

SEE SHEET 2 FOR INDEX

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PLANS FOR PROPOSED FEDERAL AID HIGHWAY

PLAN 1 INCH = 100 FT.
PROFILE, HOR. 1 INCH = 100 FT.
PROFILE, VERT. 1 INCH = 10 FT.
CROSS-SECTIONS 1 INCH = 10 FT.

F.A. ROUTE 403 SEC. 161-1 (1, HB, HB-1, HB-2, B-1, HB-3, 1 SG)
& FAI 80 SEC. 81-1 (HBY, SG-1)
PROJECTS EBRF 403-1(7) & I-80-1(94)0
ROCK ISLAND COUNTY

C-92-065-74

C-92-088-74

DESIGN DESIGNATION
1235 (95) TRUNK 716 (CRPCC-20)

BEGIN PROJECT I-80-1(94)0
STA. 33+43, ENDS STA. 280+50

PROJECT EBRF 403-1(7)
SEC. 161-1-1 BEGINS
STA. 207+00

Sec. 81-1HBY
Sta. 233+56.80

Sec. 161-1HB
Sta. 273+25

Sec. 161-1HB-1
Sta. 320+64.69

EQUATION STA. 375+52.51 BACK=
STA. 374+39.09 AHEAD

NET LENGTH OF PROJECT EBRF 403-1(7) 29,813.42 FEET = 5.646 MILES = 9.087 KILOMETERS
NET LENGTH OF PROJECT I-80-1(94)0 0.00 FEET = 0.000 MILE

SCALE: 1 INCH = 1 MILE

EQUATION STA. 703+68.46 BACK=
STA. 703+69.44 AHEAD

PROJECT EBRF 403-1(7)
SEC. 161-1-1 ENDS
STA. 504+00

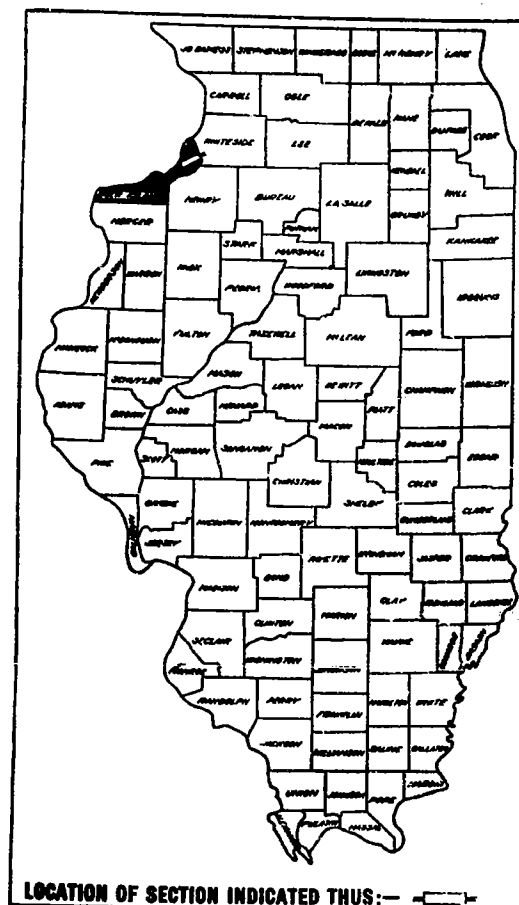
Sec. 161-1HB-3
Sta. 487+74.80

SEC. 161-1B-1
STA. 428+77

Sec. 161-1HB-2
Sta. 415+92.08

ROUTE NO.	SEC.	COUNTY	TOTAL	SHEET
FA 403	1-1	ROCK ISLAND	545	1
FED. ROAD DIST. NO. 6 ILLINOIS PROJECT EBRF 403-1(7) & I-80-1(94)0				

P-92-001-71 (161)



LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
SUBMITTED	<i>Aug. 28, 1974</i>
EXAMINED	<i>Nov. 6, 1974</i>
PASSED	<i>Nov. 9, 1974</i>
APPROVED	<i>Nov. 9, 1974</i>

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ENGINEER	DATE

CONTRACT NO. 80342

ROCK ISLAND COUNTY SECTION 161-1-1 F.A. ROUTE 403

REVISED SET
6-30-75

B.M. At Sta 441+50-30' L. 2 Nails
in south face of 14" tree
El. 576.74

NO.	SECTION	NO.	TOTAL	NO.	SHEET NO.
161-	161-	161-	545	255	11 SHEETS
FA 403	161-	161-	545	255	11 SHEETS
FA 403	161-	161-	545	255	11 SHEETS

GENERAL NOTES:

All Reinforcement bars shall be lapped 24 diameters unless otherwise shown.
Field connections shall be bolted using high strength bolts. Bolts 3/4" ϕ , open holes 13/16" ϕ , unless otherwise noted.

The basic lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

Field welding of construction accessories will not be permitted to the bottom or flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh weighing 58# per 100 sq.ft.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The contractor shall drive two steel test piles in a permanent location, one each at Abut. A and Abut. D as directed by the engineer before ordering the remainder of the piles.

Layout of slope walls may be varied in the field to suit ground conditions as directed by the engineer.

The concrete rail section above the mandatory const. joint at the top of the slab shall be constructed of class X concrete, except the aggregates shall conform to the requirements of handrail concrete.

Protective coat shall not be applied to surfaces to which waterproofing membrane syst. is applied.

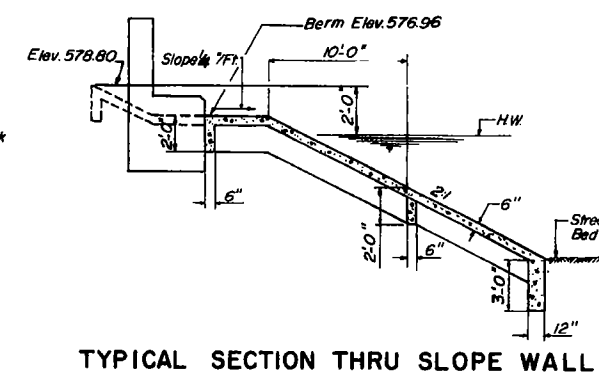
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

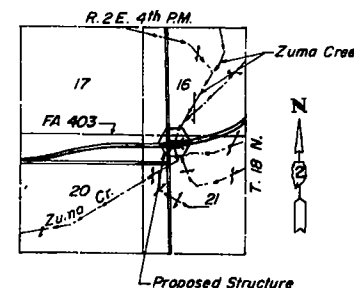
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Protective coat	Sq. Yds.	122	—	122
Class X Concrete	Cu Yds.	203.6	182	385.6
Structural Steel	L. Sum	0.11	—	0.11
Aluminum Railing	Lin. Ft.	308	—	308
Reinforcement bars	Lbs.	44,740	15,380	60,120
Stud Shear connectors	Each	2988	—	2988
Steel Piles HP 8 x 36	Lin. Ft.	—	714	714
Test Piles HP 8 x 36	Each	—	2	2
Name Plates	Each	1	—	1
Slope Wall (6")	Sq. Yds.	—	877	877
Bit. Conc. Surface course, Class I	Tons	56.0	—	56.0
Waterproofing Mem. System	Sq. Yds.	670	—	670
Preformed Jt. Sealer 2 1/2"	Lin. Ft.	84	—	84
Permanent Bench Mark	Each	1	—	1

* Calculated weight of structural steel = 183,080 Lbs.



TYPICAL SECTION THRU SLOPE WALL



LOCATION MAP

WATERWAY INFORMATION

Drainage Area	7680 Acres
Character	Hilly
Required Opening	450 Sq. Ft.
Proposed Opening	450 Sq. Ft.
Bottom Channel	El. 565.7
Q (50)	2600 c.f.s.

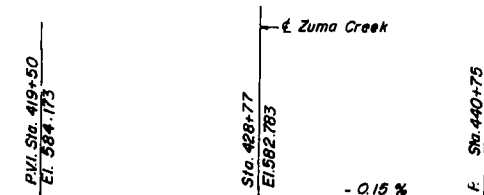
NOTES:

DESIGN LOADING:
HS 20-44 And Allowance For 25 PSF Future Wearing Surface

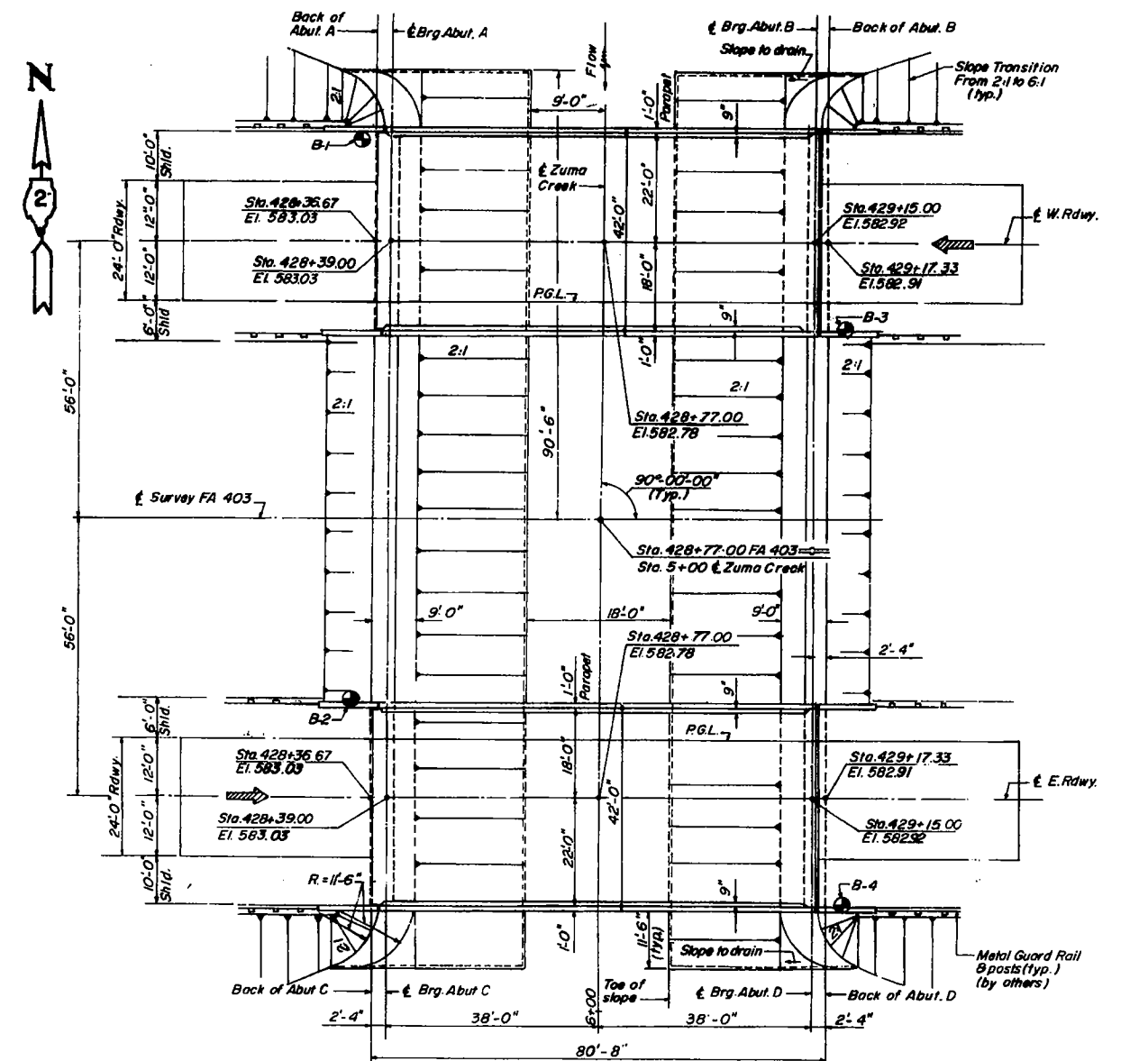
DESIGN STRESSES:
f_c = 1400 P.S.I. Except As follows:
f_s = 1200 P.S.I. For Deck Slab
f_c = 1000 P.S.I. For Conc. In Contact With Earth
f_s = 27,000 P.S.I. (AASHTO M223) Grade 50
f_s = 20,000 P.S.I. Reinforcement Steel
f_s = 75 P.S.I. Allowable Shear In Footings
f_s = 22,000 p.s.i. (Structural Steel) AASHTO M103
f_s = 70
Allowable Live Load Deflection =
L/1200 (Composite)
DESIGN SPECIFICATIONS: AASHTO 1969 As Applicable

NAME PLATE

SEE STD. 2113

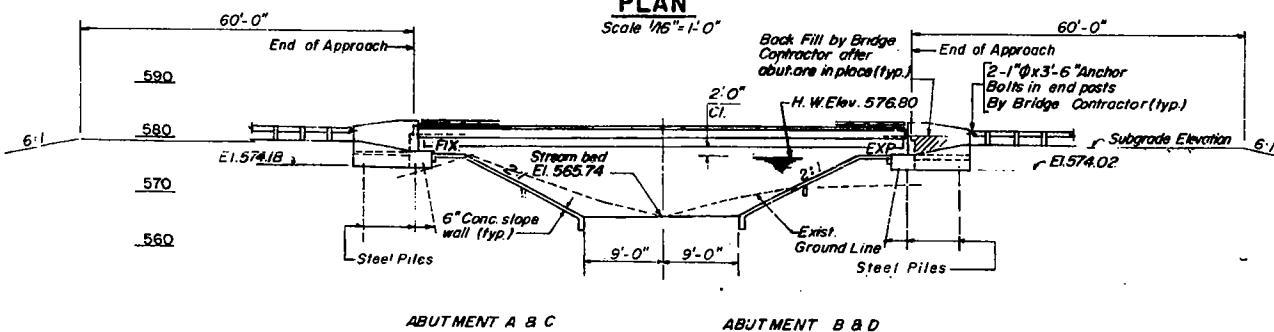


PROFILE FA 403 ALONG PROFILE GRADE LINE



PLAN

Scale 1/16" = 1'-0"



ELEVATION

Scale 1/16" = 1'-0"

DESIGNED	D.N.
CHECKED	H.S.
DRAWN	A.M.
CHECKED	H.S.

Rev. Reinf. Bars Sub from 14,580# to 15,380#. Total from 59,320# to 60,120#. 10-16-74 D.D.

Revised 12-6-74 (Design Structures)

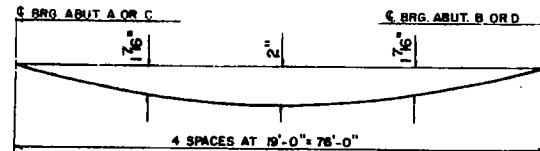
GENERAL PLAN & ELEVATION

FA 403 SECTION 161-1B-1

FA 403 OVER ZUMA CREEK

ROCK ISLAND COUNTY

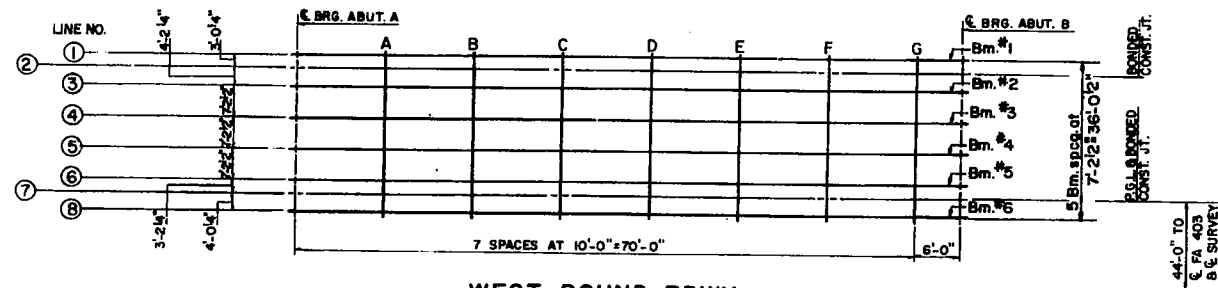
STATION 428+77.00



Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete slab and deck surfacing)



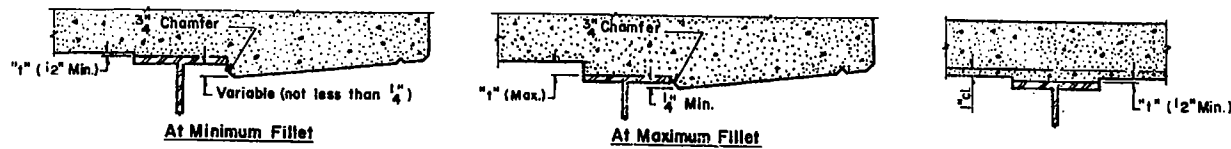
WEST BOUND RDWY.

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
C Brg. Abut. A	1 428+39.000	32.021	582.6693		582.669
	2 428+39.000	28.999	582.7323		582.732
	3 428+39.000	24.811	582.8195		582.820
	4 428+39.000	17.604	582.9368		582.936
	5 428+39.000	10.395	582.9989		582.999
	6 428+39.000	3.188	582.8863		582.886
	7 428+39.000	0.000	582.8365		582.837
	8 428+39.000	-4.021	582.7527		582.753
A	1 428+49.000	32.021	582.6543	0.0650	582.719
	2 428+49.000	28.999	582.7173	0.0666	582.784
	3 428+49.000	24.811	582.8095	0.0683	582.873
	4 428+49.000	17.604	582.9214	0.0683	582.990
	5 428+49.000	10.395	582.9839	0.0683	583.052
	6 428+49.000	3.188	582.8713	0.0683	582.940
	7 428+49.000	0.000	582.8715	0.0666	582.888
	8 428+49.000	-4.021	582.7377	0.0650	582.803
B	1 428+59.000	32.021	582.6393	0.1166	582.756
	2 428+59.000	28.999	582.7023	0.1191	582.822
	3 428+59.000	24.811	582.7895	0.1216	582.911
	4 428+59.000	17.604	582.9064	0.1216	583.028
	5 428+59.000	10.395	582.9689	0.1216	583.091
	6 428+59.000	3.188	582.8563	0.1216	582.978
	7 428+59.000	0.000	582.8065	0.1191	582.926
	8 428+59.000	-4.021	582.7227	0.1166	582.839
C	1 428+69.000	32.021	582.6243	0.1491	582.774
	2 428+69.000	28.999	582.6873	0.1529	582.840
	3 428+69.000	24.811	582.7745	0.1566	582.931
	4 428+69.000	17.604	582.8914	0.1566	583.048
	5 428+69.000	10.395	582.9539	0.1566	583.111
	6 428+69.000	3.188	582.8413	0.1566	582.998
	7 428+69.000	0.000	582.7915	0.1529	582.944
	8 428+69.000	-4.021	582.7077	0.1491	582.857

DESIGNED	D.M.P.
CHECKED	R.A.
DRAWN	A.S.
CHECKED	D.M.P.

NOTES:
ELEVATIONS ARE GIVEN AT SURFACE OF 1/2" DECK SURFACING.
OFFSETS ARE FROM PROFILE GRADE LINE.

LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
D	1 428+79.000	32.021	582.6093	0.1566	582.766
	2 428+79.000	28.999	582.6723	0.1612	582.834
	3 428+79.000	24.811	582.7595	0.1658	582.925
	4 428+79.000	17.604	582.8764	0.1658	583.042
	5 428+79.000	10.395	582.9389	0.1658	583.105
	6 428+79.000	3.188	582.8263	0.1658	582.992
	7 428+79.000	0.000	582.7765	0.1612	582.938
	8 428+79.000	-4.021	582.6927	0.1566	582.849
E	1 428+89.000	32.021	582.5943	0.1400	582.734
	2 428+89.000	28.999	582.6573	0.1429	582.800
	3 428+89.000	24.811	582.7445	0.1458	582.890
	4 428+89.000	17.604	582.8614	0.1458	583.007
	5 428+89.000	10.395	582.9239	0.1458	583.070
	6 428+89.000	3.188	582.8113	0.1458	582.957
	7 428+89.000	0.000	582.7615	0.1429	582.904
	8 428+89.000	-4.021	582.6777	0.1400	582.818
F	1 428+99.000	32.021	582.5793	0.0991	582.679
	2 428+99.000	28.999	582.6423	0.1012	582.744
	3 428+99.000	24.811	582.7295	0.1033	582.833
	4 428+99.000	17.604	582.8464	0.1033	582.950
	5 428+99.000	10.395	582.9089	0.1033	583.012
	6 428+99.000	3.188	582.7963	0.1033	582.900
	7 428+99.000	0.000	582.7465	0.1012	582.848
	8 428+99.000	-4.021	582.6627	0.0991	582.762
G	1 429+ 9.000	32.021	582.5644	0.0408	582.605
	2 429+ 9.000	28.999	582.6273	0.0408	582.668
	3 429+ 9.000	24.811	582.7145	0.0408	582.756
	4 429+ 9.000	17.604	582.8314	0.0408	582.872
	5 429+ 9.000	10.395	582.8939	0.0408	582.935
	6 429+ 9.000	3.188	582.7813	0.0408	582.823
	7 429+ 9.000	0.000	582.7315	0.0408	582.708
	8 429+ 9.000	-4.021	582.6477	0.0408	582.618
C Brg. Abut. B	1 429+15.000	32.021	582.5554		582.555
	2 429+15.000	28.999	582.6183		582.618
	3 429+15.000	24.811	582.7055		582.706
	4 429+15.000	17.604	582.8225		582.823
	5 429+15.000	10.395	582.8850		582.885
	6 429+15.000	3.188	582.7723		582.772
	7 429+15.000	0.000	582.7225		582.723
	8 429+15.000	-4.021	582.6387		582.639



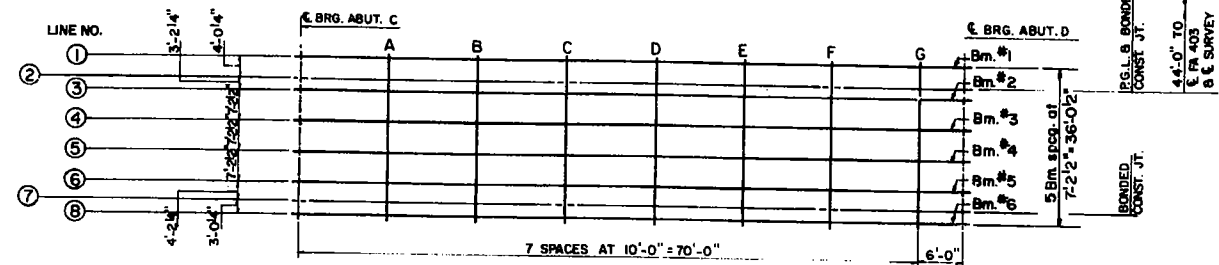
EXTERIOR BEAM

At Minimum Fillet

At Maximum Fillet

INTERIOR BEAM

FILLET HEIGHTS



EAST BOUND RDWY.

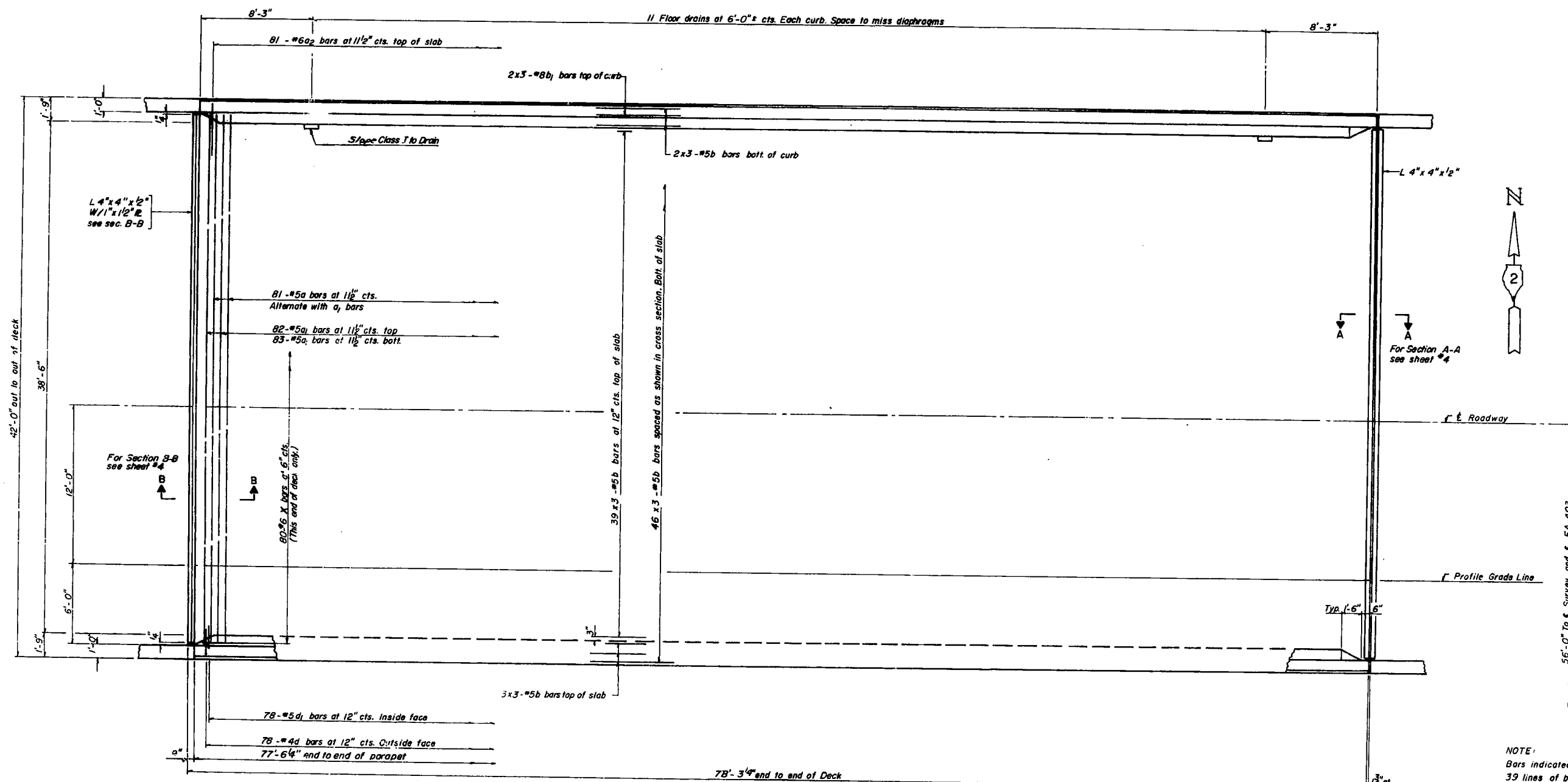
LOCATION OF LINES	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	DEFL CONC	THEORETICAL ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION
C Brg. Abut. C	1 428+89.000	4.021	582.7527		582.753
	2 428+89.000	0.000	582.8365		582.837
	3 428+89.000	-3.188	582.8863		582.886
	4 428+89.000	-10.395	582.9989		582.999
	5 428+89.000	-17.604	582.9364		582.936
	6 428+89.000	-24.811	582.8195		582.820
	7 428+89.000	-28.999	582.7323		582.732
	8 428+89.000	-32.021	582.6693		582.669
A	1 428+49.000	4.021	582.7377	0.0650	582.803
	2 428+49.000	0.000	582.8215	0.0666	582.888
	3 428+49.000	-3.188	582.8713	0.0683	582.940
	4 428+49.000	-10.395	582.9839	0.0683	583.052
	5 428+49.000	-17.604	582.9214	0.0683	582.990
	6 428+49.000	-24.811	582.8045	0.0683	582.873
	7 428+49.000	-28.999	582.7173	0.0666	582.784
	8 428+49.000	-32.021	582.6543	0.0650	582.719
B	1 428+59.000	4.021	582.7227	0.1166	582.839
	2 428+59.000	0.000	582.8065	0.1191	582.925
	3 428+59.000	-3.188	582.8563	0.1216	582.978
	4 428+59.000	-10.395	582.9689	0.1216	583.091
	5 428+59.000	-17.604	582.9064	0.1216	583.028
	6 428+59.000	-24.811	582.7895	0.1216	582.911
	7 428+59.000	-28.999	582.7023	0.1191	582.822
	8 428+59.000	-32.021	582.6393	0.1166	582.756
C	1 428+69.000	4.021	582.7077	0.1491	582.857
	2 428+69.000	0.000	582.7915	0.1529	582.944
	3 428+69.000	-3.188	582.8413	0.1566	582.998
	4 428+69.000	-10.395	582.9539	0.1566	583.111
	5 428+69.000	-17.604	582.8914	0.1566	583.048
	6 428+69.000	-24.811	582.7745	0.1566	582.931
	7 428+69.000	-28.999	582.6873	0.1529	582.840
	8 428+69.000	-32.021	582.6243	0.1491	582.774
D	1 428+79.000	4.021	582.6927	0.1566	582.849
	2 428+79.000	0.000	582.7765	0.1612	582.938
	3 428+79.000	-3.188	582.8263	0.1658	582.992
	4 428+79.000	-10.395	582.9389	0.1658	583.105
	5 428+79.000	-17.604	582.8764	0.1658	583.042
	6 428+79.000	-24.811	582.7595	0.1658	582.925
	7 428+79.000	-28.999	582.6723	0.1612	582.834
	8 428+79.000	-32.021	582.6093	0.1566	582.766
E	1 428+89.000	4.021	582.6777	0.1400	582.818
	2 428+89.000	0.000	582.7615	0.1429	582.904
	3 428+89.000	-3.188	582.8113	0.1458	582.967
	4 428+89.000	-10.395	582.9239	0.1458	583.070
	5 428+89.000	-17.604	582.8614	0.1458	583.007
	6 428+89.000	-24.811	582.7445	0.1458	582.890
	7 428+89.000	-28.999	582.6573	0.1429	582.800
	8 428+89.000	-32.021	582.5943	0.1400	582.734
F	1 428+99.000	4.021	582.6627	0.0991	582.762
	2 428+99.000	0.000	582.7465	0.1012	582.848
	3 428+99.000	-3.188	582.7963	0.1033	582.900
	4 428+99.000	-10.395	582.9089	0.1033	583.012
	5 428+99.000	-17.604	582.8464	0.1033	582.950
	6 428+99.000	-24.811	582.7295	0.1033	582.833
	7 428+99.000	-28.999	582.6423	0.1012	582.744
	8 428+99.000	-32.021	582.5793	0.0991	582.679
G	1 429+ 9.000	4.021	582.6477	0.0408	582.689
	2 429+ 9.000	0.000	582.7315	0.0408	582.772
	3 429+ 9.000	-3.188	582.7813	0.0408	582.823
	4 429+ 9.000	-10.395	582.8939	0.0408	582.935
	5 429+ 9.000	-17.604	582.8314	0.0408	582.872
	6 429+ 9.000	-24.811	582.7145	0.0408	582.756
	7 429+ 9.000	-28.999	582.6273	0.0408	582.668
	8 429+ 9.000	-32.021	582.5644	0.0408	582.605
C Brg. Abut. D	1 429+15.000	32.021	582.6387		582.639
	2 429+15.000	28.999	582.7055		582.706
	3 429+15.000	24.811	582.7925		582.793
	4 429+15.000	17.604	582.8850		582.885
	5 429+15.000	10.395	582.9539		582.954
	6 429+15.000	3.188	582.8413		582.842
	7 429+15.000	0.000	582.7915		582.792
	8 429+15.000	-4.021	582.7077		582.708

ELEVATIONS-TOP DECK
FA 403 SECTION 161 1B-1
FA 403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION 428+77.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	S
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I.	161-	ROCK ISLAND	545	257
P. A. 403	1-1			
PWD. ROAD DIST. NO. 7	ILLINOIS	PWD. A18 PROJECT		

SHEET NO. 3
11 SHEETS



DECK PLAN
(WEST BOUND SHOWN)
(EAST BOUND SIMILAR)

Note: Work this sheet with sheet No. 4

DESIGNED	PE
CHECKED	PX
DRAWN	GG
CHECKED	DMP

NOTE:
Bars indicated thus 39 x 3 - #5 etc. indicates
39 lines of bars with 3 lengths per line.
Min. bar laps = 24 dia.
Parapet Reinforcement and Class X Concrete
are billed on sheet No. 5.

DECK SLAB
FA 403 SECTION 161-1B-1
FA 403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION 428 + 77.00



*Preformed Joint Saver

L 4" x 4" x 1/2" x 39'-11 1/2" long
Fabricate to crown

7/16" ϕ vent hole at 12" cts.
set on 1 3/8" gage line.

1" x 1 1/2" bar

3/8"

7/16" ϕ vent hole at 12" cts.
set on 1 3/8" gage line.

Deck Surfacing.

3/4"

12" cts for 3/8" bolts set
All bolts shall be
or chipped off flush
angles after forms

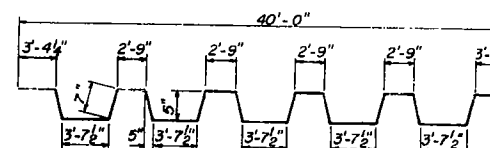
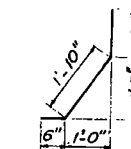
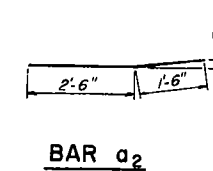
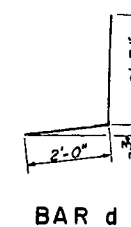
L 4" x 4" x 1/2" x 39'-11 1/2" long
Fabricate to crown

3/8" x 8" x 8" CR 1020 STL granule
or solid flux filled headed studs
automatically and welded.
(40 studs at 12" alternate cts.)

1/4" x 1/2" bars tack
weld at 6" cts.

* Abuts B & D only

PREFORMED JOINT
SEALER (2½")



BAR a

SHEET NO. 4
11 SHEETS

(Transfer to Dr. Sheet 22) Lm Fl. 42
 Note: Bill of Material for one bridge only.
 Material for two Bridges required
 * Weight of bearing assemblies with lead
 plates and anchor bolts are included
 in Structural Steel.
 * Parapet Reinforcement and Class K
 Concrete are billed on sheet No 5
 Note: Work this Sheet with Sheet No. 3

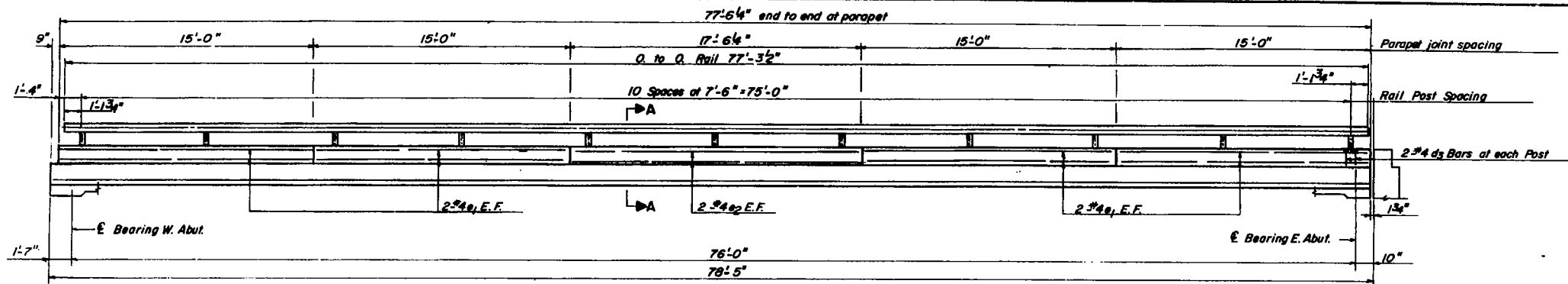
DESIGNED	PB
CHECKED	PK
DRAWN	GG
CHECKED	DMP

CROSS SECTION

Looking East W. Bd. Roadway
Looking West E. Bd. Roadway

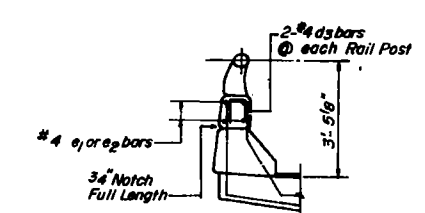
DECK DETAILS

FA 403 SECTION 161 - 18-1
FA 403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION 428 + 77.00
COR 9-25-72 LS.

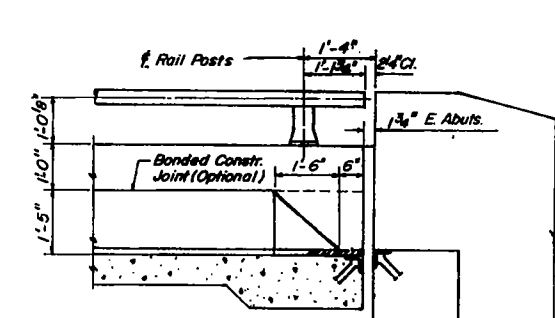


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FA 403	161-1	ROCK ISLAND	545	259	11 SHEETS
FED. ROAD BMT. NO. 7					

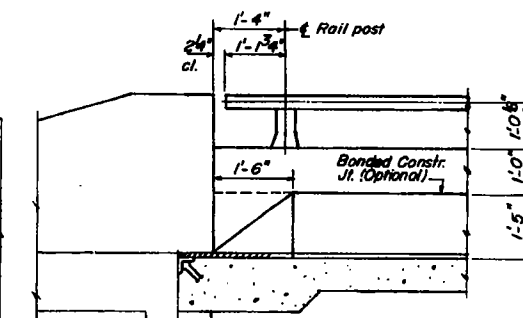
PARAPET & RAILING ALONG NORTH FASCIA (SOUTH FASCIA SIMILAR)



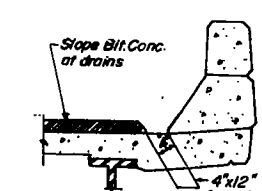
SECTION A-A



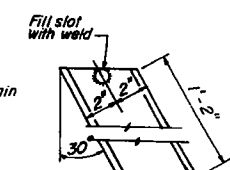
AT ABUTMENT
INSIDE VIEW OF PARAPET
EAST ABUTMENTS



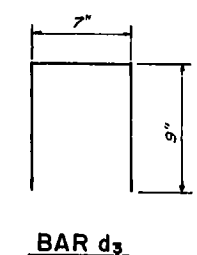
AT ABUTMENTS
INSIDE VIEW OF PARAPET
WEST ABUTMENTS



AT CURB



END VIEW



BAR d3

3/16" Aluminum Sheets Welded
ASTM B-209 alloy 6061-T6
or Aluminum Extrusions
ASTM B-221 alloy 6061-T6

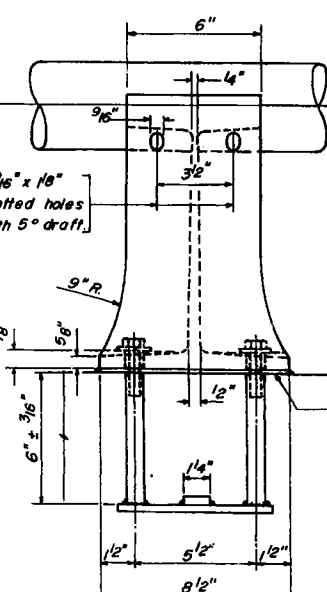
TOP VIEW

FLOOR DRAINS
(COST INCIDENTAL)

PARAPETS & RAILS * BILL OF MATERIAL

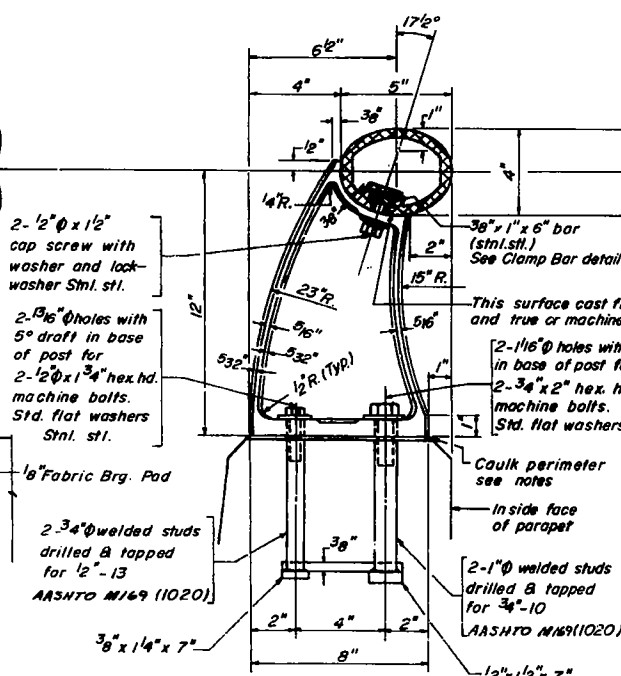
Bar	No.	Size	Length	Shape
d3	44	#4	2'-1"	□
e1	32	#4	14'-8"	—
e2	8	#4	17'-3"	—
Reinforcement Bars				Lbs. 470
Class X Concrete				Cu.Yds. 5.0
Aluminum Railing				L.in.Ft. 154

* Bill of material for one bridge only
Work this sheet with sheet No. 4

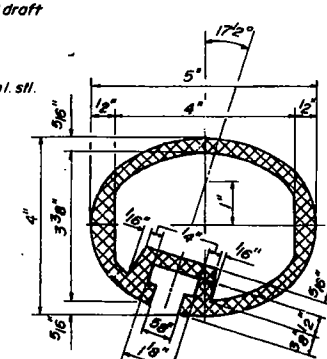


RAIL POST DETAILS

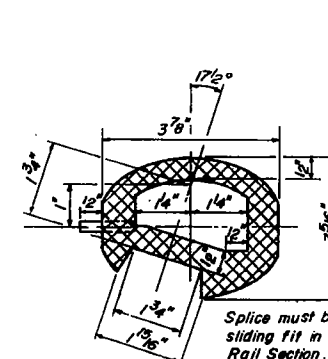
DESIGNED	P.B.
CHECKED	P.K.
DRAWN	A.S.
CHECKED	P.K.



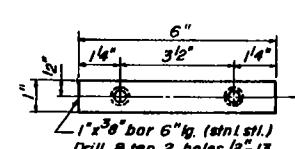
CAST END CAP
DRIVE FIT TYPE
B Required



SEC. THRU ELLIPTICAL
RAIL SECTION



SEC. THRU SPLICE



CLAMP BAR

Two component non-staining
gray sealing compound with
polysulfide liquid polymers-
gun grade with primer.

1/2" Preformed Cork
Asphalt Joint Filler.
(meets qualifications for
ASTM Designation D 1751,
Cost incidental.

PARAPET JOINT DETAIL

Stainless steel machine bolts or cap screws shall be in accordance with Article 710.37(a) of the Standard Specifications except Grade B8 or B8M may be furnished.

NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

All joints in rail shall be spliced per detail.

Provide 1-1/4" and 2-1/4" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

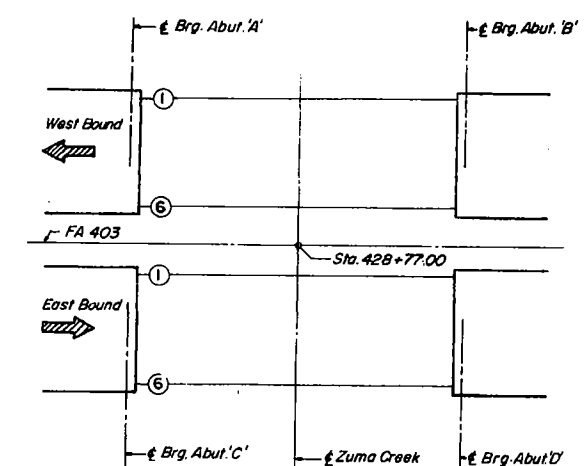
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6061-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

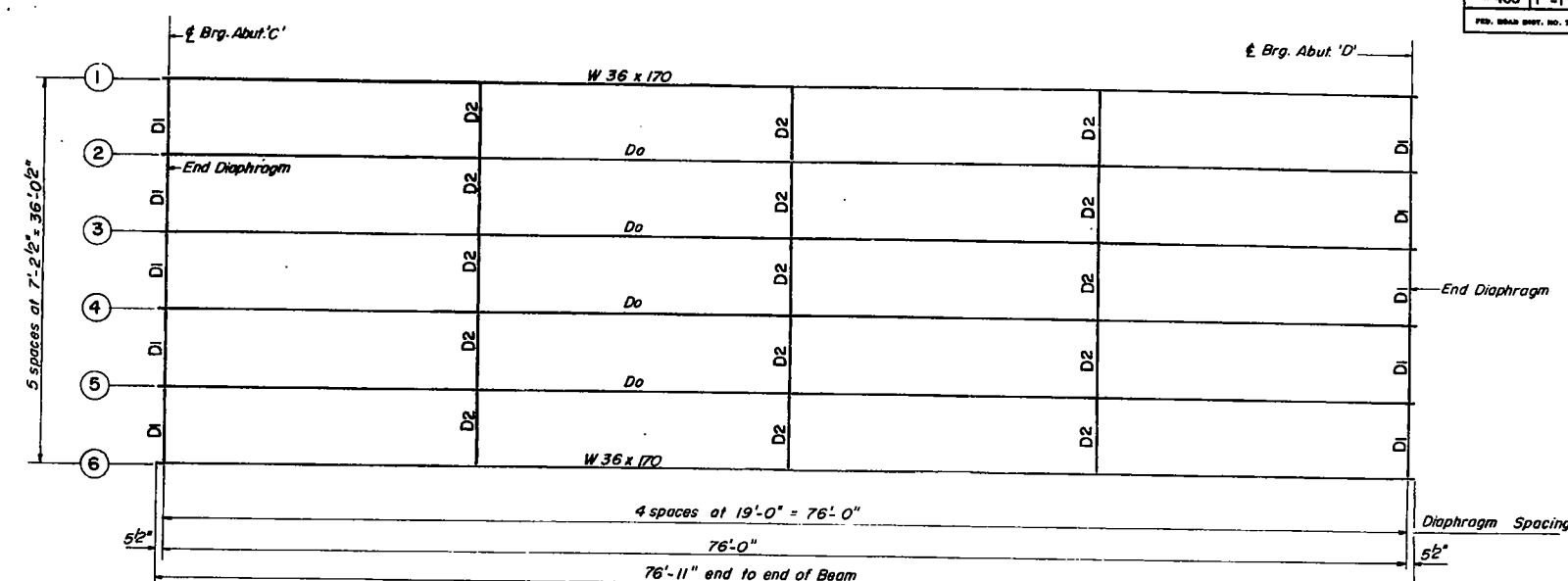
PARAPET AND RAILING

FA 403 SECTION 161-1B-1
FA 403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION 428 + 77.00
COR. 9-25-72 L.S.

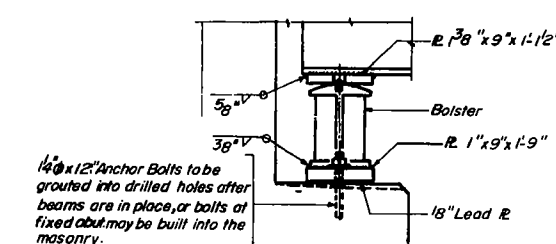
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	DATE
FA 403	161-1	ROCK ISLAND	545	260	NOV 1978
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



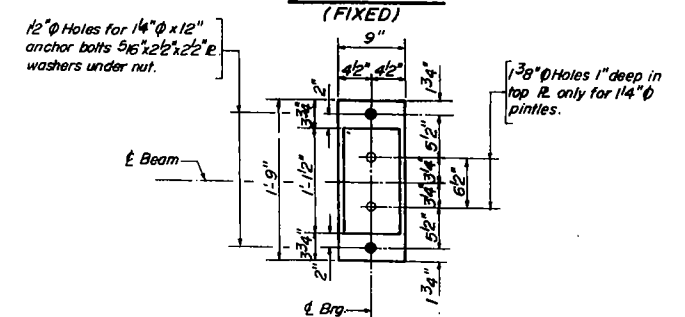
KEY PLAN



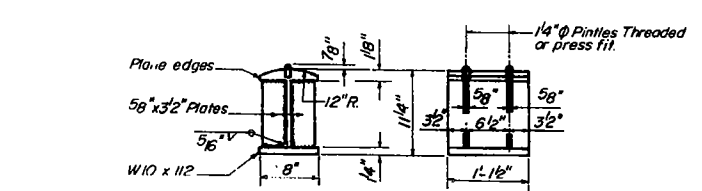
FRAMING PLAN
East Bound Shown
West Bound Similar



ABUT. A & C (FIXED)

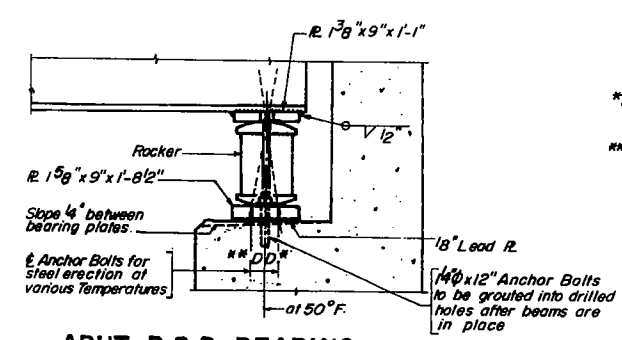


PLAN

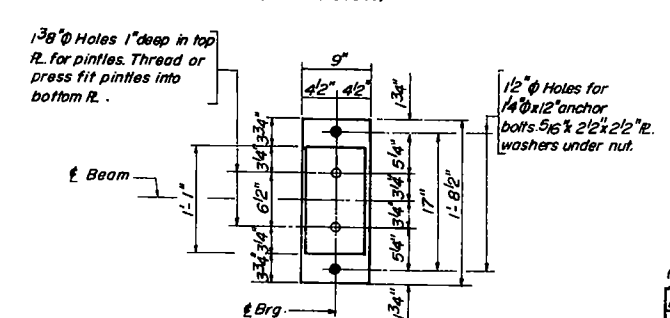


DETAIL OF BOLSTER ABUT. A & C

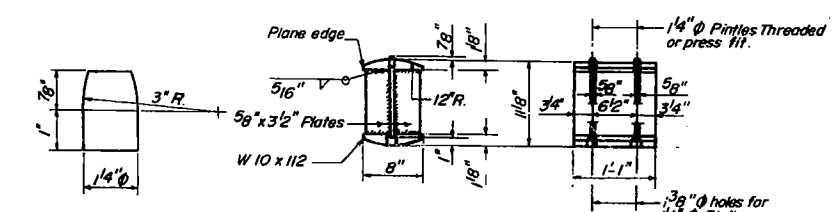
DESIGNED	P.B.
CHECKED	H.R.S.
DRAWN	A.M.
CHECKED	H.R.S.



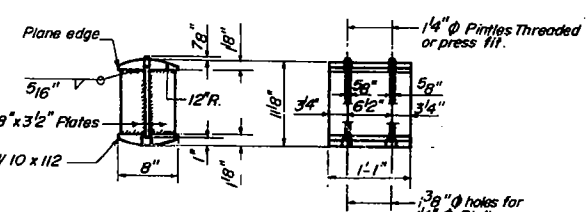
ABUT. B & D BEARING (EXPANSION)



PLAN



DETAIL OF PINTLE



DETAIL OF ROCKER ABUT. B & D

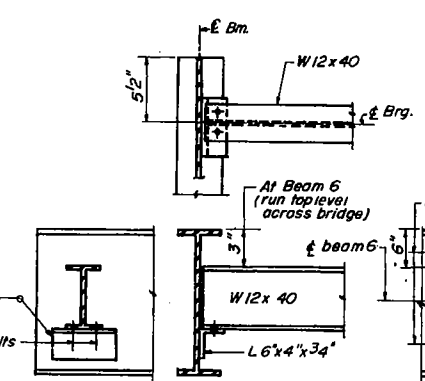
*D=1/8"/100 ft. of exp. for every 15° below the normal temp. of 50°
 **D=1/8"/100 ft. of exp. for every 15° above the normal temp. of 50°

Note: Hardened washer shall be required over 1/2" holes in angles.
 2-3/4" H.S. Bolts

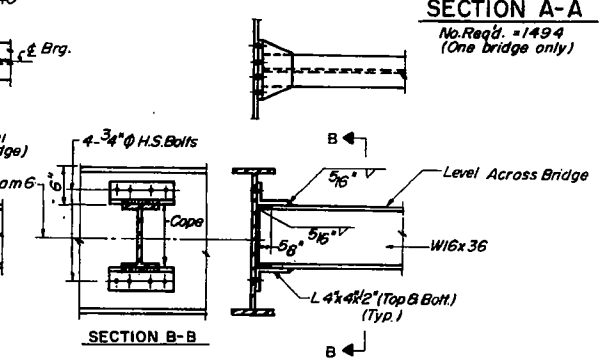
(Composite in Positive Moment areas only)

INTERIOR GIRDER MOMENT TABLE	
	0.5 Span
Is (in ⁴)	12559
Ic (in ⁴)	31400
Ss (in ³)	763
Sc (in ³)	1053
Q (in ²)	.97
M _Q (in ²)	6905
f _s Q (ksi)	10.86
S _Q (in ²)	.462
M _s Q (in ²)	337
M _Q +M _s Q (in ²)	891.1
Total (in ²)	1228
f _s Q (ksi)	13.99
f _s Total (ksi)	24.85
VR (ksi)	51.7

Note: W36x170 beams shall conform to AASHTO M223 Grade 50. All other Structural Steel to AASHTO M183.



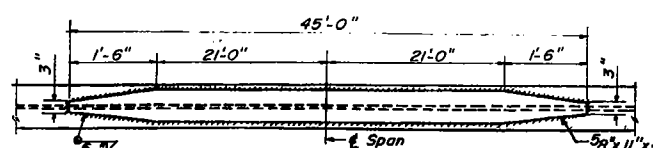
END DIAPHRAGM D1
20 D1 Required



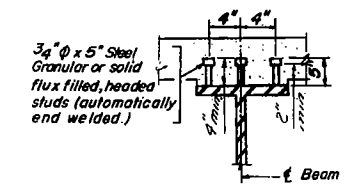
INTERIOR DIAPHRAGM D2
30 D2 Required

INTERIOR GIRDER REACTION TABLE	
	Abutment
R _Q (k)	53.8
R _Q +M _Q (k)	57.7
R Total (k)	111.5

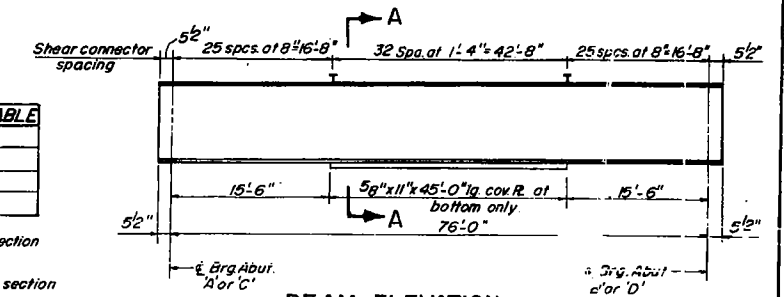
Is and Ss are the moment of inertia and section modulus of the steel section.
 Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f_s.
 VR is the maximum impact shear range in span.



DETAIL OF COVER PLATE
Revised 12-6-78 (Note for Beams etc.)

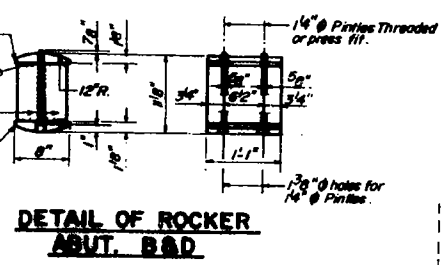
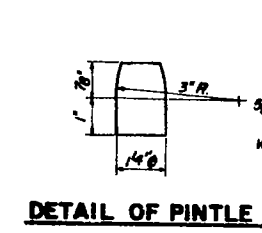
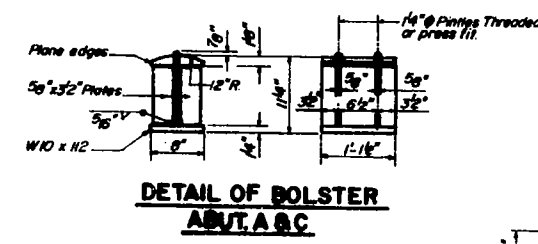
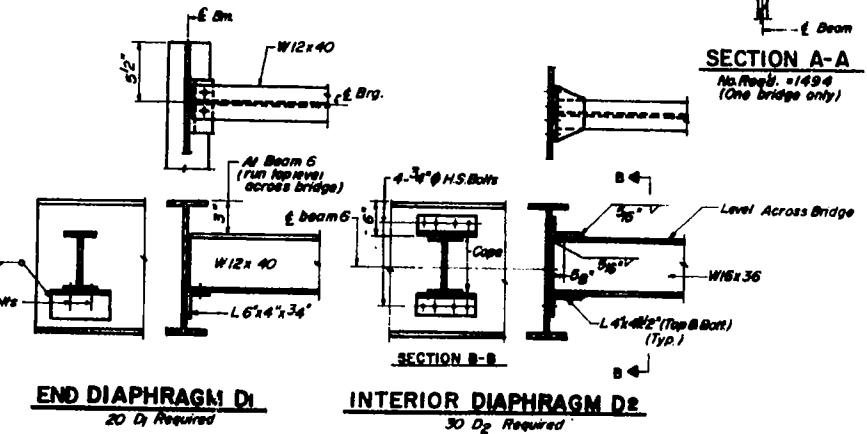
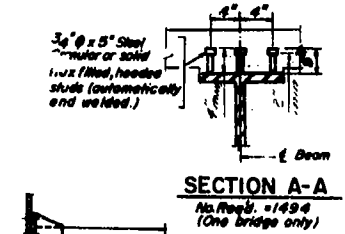
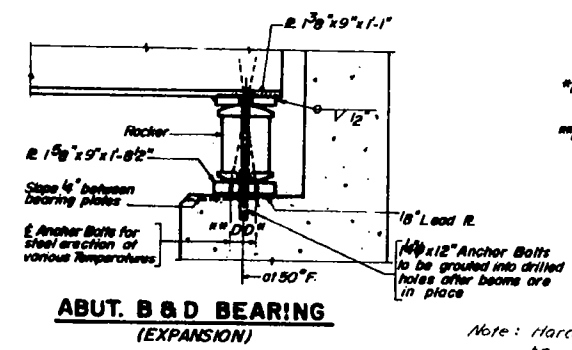
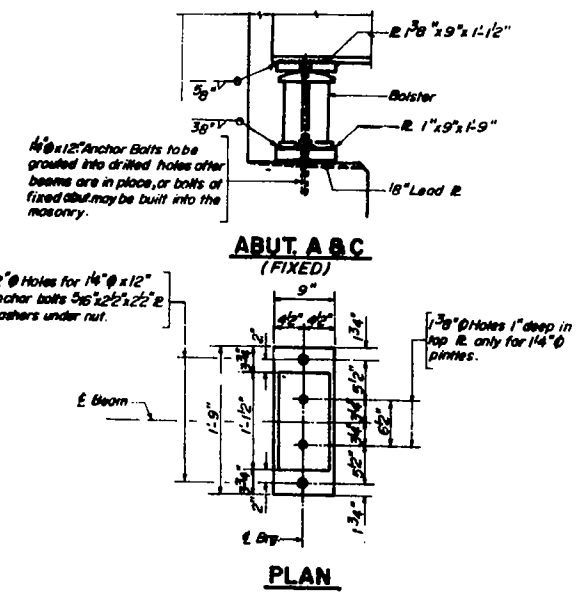
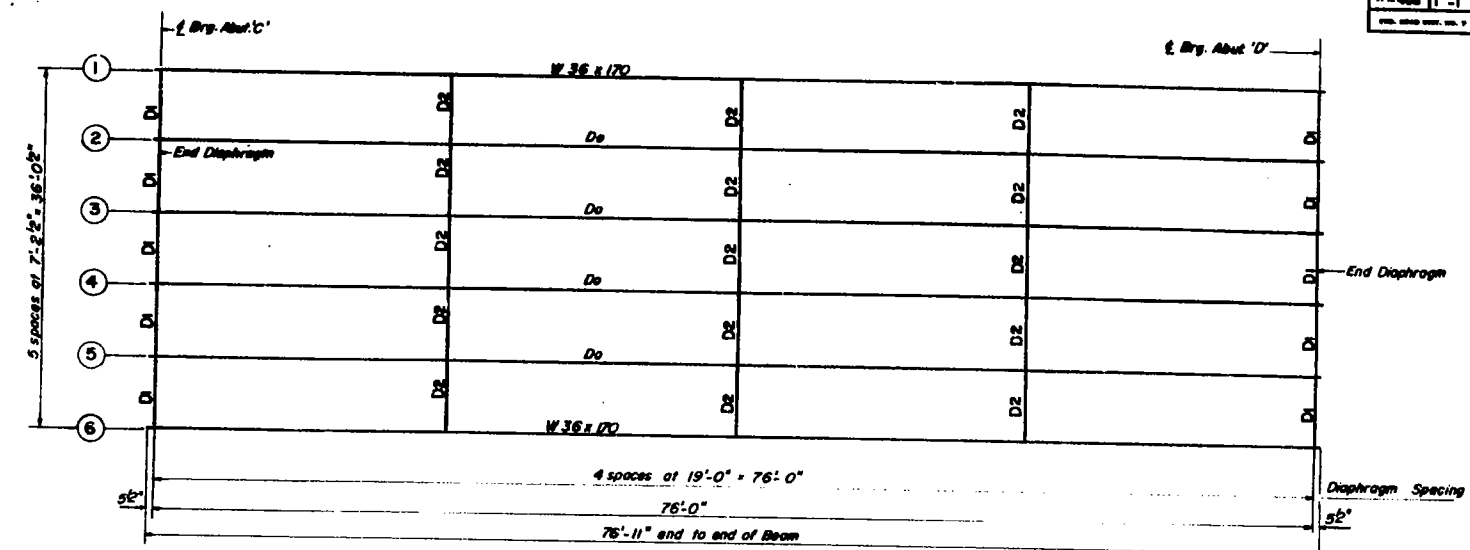
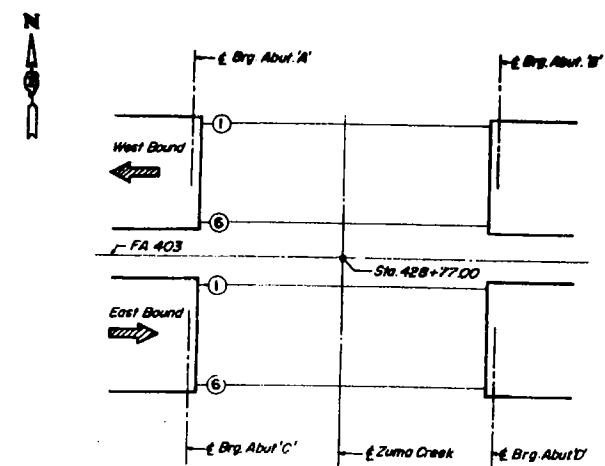


SECTION A-A
No. Req'd. = 1494
(One bridge only)



BEAM ELEVATION

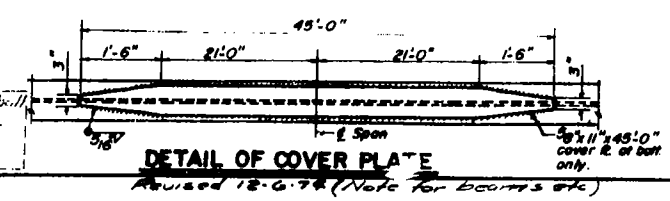
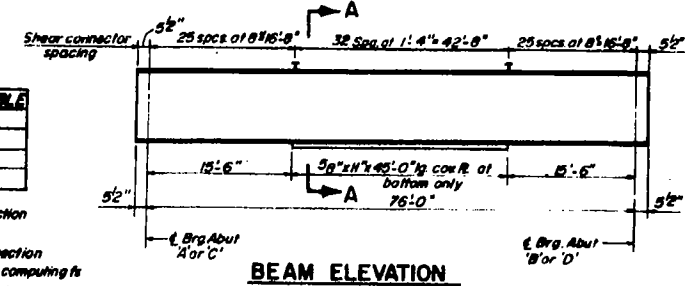
SUPERSTRUCTURE STEEL
 FA 403 SECTION 161-1B-1
 FA 403 OVER ZUMA CREEK
 ROCK ISLAND COUNTY
 STATION 428+77.00



(Composite in Positive Moment areas only)

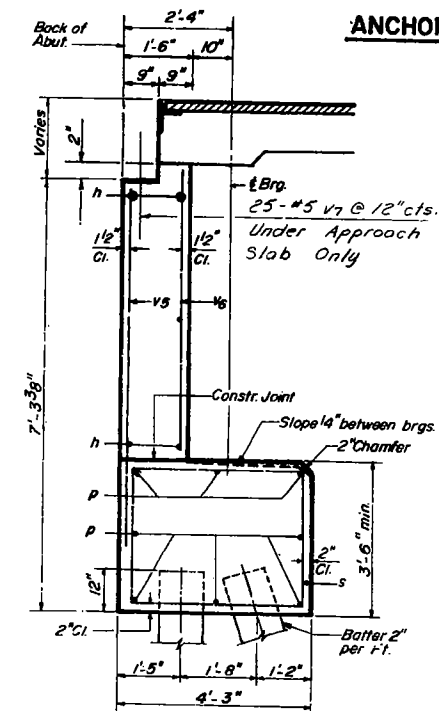
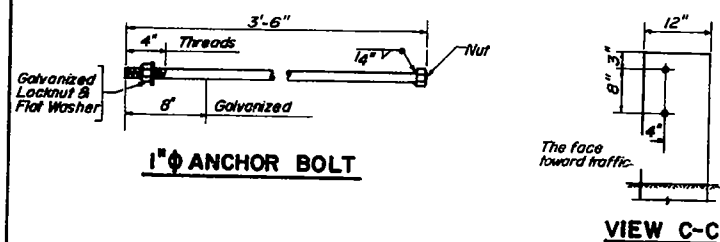
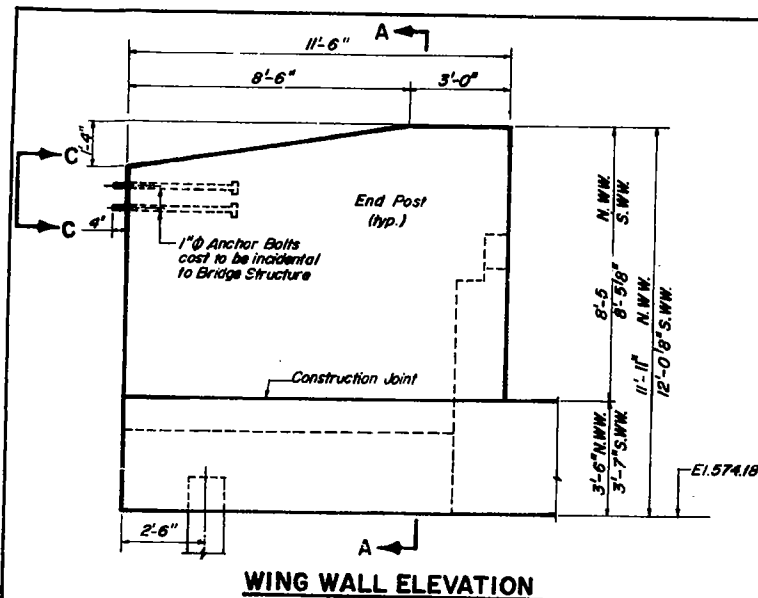
Location	Moment (ft-k)
1/4 Span	12559
1/2 Span	31400
3/4 Span	783
Support	1053
End	97
Midspan	6905
1/4 Span	10.86
1/2 Span	337
3/4 Span	89.1
Total	1228
1/4 Span	13.99
1/2 Span	2485
3/4 Span	51.7

Location	Reaction (k)
1/4 Span	53.8
1/2 Span	87.7
3/4 Span	111.5

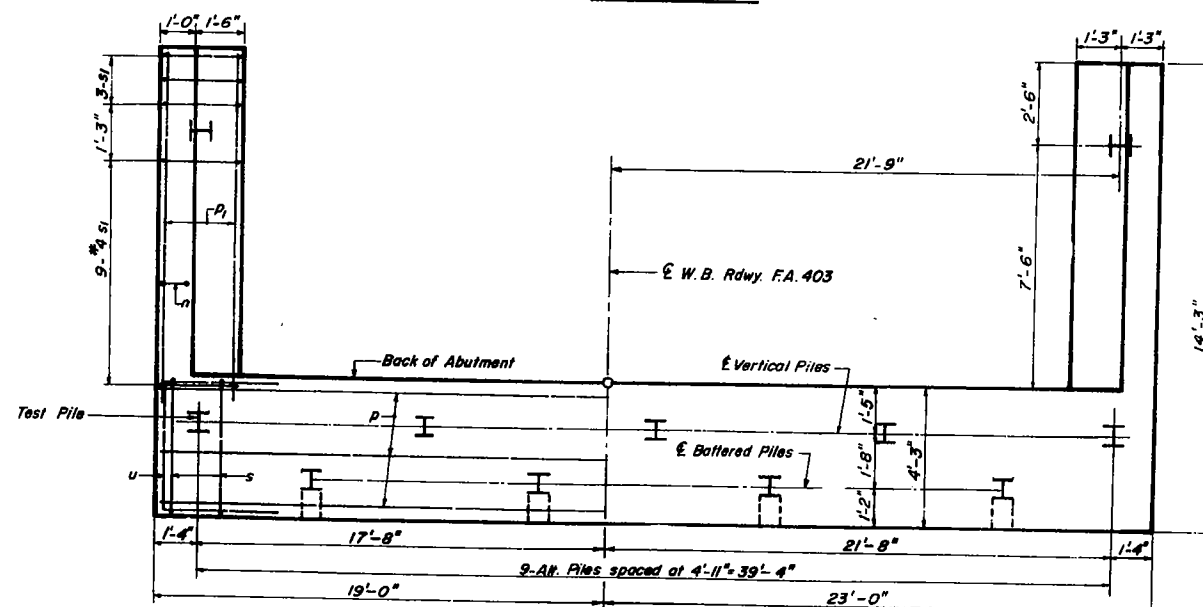
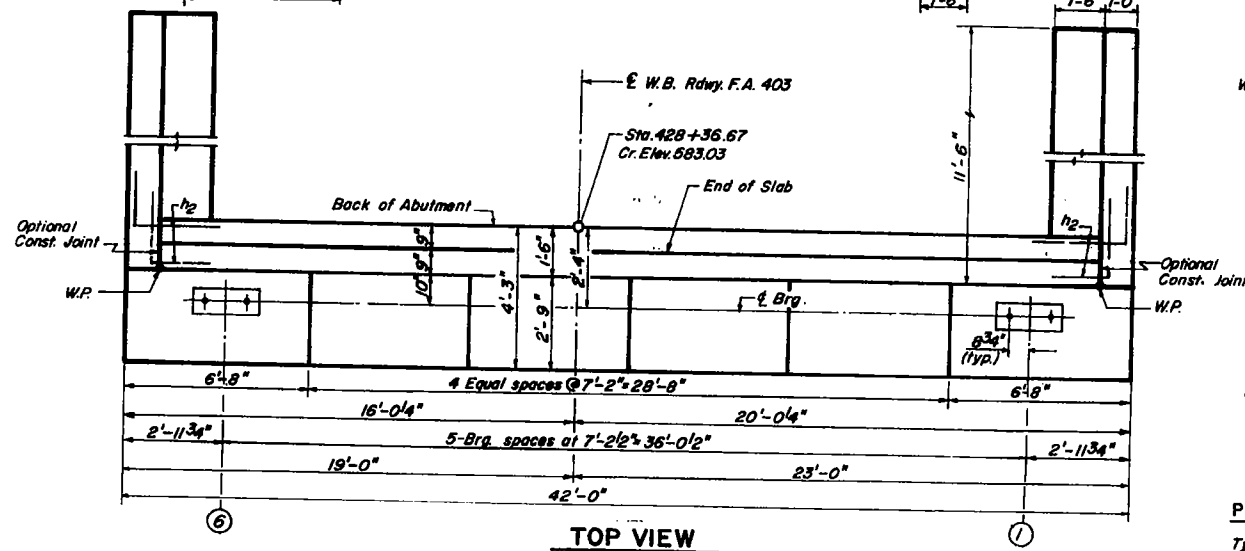
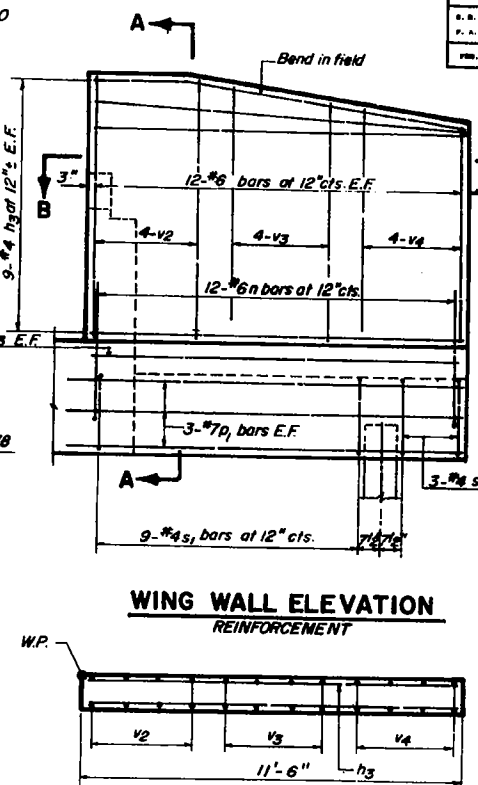
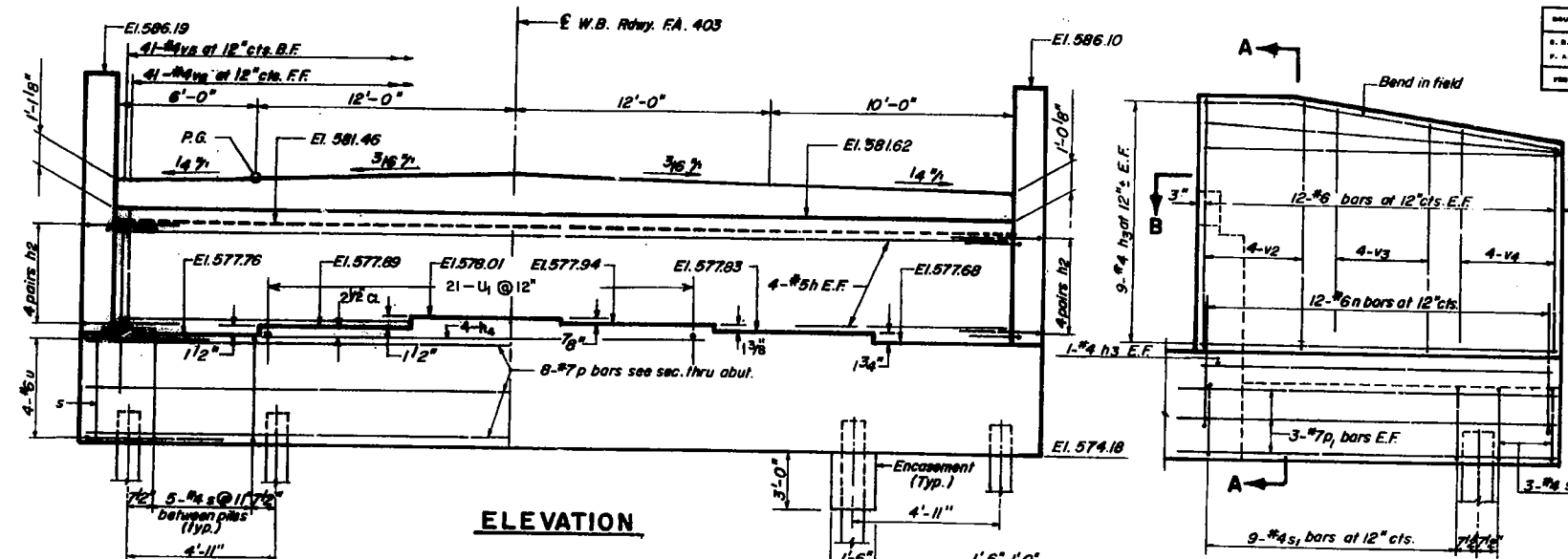
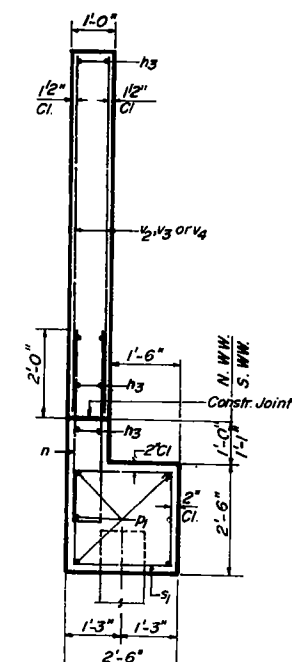


SUPERSTRUCTURE STEEL
 FA 403 SECTION 161-1B-1
 FA 403 OVER ZUMA CREEK
 ROCK ISLAND COUNTY
 STATION 428+77.00

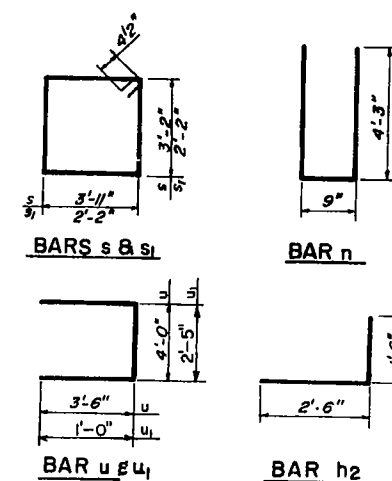
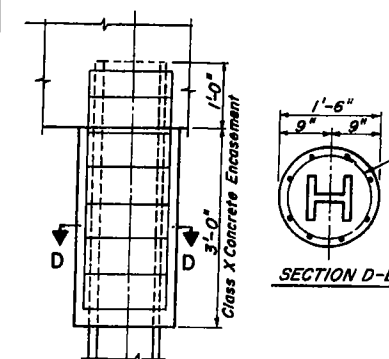
Rev. 12-5-75 D.D.



DESIGNED	A.A.
CHECKED	H.P.S.
DRAWN	A.M.
CHECKED	B.T.M.



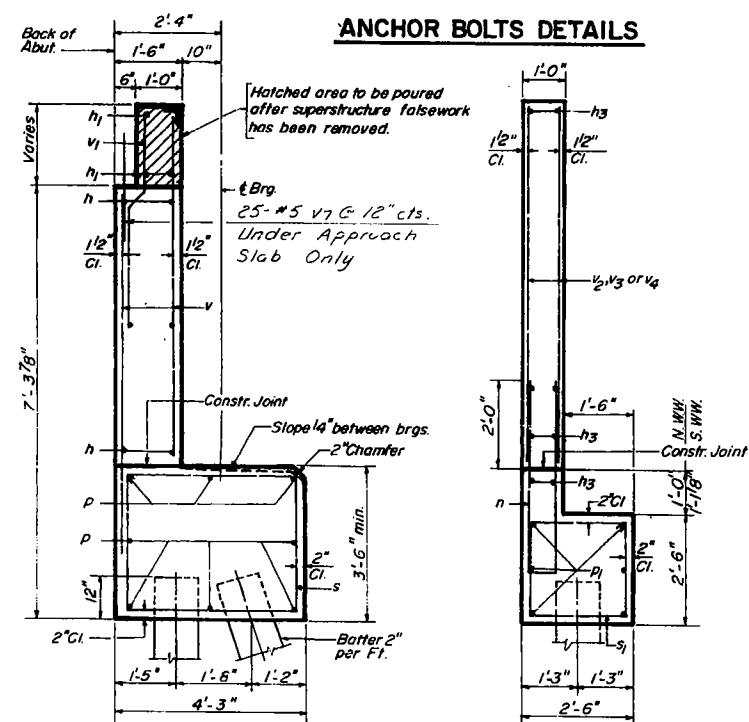
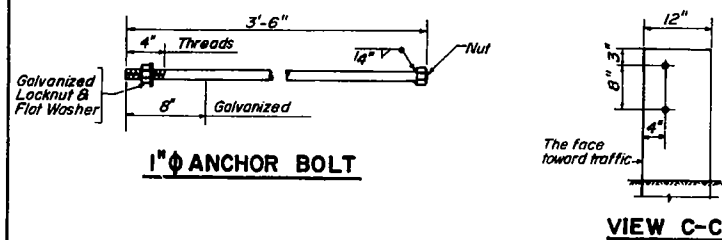
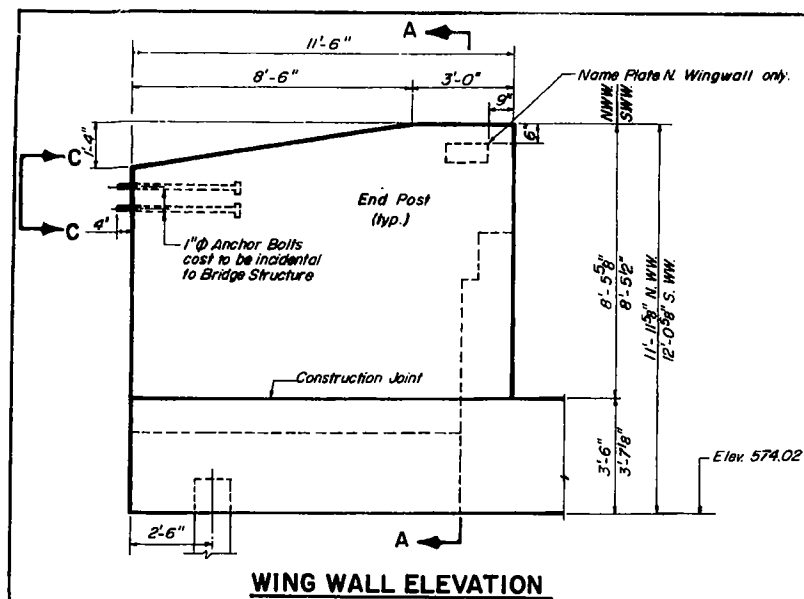
PILE DATA
 Type: — Steel Pile HP 8x36
 Capacity: Refusal
 Est. Length-14'
 No. Required: 11 Including one Test Pile



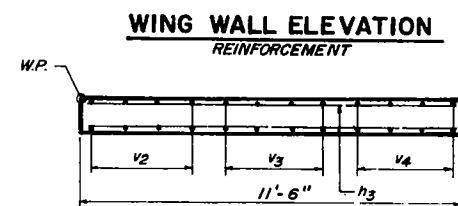
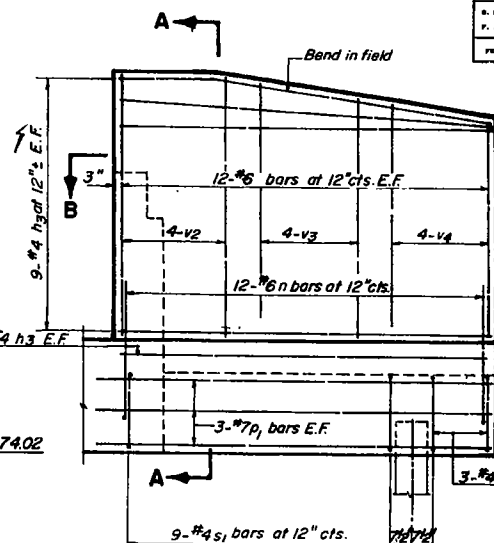
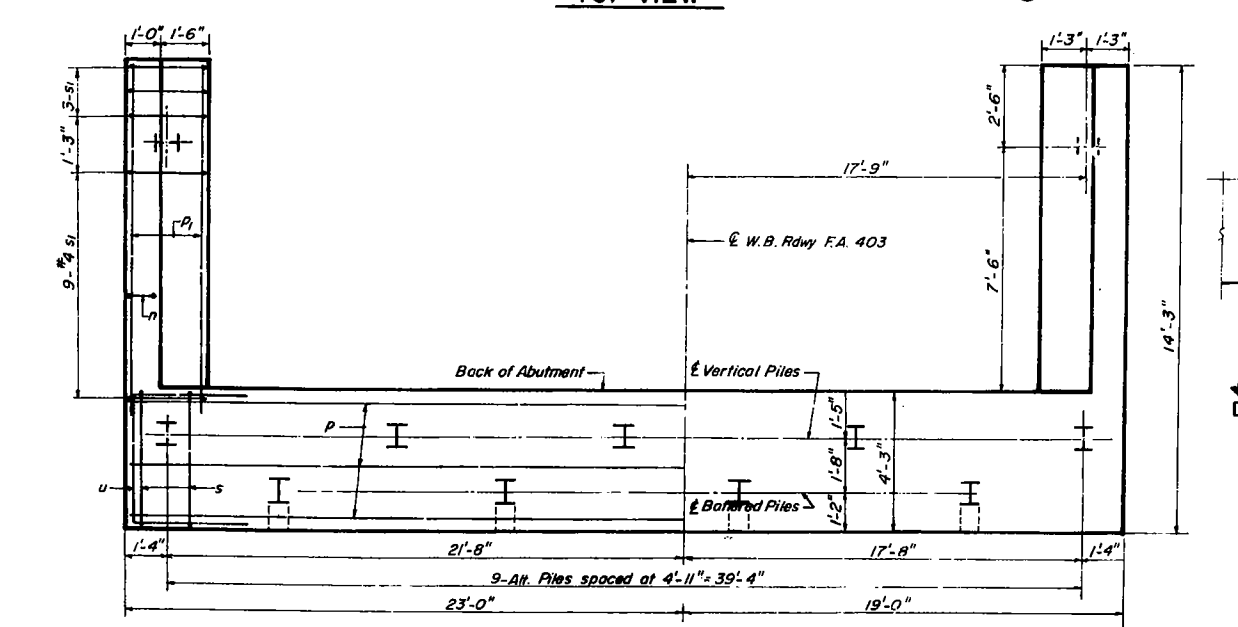
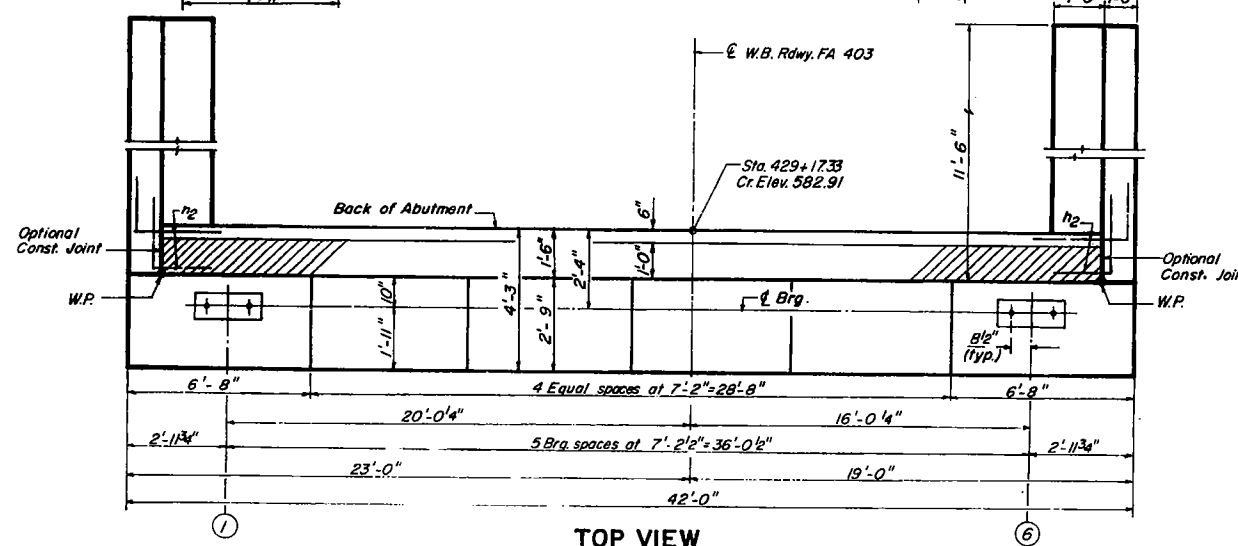
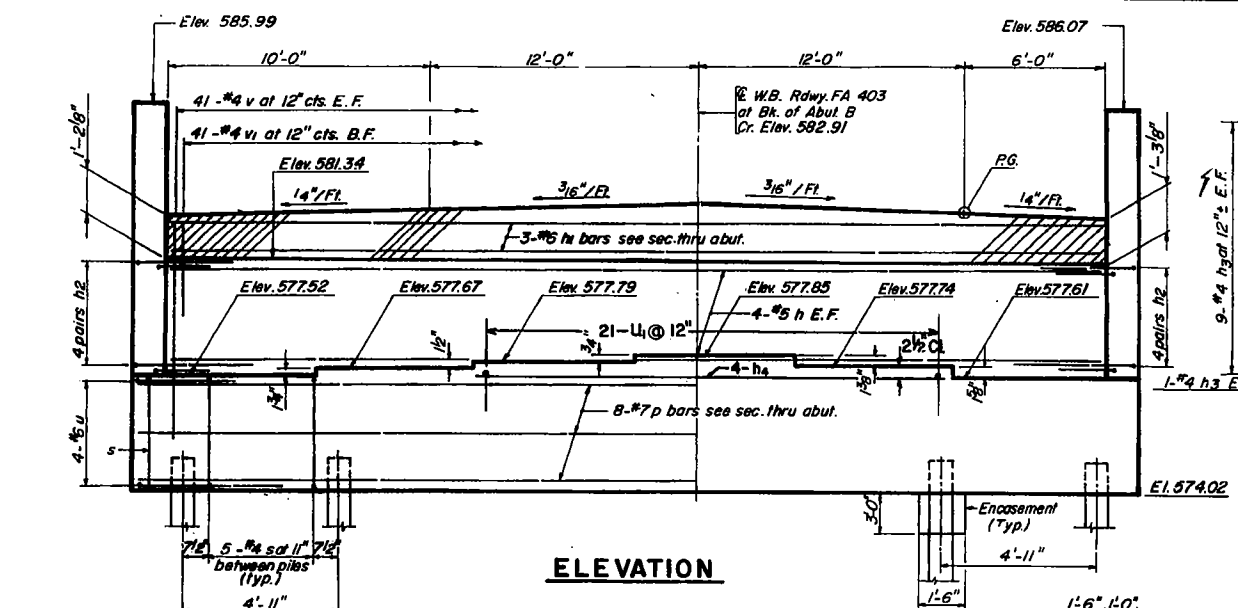
Welded wire fabric 6"x6" mesh #4 wires - Wt. 58#/100 sq.ft.
The cost of Class X Concrete Encasement and Reinforcement
is incidental to the cost of furnishing piles.
The thickness of the shell shall be .1793 inches with
a tolerance of 5 %.
Forms for encasement may be omitted when soil
conditions will permit.

BILL OF MATERIAL (ABUTMENT X ONLY)				
Bar	No.	Size	Length	Shape
h	8	#5	38'-8"	—
h ₂	18	#5	4'-0"	┐
h ₃	40	#4	11'-3"	—
h ₄	4	#4	21'-0	—
n	24	#6	9'-3"	┐
p	8	#7	41'-9"	—
p	12	#7	12'-0"	—
s	42	#4	14'-11"	□
si	24	#4	9'-5"	□
u	8	#6	11'-0"	—
u ₁	21	#4	4'-5"	┐
v ₂	16	#6	8'-3"	—
v ₃	16	#6	7'-6"	—
v ₄	16	#6	7'-0"	—
v ₅	41	#4	4'-8"	—
v ₆	41	#4	3'-8"	—
v ₇	25	#5	3'-0"	—
Class X Concrete			Cu. Yds.	45.0
Reinforcement Bars			Lbs.	3670
Steel Pile HP (8 x 36)			Lin. Ft.	140
Steel Test Pile			Each	1

ABUTMENT "A"
FA 403 SECTION 161-1B-1
FA.403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION **428+77.00**
COR 9-25-72 LS



DESIGNED	A. A.
CHECKED	H. R. S.
DRAWN	A. M.
CHECKED	A. A.



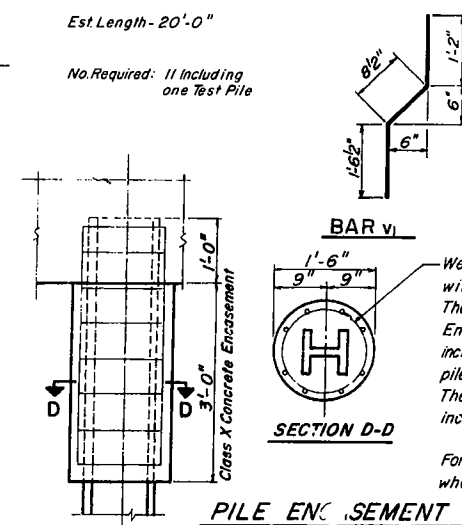
PILE DATA

Type: Steel Piles HP8 x 36

Capacity: — Refusal

Est. Length - 20'-0"

*No. Required: 11 Including
one Test Pile*



—Welded wire fabric 6"x6" mesh #4
wires - Wt. 58#/100 sq.ft.
The cost of Class X Concrete
Encasement and Reinforcement is
incidental to the cost of furnishing
piles.
The thickness of the shell shall be 1793
inches with a tolerance of 5 %

*Fornis for encasement may be omitted
when soil conditions will permit*

BILL OF MATERIAL				
(ABUTMENT "B" ONLY)				
Bar	No.	Size	Length	Shape
<i>h</i>	8	#5	39'-9"	—
<i>h₁</i>	3	#6	39'-9"	—
<i>h₂</i>	16	#5	4'-0"	┐
<i>h₃</i>	40	#4	11'-3"	—
<i>h₄</i>	4	#4	21'-0"	—
<i>n</i>	24	#6	9'-3"	┐
<i>p</i>	8	#7	41'-9"	—
<i>p₁</i>	12	#7	12'-0"	—
<i>s</i>	42	#4	14'-11"	□
<i>s₁</i>	24	#4	9'-5"	□
<i>u</i>	8	#6	11'-0"	┐
<i>u₁</i>	21	#4	4'-5"	┐
<i>v</i>	82	#4	4'-10"	—
<i>v₁</i>	41	#4	3'-5"	—
<i>v₂</i>	16	#6	8'-3"	—
<i>v₃</i>	16	#6	7'-6"	—
<i>v₄</i>	16	#6	7'-0"	—
<i>y₇</i>	25	#5	3'-0"	—
Class X Concrete			Cu. Yds.	46.0
Reinforcement Bars				4000
Steel Piles (HP 8 x 36)			Lin. Ft.	220
Name Plates			Each	1

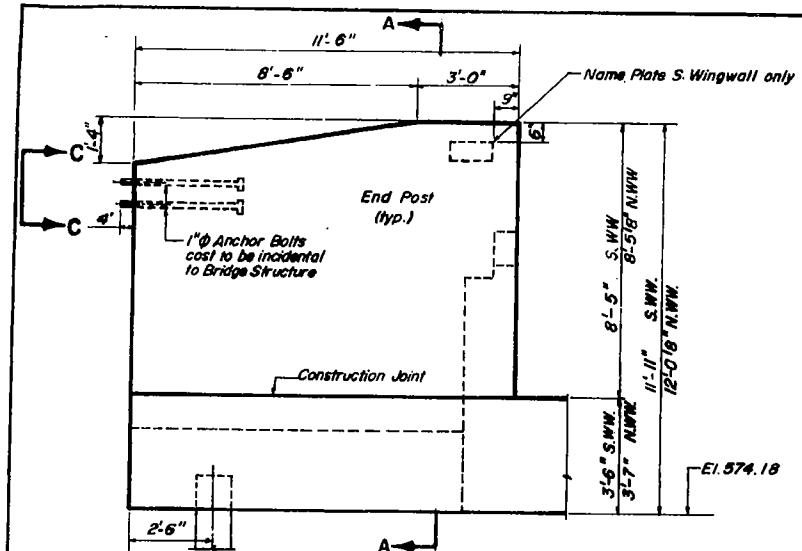
ABUTMENT "B"

FA 403 SECTION 161 - 18-1

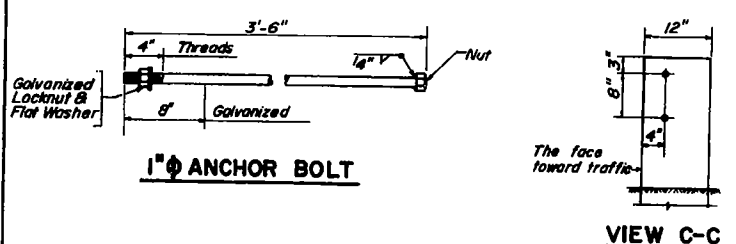
FA 403 OVER ZUMA CREEK

ROCK ISLAND COUNTY

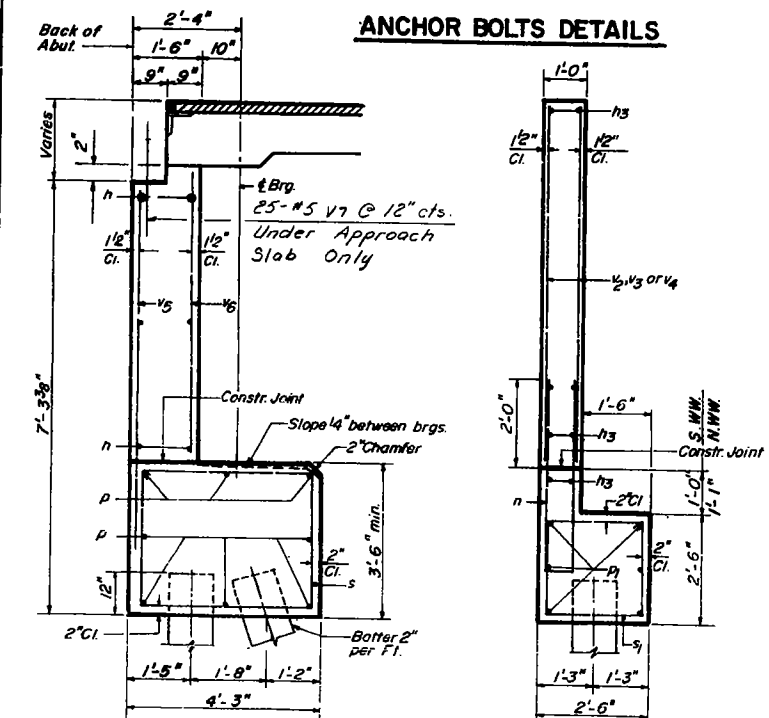
STATION 428 + 77.00
COR 9-25-72 L.S.



WING WALL ELEVATION



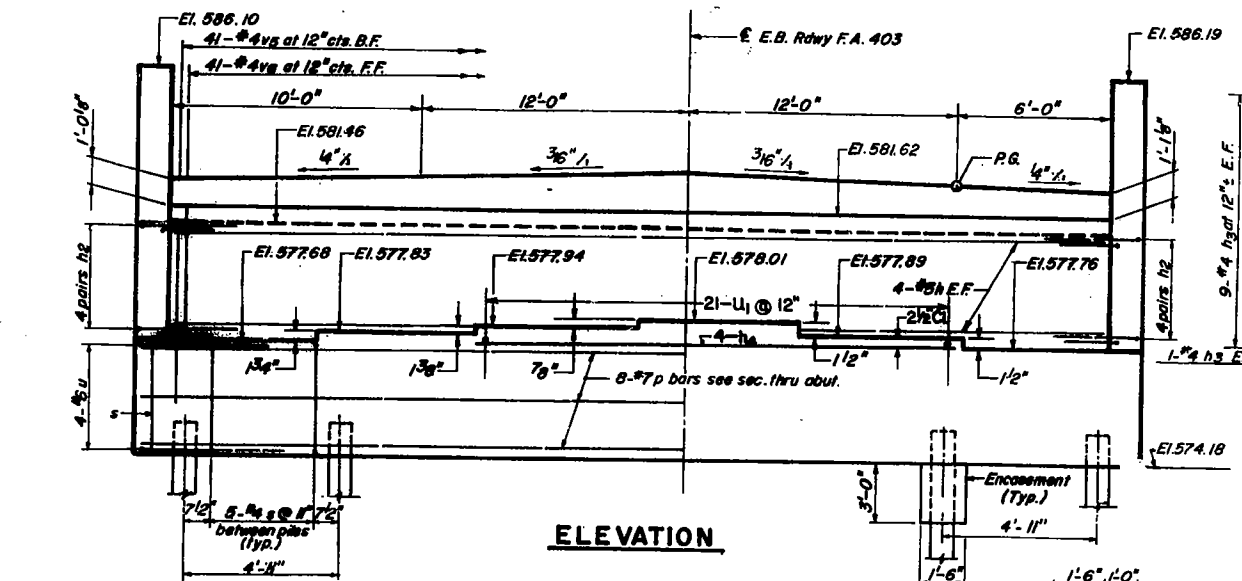
ANCHOR BOLTS DETAILS



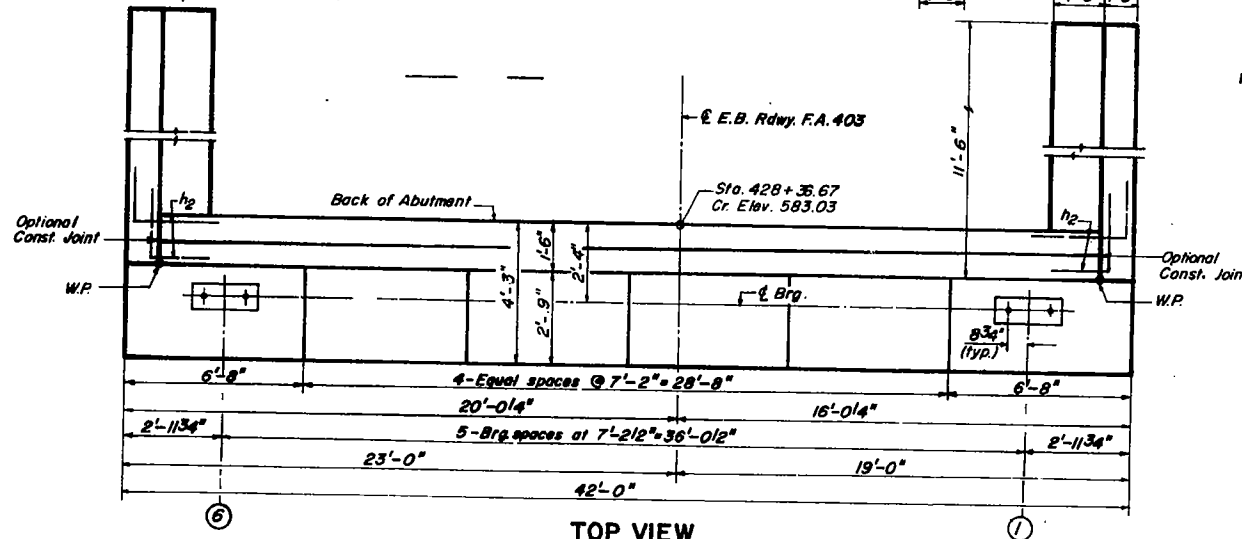
SECTION THRU ABUTMENT

SECTION A-A

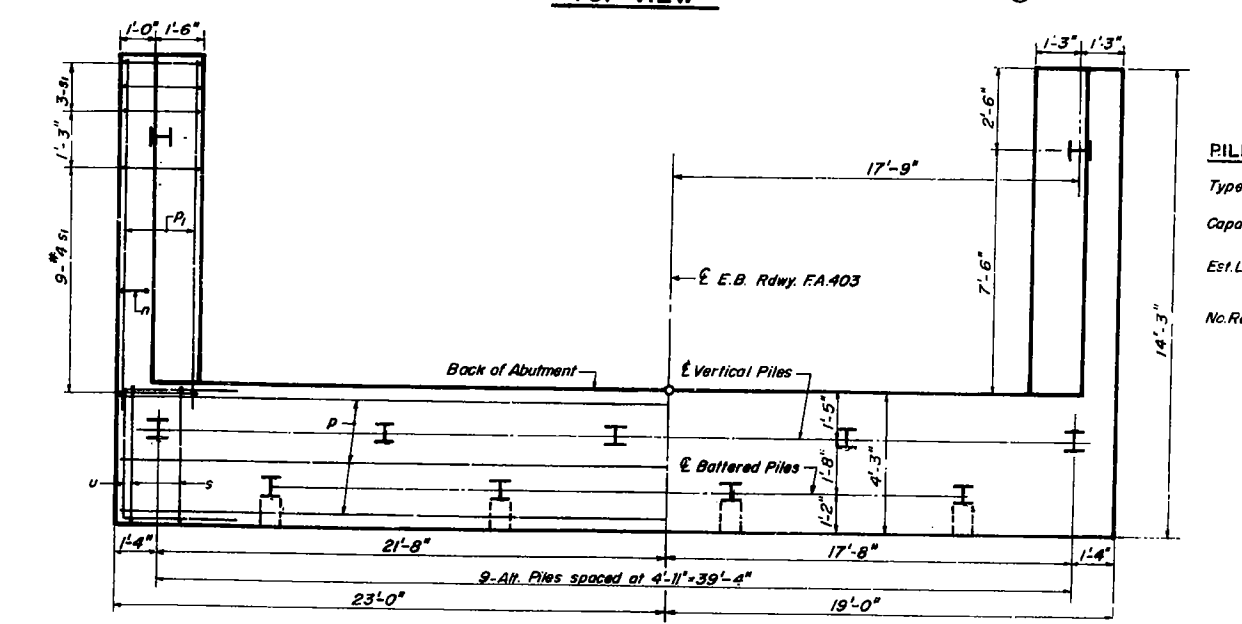
DESIGNED	A.A.
CHECKED	H.R.S.
DRAWN	A.M.
CHECKED	B.T.M.



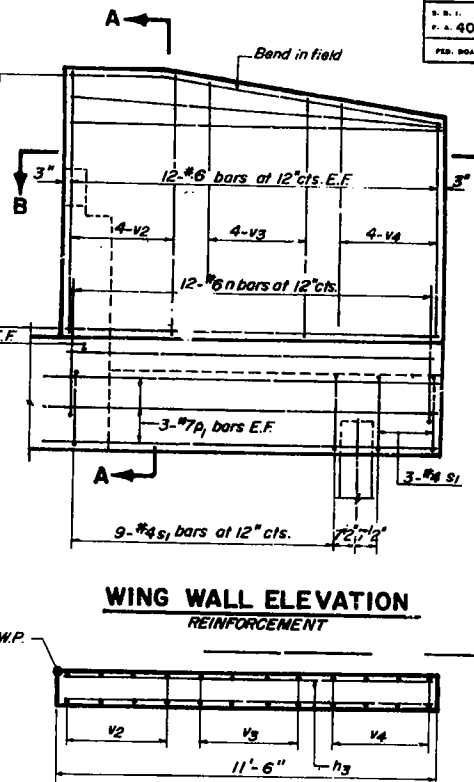
ELEVATION



TOP VIEW



PLAN - PILE CAP



WING WALL ELEVATION REINFORCEMENT

SECTION B-B

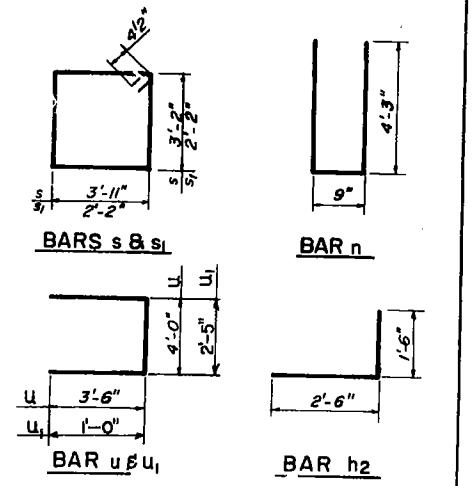


PILE DATA
Type: Steel Pile HP 8 x 36
Capacity: Refusal
Est. Length: 14'
No. Required: 11 Including one Test Pile

BILL OF MATERIAL (ABUTMENT "C" ONLY)

Bar	No.	Size	Length	Shape
h	8	#5	3'-0"	U
h ₂	16	#5	4'-0"	U
h ₃	40	#4	11'-3"	U
h ₄	4	#4	21'-0"	U
n	24	#6	9'-3"	U
p	8	#7	41'-9"	U
p	12	#7	12'-0"	U
s	42	#4	14'-11"	U
s ₁	24	#4	9'-5"	U
u	8	#6	11'-0"	U
u ₁	21	#4	4'-3"	U
v ₂	16	#6	8'-3"	U
v ₃	16	#6	7'-6"	U
v ₄	16	#5	7'-0"	U
v ₅	41	#4	4'-8"	U
v ₆	41	#4	5'-8"	U
v ₇	25	#5	3'-0"	U

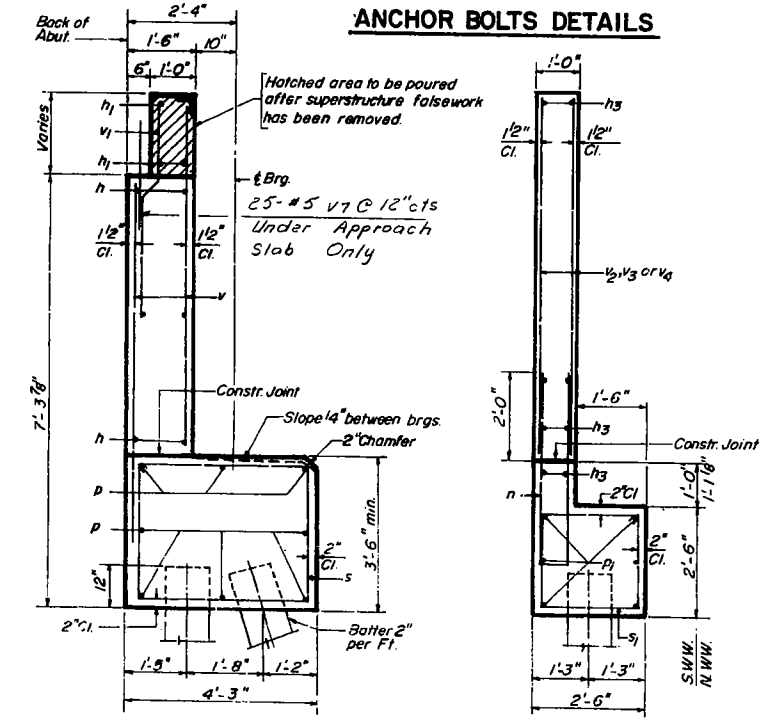
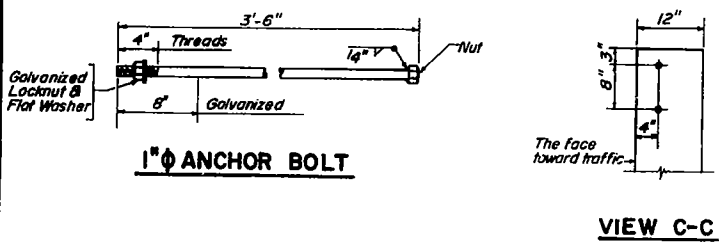
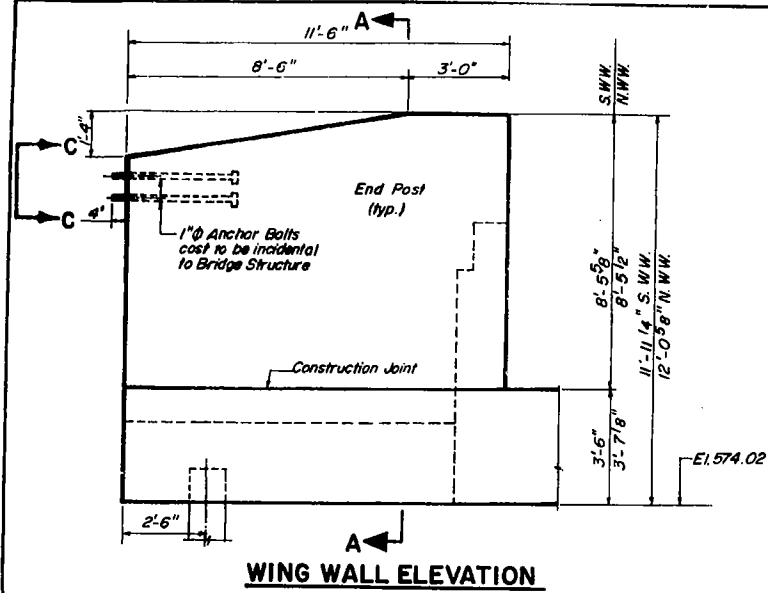
Glass X Concrete	Cu. Yds.	45.0
Reinforcement Bars	Lbs.	3690
Steel Piles (HP 8x36)	Lin. Ft.	154



NOTE: For Pile Encasement Detail see sheet No. 7 or 8

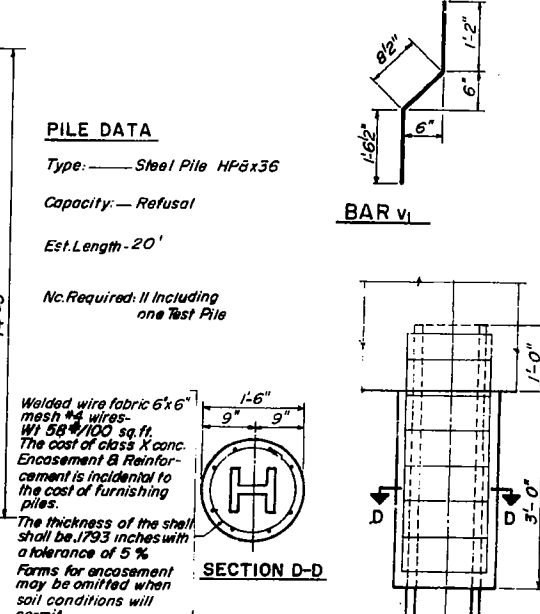
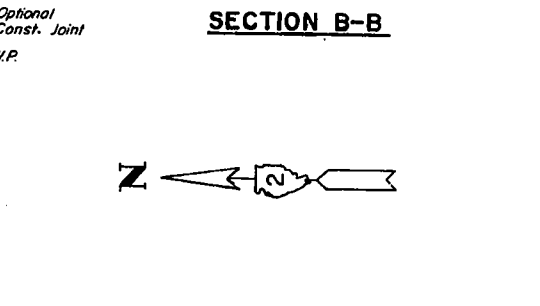
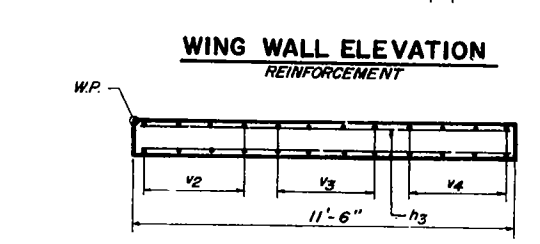
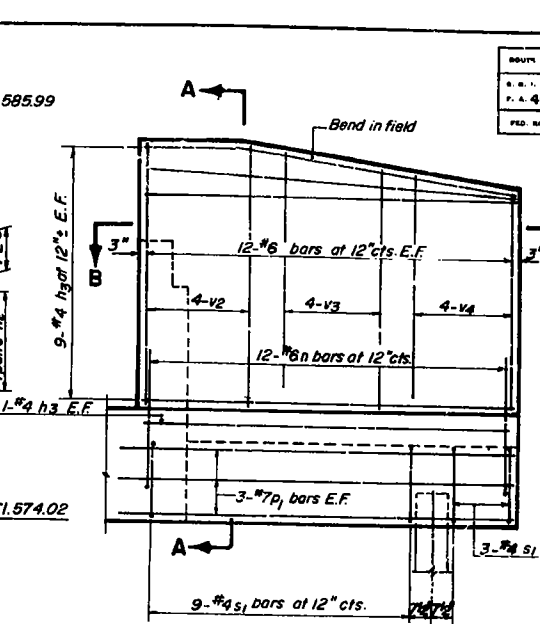
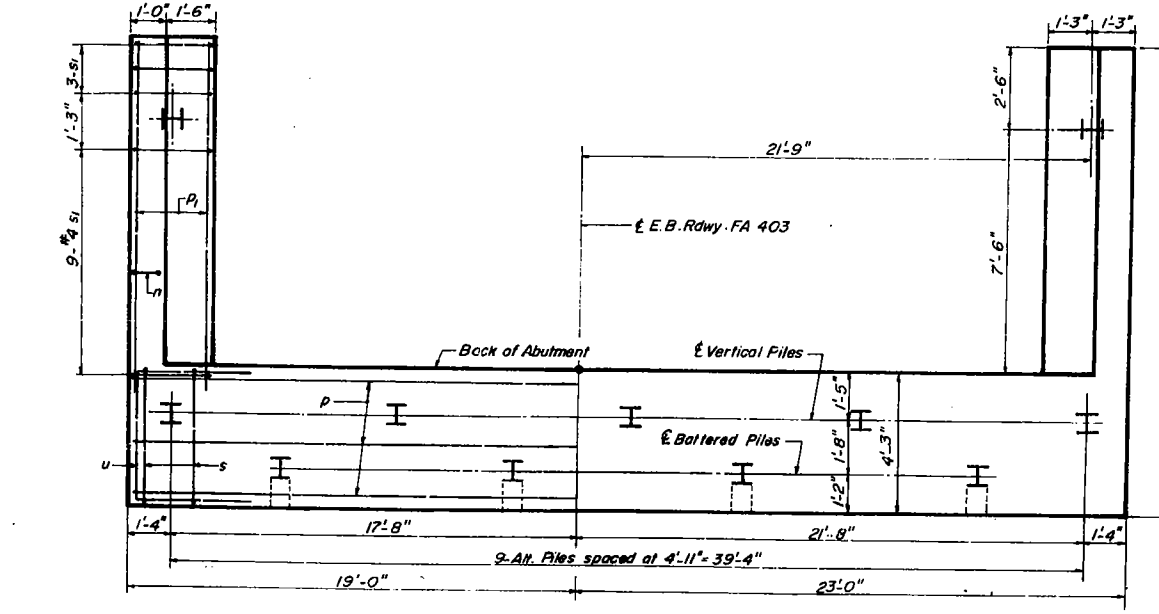
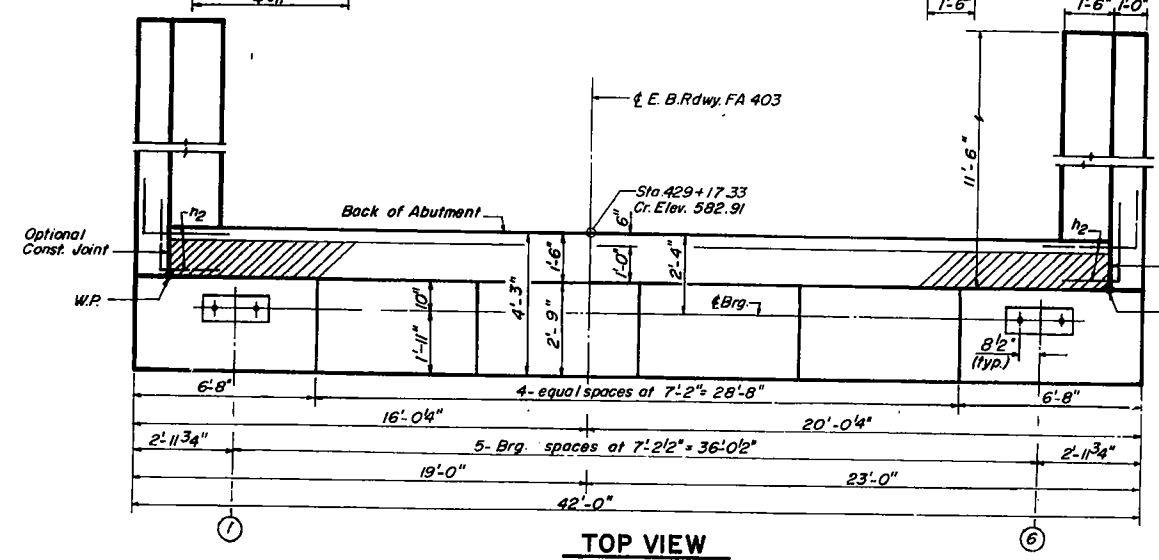
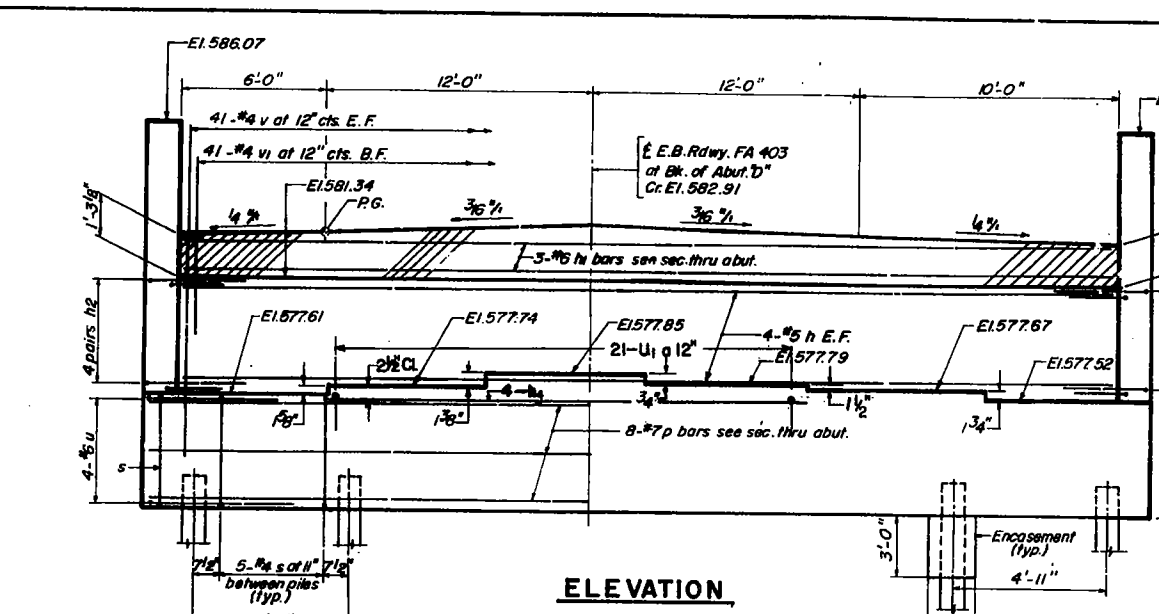
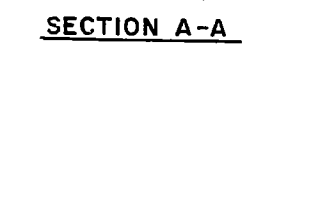
ABUTMENT "C"
FA 403 SECTION 161-1B-1
FA.403 OVER ZUMA CREEK
ROCK ISLAND COUNTY
STATION 428+77.00
COR. 9-26-72 L.S.

Rev. Reinf. Bars from 3610# to 3690# 10-16-74 J.D.



SECTION THRU ABUTMENT

DESIGNED	A.A.
CHECKED	H.R.S.
DRAWN	A.M.
CHECKED	H.R.S.



BILL OF MATERIAL (ABUTMENT "D" ONLY)

Bar	No.	Size	Length	Shape
h	8	#5	39'-9"	
h1	3	#6	39'-9"	
h2	16	#5	4'-0"	
h3	40	#4	11'-3"	
h4	4	#3	21'-0"	
n	24	#6	9'-3"	
p	8	#7	41'-9"	
p1	12	#7	12'-0"	
s	42	#4	14'-11"	
s1	24	#4	9'-5"	
u	8	#6	11'-0"	
u1	21	#4	4'-5"	
v	82	#4	4'-10"	
v1	41	#4	3'-5"	
v2	16	#6	8'-3"	
v3	16	#6	7'-6"	
v4	16	#6	7'-0"	
v7	25	#5	9'-0"	
Class X Concrete				Cu. Yds. 46.0
Reinforcement Bars				Lbs. 4000
Steel Piles (HP 36)				Lin. Ft. 200
Steel Test Pile				Each 1

