

06-15-2018 LETTING ITEM 211

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	DIST 8 GUARDRAIL 2018-3	ILLINOIS	14	1
CONTRACT NO. 76L05				

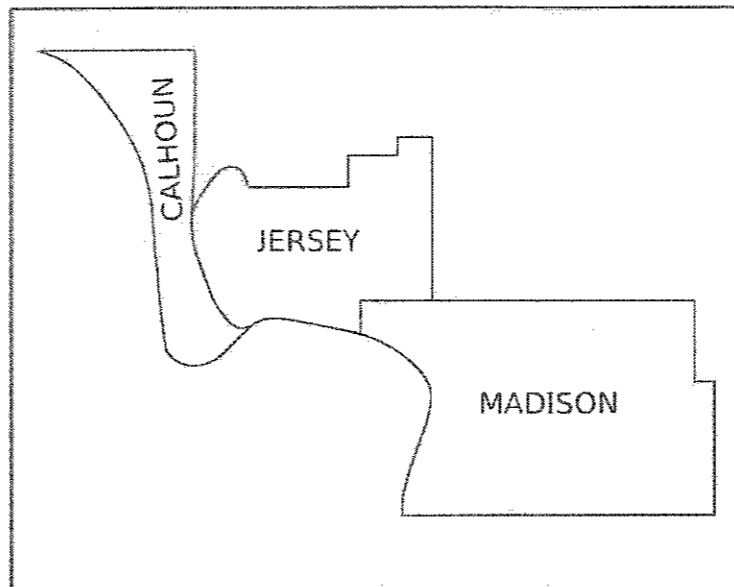
CALHOUN JERSEY MADISON
D-98-055-18

FOR INDEX OF SHEETS, SEE SHEET NO. 2

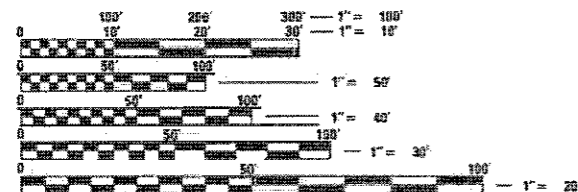
PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION DISTRICT 8 GUARDRAIL 2018-3
PROJECT HSIP-QH5R(337)
GUARDRAIL TERMINAL REPLACEMENT
VARIOUS COUNTIES

C-98-220-18



LOCATION MAP

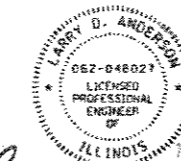


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PLANS PREPARED BY
HORNER SHIFRIN
WWW.HORNERSHIFRIN.COM

604 Pierce Boulevard, Suite 300 • O'Fallon, Illinois 62269
Phone: (618) 622-3040
Illinois Professional Design Firm No. 184-000435
License Expires 4/30/2019



Larry D. Anderson
Date

License Expires 11/30/2019

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED May 4 2018
Jeffrey T. Kan
REGIONAL ENGINEER

May 11 2018
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2018
Paul C. [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 3

PROJECT ENGINEER: HERVE GELIN (618) 346-3179
PROJECT MANAGER: JON DINTELMAN (618) 346-3185

CONTRACT NO. 76L05

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OF THE STATE OF ILLINOIS

COMMITMENTS

NONE

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS
- 3 SUMMARY OF QUANTITIES
- 4 SCHEDULES
- 5-6 UTILITY INFORMATION
- 7-11 GUARDRAIL DETAILS
- 12 DETAIL - STEEL RAILING, TYPE 2399
- 13 DETAIL - STEEL RAILING, TYPE T-1 (FOR INFORMATION ONLY)
- 14 DETAIL - STEEL RAILING, TYPE S-1 (FOR INFORMATION ONLY)

IDOT HIGHWAY STANDARDS

000001-06	631032-09	701456-05
001006	635001-02	701501-06
630001-12	701001-02	701601-09
630106-02	701006-05	701701-10
630111	701011-04	701901-07
630301-08	701101-05	725001-01
631011-10	701201-04	782006
631031-15	701421-08	

GENERAL NOTES

1. NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.
2. NO MATERIAL SHALL BE LEFT ON OR NEAR ROADWAY DURING NON-WORKING HOURS.
3. ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE LISTED IN THE PLANS AND CONTRACT DOCUMENTS.
4. PRIOR TO ORDERING ANY MATERIALS, THE CONTRACTOR SHALL CONFIRM THE TYPES AND SPECIFIC MANUFACTURER FOR THE GUARDRAIL.
5. ILLINOIS STATE LAW REQUIRES A 48 HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAYBE OBTAINED BY CONTACTING J.U.L.I.E. (PHONE 800-892-0123) OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY.
6. WHEN NO WORK IS BEING PERFORMED, THE FLAGGERS ARE NOT REQUIRED. IF FLAGGERS ARE NOT PRESENT, THE FLAGGER SIGNS SHALL BE REMOVED OR COVERED.
7. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THE SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN THE HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR TRADES, JOB READINESS, TECHNICAL SKILLS COURSE WORK, (CARPENTRY, CONCRETE FLAT WORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ECT.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT EEO OFFICE AT 618-346-3360 AND THE OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORK FORCE AND TRAINEE GOALS.
8. A QUANTITY OF 189 CUBIC YARDS OF FURNISHED EXCAVATION HAS BEEN INCLUDED IN THE PLANS. THIS QUANTITY IS TO ADDRESS WIDENING AREAS AT PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) LOCATIONS.
9. A QUANTITY OF 280.9 TONS OF AGGREGATE SHOULDER TYPE B HAS BEEN INCLUDED IN THE PLANS. THIS QUANTITY IS TO ADDRESS LOW SPOTS IN THE EXISTING AGGREGATE SHOULDERS AND USE SHALL BE DIRECTED BY THE ENGINEER.
10. ALL DISTURBED EMBANKMENT AREA SHALL BE SEEDED WITH CLASS 2A SEED, FERTILIZED AND MULCHED AS PER SECTION 250.04 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THE COST FOR PERFORMING THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE ITEM OF WORK INITIATING THE DISTURBANCE.
11. REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED OR RESTORED GUARDRAIL AT ANY TIME.

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USER NAME = PWICSS	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS	F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -			**	DIST 8 GUARDRAIL 2018-3	***	14	2
PLOT DATE = 5/3/2018	DATE -	REVISED -			CONTRACT NO. 76L05				
					SCALE:	SHEET 1 OF 1 SHEETS	STA.	TO STA.	

* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

Location	Company	Address	Type	Member	JULIE	Aerial	Buried
1	Frontier Communications (South)	IL 96, W of Bridge 007-0028 111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Calhoun County Rural Water District	R R 1, Box 25, Harden, IL 62047	Water	Yes			X
2	Frontier Communications (South)	IL 96, W of Box Culvert 007-2427 111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Calhoun County Rural Water District	R R 1, Box 25, Harden, IL 62047	Water	Yes			X
3	Calhoun County Rural Water District	IL 96, E of Box Culvert 007-2417 R R 1, Box 25, Harden, IL 62047	Water	Yes			X
	Frontier Communications (South)	111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
4	Frontier Communications (South)	IL 16, N of Bridge 042-0005 111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Jersey County Rural Water Co	1009 State Highway 16, Jerseyville, IL 62052	Water	Yes			X
	M.J.M Electric CO-OP	264 N. East Street, P.O. Box 80, Carlinville, IL 62626	Electric	Yes		X	X
5	Frontier Communications (South)	IL 100, N of Bridge 042-0010 111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Jersey County Rural Water Co	1009 State Highway 16, Jerseyville, IL 62052	Water	Yes			X
6	Frontier Communications (South)	IL 100, Bridge 042-0012 111 E. State St, Mascoutah IL, 62258	Communications	Yes		X	X
	Jersey County Rural Water Co	1009 State Highway 16, Jerseyville, IL 62052	Water	Yes			X
	M.J.M Electric CO-OP	264 N. East Street, P.O. Box 80, Carlinville, IL 62626	Electric	Yes		X	X
7	Madison Telephone Company	250' S of New Douglas Rd 21668 Double Arch Road P.O. Box 29, Staunton, IL 62088	Communications	Yes		X	X
	CenturyLink Inc	333 Front Street, North, La Crosse, WI 54601	Communications	Yes		X	X
	Village of Livingston	601 Livingston Ave, P.O. Box 388, Livingston, IL 62058	Sewer/Water	Yes			X
	Three County Public Water Dist	406 North Fourth Street, P.O. Box 27, New Douglas, IL 62074	Water	Yes			X
8	Ameren Illinois	IL 143, W of Kiowa St 2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes		X	X
	AT&T Illinois	1420 Frontage Road, O'Fallon, IL 62269	Communications	Yes		X	X
	City of Edwardsville	118 Hillsboro Ave, P.O. Box 407, Edwardsville, IL 62025	Sewer/Water	Yes			X
9	AT&T Illinois	IL 3, N of Amoco Cutoff 160 West Division St, Maryville, IL 62062	Communications	Yes		X	X
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes		X	X
	BP Pipelines North America Inc	150 W Warrenville Road, Building 605, 3rd Floor Naperville, IL 60563	Gas	Yes			X
	Enable Midstream Partners	5300 Northshore Cove, North Little Rock, AR 72118	Pipeline	Yes			X
	City of Wood River	111 North Wood River Avenue, Wood River, IL 62095	Sewer/Water	Yes			X
10	AT&T Illinois	IL 3, N of Buckmaster Ln 160 West Division St, Maryville, IL 62062	Communications	Yes		X	X
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes		X	X
	Illinois American Water	4436 Industrial Drive, P.O. Box 186, Alton, IL 62002	Water	Yes			X
	City of Alton	101 East Third Street, Alton, IL 62002	Sewer/Electric	Yes		X	X
11	AT&T Illinois	IL 3, N of Curvey St 160 West Division St, Maryville, IL 62062	Communications	Yes		X	X
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes		X	X
	Illinois American Water	4436 Industrial Drive, P.O. Box 186, Alton, IL 62002	Water	Yes			X
	Village of Godfrey	6810 Godfrey Road, P.O. Box 5067, Godfrey, IL 62035	Sewer	Yes			X
12	AT&T Illinois	IL 3, N and S of Grovelin St 160 West Division St, Maryville, IL 62062	Communications	Yes		X	X
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes		X	X
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes		X	X
	Illinois American Water	4436 Industrial Drive, P.O. Box 186, Alton, IL 62002	Water	Yes			X
	Village of Godfrey	6810 Godfrey Road, P.O. Box 5067, Godfrey, IL 62035	Sewer	Yes			X

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

UTILITY INFORMATION

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	11	5
			CONTRACT NO. 76L05	

* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

Location	Company	Address	Type	Member	JULIE	Aerial	Buried
13		US 67, N of 9th St					
	AT&T Illinois	160 West Division St, Maryville, IL 62062	Communications	Yes	X	X	
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes	X	X	
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes	X	X	
	Illinois American Water	4436 Industrial Drive, P.O. Box 186, Alton, IL 62002	Water	Yes			X
	City of Alton	101 East Third Street, Alton, IL 62002	Sewer/Electric	Yes	X	X	
14		US 67, S of College Ave					
	AT&T Illinois	160 West Division St, Maryville, IL 62062	Communications	Yes	X	X	
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes	X	X	
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes	X	X	
	Illinois American Water	4436 Industrial Drive, P.O. Box 186, Alton, IL 62002	Water	Yes			X
	City of Alton	101 East Third Street, Alton, IL 62002	Sewer/Electric	Yes	X	X	
15		US 67, S of Godfrey Rd					
	AT&T Illinois	160 West Division St, Maryville, IL 62062	Communications	Yes	X	X	
	Ameren Illinois	2600 N. Center St. Maryville, IL 62062-0378	Gas & Electric	Yes	X	X	
	Charter Communications	815 Charter Commons Dr. Town & Country, MO 63017	Cable TV	Yes	X	X	
	Village of Godfrey	6810 Godfrey Road, P.O. Box 5067, Godfry, IL 62035	Sewer	Yes			X

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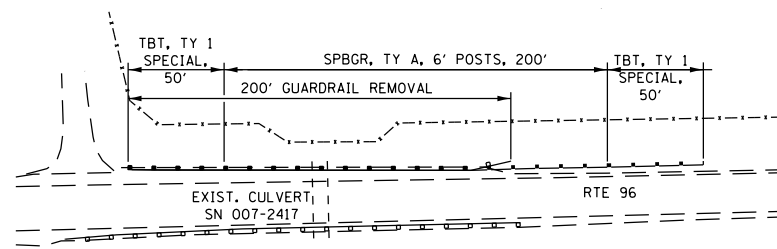
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

UTILITY INFORMATION

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

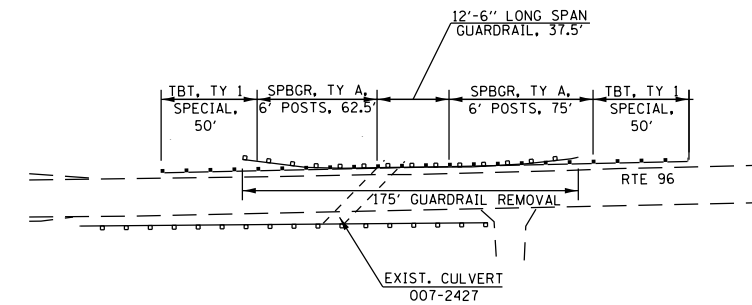
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**	DIST 8 GUARDRAIL 2018-3	***	14	6
			CONTRACT NO. 76L05	
		ILLINOIS	FED. AID PROJECT	

* VARIOUS
 ** VARIOUS
 *** CALHOUN JERSEY MADISON



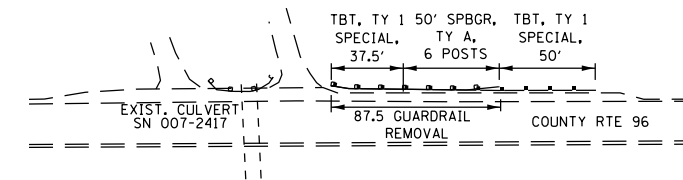
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LOCATION 1



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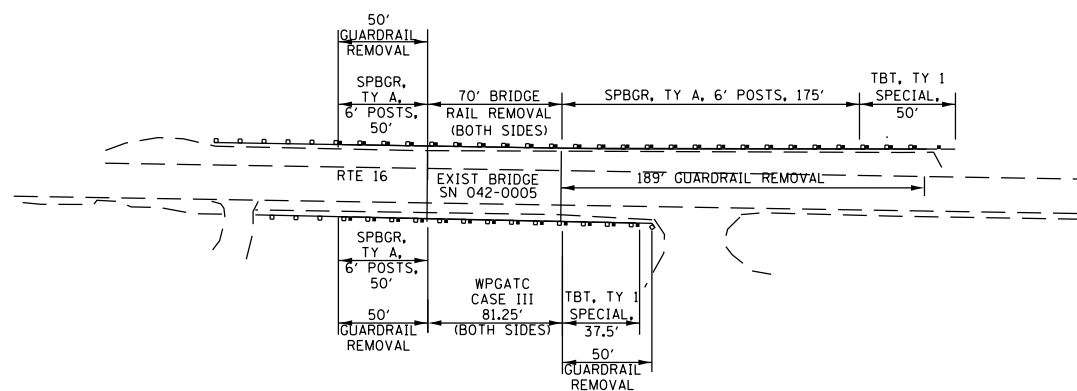
LOCATION 2



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LOCATION 3

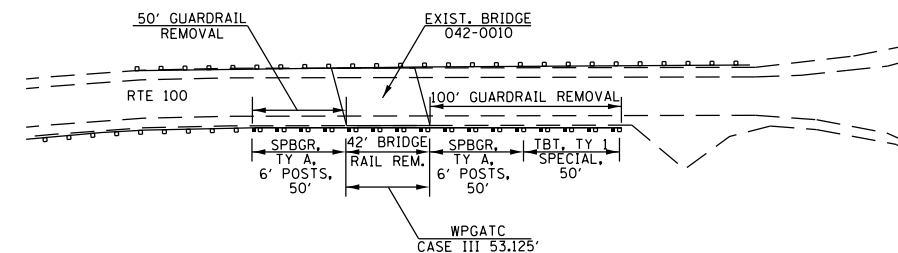
WPGATC - WEAK POST GUARDRAIL ATTACHED TO CULVERT



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LOCATION 4

WPGATC - WEAK POST GUARDRAIL ATTACHED TO CULVERT



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LOCATION 5

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PLOT DATE = 5/3/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN

SCALE: 1" = 50' SHEET 1 OF 5 SHEETS STA. TO STA.

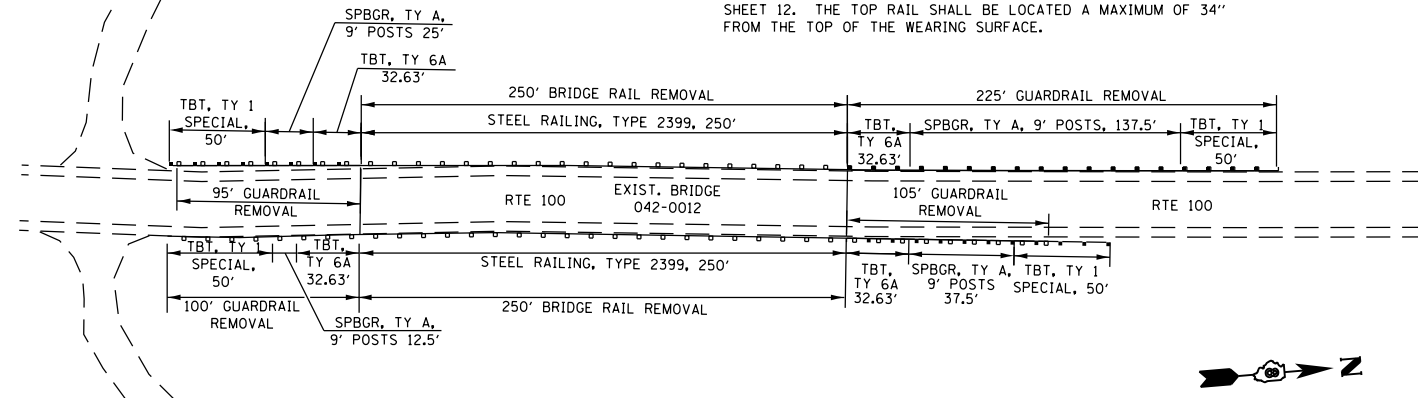
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**	DIST 8 GUARDRAIL 2018-3	***	14	7
CONTRACT NO. 76L05				

* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

WPGATC - WEAK POST GUARDRAIL ATTACHED TO CULVERT

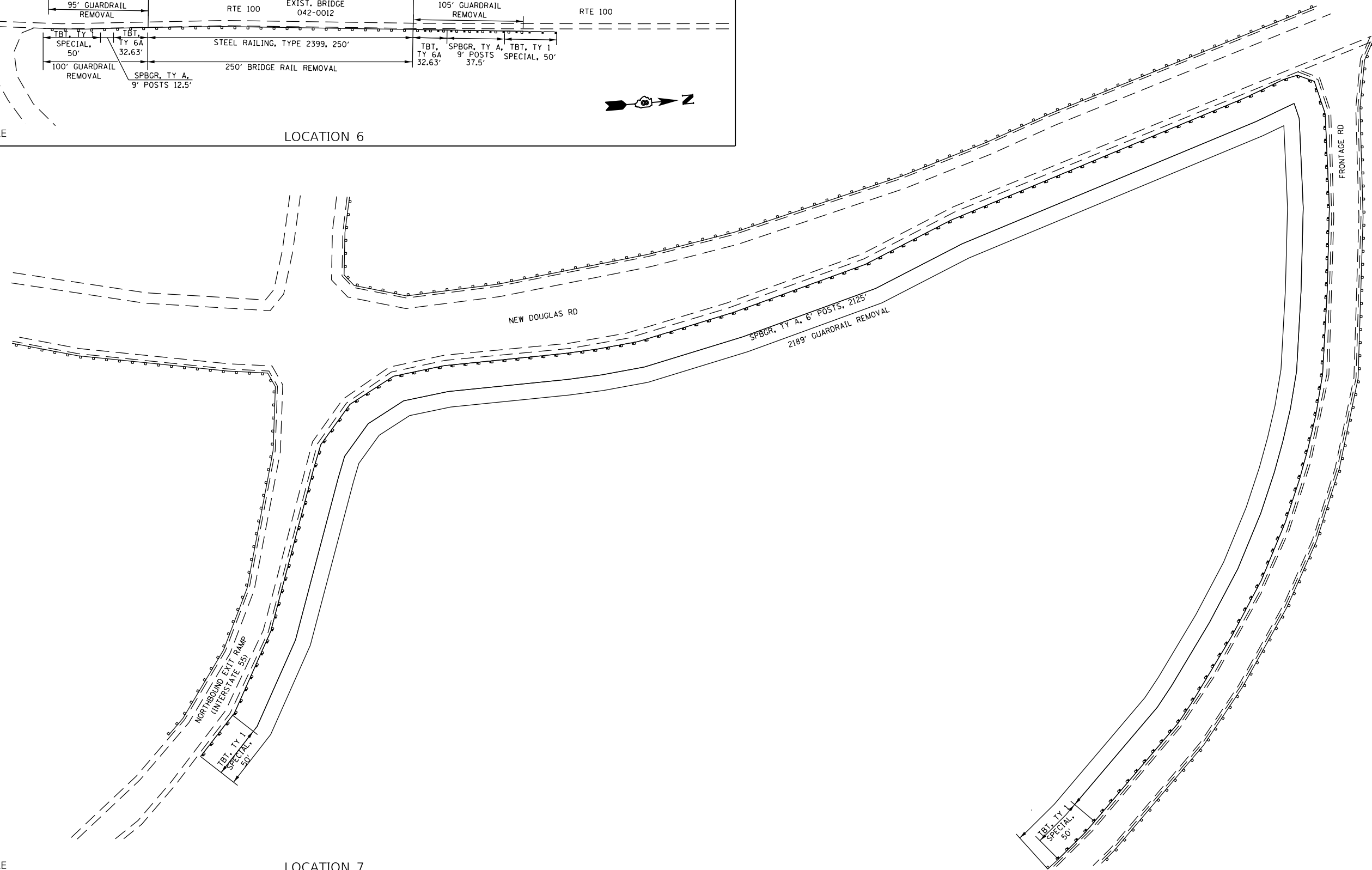
LOCATION #6 NOTES:

1. REMOVE EXISTING BRIDGE RAIL. DO NOT REMOVE EXISTING POSTS ATTACHED TO THE STRUCTURE
2. REPLACE THE RAILING WITH STEEL RAILING, TYPE 2399 SHOWN ON SHEET 12. THE TOP RAIL SHALL BE LOCATED A MAXIMUM OF 34" FROM THE TOP OF THE WEARING SURFACE.



NOT TO SCALE

LOCATION 6



NOT TO SCALE

LOCATION 7



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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

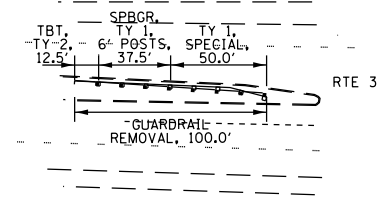
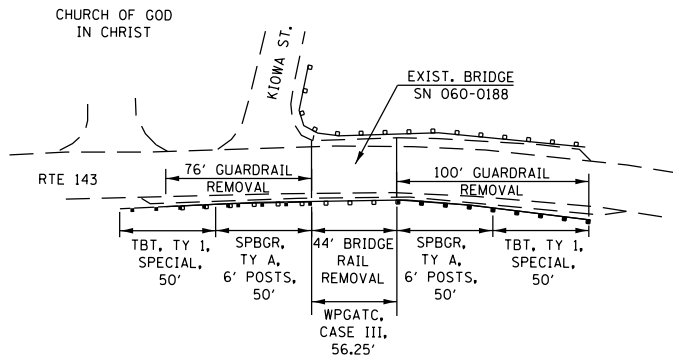
PLAN

SCALE: 1" = 50' SHEET 2 OF 5 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	14	8
CONTRACT NO. 76L05				

* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

WPGATC - WEAK POST GUARDRAIL ATTACHED TO CULVERT

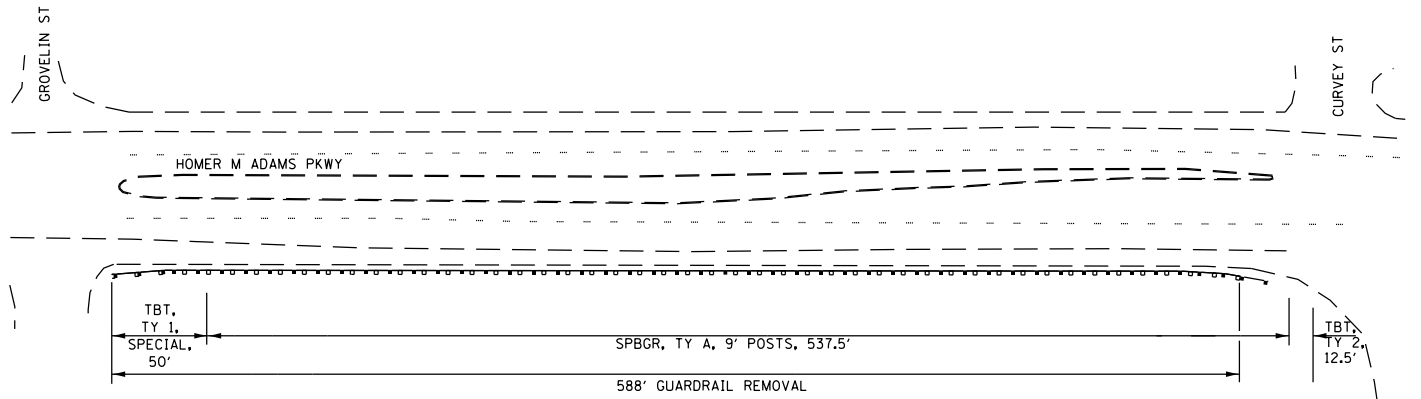
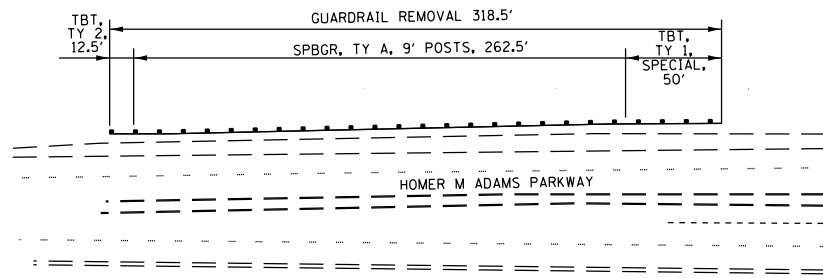


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LOCATION 8

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LOCATION 9

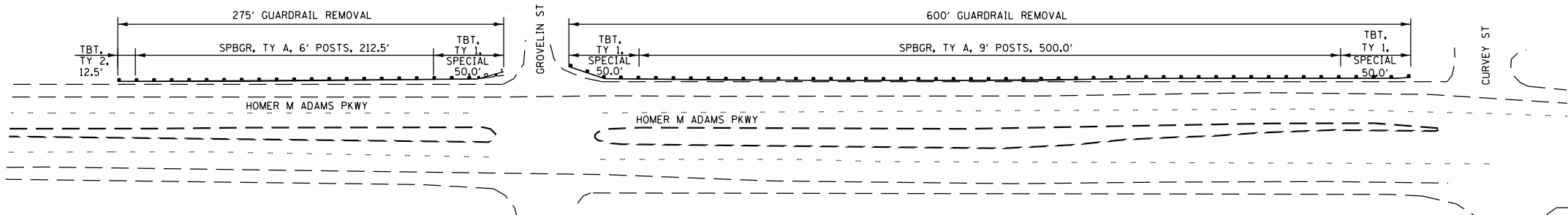


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LOCATION 10

NOT TO SCALE

LOCATION 11



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LOCATION 12

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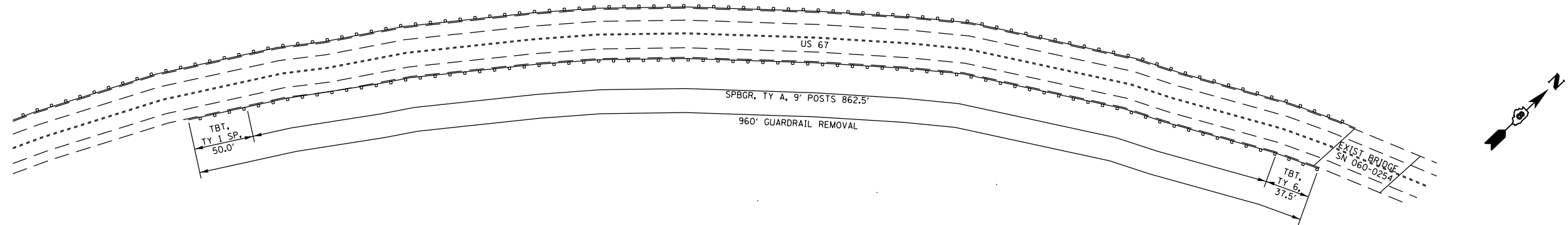
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN

SCALE: 1" = 50' SHEET 3 OF 5 SHEETS STA. TO STA.

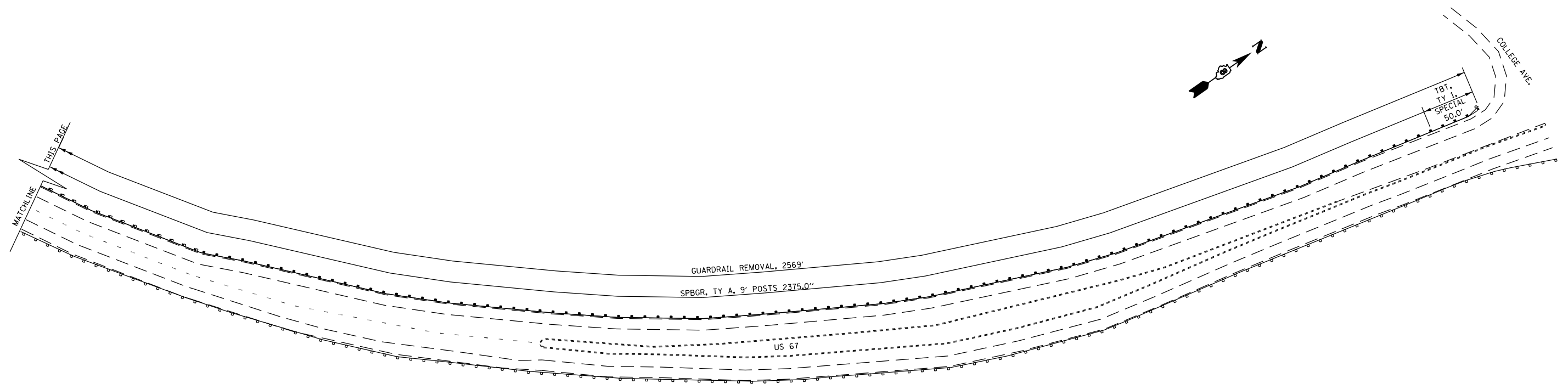
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**	DIST 8 GUARDRAIL 2018-3	***	14	9
			CONTRACT NO. 76L05	

* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

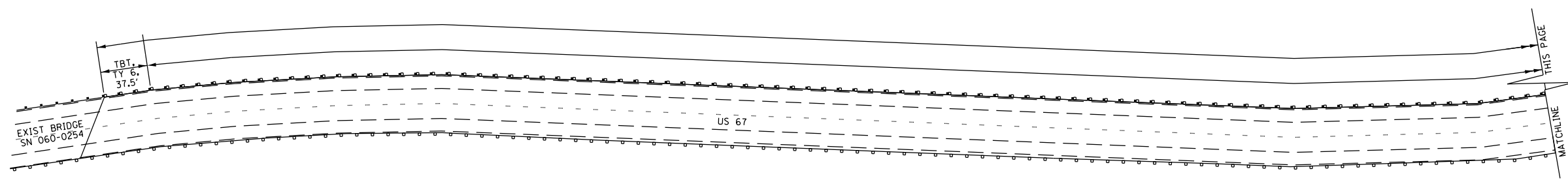


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LOCATION 13



UPPER PORTION



LOWER PORTION

NOT TO SCALE

LOCATION 14

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

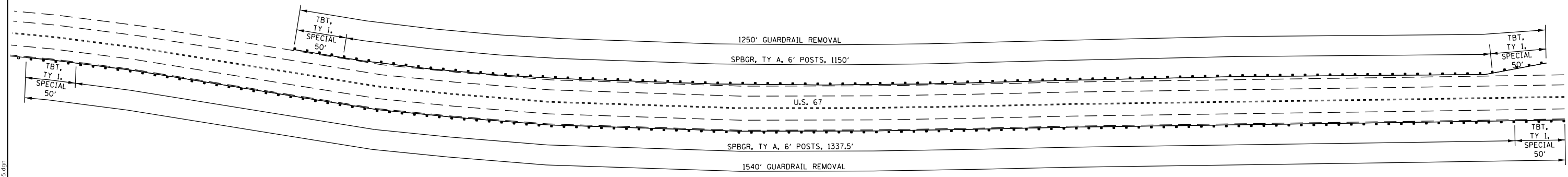
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	14	10
			CONTRACT NO. 76L05	

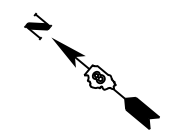
* VARIOUS
** VARIOUS
*** CALHOUN JERSEY MADISON

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LOCATION 15



**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN

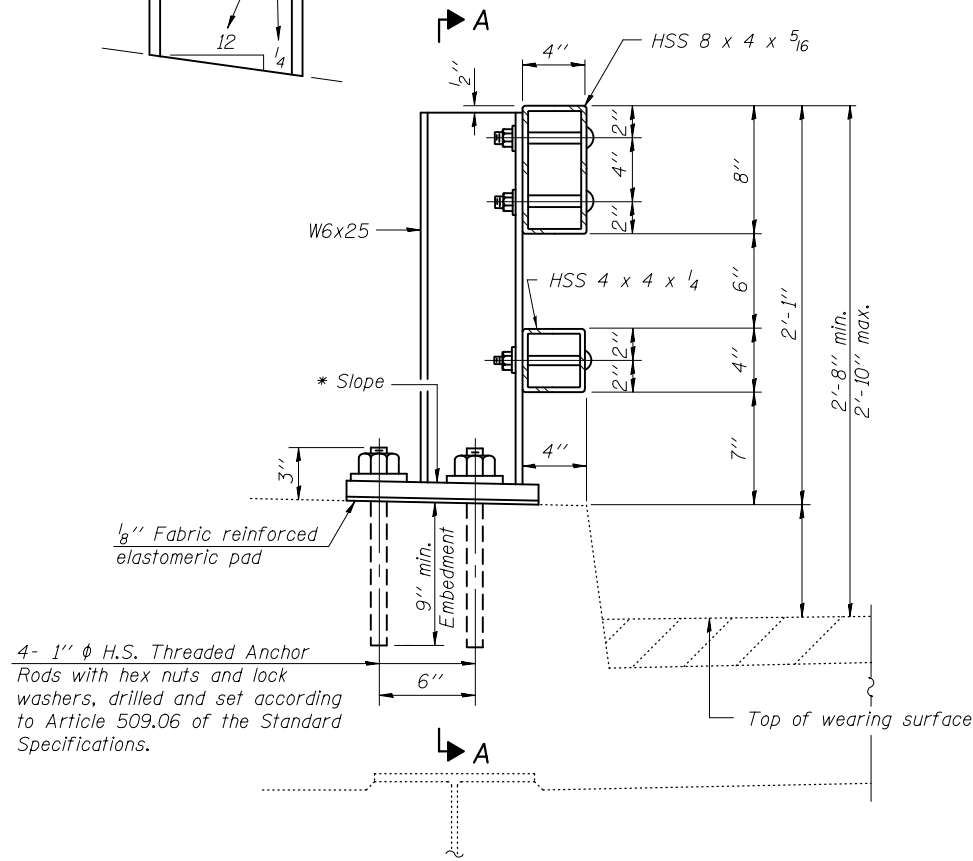
SCALE: 1" = 50' SHEET 5 OF 5 SHEETS STA. TO STA.

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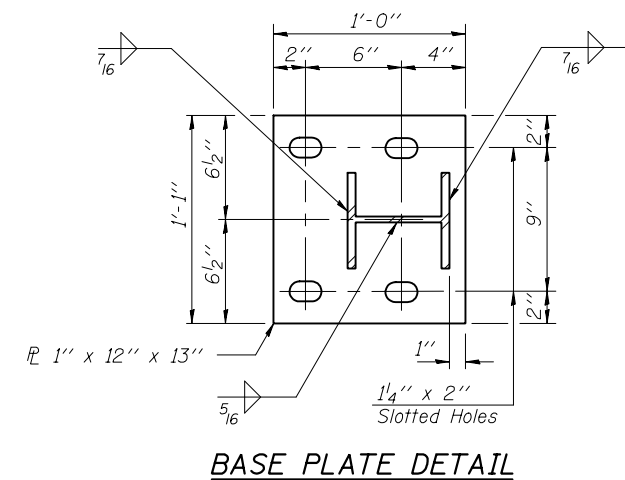
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	14	11
			CONTRACT NO. 76L05	
		ILLINOIS	FED. AID PROJECT	

* VARIOUS
 ** VARIOUS
 *** CALHOUN JERSEY MADISON

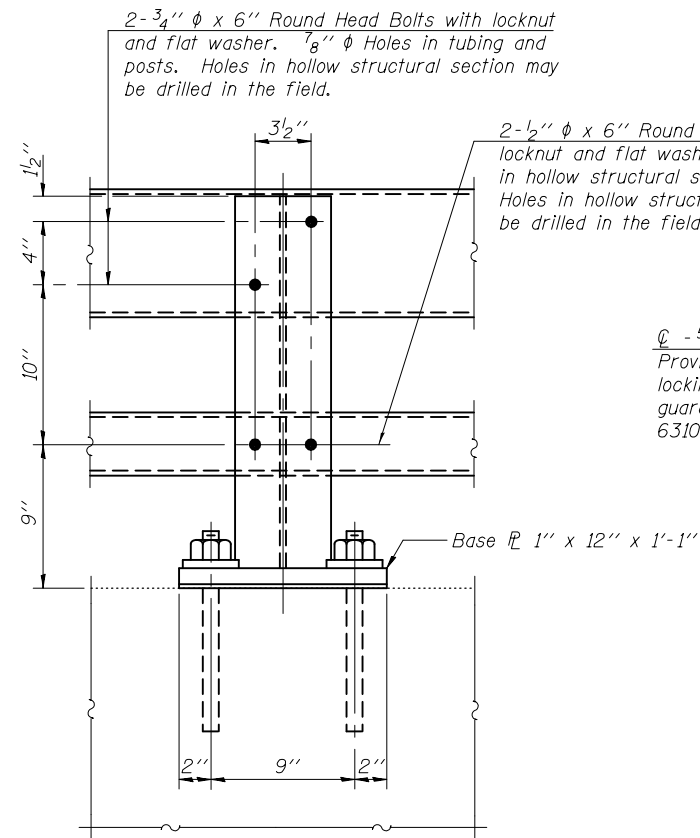
* Cut bottom end of post to curb slope.



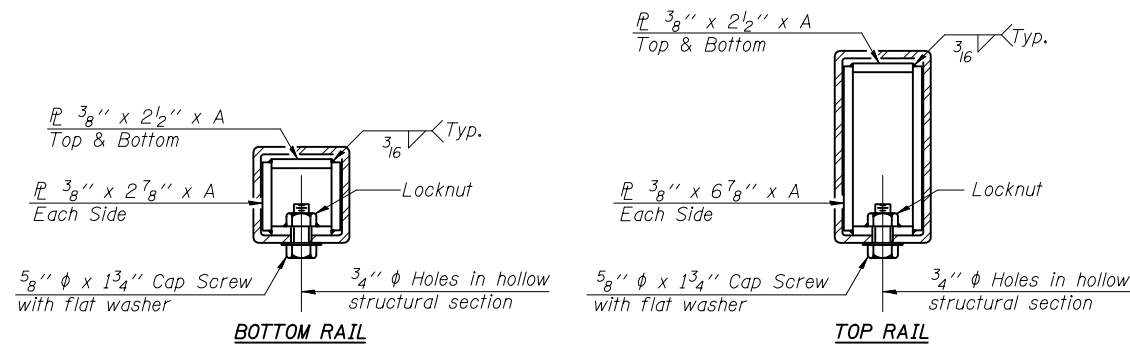
SECTION AT RAIL POST



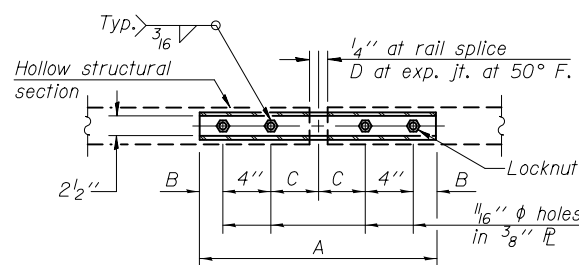
BASE PLATE DETAIL



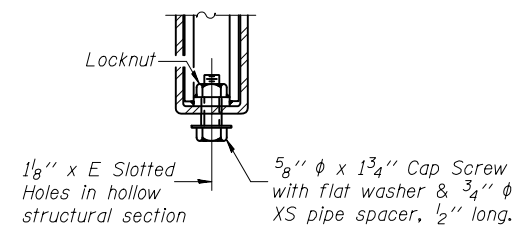
SECTION A-A



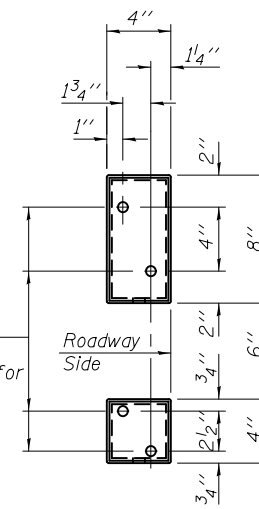
SECTIONS AT RAIL SPLICE



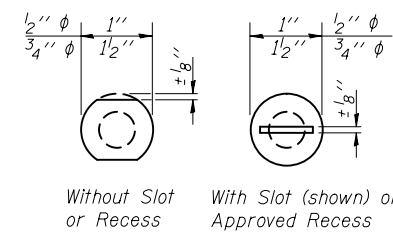
PLAN-BOTT. SPLICE TYPICAL



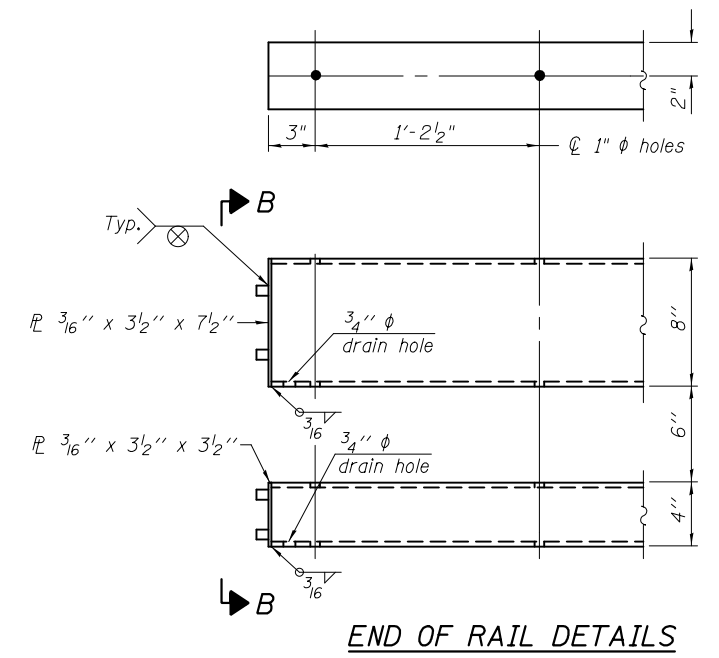
RAIL SPLICE CONNECTION AT EXPANSION JT.



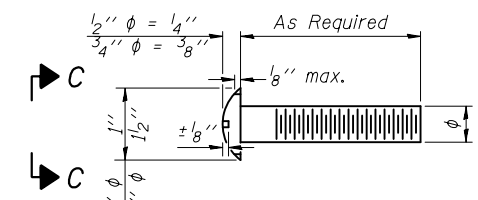
VIEW B-B



VIEW C-C



END OF RAIL DETAILS



DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS

Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

R-31

1-12-15

(6'-3" Maximum Post Spacing)

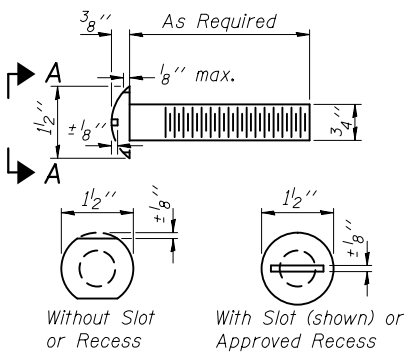
FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE 2399
 STRUCTURE NO.**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	14	12
			CONTRACT NO. 76L05	

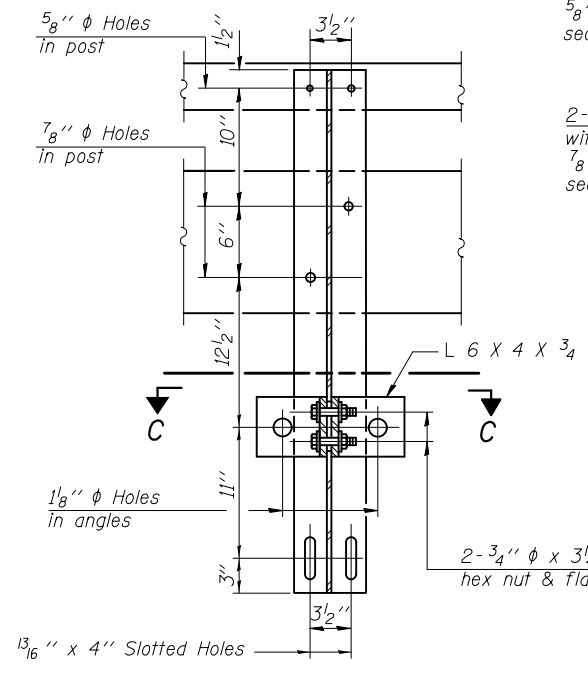
ILLINOIS FED. AID PROJECT
 ** VARIOUS
 ** VARIOUS
 ** CALHOUN JERSEY MADISON



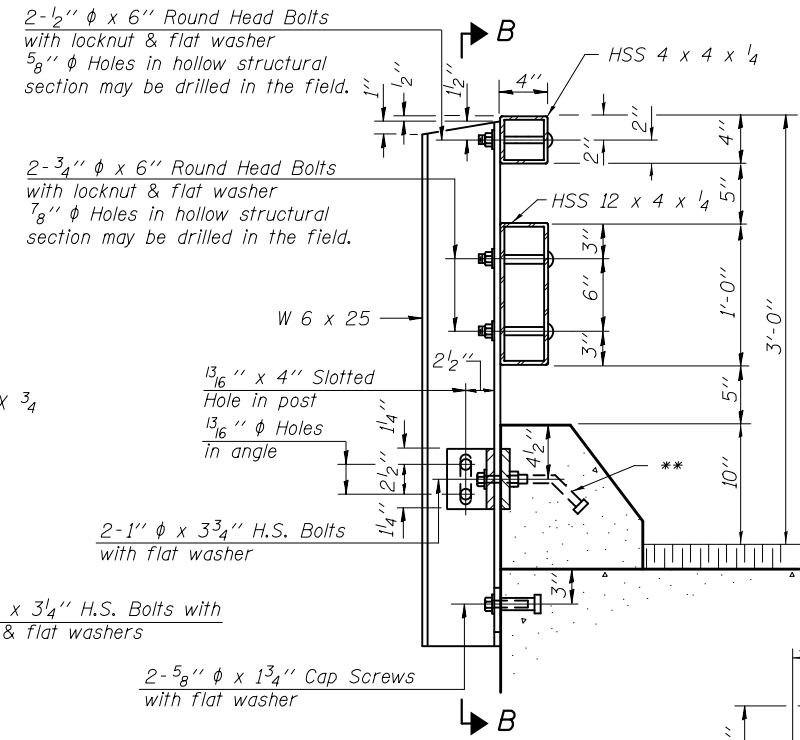
**VIEW A-A
ROUND HEAD BOLT**

**FOR INFORMATION ONLY
LOCATION 6**

Notes:
 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.
 ** 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.



SECTION B-B



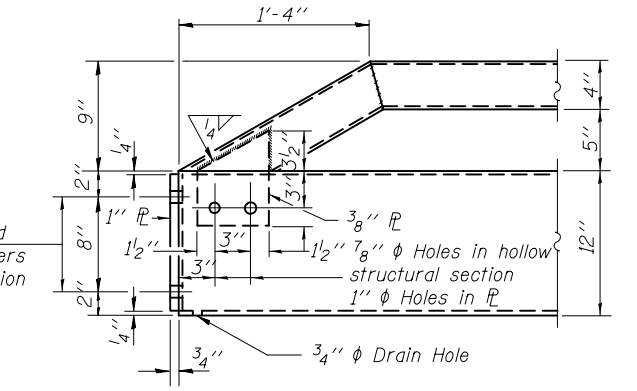
SECTION AT RAIL POST

SPLICE DIMENSIONS

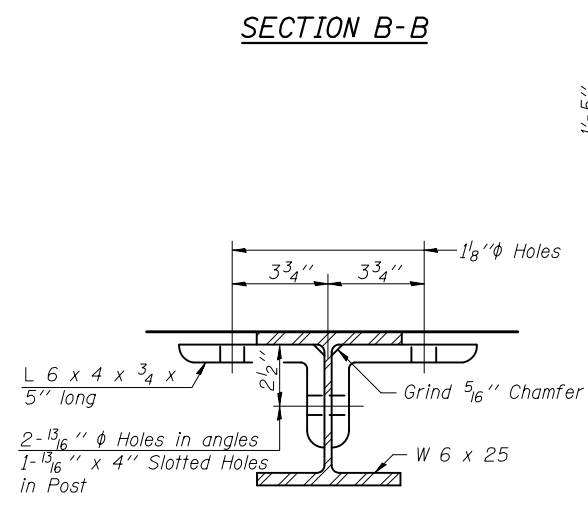
T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	

T = Total movement at expansion joint as shown on the design plans.

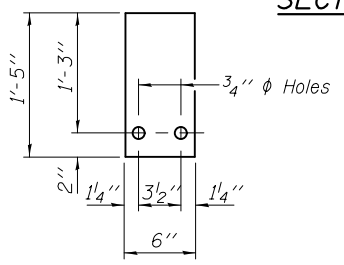
1 1/8" φ Holes for 1" φ x 4" Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy. Std. 631026 or BLR 27-1.



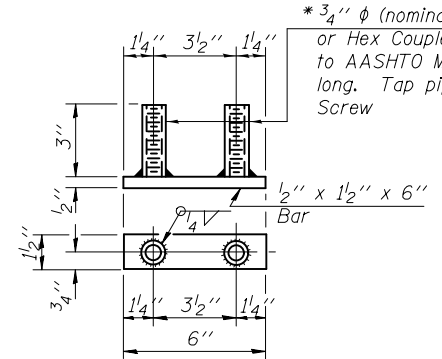
END OF RAIL DETAILS



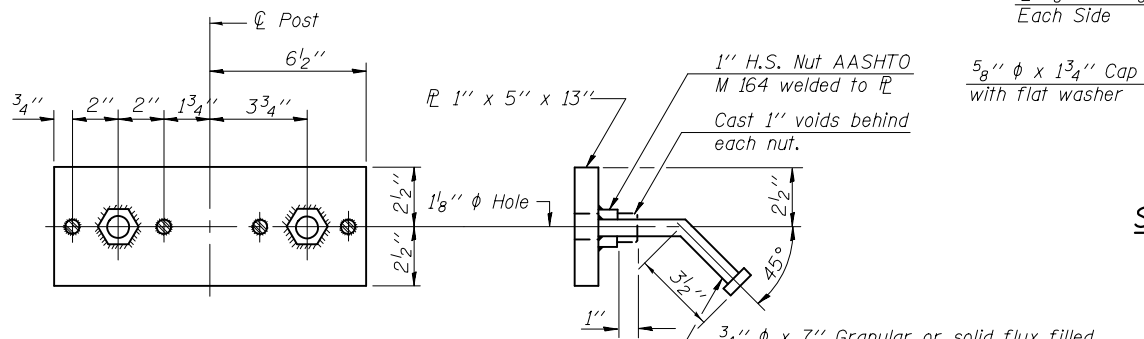
SECTION C-C



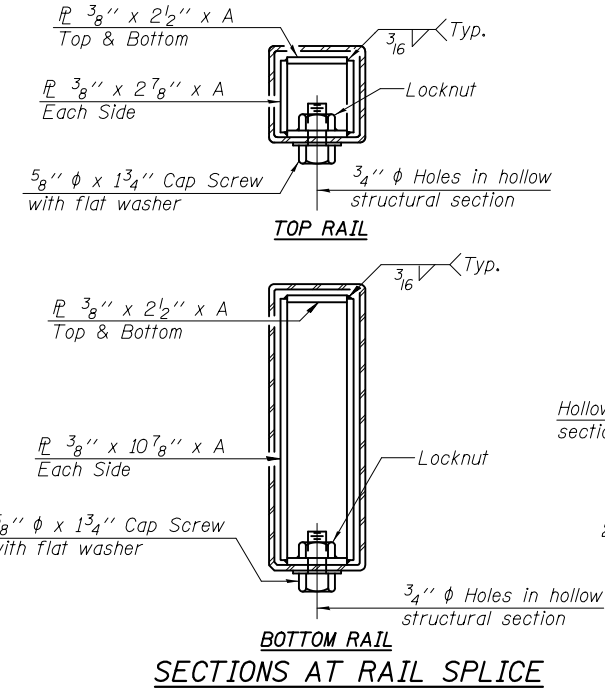
1/4 SHIM PLATE



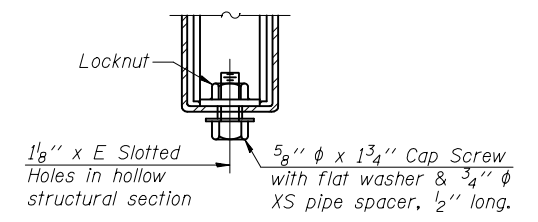
BOTTOM ANCHOR DEVICE



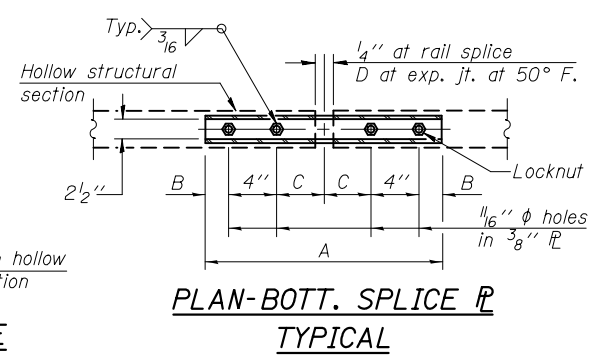
TOP ANCHOR DEVICE



SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE R TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type T-1	Foot	

R-24A 1-12-15 (9'-6" Maximum Post Spacing)

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
		CHECKED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
**	DIST 8 GUARDRAIL 2018-3	***	14	13
CONTRACT NO.			76L05	
ILLINOIS FED. AID PROJECT				

** VARIOUS
*** CALHOUN JERSEY MADISON

