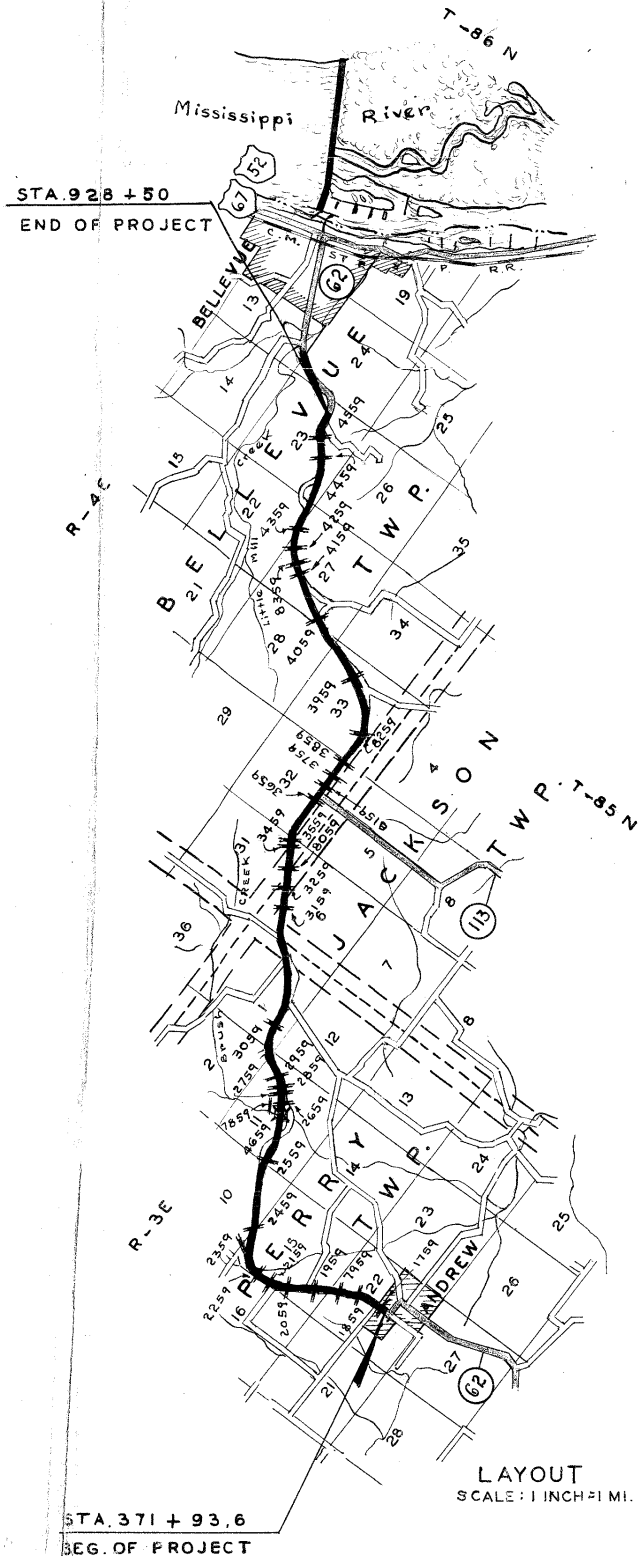


BRIDGE AND CULVERTS
PRIMARY ROAD SYSTEM
PROJECT NO. FN 144
JACKSON COUNTY
AUGUST 1953

In Letting of October 20, 1959.

DESIGN NO 4659		STA. 512+10 OVER BRUSH CREEK ON	
SECTION 11		IOWA NO. 62 PERRY TOWNSHIP	
159'-2"x30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE-15°SKEW			
ESTIMATE OF QUANTITIES			
Concrete		401.8 Cu.Yds.	
Reinforcing Steel		57,936 Lbs.	
Aluminum Rail (R to & End Posts)		301.7 Lin.Ft.	
Pretensioned Prestressed Concrete Beams	46'-8"	8 Beams	
	67'-6"	8 Beams	
	42'-6"	8 Beams	
10 B P 42 Steel		549 Lin.Ft.	
Piles	Furnish 9@32', 9@29'	549 Lin.Ft.	
	Drive 9@32', 9@29'	549 Lin.Ft.	
Formed Steel Beam Rail (10 gauge)		100 Lin.Ft.	
Crescoped Posts (8"x6"x6")		12 Posts	
Excavation Class 20		98 Cu.Yds.	
" Class 23		270 Cu.Yds.	
" Class 10 channel		650 Cu.Yds.	
Removal of Old Structure		Lump Sum	



DESIGN	LOCATION			DESCRIPTION	ESTIMATE OF QUANTITIES															REMOVALS	
	SECTION	TOWNSHIP	STATION		SIZE AND TYPE	CONCRETE CU.YDS.	REINF. STEEL LBS.	EXCAVATION CU.YDS.		CONCRETE PIPE LIN. FT.				CONCRETE APRON FOR PIPE - NUMBER				6" Vit. Bell Tile Lin.Ft.	Hardware Lbs.		Lumber Ft. B.M. un- treated Cryo
								CL. 20	CL. 24	24"φ	30"φ	36"φ	42"φ	24"φ	30"φ	36"φ	42"φ				
1759	22	Perry	376+00	2'x 3'x 158 R.C.B. Culv.	58.9	3537	28														
1859	22	"	386+00	4'x 5'5"x 62' R.C.B. Culv. (Stock Pass)	43.9	3652	70														
1959	15	"	418+16	3'x 4'x 176' R.C.B. Culv. & 48.15' Flume 45°Sk	92.1	6847	159														
2059	15	"	428+00	8'x 8'x 134' R.C.B. Culv.	249.8	26,612	361														
2159	15	"	434+00	4'x 3'x 70' R.C.B. Culv. & 37'2 Flume 45°skew	45.2	3801	163														
2259	15	"	442+06	30"φ F-1 Pipe & 38.76' Flume	8.2	563	76			54				1							
2359	10	"	466+35	5'x 4'x 106' R.C.B. & 30.8' Flume 30°skew	88.3	9048	86														
2459	10	"	470+17	12'x 12'x 118' R.C.B. Culv.	460.7	46,099	739														
2559	11	"	498+50	24"φ F-1 Pipe & 97.47' Flume	17.1	1229	127	47	54					1							
2659	11	"	521+86	36"φ F-1 Pipe & 95'10 7/8 Flume	27.3	1564	26	591			104										
2759	11	"	534+50	24"φ F-1 Pipe & 74'9 1/8 Flume	13.3	960	167		52					1							
2859	11	"	538+70.5	30"φ F-1 Pipe Extension	0.5	10	10	35			80			1						Portion of present culvert, as per plan	
2959	11	"	545+24.4	30"φ F-1 Ext. & 43.6' Flume-2x2' R.C.B. Ext. Outlet End	14.0	893	17	20			4			1						Portion of pres. structure interfering with new work	
3059	1	"	578+41.9	30"φ F-1 Ext. & 24.7' Stub Flume	5.6	389	40				46										
3159	6	Jackson	634+12.5	30"φ F-1 Pipe Ext.	0.5	10	30	5			36			2						" " " " " "	
3259	6	"	650+72.7	3'x 2' Reinf. C. Box Culv. Ext.	15.2	861	29													" " " " " "	
3459	31	Bellevue	670+82.5	30"φ F-1 Pipe Extension	0.5	10	17	34			40			2						" " " " " "	
3559	31	"	675+13.3	30"φ F-1 Pipe Ext. inlet, 2'x2' Ext. & 43.72' Flume outlet	13.0	825	70				12			1						" " " " " "	
3659	32	"	701+78	4'x 3' Reinf. C. Box Culv. Ext.	24.5	2525	32													" " " " " "	
3759	32	"	720+26.4	2'x 2' R.C.B. Culv. Ext.	23.2	1224	50													" " " " " "	
3859	32	"	731+12.9	30"φ F-1 Pipe Extension	0.4	10	87			44				2						" " " " " "	
3959	33	"	766+19.5	42"φ F-1 Pipe Ext. 25°skew	0.3	7	24									1				" " " " " "	
4059	27	"	811+00	30"φ F-1 Pipe & 38'5 9/16 Flume	8.3	568	89			112										" " " " " "	
4159	27	"	827+80	2'x 3'x 197' R.C.B. Culv. & 30.27' Stub Flume	78.2	5025	73														
4259	27	"	838+45	24"φ F-1 Pipe & 33.46' Stub Flume	5.9	437	35			98				1							
4359	22 & 27	"	876+90	30"φ F-1 Pipe & 63.23' Flume	13.6	900	37	251		112				1							
4459	23	"	901+00	24"φ F-1 Pipe & 34.71' Stub Flume	7.9	582	40	63		116				1							
4559	23	"	918+66	2'x 2'x 183' R.C.B. & 27.26' Stub Flume 5°Sk	61.9	3838	110														
7959	22	Perry	397+00	4'x 5'6"x 45' C. Stock Pass	35.4	3066	183														
8059	6 & 31	Jackson Bellevue	660+70	4'x 5'6"x 45' C. Stock Pass	35.4	3066	118														
8159	32	Bellevue	713+00	4'x 5'6"x 58' C. Stock Pass	41.9	3477	69	51													
8259	33	"	745+00	4'x 5'6"x 44' C. Stock Pass	36.3	2968	40	339													
8359	27	"	826+00	4'x 5'6"x 55' C. Stock Pass	40.4	3345	36														
7859	11	Perry	513+19.1	2.5'x 4.5' Concrete Tank	1.9	127	9									6	5	17	37.5		
Totals					1569.6	138,075	3247	1436	300	540	104	58	4	11	1	1	6	5	17	37.5	

Specifications:

All material & construction to be in accordance with Iowa State Highway Commission
Standard Specifications,
Series 1956, plus current special provisions.

This bridge will require Bridge Sign Assemblies furnished and placed
by others, as specified in S.F.T. Instructions No. 11.
Revised March 1, 1956.

MILEAGE SUMMARY:
Bridge at Sta. 512+10 = 162'-1 1/4" = .031 Mi.

CONSTRUCTION PLANS SHOWING PROJECT AS BUILT

ONE COPY PREPARED BY *William D. Payne* RES. ENGR. DATE *1-11-62*

ONE COPY APPROVED AND FORWARDED TO AMES

Chas. C. Shultz DISTRICT ENGINEER DATE *3-14-62*

TWO COPIES TO BE MADE AND RETURNED TO:

VAN R. SNYDER DISTRICT ENGR.

PAUL FERLEMAN RES. MAINTENANCE ENGR.

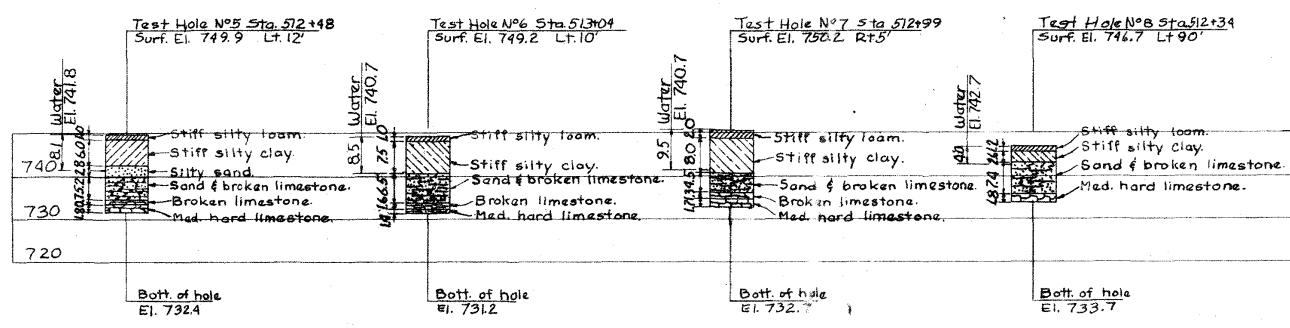
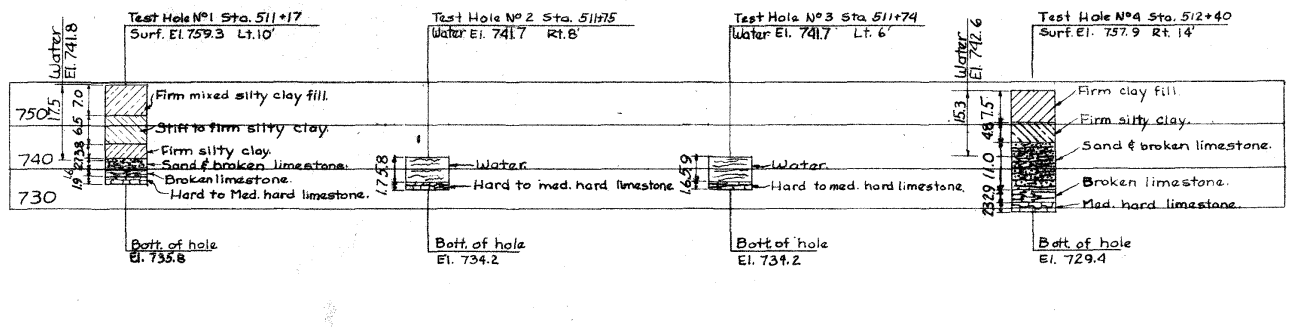
APPROVED
CHIEF ENGINEER
IOWA HIGHWAY COMMISSION
DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER
DATE

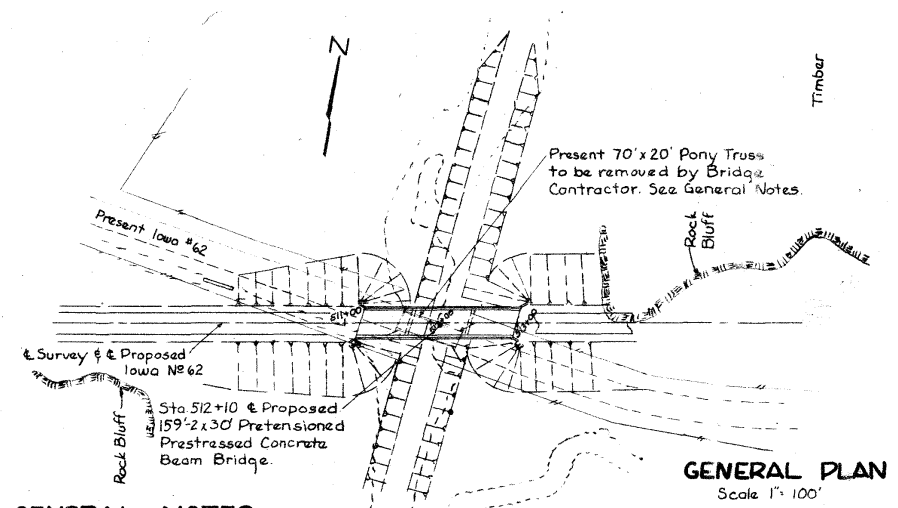
18-Sheets

OCT. 20, 1959

Bench Mark N° 60 Sta. 512+37.2 on wheel guard N.E. Cor. Pony Truss Br. 8' Rt. El. 758.27
Bench Mark N° 60 Sta. 511+20.0 on N.W. corner West Abut. 23' LT. El. 749.27



SOUNDING DATA
Scale 1" = 20'
Dated: October 6, 1958

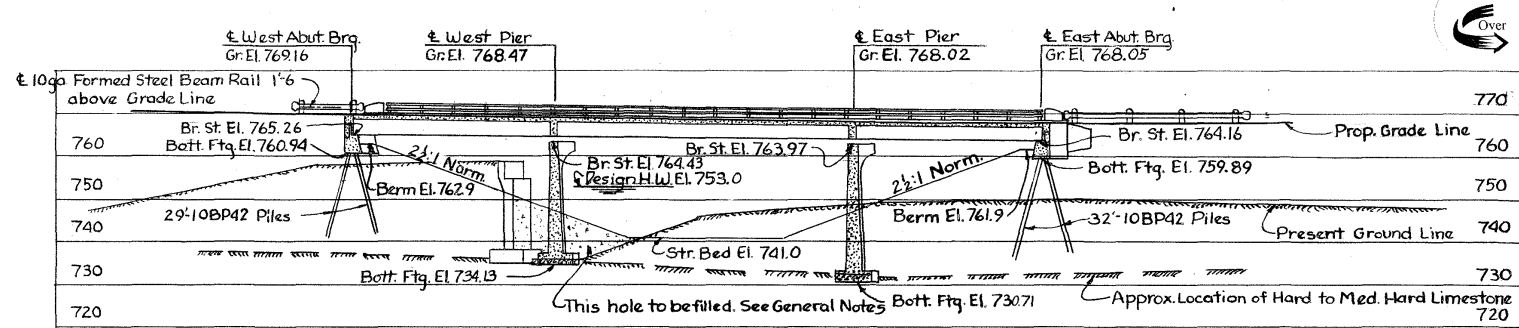


GENERAL NOTES

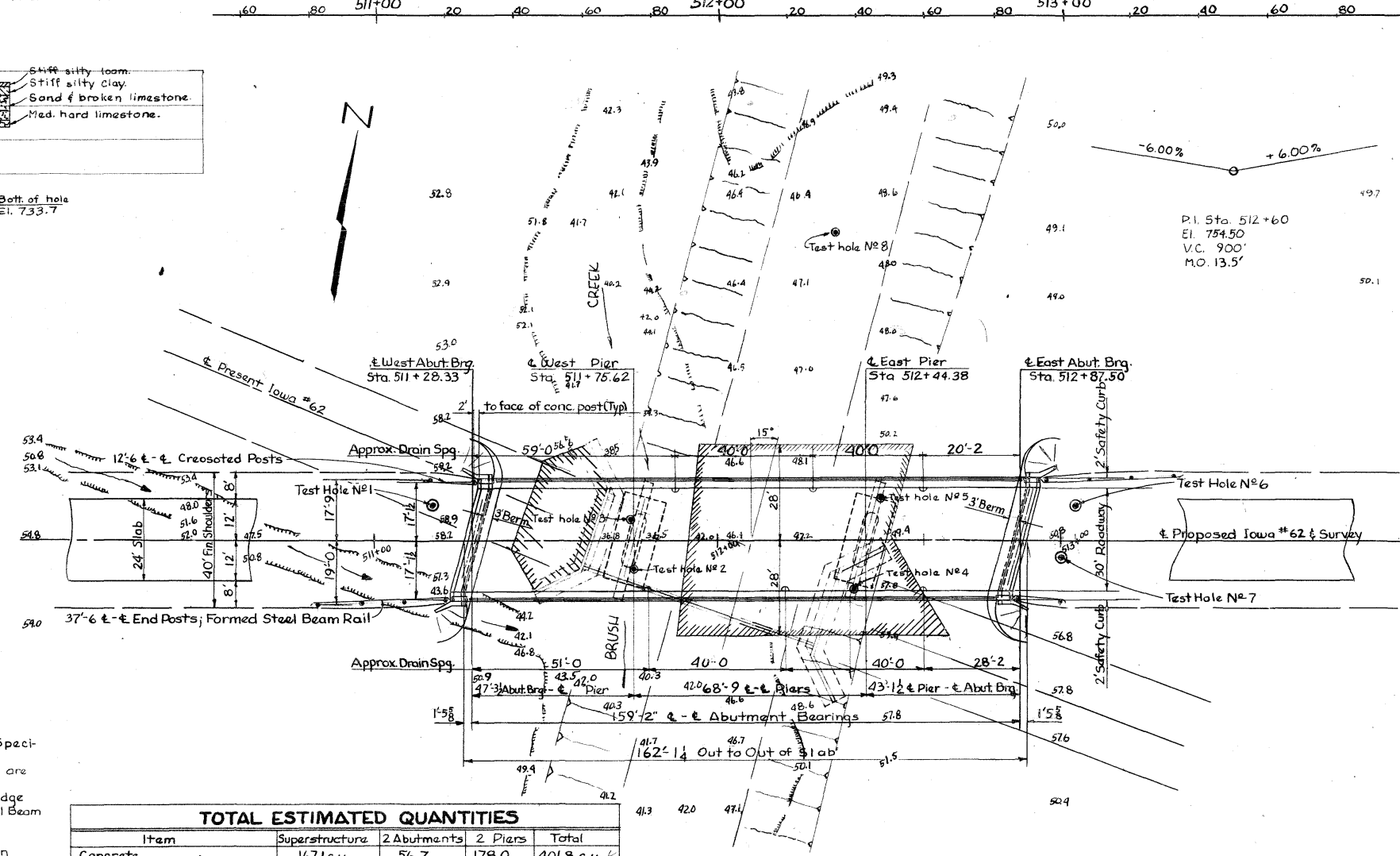
- This bridge is designed for H20-516-44 loading and an alternate loading designated in RPR 20-4, Section 4c of the B.P.R. Specifications, each with 19 lbs./sq. ft. of roadway for future wearing surface.
- The approach fills as shown are not a part of this estimate but are to be placed and compacted before abutment piles are driven. The Bridge Contractor is to level off and shape the berms to the elevations and dimensions shown.
- The Formed Steel Beam Rails and Creosoted Posts at the ends of the bridge are to be furnished and placed by the Bridge Contractor. The cost of the curved end terminals and all necessary bolts is to be included in the estimate item "Formed Steel Beam Rail."
- The bid item "Removal of Old Structure" is to include the following:
- 1) The Bridge Contractor is to remove the present 70' x 20' Pony Truss with concrete floor and concrete substructure, in accordance with Section 2401 of the Standard Specifications. All salvable material is to be piled neatly within 200' of site as directed by the Engineer.
 - 2) The Bridge Contractor is to remove all portions of both abutments which may interfere in any way with the new construction. Present abutments however are to be removed to at least one foot below finished ground line.
 - 3) The Bridge Contractor is to clear the channel under bridge for a distance of 28' on either side of & of the roadway as shown by the hatched areas on the "Situation Plan" and "Longitudinal Section Along & Roadway".
 - 4) The Bridge Contractor is to use the broken concrete from the old bridge slab and abutments (as well as the channel excavation under the proposed bridge) to fill hole at the West Pier as indicated on the "Longitudinal Section".

SPECIFICATIONS

Design: A.A.S.H.O. Series of 1957, except as noted.
Construction: Standard Specifications of the Iowa State Highway Commission. Series of 1956 with current special provisions.



LONGITUDINAL SECTION ALONG & ROADWAY



SITUATION PLAN
Scale 1" = 20'

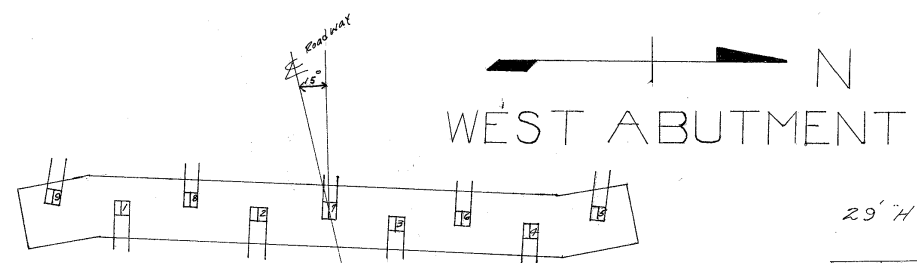
TOTAL ESTIMATED QUANTITIES				
Item	Superstructure	2 Abutments	2 Piers	Total
Concrete	167.1 c.y.	56.7	178.0	401.8 c.y.
Reinforcing Steel	30,922	5032	21,982	57,936 lbs.
Aluminum Rail (8" x 16" O)	301.7			301.7 l.f.
Prestressed Concrete Beams	46'-8" 8			8 beams
	67'-6" 8			8 beams
	42'-6" 8			8 beams
10BP42 Steel Piles	Furnish	9032, 9029'		549 l.f.
	Drive	9032, 9029'		549 l.f. 508.7 l.f.
Formed Steel Beam Rail (10ga)				100 l.f.
Creosoted Posts (8" x 16" O)				12 posts
Class 20 Excavation		98-49		98 c.y.
Class 23 Excavation			270	270 c.y.
Class 10 Channel Excavation				650 c.y.
Removal of Old Structure				Lump Sum

LOCATION

Jackson County
T-85N R-3E
Perry Twp.
Sec 11
Over Brush Creek
On Iowa N° 62

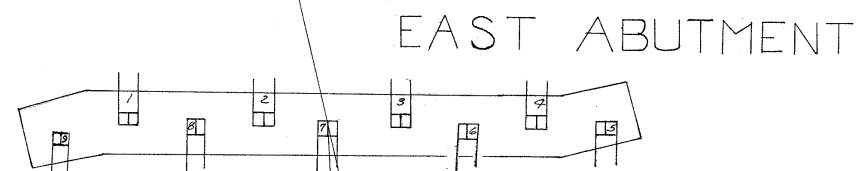
159'-2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

End Spans: 43'-12" & 47'-3 1/2"
Concrete Floor & Substructure
Interior Spans: 48'-9"
Aluminum Rail
SITUATION PLAN
Station 512+10.00
Project FNI44
JACKSON COUNTY
Iowa State Highway Commission
February 1959
Design 4659 Jackson County File N° 19424
Sheet 1 of 6



29' H Beam Pile 1:4 Batter

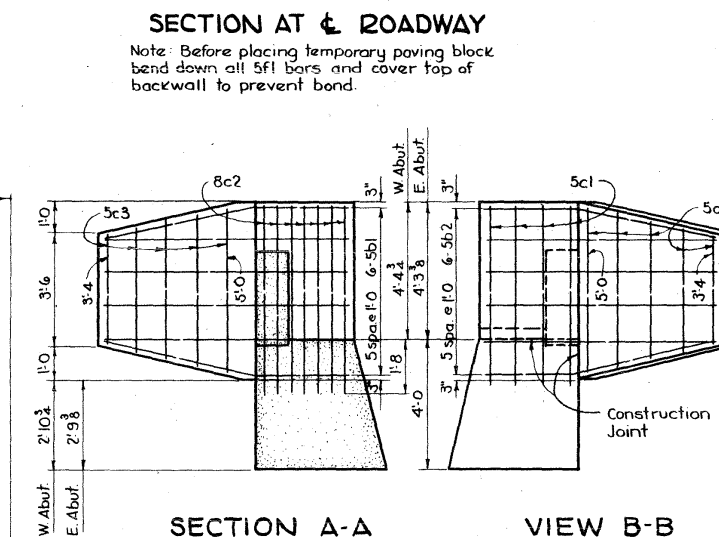
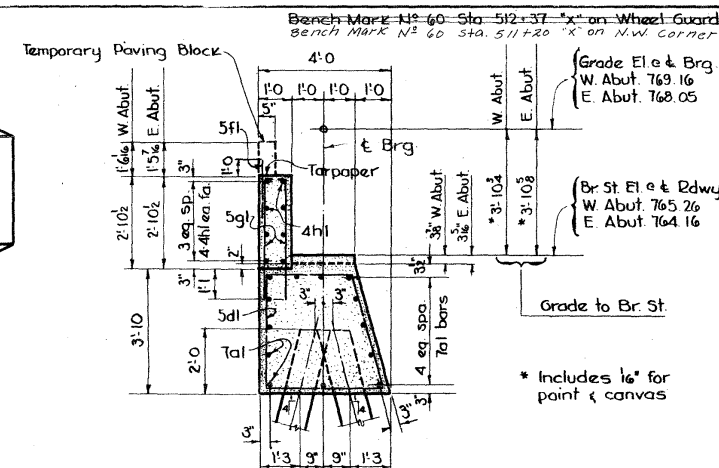
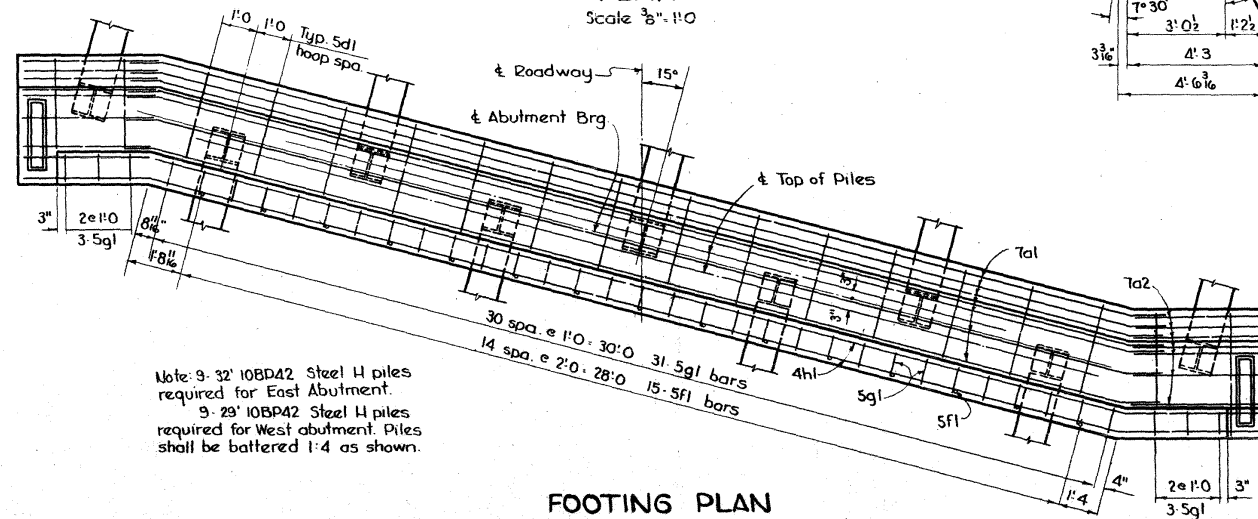
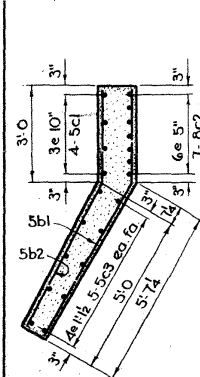
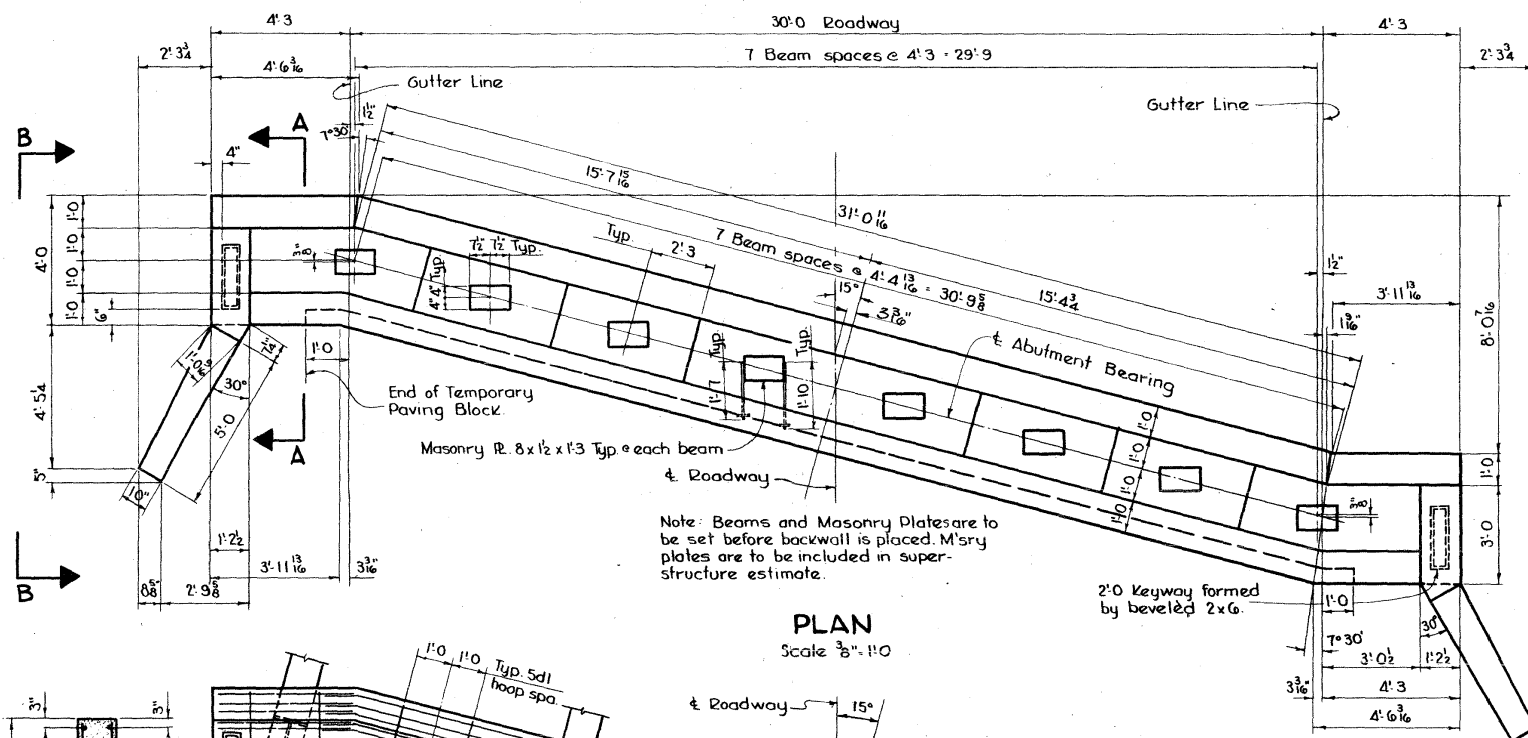
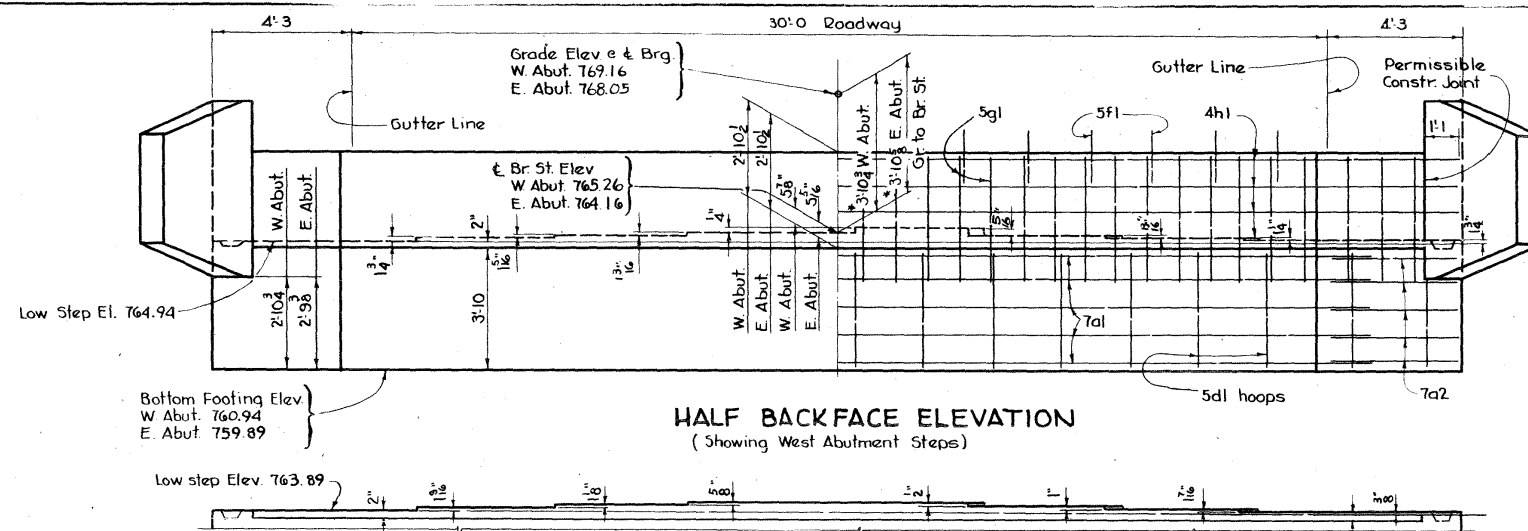
No.	Length	Bearing
1	26.1	47.05
2	26.1	49.02
3	26.6	43.57
4	26.9	56.02
5	27.6	51.16
6	28.0	47.05
7	27.4	43.57
8	26.4	45.26
9	26.1	53.48



32' H Beam Pile 1:4 Batter

No.	Length	Bearing
1	29.6	47.84
2	29.5	44.16
3	29.5	47.84
4	29.9	52.18
5	29.6	47.84
6	29.7	52.18
7	30.0	44.16
8	29.8	52.18
9	29.9	49.29

PIERS SETTING ON ROCK NO PILING



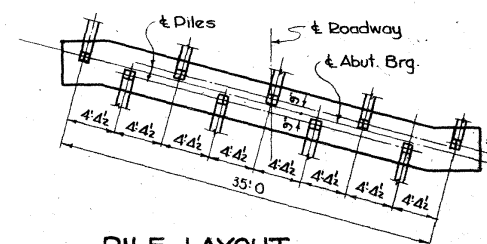
ABUTMENT NOTES:

All exposed corners of 90° or sharper are to be filleted with a $\frac{3}{4}$ " dressed and beveled strip.

Reinforcing is to be securely wired in place before concrete is placed.

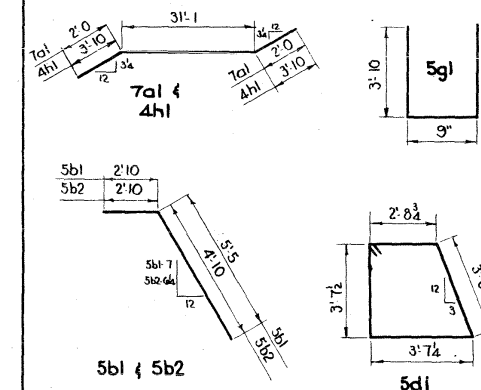
Clear distance from face of concrete to near reinforcing bar is to be 12" unless otherwise noted or shown.

Piling shall be driven to full penetration if practicable, but to at least 37 Ton bearing value.



REINFORCING STEEL - ONE ABUT.					
Bar	Location	Shape	N^s	L'gth.	Wt.
Tal	Footing longitudinal	//	13	35'-1"	932#
Sbl	" Wing horizontal B.F.	/ /	12	8'-3"	103#
Sbd	" " FF	/ /	12	7'-8"	96#
ScL	" Wing vertical F.F.		8	5'-9"	48#
BcT	" " B.F.		14	5'-9"	215#
ScB	" " FF & B.F.		20	Var.	87#
SdI	Footing hoops	D	18	14'-5"	27#
SfI	Backwall dowels		15	2'-0"	31#
Sgl	" vertical		37	8'-4"	323#
Hhl	" horizontal	/	8	38'-9"	207#
TaZ	Footing longitudinal	//	26	3'-10"	202#
	Total				2551#

BAR DETAILS



CONCRETE PLACEMENT QUANTITIES		
	E Abut	W Abut
Footing	20.8 ✓	20.7
Backwall	4.0 ✓	4.0
Wings	2.9 ✓	2.9
Paving Block	0.7 ✓	0.7
Total	28.4 c.y.	28.3 c.y.

ESTIMATED QUANTITIES - 2 ABUTS.		
Concrete		56.7 c.y.
Reinforcing Steel		5032 lbs
10B#42 Steel Piles	Furnish 9e29; 9e32'	549 L.F.
	Drive 9e29; 9e32'	508.7 549 L.F.
Excavation Class 20		99 98 c.y.

→ See Piling Log on Rev. Side-Sheet 1 of 6

Design for 15°00' Skew

159'-2 x 30' PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE

43'-1½' & 47'-3½' End Spans
Concrete Floor & Superstructure

68'-9" Interior Span
Aluminum Rail

ABUTMENT DETAILS

Station 512+10.00

Project FN144

JACKSON COUNTY

Iowa State Highway Commission

February 1959

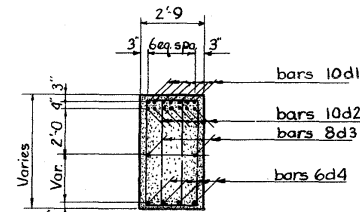
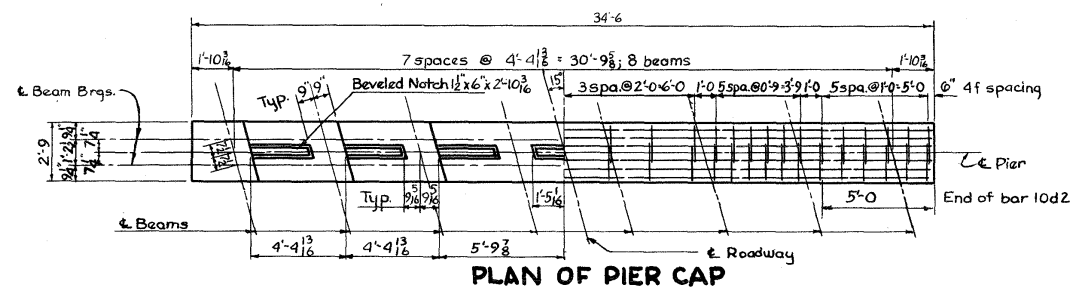
Sheet 2 of 6

Design 4659

Jackson County

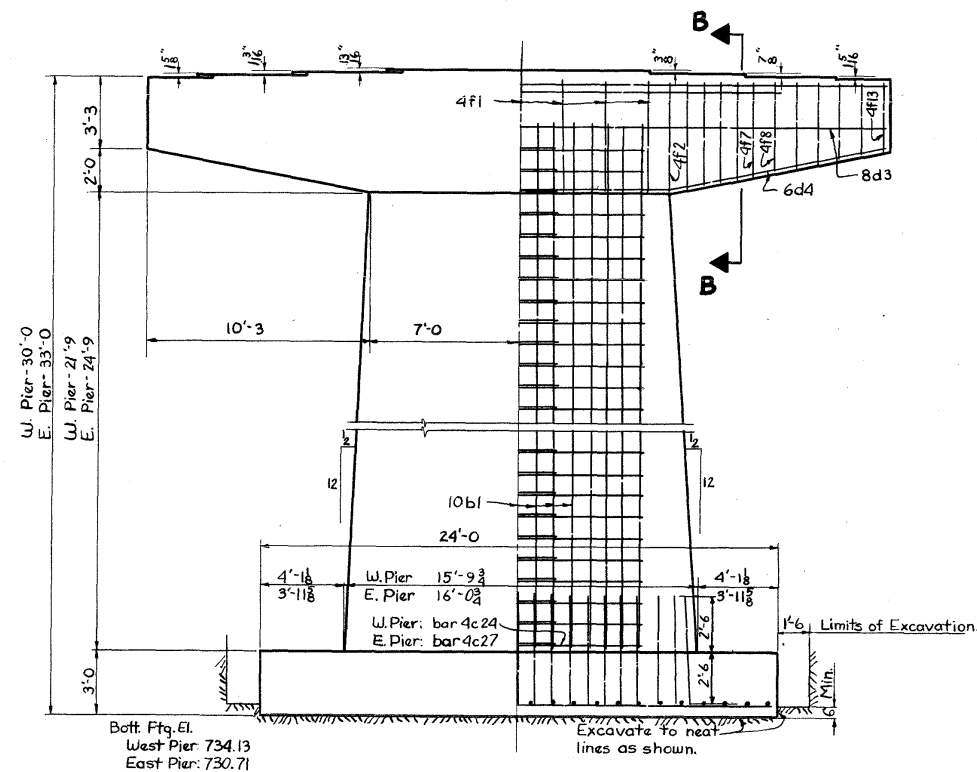
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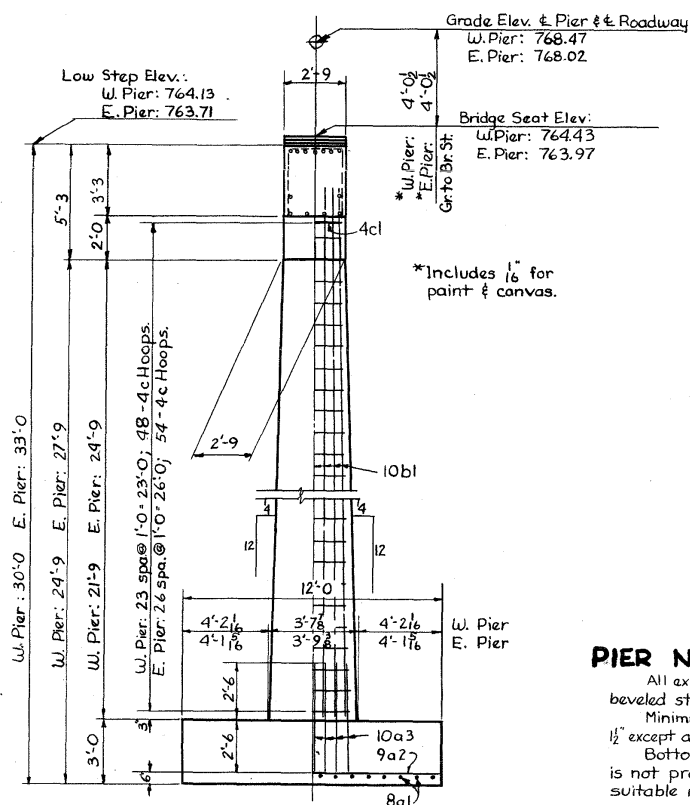


SECTION B-B
Scale: 1/4" = 1'-0"

PART ELEVATION-LOOKING EAST
Showing East Pier Steps

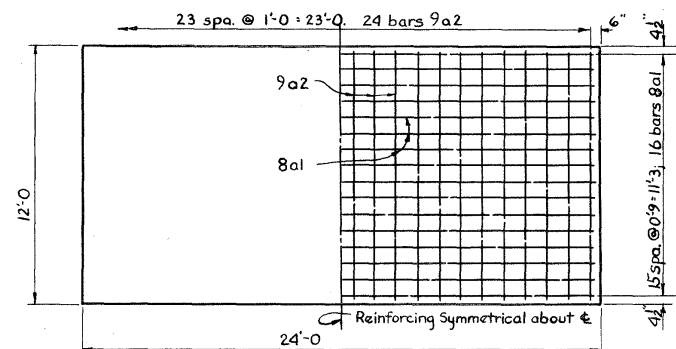


PIER ELEVATION - LOOKING EAST
Showing West Pier Steps
Scale: 1/4" = 1'-0"

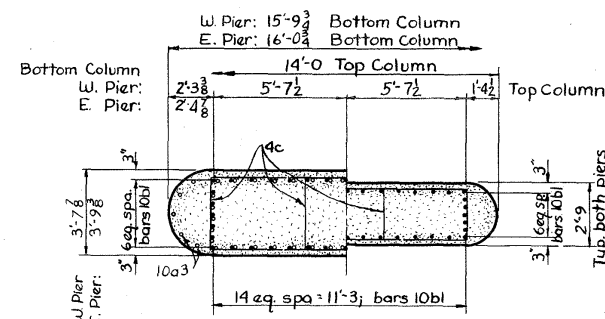


END ELEVATION
Scale: 1/4" = 1'-0"

Note: Footing typical for W. Pier & E. Pier



FOOTING PLAN
Scale: 1/4" = 1'-0"



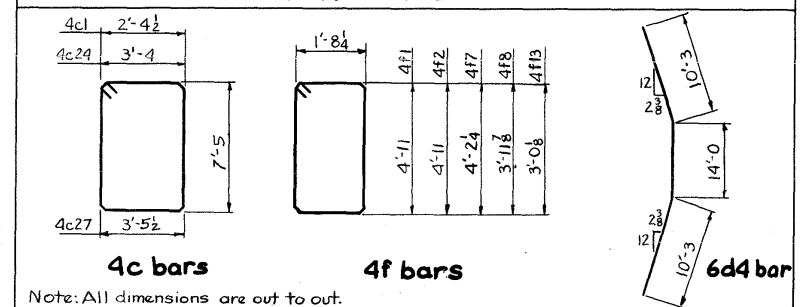
COLUMN PLAN
Scale: 1/4" = 1'-0"

Bench Mark #60 Sta. 512+37 "X" wheel guard N.E. cor. Pony Truss Bridge Rt. 8" El. 758.27
Bench Mark #60 Sta. 511+50 "X" on N.W. Corner West Abut. 29'47" El. 769.27

REINFORCING STEEL

Bar	Location	Shape	N ^o	Length	Weight	N ^o	Length	Weight
8a1	Footing Longitudinal	—	16	23'-8"	1011	16	23'-8"	1011
9a2	Footing Transverse	—	24	11'-8"	952	24	11'-8"	952
10a3	Column Dowels	—	50	5'-0"	1076	50	5'-0"	1076
10b1	Column Vertical	—	40	25'-0"	4303	40	29'-0"	4819
4c1-24	Column Ties	—	48	Varies	676	54	Varies	766
4d-27	Column Ties	—	54	Varies	766	54	Varies	766
10d1	Beam Longitudinal Top	—	7	34'-2"	1029	7	34'-2"	1029
10d2	Beam Longitudinal Top	—	7	24'-6"	738	7	24'-6"	738
8d3	Beam Longitudinal Side	—	2	34'-2"	182	2	34'-2"	182
6d4	Beam Longitudinal Bottom	—	4	34'-6"	207	4	34'-6"	207
4f1	Beam Stirrups	—	14	13'-9"	129	14	13'-9"	129
4f2-7	Beam Stirrups	—	24	Varies	209	24	Varies	209
4f8-13	Beam Stirrups	—	24	Varies	176	24	Varies	176
Total					10,688			11,294

BAR DETAILS



CONC. PLACEMENT QUANTITIES			TOTAL ESTIMATED QUANTITIES	
Location	W. Pier	E. Pier	Item	Two Piers
Beam	171 c.y.	170 c.y.	Concrete	178.0 c.y. ✓
Column	36.8 c.y.	43.1 c.y.	Reinforcing Steel	21,982 lbs. ✓
Footing	32.0 c.y.	32.0 c.y.	Class 23 Excavation	270 c.y. ✓
Total	85.9 c.y. ✓	92.1 c.y. ✓		

PIER NOTES:

All exposed corners 90° or sharper are to be filletted with a 3/4" dressed and beveled strip.
Minimum clear distance from face of concrete to nearest reinforcing bar is to be 1/2" except as shown or noted.
Bottom of footing shall be on suitable foundation material. If suitable material is not present at the elevation indicated, the footing shall be thickened until suitable material is encountered.

SPECIFICATIONS:

Design: A.A.S.H.O. Series of 1957
Construction: Iowa State Highway Commission Series of 1956, plus current special provisions.

159'-2x30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

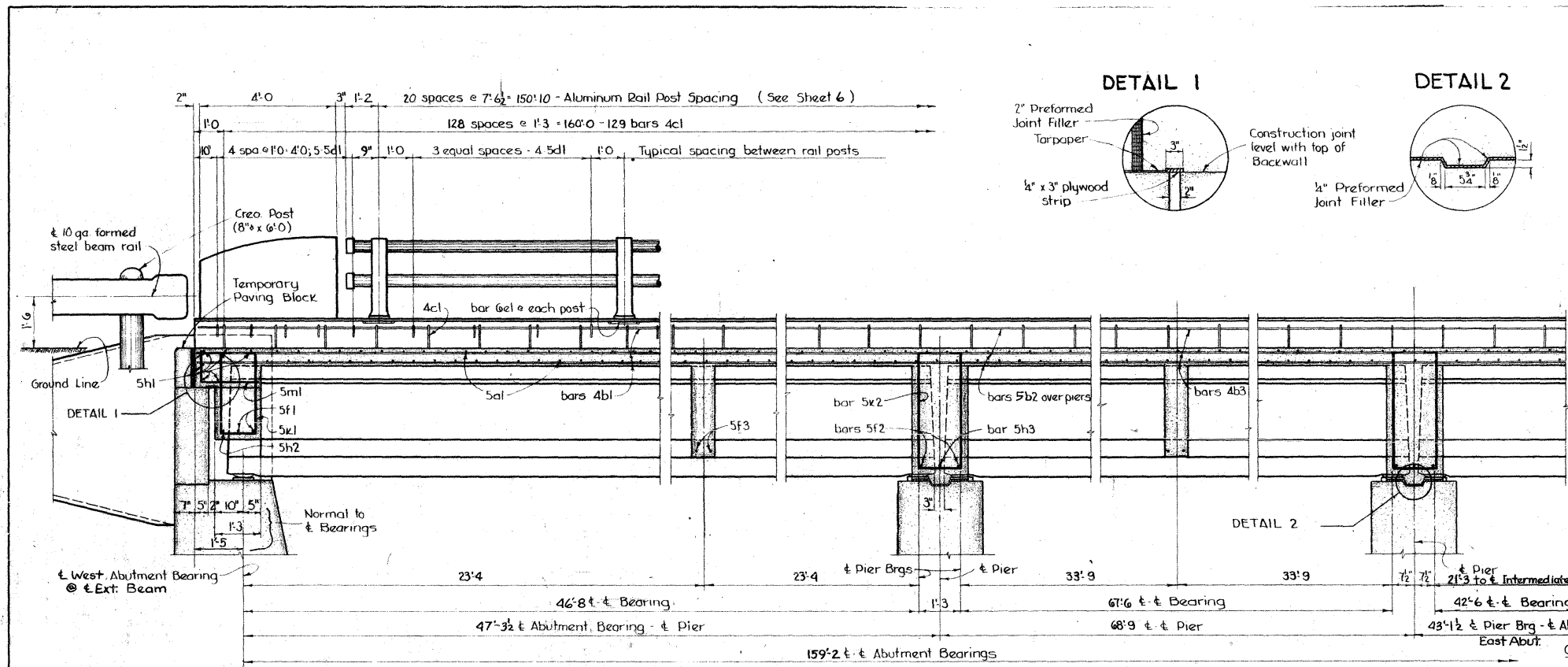
End Spans: 47'-3 1/2" & 43'-1 1/2"
Concrete Floor & Substructure
Interior Span: 68'-9"
Aluminum Rail

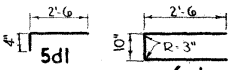
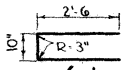
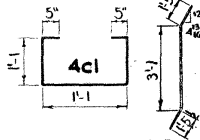
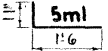
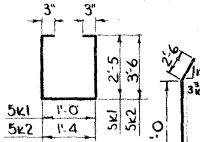
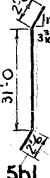
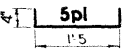
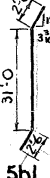
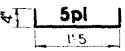
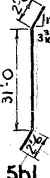
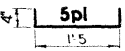
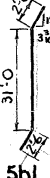
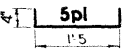
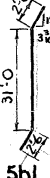
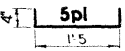
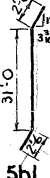
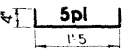
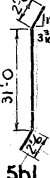
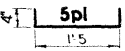
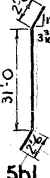
PIER DETAILS

Station 512+10.00 Project FN144

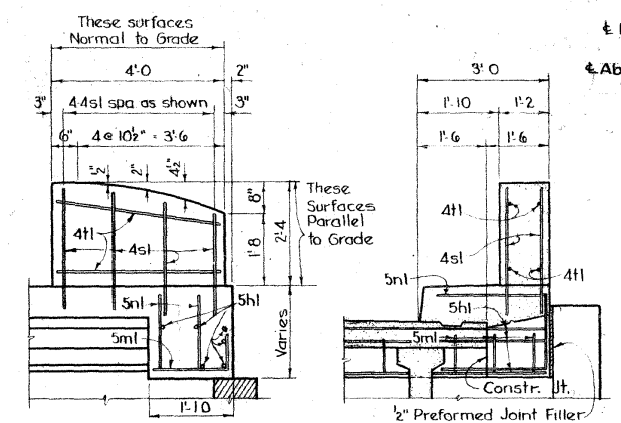
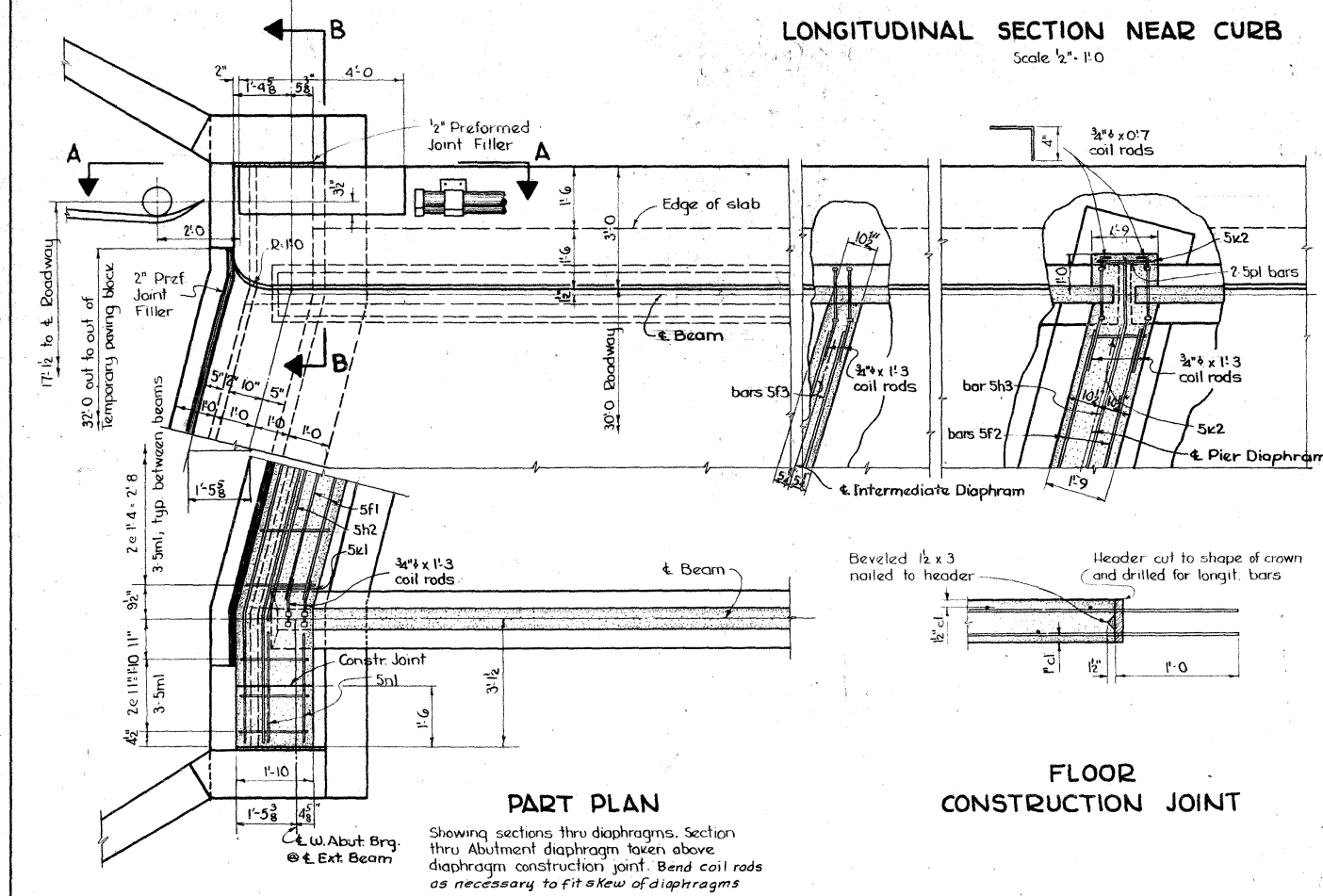
JACKSON COUNTY

Iowa State Highway Commission
February 1959 Sheet 3 of 6
Design 4659 Jackson County File No 19424



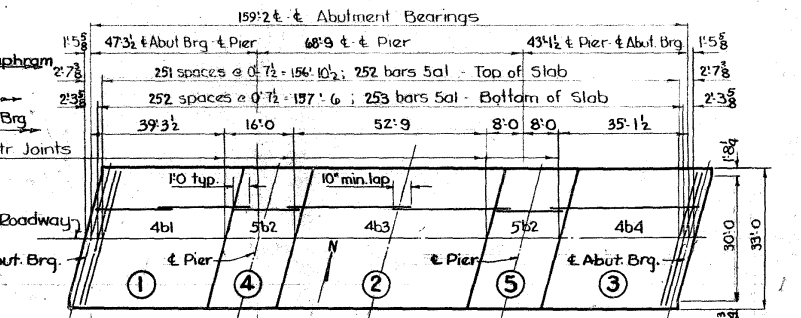
REINFORCING STEEL						BAR DETAILS	
Bar	Location	Shape	N°	Length	Weight		
5a1	Slab transverse - top & bott.	—	505	33'10	17,820		
4b1	Slab & curb longit West span	—	154	21'2	2,177		
5b2	" " " over Piers	—	178	15'9	2,924		
4b3	" " " Center span	—	154	27'10	28,663		
4c1	Curb hoops	□	258	3'10	661		
5d1	Curb transverse	—	180	2'9	516		
6e1	Rail post anchors	—	42	5'6	347		
5f1	Abutment Diaph. between bms	—	28	3'8	107		
5f2	Pier Diaph. between beams	—	28	2'9	80		
5f3	Interm. Diaph. between beams	—	42	3'2	139		
5h1	Abutment Diaph. - Longit.	—	12	36'-0	451		
5h2	" " " " "	—	2	30'-0	63		
5h3	Pier Diaphragm	—	14	6'-0	88		
5k1	Abutment Diaphragm hoops	□	28	6'-1	177		
5k2	Pier Diaphragm hoops	□	32	8'-7	286		
5m1	Abutment Diaph. transverse	—	54	2'4	131		
5n1	Curb transverse ends	—	8	6'-8	56		
5p1	Pier Diaphragm ends	—	8	1'-11	16		
4s1	End Post vertical	—	32	2'-10	61		
4t1	End Post horizontal	—	16	3'-8	39		
4b4	Slab & Curb Longit. - E Span	—	77	37'-4	1920		
Total					30,922		

Note: All bar dimensions are out to out. Radii are to bar.

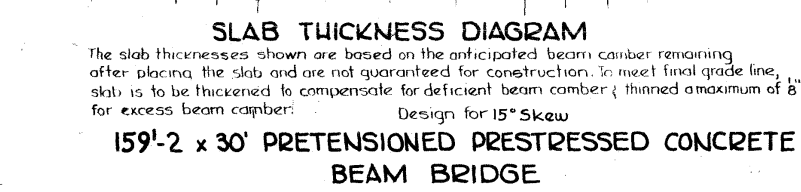
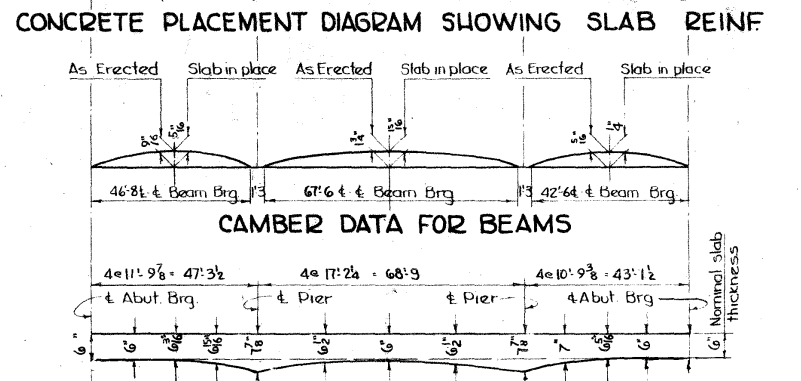


CONCRETE PLACEMENT QUANTITIES	
Sections 1	31.9 c.y.
Section 2	36.4 c.y.
Sections 3	29.3 c.y.
Sections 4 & 5	2 @ 18.3 c.y.
End Posts	1.5 c.y.
Curbs	31.4 c.y.
Total	167.1 c.y.

ESTIMATED QUANTITIES - SUPERSTR.	
Concrete	167.1 c.y.
Reinforcing Steel	30,922 lbs
42'-6" Pretensioned Prestressed Concrete Beams	8 Bms.
46'-8" Pretensioned Prestressed Concrete Beams	8 Bms.
67'-6" Pretensioned Prestressed Concrete Beams	8 Bms.

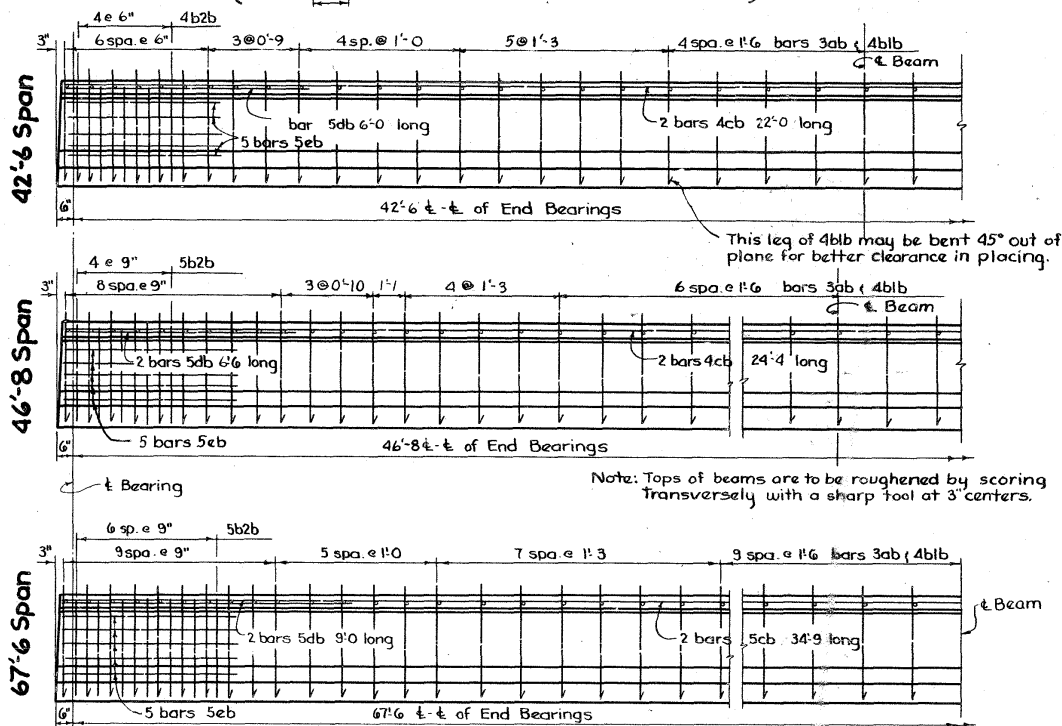
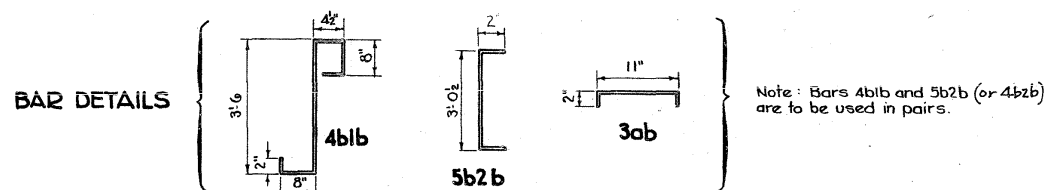
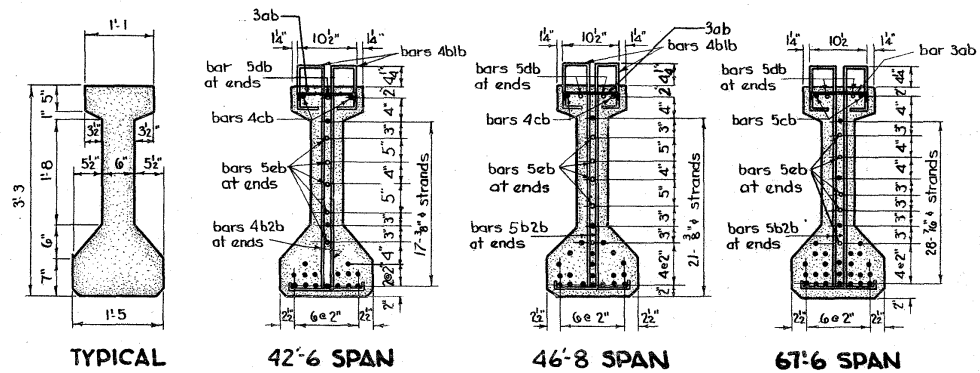


Note: Sections of floor over Piers & Pier Diaphragms are to be placed last. Curbs may be placed continuously. Bars 5b2 are spaced the same as 4b1 & 4b3 with additional bars as shown on cross section - Sheet 5.



159'-2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

JACKSON COUNTY
Iowa State Highway Commission
February 1959
Design 4659
Traced by: CEC
Checked by: JSD



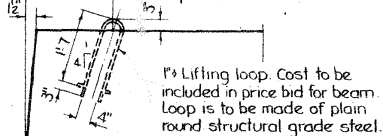
DETAILS OF BEAMS
Scale: $\frac{1}{8}$ " = 1'-0"

One abutment { one pier end • Two pier ends

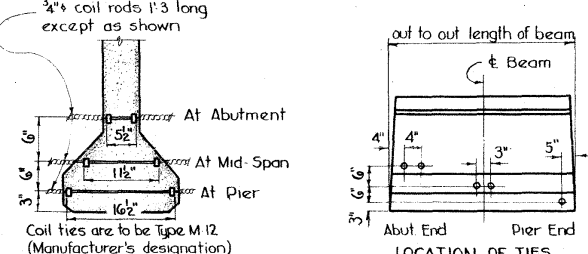
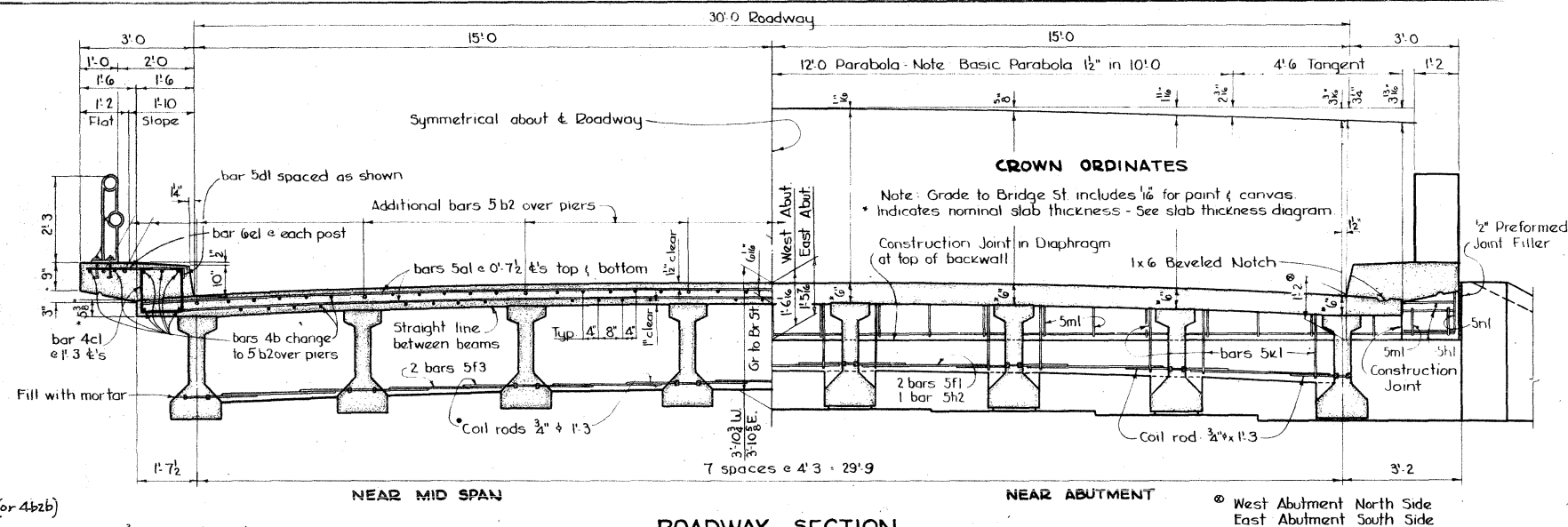
BEAM DATA						CAMBER	
Span	Concrete	Reinf St	Struct St	Strands	Initial Pre Stress	As Erected	Slab in Place
42'-6"	4.26 cy	508 lbs.	*190"	17 - 3/8"	244k	5 1/2"	4 1/4"
46'-8"	4.68 cy	553 lbs.	*190"	21 - 3/8"	309k	9 1/2"	5 1/2"
67'-6"	6.74 cy	803 lbs.	*190"	28 - 3/8"	556k	13 1/2"	15 1/2"

BEAM REINFORCING - ONE BEAM															
Shape	42'-6" Span				46'-8" Span				67'-6" Span						
	Bar	N°	L'gth	Wt	Bar	N°	L'gth	Wt	Bar	N°	L'gth	Wt			
┐	3ab	45	1'-2"	20	3ab	45	1'-2"	20	3ab	61	1'-2"	27			
└	4blb	90	5'-5"	326	4blb	90	5'-5"	326	4blb	122	5'-5"	442			
┌	4b2b	20	3'-3"	43	5b2b	20	3'-3"	68	5b2b	28	3'-3"	95			
—	4cb	4	22'-0"	59	4cb	4	24'-4"	65	5cb	4	34'-9"	144			
—	5db	2	6'-0"	13	5db	4	6'-6"	27	5db	4	9'-0"	38			
—	5eb	10	4'-6"	47	5eb	10	4'-6"	47	5eb	10	5'-6"	57			
	Total				508	Total				553	Total				803

Initial prestress includes 5% for temperature loss in curing and is assumed to take place before transfer. Unless otherwise specified, allowance is to be made for shortening equal to .0005L for shrinkage and elastic change. At the ends of beams, strands which will be encased in concrete diaphragms are to be left projecting 1' exposed strands are to be cut flush and given two coats of shop paint.

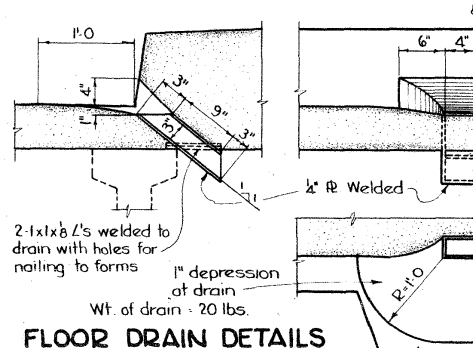


LIFTING LOOP
Scale: $\frac{1}{2}$ " = 1'-0"



COIL TIE DETAILS

Coil rods shown shall be similar to and equal to those manufactured by the Superior Concrete Accessories Co. Inc. of Chicago, Ill. and the Richmond Screw Anchor Co. of St. Joseph, Mo. Coil ties are to be held in place in forms by slotted coil setting studs projecting thru forms. Studs are to be left in place until beams are erected when they are to be replaced with coil rods. Cost of coil ties and rods is to be included in price bid for beams.



FLOOR DRAIN DETAILS
Scale: 1" = 1'-0"

Note: For number of drains & location see "Situation Plan."

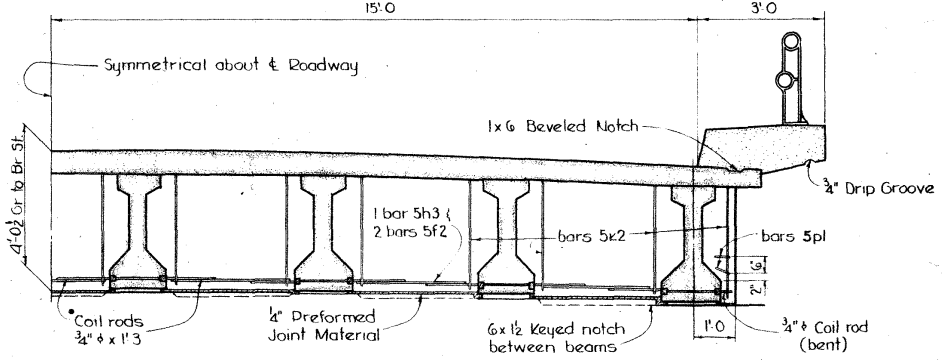
SUPERSTRUCTURE NOTES:

This bridge is designed for H20-S16-44, plus 19 lbs per sq ft of roadway for future wearing surface, and alternate loading designated in DPM 20-4, Section 4-C.
Concrete in slab is to have a 28 day crushing strength of 3500 p.s.i. and is to contain no Class "V" aggregate. It is to be placed as dry as practicable to reduce shrinkage to a minimum and special precaution is to be taken to secure complete bond between beams and slab. All exposed corners of 90° or sharper are to be filleted $\frac{3}{4}$ ". Clear distance from face of concrete to near reinforcing bar shall be 12" unless otherwise noted or shown. All reinforcing is to be securely wired in place and adequately supported on metal bar chairs before placing concrete.
Beams are to be cast with Sole R's and set on Masonry R's at abutments and piers.
Cost of all preformed joint filler is to be included in price bid for concrete.
Slab as shown includes $\frac{1}{2}$ " wearing surface.
Forms for slab and curbs are to be supported by the beams.
Superstructure details are adapted from I.H.C. Standard R.C.P. and R.C.P. (a).
Construction of prestressed units to be in accordance with Section 2406A of the special provisions with the added provision - When stress is released it is to be done gradually by means of jacks.
Cost of floor drains is to be included in the price bid for concrete. 4"x8" outside dimension rolled tube with $\frac{1}{4}$ " wall thickness may be substituted for the welded floor drains shown.

SPECIFICATIONS:

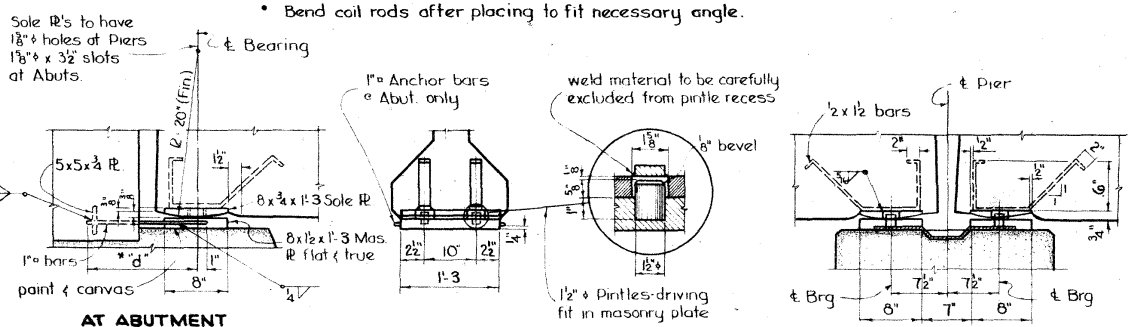
Design: A.A.S.H.O. Series of 1957 and U.S. Bureau of Public Roads Design Criteria for Prestressed Concrete Bridges, Series of 1955
Construction: Standard Specifications of I.S.H.C., Series of 1956, plus current special provisions

ROADWAY SECTION



HALF ROADWAY NEAR PIER

* Bend coil rods after placing to fit necessary angle.



BEARING DETAILS

Design for 15° 00' Skew
159' 1/2 x 30' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

43' 1 1/2 & 47' 3/2 End Spans
Concrete Floor & Substructure
68' 9" Interior Span
Aluminum Rail

SUPERSTRUCTURE DETAILS

Station 512+10.00
Project FN144

JACKSON COUNTY

Iowa State Highway Commission
February 1959
Design 4659
Jackson County
Sheet 5 of 6
File No 19424

File № 19424