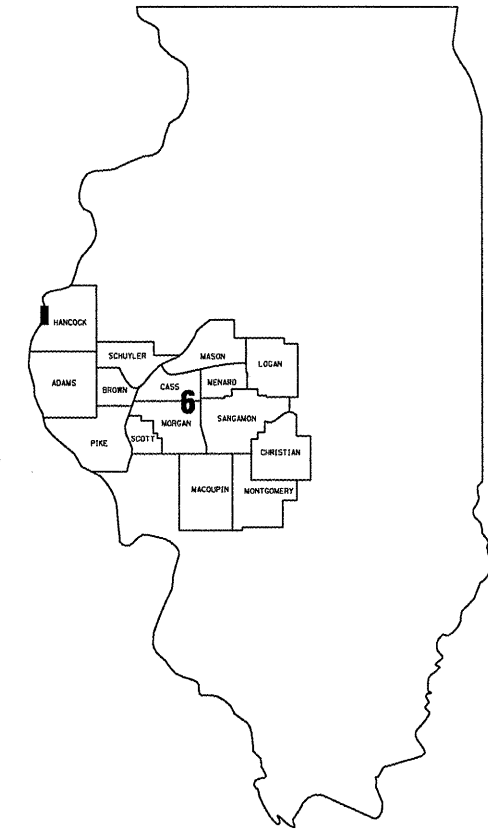


FOR INDEX OF SHEETS AND HIGHWAY
STANDARDS, SEE SHEET 2.

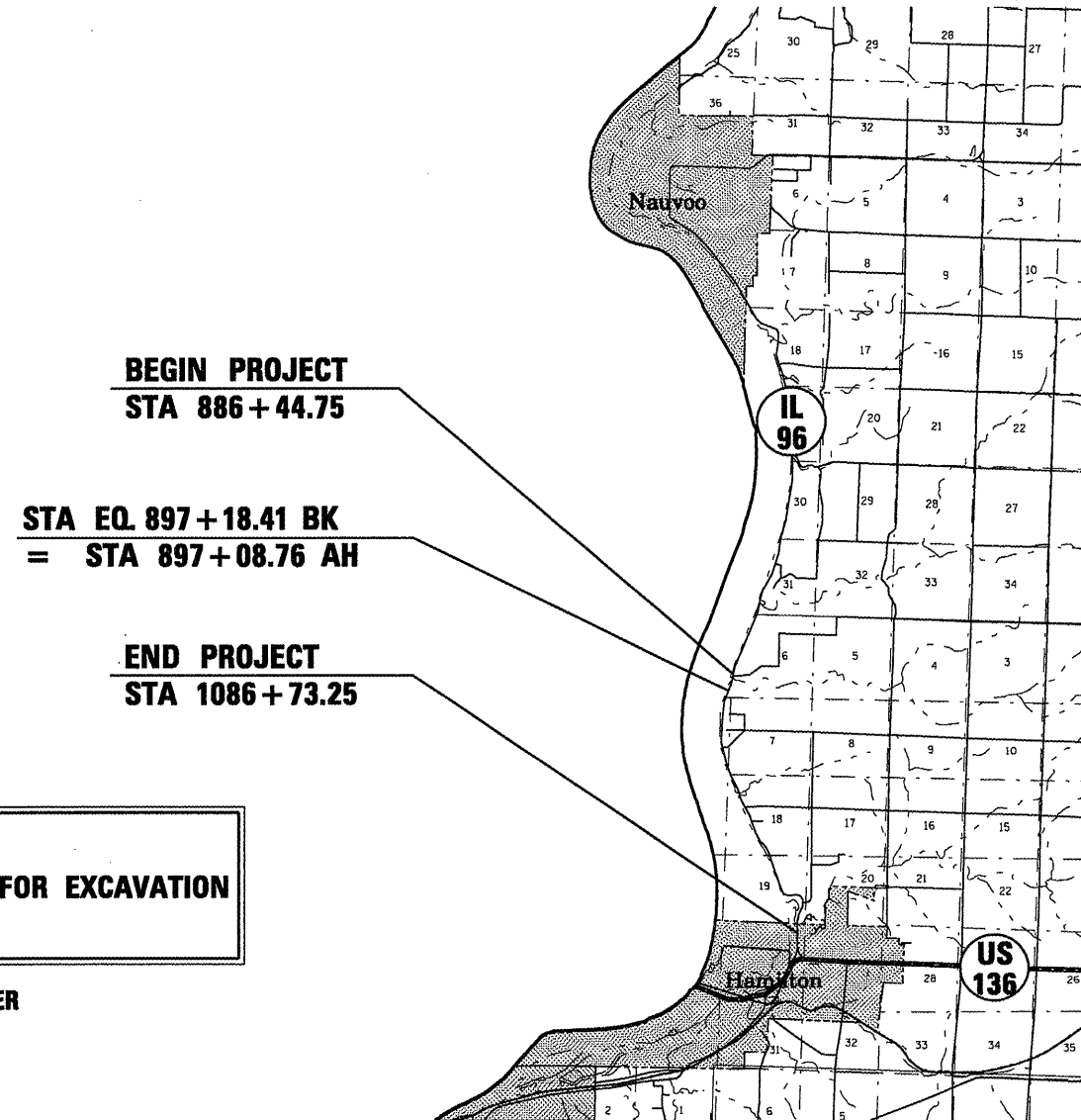
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CONTRACT: 72C82
SHEET 1 OF 8

**PROPOSED
HIGHWAY PLANS**
FAP ROUTE 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY
C96-077-09 / D96-077-09
PROJECT No. ACF-0510(034)



LOCATION OF SECTION INDICATED THUS: ■



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

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

CONTRACT NO. 72C82

NET LENGTH OF SEC 20038 FT=3.80 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MARCH 19 20 09

Ry Z Ruf
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

May 8, 20 09
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 20 09
Christine M. Reed
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

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4-5	GUARD RAIL SCHEDULE
6	LOCATION MAP
7	GUARD RAIL PLACEMENT DETAILS
8	STEEL RAIL, TYPE T-1 DETAILS

STANDARDS

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630101-08
630301-05
631011-05
635006-03
635011-02
701001-02
701006-03
701201-03
701901-01
BLR27-1

GENERAL NOTES:

THE CONTRACTOR SHALL REPLACE ALL GUARD RAIL AND BRIDGE RAIL ON THE SAME DAY THAT IT IS REMOVED. NO OVERNIGHT LANE CLOSURES WILL BE PERMITTED.

ALL STEEL PLATE BEAM GUARDRAIL THAT IS PLACED ON TOP OF EXISTING RETAINING WALLS SHALL USE 6' POSTS.

THE INCLUDED QUANTITY FOR ^{FURNISHED} EXCAVATION, SPECIAL IS INTENDED FOR BUILDING UP SHOULDERS THAT ARE TOO NARROW OR STEEP TO ACCOMODATE TRAFFIC BARRIER TERMINALS. THE ENGINEER SHALL DECIDE WHERE FURNISHED EXCAVATION IS NECESSARY. THE ^{FURNISHED} EXCAVATION, SPECIAL PAY ITEM SHALL ALSO INCLUDE ALL LABOR AND MATERIAL NECESSARY TO APPLY CLASS 2 SEEDING TO THE ^{FURNISHED} EXCAVATION AREAS AS DETAILED IN THE SPECIAL PROVISIONS. ^{SPECIAL}

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

<p>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6</p>
<p>EXAMINED <u>March 20</u> 20<u>09</u></p> <p style="text-align: center;"><u>Sam J. Hoan</u> ENGINEER OF OPERATIONS</p>
<p>EXAMINED <u>March 20</u> 20<u>09</u></p> <p style="text-align: center;"><u>Sam J. Hoan</u> ENGINEER OF PROGRAM IMPLEMENTATION</p>
<p>EXAMINED <u>MARCH 19</u> 20<u>09</u></p> <p style="text-align: center;"><u>Ray Z. Rife</u> ENGINEER OF PROGRAM DEVELOPMENT</p>

INDEX, STDS, & GENERAL NOTES
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY

Rev.

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

CODE NO.	ITEM	UNIT	80% FED.
			20% STATE
			SFTY-2A
			TOTAL QTY
20400805	FURNISHED EXCAVATION, SPECIAL	CU YD	100
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 ^{FOOT} POSTS	FOOT	4712.5
63000003	STEEL PLATE BEAM GUARD RAIL, TYPE A, 9 ^{FOOT} POSTS	FOOT	1887.5
63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	37.5
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	14
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	21
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	2
63100175	TRAFFIC BARRIER TERMINAL, TYPE 2 (SPECIAL)	EACH	2
63200307	STEEL PLATE BEAM GUARD RAIL REMOVAL, ATTACHED TO STRUCTURE	FOOT	37.5
63200310	GUARDRAIL REMOVAL	FOOT	7937
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
78200410	GUARDRAIL MARKERS, TYPE A	EACH	112
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	24
X0325194	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3, SPECIAL	EACH	2
X0325363	REMOVE AND REPLACE STEEL BRIDGE RAIL, TYPE T-1 (SPECIAL)	FOOT	1591.2

QUANTITIES
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY

GUARDRAIL SCHEDULE																
LOCATION	STA	TO STA	SIDE	TRAF. BARR. TERM. TY 1 SPC. (TANGENT)	TRAF. BARR. TERM. TY 1 SPC. (FLARED)	TRAF. BARR. TERM. TY 5A	TRAF. BARR. TERM. TY 2 (SPECIAL)	IMPACT ATTN. (FULLY REDIRECTIVE, NARROW), TL3, SPC	SPBGR, 9' POSTS	SPBGR, 6' POSTS	SPBGR ATTACHED TO STRUCTURES	REMOVE AND REPLACE STEEL BRIDGE RAIL	SPBGR REM. ATTACHED TO STRUCTURE	GUARDRAIL REMOVAL	TERMINAL MARKERS - DIRECT APPLIED	GUARDRAIL MARKERS
				EACH	EACH	EACH	EACH	EACH	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH
1 (034-0058)	886+44.75	886+94.75	RT	1										50	1	
	886+94.75	888+82.25	RT						187.5					187.5		2
	888+82.25	888+95.50	RT			1								13.25		1
	888+95.50	892+56.50	RT									361				3
	892+56.50	892+69.75	RT			1								13.25		1
	892+69.75	893+57.25	RT							87.5				87.5		1
	893+57.25	894+07.25	RT	1										50	1	
	888+32.25	888+82.25	LT		1									50	1	
	888+82.25	888+95.50	LT			1								13.25		1
	888+95.50	892+56.50	LT									361				3
892+56.50	892+69.75	LT											13.25		1	
892+69.75	892+94.75	LT					1						25			
LOCATION SUB-TOTALS:				2	1	3		1		275		722		503	3	13
2	896+07.00	896+57.00	RT	1										50	1	
	896+57.00	898+32.00	RT						168.75	6.25			6.25	168.75		3
	898+32.00	898+82.00	RT	1										50	1	
	LOCATION SUB-TOTALS:				2					168.75	6.25		6.25	268.75	2	3
3	897+18.00	897+68.00	LT	1										50	1	
	897+68.00	898+93.00	LT						118.75	6.25			6.25	118.75		2
	898+93.00	899+43.00	LT	1										50	1	
	LOCATION SUB-TOTALS:				2					118.75	6.25		6.25	218.75	2	2
4	926+00.00	926+50.00	RT	1										50	1	
	926+50.00	936+50.00	RT							1000				1000		13
	936+50.00	942+00.00	RT						550					550		7
	942+00.00	950+50.00	RT							837.5	12.5		12.5	837.5		11
	950+50.00	951+00.00	RT	1										50	1	
	LOCATION SUB-TOTALS:				2				550	1837.5	12.5		12.5	2487.5	2	31
5	943+12.50	944+00.00	LT		1		1			25	12.5		12.5	75	1	1
	LOCATION SUB-TOTALS:					1		1		25	12.5		12.5	75	1	1
	LOCATION SUB-TOTALS:					1		1		25	12.5		12.5	75	1	1
6 (034-0056)	972+24.08	972+74.08	RT	1										50	1	
	972+74.08	974+24.08	RT						150					150		2
	974+24.08	974+37.33	RT			1								13.25		1
	974+37.33	975+35.91	RT									98.58				1
	975+35.91	975+49.16	RT			1								13.25		
	975+49.16	976+24.16	RT						75					75		1
	976+24.16	976+74.16	RT	1										50	1	
	972+99.08	973+49.08	LT	1										50	1	
	973+49.08	974+24.08	LT						75					75		1
	974+24.08	974+37.33	LT				1							13.25		
	974+37.33	975+35.91	LT									98.58				1
	975+35.91	975+49.16	LT			1								13.25		1
	975+49.16	976+61.66	LT							112.5				112.5		1
	976+61.66	977+11.66	LT	1										50	1	
LOCATION SUB-TOTALS:				4		4			300	112.5		197.16		665.5	4	9

GUARD RAIL SCHEDULE
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY

GUARDRAIL SCHEDULE (CONTINUED)																
LOCATION	STA	TO STA	SIDE	TRAF. BARR. TERM. TY 1 SPC. (TANGENT)	TRAF. BARR. TERM. TY 1 1 SPC. (FLARED)	TRAF. BARR. TERM. TY 5A	TRAF. BARR. TERM. TY 2 (SPECIAL)	IMPACT ATTEN. (FULLY REDIRECTIVE, NARROW), TL3, SPC	SPBGR, 9' POSTS	SPBGR, 6' POSTS	SPBGR ATTACHED TO STRUCTURES	REMOVE AND REPLACE STEEL BRIDGE RAIL	SPBGR REM. ATTACHED TO STRUCTURE	GUARDRAIL REMOVAL	TERMINAL MARKERS - DIRECT APPLIED	GUARDRAIL MARKERS
				EACH	EACH	EACH	EACH	EACH	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH
7 (084-0029)	1029+53.25	1030+03.25	RT	1										50	1	
	1030+03.25	1031+90.75	RT							187.5				187.5		1
	1031+90.75	1032+04.00	RT			1								13.25		1
	1032+04.00	1033+42.00	RT													1
	1033+42.00	1033+55.25	RT			1								13.25		
	1033+55.25	1046+05.25	RT											1250		16
	1046+05.25	1052+55.25	RT						650					650		8
	1052+55.25	1056+80.25	RT							425				425		6
	1056+80.25	1057+30.25	RT	1										50	1	
	1031+78.25	1031+90.75	LT				1									
	1031+90.75	1032+04.00	LT			1								13.25		1
	1032+04.00	1033+42.00	LT													1
	1033+42.00	1033+67.75	LT					1							25.75	
LOCATION SUB-TOTALS:				2		3	1	1	650	1862.5				2678	2	35
8	1058+00.00	1058+50.00	RT	1										50	1	
	1058+50.00	1060+75.00	RT							225				225		3
	1060+75.00	1063+75.00	RT						300					300		4
	1063+75.00 *	1064+75.00 *	RT												1	
	LOCATION SUB-TOTALS:				1				300	225				575	2	7
9	1069+00.00	1070+00.00	LT	2										87.5	2	1
	LOCATION SUB-TOTALS:				2									87.5	2	1
10 (034-0030)	1082+86.25	1083+36.25	RT	1										50	1	
	1083+36.25	1084+23.75	RT							87.5				87.5		1
	1084+23.75	1084+37.00	RT			1								13.25		1
	1084+37.00	1086+35.00	RT										198			2
	1086+35.00	1086+48.25	RT			1								13.25		1
	1086+48.25	1086+98.25	RT	1										25	1	
	1082+86.25	1083+36.25	LT	1										50	1	
	1083+36.25	1084+23.75	LT						87.5					87.5		1
	1084+23.75	1084+37.00	LT			1								13.25		1
	1084+37.00	1086+35.00	LT										198			2
	1086+35.00	1086+48.25	LT			1								13.25		1
	1086+48.25	1086+98.25	LT	1										25	1	
	LOCATION SUB-TOTALS:				4		4			87.5	87.5		396		378	4
GRAND TOTALS:				21	2	14	2	2	1887.5	4712.5	37.5	1501.16 1315.16	37.5	7987	24	112

* STA 1063+75 TO 1064+75 - A NEW TYPE 1 TERMINAL AND 50' OF NEW SPBGR ARE ALREADY IN PLACE AND ARE TO REMAIN. THE TERMINAL MARKER IS INSUFFICIENT AND SHALL BE REPLACED.

GUARD RAIL SCHEDULE
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY

LOCATION #1
SN 034-0058

LOCATIONS #2 & #3

LOCATIONS #4 & #5

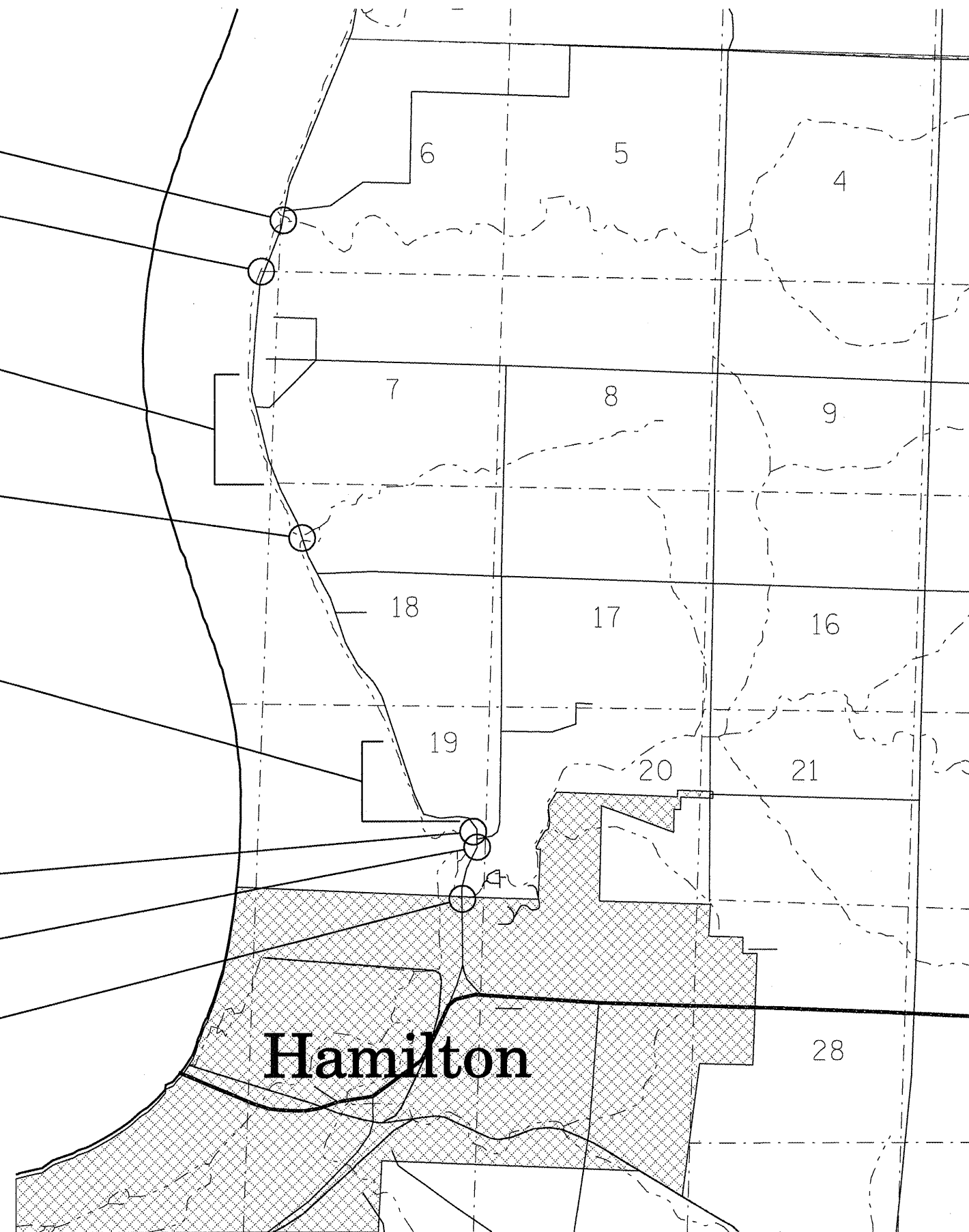
LOCATION #6
SN 034-0056

LOCATION #7
SN 034-0029

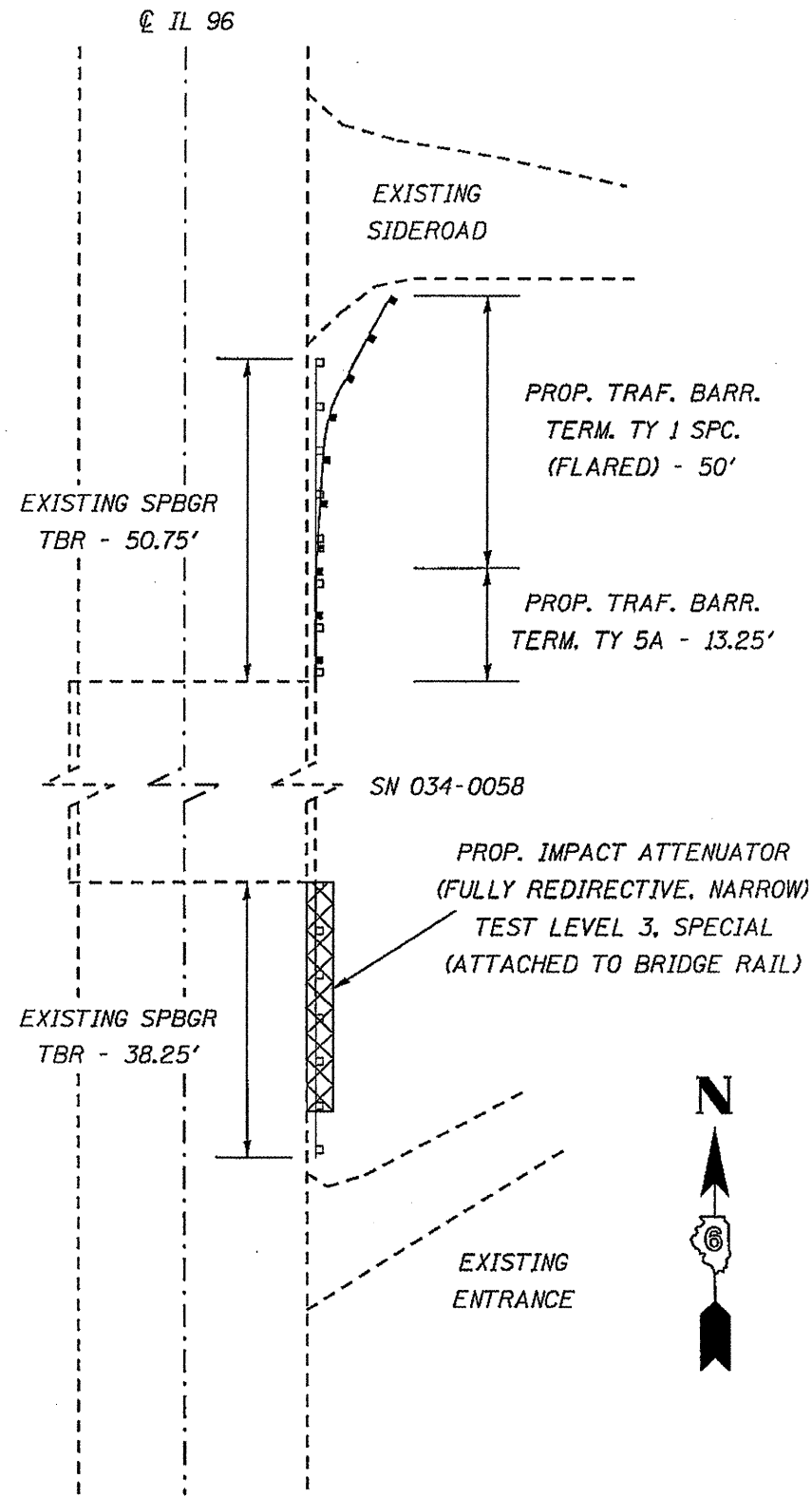
LOCATION #8

LOCATION #9

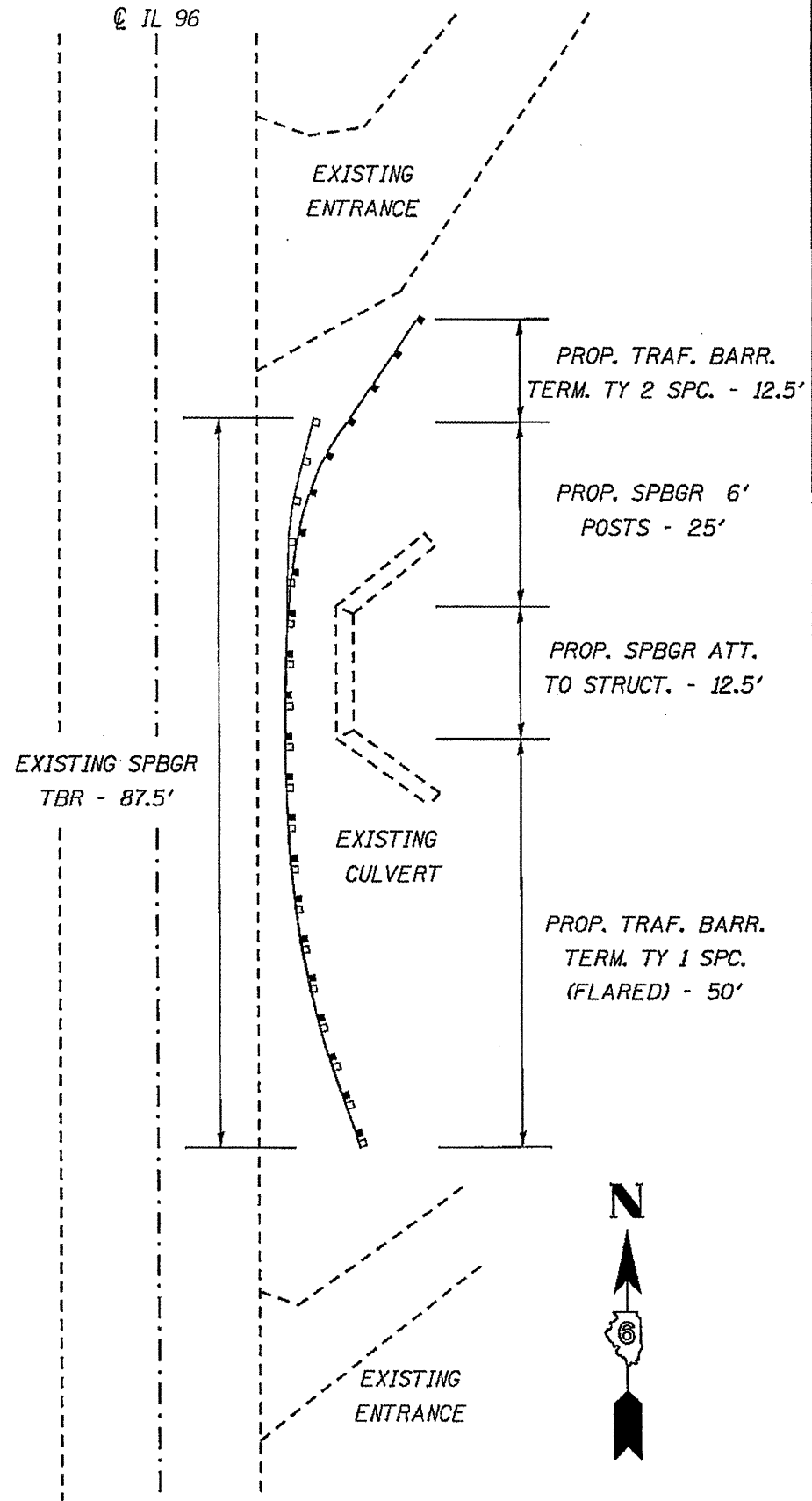
LOCATION #10
SN 034-0030



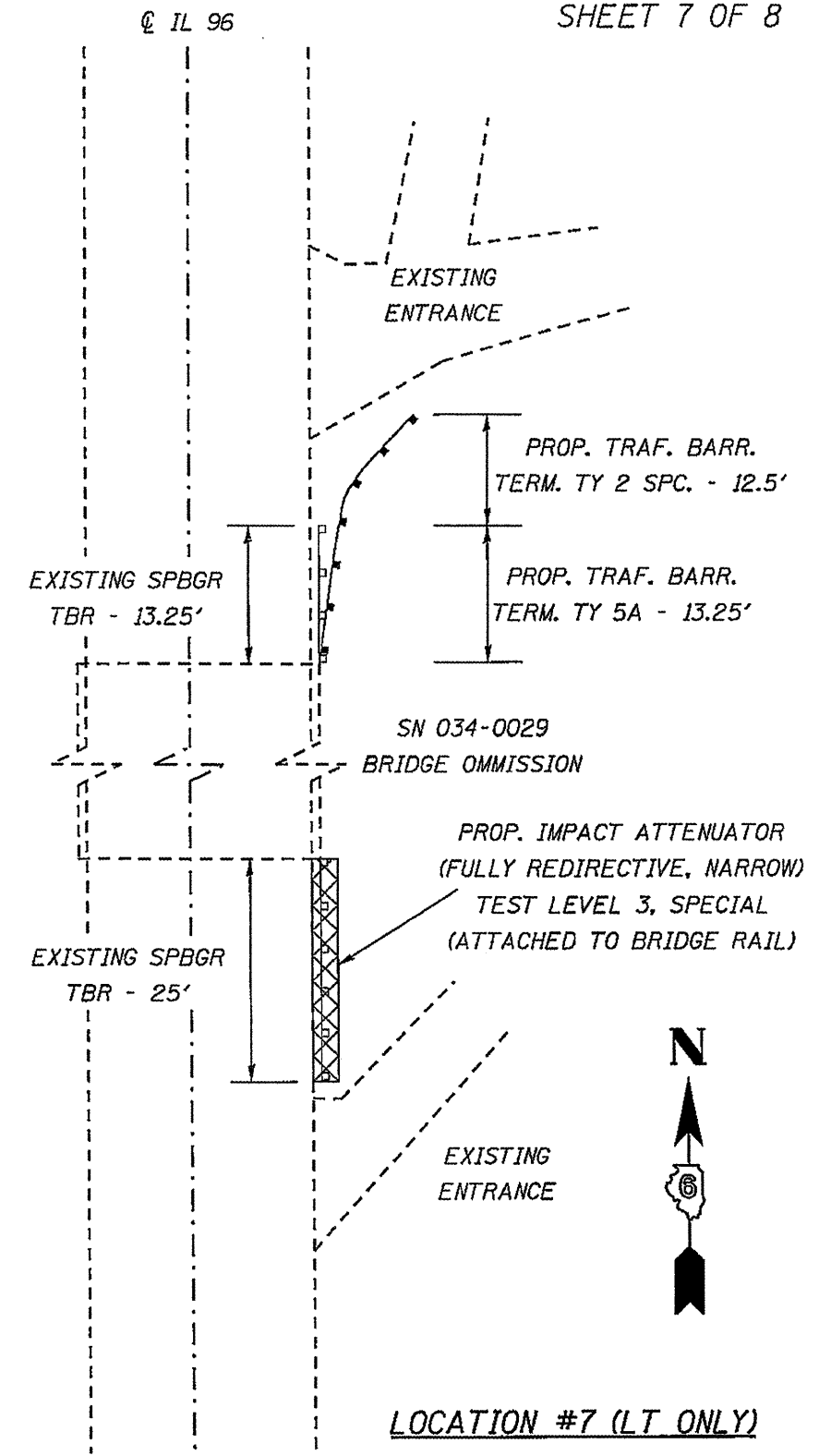
LOCATION MAP
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY



LOCATION #1 (LT ONLY)

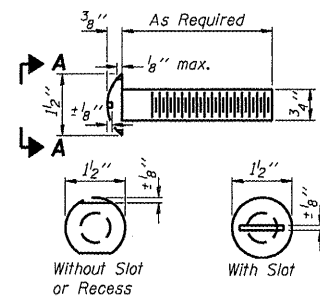


LOCATION #5

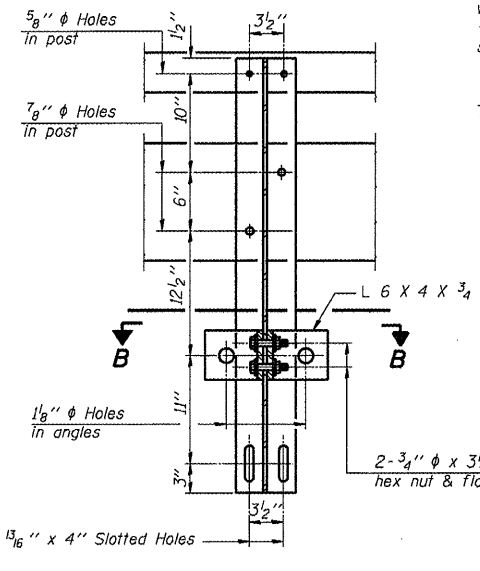


LOCATION #7 (LT ONLY)

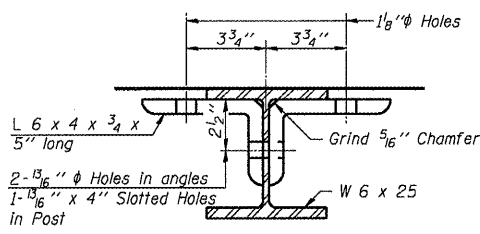
RAIL PLACEMENT DETAILS
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY



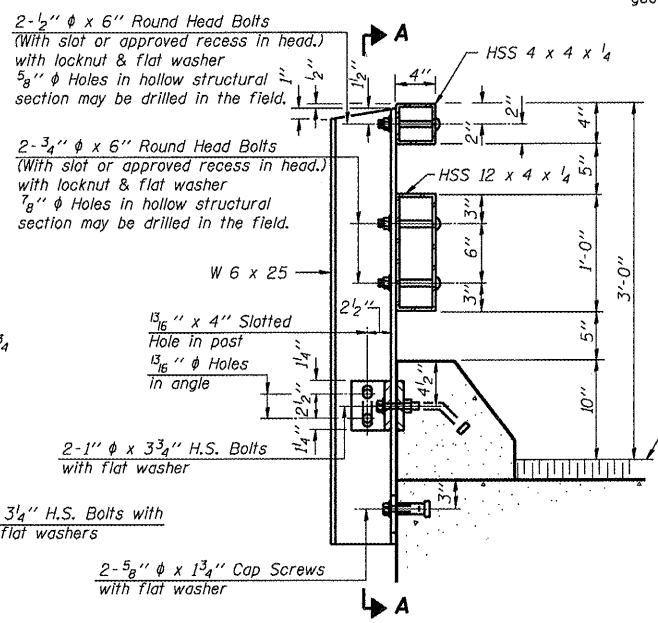
**VIEW A-A
ROUND HEAD BOLT**



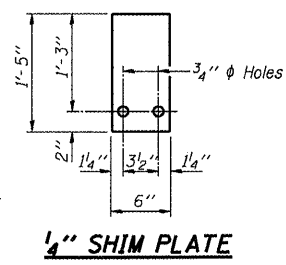
SECTION A-A



SECTION B-B



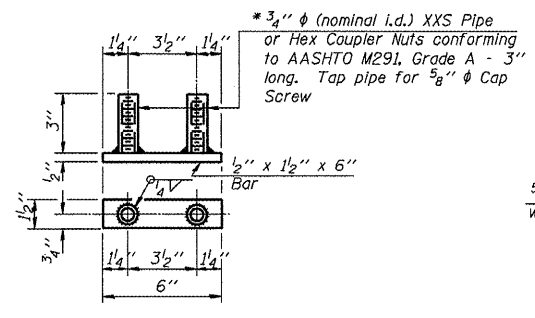
SECTION AT RAIL POST



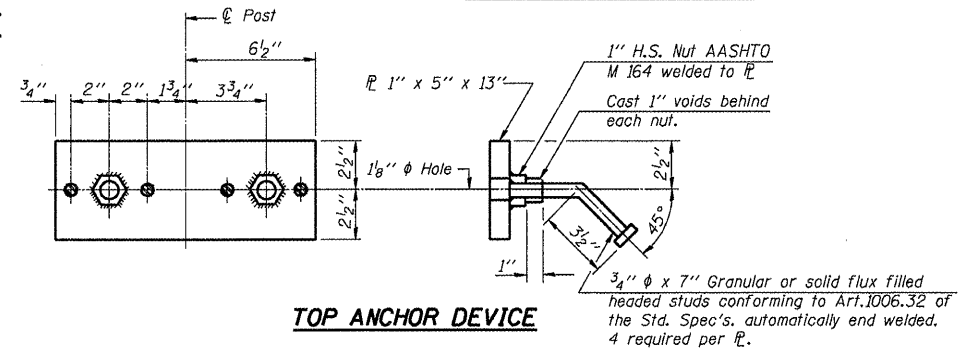
1/4" SHIM PLATE

1/8" diameter Holes for 1" diameter x 4" Round Head Bolts
Provide 2 flat washers & locknuts for guard rail connection shown on Std. 631026.

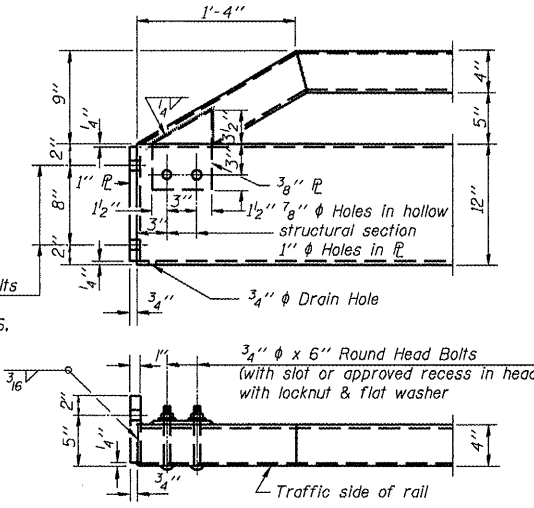
* Threaded areas shall be plugged or blocked off during casting of beam.



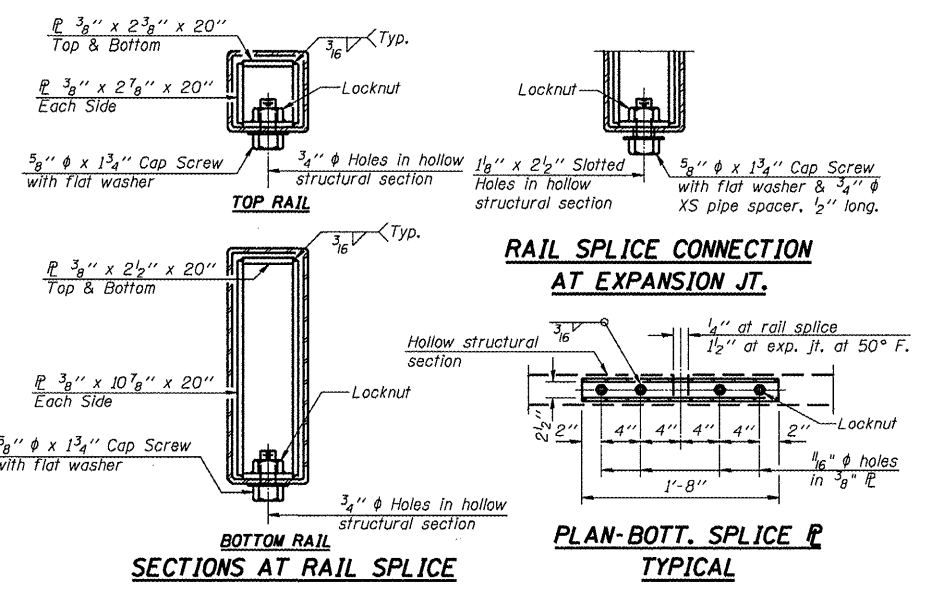
BOTTOM ANCHOR DEVICE



TOP ANCHOR DEVICE



END OF RAIL DETAILS



**RAIL SPLICE CONNECTION
AT EXPANSION JT.
TYPICAL**

SECTIONS AT RAIL SPLICE

Notes:
The existing bridge rail posts are to remain in place and be reused with the new bridge rail. The contractor shall be responsible for taking field measurements of the existing rail and fabricating a new rail to match the existing. All work and materials necessary for measuring, fabricating, furnishing, and erecting the new bridge rail shall be included in the bid price for remove and replace steel bridge rail, type T-1 special. The details included on this page are for information only.
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. Cost included with Steel Railing, Type T-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type T-1	Foot	

**STEEL RAILING, TYPE T-1
STRUCTURE NO.**

**STEEL RAILING, TYPE T-1
FAP 510 (IL 96)
SECTION 120 GUARDRAIL
HANCOCK COUNTY**