

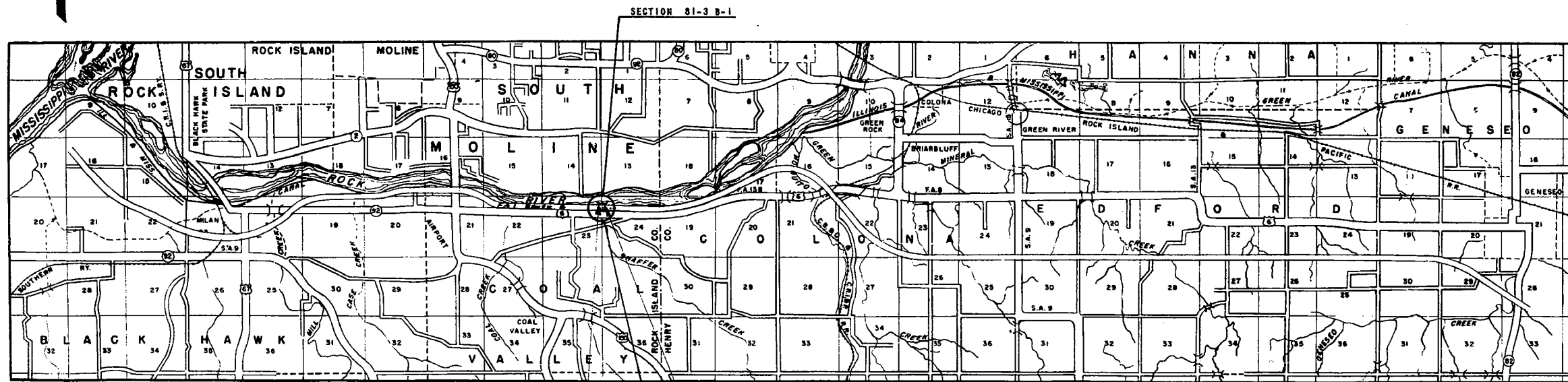
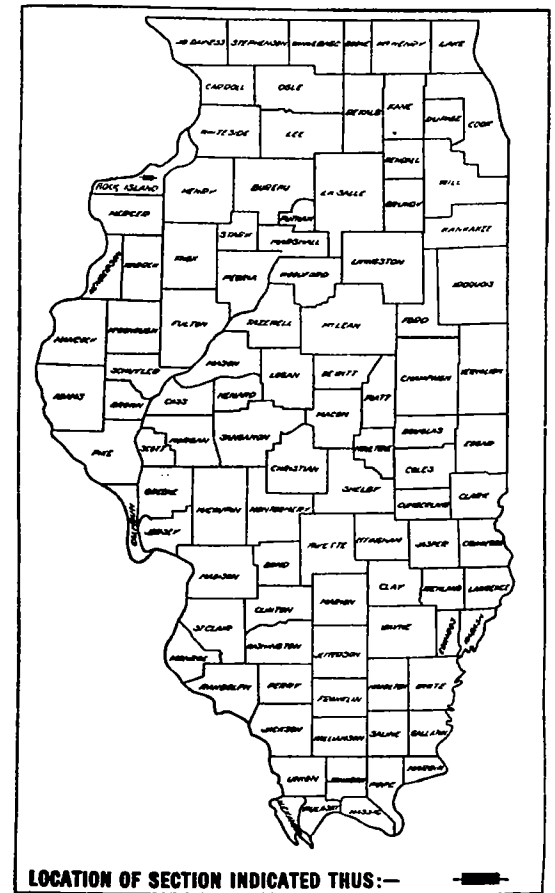
081-0007 & 081-0008

INDEX OF SHEETS

- SHEET NO.
- 1. TITLE SHEET
- 2. GENERAL NOTES, BORINGS AND QUANTITIES
- 3. SITE PLAN
- 4. GENERAL PLAN AND ELEVATION
- 5. ABUTMENTS
- 6. PIER DETAILS
- 7. SUPERSTRUCTURE - FRAMING PLAN & SLAB DETAILS
- 8. BEARING & EXPANSION GUARD DETAILS
- 9. HANDRAIL DETAILS
- 10. CHANNEL CHANGE CROSS SECTIONS- STA. 46+18 TO 51+80
- 11. MAINLINE CROSS SECTIONS- STA. 593+64 TO 594+03
- 12. MAINLINE CROSS SECTIONS- STA. 594+23 TO 597+00
- 13. STANDARDS 1971S, 2114, 2113
- 14. STANDARD 2128-1

**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID HIGHWAY**  
**BRIDGE STRUCTURES**  
 F.A.I. 74 SECTION 81-3 B-1  
 PROJECT I-74-1(5)6  
 I-06-1(10)  
 ROCK ISLAND COUNTY

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	81-3-B-1	ROCK ISLAND	14	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT F.A.I. 74-1(5)6		



PROJECT I-74-1(5)6,  
 SECTION 81-3 B-1 INCLUDES THE CONSTRUCTION OF FOUR  
 TWIN STRUCTURES CARRYING FEDERAL AID INTERSTATE  
 ROUTE 5 OVER SHAFER CREEK AT STATION 594+00  
 ON CENTER LINE SURVEY.

081-0007, 8

ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY.  
 DATE 11-12-59  
 DISTRICT ENGINEER *M. W. [Signature]*

ROAD CLASSIFICATION  
 1680-T-70

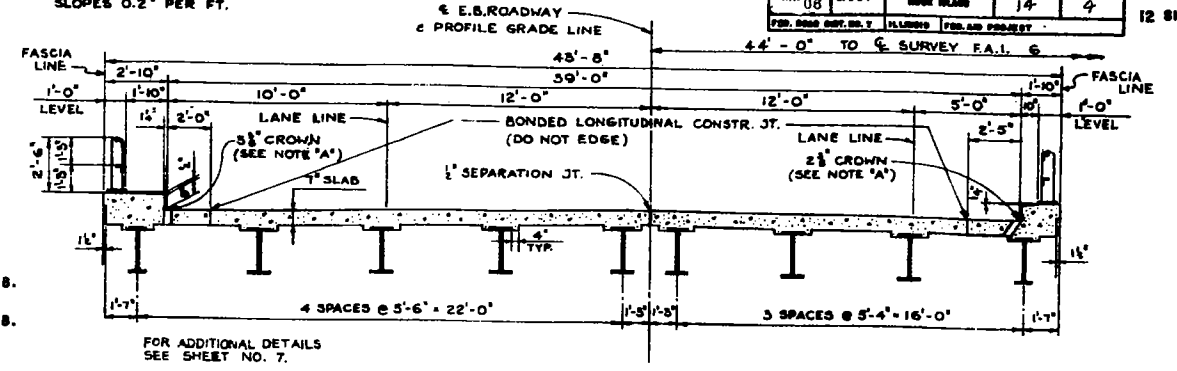
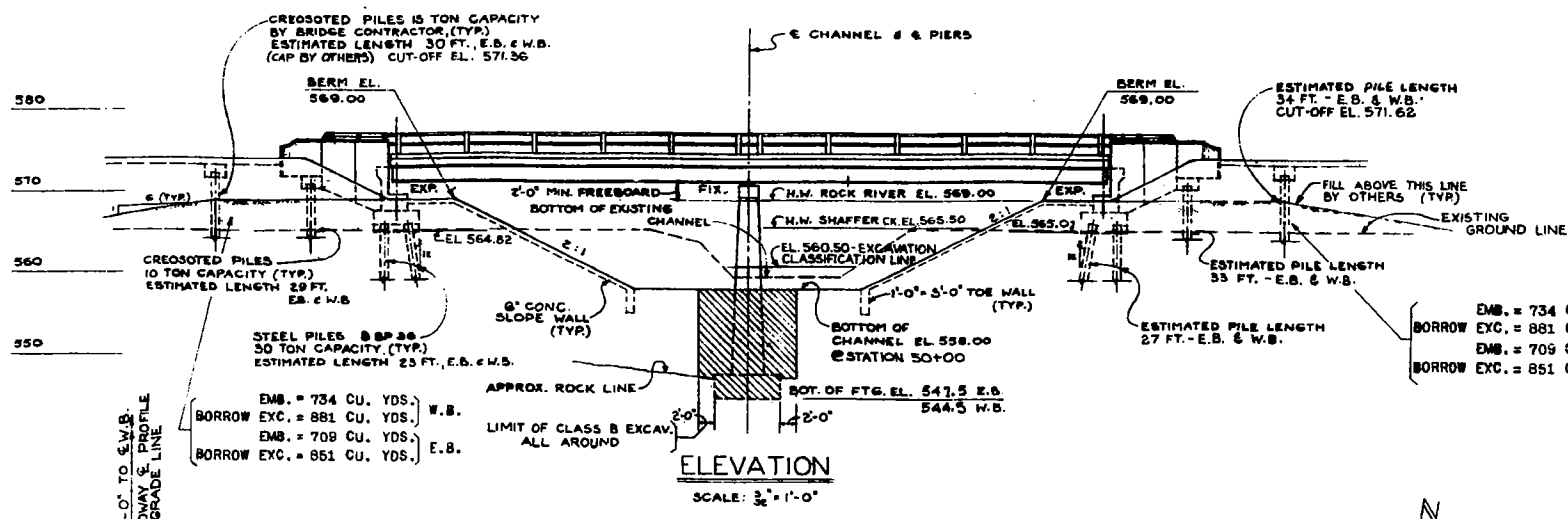
LAYOUT  
 SCALE: 1 INCH = 1 MILE  
 NET LENGTH OF SEC. 81-3 B-1  
 85.67 FEET = 0.017 MILES

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
 DIVISION OF HIGHWAYS  
 SUBMITTED 12/19 58  
 EXAMINED May 4, 65  
 PASSED May 2, 59  
 APPROVED May 4, 59  
 APPROVED May 4, 59

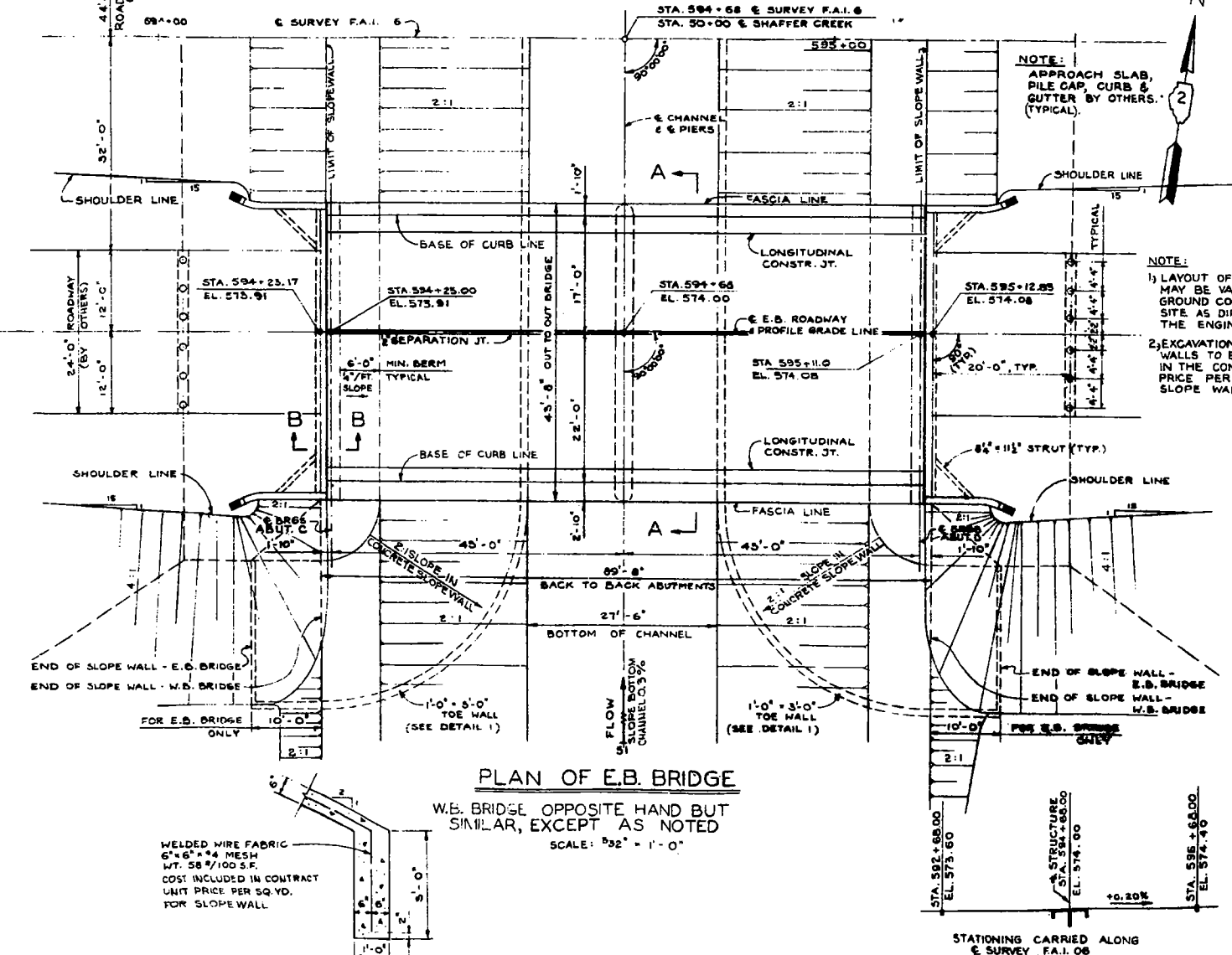
PLANS FOR STRUCTURES EXAMINED: DEC. 15 19 58  
 ENGINEER OF BRIDGE & TRAFFIC STRUCTURES

DEPARTMENT OF COMMERCE  
 BUREAU OF PUBLIC ROADS  
 APPROVER: [Redacted] DATE: [Redacted]  
 DIVISION ENGINEER

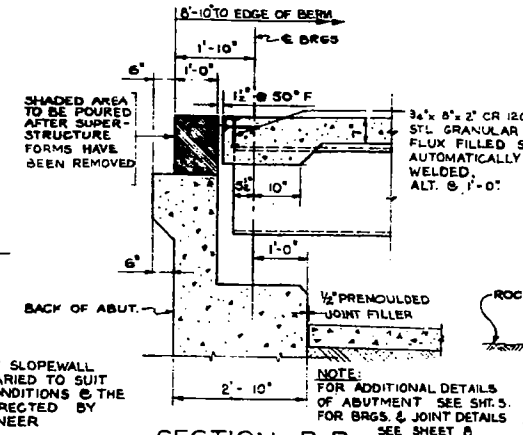
NOTE 'A': CROWN OF ROADWAY IS A CIRCULAR CURVE 10 FT. ON EACH SIDE OF ROADWAY WITH 1" DROP FROM PROFILE GRADE ELEVATION. REMAINDER OF ROADWAY SLOPES 0.2' PER FT.



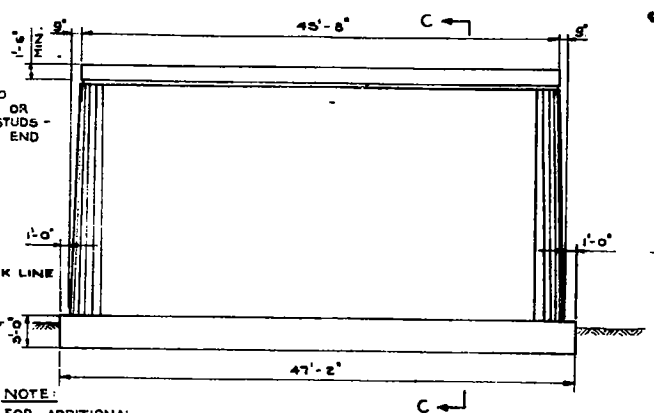
SECTION A-A  
W.B. ROADWAY SIMILAR BUT OPPOSITE HAND  
SCALE: 1/4" = 1'-0"



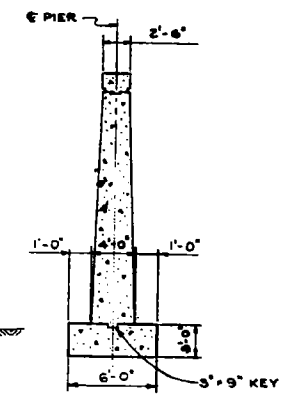
PLAN OF E.B. BRIDGE  
W.B. BRIDGE OPPOSITE HAND BUT SIMILAR, EXCEPT AS NOTED  
SCALE: 3/32" = 1'-0"



SECTION B-B  
SCALE: 1/2" = 1'-0"

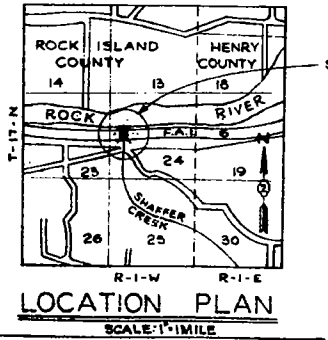


PIER ELEVATION  
SCALE: 1/4" = 1'-0"

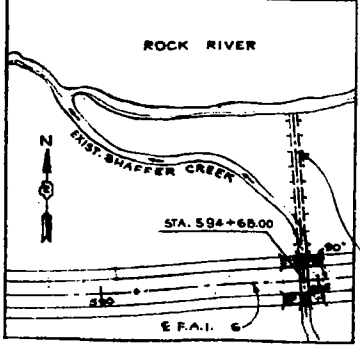


SECTION C-C  
SCALE: 1/8" = 1'-0"

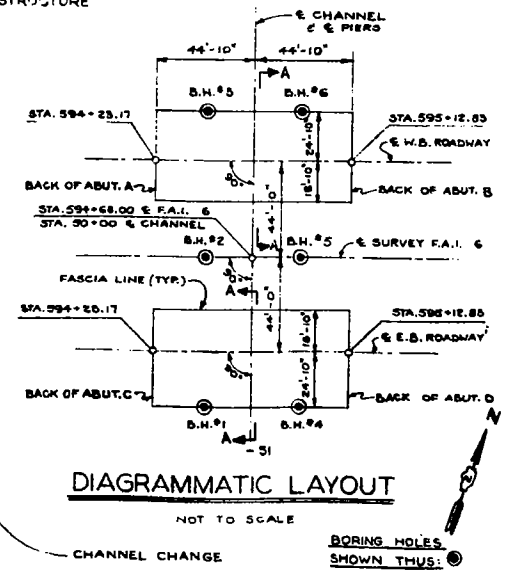
NOTE:  
1) LAYOUT OF SLOPEWALL MAY BE VARIED TO SUIT GROUND CONDITIONS @ THE SITE AS DIRECTED BY THE ENGINEER.  
2) EXCAVATION FOR TOE WALLS TO BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQ. YD. FOR SLOPE WALL.



LOCATION PLAN  
SCALE: 1" = 1 MILE



CHANNEL CHANGE  
SCALE: 1" = 200'



DIAGRAMMATIC LAYOUT  
NOT TO SCALE

WATERWAY INFORMATION  
DRAINAGE AREA 4,544 ACRES  
CHARACTER WOODED AND STEEP  
REQUIRED OPENING\* 300 S.F.  
\* 50 YEAR FLOOD

BILL OF MATERIAL \*

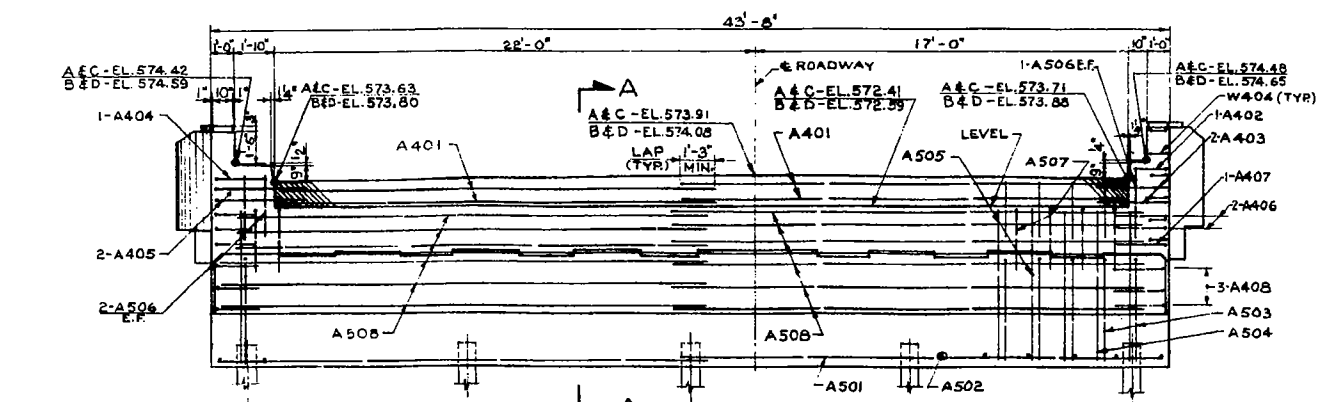
ITEM	UNIT	QUAN.
CHANNEL EXCAVATION	CU. YD.	32.33
BORROW EXCAVATION	CU. YD.	231
FURNISHING CREOSOTED PILES 20.1'-36.0'	LN. FT.	760
DRIVING TIMBER PILES	LN. FT.	768
SLOPE WALL (6")	SQ. YD.	1505
TREE REMOVAL	ACRES	1.0

DESIGN STRESSES.

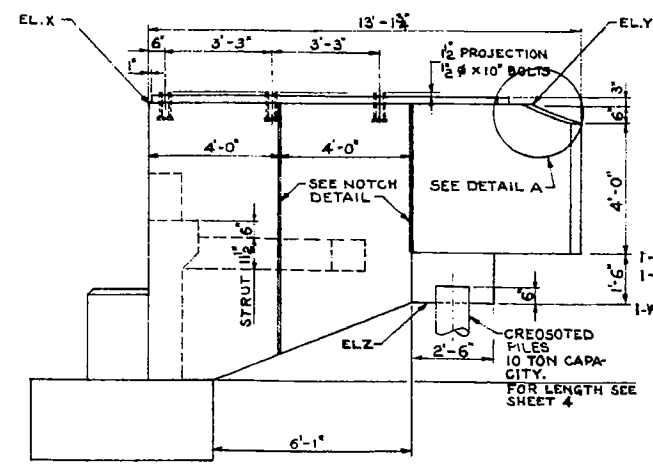
fc = 1,400 p.s.i. SUPERSTRUCTURE  
fc = 1,000 p.s.i. SUPERSTRUCTURE (CONC. WITH EARTH PRESSURE)  
fs = 20,000 p.s.i. REINFORCING BARS  
fs = 18,000 p.s.i. STRUCTURAL STEEL  
v = 75 p.s.i. SHEAR IN FOOTINGS  
n = 10  
DESIGN LOADING H20-S16-44 & MODIFIED.

GENERAL PLAN AND ELEVATION  
F.A.I. 6 SECTION B-304  
F.A.I. 6 OVER SHAFER CREEK  
ROCK ISLAND COUNTY  
STATION 594+68.00  
SCALE AS NOTED DATE:

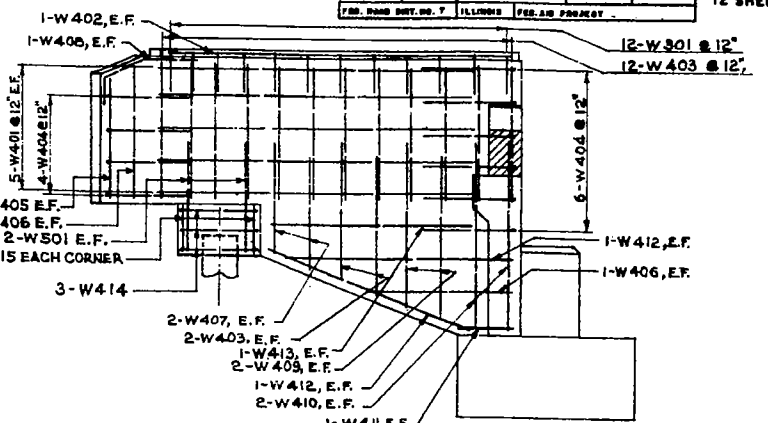
DE LEUW, CATHER & CO., ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY V.K.B.  
CHECKED E.S.M.  
IN CHARGE E.S. MARTINS  
APPROVED L.N. RIAN



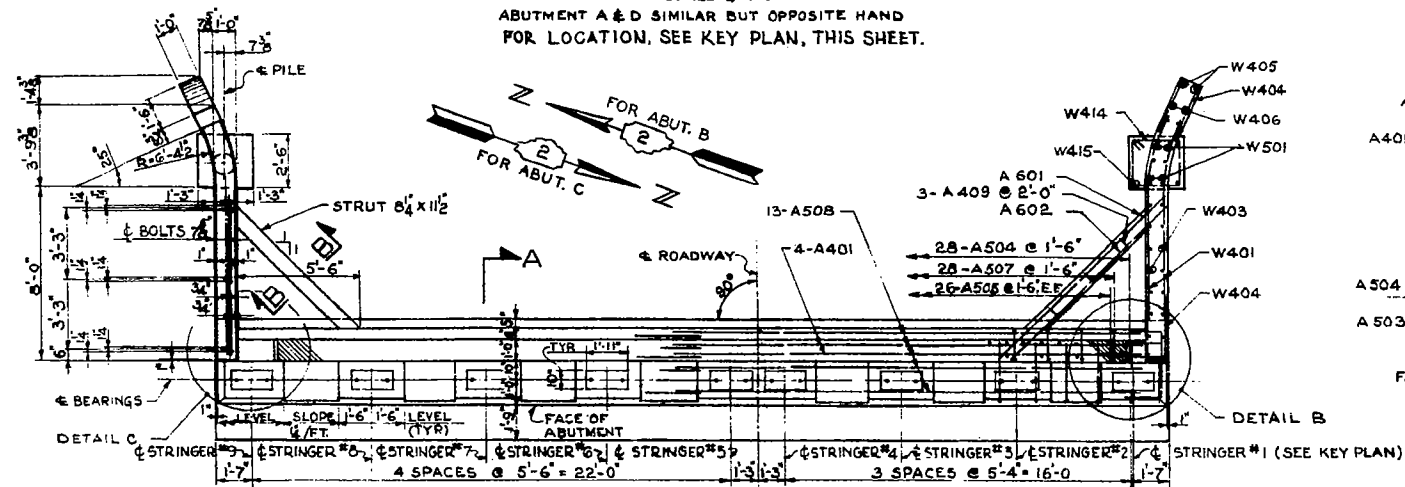
NOTE: ALL ELEVATIONS AT THE NEAR FACE OF BACKWALL.  
**ELEVATION - ABUTMENTS B & C**  
 SCALE: 1/4" = 1'-0"  
 ABUTMENT A & D SIMILAR BUT OPPOSITE HAND FOR LOCATION, SEE KEY PLAN, THIS SHEET.



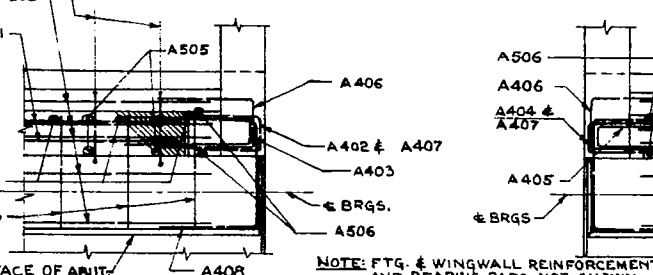
**ELEVATION OF WINGWALL**  
 SCALE: 3/8" = 1'-0"



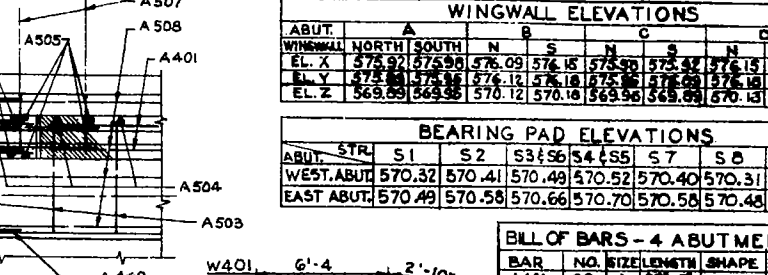
**REINFORCEMENT OF WINGWALL**  
 SCALE: 3/8" = 1'-0"



NOTE: FOR FTG. REINFORCEMENT SEE PILE PLAN THIS SHEET.  
**PLAN ABUTMENT B & C**  
 SCALE: 1/4" = 1'-0"  
 ABUTMENT A & D SIMILAR BUT OPPOSITE HAND



**DETAIL B**  
 SCALE: 1/2" = 1'-0"



**DETAIL C**  
 SCALE: 1/2" = 1'-0"

**WINGWALL ELEVATIONS**

ABUT.	A	B	C	D
WINGWALL NORTH	576.97	575.99	576.09	576.15
EL. X	576.97	575.99	576.09	576.15
EL. Y	576.97	575.99	576.09	576.15
EL. Z	569.89	569.88	570.12	570.13

**BEARING PAD ELEVATIONS**

ABUT.	STR.	S1	S2	S3	S4	S5	S6	S9
WEST ABUT.		570.32	570.41	570.49	570.52	570.40	570.31	570.22
EAST ABUT.		570.49	570.58	570.66	570.70	570.58	570.48	570.39

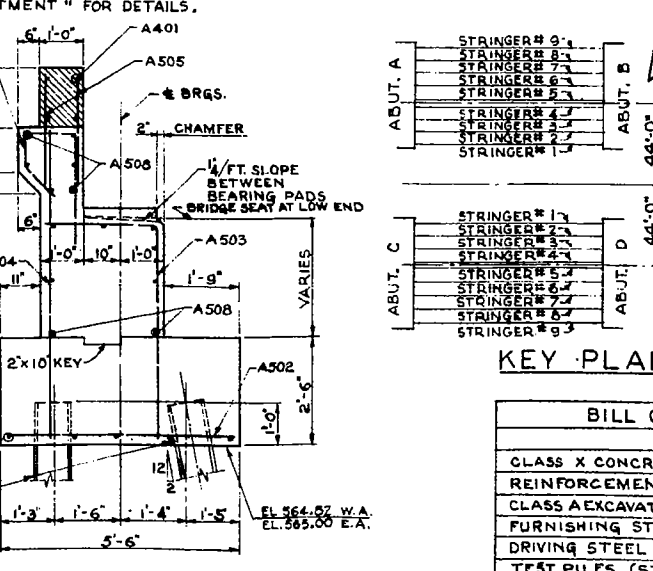
**BILL OF BARS - 4 ABUTMENTS**

BAR	NO.	SIZE	LENGTH	SHAPE	WGT.
A401	32	4	20'-0"		427
A402	4	4	2'-8"		10
A403	4	4	2'-8"		10
A404	4	4	2'-8"		10
A405	4	4	2'-8"		10
A406	4	4	2'-8"		10
A407	4	4	2'-8"		10
A408	4	4	2'-8"		10
A409	4	4	2'-8"		10
A501	40	5	22'-0"		352
A502	40	5	22'-0"		352
A503	112	5	7'-9"		347
A504	112	5	7'-9"		347
A505	208	5	3'-0"		651
A506	24	5	3'-0"		66
A507	112	5	2'-9"		555
A508	104	5	2'-3"		2414
A601	16	6	10'-0"		240
A602	16	6	9'-3"		223
W301	96	3	2'-11"		105
W401	80	4	9'-10"		575
W402	16	4	10'-6"		112
W403	288	4	4'-3"		636
W404	80	4	5'-6"		294
W405	16	4	3'-9"		40
W406	32	4	4'-0"		66
W407	32	4	3'-6"		73
W408	16	4	3'-0"		32
W409	32	4	2'-0"		107
W410	32	4	5'-3"		112
W411	16	4	1'-7"		17
W412	32	4	6'-7"		141
W413	16	4	6'-3"		67
W414	24	4	9'-6"		152
W415	32	4	1'-3"		27
W501	32	5	5'-0"		167
<b>TOTAL WEIGHT</b>					<b>10657</b>

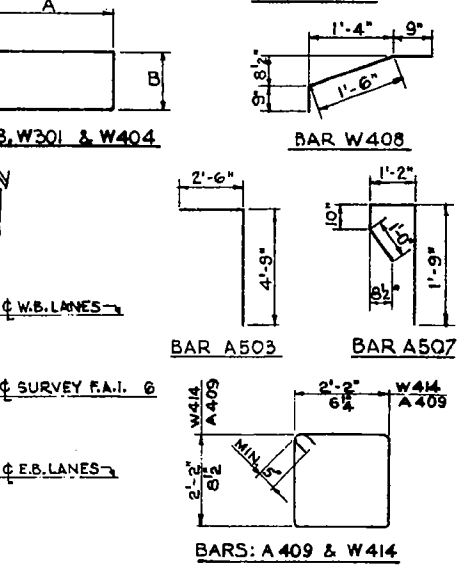
**BAR SIZES**

BAR	A402	A403	A404	A405	A406	A407	A408	W301	W404
A	1'-6"	3'-0"	2'-6"	4'-0"	1'-6"	1'-6"	1'-6"	1'-2"	2'-5"
B	8"	8"	8"	8"	1'-3"	8"	2'-5"	7"	8"

NOTE: SHADED AREA TO BE POURED AFTER SUPER STRUCTURE FORMS HAVE BEEN REMOVED. SLOPE TOP PARALLEL TO GRADE. SEE SH. 3 "SECT. THRU ABUTMENT" FOR DETAILS.  
 NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT



**SECTION A-A**  
 SCALE: 1/2" = 1'-0"



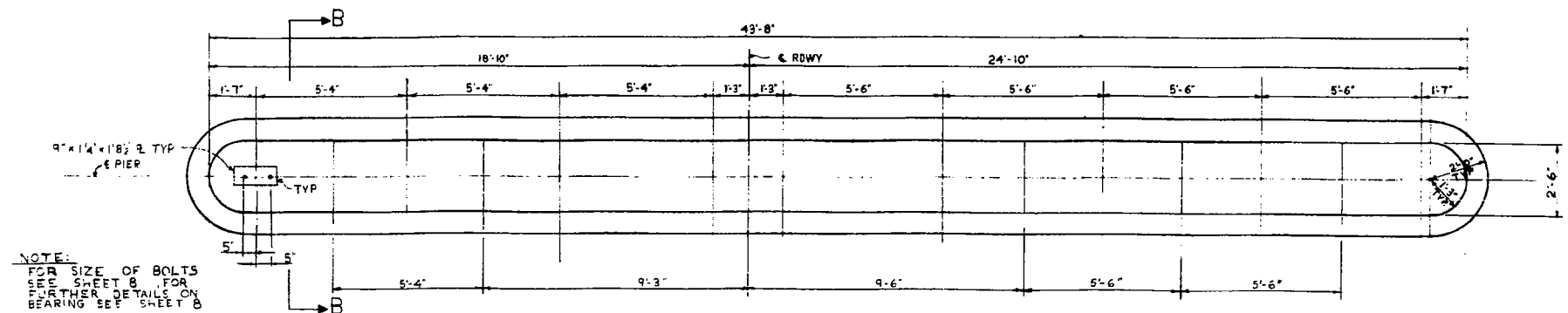
**KEY PLAN**

**BILL OF MATERIAL (4 ABUT'S)**

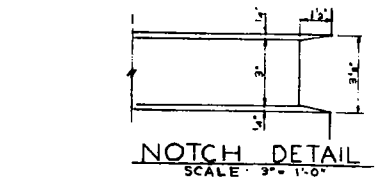
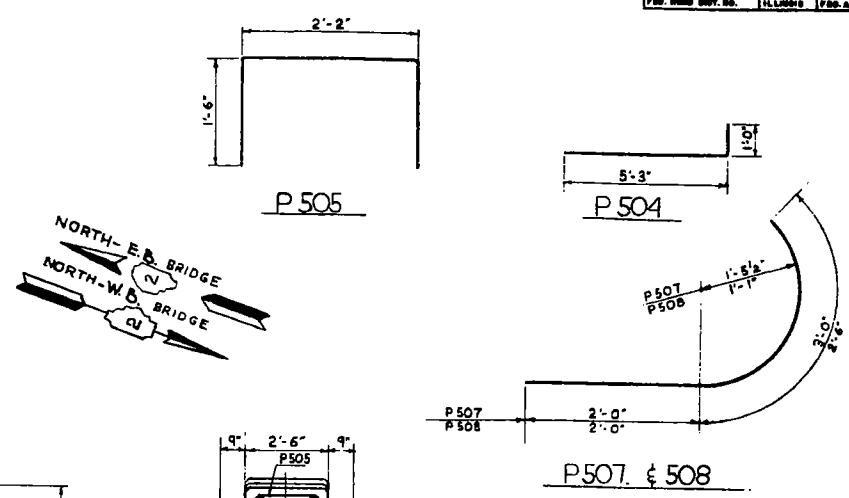
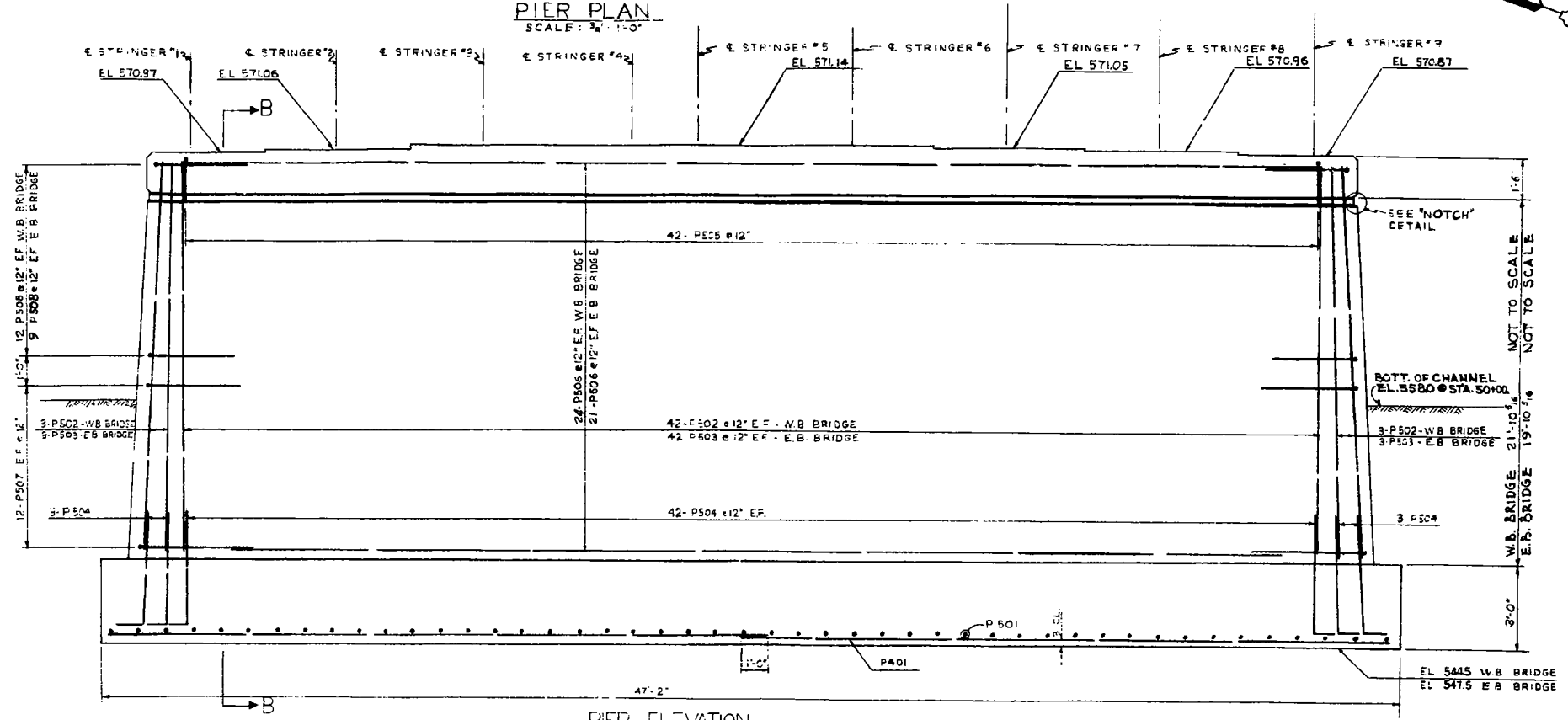
ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU. YDS	193.2
REINFORCEMENT BARS	LBS	10,657
CLASS A EXCAVATION FOR STRUCTURES	CU. YDS	20
FURNISHING STEEL PILES	L.F.	1300
DRIVING STEEL PILES	L.F.	1300
TEST PILES (STEEL)	EACH	4
FURNISHING CROSOATED TIMBER PILES (20' TO 30' LONG)	L.F.	248
DRIVING TIMBER PILES	L.F.	248

**ABUTMENTS**  
 F.A.I. 6 SECTION 81-38-1  
 F.A.I. 6 OVER SHAFFER CREEK  
**ROCK ISLAND COUNTY**  
 STATION 594 + 68.00  
 SCALE: AS NOTED DATE:

DE LEUW, CATHAR & CO., ENGINEERS  
 DESIGNED BY V. K. B.  
 DRAWN BY L. R.  
 CHECKED D. H. M.  
 IN CHARGE E. S. MARTINS  
 APPROVED L. N. RIAN



NOTE:  
FOR SIZE OF BOLTS  
SEE SHEET B. FOR  
FURTHER DETAILS ON  
BEARING SEE SHEET B

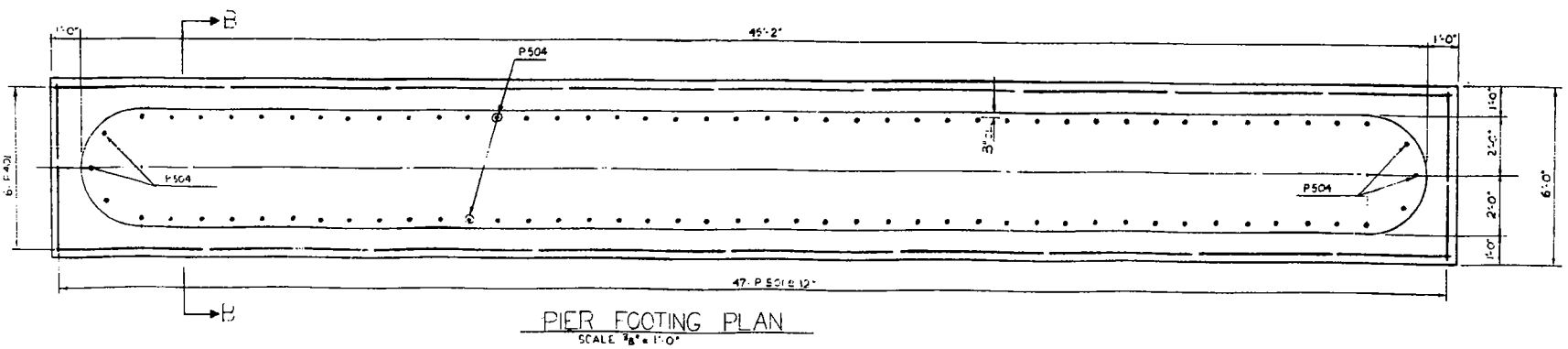


BAR LIST - 2 BRIDGES

BAR	NO	SIZE	LENGTH	SHAPE	WT
P401	24	4	23'-10"	—	382
P501	94	5	5'-6"	—	539
P502	90	5	25'-2"	—	3,175
P503	90	5	20'-2"	—	1,896
P504	180	5	6'-3"	—	1,173
P505	84	5	5'-2"	□	453
P506	90	5	41'-2"	—	3,864
P507	96	5	5'-0"	—	501
P508	84	5	4'-6"	—	394
TOTAL					11,524

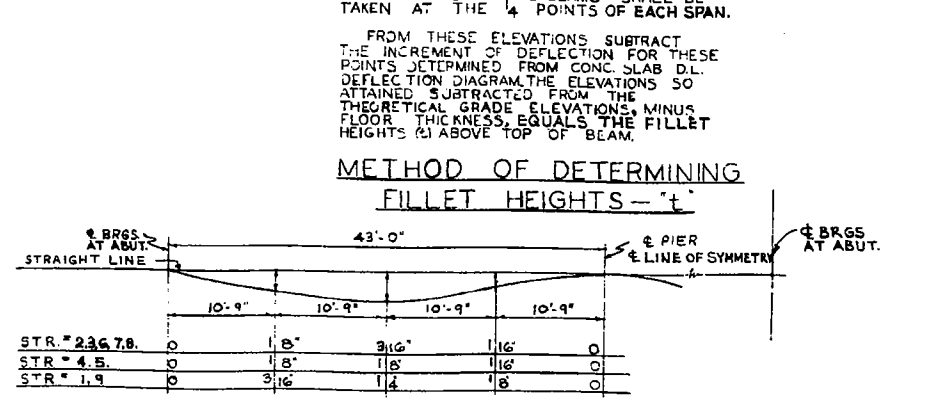
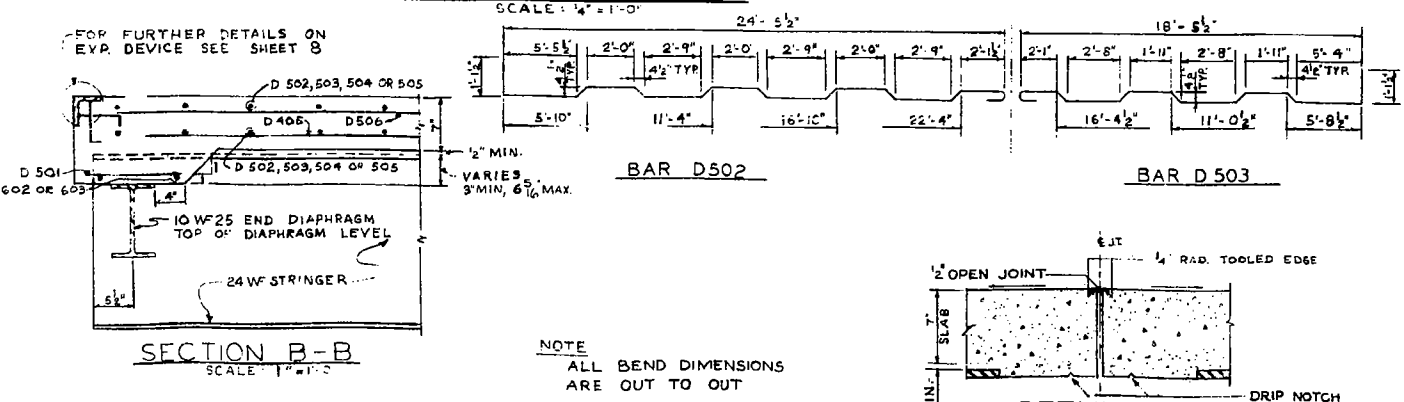
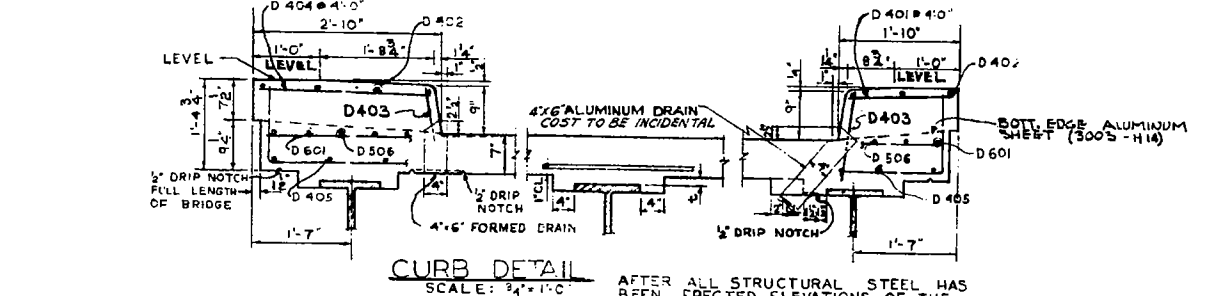
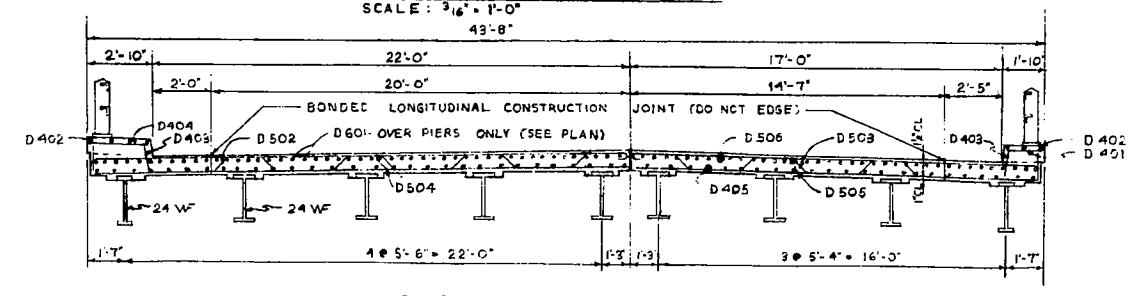
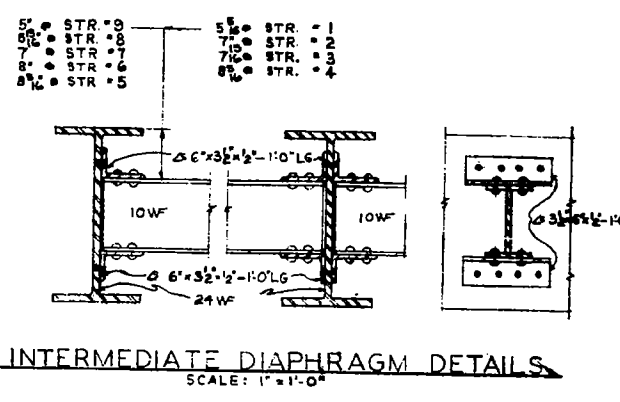
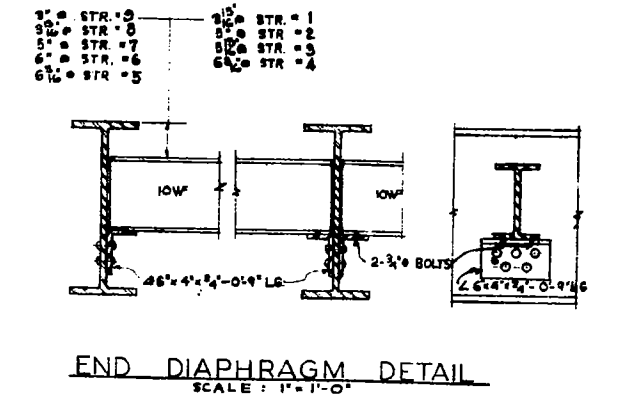
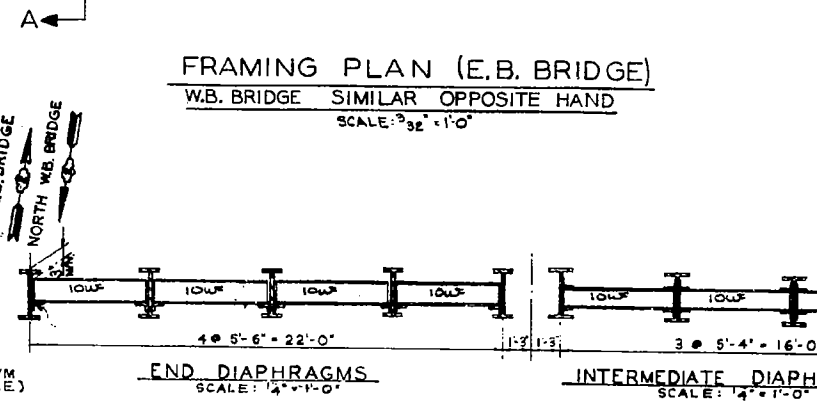
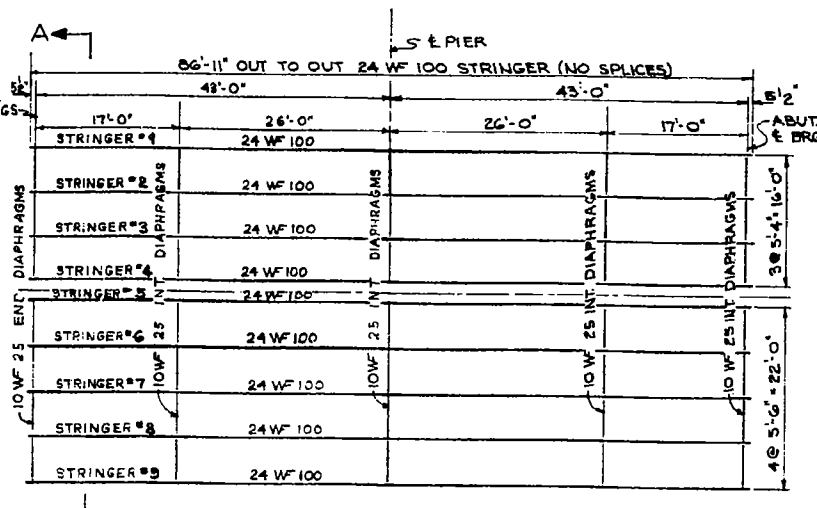
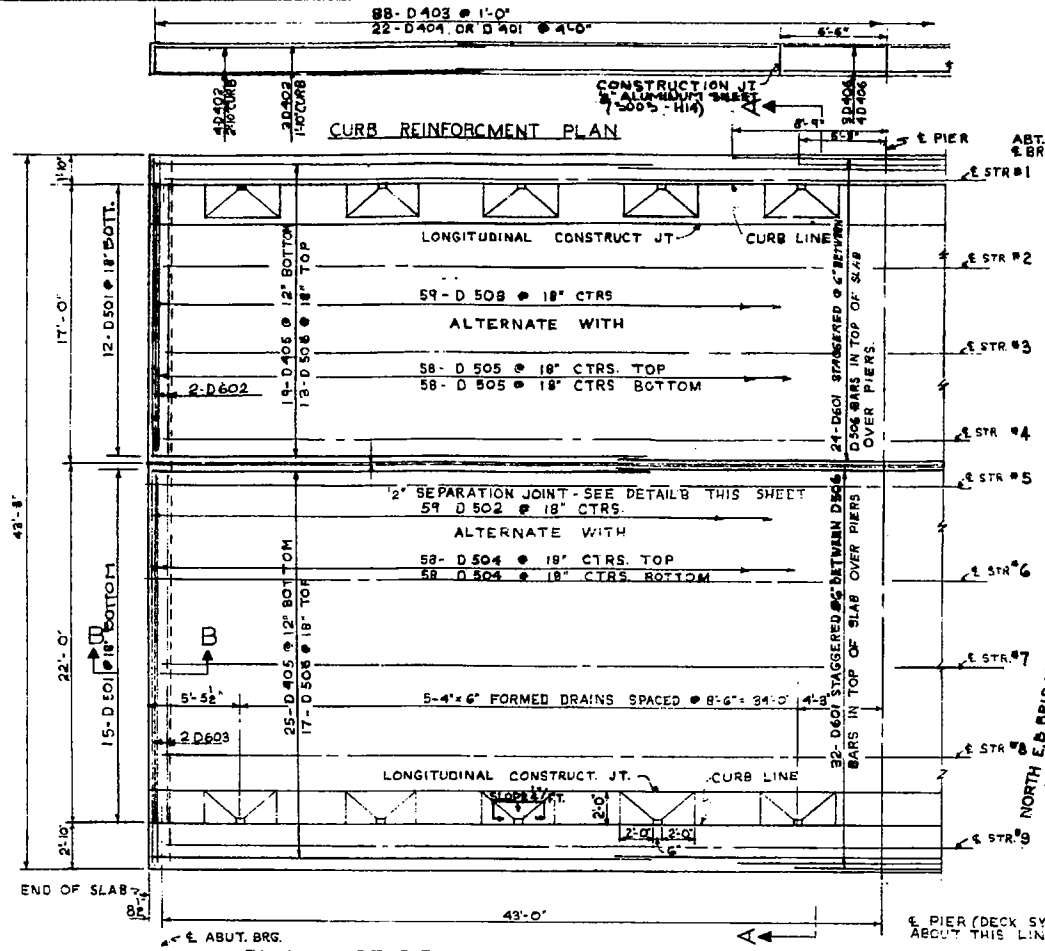
BILL OF MATERIAL (2 BRIDGES)

ITEM	UNIT	QUANTITY
CLASS A CONCRETE	CU. YDS.	289.7
REINFORCEMENT BARS	LBS.	11,574
CLASS B EXCAVATION FOR STRUCT.	CU. YDS.	4.35
ROCK EXCAVATION FOR STRUCT.	CU. YDS.	10



DE LEUW, CATHY & CO., ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY B.H.M.  
CHECKED BY D.H.M.  
IN CHARGE E.S. MARTINS  
APPROVED L.N. RIAN

PIER DETAILS  
F.A.I. 6 SECTION 81-38-1  
F.A.I. 6 OVER SHAFFER CREEK  
ROCK ISLAND COUNTY  
STATION 594+68.00  
SCALE: AS NOTED DATE:



BILL OF BARS 2 BRIDGES					
BAR NO	SIZE	LENGTH	SHAPE	WEIGHT	
D 401	44	4	1'-5 1/2"		42
D 402	56	4	19'-3"		720
D 403	352	4	1'-0"		235
D 404	44	4	2'-5"		71
D 405	264	4	30'-0"		5291
D 406	28	4	6'-3"		117
D 501	108	5	1'-2"		131
D 502	118	5	27'-4"		3364
D 503	118	5	21'-0"		2585
D 504	232	5	24'-4"		5928
D 505	232	5	18'-6"		4477
D 506	180	5	30'-3"		5679
D 501	112	6	14'-0"		2356
D 602	8	6	16'-6"		198
D 603	8	6	21'-6"		258
					31,451

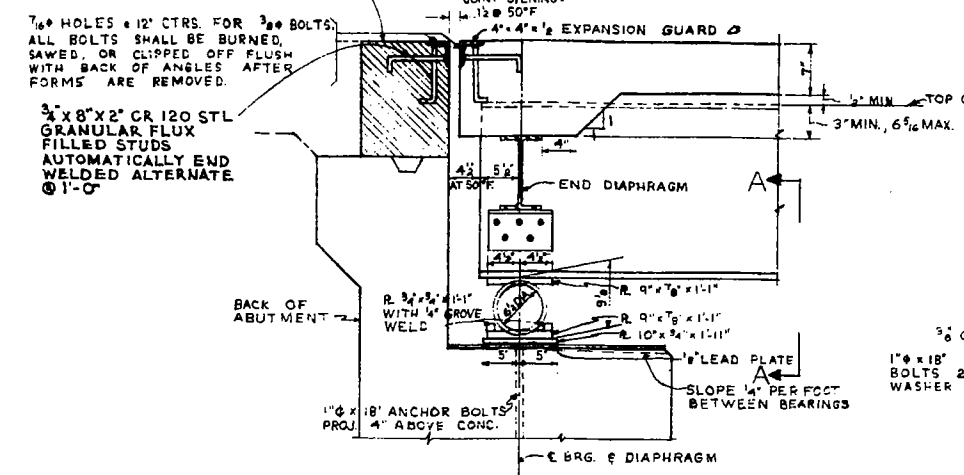
BILL OF MATERIAL (2 BRIDGES)			
ITEM	UNIT	QUANTITY	
CLASS X CONCRETE	CU YDS	193.7	
REINFORCEMENT BARS	LBS.	31,451	
FURNISHING AND ERECTING	LBS.	102,682	
STRUCTURAL STEEL			

\* COST OF ALUMINUM SHEET TO BE INCLUDED IN UNIT PRICE OF CONC.

**SUPERSTRUCTURE SLAB DETAILS & FRAMING PLAN**  
 F.A.I. 6 SECTION 81-38-1  
 F.A.I. 6 OVER SHAFFER CREEK  
 ROCK ISLAND COUNTY  
 STATION 594 + 68.00  
 SCALE: AS NOTED DATE:

DE LEUW, CATHAR & CO., ENGINEERS  
 DESIGNED BY V. K. B.  
 DRAWN BY R. H. M.  
 CHECKED D. H. M.  
 IN CHARGE E. S. MARTINS  
 APPROVED L. N. RIAN

SHADED AREA NOT TO BE POURED UNTIL AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. ADJUST JOINT OPENINGS (PER SCHEDULE ON THIS SHEET) AT THE TIME THIS CONCRETE IS POURED.

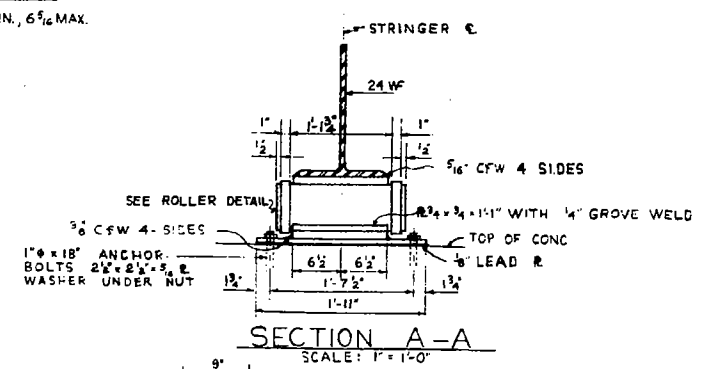


SECTION THRU ABUTMENT  
SCALE: 1" = 1'-0"  
EXPANSION BEARING  
WT. PER BRG. : 297\*

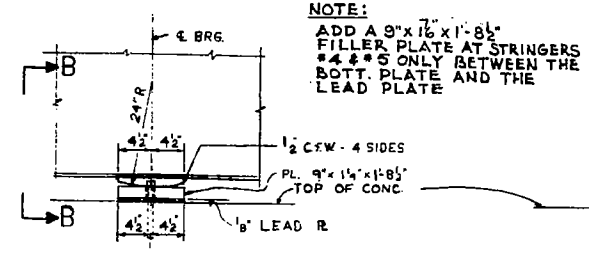
EXPANSION JOINT ADJUSTMENT SCHEDULE

TEMPERATURE, °F	110	90	70	50	30	10
ALL ABUTMENTS	1 1/8"	1 3/8"	1 7/8"	1 1/2"	1 1/4"	1 1/8"

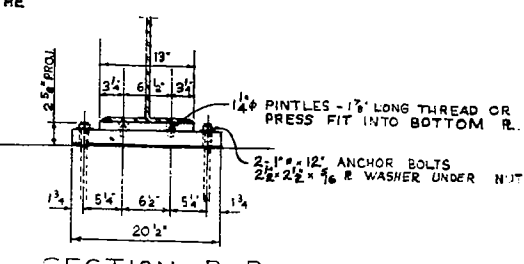
JOINT OPENINGS ARE PARALLEL TO & OF BRIDGE AND ARE BASED ON 1/2" OPENING AT 50°F.



SECTION A-A  
SCALE: 1" = 1'-0"

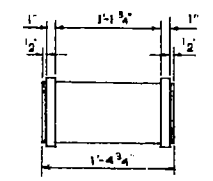


BEARING DETAIL AT PIER  
SCALE: 1" = 1'-0"  
FIXED BEARING  
WT. PER BRG: 119\* (EXCLUSIVE OF FILLER PLATES)



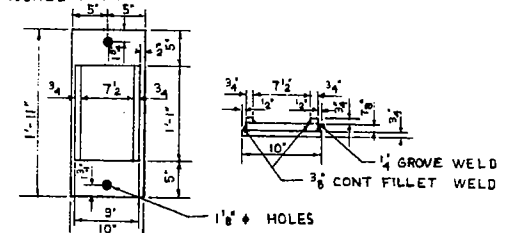
SECTION B-B  
SCALE: 1" = 1'-0"

1" x 2" RING-WELD TO ROLLER WITH 5/16 CFW. OR ROLLER MAY BE TURNED FROM SOLID WITHOUT 1/2" END PROJECTION WELD ONLY ON OUTSIDE OF RING.

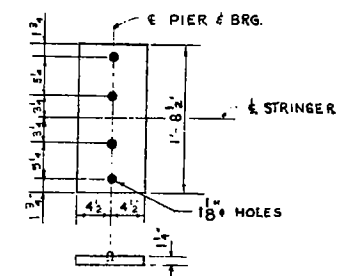
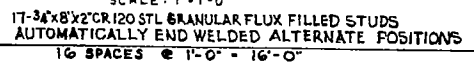


ROLLER DETAILS  
SCALE: 1" = 1'-0"

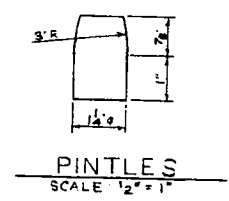
TOP PLATE OVER ROLLER  
SCALE: 1" = 1'-0"



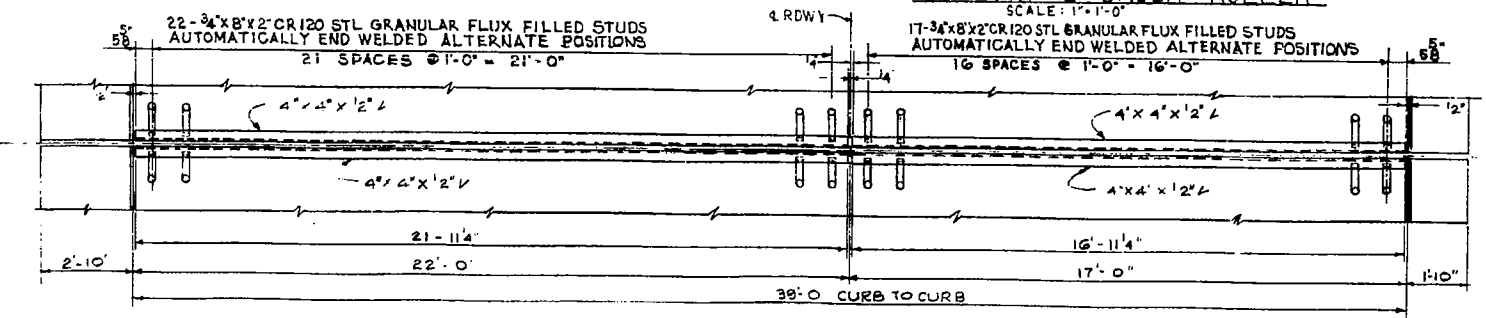
BOTTOM PL UNDER ROLLER  
SCALE: 1" = 1'-0"



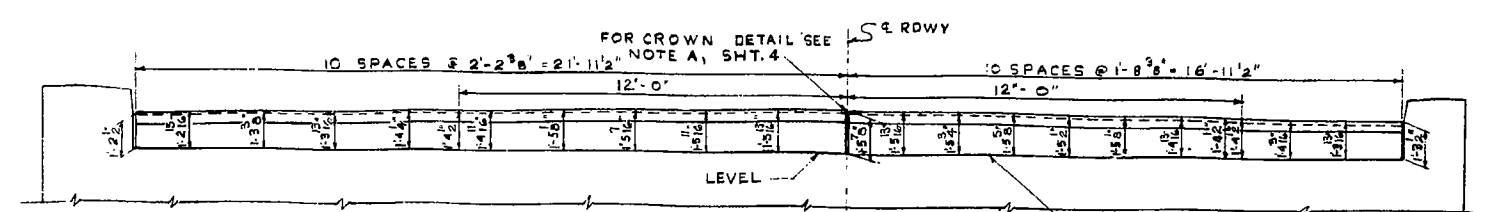
TOP P-PIER BEARING  
SCALE: 1" = 1'-0"



PINTLES  
SCALE: 1/2" = 1"



PLAN  
SCALE: 3/8" = 1'-0"



PROFILE  
DETAILS OF EXPANSION GUARD  
NOTE: THE ROADWAY EXPANSION GUARD SHALL BE FABRICATED TO FIT ROADWAY  
SCALE: 1/8" = 1'-0"

EXPANSION GUARD NOTES: SEE "GENERAL NOTES FOR STRUCTURAL STEEL" SHEET NO. 2  
EXPANSION JOINT ASSEMBLIES SHALL BE FABRICATED AND ERECTED TO CONFORM TO THE ROADWAY CROWN AND SLOPE OF GRADE AT THE JOINTS. THEY SHALL BE ASSEMBLED IN THE SHOP FOR INSPECTION.  
ALL STEEL OF JOINT ASSEMBLY INCLUDING STRAP ANCHORS SHALL BE INCLUDED IN STRUCTURAL STEEL FOR PAYMENT.  
GUARD SETTING INSTRUCTIONS: JOINT OPENINGS SHOWN ON GUARD DETAILS ARE BASED ON AN ASSUMED TEMPERATURE OF 50°F. THEY INCLUDE A 1/4" ALLOWANCE FOR POSSIBLE FORWARD MOVEMENT AT THE TOP OF THE ABUTMENT DUE TO EARTH PRESSURE, THRUST OF APPROACH SLAB, ETC.

TOTAL ESTIMATED WEIGHT OF SUPERSTRUCTURE EXPANSION GUARDS @ 4362.

NOTE:  
COST OF 3/4" X 8" X 2" CR 1020 STL GRANULAR FLUX FILLED STUDS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FURNISHING & ERECTING STRUCTURAL STEEL

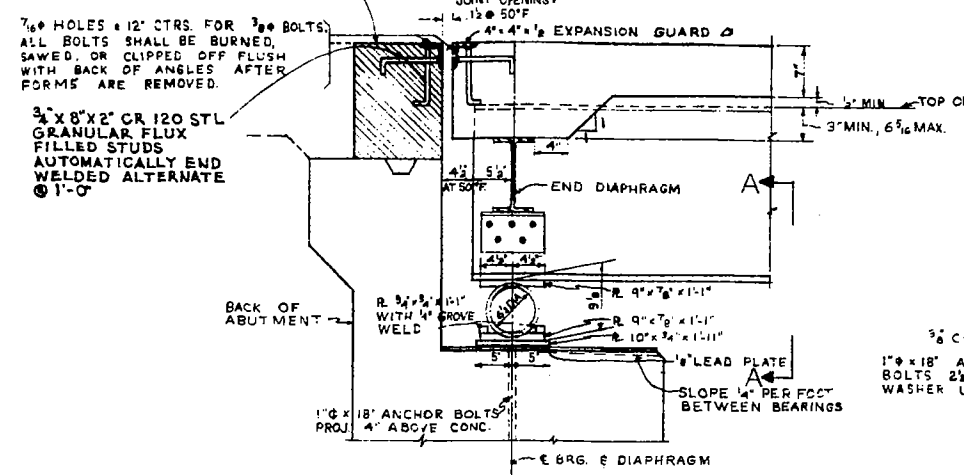
BILL OF MATERIALS (2 BRIDGES)		
ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	17,296*

\* INCLUDES FILLER PLATES

BEARING & EXPANSION GUARD DETAILS  
P.A. 6 SECTION 81-38-1  
OVER SHAFFER CREEK  
ROCK ISLAND COUNTY  
STATION 594+68.00  
SCALE: AS NOTED DATE:

DE LEUW, CATHY & CO. ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY R.H.M.  
CHECKED D.H.M.  
IN CHARGE E.S. MARTINE  
APPROVED L.N. RIAN  
JOB NO. 859

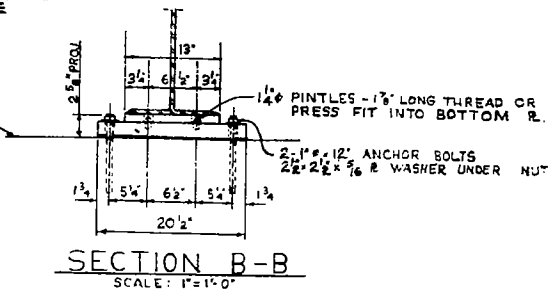
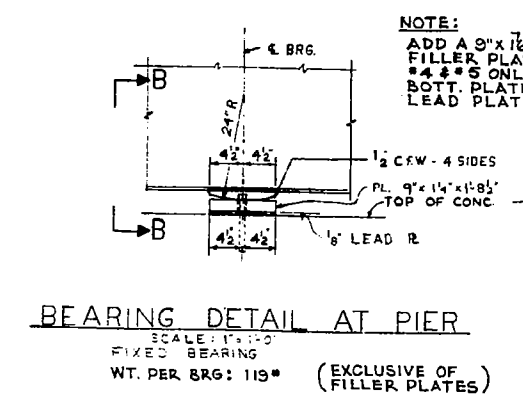
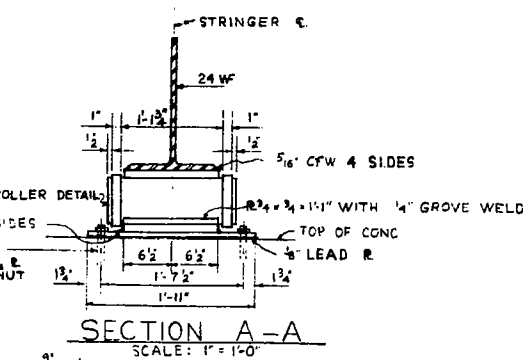
SHADED AREA NOT TO BE POURED UNTIL AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. ADJUST JOINT OPENINGS (PER SCHEDULE ON THIS SHEET) AT THE TIME THIS CONCRETE IS POURED.



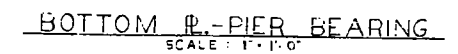
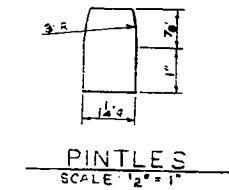
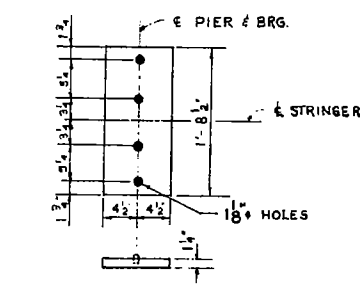
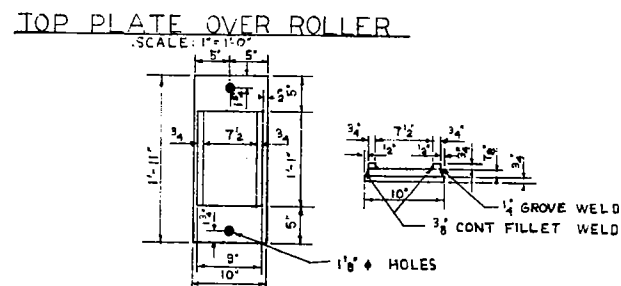
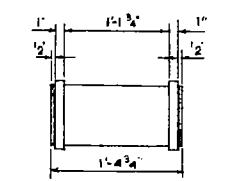
**EXPANSION JOINT ADJUSTMENT SCHEDULE**

TEMPERATURE, °F	110	90	70	50	30	10
ALL ABUTMENTS	1 3/8"	1 3/8"	1 7/8"	1 1/2"	1 1/8"	1 1/8"

JOINT OPENINGS ARE PARALLEL TO E OF BRIDGE AND ARE BASED ON 1 1/2" OPENING AT 50°F.



1" x 1/2" RING-WELD TO ROLLER WITH 5/16 CFW. OR ROLLER MAY BE TURNED FROM SOLID WITHOUT 1/2" END PROJECTION WELD ONLY ON OUTSIDE OF RING.



**EXPANSION GUARD NOTES:** SEE "GENERAL NOTES FOR STRUCTURAL STEEL" SHEET NO. 2  
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TOTAL ESTIMATED WEIGHT OF SUPERSTRUCTURE EXPANSION GUARDS = 4362.

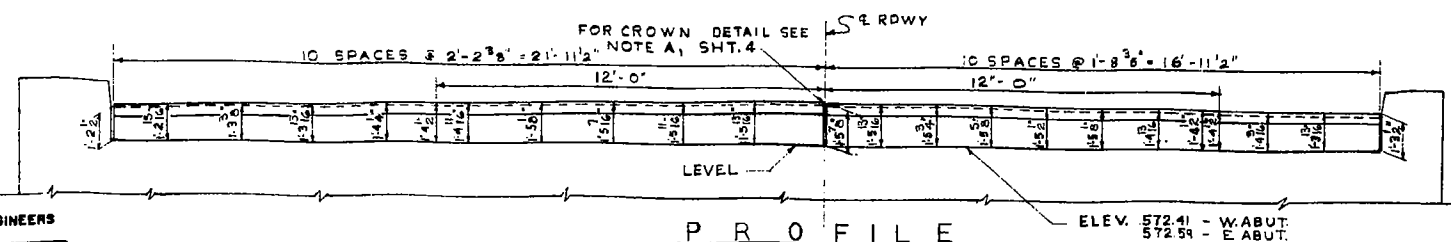
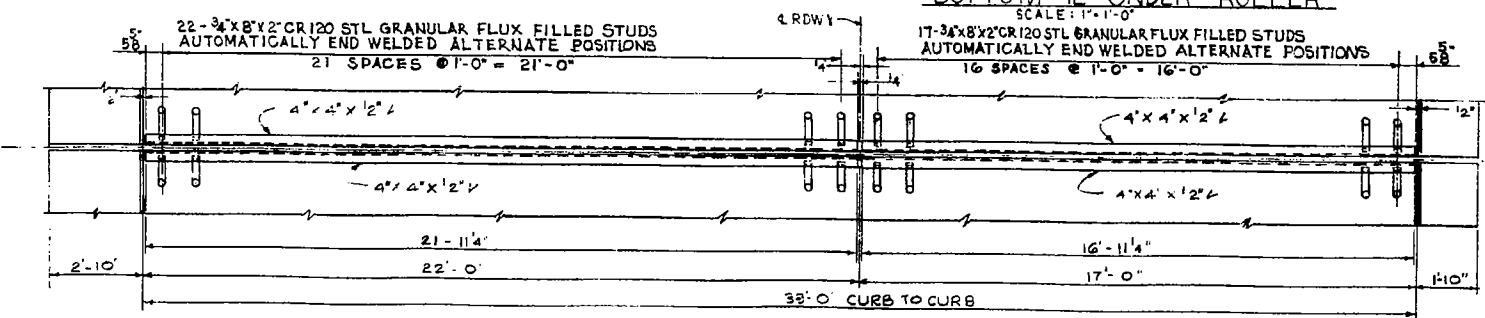
**NOTE:**  
COST OF 3/4" x 8" x 2" CR 1020 STL. GRANULAR FLUX FILLED STUDS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FURNISHING & ERECTING STRUCTURAL STEEL

**BILL OF MATERIALS (2 BRIDGES)**

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	17296 *

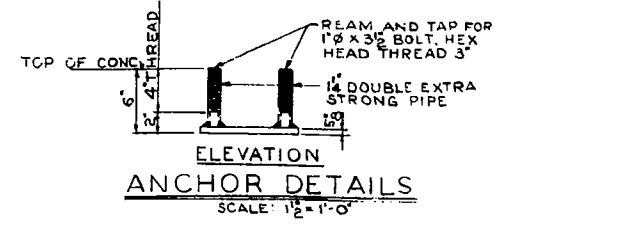
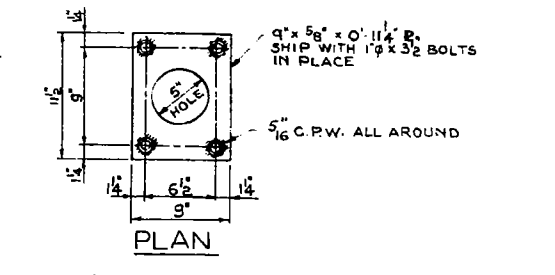
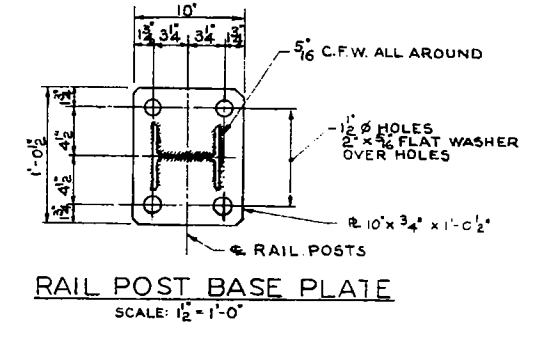
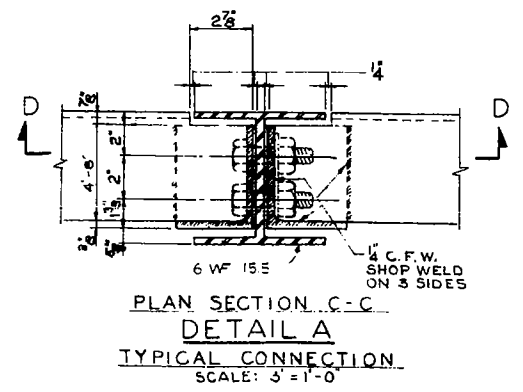
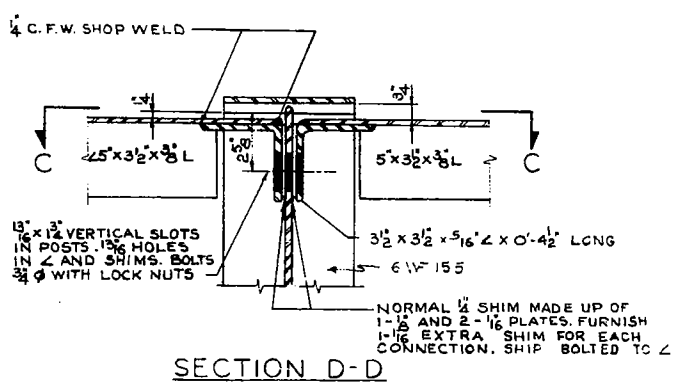
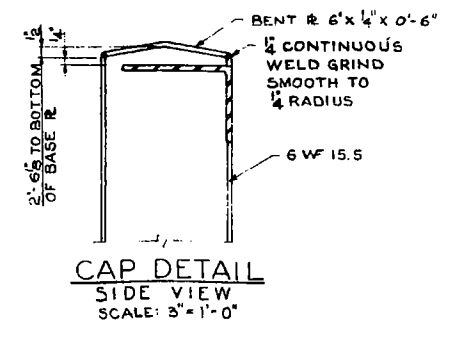
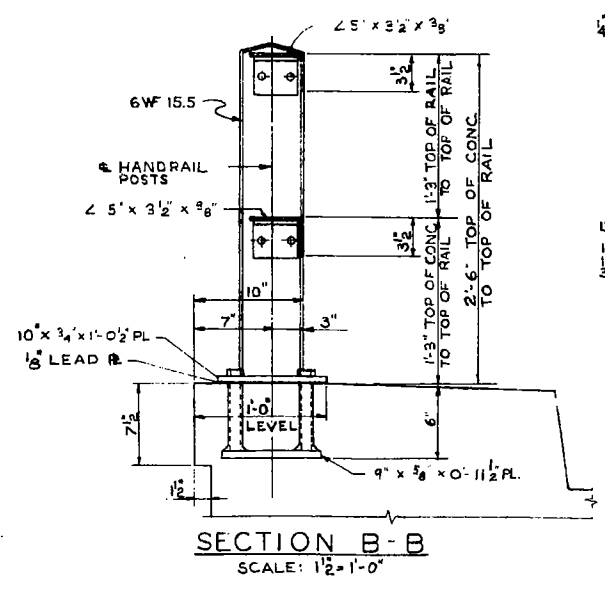
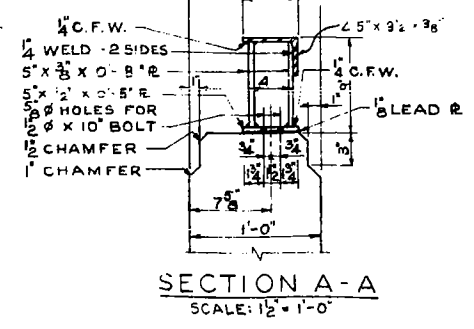
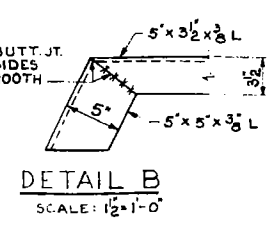
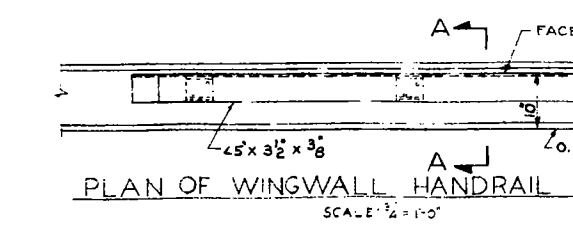
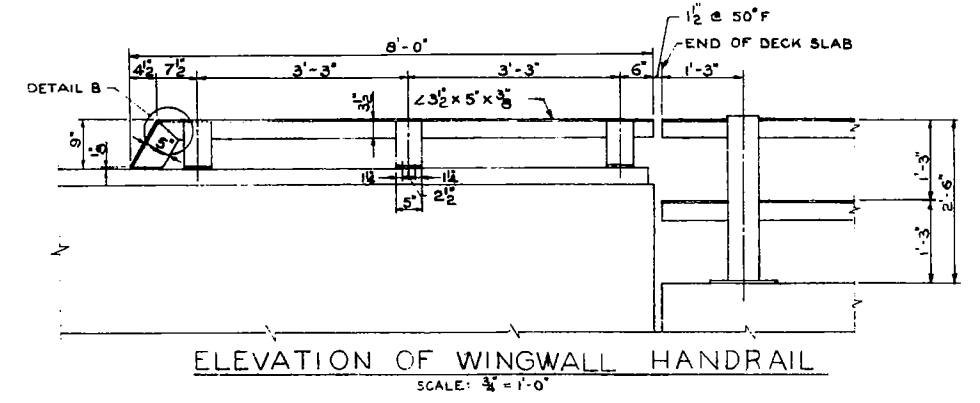
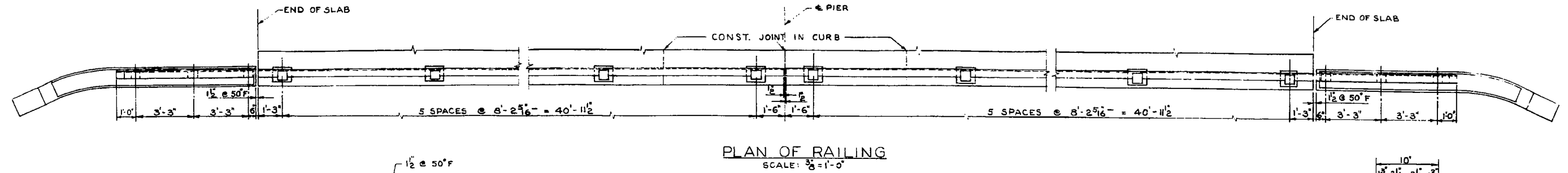
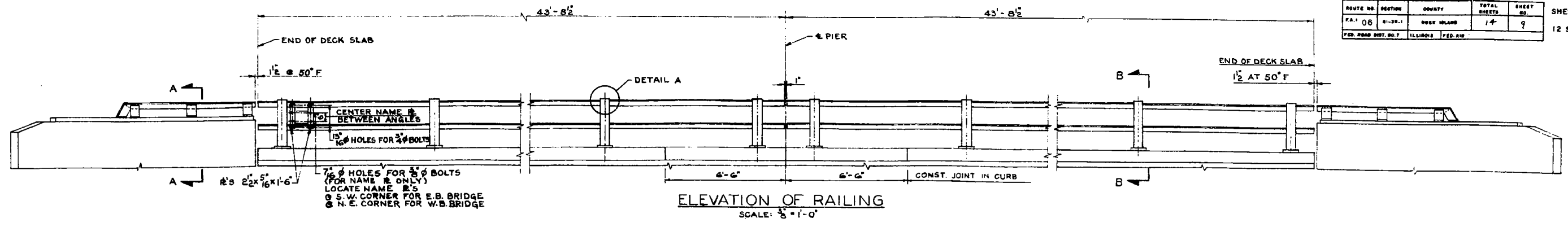
\* INCLUDES FILLER PLATES

**BEARING & EXPANSION GUARD DETAILS**  
F.A.I. 6 SECTION 81-38-1  
F.A.I. 6 OVER SHAFFER CREEK  
**ROCK ISLAND COUNTY**  
STATION 594+68.00  
SCALE: AS NOTED DATE:



**DETAILS OF EXPANSION GUARD**  
NOTE: THE ROADWAY EXPANSION GUARD SHALL BE FABRICATED TO FIT ROADWAY

DE LEUW, CATHER & CO., ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY R.H.M.  
CHECKED D.H.M.  
IN CHARGE E.S. MARTIN  
APPROVED L.N. RIAN



**BILL OF MATERIAL (2 BRIDGES)**

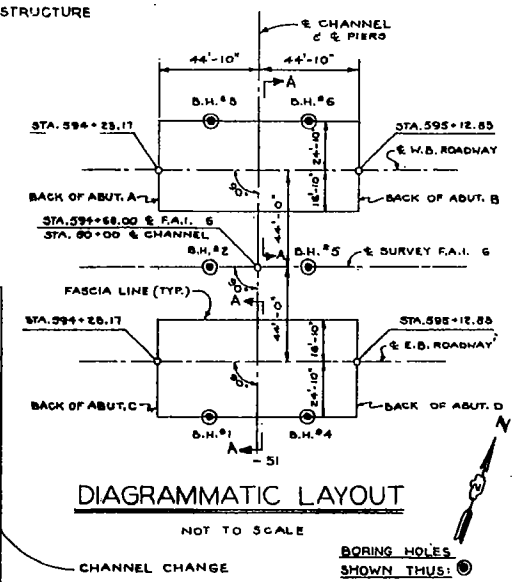
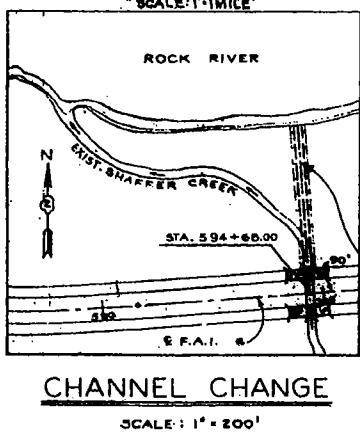
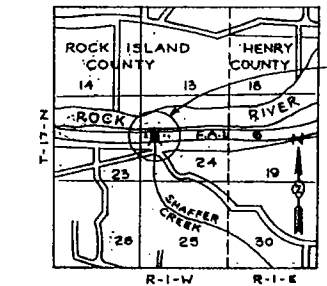
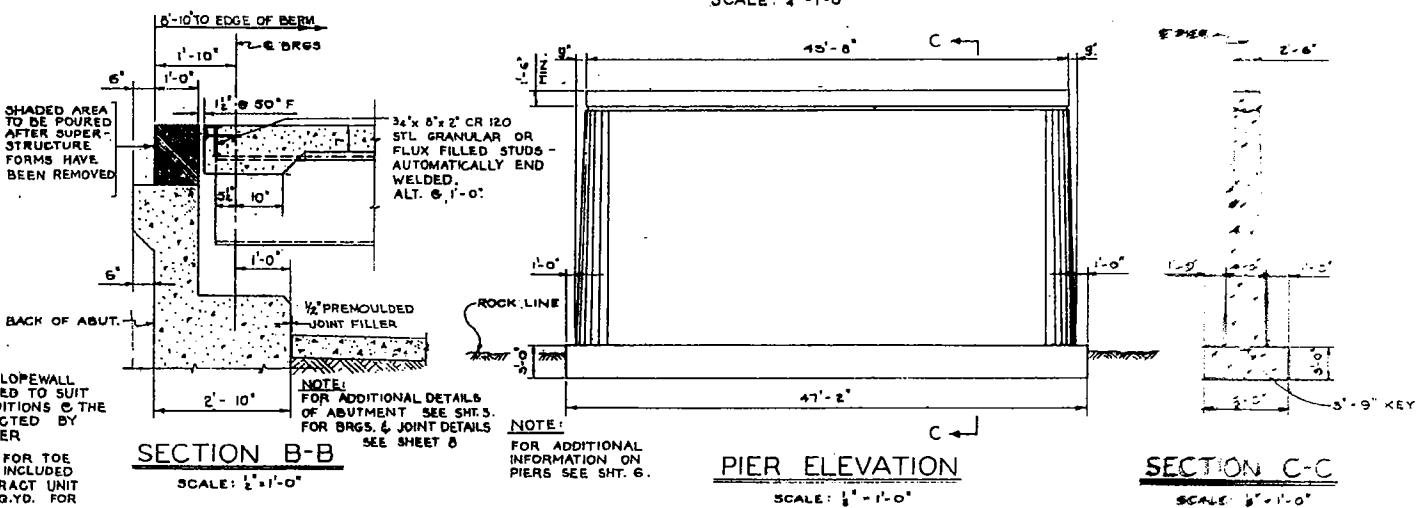
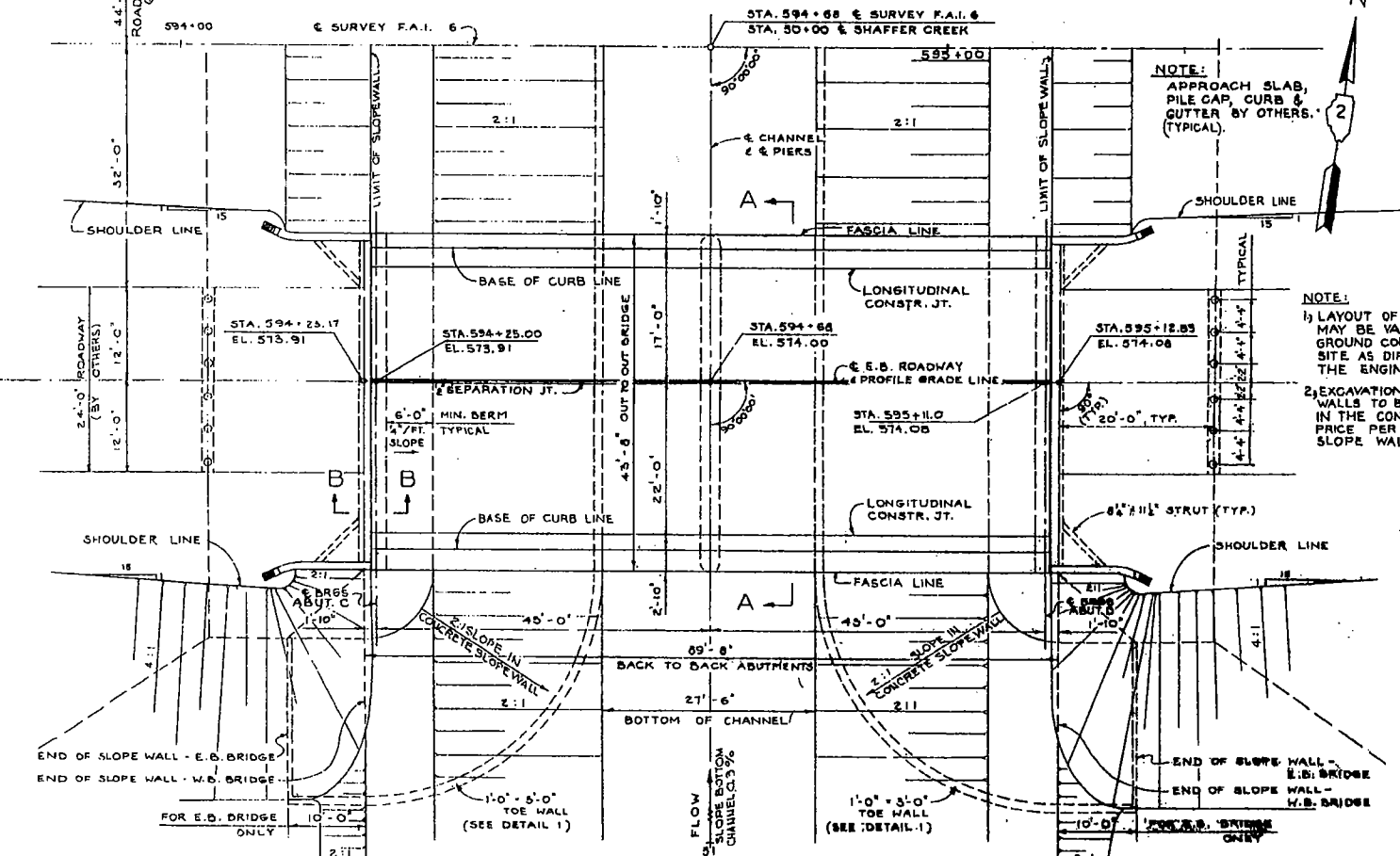
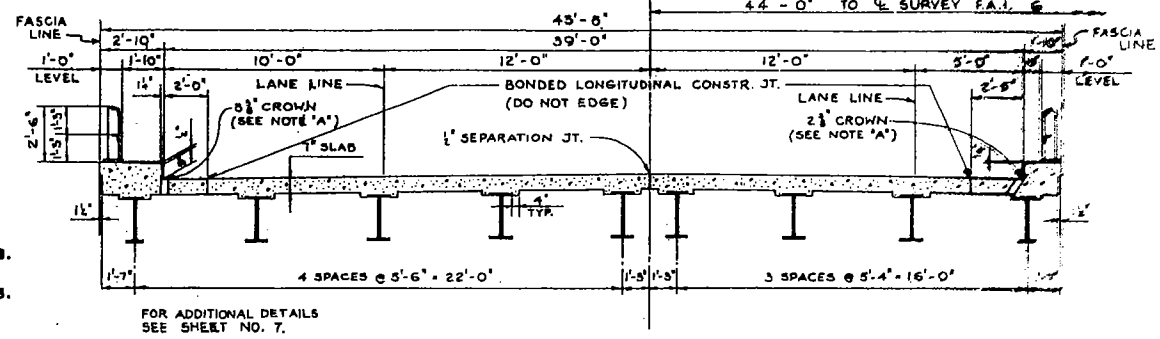
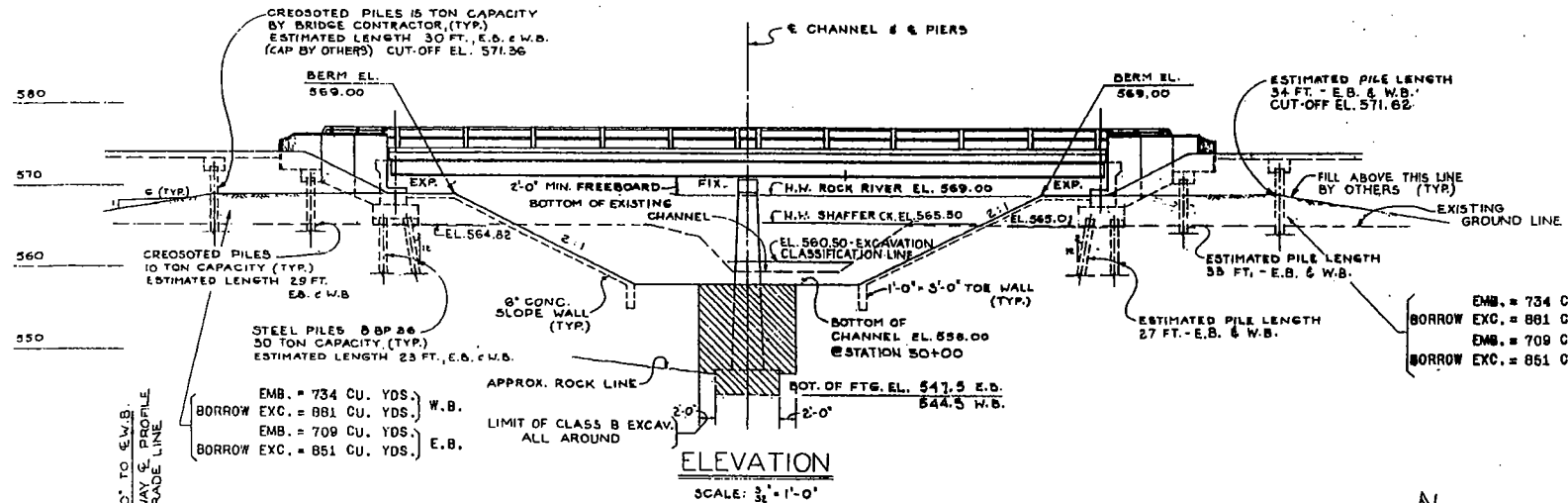
ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING METAL HANDRAIL	LIN. FT.	415

**HANDRAIL DETAILS**  
F.A. 1. G SECTION 81-38-1  
F.A. 1. G OVER SHAFFER CREEK  
**ROCK ISLAND COUNTY**  
STATION 594 + 68.00  
SCALE: AS NOTED DATE:

DE LEUW, CATHER & CO. ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY L.R.  
CHECKED D.H.M.  
IN CHARGE E.S. MARTINS  
APPROVED L.N. RIAN



NOTE 'A': CROWN OF ROADWAY IS A CIRCULAR CURVE 10 FT. ON EACH SIDE OF E. ROADWAY WITH 1" DROP FROM PROFILE GRADE ELEVATION. REMAINDER OF ROADWAY SLOPES 0.2" PER FT.



WATERWAY INFORMATION  
 DRAINAGE AREA 4,544 ACRES  
 CHARACTER WOODED AND STEEP  
 REQUIRED OPENING \* 300 S.F.  
 \* 50 YEAR FLOOD

BILL OF MATERIALS \*

ITEM	UNIT	QUAN.
CHANNEL EXCAVATION	CU YD.	32.33
BORROW EXCAVATION	CU YD.	2.31
FURNISHING CREOSOTED PILES 20'-30'	LN FT.	7.68
DRIVING TIMBER PILES	LN FT.	7.68
SLOPE WALL (6")	SQ. YD.	15.95
TREE REMOVAL	ACRES	1.0

\* INCLUDES ALL ITEMS SHOWN ON SHEETS 3 & 4, NOT BILLED ELSEWHERE.

DESIGN STRESSES.

f<sub>c</sub> = 1,400 p.s.i. SUPERSTRUCTURE  
 f<sub>c</sub> = 1,000 p.s.i. SUPERSTRUCTURE (CONC. WITH SEAWATER PRESSURE)  
 f<sub>s</sub> = 20,000 p.s.i. REINFORCING BARS  
 f<sub>a</sub> = 10,000 p.s.i. STRUCTURAL STEEL  
 v = 75 p.s.i. SHEAR IN FOOTINGS  
 n = 10  
 DESIGN LOADING H20-60/84 & MODIFIED.

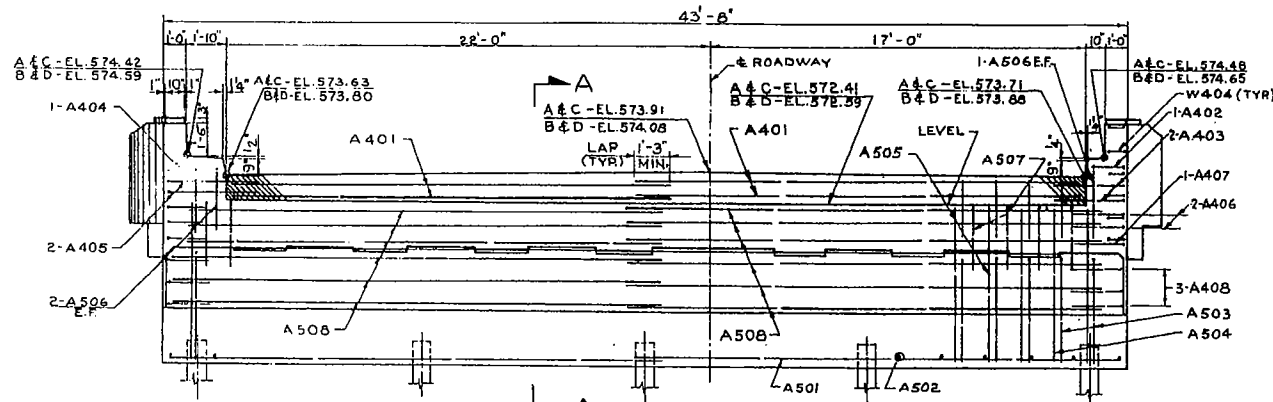
GENERAL PLAN AND ELEVATION  
 F.A.I. 6 SECTION 01-38-1  
 F.A.I. 6 OVER SHAFFER CREEK  
 ROCK ISLAND COUNTY  
 STATION 594+68.00  
 SCALE: AS SHOWN  
 DATE:

DE LEUW, CATHY & CO., ENGINEERS  
 DESIGNED BY V. K. B.  
 DRAWN BY V. K. B.  
 CHECKED E. S. M.  
 IN CHARGE E. S. MARTINS  
 APPROVED L. N. RIAN

DETAIL 1  
 SCALE: 1" = 1'-0"

PROFILE GRADE F.A.I. 6

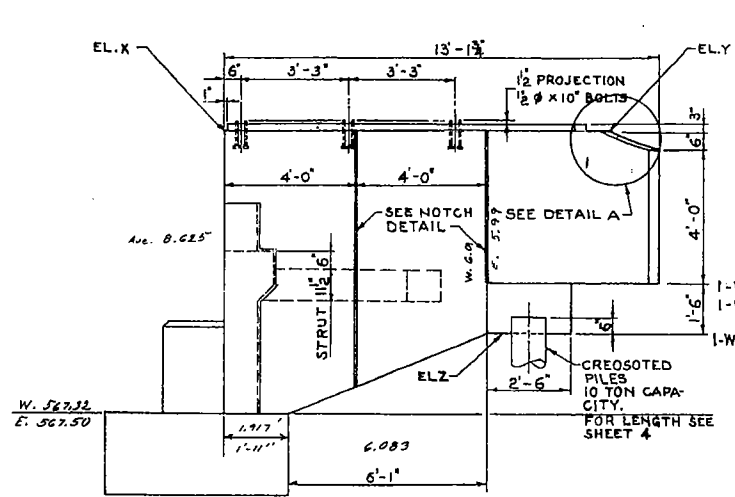
FOR INFORMATION ONLY



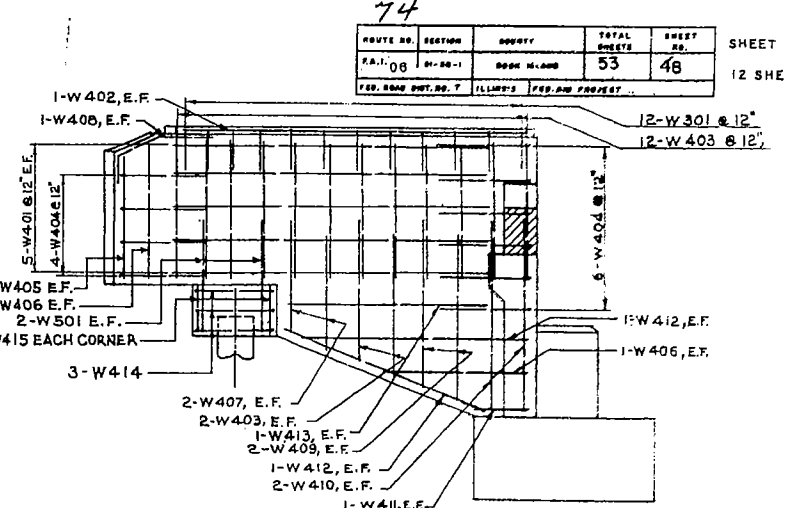
NOTE: ALL ELEVATIONS AT THE NEAR FACE OF BACKWALL.

ELEVATION - ABUTMENTS B & C  
 SCALE: 1/2" = 1'-0"

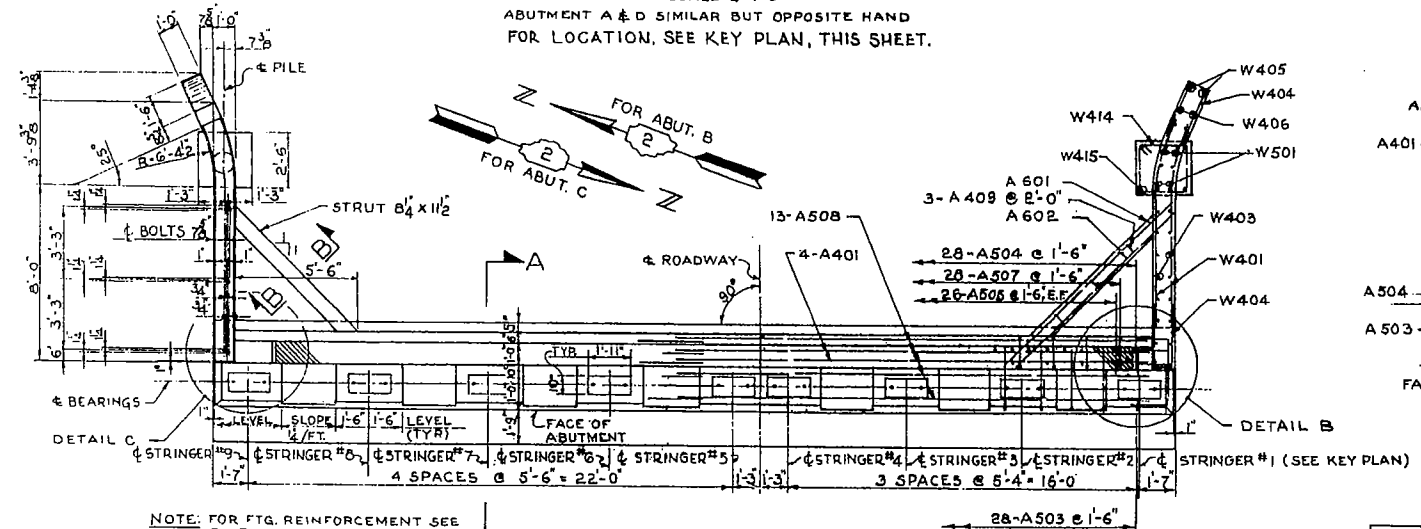
ABUTMENT A & D SIMILAR BUT OPPOSITE HAND FOR LOCATION, SEE KEY PLAN, THIS SHEET.



ELEVATION OF WINGWALL  
 SCALE: 1/2" = 1'-0"

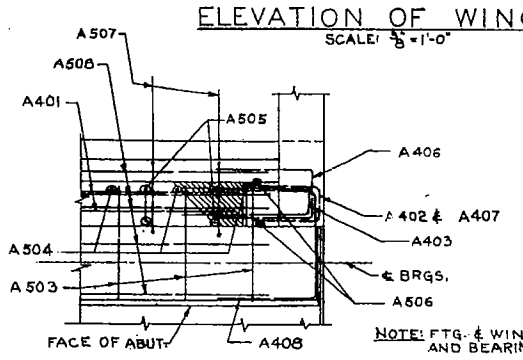


REINFORCEMENT OF WINGWALL  
 SCALE: 1/2" = 1'-0"

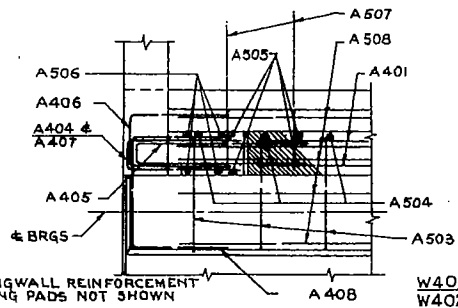


PLAN ABUTMENT B & C  
 SCALE: 1/2" = 1'-0"

ABUTMENT A & D SIMILAR BUT OPPOSITE HAND



DETAIL B  
 SCALE: 1/2" = 1'-0"



DETAIL C  
 SCALE: 1/2" = 1'-0"

BAR	A 402	A 403	A 404	A 405	A 406	A 407	A 408	W 301	W 404
A	1'-6"	3'-0"	2'-6"	4'-0"	1'-6"	1'-6"	1'-6"	1'-2"	2'-5"
B	8"	8"	8"	8"	1'-3"	8"	2'-5"	7"	8"

BARS: A 402, A 403, A 404, A 405, A 406, A 407, A 408, W 301 & W 404

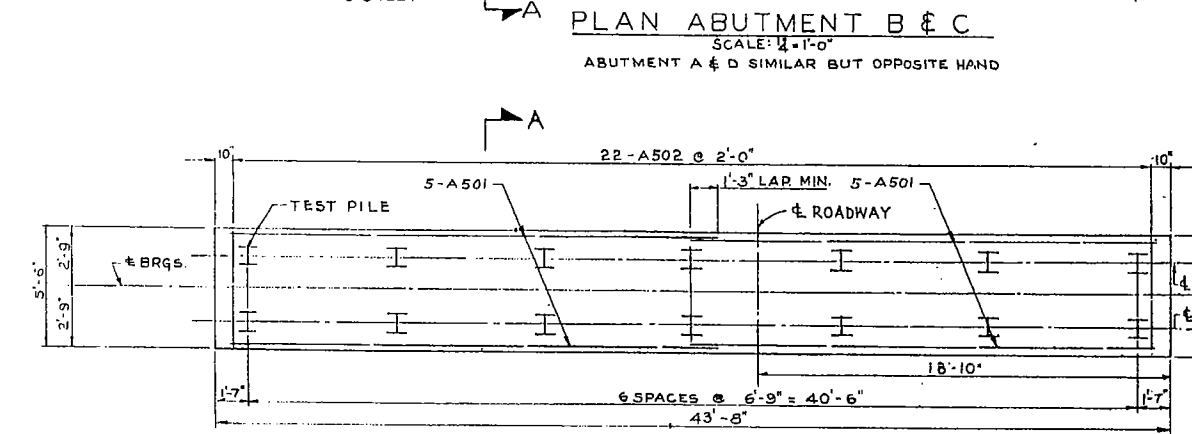
NOTE: SHADED AREA TO BE POURED AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED, SLOPE TOP PARALLEL TO GRADE. SEE SH. 8 "SECT. THRU ABUTMENT" FOR DETAILS.

NOTE: ALL BAR DIMENSIONS ARE OUT TO OUT

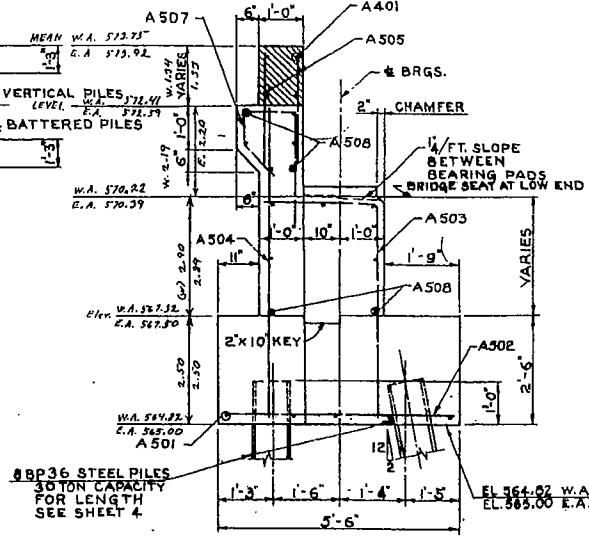
ABUT.	WINGWALL ELEVATIONS							
	NORTH	SOUTH	N	S	N	S	N	S
EL. X	575.92	575.98	576.09	576.15	575.90	575.92	576.15	576.09
EL. Y	575.89	575.96	576.12	576.18	575.96	575.99	576.18	576.12
EL. Z	569.89	569.96	570.12	570.18	569.96	569.99	570.18	570.12

ABUT.	BEARING PAD ELEVATIONS								
	STR. 51	52	53	56	54	55	57	58	59
WEST ABUT.	570.32	570.41	570.49	570.52	570.40	570.31	570.22		
EAST ABUT.	570.49	570.58	570.66	570.70	570.58	570.43	570.39		

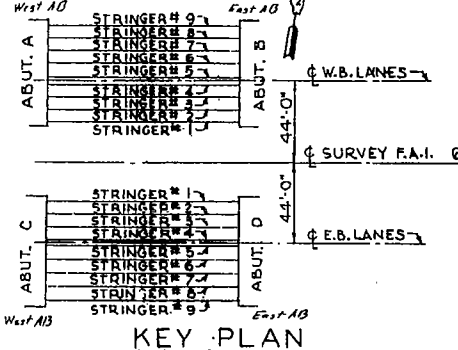
BILL OF MATERIALS - 4 ABUTMENTS					
BAR	NO.	SIZE	LENGTH	SHAPE	WGT. #
A 401	32	4	20'-0"		427
A 402	4	4	8'-8"		13
A 403	8	4	6'-8"		36
A 404	4	4	5'-8"		15
A 405	8	4	8'-8"		46
A 406	16	4	4'-3"		45
A 407	8	4	3'-8"		20
A 408	24	4	5'-5"		83
A 501	40	5	22'-4"		932
A 502	88	5	5'-0"		458
A 503	112	5	7'-3"		847
A 504	112	5	7'-0"		818
A 505	208	3	3'-0"		651
A 506	24	5	3'-6"		80
A 507	112	3	4'-9"		555
A 508	104	5	22'-3"		2414
A 601	16	6	10'-0"		240
A 602	16	6	9'-3"		223
W 301	96	3	2'-11"		105
W 401	80	4	9'-10"		525
W 402	16	4	10'-6"		112
W 403	224	4	4'-3"		626
W 404	80	4	5'-6"		294
W 405	16	4	3'-9"		40
W 406	32	4	4'-0"		96
W 407	32	4	3'-6"		75
W 408	16	4	3'-0"		32
W 409	32	4	5'-0"		107
W 410	32	4	5'-3"		112
W 411	16	4	1'-7"		17
W 412	32	4	6'-7"		141
W 413	16	4	6'-3"		67
W 414	24	4	8'-6"		152
W 415	32	4	1'-3"		27
W 501	32	5	5'-0"		167
TOTAL WEIGHT					10657



PILE PLAN  
 SCALE: 1/2" = 1'-0"



SECTION A-A  
 SCALE: 1/2" = 1'-0"



KEY PLAN

BILL OF MATERIAL (4 ABUT'S)		
ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU. YDS	193.2
REINFORCEMENT BARS	LB5	10,657
CLASS A EXCAVATION FOR STRUCTURES	CU. YDS	20
FURNISHING STEEL PILES	L.F.	1300
DRIVING STEEL PILES	L.F.	1300
TEST PILES (STEEL)	EACH	4
FURNISHING CRESOTED TIMBER PILES (20' TO 30' LONG)	L.F.	248
DRIVING TIMBER PILES	L.F.	248

FOR INFORMATION ONLY

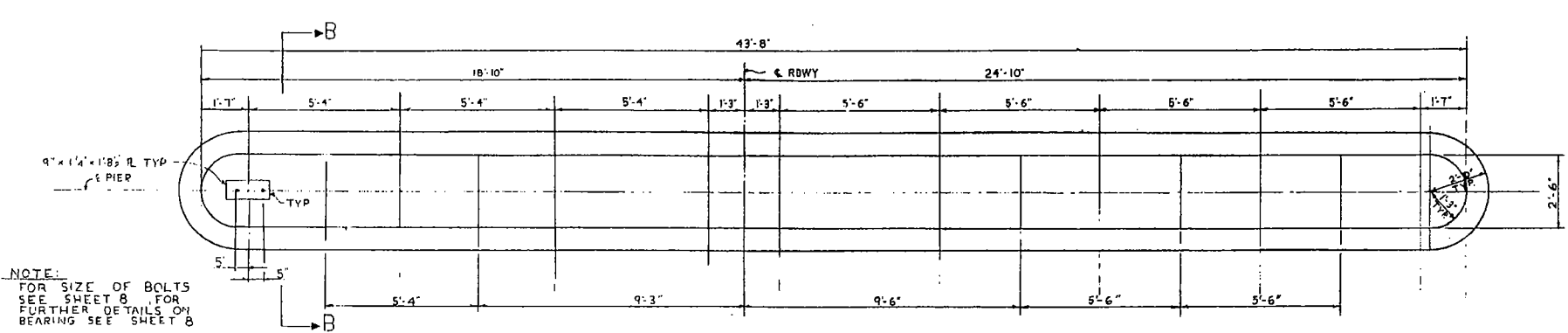
ABUTMENTS  
 F.A.I. 6 SECTION 81-38-1  
 F.A.I. 6 OVER SHAFFER CREEK  
 ROCK ISLAND COUNTY  
 STATION 594 + 68.00

DE LEUW, CATHAR & CO., ENGINEERS  
 DESIGNED BY Y. K. B.  
 DRAWN BY L. R.  
 CHECKED BY D. H. M.  
 IN CHARGE E. S. MARTINS  
 APPROVED L. N. RIAN

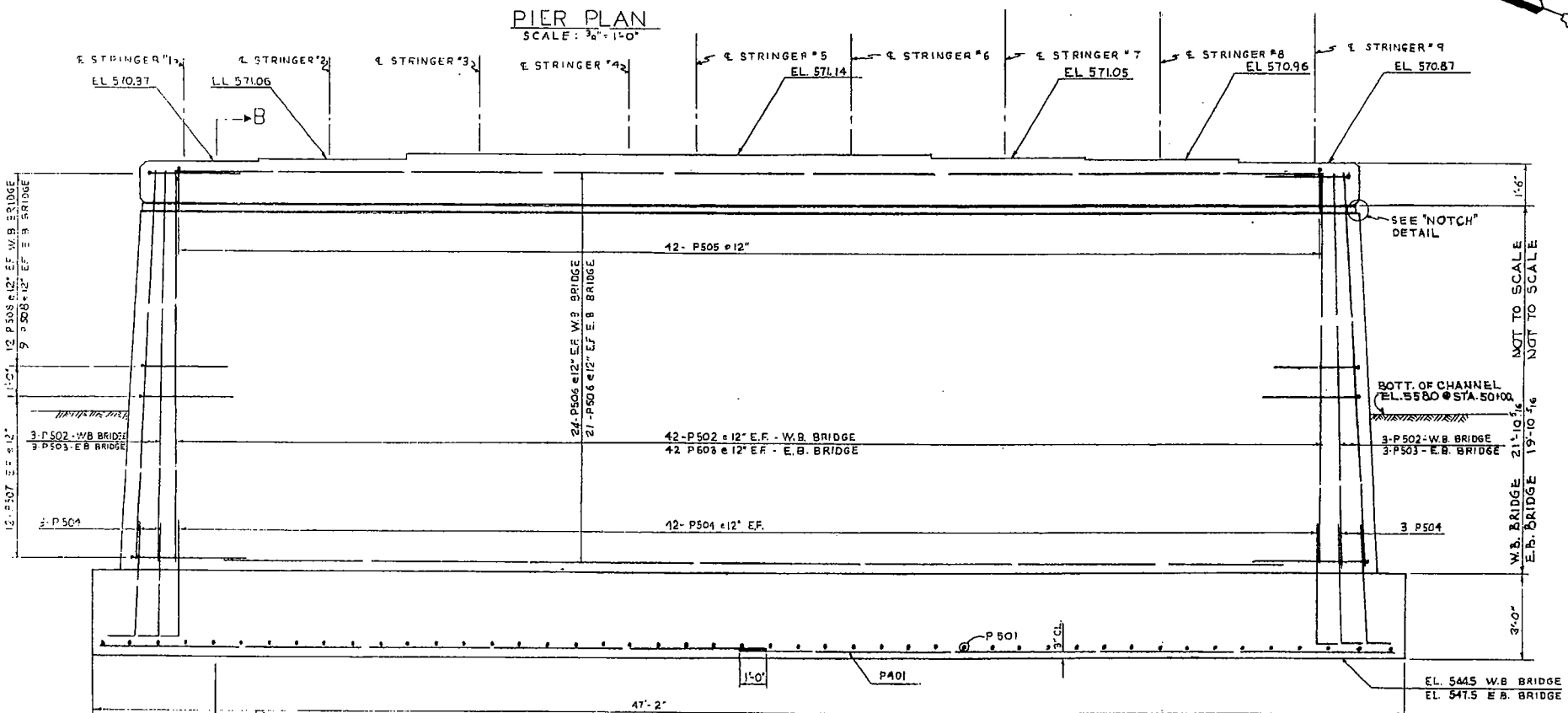
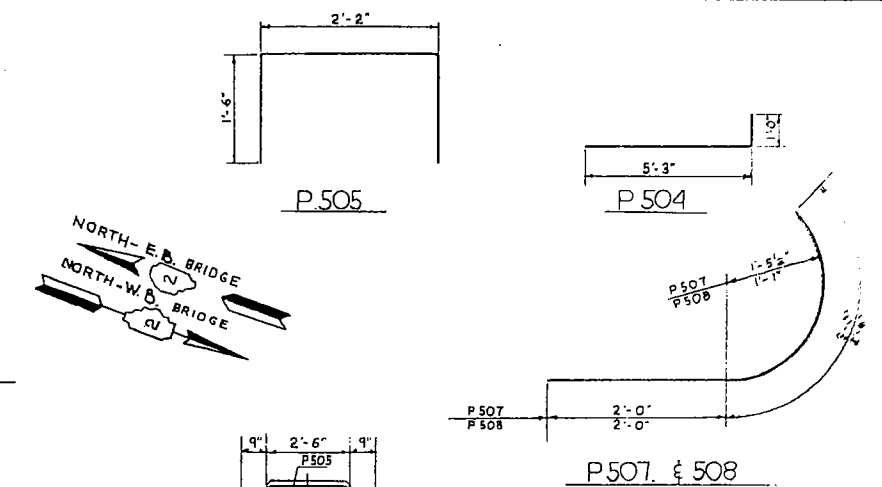
SECTION B-B  
 SCALE: 1/2" = 1'-0"

DETAIL A  
 SCALE: 1" = 1'-0"

NOTCH DETAIL  
 FULL SIZE

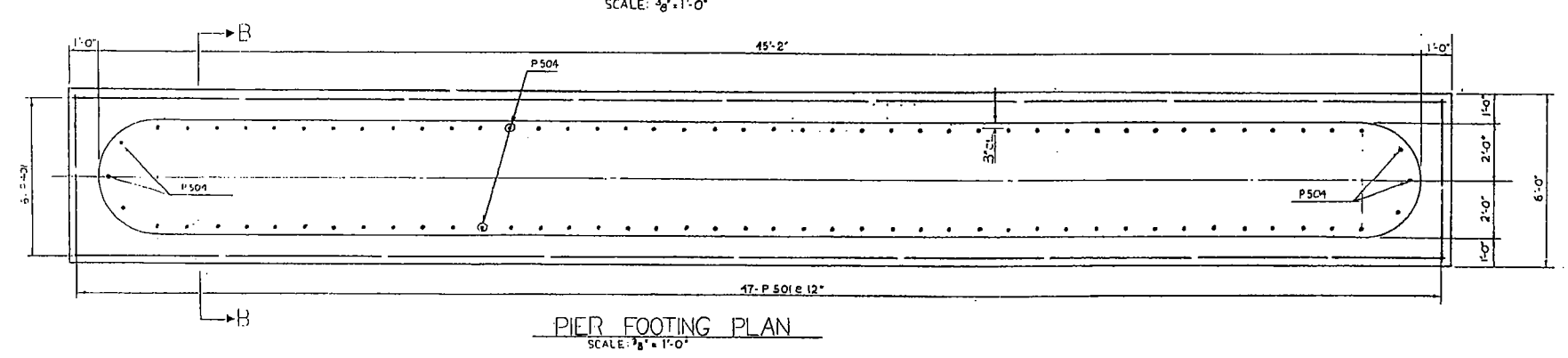


NOTE:  
FOR SIZE OF BOLTS  
SEE SHEET 8. FOR  
FURTHER DETAILS ON  
BEARING SEE SHEET 8



BAR LIST - 2 BRIDGES					
BAR	NO	SIZE	LENGTH	SHAPE	WT
P401	24	4	23'-10"		382
P501	94	5	5'-6"		531
P502	90	5	23'-2"		2,175
P503	90	5	20'-2"		1,890
P504	180	5	6'-3"		1,173
P505	84	5	5'-2"		453
P506	90	5	4'-2"		3,864
P507	16	5	5'-0"		501
P508	84	5	4'-6"		394
TOTAL					11,374

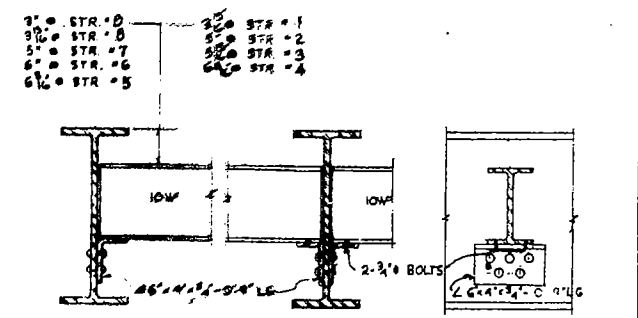
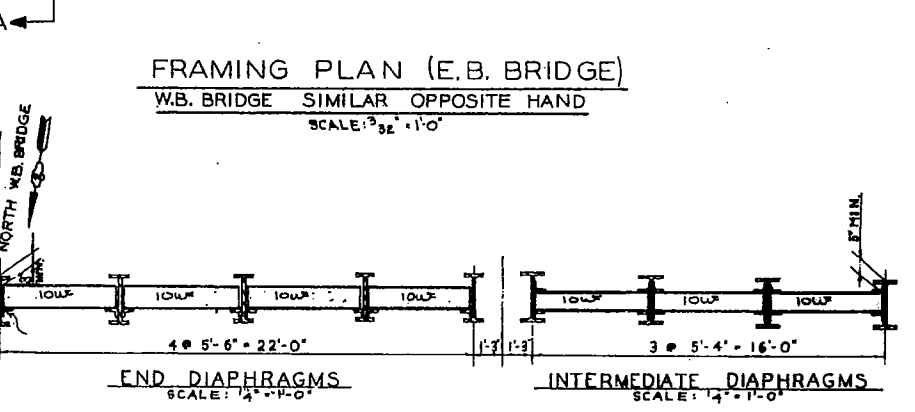
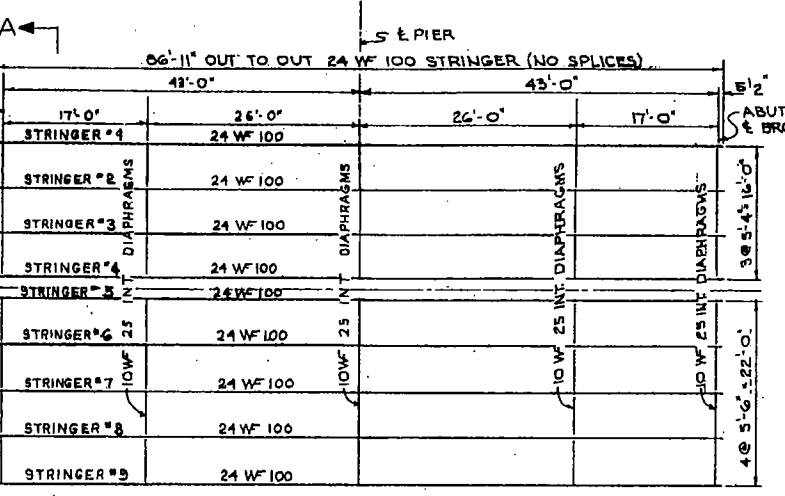
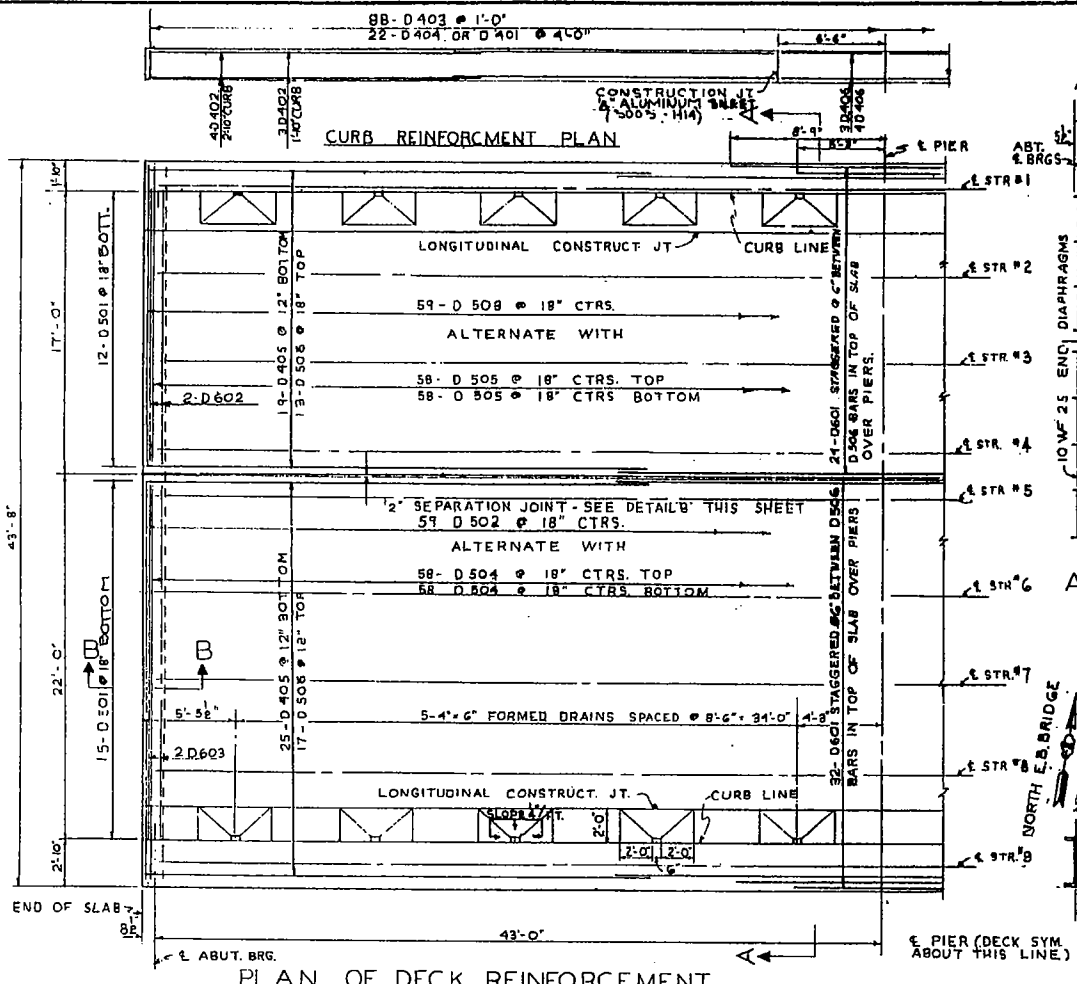
BILL OF MATERIAL (2 BRIDGES)		
ITEM	UNIT	QUANTITY
CLASS A CONCRETE	CU. YDS.	289.7
REINFORCEMENT BARS	LBS.	11,374
CLASS B EXCAVATION FOR STRUCT.	CU. YDS.	435
ROCK EXCAVATION FOR STRUCT.	CU. YDS.	10



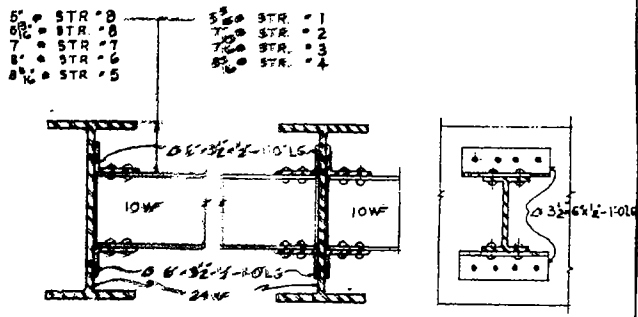
DE LEUW, CATHER & CO., ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY R.H.M.  
CHECKED D.H.M.  
IN CHARGE E.S. MARTINS  
APPROVED L.N. RIAN

PIER DETAILS  
F.A. 1.06 SECTION 81-38-1  
OVER SHAFFER CREEK  
ROCK ISLAND COUNTY  
STATION 594 + 68.00  
SCALE AS NOTED DATE:

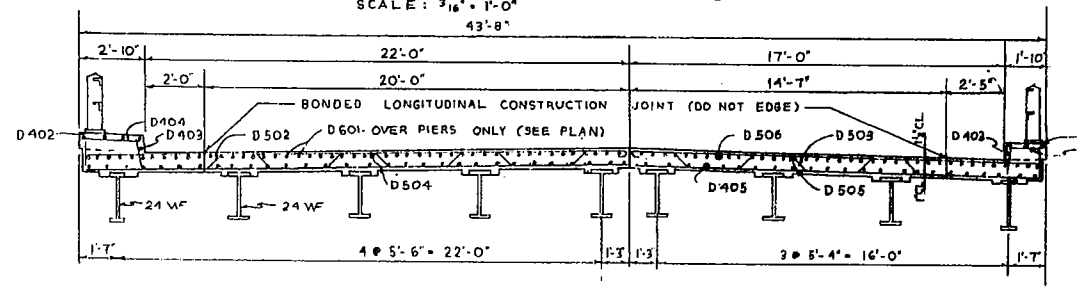
FOR INFORMATION ONLY



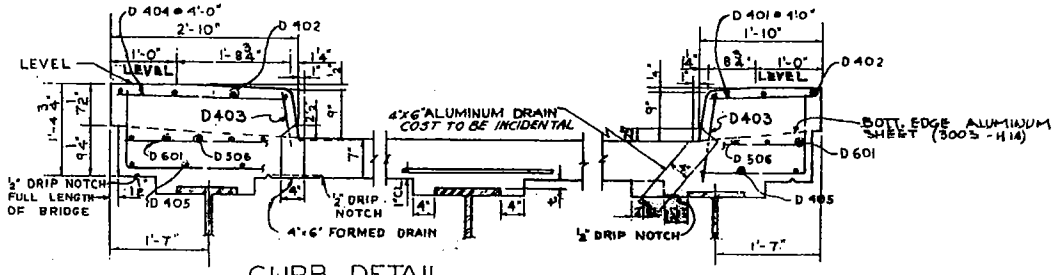
END DIAPHRAGM DETAIL  
 SCALE: 1" = 1'-0"



INTERMEDIATE DIAPHRAGM DETAILS  
 SCALE: 1" = 1'-0"



CROSS SECTION A-A  
 SCALE: 1/4" = 1'-0"

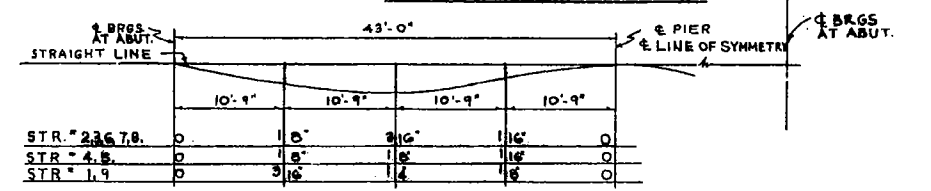


CURB DETAIL  
 SCALE: 3/4" = 1'-0"

AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT THE 1/4 POINTS OF EACH SPAN.

FROM THESE ELEVATIONS SUBTRACT THE INCREMENT OF DEFLECTION FOR THESE POINTS DETERMINED FROM CONC. SLAB D.L. DEFLECTION DIAGRAM. THE ELEVATIONS SO ATTAINED SUBTRACTED FROM THE THEORETICAL GRADE ELEVATIONS, MINUS FLOOR THICKNESS, EQUALS THE FILLET HEIGHTS (H) ABOVE TOP OF BEAM.

METHOD OF DETERMINING FILLET HEIGHTS - 't'



STRINGER DEFLECTION DUE TO CONCRETE DEAD LOAD ONLY

BILL OF BARS 2 BRIDGES					
BAR NO	SIZE	LENGTH	SHAPE	WEIGHT	
D 401	44	4	1'-5 1/2"		42
D 402	56	4	19'-3"		720
D 403	352	4	1'-0"		235
D 404	44	4	2'-5"		71
D 405	264	4	30'-0"		5291
D 406	28	4	6'-3"		117
D 501	108	5	1'-2"		131
D 502	118	5	27'-4"		3364
D 503	118	5	21'-0"		2585
D 504	232	5	24'-6"		5928
D 505	232	5	18'-6"		4977
D 506	180	5	30'-9"		5679
D 601	112	6	14'-0"		2336
D 602	8	6	16'-6"		198
D 603	8	6	21'-6"		258
					31,451

BILL OF MATERIAL (2 BRIDGES)		
ITEM	UNIT	QUANTITY
CLASS X CONCRETE	CU YDS	193.7
REINFORCEMENT BARS	LBS.	31,451
SUPPLYING AND ERECTING STRUCTURAL STEEL	LBS.	169,682

\* COST OF ALUMINUM SHEET TO BE INCLUDED IN UNIT PRICE OF CONC.

SUPERSTRUCTURE SLAB DETAILS & FRAMING PLAN

F.A.I. 6 SECTION 81-3B-1

F.A.I. 6 OVER SHAFFER COUNTY

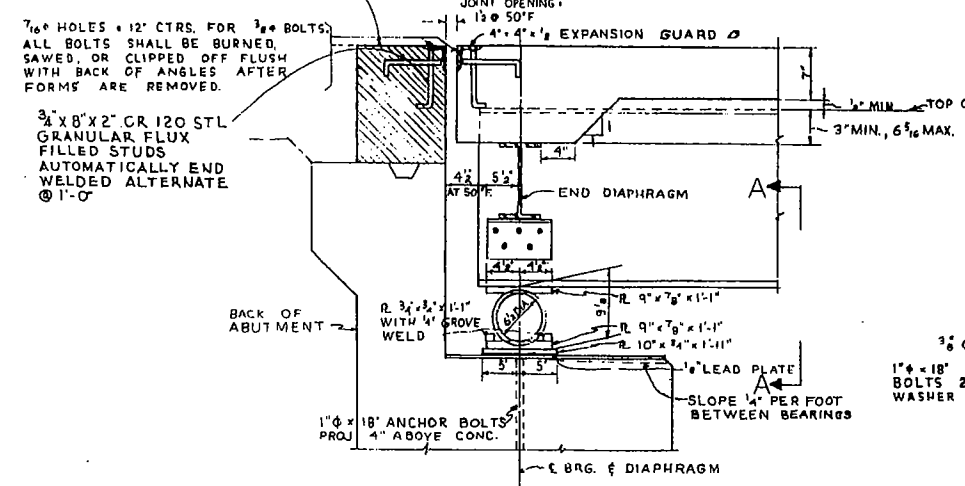
STATION 594 + 68.00

SCALE: AS NOTED DATE:

FOR INFORMATION ONLY

DE LEUW, CATHAR & CO., ENGINEERS  
 DESIGNED BY V. K. B.  
 DRAWN BY R. H. M.  
 CHECKED D. H. M.  
 IN CHARGE F. S. MARTINS  
 APPROVED L. H. RIAN

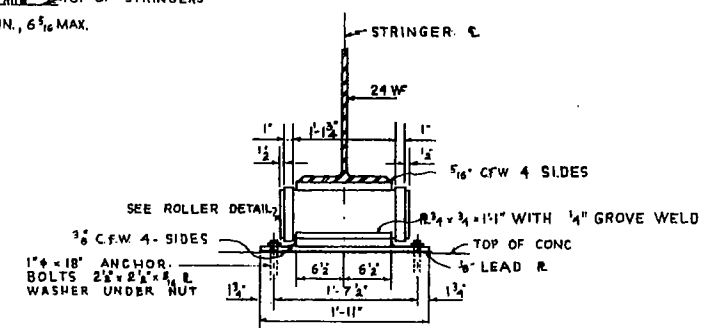
SHADED AREA NOT TO BE POURED UNTIL AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED. ADJUST JOINT OPENINGS (PER SCHEDULE ON THIS SHEET) AT THE TIME THIS CONCRETE IS POURED.



SECTION THRU ABUTMENT  
SCALE: 1" = 1'-0"  
EXPANSION BEARING  
WT. PER BRG. : 287#

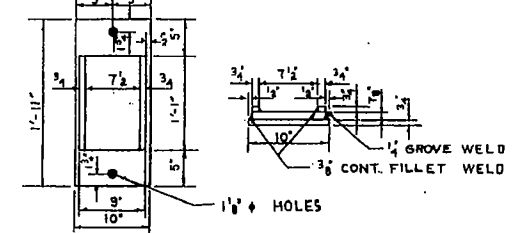
TEMPERATURE, °F	110	90	70	50	30	10
ALL ABUTMENTS	1 1/4"	1 3/8"	1 1/2"	1 3/4"	1 7/8"	1 5/8"

JOINT OPENINGS ARE PARALLEL TO & OF BRIDGE AND ARE BASED ON 1 1/2" OPENING AT 50°F.

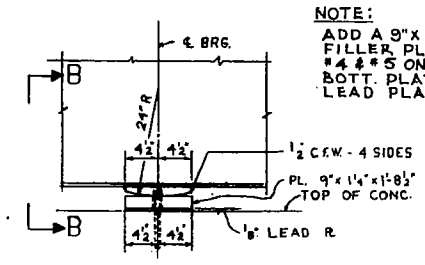


SECTION A-A  
SCALE: 1" = 1'-0"

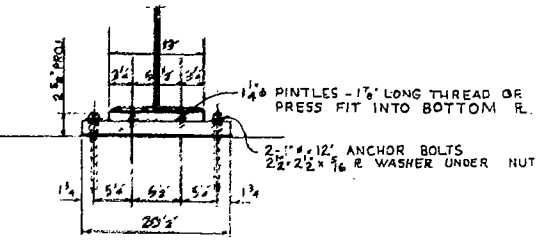
TOP PLATE OVER ROLLER  
SCALE: 1" = 1'-0"



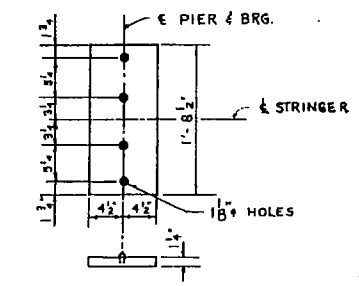
BOTTOM R UNDER ROLLER  
SCALE: 1" = 1'-0"



BEARING DETAIL AT PIER  
SCALE: 1" = 1'-0"  
FIXED BEARING  
WT. PER BRG: 119# (EXCLUSIVE OF FILLER PLATES)

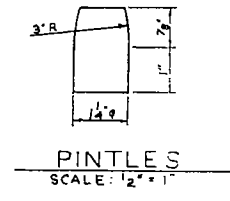


SECTION B-B  
SCALE: 1" = 1'-0"



BOTTOM P-PIER BEARING  
SCALE: 1" = 1'-0"

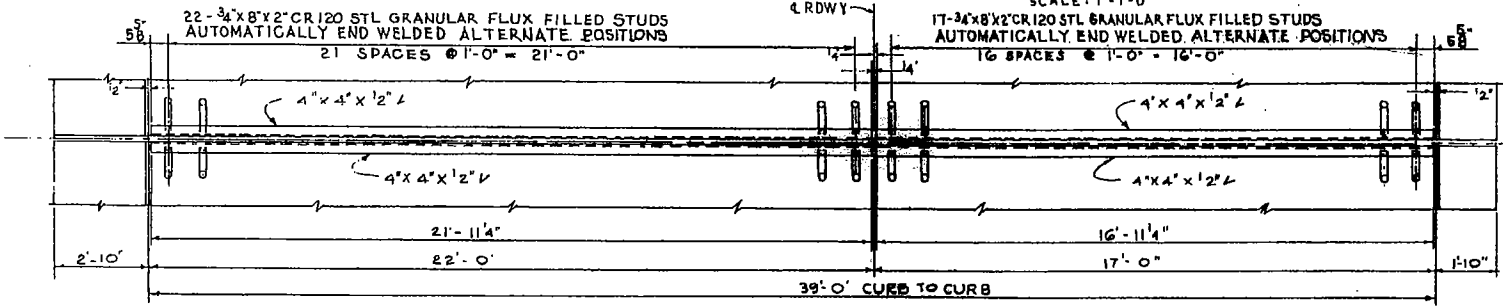
TOP P-PIER BEARING  
SCALE: 1" = 1'-0"



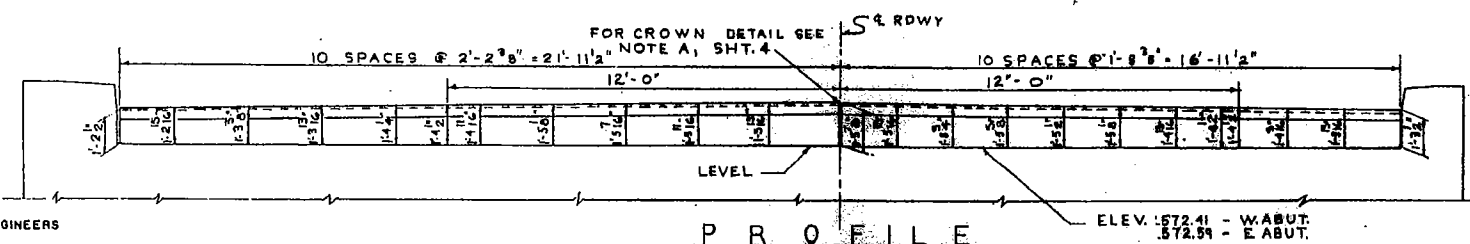
PINTLES  
SCALE: 1/2" = 1"

**EXPANSION GUARD NOTES:** SEE "GENERAL NOTES FOR STRUCTURAL STEEL" SHEET NO. 2  
EXPANSION JOINT ASSEMBLIES SHALL BE FABRICATED AND ERECTED TO CONFORM TO THE ROADWAY CROWN AND SLOPE OF GRADE AT THE JOINT. THEY SHALL BE ASSEMBLED IN THE SHOP FOR INSPECTION.  
ALL STEEL OF JOINT ASSEMBLY INCLUDING STRAP ANCHORS SHALL BE INCLUDED IN STRUCTURAL STEEL FOR PAYMENT.  
**GUARD SETTING INSTRUCTIONS:** JOINT OPENINGS SHOWN ON GUARD DETAILS ARE BASED ON AN ASSUMED TEMPERATURE OF 50°F. THEY INCLUDE A 1/4" ALLOWANCE FOR POSSIBLE FORWARD MOVEMENT AT THE TOP OF THE ABUTMENT DUE TO EARTH PRESSURE, THRUST OF APPROACH SLAB, ETC.

TOTAL ESTIMATED WEIGHT OF SUPERSTRUCTURE EXPANSION GUARDS = 4362.



PLAN  
SCALE: 3/8" = 1'-0"



PROFILE  
SCALE: 1/2" = 1'-0"

NOTE: THE ROADWAY EXPANSION GUARD SHALL BE FABRICATED TO FIT ROADWAY

DE LEUW, CATER & CO., ENGINEERS  
DESIGNED BY V.K.B.  
DRAWN BY R.H.M.  
CHECKED D.I.M.  
IN CHARGE E.S. MARTINE  
APPROVED L.N. RIAN

JOB NO. 889

**NOTE:**  
COST OF 3/4" x 8" x 2" CR 1020 STL. GRANULAR FLUX FILLED STUDS TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FURNISHING & ERECTING STRUCTURAL STEEL.

ITEM	UNIT	QUANTITY
FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	17,296*

\* INCLUDES FILLER PLATES

**BEARING & EXPANSION GUARD DETAILS**  
F.A. 1. 6 SECTION 81-38-1  
A.I. 6 OVER SHAFFER CREEK  
ROCK ISLAND COUNTY  
STATION 594+68.00

FOR INFORMATION ONLY

SCALE: AS NOTED DATE: