

# MISSOURI STATE HIGHWAY DEPARTMENT

(4'-60'-60'-36') Con't. Slab Spans (Voided)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	37	

## GENERAL NOTES:

Design Specifications: A.A.S.H.O. - 1965

## Design Loading:

H520-44 15#/sq. ft. Future Wearing Surface  
Earth 120# Equivalent Fluid Pressure 30#

## Design Unit Stresses:

Class B Concrete (Structure)  $f_c = 1,200$  psi  
Class B1 Concrete (Superstructure)  $f_c = 1,600$  psi  
Reinforcing Steel  $f_s = 20,000$  psi

## Surface Seal:

Superstructure deck to be surface sealed.

FOOTING DATA					
BENT NO.	1	2	3	4	5
Foundation Material	Rock	Rock	Rock	Rock	Rock
Des. Brg. Tons/Sq. Ft.	1.9	11.0	11.0	9.2	1.9

ESTIMATED QUANTITIES			
ITEM	SUBSTR.	SUPERSTR.	TOTAL
Class I Excavation for Structures	Cu.Yd.	350	350
Class B Concrete	Cu.Yd.	81.9	81.9
Class B1 Concrete	Cu.Yd.	1064.8	1064.8
Reinforcing Steel	Lbs.	4350	250800
Bridge Rail (Single Tube Type)	Ln. Ft.	416	416
Conduit System (On Structure)	Lump Sum	1	1

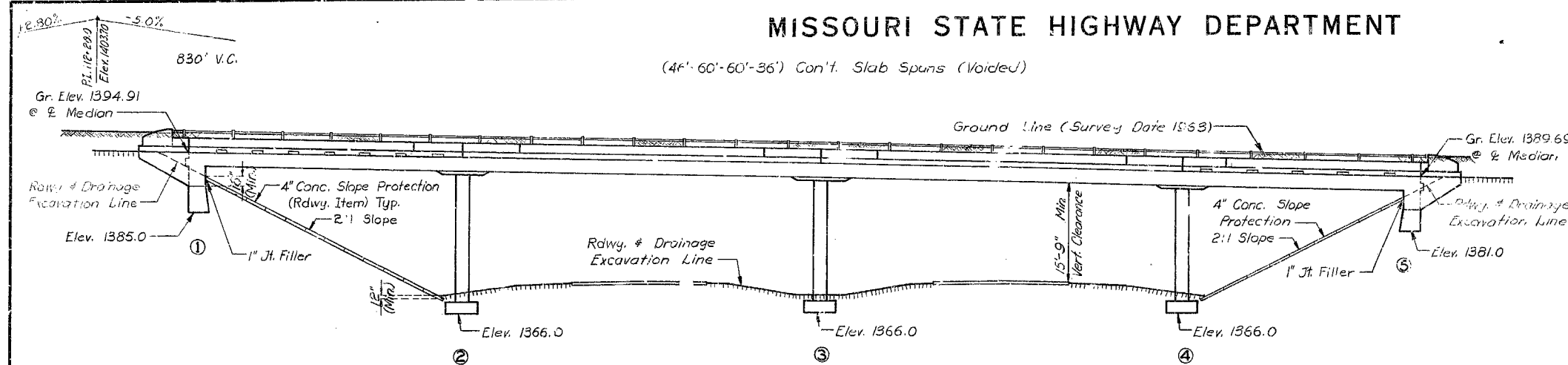
Note: All concrete and reinforcement above footings is included in superstructure quantities

B.M. Elev. 1381.93 on S. Hdwl. R.R. Culve +  
120' Rt. Sta. 790+95. (U.S.G.S. Datum)

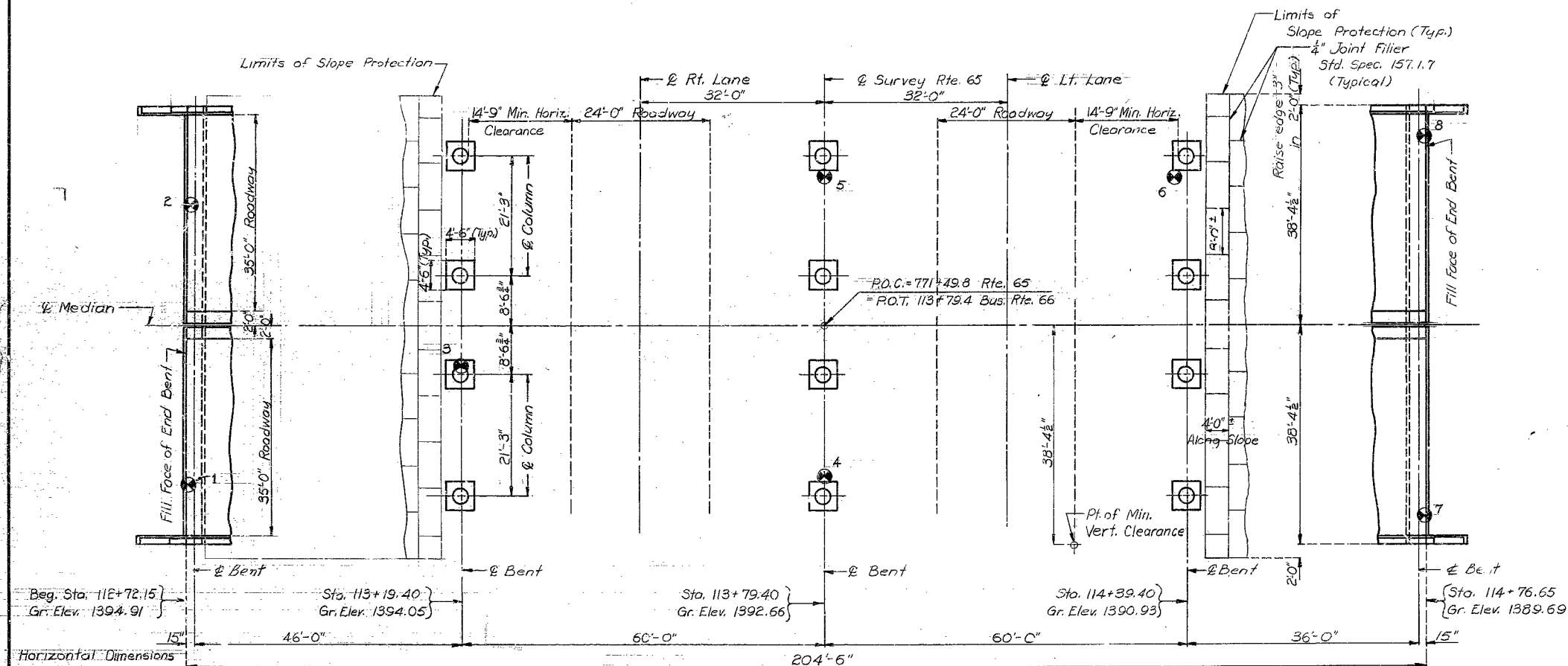
**BRIDGE : BUSINESS ROUTE 66 UNDERPASS**  
STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
IN: SPRINGFIELD  
PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+49.80  
GREENE COUNTY

SUBMITTED BY: *W. A. Caney* DATE: Feb. 13, 1968  
APPROVED BY: *M. J. Snider* DATE: Feb. 13, 1968

STD. 54.00  
A-1648

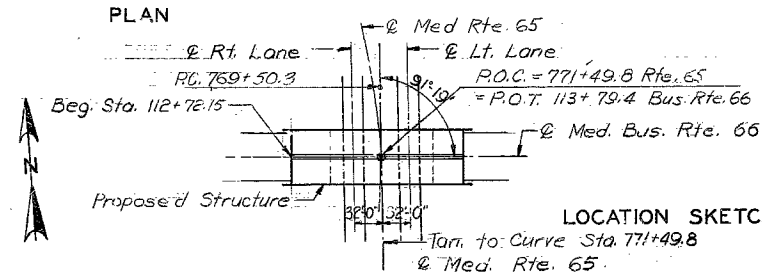


ELEVATION



PLAN

Note: For Boring Data see Sheet No. 2 of 8  
• Indicates location of boring.



LOCATION SKETCH

Curve Data:  
P.I. = 771+50.3  
 $\Delta = 0^\circ 40' 10''$   
D = 0'-10'  
L = 200'-0'  
E = 400'-0'  
R = 34,373.1'  
S.E. = 0'-0'

Sheet No. 1 of 8.

DESIGNED July 1967 BY Meisel  
DETAILED Sept. 1967 BY Underwood  
CHECKED Dec. 1967 BY Girirappa

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

SEE FINAL PLANS BROWN-LINES

## MISSOURI STATE HIGHWAY DEPARTMENT

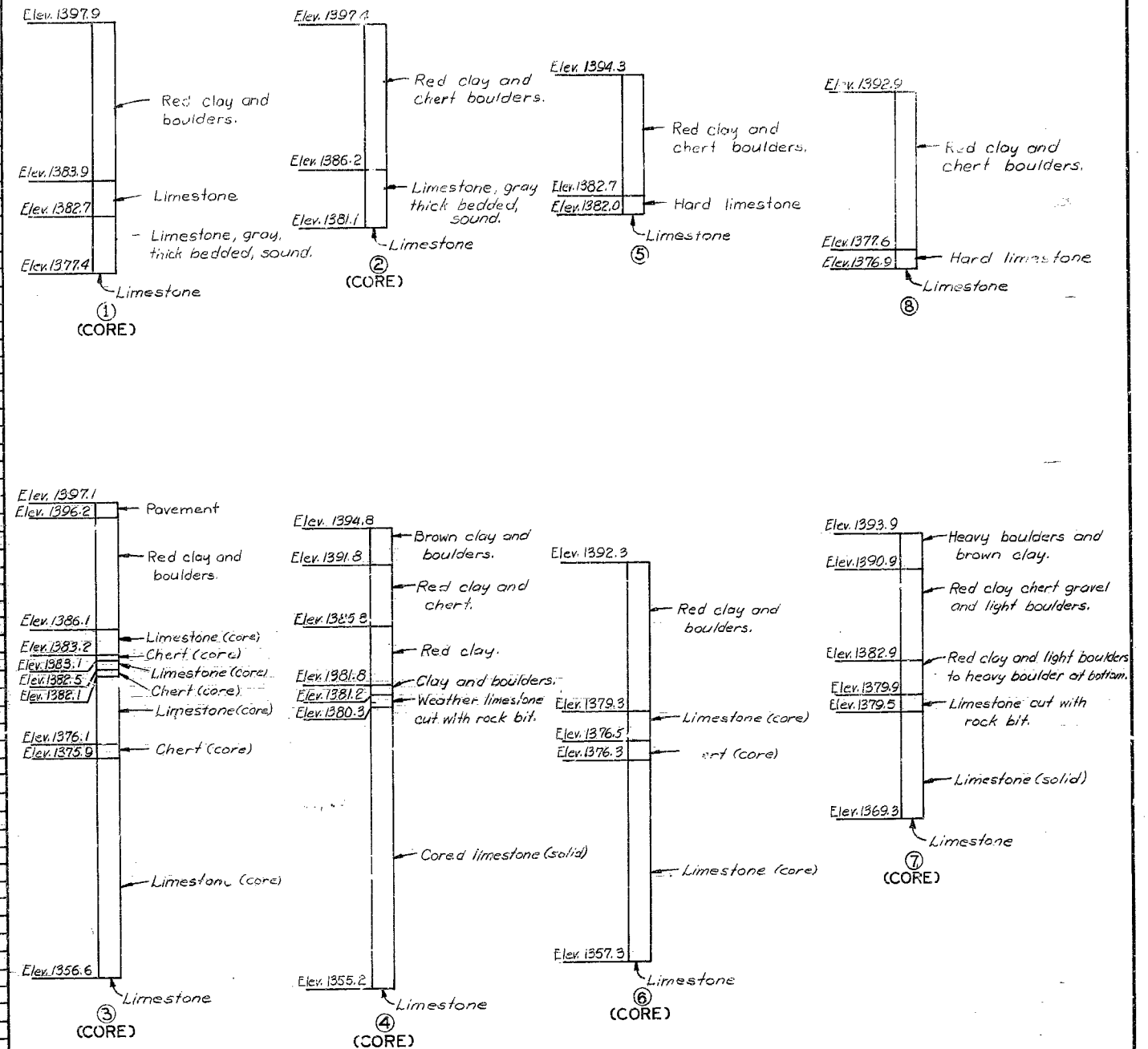
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	38	

## COMPLETE BILL OF REINFORCING STEEL

## BENDING SKETCHES &amp; CUTTING DIAGRAMS

NO.	SIZE	LENGTH	MARK	LOCATION
INT. BENT NO. 2 (SUB.)				
36	#5	2'-6"	D1	Footing
INT. BENT NO. 3 (SUB.)				
36	#5	2'-6"	D1	Footing
INT. BENT NO. 4 (SUB.)				
36	#5	2'-6"	D1	Footing
END BENTS NO. 1 & 5 (SUB.)				
20	#6	38'-0"	H1	Beam (Bt. #1)
16	#6	38'-0"	H1	Beam (Bt. #2)
76	#5	14'-0"	U2	Beam (Bt. #1)
76	#5	11'-6"	U6	" (Bt. #2)
END BENT NO. 1 (SUPER.)				
24	#6	38'-0"	H1	Beam
8	#6	11'-9"	H2	Wing
4	#6	9'-3"	H3	"
4	#6	11'-9"	T1	Wing
152	#5	7'-0"	U1	Beam
102	#6	7'-9"	V1	Slab & Beam
16	#4	7'-0"	V2	Wing
INT. BENT NO. 2 (SUPER.)				
28	#11	40'-6"	G1	Beam
22	#11	37'-6"	G2	"
64	#6	9'-0"	U3	Beam
120	#5	9'-0"	U4	"
18	#8	24'-9"	V6	Column
18	#8	25'-3"	"	"
92	#3	8'-0"	"	Column
INT. BENT NO. 3 (SUPER.)				
30	#11	40'-6"	G1	Beam
26	#11	37'-6"	G2	"
184	#5	11'-0"	U5	Beam
18	#8	23'-6"	V8	Column
18	#8	23'-9"	V9	"
88	#3	8'-0"	P1	Column
INT. BENT NO. 4 (SUPER.)				
26	#11	40'-6"	G1	Beam
22	#11	37'-6"	G2	"
64	#6	9'-0"	U3	Beam
120	#5	9'-0"	U4	"
18	#11	23'-0"	V10	Column
18	#11	23'-3"	V11	"
80	#3	8'-0"	P1	Column

NO.	SIZE	LENGTH	MARK	LOCATION
END BENT NO. 5 (SUPER.)				
24	#6	38'-0"	H1	Beam
4	#6	7'-9"	H4	Wing
6	#6	11'-3"	H5	"
102	#6	7'-9"	V1	Slab & Beam
12	#4	6'-9"	V3	Wing
152	#5	9'-0"	U1	Beam
4	#6	10'-3"	T2	Wing
SUPERSTRUCTURE				
434	#5	4'-0"	C1	Curb
410	#5	5'-3"	C2	Median
4	#6	7'-9"	C3	Curb
4	#6	6'-3"	C4	"
8	#6	24'-3"	C5	"
16	#5	30'-9"	C6	"
4	#6	36'-9"	C7	"
12	#5	24'-3"	C8	Median
24	#5	30'-9"	C9	"
6	#5	37'-0"	C10	"
8	#5	4'-9"	R1	End Post
4	#5	5'-6"	R2	"
4	#5	6'-0"	R3	"
4	#5	6'-6"	R4	"
4	#5	6'-9"	R5	"
8	#5	7'-0"	R6	"
410	#5	5'-3"	R7	Parapet
24	#5	4'-3"	R8	"
4	#5	6'-3"	R9	End Post
4	#5	5'-9"	R10	"
16	#6	10'-0"	R11	"
8	#5	4'-0"	R12	Parapet
8	#5	2'-6"	R13	"
32	#5	9'-9"	R14	"
8	#5	8'-0"	R15	"
8	#5	11'-0"	R16	"
3	#5	38'-6"	R17	"
32	#5	20'-9"	R18	"
8	#5	25'-6"	R19	"
468	#5	38'-0"	S1	Slab
102	#5	30'-6"	S2	"
62	#10	33'-3"	S3	"
62	#10	26'-9"	S4	"
60	#10	16'-6"	S5	"
102	#5	28'-0"	S6	"
62	#10	35'-0"	S7	"
62	#10	29'-6"	S8	"
60	#11	18'-0"	S9	"
102	#5	31'-0"	S10	"
62	#9	31'-0"	S11	"
62	#10	27'-0"	S12	"
60	#10	17'-0"	S13	"
102	#5	19'-9"	S14	"
52	#9	48'-6"	S15	"
50	#10	37'-0"	S16	"
50	#10	26'-6"	S17	"
156	#10	42'-6"	S18	"
100	#10	41'-6"	S19	"
100	#10	28'-3"	S20	"
52	#7	58'-0"	S21	"
50	#8	26'-9"	S22	"
50	#8	19'-6"	S23	"
4	#4	38'-0"	S24	App. Haunch
196	#4	2'-0"	S25	"



Note: See Sheet No. 1 of 8 for location of Borings.

## BORING DATA

BRIDGE: BUSINESS ROUTE 66 UNDERPASS  
STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
IN SPRINGFIELD  
PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+ 49.80  
GREENE COUNTY

A-1648

DETAILED Sept. 1967 BY Underwood  
CHECKED Dec. 1967 BY Givira, rpa

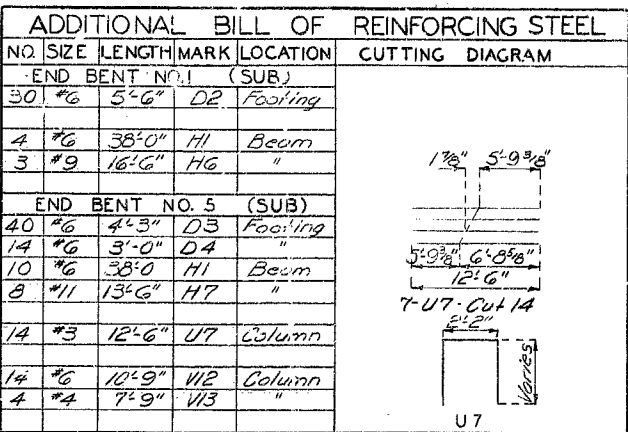
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 8.

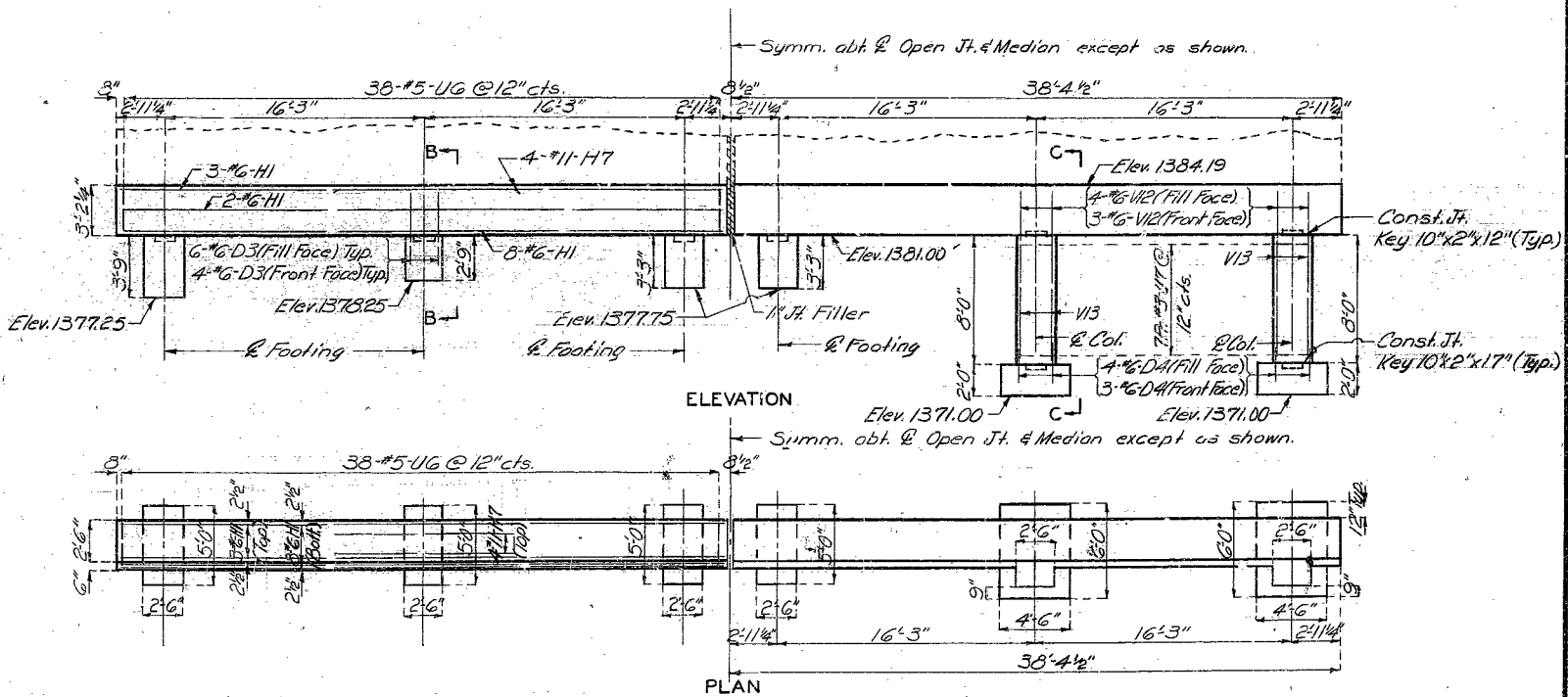
NO CONSTRUCTION CHANGES



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



ADDITIONAL ESTIMATED QUANTITIES	
Item	Substr. Total
Class B Concrete	Cu Yd. 20.4 20.4
Reinforcing Steel	Lb. 2,420 2,420



REVISÉ DETAILS OF END BENT NO. 5

**BRIDGE BUSSINESS ROUTE 66 UNDERPASS**  
**STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.**  
**IN SPRINGFIELD**  
**PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+43.80**  
**GREENE COUNTY**

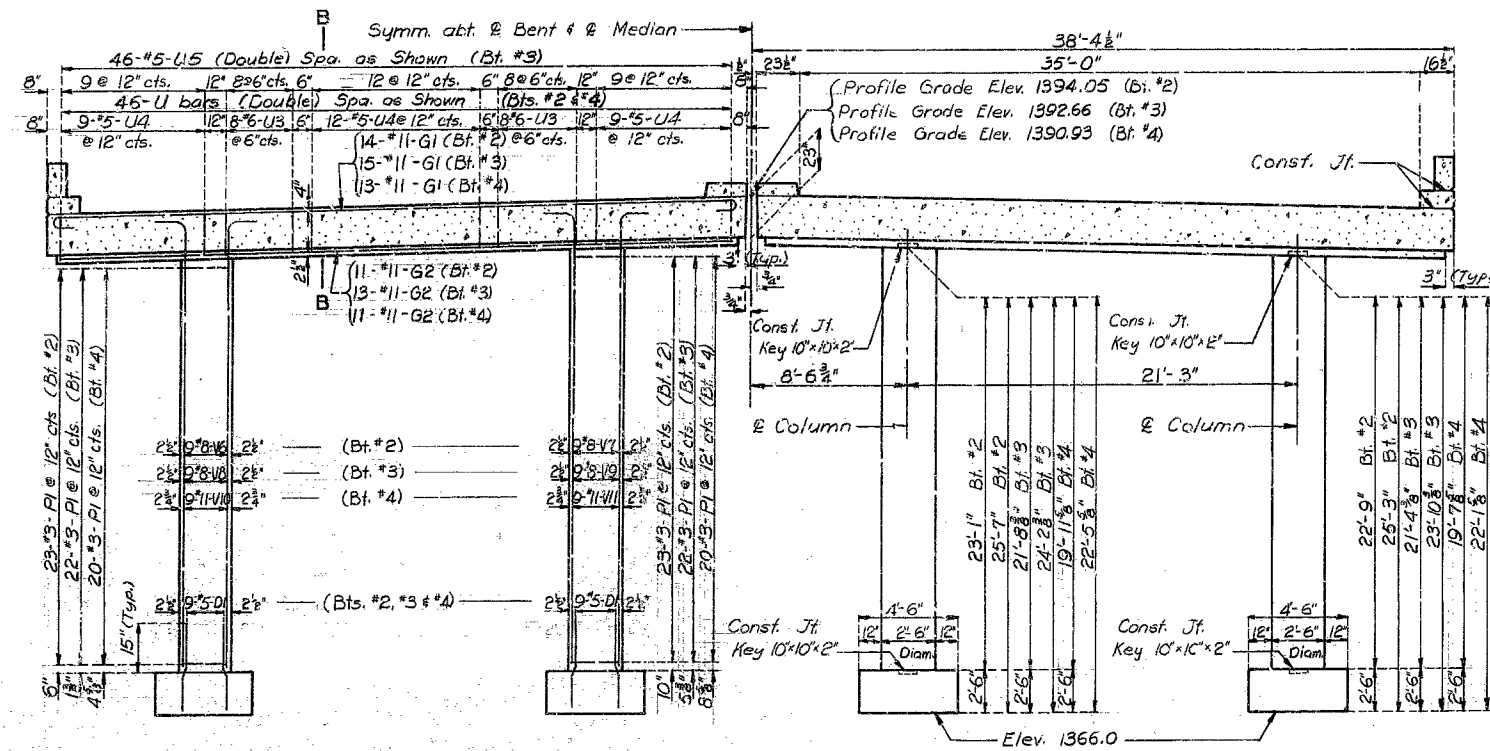
Sheet No. 3A 8-5A of 8.

NO CONSTRUCTION CHANGES

A-1648

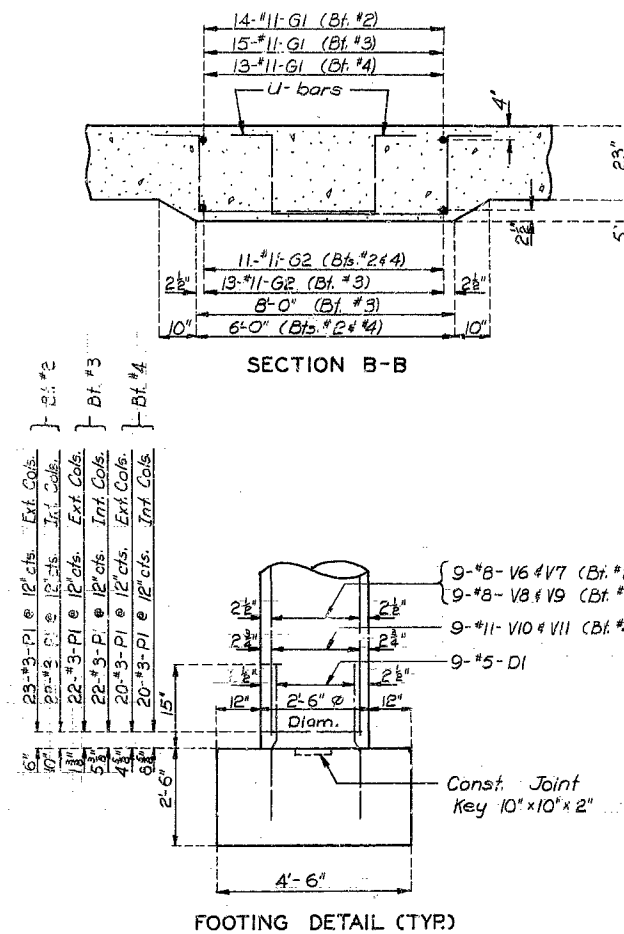
# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		39	40	

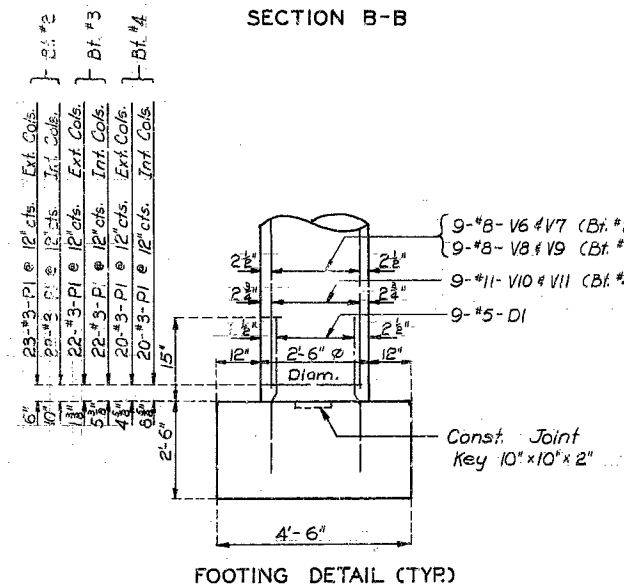


SECTION A-A

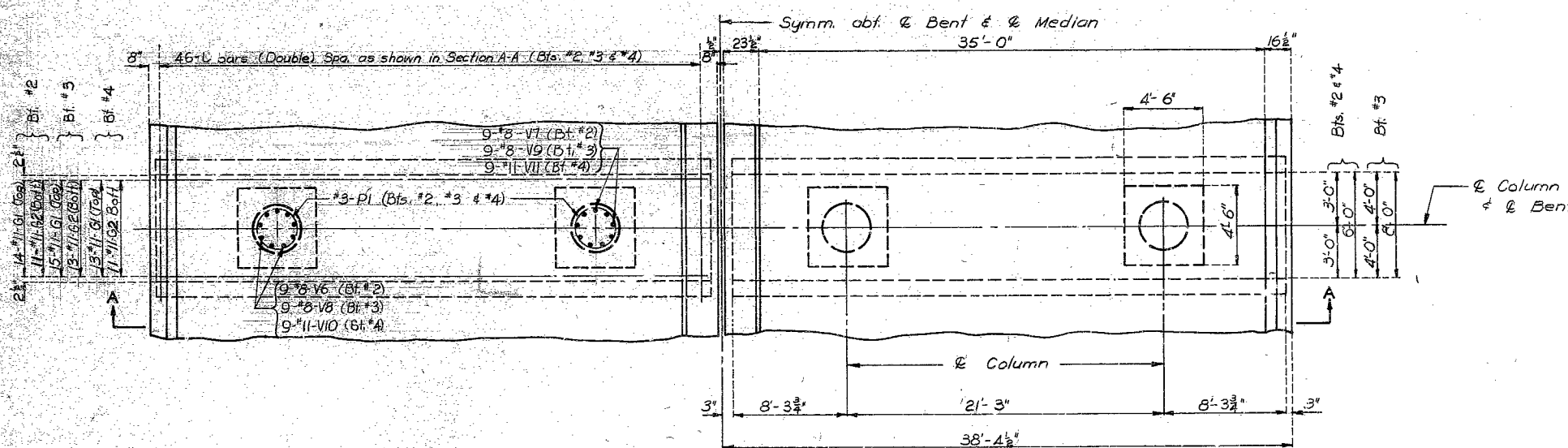
Note: V6, V7, V8 & V9 are straight bars  
V10 & V11 are bent as shown.



SECTION B-B



FOOTING DETAIL (TYP)



PLAN  
DETAILS OF INT. BENTS NO. 2, 3 & 4.

BRIDGE: BUSINESS ROUTE 66 UNDERPASS  
STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
IN SPRINGFIELD  
PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+49.80  
GREENE COUNTY

DETAILED Sept. 1967 BY UNDERWOOD  
CHECKED Dec. 1967 BY GRIFFIN

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

Sheet No. 4 of 8.

SEE FINAL PLANS BROWN LINES

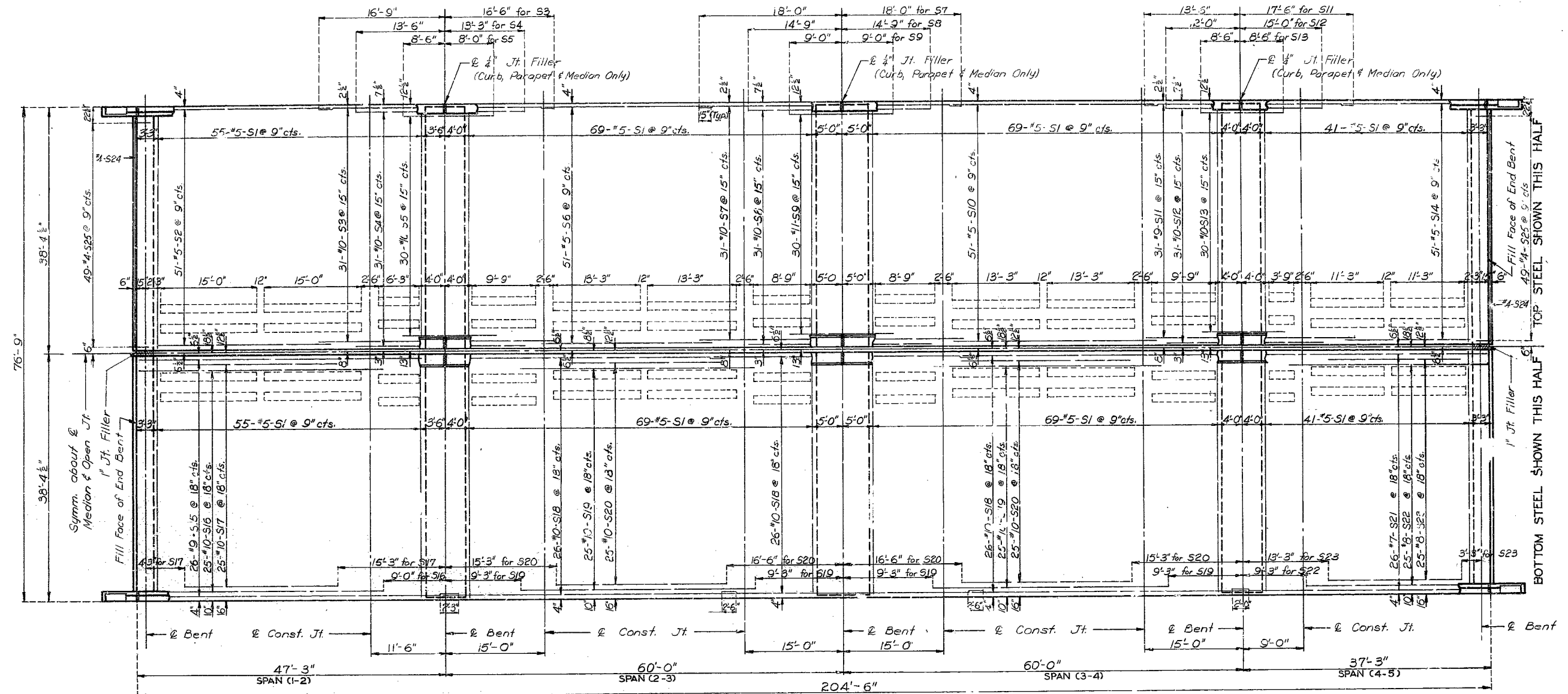
A-1648





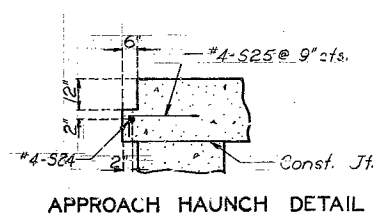
# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	42	

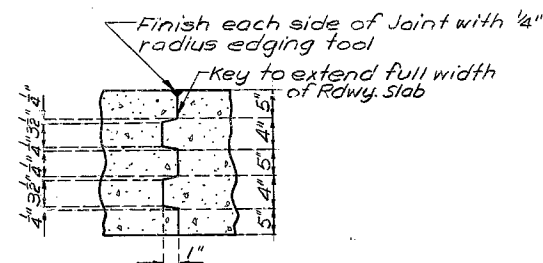


PLAN OF SLAB SHOWING TOP AND BOTTOM REINFORCEMENT

Note: All longitudinal dimensions shown are horizontal.



APPROACH HAUNCH DETAIL



DETAILS OF SLAB CONSTRUCTION JOINT KEY

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

**BRIDGE: BUSINESS ROUTE 66 UNDERPASS**  
**STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.**  
**IN SPRINGFIELD**  
**PROJECT NO. U-UG-65-2(10) (R.T.E. 65) STA. 771+49.80**  
**GREENE COUNTY**

DETAILED SEPT. 1967 BY UNDERWOOD  
 CHECKED DEC. 1967 BY GIRIYAPPA.

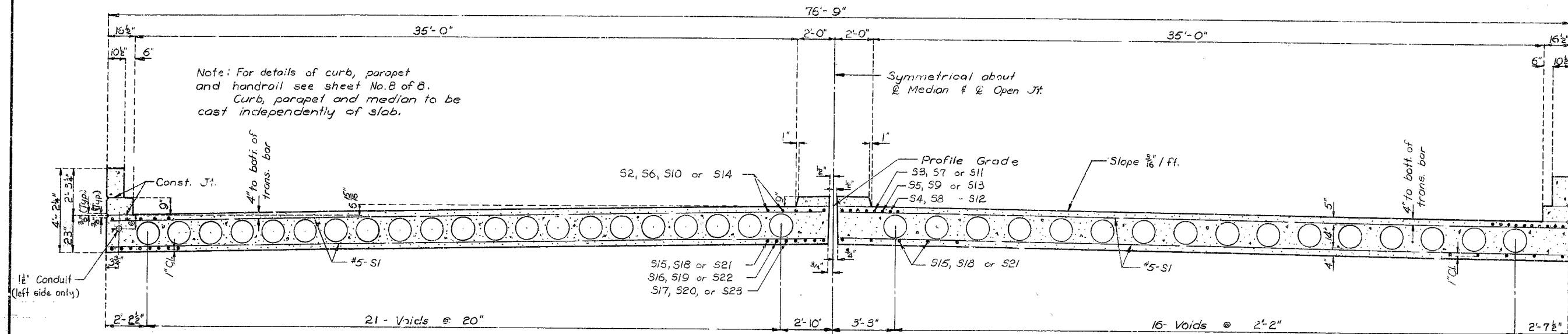
Sheet No. 6 of 8.

NO CONSTRUCTION CHANGES

A-1648

# MISSOURI STATE HIGHWAY DEPARTMENT

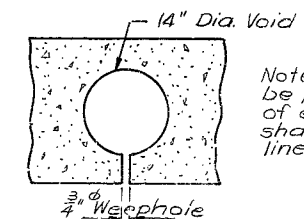
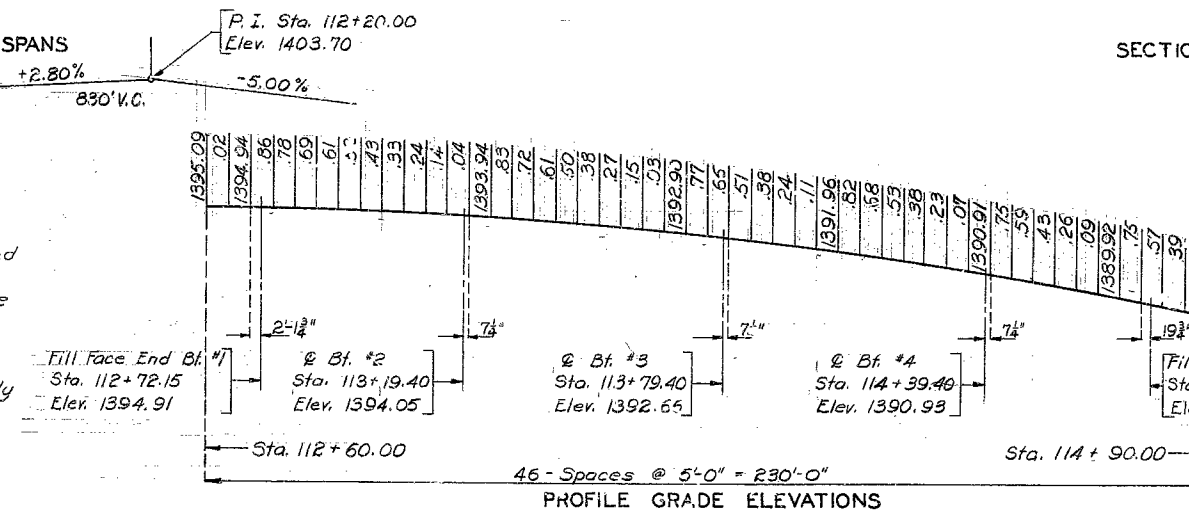
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	43	



SECTION NEAR CENTER OF SPANS

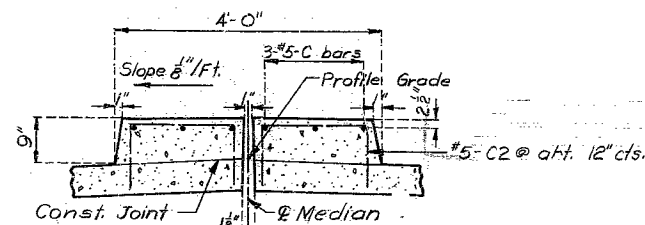
SECTION NEAR INT. BENTS

Note: The contractor shall use an approved oscillating screed type, self-propelled mechanical finishing machine and shall pour and satisfactorily finish the roadway slab at a rate of not less than 43 cubic yards per hour for each lane. He shall observe the transverse construction joints shown on plans unless he can demonstrate to the satisfaction of the engineer that he is equipped to pour and satisfactorily finish the roadway slab at a rate which will permit a continuous pouring through some or all of these joints. Finishing machine load will not be permitted on concrete less than 48 hours old.



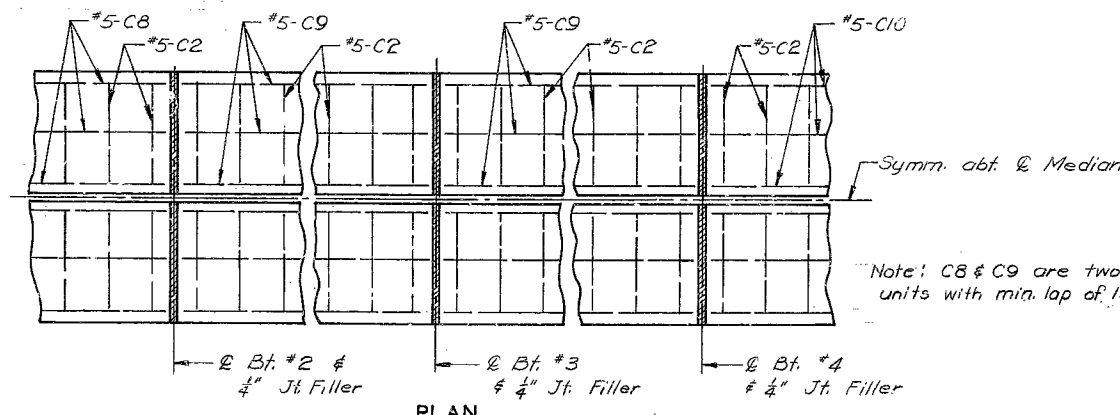
DETAIL OF WEEPHOLE IN VOIDS

Note: Fiber tubes for producing voids shall have an outside diameter of 14" and a wall thickness of .250" and shall be anchored to joists carrying the floor form at not more than 4'-0" centers. See Special Provisions for metal tube alternate for voids.

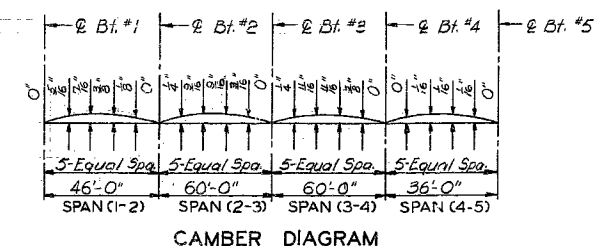


SECTION (TYP.)

DETAILS OF MEDIAN



PLAN



CAMBER DIAGRAM

**BRIDGE: BUSINESS ROUTE 66 UNDERPASS**  
**STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.**  
**IN SPRINGFIELD**  
**PROJECT NO. U-UG-65-2(10) (RT 65) STA. 771+49.80**  
**GREENE COUNTY**

DETAILED SEPT. 1967 BY UNDERWOOD  
 CHECKED DEC. 1967 BY Giriappa

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

Sheet No. 7 of 8.

NO CONSTRUCTION CHANGES

A-1648



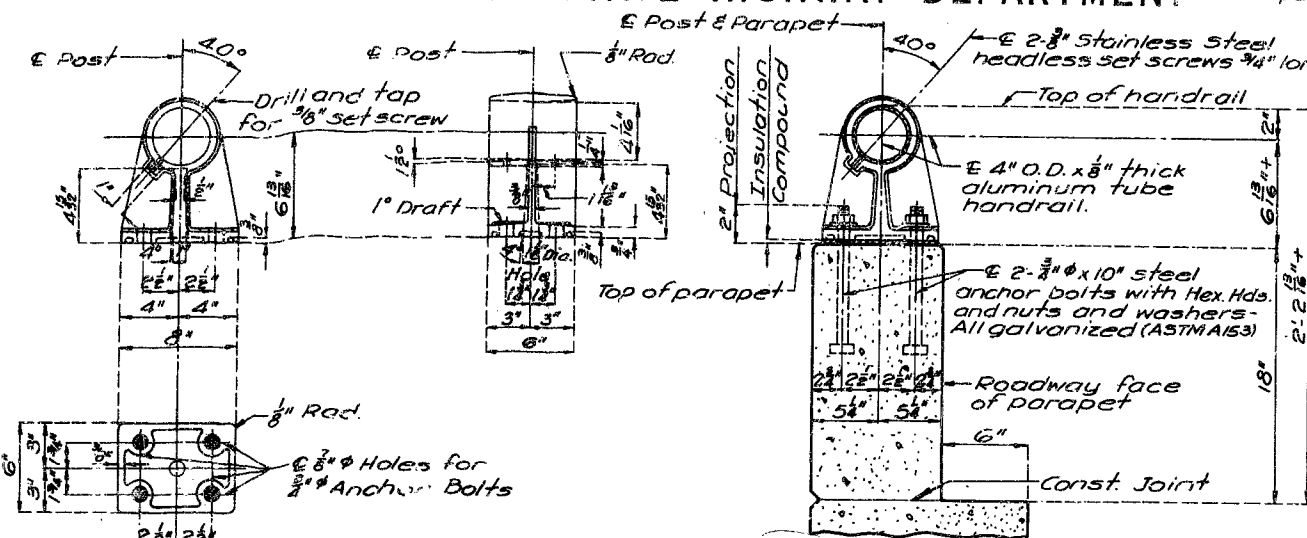
# GENERAL HANDRAIL NOTES:

All handrail posts shall be set normal to grade.  
 Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.  
 Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". 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.  
 The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.  
 All fillets 1/4" except as noted.  
 All drafts 3° except as noted.  
 Pipe rail to be fabricated in a minimum of 2 panel lengths.  
 Omit set screw on side adjacent to filled joint in parapet and curb at all expansion posts.  
 Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end posts) normal to grade.  
 Concrete end posts to be vertical.  
 All exposed edges of end posts shall have 1/2" bevel.  
 All exposed edges of curbs and parapets shall have 1/2" radius or 1/8" bevel unless otherwise noted.  
 If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.  
 Integrally cast test coupons and a coat of clear lacquer specified in Std. Spec. 56.2.4 and 56.3.5 respectively will not be required for these rail posts.

## MISSOURI STATE HIGHWAY DEPARTMENT

2" Min. except for Exp. Gap  
 in parapet use 3" @ 60° F

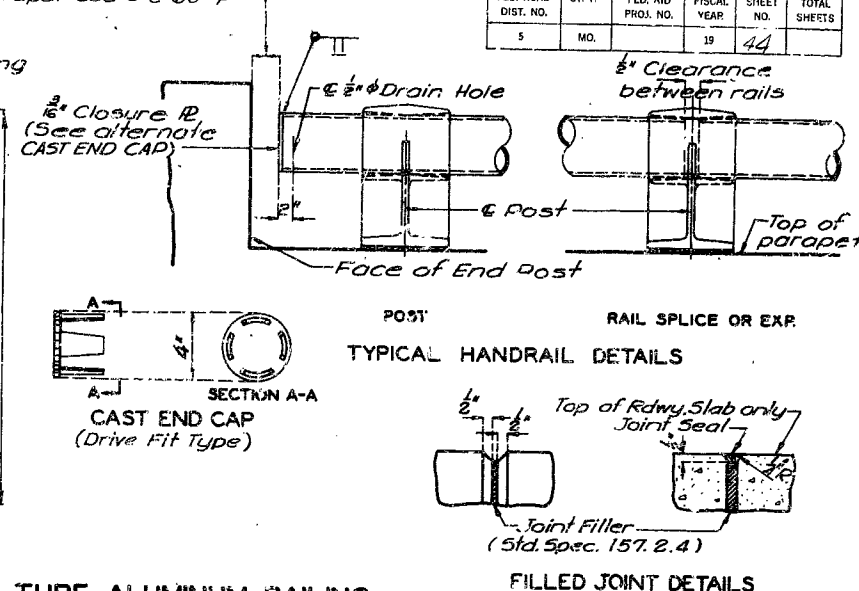
FED. ROAD DIST. NO.	STAT.	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	44	



POST DETAILS

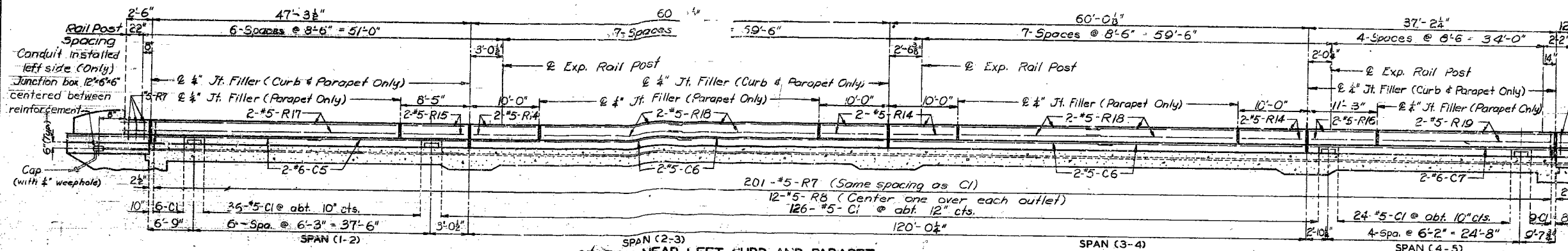
SECTION THRU HANDRAIL

SINGLE TUBE ALUMINUM RAILING



TYPICAL HANDRAIL DETAILS

FILLED JOINT DETAILS



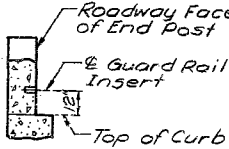
SECTION NEAR LEFT CURB AND PARAPET

Longitudinal dimensions shown are along top of parapet parallel to grade.

12" Steel Conduit between junction boxes (slope to drain)

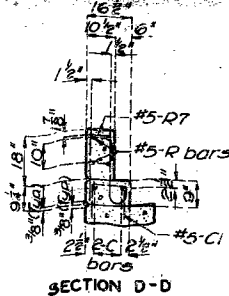
2" Steel Conduit to joint boxes

Note: For horizontal curb and parapet bars use a minimum lap of 15" for #5 and 18" for #6



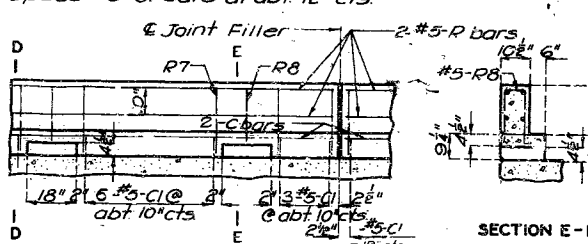
SECTION H-H

Note: Anchors for attaching guard rail shall be 3/4" threaded malleable iron (galv.) inserts having a min. depth of 3 1/2" and filled with a plastic closing plug. Cost for furnishing and installing the inserts and plugs will be included in price bid for other items.



SECTION D-D

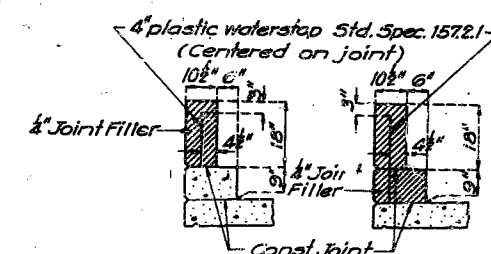
Note: When curb outlets are omitted space #5-C1 bars at abt. 12" cts.



SECTION E-E

### Conduit Notes:

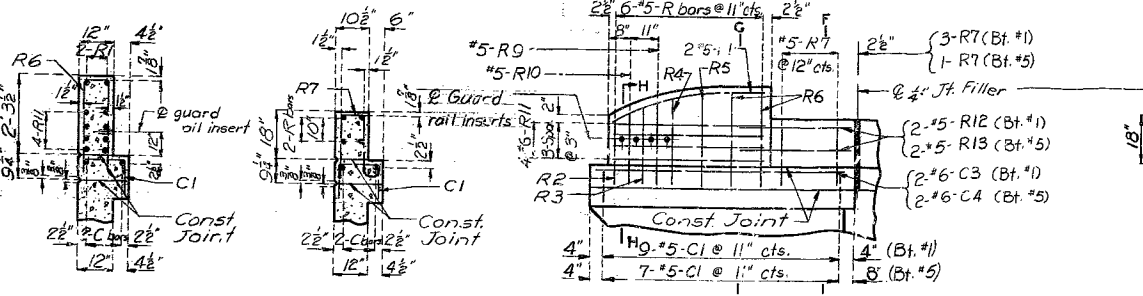
Cost of furnishing and placing conduit shall be included in contract unit price of Conduit System (on structures).  
 All conduit to be rigid galvanized steel with 3" min. cover in concrete.  
 3/4" reinforcing steel in field where necessary to clear conduit & junction boxes.  
 Junction boxes shall be galvanized cast-iron boxes, flush mounted on outside face of wings, equal to O.T. Elec. Mfg. Co. Type YR. Wall thickness to be sufficient to provide 5 full threads for water tight conduit joint.  
 Conduit is to be installed so that it will slope to drain at conduit boxes.



Note: Plastic waterstop shall be placed in all parapet and curb filled joints.

Cost of plastic waterstop complete in place to be included in unit price bid for concrete.

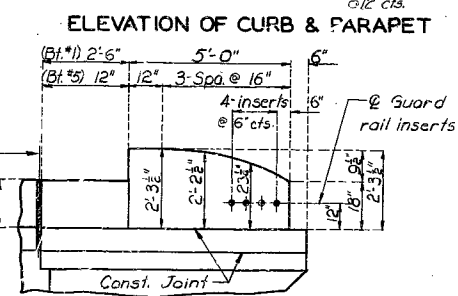
DETAILS OF PLASTIC WATERSTOP



SECTION G-G

SECTION F-F

ELEVATION OF END POSTS



ELEVATION OF CURB & PARAPET

DETAILED Sept. 1967 BY Underwood  
 CHECKED Dec. 1967 BY Giryappa

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

Sheet No. 8 of 8

BRIDGE : BUSINESS ROUTE 66 UNDERPASS  
 STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
 IN SPRINGFIELD  
 PROJECT NO. U-UG-65-2(10) (RTE. 65 STA. 771+49.80)  
 GREENE COUNTY

A-1648

# MISSOURI STATE HIGHWAY DEPARTMENT

(46'-60'-60'-36') Cont. Slab Spans (Voiees)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FIN. AID YEAR	SHEET NO.	TOTAL SHEETS
MO			19	2	2

## GENERAL NOTES:

Design Specifications AASHTO 1961

## Design Loading

HS20-44 15# / sq ft future Wearing Surface  
Earth 120# Equivalent Fluid Pressure 30#

## Design Unit Stresses

Class B Concrete (substructure)  $f_c = 1,200$  psi  
Class B Concrete (superstructure)  $f_c = 1,600$  psi  
Reinforcing Steel  $f_s = 20,000$  psi

## Surface Seal

Superstructure deck was surface sealed

FOOTING DATA					
BENT NO.	1	2	3	4	5
Foundation Material	Rock	Rock	Rock	Rock	Rock
Des. Brg. Tons / Sq. Ft.	1.9	11.0	1.1	9.2	1.9

QUANTITIES			
ITEM	SUBSTR.	SUPERSTR.	TOTAL
Class I Excavation for Structures	CuYd.	344.5	344.5
Class B Concrete	CuYd.	102.3	102.3
Class B Concrete	CuYd.	1064.8	1064.8
Reinforcing Steel	Lbs.	6770	269350
Bridge Rail (Single Tube Type)	Lin. Ft.	416	416
Conduit System (on structure)	Lump Sum	1	1
Contingent Items			
Class I Excavation for Structures $\pm 25\%$	CuYd.	62	62
Test Holes	Lin. Ft.	92	92
Sign Support	Lump Sum	1	1

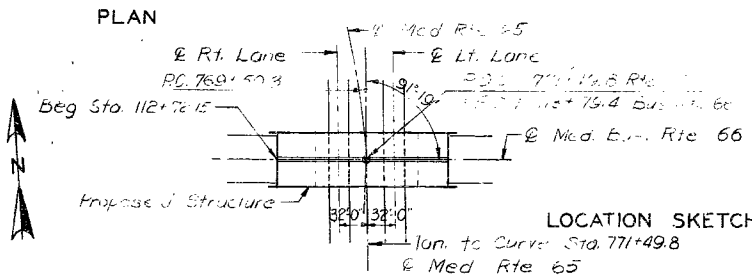
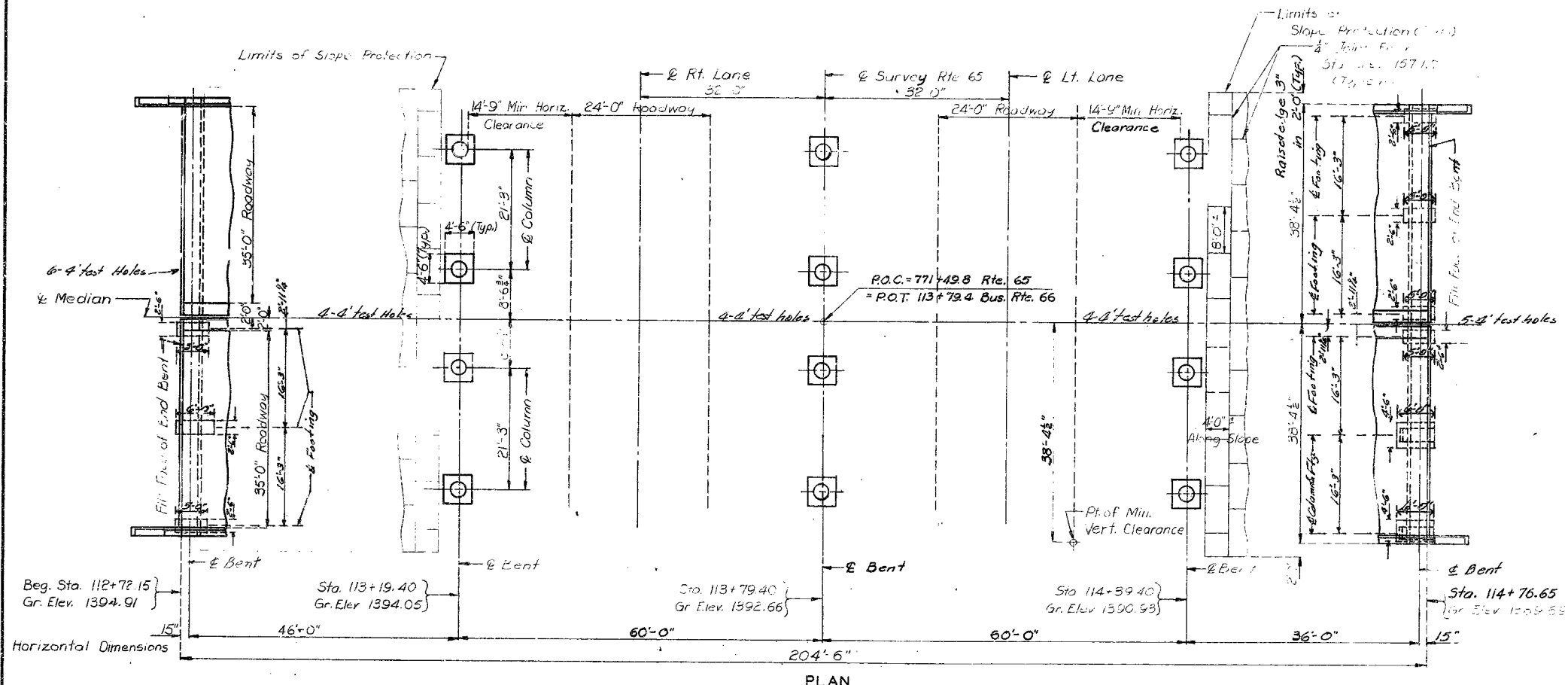
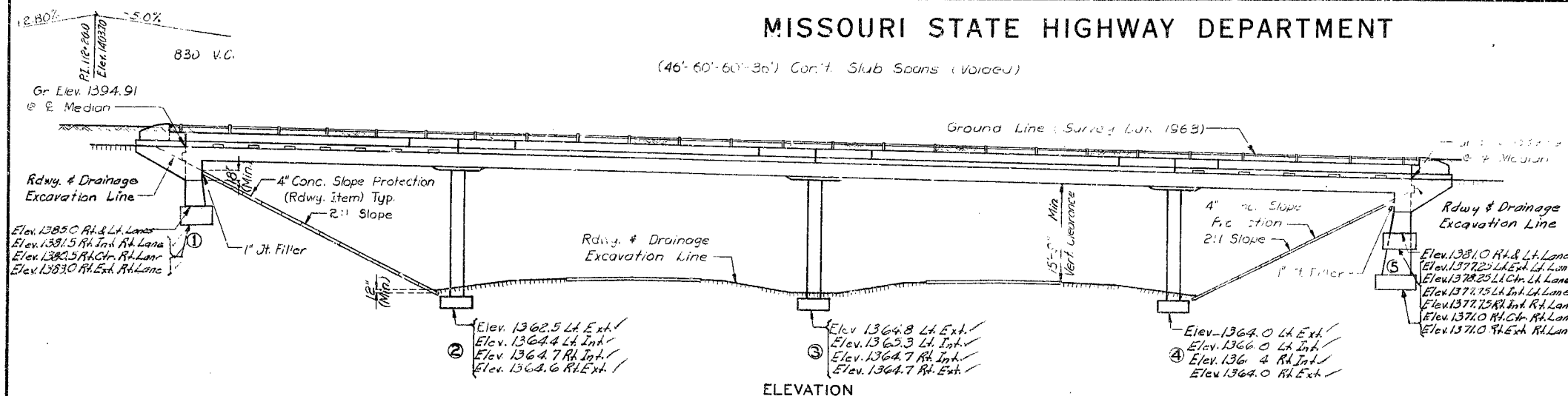
Note: All concrete and reinforcement above footings included in superstructure quantities

B.M. Elev 1320.47 on NE corner Med. Island 8' Lt. @ Rte. 66 @ Sta. 114+76.65

**BRIDGE : BUSINESS ROUTE 66 UNDERPASS**  
STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
IN SPRINGFIELD  
PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+49.80  
**GREENE COUNTY**

SUBMITTED BY: SRIDGE ENGINEER DATE: 11/1/67  
APPROVED BY: CHIEF ENGINEER DATE: 11/1/67

STD. 54-00  
A-1648



DESIGNED July 1967 BY Meisel  
DETAILED Sept. 1967 BY Underwood  
CHECKED Dec. 1967 BY Girirappa

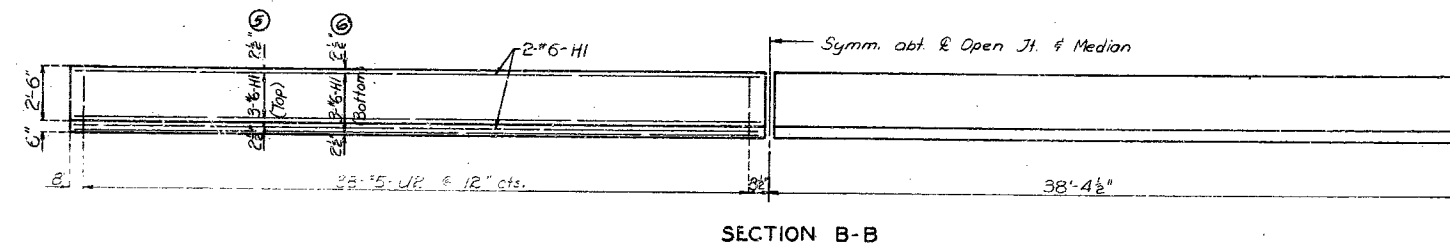
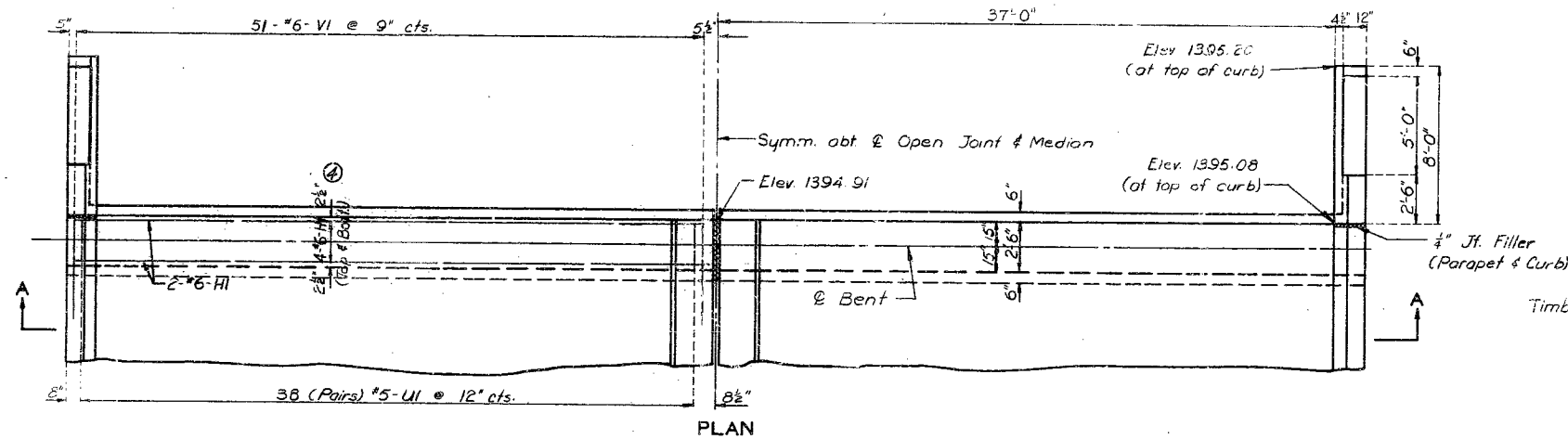
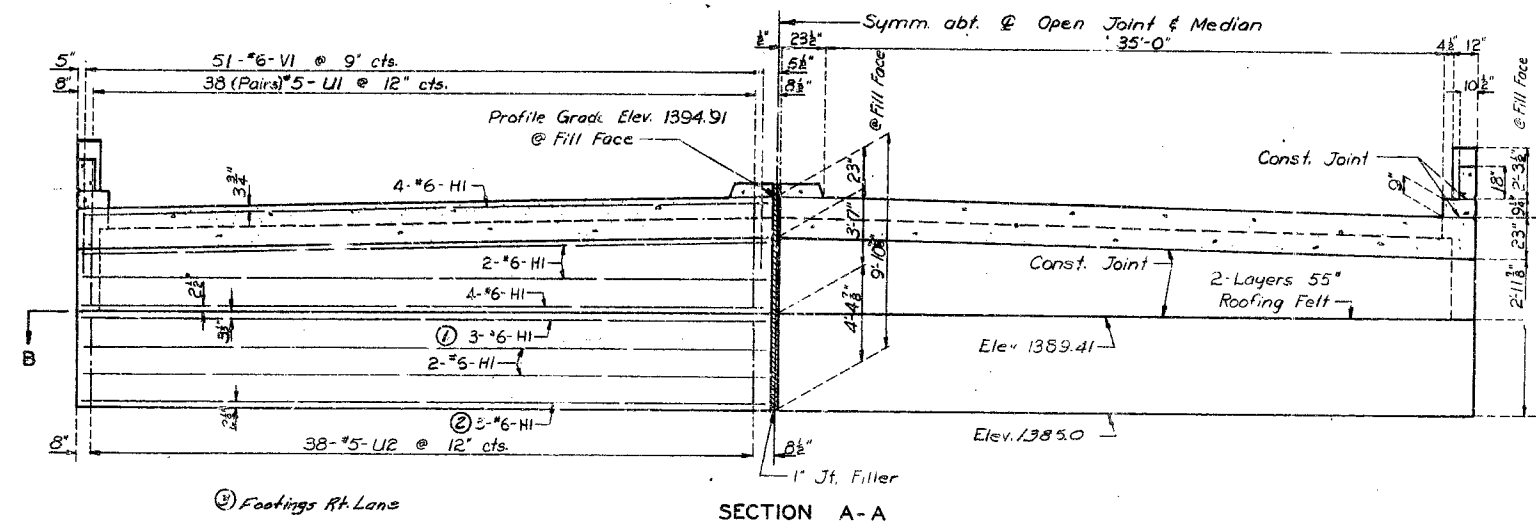
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1A of 4

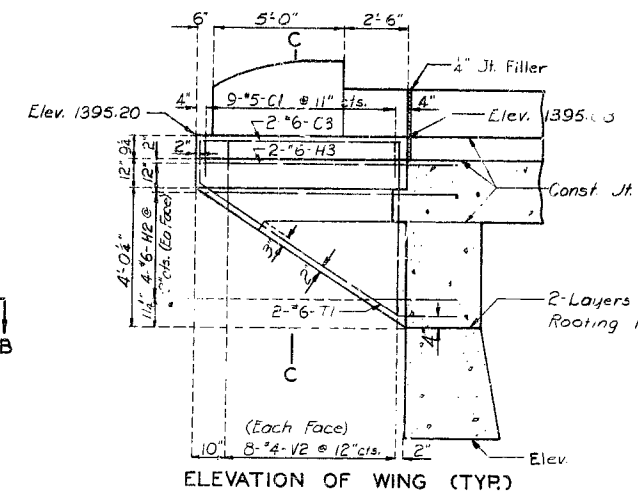
FINAL PLANS

# MISSOURI STATE HIGHWAY DEPARTMENT

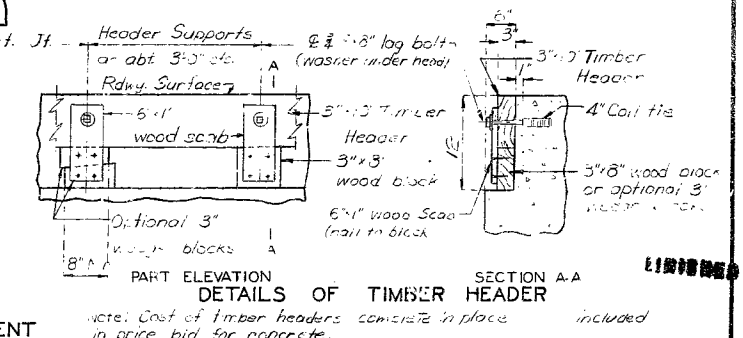
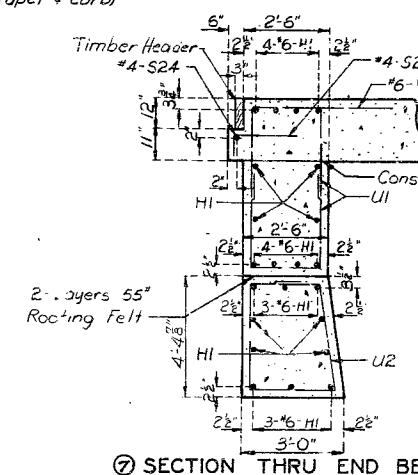
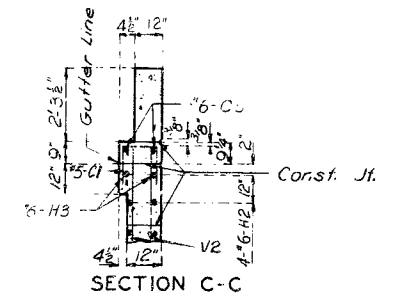
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	39	



DETAILS OF END BENT NO. 1  
See sheet No. 3A for changes in Rt. Lane



Notes:  
①②③④⑤⑥⑦ See sheet No. 3A for Rt. Lane revision



BRIDGE: BUSINESS ROUTE 66 UNDERPASS  
STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.  
IN SPRINGFIELD  
PROJ CT NO. U-UG-65-2(10) (RTE. 65) STA. 771+49.30  
GREENE COUNTY

DETAILED Sept. 1967 BY UNDERWOOD  
CHECKED Dec. 1967 BY GRIYAPPA

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

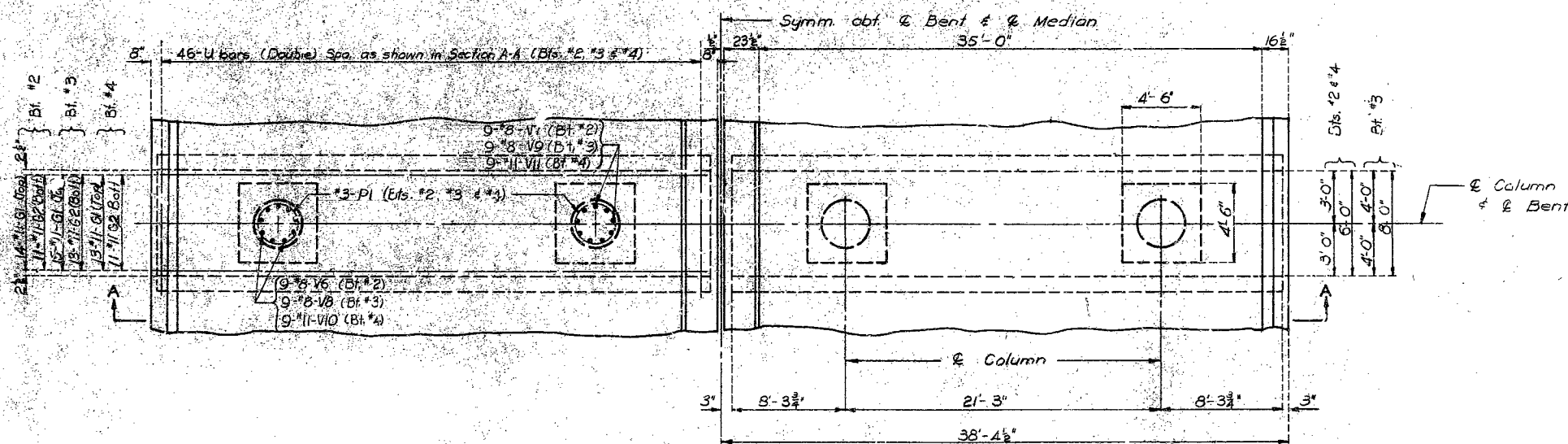
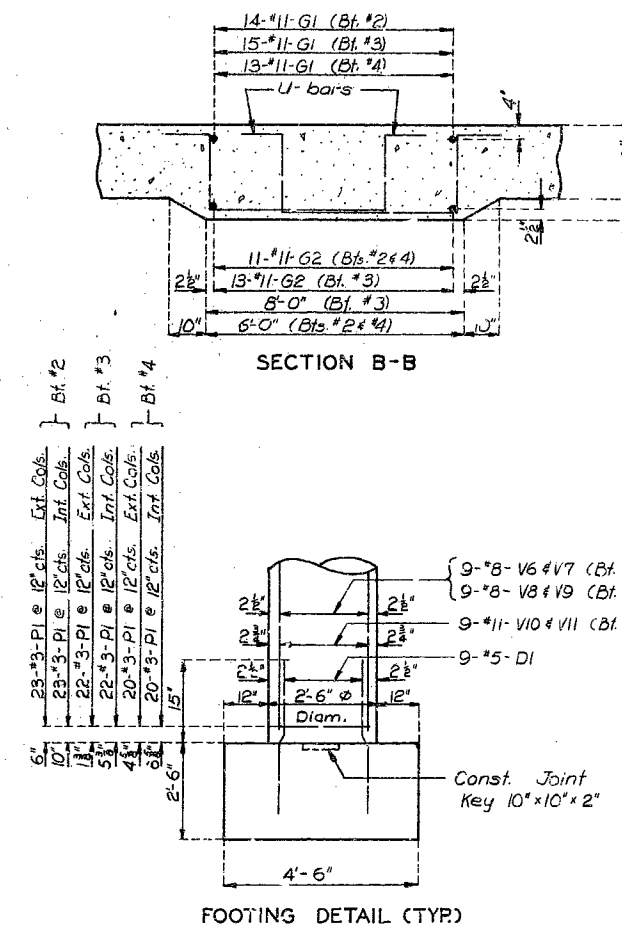
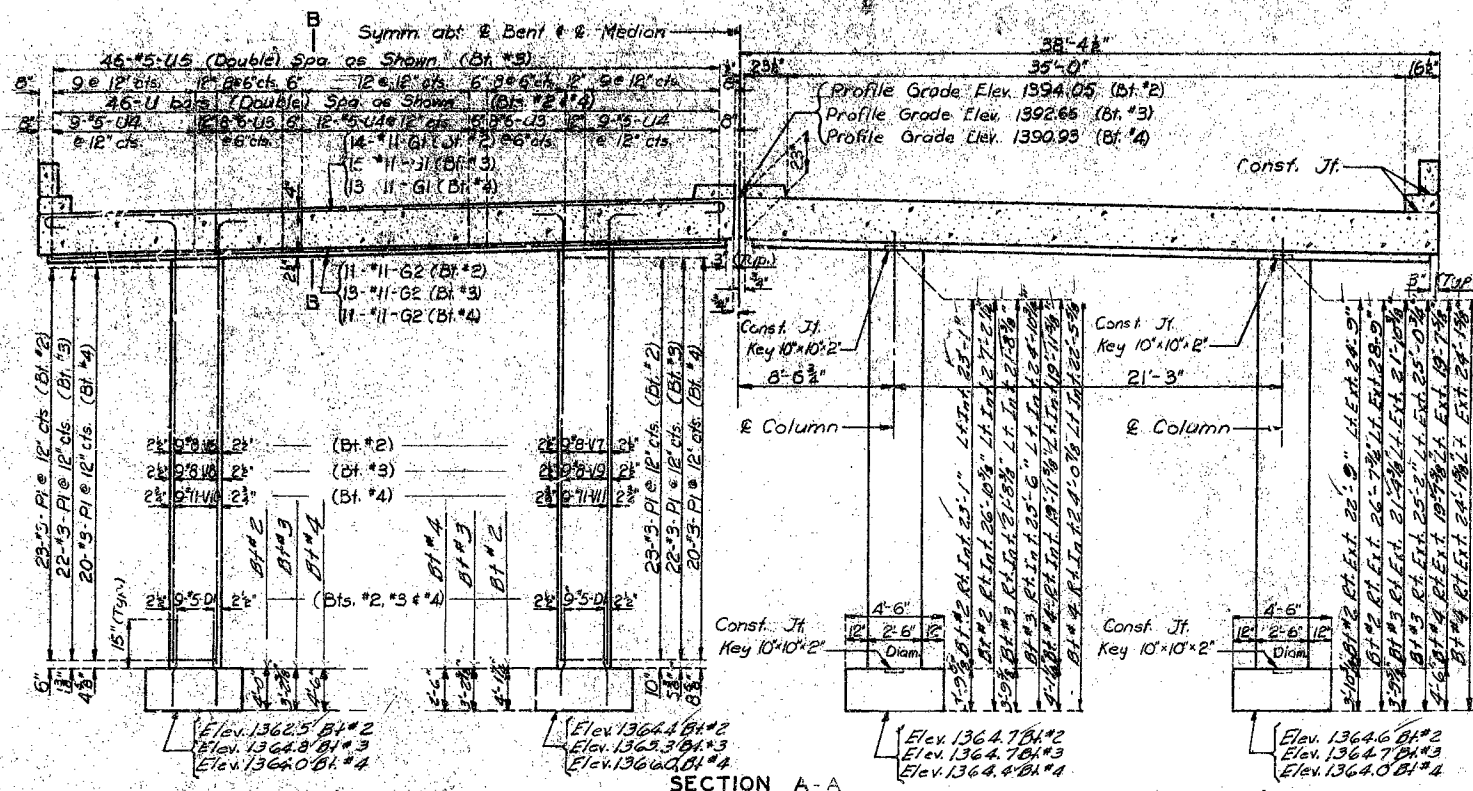
Sheet No. 3A of 4

FINAL PLANS

A-1648

# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	40	



DETAILS OF INT. BENTS NO. 2, 3 & 4.

**BRIDGE: BUSINESS ROUTE 66 UNDERPASS**  
**STATE ROAD FROM I-44 SOUTH TO SOUTH OF CHERRY ST.**  
**IN SPRINGFIELD**  
**PROJECT NO. U-UG-65-2(10) (RTE. 65) STA. 771+49.80**  
**GREENE COUNTY**

DETAILED Sept. 1967 BY UNDERWOOD  
 CHECKED Dec. 1967 BY Giriappa

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

Sheet No. 4 of 4

FINAL PLANS

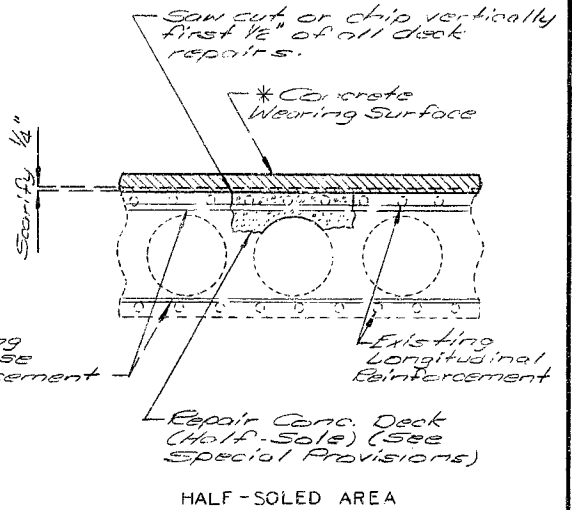
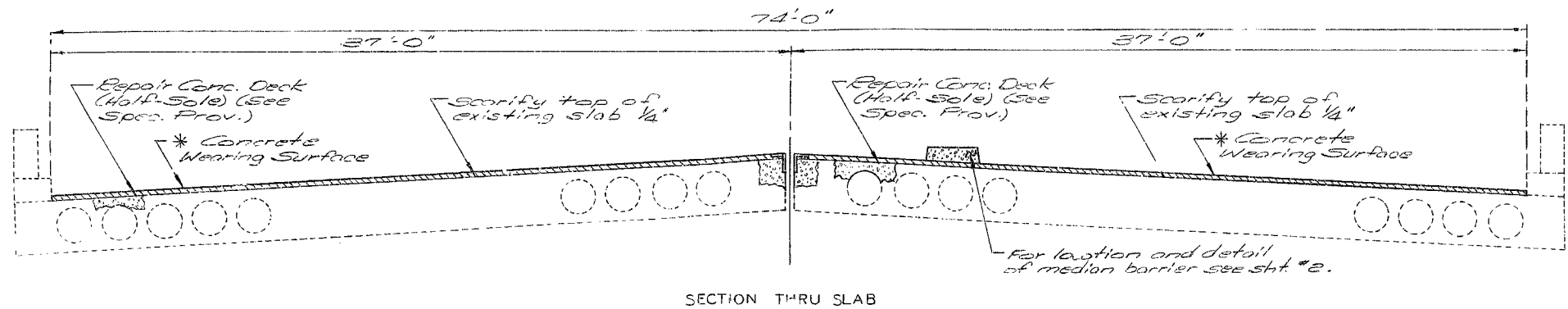
A-1648





MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	NO	SHEET NO.
MO		20
SEC./SUR	9	301 RGE 21W



Note: Sequence for repair: Zone A, then Zone B, then Zone C. Zones with the same letter designation may be repaired at the same time. Any repair in the remainder of the bridge that is within 5'-0" of Zone A shall be completed before removing old concrete in Zone A.

GENERAL NOTES:

Design Specifications: AASHTO 1977 and Interim.5 thru 1983

Design Unit Stresses: Class B1 Concrete (Median Barrier Curb)  $f_c = 1,600$  psi  
Reinforcing Steel (Grade 60)  $f_s = 24,000$  psi

All joint filler shall meet the requirement of Std. Spec. 1057.2.4, except as noted.

One lane of traffic in each direction is to be maintained during construction. (See Road Plans)

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

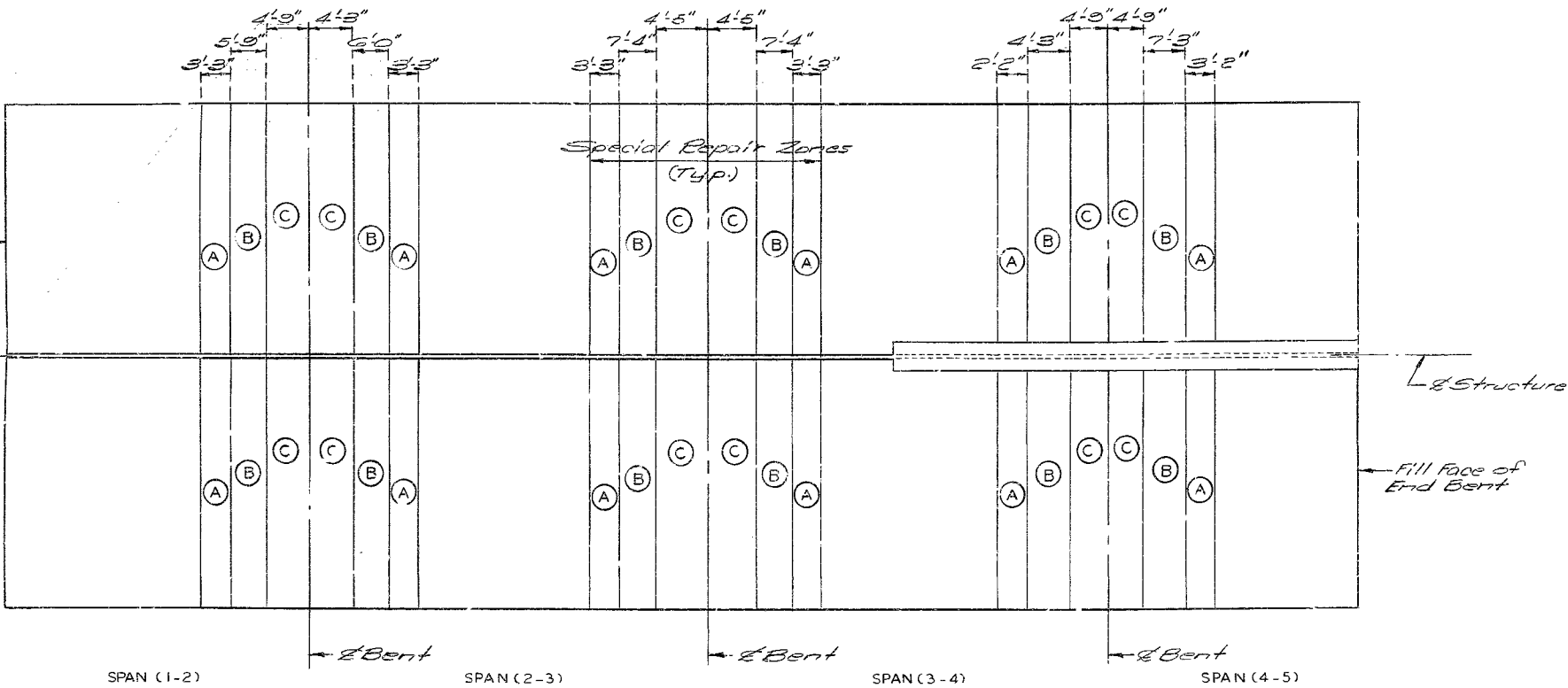
Bars bonded in old concrete not removed shall be cleanly stripped and embedded into new concrete where possible. If length is available, old bars shall extend into new concrete at least 30 diameters for deformed bars, unless otherwise noted.

The contractor shall use one of the approved Resin Anchor Systems listed in the Spec. Prov. for Raised Median Barrier.

These Anchor Systems shall be installed according to the manufacturer's specifications except that an epoxy coated #6, Grade 60, reinforcing bar shall be substituted for the threaded rod stud.

ESTIMATED QUANTITIES		
ITEM		TOTAL
* Concrete Wearing Surface ( )	Sq. Yd.	1648
Repair Conc. Deck (Half-Soling)	Sq. Ft.	1187
Raised Median Barrier	Sq. Ft.	540
Special Work	Lumpsum	1

Note: See Special Provisions for alternate use of concrete wearing surface.



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

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

DESIGNED Jan 19 86  
DETAILED Jan 19 86  
CHECKED JAN. 19 86

SEE FRIDGE PLAN

Sheet No. 1 of 2

REPAIRS TO  
BRIDGE: ROUTE 744 OVER ROUTE 65

STATE ROAD: FROM INTERSTATE 44 SOUTH

IN SPRINGFIELD

PROJECT NO. F-FG-65-2(31)

JOB NO. 8-U-65-467

GREENE

STA. 771 + 49.80 (RTE. 65)

RTE. 65

COUNTY

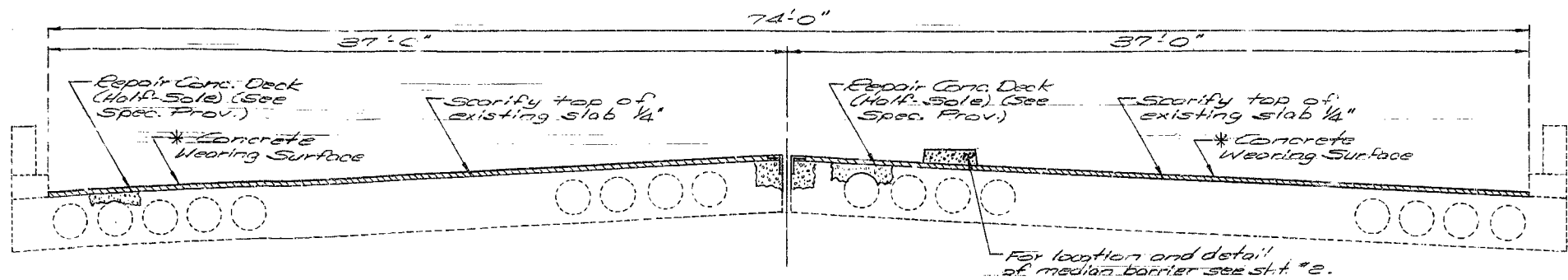
DATE 2/21/86

STD.
STD.
A-1648R



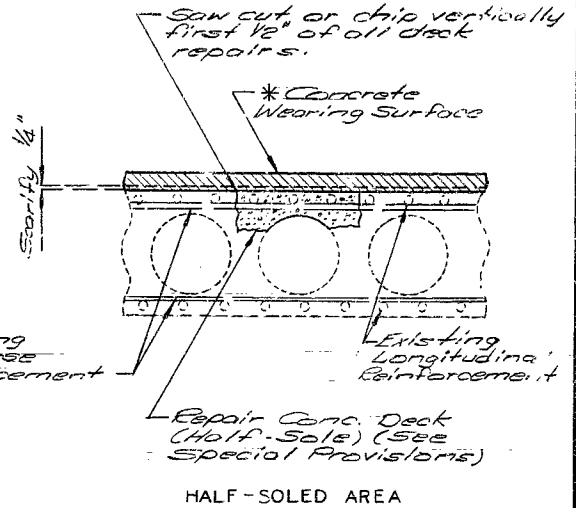
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

STATE	PROJ NO	SHEET NO
MO		20
.../SUR	9 TWP 23N RGE 21W	



SECTION THRU SLAB

\* 2 1/4" (min.) Low Slump Concrete



HALF-SOLED AREA

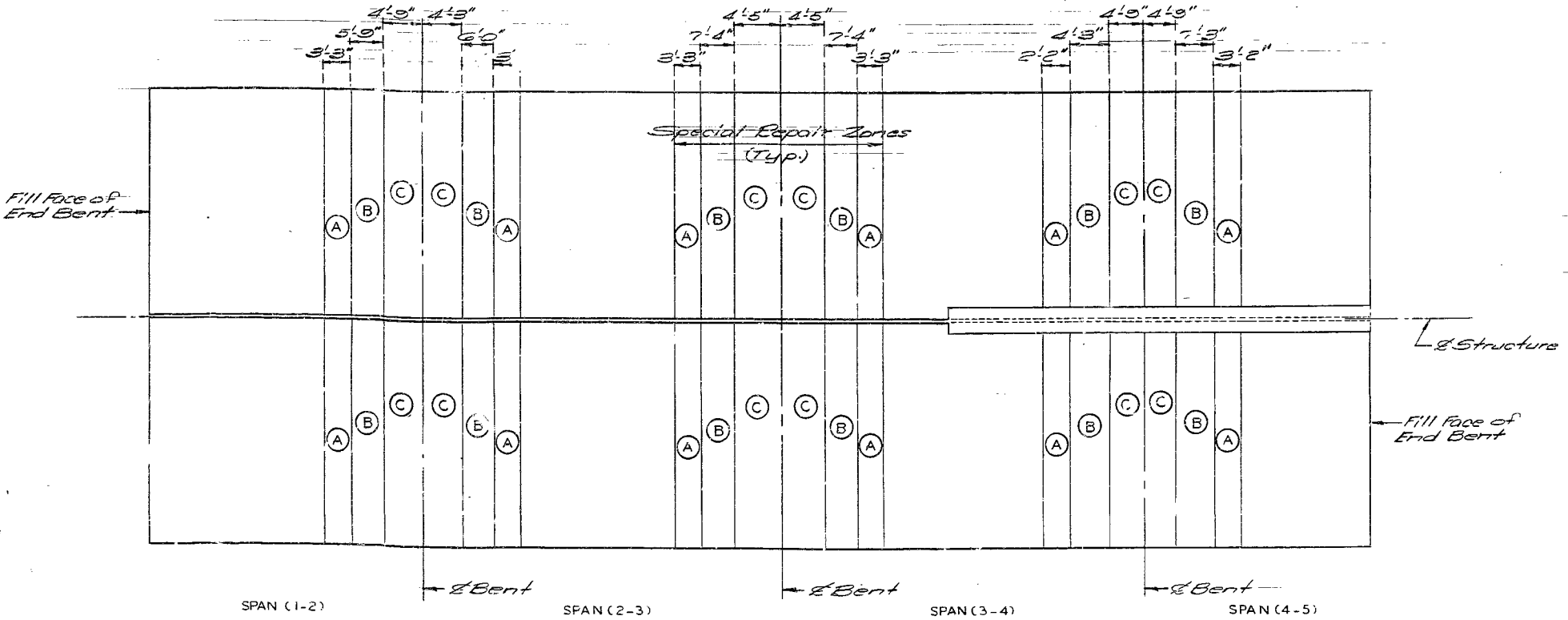
Note: Sequence for repairs: Zone A, then Zone B, then Zone C. Zones with the same letter designation may be repaired at the same time. Any repair in the remainder of the bridge that is within 5'0" of Zone A shall be completed before removing old concrete in Zone A.

GENERAL NOTES:

- Design Specifications: AASHTO 1977 and Interims thru 1983
- Design Unit Stresses:
  - Class B1 Concrete (Median Barrier C-4)  $f_c = 4,600$  psi
  - Reinforcing Steel (Grade 60)  $f_s = 24,000$  psi
- All joint filler shall meet the requirement of Std. Spec. 1057.2.4, except as noted.
- One lane of traffic in each direction is to be maintained during construction (See Road Plans).
- Outline of old work is indicated by light dashed line. 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 30 diameters for deformed bars, unless otherwise noted.
- The contractor shall use one of the approved Rein. Anchor Systems listed in the Spec. Prov. for Eased Median Barrier.
- These Anchor Systems shall be installed according to the manufacturer's specifications except that an epoxy coated 3/8" #4 Grade 60 reinforcing bar shall be substituted for the threaded rod stud.

ESTIMATED QUANTITIES		
ITEM		TOTAL
* Concrete Wearing Surface (Half-Soling)	Sq. Yd.	1648
Repair Conc. Deck (Half-Soling)	Sq. Ft.	268
Eased Median Barrier	Sq. Ft.	640
Special Work	Lumpsum	1

Note: See Special Provisions for alternate use of concrete wearing surface.



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

DESIGNED Jan 19 86  
DETAILED Jan 19 86  
CHECKED JAN. 19 86

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

Sheet No. 1A of 2

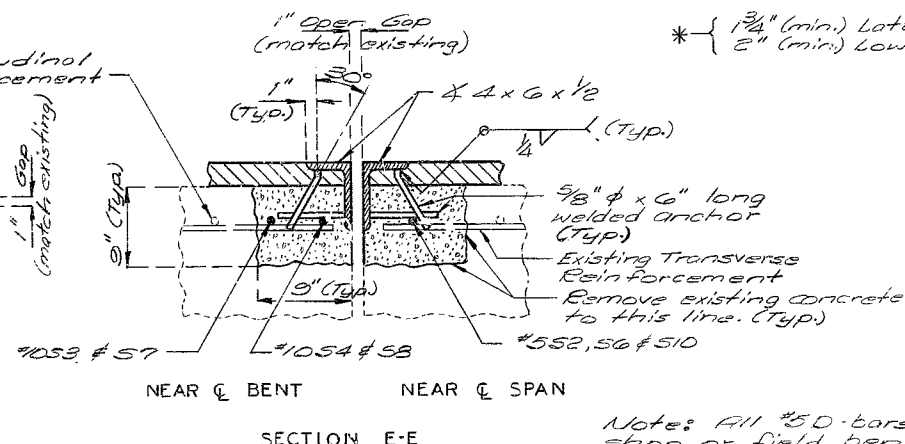
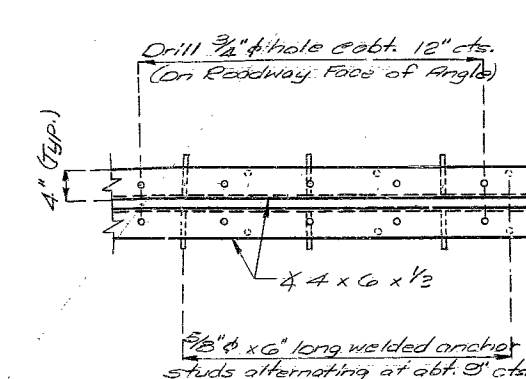
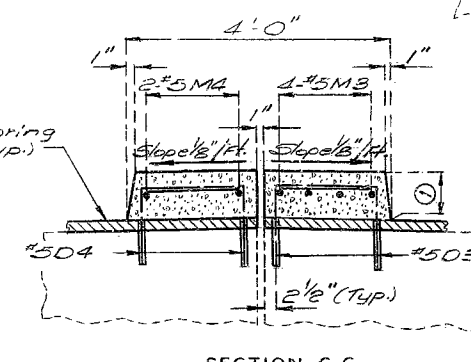
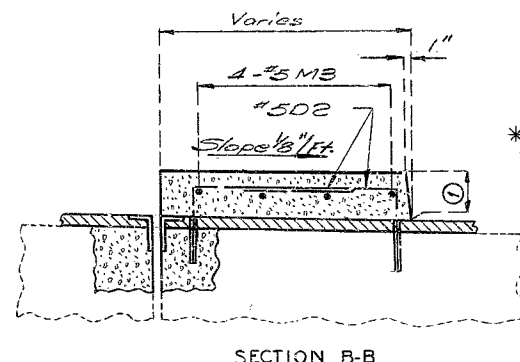
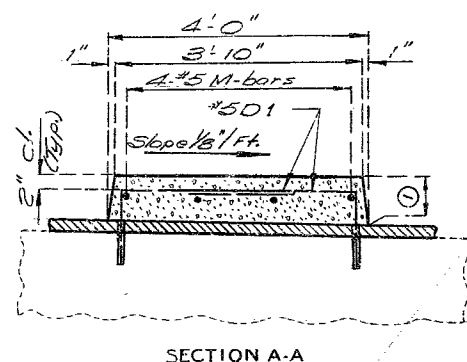
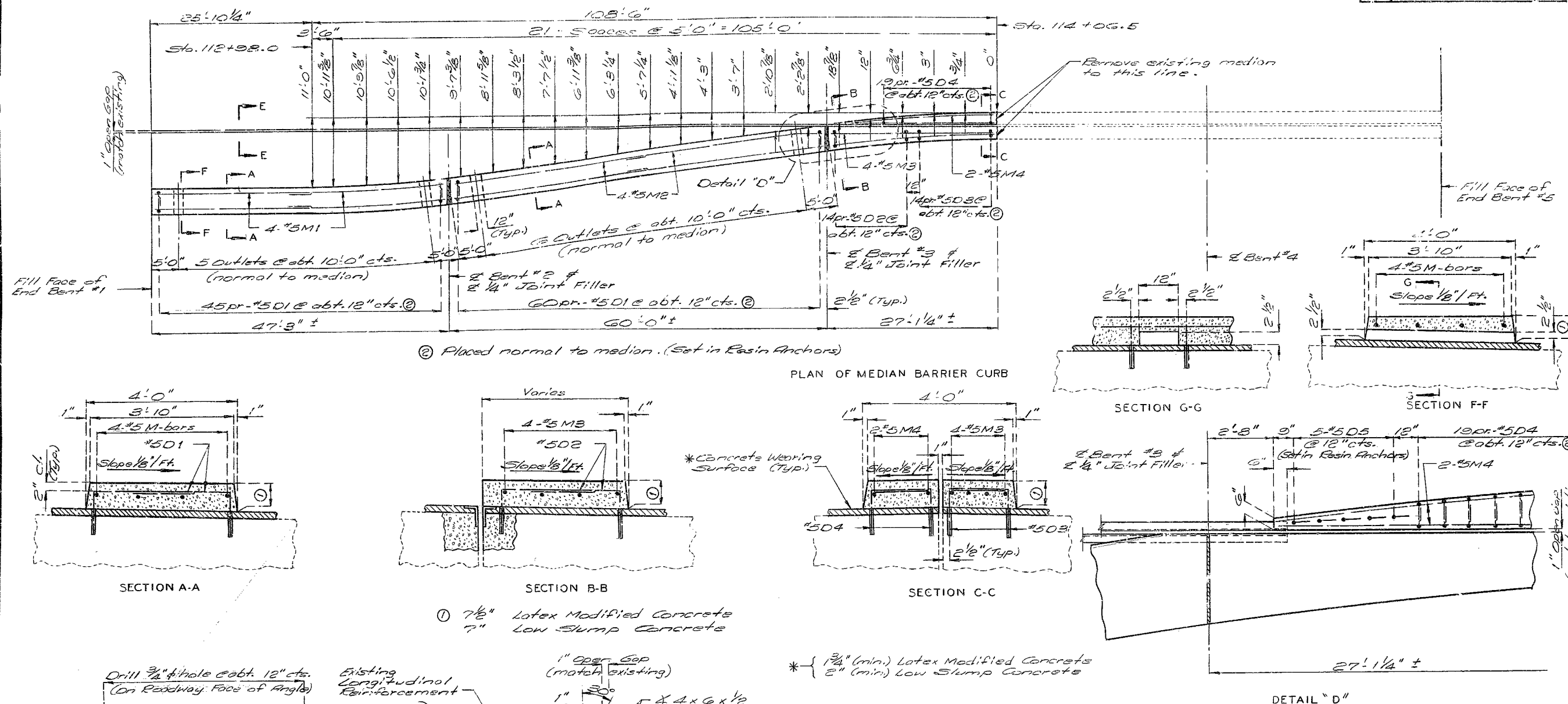
REPAIRS TO  
BRIDGE: ROUTE 744 OVER ROUTE 65  
STATE ROAD: FROM INTERSTATE 44 SOUTH  
IN SPRINGFIELD  
PROJECT NO. F-FG-65-2(31) STA. 771 + 49.80 (RTE. 65)  
JOB NO. 8-U-65-407 RTE. 65  
GREENE COUNTY

DATE 2/21/86

STD.
STD.
A-1648R

Prepared by: [illegible] 7-8-87  
Checked by: [illegible] 12-8-87

460



BILL OF REINFORCING STEEL									
NO.	SIZE	MARK	LOCATION	V	A	NO.	SIZE	MARK	LOCATION
210	5D1		Median	2	3'-9"	2	552		Slab (Sp. 1)
28	5D2		Median	2	3'-7"	2	1053		Slab (Bt. 2)
					3'-0"	2	1054		Slab (Bt. 2)
						2	556		Slab (Sp. 2)
28	5D3		Median	2	3'-0"	2	1057		Slab (Bt. 3)
					2'-9"	2	1058		Slab (Bt. 3)
38	5D4		Median	2	2'-9"	2	5510		Slab (Sp. 3)
					1'-11"				
3	5D5		Median		1'-11"				
8	5M1		Median		24'-4"				
8	5M2		Median		31'-0"				
4	5M3		Median		20'-10"				
2	5M4		Median		24'-0"				

Note: Anchors for armor shall be approved stud welded anchors (C1010 thru C1020).  
Furnishing, painting and installing the structural steel armor shall be included in price bid for Special Work.  
Splicing of armor angle is permitted.

Note: The void area under the armored angles shall be filled with concrete by hand troweling or another approved method.

Note: All #5D-bars may be shop or field bent, depending on the type of Resin Anchor System used. The bars shall be bent to a 2 1/2" diameter.

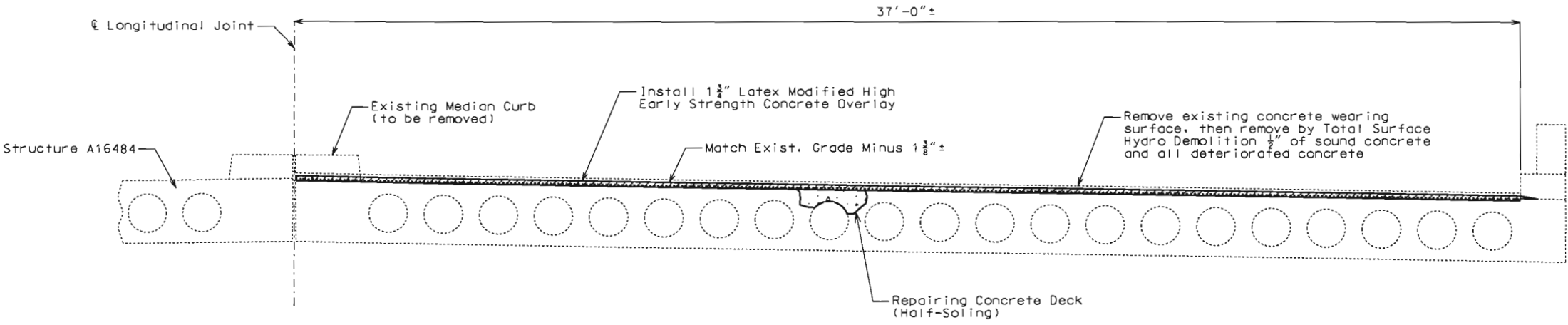
All reinforcement shall be epoxy coated grade 60.  
V = Bar dimensions vary in equal increments between dimensions shown on this line and the following line with the number of bars of each length.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
U.I.P. EXISTING (46'-60'-60'-36') CONTINUOUS CONCRETE VOIDED SLAB SPANS

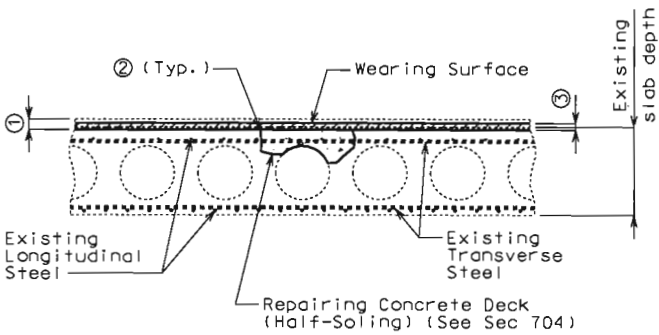
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JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			
SEC/SUR 9		TWP 29N	RGE 21W

STATE OF MISSOURI  
RAYMOND J. JENSEN  
NUMBER  
PE-16126  
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.



SECTION THRU SLAB (E.B.L.)



HALF-SOLED AREA

- 1 Remove existing wearing surface plus 1/2" of bridge deck by Total Surface Hydro Demolition.
- 2 One inch vertical side shall be established outside the deteriorated area. See Sec 704.
- 3 1-3/4" (min.) Latex Modified High Early Strength Concrete Overlay.

General Notes:

**Design Specifications:**  
2002 - AASHTO 17th Edition  
Bridge Deck Rating = 6

**Design Loading:**  
H20-44 (1965), HS20-44 (New Const.)

**Design Unit Stresses:**  
Class B-2 Concrete       $f'c = 4,000$  psi

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

**Traffic Control:**  
Maintain one lane of traffic over structure during construction. (See roadway plans for traffic control).

**Miscellaneous:**  
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.  
Roadway surfacing adjacent to bridge ends to match bridge deck (Rdwy. Item).  
The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the latex modified high early strength concrete overlay.  
All exposed edges of overlay shall have a 1/4" radius, unless otherwise noted.  
"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

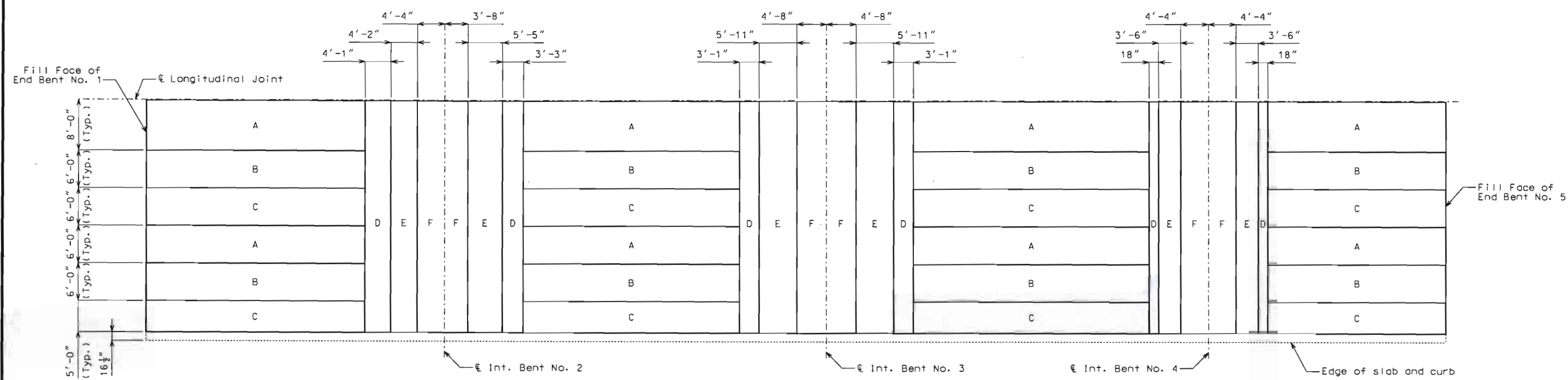
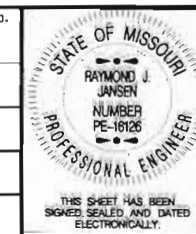
Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	7558
* Removal of Median Curb	linear foot	301
Latex Modified High Early Strength Concrete Wearing Surface	sq. yard	828
Polymer Concrete	cu. foot	34
Repairing Concrete Deck (Half-Soling)	sq. foot	500
Total Surface Hydro Demolition	sq. yard	840
Clean and Epoxy Seal	sq. foot	1793
Silicone Expansion Joint Sealant	linear foot	205

\* Limits of removal is from Sta. 112+20.90 to Sta. 115+22.30.

REPAIRS TO BRIDGE: RTE. 744 OVER RTE. 65

STATE ROAD FROM RTE. I-44 SOUTH  
IN SPRINGFIELD  
STA. 112+72.15± (Match Exist.)

ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 2
JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			



PLAN OF SLAB SHOWING REPAIR ZONES

Note:

Total Surface Hydro Demolition and concrete deck repair shall be completed in alphabetical sequence beginning with Repair Zone "A". Repair zone requirement does not apply to removal of existing concrete wearing surface.

Removal and repair shall be completed in one repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next 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 except for the zones directly adjacent to the centerline of bent. If either of the zones adjacent to centerline of bent has a single repair area of over 10 square feet or a total repair area of over 20 square feet, that zone shall be repaired before removing concrete in the other zone of the same designation at that bent.

Except for the repair zone requirement for the zones directly adjacent to the centerline of bent, if any single repair area in Repair Zone "D" or "E" does not exceed 9 square feet in size and the total repair within a repair zone does not exceed 27 square feet, the repair zone requirement does not apply for that zone. Half-soling repair in a repair zone shall be to a depth that will not expose half the diameter of the bottom longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the bottom longitudinal reinforcing bar.

An exposed void in the deck shall be patched as approved by the engineer in a manner that shall maintain the void area completely free of concrete. Cost of patching an exposed void will be considered completely covered by the contract unit price for repairing concrete deck (half-soling).

Detailed May 2008  
Checked June 2008

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

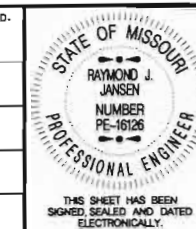
Sheet No. 2 of 4

A16483

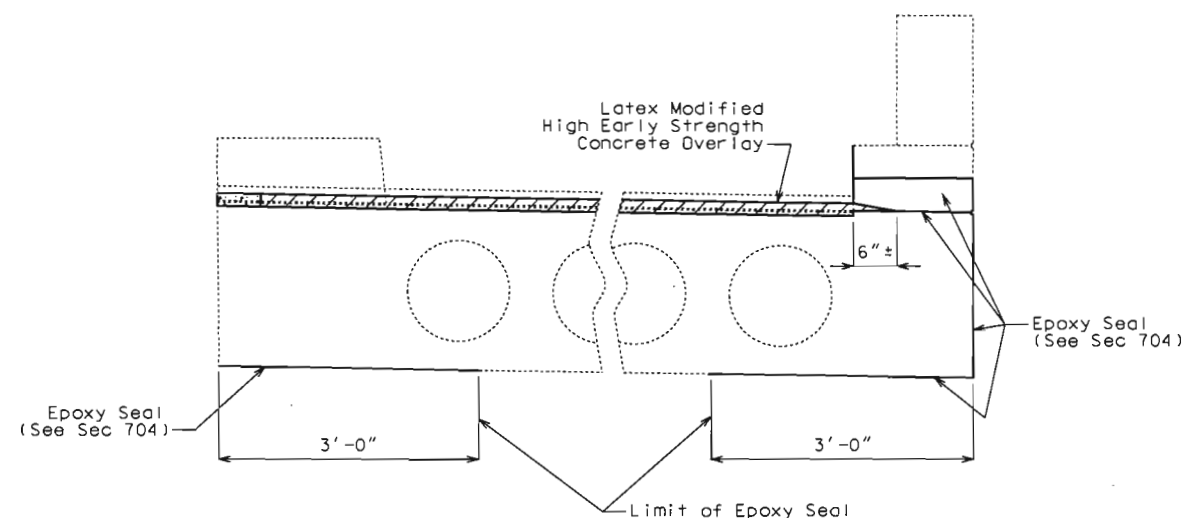
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



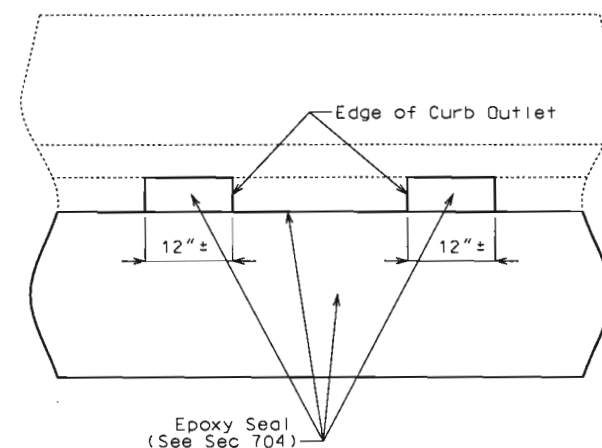
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JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			



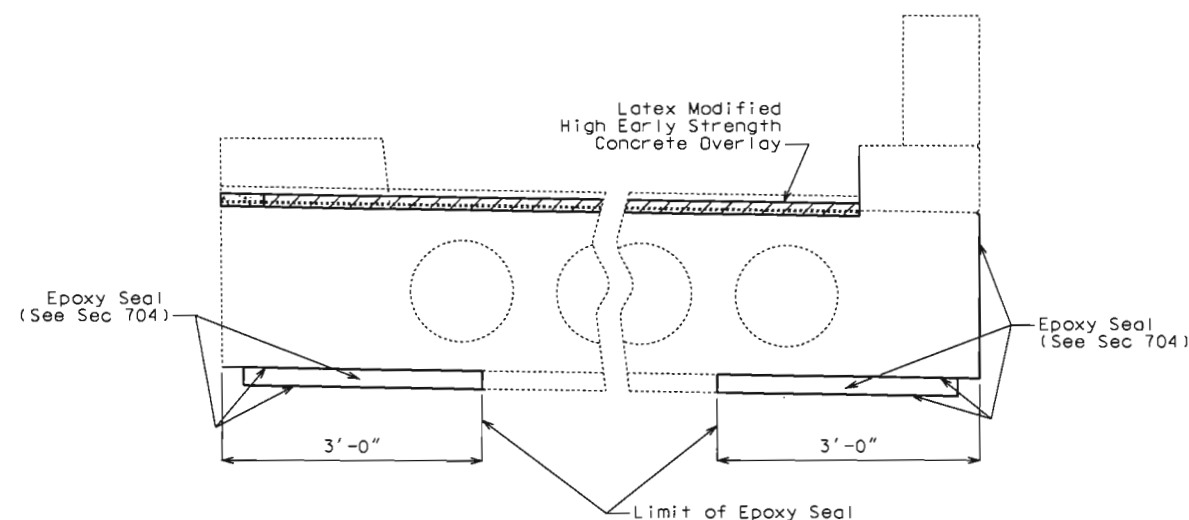
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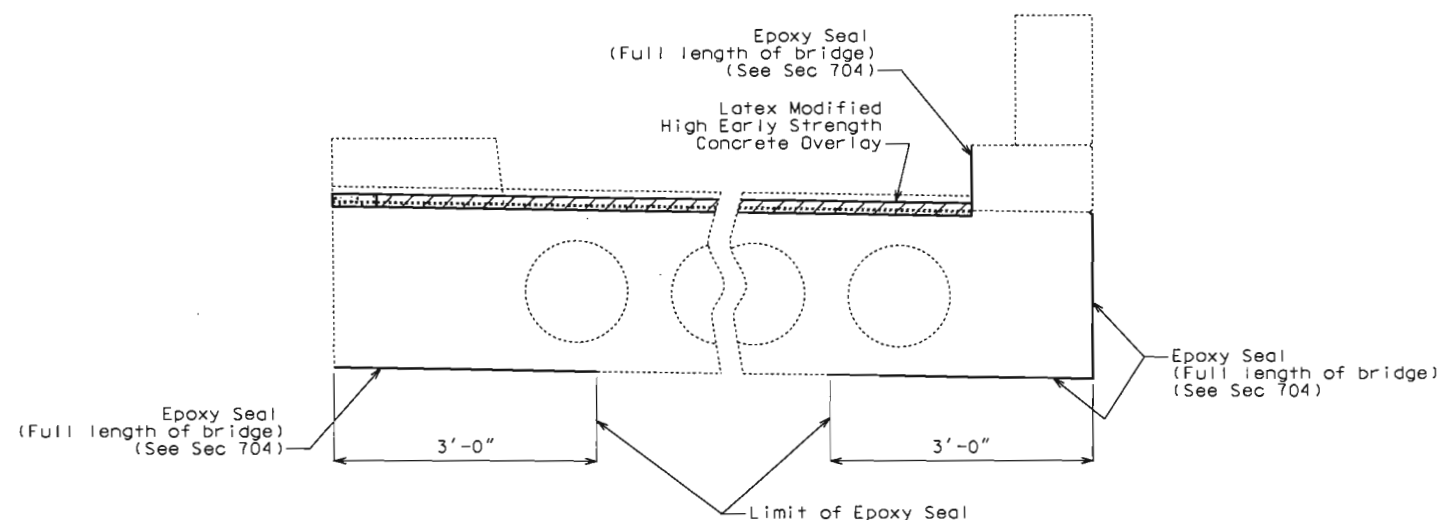
TYPICAL PART SECTION THRU SLAB SHOWING EXISTING CURB OUTLET



TYPICAL ELEVATION OF EXISTING CURB SHOWING OUTLET

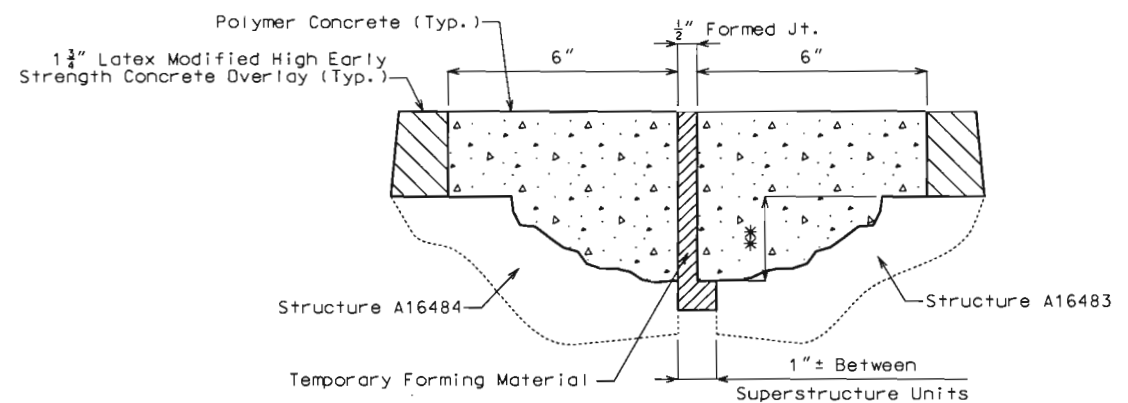
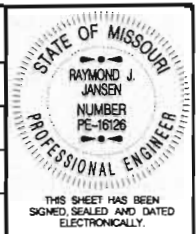


TYPICAL PART SECTION THRU SLAB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4

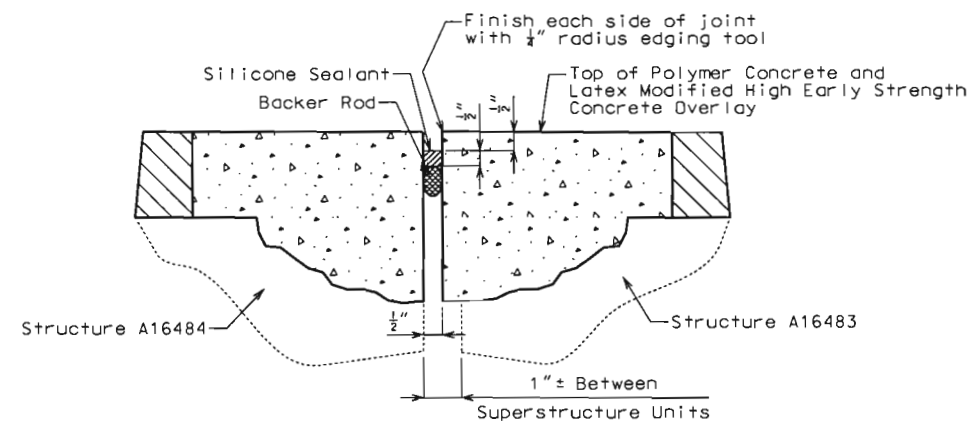


TYPICAL PART SECTION THRU SLAB

ROUTE	STATE	DISTRICT	SHEET NO.
744	MO	BR	4
JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			

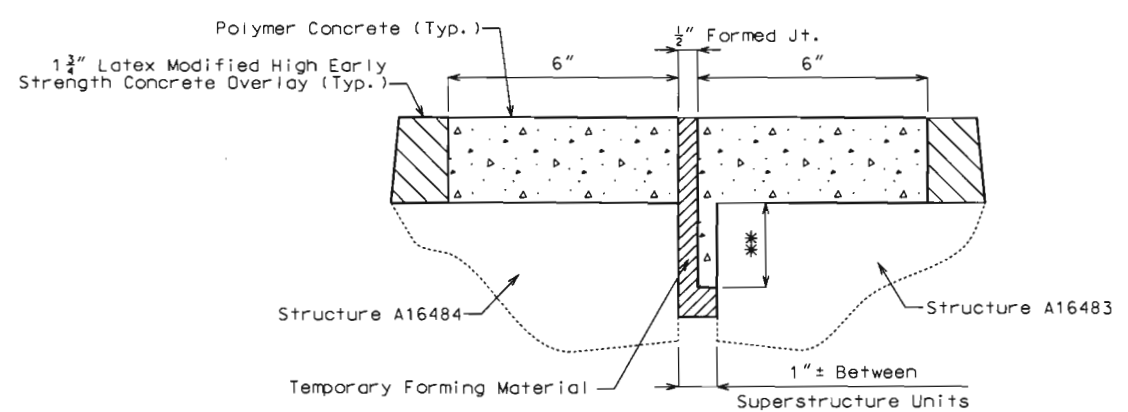


\*\* Polymer Concrete manufacturer's recommended depth.  
**WEARING SURFACE INSTALLATION AT LONGITUDINAL JOINT**  
 (in area of existing longitudinal armor removal)

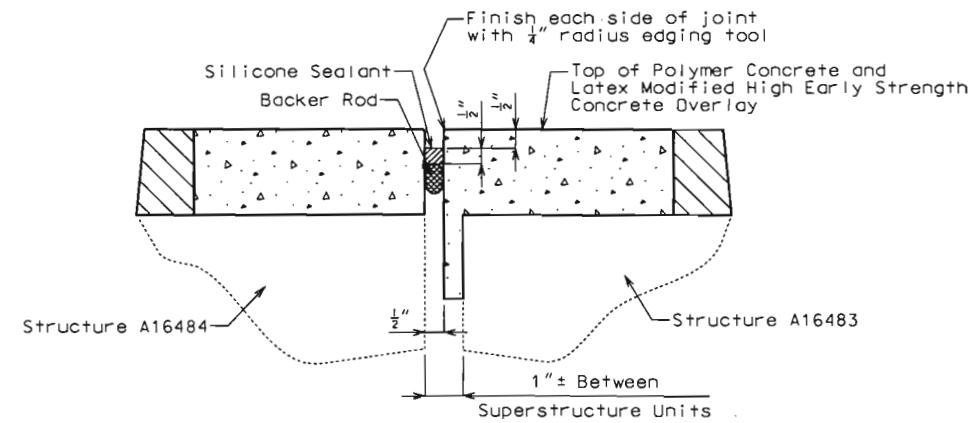


**COMPLETED LONGITUDINAL JOINT**  
 (in area of existing longitudinal armor removal)

Notes:  
 All temporary forming material shall be completely removed prior to sealing joint.  
 Silicone Expansion Joint shall be in accordance with Sec 717.40.  
 Polymer concrete shall be in accordance with Sec 623.  
 Removal of longitudinal armor shall be included in unit price bid for "Removal of Concrete Wearing Surface".



\*\* Polymer Concrete manufacturer's recommended depth.  
**WEARING SURFACE INSTALLATION AT LONGITUDINAL JOINT**  
 Ahead station from Bent No. 3 (no armor)



**COMPLETED LONGITUDINAL JOINT**  
 Ahead station from Bent No. 3 (no armor)

**LONGITUDINAL SILICONE EXPANSION JOINT**

Detailed May 2008  
 Checked June 2008

**A16483**

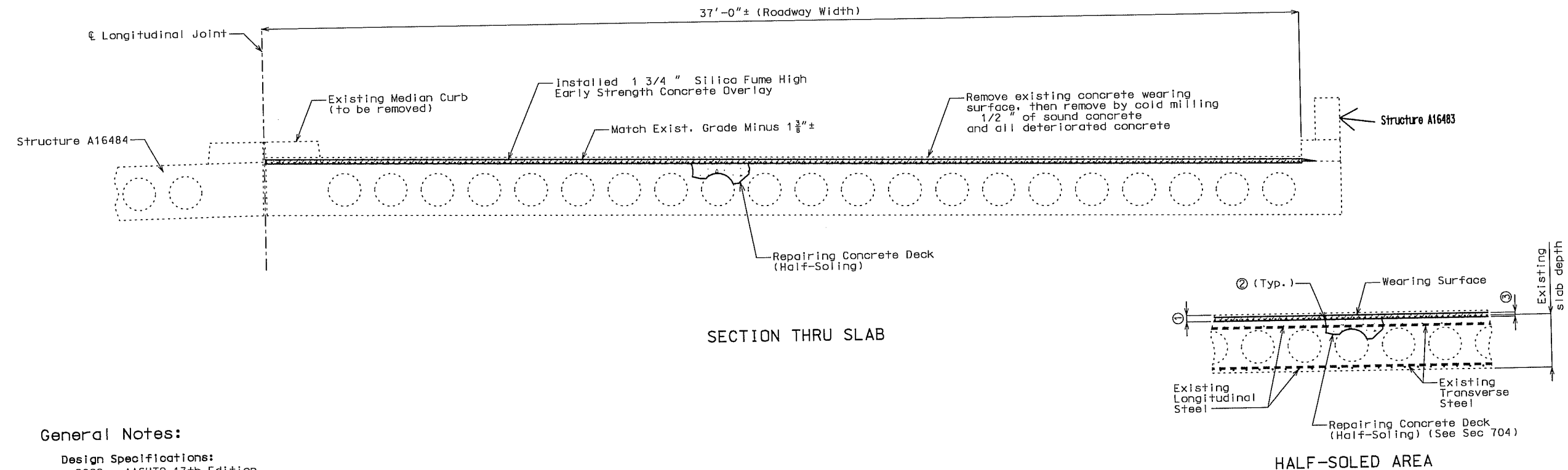
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
U.I.P. EXISTING (46'-60'-60'-36') CONTINUOUS CONCRETE VOIDED SLAB SPANS

FINAL PLANS

ROUTE	STATE	DISTRICT	SHEET NO.
744	MO	BR	1
JOB NO. J8S2152			
CONTRACT ID. 080822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			
DATE			
SEC/SUR 9		TWP 29N	RGE 21W



General Notes:

- Design Specifications:**  
2002 - AASHTO 17th Edition  
Bridge Deck Rating = 6
- Design Loading:**  
H20-44 (1965), HS20-44 (New Const.)
- Design Unit Stresses:**  
Class B-2 Concrete  $f'c = 4,000$  psi
- Dimensions:**  
Contractor shall verify all dimensions in field before ordering new material.
- Traffic Control:**  
Maintain one lane of traffic over structure during construction.  
(See roadway plans for traffic control).
- Miscellaneous:**  
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.  
Roadway surfacing adjacent to bridge ends to match bridge deck (Rdwy. Item).  
The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the silica fume high early strength concrete overlay.  
All exposed edges of overlay shall have a 1/4" radius, unless otherwise noted.  
"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

- Remove existing wearing surface plus 1/2" of bridge deck by cold milling.
- One inch vertical side shall be established outside the deteriorated area. See Sec 704.
- 1-3/4" (min.) Silica Fume High Early Strength Concrete Overlay.

(BRIDGE NO. A-16483)

Estimated Quantities			Total
Item			
Removal of Concrete Wearing Surface	sq. foot	7558	✓
Removal of Median Curb	linear foot	301	✓
SILICA FUME CONCRETE WEARING SURFACE	* (5102) sq. yard	851	✓
Repairing Concrete Deck (Half-Soling)	sq. foot	6960	✓
Total Surface Hydro Demolition	sq. yard	0	✓
Clean and Epoxy Seal	sq. foot	2223	✓
Silicone Expansion Joint Sealant	linear foot	205	✓
SUPER STRUCTURE REPAIR	* (5107) SQ. FOOT	174	✓
SLAB EDGE REPAIR	* (5106) SQ. FOOT	70	✓
STIRRUPS	* (5101) EACH	464	✓
RE-STOCKING FEE FOR LATEX MODIFIED MATERIAL	* (5105) LUMP SUM	1	✓
MOBILIZATION FOR EXTRA WORK	* (5111) LUMP SUM	1	✓
MOBILIZATION FOR EXTRA WORK	* (5112) LUMP SUM	1	✓
LATEX MODIFIED HIGH EARLY STRENGTH CONCRETE WEARING SURFACE (LINE NO. 1480)	SO. YARD	0	✓
POLYMER CONCRETE (LINE NO. 1490)	CU.FT.	0	✓

\*Bridge Contingent Items

REPAIRS TO BRIDGE OVER RTE. 65

STATE ROAD

ABOUT

STA. 112+72.15± (Match Exist.)

STD.
STD.
STD.
STD.
A16483

Designed  
Detailed May 2008  
Checked 2008

COMPILED BY:

*Bernie J. Mac 4-18-10*

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

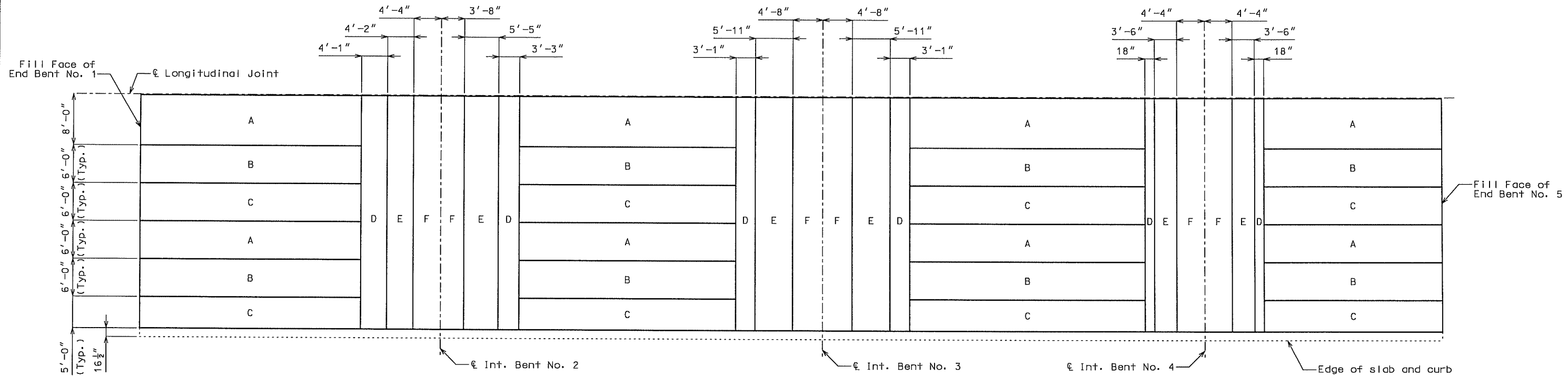
Sheet No. 1 of 4

CHECKED BY:

*D. R. J. 2-12-10*

T:\de-proj\039\J8S0919\Bridge\B\_A16483\_001\_J8S2152\_001.dgn 9:30:35 AM 6/17/2010

ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 2
JOB NO. J8S2152			
CONTRACT ID. 080822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			DATE



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Note:

Total was cold milled and concrete deck repair shall be completed in alphabetical sequence beginning with Repair Zone "A". Repair zone requirement does not apply to scarification.

Removal and repair shall be completed in one repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next 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 except for the zones directly adjacent to the centerline of bent. If either of the zones adjacent to centerline of bent has a single repair area of over 10 square feet or a total repair area of over 20 square feet, that zone shall be repaired before removing concrete in the other zone of the same designation at that bent.

Except for the repair zone requirement for the zones directly adjacent to the centerline of bent, if any single repair area in Repair Zone "D" or "E" does not exceed 9 square feet in size and the total repair within a repair zone does not exceed 27 square feet, the repair zone requirement does not apply for that zone. Half-soling repair in a repair zone 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.

COMPILED BY: *Bernie Mac 6-18-10*

Detailed May 2008  
Checked 2008

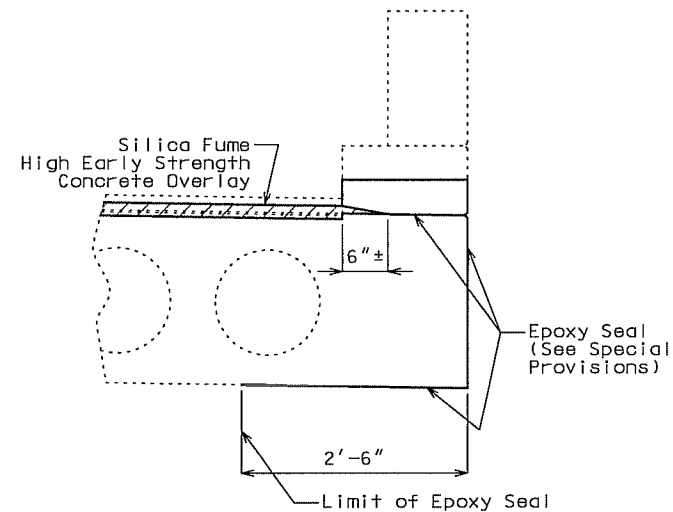
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Sheet No. 2 of 4

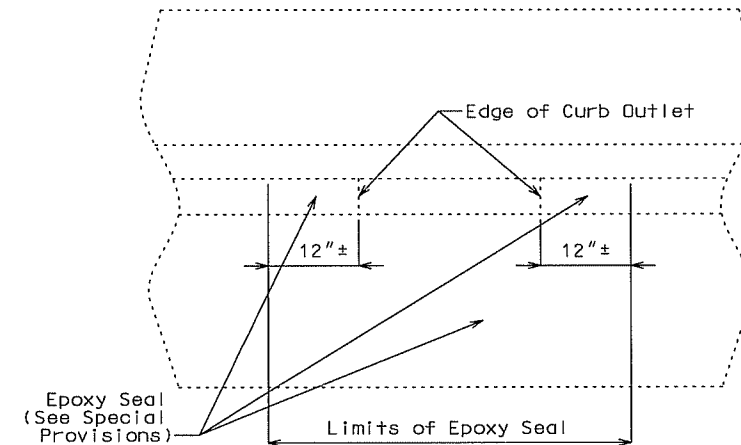
CHECKED BY: *Dad 1/21/10*

A16483

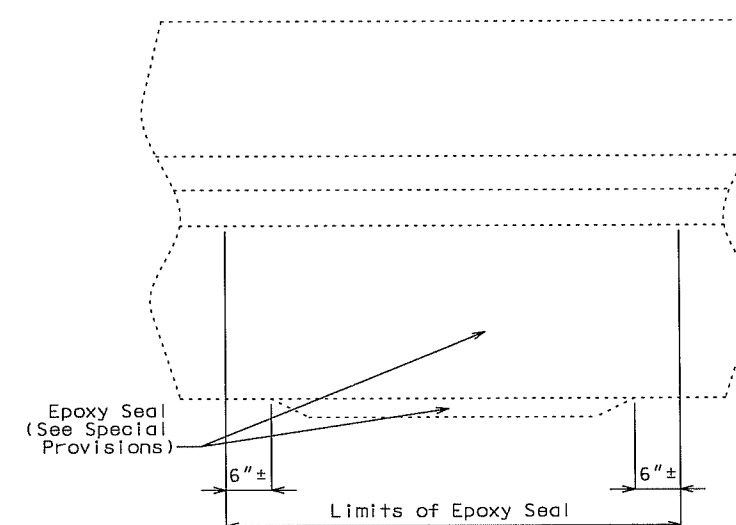
ROUTE	STATE	DISTRICT	SHEET NO.
744	MO	BR	4
JOB NO. J8S2152			
CONTRACT ID. 080822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			DATE



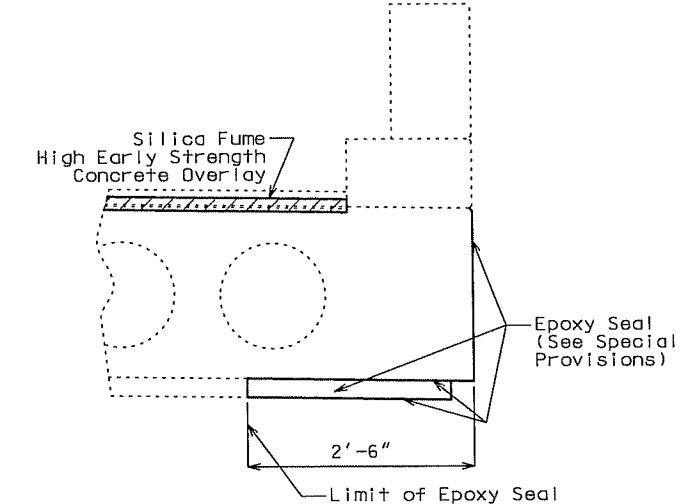
TYPICAL SECTION OF EXISTING CURB SHOWING OUTLET



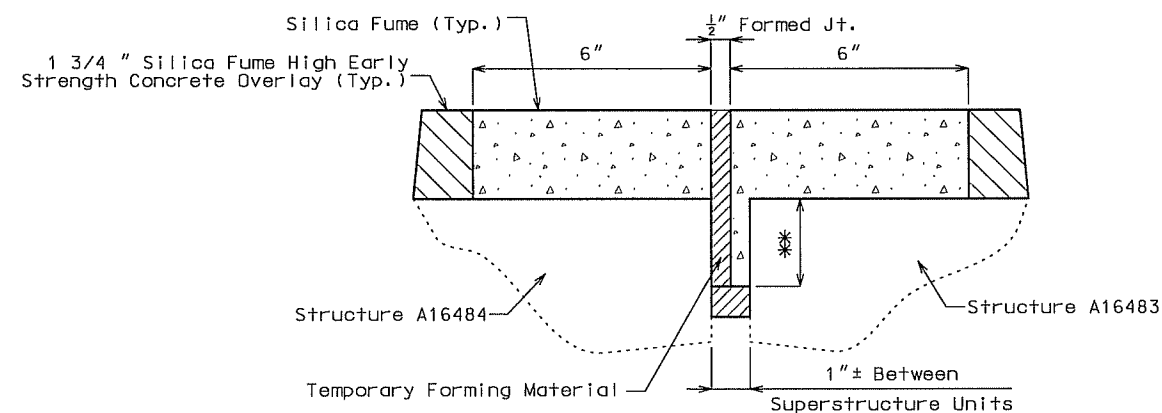
TYPICAL ELEVATION OF EXISTING CURB SHOWING OUTLET



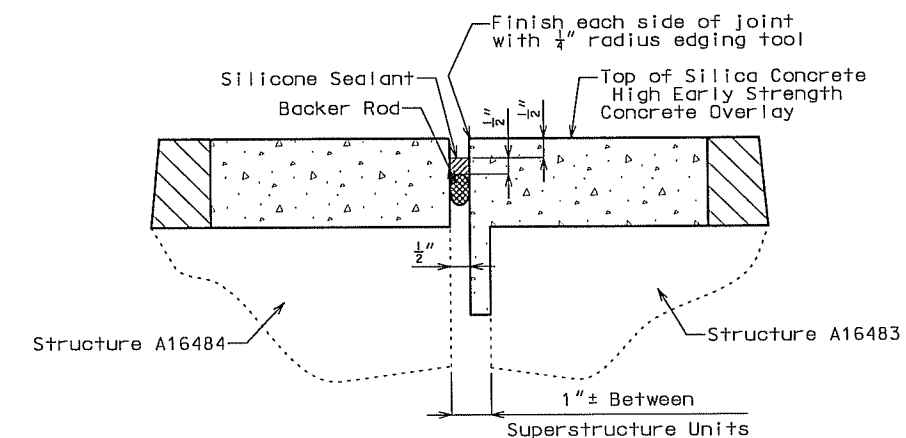
TYPICAL ELEVATION OF EXISTING CURB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4



TYPICAL SECTION OF EXISTING CURB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4



WEARING SURFACE INSTALLATION AT JOINT



COMPLETED JOINT

Notes:  
All temporary forming material shall be completely removed prior to sealing joint.  
Silicone Expansion Joint shall be in accordance with Sec 717.40.  
Silica concrete shall be in accordance with Sec 505.30..

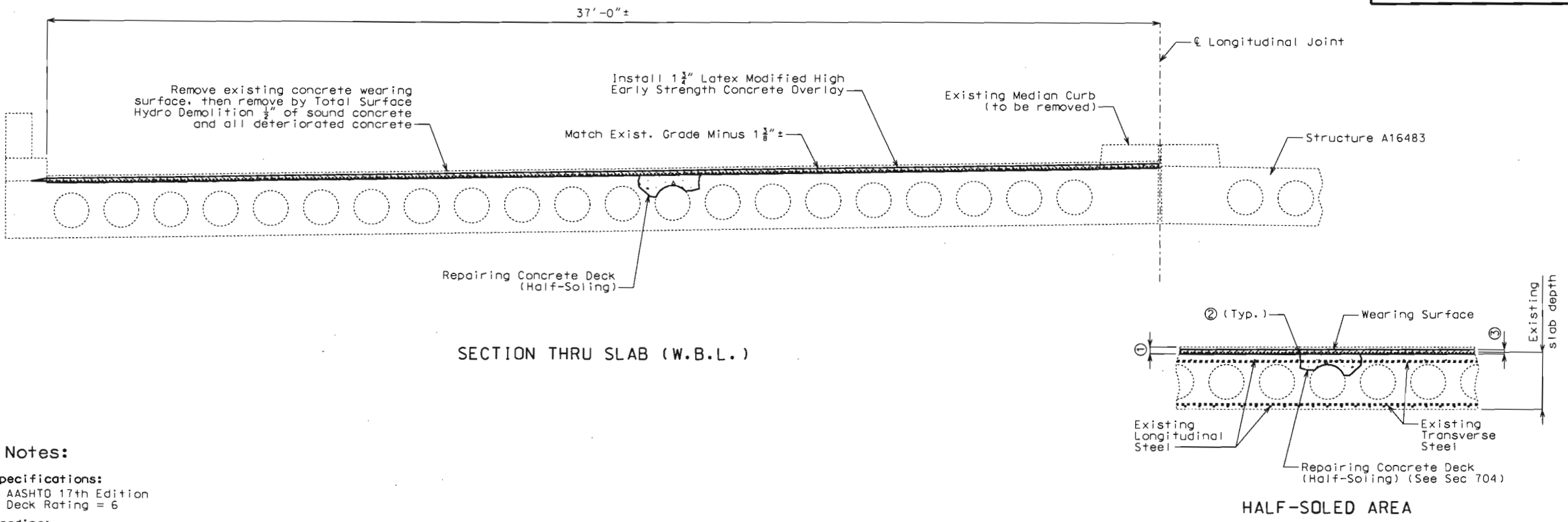
# LONGITUDINAL SILICONE EXPANSION JOINT

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
U.I.P. EXISTING (46'-60'-60'-36') CONTINUOUS CONCRETE VOIDED SLAB SPANS

ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 1
JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			
SEC/SUR 9		TWP 29N	RGE 21W

STATE OF MISSOURI  
RAYMOND J. JANSEN  
NUMBER PE-16126  
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN  
SIGNED, SEALED, AND DATED  
ELECTRONICALLY.



General Notes:

- Design Specifications:**  
2002 - AASHTO 17th Edition  
Bridge Deck Rating = 6
- Design Loading:**  
H20-44 (1965), HS20-44 (New Const.)
- Design Unit Stresses:**  
Class B-2 Concrete      f'c = 4,000 psi
- Dimensions:**  
Contractor shall verify all dimensions in field before ordering new material.
- Traffic Control:**  
Maintain one lane of traffic over structure during construction.  
(See roadway plans for traffic control).
- Miscellaneous:**  
Outline of old work is indicated by light dashed lines. Heavy lines indicate new work.  
Roadway surfacing adjacent to bridge ends to match bridge deck (Rdwy. Item).  
The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the latex modified high early strength concrete overlay.  
All exposed edges of overlay shall have a 1/4" radius, unless otherwise noted.  
"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

- ① Remove existing wearing surface plus 1/2" of bridge deck by Total Surface Hydro Demolition.
- ② One inch vertical side shall be established outside the deteriorated area. See Sec 704.
- ③ 1-3/4" (min.) Latex Modified High Early Strength Concrete Overlay.

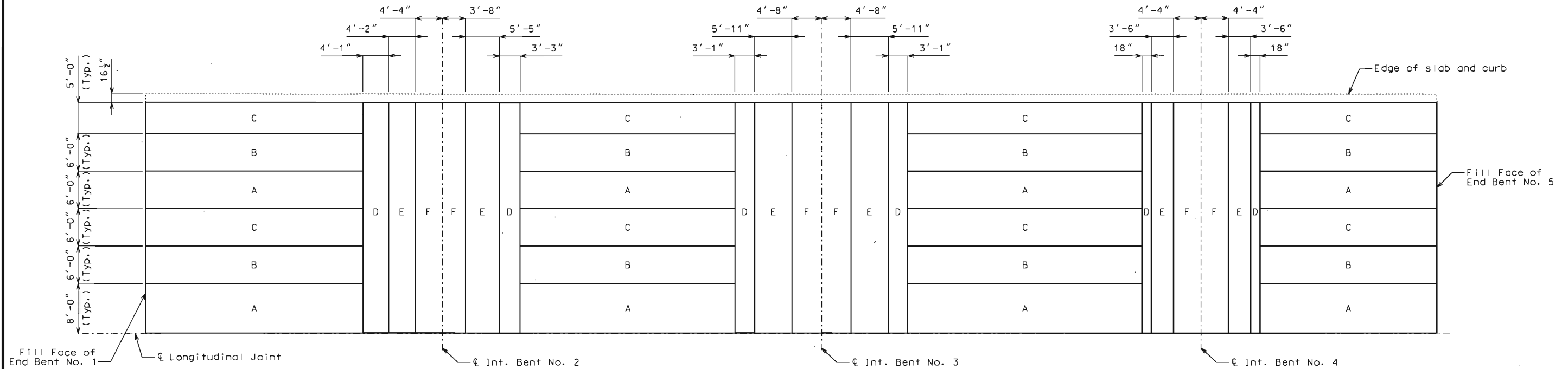
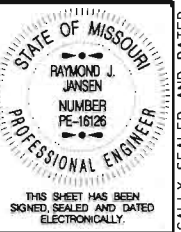
Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	7558
* Removal of Median Curb	linear foot	140
Latex Modified High Early Strength Concrete Wearing Surface	sq. yard	828
Polymer Concrete	cu. foot	34
Repairing Concrete Deck (Half-Soling)	sq. foot	500
Total Surface Hydro Demolition	sq. yard	840
Clean and Epoxy Seal	sq. foot	1793

\* Limits of removal is from the start of median curb on bridge (approx. Sta. 113+82.07, 2'-8"± ahead station from Bent No. 3) to Sta. 115+22.30.

REPAIRS TO BRIDGE: RTE. 744 OVER RTE. 65

STATE ROAD FROM RTE. I-44 SOUTH  
IN SPRINGFIELD  
STA. 112+72.15± (Match Exist.)

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



PLAN OF SLAB SHOWING REPAIR ZONES

Note:

Total Surface Hydro Demolition and concrete deck repair shall be completed in alphabetical sequence beginning with Repair Zone "A". Repair zone requirement does not apply to removal of existing concrete wearing surface.

Removal and repair shall be completed in one repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next 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.

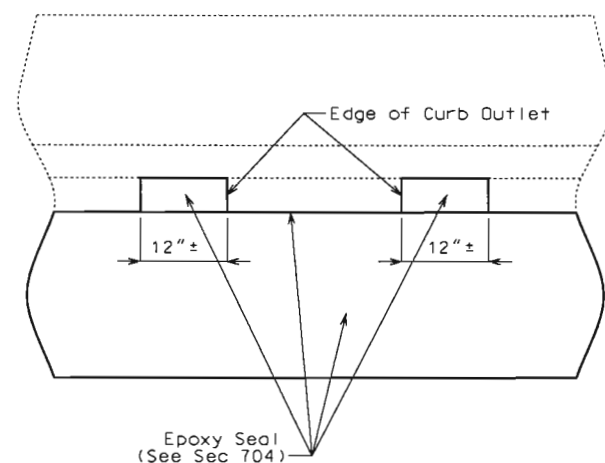
Zones with the same letter designation may be repaired at the same time except for the zones directly adjacent to the centerline of bent. If either of the zones adjacent to centerline of bent has a single repair area of over 10 square feet or a total repair area of over 20 square feet, that zone shall be repaired before removing concrete in the other zone of the same designation at that bent.

Except for the repair zone requirement for the zones directly adjacent to the centerline of bent, if any single repair area in Repair Zone "D" or "E" does not exceed 9 square feet in size and the total repair within a repair zone does not exceed 27 square feet, the repair zone requirement does not apply for that zone. Half-soling repair in a repair zone shall be to a depth that will not expose half the diameter of the bottom longitudinal reinforcing bar. Full depth repair shall be made when removal of deteriorated concrete exposes half or more of the diameter of the bottom longitudinal reinforcing bar.

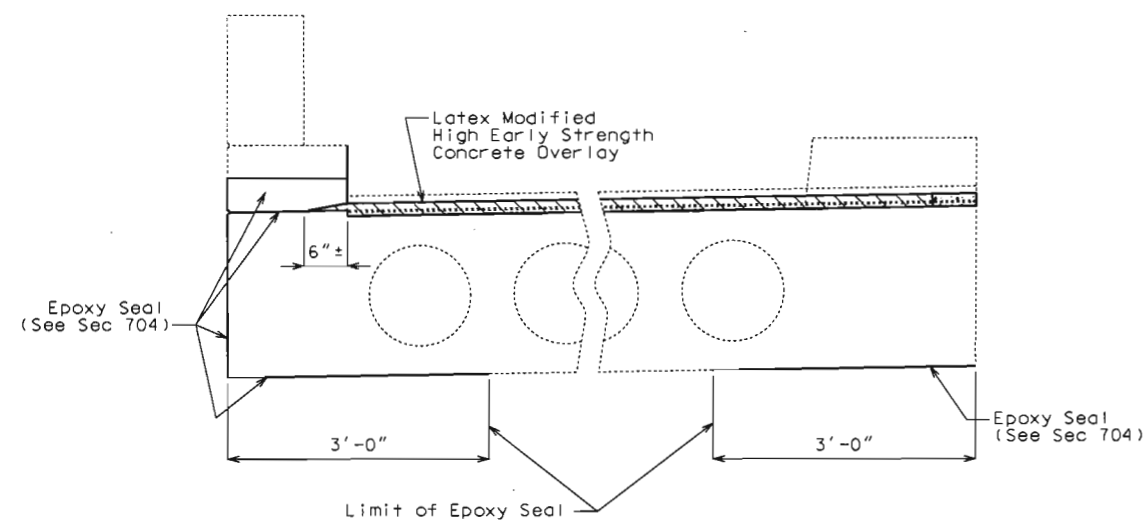
An exposed void in the deck shall be patched as approved by the engineer in a manner that shall maintain the void area completely free of concrete. Cost of patching an exposed void will be considered completely covered by the contract unit price for repairing concrete deck (half-soling).

ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 3
JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			

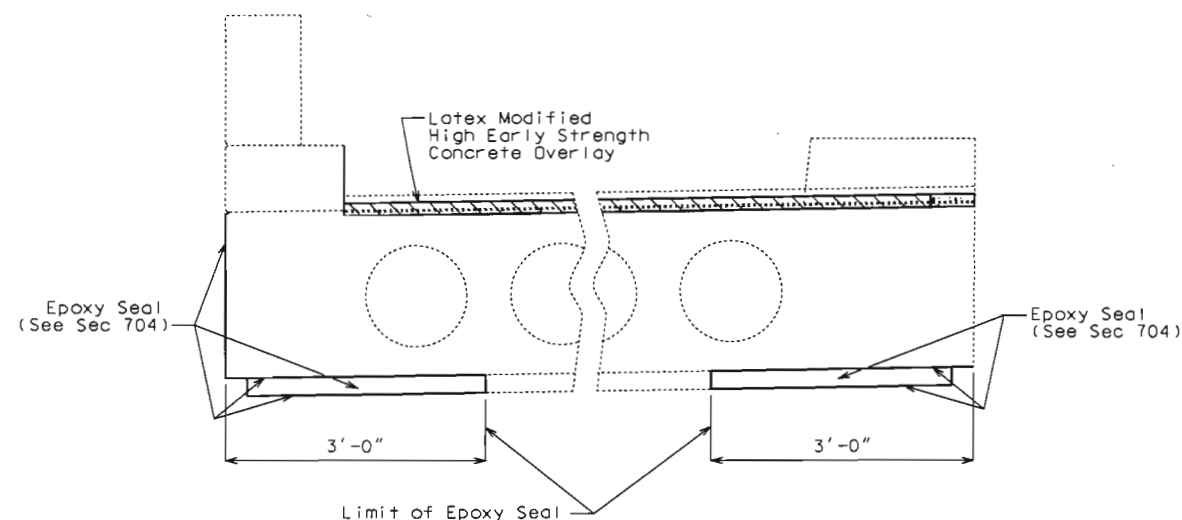
STATE OF MISSOURI  
 RAYMOND J. JANSEN  
 NUMBER PE-16126  
 PROFESSIONAL ENGINEER  
THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.



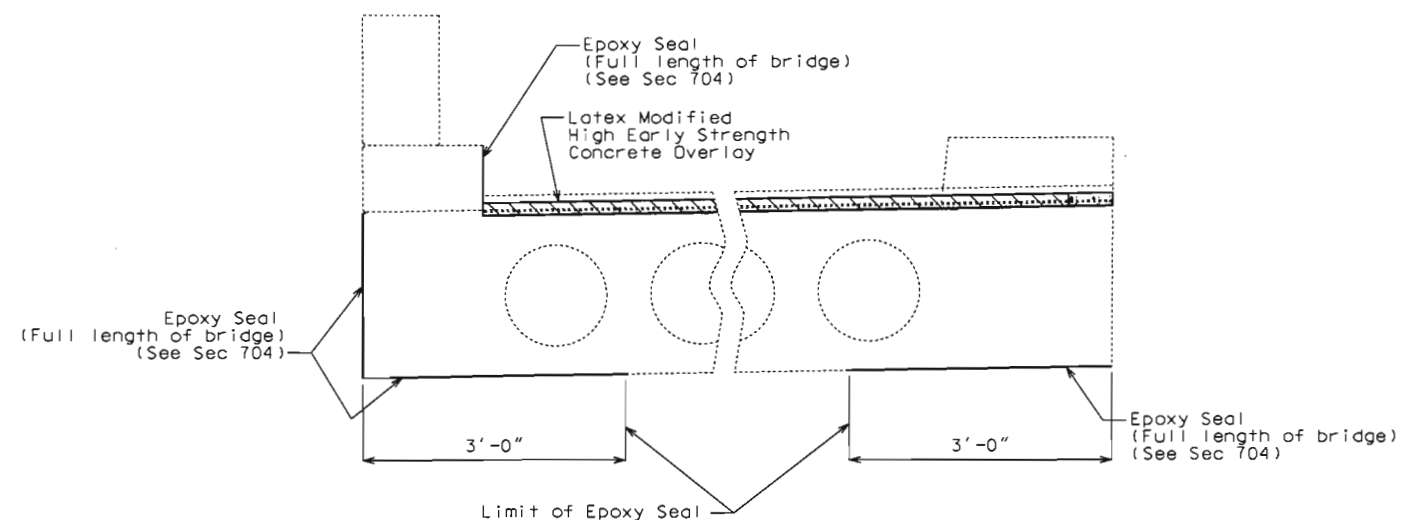
TYPICAL ELEVATION OF EXISTING CURB SHOWING OUTLET



TYPICAL PART SECTION THRU SLAB SHOWING EXISTING CURB OUTLET



TYPICAL PART SECTION THRU SLAB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4

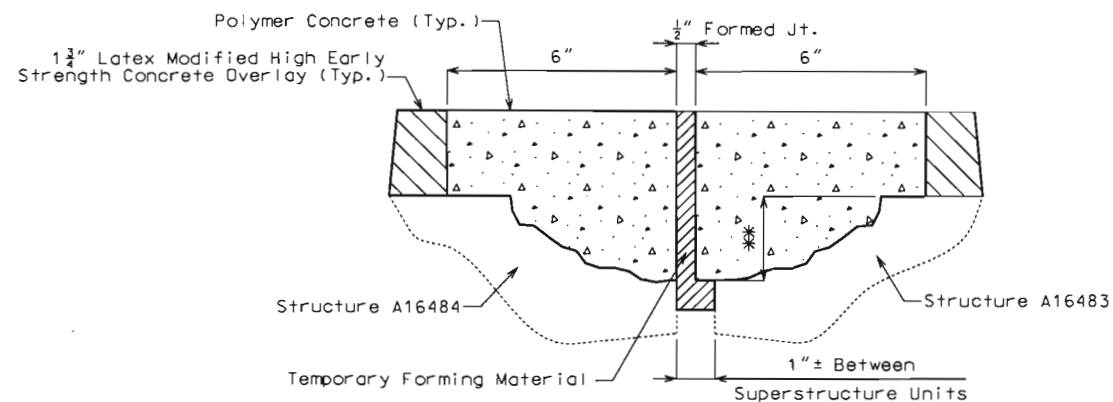


TYPICAL PART SECTION THRU SLAB

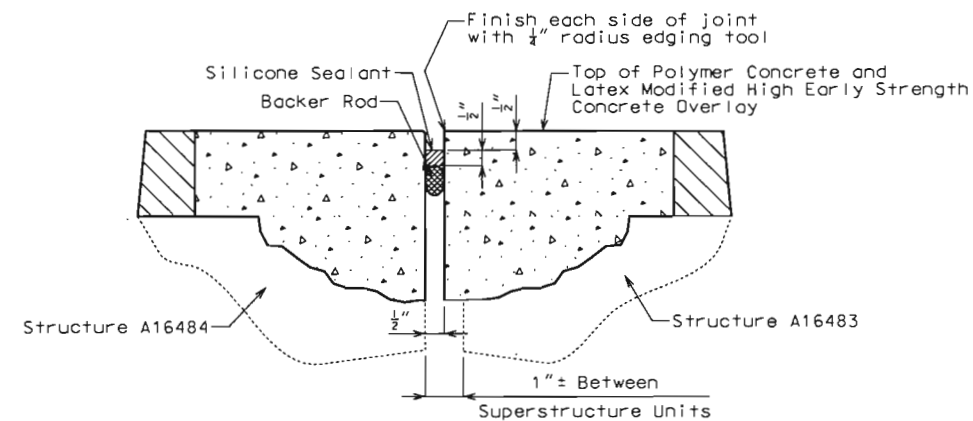


ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 4
JOB NO. J8S2152			
CONTRACT ID.			
PROJECT NO.			
COUNTY GREENE			

STATE OF MISSOURI  
 RAYMOND J. JANSEN  
 NUMBER PE-16126  
 PROFESSIONAL ENGINEER  
THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.



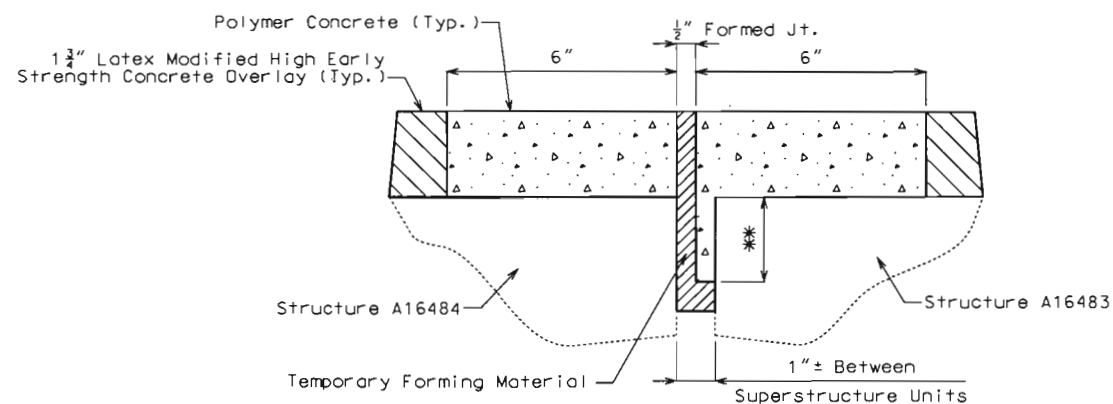
WEARING SURFACE INSTALLATION AT LONGITUDINAL JOINT  
(in area of existing longitudinal armor removal)



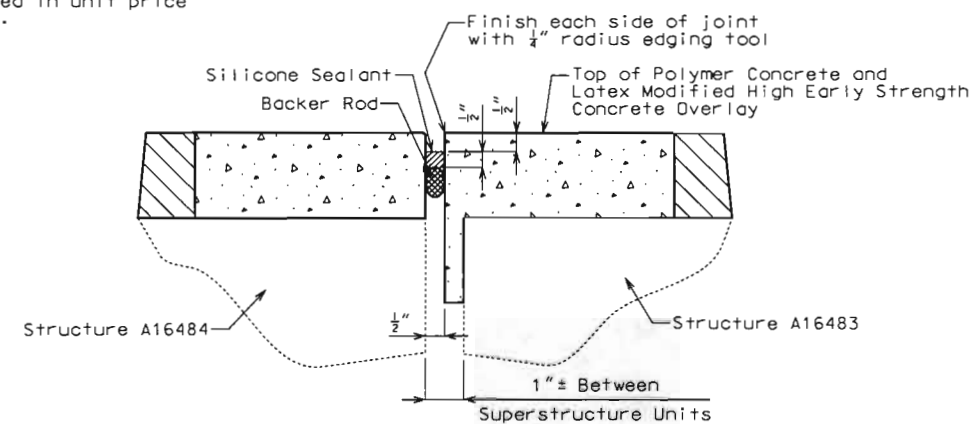
COMPLETED LONGITUDINAL JOINT  
(in area of existing longitudinal armor removal)

Notes:

- All temporary forming material shall be completely removed prior to sealing joint.
- Silicone Expansion Joint shall be in accordance with Sec 717.40.
- Polymer concrete shall be in accordance with Sec 623.
- Cost of silicone expansion joint sealant will be considered completely covered by Structure A16483.
- Removal of longitudinal armor shall be included in unit price bid for "Removal of Concrete Wearing Surface".



WEARING SURFACE INSTALLATION AT LONGITUDINAL JOINT  
Ahead station from Bent No. 3 (no armor)



COMPLETED LONGITUDINAL JOINT  
Ahead station from Bent No. 3 (no armor)

LONGITUDINAL SILICONE EXPANSION JOINT

Detailed June 2008  
Checked June 2008

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

Sheet No. 4 of 4

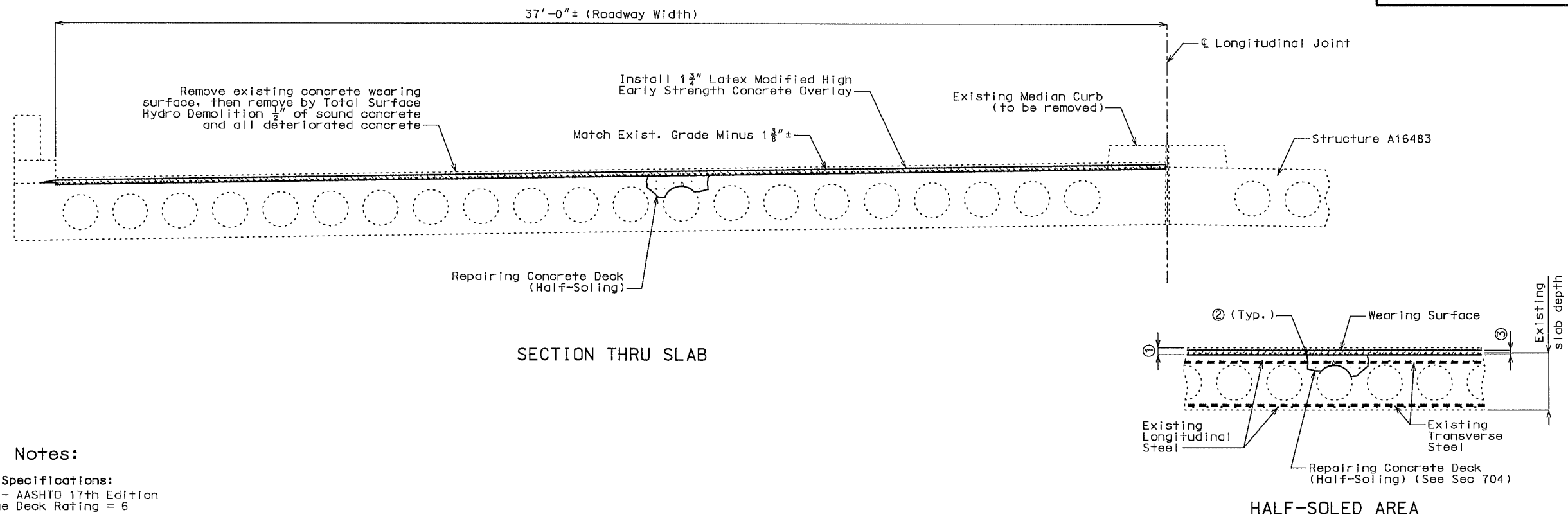
A16484

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

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
U.I.P. EXISTING (46'-60'-60'-36') CONTINUOUS CONCRETE VOIDED SLAB SPANS

FINAL PLANS

ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 1
JOB NO. J8S2152			
CONTRACT ID. 080822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			DATE
SEC/SUR 9		TWP 29N	RGE 21W



General Notes:

Design Specifications:

2002 - AASHTO 17th Edition  
Bridge Deck Rating = 6

Design Loading:

H20-44 (1965), HS20-44 (New Const.)

Design Unit Stresses:

Class B-2 Concrete  $f'c = 4,000$  psi

Dimensions:

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

Traffic Control:

Maintain one lane of traffic over structure during construction.  
(See roadway plans for traffic control).

Miscellaneous:

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

Roadway surfacing adjacent to bridge ends to match bridge deck (Rdwy. Item).

The contractor shall exercise care to ensure spillage over joint edges is prevented and that a neat line is obtained along any terminating edge of the latex modified high early strength concrete overlay.

All exposed edges of overlay shall have a 1/4" radius, unless otherwise noted.

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

- ① Remove existing wearing surface plus 1/2" of bridge deck by Total Surface Hydro Demolition.
- ② One inch vertical side shall be established outside the deteriorated area. See Sec 704.
- ③ 1-3/4" (min.) Latex Modified High Early Strength Concrete Overlay.

Estimated Quantities		
Item		Total
Removal of Concrete Wearing Surface	sq. foot	7558 ✓
Removal of Median Curb	linear foot	140 ✓
Silica Fume High Early Strength Concrete Wearing Surface	* (5104) sq. yard	851 ✓
Polymer Concrete	cu. foot	0 ✓
Repairing Concrete Deck (Half-Soling)	sq. foot	5067 ✓
Total Surface Hydro Demolition	sq. yard	0 ✓
Clean and Epoxy Seal	sq. foot	2287 ✓
Stirrups	* (5103) Each	296 ✓
Slab Edge Repair	* (5108) Sq. foot	60 ✓
Superstructure Repair	* (5109) Sq. foot	118 ✓
Mobilization for Edge Repair & Extra Work	* (5110) LUMP SUM	1 ✓
LATEX MODIFIED HIGH EARLY STRENGTH CONCRETE WEARING SURFACE (LINE NO. 1560)		0 ✓

\* Contingent Items

REPAIRS TO BRIDGE OVER RTE. 65

STATE ROAD

ABOUT

STA. 112+72.15± (Match Exist.)

STD.
STD.
STD.
STD.
A16484

Designed  
Detailed June 2008  
Checked 2008

COMPILED BY:

*Bernie Mac 6-18-10*

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

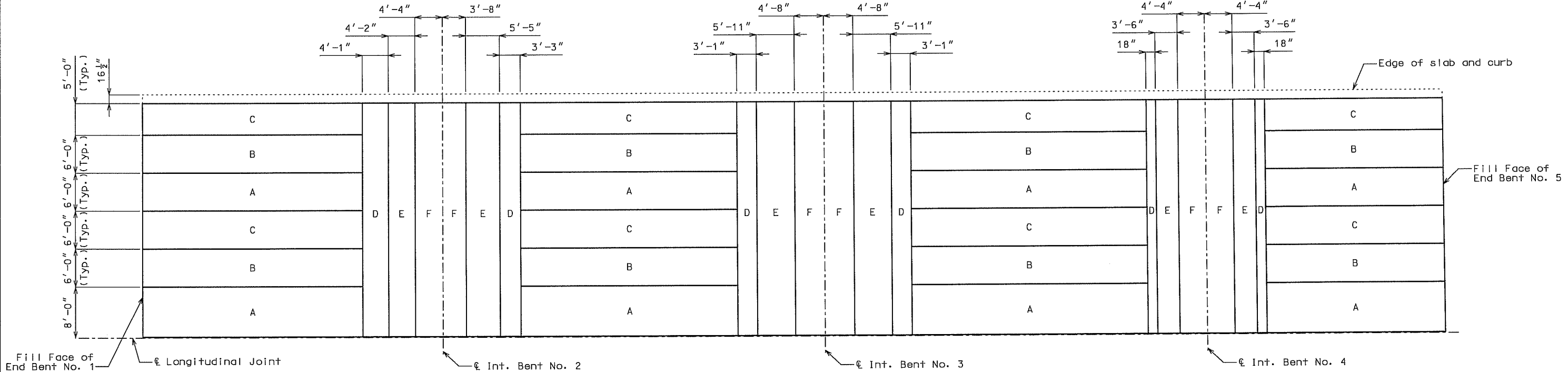
Sheet No. 1 of 4.

CHECKED BY:

*Timothy A. Hume 6-15-10*

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ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 2
JOB NO. J8S2152			
CONTRACT ID. Q80822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			DATE



PLAN OF SLAB SHOWING SPECIAL REPAIR ZONES

Note:

Cold Milled material and concrete deck repair shall be completed in alphabetical sequence beginning with Repair Zone "A". Repair zone requirement does not apply to scarification.

Removal and repair shall be completed in one repair zone and concrete shall have attained a compressive strength of 3200 psi before work can be started in the next 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.

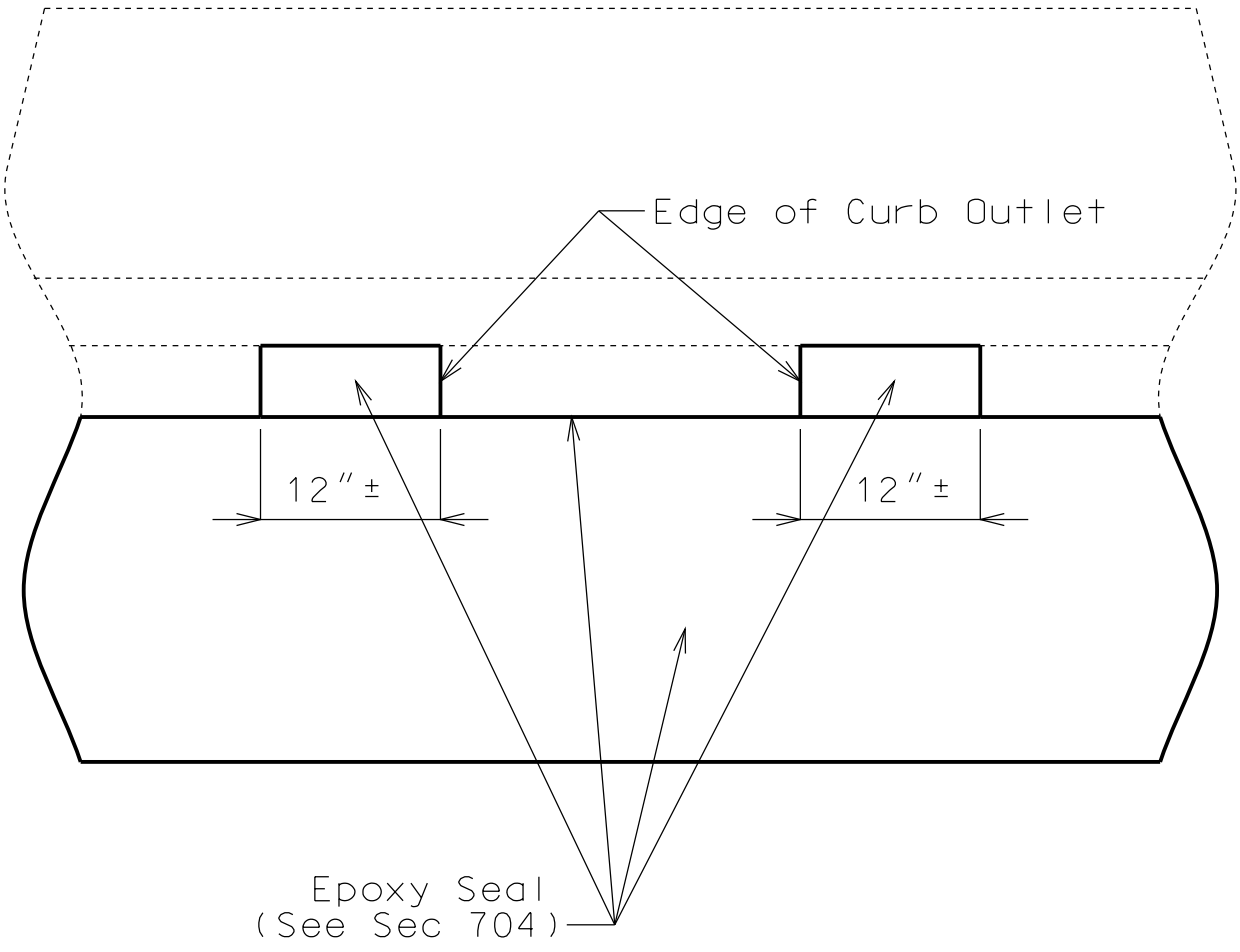
Zones with the same letter designation may be repaired at the same time except for the zones directly adjacent to the centerline of bent. If either of the zones adjacent to centerline of bent has a single repair area of over 10 square feet or a total repair area of over 20 square feet, that zone shall be repaired before removing concrete in the other zone of the same designation at that bent.

Except for the repair zone requirement for the zones directly adjacent to the centerline of bent, if any single repair area in Repair Zone "D" or "E" does not exceed 9 square feet in size and the total repair within a repair zone does not exceed 27 square feet, the repair zone requirement does not apply for that zone. Half-soling repair in a repair zone 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.

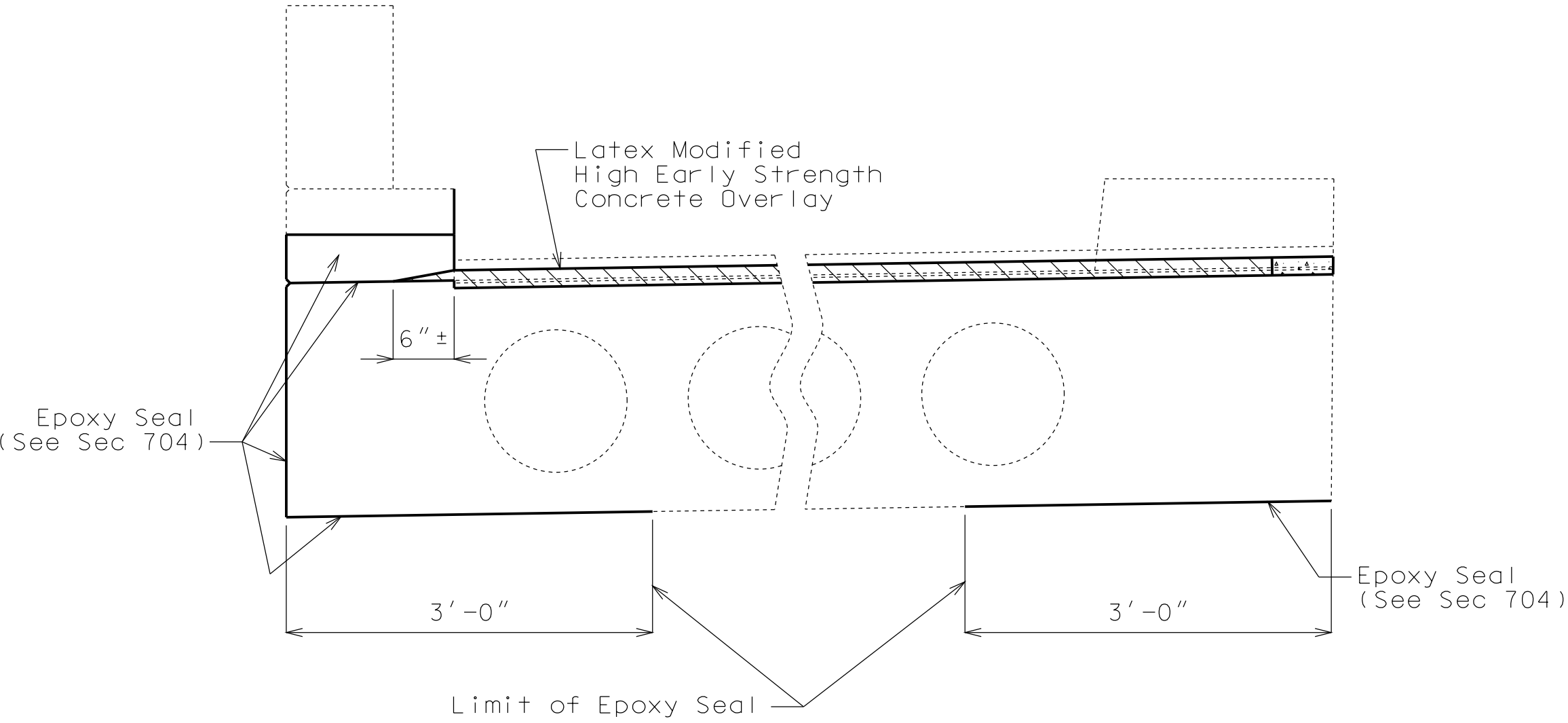
COMPILED BY: *Bernie J. Mar 6-7-07*

CHECKED BY: *David R. Go 6/2/10*

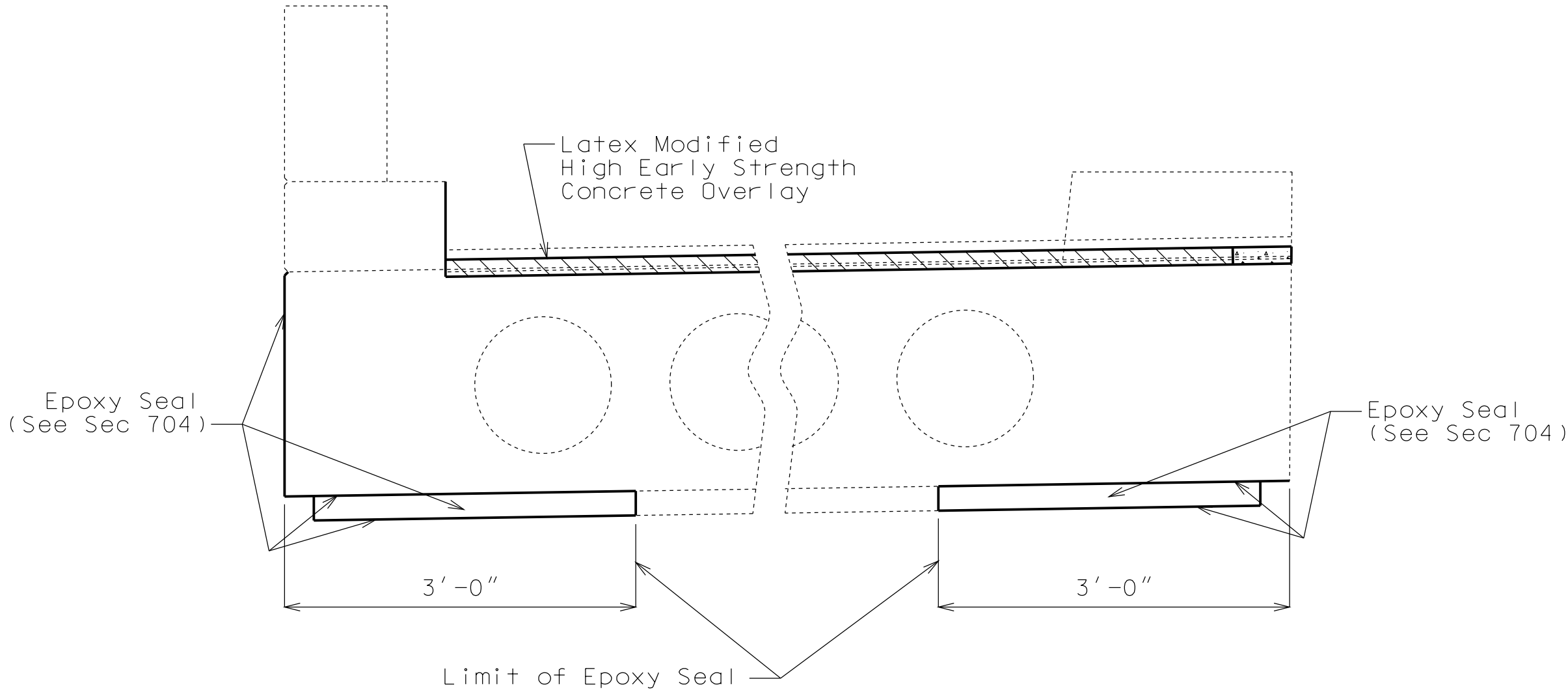
ROUTE 744	STATE MO	DISTRICT BR	SHEET NO. 3	"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."  DATE _____
JOB NO. J8S2152				
CONTRACT ID.				
PROJECT NO.				
COUNTY GREENE				



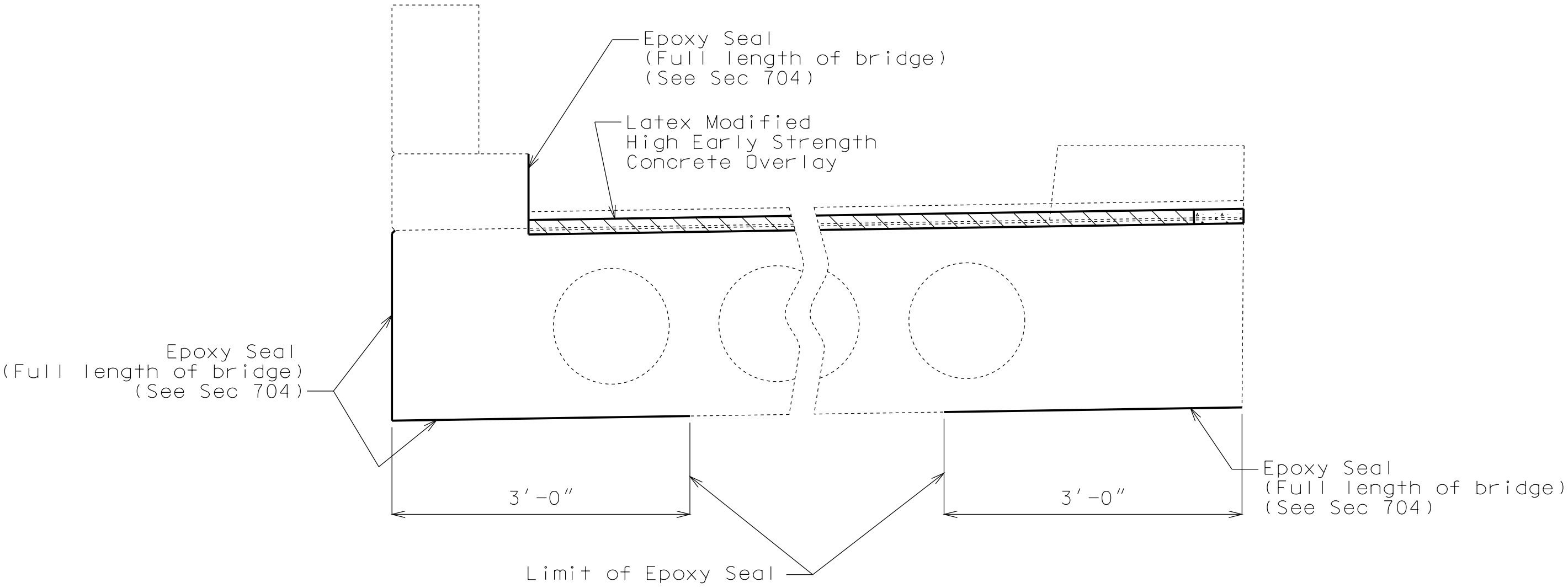
TYPICAL ELEVATION OF EXISTING  
CURB SHOWING OUTLET



TYPICAL PART SECTION THRU  
SLAB SHOWING EXISTING CURB OUTLET

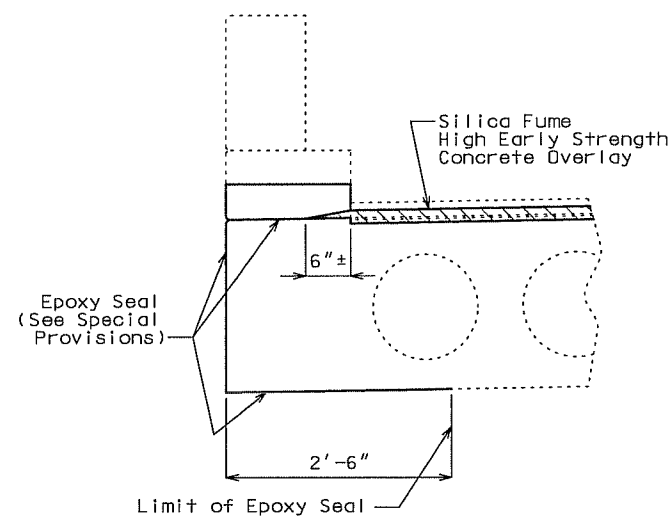


TYPICAL PART SECTION THRU SLAB  
SHOWING DROP PANEL AREA  
AT INT. BENT NOS. 2 & 4

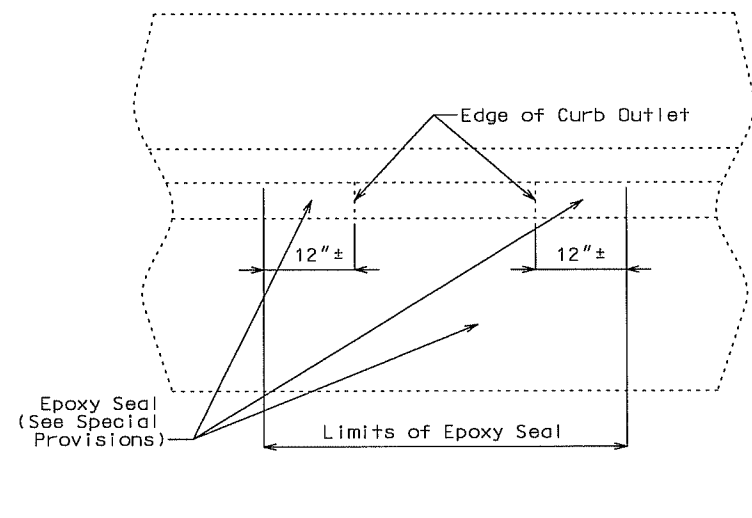


TYPICAL PART SECTION THRU SLAB

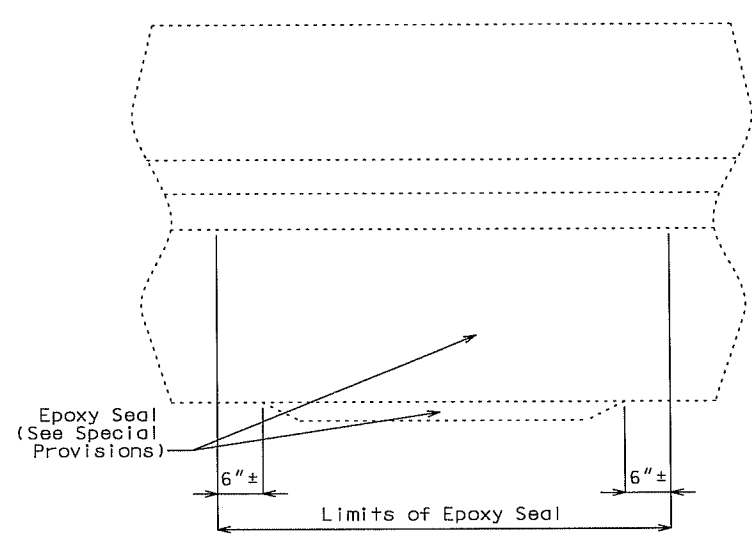
ROUTE	STATE	DISTRICT	SHEET NO.
744	MO	BR	4
JOB NO. J8S2152			
CONTRACT ID. 080822-801			
PROJECT NO. FAF-1(3) & FAF 744-1(4)			
COUNTY GREENE			DATE



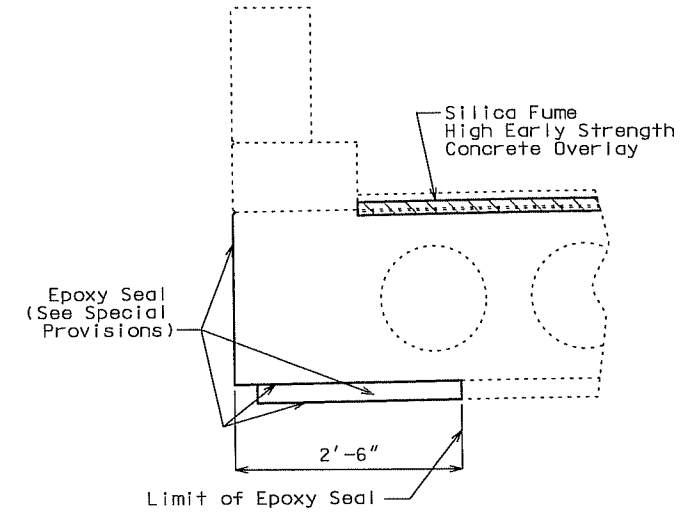
TYPICAL SECTION OF EXISTING CURB SHOWING OUTLET



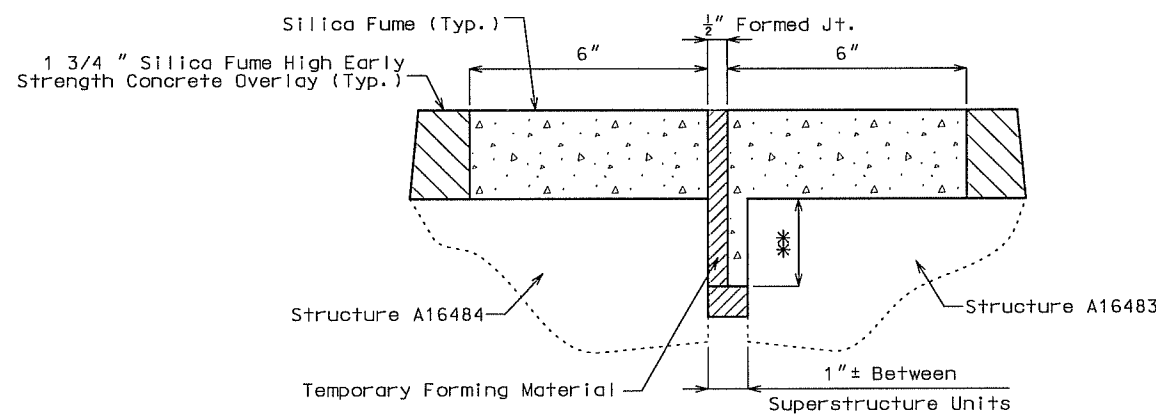
TYPICAL ELEVATION OF EXISTING CURB SHOWING OUTLET



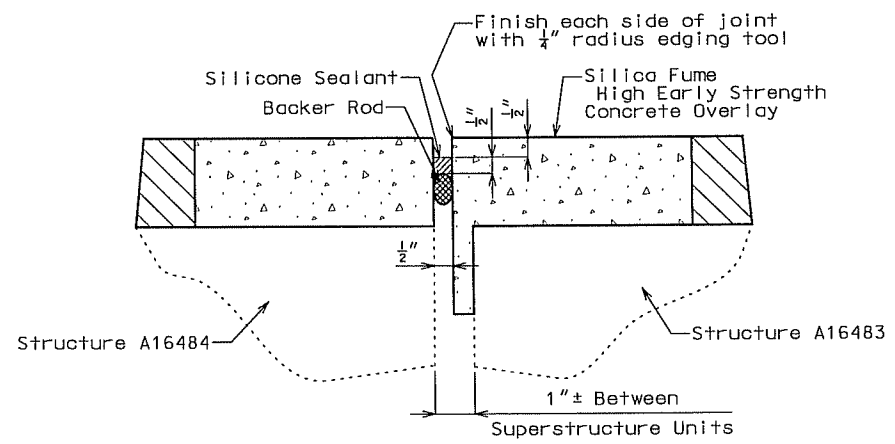
TYPICAL ELEVATION OF EXISTING CURB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4



TYPICAL SECTION OF EXISTING CURB SHOWING DROP PANEL AREA AT INT. BENT NOS. 2 & 4



WEARING SURFACE INSTALLATION AT JOINT



COMPLETED JOINT

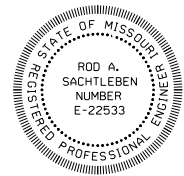
\*Silica Fume manufacturer's recommended depth.

Notes:  
All temporary forming material shall be completely removed prior to sealing joint.  
Silicone Expansion Joint shall be in accordance with Sec 717.40.  
Silica Fume shall be in accordance with Sec 505.30.  
Cost of silicone expansion joint sealant will be considered completely covered by Structure A16483.

COMPILED BY: *Bernie J. Price 6-18-10*

LONGITUDINAL SILICONE EXPANSION JOINT

CHECKED BY: *D. Mayo 6/21/10*



Rod Sachtleben  
2009.05.13 11:43:34  
-05'00'

DATE PREPARED  
05/13/09

ROUTE 65 STATE MO

DISTRICT BR SHEET NO. 1

COUNTY GREENE

JOB NO. J8P0605E

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A16485

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

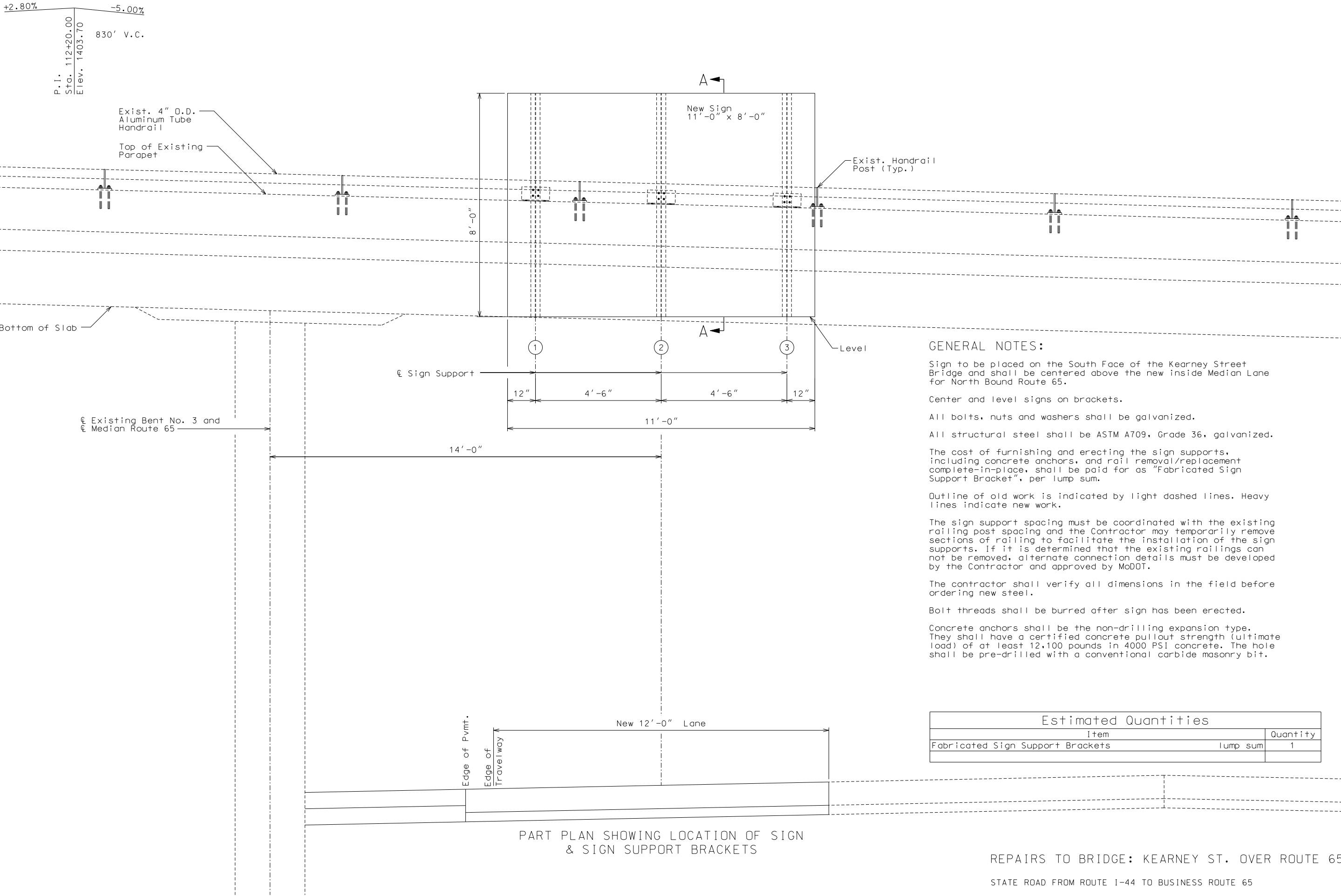


105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

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Hanson Professional Services Inc.  
13801 Riverport Drive, Suite 300  
St. Louis, Missouri 63143  
Professional Engineer Rod A. Sachtleben  
www.hanson-inc.com E-22533 314.770.0467



GENERAL NOTES:

Sign to be placed on the South Face of the Kearney Street Bridge and shall be centered above the new inside Median Lane for North Bound Route 65.

Center and level signs on brackets.

All bolts, nuts and washers shall be galvanized.

All structural steel shall be ASTM A709, Grade 36, galvanized.

The cost of furnishing and erecting the sign supports, including concrete anchors, and rail removal/replacement complete-in-place, shall be paid for as "Fabricated Sign Support Bracket", per lump sum.

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

The sign support spacing must be coordinated with the existing railing post spacing and the Contractor may temporarily remove sections of railing to facilitate the installation of the sign supports. If it is determined that the existing railings can not be removed, alternate connection details must be developed by the Contractor and approved by MoDOT.

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Estimated Quantities		
Item		Quantity
Fabricated Sign Support Brackets	lump sum	1

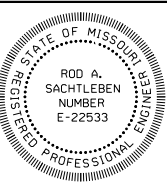
Designed: RAS 03/30/09  
Detailed: MQC 04/01/09  
Checked: RAS 05/13/09

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

Sheet No. 1 of 2

REPAIRS TO BRIDGE: KEARNEY ST. OVER ROUTE 65  
STATE ROAD FROM ROUTE I-44 TO BUSINESS ROUTE 65  
ABOUT 1.0 MILE SOUTH OF ROUTE I-44  
STA. 112+72.15





Rod Sachtleben  
2009.05.13 11:43:33  
-05'00'

DATE PREPARED

05/13/09

ROUTE 65 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY GREENE

JOB NO.

J8P0605E

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A16485

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

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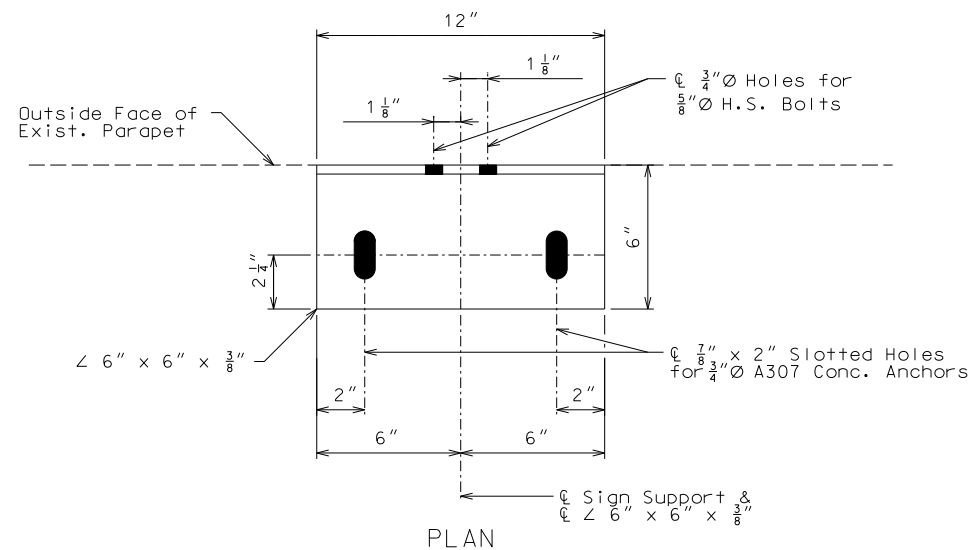
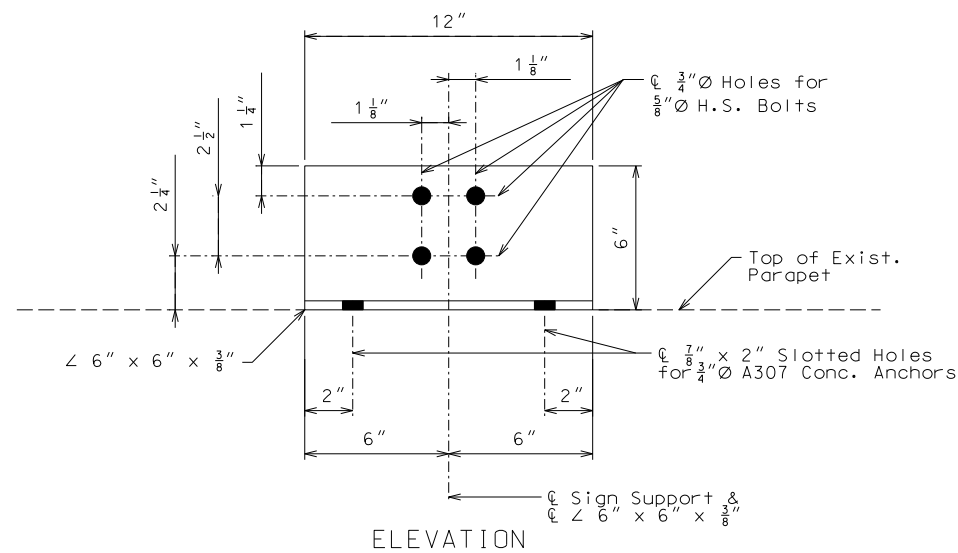
13881 Riverport Drive, Suite 300

St. Louis, Missouri 63103

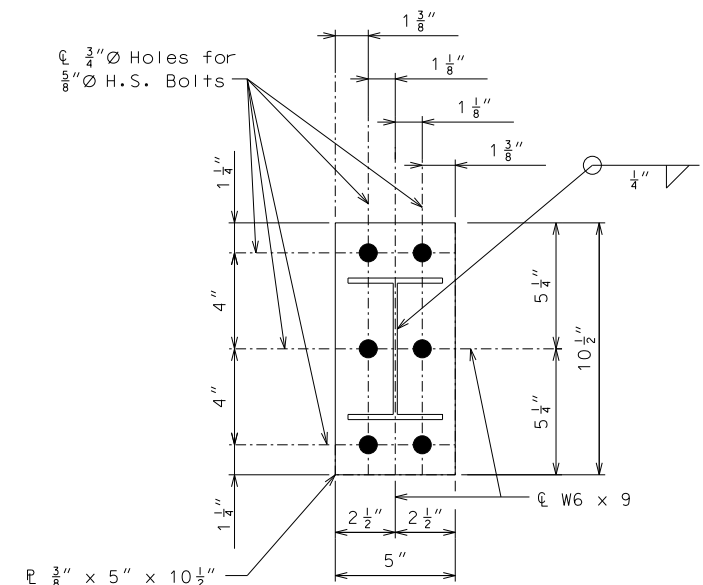
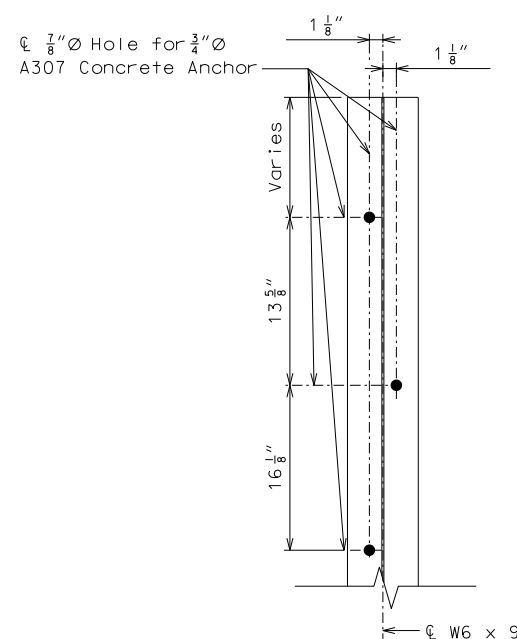
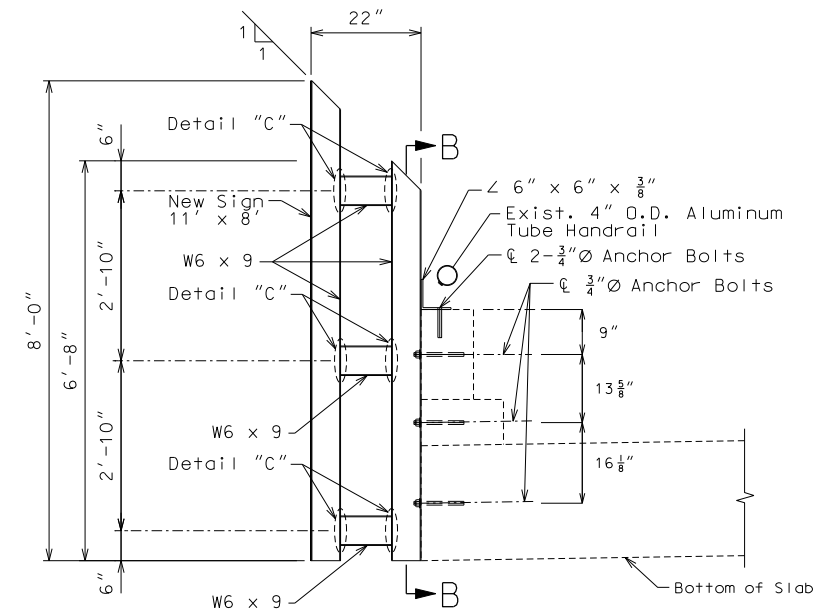
Professional Engineer E-22533

www.hanson-inc.com Rod A. Sachtleben

314.770.0467 Professional Engineer



DETAILS OF 6" x 6" x 3/8" ANGLE



Designed: RAS 03/30/09  
Detailed: MQC 04/01/09  
Checked: RAS 05/13/09

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

Sheet No. 2 of 2



## MEMORANDUM

Missouri Department of Transportation  
Bridge Division  
Central Office

---

**TO:** Gayle Davis-SW (Project Office)

**CC/ATT:** Becky Baltz - SW  
Dave Ahlvers - cm  
John Gahagan - br  
Chad Daniel - br  
Bill Dunn - br  
Kent Nelson - br (2)

**FROM:** Joyce Foster *JF*  
Structural Liaison Engineer

**DATE:** August 24, 2011

**SUBJECT:** Greene County, Route 65  
Structure A16485  
Job No. J8P0605E  
Letting Date 6/26/2009  
Construction Plan Changes

The following plan sheets have been placed in sharepoint in adobe acrobat format. Enclosed is one half-size copies of these plan sheets:

Bridge A16485-

Voided - 1  
New Sheet - 1A, 2A

This change order was required because there was an existing 3 inch conduit located on the bridge, and the sign had to be moved up to miss this conduit.

Change requested by your office.

If you have questions or comments, please call me at (573) 751-3707.

J:/fostej/construction change 8

# MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



Rod A. Sachtleben  
2011.08.23 14:46:56  
-05'00'

DATE PREPARED  
05/13/09

ROUTE 65 STATE MO

DISTRICT BR SHEET NO. 1

COUNTY GREENE

JOB NO. J8P0605E

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A16485

DESCRIPTION

DATE 08/23/11

VOIDED SHEET

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MoDOT

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13801 Riverport Drive, Suite 300

St. Louis, Missouri 63043

Professional Engineer 001632

www.hansonps.com

814.770.0487

Professional Engineer

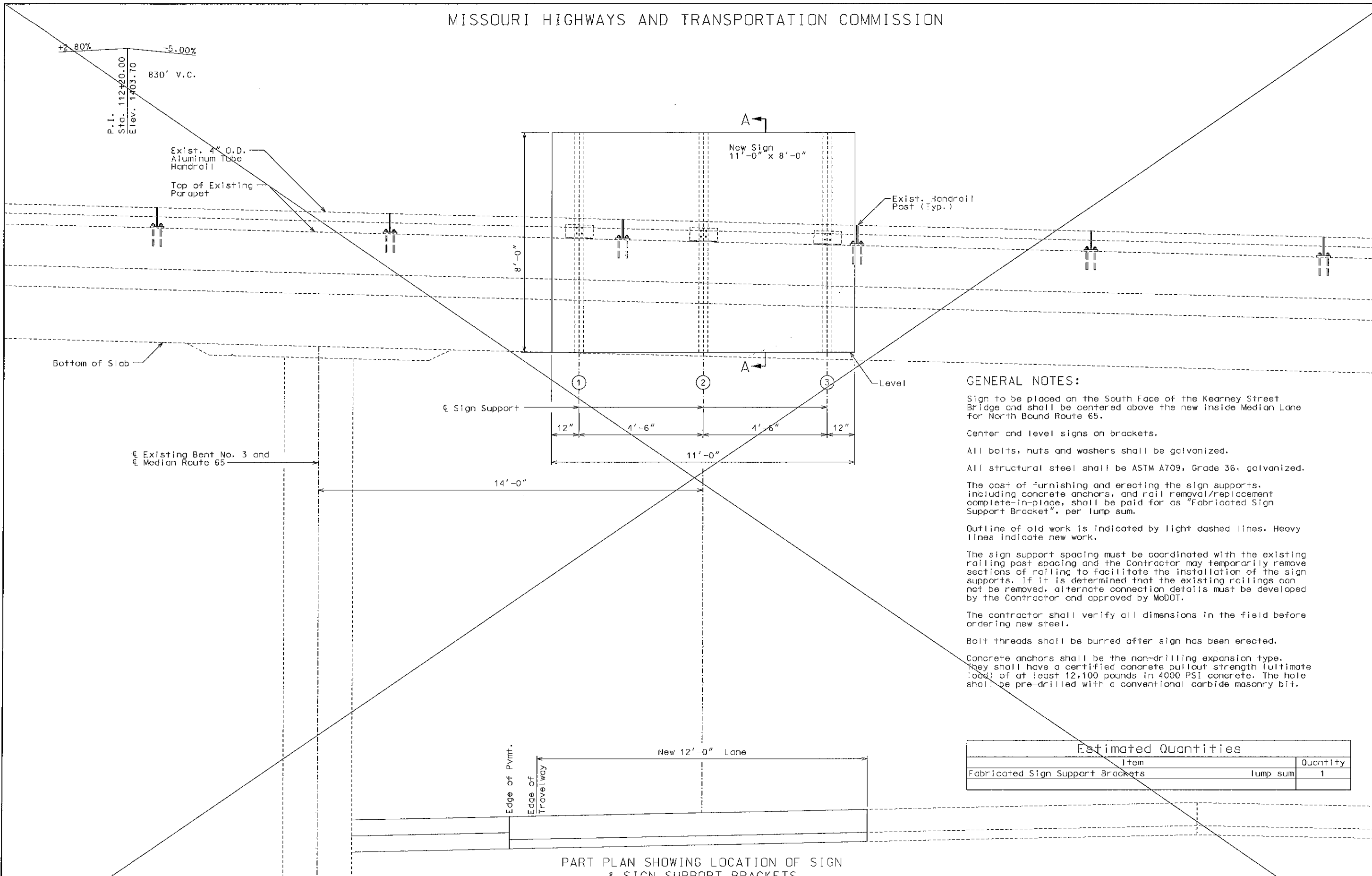
E-22533

REPAIRS TO BRIDGE: KEARNEY ST. OVER ROUTE 65

STATE ROAD FROM ROUTE 1-44 TO BUSINESS ROUTE 65

ABOUT 1.0 MILE SOUTH OF ROUTE 1-44

STA. 112+72.15



## GENERAL NOTES:

Sign to be placed on the South Face of the Kearney Street Bridge and shall be centered above the new inside Median Lane for North Bound Route 65.

Center and level signs on brackets.

All bolts, nuts and washers shall be galvanized.

All structural steel shall be ASTM A709, Grade 36, galvanized.

The cost of furnishing and erecting the sign supports, including concrete anchors, and rail removal/replacement complete-in-place, shall be paid for as "Fabricated Sign Support Bracket", per lump sum.

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## Estimated Quantities

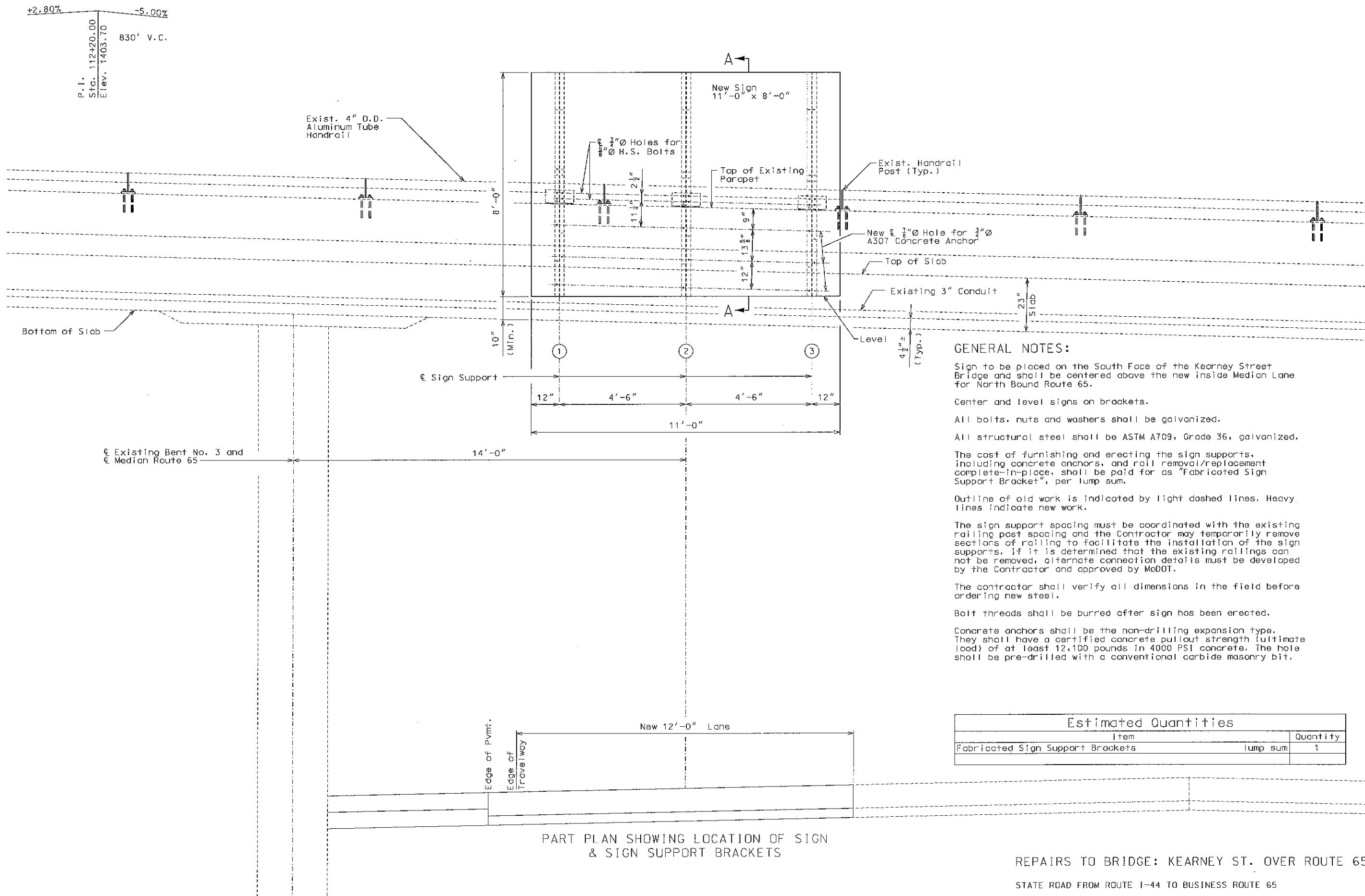
Item	Quantity
Fabricated Sign Support Brackets	1

Designed: RAS 03/30/09  
Detailed: MQC 04/01/09  
Checked: RAS 05/13/09

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

Sheet No. 1 of 2

# MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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## Estimated Quantities

Item	Quantity
Fabricated Sign Support Brackets	1

PART PLAN SHOWING LOCATION OF SIGN & SIGN SUPPORT BRACKETS

REPAIRS TO BRIDGE: KEARNEY ST. OVER ROUTE 65

STATE ROAD FROM ROUTE 1-44 TO BUSINESS ROUTE 65

ABOUT 1.0 MILE SOUTH OF ROUTE 1-44

STA. 112+72.15

Designed: RAS 03/30/09  
 Detailed: BWC 08/23/11  
 Checked: HNG 08/23/11

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

Sheet No. 1A of 2A



Rod A. Sachtleben  
 2011.08.23 14:45:57 -05'00'

DATE PREPARED  
 08/23/11  
 ROUTE 65 STATE MO  
 DISTRICT BR SHEET NO. 1A

COUNTY GREENE  
 JOB NO. J8P0605E  
 CONTRACT ID.

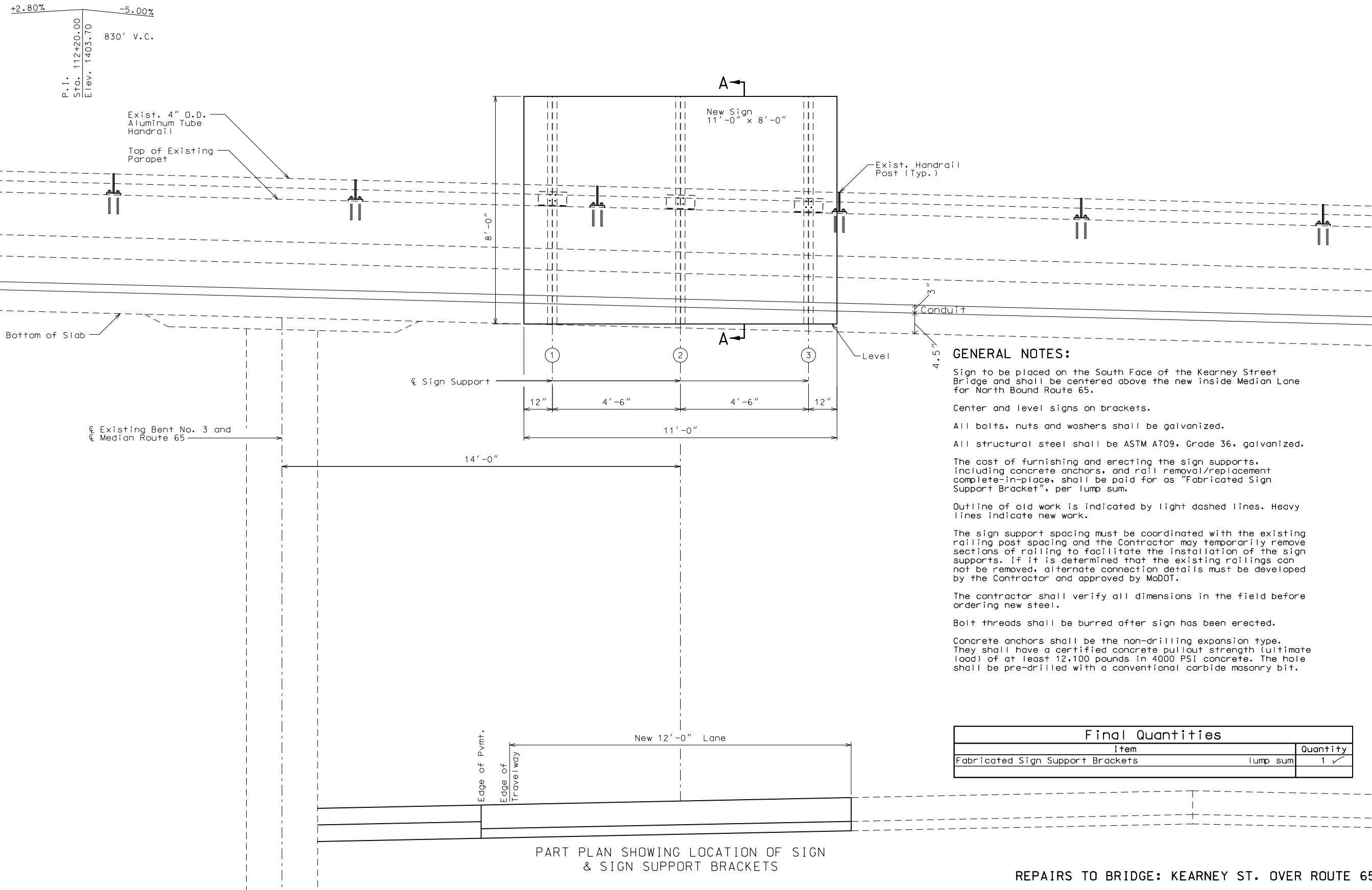
PROJECT NO.  
 BRIDGE NO. A16485

DATE	DESCRIPTION
08/23/11	New Sheet

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

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 St. Louis, Missouri 63043  
 Professional Engineer 001632  
 www.hanson-inc.com  
 314.770.0457  
 Rod A. Sachtleben  
 Professional Engineer  
 E-22533





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

Sheet No. 1 of 2

REPAIRS TO BRIDGE: KEARNEY ST. OVER ROUTE 65

STATE ROAD FROM ROUTE I-44 TO BUSINESS ROUTE 65

ABOUT 1.0 MILE SOUTH OF ROUTE I-44

STA. 112+72.15

DATE PREPARED	
05/13/09	
ROUTE	STATE
65	MO
DISTRICT	SHEET NO.
BR	1
COUNTY	
GREENE	
JOB NO.	
J8P0605E	
CONTRACT ID.	
090626-802	
PROJECT NO.	
AF-65-2(65)	
BRIDGE NO.	
A16485	

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

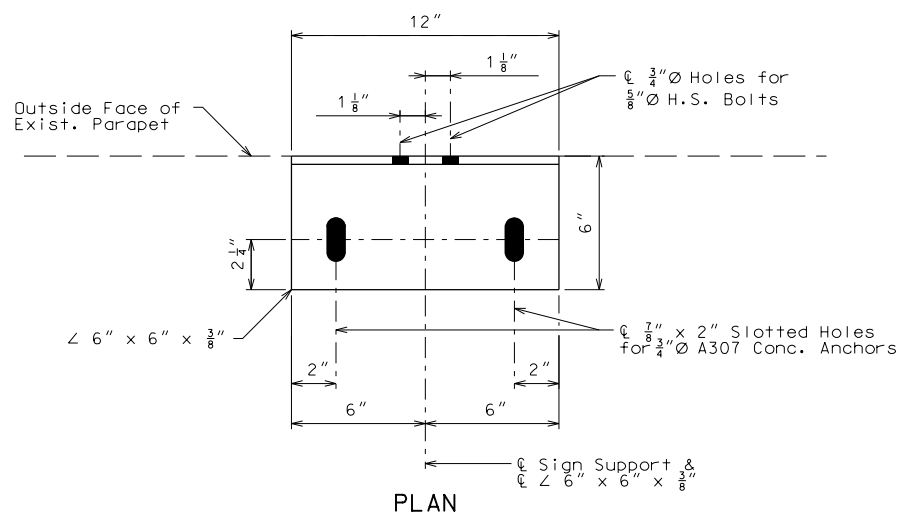
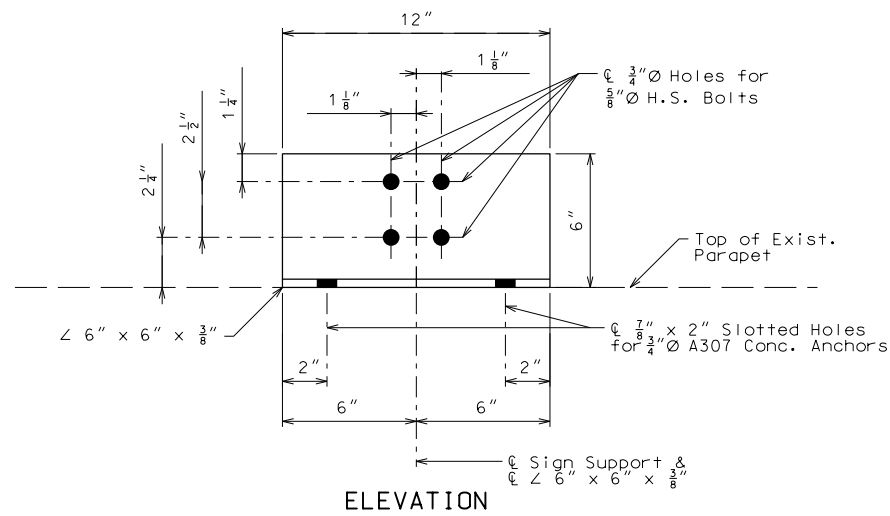
MoDOT



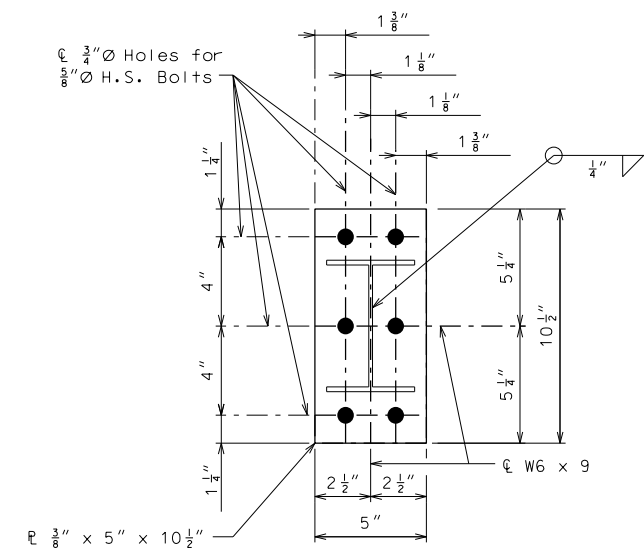
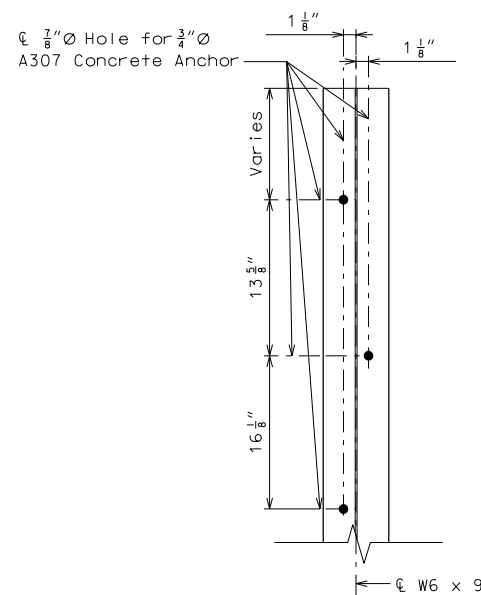
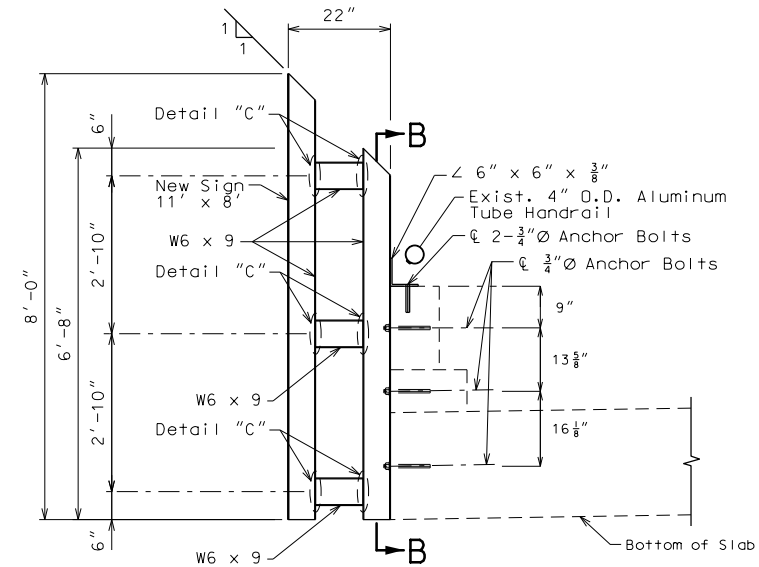
DATE PREPARED 05/13/09	
ROUTE 65	STATE MO
DISTRICT BR	SHEET NO. 2
COUNTY GREENE	
JOB NO. J8P0605E	
CONTRACT ID. 090626-802	
PROJECT NO. FAF-65-2(65)	
BRIDGE NO. A16485	

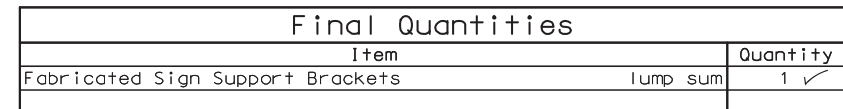
DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

DETAILS OF 6" x 6" x 3/8" ANGLE





STA. 112+72.15

DATE PREPARED	
05/13/09	
ROUTE	STATE
65	MO
DISTRICT	SHEET NO.
BR	1
COUNTY	
GREENE	
JOB NO.	
J8P0605E	
CONTRACT ID.	
090626-802	
PROJECT NO.	
AF-65-2(65)	
BRIDGE NO.	
A16485	

[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

