

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

VARIOUS ROUTES
SECTION D6 PAINTING 2013-1

BRIDGE PAINTING
ADAMS & PIKE COUNTIES

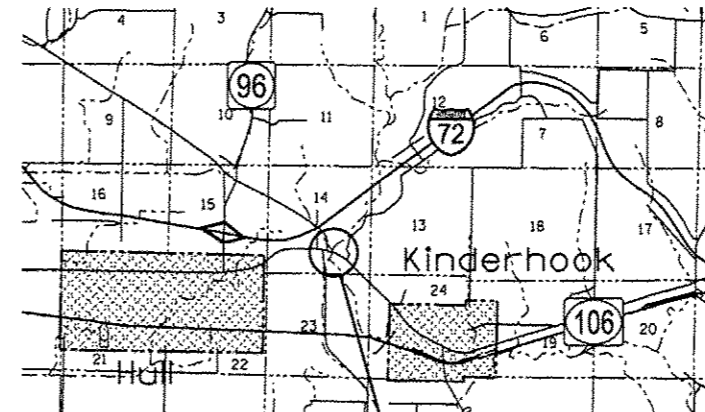
C-96-040-13

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	D6 PAINTING 2013-1	ADAMS/PIKE	16	1
		ILLINOIS	CONTRACT NO. 72G07	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

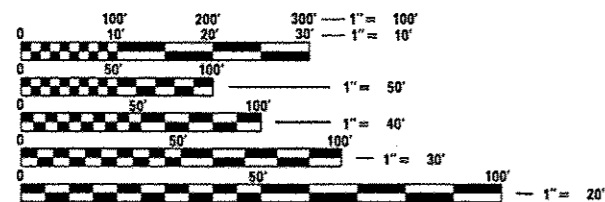
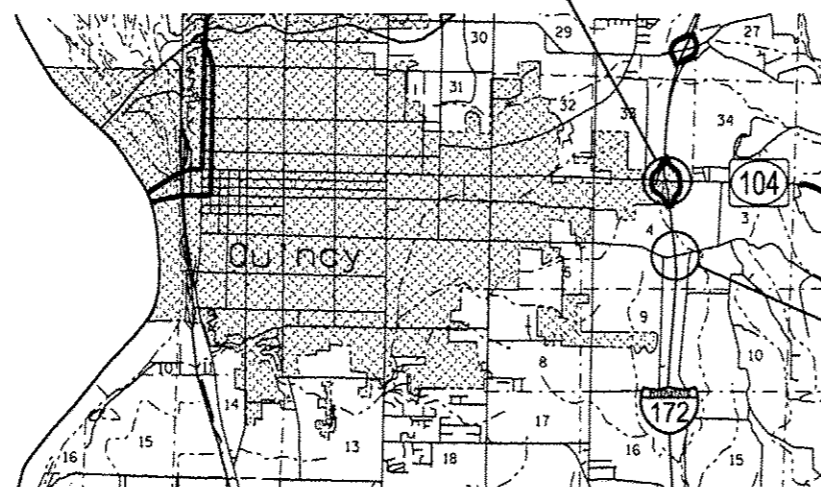


LOCATION #2
SN 001-0047
IL 104 OVER I-172
N 39 56' 5.46"
W 91 19' 31.15"
ADT = 7600



LOCATION #3
SN 075-0076
IL 96/106 OVER McCRANEY CREEK
N 39 42' 56.77"
W 91 10' 25.35"
ADT = 2150

LOCATION #1
SN 001-0046
CHS OVER I-172
N 39 55' 27.54"
W 91 19' 23.88"
ADT = 3650



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

BRIDGE INSPECTION ENGINEER
DAVE COPENBARGER (217) 785-5306

NET LENGTH = 828 FT. = 0.16 MILE

CONTRACT NO. 72G07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 21 20 13
Regan Smith
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

April 26 20 13
John D. Baramelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

April 26 20 13
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS:

- 1 COVER SHEET
- 2 INDEX, HIGHWAY STANDARDS, & GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4-7 EXISTING PLANS, SN 001-0046
- 8-11 EXISTING PLANS, SN 001-0047
- 12-16 EXISTING PLANS, SN 075-0076

STANDARDS

- 701001-02
- 701006-04
- 701101-03
- 701106-02
- 701201-04
- 701301-04
- 701400-06
- 701401-07
- 701411-08
- 701901-02

GENERAL NOTES:

STRUCTURE NO 1 - SN 001-0046, CH 5 OVER I-172 LOCATED .7 M S OF IL 104 IN ADAMS CO. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL EXISTING STEEL SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN, MUNSELL NO 7.5G 4/8. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY, MUNSELL NO 5B 7/1.

STRUCTURE NO 2 - SN 001-0047, IL 104 OVER I-172 LOCATED AT IL 104/I-172 INTERCHANGE IN ADAMS CO. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL EXISTING STEEL SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN, MUNSELL NO 7.5G 4/8. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY, MUNSELL NO 5B 7/1.

STRUCTURE NO 3 - SN 075-0076, IL 106/IL 96 OVER MCCRANEY CREEK LOCATED 1 M E OF IL106/96 SPLIT. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL EXISTING STEEL LOCATED 5' FROM THE EXPANSION JOINTS AND BOTH SIDES OF THE FASCIA BEAMS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN, MUNSELL NO 7.5G 4/8. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES AND SHALL BE GRAY, MUNSELL NO 5B 7/1.

THE USE OF AIR MONITORS WILL BE REQUIRED AT STRUCTURES NUMBERS 1,2 AND 3. A MINIMUM OF 2 MONITORS WILL BE REQUIRED AT EACH BRIDGE TO MONITOR ABRASIVE BLASTING OPERATIONS AT THIS SITE, SEE SPECIAL PROVISIONS FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".

THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED FOR THESE BRIDGES.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED	3/5 20 13
<i>Bill Byrne</i> ENGINEER OF OPERATIONS	
EXAMINED	MARCH 7 20 13
<i>Tommy [Signature]</i> ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	March 12 20 13
<i>DRMLJ</i> ENGINEER OF PROGRAM DEVELOPMENT	

FILE NAME * S:\Bridgeplans\CAD\72607 - 06 painting	USER NAME * copenbergerda	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX, HIGHWAY STANDARDS, & GENERAL NOTES	F.A.I. - RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE * 8.9098' / 1in.	CHECKED - DATE	REVISED - REVISED -			VAR.	D6 PAINTING 2013-1	ADAMS/PIKE	16	2
Default	PLOT DATE * Mar-26-2013 10:31:17AM					SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT CONTRACT NO. 72607	

S U M M A R Y O F Q U A N T I T I E S

CODE NO.	ITEM	UNIT	100% STATE	100% STATE	100% STATE
			0014	0014	0014
			ADAMS QTY	PIKE QTY	TOTAL QTY
67100100	MOBILIZATION	L SUM	0.5	0.5	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2		2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	0.5	0.5	1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1		1
70106800	CHANGEABLE MESSAGE SIGNS	CAL MO	4		4
Z0052396	PORTABLE TEMPORARY BARRIER SYSTEM, TEST LEVEL 3	FOOT	500		500
X7040092	RELOCATE PORTABLE TEMPORARY BARRIER SYSTEM, TEST LEVEL 3	L SUM	1		1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE, NO. 1	L SUM	1		1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE, NO. 2	L SUM	1		1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE, NO. 3	L SUM		1	1
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES, NO 1	L SUM	1		1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES, NO 2	L SUM	1		1
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES, NO 3	L SUM		1	1

Bench Mark: Chiseled in N.E. corner of conc. water trough
 45' E. of Sta. 220+00 Elev. 667.05
 No Existing Structure

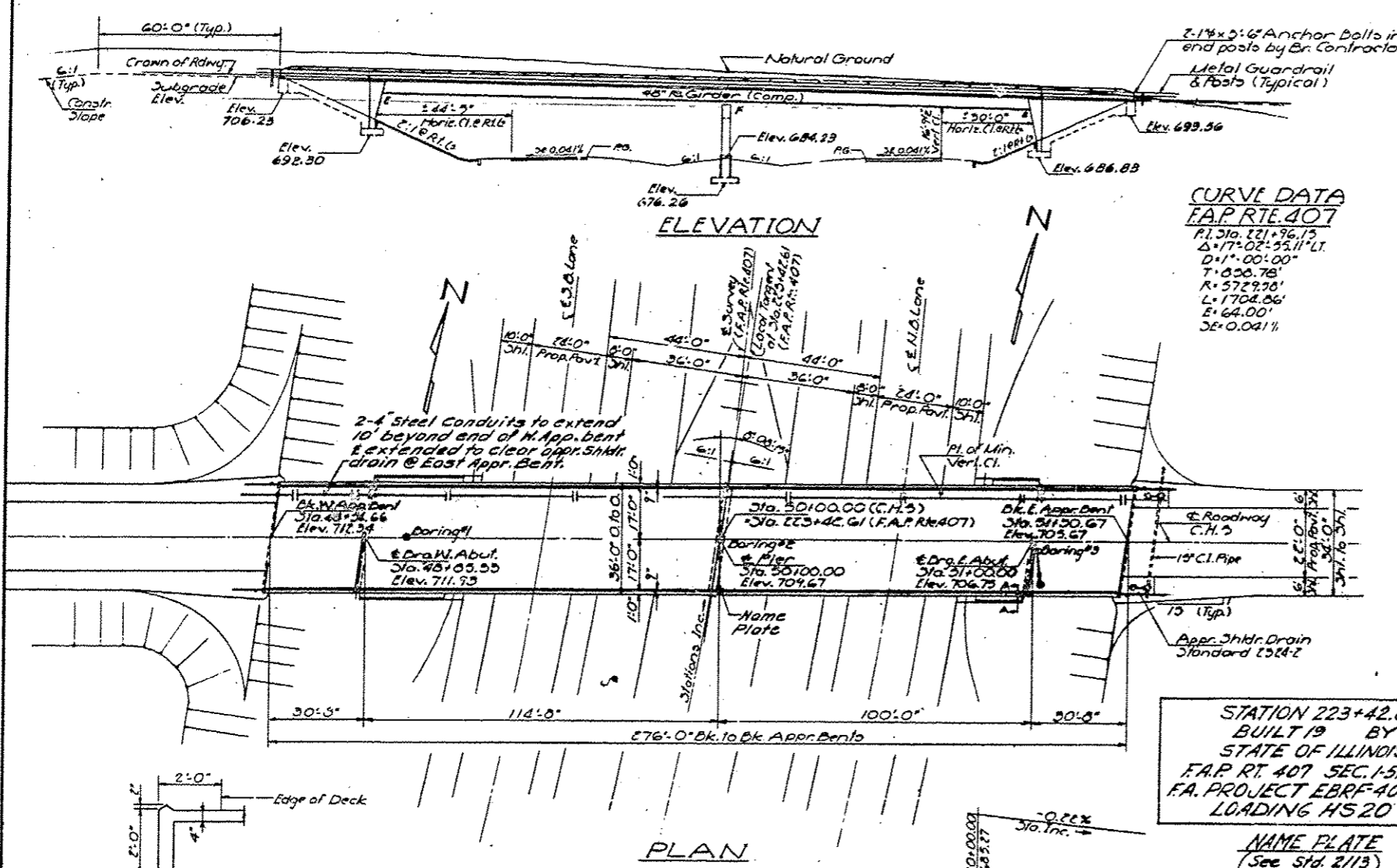
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

001-0046

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
407	5HB-2	Adams	58	19
11 SHEETS				

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Fasteners shall be high strength bolts. Bolts 7/8"; open holes 1 1/2" unless otherwise noted.
 Calculated Weight of Structural Steel = 260,380 Lbs.
 Field Welding of Construction accessories will not be permitted to the bottom 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 concrete rail section above the mandatory construction joint of the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Nonrail concrete.
 Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
 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. (Pier only)
 The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.
 The main load carrying members of steel bridges subjected to tensile stresses shall conform to the supplemental requirements for Notch Toughness.
 See proposal for Boring Log.



CURVE DATA
 F.A.P. RTE. 407
 P.I. Sta. 221+96.15
 Δ = 17° 02' 55.11" LT.
 D = 1° 00' 00"
 T = 556.78'
 R = 5729.96'
 L = 1704.86'
 E = 64.00'
 SE = 0.041%

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bit. Conc. Surf. C.I. I	Tons	82		82
Structure Excavation	Cu. Yds.		492	492
Protective Coat	Sq. Yds.	206		206
Class X Concrete	Cu. Yds.	868.8	267.4	1136.2
Structural Steel	L.S.	L.S.		L.S.
* Waterproofing Membrane Sys.	Sq. Yds.	993		993
Stud Shear Connectors	Ea.	2025		2025
Aluminum Rolling	Lin. Ft.	546		546
Reinforcement Bars	Lbs.	81140	30460	111600
Name Plates	Ea.		1	1
Slope Wall (4")	Sq. Yds.		329	329
Preformed Jt. Sealer (4")	Lin. Ft.	73		73
Sand Backfill	Cu. Yds.		361	361

* See Special Provisions

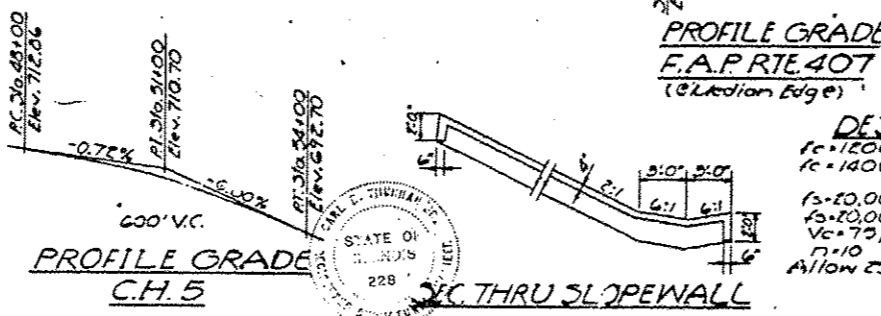
STATION 223+42.61
 BUILT BY
 STATE OF ILLINOIS
 F.A.P. RT. 407 SEC. 1-5HB-2
 FA. PROJECT EBRF-407(B)
 LOADING HS 20

NAME PLATE
 (See Std. 2/113)

DESIGNED: *Frank Keller*
 CHECKED: *Summit Ogden*
 DRAWN: *Leon Hearen*
 CHECKED: *GEO*

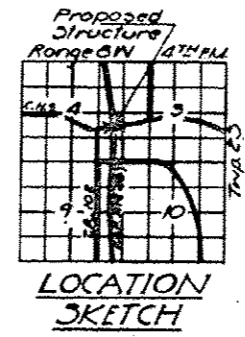
MARCH 12 2013

EXAMINED: *[Signature]*
 PASSED: _____
 APPROVED: _____



DESIGN STRESSES
 f_c = 1100 psi - Deck Slab
 f_c = 1400 psi - Curb, Parapet
 f_s = 10,000 psi - Reinf.
 f_s = 10,000 psi - Struct.
 V_c = 75 psi - Footings
 n = 10
 Allow 25# psf for Full Wearing Surf.

DESIGN LOADING HS20-44



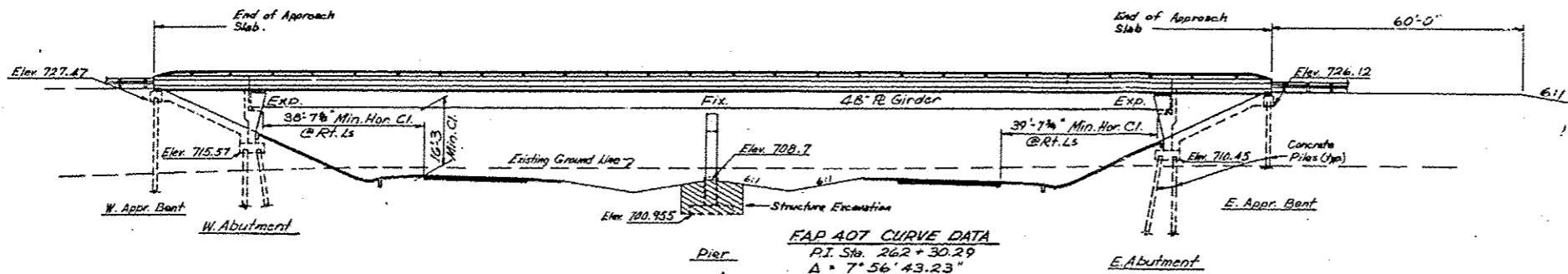
001-0046
 GENERAL PLAN & ELEVATION
 PROJECT EBRF-407(B)
 C.H.5 OVER F.A.P. RTE. 407
 F.A.P. ROUTE 407
 SECTION 1-5HB-2
 ADAMS COUNTY
 STATION 223+42.61 (F.A.P. RTE. 407)
 STATION 50+00.00 (C.H.5)

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 407	1-5HB	ADAMS	151	58
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				

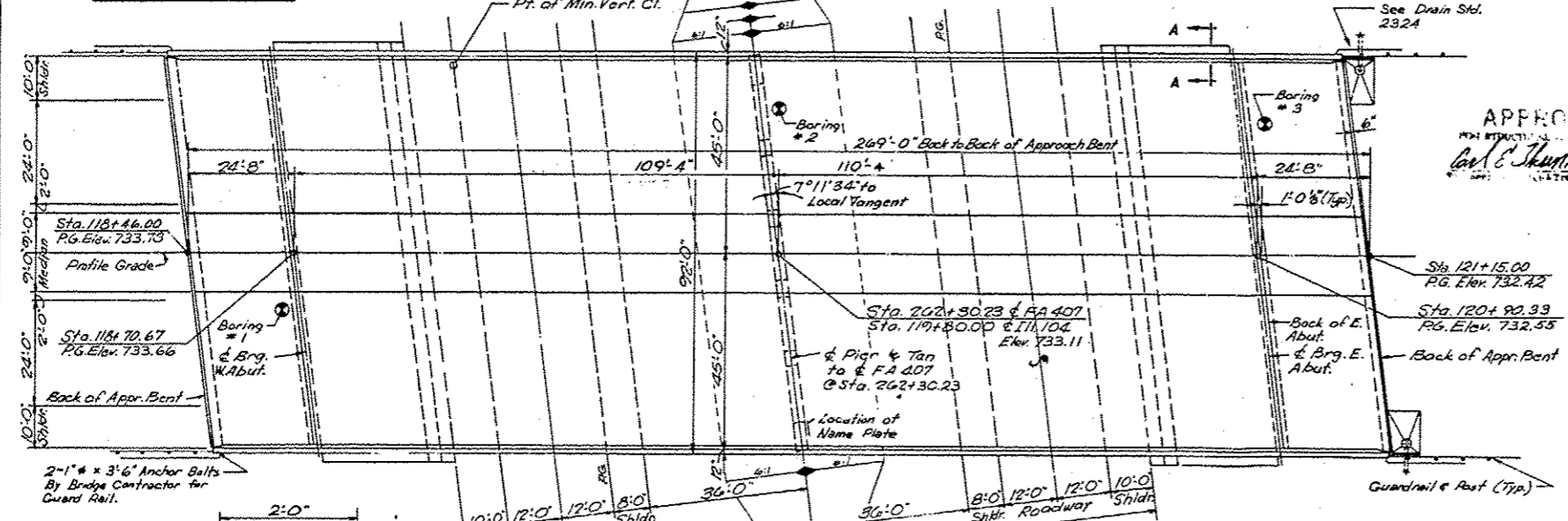
Bench Mark #21 R.R. Spike in S.E. Side of corner fence post, 125' S. Sta. 256+00 Elev. 74.24.
No Existing Structure.



FA 407 CURVE DATA
P.I. Sta. 262+30.29
A = 7° 56' 43.23"
D = 0° 30' 00"
T = 795.81'
R = 11,459.16'
L = 1589.07'
E = 27.60
S.E. = 0.024 1/4"

FA 407 PROFILE
1200' V.C.
+2.15%
+0.65%
PVI Sta. 259+30 Elev. 703.12

ILL. 104 PROFILE
800' V.C.
-0.51%
0.58%
PVI Sta. 115+00 Elev. 735.56



APPROVED
G. E. Skutumpah
Professional Engineer

GENERAL NOTES

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.
FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" &, OPEN HOLES 15/16" &, UNLESS OTHERWISE NOTED.
THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ARE THE FLANGES AS DESIGNATED IN THE ELEVATION VIEW ALONG WITH THE WEBS AND ALL SPLICE PLATES OF THE STEEL GIRDERS.
ALL STRUCTURAL STEEL IS A36 EXCEPT AS NOTED ON GIRDER ELEVATION.
CALCULATED WEIGHT OF STRUCTURAL STEEL: (M183) 618,189 Lbs. (M223) 80,268 Lbs.
THE BASIC LEAD ELLIPO 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 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 38# PER 100 SQ. FT.
THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMOVAL OF PILES.
CONCRETE PILES AT APPROACH BENTS SHALL BE DRIVEN IN HOLES PRECURED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.09(C) OF THE STANDARD SPECIFICATIONS.
THE CONCRETE PAVEMENT SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF STANDARD CONCRETE.
PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.
BEARING 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 SUPPORTING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
SEE THE SPECIAL PROVISIONS FOR BORING LOGS.

STATION 262+30.23
BUILT 197 BY
STATE OF ILLINOIS
FA. RTE. 407 SEC. 1-5HB3
FA. PROJ. EBRF-407-1(9)
LOADING HS20

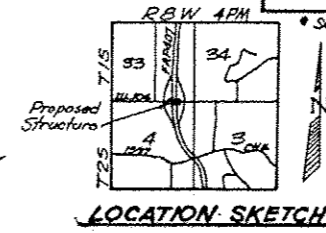
NAME PLATE
See Std. 2113

TOTAL BILL OF MATERIALS

Item	Unit	Super.	Sub.	Total
Structure Excavation	Cu. Yd.	—	320	320
Class X Concrete	Cu. Yd.	936.1	619.2	1555.3
Structural Steel	Lump Sum	1	—	1
Reinforcement Bars	Lbs.	201,407	77,120	278,527
Concrete Piles	Lin. Ft.	—	3,941	3,941
Test Piles, Concrete	each	—	2	2
Slope Wall, (4")	Sq. Yd.	—	725	725
Aluminous Surface, Class I	Tons	175	—	175
Waterproofing Membrane Sys.	Sq. Yd.	2115	—	2115
Aluminum Railing	Lin. Ft.	531.7	—	531.7
Prefabricated Joint Sealer (4")	Lin. Ft.	186	—	186
Steel Shear Connectors, 3/4"	each	—	5292	5292
Protective Coat	Sq. Yd.	773	—	773
Sand Backfill	Cu. Yd.	—	645	645
Name Plate	each	—	1	1

DESIGN STRESSES:
R_s = 1200 psi Deck Slab (Main Spans)
R_c = 1400 psi Curb, Parapet, Deck Slab (Approach Spans) & Substructure
R_s = 75 psi (Ftgs.)
n = 10
R_s = 20,000 psi Reinf.
R_c = 20,000 psi to 27,000 psi (M183 & M223) Struct.
Allowable & Deflection = 1/1600 or 1/1000
Design Specifications 1973 AASHTO (as applicable)
Add 25# per sq. ft. for future wearing surface.

LOADING - HS20-44



DESIGNED	CDC
CHECKED	HMW
DRAWN	CDC
CHECKED	HMW

SECTION A-A

SECTION THRU SLOPEWALL

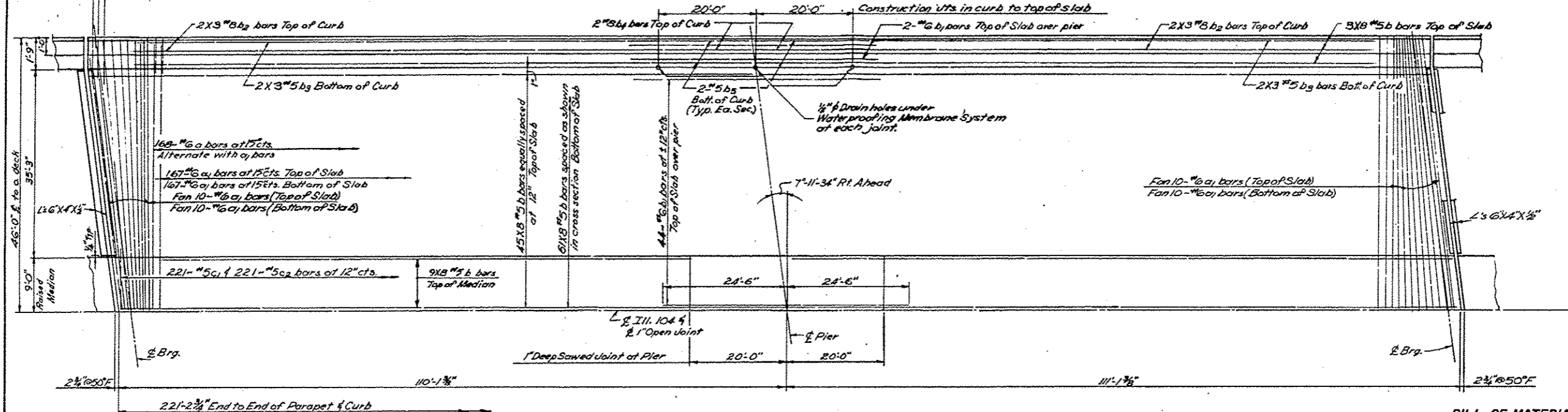
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

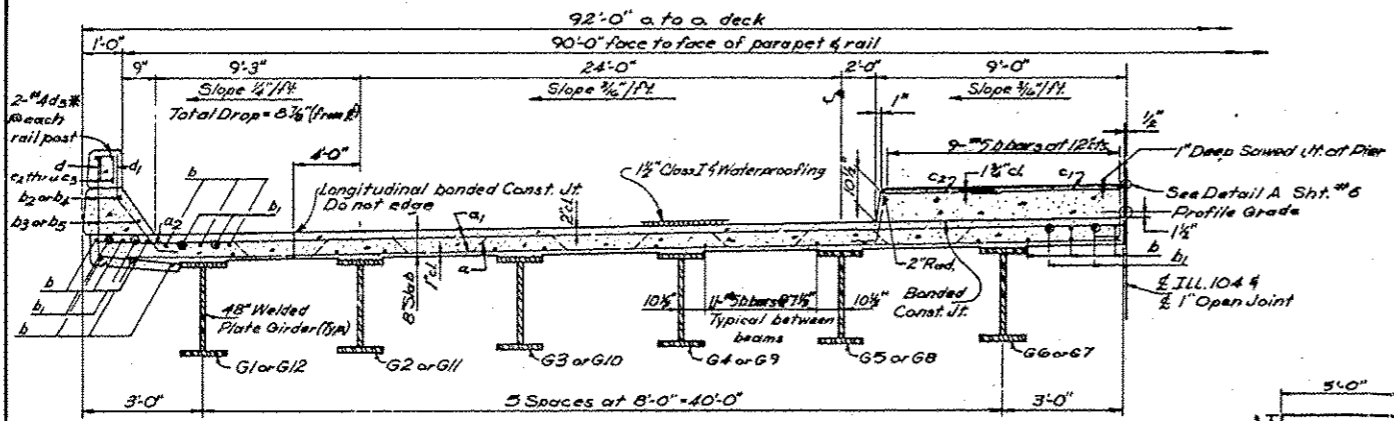
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 407	1-5HB3	ADAMS	151	62
STA.	TO STA.			
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				

NOTE:

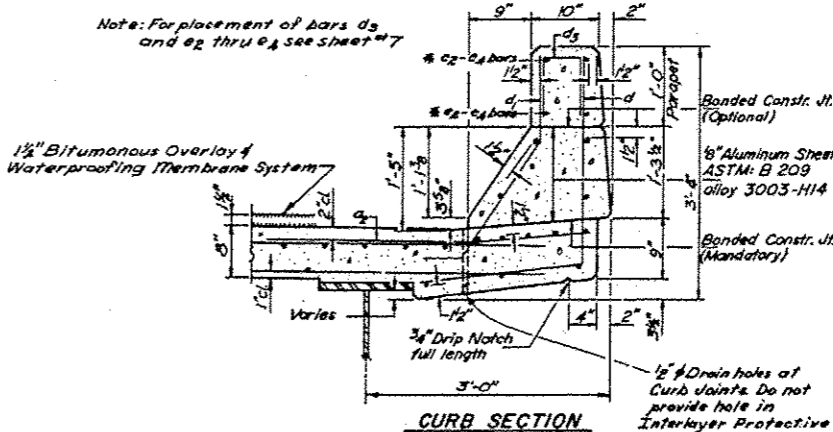
Bars indicated thus 20x3-5 etc. indicates 20 lines of bars with 3 lengths per line
 178-#6cs bars at 12" cts. (Top of Slab)
 221-#4ds bars at 12" cts. (Outside Face)
 221-#5ds bars at 12" cts. (Inside Face)



PART PLAN



CROSS SECTION



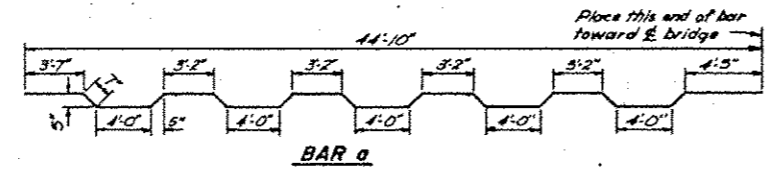
CURB SECTION

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	356	#6	46'-6"	~
c1	748	#6	45'-0"	~
c2	356	#6	4'-0"	~
b	1888	#5	28'-9"	~
b1	92	#6	49'-0"	~
b2	24	#3	31'-9"	~
b3	24	#5	31'-9"	~
b4	8	#8	19'-9"	~
b5	8	#5	19'-9"	~
c1	442	#5	7'-0"	~
c2	442	#5	6'-10"	~
d	442	#4	4'-7"	~
d1	442	#5	3'-7"	~
Reinforcement Bars				Lbs. 152,334
Class X Concrete				Cu. Yds. 680.0

* Parapet Reinforcement and Class X Concrete are billed on sheet # 7

DESIGNED	MVM
CHECKED	HMW
DRAWN	BMM
CHECKED	HMW

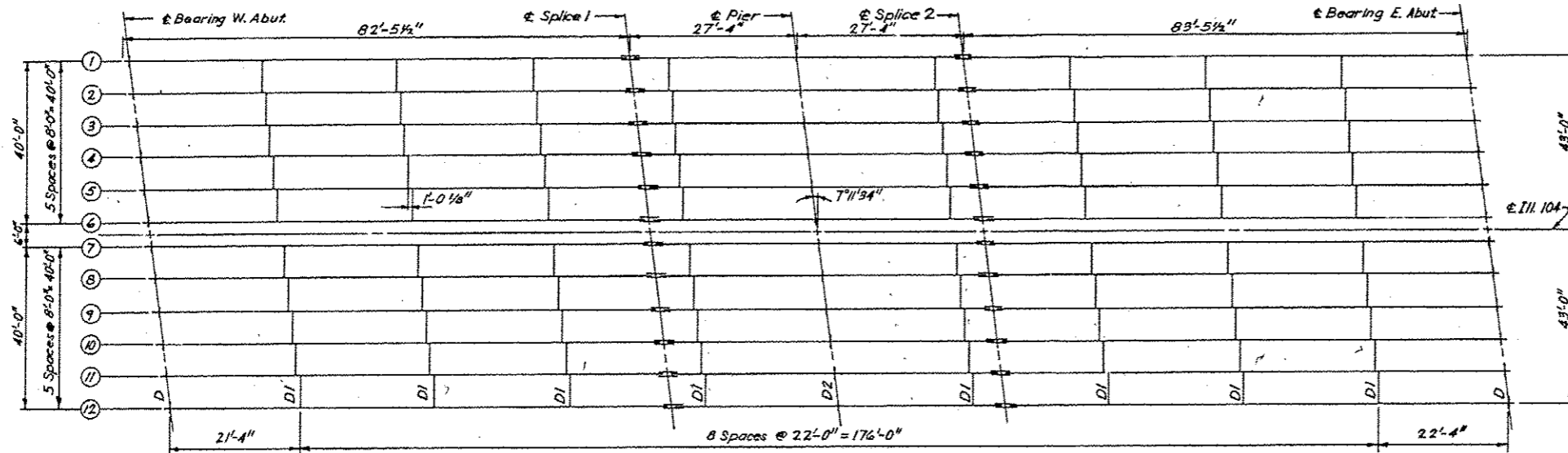


SUPERSTRUCTURE
 F.A. RTE. 407 SEC. 1-5HB3
 ADAMS COUNTY
 STATION 262+30.23

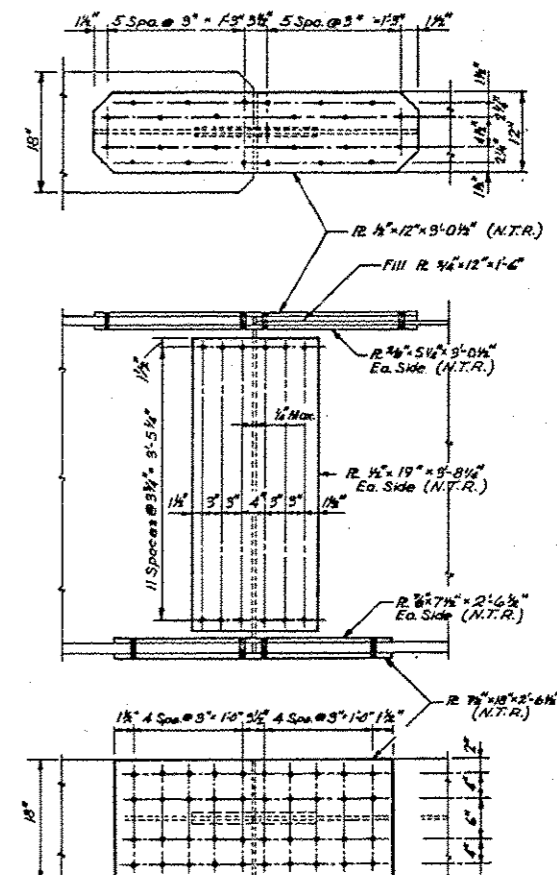
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

407	3	ADAMS	151	65	12 SHEETS
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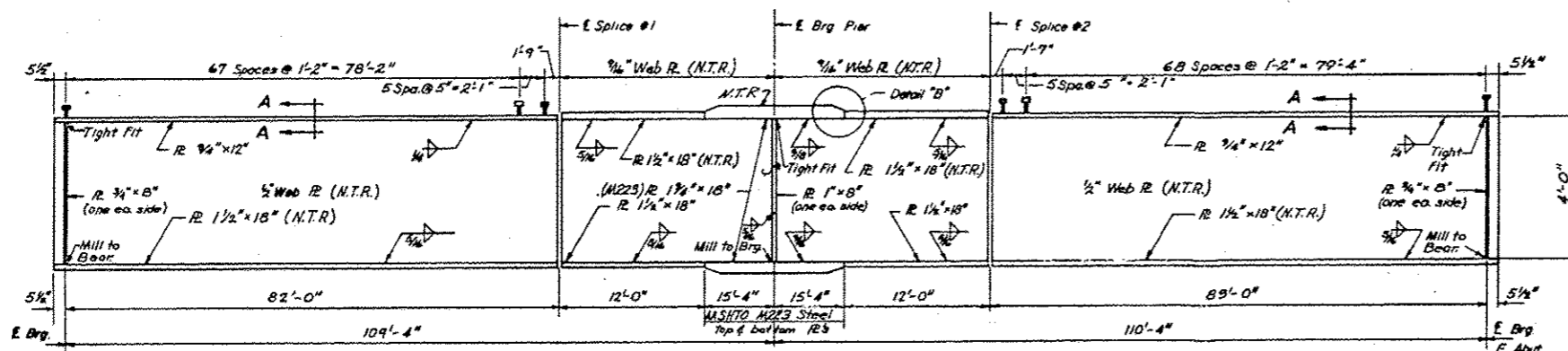


FRAMING PLAN

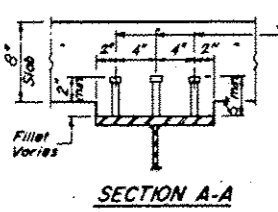


SPLICE DETAILS
(All bolts 7/8\"/>

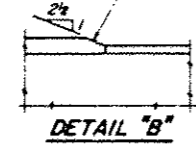
Notes:
N.T.R. indicates notch toughness requirements. See General Notes.
Use 1/8\"/>



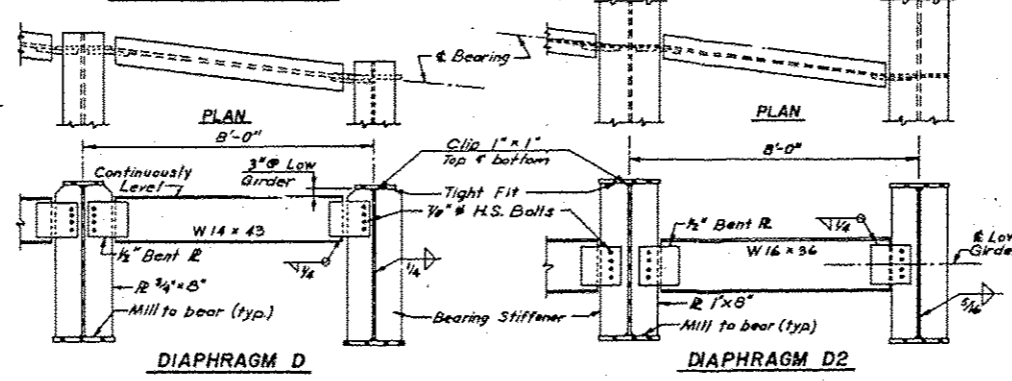
GIRDER ELEVATION



SECTION A-A



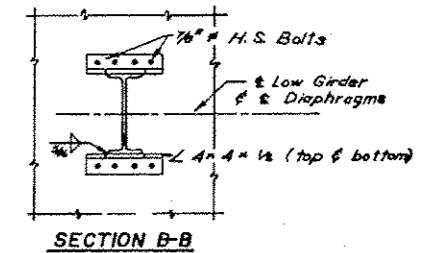
DETAIL B



DIAPHRAGM D

DIAPHRAGM D2

DIAPHRAGM D1



SECTION B-B

STRUCTURAL STEEL
FA. RTE. 407 SEC. 1-5HB3
ADAMS COUNTY
STATION 282+30.23

DESIGNED	M.K.M.
CHECKED	H.M.W.
DRAWN	S.L.M.
CHECKED	H.M.W.

G-1 7-1-72

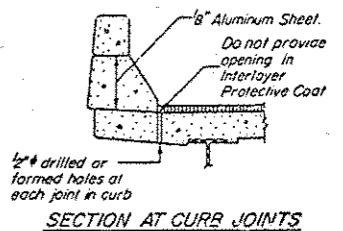
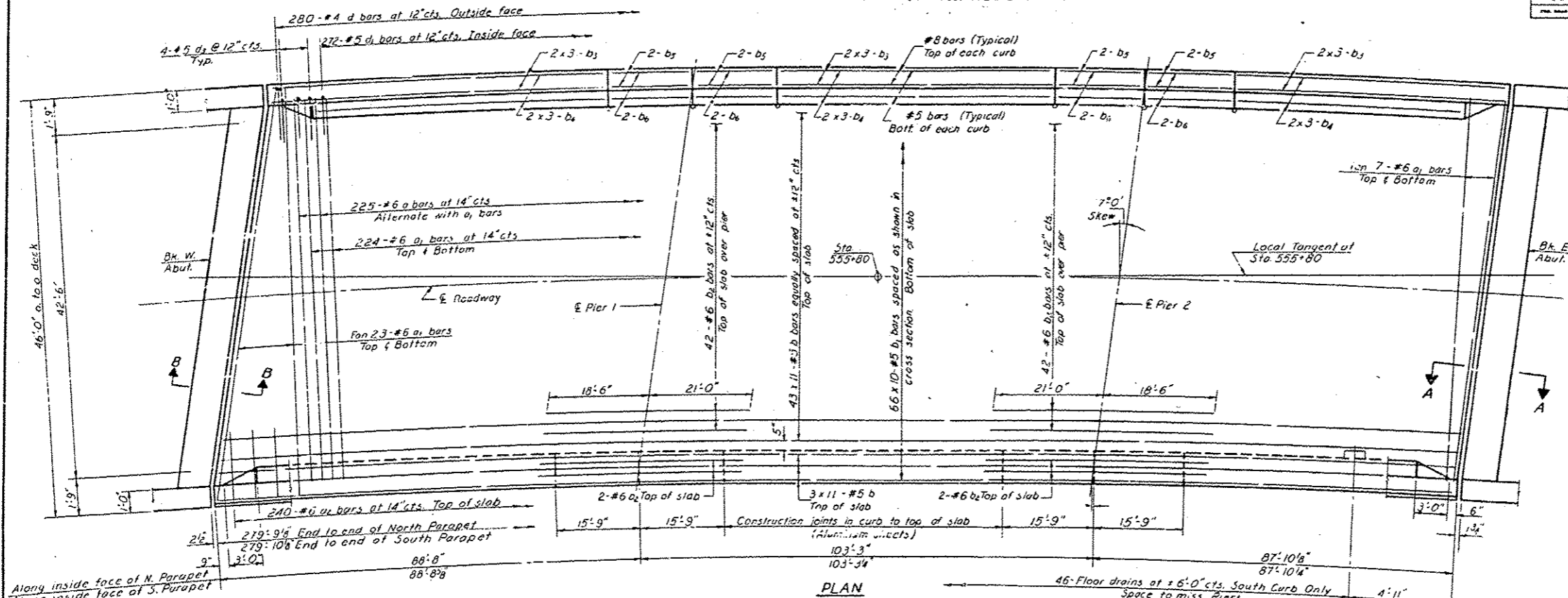
FOR INFORMATION ONLY

FILE NAME D:\OPERATIONS\Bridges\plans\CAD\72087 - D	USER NAME adlaybn pointing 2013-1\plans\ee\dgn	DESIGNED DRAWN CHECKED DATE	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	001-0047 EXISTING PLANS	SCALE: SHEET OF SHEETS STA. TO STA.	F.A.I. RTE. VAR.	SECTION 06 PAINTING 2013-1	COUNTY ADAMS/PIKE	TOTAL SHEETS 16	SHEET NO. 10	CONTRACT NO. 72G07	ILLINOIS FED. AID PROJECT
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
36	PIKE	PIKE	17	42
16 SHEETS				

* 14X-1, 14(W-1), RS-2, 14B-1

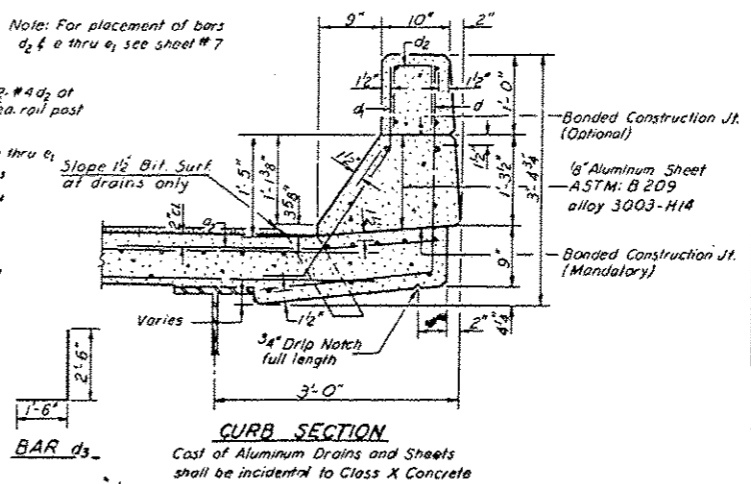
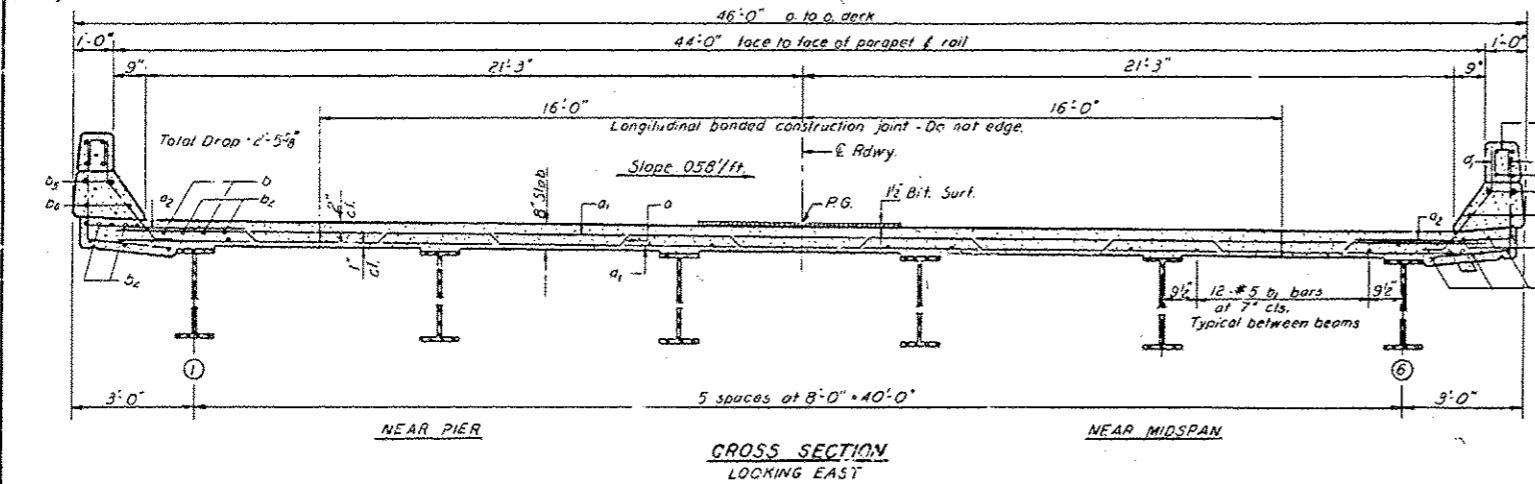


Note: For Sec A-A & Sec B-B see Sheet # 8

BILL OF MATERIAL

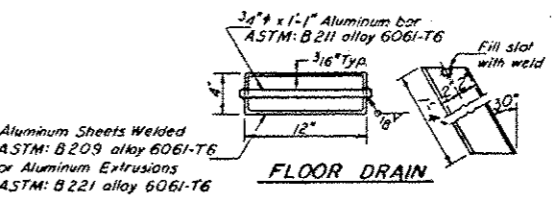
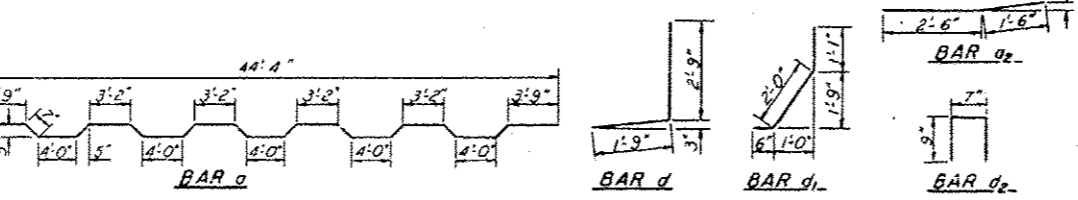
Bar	No.	Size	Length	Shape
a	225	#6	46'-0"	
a ₁	284	#6	44'-3"	
a ₂	180	#6	4'-0"	
b	539	#5	26'-6"	
b ₁	660	#5	29'-3"	
b ₂	52	#6	39'-6"	
b ₃	36	#8	25'-8"	
b ₄	36	#5	25'-0"	
b ₅	16	#8	15'-6"	
b ₆	16	#5	15'-6"	
d	560	#4	4'-6"	J
d ₁	544	#5	3'-7"	J
d ₂	136	#4	2'-1"	J
d ₃	16	#5	4'-0"	J
Reinforcement Bars	Lbs.	86100		
Class X Concrete	Cu.Yds.	376.5		

The lengths and quantities of longitudinal reinforcement and Class X Concrete in parapets are not included in above quantities. See sheet # 7



DESIGNED: J. J. [Signature]
CHECKED: [Signature]
DRAWN: R. A. Summer
CHECKED: JNP

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

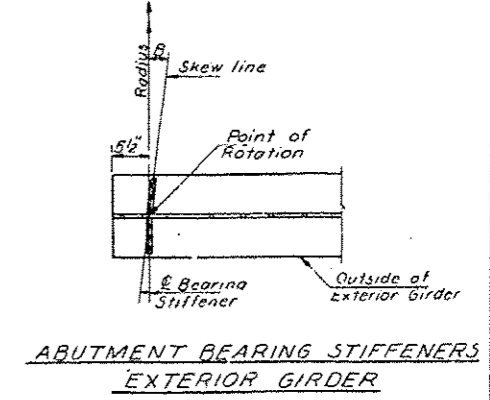
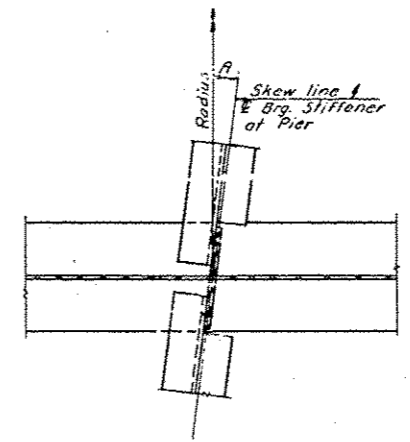
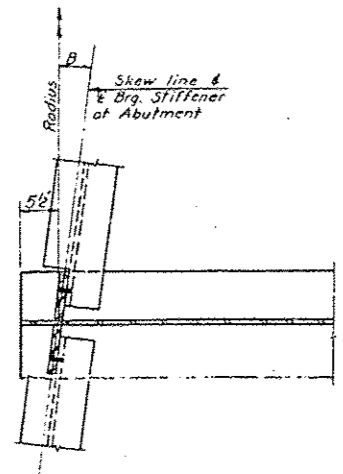


SUPERSTRUCTURE
F.A. RT. 36 SEC. 14B-1
PIKE COUNTY
STATION 555+80

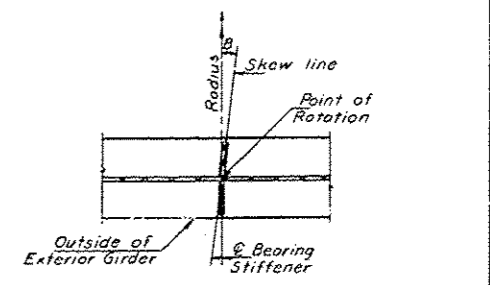
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

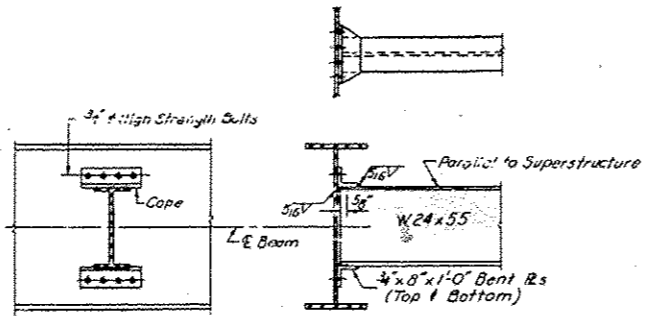
PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
FA. RT. 36	Pike	119	46
SHEET NO. 9			
16 SHEETS			



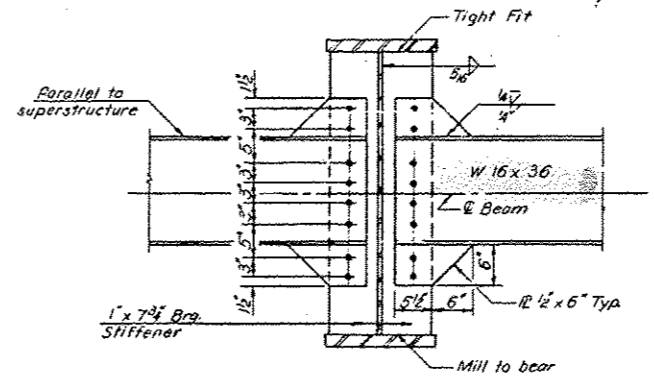
ABUTMENT BEARING STIFFENERS
EXTERIOR GIRDER



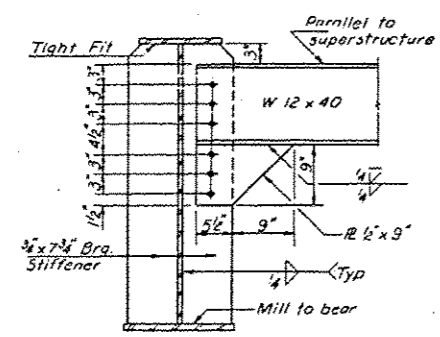
PIER BEARING STIFFENERS
EXTERIOR GIRDER



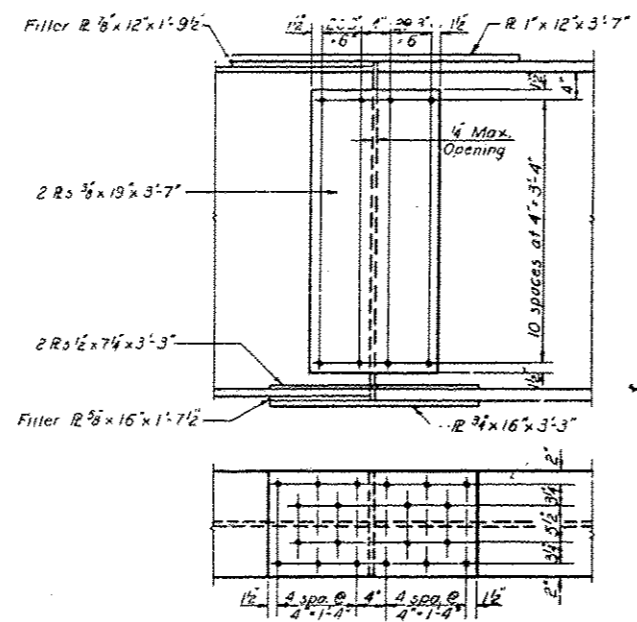
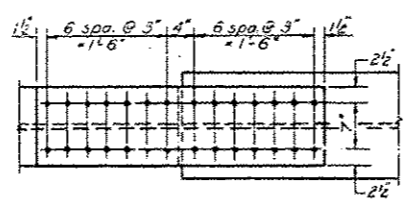
DIAPHRAGM D₁
No. Req'd. 65



DIAPHRAGM D₂
No. Req'd. 10



DIAPHRAGM D
No. Req'd. 10



TOP OF WEB ELEVATIONS

Girder	
1	497.066
2	496.602
3	496.138
4	495.674
5	495.210
6	494.746

ANGLE "B"

Loc Girder	W Abut	Pier 1	Pier 2	E. Abut.
1	10° 24' 06"	8° 13' 13"	5° 39' 41"	3° 30' 07"
2	10° 26' 17"	8° 14' 37"	5° 40' 52"	3° 30' 51"
3	10° 28' 30"	8° 16' 41"	5° 42' 04"	3° 31' 55"
4	10° 30' 43"	8° 18' 26"	5° 43' 16"	3° 32' 20"
5	10° 32' 37"	8° 20' 11"	5° 44' 28"	3° 33' 04"
6	10° 35' 13"	8° 21' 58"	5° 45' 41"	3° 33' 50"

SPLICE
3/4" H.S. Bolts Flanges
1/2" H.S. Bolts Web

DESIGNED	J. W. C. W.
CHECKED	James Kunk
DRAWN	R. P. Summer
CHECKED	JNP

EXAMINED	[Signature]
PASSED	
APPROVED	

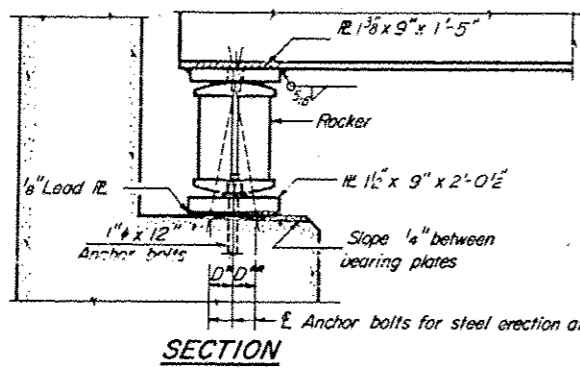
STRUCTURAL STEEL
FA. RT. 36 SEC. 14B-1
PIKE COUNTY
STATION 555+80

FOR INFORMATION ONLY

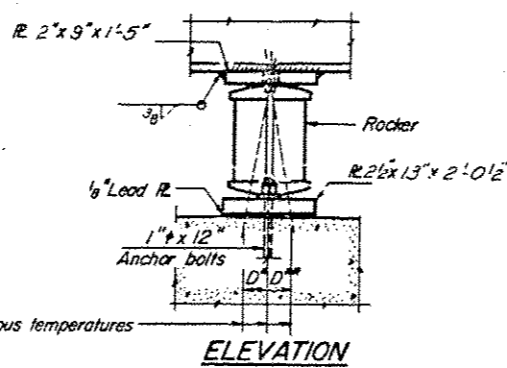
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	PROJECT	SHEET NO.	TOTAL SHEETS
11-26	PIKE	119	47

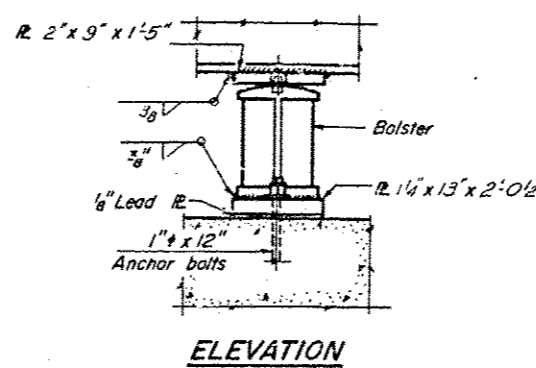
16 SHEETS



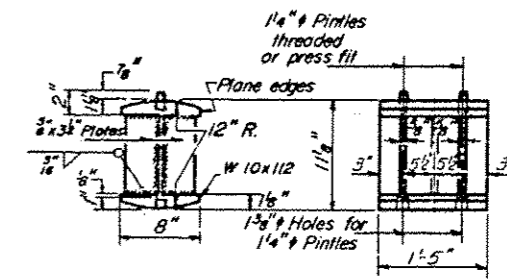
SECTION



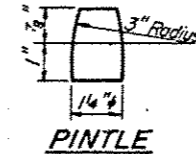
ELEVATION



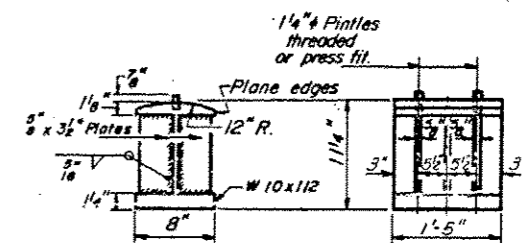
ELEVATION



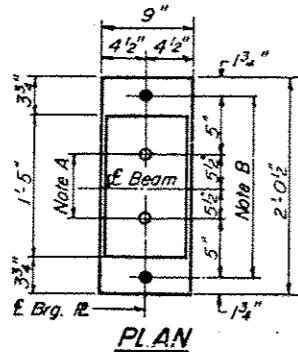
ROCKER



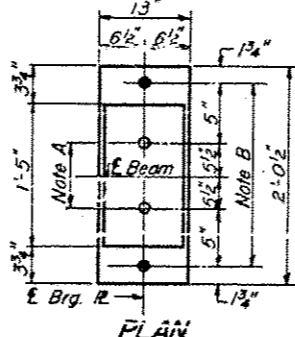
PINTLE



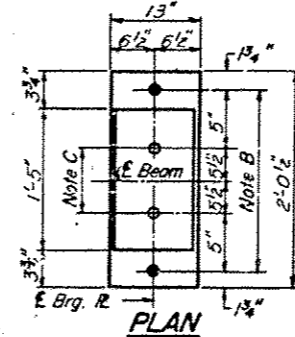
BOLSTER



PLAN AT ABUTMENTS



PLAN AT PIER 1



PLAN AT PIER 2

NOTE A
1 3/8" Holes - 1" deep in top R. for pintles. Thread or press fit pintles into bottom R.

NOTE B
1 1/2" Holes for 1" anchor bolts. 1 1/2 x 2 1/2 x 2 1/2 R. Washers under nut.

NOTE C
1 3/8" Holes 1" deep in top R. only for 1 1/4" pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
- D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS

	Support 6sp 3	Pier	0.5 Sp. 2
I ₁ (in ⁴)	18953	36634	18953
I _c (in ⁴)	50519	50519	50519
S _s (in ³)	883	1430	883
S _c (in ³)	1227	1227	1227
Q ₂ (in)	1.028	1.487	1.028
M ₁ (k)	518	1478	306
F ₁ (ksi)	7.0	12.4	4.2
S ₁ (in)	0.439		0.439
M ₂ (k)	257		209
M ₃ (k)	794	658	762
M _{imp} (k)	184	148	166
TOTAL (k)	1235	806	1137
F ₁ + S ₁ (ksi)	12.1	6.8	11.1
F ₁ TOTAL (ksi)	19.1	19.2	15.3
VR (k)	62.4		55.6

	Abut.	Pier
R ₁ (k)	47.8	158.4
R ₂ (k)	45.7	71.0
Impd (k)	10.7	16.1
R ₁ TOTAL (k)	104.2	245.5

I₁ and S₁ are the moment of inertia and section modulus of the steel section.
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s.
VR is the maximum 1/4" impact shear range in span used to determine shear connector spacing.

DESIGNED	EXAMINED
CHECKED	PASSED
R.P.S.	APPROVED
DRAWN	
CHECKED	

I-2-B 9-1-65, 8-1-70

STRUCTURAL STEEL
F.A. RT.36 SEC.14B-1
PIKE COUNTY
STATION 555+80

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