

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 510 (IL 96)
SECTION 120 J-1
PROJECT C-96-006-07
HANCOCK COUNTY

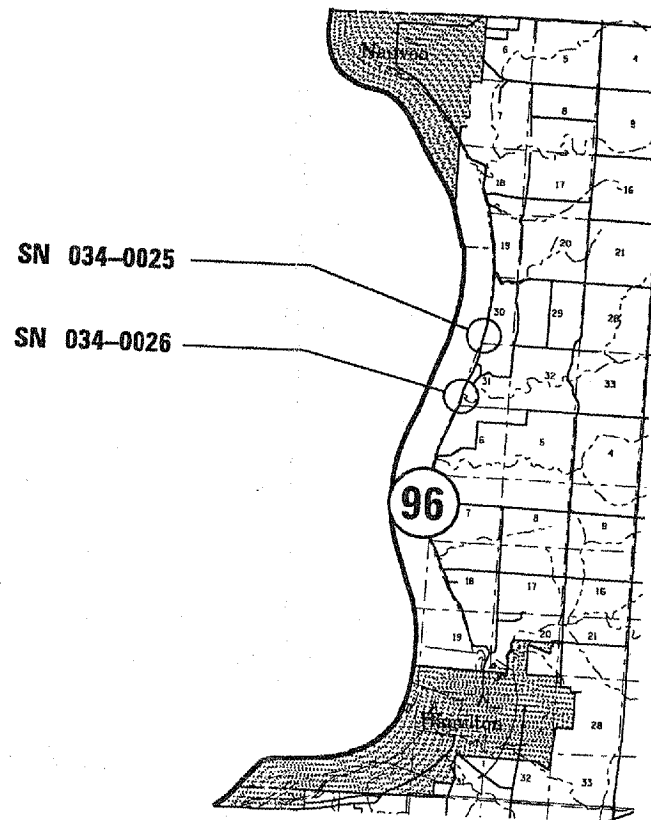
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	120 J-1	HANCOCK	8	1

CONTRACT NO. 72A48

FOR INDEX OF SHEETS, SEE SHEET NO. 2

LIST OF HIGHWAY STANDARDS

- 630001-07
- 631032-03
- 701006-02
- 701011-01
- 701201-02
- 701301-02
- 701311-02
- 702001-06



NET LENGTH OF SECTION: 3934' = 0.75 MI

OPERATIONS DESIGN & PLANNING ENGINEER
CECIL DOWNING - (217) 785-4036

BRIDGE INSPECTION ENGINEER
DAVE COPENBARGER - (217) 785-5306

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

CONTRACT NO. 72A48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *MAIB 20 06*
Chris M. Reed
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 30, 20 06
J. Mike Hurd
ENGINEER OF DESIGN AND ENVIRONMENT

June 30, 20 06
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, SIGNATURES, & SUMMARY OF QUANTITIES
- 3 GUARDRAIL SCHEDULE
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- 6-7 EXISTING BRIDGE RAIL PLANS

GENERAL NOTES

THE PRICE OF TRAFFIC CONTROL ITEMS SHALL BE INCLUDED IN THE BID PRICE FOR STEEL PLATE BEAM GUARDRAIL AS PER ARTICLE 701.05 IN THE STANDARD SPECIFICATIONS

STEEL BRIDGE RAIL POSTS SHALL REMAIN IN PLACE, ONLY THE BRIDGE RAIL SHALL BE REPLACED. ANY NECESSARY MODIFICATIONS TO THE NEW BRIDGE RAIL SHALL BE INCLUDED IN THE BID PRICE FOR REMOVE AND REPLACE STEEL BRIDGE RAIL, TYPE T-1 (SPECIAL)

DATE	
BY	
ROW	
PLAT	
NOTEBOOK	
NO.	

SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY	SFTY-3J 100% STATE HANCOCK
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	3675	3675
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	8
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	8	8
63200310	GUARDRAIL REMOVAL	FOOT	4292	4292
67100100	MOBILIZATION	L SUM	1	1
78200410	GUARDRAIL MARKERS, TYPE A	EACH	56	56
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	8
X0325363	REMOVE AND REPLACE STEEL BRIDGE RAIL, TYPE T-1 (SPECIAL)	FOOT	463	463

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED May 9 2006
[Signature]
ENGINEER OF OPERATIONS

EXAMINED April 28 2006
[Signature]
ENGINEER OF PROGRAM IMPLEMENTATION

EXAMINED May 15 2006
[Signature]
ENGINEER OF PROGRAM DEVELOPMENT

INDEX OF SHEETS, GENERAL
NOTES, SIGNATURES, &
SUMMARY OF QUANTITIES

Rev.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

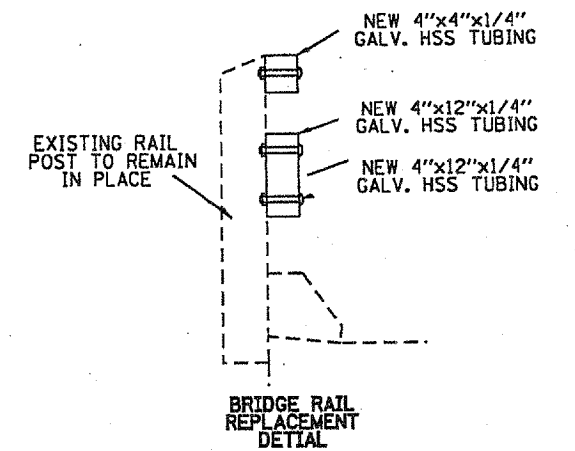
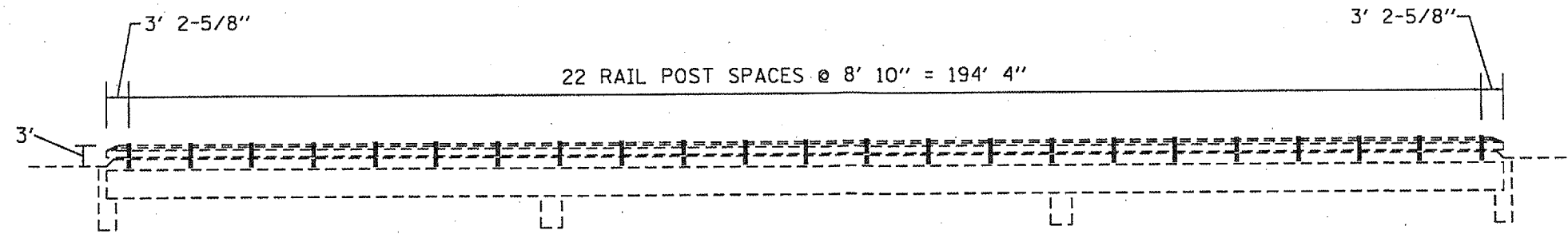
SHEET 3 OF 8
CONTRACT 72A48

GUARDRAIL SCHEDULE

STA TO	STA	SIDE	TRAF. BARR. TERM. TY 1 SPC. (TANGENT) EACH	TRAF. BARR. TERM. TY 6A EACH	STEEL PLATE BEAM GUARDRAIL FEET	REMOVE AND REPLACE STEEL BRIDGERAIL FEET	GUARDRAIL REMOVAL FEET	TERMINAL MARKERS DIRECT APPLIED EACH	GUARDRAIL MARKERS TY A EACH
SN 034-0025									
771+07.31	771+57.31	RT	1				42.5	1	
771+57.31	772+94.81	RT			137.5		137.5		2
772+94.81	773+26.81	RT		1			32		
773+26.81	773+57.19	RT				30.38			1
773+57.19	773+89.19	RT		1			32		
773+89.19	774+26.69	RT			37.5		37.5		1
774+26.69	774+76.69	RT	1				47.5	1	
771+73.31	772+23.31	LT	1				50.5	1	
772+23.31	772+60.81	LT			37.5		37.5		1
772+60.81	772+92.81	LT		1			32		
772+92.81	773+23.19	LT				30.38			1
773+23.19	773+55.19	LT		1			32		
773+55.19	773+92.69	LT			37.5		37.5		1
773+92.69	774+42.69	LT	1				41.5	1	
SN 034-0026									
801+92.84	802+42.84	RT	1				43	1	
802+42.84	830+67.84	RT			2825		2825		35
830+67.84	830+99.84	RT		1			32		
830+99.84	833+00.64	RT				200.8			3
833+00.64	833+32.64	RT		1			32		
833+32.64	837+07.64	RT			375		375		5
837+07.64	837+57.64	RT	1				49	1	
829+30.34	829+80.34	LT	1				46.5	1	
829+80.34	830+67.84	LT			87.5		87.5		1
830+67.84	830+99.84	LT		1			32		
830+99.84	833+00.64	LT				200.8			3
833+00.64	833+32.64	LT		1			32		
833+32.64	834+70.14	LT			137.5		137.5		2
834+70.14	835+20.14	LT	1				40.5	1	
TOTALS			8	8	3675	463	4292	8	56

DATE	
BY	
NO. OF PLAT	
NOTEBOOK NO.	

SN 034-0025, 26
GUARDRAIL SCHEDULE



REV.	DATE	BY

34' 0" TO 0" OF DECK

CL IL 96

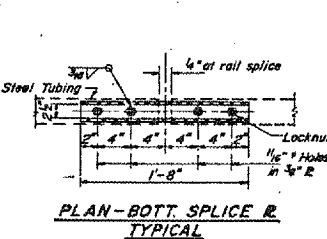
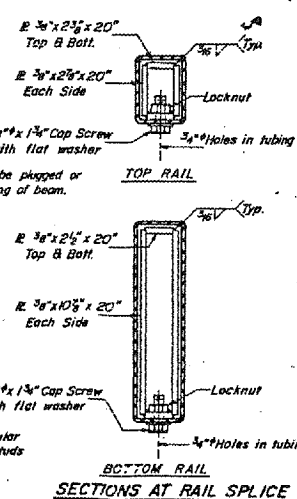
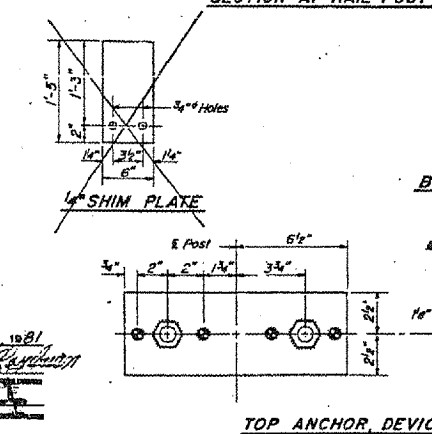
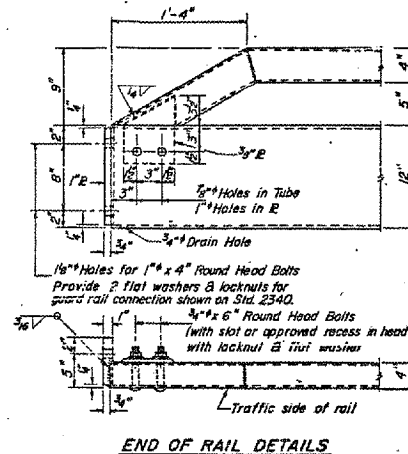
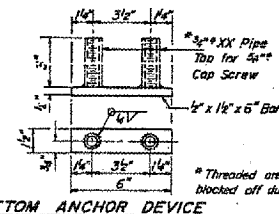
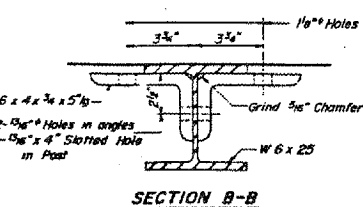
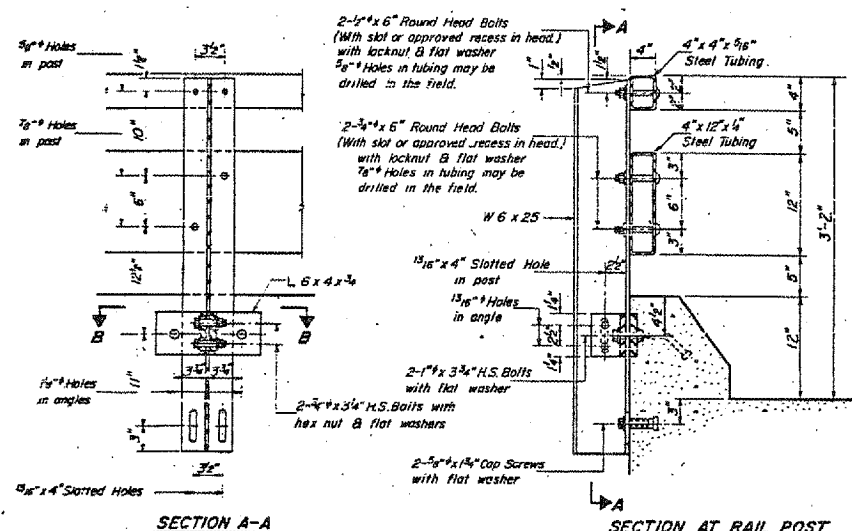
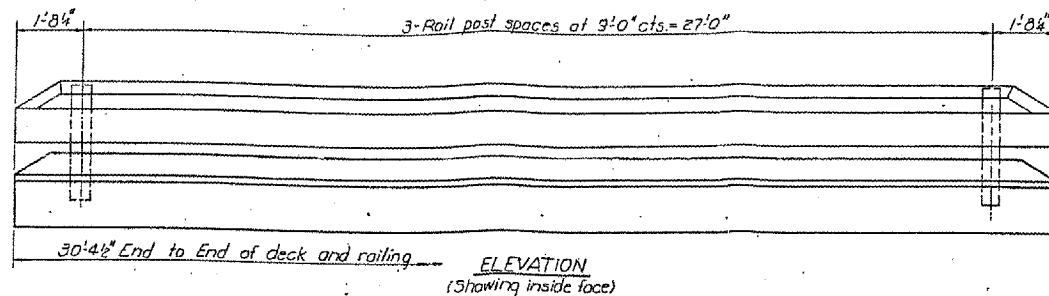
STA 832+00.24

204' 1" BACK TO BACK ABUTMENTS

SN 034-0026
EXISTING PLAN & PROFILE
(NOT TO SCALE)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE
DESIGNED BY	DATE	BY	DATE	BY	DATE



NOTES

- Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing.
- All other steel shapes and plates shall conform to the requirements of AASHTO M-163 except posts and angles shall conform to AASHTO M-223, Grade 50.
- Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.
- All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.
- All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.
- Railing shall be in accordance with Section 50B of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE T-1.
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.
- The 3/4" high strength bolts used to connect the 6x4x3/4 angles to the post shall be tightened in accordance with Article 507D(1)(3) of the Standard Specifications. The 1 1/4" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.
- All railing and accessories shall be painted with lead silico chromate paint system except that the final field coat shall be maroon finish coat. See Special Provisions.

BILL OF MATERIAL

Item	Unit	Total
Steel Railing, Type T-1	Lin. Ft.	61

TYPE T-1
STEEL RAILING
EA. RT. 310 SEC. 120 BR-B
HANCOCK COUNTY
STA. 713123.00

DESIGNED Lance Kidd
CHECKED M.A. Ryan
DRAWN R. Daly
CHECKED T.M.R.

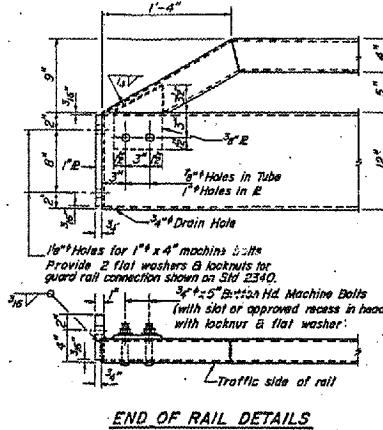
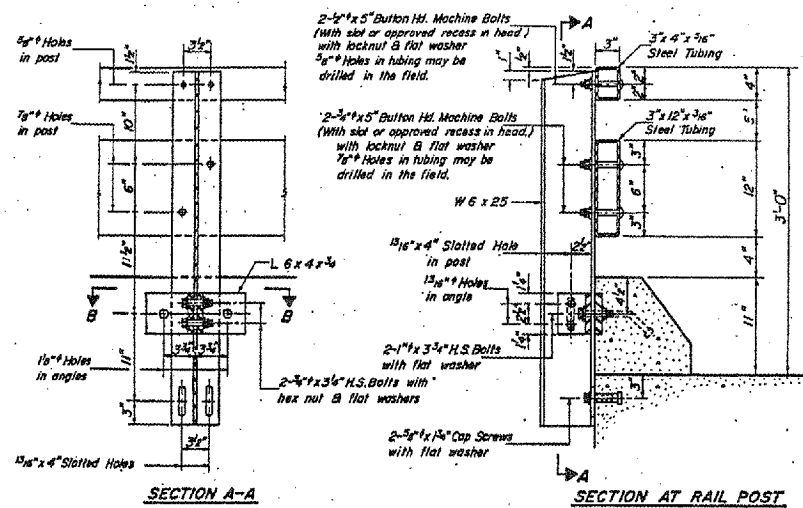
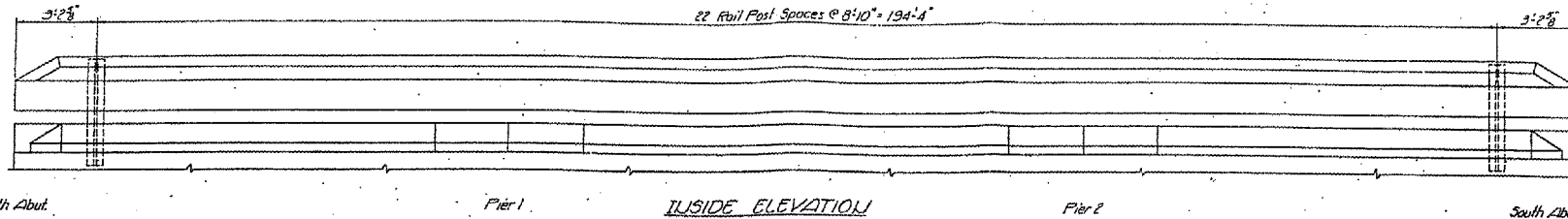
September 16, 1981
EXAMINED James J. Ryan
APPROVED

R-24A 8-30-80 (11'-0" Maximum Post Spacing)

SN 034-0025
EXISTING GUARDRAIL PLAN
FOR INFORMATION ONLY
(NOT TO SCALE)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	120	DATE	34	21	SHEET NO. 6
CONTRACT NO.	80-2	DESIGNER	HANCOCK	DATE	15 SHEETS



NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B or A-501 Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

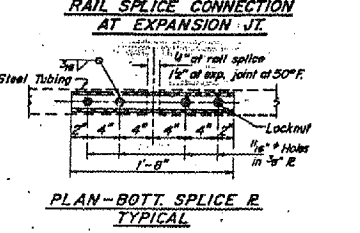
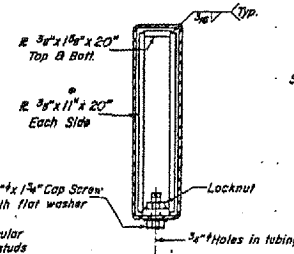
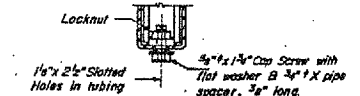
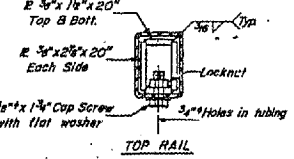
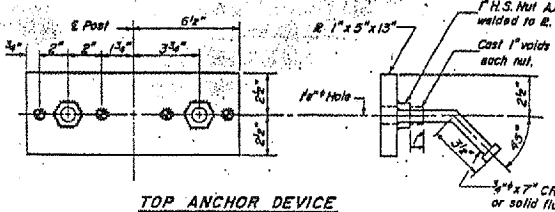
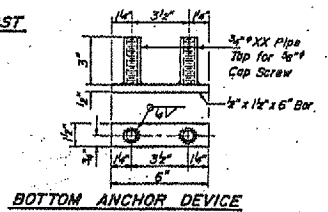
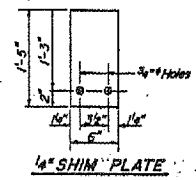
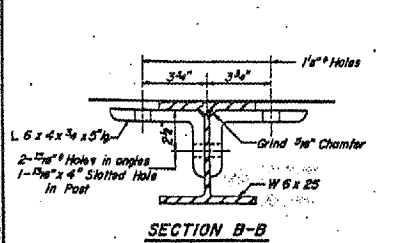
Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-154.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE T.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/2" fabric bearing pad between the post and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 502.04(1)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 2-3/4" cap screws in bottom of posts shall be tightened to a snug fit only.

For multi-span bridges, sufficient 1/2" x 5" x 1-5/8" steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.



CURB & RAIL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Steel Railing, Type T	Lin. Ft.	402'		

TYPE T STEEL RAILING
EA. RT. 510 SEC. 120 BR. 2
HANCOCK COUNTY
STA. 832+00.24

DESIGNED *Ralph C. Anderson*
CHECKED *Thomas S. Kunkel*
DRAWN *JD*
DATE *July 30 1970*

EXAMINED *[Signature]*
PASSED *[Signature]*
APPROVED *[Signature]*

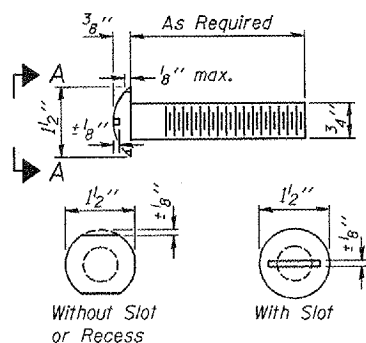
R-24 4-1-70 (9'-0" Maximum Post Spacing)

SN 034-0026
EXISTING GUARDRAIL PLAN
FOR INFORMATION ONLY
(NOT TO SCALE)

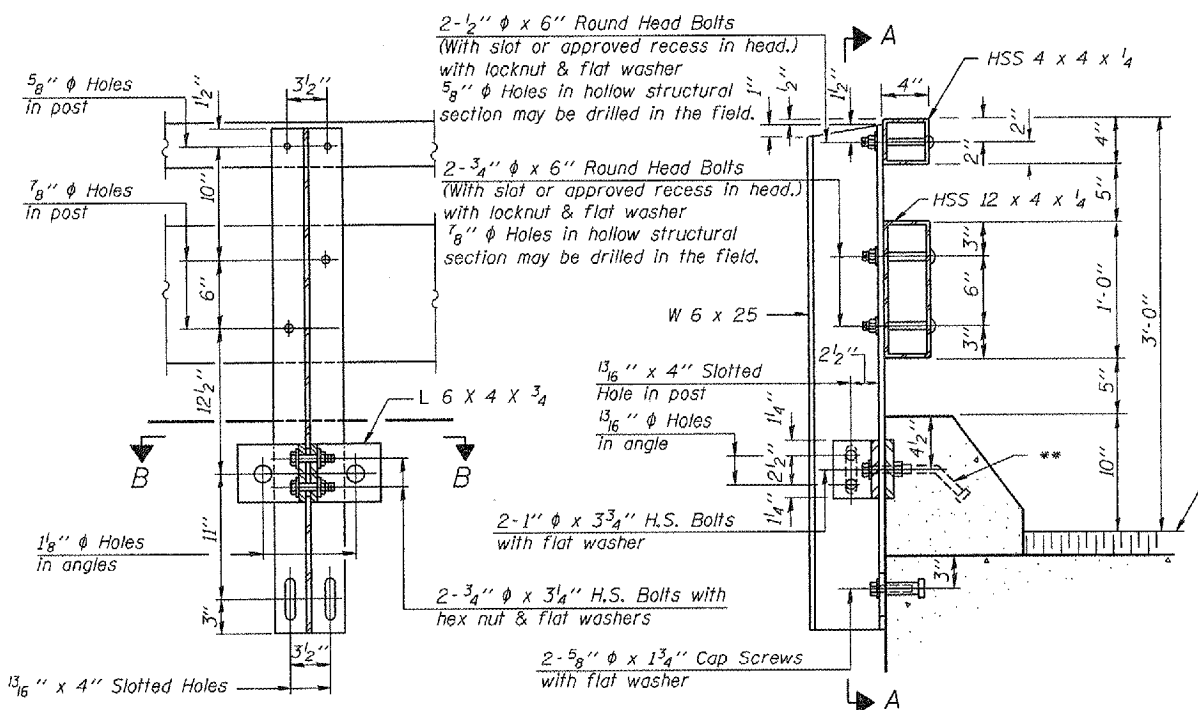
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
510	129	HANCOCK	8	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract # 72A48

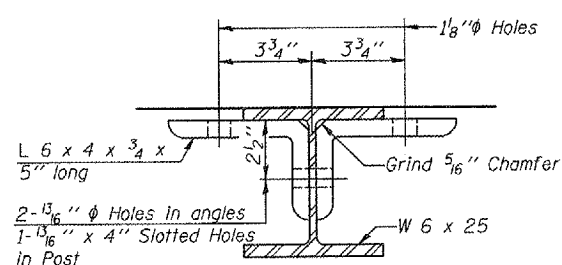


VIEW A-A
ROUND HEAD BOLT

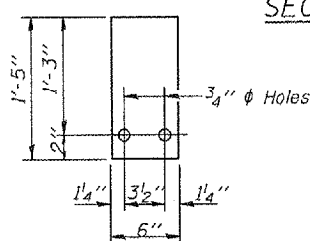


SECTION A-A

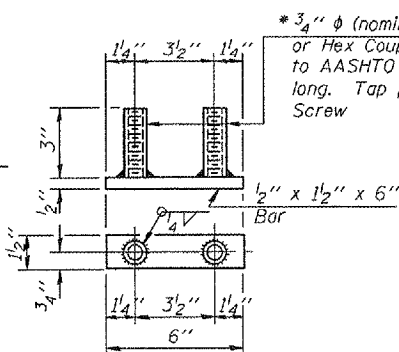
SECTION AT RAIL POST



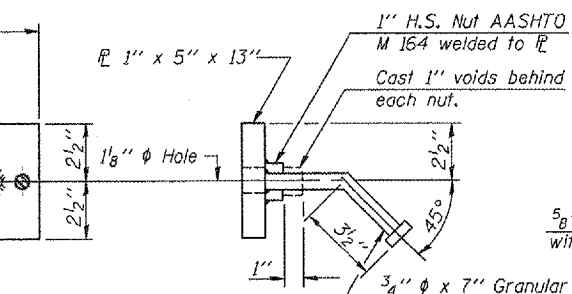
SECTION B-B



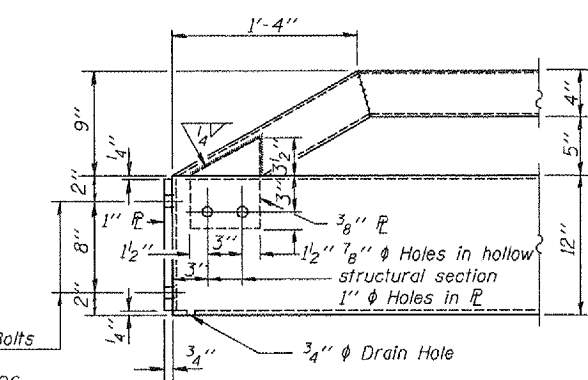
1/4 SHIM PLATE



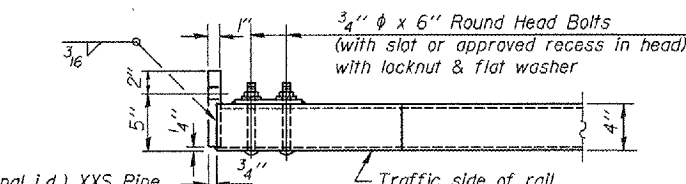
BOTTOM ANCHOR DEVICE



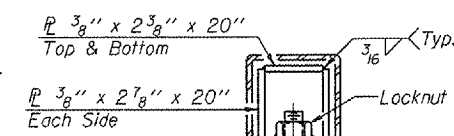
TOP ANCHOR DEVICE



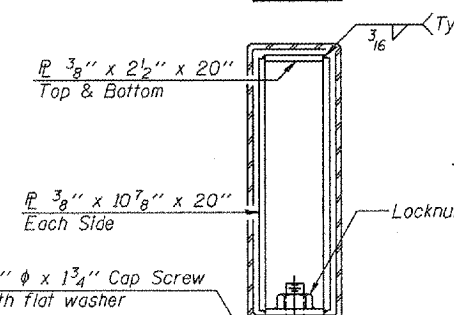
END OF RAIL DETAILS



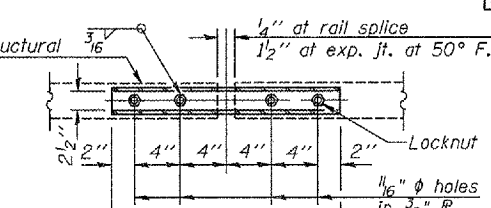
TOP RAIL



RAIL SPLICE CONNECTION
AT EXPANSION JT.



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE R
TYPICAL

Notes:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- For multi-span bridges, sufficient 1/4" x 6" x 1'-5" galvanized steel shims shall be provided to align rail between adjacent spans. Cast included with Steel Railing, Type T-1.
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
- ** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type T-1	Foot	

STEEL RAILING, TYPE T-1
SN. 034-0025
034-0026

DESIGNED -	200
CHECKED -	EXAMINED
DRAWN -	PASSED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES