Missouri Department of Transportation
State Bridge Inspection Report

COUNTY: JACKSON **DISTRICT: KC** **CLASS: STATBR** **FED-ID: 216** **BRIDGE: A0246**

GENERAL STRUCTURE INFORMATION

ROUTE: US71N	**# SPANS:** 3	**PLACE CODE:** 38000 KANSAS CITY CITY	
FEATURE: CST E 12TH ST	**LANES ON:** 2	**LENGTH:** 164 FT 0 IN	
STATUS: A-OPEN	**LANES UNDER:** 2	**MAXIMUM SPAN:** 67 FT 0 IN	
LOG MILE: 199.099	**COMPASS DIRECTION:** SOUTH to NORTH	**APPROACH ROADWAY:** 36 FT 0 IN	
DETOUR: 2.00 MILES	**DIRECTION OF TRAFFIC:** 1-WAY TRAF	**CURB TO CURB:** 37 FT 2 IN	
NHS: YES	**FUNCTIONAL CLASS:** UR-FREEWAY	**OUT TO OUT:** 39 FT 9 IN	
BUILT: 1960	**NBI OWNER:** MODOT	**AADT:** 35600	
REHAB: 1984	**NBI MAINTAINED:** MODOT	**AADT YEAR:** 2023	
LOCATION: S 5 T 49 R 33 W	**MAINTENANCE DISTRICT:** KC	**AADT TRUCK:** 6.0%	
LATITUDE: 39 5 58.3 (DMS)	**MAINTENANCE COUNTY:** JACKSON	**FUTURE AADT:** 48060	
LONGITUDE: 94 34 19.64 (DMS)	**SUB AREA:** 7C01	**FUTURE AADT YEAR:** 2043	

BRIDGE INSPECTION INFORMATION

DATE: 09/12/2023 **RESPONSIBILITY:** DISTRICT
FREQUENCY: 24 **CALCULATED INTERVAL**:** 24
TEAM LEADER: TIMOTHY HAZLETT **ELEMENT:** YES
INSPECTOR 2: **INSPECTOR 4:**
INSPECTOR 3:

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

GENERAL INSPECTION COMMENTS

FRACTURE CRITICAL INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

INDEPTH INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

FRACTURE CRITICAL INSPECTION COMMENTS

INDEPTH INSPECTION COMMENTS

SPECIAL INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

UNDERWATER INSPECTION INFORMATION

DATE: **RESPONSIBILITY:** **CATEGORY:**
FREQUENCY: **CALCULATED INTERVAL**:** **NBI:**
TEAM LEADER: **INSPECTOR 3:** **METHOD:**
INSPECTOR 2: **INSPECTOR 4:**

** When calculated interval exceeds the frequency, a justification comment per BIRM is required.

SPECIAL INSPECTION COMMENTS

UNDERWATER INSPECTION COMMENTS

OTHER SPECIAL INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD

OTHER UNDERWATER INSPECTIONS

DATE	FREQUENCY	CATEGORY	NBI	CALCULATED INTERVAL	RESPONSIBILITY	METHOD

COUNTY: JACKSON **DISTRICT: KC** **CLASS: STATBR** **FED-ID: 216** **BRIDGE: A0246**

STRUCTURE POSTING

APPROVED CATEGORY: S-1 NO POSTING REQUIRED
Ton 1: **Ton 2:** **Ton 3:**
COMMENTS:

FIELD CATEGORY: S-1 NO POSTING REQUIRED
Ton 1: **Ton 2:** **Ton 3:** **PROBLEM:** **PROBLEM DIRECTION:**
COMMENTS:

GENERAL COMMENTS/MAJOR RATED ITEMS

GENERAL COMMENTS: (BOWDEJ1, 10/07/2008)--(47'-67'-47') CONT CONC BOX GDR SPANS

[ITEM 58] DECK: 5-FAIR CONDITION **COMMENTS:** (OTISL1, 09/22/2021)--PATCHES & GENERAL EDGE DETERIORATION
RATING : 05/18/2001

[ITEM 59] SUPER: 5-FAIR CONDITION **COMMENTS:** (RACKEM, 10/04/2011)--DECK CONTROLS RATING.
RATING : 05/18/2001

[ITEM 60] SUB: 7-GOOD CONDITION **COMMENTS:** (OTISL1, 09/22/2021)--MINOR CRACKING WITH EFFLORENSE
RATING : 09/28/2017

[ITEM 61] BANK/CHANNEL: N-NOT APPLIC NO WATRWAY **COMMENTS:**
RATING : 05/18/2001

[ITEM 113] SCOUR: N-NOT APPLIC NOT WATERW **COMMENTS:**
RATING : 05/18/2001
EVALUATION TYPE :

[ITEM 71] WATERWAY ADEQUACY: NOT APPLICABLE **COMMENTS:**
RATING : 05/18/2001

[ITEM 72] APPRRDWY ALIGNMENT: 8-VERYGOOD **COMMENTS:**
RATING : 05/18/2001

RAILING AND APPROACH PAVEMENT COMPONENTS AND RATINGS

[ITEM 36A] BRIDGE RAILING RATING: *DOESNT MEET CURRNT STND-0* ***RATING :*** *01/07/2014* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
REINFORCED CONCRETE	PARAPET	RIGHT	
REINFORCED CONCRETE	CURB	RIGHT	
REINFORCED CONCRETE	SAFETY BARRIER CURB	LEFT	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
VERTICAL CRACKS	THROUGHOUT		FEW	

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
REINFORCED CONCRETE	BLOCKOUT	RIGHT	

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	COMMENT
VERTICAL CRACKS	THROUGHOUT		FEW	

[ITEM 36B] TRANSITION RAILING RATING: *MEETS CURRENT STANDARDS-1* ***RATING :*** *02/13/2002* ***COMMENTS:***

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	THRIE BEAM TO W-BEAM	BOTH-SOUTH	
GALVANIZED STEEL	THRIE BEAM TO W-BEAM	NORTHEAST	

[ITEM 36C] APPROACH RAILING RATING: MEETS CURRENT STANDARDS-1 *RATING :* 05/18/2001 *COMMENTS:*

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	W-BEAM	BOTH-SOUTH	
GALVANIZED STEEL	W-BEAM	NORTHEAST	

[ITEM 36D] RAIL END TREATMENT RATING: MEETS CURRENT STANDARDS-1 *RATING :* 02/13/2002 *COMMENTS:*

MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
GALVANIZED STEEL	BREKAWAY SYSTEM	BOTH-SOUTH	

APPROACH PAVEMENT: *Overall condition assigned for each approach pavemenet component is shown below.

MATERIAL	CONSTRUCTION	DIRECTION	CONDITION*	COMMENTS
ASPHALT/CONCRETE	BITUMINOUS MAT/SLAB	BOTH	FAIR	(OTISL1, 10/01/2019)--LEFT LANE IS RAVELING , RIGHT LANE-NEW ASPHALT IN GOOD CONDITION

DRAINAGE, EXPANSION DEVICES, BANK/SLOPE, AND DECK PROTECTIVE COMPONENTS

DECK PROTECTIVE COMPONENTS:

SERIES TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	THICKNESS	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION
MAIN SERIES-1	WEARING SURFACE	ASPHALT	ULTRATHIN BONDED WS	1.5 IN			POOR

COMMENT: (OTISL1, 10/01/2019)--LEFT LANE RAVELLING. WITH SOME HOLES RIGHT LANE NEW ASPHALT IN GOOD CONDITION.
(OTISL1, 09/22/2021)--RIGHT LANE RUTTING & LEAVING FEW PATCHES IN LEFT LANE

DECK PROTECTION	NOTAPPLICABLE	NONE

COMMENT:

MEMBRANE	NOTAPPLICABLE	NONE

COMMENT:

DRAINAGE COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS

EXPANSION DEVICE COMPONENTS:

SUB UNIT-#	SUB LABEL	COMPONENT	MATERIAL	CONSTRUCTION	GAP	YEAR APPLIED	MANUFACTURE	OVERALL CONDITION

COMMENT:

BANK/SLOPE PROTECTION COMPONENTS:

COMPONENT	MATERIAL	CONSTRUCTION	DIRECTION	COMMENTS
BANK PROTECTION	PLAIN CONCRETE	PAVEDSLOPE	BOTH	

DECK COMPONENTS

SPAN TYPE-#	COMPONENT	MATERIAL	CONSTRUCTION	COMMENTS
MAIN SPANS-1	DECK	REINFORCED CONCRETE	CAST-IN-PLACE	(OTISL1, 09/21/2015)--COVERED

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	EDGE		MINOR		
PATCHES	THROUGHOUT		FEW		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

MAIN SPANS-2 DECK REINFORCED CONCRETE CAST-IN-PLACE (OTISL1, 09/21/2015)--COVERED

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	EDGE		MINOR		
PATCHES	THROUGHOUT		FEW		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

MAIN SPANS-3 DECK REINFORCED CONCRETE CAST-IN-PLACE (OTISL1, 09/21/2015)--COVERED

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DETERIORATION	EDGE		MODERATE		
PATCHES	THROUGHOUT		FEW		
REBAR EXPOSED	EDGE		EXCESSIVE		
SPALLS	EDGE		MODERATE		
TRANSVERSE CRACKS	THROUGHOUT		FEW		

SUPERSTRUCTURE COMPONENTS

SERIES TYPE-#	SPAN TYPE	MATERIAL	CONSTRUCTION	LABEL	COMMENTS
MAIN SERIES-1	*CONTINUOUS SPAN*	*REINFORCED CONCRETE*	*BOX GIR-CIP MUL CELL*		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-1	NON-COMPOSITE	47 FT 0 IN	NO	(OTISL1, 09/21/2015)--MINOR SHEAR CRACKS AT ABUTMENTS

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
DIAGONAL CRACKS	ENDS		OPEN		
LONGITUDINAL CRACKS	BOTTOM		FEW		
SHEAR CRACKS	ENDS		FEW		
VERTICAL CRACKS	ENDS		FEW		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-2	NON-COMPOSITE	67 FT 0 IN	NO	(OTISL1, 09/21/2015)--MINOR SHEAR CRACKS AT ABUTMENTS

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
COLLISION DAMAGE	BOTTOM		MINOR		
DELAMINATION	EDGE		SMALL		

SPAN	COMPOSITE INDICATOR	LENGTH	WEATHERING STEEL	COMMENTS
MAIN SPANS-3	NON-COMPOSITE	47 FT 0 IN	NO	(OTISL1, 09/21/2015)--MINOR SHEAR CRACKS AT ABUTMENTS

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
LONGITUDINAL CRACKS	BOTTOM		FEW		

SUBSTRUCTURE COMPONENTS

SUBSTRUCTURE	SKEW	LENGTH	MATERIAL	CONSTRUCTION	LABEL	COMMENTS
ABUTMENT-1	*LA-20 DEGREES*	*42 FT 5 IN*	*REINFORCED CONCRETE*	*INTEGRAL*		

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT

ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION
BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE

CONDITION	LOCATION 1	LOCATION 2	SEVERITY	MEASUREMENT	COMMENT
SATURATION	FRONT FACE		MINOR		
VERTICAL CRACKS	THROUGHOUT		FEW		

ASSOCIATED COMPONENT	MATERIAL	CONSTRUCTION
PILING	STEEL	H-SHAPE

	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	TURNED BACK WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	EFFLORESCENCE	TOP		MODERATE		
	MAP CRACKS	THROUGHOUT		FEW		

BENT-2 *LA-20 DEGREES* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
	COLUMN	REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	MAP CRACKS	THROUGHOUT		FINE		
	FOOTING	REINFORCED CONCRETE	PEDESTAL			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**

BENT-3 *LA-20 DEGREES* *REINFORCED CONCRETE* *MULTIPLE COLUMN*

	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
	COLUMN	REINFORCED CONCRETE	INTEGRAL CAST-IN-PLACE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	MAP CRACKS	THROUGHOUT		FINE		
	FOOTING	REINFORCED CONCRETE	PEDESTAL			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**

ABUTMENT-4 *LA-20 DEGREES* *42 FT 5 IN* *REINFORCED CONCRETE* *INTEGRAL*

	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	ASSOCIATED COMPONENT	**MATERIAL**	**CONSTRUCTION**			
	BEAM CAP	REINFORCED CONCRETE	CAST-IN-PLACE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	PILING	STEEL	H-SHAPE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	TURNED BACK WINGS	REINFORCED CONCRETE	CAST-IN-PLACE			
	CONDITION	**LOCATION 1**	**LOCATION 2**	**SEVERITY**	**MEASUREMENT**	**COMMENT**
	MAP CRACKS	THROUGHOUT		FEW		

OVER/UNDER ROUTES CLEARANCE INFORMATION

CLEARANCES OVER DECK

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

VERTICAL CLEARANCE TYPE**	**VALUE**	**DIRECTION**	**DATE**	**COMMENT**

CLEARANCES UNDER BRIDGE

**NOTE: Vertical clearances for permitting purposes are taken as 2 inches less than the actual field measured clearance.

RECORD #	ROUTE	# LANES	DIRECTION OF TRAFFIC	RIGHT LATERAL CLEARANCE	LEFT LATERAL CLEARANCE	UR-ID
1	CST E 12TH ST E	2	1-WAY TRAF	12 FT 7 IN		519

VERTICAL CLEARANCE TYPE**	VALUE	DIRECTION	DATE	COMMENT
ACTUAL	13 FT 8 IN			

STRUCTURE PAINT INFORMATION

CONDITION: **RUST AMOUNT :** **STEEL TONS :**

ORIGINAL PAINT	CONTRACT REPAINT	DEPARTMENT REPAINT	
PAINT TYPE :	**PAINT TYPE :**	**PAINT TYPE :**	**MANUFACTURE :**
NAME :	**NAME :**	**NAME :**	**SURFACE PREP :**
PAINT COLOR :	**PAINT COLOR :**	**PAINT COLOR :**	
PAINT YEAR :	**PAINT YEAR :**	**PAINT YEAR :**	
MILS :	**MILS :**	**MILS :**	

REQUESTED WORK ITEMS

GENERAL WORK COMMENTS:

RESPONSIBILITY	LOCATION	ITEM	CATEGORY	PRIORITY	DATE	WORK ITEM COMMENT
DISTRICT SPECIAL	SEE COMMENT	MISCELLANEOUS	DECK	2	09/14/2021	(OTISL1, 09/22/2021)--OVERLAY DECK, IT IS FAILING

UTILITY ATTACHMENTS

UTILITY	OWNER	METHOD	MEASUREMENT TYPE	VALUE	NUMBER	UTILITY ATTACHMENT COMMENT
LIGHTING		POLE			1	

PROGRAM NOTES INFORMATION

YEAR	PROJECT #	MONTH LET	YEAR LET	ITEMS	COMMENT

COMPUTER GENERATED RATINGS AND DEFICIENCY ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

Rated Item	Rating	Rating Date
[Item 67] Structure Evaluation Rating:	5-BETTER THAN MINIMUM	3/20/2002
[Item 68] Deck Geometry Rating:	5-BETTER THAN MINIMUM	3/14/2002
[Item 69] Underclearance:	3-BASICALLY INTOL CORRECT	3/21/2003
Sufficiency Rating:	76.7%	2/26/2024
Deficiency:	FUNCTIONAL	3/21/2003
Funding Eligibility:	PARTIAL	----
Estimated New Structure Length:	197 FT.	----
Estimated Structure Cost:	$817,022	----
Estimated Total Project Cost:	$1,225,533	----
Year of Cost Estimate:	2024	----

NOTE: The above structure length and cost estimates are computer generated using algorithims in the TMS system. These algorthims are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.

ADVANCED SIGN INFORMATION

SIGN #	SIGN TYPE	PROBLEM	PROBLEM DIRECTION
1			

OUTFALL INSPECTION INFORMATION

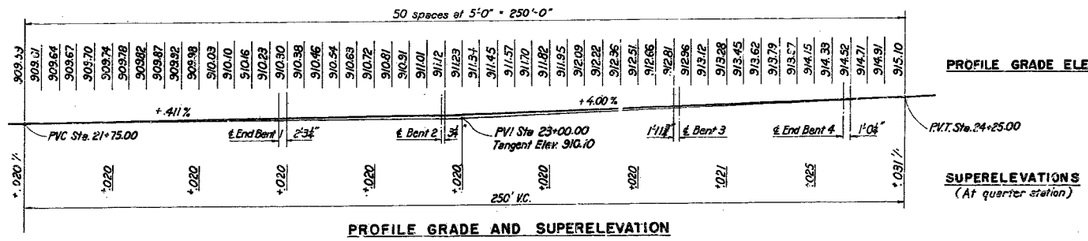
 # OUTFALLS: **INSPECTOR:**

STATUS: **DATE:**

NOTES:

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. B SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			29	
DIST. NO.	COUNTY			ROUTE	SEC.
4					

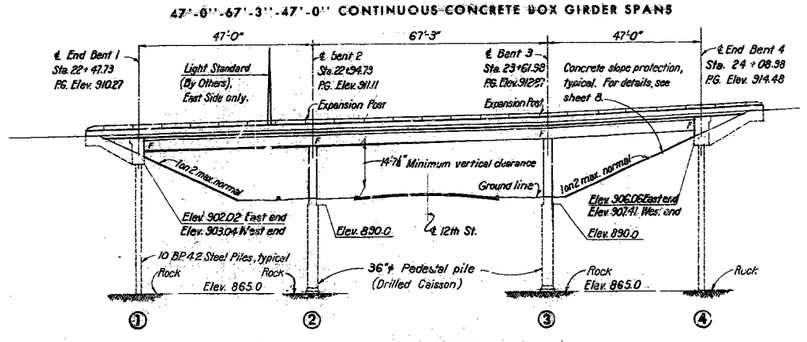


PROFILE GRADE ELEVATIONS

SUPERELEVATIONS
(At quarter station)

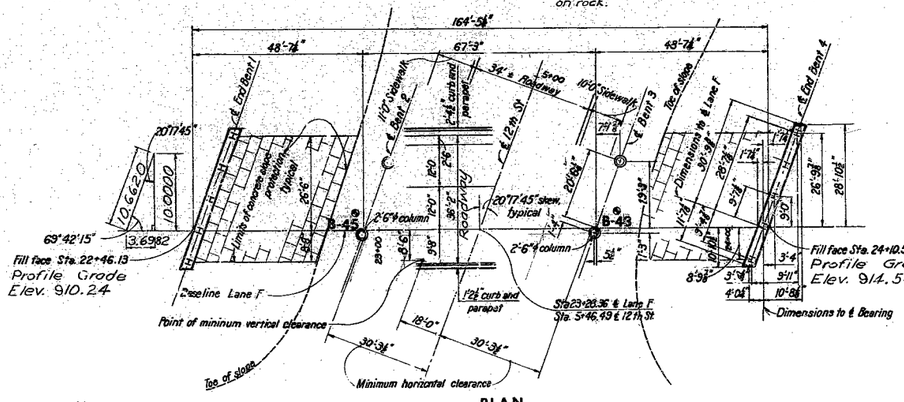
PROFILE GRADE AND SUPERELEVATION

47'-0" - 67'-3" - 47'-0" CONTINUOUS CONCRETE BOX GIRDER SPANS

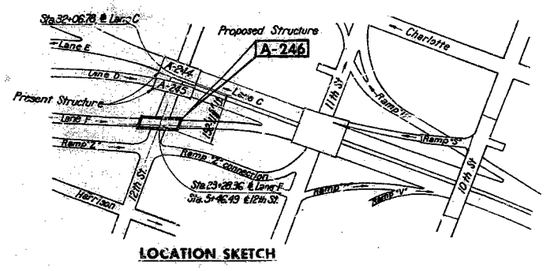


ELEVATION

Note:
All loose, shelly or disintegrated rock shall be removed and the pedestal piles placed on sound, hard, solid, undisturbed rock. If soft rock or shale is encountered, the pedestal piles shall be carried at least 18" into and cast against vertical faces of same. Bearing of 21 ton per sq. ft. used in design of pedestal pile on rock.



PLAN



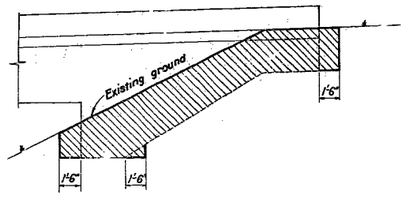
LOCATION SKETCH

NOTE: This drawing is not to scale. Follow dimensions.

ESTIMATED QUANTITIES				
ITEM	UNIT	SUB-STRUCTURE	SUPER-STRUCTURE	TOTAL
Class 1 Excavation for Structures	Cu. yd.	85		85
36"ϕ Drilled Caisson	Lin. ft	100		100
10 BP 42 Steel Pile in Place (State Furnished)	Lin. ft.	445		445
Class B 1 Concrete	Cu. yd.		5024	5024
Reinforcing Steel	Lbs.	7,680	141,140	148,820
Fabricated Structural Steel	Lbs.		540	540
Aluminum Alloy Handrail	Lin. Ft.		390	390
Conduit System	L.S.		1	1

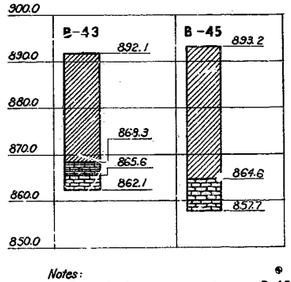
Quantity Notes:
All excavation for bridge will be paid for as Class 1 Excavation for Structures. Sketch below shows limits of excavation for pay purposes.
All concrete and reinforcement above top of pedestal piles are included in superstructure quantities.
Reinforcement in pedestal pile is included in substructure quantities.

Pedestal piles shall be constructed and paid for in accordance with Sect. 16-7 of Supplemental Specifications as "Drilled Caissons."

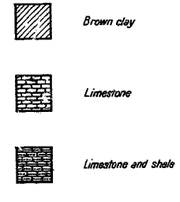


LIMITS OF EXCAVATION

BORING LOG



Notes:
Boring log locations are noted thus: B-45
Elevation shown at top of boring is top of ground.



BORING LEGEND

Bench Mark
B.M. #1 - "X" on South bolt, fire hydrant, NW corner 12th and Charlotte St. Elev. 888.18.

GENERAL PLAN AND ELEVATION SHEET 1 OF 9

GENERAL NOTES

Design Specifications: A.A.S.H.O. 1957 with tentative revisions for 1958 and 1959.

Design Loading: H 20-S16-44 and alternate loading designated in P.R.M. 20-4 Sec. 4c. 15 #/sq. ft. future wearing surface.

Concrete: Concrete stress: Class B 1 f_c = 1,600 psi
Class B f_c = 1200 psi
Concrete for superstructure shall be Class B 1 air-entrained.
Concrete for pedestal piles and substructure shall be Class "B" air-entrained.

All forms are to be removed from the interior of box girders except as indicated in Special Provisions for top slab.

Reinforcing Steel: Allowable stress 20,000 psi. All splices in reinforcing steel shall be 32 bar diameters.
Bar sizes are designated on the plans by numbers. The first digit after the letter in three digit marks and the first two digits after the letter in four digit marks indicate the size of the bar.
Dimensions shown on the plans from the reinforcing steel to outside edge of concrete are all clear dimensions.
All bending dimensions are from out to out of bars.

Waterproofing: Superstructure deck to be waterproofed. See Special Provisions.

Utilities: All utilities, unless shown otherwise, shall be removed or relocated by Others. The Contractor will notify the owner of the utilities of his work schedule sufficiently in advance to allow time for the disposition of utilities.

Shipping: Permits must be obtained for all truck loads over legal length.

Joint Filler: Where joint filler is specified on the plans it shall conform with the requirements for gray rubber compound joints as given in Section 1922B of the Standard Specifications.

Aluminum Alloy Handrail: See Special Provisions

Serrating Specified Construction Joints: See Special Provisions.

Traffic: 12th Street shall remain open to traffic during construction. Falsework over 12th Street shall be constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions).

Piling: All piles shall conform with details and notes on Sheet No. 8. All piles required for this structure will be furnished by the State. (See Special Provisions). All piles shall be driven to or into solid rock, boulders, shale or cemented gravel or to not less than full length authorized, and to sustain a load of at least 53 tons per pile for 10BP42. All piles shall be driven with a steam hammer. See Section 22-9C of Standard Specifications for required painting of steel piles. Bearing of 36 ton per sq. ft. used in design of pedestal pile on rock.

Traffic: 12th Street shall remain open to traffic during construction. Falsework over 12th Street shall be constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions.)

Qualifications of welding operators will be required.

SUBMITTED BY:
R. A. Bergendoff
REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-2153

BRIDGE LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (29) (R.T. I-70) STA. 32+06.78, LANE C 152.97' LT.
JACKSON COUNTY

SUBMITTED BY Lee F. Beckett BRIDGE ENGINEER DATE 10-11-60
APPROVED BY Ray M. Wilson CHIEF ENGINEER DATE 10-11-60

STD C110 R7
A-246

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE JSH	DATE 5-25-60	TRACED	DATE
CHECKED VFP	DATE 6-2-60	SCALE	

3/5

SEE FINAL PLANS BROWN LINES

MISSOURI STATE HIGHWAY DEPARTMENT

ROAD NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	SHEETS
F	MO.			30	
DIST. NO.	COUNTY		ROUTE	SEC.	
4					

BILL OF REINFORCING STEEL

SUBSTRUCTURE

PEDESTAL PILES

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
52	F423	8'-4"	119	2'-2½"		
52	F433	8'-4"	119	2'-2½"		

SUPERSTRUCTURE

CAPBEAMS

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
72	B501	15'-5"	109	3'-5"	3'-6⅝"	9"
12	B601	37'-0"	Str.			
12	B1001	37'-0"	Str.			
12	B1101	37'-5"	Str.			
8	B1102	14'-9"	Str.			
8	B1103	12'-0"	Str.			
16	B1121	9'-2"	104	5'-6"	3'-8"	
16	B1131	9'-2"	104	5'-6"	3'-0"	

COLUMNS

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
1	C421	556'-3"	127	2'-3"	17'-8"	
1	C422	538'-3"	127	2'-3"	17'-1"	
1	C431	611'-9"	127	2'-3"	19'-6"	
1	C432	591'-3"	127	2'-3"	18'-10"	
16	C1126	21'-3	Str.			
16	C1127	20'-9"	Str.			
16	C1136	23'-3"	Str.			
16	C1137	22'-6"	Str.			

DIAPHRAGM

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
24	D401	19'-2"	Str.			
4	D402	8'-3"	100	7'-3"	6"	
60	D501	9'-6"	109	5"	3'-7"	9"
4	D502	10'-2	109	1'-0"	3'-7"	9"
2	D801	8'-4"	108	2'-"	6'-3"	6'-0"

GIRDER

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
36	G402	28'-6"	Str.			
8	G403	26'-1"	Str.			
16	G404	26'-3"	Str.			
24	G405	20'-3"	Str.			
8	G406	22'-0"	Str.			
278	G501	5'-9"	129	3'-9"	1'-0"	1'-0"
1088	G502	6'-0"	128	3'-3"	1'-0"	9"
278	G503	5'9"	105	3'-9"	1'-0"	1'-0"
36	G801	56'-4"	Str.			
24	G1001	27'-0"	Str.			
24	G1002	14'-0"				
24	G1003	19'-6"				
24	G1004	25'0"				
24	G1005	31'-6"				
24	G1006	60'-0"				
54	G1007	58'-0"				
24	G1008	34'-4".				
24	G1009	20'-6"				
12	G1010	42'-3"				
12	G1011	57'-3"				
12	G1012	26'-3"	Str.			

SLAB

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
80	S401	16'-9"	Str.			
80	S402	18'-9"				
80	S403	20'-3"				
40	S404	21'-9"				
66	S405	28'6"				
70	S406	30'0"				
20	S407	13'-3"				
20	S408	18'-3"				
20	S409	23'5"				
10	S410	28'-3"	Str.			
30	S501	26'-10"	Str.			
60	S502	6'-0"				
506	S503	20'-7"				
15	S504	24'-3"				
32	S505	4'-0"				
264	S506	17'-6"				
18	S507	4'-9"				
39	S508	39'-0"				
129(123)	S509	34'-9"				
18	S510	15'-11"				
251	S511	21'-2"				
21	S512	24'-7"				
42	S513	24'-1"				
18	S514	25'10"				
15	S515	18'-11"	Str.			
12	S601	12'6"	Str.			
24	S602	42'7"				
12	S603	35'6"				
28	S604	30'6"				
4	S606	44'0				
2	S607	45'8"				
8	S608	30'3"				
24	S609	5'0"	Str.			

PARAPET

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
32	P401	21'-0"	Str.			
16	P402	5'8"	Str.			
16	P403	7'11"	Str.			
16	P404	25'11"	Str.			
324	P405	6'-4"	109	6⅝"	2'-0"	7⅛"
4	P406	4'-7"	133	1'-1"	1'-3"	1'-0"
2	P407	7'0"	109	1'-0⅝"	1'-10"	7⅛"

WALK

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
28	W401	24'0"	Str.			
162	W402	7'5"	125	1'-11⅛"	2'-1⅛"	1'3"
21	W403	23'2"	Str.			
162	W404	4'10"	125	9⅛"	11⅛"	1'-0"

END BENT

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
2	H611	42'0"	Str.			
6	H612	42'0"	Str.			
2	H641	42'0"	Str.			
6	H642	42'0"	Str.			
4 (3)	H1011	42'0"	Str.			
4 (3)	H1041	42'0"	Str.			
29	V611	22'-9"	109	2'-10"	7'-8"	10⅛"
29	V641	22'-9"	109	2'-10"	7'-8"	10⅛"
29	V1041	16'-4"	126	7'-10"	6'-0"	2'-6"
29	V1041	16'-4"	126	7'-10"	6'-0"	2'-6"

NORTHWEST WINGWALL

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
4	H401	19'-0"	Str.			
3	H1002	24'-11"	Str.			
5	H603	19'-10"	Str.			
1	H604	20'-3"	108	14'-9"	5'-6"	2'-0"
1	H605	13'-6"	Str.			
1	H606	14'-6"	108	9'-0"	5'-6"	2'-0"
1	H607	11'-6"	Str.			
1	H608	12'-6"	108	7'-0"	5'-6"	2'-0"
1	H609	9'-6"	Str.			
1	H610	10'-6"	108	5'-0"	5'-6"	2'-0"
1	H613	4'-6"	Str.			
1	H614	7'-0"	Str.			
2	H615	17'-0"	Str.			
1	H616	7'-6"	Str.			
1	H617	8'-3"	103	2'-9"	3'-6"	2'-0"
6	V601	28"	Str.			
8	V602	106"	Str.			
21	V603	65"	124	2'-0"	10⅛"	1'-4⅛"
21	V604	6'10"	109	6⅛"	2'-0"	10⅛"

NORTHEAST WINGWALL

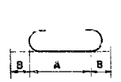
NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
4	H416	16'-2"	Str.			
5	H618	18'-3"	Str.			
1	H619	10'-9"	108	11'-3"	5'-6"	2'-0"
1	H620	[illegible]	Str.			
1	H621	11'-0"	108	5'-6"	5'-6"	2'-0"
1	H622	10'0"	Str.			
1	H623	9'-0"	108	3'-6"	5'-6"	2'-0"
1	H624	8'0"	Str.			
1	H625	7'0"	108	1'-6"	5'-6"	2'-0"
1	H626	6'0"	Str.			
1	H627	5'-3"	Str.			
1	H628	4'0"	[illegible]			
1	H629	3'0"	[illegible]			
2	H630	1'5'0"	Str.			
3	H1017	23'6"	Str.			
6	V605	2'8"	Str.			
19	V606	6'10"	109	6⅛"	2'-0"	10⅛"
7	V607	10'6"	Str.			

SOUTHEAST WINGWALL

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
4	H631	16'7"	Str.			
5	H633	17'-9"	Str.			
1	H634	18'-3"	108	12'-9"	5'-6"	2'-0"
1	H635	12'-6"	Str.			
1	H636	12'-9"	108	7'-3"	5'-6"	2'0"
1	H637	7'-3"	Str.			
1	H638	10'-9"	108	5'-3"	5'-6"	2'0"
1	H639	8'-3"	Str.			
1	H640	8'-9"	108	3'-3"	5'-6"	2'0"
1	H643	4'-3"	Str.			
1	H644	4'-6"	Str.			
2	H645	15'0"	Str.			
1	H646	6'-3"	Str.			
1	H647	6'-9"	108	1'-3"	5'-6"	2'0"
3	H1032	23'0"	Str.			
7	V612	10'6"	Str.			
6	V613	2'-8"	Str.			
19	V614	6'-10"	109	6⅛"	2'-0"	10⅛"

SOUTHWEST WINGWALL

NO.	MARK	LENGTH	SHAPE	DIMENSIONS A	B	C
4	H446	15'9"	Str.			
5	H648	18'-9"	Str.			
1	H649	16'-3"	108	10'-9"	5'-6"	2'-0"
1	H650	12'-0"	Str.			
1	H651	10'3"	108	4'-9"	5'-6"	2'0"
1	H652	10'0"	Str.			
1	H653	8'3"	108	2'-9"	5'-6"	2'-0"
1	H654	8'0"	Str.			
1	H655	6'3"	108	3"	5'-6"	2'0"
1	H656	6'0"	Str.			
1	H657	4'6"	Str.			
1	H658	3'3"	Str.			
2	H659	16'0"	Str.			
3	H1047	23'-5	Str.			
19	V608	6'10"	109	6⅛"	2'-0"	10⅛"
6	V609	2'-8"	Str.			
7	V610	10'-6"	Str.			
19	V615	6'-5"	124	2'-0"	10⅛"	1'-4⅛"



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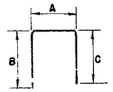

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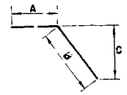

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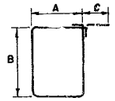

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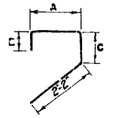

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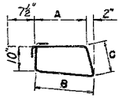

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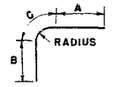

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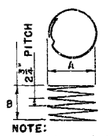
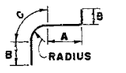


NOTE:
Make 1½ full turns top and bottom and 1⅛ full turns at splices.

127



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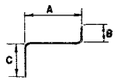

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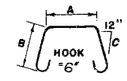

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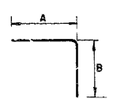

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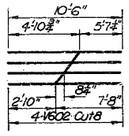
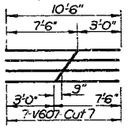
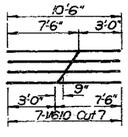
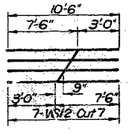
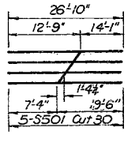
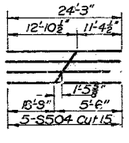


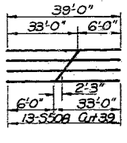


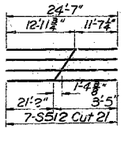


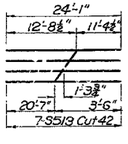


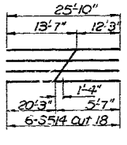


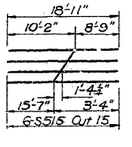












Note:
Hooks and bends shall be in accordance with the ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures (A.C.I. - 315-57).

FINISHED

REINFORCEMENT SCHEDULE

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (29) (RT. I-70) STA. 32+06.78, LANE C 152.97' LT.
JACKSON COUNTY

SHEET 2 OF 9

A-246

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY & NEW YORK

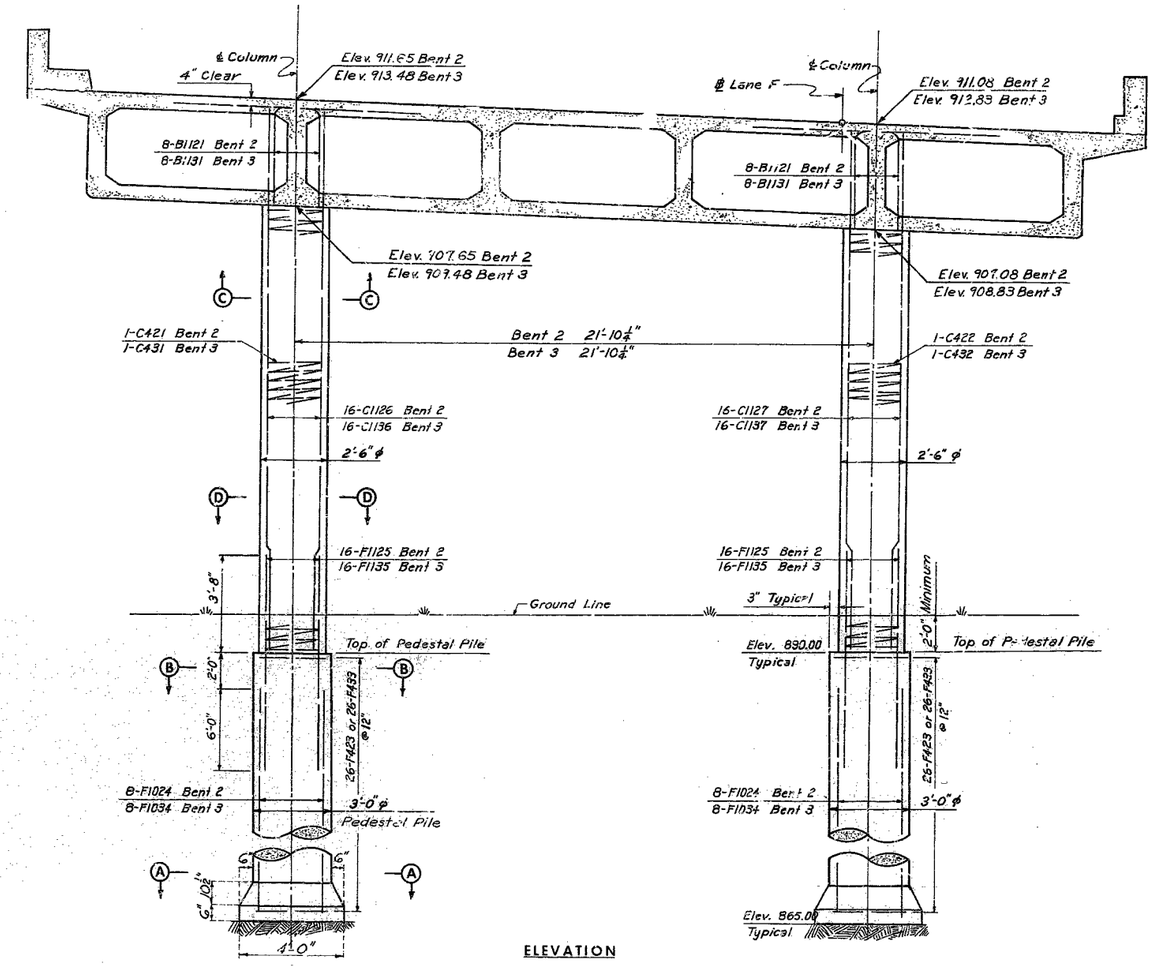
MADE JSH DATE 6-23-60 | TRACED _____ DATE _____
CHECKED EOA DATE 6-24-60 | SCALE _____

NOTE: This drawing is not to scale. Follow dimensions.

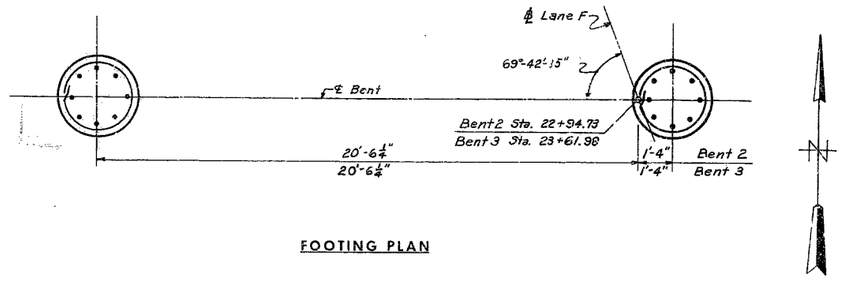
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

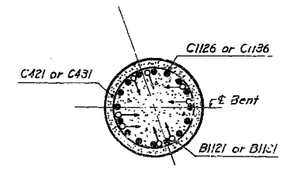
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
5	MO.		31	
DIST. NO.	COUNTY		ROUTE	SEC.
4				



ELEVATION

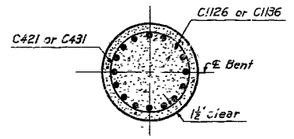


FOOTING PLAN

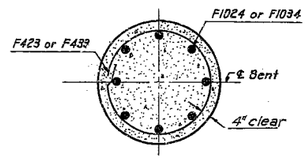


SECTION C-C

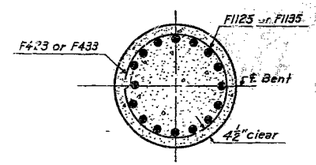
Note: Arrows show direction of B1121 or B1131 bars.



SECTION D-D



SECTION A-A



SECTION B-B

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE RWA-RGP DATE 5-13-60 TRACED DATE
CHECKED E.O.A DATE 5-10-60 SCALE

NOTE: This drawing is not to scale. Follow dimensions.

FINISHED

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (39) (RT. I-70) STA. 32+06.72, LANE C 152.97' LT.
JACKSON COUNTY

BENTS 2 AND 3

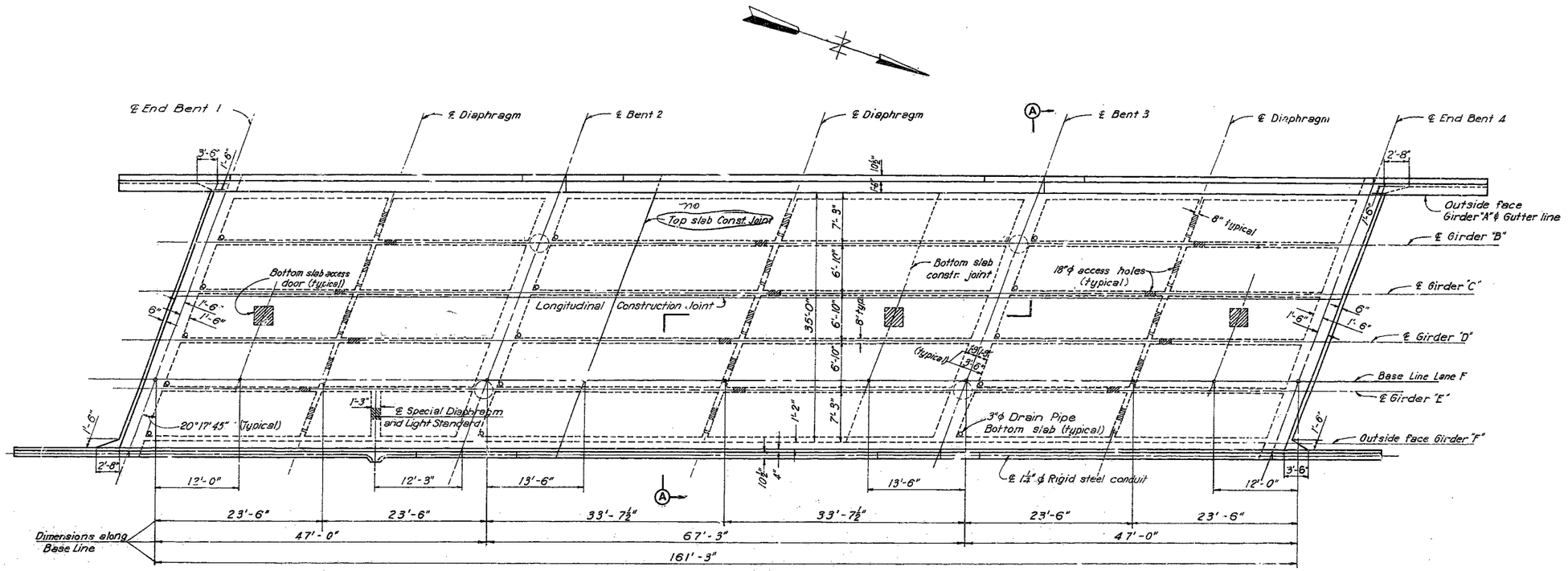
SHEET 30 OF 9

A-246

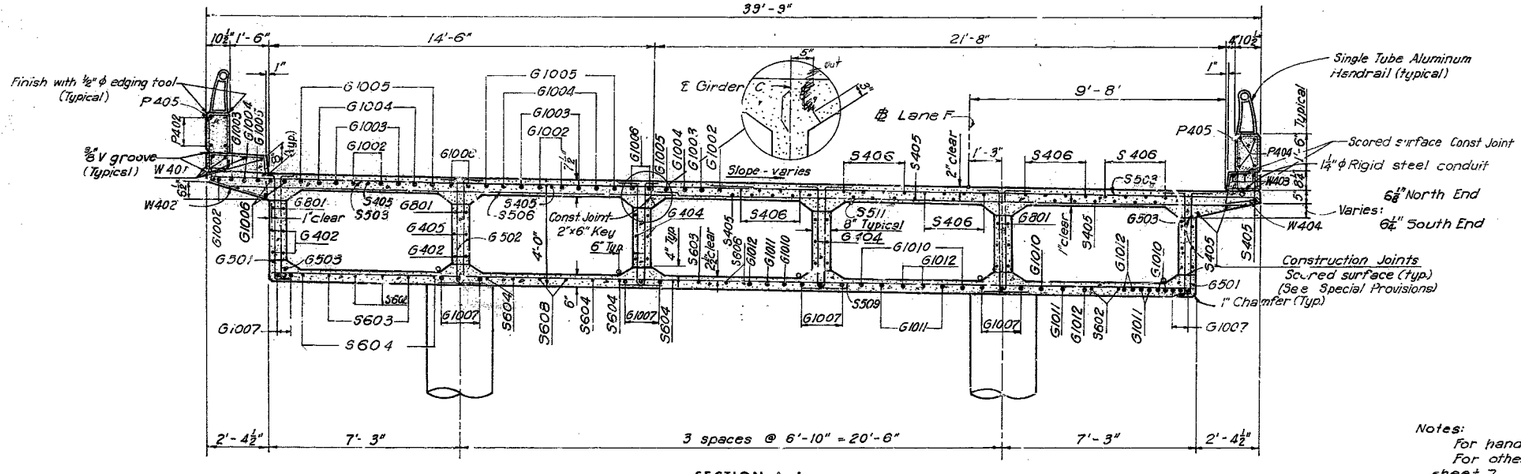
SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

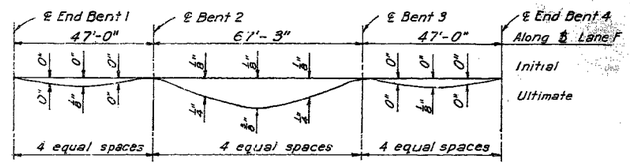
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	8 Sec.		32	
DIST. NO.	COUNTY		ROUTE	SEC.	
4					



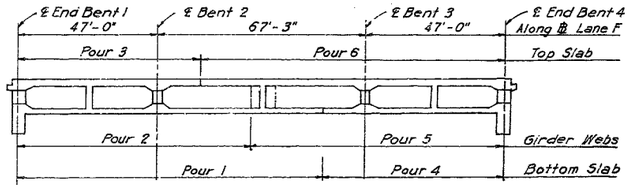
FRAMING PLAN



SECTION A-A



DEAD LOAD DEFLECTION DIAGRAM



POURING SEQUENCE

Note: See Section 16-3.E of Supplemental Specifications for possible change in pouring sequence.

FINISHED

Notes:
For handrail details see sheet 9.
For other superstructure details see sheet 7
For rustication detail see sheet 8.
Forms shall be constructed for ultimate deflection.

FINISHED

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE E.O.A. DATE 5-11-60 TRACED DATE
CHECKED J.S. DATE 6-16-60 SCALE

NOTE: This drawing is not to scale. Follow dimensions.

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (39) (RT. I-70) STA. 32+06.78, LANE C 152.97' LT.

JACKSON COUNTY

FRAMING PLAN

SHEET 4 OF 9

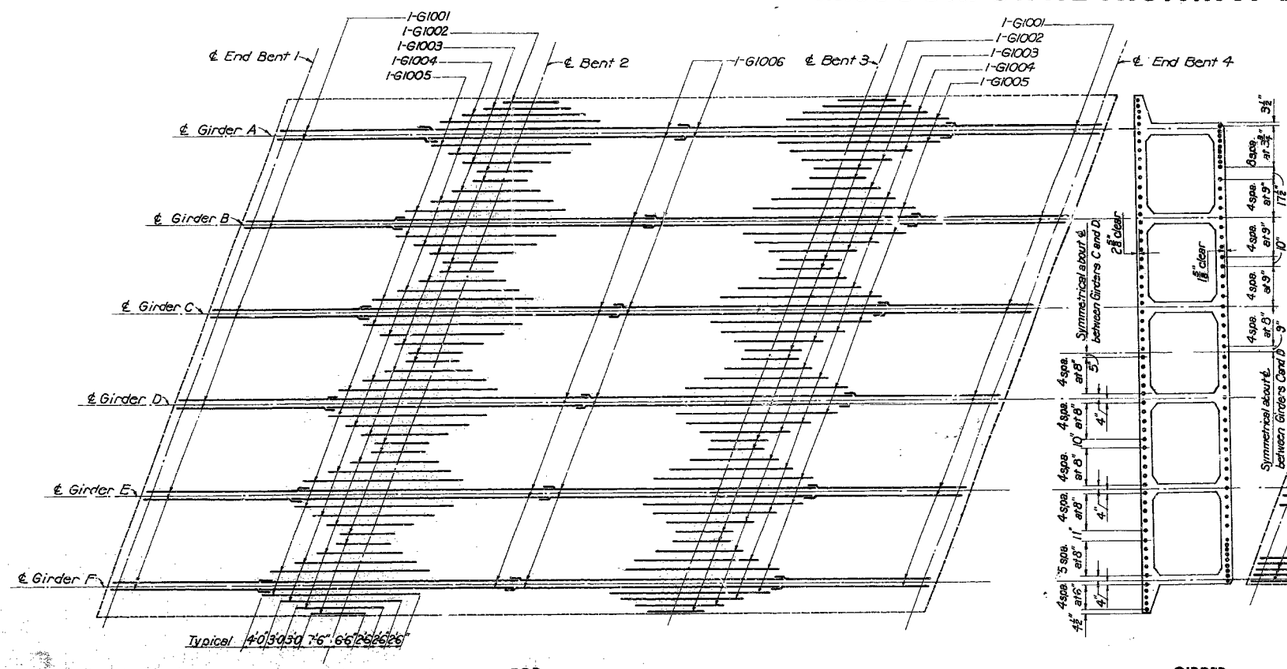
A-246

318

NO CONSTRUCTION CHANGES

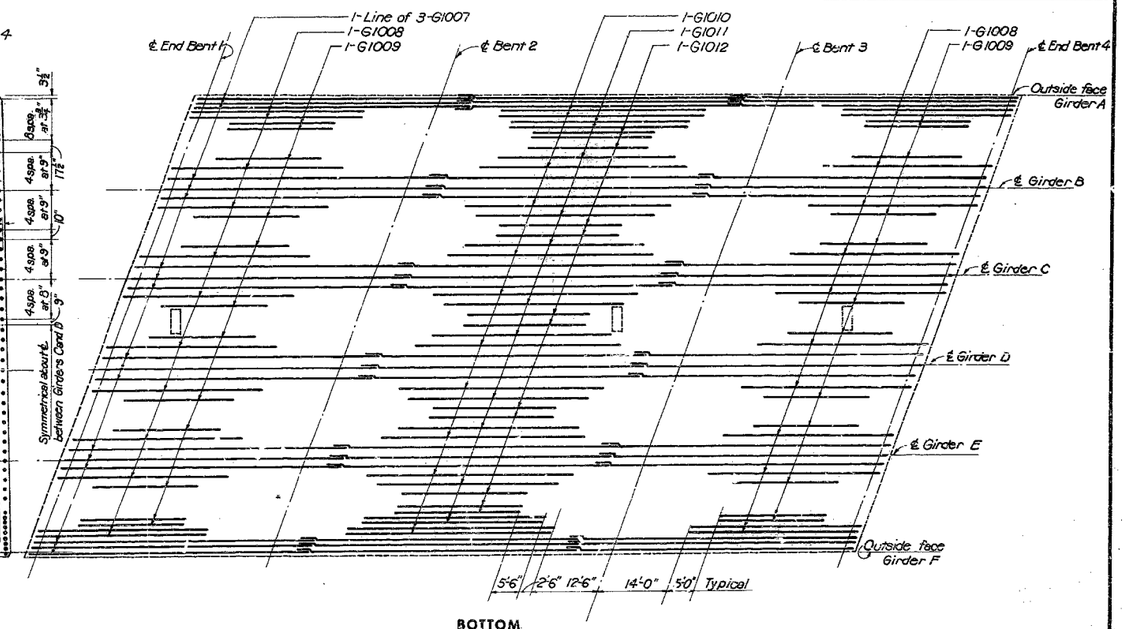
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			33	
DIST. NO.	COUNTY			ROUTE	SEC.
4					

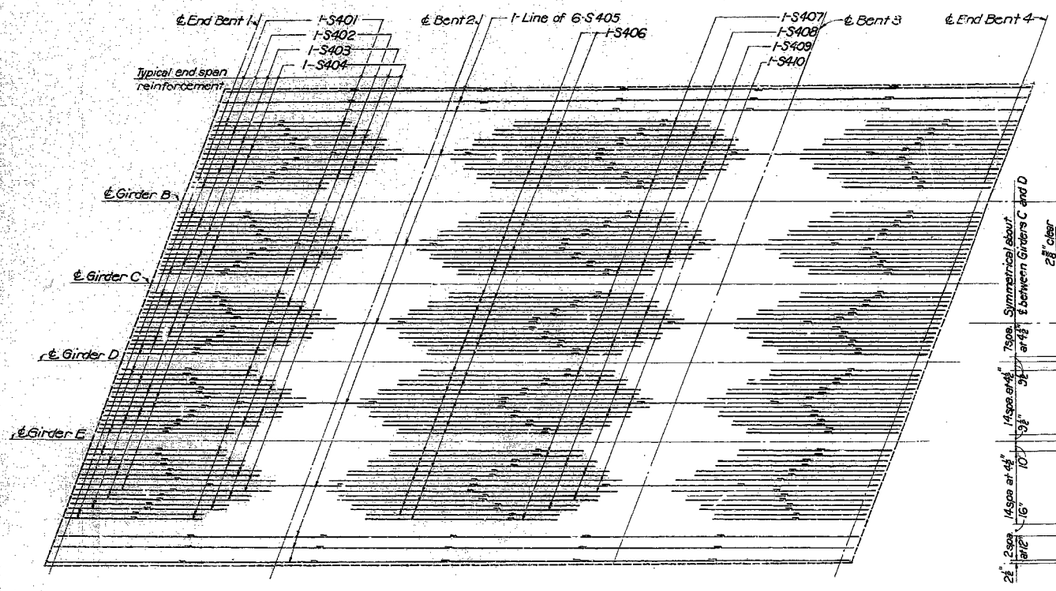


TOP

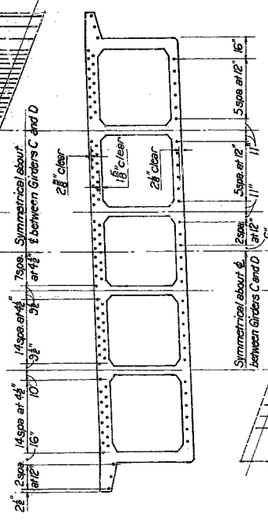
GIRDER



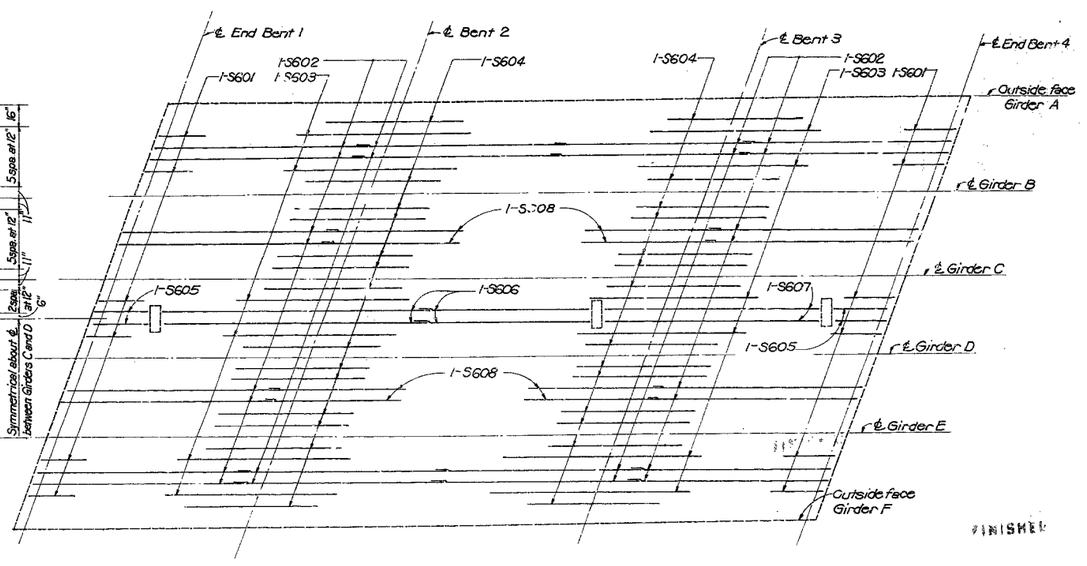
BOTTOM



TOP



SLAB



BOTTOM

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (~~39~~ 59) (RT. I-70) STA. 32+06.78, LANE C 152.97' LT.
JACKSON COUNTY

LONGITUDINAL REINFORCING

SHEET 5 OF 9

A-246

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY, NEW YORK

MADE L.O.A	DATE 5-20-60	TRACED	DATE
CHECKED JSH	DATE 6-8-60	SCALE	

NOTE: This drawing is not to scale. Follow dimensions.

319

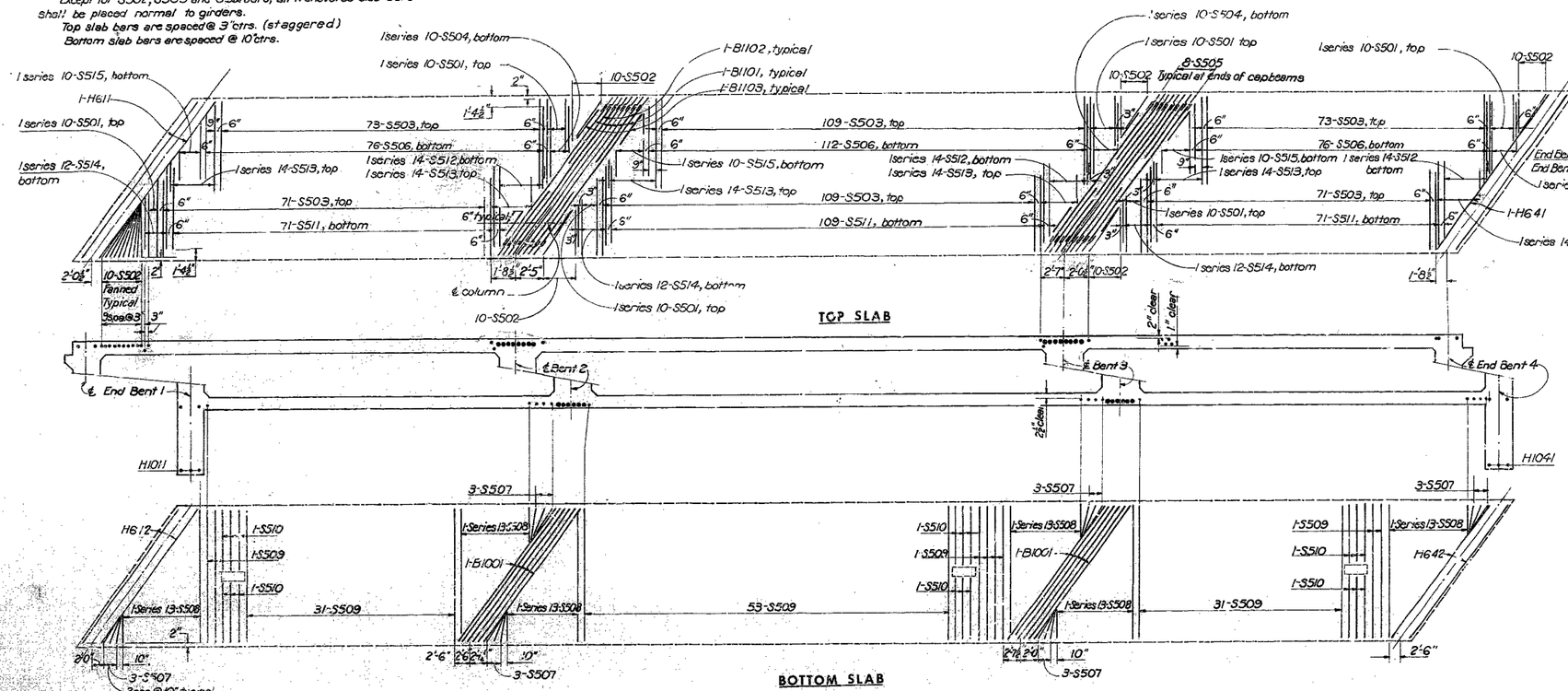
FINISHED

NO CONSTRUCTION CHANGES

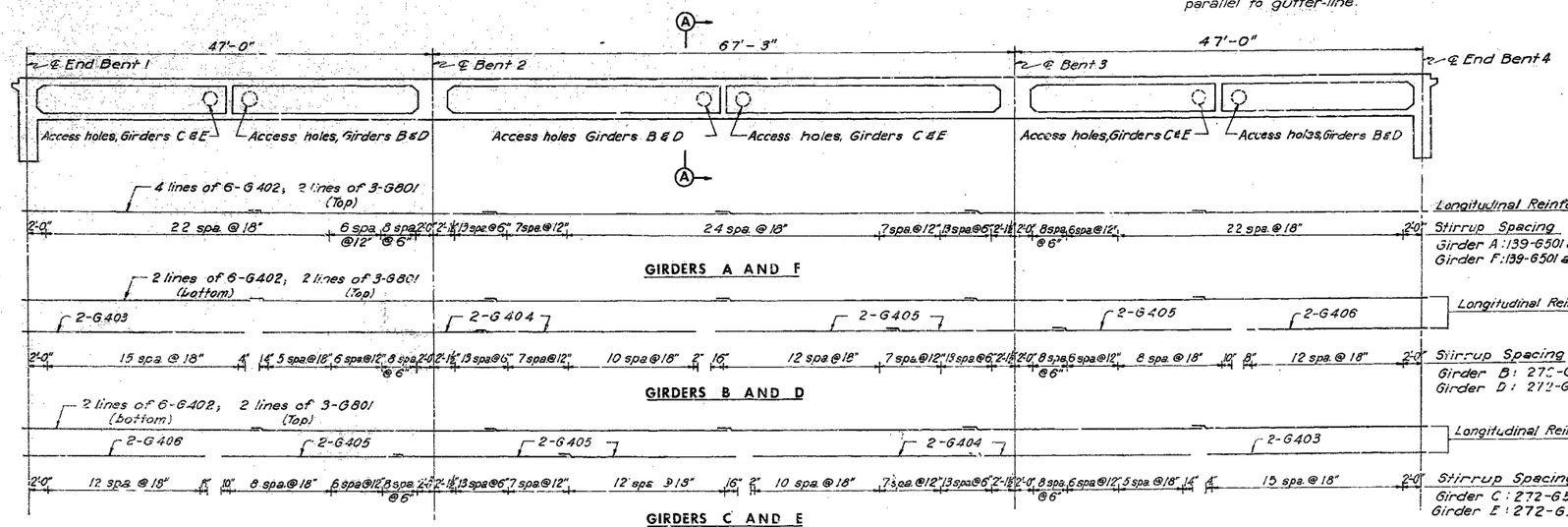
MISSOURI STATE HIGHWAY DEPARTMENT

FED. HWAY SYS. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			34	
DIST. NO.	COUNTY		ROUTE	SEC.	
4					

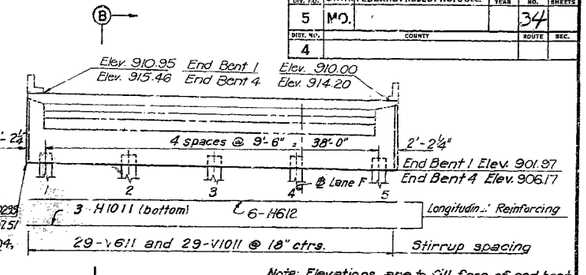
Note:
Except for S502, S505 and S511 bars, all transverse slab bars shall be placed normal to girders.
Top slab bars are spaced @ 3' ctrs. (staggered)
Bottom slab bars are spaced @ 10' ctrs.



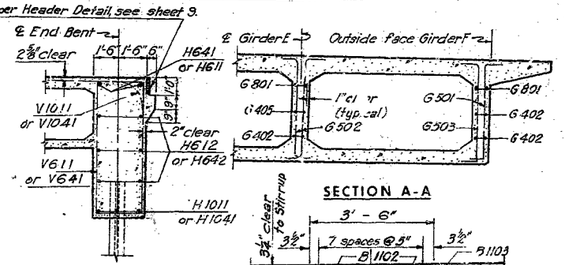
Note:
Stirrups in Bent Webs shall be placed parallel to gutter-line.



GIRDER WEB REINFORCEMENT



for Timber Header Detail see sheet 9.



Pile Cut-Off Elevations		
Pile No.	End Bent 1	End Bent 4
1	90[illegible]94	909.44
2	[illegible]14.71	909.14
3	904.48	908.84
4	904.25	908.54
5	904.02	908.24

FINISHED

BRIDGE: LANE [illegible] OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (29) (RT I-70) STA. 32+06.78.
LANE C 152.97' LT.
JACKSON COUNTY

TRANSVERSE AND WEB REINFORCING

SHEET 6 OF 9

A-246

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY & NEW YORK

MADE RVS & EOA DATE 6-3-60 TRACED _____ DATE _____
CHECKED JSH DATE 6-16-60 SCALE _____

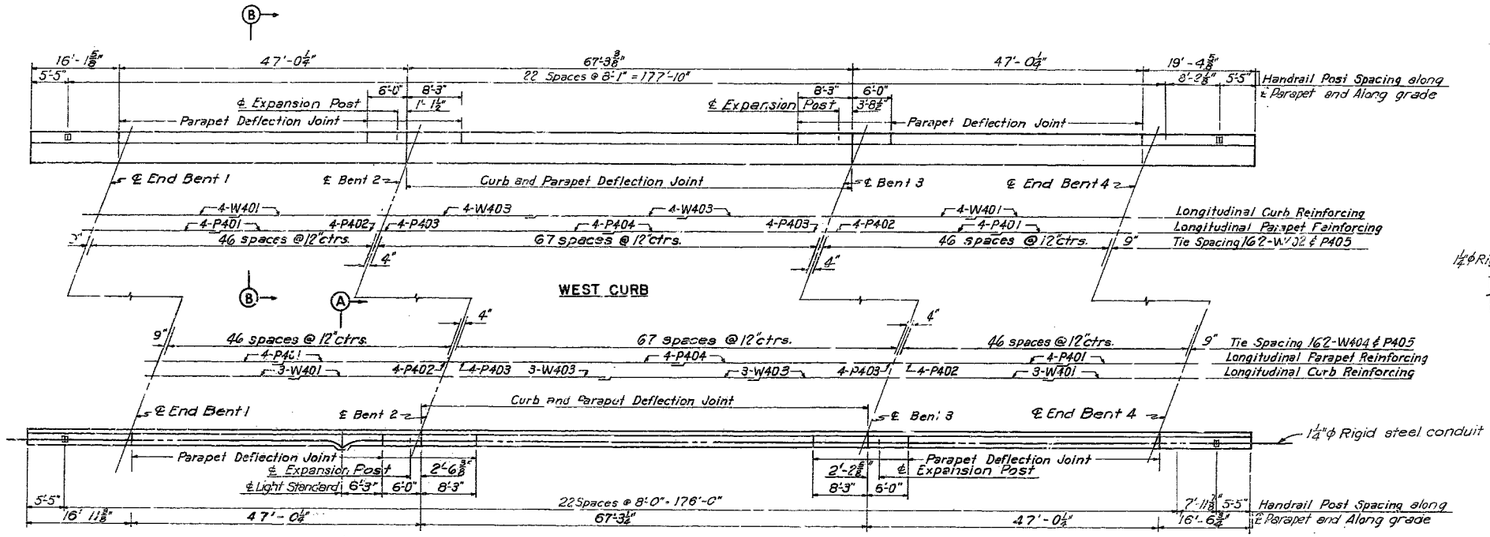
NOTE: This drawing is not to scale. Follow dimensions.

320

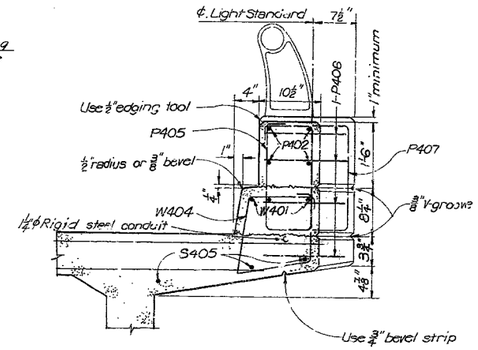
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

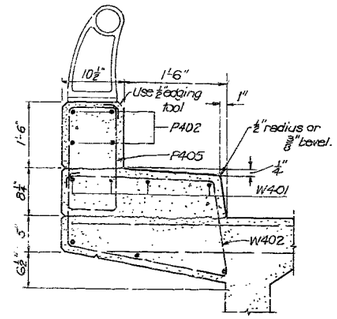
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
5	MO.		35	
DIST. NO.	COUNTY			
4				



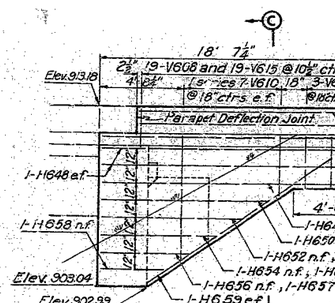
CURB AND PARAPET PLAN



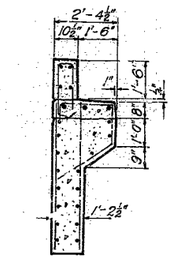
SECTION A-A



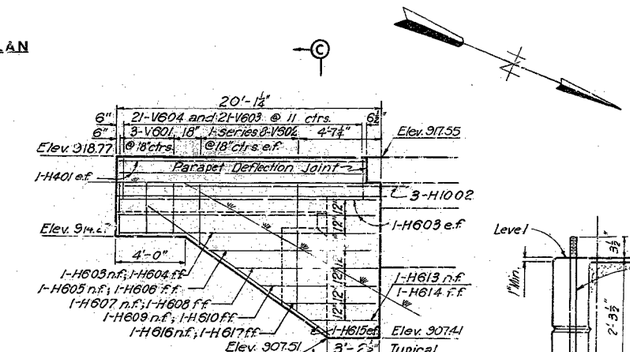
SECTION B-B



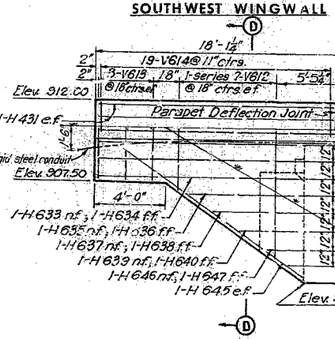
SOUTHWEST WINGWALL



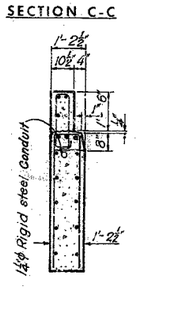
SECTION C-C



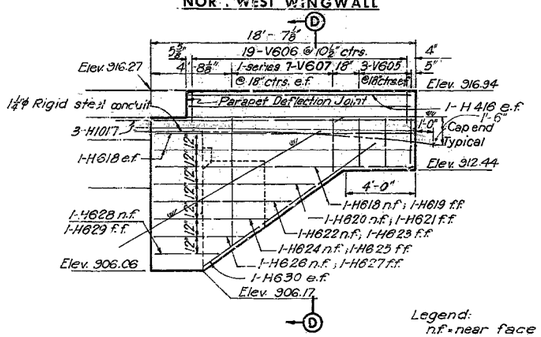
NORTHWEST WINGWALL



SOUTHEAST WINGWALL

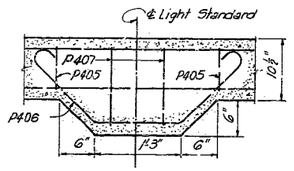


SECTION D-D

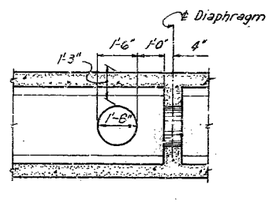


NORTHEAST WINGWALL

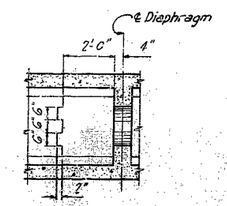
Legend:
n.f. = near face
f.f. = far face
e.f. = each face



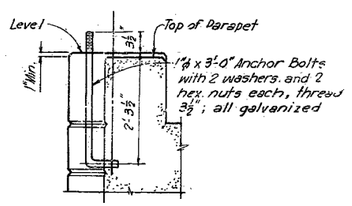
DETAIL A



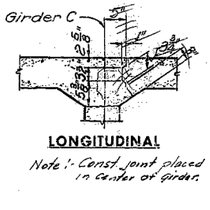
GIRDER WEB ACCESS HOLE



GIRDER WEB CONSTRUCTION JOINT

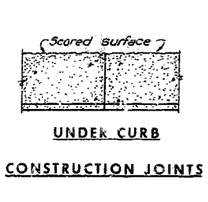


ANCHOR BOLT DETAIL



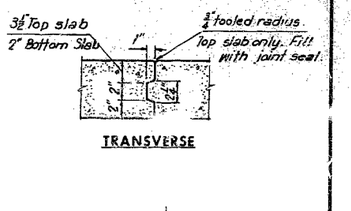
LONGITUDINAL

Note:- Const joint placed in center of girder.



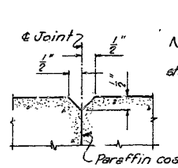
UNDER CURB

CONSTRUCTION JOINTS



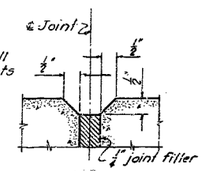
TRANSVERSE

Note:
All reinforcing shall stop 2" clear of joints.



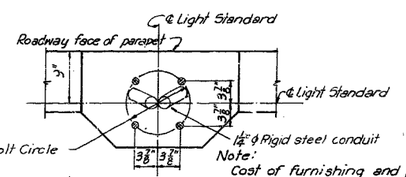
PARAPET ONLY

Note:
All reinforcing shall stop 2" clear of joints



AT CURB AND PARAPET

DEFLECTION JOINT DETAILS



Note:
Cost of furnishing and placing anchor bolts shall be included in price bid for other items of work.

ANCHOR BOLT SETTING PLAN

SUPERSTRUCTURE DETAILS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE RGP	DATE 6-1-60	TRACED	DATE
CHECKED JSH	DATE 6-17-60	SCALE	

NOTE: This drawing is not to scale. Follow dimensions.

FINISHED

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.

PROJECT NO. I-70-1(29) (RT. I-70)STA. 32+06.78, LANE C 152.97' LT.

JACKSON COUNTY

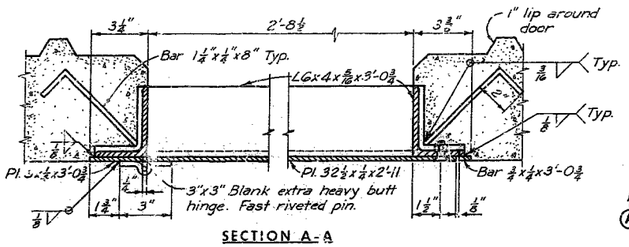
SHEET 7 OF 9

A-246

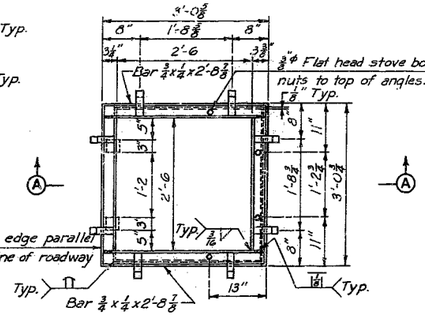
CONSTRUCTION JOINTS Deck joint

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DOC. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			36	
DIST. NO.	COUNTY		ROUTE	SEC.	
4					



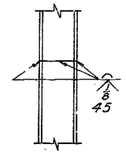
SECTION A-A



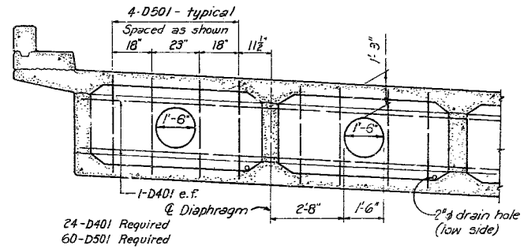
PLAN

Note:
Access Doors to be assembled and in place while slab is being poured.
Bottom surface of door to be flush with bottom of slab.
For painting see Special Provisions.
Payment for furnishing and placing access doors and frames shall be made and considered fully covered under price bid for Fabricated Structural Steel

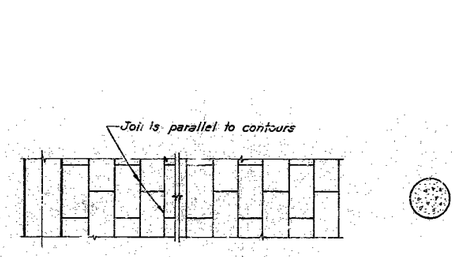
BOTTOM SLAB ACCESS DOOR DETAILS



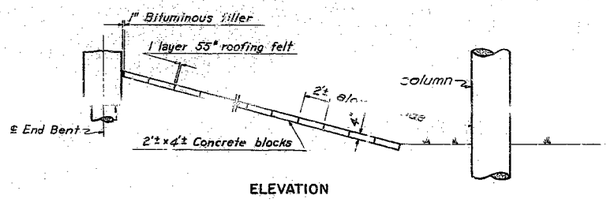
STEEL PILE SPLICE DETAIL



DIAPHRAGM DETAILS

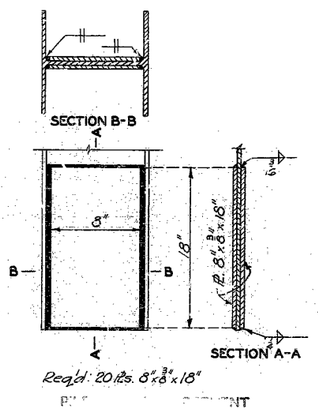


PLAN



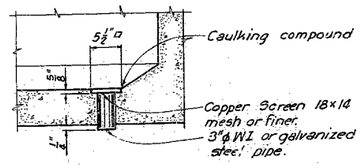
ELEVATION

SLOPE PROTECTION UNDER ENDS OF SUPERSTRUCTURE



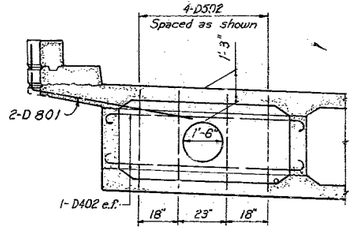
Reqd: 20 lbs. 8"x8"x18"

Note: Payment for furnishing plates and welding in position will be included in unit price bid for driving piles in place.

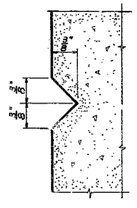


Note:
If galvanized steel pipe is used, the screen shall be aluminum.
Cost of furnishing and placing pipe, screen, and caulking compound shall be included in price bid for other items of work.

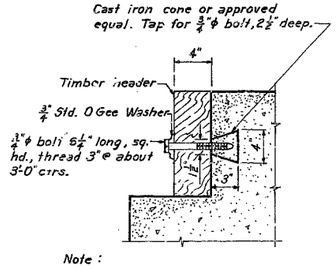
BOTTOM SLAB DRAIN



SPECIAL DIAPHRAGM

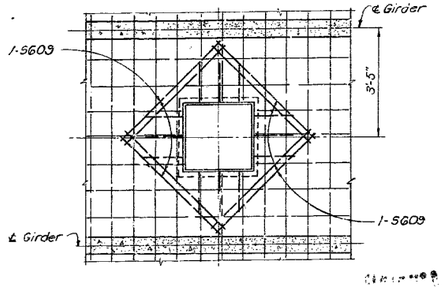


RUSTICATION DETAIL



Note:
Cost of timber headers, complete in place, to be included in price bid for concrete.

TIMBER HEADER DETAIL



REINFORCING AT ACCESS DOOR

MISCELLANEOUS DETAILS

322

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE RGP	DATE 5-23-60	TRACED	DATE
CHECKED JSH	DATE 6-10-60	SCALE	

NOTE: This drawing is not to scale. Follow dimensions.

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (RT. I-70) STA. 32+06.78, LANE C 152.97' LT.
JACKSON COUNTY

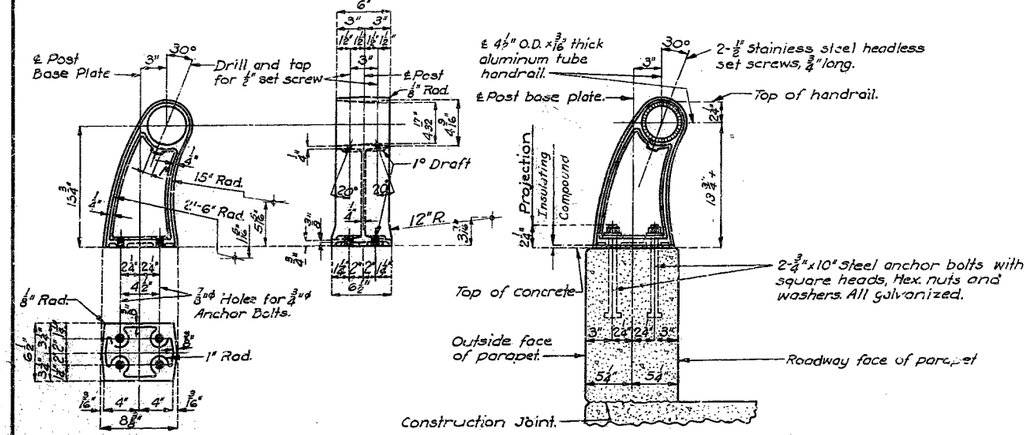
SHEET 8 OF 9

A-246

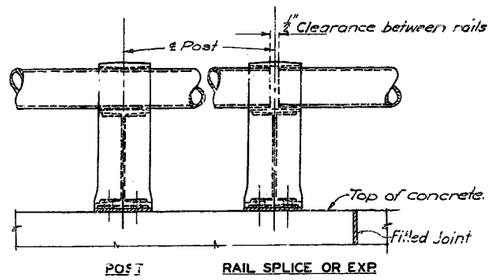
NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			32	
DIST. NO.	COUNTY			ROUTE	SEC.
4					



HANDRAIL POST — SECTION THRU HANDRAIL



TYPICAL HANDRAIL DETAILS

Note: All handrail posts shall be set normal to grade.

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet, except as shown at ends.

Aluminum washer shims between insulating compound and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be ⅛". Where more tilting of post is required for proper alignment, concrete bearing areas shall be ground down.

All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material. See Special Provisions.

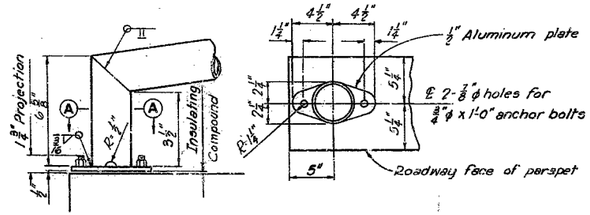
The contract unit price per linear foot of "Aluminum Alloy Handrail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.

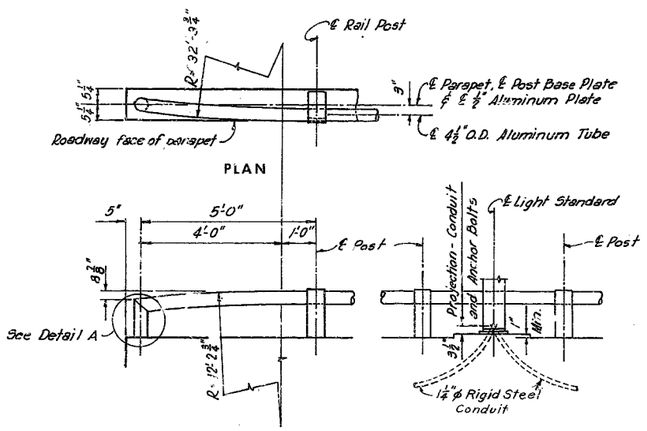
All fillets ¼" except as noted.

All drafts 3° except as noted.

Rails to be fabricated in two or three panel lengths unless otherwise approved. Omit set screw on side near filled joint in per.ect at all expansion posts.

SINGLE TUBE ALUMINUM RAILING





TREATMENT OF HANDRAIL

323

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE JFP	DATE 6-9-60	TRACED	DATE		
CHECKED JSH	DATE 6-10-60	SCALE			

NOTE: This drawing is not to scale. Follow dimensions.

FINISHED

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1 (29) (RT. I-70) STA. 32+06.78, LANE C 152.97' LT.

JACKSON COUNTY

HANDRAILS — SHEET 9 OF 9 — A-246

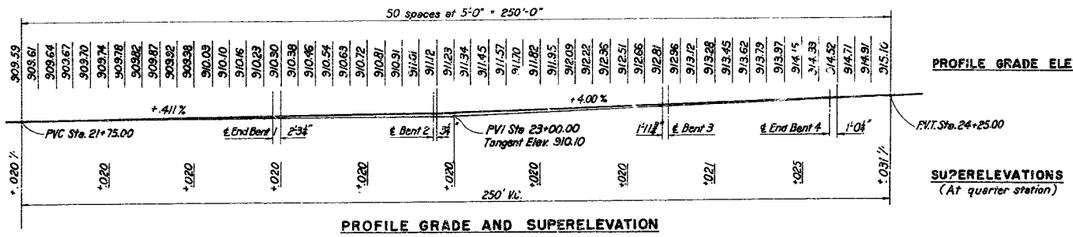
FINISHED

NO CONSTRUCTION CHANGES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FEDERAL PROJECT NO. & Sec.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	I-70-1(39)2		28	46
DIST. NO.	COUNTY		ROUTE	SEC.	
4	JACKSON		I-70		

FINAL PLANS

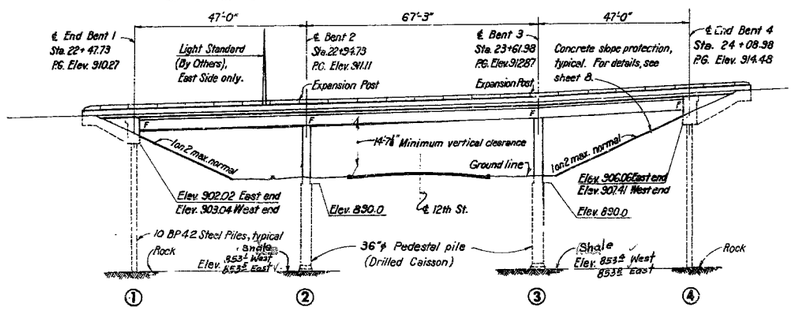


PROFILE GRADE ELEVATIONS

SUPERELEVATIONS (At quarter station)

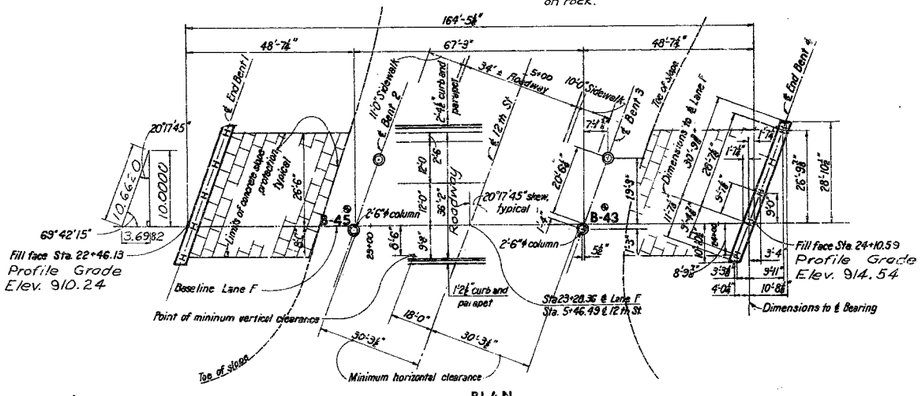
PROFILE GRADE AND SUPERELEVATION

47'-0"-67'-3"-47'-0" CONTINUOUS CONCRETE BOX GIRDER SPANS

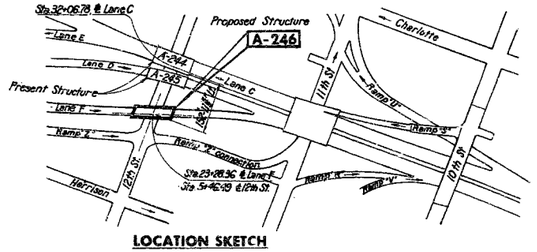


ELEVATION

Note: All loose, shelly or disintegrated rock removed and the pedestal piles placed on hard, solid, undisturbed rock. If soft rock or shale encountered, the pedestal piles carried at least 18" into and cast against vertical faces of same. Bearing of 21 ton per sq. ft. used in design of pedestal pile on rock.



PLAN



LOCATION SKETCH

NOTE: This drawing is not to scale. Follow dimensions.

FINAL PLANS QUANTITIES

ITEM	UNIT	SUB-STRUCTURE	SUPER-STRUCTURE	TOTAL
Class 1 Excavation for Structures	Cu. yd.	1100		1100
36"ϕ Drilled Caisson	Lin. ft.	146.2		146.2
10 BP 42 Steel Pile in Place (State Furnished)	Lin. ft.	458		458
Class B 1 Concrete	Cu. yd.		502.4	502.4
Reinforcing Steel	Lbs.	10,020	141,720	151,740
Fabricated Structural Steel	Lbs.		530	530
Aluminum Alloy Handrail	Lin. ft.		390	390
Conduit System	L.S.		1	1
Test Holes	Lin. ft.	34		34
Increased Cement Content	Cu. yd.	52.7		52.7

NOTE: Cement Content for Class "B" concrete for pedestal piles at Bent 3 and West Pedestal pile at Bent 2 increased 12½% due to underground streams.

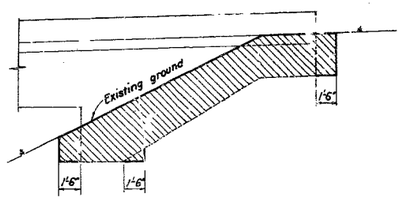
Quantity Notes:

All excavation for bridge will be paid for as Class 1 Excavation for Structures. Sketch below shows limits of excavation for pay purposes.

All concrete and reinforcement above top of pedestal piles are included in superstructure quantities.

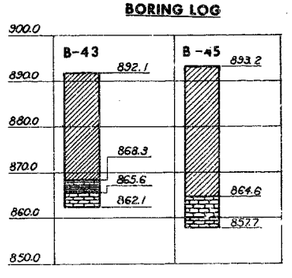
Reinforcement in pedestal pile is included in substructure quantities.

Pedestal piles constructed and paid for in accordance with Sect. 16-7 of Supplemental Specifications as "Drilled Caissons."

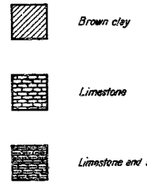


LIMITS OF EXCAVATION

BORING LOG



Notes: Boring log locations are noted thus: ⊕ B-45
Elevation shown at top of boring is top of ground.



BORING LEGEND

Bench Mark
B.M. #1 - "X" on South bolt, top hydrant, NW corner 12th and Charlotte St. Elev. 888.18.

FINISHED

GENERAL PLAN AND ELEVATION SHEET 1A of 2

GENERAL NOTES

Design Specifications: A. A. S. H. O. 1957 with tentative revisions for 1958 and 1959.

Design Loading: H 20-S16-44 and alternate loading designated in P.R.M. 20-4 Sec. 4c. 15#/sq. ft. future wearing surface.

Concrete: Concrete stress: Class B 1 f'c = 1,600 psi
Class B f'c = 1200 psi

Concrete for superstructure shall be Class B 1 air-entrained. Concrete for pedestal piles and substructure shall be Class 'B' air-entrained.

All forms are removed from the interior of box girders except as indicated in Special Provisions for top slab.

Reinforcing Steel: Allowable stress 20,000 psi. All splices in reinforcing steel 32 bar diameters.

Bar sizes are designated on the plans by numbers. The first digit after the letter in three digit marks and the first two digits after the letter in four digit marks indicate the size of the bar.

Dimensions shown on the plans from the reinforcing steel to outside edge of concrete are all clear dimensions.

All bending dimensions are from out to out of bars.

Waterproofing: Superstructure deck waterproofed. See Special Provisions.

Utilities: All utilities, unless shown otherwise, removed or relocated by Others. The Contractor will notify the owner of the utilities of his work schedule sufficiently in advance to allow time for the disposition of utilities.

Shipping: Permits obtained for all truck loads over legal length.

Joint Filler: Where joint filler is specified on the plans it conform with the requirements for grey rubber compound joints as given in Section 5392B of the Standard Specifications.

Aluminum Alloy Handrail: See Special Provisions

Serrating Specified Construction Joints: See Special Provisions.

Traffic: 12th Street remain open to traffic during construction. Falsework over 12th Street constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions).

Piling: All piles conform with details and notes on Sheet No. 8. All piles required for this structure furnished by the State. (See Special Provisions). All piles driven to or into solid rock, boulders, shale or cemented gravel or to not less than full length authorized, and to sustain a load of at least 5 tons per pile for 10 BP 42. All piles driven with a steam hammer. See Section 22-9C of Standard Specifications for required painting of steel piles.

Traffic: 12th Street remain open to traffic during construction. Falsework over 12th Street constructed with a minimum vertical clearance of not less than 12'-0" and a minimum lateral clearance of not less than 28'-0". (See Special Provisions.)

Qualifications of welding operators required.

SUBMITTED BY: K. D. Pogerdoff FINISHED
REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-253

BRIDGE LANE F OVER 12TH STREET

CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.
PROJECT NO. I-70-1(39)2 (RT. I-70) STA. 32+06.78, LANE C
JACKSON COUNTY STA. 22+46.13 LANE F 152.97' LT.

FINISHED SUBMITTED BY Roe F. Beckett BRIDGE ENGINEER DATE 10-11-60 STD C110 R7
APPROVED BY Roe M. McNeal CHIEF ENGINEER DATE 10-11-60 A-246

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE JSH	DATE 5-27-60	TRACED	DATE
CHECKED JFD	DATE 9-8-60	SCALE	

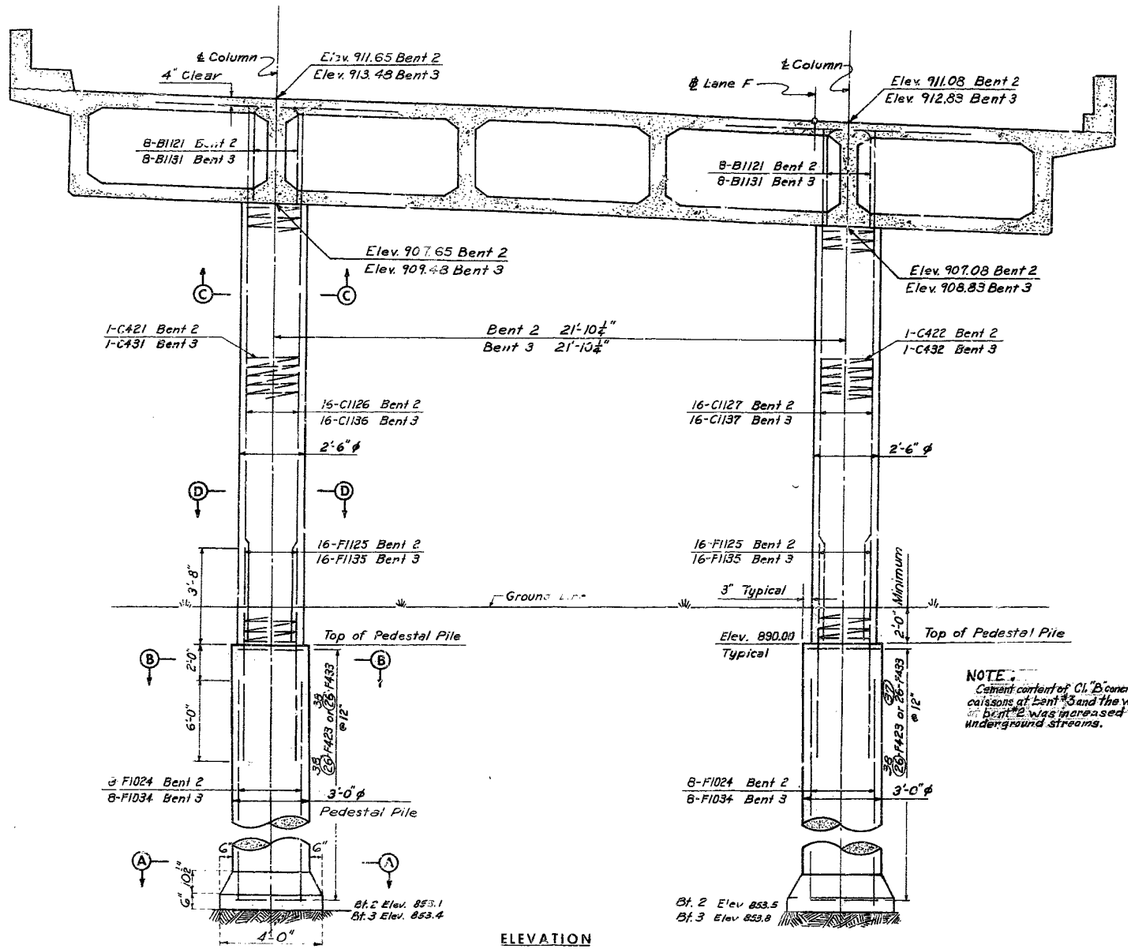
324

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

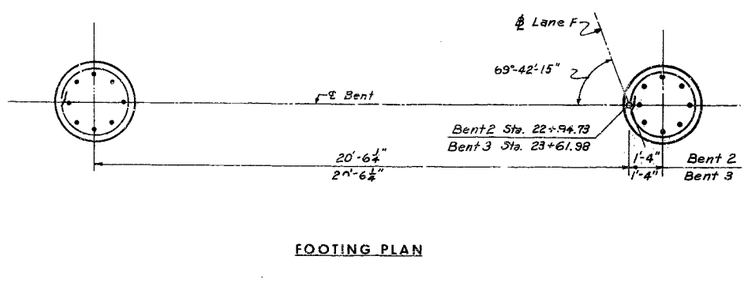
FED. ROAD DIV. NO.	STATE	FEDERAL PROJECT NO. & SEC.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	I-70-1(39)2		3046	
DIST. NO.	COUNTY			ROUTE	SEC.
4	JACKSON			I-70	

FINAL PLANS

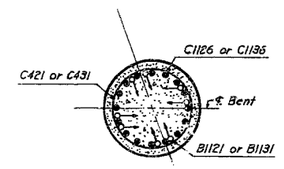


ELEVATION

NOTE:
Cement content of Cl. "B" concrete for drilled caissons at bent #3 and the west caisson at bent #2 was increased 15% due to underground streams.

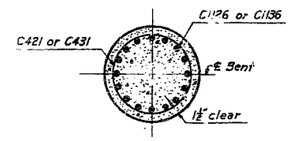


FOOTING PLAN

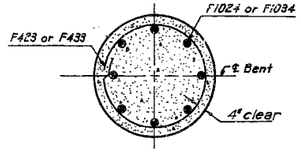


SECTION C C

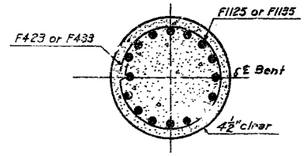
Note: Arrows show direction of B1121 or B1131 bars.



SECTION D-D



SECTION A-A



SECTION B-B

325

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

MADE RIA-RGD	DATE 5-13-60	TRACED	DATE
CHECKED E.O.A	DATE 6-14-60	SCALE	

NOTE: This drawing is not to scale. Follow dimensions.

FINISHED

FINISHED

BRIDGE: LANE F OVER 12TH STREET
CROSSTOWN FREEWAY 14th ST. INTERCHANGE
KANSAS CITY, MO.

PROJECT NO. I-70 1 (39)2 (RT. I-70) STA. 32+06.78, LANE C 152.97' LT. STA. 22+46.13 LANE F

JACKSON COUNTY

BENTS 2 AND 3

SHEET 3A of 2

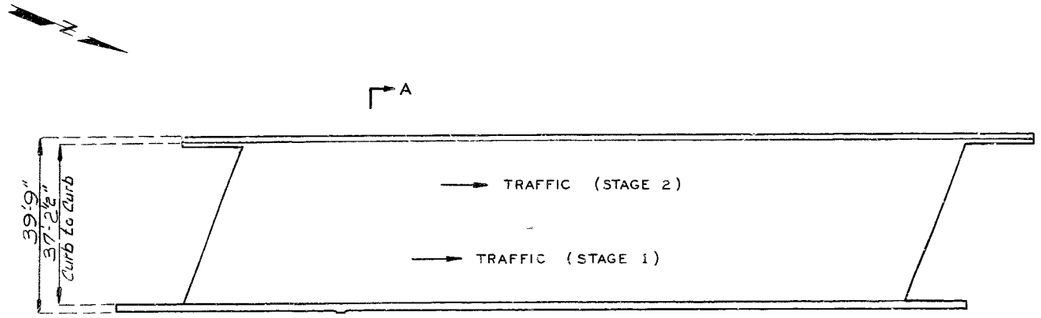
FINISHED

A-246

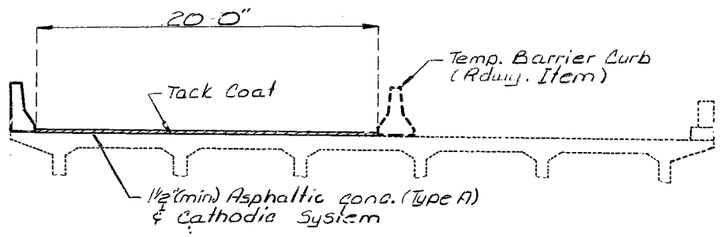
FINAL PLANS

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

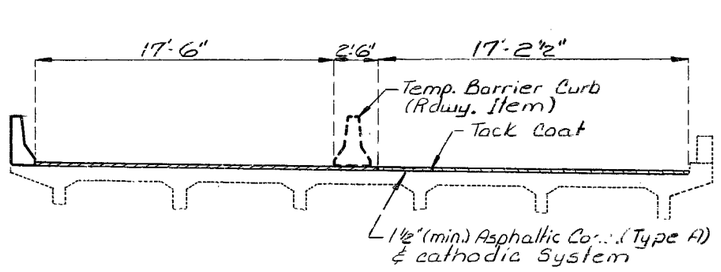
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	9	
SEC./SUR. 5		TWP. 49N		RGE. 33W	



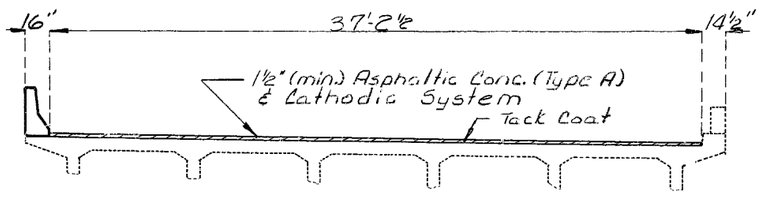
PLAN



SECTION A-A (STAGE 1)

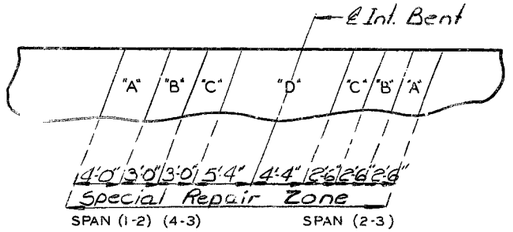


SECTION A-A (STAGE 2)



SECTION A-A (FINAL STAGE)

Note: For details of Cathodic Deck Protection see sheet No. 4.

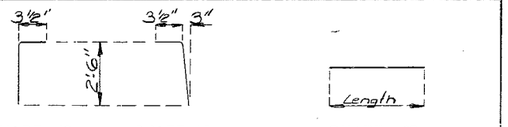


PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Note: Care shall be exercised during deck repair to maintain structural integrity of bridge.
Sequence for Repair: Zone "A", Zone "B", then Zone "C"
Repair zones at one bent with the same letter designation may be repaired at the same time.
Any repair in the remainder of the bridge that is within 2'-6" of adjacent Zone "A" shall be completed before removing old concrete in Zones "A".

BILL OF REINFORCING STEEL

	NO. REQD.	SIZE & MARK	LOCATION	SHAPE	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT (Lbs.)
	210	5-R1	Barrier Curb	19s	2'-10"	2'-8"	584
	210	5-R2		15s	2'-10"	2'-9"	602
	16	5-R3		20	5'-0"	5'-0"	83
	1	5-R4			18'-1"	18'-1"	19
	2	5-R5			14'-9"	14'-9"	31
	3	5-R6			18'-4"	18'-4"	57
	1	5-R7			16'-7"	16'-7"	17
	1	5-R8			20'-1"	20'-1"	21
	2	5-R9			16'-9"	16'-9"	35
	3	5-R10			20'-4"	20'-4"	64
	1	5-R11			18'-7"	18'-7"	19
*	30	5-R12			9'-9"	9'-9"	305
	7	5-R13			34'-8"	34'-8"	253
	7	5-R14			47'-0"	47'-0"	343
	7	5-R15	Barrier Curb	20	35'-2"	35'-2"	257



Notes: All reinforcement shall be epoxy coated.
Reinforcement shall meet specifications of C.R.S.I.

* 2 additional "5-R12 are included in the bar bill for testing.

Actual lengths are measured along centerline bar to the nearest inch. Nominal lengths are based on out to out dimensions.

s - stirrup bend

GENERAL NOTES:

Design Specifications: A.A.S.H.T.O.-1977 & interims thru '83

Design Loading: H520-44
Modified 24,000 # tandem axle

Design Unit Stresses:
Class B1 concrete (Safety Barrier Curb) f'_c = 4,000 p.s.i.
Reinforcing Steel (Grade 60) fy = 60,000 p.s.i.

All joint filler shall meet the requirement of Std. Spec. 1057.2.4 except as noted.
Minimum clearance to reinforcing steel shall be 1½" unless otherwise shown.
Traffic over structure to be maintained during construction.
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.
Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars.
Holes for ¾"ø anchor bar may be slanted slightly to miss slab reinforcement.
See Special Provisions for removal and storage of Handrail and Posts from west parapet.

Construction Clearance: Falsework over existing lanes shall be constructed with a minimum vertical clearance of 13'-6" from crown of existing lanes, and a minimum lateral clearance of 32'-0" centered on existing lanes.

ESTIMATED QUANTITIES

ITEM		TOTAL
Special Work	Lump Sum	1
Asphalt Cement (Asph. Conc.) (60-70 or AC-20)	Ton	2.8
Mineral Aggregate (Asph. Conc.) (Type A Mix)	Ton	53
Tack-Coat ①	Gal.	40
Safety Barrier Curb	Lin Ft.	197
Repairing Conc. Deck (Half Soling)	Sq. Ft.	2448
Full Depth Repair	Sq. Ft.	306
Deck overhang Repair	Lin. Ft.	20
Cathodic Deck Protection		

① Tack-Coat shall be emulsified asphalt applied at a rate of .05 gallons per square yard.

B.M. No. 1 - "X" on south bolt, top hydrant, N.W. corner 12th and Charlotte St. Elev 888.18

BRIDGE: LANE "F" OVER 12TH STREET

STATE ROAD: INTERSTATE 35
IN KANSAS CITY

PROJECT NO. I-1R-35-1(144) **STA.** 22+46.13

JOB NO. 4-1-35-448 **RTE.** I-35

JACKSON **COUNTY**

DATE

STD.
STD. 706.35
A-246R

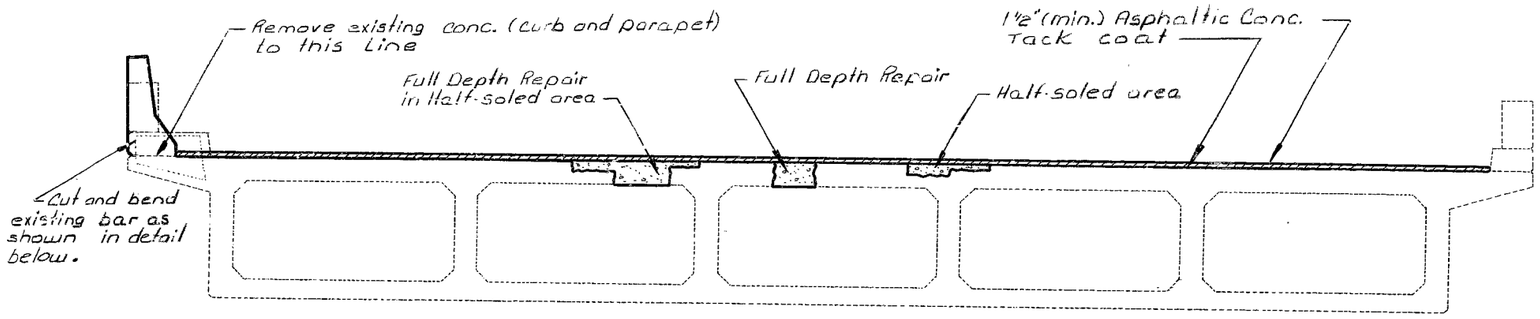
DETAILED APR. 1984
CHECKED Apr. 1984

Note: This drawing is not to scale. Follow dimensions.

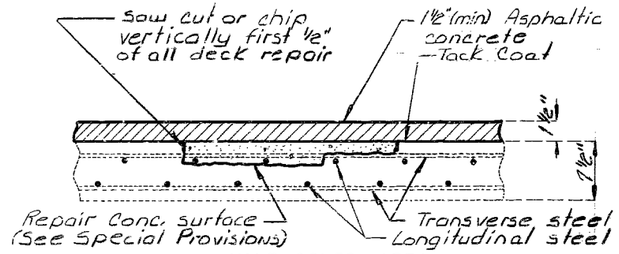
Sheet No. 1 of 5.

97

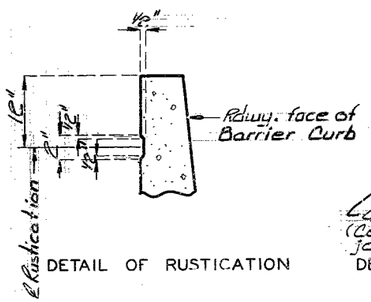
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TAL SHEETS
5	MO.		19	10	



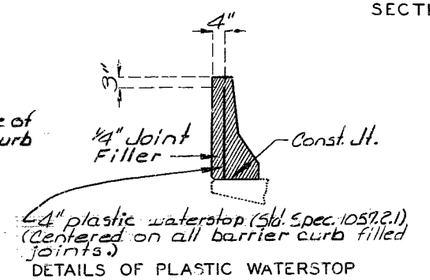
SECTION THRU SLAB



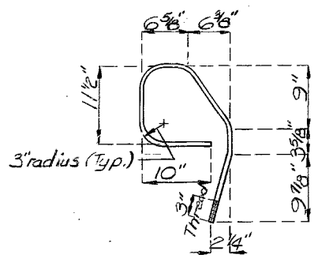
HALF-SOLED AREA



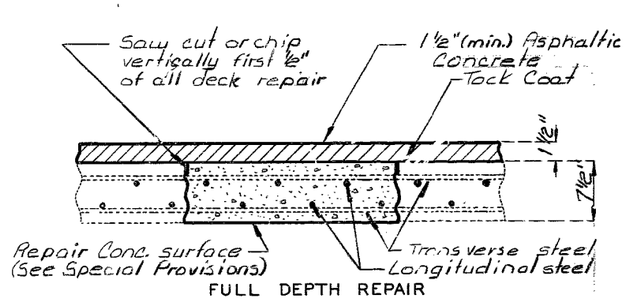
DETAIL OF RUSTICATION



DETAILS OF PLASTIC WATERSTOP

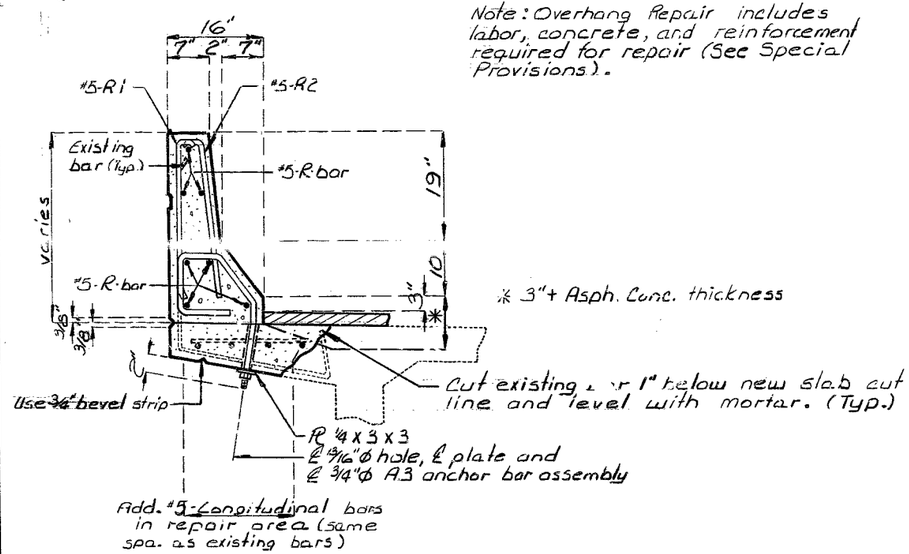


A3 - ANCHOR BAR DETAIL.



FULL DEPTH REPAIR

Note: Overhang Repair includes labor, concrete, and reinforcement required for repair (See Special Provisions).



CURB AND DECK OVERHANG REPAIR

* 3" + Asph. Conc. thickness

Note: Each A3-anchor bar (A.S.T.M. A-36) shall be furnished with a ¼ X 3 X 3 R (A.S.T.M. A-36) and one heavy hex. nut (A.S.T.M. A-307).

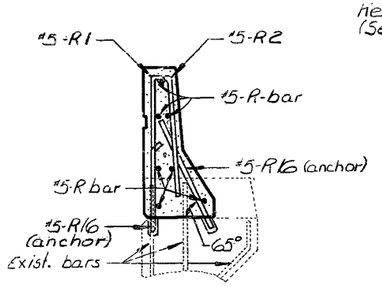
Anchor bars shall be epoxy coated, the threaded area of the anchor bars, ¼" plates (including areas in contact with concrete) and nuts shall be cleaned and painted with system C inorganic zinc prime coat.

After the concrete in the barrier curb has set, the plate and nut shall be installed and the nut tightened snug tight and the threads burred.

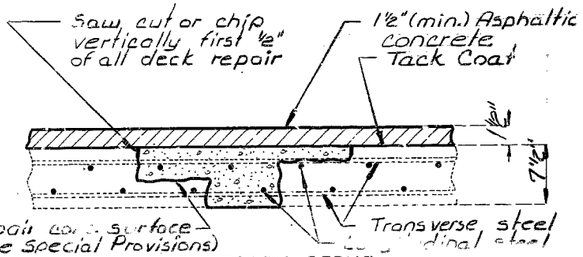
Cost of furnishing and installing anchor bar assemblies shall be included in the price bid per lin. ft. of Barrier Curb.

For details and location of ¾" ϕ anchor bar assemblies see sheet No. 3.

Note: For location of Section B-B see sheet No. 3.



SECTION B-B
(Optional anchoring System)



FULL DEPTH REPAIR
IN HALF-SOLED AREA

Note: The contractor shall use one of the following anchor systems at End Bt. Wings.

1. Molly Parabond Capsule Anchors
2. Hilti HVA Adhesive Anchor
3. Sup-R-Set Synthetic Resin Capsule Anchor

These anchor systems shall be installed according to the manufactures specifications, ~~except that an epoxy coated ⅝ dia Gr 60 Rein. bar (R16) 2'6" long shall be substituted for the threaded rod stud.~~

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DETAILED APR. 1984
CHECKED Apr. 1984

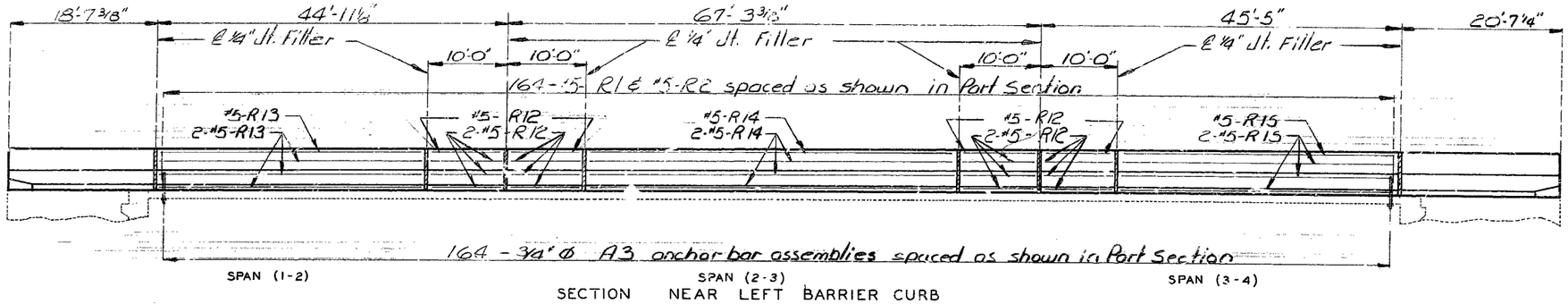
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 5.

JACKSON COUNTY

A-246 R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	NO.		19	11	



SECTION NEAR LEFT BARRIER CURB

Note: Use a minimum lap of 17" for #5 horizontal barrier curb bars.

Note: Rustication not shown for clarity. Longitudinal dimensions are along top of Barrier Curb parallel to grade.

* 3"+ asphaltic concrete thickness

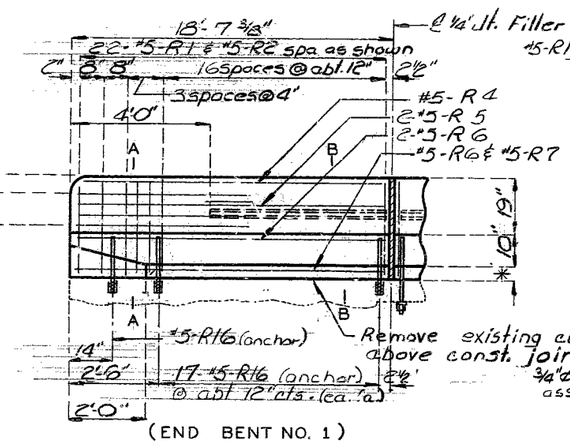
Note: For optional Anchoring System see sheet No. 2.

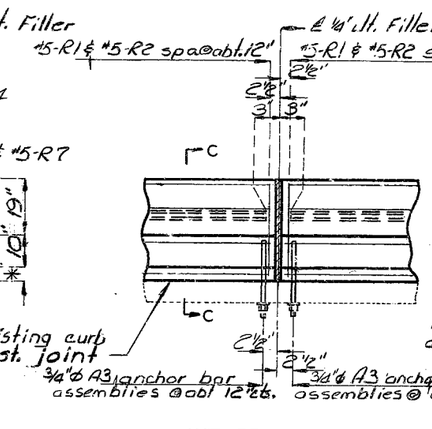
Note: Top of Barrier Curb to be built parallel to grade with barrier curb joints (except at end bents) normal to grade.

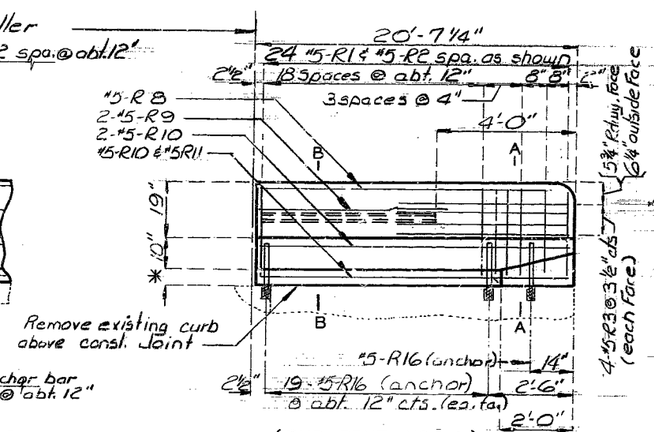
All exposed edges of barrier curb shall have 1/2" radius or 3/8" bevel unless otherwise noted.

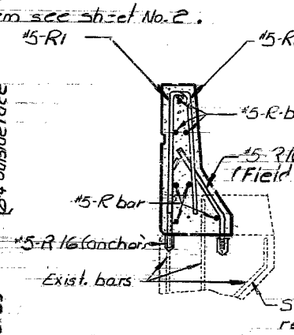
When the barrier curb is bid by linear feet the contract unit price shall include the cost of concrete and reinforcement including Anchor Bars complete in place.

Measurement of Safety barrier curb is to the nearest linear foot for each structure, measured along the outside top face of the curb from end of wing to end of wing

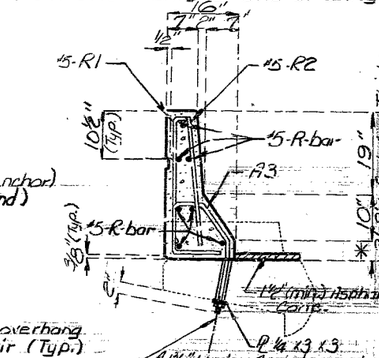




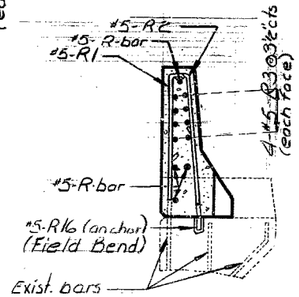




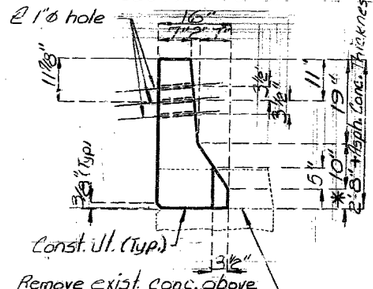
SECTION B-B



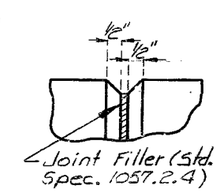
SECTION C-C



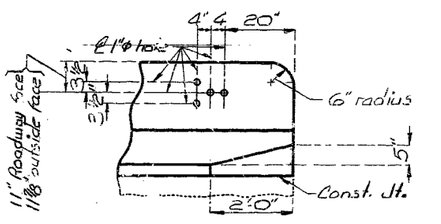
SECTION A-A



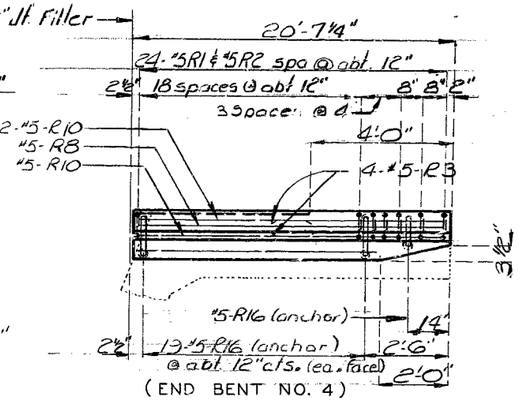
END ELEVATION - BARRIER CURB



FILLED JOINT DETAIL



DETAILS OF GUARD RAIL ATTACHMENT



(END BENT NO. 1)

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DETAILS OF BARRIER CURB

DETAILED Apr. 16 84
CHECKED Apr. 19 84

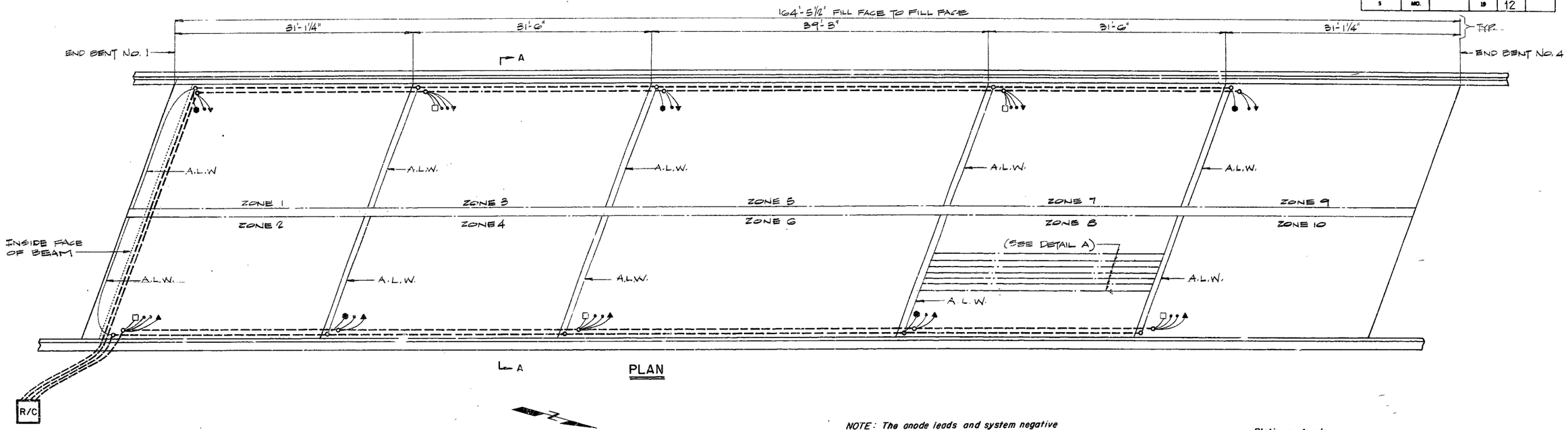
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 5.

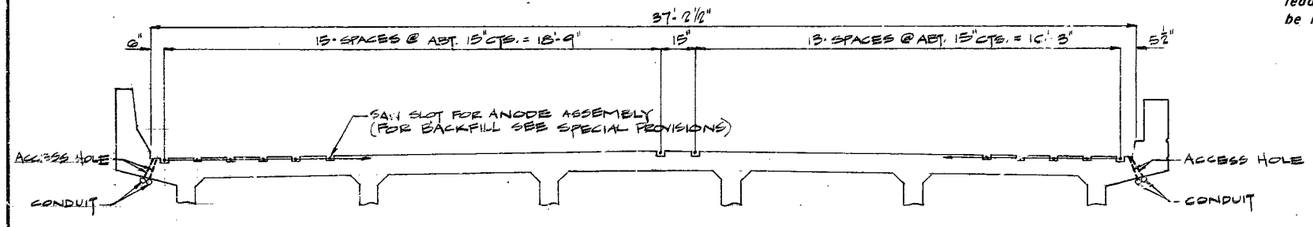
JACKSON COUNTY

A-246R

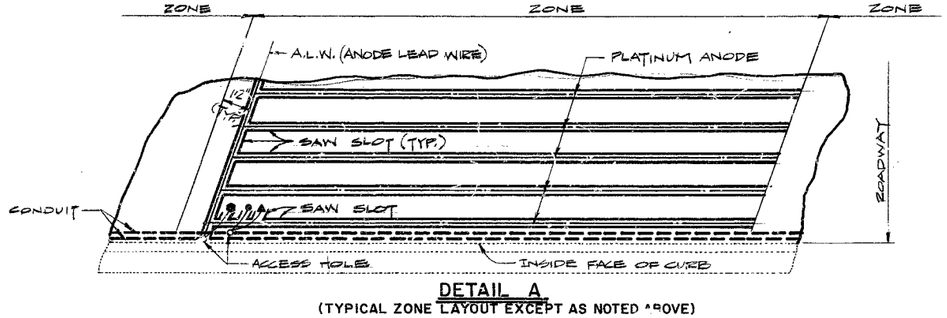
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	12	



PLAN



SECTION A-A



DETAIL A

(TYPICAL ZONE LAYOUT EXCEPT AS NOTED ABOVE)

NOTE: The anode leads and system negative return leads shall be routed in the same conduit.

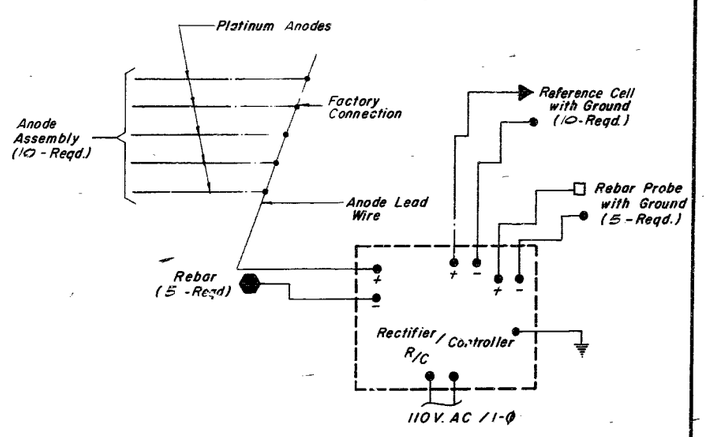
The reference cell, reference cell ground leads, rebar probe and probe ground leads shall be routed in the same conduit.

NOTE: Reference cells are to be placed between anodes.

Reference cell ground shall be welded to top rebar within one foot of reference cell.

All zones are similar with varying widths (see Section A-A).

Anode assembly number must match zone number.



PARTIAL SCHEMATIC

ESTIMATED QUANTITIES *		
ITEM	UNIT	QUANTITY
Anode Strands	Lin. Ft.	4785
Reference Cells	Each	10
Rebar Probes	Each	5
Cadwelds	Each	20
Conduit 2" ø PVC	Lin. Ft.	775

* For information only.

NOTE: ANODE STRANDS AND CONDUIT LENGTHS ARE APPROXIMATE. ACTUAL LENGTHS ARE THE RESPONSIBILITY OF CONTRACTOR.

DENOTATIONS

- A.L.W. Anode Lead Wire
- Platinum Anode
- System Negatives Connection
- Reference Cell
- Rebar Probe (Corrosometer)
- Grounds
- Conduit

CATHODIC PROTECTION SYSTEM

JACKSON COUNTY

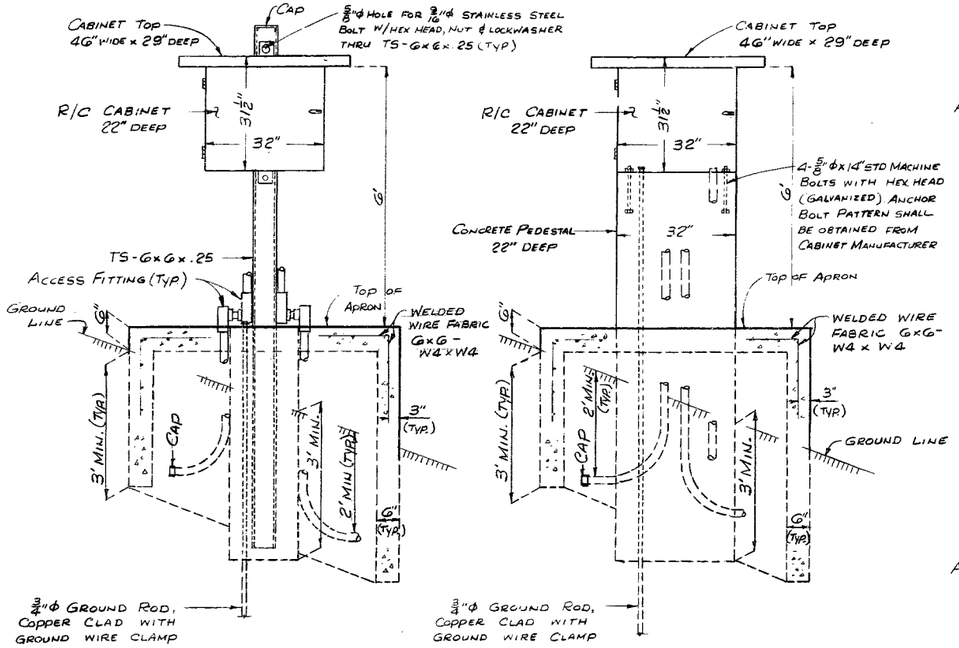
A-246R

DETAILED MAY 1984
CHECKED MAY 1984

Note: This drawing is not to scale. Follow dimensions.

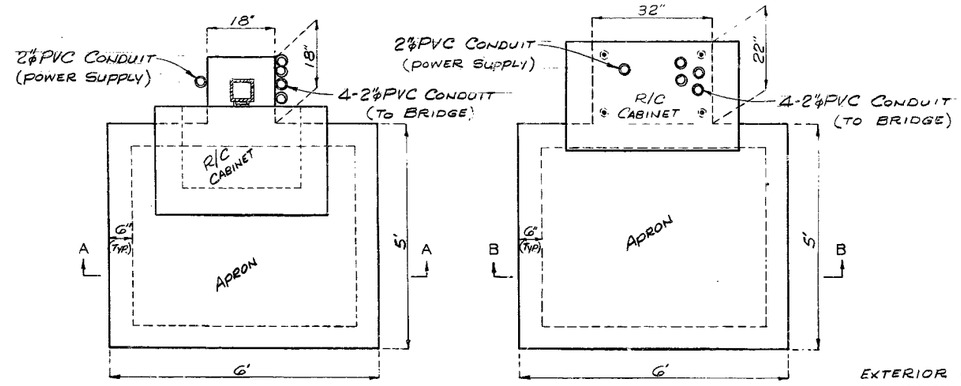
Sheet No. 4 of 5.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	13	



SECTION A-A

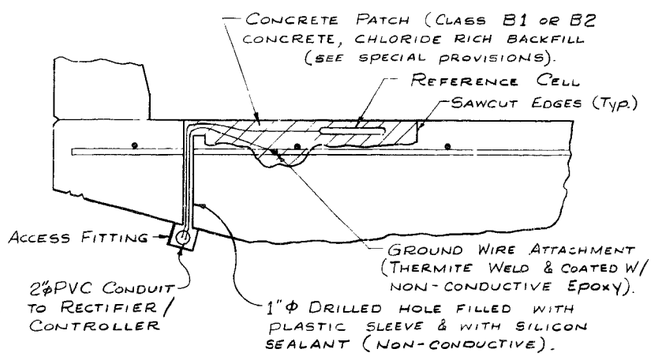
SECTION B-B



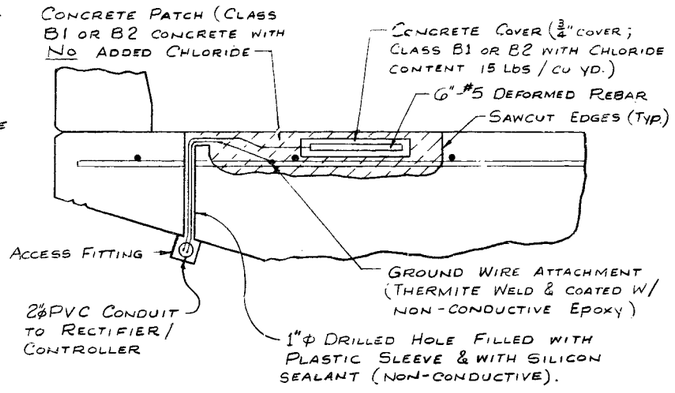
PLAN OPTION "A"

PLAN OPTION "B"

NOTE: THE ¾"ϕ GROUND ROD SHALL BE SUFFICIENT LENGTH TO EXTEND A MINIMUM OF 10' BELOW BOTTOM OF CONCRETE PEDESTAL. GROUND WIRE SHALL BE No. 6 AWG MINIMUM.
KNOCKOUTS OR DRILLED HOLES SHALL BE PROVIDED IN CABINETS FOR ALL CONDUIT. LOCATIONS OF SUCH ARE THE RESPONSIBILITY OF THE CONTRACTOR AND CABINET MANUFACTURER.

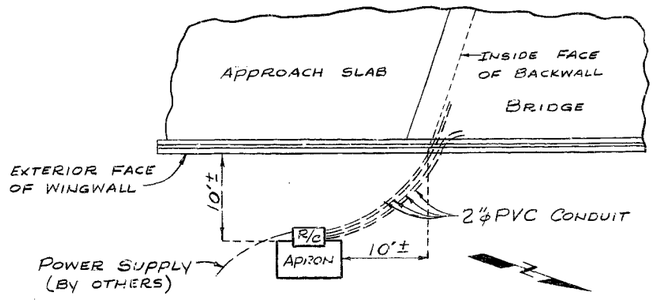


REFERENCE CELL DETAILS

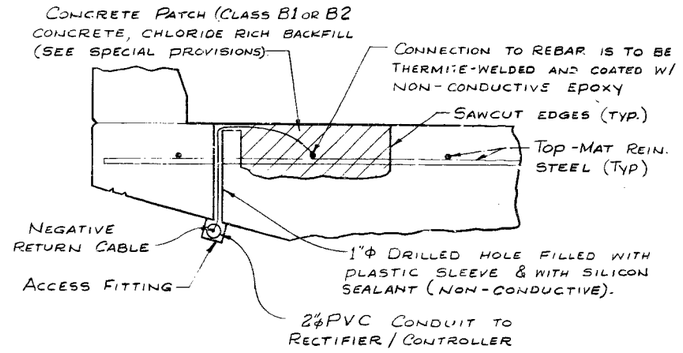


REBAR PROBE DETAILS

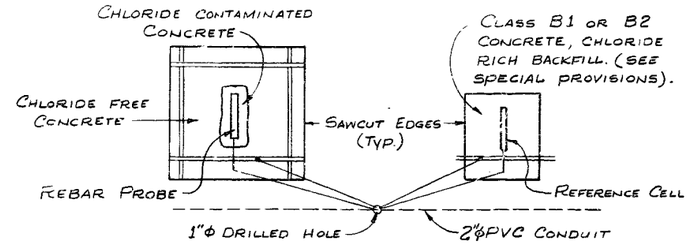
NOTE: CURBS SHOWN ARE ON WEST SIDE OF BRIDGE. CURBS ON EAST SIDE ARE SIMILIAR.



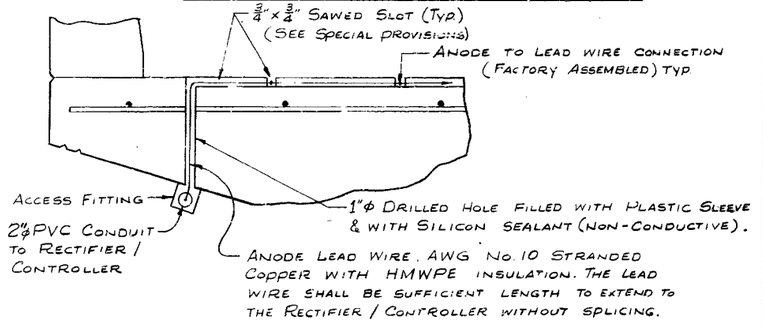
PLAN LOCATION OF RECTIFIER/CONTROLLER



SYSTEM NEGATIVES CONNECTION DETAIL.



PLAN OF REBAR PROBE AND REFERENCE CELL



ANODE LEAD WIRE DETAIL

NOTES: CONDUIT SHALL BE SCHEDULE 40 HEAVY WALL PVC (POLYVINYL CHLORIDE PLASTIC).
CONDUIT SHALL BE SECURED TO CONCRETE WITH CLAMPS @ ABT. 5' CENTERS.
WEEP HOLES SHALL BE PROVIDED AT APPROPRIATE LOCATIONS TO DRAIN ANY MOISTURE IN THE CONDUIT LINES.
THE LOCATION AND DIRECTION OF CONDUIT MAY BE SHIFTED TO MEET FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
USE EXPANSION COUPLINGS AND ACCESS FITTINGS WHERE APPROPRIATE.

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DETAILED MAY 1984
CHECKED MAY 1984

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 5 of 5.

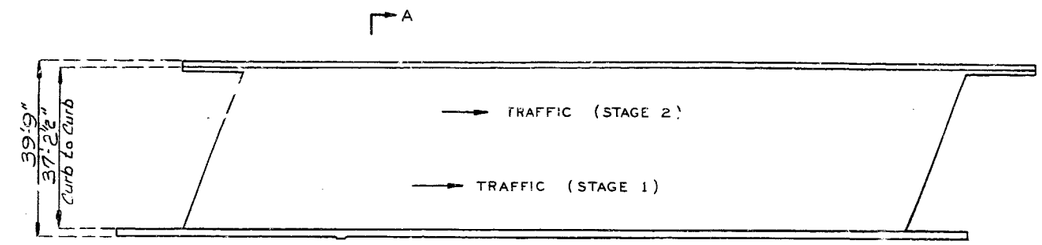
JACKSON COUNTY

A-246R

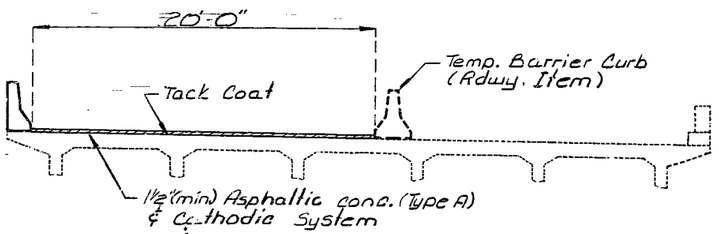
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	9	
SEC./SUR. 5	TWP. 49 N	RGE. 33 W			

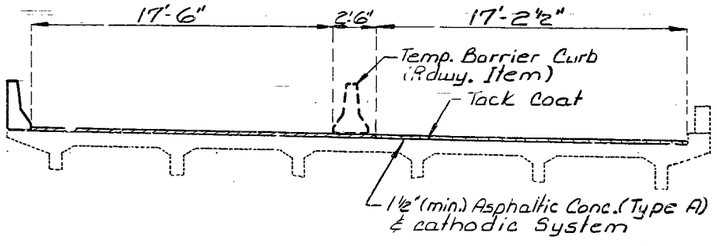
FINAL PLANS



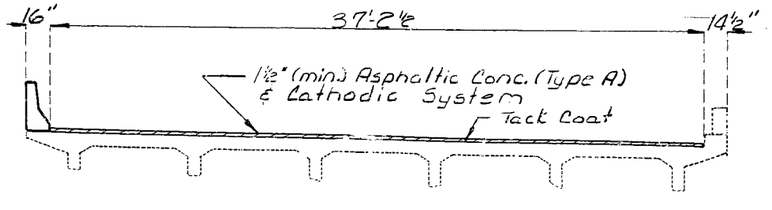
PLAN



SECTION A-A (STAGE 1)

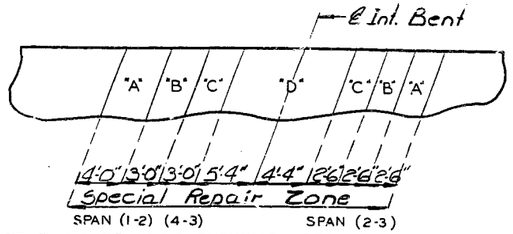


SECTION A-A (STAGE 2)



SECTION A-A (FINAL STAGE)

Note: For details of Cathodic Deck Protection see sheet No. 4.

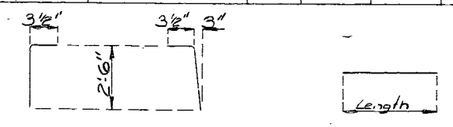


PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Note: Care shall be exercised during deck repair to maintain structural integrity of bridge.
Sequence for Repair: Zone "A", Zone "B", then Zone "C".
Repair zones at one bent with the same letter designation may be repaired at the same time.
Any repair in the remainder of the bridge that is within 2'-6" of adjacent Zone "A" shall be completed before removing old concrete in Zones "A".

BILL OF REINFORCING STEEL

NO. REQD.	SIZE & MARK	LOCATION	SHAPE	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT (LBS.)
210	5-R1	Barrier Curb	19s	2'-10"	2'-8"	584
210	5-R2		15s	2'-10"	2'-9"	602
16	5-R3		20	5'-0"	5'-0"	83
1	5-R4			18'-1"	18'-1"	19
2	5-R5			14'-9"	14'-9"	31
3	5-R6			18'-4"	18'-4"	57
1	5-R7			16'-7"	16'-7"	17
1	5-R8			20'-1"	20'-1"	21
2	5-R9			16'-9"	16'-9"	35
3	5-R10			20'-4"	20'-4"	64
1	5-R11			18'-7"	18'-7"	19
* 30	5-R12			9'-9"	9'-9"	305
7	5-R13			34'-8"	34'-8"	253
7	5-R14			47'-0"	47'-0"	343
7	5-R15	Barrier Curb	20	35'-2"	35'-2"	257



Notes: All reinforcement shall be epoxy coated. Reinforcement shall meet specifications of C.R.S.I.

* 2 additional "5-R12 are included in the bar bill for testing.

Actual lengths are measured along centerline bar to the nearest inch. Nominal lengths are based on out to out dimensions.

s - stirrup bend

GENERAL NOTES:

Design Specifications: A.A.S.H.T.O.-1977 & interims thru '83

Design Loading: H520-44
Modified 24,000 # tandem axle

Design Unit Stresses:
Class B1 concrete (Safety Barrier Curb) f'c = 4,000 p.s.i.
Reinforcing Steel (Grade 60) fy = 60,000 p.s.i.

All joint filler shall meet the requirement of Std. Spec. 1057.2.4 except as noted.
Minimum clearance to reinforcing steel shall be 1½" unless otherwise shown.
Traffic over structure to be maintained during construction.
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.
Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars.
Holes for ¾"Ø anchor bar may be slanted slightly to miss slab reinforcement.
See Special Provisions for removal and storage of Handrail and Posts from west parapet.

Construction Clearance: Falsework over existing lanes shall be constructed with a minimum vertical clearance of 13'-6" from crown of existing lanes and a minimum lateral clearance of 32'-0" centered on existing lanes.

ESTIMATED QUANTITIES

ITEM		TOTAL
Special Work	Lump Sum	1
Asphalt Cement (Asph. Conc.) (60-70 or AC-20)	Ton	2.8
Mineral Aggregate (Asph. Conc.) (Type A Mix)	Ton	56
Tack Coat ①	Gal.	40
Safety Barrier Curb	Lin.Ft.	197
Repairing Conc. Deck (Half Soling)	Sq. Ft.	2259
Full Depth Repair	Sq. Ft.	0
Brick overhang Repair	Lin.Ft.	18
Cathodic Deck Protection	Lump Sum	1

① Tack Coat shall be emulsified asphalt applied at a rate of .05 gallons per square yard.

B.M. No. 1 - "X" on south bolt, top hydrant, N.W. corner 12th and Charlotte St. Elev 883.18

BRIDGE: LANE "F" OVER 12 TH STREET

STATE ROAD: INTERSTATE 35

IN KANSAS CITY

PROJECT NO. I-IR-35-1(144) **STA.** 22+46.13

JOB NO. 4-1-35-448 **RTE.** I-35

JACKSON **COUNTY**

DATE

STD.
STD. 706.35
A-246R

98

DETAILED APR. 1984
CHECKED Apr. 1984

Note: This drawing is not to scale. Follow dimensions.

SEC/SUR 5 TWP 49N RGE 33W

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

U.I.P. AND REHAB EXISTING (47'- 67'-3" - 47') CONTINUOUS CONCRETE BOX GIRDER SPANS

General Notes:

Design Specifications:

2002 - AASHTO 17th Edition
Bridge Deck Rating = 5

Design Unit Stresses:

Class B-1 Concrete (Curb Blockout)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi

Joint Filler:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.

Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge overlay (Roadway Item).

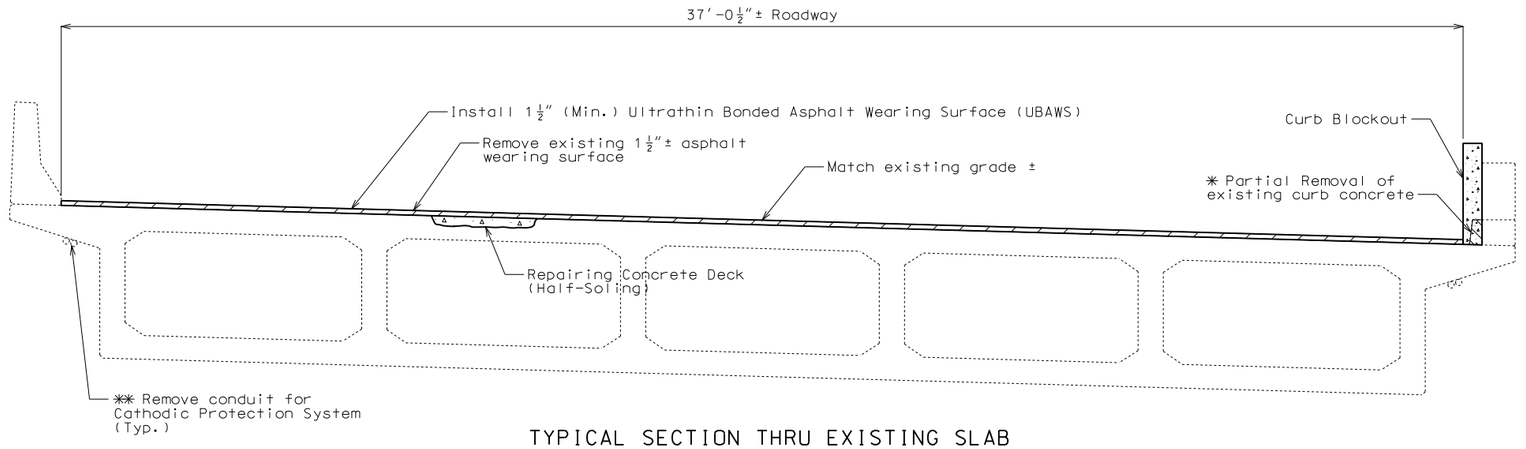
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. The cost of furnishing and installing the overlay will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of overlay.

Traffic Handling:

Structure to be closed during construction.



✳✳ Grout fill existing access holes.

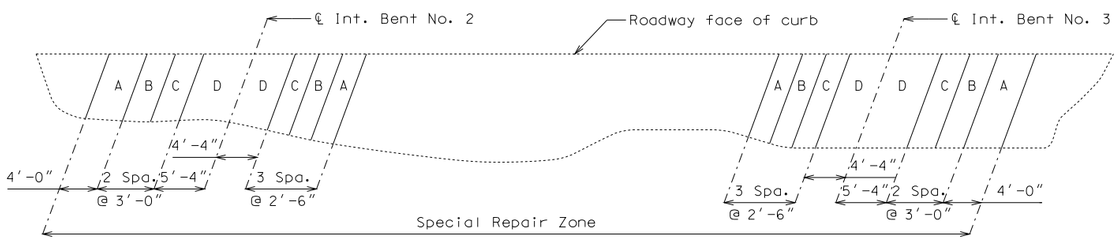
TYPICAL SECTION THRU EXISTING SLAB

Sequence of Construction:
1) Remove existing asphalt wearing surface.
2) Leave-in-place existing cathodic protection system in the top slab of box girder except in areas of new half-sole deck repairs.
3) Make half-sole deck repairs.
4) Install new asphalt wearing surface.

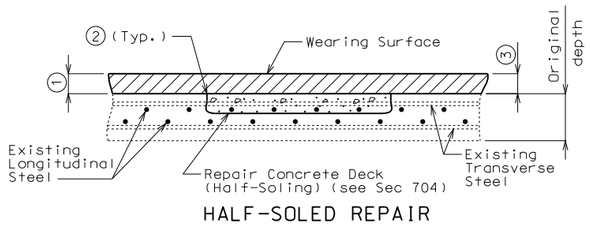
✳ Cost of partial removal of existing curb concrete will be considered completely covered by the contract unit price for Curb Blockout.

Estimated Quantities

Item		Total
Removal of Asphalt Wearing Surface	sq. foot	6203
Removal of Cathodic Protection System Conduit	lump sum	1
Ultrathin Bonded Asphalt Wearing Surface Type A, B or C	sq. yard	689
Curb Blockout	linear foot	195
Repairing Concrete Deck (Half Soling)	sq. foot	1200



PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES



HALF-SOLED REPAIR

① Remove existing wearing surface.

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ 1½" (min.) UBAWS.

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bents, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

REPAIRS TO BRIDGE: RAMP I-670 EB TO I-35 NB OVER 12TH STREET

STATE ROAD FROM RTE. 71 TO THE STATE LINE

IN KANSAS CITY

STA. 22+46.13± (Match Existing)

STD. 617.10
STD. 706.35

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
MICHELE ANN ATKINSON
NUMBER PE-026610
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2012

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	1

COUNTY JACKSON

JOB NO. J4I3014

CONTRACT ID.

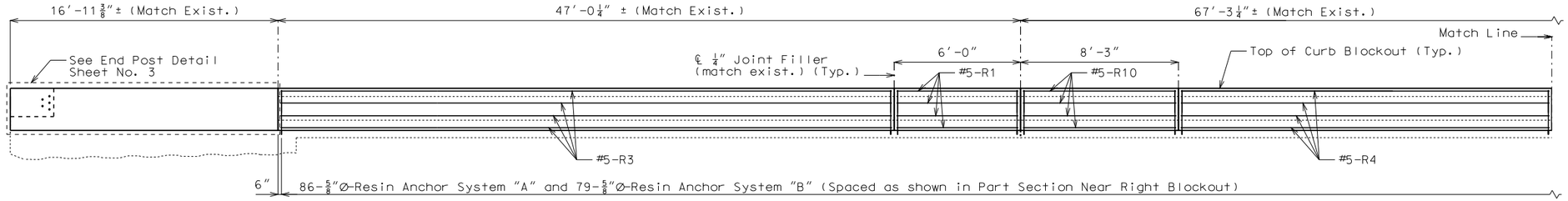
PROJECT NO.

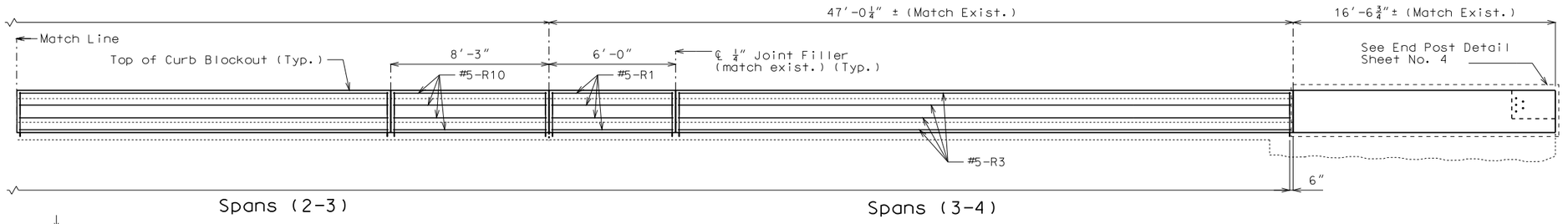
BRIDGE NO. A02462

DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

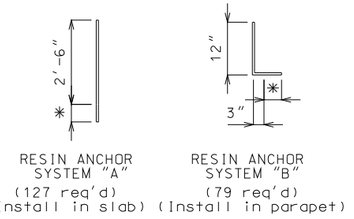




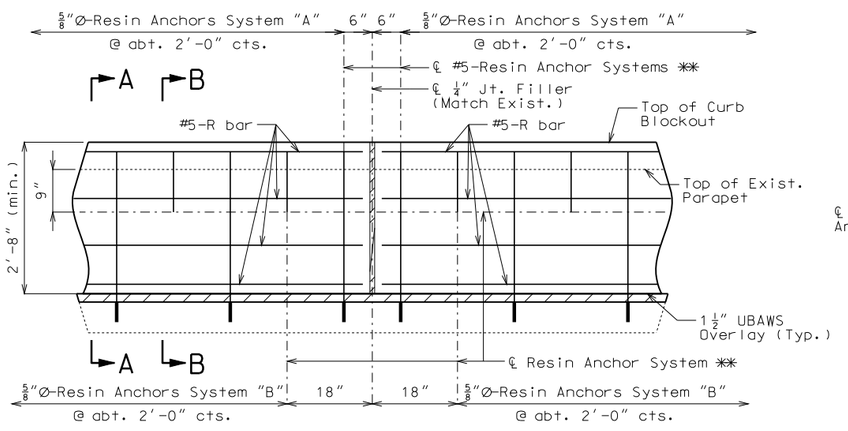
SECTION NEAR RIGHT CURB BLOCKOUT

Note: Longitudinal dimensions shown are along grade and are taken at top and ℄ of Parapet.

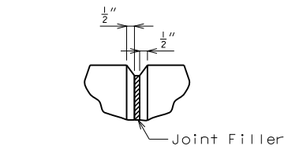
Bridge rail not shown, for clarity.



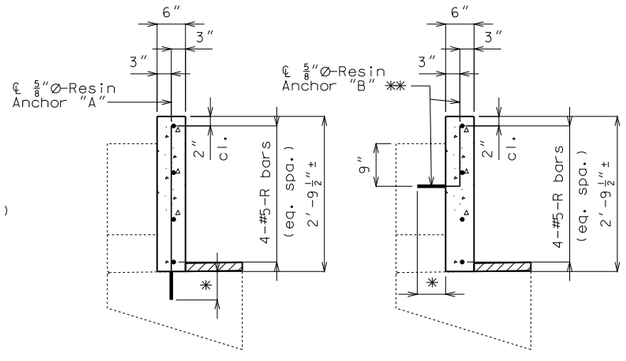
DETAILS OF RESIN ANCHORS



PART SECTION NEAR RIGHT CURB BLOCKOUT



FILLED JOINT DETAIL



SECTION A-A SECTION B-B

Notes:
Concrete in curb blockout shall be Class B-1 with f′c = 4000 psi.

Measurement of curb blockout is to the nearest linear foot, measured at the top and ℄ of parapet from end of wing to end of wing. (Match existing curb and parapet)

All exposed edges of curb blockout shall have ½″ radius or ⅝″ bevel unless otherwise shown.

Payment for concrete, reinforcing steel, resin anchors, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete parapet repair will be included in the contract unit price for Curb Blockout.

All reinforcement shall be epoxy coated.

✳✳ Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

Use a minimum lap of 2′-11″ for #5 horizontal curb blockout bars.

Concrete traffic barrier delineators shall be placed on top of the curb blockout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Curb Blockout".

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5″.

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the ⅝″Ø threaded rod.

DETAILS OF RIGHT CURB BLOCKOUT

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
MICHELE ANN ATKINSON
NUMBER PE-026610
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2012
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02462

DESCRIPTION | DATE

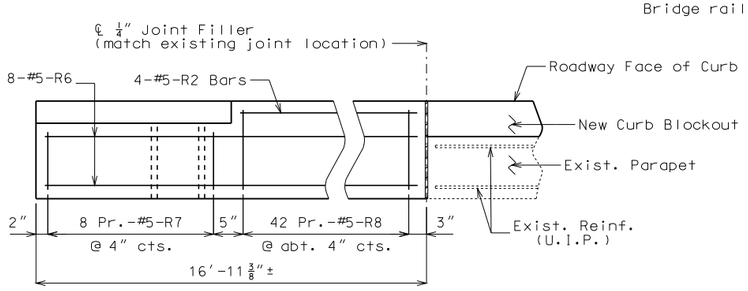
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

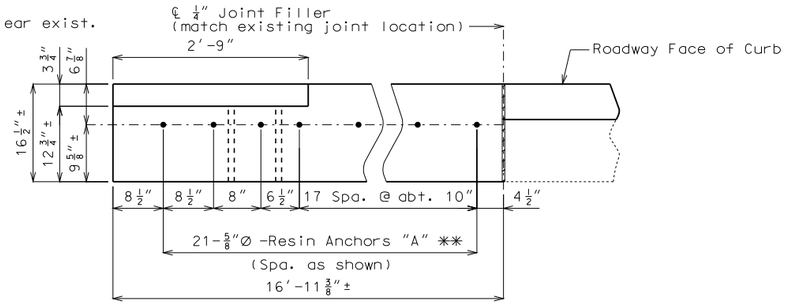
Notes:
For Details of Resin Anchors, see Sheet No. 2.

** Shift resin anchors where necessary to clear exist. reinforcement.

Bridge rail not shown, for clarity.

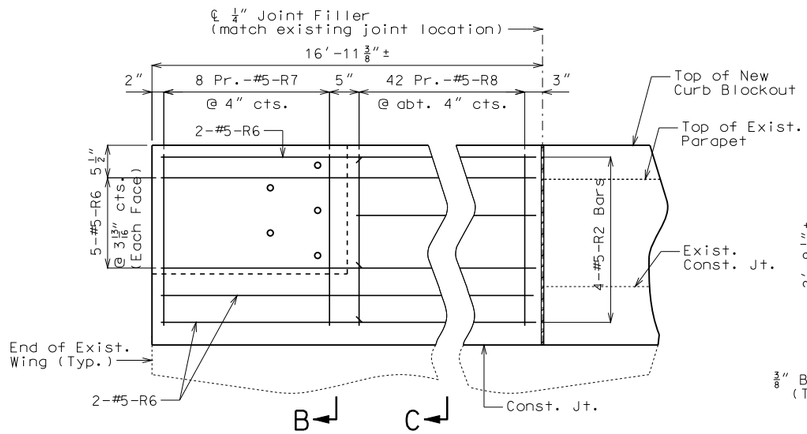


PLAN SHOWING END POST
REINFORCEMENT



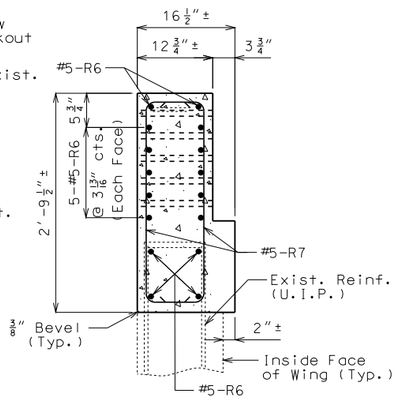
PLAN SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS

B C



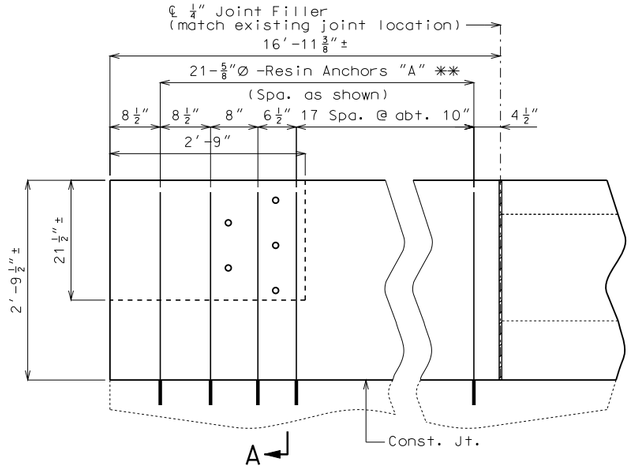
B C

ELEVATION SHOWING END POST
REINFORCEMENT



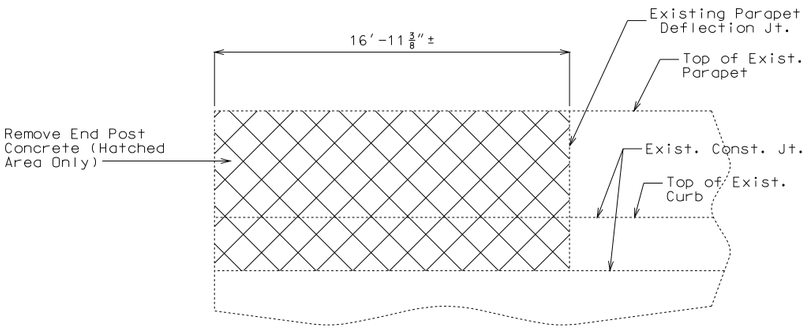
SECTION B-B

A



A

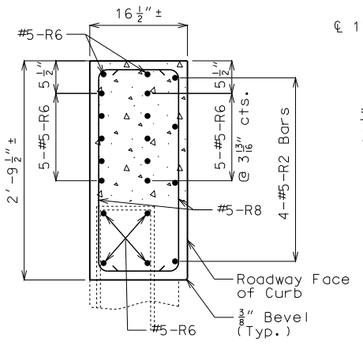
ELEVATION SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



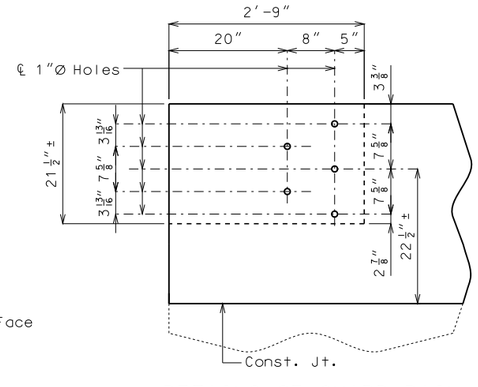
ELEVATION OF EXISTING END POST
SHOWING CONCRETE REMOVAL

Note:

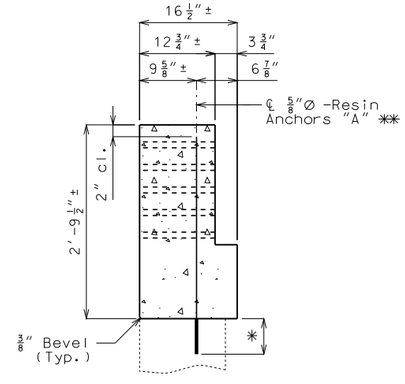
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout (linear foot).



SECTION C-C



DETAILS OF GUARD RAIL
ATTACHMENT



SECTION A-A

* Manufacturer's recommended embedment length. (5" minimum embedment)

DETAILS OF RIGHT END POST AT END BENT NO. 1

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
MICHELE ANN ATKINSON
NUMBER PE-026610
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2012

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	3

COUNTY
JACKSON

JOB NO.
J4I3014

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A02462

REV.	DESCRIPTION	DATE

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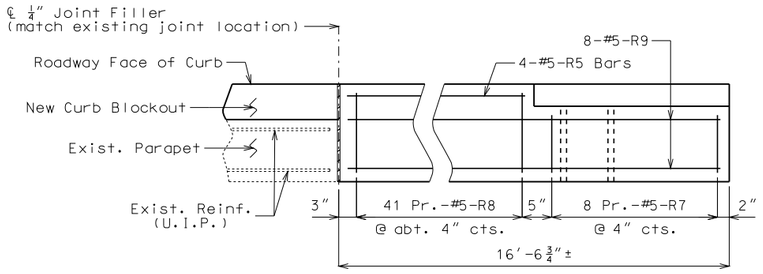
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

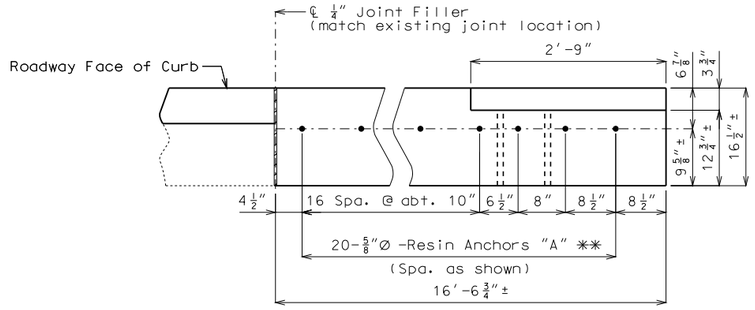
Notes:
For Details of Resin Anchors, see Sheet No. 2.

✱✱ Shift resin anchors where necessary to clear exist. reinforcement.

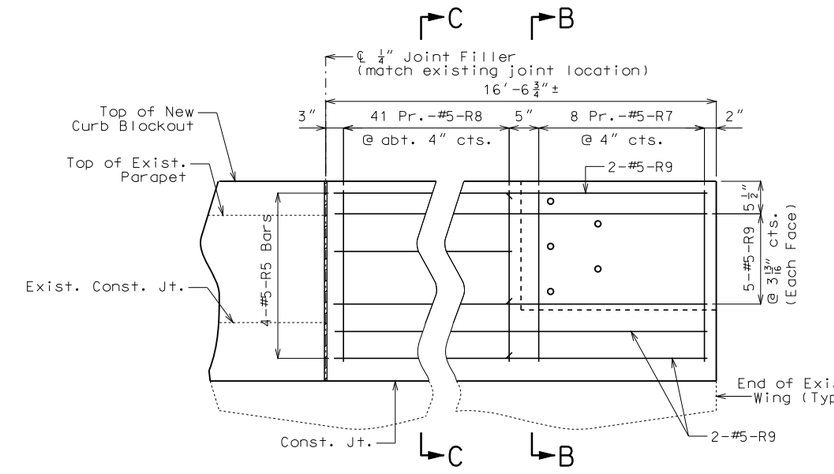
Bridge rail not shown, for clarity.



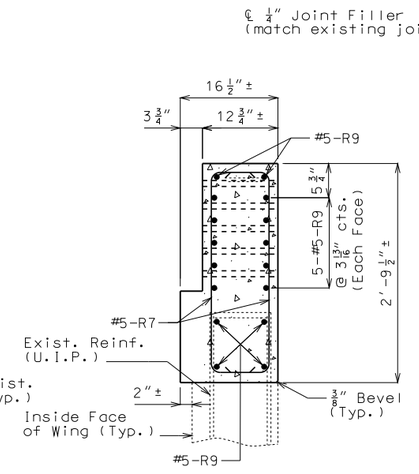
PLAN SHOWING END POST
REINFORCEMENT



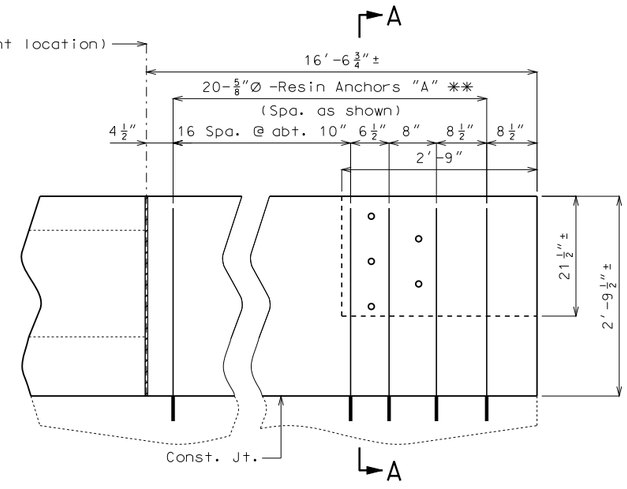
PLAN SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



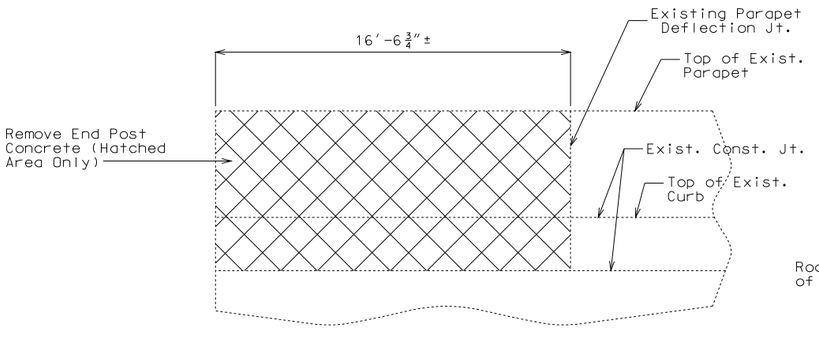
ELEVATION SHOWING END POST
REINFORCEMENT



SECTION B-B



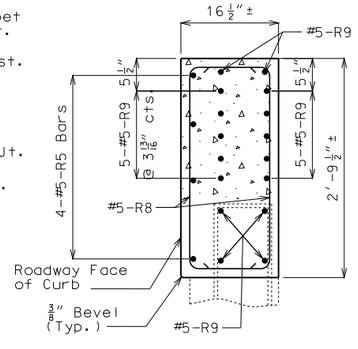
ELEVATION SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



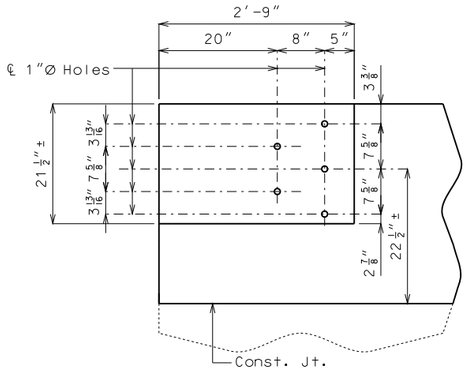
ELEVATION OF EXISTING END POST
SHOWING CONCRETE REMOVAL

Note:

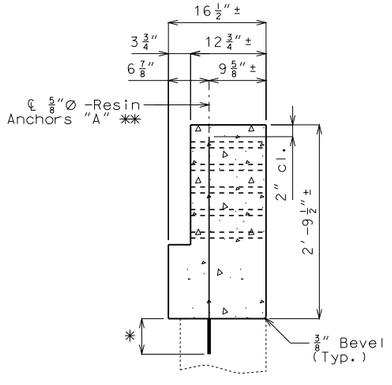
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout (linear foot).



SECTION C-C



DETAILS OF GUARD RAIL
ATTACHMENT



SECTION A-A

✱ Manufacturer's recommended embedment length. (5" minimum embedment)

DETAILS OF RIGHT END POST AT END BENT NO. 4

Detailed Aug. 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
MICHELE ANN ATKINSON
NUMBER PE-026610
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
12/11/2012

ROUTE	STATE
I-70	MO
DISTRICT	SHEET NO.
BR	4

COUNTY
JACKSON

JOB NO.
J4I3014

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
A02462

REV.	DESCRIPTION	DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

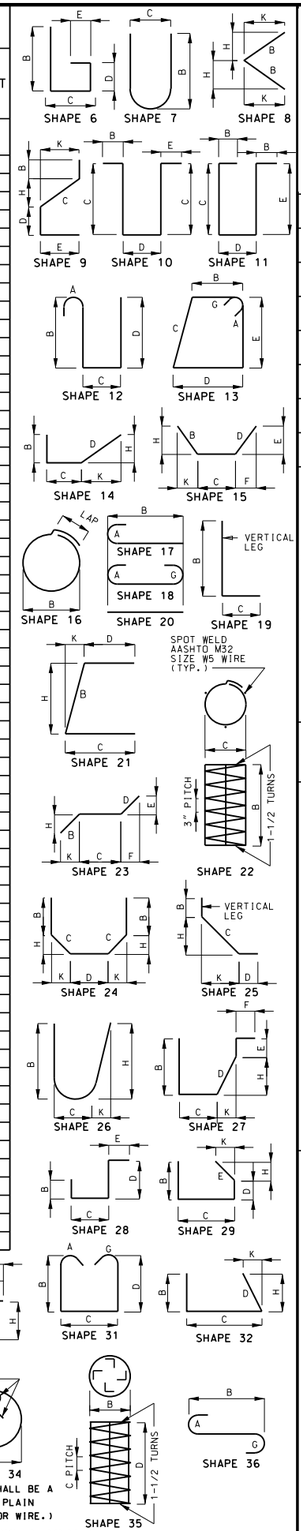
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

BILL OF REINFORCING STEEL

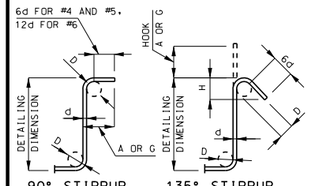
NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.
			CURB																									
			BLOCKOUT																									
8	5	R1	BLOCKOUT	E	20					5	9.000													5	9	5	9	48
8	5	R3	BLOCKOUT	E	20					40	9.000													40	9	40	9	340
4	5	R4	BLOCKOUT	E	20					50	6.000													50	6	50	6	211
8	5	R10	BLOCKOUT	E	20					8	0.000													8	0	8	0	67
			END POST																									
4	5	R2	END POST	E	20					13	11.000													13	11	13	11	58
6	5	R5	END POST	E	20					13	6.000													13	6	13	6	84
16	5	R6	END POST	E	20					16	8.000													16	8	16	8	278
32	5	R7	END POST	E	10							9.750		2	5.000									4	1	3	10	128
166	5	R8	END POST	E	10							13.500		2	5.000									4	8	4	5	765
16	5	R9	END POST	E	20					16	4.000													16	4	16	4	273
			TOTALS																									
	5			E																								2252
			TOTAL																									0
			TOTAL	E																								2252
			Slab on Girder																									
	5			E																								2252
			TOTAL																									2252

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO. SIZE	MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B FT.	B IN.	C FT.	C IN.	D FT.	D IN.	E FT.	E IN.	F FT.	F IN.	H FT.	H IN.	K FT.	K IN.	NOMINAL LENGTH FT.	NOMINAL LENGTH IN.	ACTUAL LENGTH FT.	ACTUAL LENGTH IN.	WEIGHT LBS.

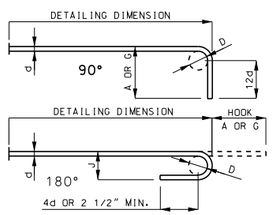


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS				
GRADES 40 - 50 - 60 KSI				
BAR SIZE	D (IN.)	90° HOOK A OR G	135° HOOK A OR G	135° HOOK APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
		ALL GRADES		
BAR SIZE	D (IN.)	180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

TWO ADDITIONAL #5-R5 ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) FY = 60,000 PSI.

Detailed Aug. 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

STATE OF MISSOURI
MICHELE ANN ATKINSON
NUMBER PE-026610
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 12/11/2012
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID.
PROJECT NO.
BRIDGE NO. A02462

DESCRIPTION | DATE

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

SEC/SUR 5 TWP 49N RGE 33W

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

U.I.P. AND REHAB EXISTING (47'- 67'-3" - 47') CONTINUOUS CONCRETE BOX GIRDER SPANS

General Notes:

Design Specifications:

2002 - AASHTO 17th Edition
Bridge Deck Rating = 5

Design Unit Stresses:

Class B-1 Concrete (Curb Blockout)	f'c = 4,000 psi
Reinforcing Steel (Grade 60)	fy = 60,000 psi

Joint Filler:

All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.

Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 40 diameters for smooth bars and 30 diameters for deformed bars, unless otherwise noted.

Miscellaneous:

Roadway surfacing adjacent to bridge ends shall match new bridge overlay (Roadway Item).

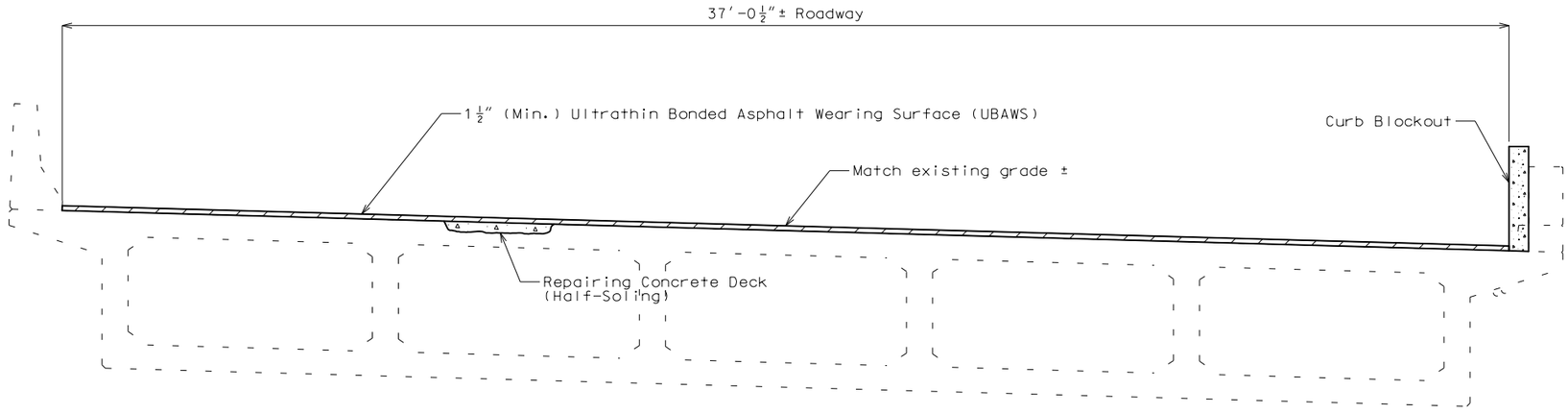
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.

Contractor shall verify all dimensions in field before ordering new material.

In order to maintain grade and a minimum thickness of overlay as shown on plans it may be necessary to use additional quantities of overlay at various locations throughout the structure. The cost of furnishing and installing the overlay will be considered completely covered in the contract unit price, including all additional labor, materials or equipment for variations in thickness of overlay.

Traffic Handling:

Structure to be closed during construction.



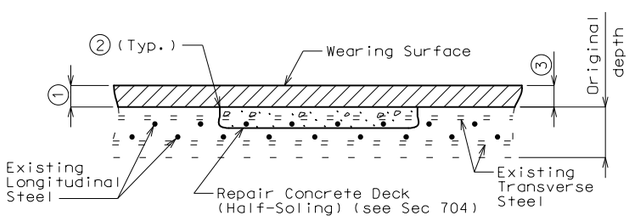
TYPICAL SECTION THRU EXISTING SLAB

Sequence of Construction:
1) Remove existing asphalt wearing surface.
2) Leave-in-place existing cathodic protection system in the top slab of box girder except in areas of new half-sole deck repairs.
3) Make half-sole deck repairs.
4) Install new asphalt wearing surface.

* Cost of partial removal of existing curb concrete will be considered completely covered by the contract unit price for Curb Blockout.

Final Quantities

Item		Total	
Removal of Asphalt Wearing Surface	sq. foot	6358	2400
Removal of Cathodic Protection System Conduit	lump sum	1	2410
Ultrathin Bonded Asphalt Wearing Surface Type A, B or C	sq. yard	689	2420
Curb Blockout	linear foot	195	2430
Repairing Concrete Deck (Half Soling)	sq. foot	4066	2440

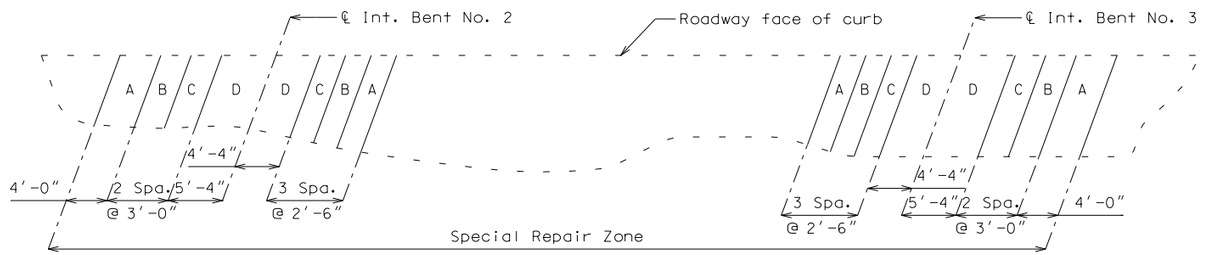


HALF-SOLED REPAIR

① Remove existing wearing surface.

② One inch vertical side shall be established outside the deteriorated area. See Sec 704.

③ 1½" (min.) UBAWS.



PART PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Notes:
Any half-soling required in the areas designated as special repair zones shall be completed in alphabetical sequence. Any repair in the remainder of the bridge that is adjacent to Zone A and not designated as a special repair zone shall be completed prior to work in Zone A.

Removal and repair shall be completed in one special repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next special repair zone. Before placing concrete in areas adjacent to areas of subsequent repair, the concrete shall be separated with a material such as polyethylene sheets to aid in removal of old concrete.

Zones with the same letter designation may be repaired at the same time.

If any single repair area does not exceed 9 square feet in size and the total repair within a special repair zone does not exceed 27 square feet, the special repair zone requirement does not apply for that zone. Half-soling repair in the special repair zone, on either side of the intermediate bents, shall be to a depth that will not expose half the diameter of the longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the longitudinal reinforcing bar.

REPAIRS TO BRIDGE: RAMP I-670 EB TO I-35 NB OVER 12TH STREET

STATE ROAD FROM RTE. 71 TO THE STATE LINE

IN KANSAS CITY

STA. 22+46.13± (Match Existing)

STD. 617.10
STD. 706.35

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 8/18/2015
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 1
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID. 130222-C05
PROJECT NO. I-35-1(281)
BRIDGE NO. A02462

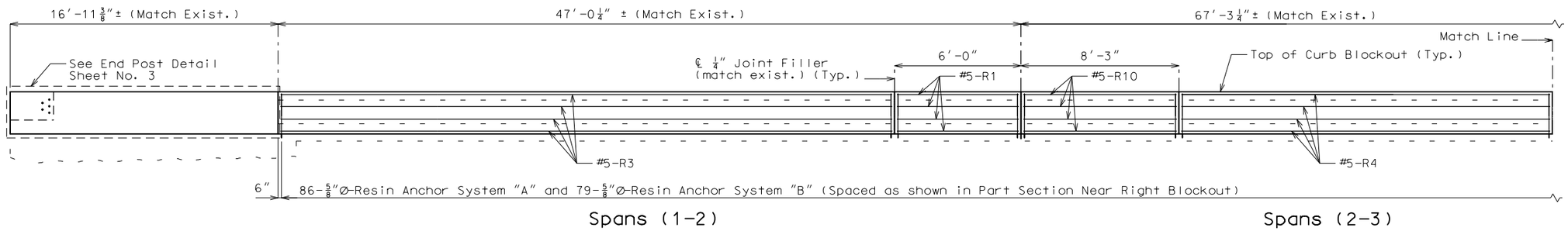
DESCRIPTION | DATE

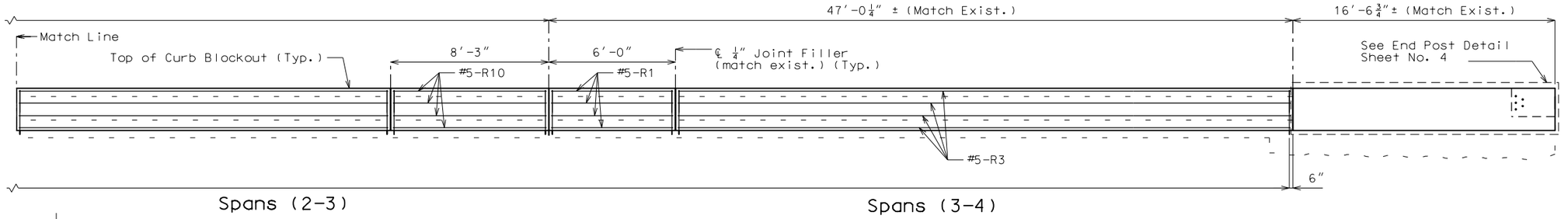
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

J:\J4I2371, J4I3012, J4I3014\Final Plans Sheets\Bridge Plans\J4I3014\A02462\B_A02462_001_J4I3014_FrontSheetFP.dgn 10:23:11 AM 8/18/2015

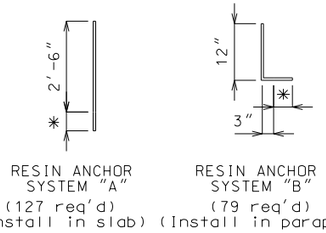




SECTION NEAR RIGHT CURB BLOCKOUT

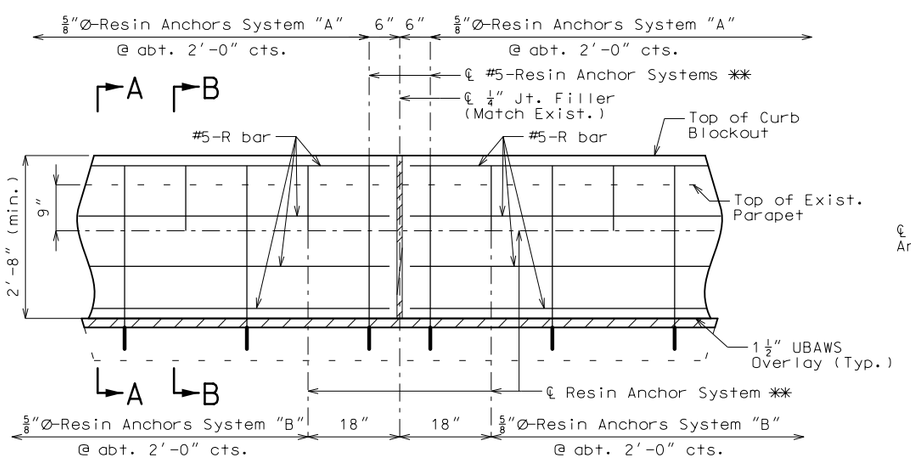
Note: Longitudinal dimensions shown are along grade and are taken at top and ℄ of Parapet.

Bridge rail not shown, for clarity.

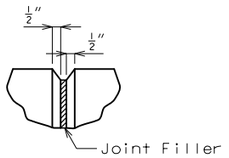


✱ Use manufacturer's embedment length. (5″ minimum embedment)

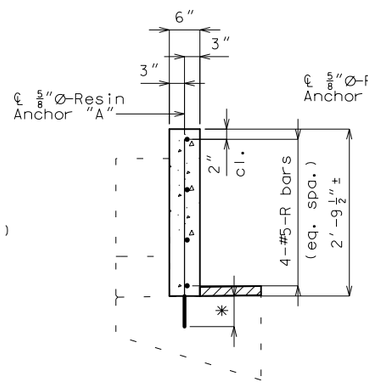
DETAILS OF RESIN ANCHORS



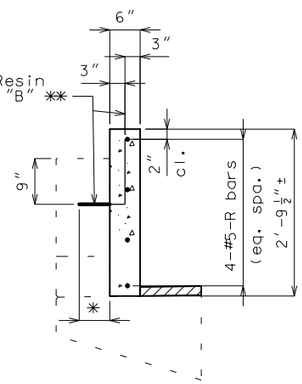
PART SECTION NEAR RIGHT CURB BLOCKOUT



FILLED JOINT DETAIL



SECTION A-A



SECTION B-B

Notes:
Concrete in curb blockout shall be Class B-1 with f′c = 4000 psi.

Measurement of curb blockout is to the nearest linear foot, measured at the top and ℄ of parapet from end of wing to end of wing. (Match existing curb and parapet)

All exposed edges of curb blockout shall have ½″ radius or ⅜″ bevel unless otherwise shown.

Payment for concrete, reinforcing steel, resin anchors, and any other work incidental to the curb blockout, complete in place, will be included in the contract unit price for Curb Blockout per linear foot.

Cost of any concrete parapet repair will be included in the contract unit price for Curb Blockout.

All reinforcement shall be epoxy coated.

✱✱ Shift resin anchors where necessary to clear existing anchor bolts for bridge rail, miss curb outlets (if present) and clear existing reinforcement.

Use a minimum lap of 2′-11″ for #5 horizontal curb blockout bars.

Concrete traffic barrier delineators shall be placed on top of the curb blockout similarly as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for "Curb Blockout".

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

The minimum embedment depth in concrete with f′c = 4,000 psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

An epoxy coated #5 Grade 60 reinforcing bar shall be substituted for the ⅝″Ø threaded rod.

DETAILS OF RIGHT CURB BLOCKOUT

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

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DATE PREPARED 5/13/2015
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 2
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID. 130222-C05
PROJECT NO. I-35-1(281)
BRIDGE NO. A02462

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

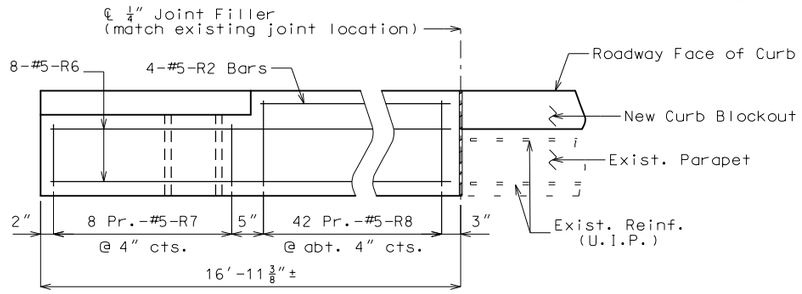
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

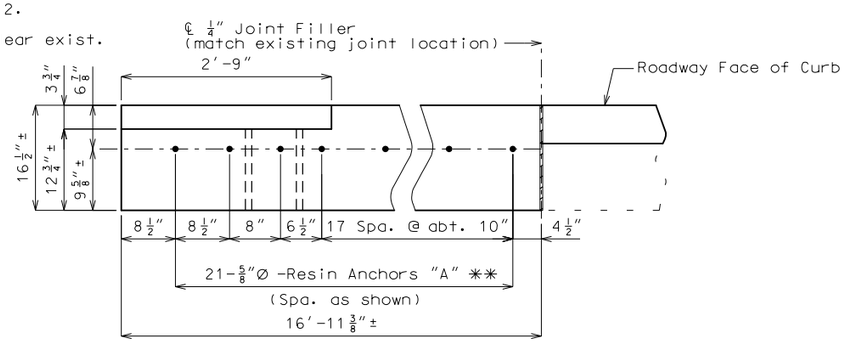
Notes:
For Details of Resin Anchors, see Sheet No. 2.

** Shift resin anchors where necessary to clear exist. reinforcement.

Bridge rail not shown, for clarity.

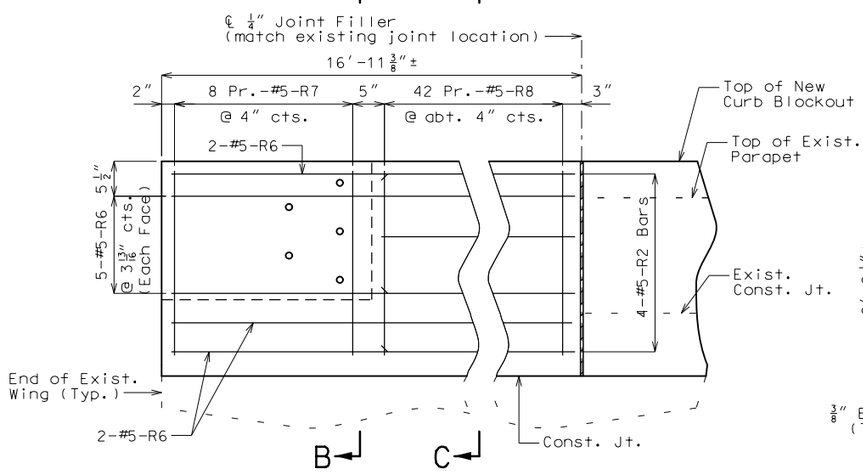


PLAN SHOWING END POST
REINFORCEMENT



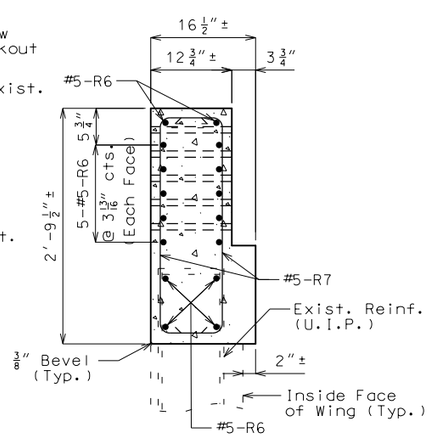
PLAN SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS

B C



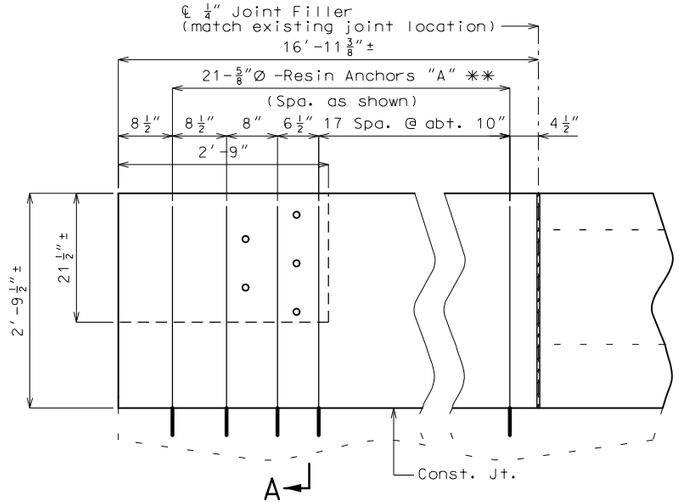
B C

ELEVATION SHOWING END POST
REINFORCEMENT



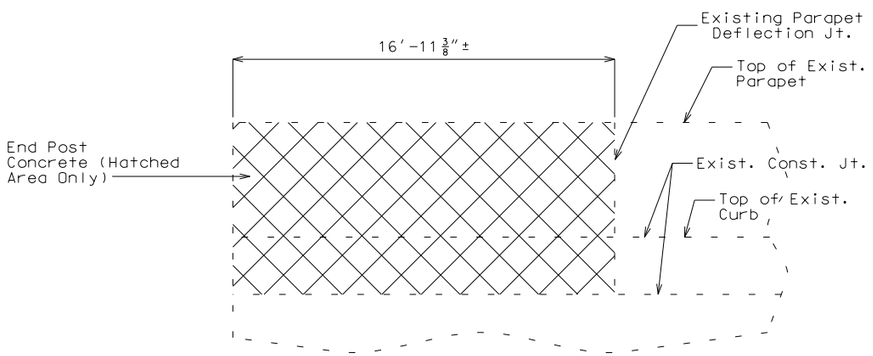
SECTION B-B

A



A

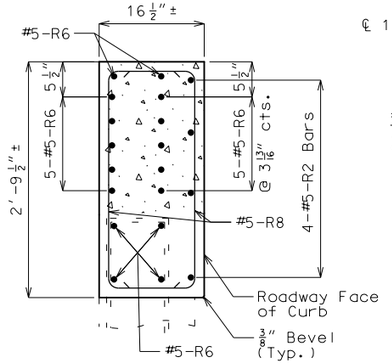
ELEVATION SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



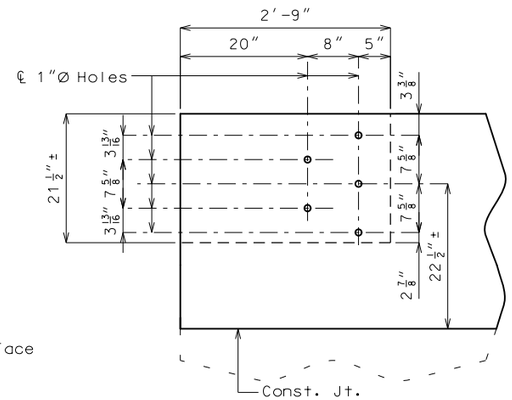
ELEVATION OF EXISTING END POST
SHOWING CONCRETE REMOVAL

Note:

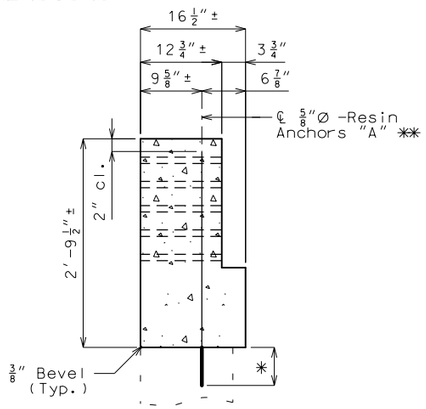
Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout (linear foot).



SECTION C-C



DETAILS OF GUARD RAIL
ATTACHMENT



SECTION A-A

* Manufacturer's recommended embedment length. (5" minimum embedment)

DETAILS OF RIGHT END POST AT END BENT NO. 1

Detailed July 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

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DATE PREPARED 5/13/2015
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 3
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID. 130222-C05
PROJECT NO. I-35-1(281)
BRIDGE NO. A02462

DESCRIPTION | DATE | REV.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

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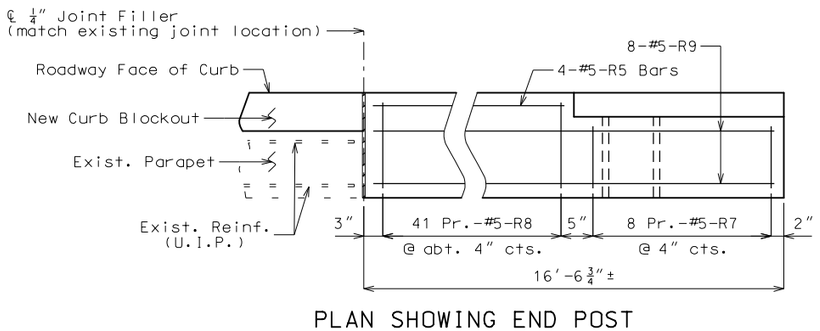
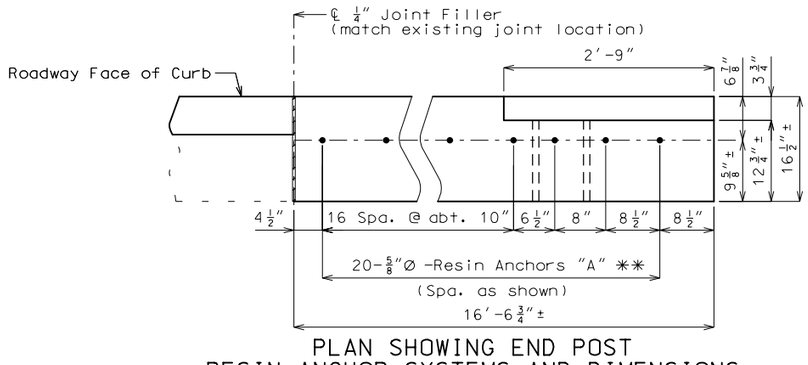
Notes:
For Details of Resin Anchors, see Sheet No. 2.

** Shift resin anchors where necessary to clear exist. reinforcement.

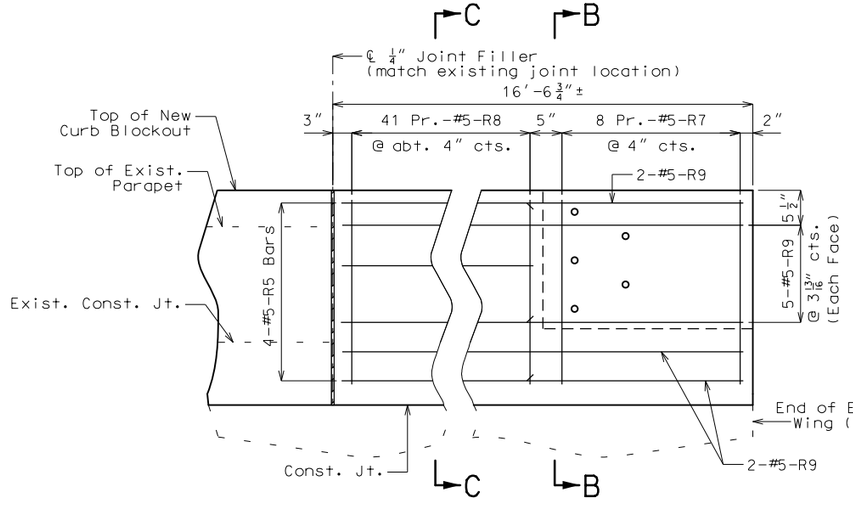
Bridge rail not shown, for clarity.



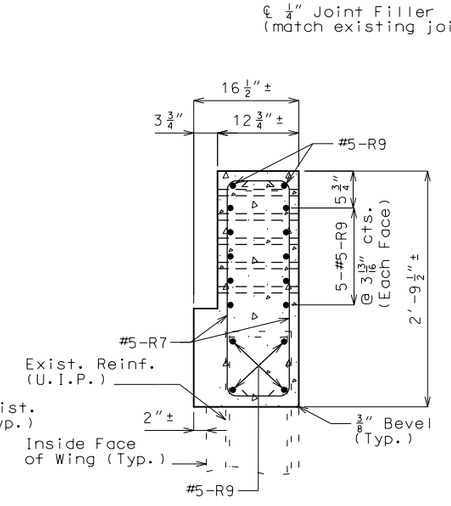
PLAN SHOWING END POST
REINFORCEMENT



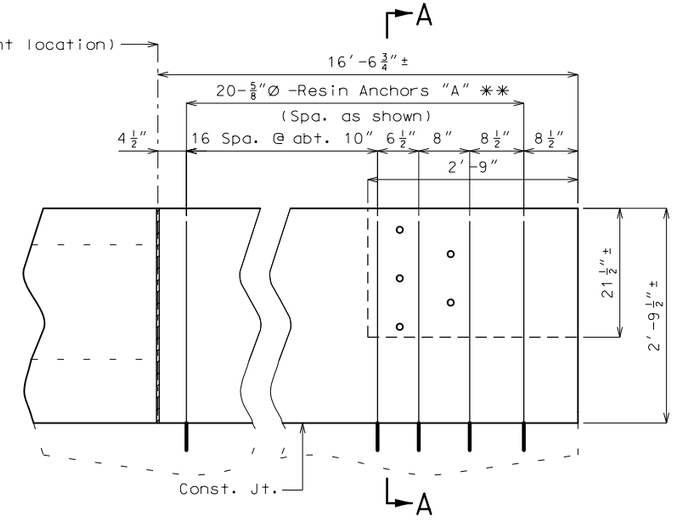
PLAN SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



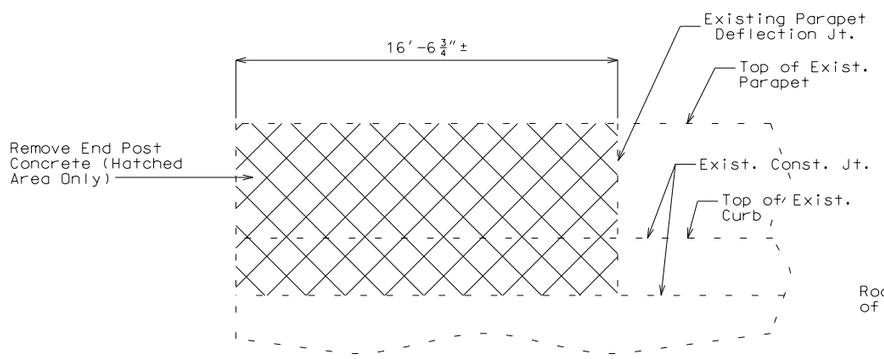
ELEVATION SHOWING END POST
REINFORCEMENT



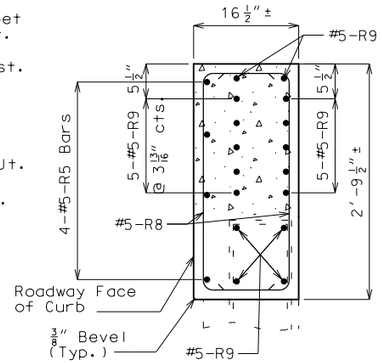
SECTION B-B



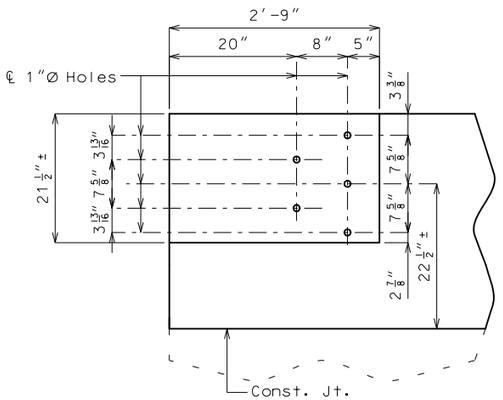
ELEVATION SHOWING END POST
RESIN ANCHOR SYSTEMS AND DIMENSIONS



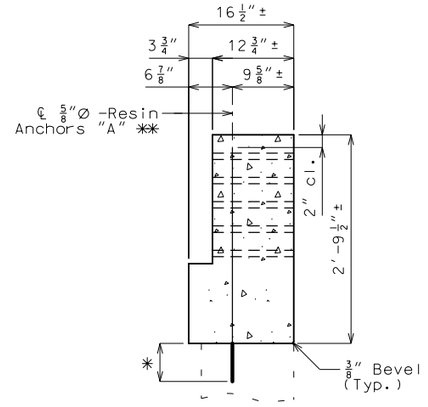
ELEVATION OF EXISTING END POST
SHOWING CONCRETE REMOVAL



SECTION C-C



DETAILS OF GUARD RAIL
ATTACHMENT



SECTION A-A

* Manufacturer's recommended embedment length. (5" minimum embedment)

Note:

Cost of removing existing end posts will be considered completely covered by the contract unit price for Curb Blockout (linear foot).

DETAILS OF RIGHT END POST AT END BENT NO. 4

Detailed Aug. 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

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DATE PREPARED 5/13/2015
ROUTE I-70
STATE MO
DISTRICT BR
SHEET NO. 4
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID. 130222-C05
PROJECT NO. I-35-1(281)
BRIDGE NO. A02462

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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FINAL PLANS

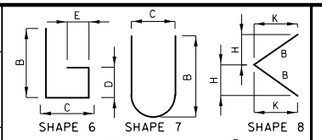
REV.

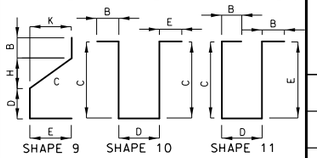
BILL OF REINFORCING STEEL

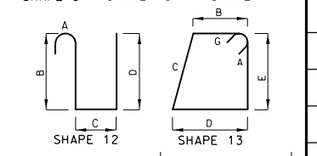
NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B	C	D	E	F	H	K	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
		CURB																
		BLOCKOUT																
8	5 R1	BLOCKOUT	E	20					5 9.000							5 9	5 9	48
8	5 R3	BLOCKOUT	E	20					40 9.000							40 9	40 9	340
4	5 R4	BLOCKOUT	E	20					50 6.000							50 6	50 6	211
8	5 R10	BLOCKOUT	E	20					8 0.000							8 0	8 0	67
		END POST																
4	5 R2	END POST	E	20					13 11.000							13 11	13 11	58
6	5 R5	END POST	E	20					13 6.000							13 6	13 6	84
16	5 R6	END POST	E	20					16 8.000							16 8	16 8	278
32	5 R7	END POST	E	10						9.750	2 5.000					4 1	3 10	128
166	5 R8	END POST	E	10						13.500	2 5.000					4 8	4 5	765
16	5 R9	END POST	E	20					16 4.000							16 4	16 4	273
		TOTALS																
	5		E															2252
		TOTAL																0
		TOTAL	E															2252
		Slab on																
		Girder																
	5		E															2252
		TOTAL																2252

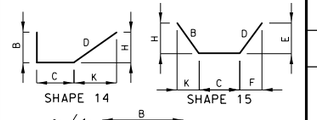
BILL OF REINFORCING STEEL

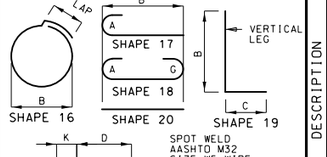
NO. REQ'D.	MARK NO. SIZE MARK	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS B	C	D	E	F	H	K	NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
									FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.

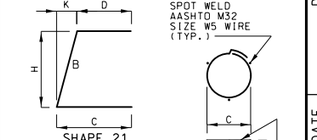


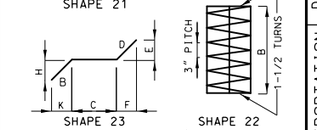


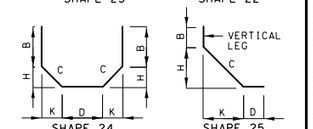


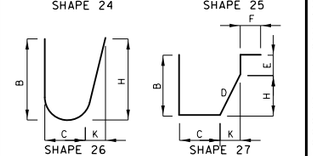


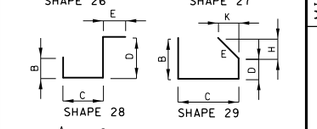


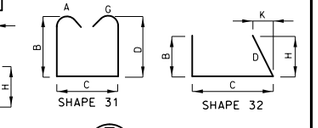


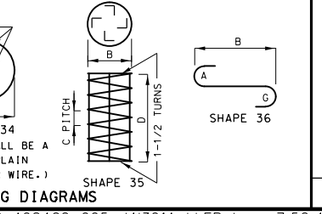




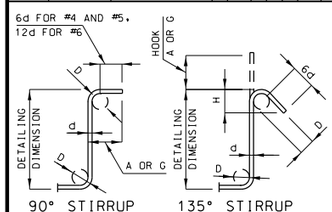






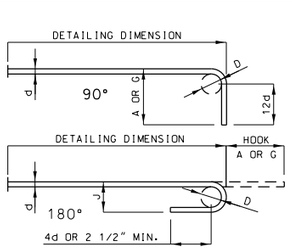


BENDING DIAGRAMS



STIRRUP HOOK DIMENSIONS			
GRADES 40 - 50 - 60 KSI			
BAR SIZE	D (IN.)	90° HOOK	135° HOOK
		HOOK A OR G	HOOK A OR G	APPROX. H
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"
#6	4 1/2"	12"	8"	4 1/2"

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



END HOOK DIMENSIONS				
BAR SIZE	D (IN.)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	2'-0"
#14	18 1/4"	2'-3"	21 3/4"	2'-7"

TWO ADDITIONAL #5-R5 ARE INCLUDED IN THE BAR BILL FOR TESTING.

NOTE:
ALL STANDARD HOOKS AND BENDS OTHER THAN 180 DEGREE ARE TO BE BENT WITH SAME PROCEDURE AS FOR 90 DEGREE STANDARD HOOKS.
HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH THE PROCEDURES AS SHOWN ON THIS SHEET.
E = EPOXY COATED REINFORCEMENT.
S = STIRRUP.
X = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES.
V = BAR DIMENSIONS VARY IN EQUAL INCREMENTS BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.
NO. EA. = NUMBER OF BARS OF EACH LENGTH.
NOMINAL LENGTHS ARE BASED ON OUT TO OUT DIMENSIONS SHOWN IN BENDING DIAGRAMS AND ARE LISTED FOR FABRICATORS USE. (NEAREST INCH)
ACTUAL LENGTHS ARE MEASURED ALONG CENTERLINE BAR TO THE NEAREST INCH.
PAYWEIGHTS ARE BASED ON ACTUAL LENGTHS.
FOUR ANGLE OR CHANNEL SPACERS ARE REQUIRED FOR EACH COLUMN SPIRAL. SPACERS ARE TO BE PLACED ON INSIDE OF SPIRALS. LENGTH AND WEIGHT OF COLUMN SPIRALS DO NOT INCLUDE SPLICES OR SPACERS.
REINFORCING STEEL (GRADE 60) FY = 60.000 PSI.

Detailed Aug. 2012
Checked Aug. 2012

Note: This drawing is not to scale. Follow dimensions.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 5/13/2015
ROUTE I-70 | STATE MO
DISTRICT BR | SHEET NO. 5
COUNTY JACKSON
JOB NO. J4I3014
CONTRACT ID. 130222-C05
PROJECT NO. I-35-1(281)
BRIDGE NO. A02462

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

FINAL PLANS

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:13:12pm

COUNTY : JACKSON **BRIDGE :** A0246 2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	216
27	Year Built	1960
106	Year Reconstructed	1984
42A	Type of Service On	OVERPASS
21	Structure Maintenance	STATE HIGHWAY AGENCY
22	Structure Owner	STATE HIGHWAY AGENCY
33	Br. Median Code	NO MEDIAN
37	Historical Significance	NOT ELIGIBLE FOR NR OF HP
101	Parallel Struc Desg	RIGHT
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	YES

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE CARRIED 'ON' STRUCT
5B	Route Signing Prefix	US
5C	Designated Level of Service	MAINLINE
5D	Route Number	00071
5E	Directional Suffix	NOT APPLICABLE
7	Facility Carried	US 71 N
12	Base Hwy. Network	YES
13A	LRS Inventory Route No.	0000002029
13B	Subroute No.	00
20	Toll Status	ON FREE ROAD
26	Functional Classification	12-UR PRNCPL ARTERIAL-OTH
28A	Lanes on Structure	02
100	STRAHNET Designation	RTE NOT A DEFENSE HWY
104	National Highway System	ON NHS
105	Federal Lands Highway	NOT APPLICABLE
110	Designated Nat. Network	YES

STRUCTURE LOCATION INFORMATION

4	Place	KANSAS CITY CITY
	Code	38000
9	Location	S 5 T 49 N R 33 W
11	Milepoint	198.66 miles
16	Latitude	39 D 5 M 58 S
17	Longitude	94 D 34 M 20 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	35600
30	AADT Year	2023
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	6%
114	Future AADT	48060
115	Future AADT Year	2043

UNDERRECORD INFORMATION

6	Features Intersected	CST E 12TH ST
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	HIGHWAY
54B	Vert. Clearance	13 Ft. 8 In.
55A	Rt. Lat Clear Ref.	HIGHWAY
55B	Rt. Lat Clearance	12 Ft. 6 In.
56	Left Lat Clearance	0 Ft. 0 In.
38	Navigation Control	N/A
39	Nav Vertical Clear	0 Ft. 0 In.
40	Nav Horizontal Clear	0 Ft. 0 In.
111	Nav. Pier Protection	
116	Nav. Cl. Vert. Clear	

STRUCTURE GEOMETRIC INFORMATION

10	Inventory Rte. Vert. Clear	99 Ft. 99 In.
19	By pass Detour Length	1.86 miles
32	Approach Roadway Width	36 Ft. 1 In.
34	Skew	20.00 Degrees
35	Struct. Flared	NO
47	Total Horiz. Clear	37 Ft. 1 In.
48	Maximum Span Length	66 Ft. 11 In.
49	Structure Length	164 Ft. 1 In.
50A	Left Curb/Sidewalk Width	0 Ft. 0 In.
50B	Right Curb/Sidewalk Width	0 Ft. 0 In.
51	Curb to Curb Br. Width	37 Ft. 1 In.
52	Deck Width (Out-Out)	39 Ft. 8 In.
53	Vert.Clearance Over Deck	99 Ft. 99 In.

Design_No = A0246

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:13:12pm

COUNTY : JACKSON **BRIDGE :** A0246 2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE CARRIED 'ON' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

LOAD RATING AND POSTING INFORMATION

31	Design Load	HS 20
41	Structure Status	A - OPEN NO RESTRICTIONS
63	Oper. Rating Meth.	LOAD FACTOR
64	Operating Rating	75 Tons.
65	Inventory Rating Meth	LOAD FACTOR
66	Inventory Rating	46 Tons.
70	Bridge Posting Code	=>LEGAL LOADS

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating	76.7 Percent
	Deficiency Rating	FUNCTIONAL
	Funding Eligibility	PARTIAL
75A	Proposed Work	REHAB-GENERAL DETERIORAT
75B	Work Done By	Contract
76	New Struc Length	0 Ft. 0 In.
94	Struc Improve Cost	$ 817,000
95	Roadway Improve Cost	$ 82,000
96	Total Project Cost	$ 1,226,000
97	Year of Cost Estimates	2024

APPRAISAL RATING INFORMATION

36A	Br. Rail App. Rating	DOES NOT MEET ACCEPT STND
36B	Transition Rail App. Rating	MEETS ACCEPTBLE STND
36C	Approach Rail App. Rating	MEETS ACCEPTBLE STND
36D	Rail End Treat. App. Rating	MEETS ACCEPTBLE STND
67	Struc Eval App. Rating	5
68	Deck Geometry App. Rating	5
69	Underclearance App. Rating	3
71	Waterway Adeq. App. Rating	N
72	Approach Road App. Rating	8
113	Scour Assess App. Rating	N

APPROVED POSTING INFORMATION

Approved Posting Category S-1

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

NO POSTING REQUIRED

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	BOX BEAM OR GIRDERS- SING
45	# of Main Spans	3
44A	Appr Struc. Mat type	
44B	Appr Struc. Cnstr. type	
46	# of Approach Span	0
107	Deck Mat/Constr.	1 CONCRETE CIP
108A	Wear Surf Mat/Constr.	6 BITUMINOUS
108B	Membrane Mat/Constr.	0 NONE
108C	Deck Protect Mat/Constr.	0 NONE

CONDITION RATING INFORMATION

58	Deck Cond. Rating	5
59	Superstructure Cond. Rating	5
60	Substructure Cond. Rating	7
61	Channel /Channel Protection Cond. Rating	N
62	Culvert Cond. Rating	N

INSPECTION INFORMATION

90	Gen. Insp Date	9 / 23	
91	Gen. Insp. Frequency	24	Months
92A	Frac. Critical Inspection	N	Months
93A	Frac. Critical Insp. Date		
92B	Underwater Inspection	N	Months
93B	Underwater Insp. Date		
92C	Special Inspection	N	Months
93C	Special Inspection Date		

BORDER BRIDGE INFORMATION

98	Neighboring State Code
98B	Neighboring State % Respon
99	Neighboring State Struc. No.

FIELD POSTING INFORMATION

Field Posting Category S-1

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

NO POSTING REQUIRED

Design_No = A0246

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

May 2, 2024
4:13:12pm

COUNTY : JACKSON **BRIDGE :** A0246 2 **REVIEW STATUS :** APPROVED **NBI STATUS :** P
RECORD TYPE : ROUTE 'UNDER' STRUCT **RUN DATE :** 3/7/2024 **SUBMITTAL YEAR :** 2023

GENERAL STRUCTURE INFORMATION

1	State	MISSOURI
2	District	KC
3	County	JACKSON
8	Federal ID No.	216
27	Year Built	1960
106	Year Reconstructed	0
42A	Type of Service On	OVERPASS
21	Structure Maintenance	
22	Structure Owner	
33	Br. Median Code	
37	Historical Significance	
101	Parallel Struc Desg	RIGHT
103	Temporary Structure	NOT TEMPORARY
112	NBIS Bridge Length	

ROUTE DESIGNATION INFORMATION

5A	Record Type	ROUTE 'UNDER' STRUCT	Code : 2
5B	Route Signing Prefix	CST	
5C	Designated Level of Service	MAINLINE	
5D	Route Number	00000	
5E	Directional Suffix	NOT APPLICABLE	
7	Facility Carried	US 71 N	
12	Base Hwy. Network		
13A	LRS Inventory Route No.		
13B	Subroute No.		
20	Toll Status	ON FREE ROAD	
26	Functional Classification	17-URBAN COLLECTOR	
28A	Lanes on Structure	02	
100	STRAHNET Designation	RTE NOT A DEFENSE HWY	
104	National Highway System	NOT ON NHS	
105	Federal Lands Highway		
110	Designated Nat. Network	NO	

STRUCTURE LOCATION INFORMATION

4	Place	KANSAS CITY CITY
	Code	38000
9	Location	S 5 T 49 N R 33 W
11	Milepoint	0.59 miles
16	Latitude	39 D 5 M 58 S
17	Longitude	94 D 34 M 20 S

STRUCTURE TRAFFIC INFORMATION

29	AADT	1905
30	AADT Year	2023
102	Direction of Traffic	1-WAY TRAFFIC
109	AADT Truck Percent	5%
114	Future AADT	
115	Future AADT Year	

UNDERRECORD INFORMATION

6	Features Intersected	CST E 12TH ST
42B	Type of Service Under	HIGHWAY
28B	Lanes Under Structure	02
54A	Vert. Clearance Ref.	
54B	Vert. Clearance	
55A	Rt. Lat Clear Ref.	
55B	Rt. Lat Clearance	
56	Left Lat Clearance	
38	Navigation Control	
39	Nav Vertical Clear	
40	Nav Horizontal Clear	
111	Nav. Pier Protection	
116	Nav. Cl. Vert. Clear	

STRUCTURE GEOMETRIC INFORMATION

10	Inventory Rte. Vert. Clear	13 Ft. 8 In.
19	By pass Detour Length	0.00 miles
32	Approach Roadway Width	
34	Skew	
35	Struct. Flared	
47	Total Horiz. Clear	13 Ft. 9 In.
48	Maximum Span Length	66 Ft. 11 In.
49	Structure Length	164 Ft. 1 In.
50A	Left Curb/Sidewalk Width	
50B	Right Curb/Sidewalk Width	
51	Curb to Curb Br. Width	
52	Deck Width (Out-Out)	
53	Vert.Clearance Over Deck	

Design_No = A0246

Missouri Department of Transportation
Bridge Inventory and Inspection System
Structural Inventory & Appraisal Sheet

COUNTY :	**JACKSON**	**BRIDGE :**	**A0246 2**	**REVIEW STATUS :**	**APPROVED**	**NBI STATUS :**	**P**
RECORD TYPE :	**ROUTE 'UNDER' STRUCT**			**RUN DATE :**	**3/7/2024**	**SUBMITTAL YEAR :**	**2023**

LOAD RATING AND POSTING INFORMATION

31	Design Load
41	Structure Status
63	Oper. Rating Meth.
64	Operating Rating
65	Inventory Rating Meth
66	Inventory Rating
70	Bridge Posting Code

PROPOSED IMPROVEMENT INFORMATION

	Sufficiency Rating
	Deficiency Rating
	Funding Eligibility
75A	Proposed Work
75B	Work Done By
76	New Struc Length
94	Struc Improve Cost
95	Roadway Improve Cost
96	Total Project Cost
97	Year of Cost Estimates

APPRAISAL RATING INFORMATION

36A	Br. Rail App. Rating
36B	Transition Rail App. Rating
36C	Approach Rail App. Rating
36D	Rail End Treat. App. Rating
67	Struc Eval App. Rating
68	Deck Geometry App. Rating
69	Underclearance App. Rating
71	Waterway Adeq. App. Rating
72	Approach Road App. Rating
113	Scour Assess App. Rating

MATERIAL/CONSTRUCTION INFORMATION

43A	Main Struc. Mat type	CONCRETE CONTINUOUS
43B	Main struc Constr. Type	BOX BEAM OR GIRDERS- SING
45	# of Main Spans	
44A	Appr Struc. Mat type	
44B	Appr Struc. Cnstr. type	
46	# of Approach Span	
107	Deck Mat/Constr.	
108A	Wear Surf Mat/Constr.	
108B	Membrane Mat/Constr.	
108C	Deck Protect Mat/Constr.	

CONDITION RATING INFORMATION

58	Deck Cond. Rating
59	Superstructure Cond. Rating
60	Substructure Cond. Rating
61	Channel /Channel Protection Cond. Rating
62	Culvert Cond. Rating

INSPECTION INFORMATION

90	Gen. Insp Date
91	Gen. Insp. Frequency
92A	Frac. Critical Inspection
93A	Frac. Critical Insp. Date
92B	Underwater Inspection
93B	Underwater Insp. Date
92C	Special Inspection
93C	Special Inspection Date

BORDER BRIDGE INFORMATION

98	Neighboring State Code
98B	Neighboring State % Respon
99	Neighboring State Struc. No.

APPROVED POSTING INFORMATION

Approved Posting Category

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

FIELD POSTING INFORMATION

Field Posting Category

Ton1 Ton2 Ton3

Tonnage Values for Posting Sign

General Text for Posting Sign

Design_No = A0246