

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 76409		

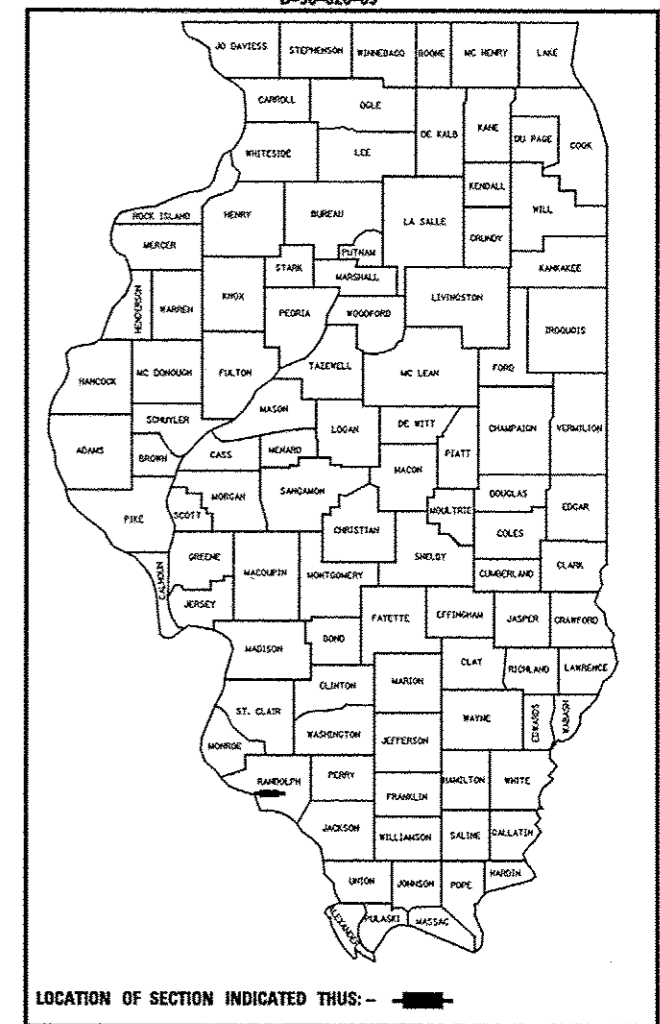
* 72 + 2 = 74

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PLANS FOR PROPOSED
HIGHWAY IMPROVEMENT

FAS ROUTE 858 (ROOTS ROAD)
SECTION 12VB-1I
PROJECT ACRS-0858(300)
RANDOLPH COUNTY

BRIDGE REHABILITATION



SECTION 12VB-1I INCLUDES THE REMOVAL AND REPLACEMENT OF THE EXISTING CONCRETE DECK ON THE EXISTING STEEL BEAMS AND SUBSTRUCTURE UNITS FOR THE STRUCTURE CARRYING ROOTS ROAD OVER UNION PACIFIC RAILROAD. THIS WORK ALSO INCLUDES RECONSTRUCTION OF THE BRIDGE APPROACH SLABS.
STA. 650+10.50
SN 079-0020

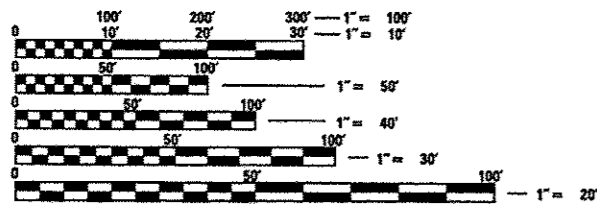
C-98-045-05

SECTION 12VB-1I BEGINS STA 624+34.70

SECTION 12VB-1I ENDS STA 652+10.00

SECTION 12VB-1I INCLUDES BRIDGE REPAIRS FOR THE STRUCTURE CARRYING ROOTS ROAD OVER THE KASKASKIA RIVER
STA. 631+60.00
SN 079-0019

RESURFACING OMISSION STA. 638+84.70 TO STA 648+11.00



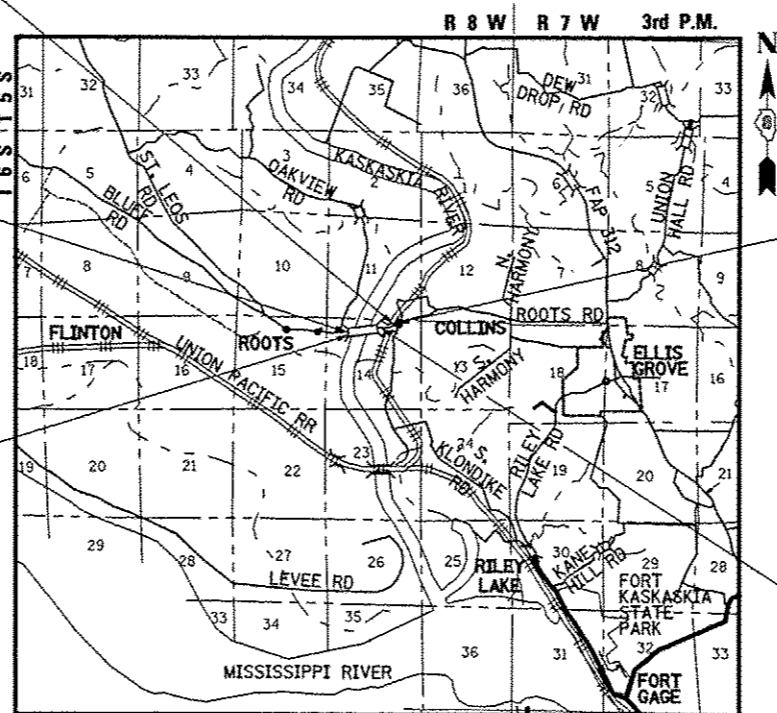
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: PATTI LEBEAU (618) 346-3179
PROJECT MANAGER: HERVE GELIN (618) 346-3323

CONTRACT NO. 76409

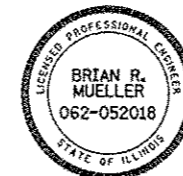
ADT: 475 (2012) COLLECTOR
ADT: 975 (2023)
13.3% TRUCKS



LOCATION MAP
ELLIS GROVE TOWNSHIP
GRAPHIC SCALE IN MILES

GROSS SECTION LENGTH = 2775.30 FEET = 0.525 MILES
OMISSION LENGTH = 926.30 FEET = 0.175 MILES
NET SECTION LENGTH = 1850.00 FEET = 0.350 MILES

LATITUDE
SN 079-0019 38°01' 0.13"
SN 079-0020 38°01' 2.98"
LONGITUDE
89°57' 34.11"
89°57' 2.40"



Brian R. Mueller
ILLINOIS PROFESSIONAL ENGINEER NO. 062-052018
EXP. 11-30-2013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED December 13 20 12
Deputy Director of Highways, Region 5 Engineer
March 22 20 13
John D. Baranzelli, P.E.
Engineer of Design and Environment
March 22 20 13
Omer Osman, P.E.
Director of Highways, Chief Engineer

BERNARDIN * LOCHMUELLER & ASSOCIATES, INC.
3 OAK DRIVE
MARYVILLE, ILLINOIS 62062
PHONE (618) 288-4666
FAX (618) 288-4666

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GENERAL NOTES

1. ALL ELEVATIONS REFER TO U.S.C.S. MEAN SEA LEVEL DATUM.
2. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
3. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF THE FACILITIES MAY ALSO BE OBTAINED BY CALLING J.U.L.I.E. AND FOR NON-J.U.L.I.E. MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

- AMERENIP
- EGYPTIAN ELECTRIC COOPERATIVE ASSOCIATION
- HARRISONVILLE TELEPHONE CO.
- GAS AND ELECTRIC
- ELECTRIC
- COMMUNICATIONS

(MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY *
NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.)

4. IN ADDITION TO SURVEYS, SOME OF THE PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING CONDITIONS HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
5. PROVISIONS HAVE BEEN INCLUDED ON THE PLANS FOR THE PLACEMENT OF STONE DUMPED RIPRAP AT EROSION PROBLEM AREAS. BEDDING AND FILTER FABRIC WILL BE REQUIRED FOR THESE INSTALLATIONS. THE ERODED AREAS SHALL BE GRADED AND ALL DEBRIS, BRANCHES AND STUMPS SHALL BE REMOVED IN A MANNER MEETING THE APPROVAL OF THE ENGINEER. THE COST OF ALL EXCAVATION AND REMOVAL OF DEBRIS, BRANCHES AND STUMPS WILL BE CONSIDERED AS INCLUDED IN STONE DUMPED RIPRAP, CLASS A4.
6. FILTER FABRIC WILL BE REQUIRED FOR RIPRAP LOCATIONS INCLUDING THE EROSION AREAS AT STA 633+94 RT AND 647+58 RT

MIXTURE REQUIREMENTS		
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT		
LOCATION (S):	FAS ROUTE 858 (ROOTS ROAD)	
MIXTURE USE	SURFACE COURSE	BINDER COURSE
AC/PG:	PG 64-22	PG 64-22
RAP 2 ₁ (MAX)	SEE SPEC.	SEE SPEC.
DESIGN AIR Voids:	4.0% @ NDES=70	4.0% @ NDES=70
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIXTURE C	MIXTURE B

PLAN QUANTITIES FOR HOT-MIX ASPHALT SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN.

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, STANDARDS, AND INDEX OF SHEETS
- 3-3B SUMMARY OF QUANTITIES
- 4-5 TYPICAL SECTIONS
- 6 SCHEDULE OF QUANTITIES
- 7-8 ALIGNMENT, TIES AND HORIZONTAL CONTROL
- 9-14 PLAN AND PROFILE
- 15-16 EROSION CONTROL SHEETS
- 17-19 RIGHT OF WAY SHEETS
- 20-22 REMOVAL ITEMS
- 23-24 PAVEMENT MARKING DETAILS
- 25-29 GUARDRAIL DETAILS
- 30 MISCELLANEOUS DETAILS
- 31 DETOUR PLAN
- 32-33 NAVIGATION LIGHTING SYSTEM
- 34-46 STRUCTURE SHEETS (SN 079-0019)
- 47-72 STRUCTURE SHEETS (SN 079-0020)

COMMITMENT

THE BUREAU OF CONSTRUCTION SHALL NOTIFY LOCAL OFFICIALS OF THE UPCOMING DETOUR PRIOR TO CLOSURE.

HIGHWAY STANDARDS

- 000001-06
- 001001-02
- 001006
- 280001-07
- 420401-09
- 482011-03
- 515001-03
- 542401-01
- 601101-01
- 630001-10
- 630301-06
- 631031-11
- 631032-08
- 635006-03
- 635011-02
- 701501-02
- 780001-03
- 781001-03
- BLR 21-9
- BLR 22-7

FILE NAME *	USER NAME * #USER*	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, STANDARDS, AND INDEX OF SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#121		DRAWN - PDB	REVISED -			858	12VB-11	RANDOLPH	72	2	
		CHECKED - BRM	REVISED -			CONTRACT NO. 76409					
		DATE - 03-28-11	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FED. 20% STATE		CONSTRUCTION CODE	
				ROADWAY 0004	BRIDGE SN 079-0020 0014	BRIDGE SN 079-0019 0014	
* 25000200	SEEDING, CLASS 2	ACRE	0.25	0.25			
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	23			
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23	23			
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	23			
* 25100105	MULCH, METHOD 1	ACRE	0.25	0.25			
28000200	EARTH EXCAVATION FOR EROSION CONTROL	CU YD	4	4			
28000400	PERIMETER EROSION BARRIER	FOOT	1252	1252			
28001000	AGGREGATE (EROSION CONTROL)	TON	2	2			
28100107	STONE RIPRAP, CLASS A4	SQ YD	111	6	105		
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	736	436	300		
28200200	FILTER FABRIC	SQ YD	347	242	105		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.2	0.2			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	296	296			
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	519	58	461		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE			
				80% FED. 20% STATE		CONSTRUCTION CODE	
				ROADWAY 0004	BRIDGE SN 079-0020 0014	BRIDGE SN 079-0019 0014	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	43			
44000100	PAVEMENT REMOVAL	SQ YD	94	94			
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	39	39			
48101200	AGGREGATE SHOULDERS, TYPE B	TON	6	6			
50102400	CONCRETE REMOVAL	CU YD	27.6		18.6	9	
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1		
50105220	PIPE CULVERT REMOVAL	FOOT	12	12			
50157300	PROTECTIVE SHIELD	SQ YD	303		303		
50200100	STRUCTURE EXCAVATION	CU YD	482		482		
50300225	CONCRETE STRUCTURES	CU YD	79.2		79.2		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	368.8		359.2	9.6	
50300260	BRIDGE DECK GROOVING	SQ YD	904		904		
50300300	PROTECTIVE COAT	SQ YD	1189		1189		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3660		3660		

*SPECIALTY ITEM

FILE NAME *	USER NAME * Paul	DESIGNED - JLS	REVISED - 12-20-2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	PLOT SCALE = 40.0000 / IN.	DRAWN - PDB	REVISED -					85B	12VB-11	RANDOLPH	72	3
	PLOT DATE = 12/20/2011	CHECKED - BRM	REVISED -		SCALE:	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			
		DATE - 03-28-11	REVISED -		CONTRACT NO. 76409							

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE	BRIDGE
					SN 079-0020 0014	SN 079-0019 0014
50500505	STUD SHEAR CONNECTORS	EACH	2445		2445	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	99230		97910	1320
50800515	BAR SPLICERS	EACH	66		66	
50900200	STEEL RAILING, TYPE 2399	FOOT	2664			2664
51500100	NAME PLATES	EACH	1		1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	179.9		102	77.9
52000216	FINGER PLATE EXPANSION JOINT, 5"	FOOT	62.5			62.5
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10		10	
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	5		5	
52100520	ANCHOR BOLTS, 1"	EACH	40		40	
54215547	METAL END SECTIONS, 12"	EACH	1	1		
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	4116			4116
58700300	CONCRETE SEALER	SQ FT	550.6		550.6	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	96		96	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE	BRIDGE
					SN 079-0020 0014	SN 079-0019 0014
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4		4	
60100945	PIPE DRAINS 12"	FOOT	12	12		
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	3414	3414		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	6	6		
63200310	GUARDRAIL REMOVAL	FOOT	3832	3832		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7	7		
67100100	MOBILIZATION	L SUM	1	1		
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	5274	5274		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4		
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	21	21		
78200410	GUARDRAIL MARKERS, TYPE A	EACH	38	38		
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	6		

*SPECIALTY ITEM

FILE NAME *	USER NAME * USER*	DESIGNED - JLS	REVISED - 12-20-2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILE#		DRAWN - PDB	REVISED -		SCALE:	SHEET NO. 2 OF 3 SHEETS	STA.	TO STA.	858	12VB-11	RANDOLPH	72	3A
		CHECKED - BRM	REVISED -						CONTRACT NO. 76409				
		DATE - 03-28-11	REVISED -						ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE	
					SN 079-0020 0014	SN 079-0019 0014
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	25	25		
X0550300	SLOPE WALL BREAKING	SQ YD	790		790	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	215		215	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
X8260110	NAVIGATION LIGHTING SYSTEM	L SUM	1	1		
XZ193505	VERTICAL CLEARANCE GAUGE	EACH	2			2
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	5		5	
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	5907		5907	
Z0004552	APPROACH SLAB REMOVAL	SQ YD	129	129		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1		1	
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1	
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	51			51
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	746			746

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE	
					SN 079-0020 0014	SN 079-0019 0014
*Z0016702	DETOUR SIGNING	L SUM	1	1		
Z0031200	JACKING AND CRIBBING	EACH	10		10	
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	102		102	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0058668	GRADING AND SHAPING FORESLOPES	SQ YD	936	936		
+Z0076600	TRAINEES	HOUR	1,500	1,500		
+Z0076604	TRAINEES, TRAINING PROGRAM GRADUATE	HOUR	1,500	1,500		

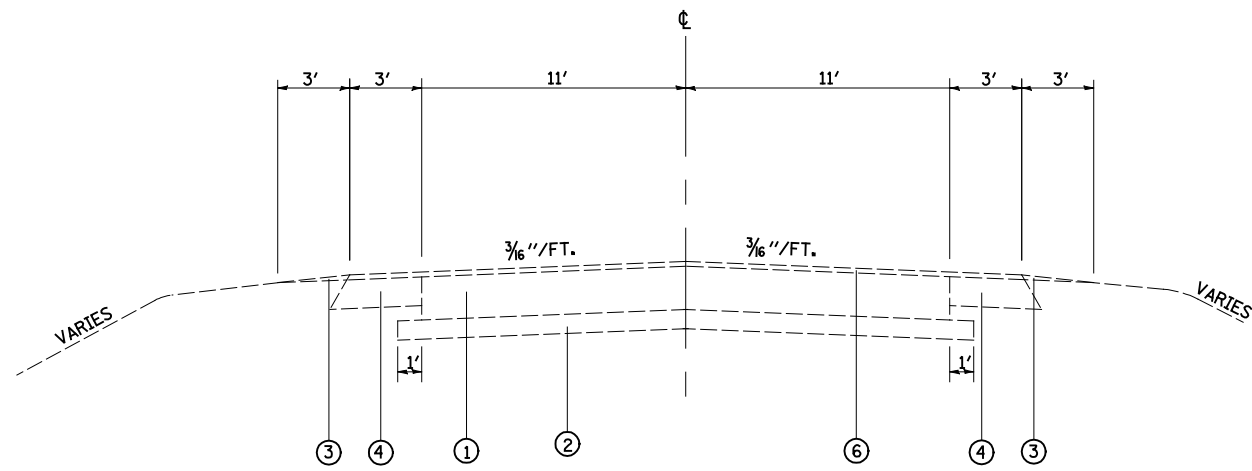
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	PLOT DATE = #DATE#	DATE - 03-28-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

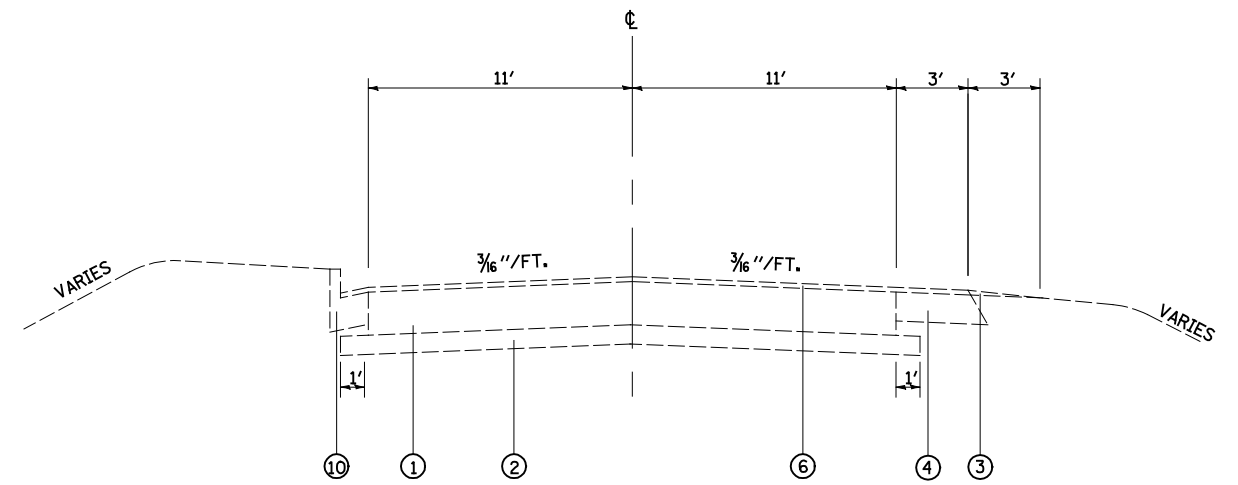
SUMMARY OF QUANTITIES			
SCALE:	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	38
CONTRACT NO. 76409				
[ILLINOIS] FED. AID PROJECT				



EXISTING TYPICAL SECTION

STA. 624+34.70 TO STA. 624+94.23
 STA. 651+17.50 TO STA. 652+10.00



EXISTING TYPICAL SECTION

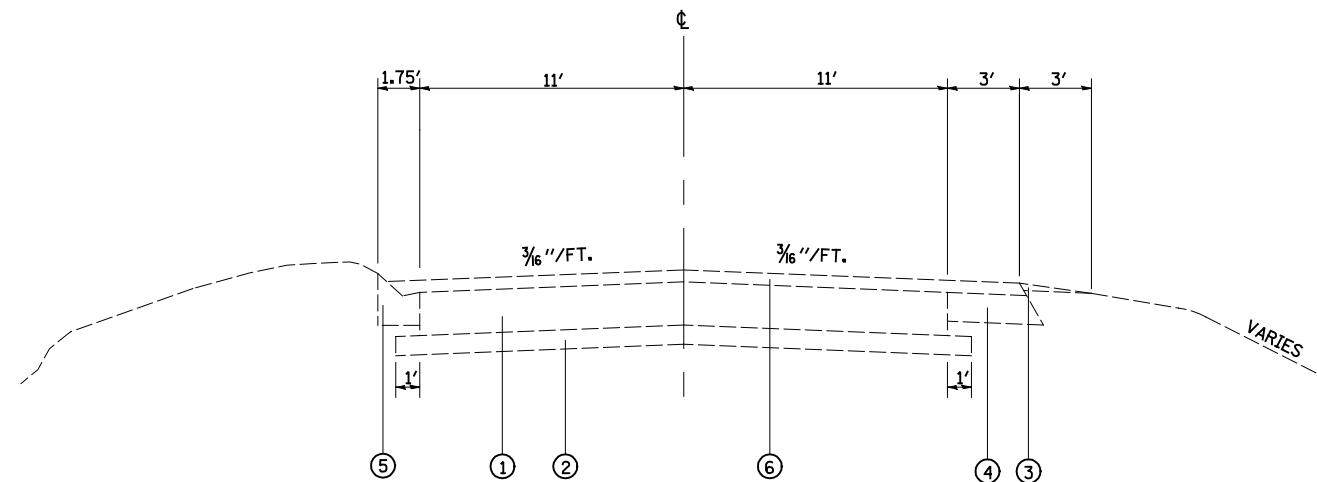
STA. 638+25.97 TO STA. 638+84.70
 STA. 648+84.26 TO STA. 649+03.50

NOTES:

STA. 624+94.23 TO STA. 638+25.97 (SN 079-0019)
 STA. 649+03.50 TO STA. 651+17.50 (SN 079-0020)

LEGEND

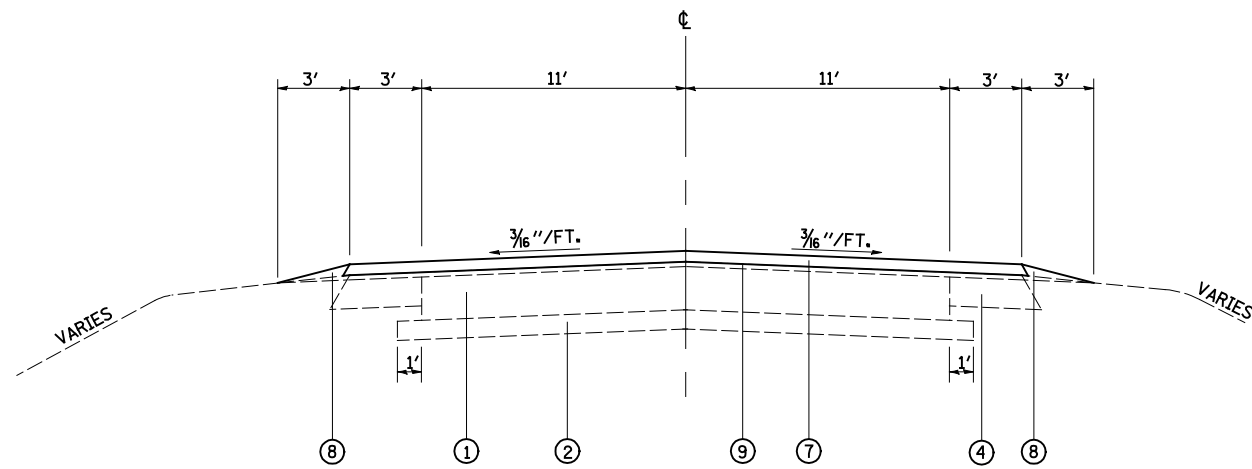
- ① EXISTING PCC PAVEMENT 9"
- ② EXISTING SUB-BASE GRANULAR MATERIAL TYPE A, 4"
- ③ EXISTING AGGREGATE WEDGE SHOULDERS
- ④ EXISTING HMA SHOULDER 6"
- ⑤ EXISTING CONCRETE GUTTER TYPE B
- ⑥ EXISTING HMA RESURFACING, 2 1/2" AND VARIES
- ⑦ PROPOSED HMA SURFACE COURSE MIX C, N70, 2" AND VARIES, SEE MISCELLANEOUS DETAILS
- ⑧ PROPOSED AGGREGATE SHOULDER, TYPE B
- ⑨ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑩ EXISTING COMBINATION CONCRETE CURB AND GUTTER



EXISTING TYPICAL SECTION

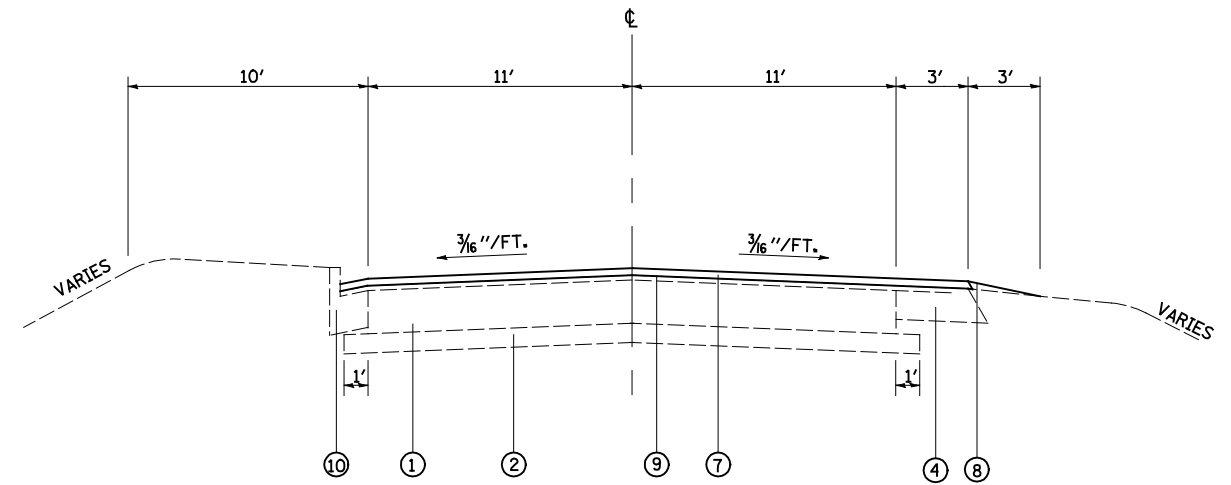
STA. 638+84.70 TO STA. 648+84.26

FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING TYPICAL SECTIONS			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - PDB	REVISED -		858	12VB-II	RANDOLPH	72	4			
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -		SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.			CONTRACT NO. 76409				
	PLOT DATE = 12/20/2011	DATE - 03-28-11	REVISED -		ILLINOIS FED. AID PROJECT							



PROPOSED TYPICAL SECTION

STA. 624+34.70 TO STA. 624+94.23
 STA. 651+53.50 TO STA. 652+10.00



PROPOSED TYPICAL SECTION

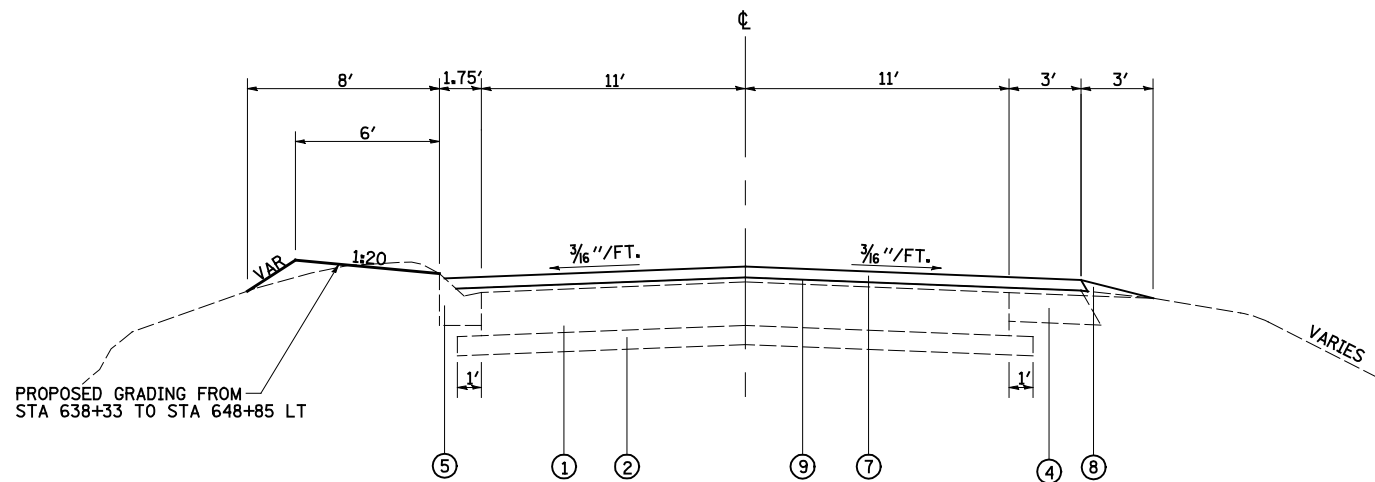
STA. 638+25.97 TO STA. 638+84.70

NOTES:

- STA. 624+94.23 TO STA. 638+25.97 (SN 079-0019)
- STA. 638+84.70 TO STA. 648+11.00 (RESURFACING OMISSION)
- STA. 648+67.50 TO STA. 648+73.50 (SN 079-0020 BRIDGE APPROACH PAVEMENT CONNECTOR)
- STA. 648+73.50 TO STA. 649+03.50 (SN 079-0020 BRIDGE APPROACH SLAB WEST APPROACH)
- STA. 649+03.50 TO STA. 651+17.50 (SN 079-0020)
- STA. 651+17.50 TO STA. 651+47.50 (SN 079-0020 BRIDGE APPROACH SLAB EAST APPROACH)
- STA. 651+47.50 TO STA. 651+53.50 (SN 079-0020 BRIDGE APPROACH PAVEMENT CONNECTOR)

LEGEND

- ① EXISTING PCC PAVEMENT 9"
- ② EXISTING SUB-BASE GRANULAR MATERIAL TYPE A, 4"
- ③ EXISTING AGGREGATE WEDGE SHOULDERS
- ④ EXISTING HMA SHOULDER 6"
- ⑤ EXISTING CONCRETE GUTTER TYPE B
- ⑥ EXISTING HMA RESURFACING, 2 1/2" AND VARIES
- ⑦ PROPOSED HMA SURFACE COURSE MIX C, N70, 2" AND VARIES, SEE MISCELLANEOUS DETAILS
- ⑧ PROPOSED AGGREGATE SHOULDER, TYPE B
- ⑨ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑩ EXISTING COMBINATION CONCRETE CURB AND GUTTER



PROPOSED TYPICAL SECTION

STA. 648+11.00 TO STA. 648+73.50

FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TYPICAL SECTIONS		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#	PLOT SCALE = 40.0000' / IN.	DRAWN - PDB	REVISED -				858	12VB-II	RANDOLPH	72	5	
	PLOT DATE = 12/20/2011	CHECKED - BRM	REVISED -		SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 76409			
		DATE - 03-28-11	REVISED -		ILLINOIS FED. AID PROJECT							

SEEDING AND GRADING SCHEDULE

Table with 7 columns: LOCATION, SEEDING CLASS 2, NITROGEN FERTILIZER NUTRIENT, PHOSPHORUS FERTILIZER NUTRIENT, POTASSIUM FERTILIZER NUTRIENT, MULCH METHOD 1, GRADING AND SHAPING FORESLOPES. Rows include STA 638+33 TO STA 648+85 and a PAY TOTAL row.

PAVEMENT SCHEDULE

Table with 5 columns: LOCATION, BITUMINOUS MATERIALS (PRIME COAT), HOT-MIX ASPHALT SURFACE COURSE, BRIDGE APPROACH PAVEMENT CONNECTOR, AGGREGATE SHOULDERS. Rows include STA 624+34.70 TO STA 624+94.23 and a PAY TOTAL row.

DRAINAGE SCHEDULE

Table with 5 columns: LOCATION, PIPE CULVERT REMOVAL, METAL END SECTIONS, PIPE DRAINS. Rows include STA 645+33 and a PAY TOTAL row.

EROSION CONTROL SCHEDULE

Table with 4 columns: LOCATION, EARTH EXCAVATION FOR EROSION CONTROL, PERIMETER EROSION BARRIER, AGGREGATE (EROSION CONTROL). Rows include STA 638+00 TO STA 638+60 and a PAY TOTAL row.

RIPRAP SCHEDULE

Table with 5 columns: LOCATION, STONE RIPRAP, CLASS A4, STONE DUMPED RIPRAP, CLASS A4, FILTER FABRIC. Rows include STA 638+44 and a PAY TOTAL row.

GUARDRAIL SCHEDULE

Table with 8 columns: LOCATION, STEEL PLATE BEAM GUARDRAIL, TRAFFIC BARRIER TERMINAL, TRAFFIC BARRIER TERMINAL, TRAFFIC BARRIER TERMINAL, GUARDRAIL REMOVAL, GUARDRAIL MARKERS, TERMINAL MARKER. Rows include STA 616+92 TO STA 624+83 and a PAY TOTAL row.

REMOVAL SCHEDULE

Table with 5 columns: LOCATION, HOT-MIX ASPHALT SURFACE REMOVAL, PAVEMENT REMOVAL, COMBINATION CURB AND GUTTER REMOVAL, APPROACH REMOVAL. Rows include STA 624+34.70 TO STA 624+58.70 and a PAY TOTAL row.

PAVEMENT MARKING SCHEDULE

Table with 7 columns: LOCATION, URETHANE PAVEMENT MARKING - LINE 4", SOLID WHITE, SOLID YELLOW, SKIP DASH YELLOW, RAISED REFLECTIVE PAVEMENT MARKER, RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE), RAISED REFLECTIVE PAVEMENT MARKER REMOVAL. Rows include STA 624+34.70 TO STA 631+70.00 and a PAY TOTAL row.

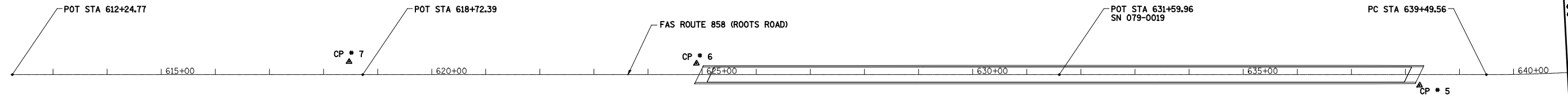
FAS 858 ROOTS ROAD

DESCRIPTION	COORDINATE	
	NORTHING	EASTING
POT STA 612+24.77	491588.45	355308.05
POT STA 618+72.39	491625.32	355954.62
POT STA 631+59.96	491698.63	357240.10
PC STA 639+49.56	491743.59	358028.42
PT STA 642+99.99	491763.54	358378.28
PT STA 646+46.95	491867.23	358713.02
POT STA 650+10.50	491974.80	359060.28
POT STA 654+47.21	492104.02	359477.44
POT STA 662+33.97	492336.82	360228.97

CONTROL POINTS

CONTROL POINT	COORDINATE	
	NORTHING	EASTING
CP #2	492256.06	360023.05
CP #3	491987.77	359166.91
CP #4	491834.37	358507.15
CP #5	491717.01	357906.51
CP #6	491681.19	356569.65
CP #7	491647.65	355928.40

EXISTING CURVE C-1
 PI STA. = 642+99.99
 $\Delta = 13^\circ 56' 50''$ (LT)
 D = 2' 00' 00"
 R = 2,864.90'
 T = 350.43'
 L = 697.39'
 E = 21.35'
 P.C. STA = 639+49.56
 P.T. STA = 646+46.95



BENCHMARK * ROOTS-2

BENCHMARK * ROOTS-3

BENCHMARK * ROOTS-4

BENCHMARK * ROOTS-5

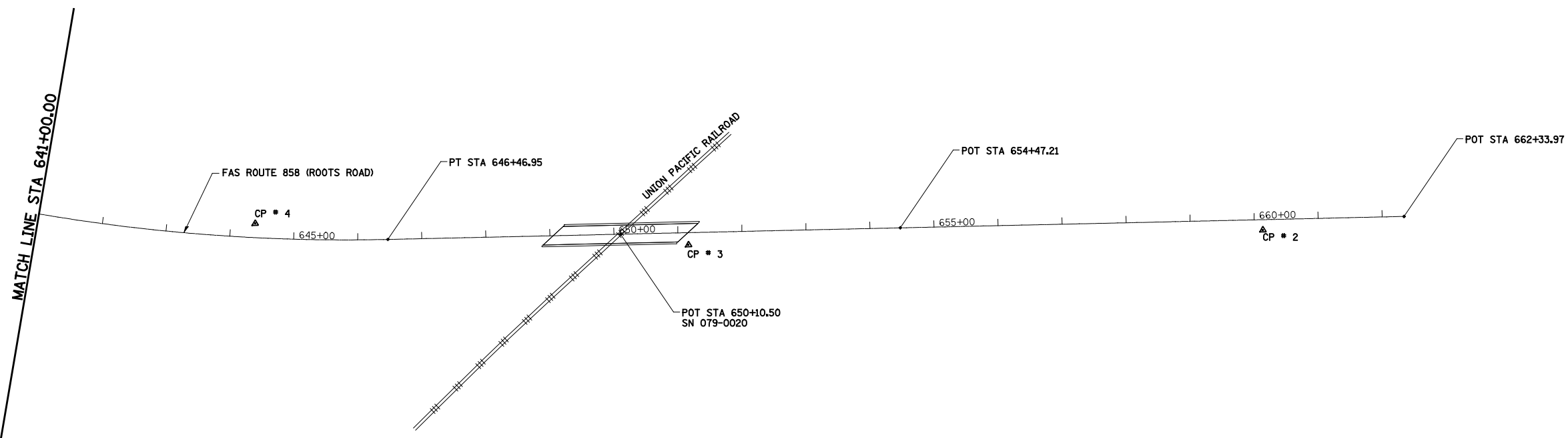
CUT "□" ON BRIDGE CURB @ N.W. CORNER OF ROOTS ROAD BRIDGE (SN 079-0020) ELEV 429.14

CUT "□" ON BRIDGE CURB @ N.E. CORNER OF ROOTS ROAD BRIDGE (SN 079-0019) ELEV 420.87

CUT "□" ON BRIDGE CURB @ N.W. CORNER OF ROOTS ROAD BRIDGE (SN 079-0019) ELEV 412.19

RAILROAD SPIKE IN POWER POLE ON SOUTH SIDE OF ROOTS ROAD ± 0.33 MILES WEST OF WEST END OF SN 079-0019 ELEV 389.15

MATCH LINE STA 641+00.00

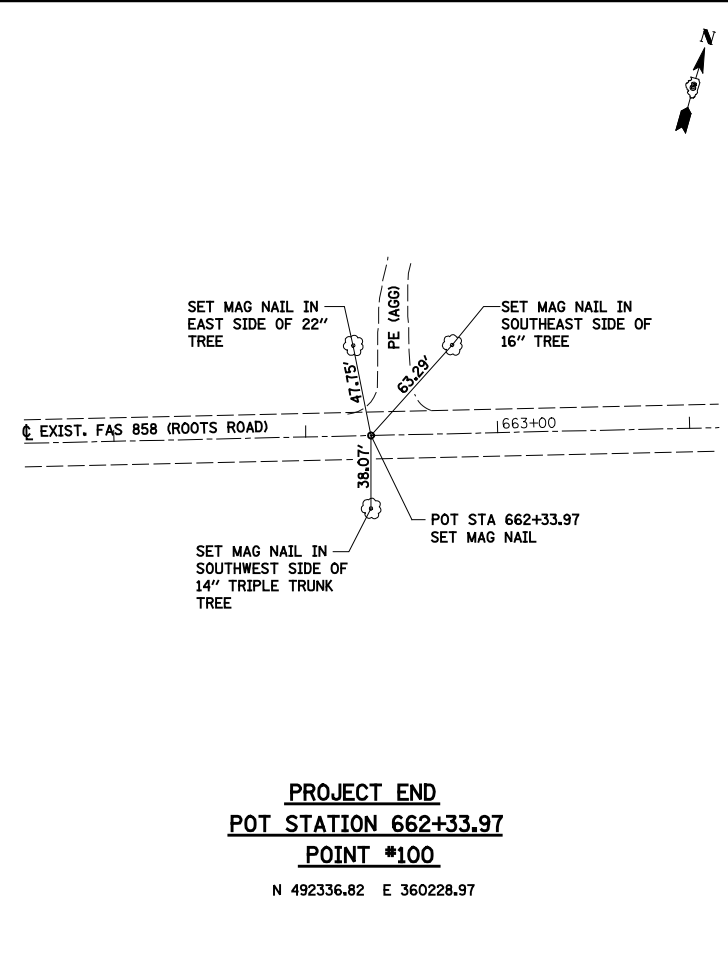
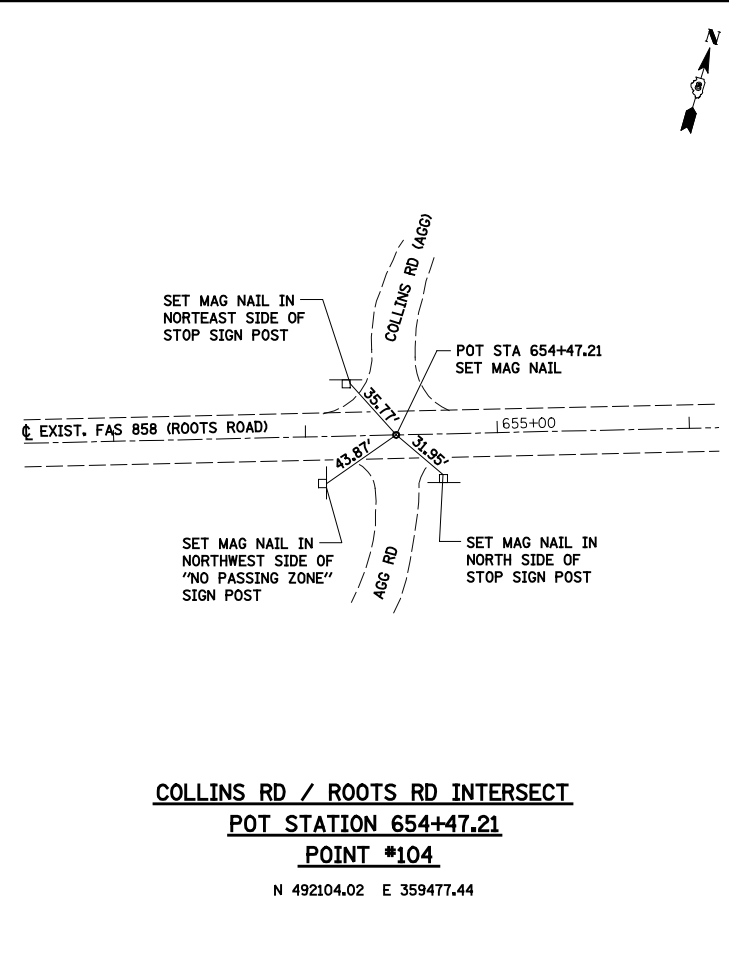
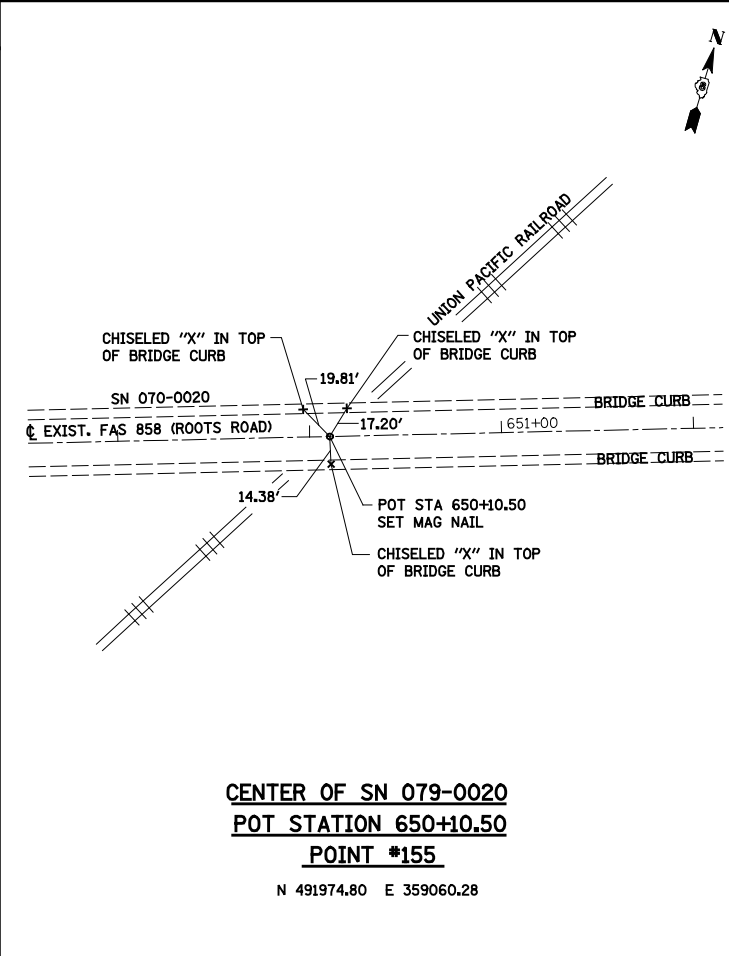
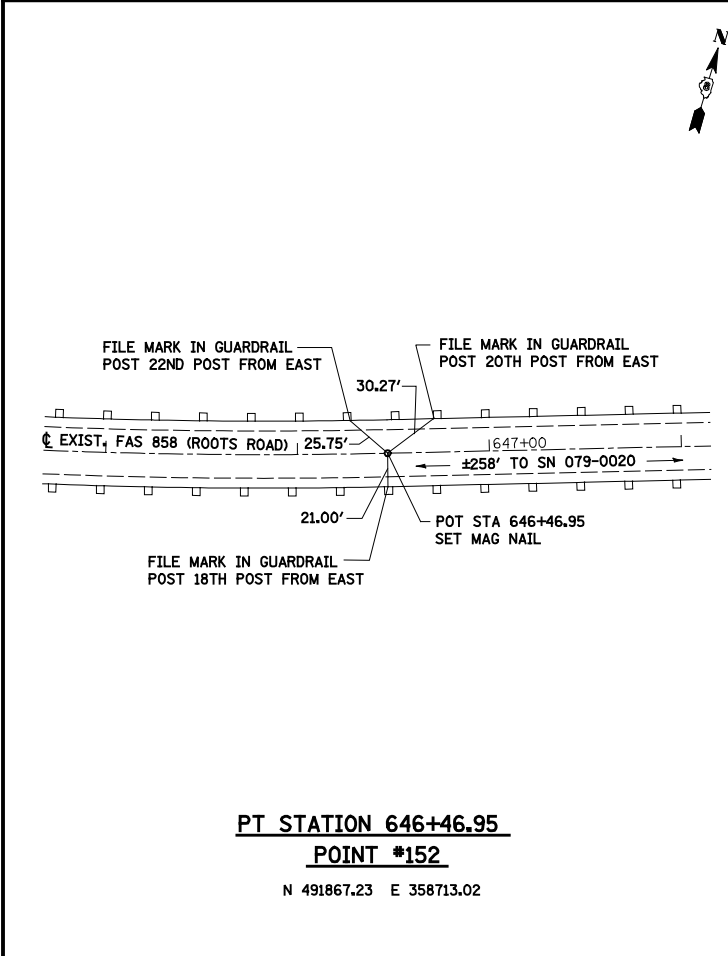
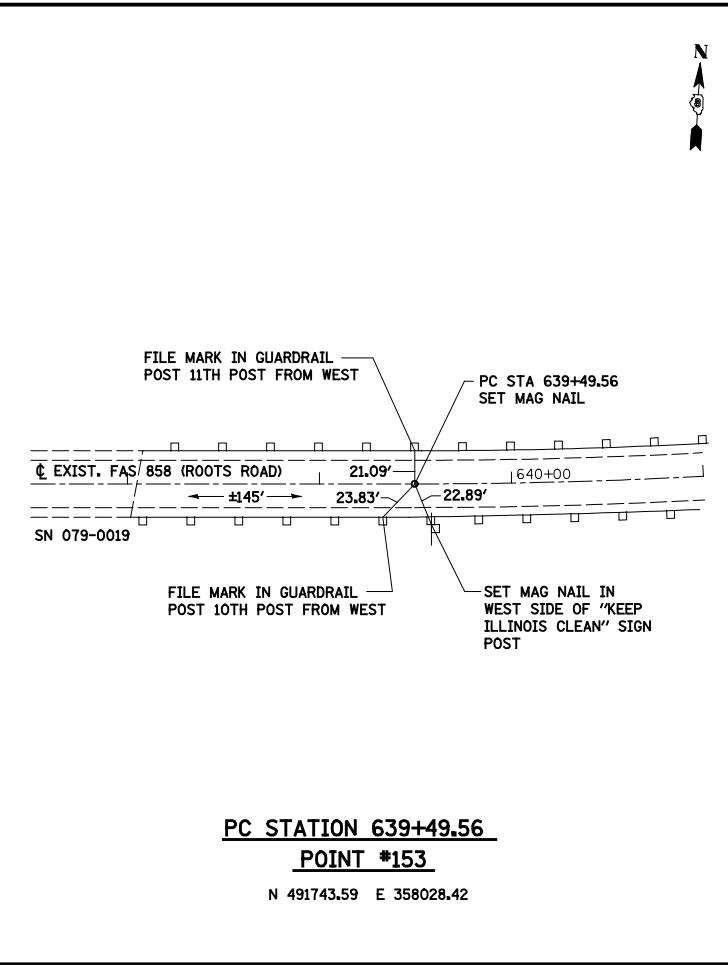
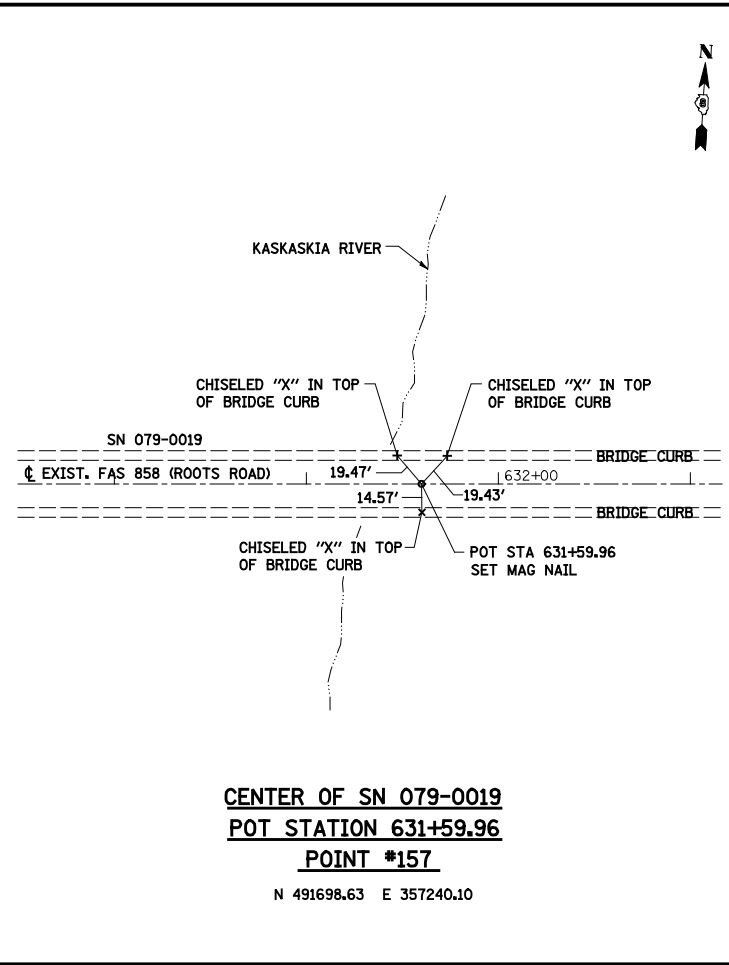
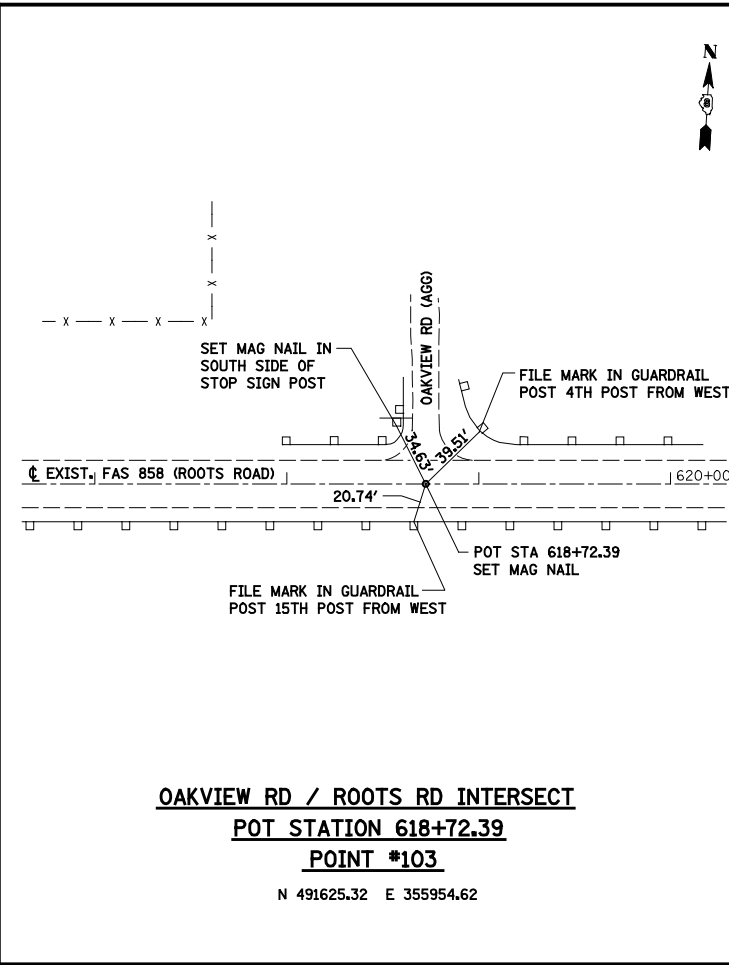
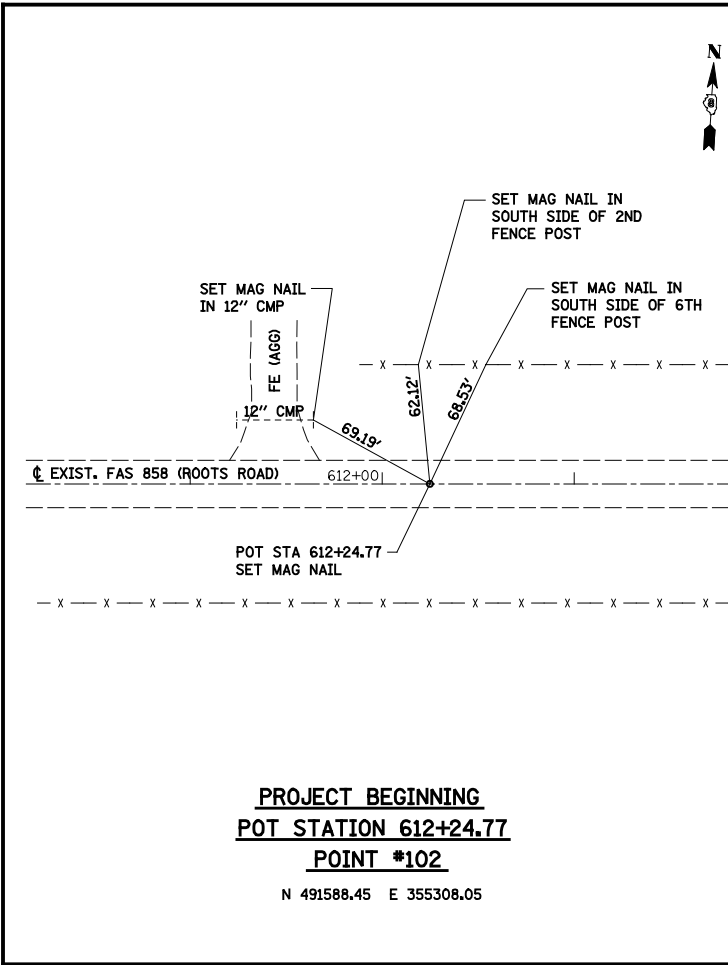


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PLOT SCALE = 200.0000' / IN.	CHECKED - BRM	DATE - 03-28-11	REVISED -
PLOT DATE = 12/20/2011			

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

HORIZONTAL CONTROL & TIE POINTS, FAS 858 (ROOTS ROAD)
 SCALE: 1"=100' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

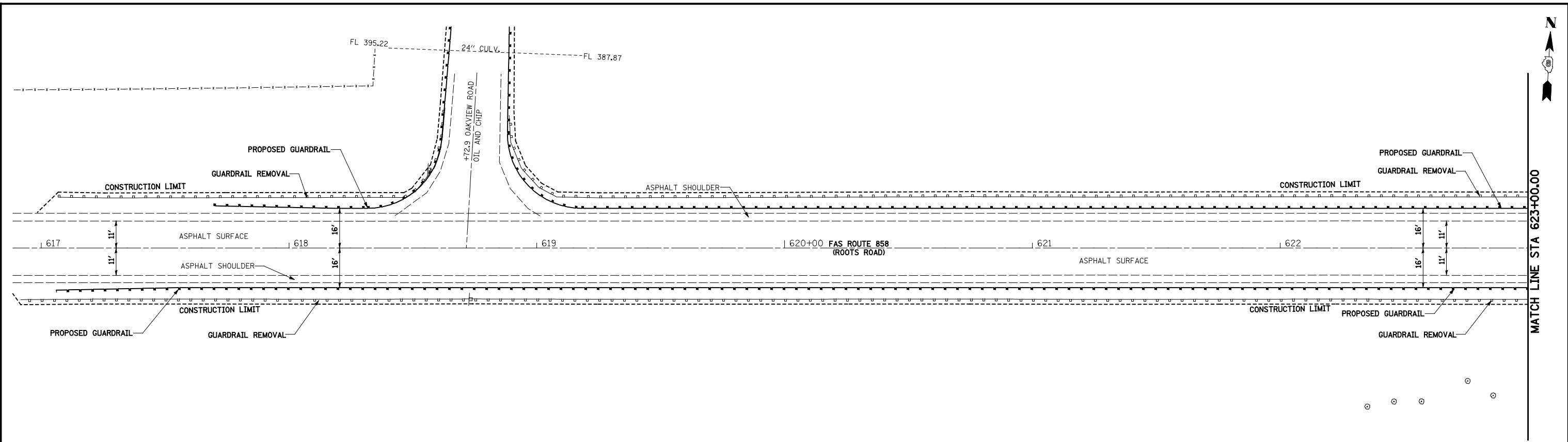
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	7
CONTRACT NO. 76409				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



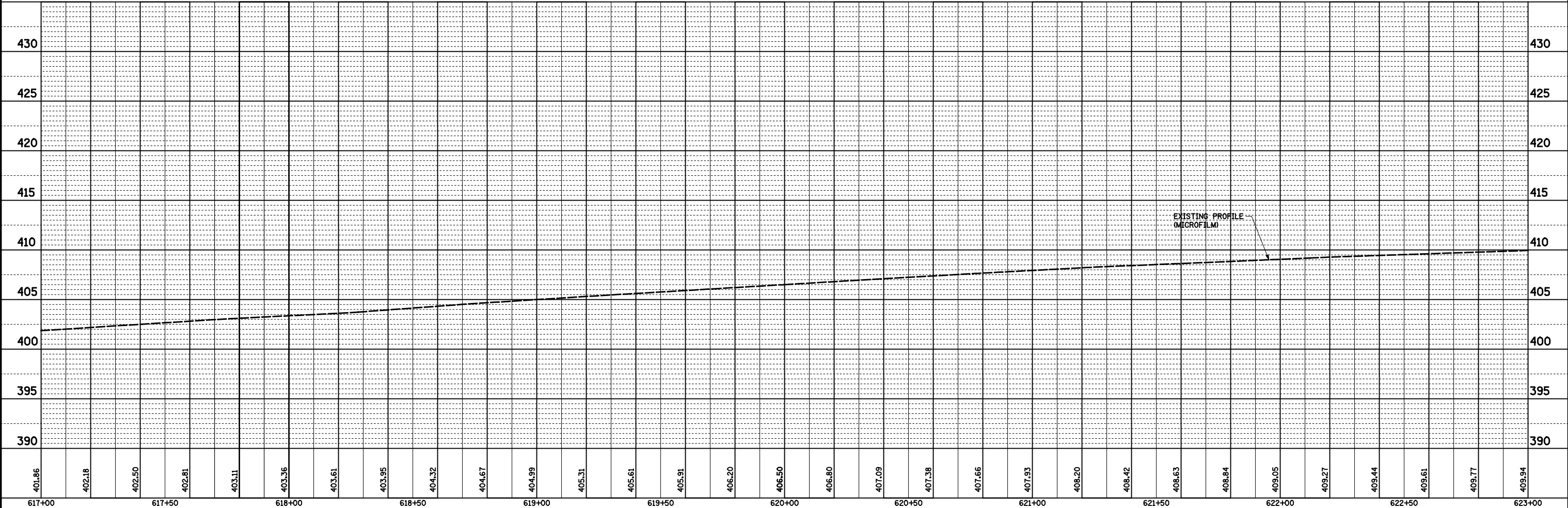
FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HORIZONTAL CONTROL & TIE POINTS, FAS 858 (ROOTS ROAD)		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
St:\Projects\409-0028-DHY Roots Rd Final	plans\dgn\CADD Sheets\0876409-sht-ATB.dgn	DRAWN - WJS	REVISED -				858	12VB-II	RANDOLPH	72	8		
	PLOT SCALE = 200.0000' / IN.	CHECKED - BRM	REVISED -				CONTRACT NO. 76409						
	PLOT DATE = 12/20/2011	DATE - 09-19-11	REVISED -				ILLINOIS FED. AID PROJECT						
				SCALE: NONE		SHEET NO. 2 OF 2 SHEETS		STA.		TO STA.			

PLAN	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	NOTED		
	CHECKED		
	FILE NAME		
	NO.		

PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	NOTED		
	CHECKED		
	FILE NAME		
	NO.		



NOTE:
 SEE GUARDRAIL DETAIL SHEETS FOR EXISTING AND PROPOSED GUARDRAIL.
 FOR RIGHT OF WAY INFORMATION SEE RIGHT OF WAY PLAN SHEETS



FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -
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	PLOT DATE = 12/21/2011	DATE - 3-23-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

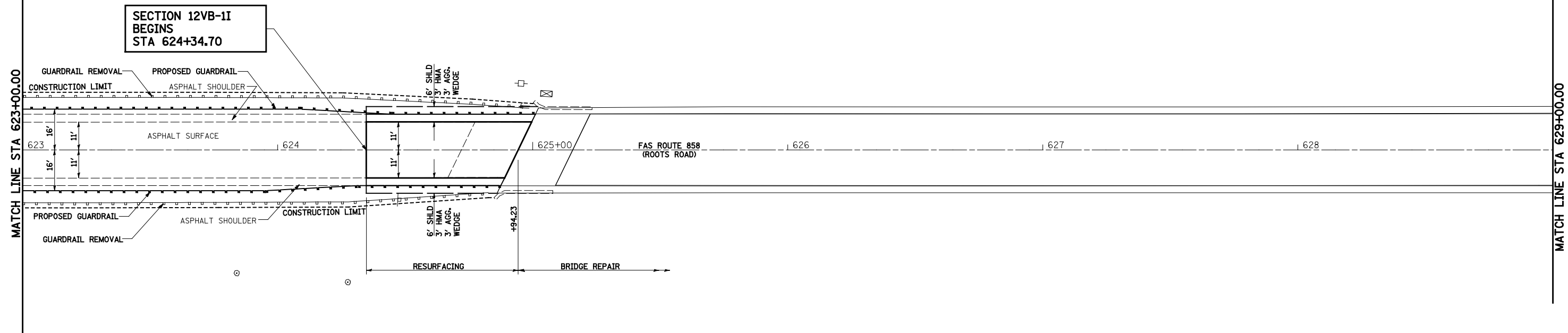
PLAN AND PROFILE

SCALE: 1"=20' SHEET NO. 1 OF 6 SHEETS STA. 620+00.00 TO STA. 623+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	9
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76409	



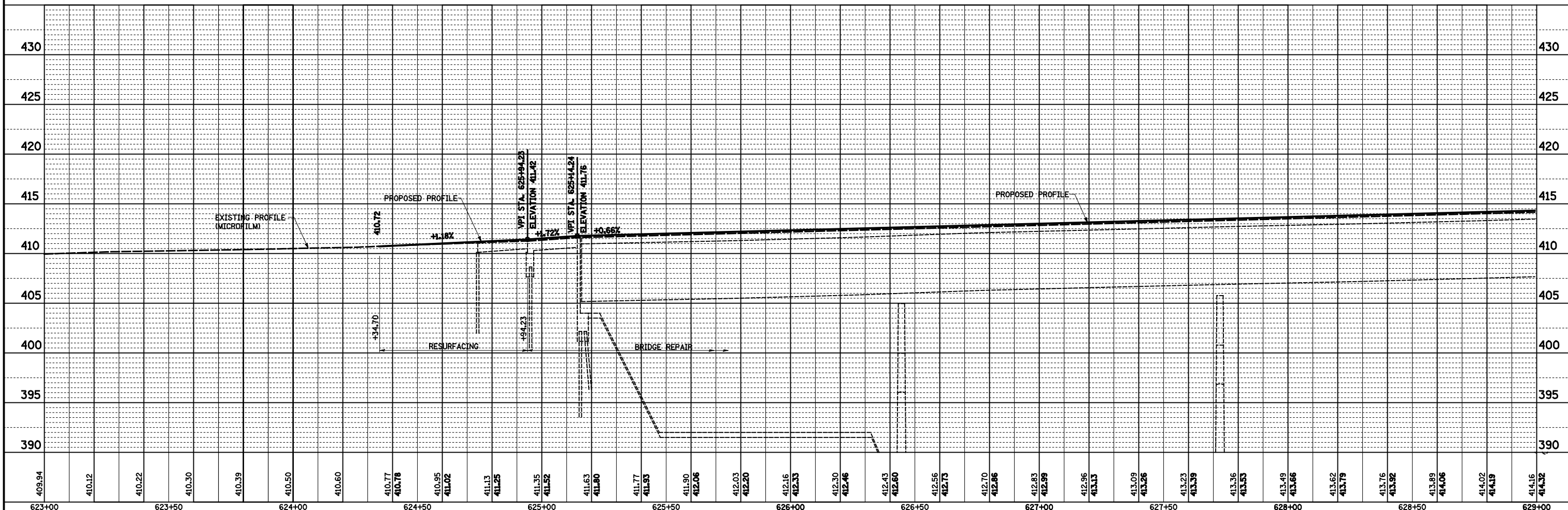
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	PLOTTED		
	CHECKED		
	DATE		
	CADD FILE NAME		



NOTE:
 SEE GUARDRAIL DETAIL SHEETS FOR EXISTING AND PROPOSED GUARDRAIL.
 FOR RIGHT OF WAY INFORMATION SEE RIGHT OF WAY PLAN SHEETS



PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	CHECKED		
	DATE		
	STRUCTURE		
	NOTATION CHFD		



FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -
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	PLOT DATE = 12/20/2011	DATE - 3-23-11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE

SCALE: 1"=20' SHEET NO. 2 OF 6 SHEETS STA. 623+00.00 TO STA. 629+00.00

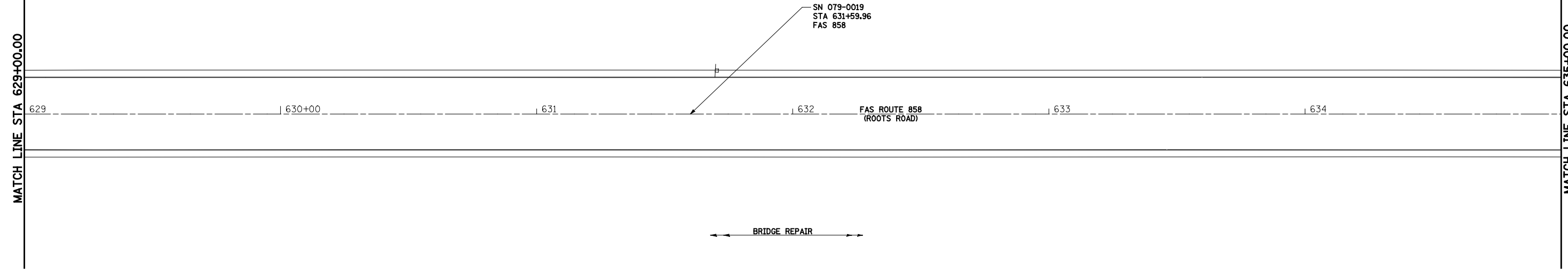
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	10
CONTRACT NO. 76409				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	NOTE BOOK		
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	CADD FILE NAME		

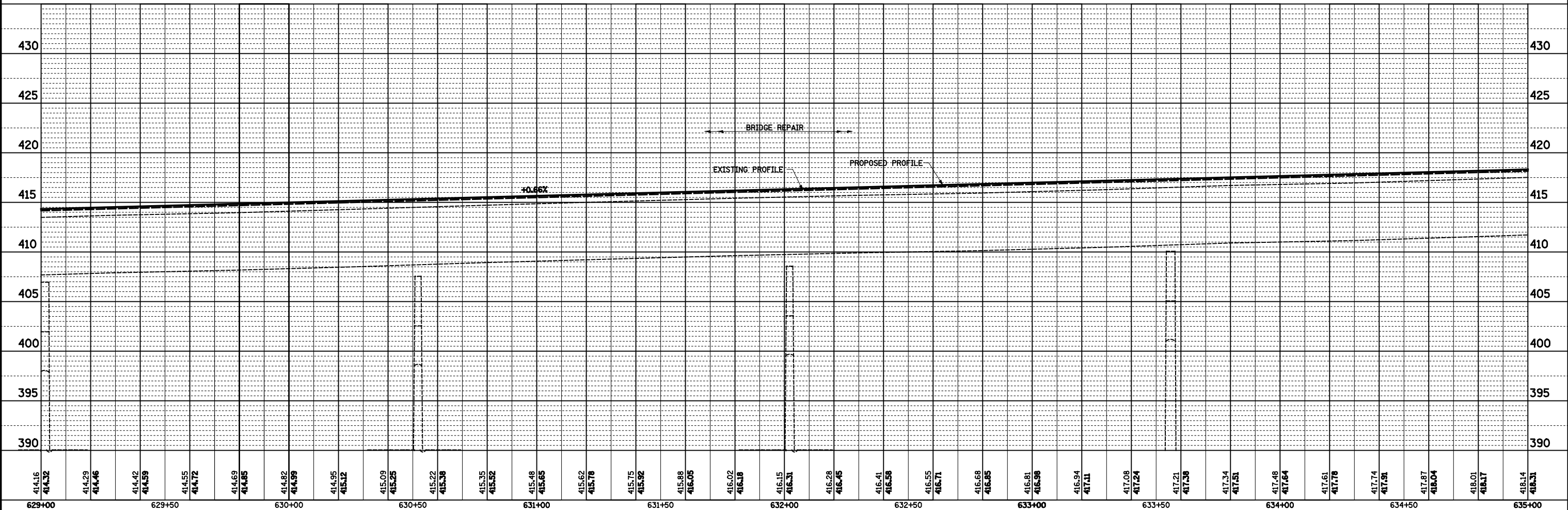
PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	NOTE BOOK		
	NO.		
	CADD FILE NAME		

MATCH LINE STA 629+00.00

MATCH LINE STA 635+00.00



NOTE:
SEE GUARDRAIL DETAIL SHEETS FOR EXISTING AND PROPOSED GUARDRAIL.
FOR RIGHT OF WAY INFORMATION SEE RIGHT OF WAY PLAN SHEETS



414.16 414.32	414.29 414.46	414.42 414.59	414.55 414.72	414.69 414.85	414.82 414.99	414.95 415.12	415.09 415.25	415.22 415.38	415.35 415.52	415.48 415.65	415.62 415.78	415.75 415.92	415.88 416.05	416.02 416.18	416.15 416.31	416.28 416.45	416.41 416.58	416.55 416.71	416.68 416.85	416.81 416.98	416.94 417.11	417.08 417.24	417.21 417.38	417.34 417.51	417.48 417.64	417.61 417.78	417.74 417.91	417.87 418.04	418.01 418.17	418.14 418.31
629+00	629+50	630+00	630+50	631+00	631+50	632+00	632+50	633+00	633+50	634+00	634+50	635+00																		

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PLOT SCALE = 40.0000' / IN.
PLOT DATE = 12/20/2011

DESIGNED - JWS
DRAWN - PDB
CHECKED - BRM
DATE - 3-23-11

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 1"=20' SHEET NO. 3 OF 6 SHEETS STA. 629+00.00 TO STA. 635+00.00

F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 11
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 76409

PLAN	SURVEYED EXISTING	BY	DATE
	PLOTTED		
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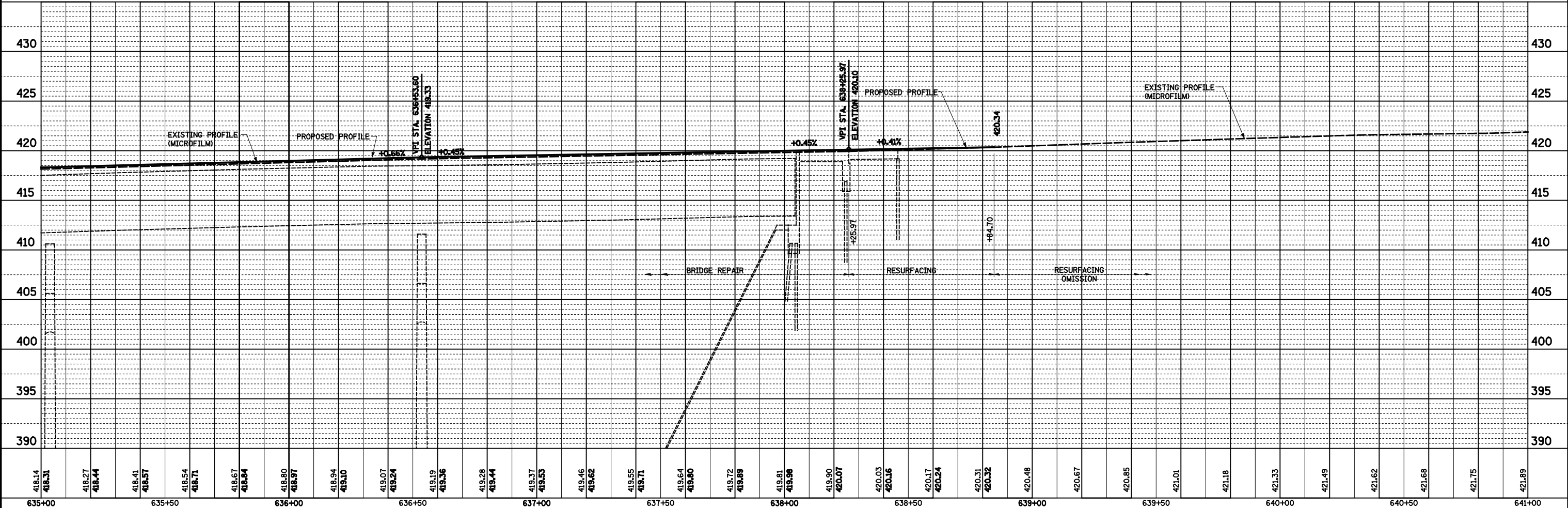
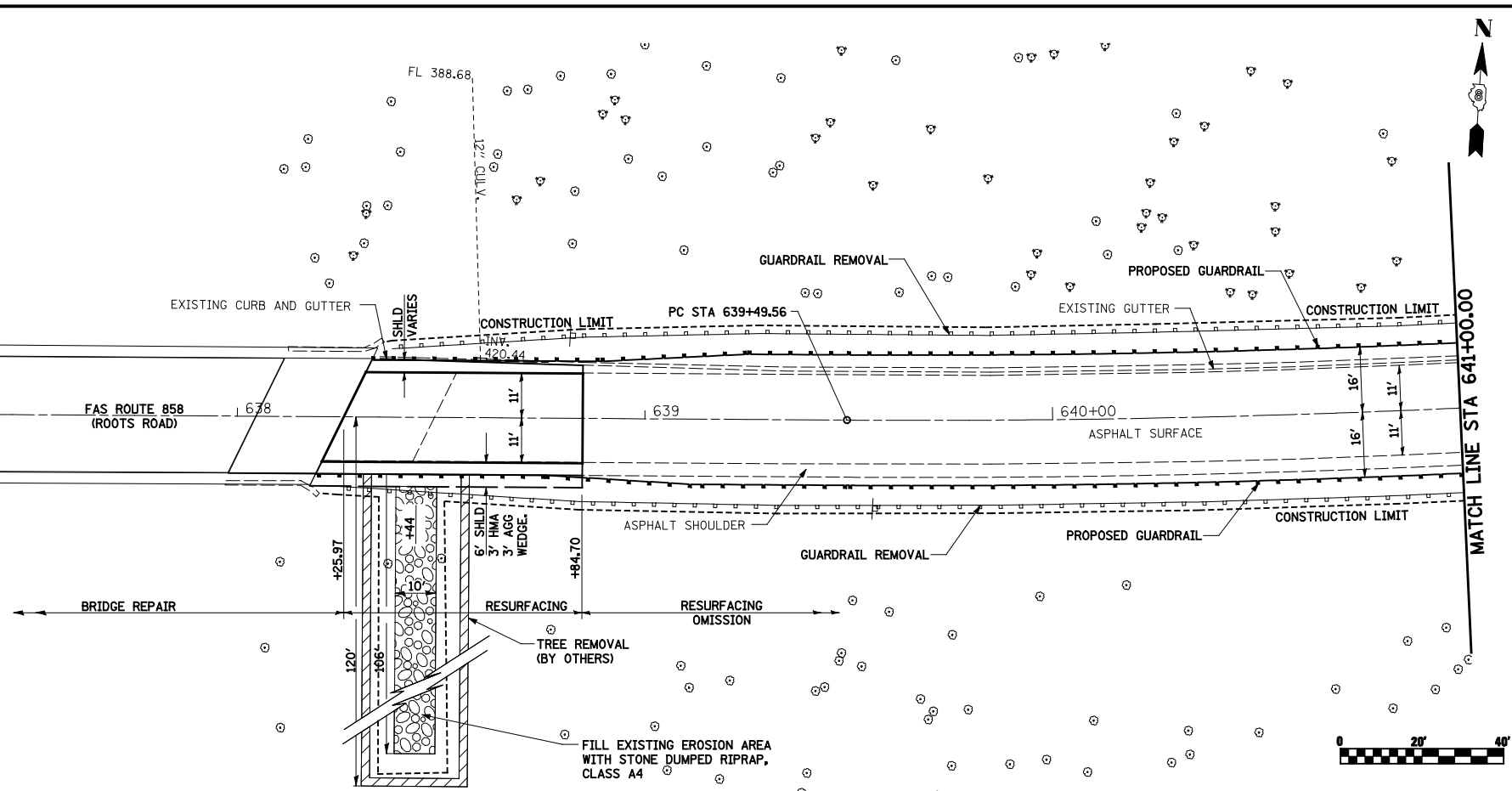
PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE		
	NOT AT THIS OFFICE		
	NO.		

MATCH LINE STA 635+00.00

MATCH LINE STA 641+00.00

EXISTING CURVE C-1
 PI STA. = 642+99.99
 $\Delta = 13^\circ 56' 50''$ (LT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.90'$
 $T = 350.43'$
 $L = 697.39'$
 $E = 21.35'$
 P.C. STA = 639+49.56
 P.T. STA = 646+46.95

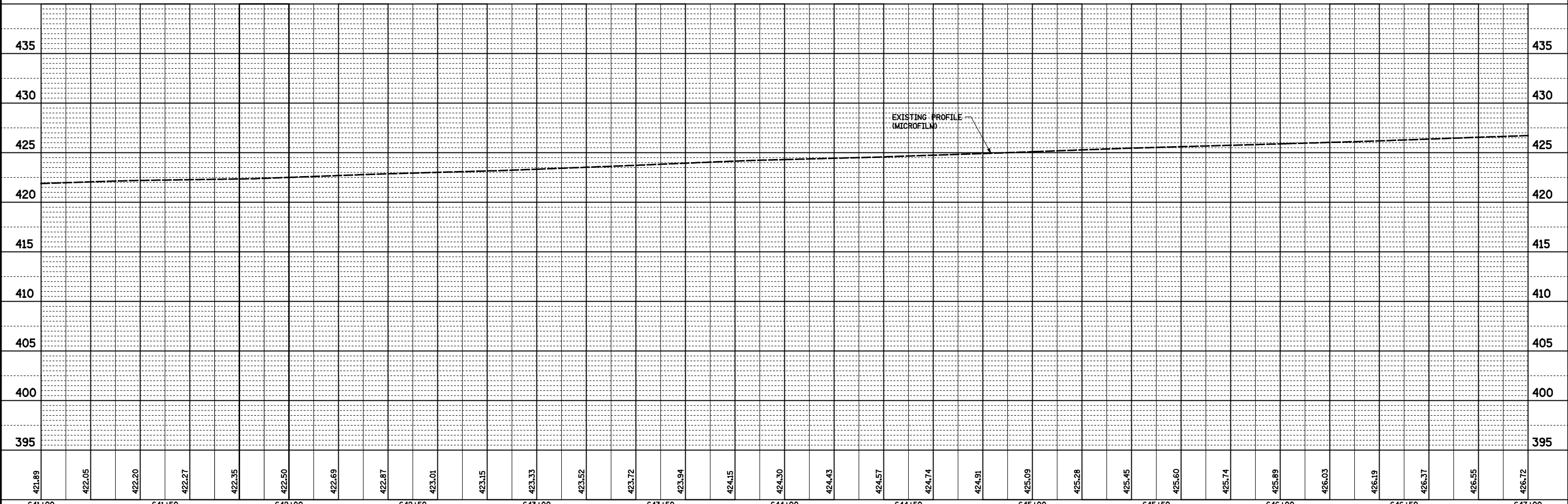
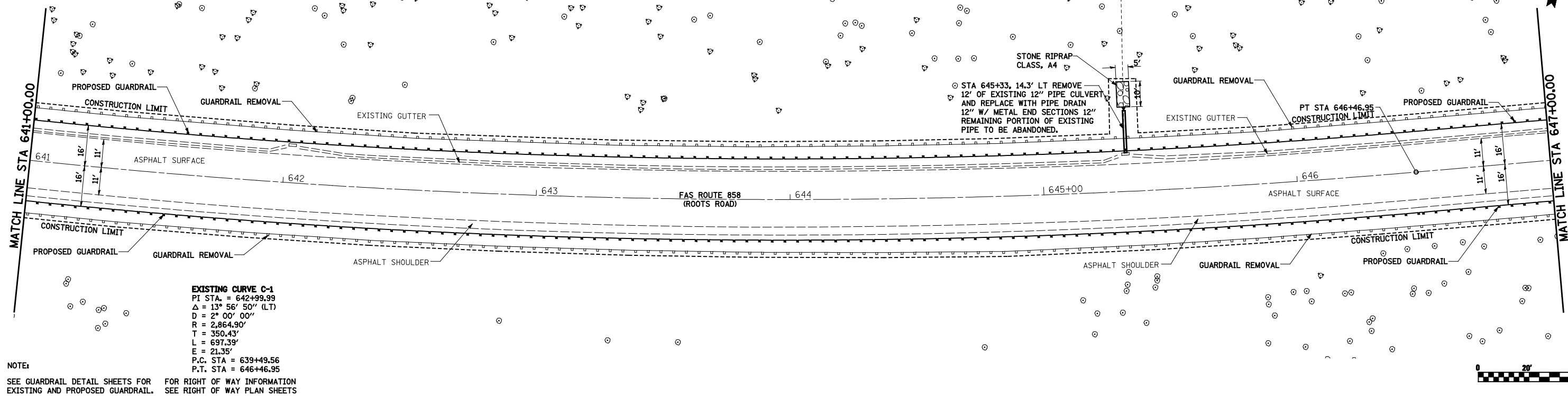
NOTE:
 SEE GUARDRAIL DETAIL SHEETS FOR EXISTING AND PROPOSED GUARDRAIL.
 FOR RIGHT OF WAY INFORMATION SEE RIGHT OF WAY PLAN SHEETS



FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN AND PROFILE SCALE: 1"=20' SHEET NO. 4 OF 6 SHEETS STA. 635+00.00 TO STA. 641+00.00	F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 12
S:\Projects\409-0028-DHY Route Rd Final\plans\dgn\CADD	Sheet\0876409-sh1-plan-profile.dgn	DRAWN - PDB	REVISED -			CONTRACT NO. 76409				
	PLOT SCALE = 40.0000 / IN.	CHECKED - BRM	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
	PLOT DATE = 12/21/2011	DATE - 3-23-11	REVISED -							

PLAN	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	CHECKED		
	ALIGNED		
	CADD FILE NAME		
	NO.		

PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE		
	NOTATIS CHFD		
	NO.		



FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

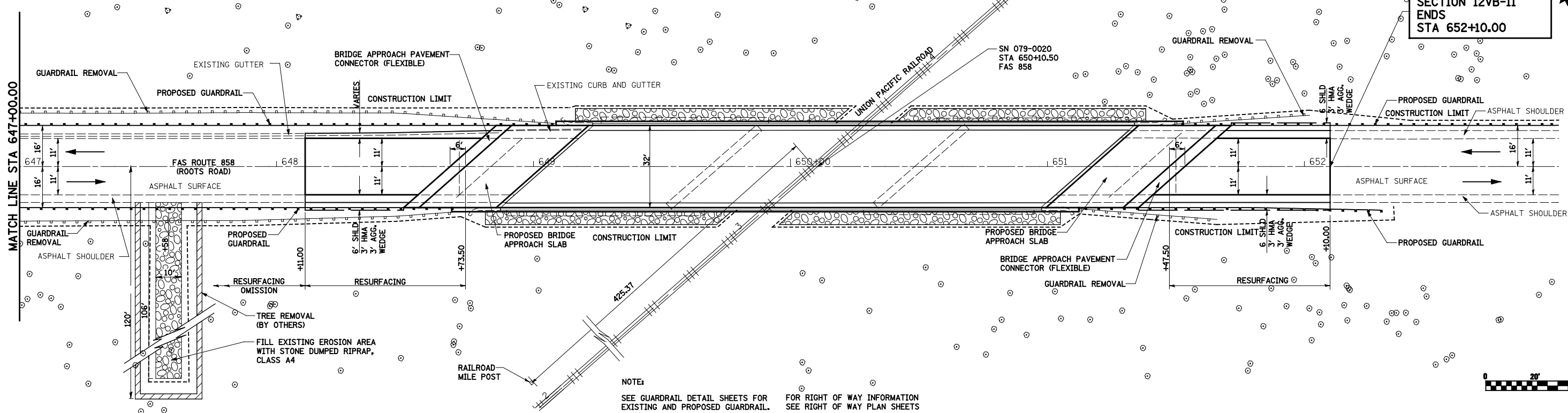
PLAN AND PROFILE

SCALE: 1"=20' SHEET NO. 5 OF 6 SHEETS STA. 641+00.00 TO STA. 647+00.00

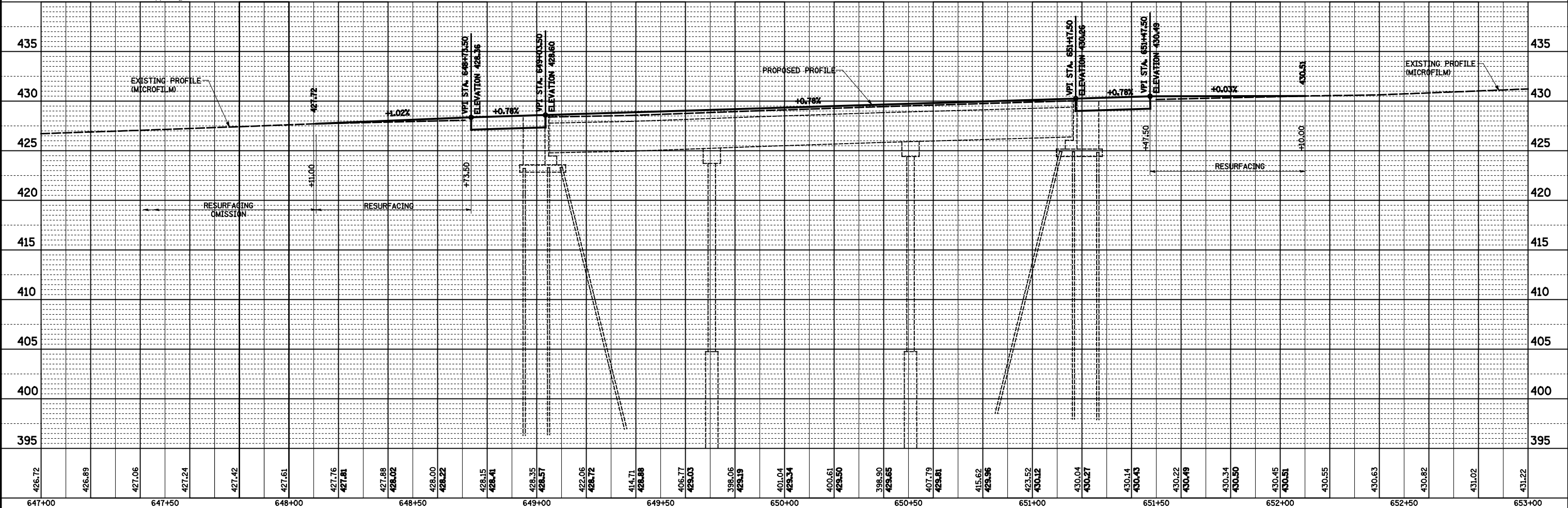
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	13
CONTRACT NO. 76409				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED EXISTING	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



NOTE:
SEE GUARDRAIL DETAIL SHEETS FOR EXISTING AND PROPOSED GUARDRAIL.
FOR RIGHT OF WAY INFORMATION SEE RIGHT OF WAY PLAN SHEETS



FILE NAME =	USER NAME = Paul	DESIGNED - JWS	REVISED -
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	PLOT DATE = 12/20/2011	DATE - 3-23-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN AND PROFILE

SCALE: 1"=20' SHEET NO. 6 OF 6 SHEETS STA. 647+00.00 TO STA. 653+00.00

F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76409	

EROSION CONTROL & SEDIMENT CONTROL NOTES

ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLANS. PRIOR TO APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE THE MANUFACTURER RECOMMENDED INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

TEMPORARY SEEDING SHALL BE COMPLETED ON A WEEKLY BASIS ON EXPOSED GROUND AND WILL NOT BE PAID FOR SEPARATELY BUT CONSIDERED AS INCLUDED IN THE PERMANENT SEEDING ITEMS.

ALL AREAS DISTURBED FOR ANY REASON SHALL BE PERMANENTLY SEEDDED AS DIRECTED BY THE ENGINEER. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE SEEDDED AT THE CONTRACTOR'S EXPENSE.

FINAL SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.

FAS ROUTE 858
(ROOTS ROAD)

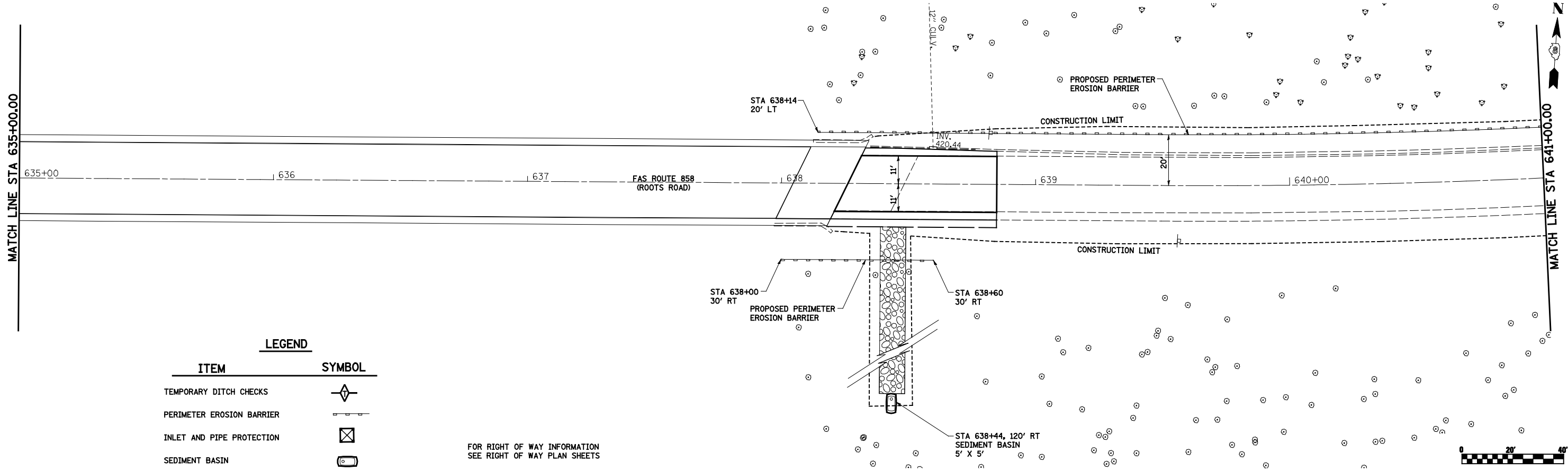
| 632 | 633 | 634



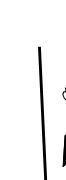
MATCH LINE STA 635+00.00

FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS

MATCH LINE STA 635+00.00



MATCH LINE STA 641+00.00



LEGEND

ITEM	SYMBOL
TEMPORARY DITCH CHECKS	
PERIMETER EROSION BARRIER	
INLET AND PIPE PROTECTION	
SEDIMENT BASIN	

FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS

FILE NAME =
#FILEL#

USER NAME = Paul
PLOT SCALE = 40.0000' / IN.
PLOT DATE = 12/20/2011

DESIGNED - JWS
DRAWN - PDB
CHECKED - BRM
DATE - 03-28-11

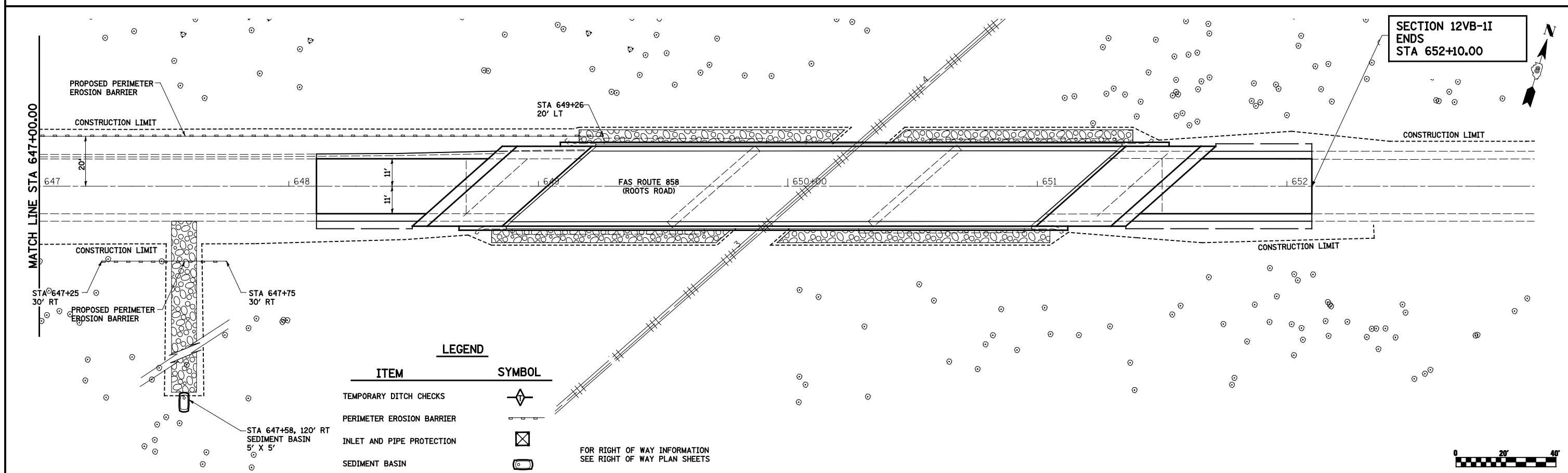
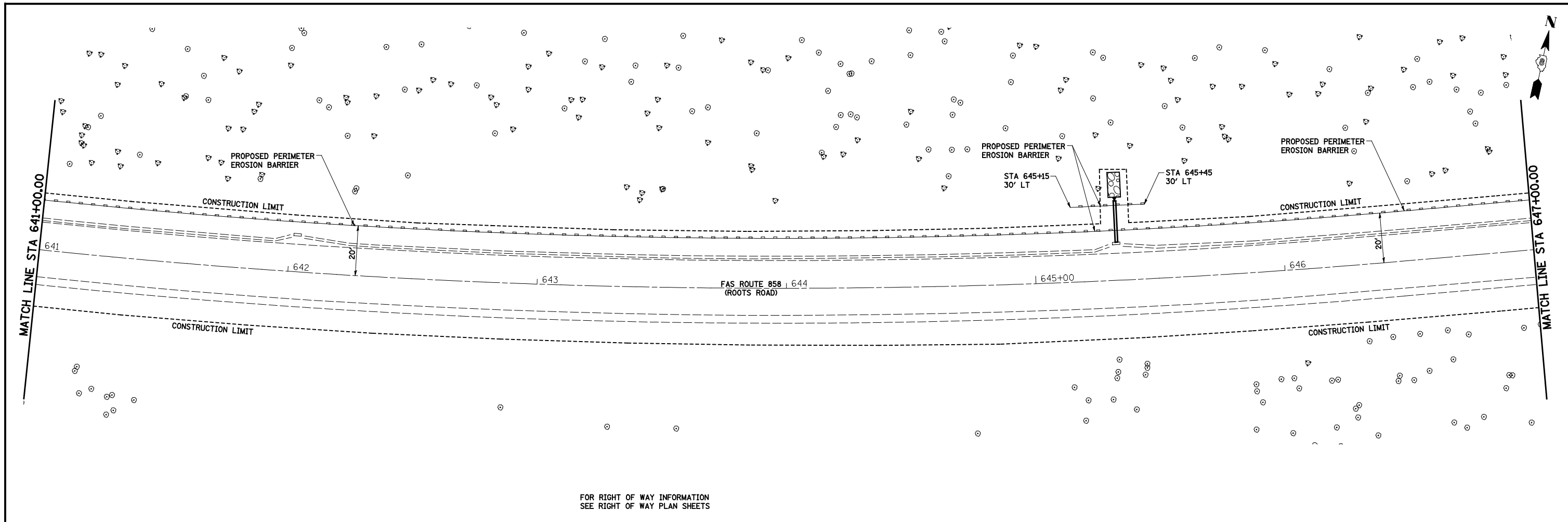
REVISED -
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REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"=20' SHEET NO. 1 OF 2 SHEETS STA. 629+00.00 TO STA. 641+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-1I	RANDOLPH	72	15
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				

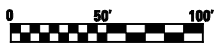
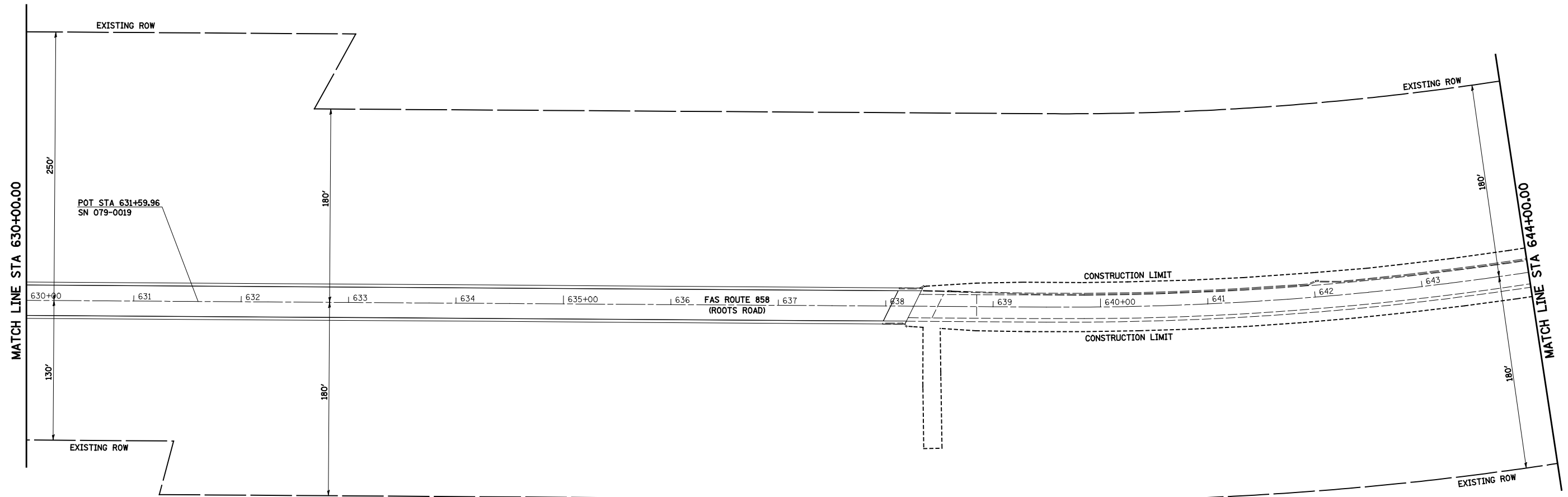


LEGEND

ITEM	SYMBOL
TEMPORARY DITCH CHECKS	
PERIMETER EROSION BARRIER	
INLET AND PIPE PROTECTION	
SEDIMENT BASIN	



FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION AND SEDIMENT CONTROL PLAN			F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 16
					SCALE: 1"=20'	SHEET NO. 2 OF 2 SHEETS	STA. 641+00.00 TO STA. 653+00.00	CONTRACT NO. 76409				
					ILLINOIS FED. AID PROJECT							



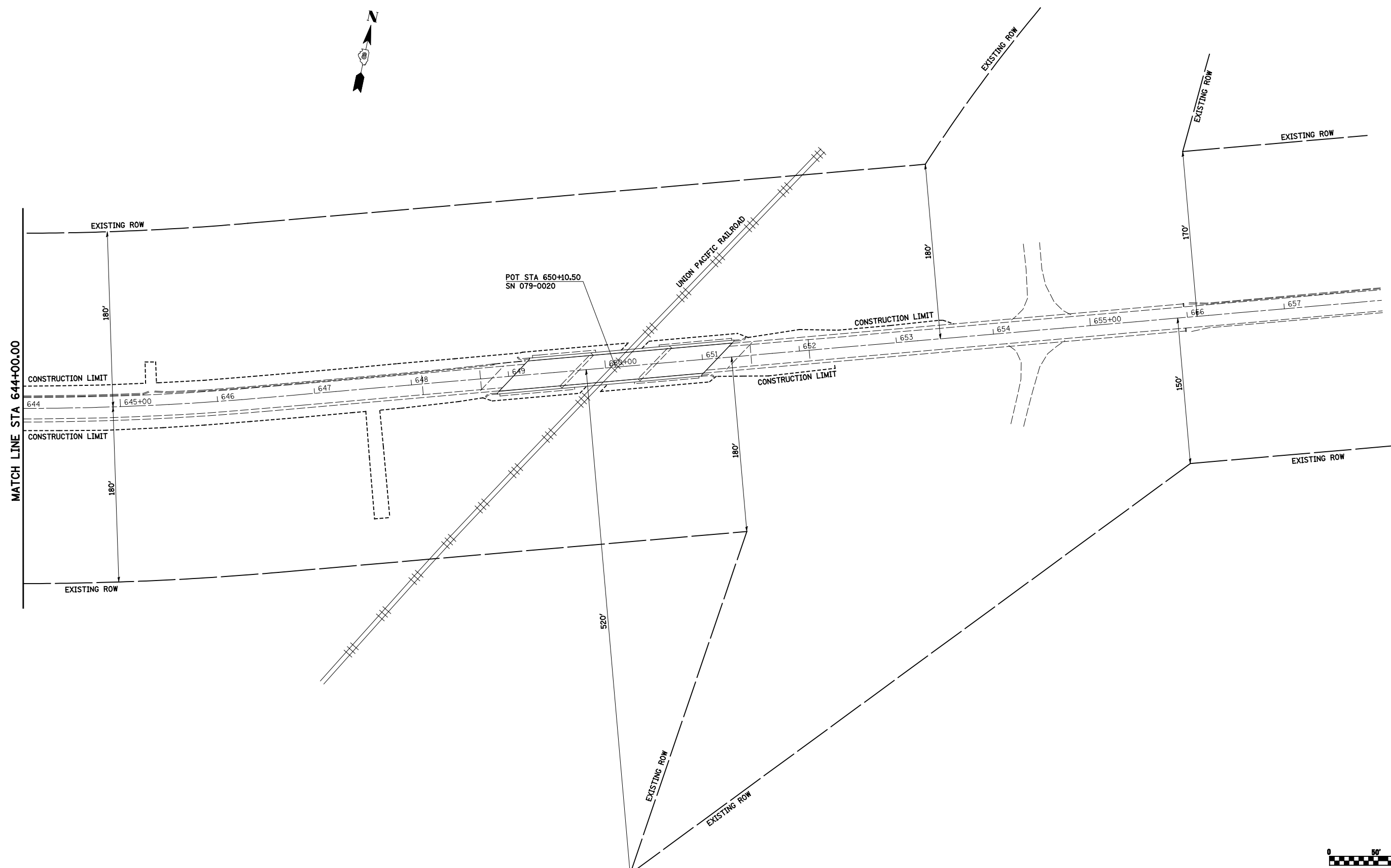
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	PLOT DATE = 12/20/2011	DATE - 9-26-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

RIGHT OF WAY PLAN - FAS 858 (ROOTS ROAD)

SCALE: 1"=50' SHEET NO. 2 OF 3 SHEETS STA. 630+00.00 TO STA. 644+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	18
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				



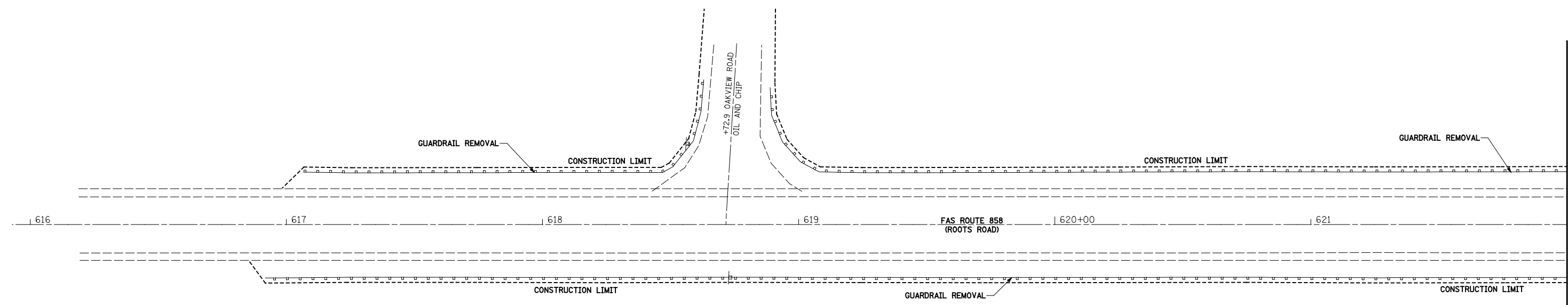
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		DRAWN - WJS	REVISED -
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	PLOT DATE = 12/21/2011	DATE - 9-26-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**


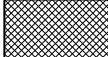


RIGHT OF WAY PLAN - FAS 858 (ROOTS ROAD)

SCALE: 1"=50' SHEET NO. 3 OF 3 SHEETS STA. 644+00.00 TO STA. 658+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	19
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				



LEGEND

-  APPROACH SLAB REMOVAL
 PAVEMENT REMOVAL
-  COMBINATION CURB AND GUTTER REMOVAL
 HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT

FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS



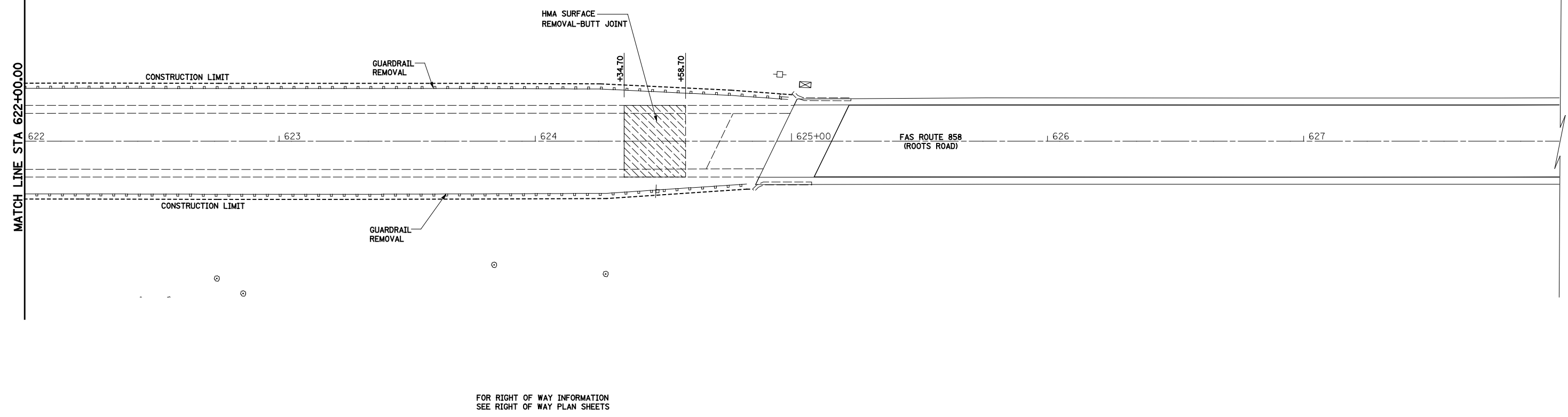
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

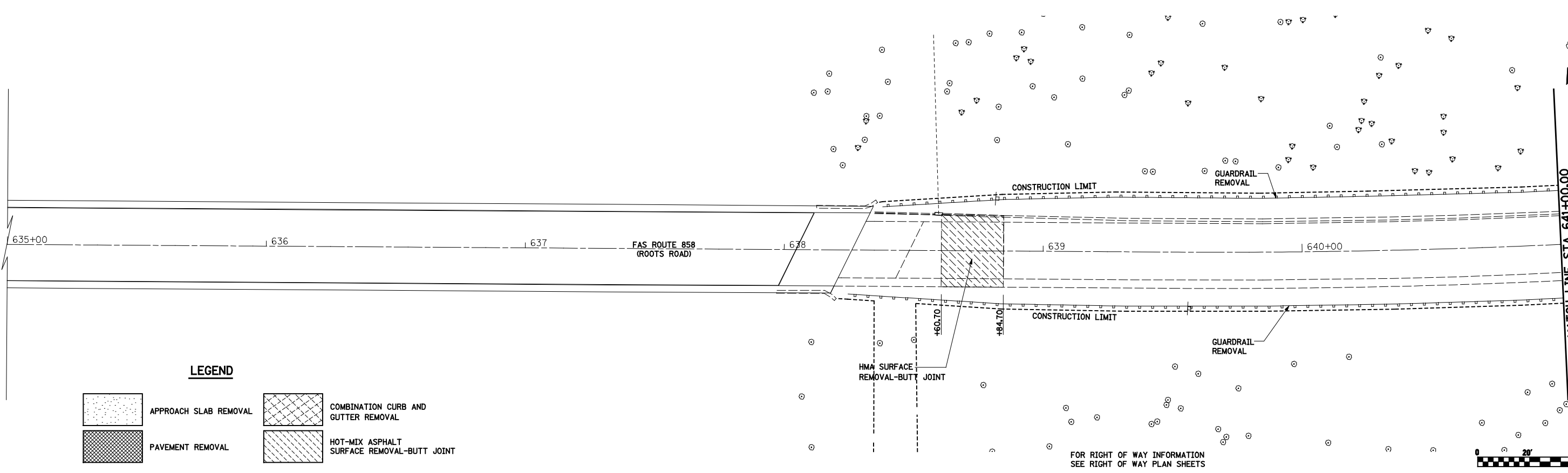
REMOVAL ITEMS - FAS 858 (ROOTS ROAD)

SCALE: 1"=20' SHEET NO. 1 OF 3 SHEETS STA. TO STA.




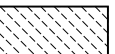
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-1I	RANDOLPH	72	20
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				



FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS



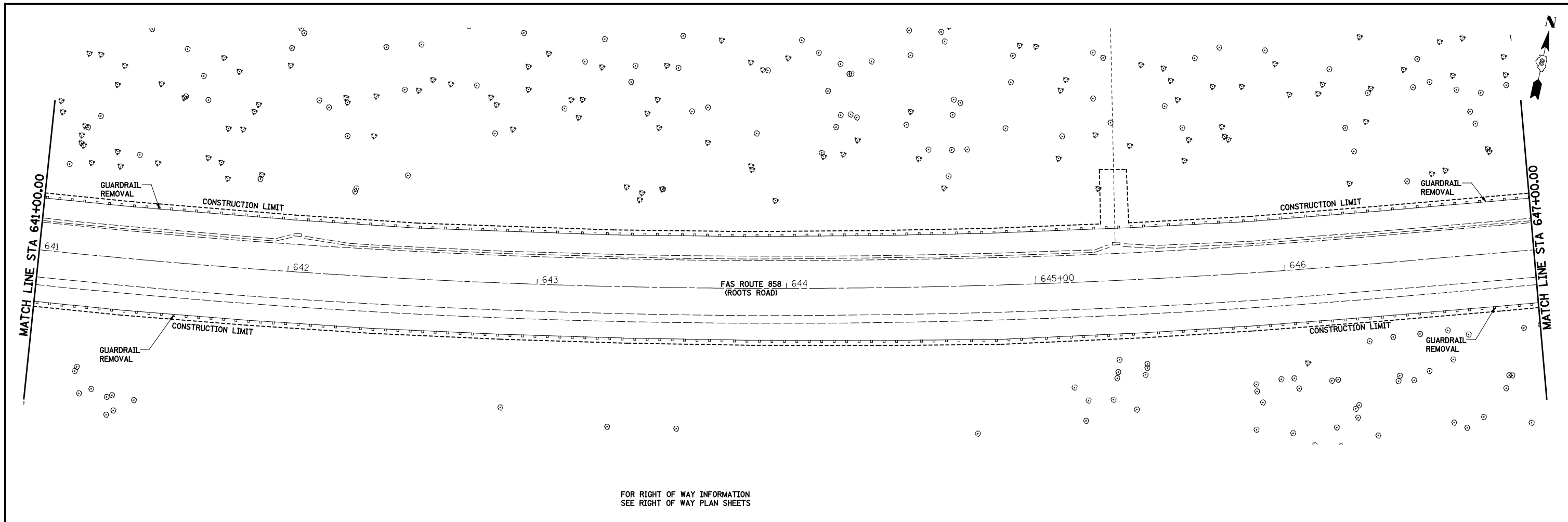
LEGEND

-  APPROACH SLAB REMOVAL
-  COMBINATION CURB AND GUTTER REMOVAL
-  PAVEMENT REMOVAL
-  HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT

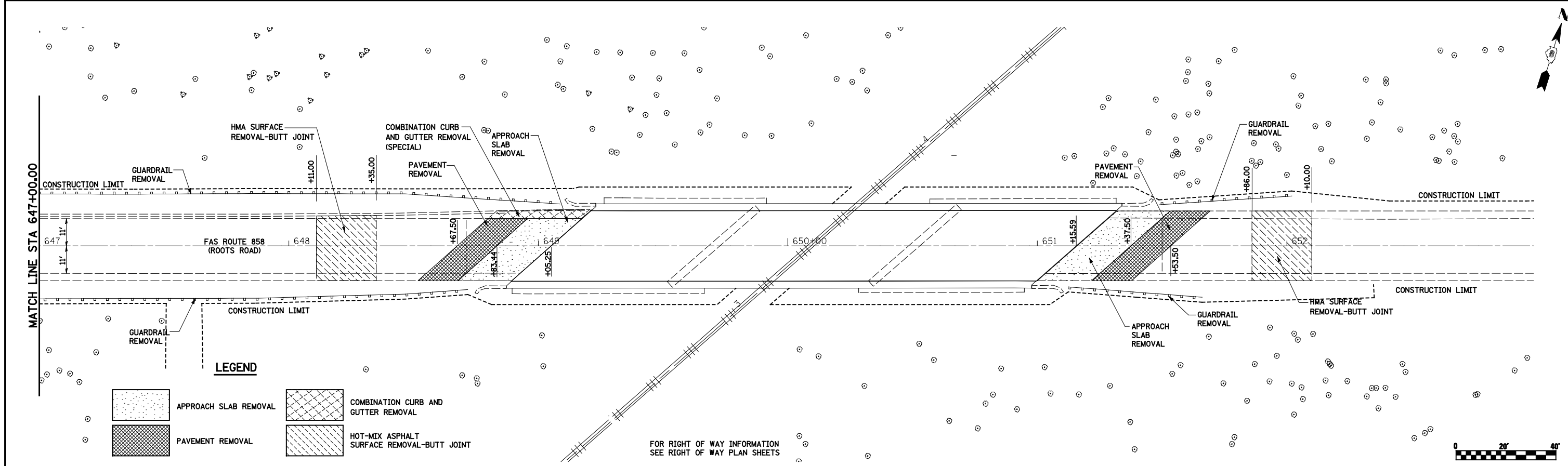
FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS



FILE NAME = #FILE#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL ITEMS - FAS 858 (ROOTS ROAD)			F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 21
	PLOT SCALE = 40.0000' / IN.	DRAWN - PDB	REVISED -		SCALE: 1"=20'	SHEET NO. 2 OF 3 SHEETS	STA. TO STA.	CONTRACT NO. 76409				
	PLOT DATE = 12/20/2011	CHECKED - BRM	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE - 03-28-11	REVISED -									



FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS

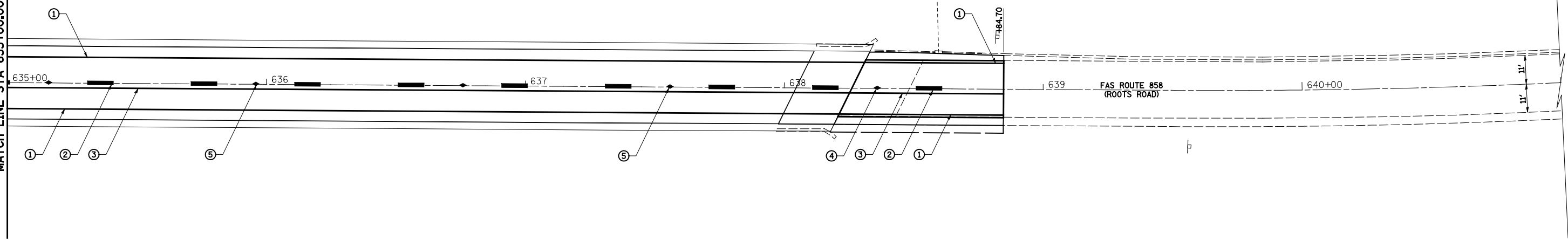


FOR RIGHT OF WAY INFORMATION
SEE RIGHT OF WAY PLAN SHEETS

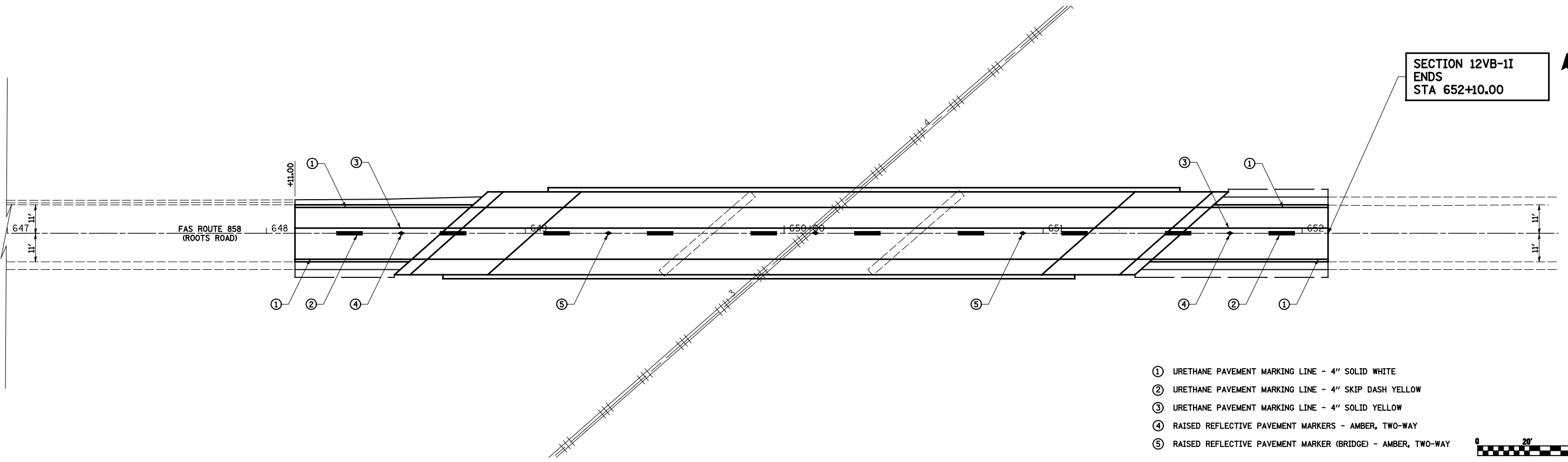
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	PLOT SCALE = 40.0000' / IN.	DRAWN - PDB	REVISED -		SCALE: 1"=20'	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.		CONTRACT NO. 76409	
	PLOT DATE = 12/20/2011	CHECKED - BRM	REVISED -					ILLINOIS FED. AID PROJECT			
		DATE - 03-28-11	REVISED -								



MATCH LINE STA 635+00.00



SECTION 12VB-1I
ENDS
STA 652+10.00

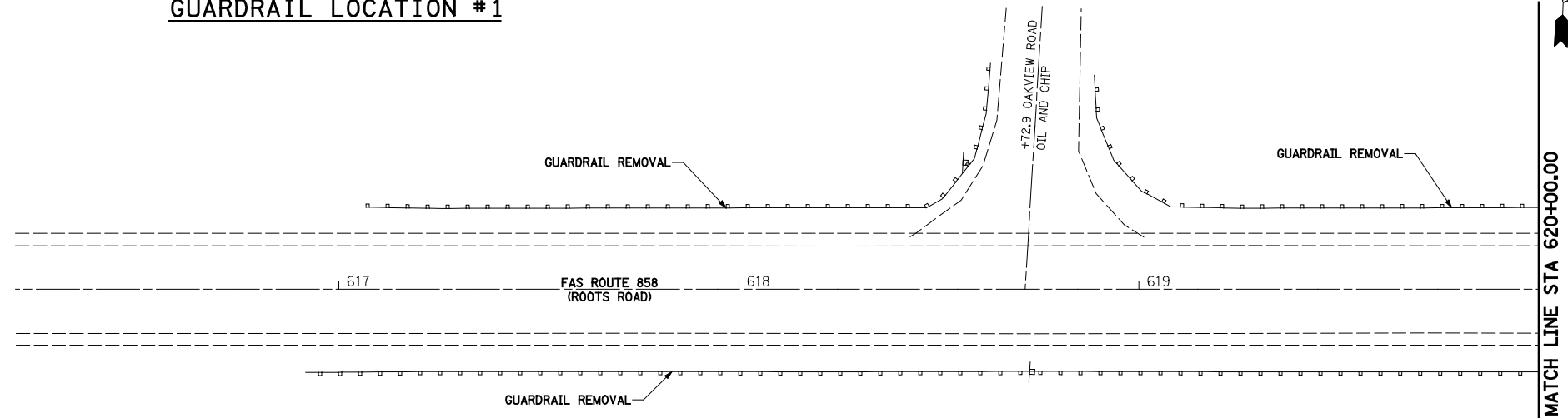


- ① URETHANE PAVEMENT MARKING LINE - 4" SOLID WHITE
- ② URETHANE PAVEMENT MARKING LINE - 4" SKIP DASH YELLOW
- ③ URETHANE PAVEMENT MARKING LINE - 4" SOLID YELLOW
- ④ RAISED REFLECTIVE PAVEMENT MARKERS - AMBER, TWO-WAY
- ⑤ RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE) - AMBER, TWO-WAY

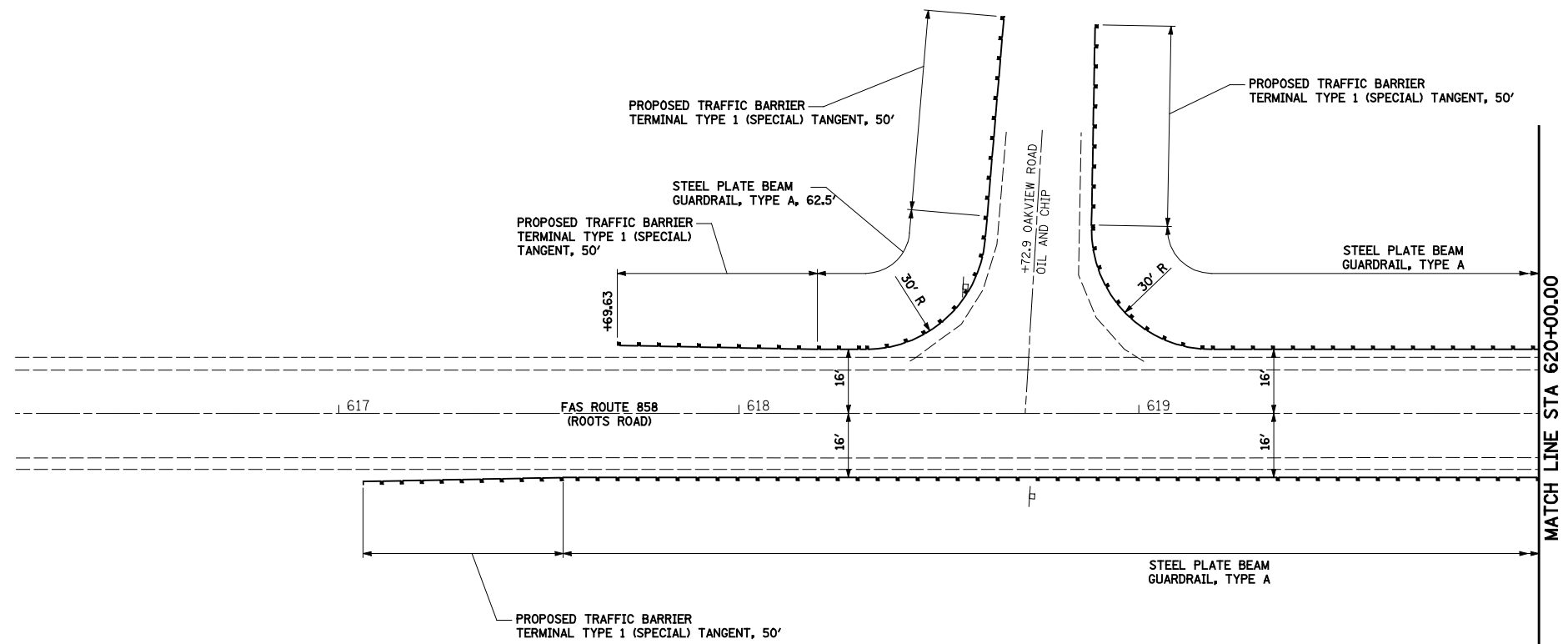
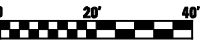


FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING - FAS 858 (ROOTS ROAD)		F.A.S. RTE. 858	SECTION 12VB-1I	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 24
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -		SCALE: 1"=20'	SHEET NO. 2 OF 2 SHEETS	STA. 635+00.00 TO STA. 652+50.00	CONTRACT NO. 76409		ILLINOIS FED. AID PROJECT	
	PLOT DATE = 12/21/2011	DATE - 03-28-11	REVISED -								

GUARDRAIL LOCATION #1



EXISTING CONDITION



PROPOSED CONDITION



FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -
		DRAWN - PDB	REVISED -
		CHECKED - BRM	REVISED -
		DATE - 03-28-11	REVISED -

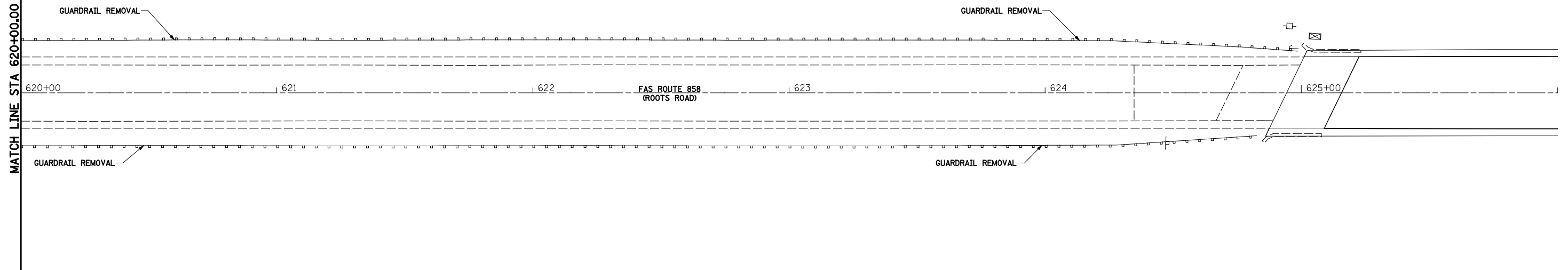
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL DETAILS
FAS 858, ROOTS ROAD**

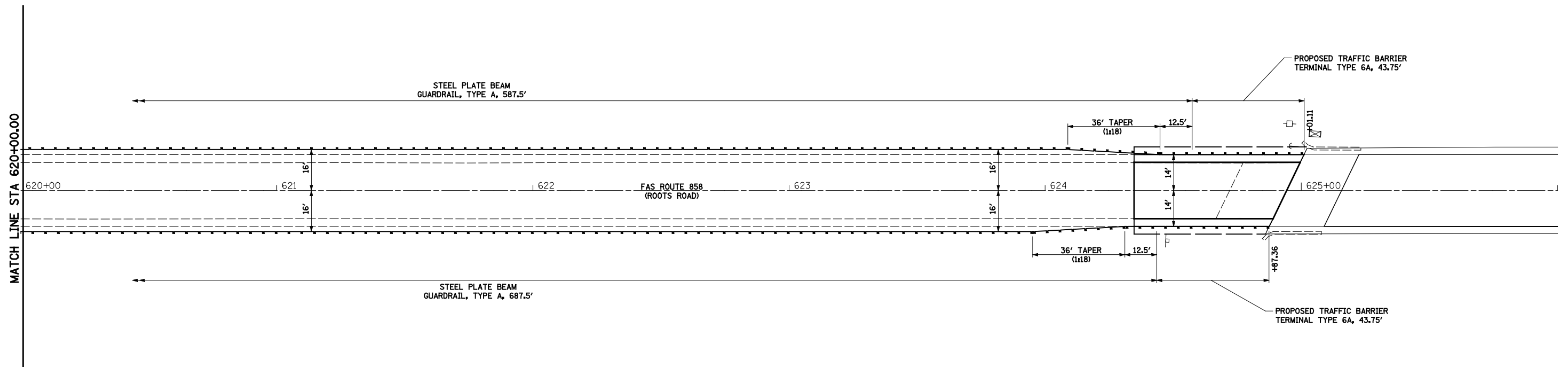
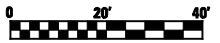
SCALE: 1"=20' SHEET NO. 1 OF 5 SHEETS STA. 614+00.00 TO STA. 620+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	25
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				

GUARDRAIL LOCATION #1



EXISTING CONDITION

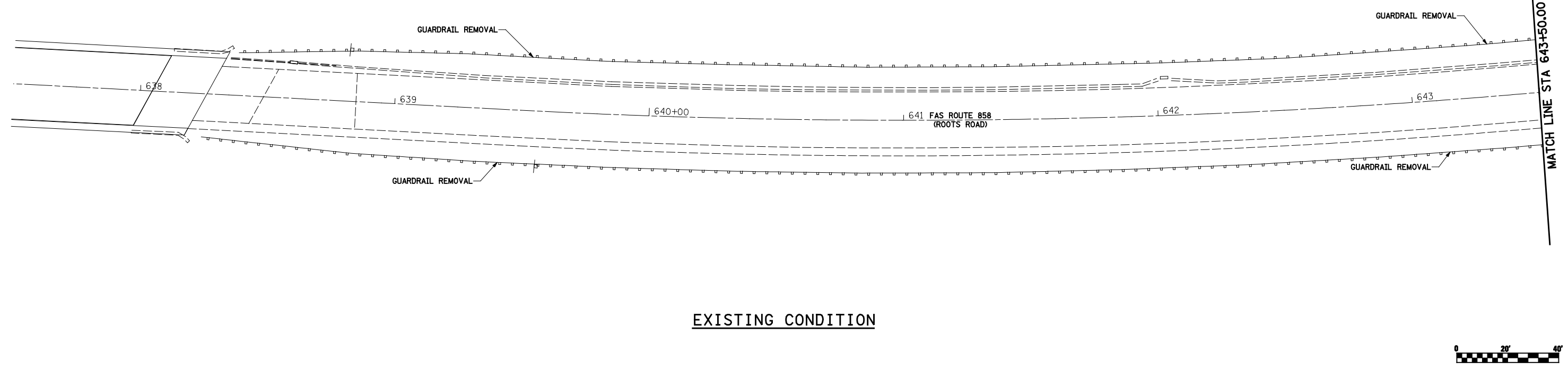


PROPOSED CONDITION

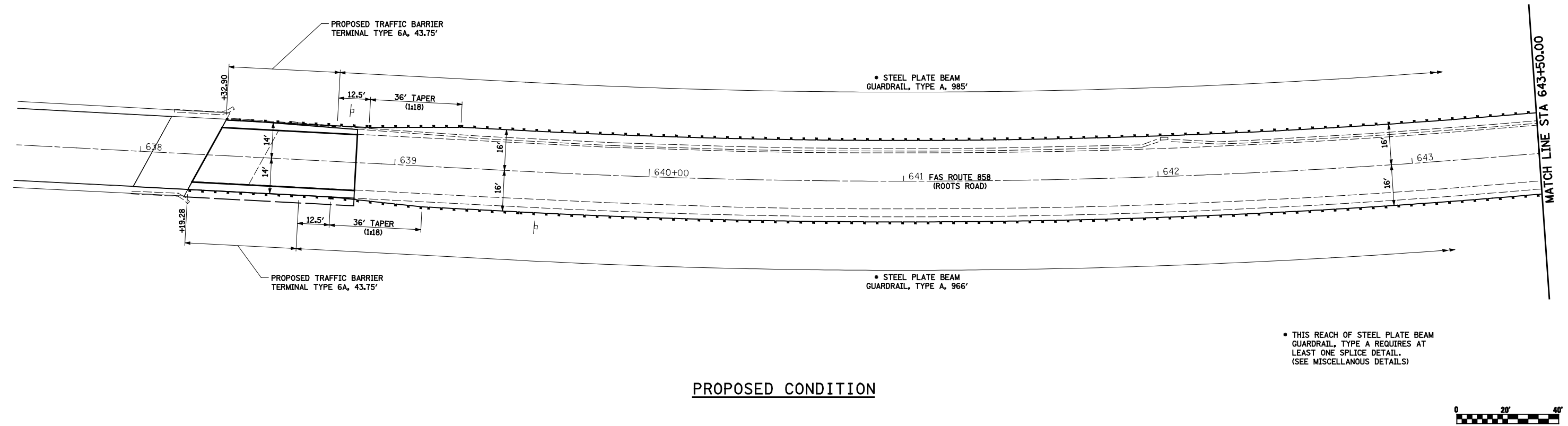


FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL DETAILS FAS 858, ROOTS ROAD		F.A.S. RTE. 858	SECTION 12VB-1I	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 26	
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -				CONTRACT NO. 76409					
PLOT DATE = 12/20/2011	DATE - 03-28-11	REVISED -	SCALE: 1"=20'		SHEET NO. 2 OF 5 SHEETS	STA. 620+00.00 TO STA. 626+00.00	ILLINOIS FED. AID PROJECT					

GUARDRAIL LOCATION #2



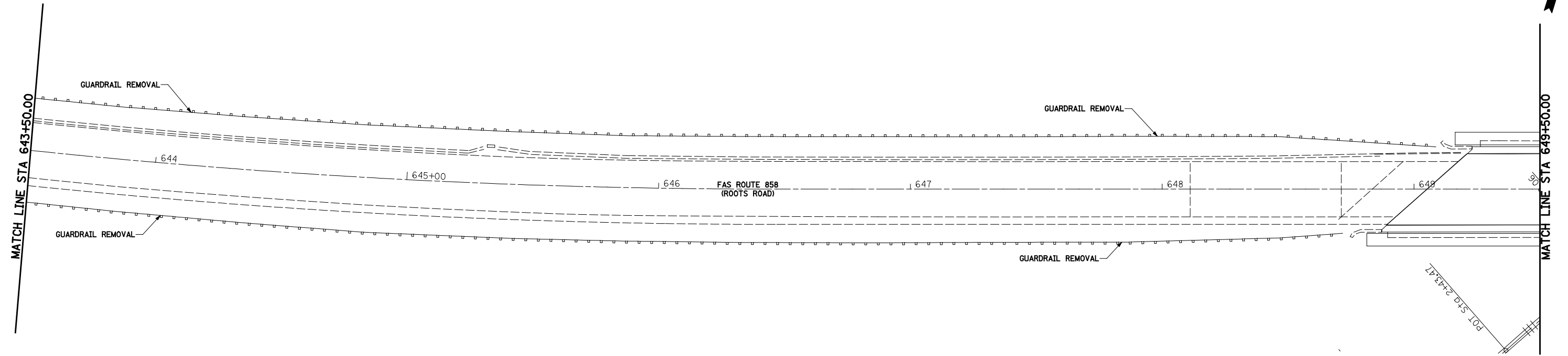
EXISTING CONDITION



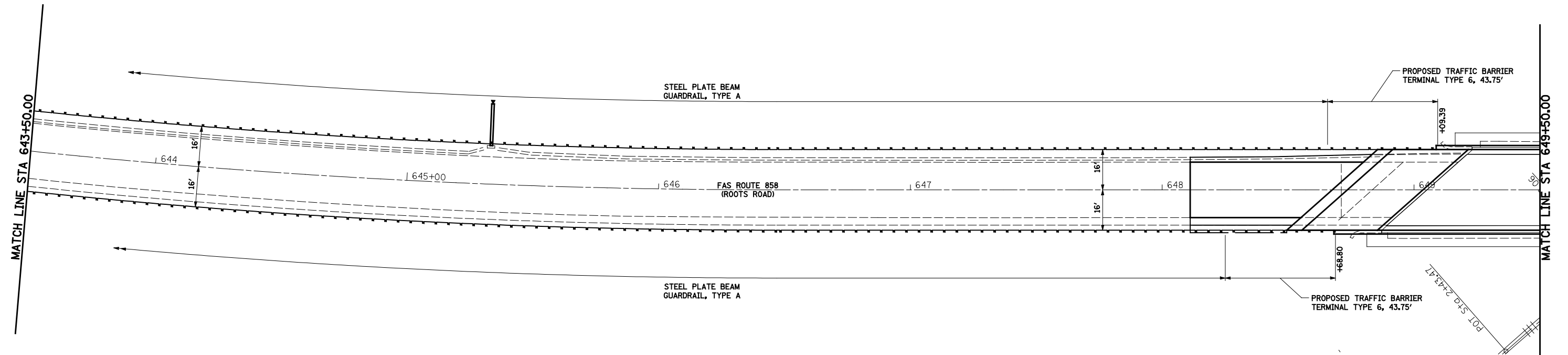
PROPOSED CONDITION

FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL DETAILS FAS 858, ROOTS ROAD		F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 27	
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -		SCALE: 1"=20'	SHEET NO. 3 OF 5 SHEETS	STA. 637+50.00 TO STA. 643+50.00	CONTRACT NO. 76409		ILLINOIS FED. AID PROJECT		
PLOT DATE = 12/20/2011	DATE - 03-28-11	REVISED -	REVISED -									

GUARDRAIL LOCATION #2



EXISTING CONDITION

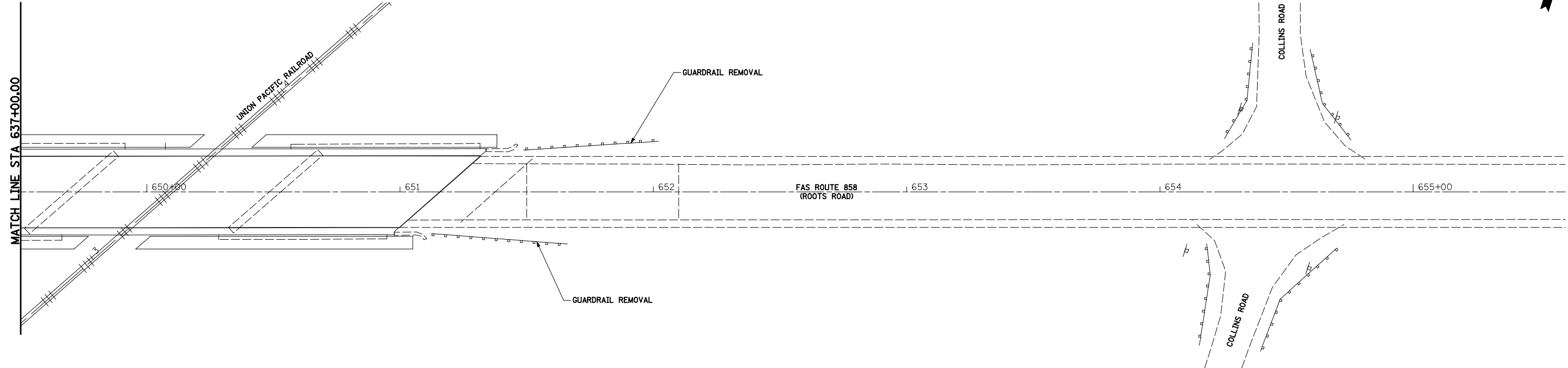


PROPOSED CONDITION

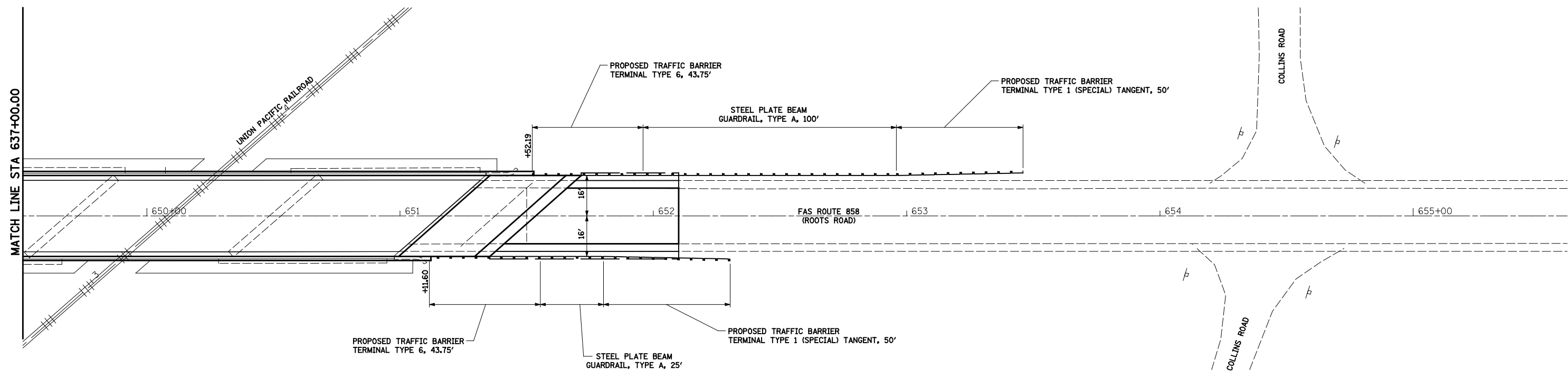


FILE NAME = #FILEL#	USER NAME = Paul	DESIGNED - JWS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL DETAILS FAS 858, ROOTS ROAD		F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 28	
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -		SCALE: 1"=20'	SHEET NO. 4 OF 5 SHEETS	STA. 643+50.00 TO STA. 649+50.00	CONTRACT NO. 76409		ILLINOIS FED. AID PROJECT		
PLOT DATE = 12/20/2011	DATE - 03-28-11	REVISED -	REVISED -									

GUARDRAIL LOCATION #3



EXISTING CONDITION



PROPOSED CONDITION



FILE NAME =
#FILEL#

USER NAME = Paul
PLOT SCALE = 40.0000' / IN.
PLOT DATE = 12/20/2011

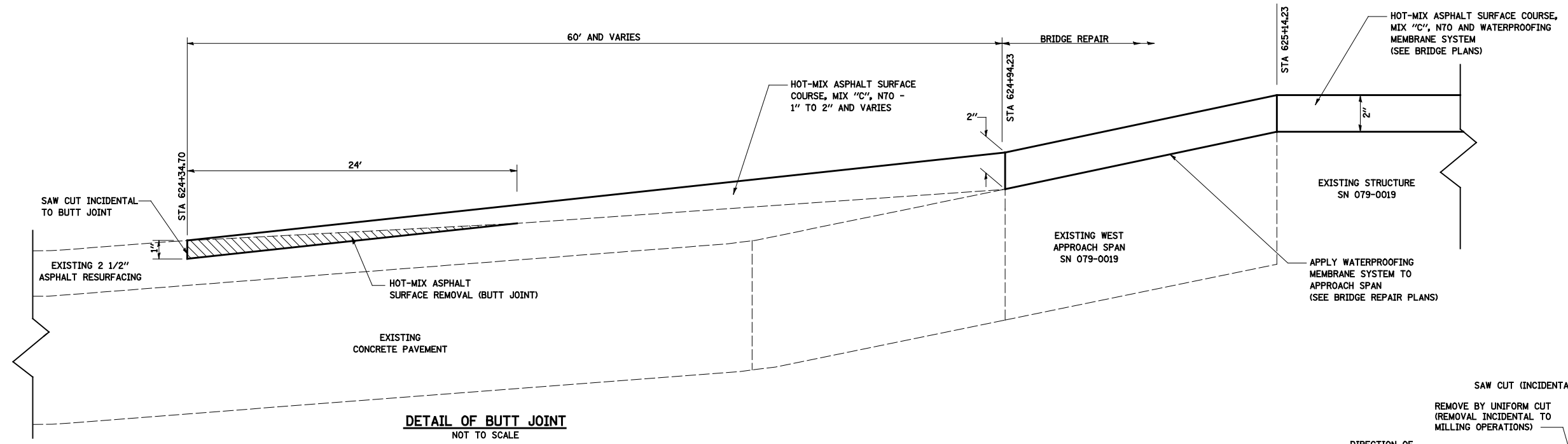
DESIGNED - JWS
DRAWN - PDB
CHECKED - BRM
DATE - 03-28-11

REVISED -
REVISED -
REVISED -
REVISED -

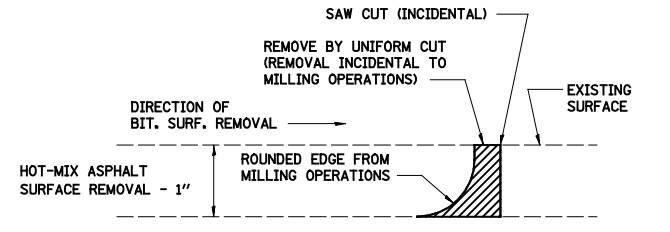
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL DETAILS
FAS 858, ROOTS ROAD**
SCALE: 1"=20' SHEET NO. 5 OF 5 SHEETS STA. 649+50.00 TO STA. 655+60.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	29
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				

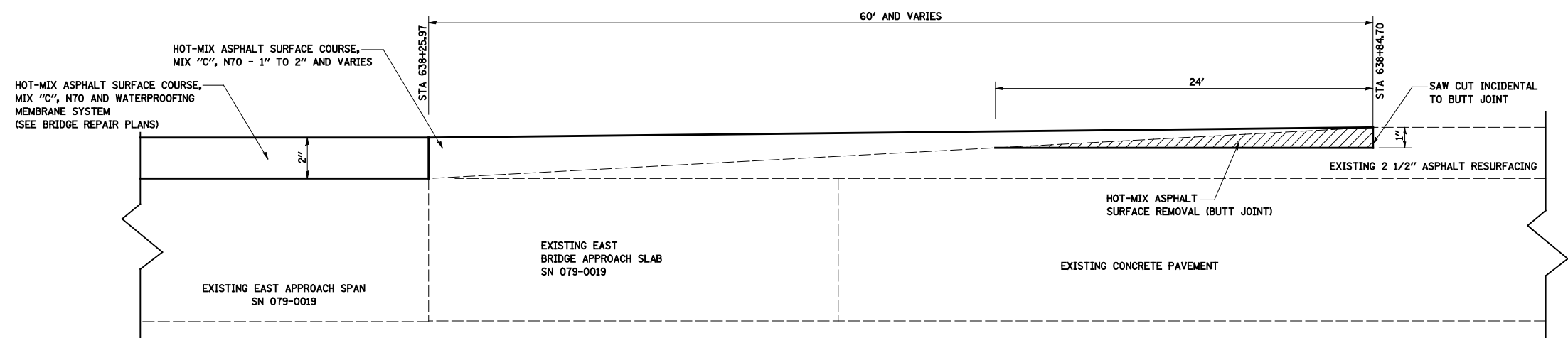


DETAIL OF BUTT JOINT
NOT TO SCALE

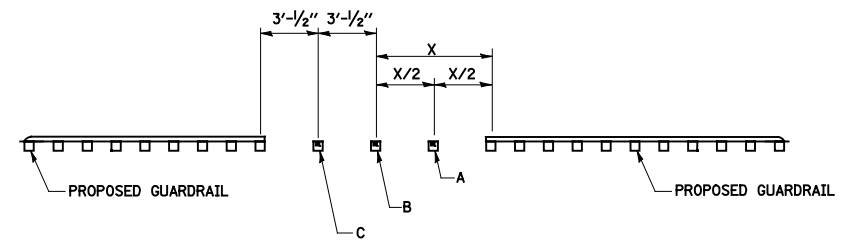


NOTE: WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

BITUMINOUS DETAIL AT BUTT JOINTS
NOT TO SCALE

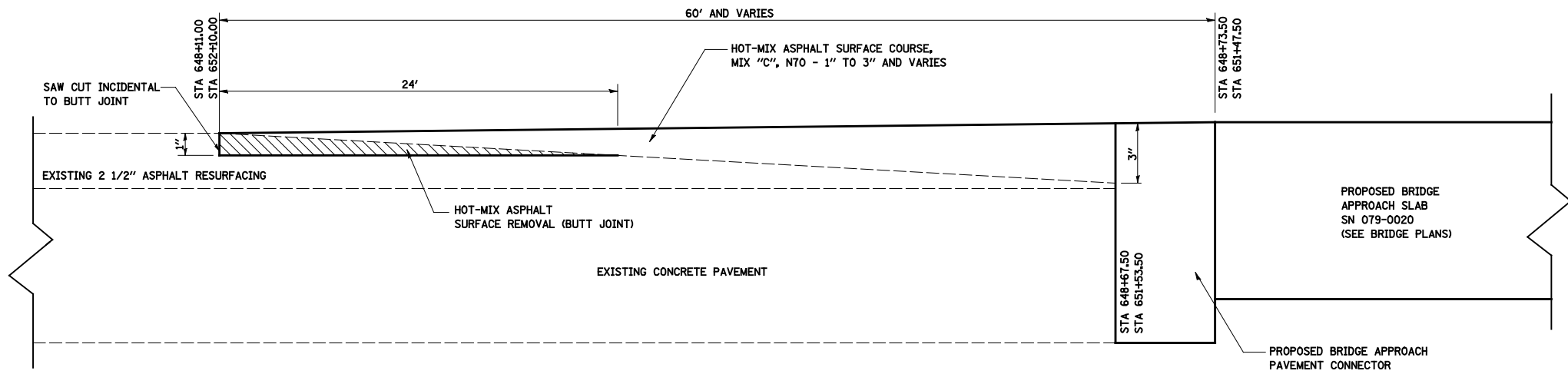


DETAIL OF BUTT JOINT
NOT TO SCALE



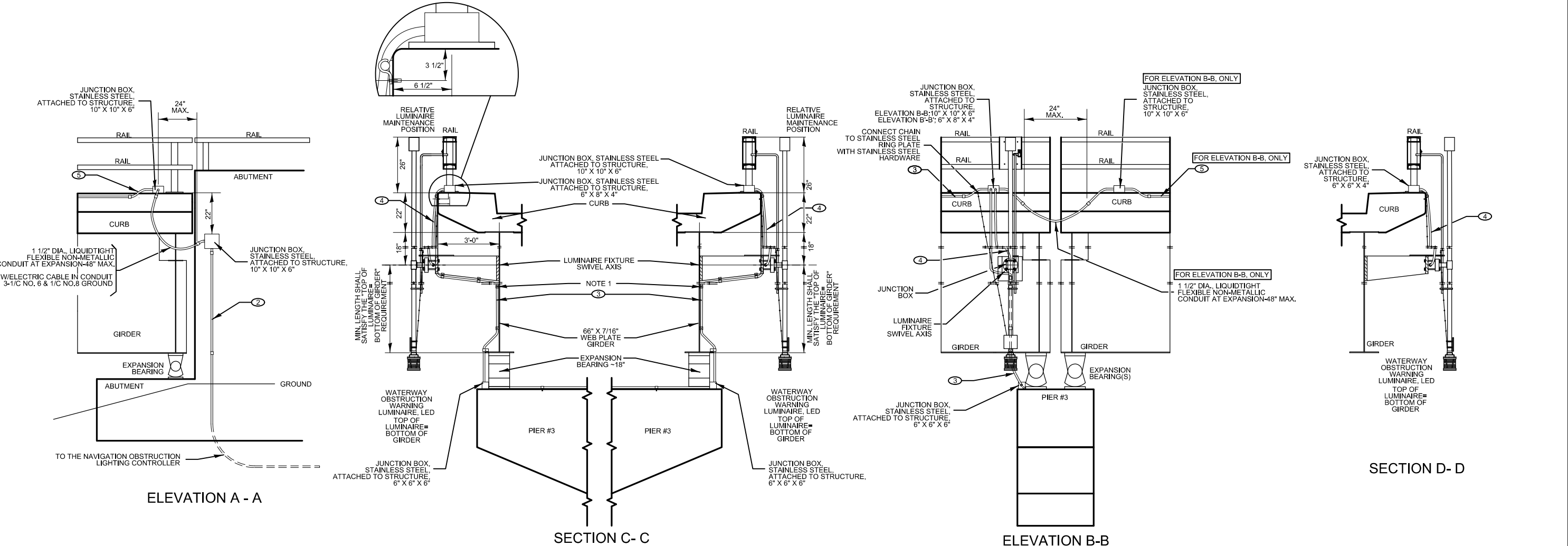
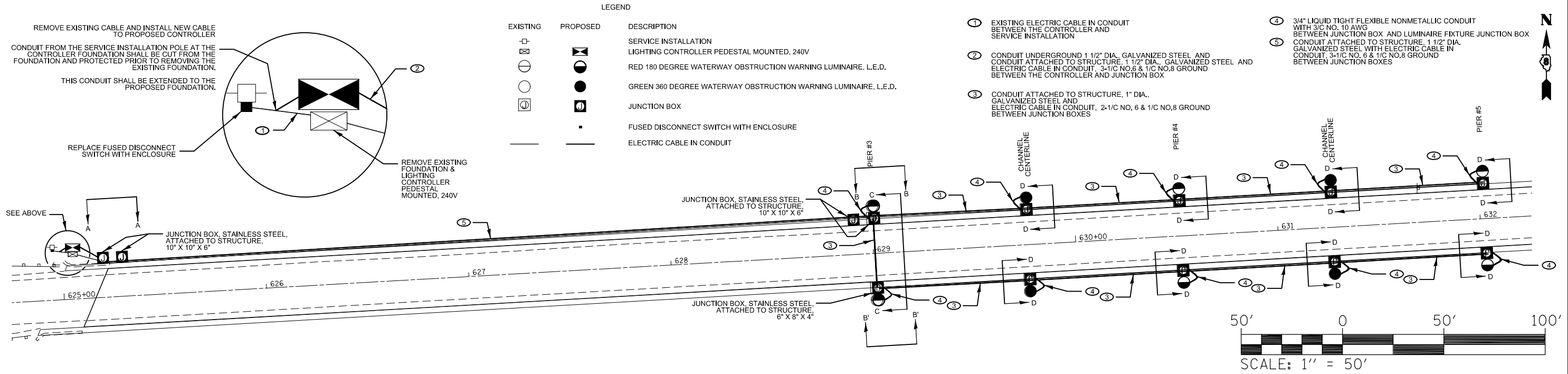
GUARDRAIL SPLICE DETAIL

1. INSTALL POST B HALF WAY BETWEEN POST A AND C.
2. FIELD DRILL RAIL ELEMENT AT B AND A AND ATTACH USING NEW BOLTS, NUTS AND WASHERS. PAINT DRILLED HOLES WITH ZINC-RICH PAINT.
3. INSTALL VARIABLE LENGTH RAIL TO SPAN GAP BETWEEN POST A AND C, USING NEW SPLICE PLATES, BOLTS AND NUTS. ADJUST POST SPACING SO THAT X/2 IS BETWEEN 3'- 1/2" TO 6'- 3"
4. THE COST OF CONNECTING THE PROPOSED GUARDRAIL SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED GUARDRAIL PAY ITEMS.



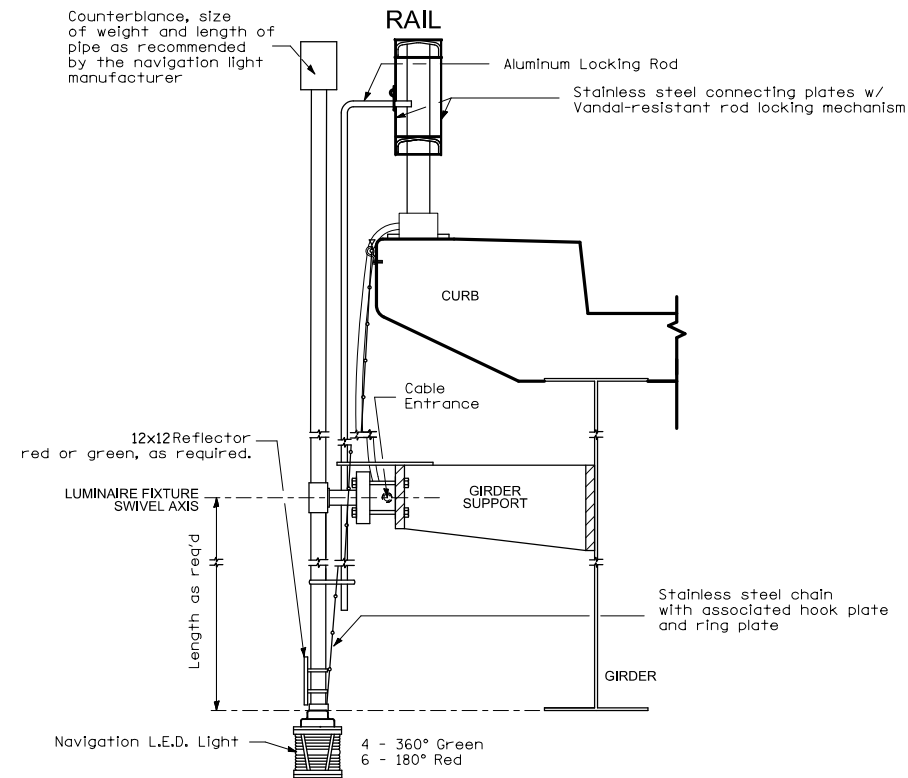
DETAIL OF BUTT JOINT
NOT TO SCALE

FILE NAME =	USER NAME = Paul	DESIGNED - ESW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\Projects\409-0028-DHY_Roots_Rd_Final\plans\dgn\CADD	Sheets\0876409-eh1-misc.dgn	DRAWN - PDB	REVISED -		SCALE: 1"=20'	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	858	12VB-II	RANDOLPH	72	30
	PLOT SCALE = 40.0000' / IN.	CHECKED - BRM	REVISED -						CONTRACT NO. 76409				
	PLOT DATE = 12/20/2011	DATE - 03-28-11	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

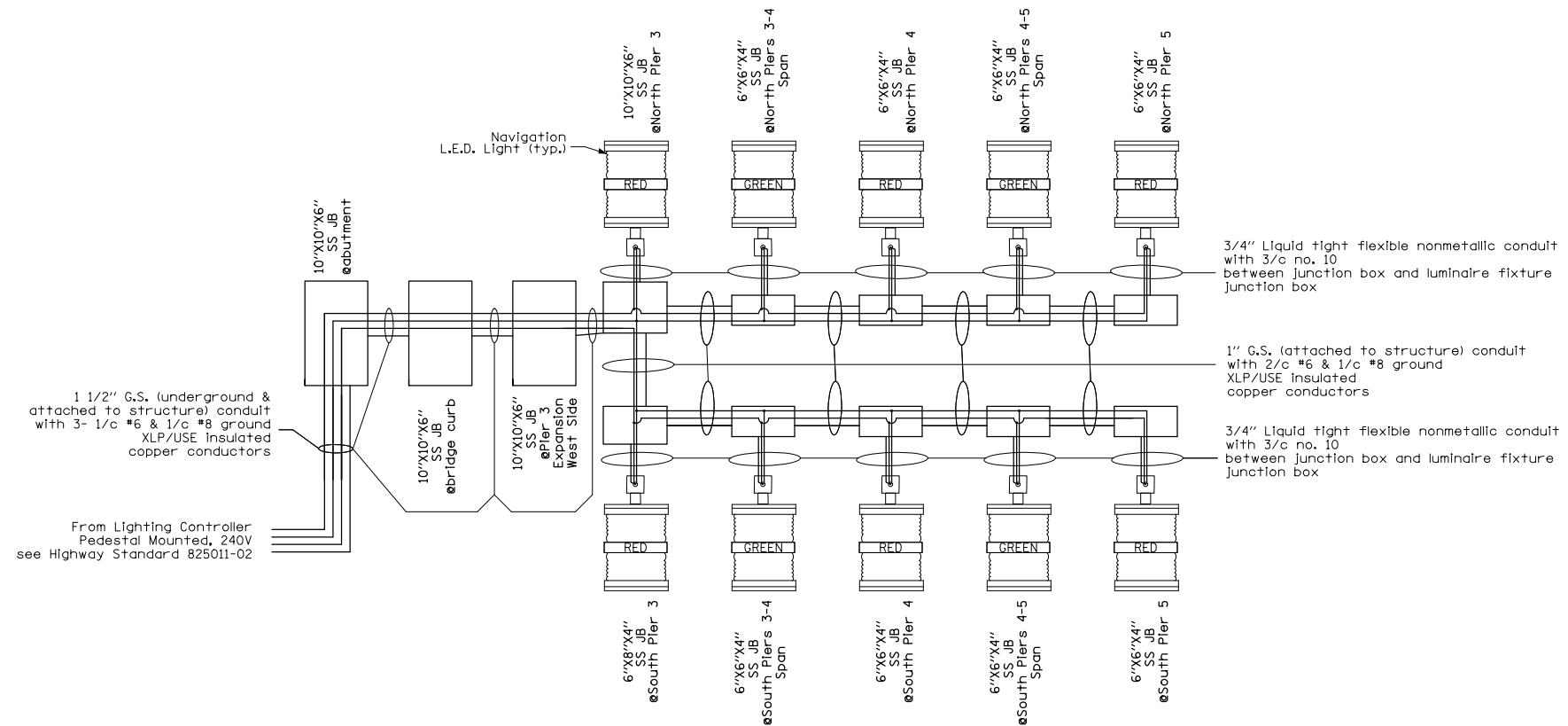


NOTE:
 1. CONDUIT ATTACHMENT AND ROUTING SHOWN IS DIAGRAMMATIC.
 THE CONTRACTOR SHALL ROUTE CONDUIT AS NEEDED BASED ON EXISTING FIELD CONDITIONS.
 CONDUIT ATTACHED TO STRUCTURE SHALL BE SUPPORTED ACCORDING TO NEC REQUIREMENTS.
 THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONDUIT ATTACHED TO STRUCTURE PAY ITEM.

FILE NAME =	USER NAME = prestonme	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NAVIGATION LIGHTING SYSTEM 1 OF 2				F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\dot\prestonme\d0144648\d076409-sh-t-light.dgn	PLOT SCALE = 100.0000' / 1in.	DRAWN -	REVISED -		858	12VB-II	RANDOLPH	72	32				
PLOT DATE = 12/24/2012	DATE -	CHECKED -	REVISED -		CONTRACT NO. 76409				FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
		DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				



NAVIGATION LUMINAIRE



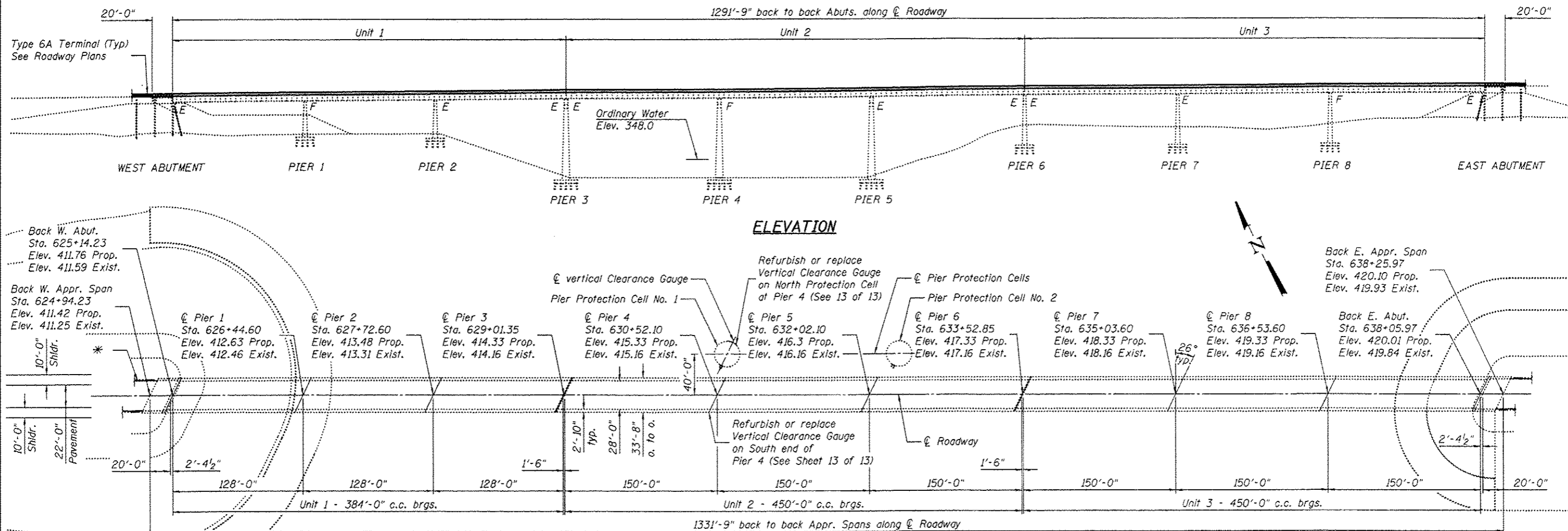
WIRING DIAGRAM FOR NAVIGATION LIGHTING

FILE NAME =	USER NAME = prestonme	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NAVIGATION LIGHTING SYSTEM 2 OF 2				F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\idot\prestonme\d0144648\d076409-sh-t-light.dgn		DRAWN -	REVISED -		858	12VB-II	RANDOLPH	72	33				
PLOT SCALE = 100.0000' / in.		CHECKED -	REVISED -		CONTRACT NO. 76409								
PLOT DATE = 12/24/2012		DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

Existing Structure: S.N. 079-0019, originally constructed in 1961 as F.A. Route 182 Sec. 12-D-E-F & P at Station 631+60, using steel beams with 7" concrete deck, nine spans, 1,291'-9" back to back of abutments, 33'-8" out to out width, vaulted abutments on piles and hammerhead piers with footings on piles. Various repairs and maintenance between 1998 and 2011 including elastomeric bearing replacement, deck drains extended and plugged, beam straightening and deck patching.

Structure improvements include deck patching, placing waterproofing and asphalt overlay, replacing expansion joints, installing finger joint retrofit plates and bridge rails.

Road to be closed and traffic detoured during construction.



* Traffic Barrier Terminal Type 6A (Std. 631032) (typ.) See Roadway Plans

PLAN

GENERAL NOTES:

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when joint is paired at a temperature other than 50°F.



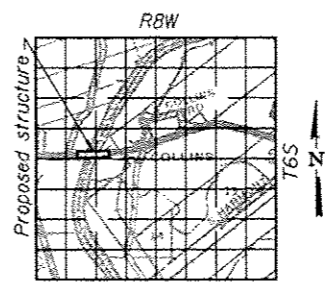
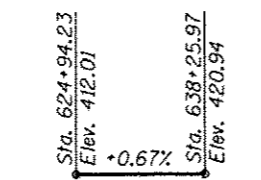
Signed: *[Signature]*
 Date: 12/14/2012
 License Expires: 11/30/2014

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Hot-Mix Asphalt Surface Course, Mix "C", N70	Ton	461
Concrete Removal	Cu. Yd.	9.0
Concrete Superstructure	Cu. Yd.	9.6
Reinforcement Bars, Epoxy Coated	Pound	1,320
Steel Railing Type 2399	Foot	2,664
Preformed Joint Strip Seal	Foot	77.9
Finger Plate Expansion Joint, 5"	Foot	62.5
Waterproofing Membrane System	Sq. Yd.	4,116
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	51
Deck Slab Repair (Partial)	Sq. Yd.	746
Vertical Clearance Gage	Each	2

INDEX OF SHEETS

- General Plan & Elevation
- Cross Section
- Joint Details at Abutments
- Preformed Joint Strip Seal
- Finger Plate Details at Pier No. 3 & Pier No. 6
- Deck Patching Survey Unit 1
- Deck Patching Survey Unit 1
- Deck Patching Survey Unit 2
- Deck Patching Survey Unit 2
- Deck Patching Survey Unit 3
- Deck Patching Survey Unit 3
- Steel Railing Type 2399
- Vertical Clearance Gauge Details



PRINT DATE: 12/14/2012 6:43:11 AM 2110185 BLA 1001 Root: Roadway\Dr\Sign\Final\Plots\Station 631+60\079-0019-081-CPE.dwg

EFK Moen, LLC
 Civil Engineering Design
 331 Salem Place, Suite 225
 Fairview Heights, IL 62208
 Phone 618-206-4250

USER NAME - cd1	DESIGNED - CTW	REVISED -
PLOT SCALE = 0.1" / 1" / IN.	CHECKED - CDL	REVISED -
PLOT DATE = 12/14/2012	DRAWN - DP	REVISED -
	DATE - 12/14/2012	REVISED -

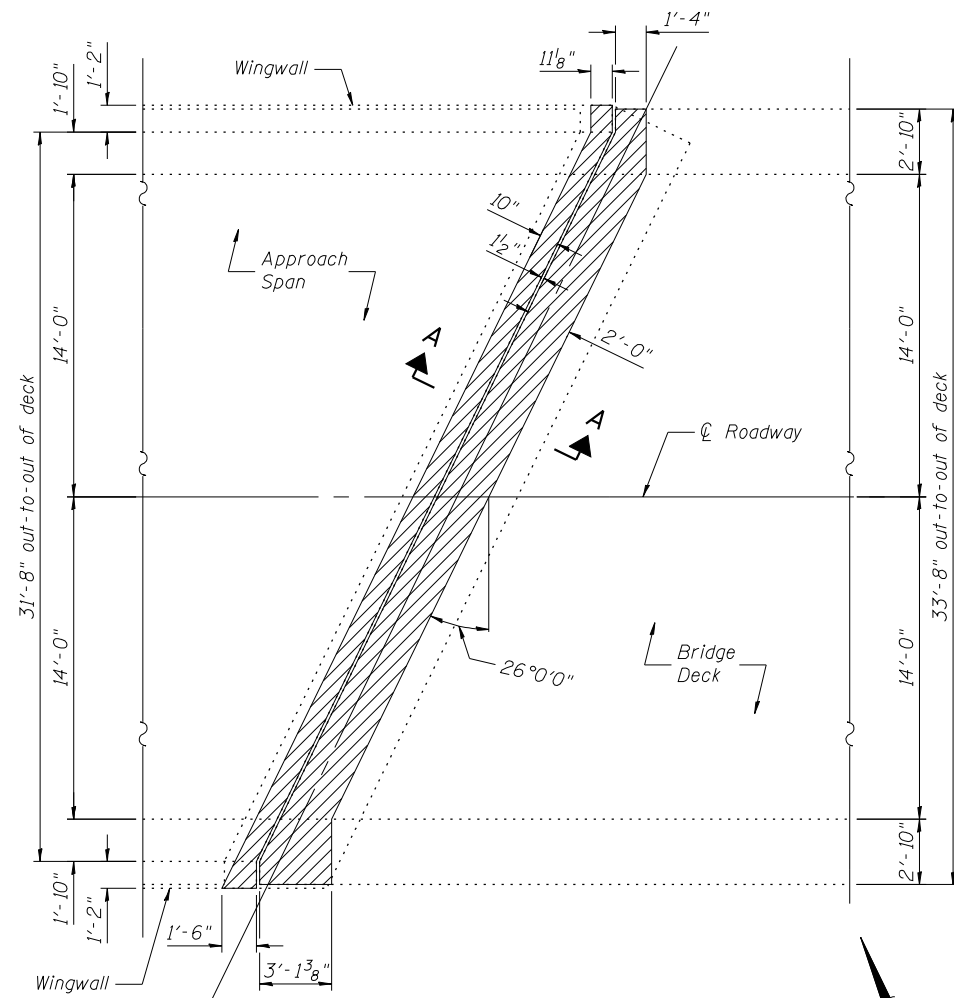
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 13 SHEETS

F.A.S. RTE. 858	SECTION 12VB-11	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 34
				CONTRACT NO. 76409
ILLINOIS FED. AID PROJECT				

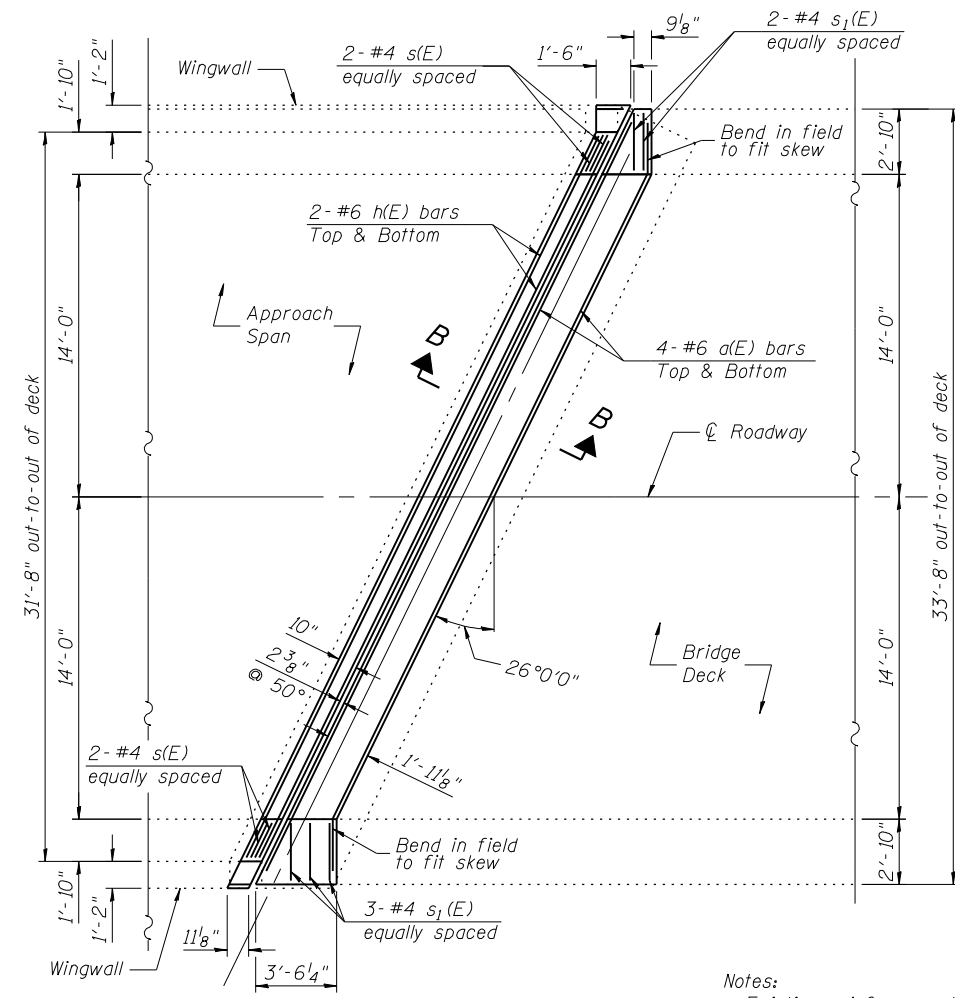
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	16	#6	34'-2"	—
h(E)	8	#6	34'-10"	—
s(E)	8	#4	7'-3"	∩
s ₁ (E)	10	#4	6'-6"	∩
Concrete Removal			Cu. Yd.	9.0
Reinforcement Bars, Epoxy Coated			Pound	1,320
Concrete Superstructure			Cu. Yd.	9.6



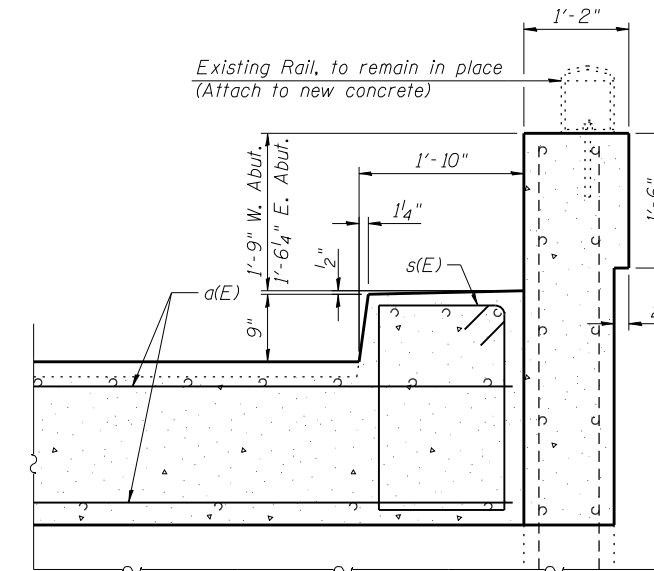
CONCRETE REMOVAL

(W. Abut shown, E. Abut similar)

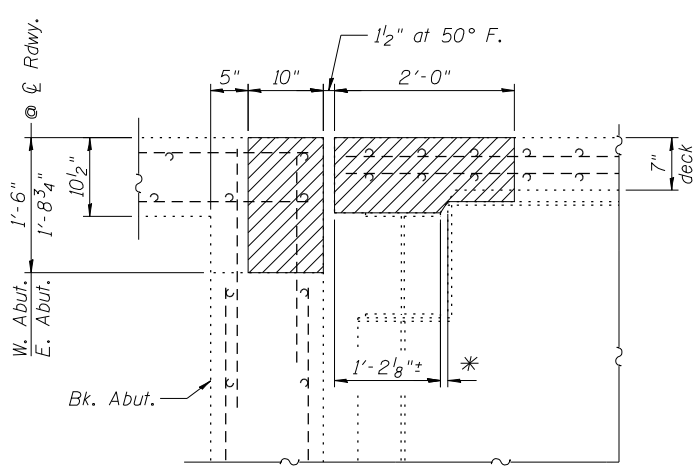


CONCRETE REPLACEMENT

(W. Abut shown, E. Abut similar)

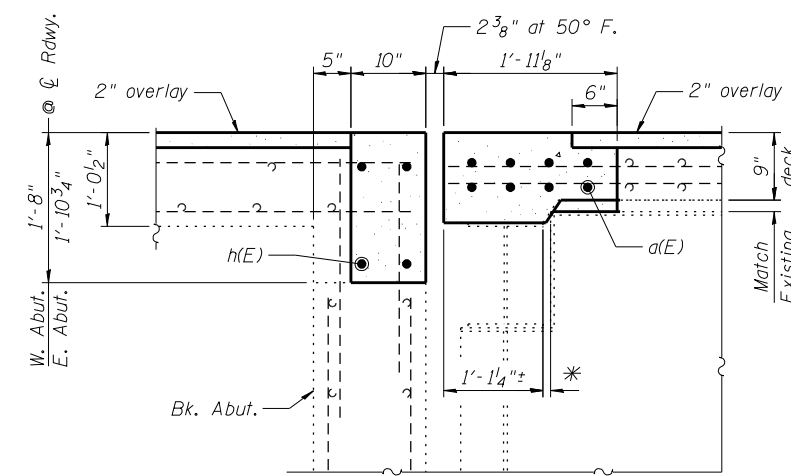


SECTION THRU WING AT ABUTMENT



SECTION A-A

* Varies



SECTION B-B

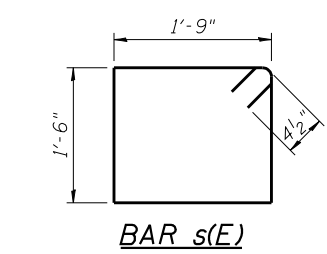
* Varies



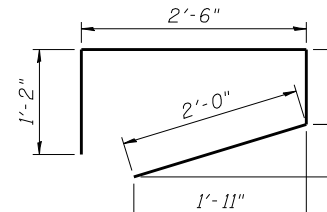
Notes:
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

New Steel Railing, Type 2399 not shown for clarity.

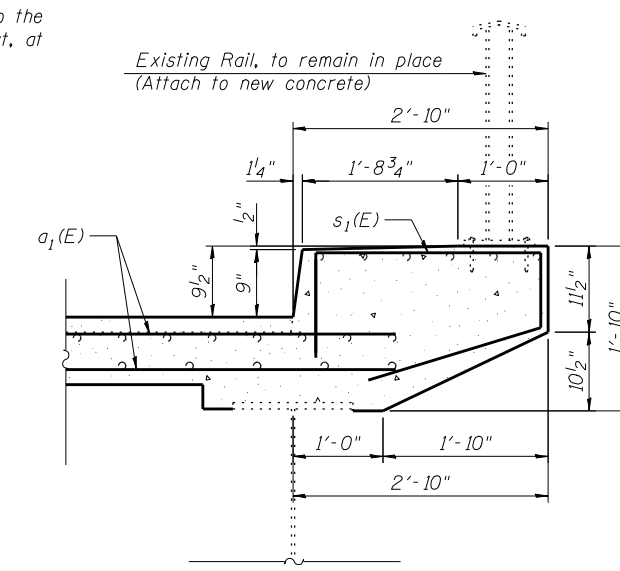
Existing rail post anchors shall be cleaned and cast into the reconstructed curb at expansion joint locations (2 rail post, at each corner). Cost included with concrete superstructure.



BAR s(E)



BAR s₁(E)



SECTION THRU CURB ON BRIDGE

**JOINT DETAILS AT ABUTMENTS
STRUCTURE NO. 079-0019**

SHEET NO. 3 OF 13 SHEETS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

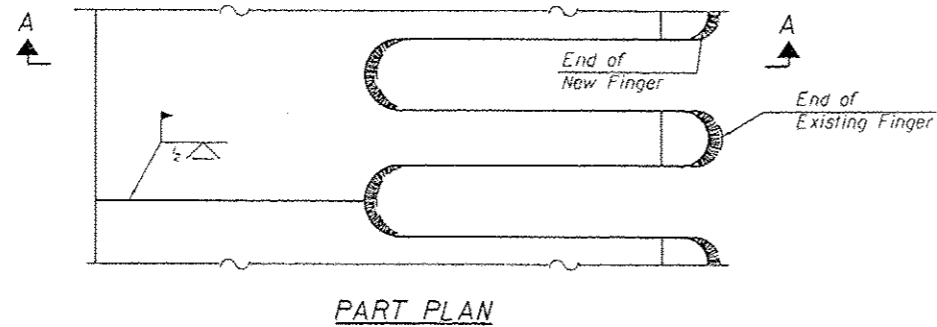
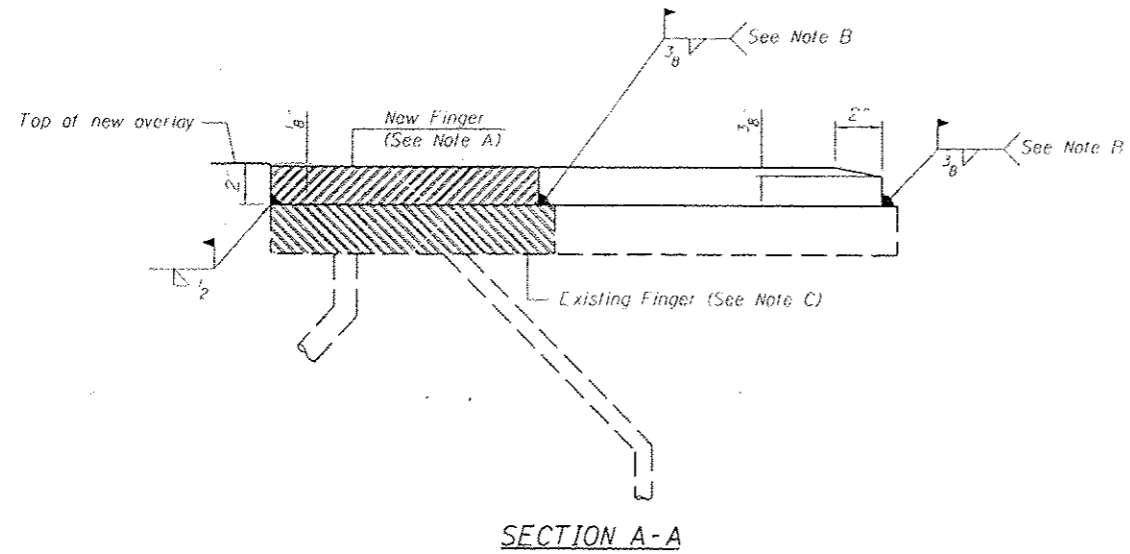
EFK Moen, LLC
Civil Engineering Design
331 Salem Place, Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250

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PLOT SCALE = 0:1' = 1" / IN.	CHECKED - CDL	REVISED -
PLOT DATE = 9/27/2011	DRAWN - DP	REVISED -
	DATE - 9/27/2011	REVISED -

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	36
CONTRACT NO. 76409				

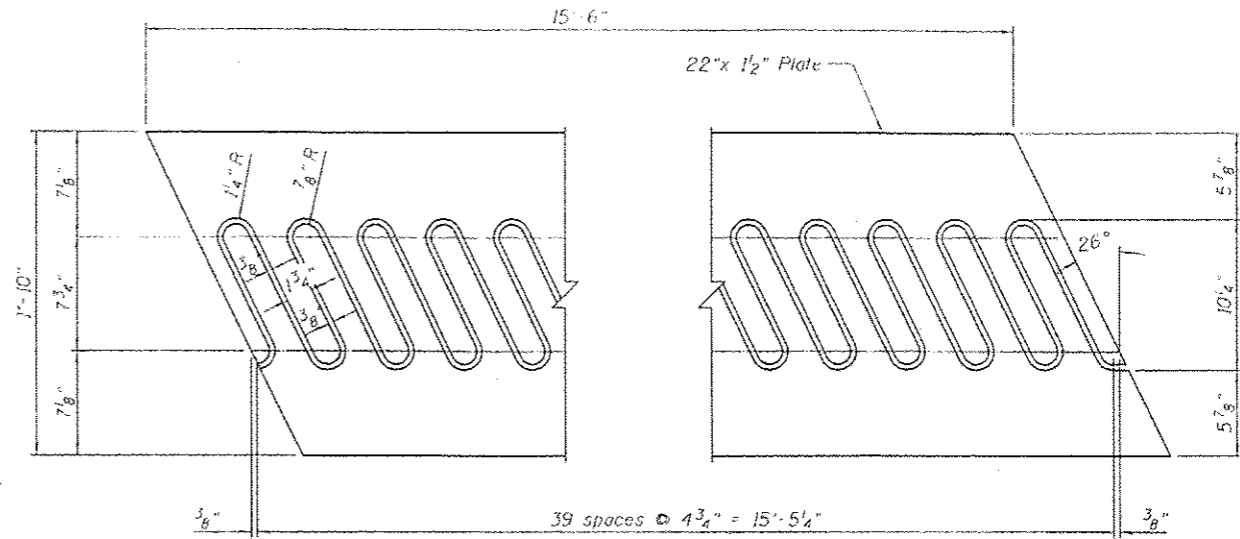
ILLINOIS FED. AID PROJECT

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Notes:

- A. New Finger shall be blast cleaned to SSPC SP 10 and shop painted with the inorganic zinc rich primer.
- B. Fillet weld sizes at ends (tips) and cratches of fingers shall vary from 3/8" near center to 3/16" minimum near edges as new and existing plates converge.
- C. Existing Finger widths and exact locations must be field verified. A template shall be made to insure alignment. Remove foreign material that would prevent uniform contact between new and existing plates by method approved by the Engineer.



DETAIL OF EXISTING PLATE

The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Finger Plate Expansion Joint, 5"	Foot	62.5

PRINT DATE: 9/27/2011 12:34:08 PM P:\11015 b1a_dwt_reprt_reed\pgn\p-dgn\Finger_Plate.dgn

EFK Moen, LLC
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 331 Salem Place, Suite 225
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PLOT SCALE: 8/11" = 1" IN.	CHECKED: CDL	REVISIONS:
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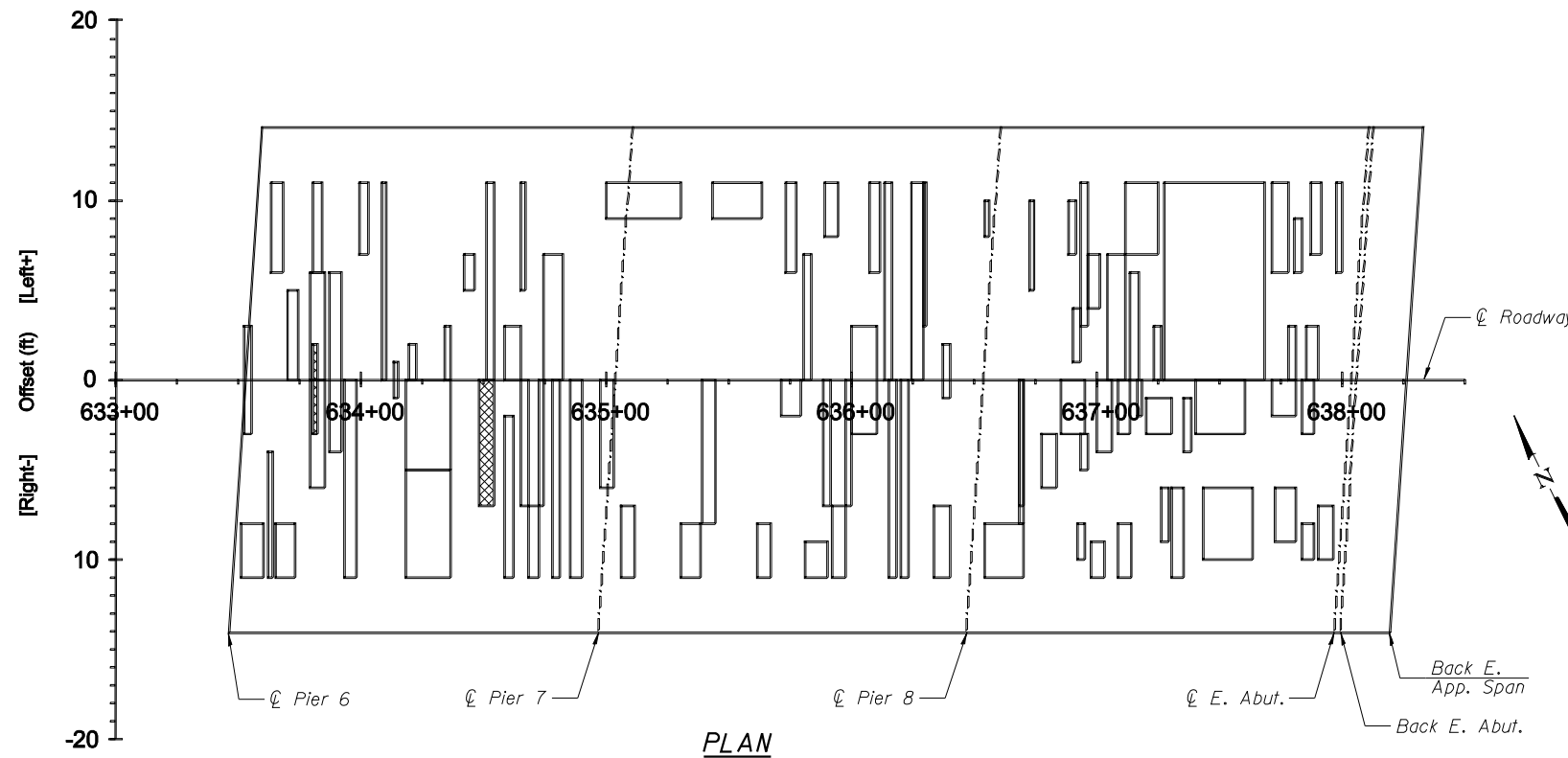
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FINGER PLATE DETAILS AT PIER NO. 3 & PIER NO. 6
 STRUCTURE NO. 079-0019
 SHEET NO. 5 OF 13 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
058	12VB-11	RANDOLPH	72	38
			CONTRACT NO. 76409	
ILLINOIS FED. AID PROJECT				

UNIT 3

- Deck Slab Repair (Partial) 313 sq. yd.
- Deck Slab Repair (Full Depth, Type I) 0 sq. yd.
- Deck Slab Repair (Full Depth, Type II) 6 sq. yd.



Notes

The areas of deck repairs are estimated.
 The deck survey and schedule shows 6 sq. yds. of full depth deck slab repairs.
 Plan quantities have been increased by 25% (to 8 sq. yds.)

The Engineer shall show actual patch locations on as-built plans.

Deck Survey 3-16-2011

Patch #	Start Sta	End Sta	Offsets (ft)		Length (ft.)	Width (ft.)	Area (sy)	Full or Partial Depth	Type I or II (Full Depth)
			From	To					
1	633+52	633+55	3 Lt	3 Rt	3	6	2.00	P	
2	633+51	633+60	8 Rt	11 Rt	9	3	3.00	P	
3	633+62	633+64	4 Rt	11 Rt	2	7	1.56	P	
4	633+65	633+73	8 Rt	11 Rt	8	3	2.67	P	
5	633+70	633+74	0 Lt	5 Lt	4	5	2.22	P	
6	633+63	633+68	6 Lt	11 Lt	5	5	2.78	P	
7	633+79	633+85	0 Lt	6 Lt	6	6	4.00	P	
8	633+79	633+85	0 Rt	6 Rt	6	6	4.00	P	
9	633+80	633+84	6 Lt	11 Lt	4	5	2.22	P	
10	633+87	633+92	6 Lt	4 Rt	5	10	5.56	P	
11	633+80	633+82	2 Lt	3 Rt	2	5	1.11	F	Type II
12	633+93	633+98	0 Rt	11 Rt	5	11	6.11	P	
13	633+99	634+03	7 Lt	11 Lt	4	4	1.78	P	
14	634+08	634+10	0 Lt	11 Lt	2	11	2.44	P	
15	634+13	634+15	1 Lt	1 Rt	2	2	0.44	P	
16	634+18	634+36	0 Rt	5 Rt	18	5	10.00	P	
17	634+18	634+36	5 Rt	11 Rt	18	6	12.00	P	
18	634+19	634+22	0 Lt	2 Lt	3	2	0.67	P	
19	634+34	634+36	0 Lt	3 Lt	2	3	0.67	P	
20	634+42	634+46	5 Lt	7 Lt	4	2	0.89	P	
21	634+48	634+54	0 Rt	7 Rt	6	7	4.67	F	Type II
22	634+51	634+54	0 Lt	11 Lt	3	11	3.67	P	
23	634+58	634+62	2 Rt	11 Rt	4	9	4.00	P	
24	634+65	634+68	0 Rt	7 Rt	3	7	2.33	P	

Patch #	Start Sta	End Sta	Offsets (ft)		Length (ft.)	Width (ft.)	Area (sy)	Full or Partial Depth	Type I or II (Full Depth)
			From	To					
25	634+72	634+74	0 Rt	7 Rt	2	7	1.56	P	
26	634+68	634+72	7 Rt	11 Rt	4	4	1.78	P	
27	634+58	634+65	0 Lt	3 Lt	7	3	2.33	P	
28	634+65	634+67	5 Lt	11 Lt	2	6	1.33	P	
29	634+74	634+82	0 Lt	7 Lt	8	7	6.22	P	
30	634+78	634+81	0 Rt	11 Rt	3	11	3.67	P	
31	634+85	634+90	0 Rt	11 Rt	5	11	6.11	P	
32	634+97	635+03	0 Rt	6 Rt	6	6	4.00	P	
33	635+06	635+11	7 Rt	11 Rt	5	4	2.22	P	
34	635+00	635+30	9 Lt	11 Lt	30	2	6.67	P	
35	635+30	635+38	8 Rt	11 Rt	8	3	2.67	P	
36	635+39	635+44	0 Rt	8 Rt	5	8	4.44	P	
37	635+43	635+63	9 Lt	11 Lt	20	2	4.44	P	
38	635+61	635+67	8 Rt	11 Rt	6	3	2.00	P	
39	635+71	635+79	0 Rt	2 Rt	8	2	1.78	P	
40	635+81	635+90	9 Rt	11 Rt	9	2	2.00	P	
41	635+88	635+91	0 Rt	7 Rt	3	7	2.33	P	
42	635+92	635+97	7 Rt	11 Rt	5	4	2.22	P	
43	635+97	636+00	0 Rt	7 Rt	3	7	2.33	P	
44	635+73	635+77	6 Lt	11 Lt	4	5	2.22	P	
45	635+80	635+83	0 Lt	7 Lt	3	7	2.33	P	
46	635+89	635+94	8 Lt	11 Lt	5	3	1.67	P	
47	636+00	636+10	3 Lt	3 Rt	10	6	6.67	P	
48	636+07	636+11	6 Lt	11 Lt	4	5	2.22	P	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PATCHING SURVEY UNIT 3
STRUCTURE NO. 079-0019

SHEET NO. 10 OF 13 SHEETS

F.A.S R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	43
CONTRACT NO. 76409				

ILLINOIS FED. AID PROJECT

Patch #	Start Sta	End Sta	Offsets (ft)		Length (ft.)	Width (ft.)	Area (sy)	Full or Partial Depth	Type I or II (Full Depth)
			From	To					
49	636+13	636+16	0 Lt	11 Lt	3	11	3.67	P	
50	636+15	636+18	0 Rt	11 Rt	3	11	3.67	P	
51	636+20	636+23	0 Rt	11 Rt	3	11	3.67	P	
52	636+24	636+29	0 Lt	11 Lt	5	11	6.11	P	
53	636+29	636+30	3 Lt	11 Lt	1	8	0.89	P	
54	636+33	636+40	7 Rt	11 Rt	7	4	3.11	P	
55	636+37	636+40	2 Lt	1 Rt	3	3	1.00	P	
56	636+54	636+56	8 Lt	10 Lt	2	2	0.44	P	
57	636+54	636+70	8 Rt	11 Rt	16	3	5.33	P	
58	636+68	636+70	0 Rt	8 Rt	2	8	1.78	P	
59	636+68	636+70	0 Rt	7 Rt	2	7	1.56	P	
60	636+72	636+74	5 Lt	10 Lt	2	5	1.11	P	
61	636+77	636+83	3 Rt	6 Rt	6	3	2.00	P	
62	636+85	636+95	0 Rt	3 Rt	10	3	3.33	P	
63	636+88	636+91	7 Lt	10 Lt	3	3	1.00	P	
64	636+90	636+93	1 Lt	4 Lt	3	3	1.00	P	
65	636+92	636+95	8 Rt	10 Rt	3	2	0.67	P	
66	636+93	636+96	3 Rt	5 Rt	3	2	0.67	P	
67	636+93	636+96	3 Lt	11 Lt	3	8	2.67	P	
68	636+96	637+01	4 Lt	7 Lt	5	3	1.67	P	
69	636+97	637+03	9 Rt	11 Rt	6	2	1.33	P	
70	637+00	637+06	0 Rt	4 Rt	6	4	2.67	P	
71	637+04	637+11	0 Lt	7 Lt	7	7	5.44	P	
72	637+08	637+13	0 Rt	3 Rt	5	3	1.67	P	
73	637+08	637+14	8 Rt	11 Rt	6	3	2.00	P	
74	637+11	637+25	7 Lt	11 Lt	14	4	6.22	P	
75	637+13	637+17	0 Lt	6 Lt	4	6	2.67	P	
76	637+16	637+18	0 Rt	2 Rt	2	2	0.44	P	
77	637+20	637+30	1 Rt	3 Rt	10	2	2.22	P	
78	637+23	637+26	0 Lt	3 Lt	3	3	1.00	P	
79	637+26	637+29	6 Rt	9 Rt	3	3	1.00	P	
80	637+27	637+68	0 Lt	11 Lt	41	11	50.11	P	
81	637+30	637+35	6 Rt	11 Rt	5	5	2.78	P	
82	637+35	637+38	1 Rt	4 Rt	3	3	1.00	P	
83	637+40	637+60	0 Rt	3 Rt	20	3	6.67	P	
84	637+43	637+63	6 Rt	10 Rt	20	4	8.89	P	
85	637+71	637+78	6 Lt	11 Lt	7	5	3.89	P	
86	637+71	637+81	0 Rt	2 Rt	10	2	2.22	P	
87	637+72	637+81	6 Rt	9 Rt	9	3	3.00	P	
88	637+80	637+83	6 Lt	9 Lt	3	3	1.00	P	
89	637+78	637+81	0 Lt	3 Lt	3	3	1.00	P	
90	637+83	637+88	0 Rt	3 Rt	5	3	1.67	P	
91	637+83	637+88	8 Rt	10 Rt	5	2	1.11	P	
92	637+85	637+90	0 Lt	3 Lt	5	3	1.67	P	
93	637+87	637+91	7 Lt	11 Lt	4	4	1.78	P	
94	637+90	637+96	7 Rt	10 Rt	6	3	2.00	P	
95	637+97	638+00	6 Lt	11 Lt	3	5	1.67	P	

EFK Moen, LLC
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 331 Salem Place, Suite 225
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 Phone 618-206-4250

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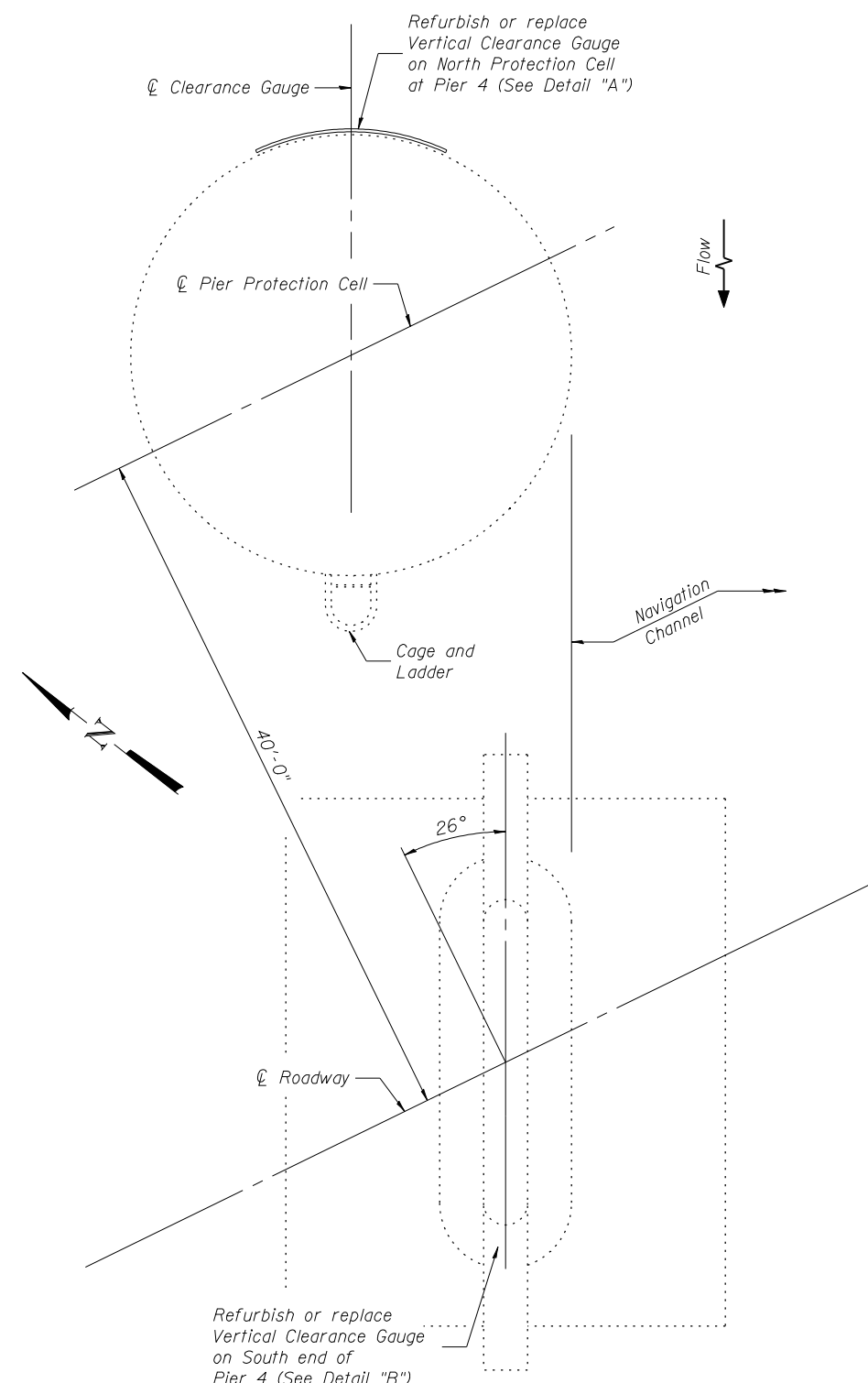
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DECK PATCHING SURVEY UNIT 3
 STRUCTURE NO. 079-0019**

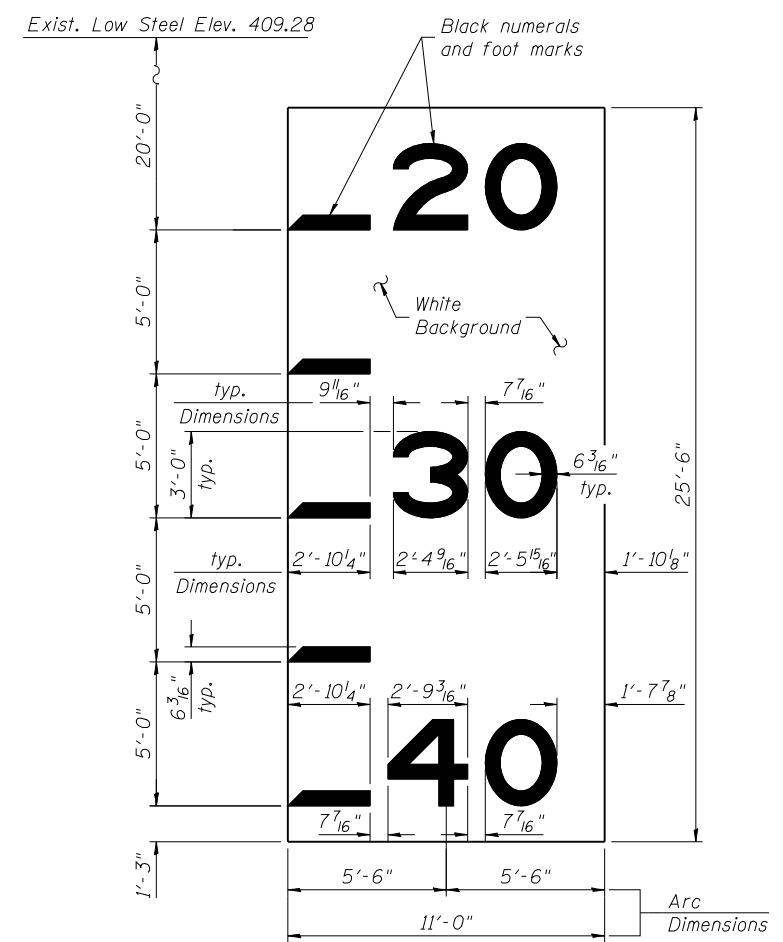
SHEET NO. 11 OF 13 SHEETS

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 76409	

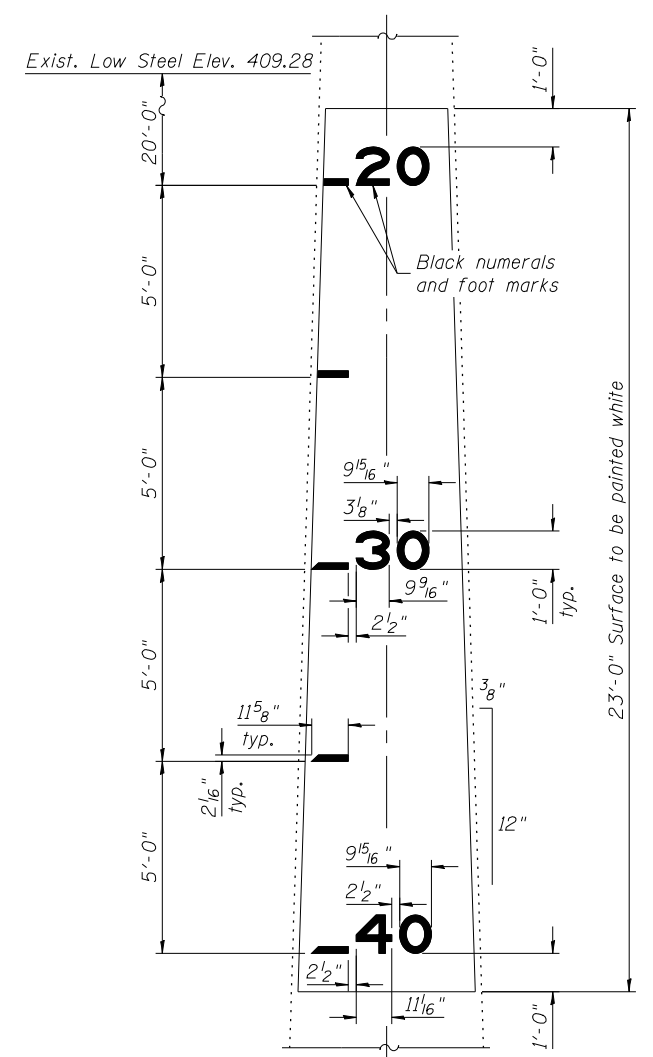
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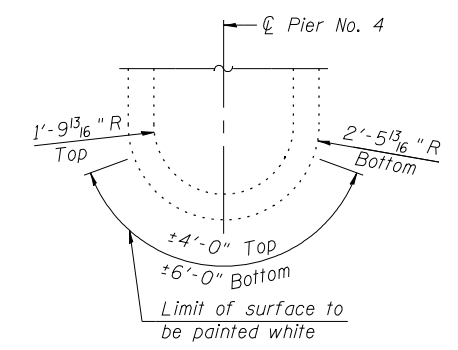
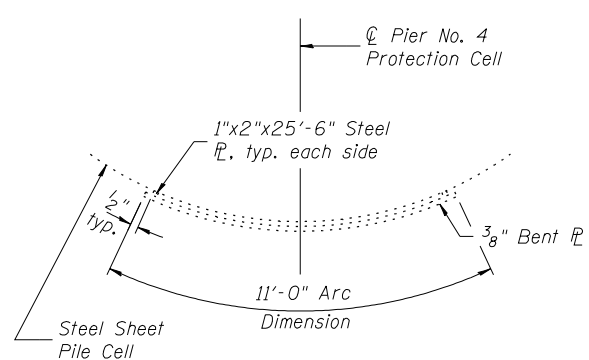
PLAN AT PIER 4
See Special Provisions



DETAIL "A"
EXISTING CELL NO. 1
GAUGE DETAILS
See Special Provisions



DETAIL "B"
EXISTING PIER NO. 4
GAUGE DETAILS
See Special Provisions



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

VERTICAL CLEARANCE GAUGE DETAILS
STRUCTURE NO. 079-0019

SHEET NO. 13 OF 13 SHEETS

F.A.S R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	46
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76409	

Bench Mark: Cut "□" on bridge curb at N.W. corner of S.N. 079-0020 Elev. 429.14

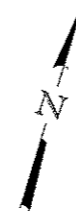
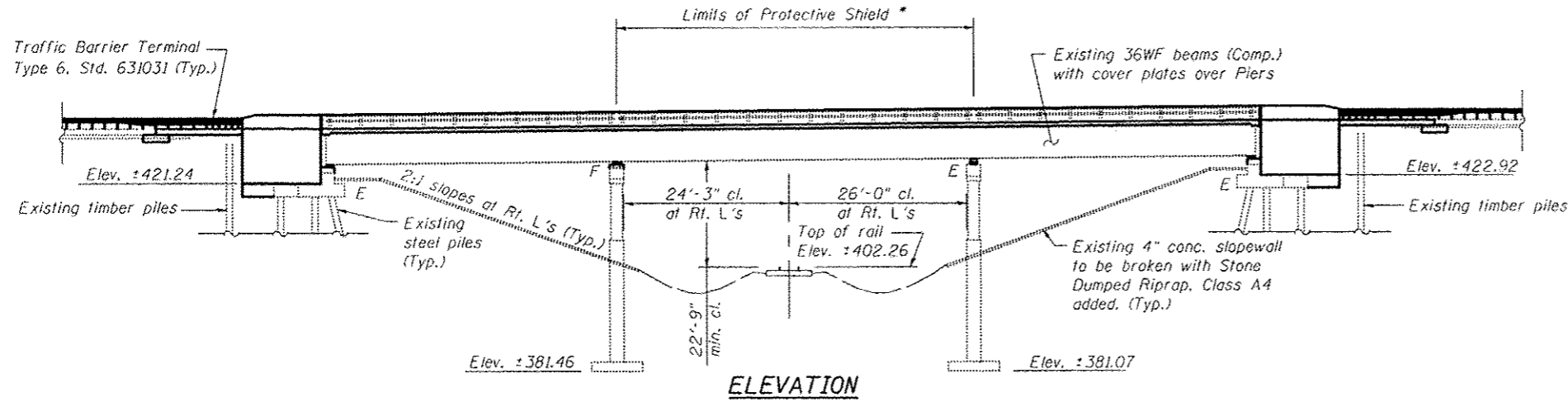
Existing Structure: #079-0020 was constructed in 1960 under F.A. 182 Section 12VB at Sta. 650+10.50. The structure consists of a three span non-composite reinforcement concrete deck on steel stringers. The spans measure 63'-6", 81'-0" and 63'-6" respectively. The out-to-out width is 33'-8" with a roadway width of 28'-0" and back-to-back of abutment length of 214'-0". The structure is supported on steel piles at the abutments and spread footings at the piers. Traffic to be detoured during construction.

No Salvage

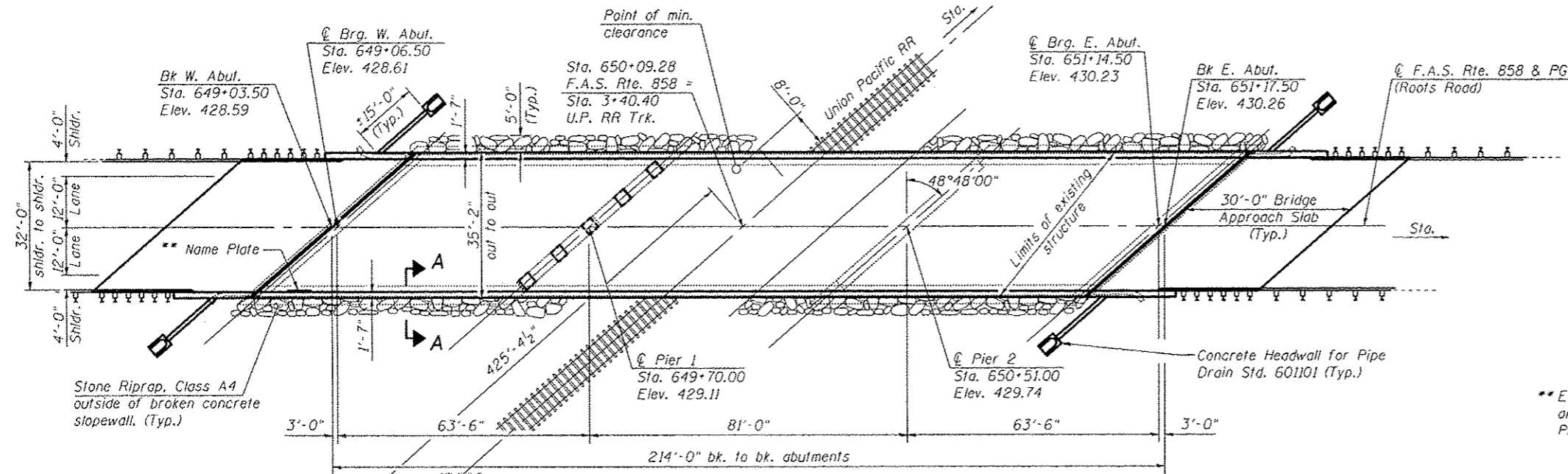
INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
- 3.-5. Top of Slab Elevations
6. West Approach Pavement Top of Slab Elevations
7. East Approach Pavement Top of Slab Elevations
8. Superstructure
9. Superstructure Details
- 10.-11. Bridge Approach Slab Details
12. Structural Steel Details
- 13.-14. Bearing Details
15. West Abutment Concrete Removal
16. West Abutment
17. East Abutment Concrete Removal
18. East Abutment
- 19.-20. Abutment Details
- 21.-22. Pier 1 Details
23. Slopewall Details
24. Preformed Joint Strip Seal
25. Concrete Parapet Slipforming Option
26. Bar Splicer Assembly & Mechanical Splicer Details

* See Sheet 2 of 26 for limits of Protective Shield



Note: For Section A-A see sheet 23 of 26.



STATION 650+10.50
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.S. RT. 858 SEC. 12VB-II
LOADING HS20-44
STRUCTURE NO. 079-0020

NAME PLATE
See Std. 515001

** Existing Name Plates to be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

LOADING HS20-44

No future wearing surface allowed.

DESIGN SPECIFICATIONS

SUPERSTRUCTURE

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

EXISTING STRUCTURE

f_c = 3,500 psi
f_y = 40,000 psi (Reinforcement)
f_y = 33,000 psi (Structural Steel)

NEW CONSTRUCTION

f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

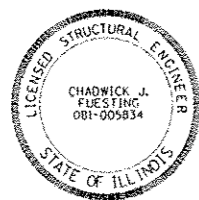
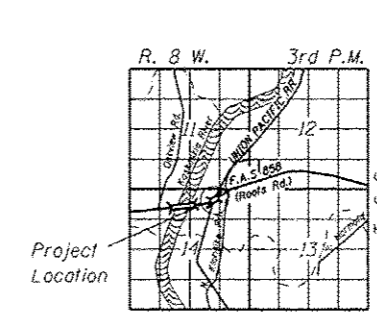
SEISMIC DATA

Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.13g
Site Coefficient (S) = 1.2

APPROVED
For Structural Adequacy Only

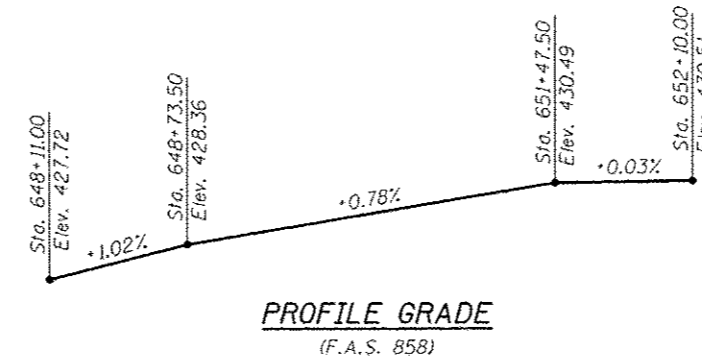
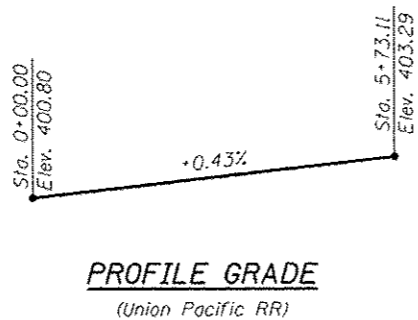
P. Carl Runyon, P.E.
Engineer of Bridges & Structures

GENERAL PLAN & ELEVATION
ROOTS RD. OVER UNION PACIFIC R.R.
F.A.S. RTE. 858 - SEC. 12VB-II
RANDOLPH COUNTY
STATION 650+10.50
STRUCTURE NUMBER 079-0020



EXP. 11-30-2014

Chadwick Justin Fleesting 12/13/12



FILE NAME: _sheet 01\cover.dgn	USER NAME: adam	DESIGNED: BB	REVISIONS:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.S. RTE. 858	SECTION 12VB-II	COUNTY RANDOLPH	TOTAL SHEETS: 72	SHEET NO. 47
DESIGNER: CHADWICK J. FLEESTING	ILLINOIS DESIGN FIRM NUMBER: 184.001670	CHECKED: ACS	REVISIONS:					CONTRACT NO. 76409	
SCALE:	DRAWN: WJS	REVISIONS:							
DATE: 12/13/2012	CHECKED: CJF	REVISIONS:							

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8" ϕ , holes 15/16" ϕ , unless noted otherwise. No field welding is permitted except as specified in the contract documents. The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. Reinforcement bars designated (E) shall be epoxy coated. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that can not be removed by grinding 1/4 in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

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 scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

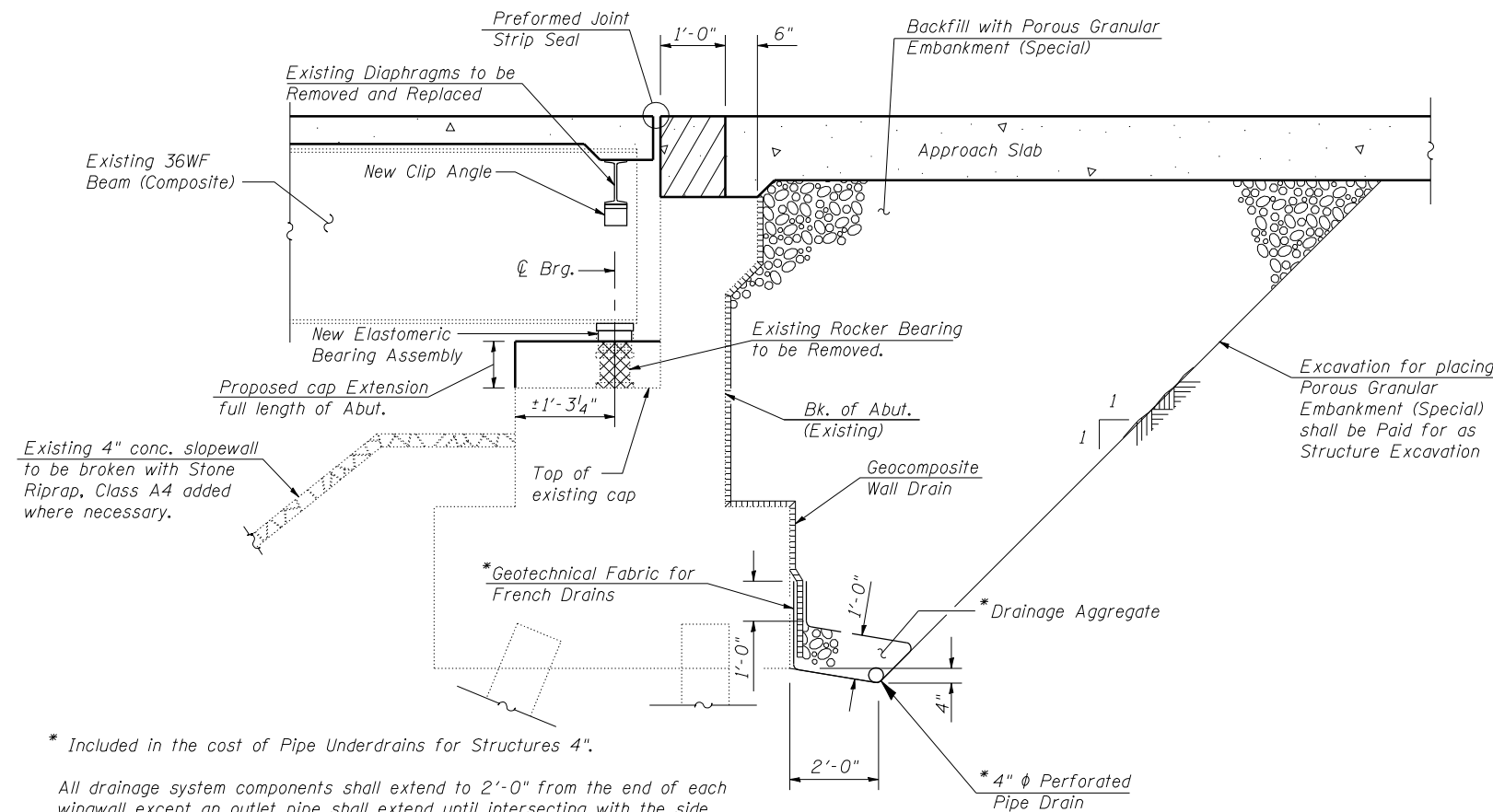
Concrete Sealer shall be applied to the designated areas of the Substructure.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Cleaning and painting all of the structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 OZ/E/U. the color of the final finish coat for all interior steel surfaces Gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray Munsell No. 5B 7/1.

All new structural steel shall be shop painted with inorganic Zinc rich primer per AASHTO M300 Type 1.



* Included in the cost of Pipe Underdrains for Structures 4".

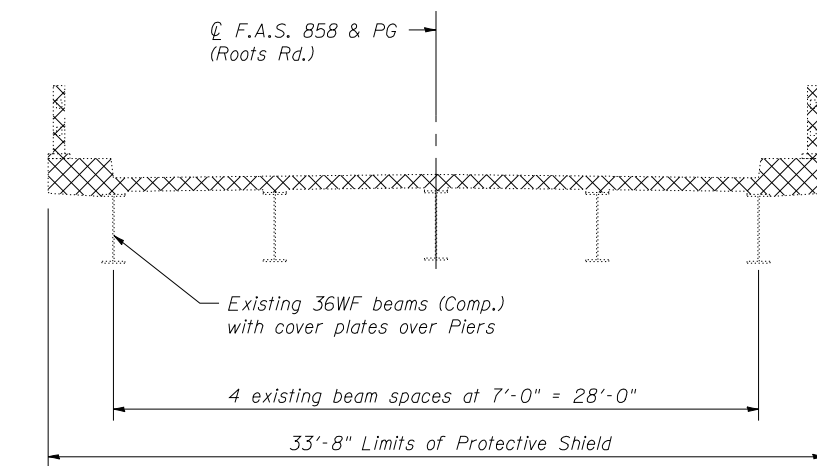
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipe shall drain through concrete headwalls (see Article 601.05 of the Standard Specifications and Highway Standard 601101).

SECTION THRU EXISTING ABUTMENT

(Horiz. dim. @ Rt. L's)

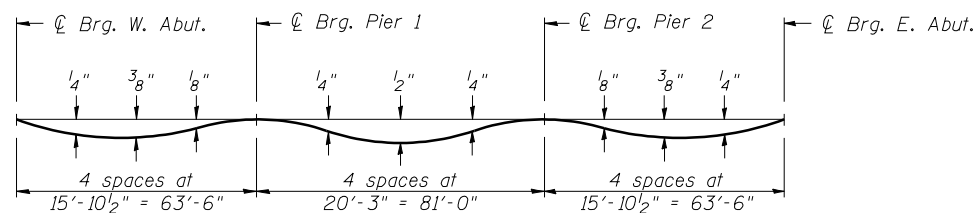
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		105	105
Filter Fabric	Sq. Yd.		105	105
Concrete Removal	Cu. Yd.		18.6	18.6
Removal of Existing Concrete Deck	Each	1		1
Protective Shield	Sq. Yd.	303		303
Structure Excavation	Cu. Yd.		482	482
Concrete Structures	Cu. Yd.		79.2	79.2
Concrete Superstructure	Cu. Yd.	359.2		359.2
Bridge Deck Grooving	Sq. Yd.	904		904
Protective Coat	Sq. Yd.	1189		1189
Furnishing and Erecting Structural Steel	Pound	3660		3660
Stud Shear Connectors	Each	2445		2445
Reinforcement Bars, Epoxy Coated	Pound	92,180	5,730	97,910
Bar Splicers	Each		66	66
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	102		102
Elastomeric Bearing Assembly, Type I	Each	10		10
Elastomeric Bearing Assembly, Type II	Each	5		5
Anchor Bolts, 1"	Each	40		40
Concrete Sealer	Sq. Ft.		550.6	550.6
Geocomposite Wall Drain	Sq. Yd.		96	96
Concrete Headwall for Pipe Drain	Each	4		4
Slope Wall Breaking	Sq. Yd.	790		790
Porous Granular Embankment, Special	Cu. Yd.		215	215
Jack and Remove Existing Bearings	Each	5		5
Structural Steel Removal	Pound	5907		5907
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum	1		1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1		1
Pipe Underdrains for Structures 4"	Foot		102	102
Stone Dumped Riprap, Class A4	Ton		300	300
Jacking and Cribbing	Each		10	10



CROSS SECTION
(Showing Structure Removal)

Indicates removal of existing concrete deck

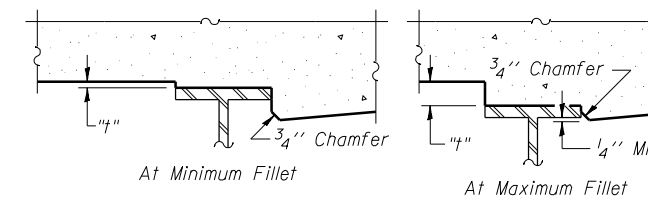


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

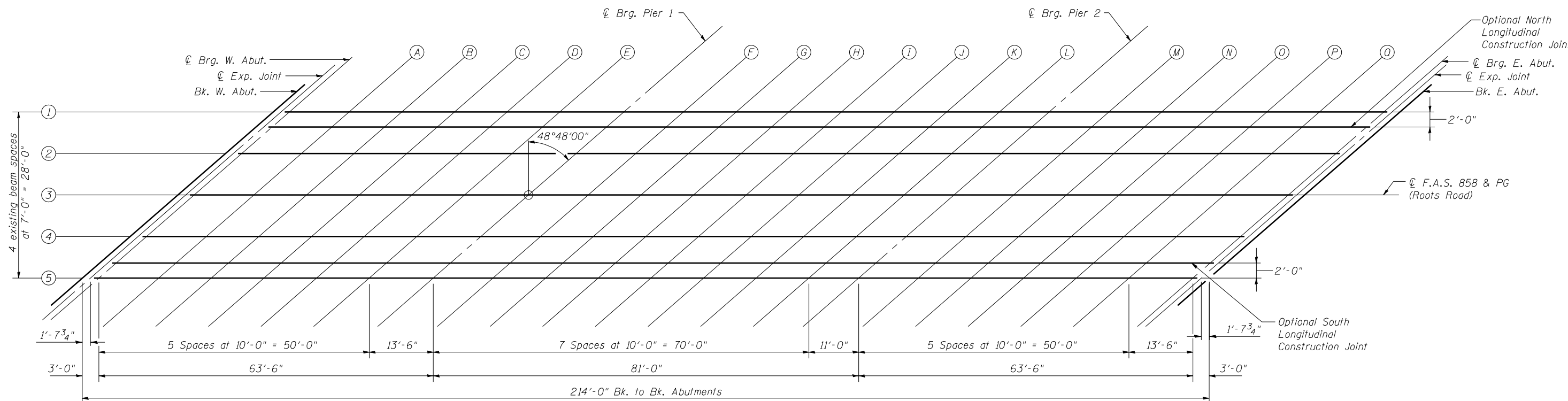
Note:

The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on sheets 4 and 5 of 26.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheets 4 and 5 of 26. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 and 5 of 26, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



ELEVATION LOCATION PLAN

FILE NAME = \sheet 03 (top of slab elev)ldgn BERNARDEN LOGGHEMILLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62450 PHONE (618) 398-4000 FAX (618) 398-4000	USER NAME = bselbel Illinois Design Firm Number 184,001670	DESIGNED - BB CHECKED - ACS	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 079-0020	F.A.S. RTE. 858	SECTION 12VB-11	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 49
	PLOT SCALE = PLOT DATE = 11:46:38 AM 12/20/2011	DRAWN - WJS CHECKED - CJF	SHEET NO. 3 OF 26 SHEETS			CONTRACT NO. 76409 ILLINOIS FED. AID PROJECT				

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	649+19.49	-14.00	428.48	428.48
☉ Expansion Joint	649+21.15	-14.00	428.50	428.50
☉ Brg. West Abut.	649+22.49	-14.00	428.51	428.51
A	649+32.49	-14.00	428.58	428.60
B	649+42.49	-14.00	428.66	428.69
C	649+52.49	-14.00	428.74	428.77
D	649+62.49	-14.00	428.82	428.84
E	649+72.49	-14.00	428.90	428.91
Pier 1	649+85.99	-14.00	429.00	429.00
F	649+95.99	-14.00	429.08	429.09
G	650+05.99	-14.00	429.16	429.18
H	650+15.99	-14.00	429.24	429.27
I	650+25.99	-14.00	429.31	429.36
J	650+35.99	-14.00	429.39	429.43
K	650+45.99	-14.00	429.47	429.50
L	650+55.99	-14.00	429.55	429.56
Pier 2	650+66.99	-14.00	429.63	429.63
M	650+76.99	-14.00	429.71	429.72
N	650+86.99	-14.00	429.79	429.81
O	650+96.99	-14.00	429.87	429.90
P	651+06.99	-14.00	429.95	429.97
Q	651+16.99	-14.00	430.02	430.05
☉ Brg. East Abut.	651+30.49	-14.00	430.13	430.13
☉ Expansion Joint	651+31.84	-14.00	430.14	430.14
Bk. of East Abut.	651+33.49	-14.00	430.15	430.15

OPTIONAL NORTH LONGITUDINAL CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	649+17.21	-12.00	428.51	428.51
☉ Expansion Joint	649+18.86	-12.00	428.52	428.52
☉ Brg. West Abut.	649+20.21	-12.00	428.53	428.53
A	649+30.21	-12.00	428.61	428.62
B	649+40.21	-12.00	428.69	428.71
C	649+50.21	-12.00	428.76	428.79
D	649+60.21	-12.00	428.84	428.86
E	649+70.21	-12.00	428.92	428.93
Pier 1	649+83.71	-12.00	429.03	429.03
F	649+93.71	-12.00	429.10	429.12
G	650+03.71	-12.00	429.18	429.21
H	650+13.71	-12.00	429.26	429.29
I	650+23.71	-12.00	429.34	429.38
J	650+33.71	-12.00	429.42	429.45
K	650+43.71	-12.00	429.49	429.52
L	650+53.71	-12.00	429.57	429.59
Pier 2	650+64.71	-12.00	429.66	429.66
M	650+74.71	-12.00	429.74	429.74
N	650+84.71	-12.00	429.81	429.83
O	650+94.71	-12.00	429.89	429.92
P	651+04.71	-12.00	429.97	430.00
Q	651+14.71	-12.00	430.05	430.07
☉ Brg. East Abut.	651+28.21	-12.00	430.15	430.15
☉ Expansion Joint	651+29.55	-12.00	430.16	430.16
Bk. of East Abut.	651+31.21	-12.00	430.18	430.18

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	649+11.50	-7.00	428.54	428.54
☉ Expansion Joint	649+13.15	-7.00	428.55	428.55
☉ Brg. West Abut.	649+14.50	-7.00	428.56	428.56
A	649+24.50	-7.00	428.64	428.66
B	649+34.50	-7.00	428.72	428.75
C	649+44.50	-7.00	428.80	428.83
D	649+54.50	-7.00	428.88	428.90
E	649+64.50	-7.00	428.95	428.96
Pier 1	649+78.00	-7.00	429.06	429.06
F	649+88.00	-7.00	429.14	429.15
G	649+98.00	-7.00	429.21	429.24
H	650+08.00	-7.00	429.29	429.33
I	650+18.00	-7.00	429.37	429.42
J	650+28.00	-7.00	429.45	429.49
K	650+38.00	-7.00	429.53	429.55
L	650+48.00	-7.00	429.60	429.62
Pier 2	650+59.00	-7.00	429.69	429.69
M	650+69.00	-7.00	429.77	429.78
N	650+79.00	-7.00	429.85	429.86
O	650+89.00	-7.00	429.92	429.95
P	650+99.00	-7.00	430.00	430.03
Q	651+09.00	-7.00	430.08	430.10
☉ Brg. East Abut.	651+22.50	-7.00	430.19	430.19
☉ Expansion Joint	651+23.84	-7.00	430.20	430.20
Bk. of East Abut.	651+25.50	-7.00	430.21	430.21

☉ FAS 858, PROFILE GRADE & BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	649+03.50	0.00	428.59	428.59
☉ Expansion Joint	649+05.15	0.00	428.60	428.60
☉ Brg. West Abut.	649+06.50	0.00	428.61	428.61
A	649+16.50	0.00	428.69	428.70
B	649+26.50	0.00	428.77	428.79
C	649+36.50	0.00	428.84	428.87
D	649+46.50	0.00	428.92	428.94
E	649+56.50	0.00	429.00	429.01
Pier 1	649+70.00	0.00	429.11	429.11
F	649+80.00	0.00	429.18	429.20
G	649+90.00	0.00	429.26	429.29
H	650+00.00	0.00	429.34	429.38
I	650+10.00	0.00	429.42	429.46
J	650+20.00	0.00	429.50	429.53
K	650+30.00	0.00	429.57	429.60
L	650+40.00	0.00	429.65	429.67
Pier 2	650+51.00	0.00	429.74	429.74
M	650+61.00	0.00	429.82	429.82
N	650+71.00	0.00	429.89	429.91
O	650+81.00	0.00	429.97	430.00
P	650+91.00	0.00	430.05	430.08
Q	651+01.00	0.00	430.13	430.15
☉ Brg. East Abut.	651+14.50	0.00	430.23	430.23
☉ Expansion Joint	651+15.85	0.00	430.24	430.24
Bk. of East Abut.	651+17.50	0.00	430.26	430.26

OPTIONAL SOUTH LONGITUDINAL
CONSTRUCTION JOINT

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	648+95.50	7.00	428.42	428.42
☉ Expansion Joint	648+97.16	7.00	428.43	428.43
☉ Brg. West Abut.	648+98.50	7.00	428.44	428.44
A	649+08.50	7.00	428.52	428.53
B	649+18.50	7.00	428.59	428.62
C	649+28.50	7.00	428.67	428.70
D	649+38.50	7.00	428.75	428.77
E	649+48.50	7.00	428.83	428.84
Pier 1	649+62.00	7.00	428.93	428.93
F	649+72.00	7.00	429.01	429.02
G	649+82.00	7.00	429.09	429.12
H	649+92.00	7.00	429.17	429.20
I	650+02.00	7.00	429.25	429.29
J	650+12.00	7.00	429.32	429.36
K	650+22.00	7.00	429.40	429.43
L	650+32.00	7.00	429.48	429.49
Pier 2	650+43.00	7.00	429.57	429.57
M	650+53.00	7.00	429.64	429.65
N	650+63.00	7.00	429.72	429.74
O	650+73.00	7.00	429.80	429.83
P	650+83.00	7.00	429.88	429.91
Q	650+93.00	7.00	429.96	429.98
☉ Brg. East Abut.	651+06.50	7.00	430.06	430.06
☉ Expansion Joint	651+07.85	7.00	430.07	430.07
Bk. of East Abut.	651+09.50	7.00	430.08	430.08

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	648+89.79	12.00	428.29	428.29
☉ Expansion Joint	648+91.45	12.00	428.31	428.31
☉ Brg. West Abut.	648+92.79	12.00	428.32	428.32
A	649+02.79	12.00	428.39	428.41
B	649+12.79	12.00	428.47	428.50
C	649+22.79	12.00	428.55	428.58
D	649+32.79	12.00	428.63	428.65
E	649+42.79	12.00	428.71	428.72
Pier 1	649+56.29	12.00	428.81	428.81
F	649+66.29	12.00	428.89	428.90
G	649+76.29	12.00	428.97	428.99
H	649+86.29	12.00	429.05	429.08
I	649+96.29	12.00	429.12	429.17
J	650+06.29	12.00	429.20	429.24
K	650+16.29	12.00	429.28	429.31
L	650+26.29	12.00	429.36	429.37
Pier 2	650+37.29	12.00	429.44	429.44
M	650+47.29	12.00	429.52	429.53
N	650+57.29	12.00	429.60	429.62
O	650+67.29	12.00	429.68	429.71
P	650+77.29	12.00	429.76	429.78
Q	650+87.29	12.00	429.83	429.86
☉ Brg. East Abut.	651+00.79	12.00	429.94	429.94
☉ Expansion Joint	651+02.14	12.00	429.95	429.95
Bk. of East Abut.	651+03.79	12.00	429.96	429.96

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	648+87.51	14.00	428.23	428.23
☉ Expansion Joint	648+89.16	14.00	428.25	428.25
☉ Brg. West Abut.	648+90.51	14.00	428.26	428.26
A	649+00.51	14.00	428.33	428.35
B	649+10.51	14.00	428.41	428.44
C	649+20.51	14.00	428.49	428.52
D	649+30.51	14.00	428.57	428.59
E	649+40.51	14.00	428.65	428.66
Pier 1	649+54.01	14.00	428.75	428.75
F	649+64.01	14.00	428.83	428.84
G	649+74.01	14.00	428.91	428.93
H	649+84.01	14.00	428.99	429.02
I	649+94.01	14.00	429.06	429.11
J	650+04.01	14.00	429.14	429.18
K	650+14.01	14.00	429.22	429.25
L	650+24.01	14.00	429.30	429.31
Pier 2	650+35.01	14.00	429.38	429.38
M	650+45.01	14.00	429.46	429.47
N	650+55.01	14.00	429.54	429.56
O	650+65.01	14.00	429.62	429.65
P	650+75.01	14.00	429.70	429.72
Q	650+85.01	14.00	429.77	429.80
☉ Brg. East Abut.	650+98.51	14.00	429.88	429.88
☉ Expansion Joint	650+99.86	14.00	429.89	429.89
Bk. of East Abut.	651+01.51	14.00	429.90	429.90

NORTH EDGE OF SHOULDER

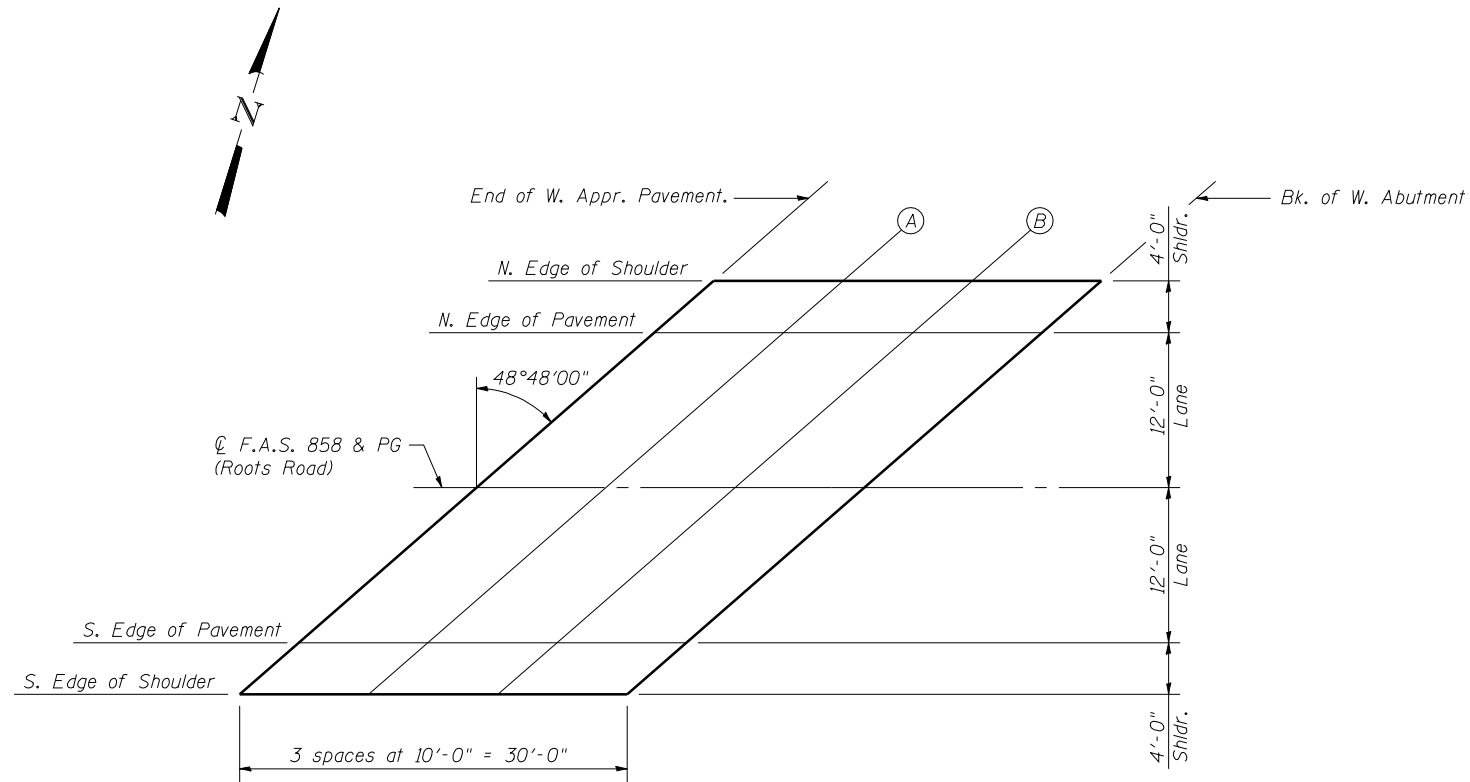
Location	Station	Offset	Theoretical Grade Elevations
End of West Appr. Pvmt.	648+91.78	-16.00	428.23
A	649+01.78	-16.00	428.30
B	649+11.78	-16.00	428.38
Back of West Abutment	649+21.78	-16.00	428.46

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of West Appr. Pvmt.	648+87.21	-12.00	428.27
A	648+97.21	-12.00	428.35
B	649+07.21	-12.00	428.43
Back of West Abutment	649+17.21	-12.00	428.51

℄ F.A.S. 858 & PG (ROOTS ROAD)

Location	Station	Offset	Theoretical Grade Elevations
End of West Appr. Pvmt.	648+73.50	0.00	428.35
A	648+83.50	0.00	428.43
B	648+93.50	0.00	428.51
Back of West Abutment	649+03.50	0.00	428.59



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of West Appr. Pvmt.	648+59.79	12.00	428.03
A	648+69.79	12.00	428.13
B	648+79.79	12.00	428.21
Back of West Abutment	648+89.79	12.00	428.29

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End of West Appr. Pvmt.	648+55.22	16.00	427.90
A	648+65.22	16.00	428.00
B	648+75.22	16.00	428.10
Back of West Abutment	648+85.22	16.00	428.17

NORTH EDGE OF SHOULDER

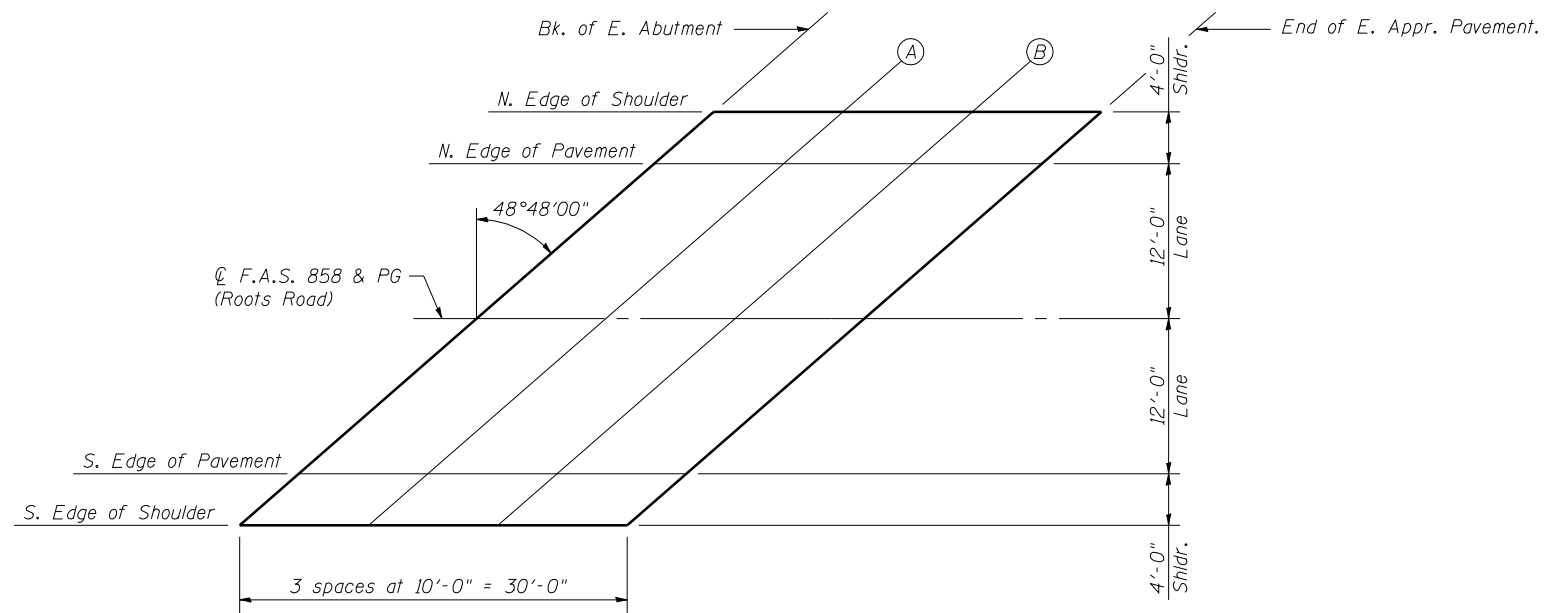
Location	Station	Offset	Theoretical Grade Elevations
Back of East Abutment	651+35.78	-16.00	430.13
A	651+45.78	-16.00	430.21
B	651+55.78	-16.00	430.22
End of East Appr. Pvmt.	651+65.78	-16.00	430.23

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Back of East Abutment	651+31.21	-12.00	430.18
A	651+41.21	-12.00	430.25
B	651+51.21	-12.00	430.30
End of East Appr. Pvmt.	651+61.21	-12.00	430.31

℄ F.A.S. 858 & PG (ROOTS ROAD)

Location	Station	Offset	Theoretical Grade Elevations
Back of East Abutment	651+17.50	0.00	430.26
A	651+27.50	0.00	430.33
B	651+37.50	0.00	430.41
End of East Appr. Pvmt.	651+47.50	0.00	430.49



SOUTH EDGE OF PAVEMENT

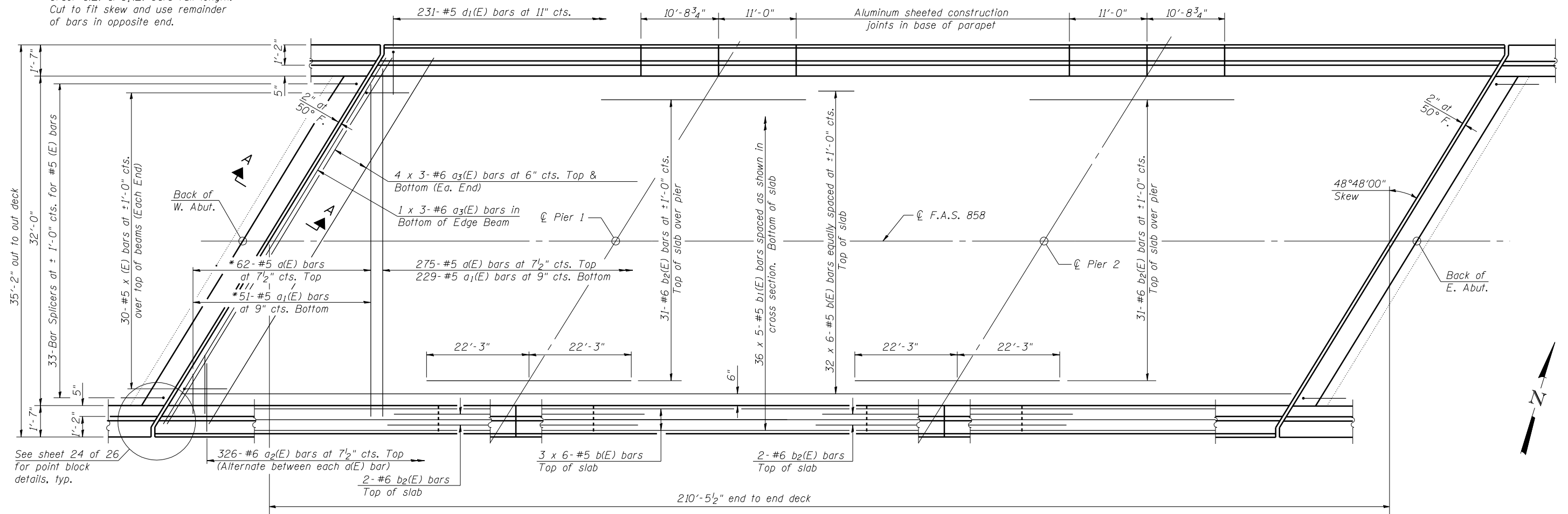
Location	Station	Offset	Theoretical Grade Elevations
Back of East Abutment	651+03.79	12.00	429.96
A	651+13.79	12.00	430.04
B	651+23.79	12.00	430.12
End of East Appr. Pvmt.	651+33.79	12.00	430.20

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Back of East Abutment	650+99.22	16.00	429.84
A	651+09.22	16.00	429.92
B	651+19.22	16.00	430.00
End of East Appr. Pvmt.	651+29.22	16.00	430.08

PLAN

* Order a(E) & a₁(E) bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



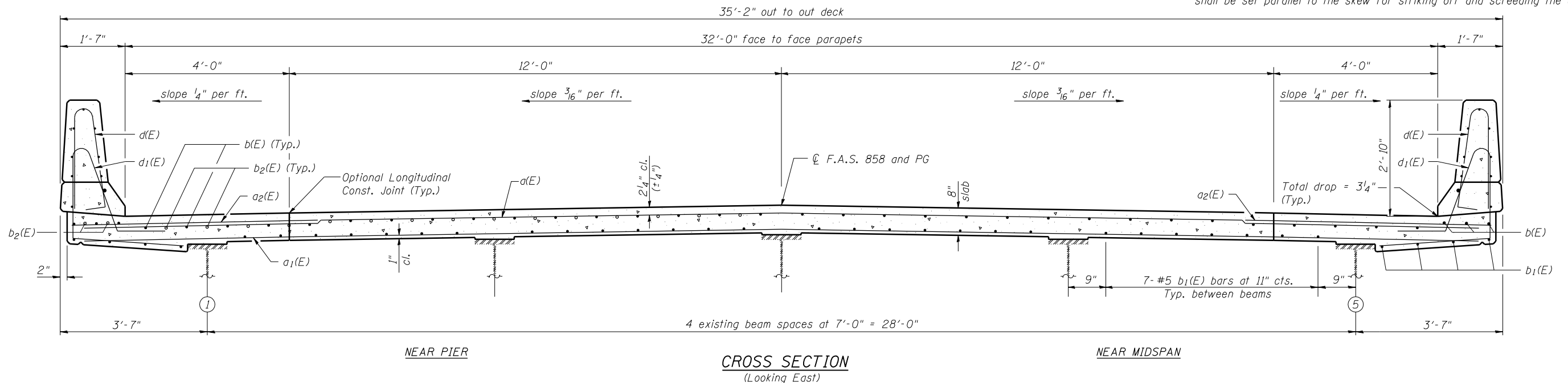
MINIMUM BAR LAP

#5 bar = 2'-6"
#6 bar = 3'-0"

PLAN

Notes:

See sheet 9 of 26 for superstructure details and Bill of Material.
Bars indicated thus 32 x 6-#5 etc. indicates 32 lines of #5 bars with 6 lengths per line.
See sheet 9 of 26 for x₁(E), x₂(E), and parapet reinforcement.
For Section A-A see sheet 9 of 26.
The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.



FILE NAME = \sheet 08 (superstruct)l.dgn

USER NAME = bselbel
Illinois Design Firm Number 184,001670
PLOT SCALE =
PLOT DATE = 11:49:55 AM 12/20/2011

DESIGNED - BB
CHECKED - ACS
DRAWN - WJS
CHECKED - CJF

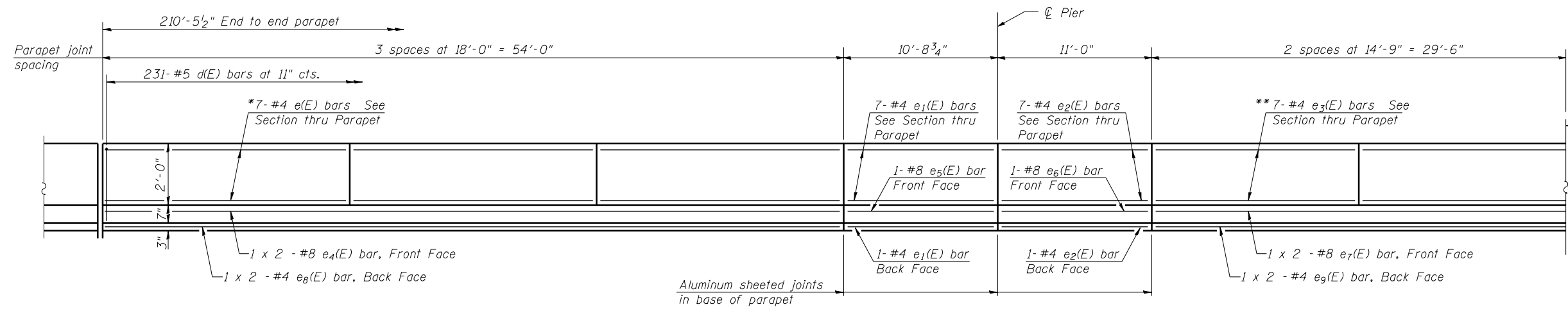
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE
STRUCTURE NO. 079-0020**

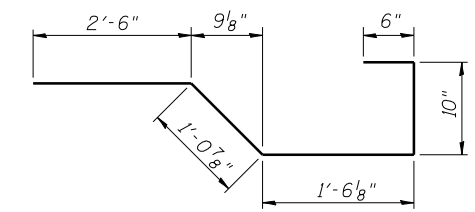
SHEET NO. 8 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	54
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76409	

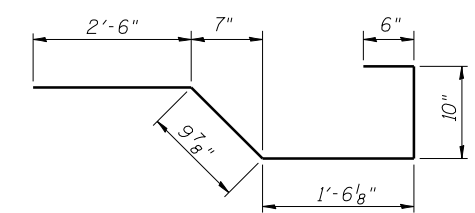


INSIDE ELEVATION OF PARAPET

*e(E) bars typical in 18'-0" segments
 **e3(E) bars typical in 14'-9" segments



BAR x1(E)

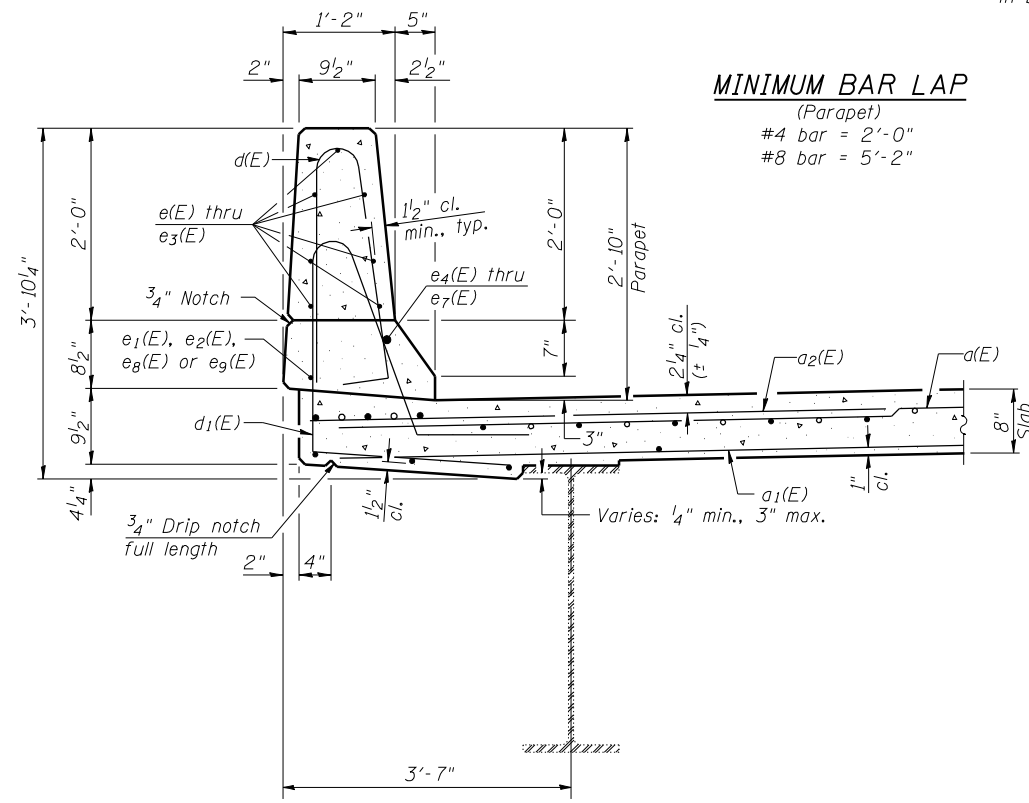


BAR x2(E)

SUPERSTRUCTURE BILL OF MATERIAL

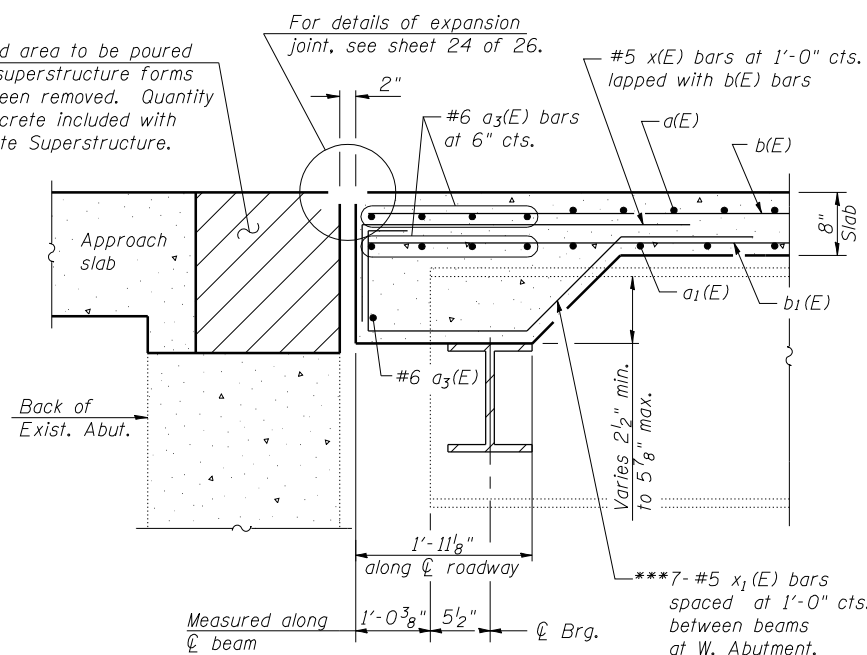
Bar	No.	Size	Length	Shape
a(E)	337	#5	34'-7"	
a1(E)	280	#5	34'-3"	
a2(E)	652	#6	6'-6"	
a3(E)	54	#6	19'-4"	
b(E)	228	#5	37'-2"	
b1(E)	180	#5	44'-1"	
b2(E)	70	#6	44'-6"	
d(E)	462	#5	5'-7"	
d1(E)	462	#5	8'-4"	
e(E)	84	#4	17'-9"	
e1(E)	32	#4	10'-5"	
e2(E)	32	#4	10'-9"	
e3(E)	56	#4	14'-6"	
e4(E)	8	#8	29'-5"	
e5(E)	4	#8	10'-5"	
e6(E)	4	#8	10'-9"	
e7(E)	4	#8	32'-0"	
e8(E)	8	#4	27'-11"	
e9(E)	4	#4	30'-5"	
x(E)	60	#5	4'-1"	
x1(E)	28	#5	6'-5"	
x2(E)	28	#5	6'-2"	
Reinforcement Bars, Epoxy Coated			Pound	62,640
Concrete Superstructure			Cu. Yds.	257.6

Bars indicated thus 1 x 2 -#8 etc. indicates 1 line of #8 bars with 2 lengths per line.
 Place x1(E) and x2(E) bars parallel to beams.



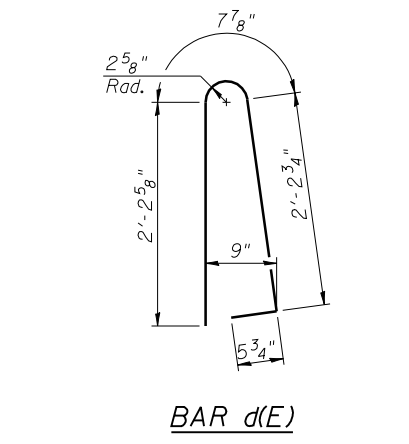
SECTION THRU PARAPET

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

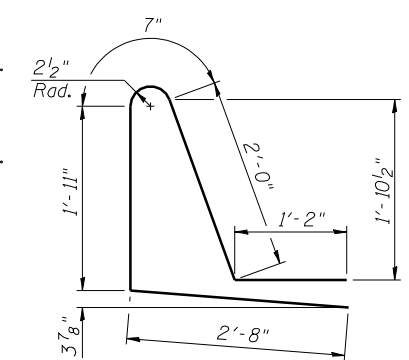


SECTION A-A

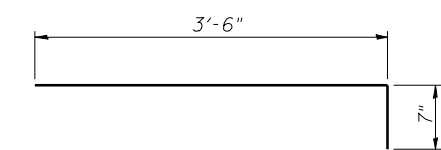
***Tilt x1(E) and x2(E) bars as required to maintain clearance.



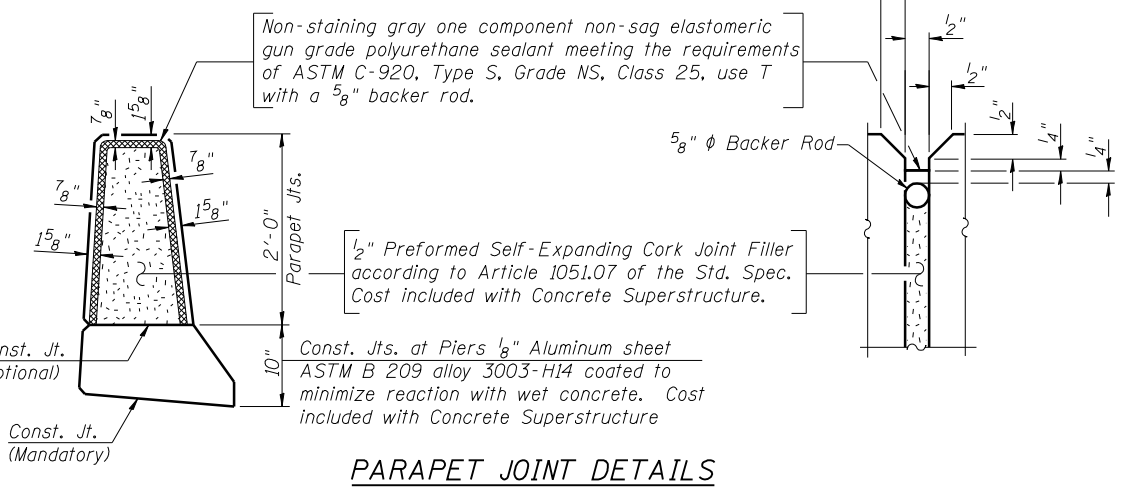
BAR d(E)



BAR d1(E)



BAR x(E)



PARAPET JOINT DETAILS

FILE NAME = \sheet 09 (superstr dtls)ldgn	USER NAME = bselbel	DESIGNED - BB	REVISED -
DESIGNED BY LOGAN MILLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62458 PHONE (618) 298-4000 FAX (618) 298-4000	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
	PLOT SCALE =	DRAWN - WJS	REVISED -
	PLOT DATE = 11:49:37 AM 12/20/2011	CHECKED - CJF	REVISED -

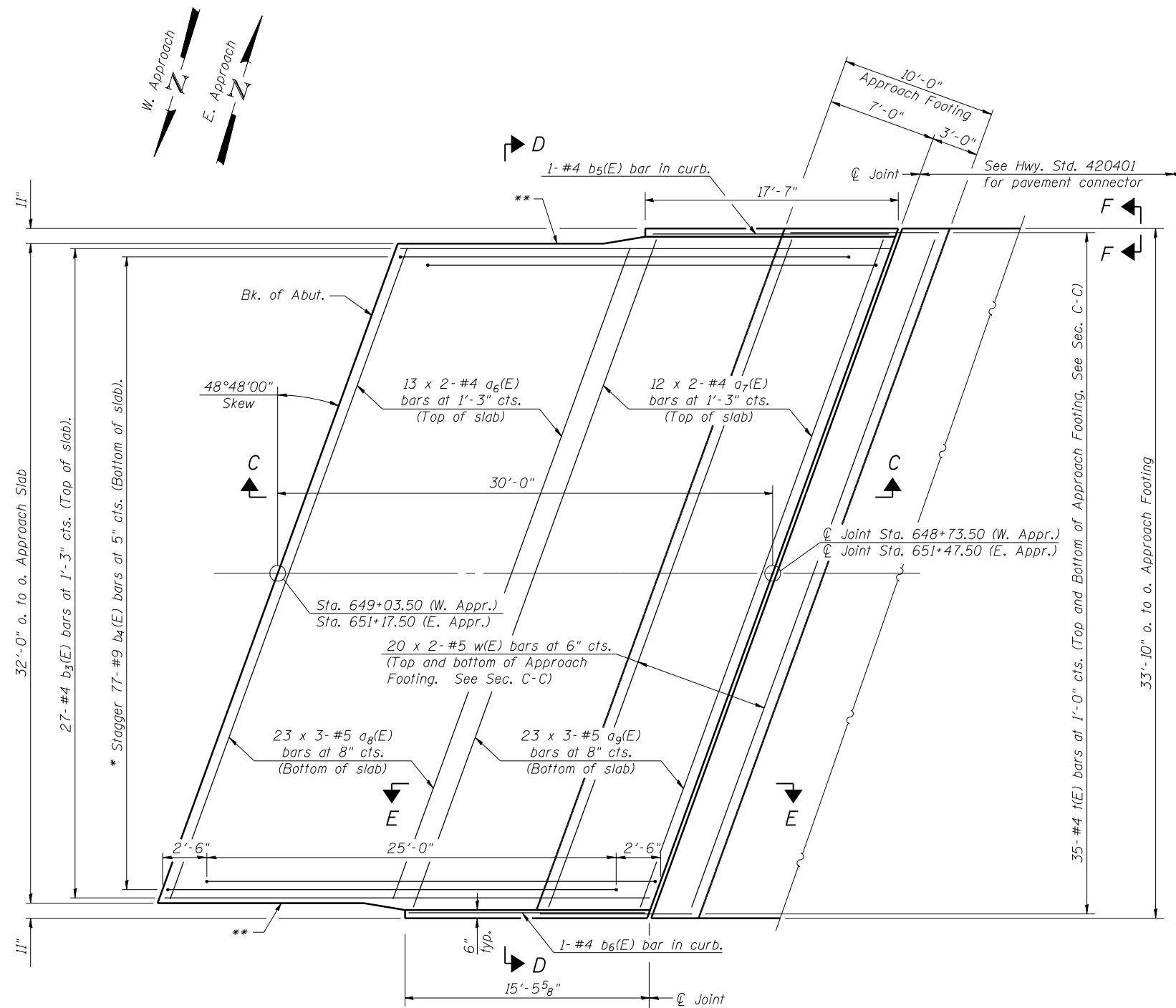
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS STRUCTURE NO. 079-0020

SHEET NO. 9 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	55
CONTRACT NO. 76409			ILLINOIS FED. AID PROJECT	

Notes:
 See sheet 11 of 26 for Sections C-C & D-D and View E-E.
 a₆(E) thru a₉(E) bar spacings measured along ϕ Rdwy.
 Bars indicated thus 13 x 5-#5 etc. indicates 13 lines of #5 bars with 3 lengths per line.

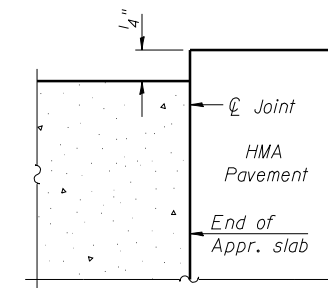


PLAN

MINIMUM BAR LAP

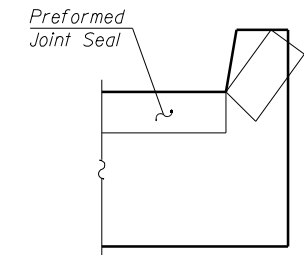
#4 bar - 2'-0"
 #5 bar = 2'-6"

- * Tilt #9 b₄(E) bars as required to maintain clearance.
- ** Closed cell joint filler according to Article 1051.09 of the Standard Specifications; full depth of slab, full length of parapet. Typ. each parapet.



FLEXIBLE PAVEMENT

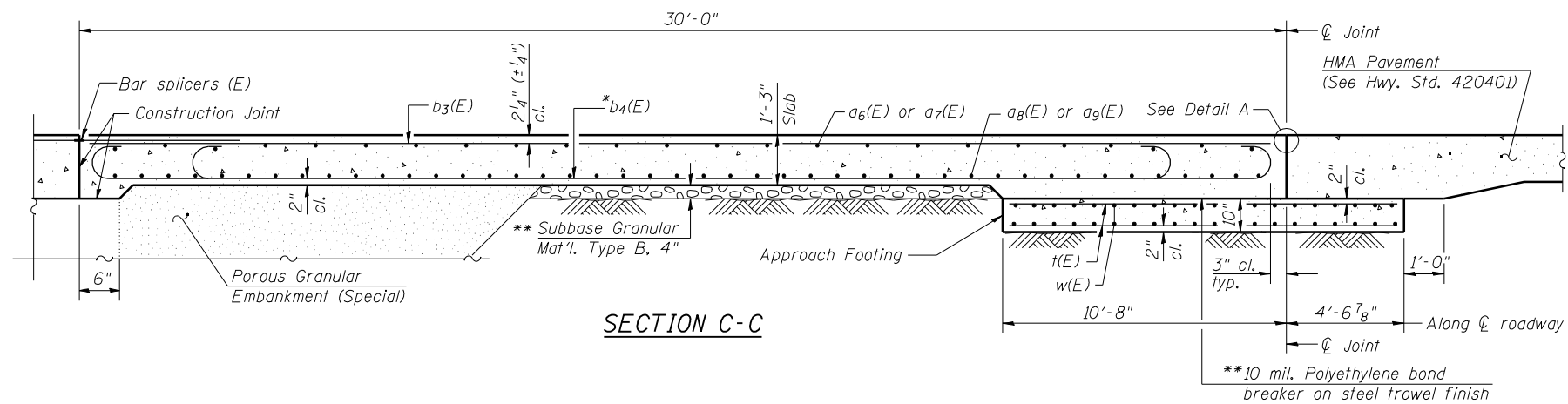
DETAIL A



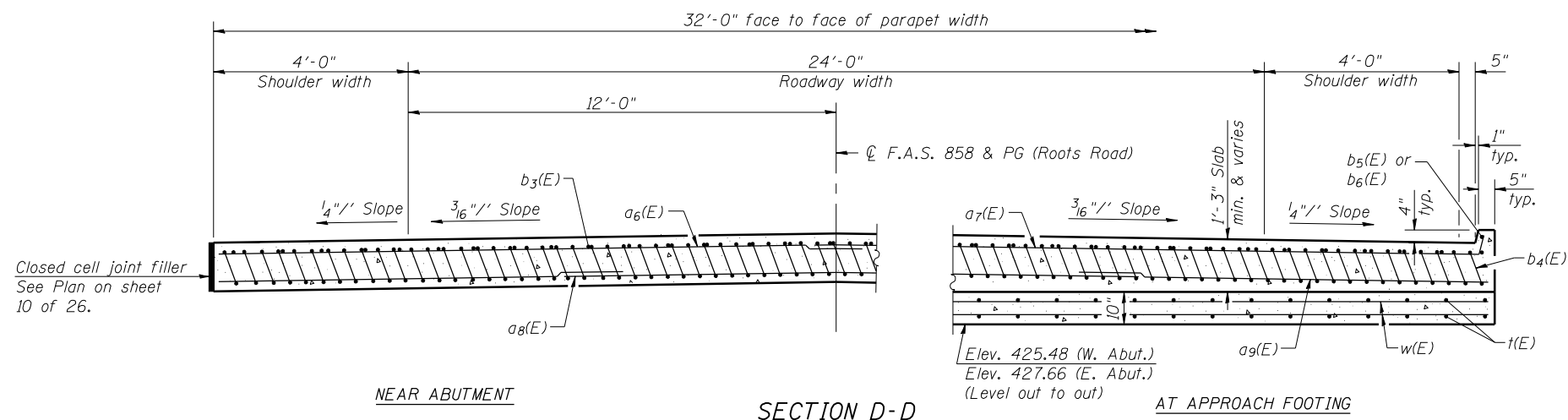
VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

FILE NAME = \sheet 10 (Appr slab d1)stdgn BERKSHIRE ENGINEERS & ARCHITECTS, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62455 PHONE (618) 398-4888 FAX (618) 398-4888	USER NAME = bselbel Illinois Design Firm Number 184,001670	DESIGNED - BB CHECKED - ACS	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 079-0020	F.A.S. RTE. 858	SECTION 12VB-11	COUNTY RANDOLPH	TOTAL SHEETS 72	SHEET NO. 56
	PLOT SCALE = PLOT DATE = 11/19/58 AM 12/20/2011	DRAWN - WJS CHECKED - CJF	SHEET NO. 10 OF 26 SHEETS			CONTRACT NO. 76409 ILLINOIS FED. AID PROJECT				



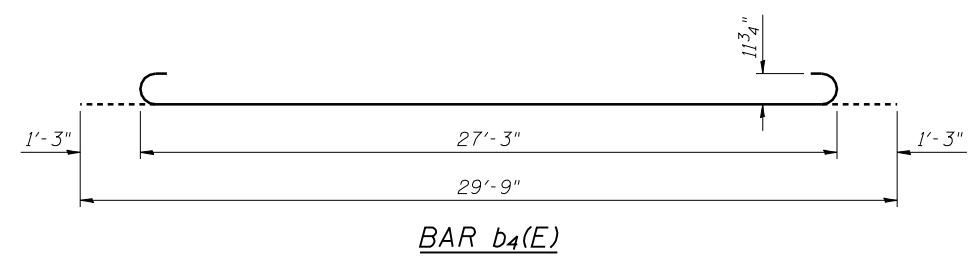
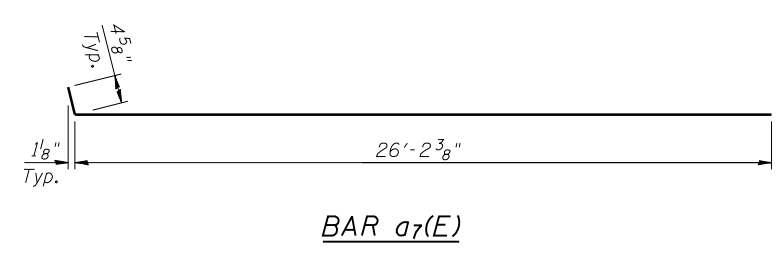
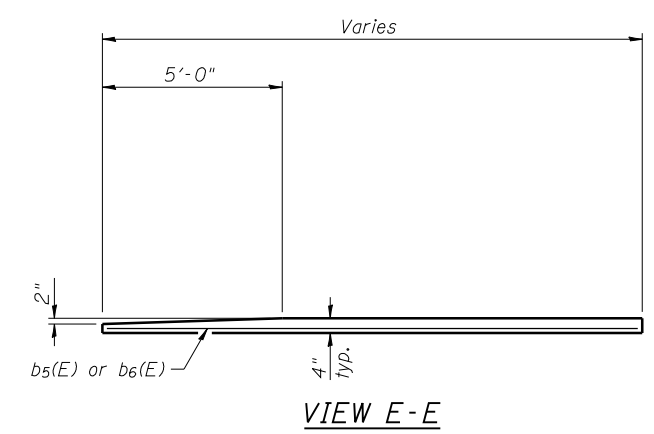
Notes:
 See sheet 10 of 26 for Detail A.
 Approach slab concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see sheet 26 of 26.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.

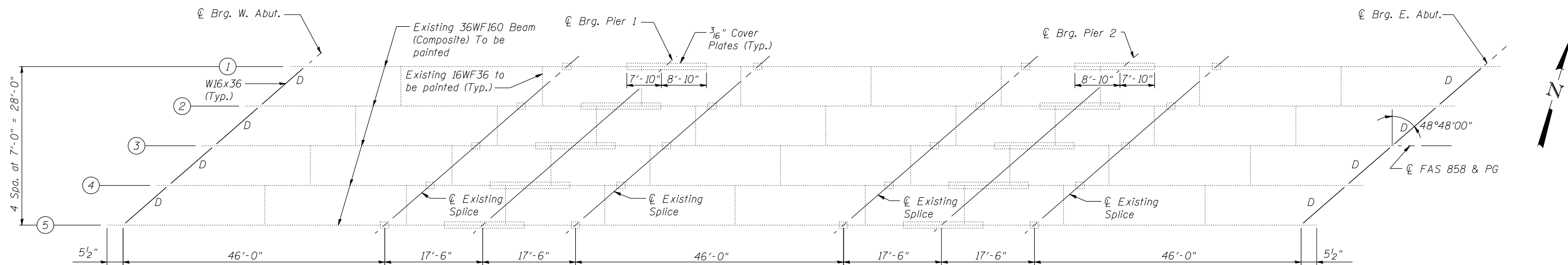


* Tilt #9 b4(E) bars as required to maintain clearance.
 ** Cost included with Concrete Superstructure.

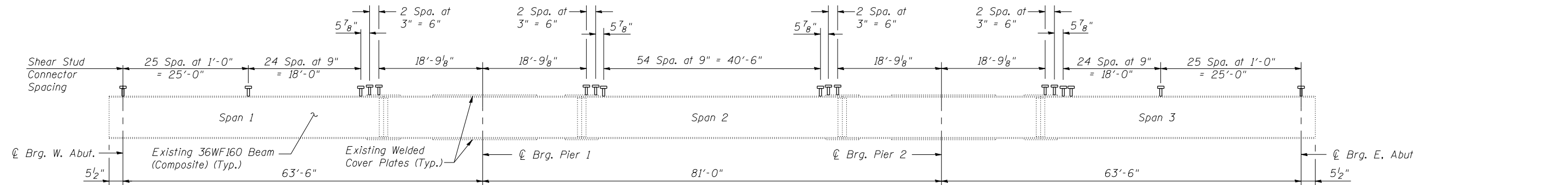
**TWO APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a6(E)	52	#4	25'-3"	—
a7(E)	48	#4	26'-7"	—
a8(E)	138	#5	17'-10"	—
a9(E)	138	#5	18'-8"	—
b3(E)	54	#4	29'-8"	—
b4(E)	154	#9	29'-9"	—
b5(E)	2	#4	17'-3"	—
b6(E)	2	#4	15'-1"	—
t(E)	140	#4	14'-11"	—
w(E)	160	#5	26'-9"	—
Concrete Superstructure			Cu. Yd.	101.6
Concrete Structures			Cu. Yd.	31.8
Reinforcement Bars, Epoxy Coated			Pound	29,540

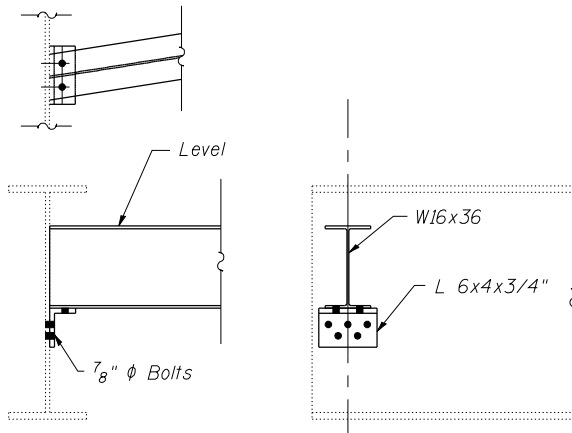




FRAMING PLAN

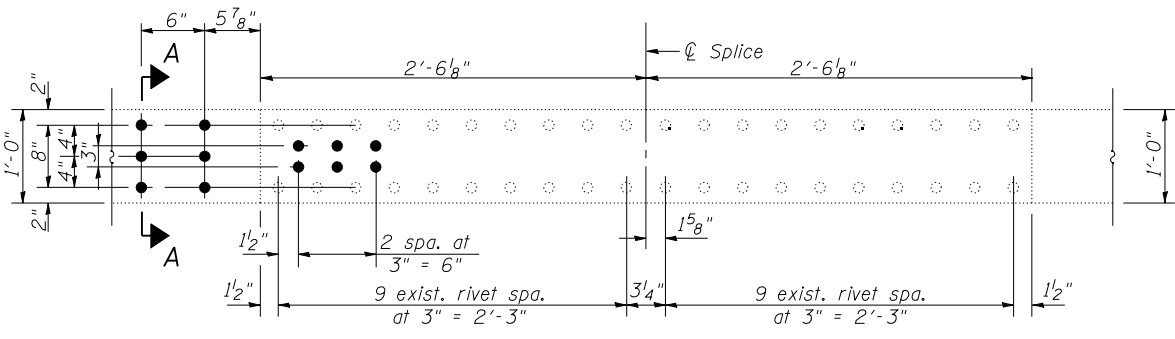


BEAM ELEVATION

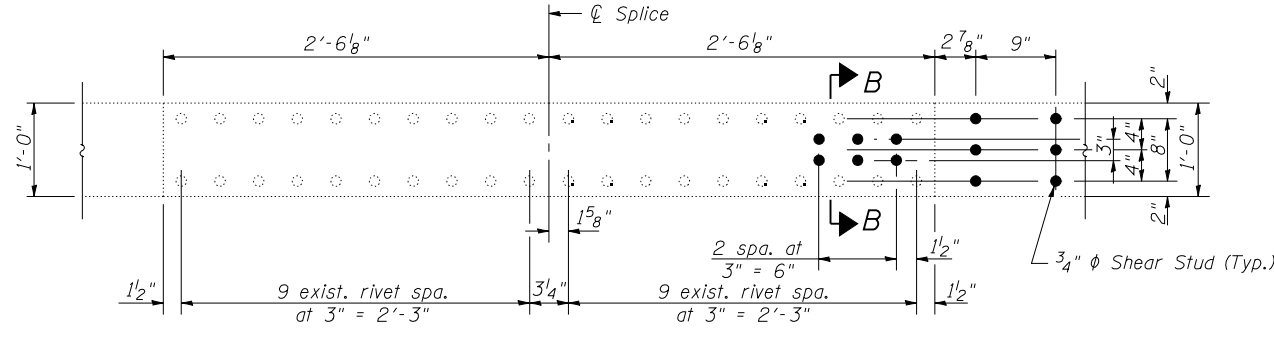


DIAPHRAGM D DETAILS
(8 Required)

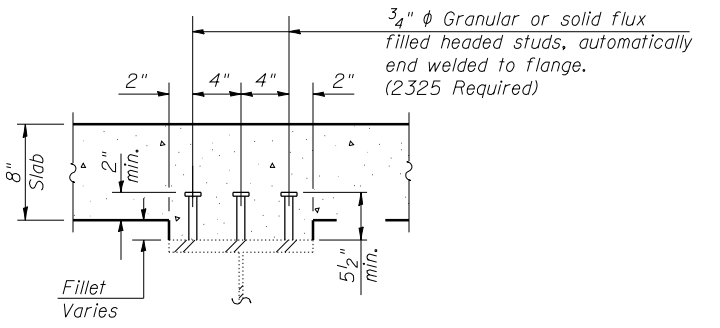
Notes:
 Diaphragm and clip angles shall be paid for as Furnishing and Erecting Structural Steel.
 All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled 1/16" dia. and reamed in the field to 1/8" dia. for 7/8" dia. bolts, unless otherwise noted. Cost included with Furnishing and Erecting Structural Steel.
 Two hardend washers shall be required over all oversized holes for diaphragms.
 Removal of existing diaphragms, angles and rivets shall be included in the cost of Structural Steel Removal.



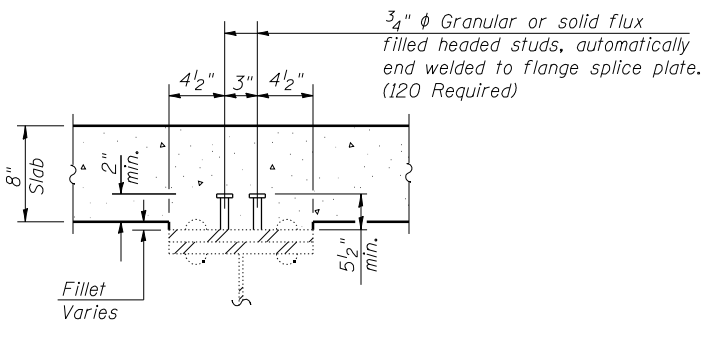
SPAN 1 & 3 SPLICE & SHEAR STUD LAYOUT
(Span 1 shown, Span 3 Similar)



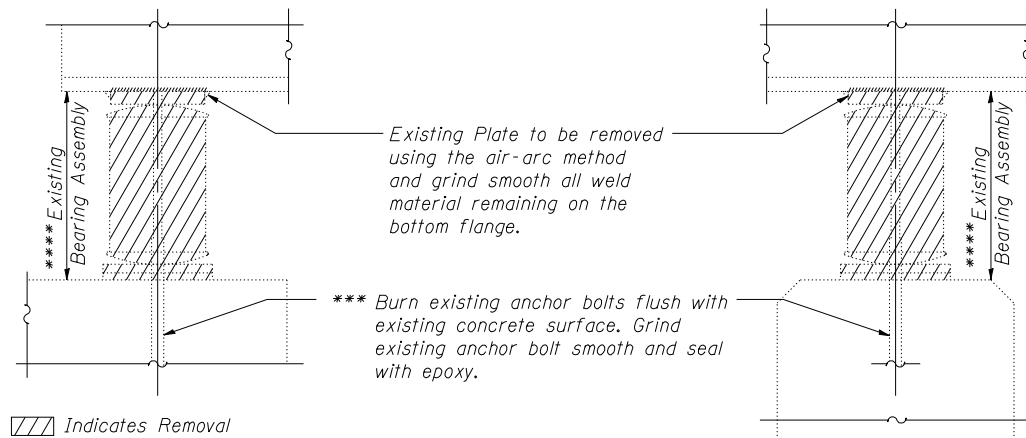
SPAN 2 SPLICE & SHEAR STUD LAYOUT



SECTION A-A



SECTION B-B

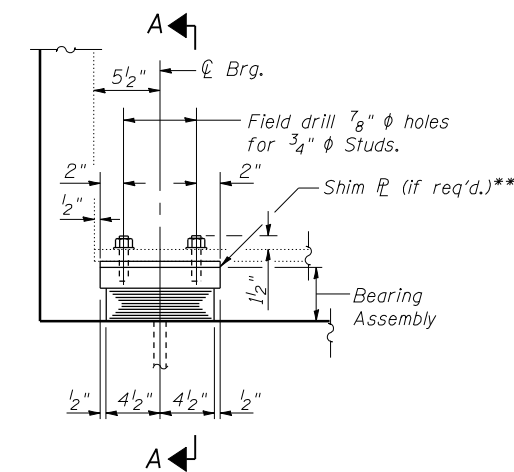


**JACK AND CRIB
EXISTING BEARING**

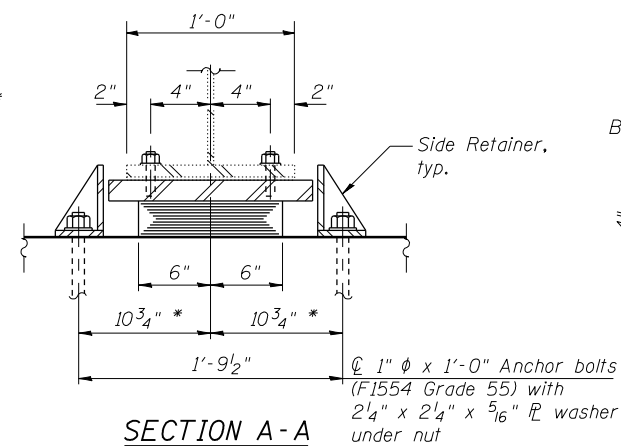
(10 Required - 5 at each Abut.)

**EXISTING BEARING
REMOVAL DETAIL**

(5 Required at Pier 2)
Cost is included in "Jack and Remove Existing Bearings"

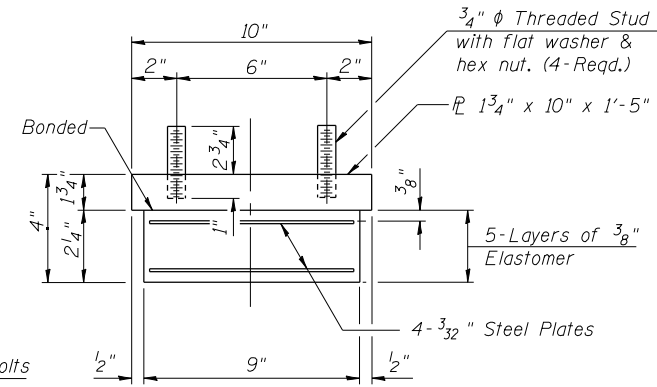


ELEVATION AT W. ABUT.



TYPE I ELASTOMERIC EXP. BRG.

(5 at West Abutment)



BEARING ASSEMBLY

* See Sheet 16 of 26 for Bolt Placement
** In addition to shim plates beams 2 & 3 will require a 1/4" fill plate.

- *** At Abutments burning existing anchor bolts is included in "Structural Steel Removal". At Pier 2 burning existing anchor bolts is included in "Jack and Remove Existing Bearings".
- **** At Abutments Removal of Existing Bearings is included in "Structural Steel Removal". At Pier 2 Removal of Existing Bearings is included in "Jack and Remove Existing Bearings".

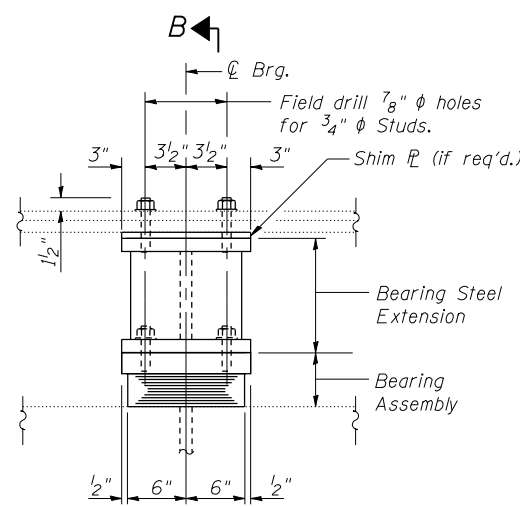
**SUGGESTED PROCEDURE TO JACK
AND REMOVE EXISTING BEARINGS**

(Pier 2)

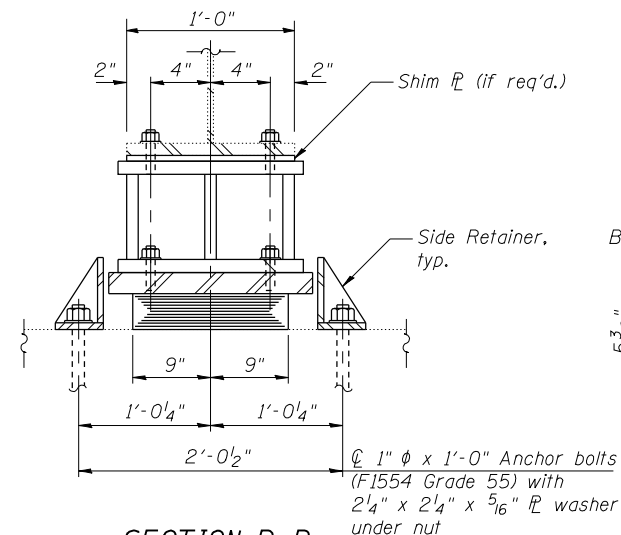
(Minimum Jack Capacity Required 67 tons at Pier 2.)

1. Jack and Remove Existing Bearings shall be conducted according to the Bridge Special Provision "Jack and Remove Existing Bearings". See Interior Beam Reaction Table for loads.
2. Jacking and removing existing bearings shall be done after partial deck concrete removal and before new deck concrete is poured.
3. Five beams may be lifted simultaneously.
4. The existing anchor bolts shall be cut off flush with the existing bridge seat, the rockers, top and bottom plates shall be removed.
5. Formwork and bearing seat construction shall occur.
6. The new elastomeric bearings shall be placed and the jacks shall be lowered.
7. The new holes for the side retainers shall be drilled at the locations specified.
8. No Bearing Replacement is required at Pier 1. Clean and paint as specified for Structural Steel.

Notes:
Shim plates shall not be placed under Bearing Assembly.
See sheet 14 of 26 for additional notes.
See sheet 14 of 26 for Bill of Materials.
Prior to ordering any material the Contractor shall verify in the field all bearing heights & shim thickness dimensions.

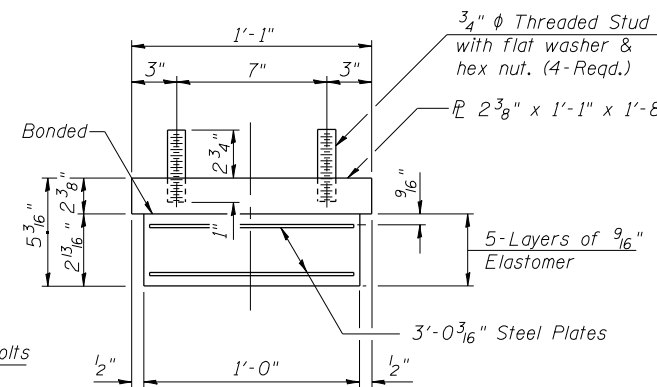


ELEVATION AT PIER 2



TYPE I ELASTOMERIC EXP. BRG.

(5 at Pier 2)



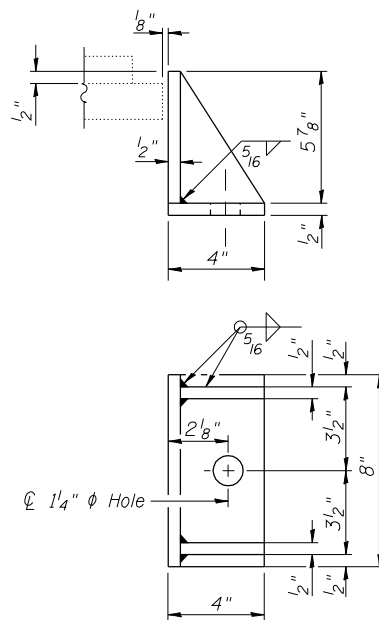
BEARING ASSEMBLY

**SUGGESTED PROCEDURE FOR
JACKING AND CRIBBING**

(East Abutment, West Abutment)

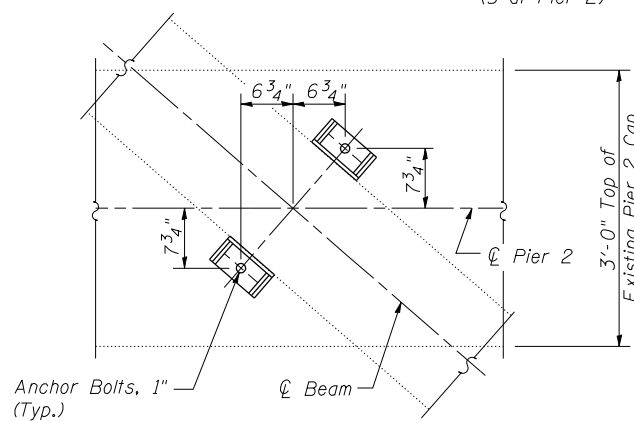
(Minimum Jack Capacity Required 20 tons at Abutments)

1. The Contractor shall submit details and plans for approval in accordance with the Special Provision prior to commencing any work at the bearings.
2. Jacking and Cribbing shall be done after the removal of the existing bridge deck is complete.
3. Jacking shall be limited to the maximum dimensions shown in the Special Provision.
4. The new bearing shall be in place and the jacks shall be lowered before the new concrete deck is poured.

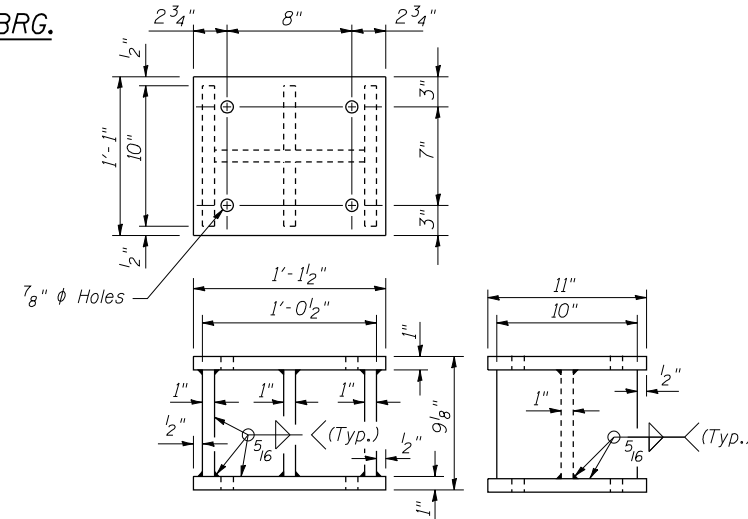


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (W. Abut. & Pier 2)



ANCHOR BOLT DETAIL PIER 2



BEARING STEEL EXTENSION

(5 at Pier 2)

FILE NAME = \sheet 13 (brg) d11.sldgn	USER NAME = bselbel	DESIGNED - BB	REVISED -
DESIGNED BY: BISHOP & ASSOCIATES, INC.	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
3 OAK DRIVE		DRAWN - WJS	REVISED -
MARYVILLE, ILLINOIS 62458		CHECKED - CJF	REVISED -
PHONE (618) 392-4000			
FAX (618) 392-4000			
PLOT SCALE =	PLOT DATE = 11:54:47 AM 12/20/2011		

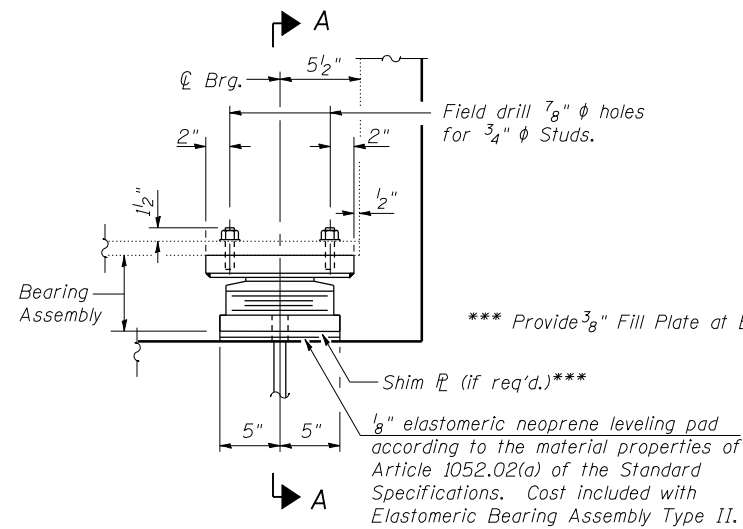
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS
STRUCTURE NO. 079-0020**

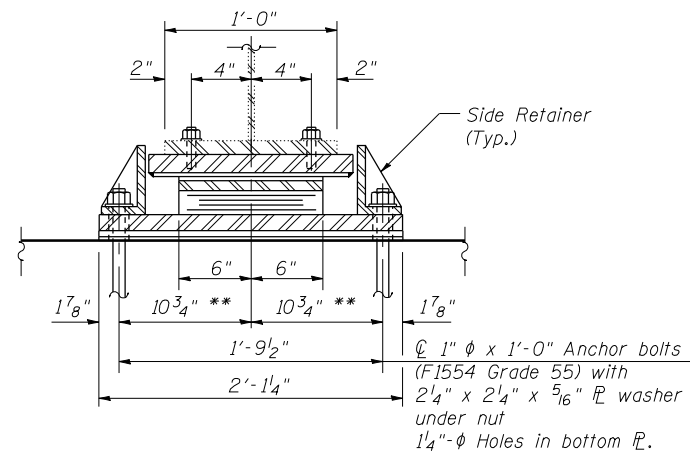
SHEET NO. 13 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	59
CONTRACT NO. 76409				

ILLINOIS FED. AID PROJECT

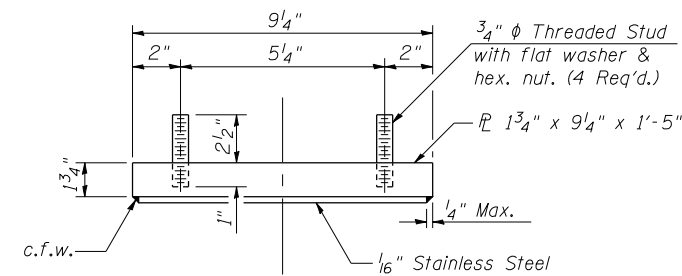


ELEVATION AT E. ABUT.

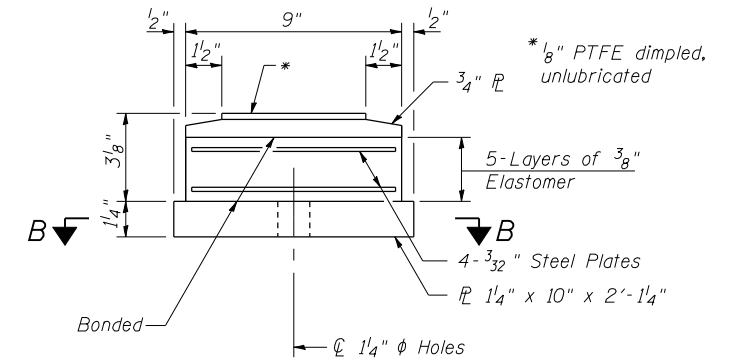


SECTION A-A

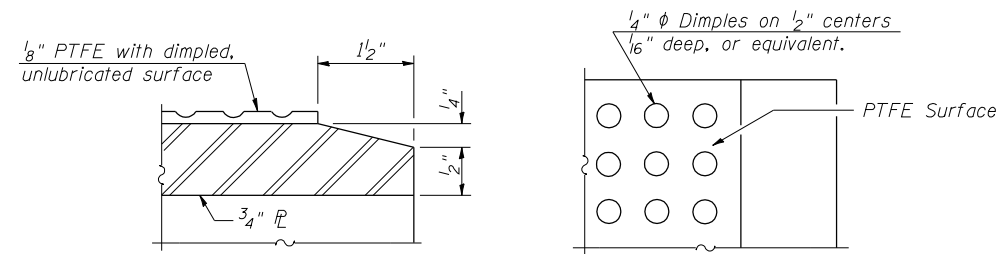
** See Sheet 18 of 26 for Bolt Placement



TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY

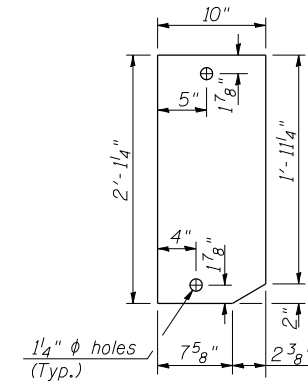


SECTION THRU PTFE

PLAN-PTFE SURFACE

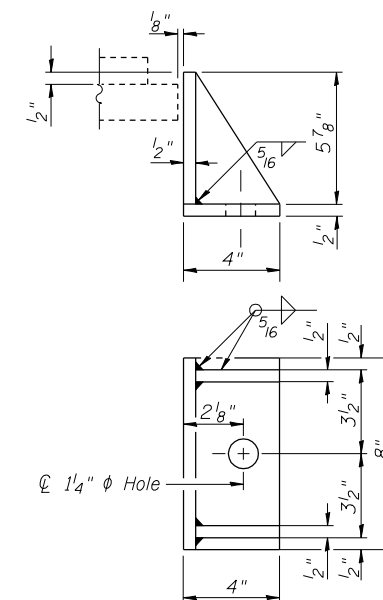
TYPE II ELASTOMERIC EXP. BRG.

(5 at East Abutment)



SECTION B-B

(Showing Bottom Plate)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (E. Abut.)

Notes:

Shim plates shall not be placed under Type I Bearing Assembly.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I and Elastomeric Bearing Assembly, Type II.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

The $\frac{1}{8}$ " PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of $\frac{1}{8}$ " PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

See sheet 22 of 26 for Side Retainer details for Pier 1.

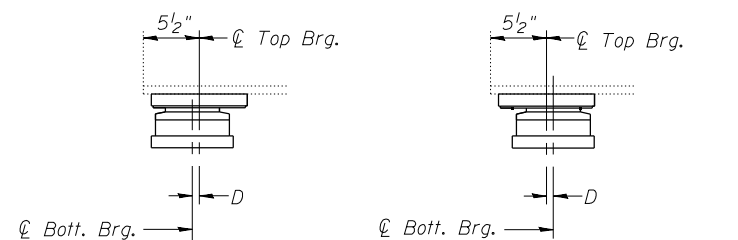
Two $\frac{1}{8}$ " adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Elastomeric Bearing Assembly, Type II	Each	5
Anchor Bolts, 1"	Each	30
Furnishing and Erecting Structural Steel	Pound	3,500

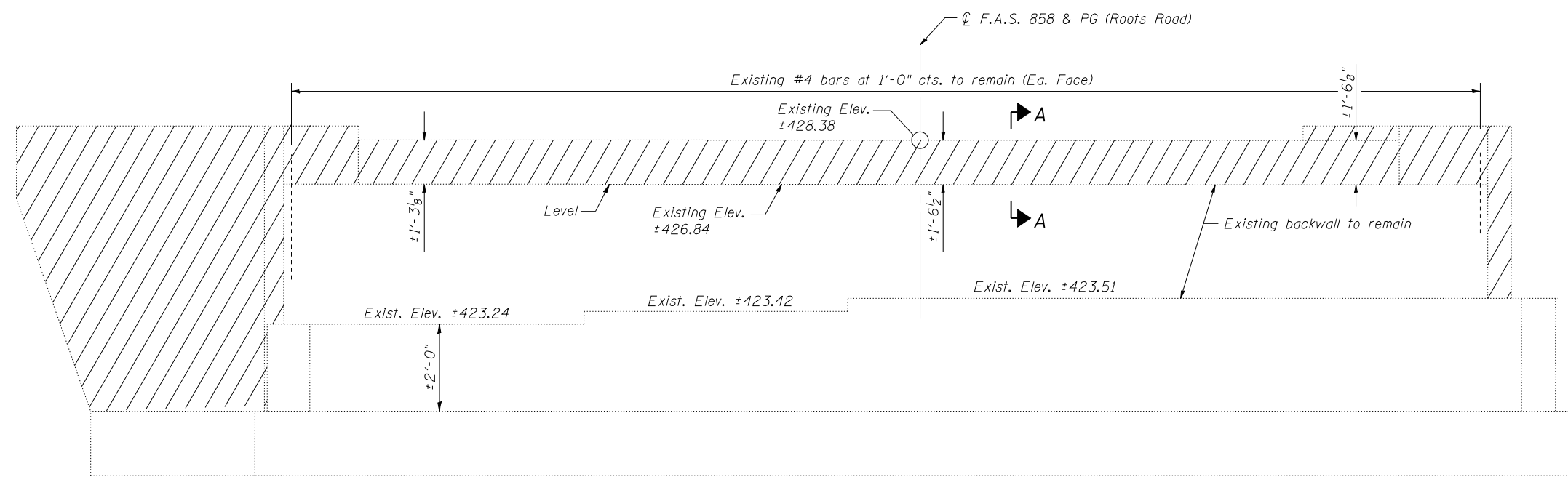
INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 & 2	0.5 Sp. 2
I_s	(in ⁴)	9760	13898	9760
$I_c(n)$	(in ⁴)	26098	-	26098
$I_c(3n)$	(in ⁴)	18938	-	18938
S_s	(in ³)	542	749	542
$S_c(n)$	(in ³)	804	-	804
$S_c(3n)$	(in ³)	722	-	722
ϕ	(k/')	0.90	0.93	0.90
$M \phi$	(k)	233	504	235
$s \phi$	(k/')	0.20	0.20	0.20
$M_s \phi$	(k)	58	96	68
$M \phi$	(k)	466	318	524
M_I	(k)	126	81	126
$\phi_3 [M \phi + I]$	(k)	987	665	1083
M_o	(k)	1661	1645	1807
M_u	(k)	3170	-	3170
$f_s \phi$ non-comp	(ksi)	5.2	8.1	5.2
$f_s \phi$ (comp)	(ksi)	1.0	1.5	1.1
$f_s \phi_3 [M \phi + M_I]$	(ksi)	14.7	10.7	16.3
f_s (Overload)	(ksi)	20.9	20.3	22.6
f_s (Total)	(ksi)	-	26.4	-
VR	(k)	59	-	45

INTERIOR BEAM REACTION TABLE			
	Abut.	Pier	
$R \phi$	(k)	25.4	88.9
$R \phi$	(k)	42.8	50.3
R_I	(k)	11.4	12.8
R_{Total}	(k)	79.6	152.0

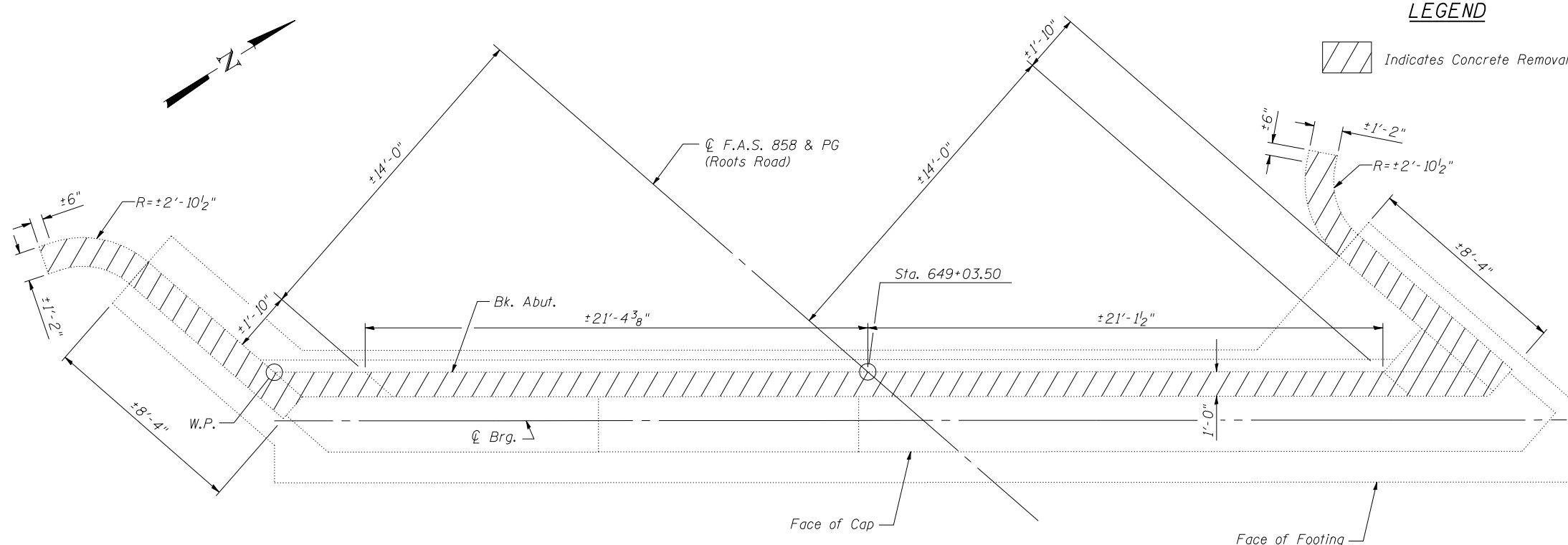


SETTING ANCHOR BOLTS AT EXP. BRG.

$D = \frac{1}{8}$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

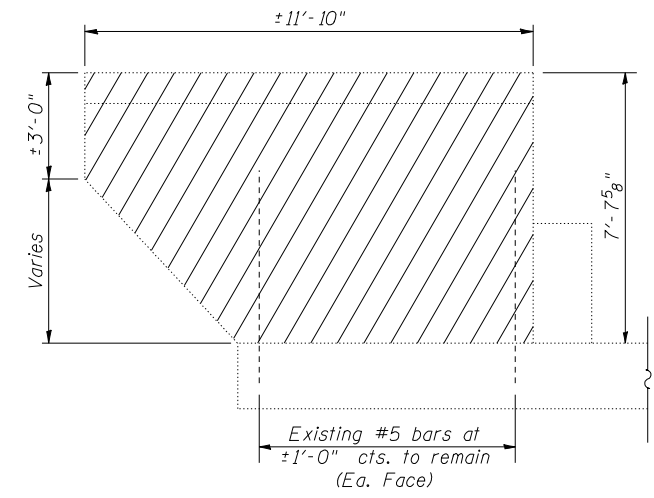


ELEVATION
(W. Abut Looking West)

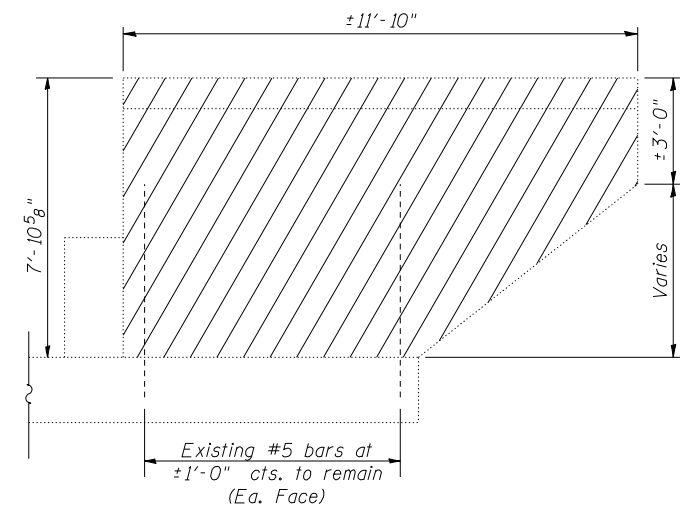


PLAN

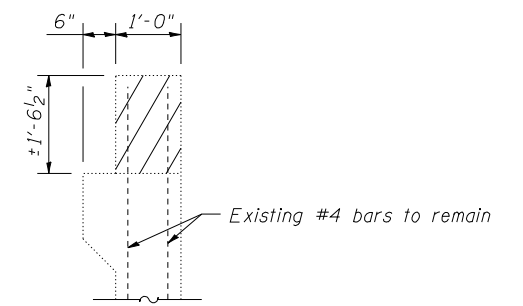
LEGEND
 Indicates Concrete Removal



SOUTH WING WALL



NORTH WING WALL

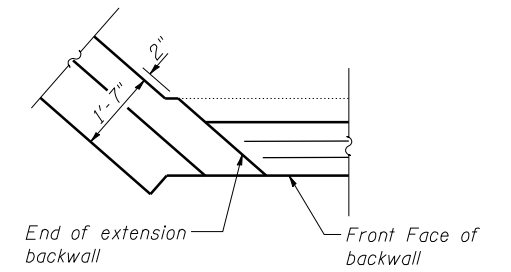
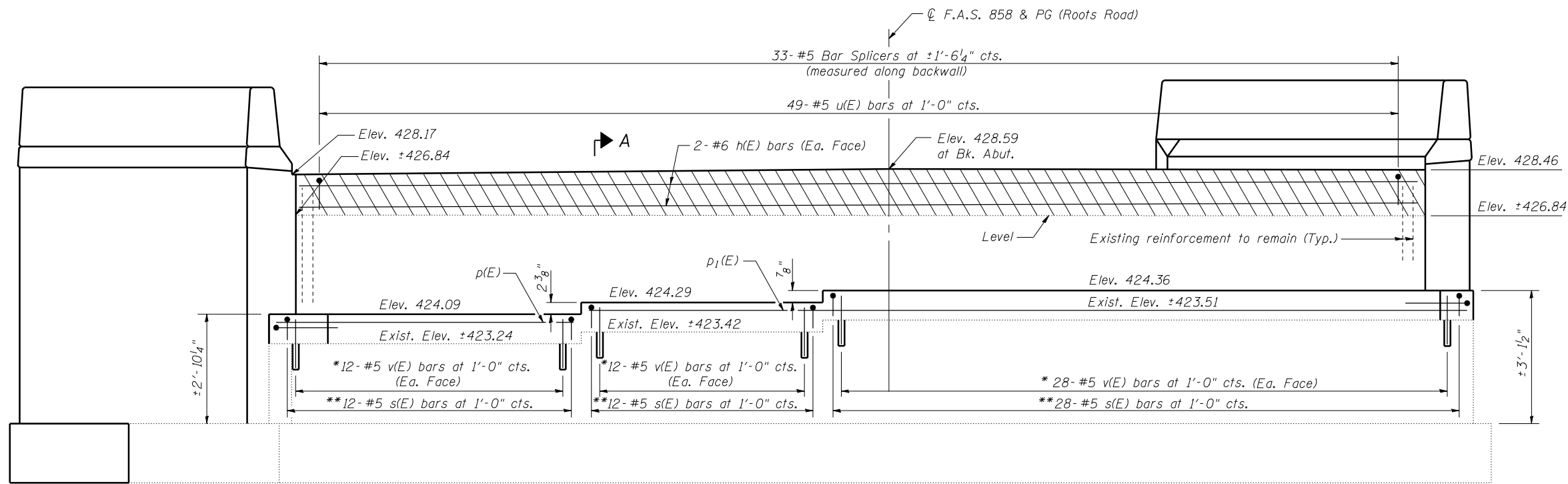


SECTION A-A

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	9.2

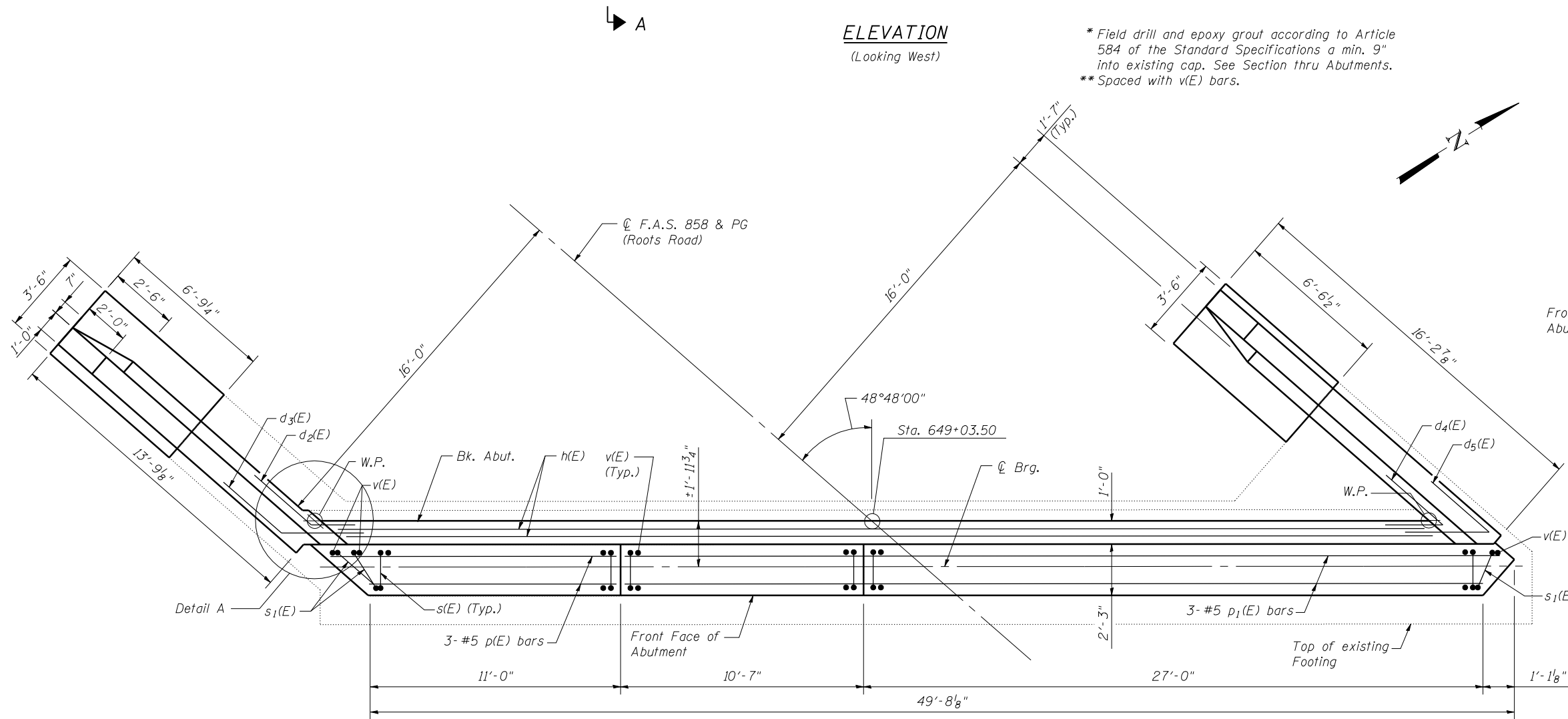
Notes:
 Existing reinforcement at the abutments shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in Concrete Removal.



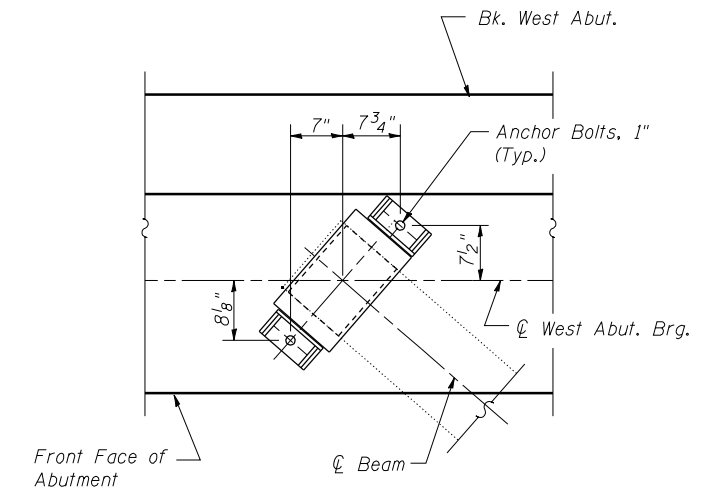
DETAIL A

ELEVATION
(Looking West)

* Field drill and epoxy grout according to Article 584 of the Standard Specifications a min. 9" into existing cap. See Section thru Abutments.
** Spaced with v(E) bars.



PLAN



**ANCHOR BOLT DETAIL
WEST ABUTMENT**

Notes:
Cut p(E) and p₁(E) bars to fit with 2" clear.
For Section A-A, Bar Bends and Bill of Material see sheet 20 of 26.
Hatched area quantity of concrete included with Concrete Superstructure.
Space reinforcement to miss Anchor Bolts.
Bars shall be drilled and grouted according to Section 584 of the Standard Specifications.
See sheet 19 of 26 for Wing Wall Details.

FILE NAME = \sheet 16 (W Abut dt)1.dgn	USER NAME = bselbel	DESIGNED - BB	REVISED -
BERNHARDT LOGGEMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARTINEVILLE, ILLINOIS 62450 PHONE (618) 298-4000 FAX (618) 298-4000	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
PLOT SCALE =		DRAWN - WJS	REVISED -
PLOT DATE = 11:09 PM 12/20/2011		CHECKED - CJF	REVISED -

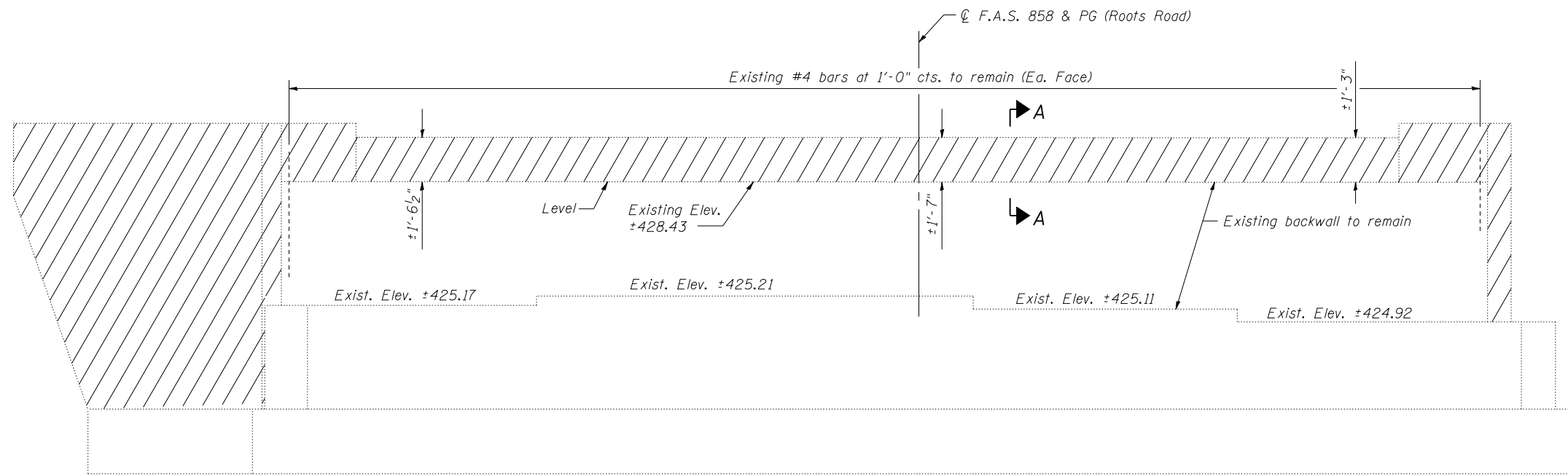
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT
STRUCTURE NO. 079-0020**

SHEET NO. 16 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	62
CONTRACT NO. 76409				

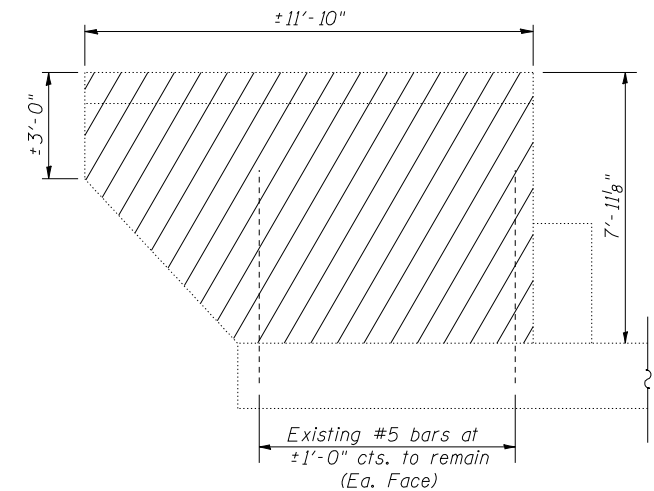
ILLINOIS FED. AID PROJECT



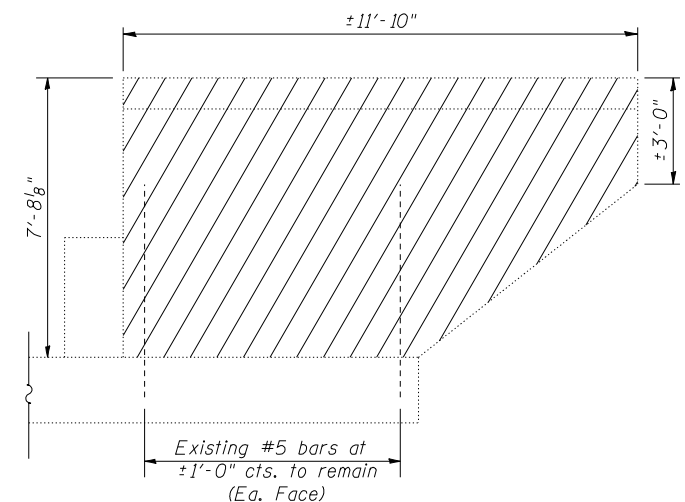
ELEVATION
(E. Abut. Looking East)

LEGEND

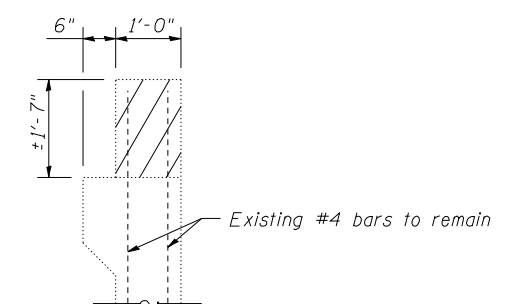
Indicates Concrete Removal



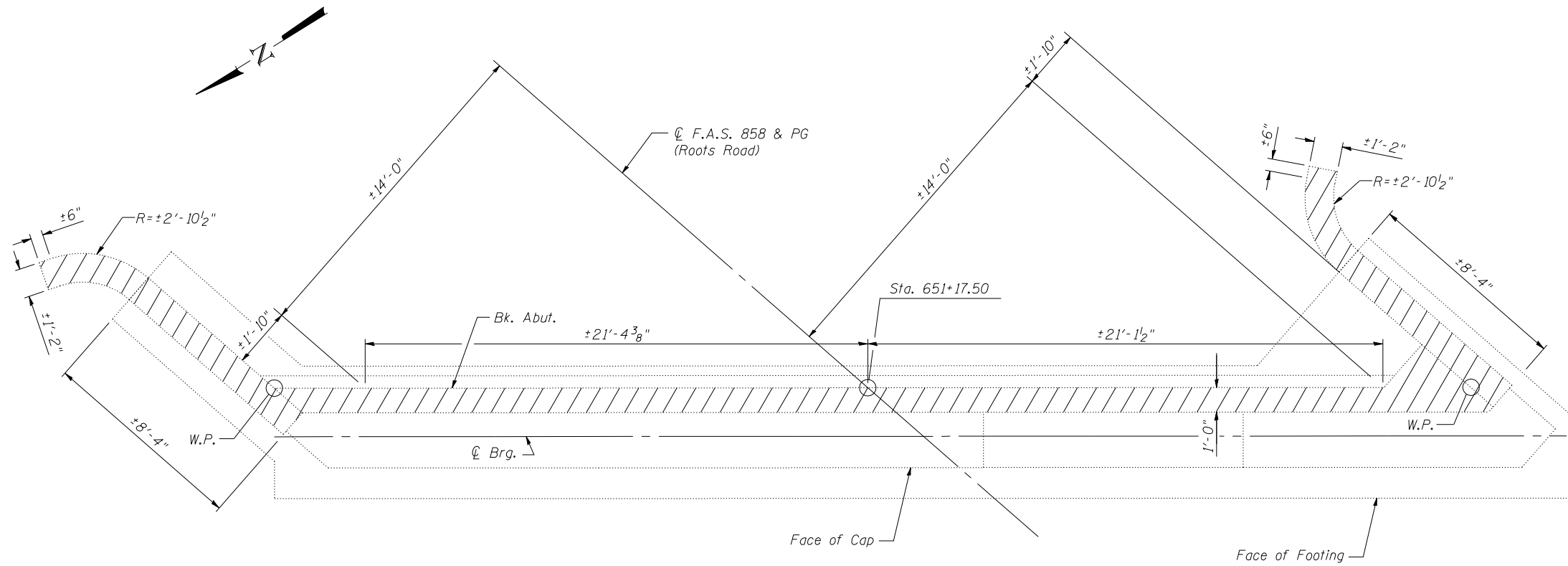
NORTH WING WALL



SOUTH WING WALL



SECTION A-A

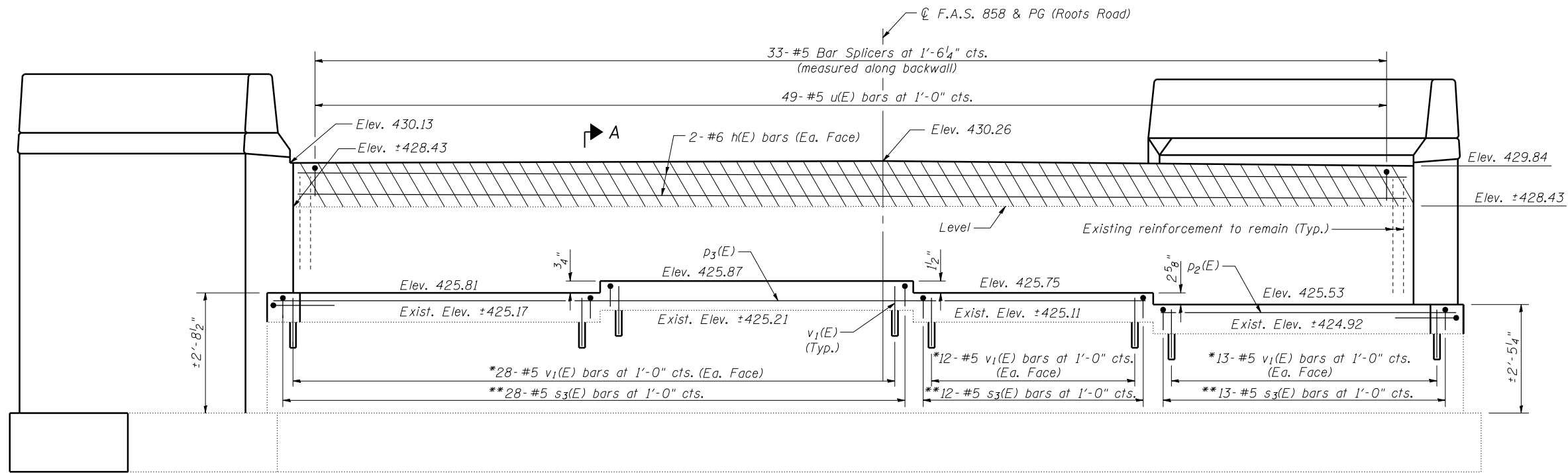


PLAN

BILL OF MATERIAL

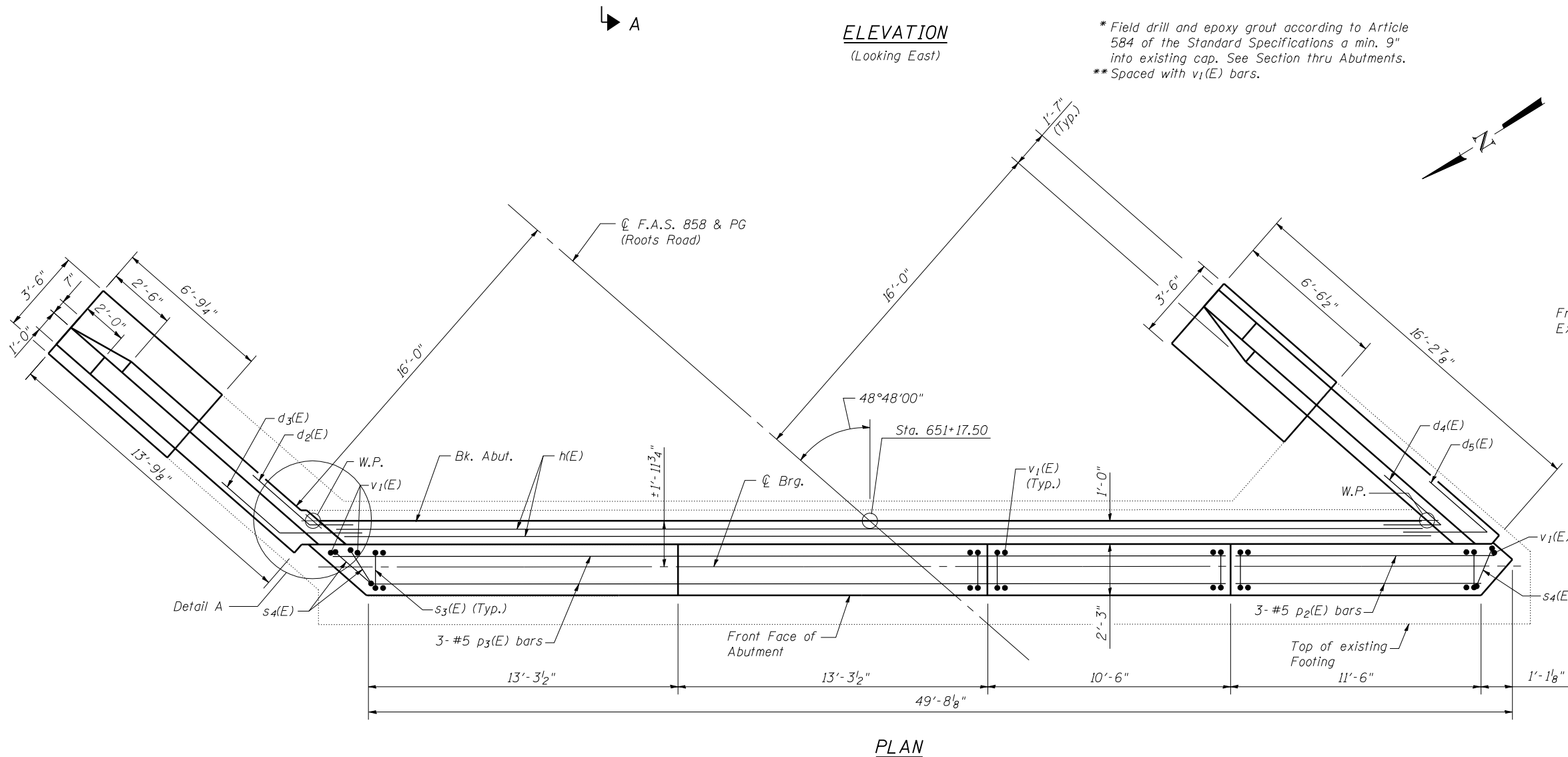
Item	Unit	Total
Concrete Removal	Cu. Yd.	9.4

Notes:
Existing reinforcement at the abutments shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in Concrete Removal.

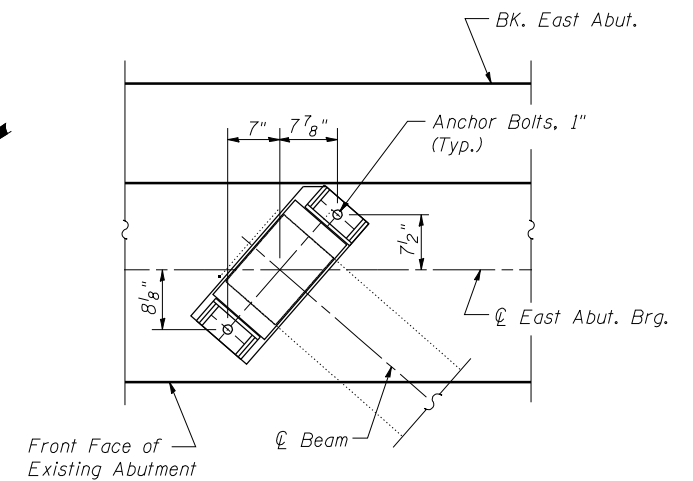


ELEVATION
(Looking East)

* Field drill and epoxy grout according to Article 584 of the Standard Specifications a min. 9" into existing cap. See Section thru Abutments.
** Spaced with $v_1(E)$ bars.



PLAN



**ANCHOR BOLT DETAIL
EAST ABUTMENT**

Notes:
Cut $p_2(E)$ and $p_3(E)$ bars to fit with 2" clear.
For Section A-A, Bar Bends and Bill of Material see sheet 20 of 26.
Hatched area quantity of concrete included with Concrete Superstructure.
Space reinforcement to miss Anchor Bolts.
Bars shall be drilled and grouted according to Section 584 of the Standard Specifications.
See sheet 19 of 26 for Wing Wall Details.
See sheet 16 of 26 for Detail A.

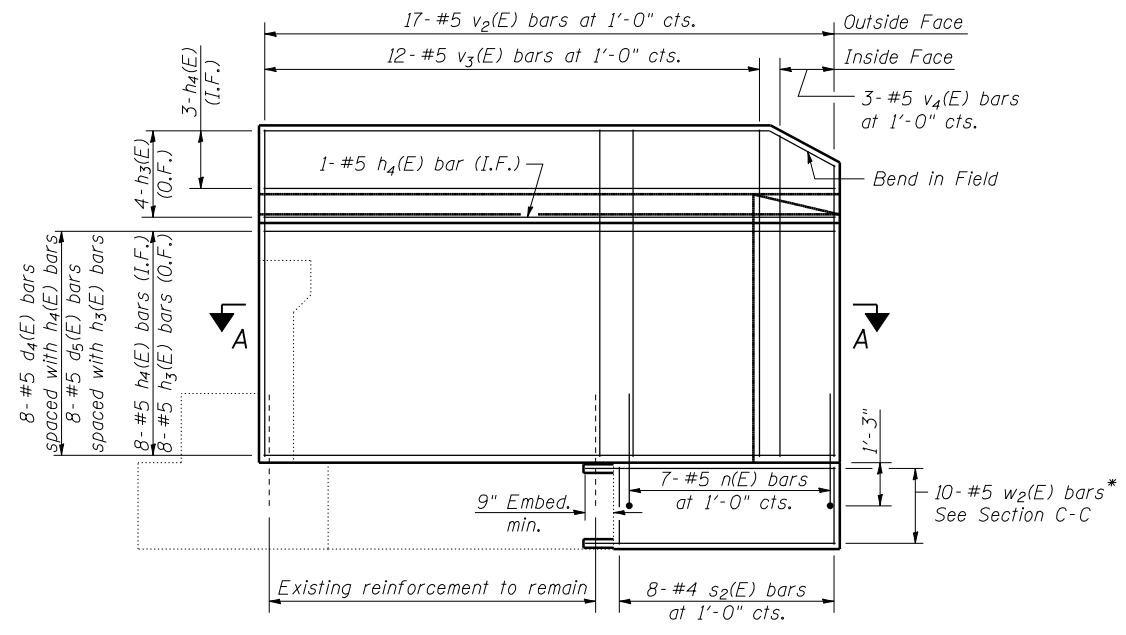
FILE NAME = \sheet 18 (E Abut) d11s1.dgn	USER NAME = bselbel	DESIGNED - BB	REVISED -
BERNHARDT LOGGEMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARTINEVILLE, ILLINOIS 62450 PHONE (618) 298-4000 FAX (618) 298-4000	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
	PLOT SCALE =	DRAWN - WJS	REVISED -
	PLOT DATE = 1:56 PM 12/20/2011	CHECKED - CJF	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENT
STRUCTURE NO. 079-0020**

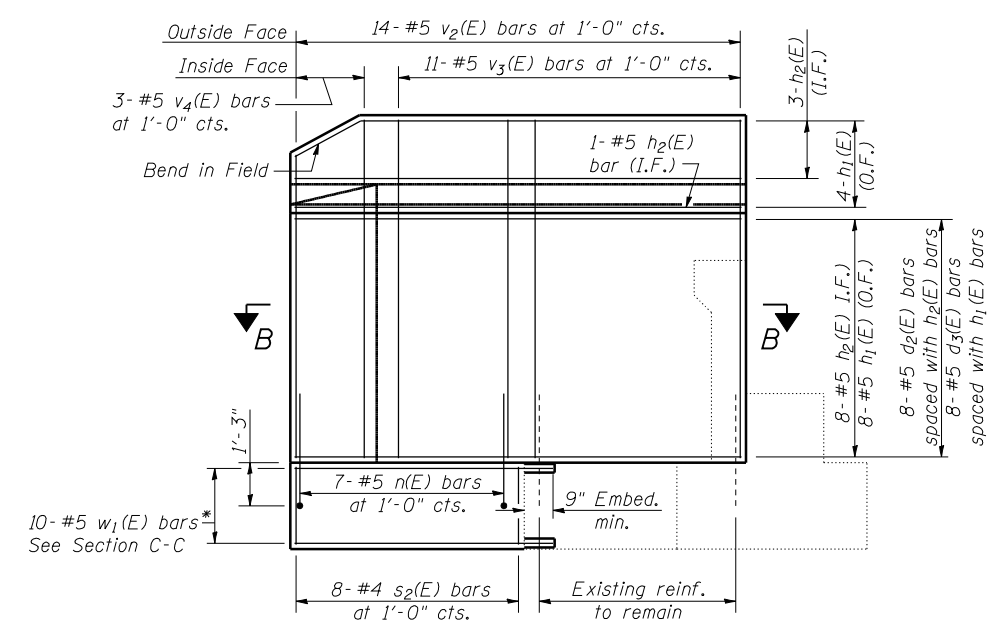
SHEET NO. 18 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	64
			CONTRACT NO. 76409	
ILLINOIS FED. AID PROJECT				



WING WALL ELEVATION

West Abutment, North Wing
East Abutment, South Wing
(Showing Reinforcement)



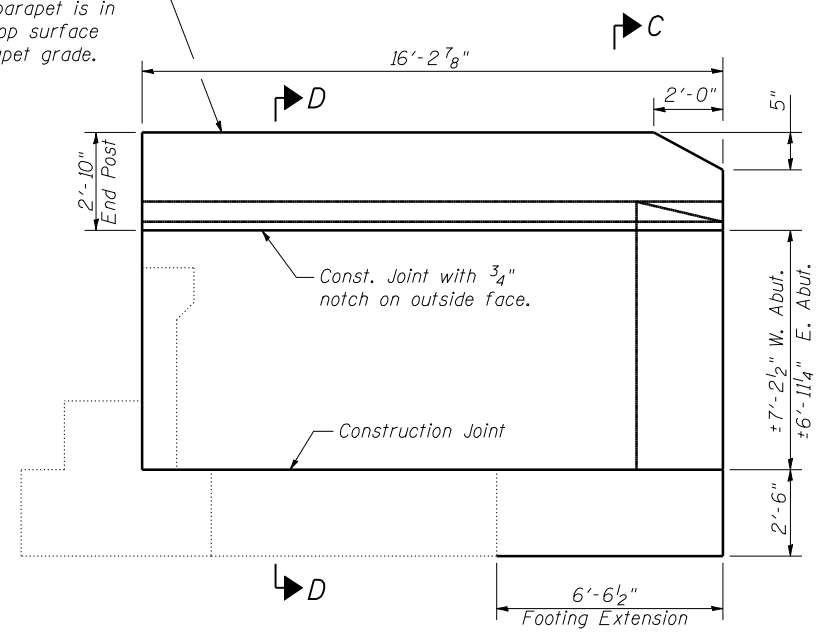
WING WALL ELEVATION

West Abutment, South Wing
East Abutment, North Wing
(Showing Reinforcement)

Notes:
I.F. indicates inside face
O.F. indicates outside face
For Sections C-C and D-D see sheet 20 of 26.
Order v₂(E), v₃(E) & v₄(E) bars full length and cut to fit in field.

* Bars shall be field drilled & epoxy grouted according to Article 584 of the Standard Specifications a min. of 9" into existing structure. d₂(E) thru d₅(E) bars to be field drilled and epoxy grouted 9" min. into existing backwall.

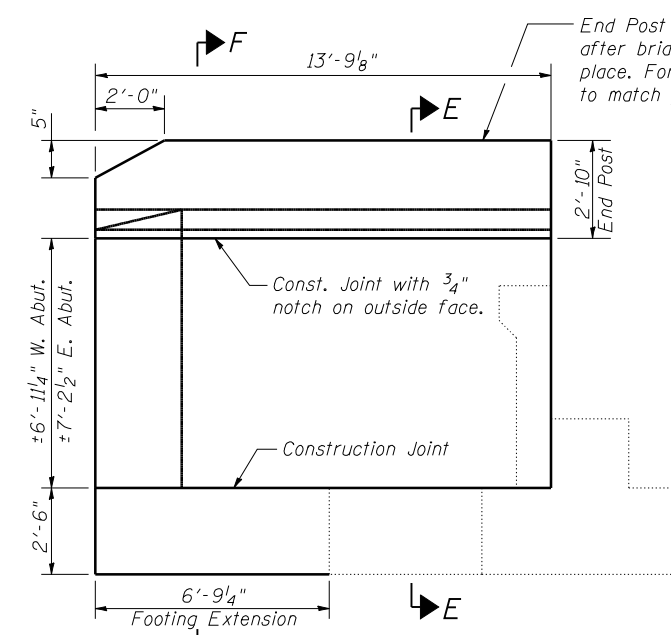
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



WING WALL ELEVATION

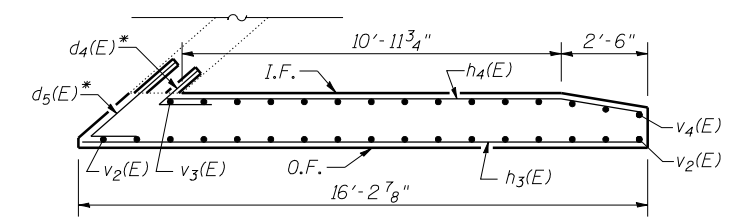
West Abutment, North Wing
East Abutment, South Wing
(Showing Dimensions)

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.

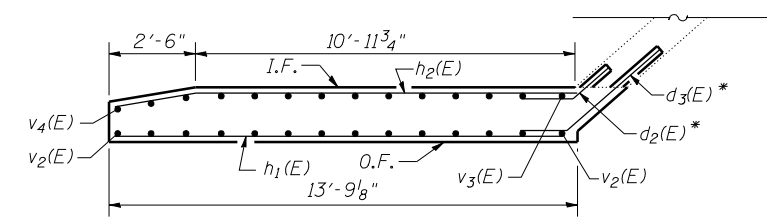


WING WALL ELEVATION

West Abutment, South Wing
East Abutment, North Wing
(Showing Dimensions)



SECTION A-A



SECTION B-B

FILE NAME = \sheet 19 (Abutment dtls).dgn	USER NAME = bselbel	DESIGNED - BB	REVISED -
BERNHARDT LOGGEMULLER & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62450 PHONE (618) 391-4000 FAX (618) 391-4000	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
	PLOT SCALE =	DRAWN - WJS	REVISED -
	PLOT DATE = 1/2/19 PM 12/20/2011	CHECKED - CJF	REVISED -

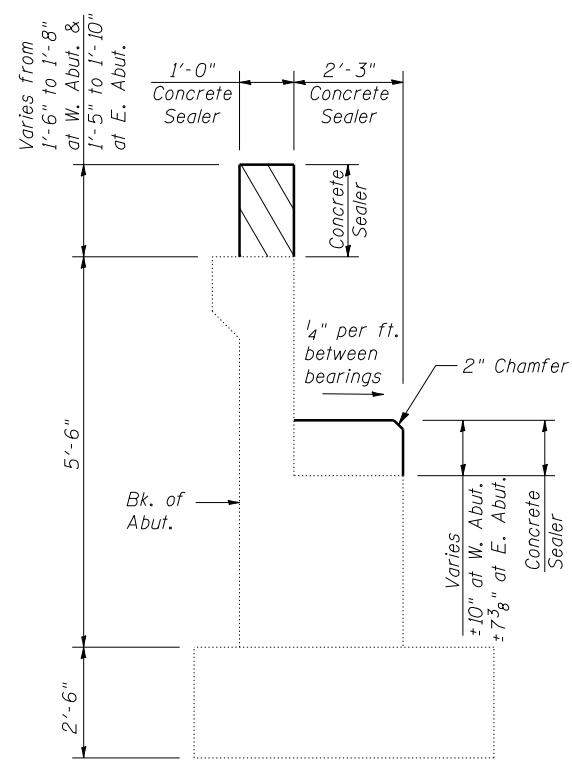
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DETAILS
STRUCTURE NO. 079-0020**

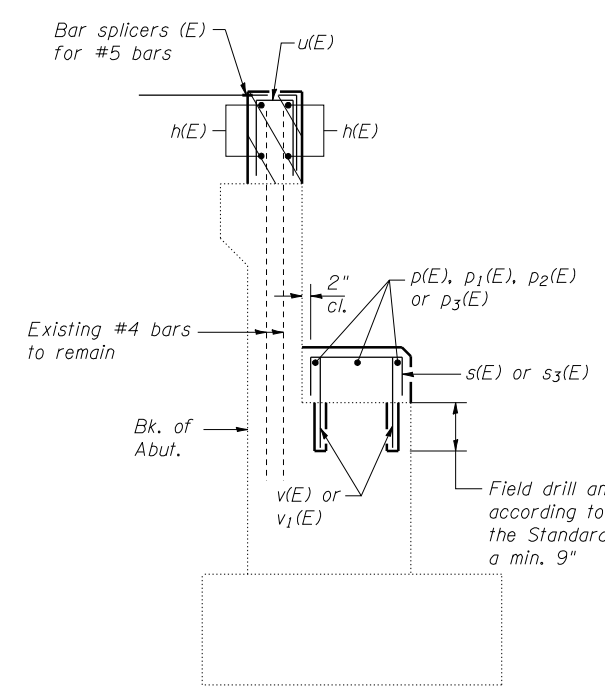
SHEET NO. 19 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	65
CONTRACT NO. 76409				

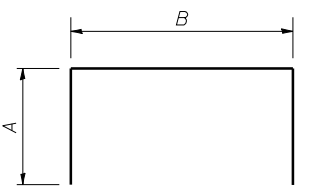
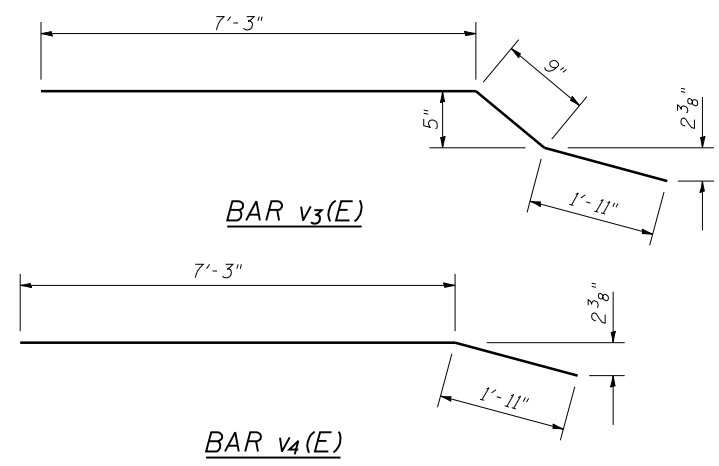
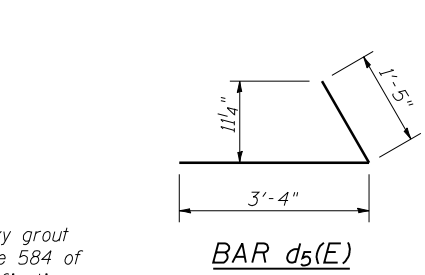
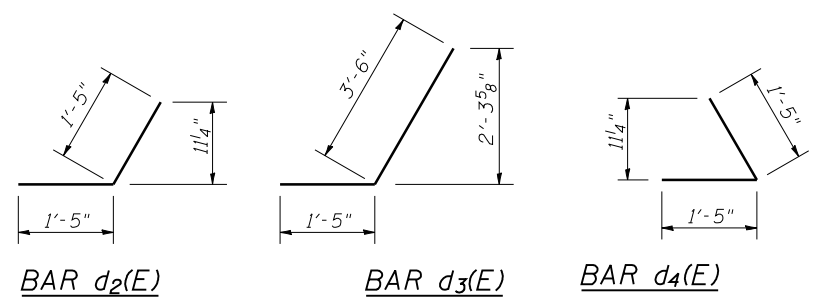
ILLINOIS FED. AID PROJECT



Dimensions at Rt. L
SECTION A-A THRU ABUTMENT
SHOWING OUTLINE

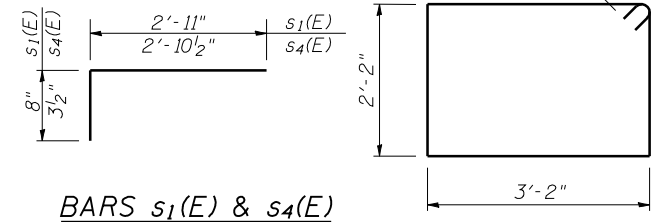


SECTION A-A THRU ABUTMENT
SHOWING REINFORCEMENT



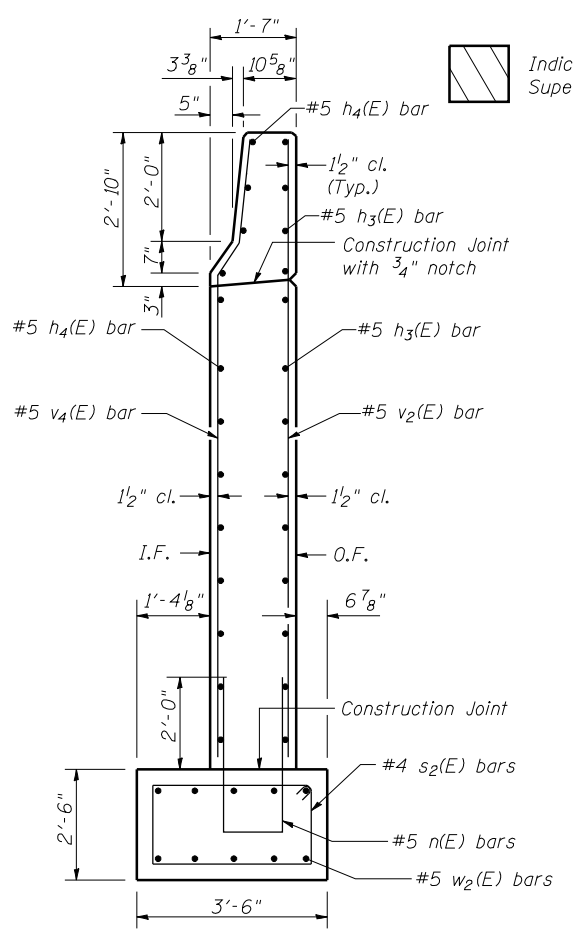
BARS

Bar	A	B
n(E)	3'-3"	1'-3"
s(E)	8"	1'-11"
s3(E)	3 1/2"	1'-11"
u(E)	1'-2"	8"

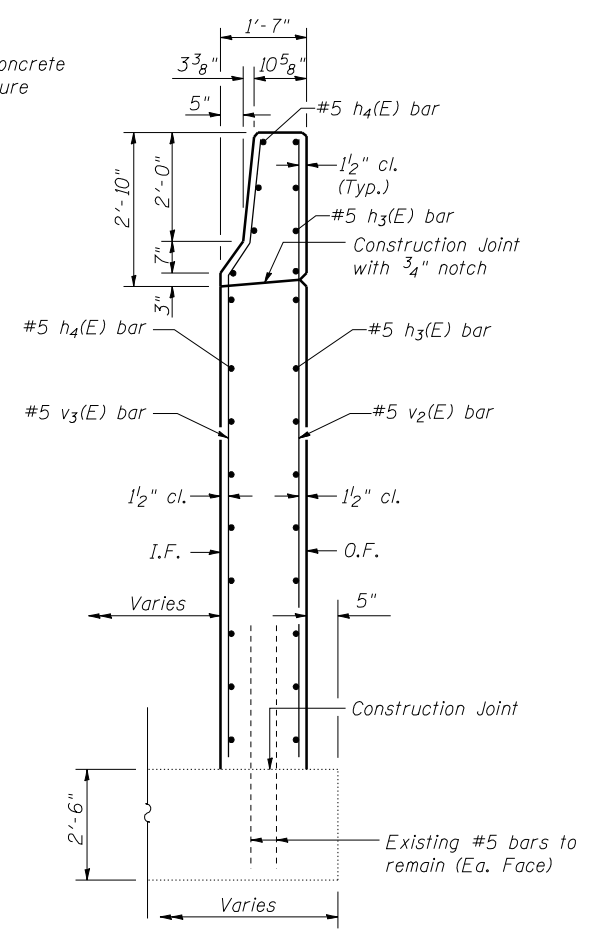


BILL OF MATERIAL
TWO ABUTMENTS

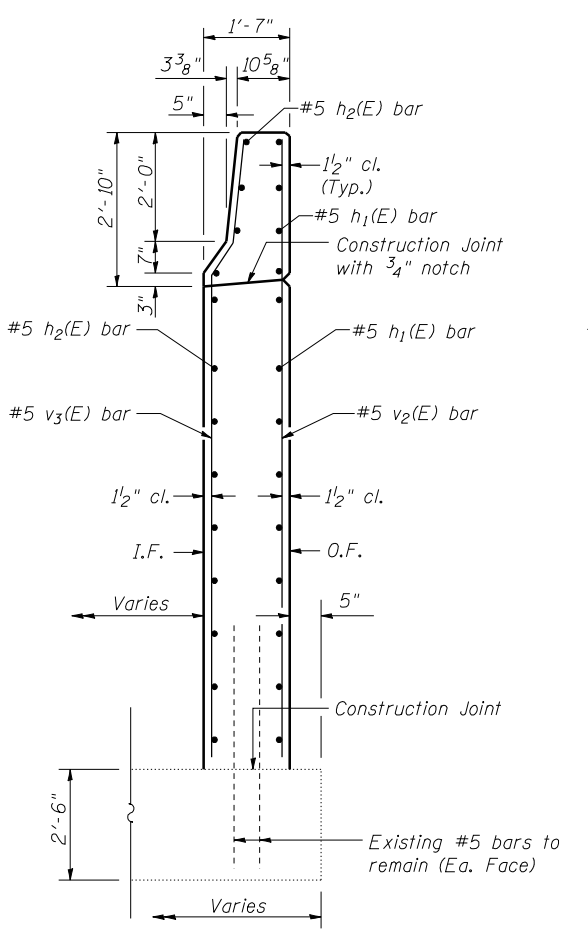
Bar	No.	Size	Length	Shape
d2(E)	16	#5	2'-10"	└─┘
d3(E)	16	#5	4'-11"	└─┘
d4(E)	16	#5	2'-10"	└─┘
d5(E)	16	#5	4'-9"	└─┘
h(E)	8	#6	48'-3"	—
h1(E)	24	#5	12'-11"	—
h2(E)	24	#5	13'-4"	—
h3(E)	24	#5	16'-2"	—
h4(E)	24	#5	13'-9"	—
n(E)	28	#5	7'-9"	└─┘
p(E)	3	#5	12'-11"	—
p1(E)	3	#5	38'-2"	—
p2(E)	3	#5	12'-1"	—
p3(E)	3	#5	39'-0"	—
s(E)	52	#5	3'-3"	└─┘
s1(E)	3	#5	3'-7"	└─┘
s2(E)	32	#4	11'-5"	└─┘
s3(E)	53	#5	2'-6"	└─┘
s4(E)	3	#5	3'-2"	└─┘
u(E)	98	#5	3'-0"	└─┘
v(E)	107	#5	1'-5"	—
v1(E)	109	#5	1'-2"	—
v2(E)	62	#5	9'-10"	—
v3(E)	46	#5	9'-11"	—
v4(E)	12	#5	9'-2"	—
w1(E)	20	#5	7'-4"	—
w2(E)	20	#5	7'-1"	—
Concrete Sealer		Sq. Ft.	550.6	
Structure Excavation		Cu. Yd.	482	
Concrete Structures		Cu. Yd.	46.4	
Reinforcement Bars, Epoxy Coated		Pound	5500	
Bar Splicers		Each	66	



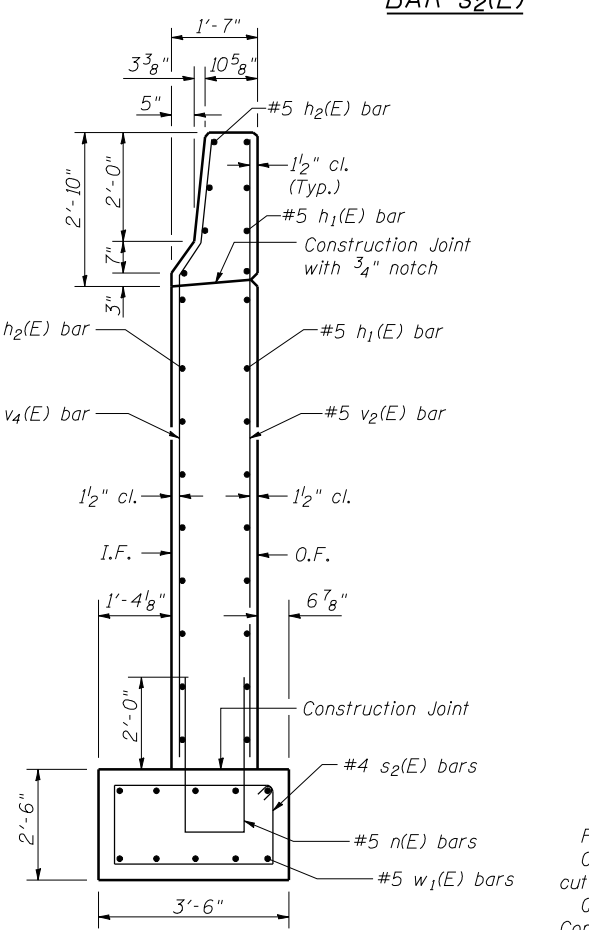
SECTION C-C



SECTION D-D

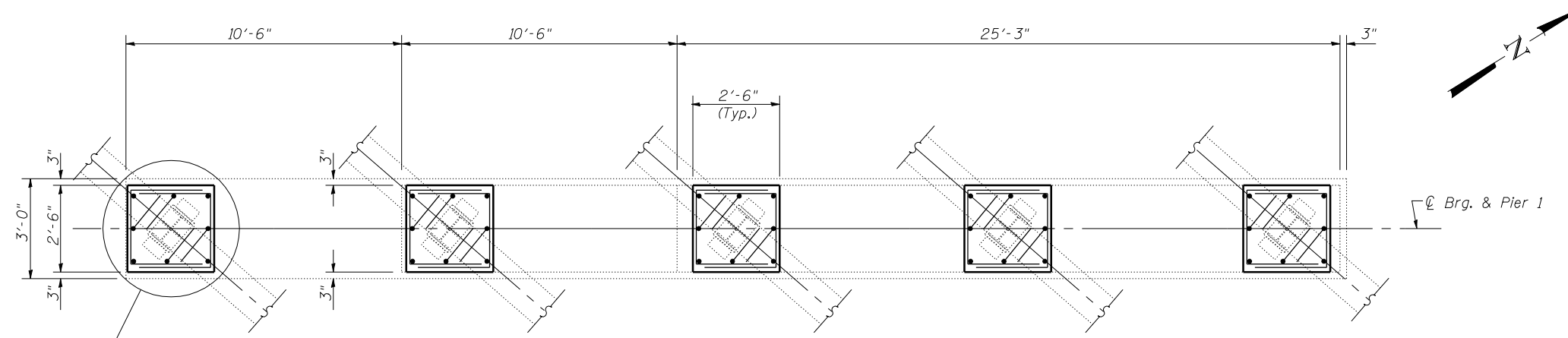


SECTION E-E



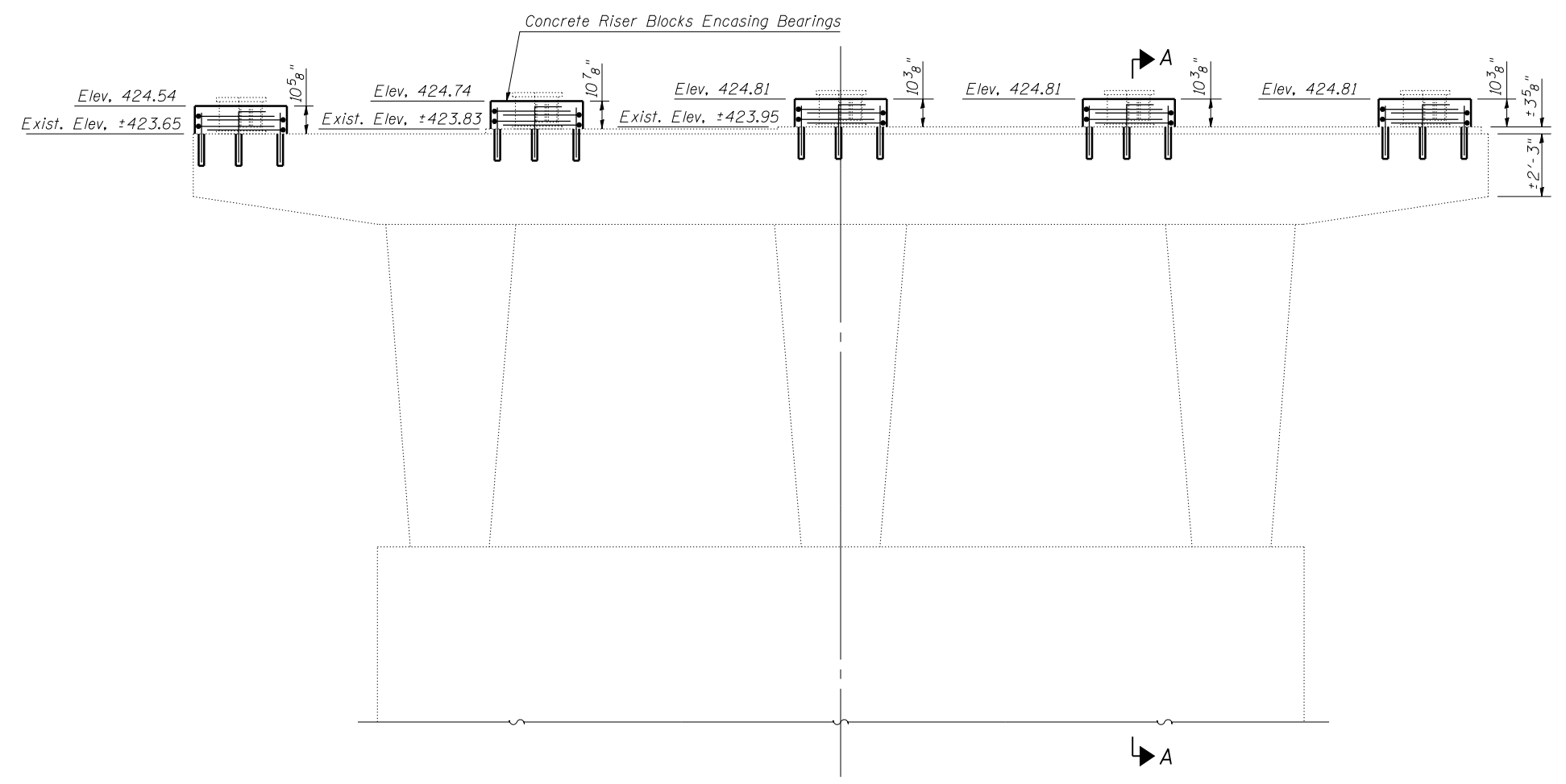
SECTION F-F

For details of Bar Splicers, see sheet 26 of 26. Order v2(E), v3(E) & v4(E) bars full length and cut to fit in field. Quantity of concrete in end post included with Concrete Superstructure on sheet 9 of 26. Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.

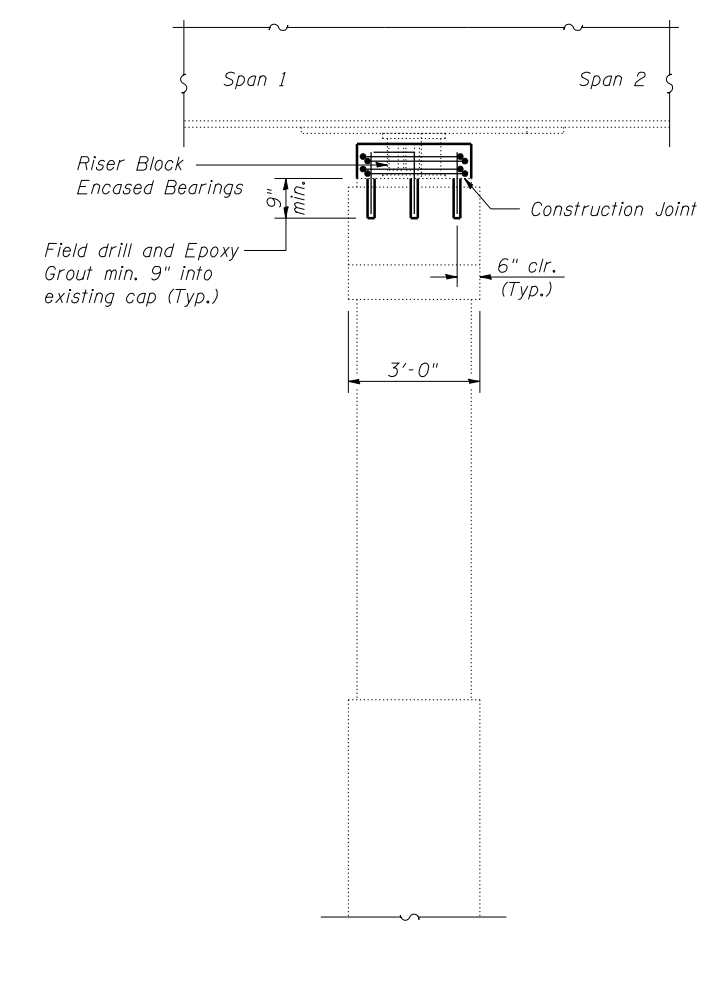


PLAN PIER CAP
(New Side Retainers not shown for clarity)

Notes:
Space reinforcement in Riser Blocks to miss Anchor Bolts.
Bars shall be drilled and grouted according to
Section 584 of the Standard Specifications.



ELEVATION PIER 1
(Looking West)



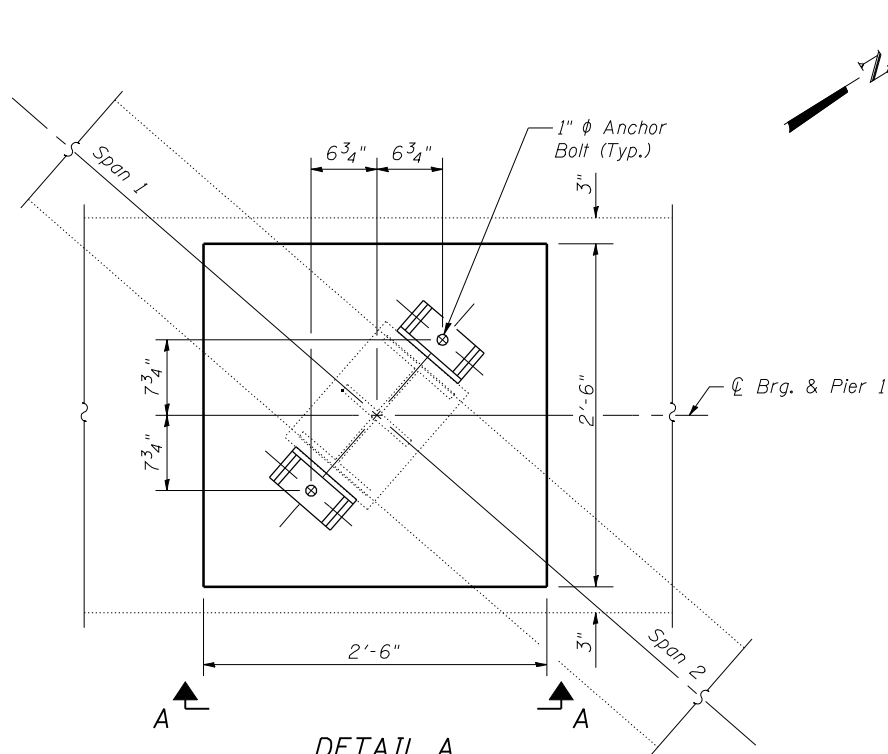
SECTION A-A
(Showing Bearings and Superstructure)

FILE NAME = \sheet 21 (pier 1).dgn	USER NAME = bsetbel	DESIGNED - BB	REVISED -
BERNHARDT LOGGERS & ASSOCIATES, INC. 3 OAK DRIVE MARYVILLE, ILLINOIS 62450 PHONE (618) 395-4000 FAX (618) 395-4000	Illinois Design Firm Number 184,001670	CHECKED - ACS	REVISED -
	PLOT SCALE =	DRAWN - WJS	REVISED -
	PLOT DATE = 11:32:20 PM 12/20/2011	CHECKED - CJF	REVISED -

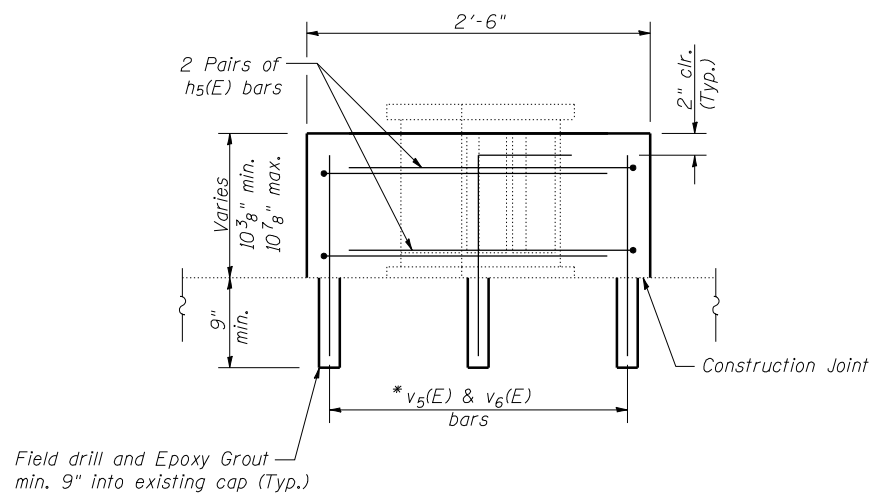
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 1 DETAILS
STRUCTURE NO. 079-0020**
SHEET NO. 21 OF 26 SHEETS

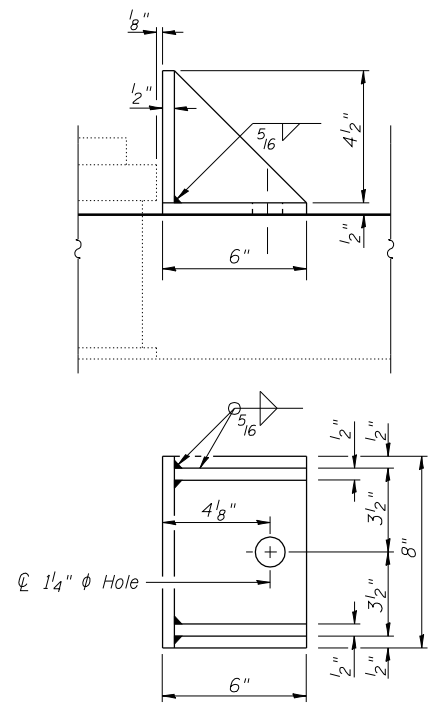
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	67
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				



DETAIL A
(Showing Side Retainers & Anchor Bolt Layout)

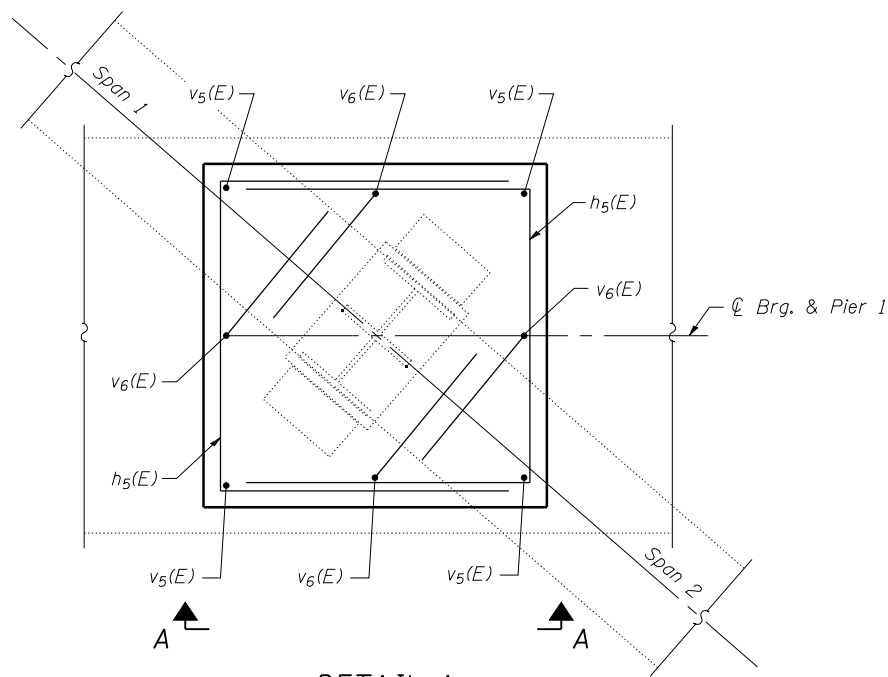


SECTION A-A

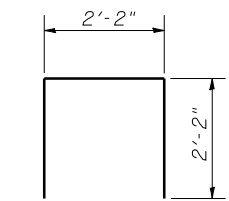


SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (Pier 1)

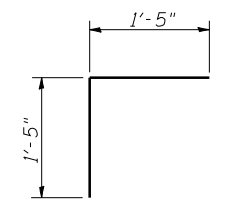
*Bars shall be drilled and grouted according to Section 584 of the Standard Specifications.



DETAIL A
(Showing Reinforcement)
(All reinforcement shown is #5 bars.)



BAR h5(E)



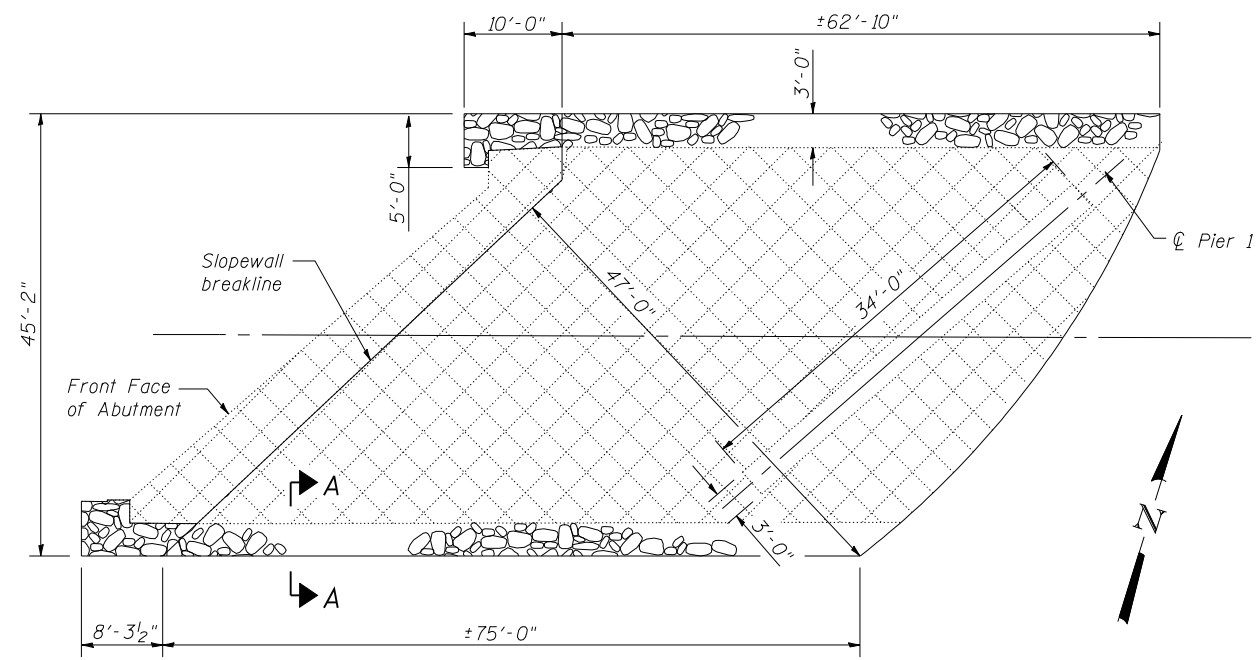
v6(E) BAR

MIN BAR LAP
#5 bar = 2'-0"

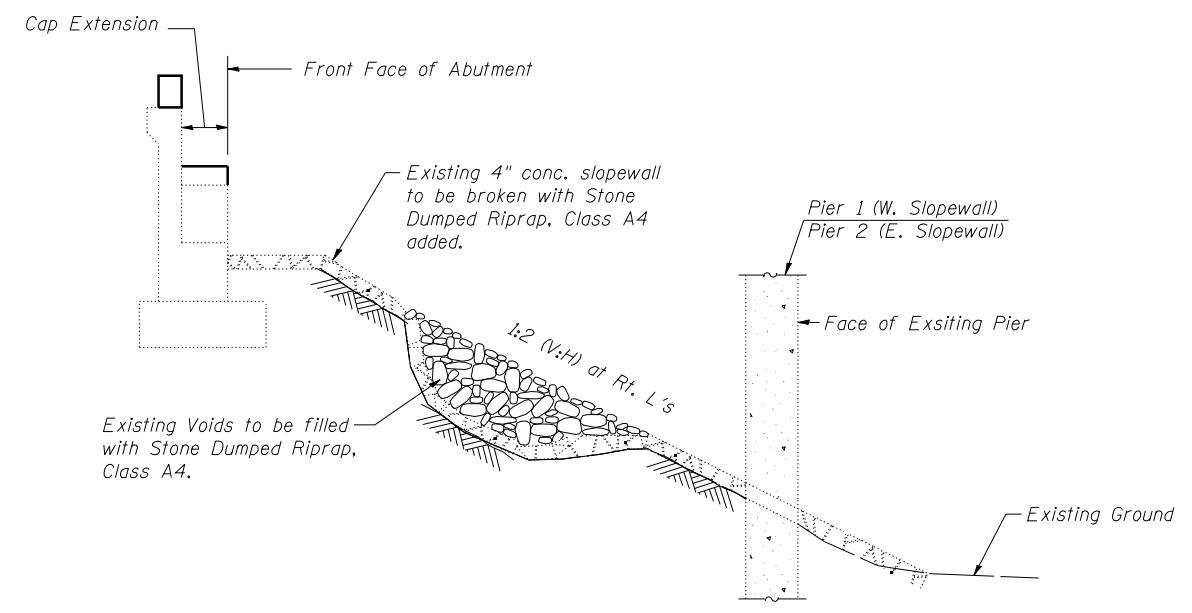
Notes:
Side retainers for Pier 1 shall be paid for as Furnishing & Erecting Structural Steel.

**BILL OF MATERIAL
PIER 1**

Bar	No.	Size	Length	Shape
h5(E)	20	#5	6'-6"	□
v5(E)	20	#5	1'-5"	—
v6(E)	20	#5	2'-10"	┌
Concrete Structures			Cu. Yd.	1.0
Reinforcement Bars, Epoxy Coated			Pound	230
Anchor Bolts, 1"			Each	10
Furnishing and Erecting Structural Steel			Pound	160

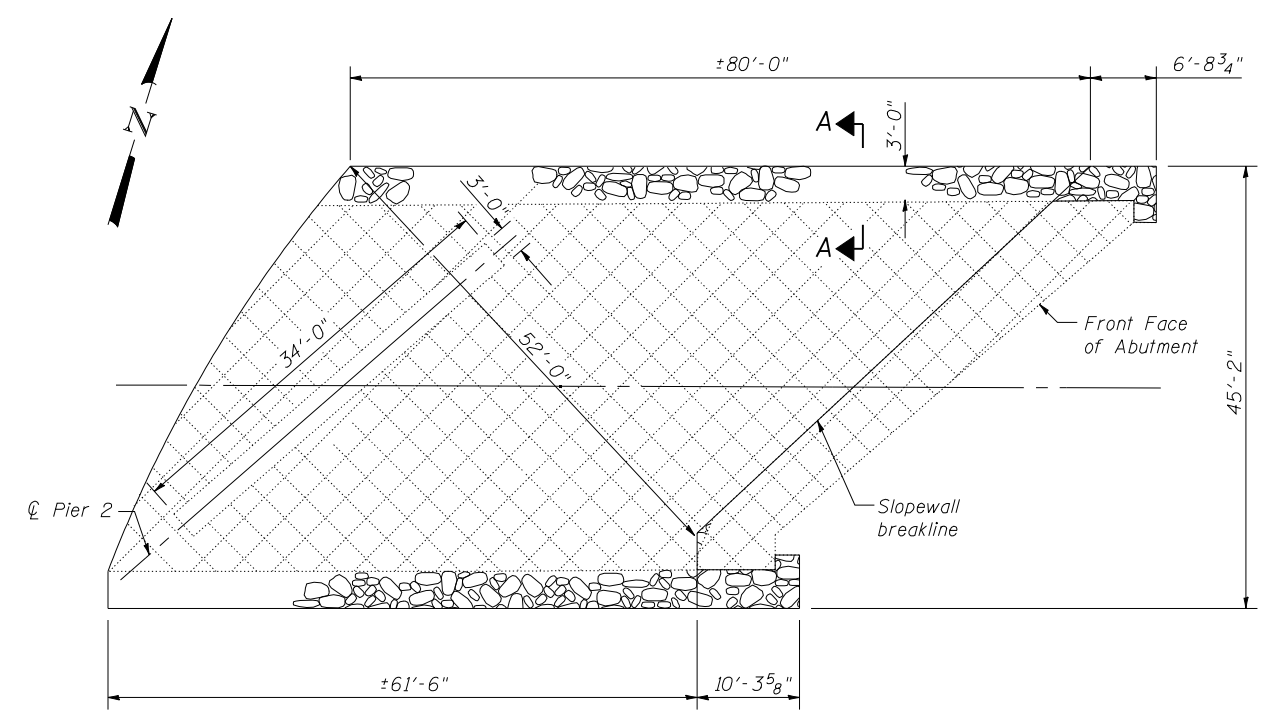


WEST SLOPEWALL PLAN
(Showing Dimensions along Slopewall)

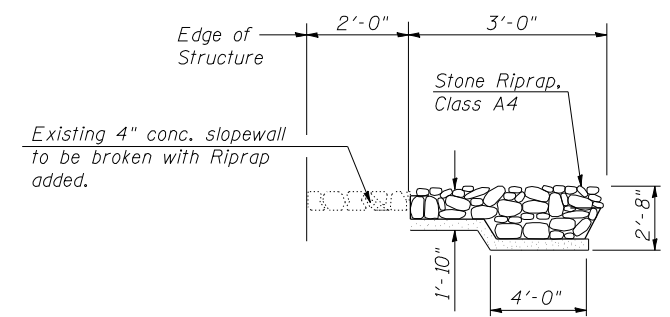


TYPICAL SECTION THRU CONCRETE SLOPEWALL

- Existing 4" conc. slopewall to be broken with Stone Dumped Riprap, Class A4 added
- Stone Riprap, Class A4



EAST SLOPEWALL PLAN
(Showing Dimensions along Slopewall)



SECTION A-A

**BILL OF MATERIAL
TWO SLOPEWALLS**

Item	Unit	Total
Stone Dumped Riprap, Class A4	Tons	300
Slope Wall Breaking	Sq. Yd.	790
Stone Riprap, Class A4	Sq. Yd.	105
Filter Fabric	Sq. Yd.	105

Notes:
The Existing Slope Wall shall be broken and graded with Stone Dumped Riprap, Class A4 according to the Special Provisions Slope Wall Breaking and Stone Dumped Riprap, Class A4.
The quantity of Stone Dumped Riprap, Class A4 has been estimated to be 20% of the Exposed Slopewall and 3'-0" deep. The actual quantity of Stone Dumped Riprap, Class A4 will vary in the field.

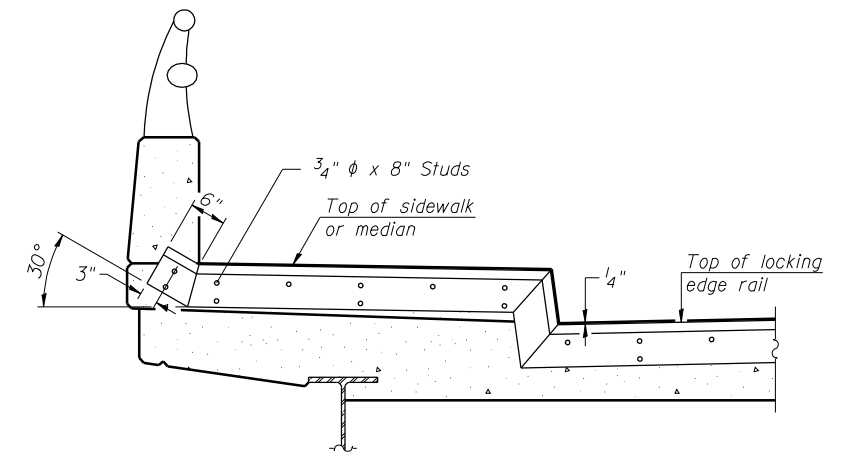
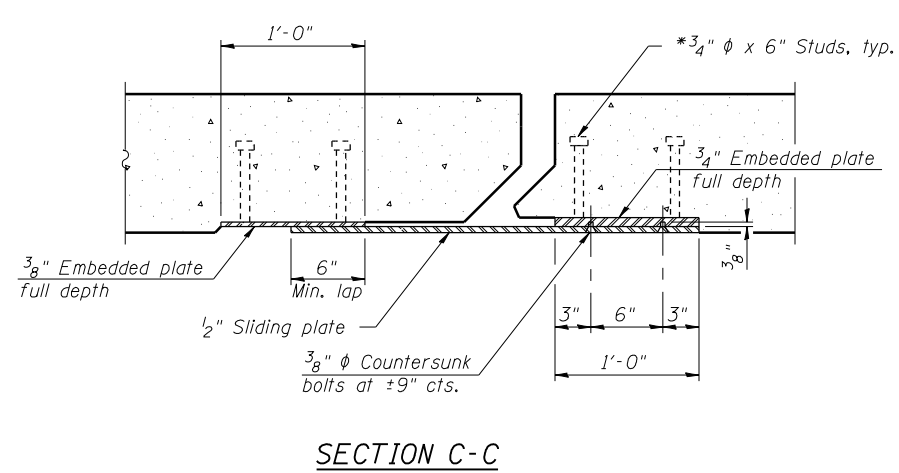
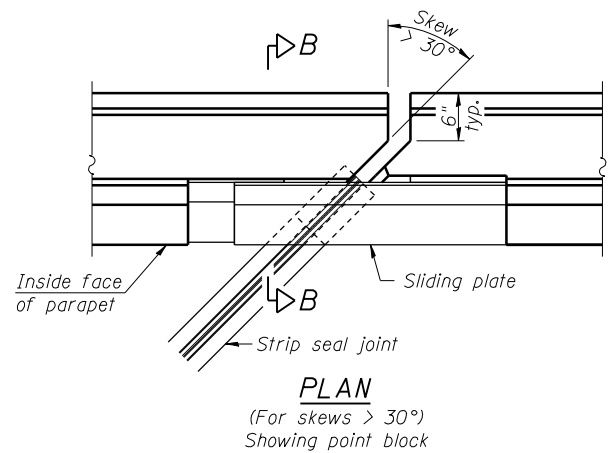
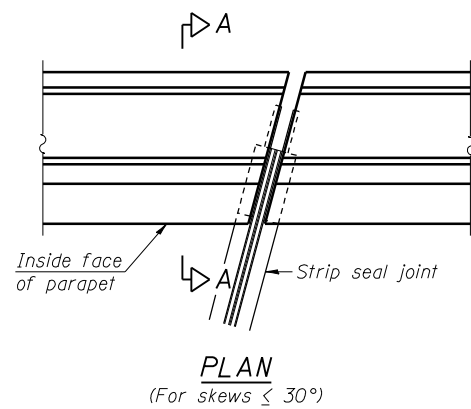
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DESIGNED BY: ILLINOIS DESIGN FIRM NUMBER 184.001670	CHECKED - ACS	DRAWN - WJS	REVISED -
PLOT SCALE =	CHECKED - CJF		
PLOT DATE = 10/4/20 PM 12/20/2011			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SLOPEWALL DETAILS
STRUCTURE NO. 079-0020**

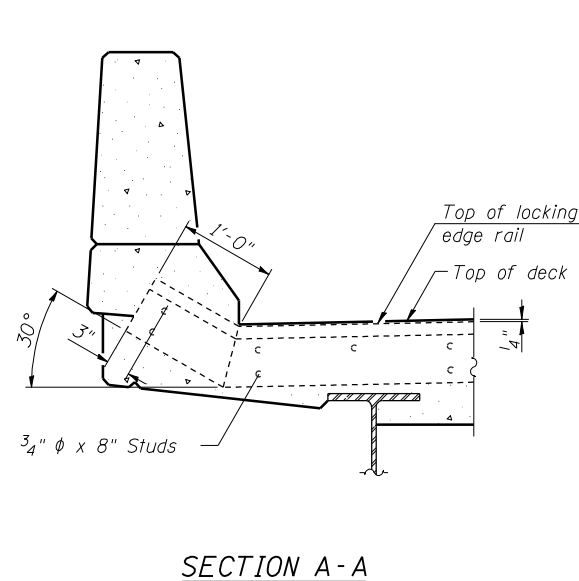
SHEET NO. 23 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-11	RANDOLPH	72	69
CONTRACT NO. 76409				
ILLINOIS FED. AID PROJECT				

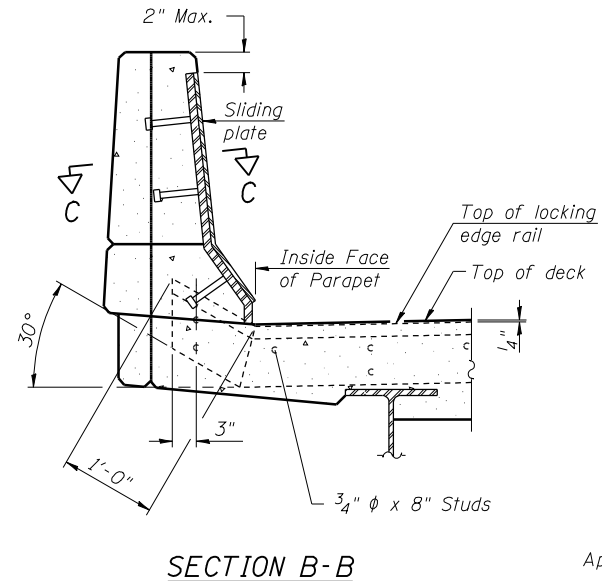


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

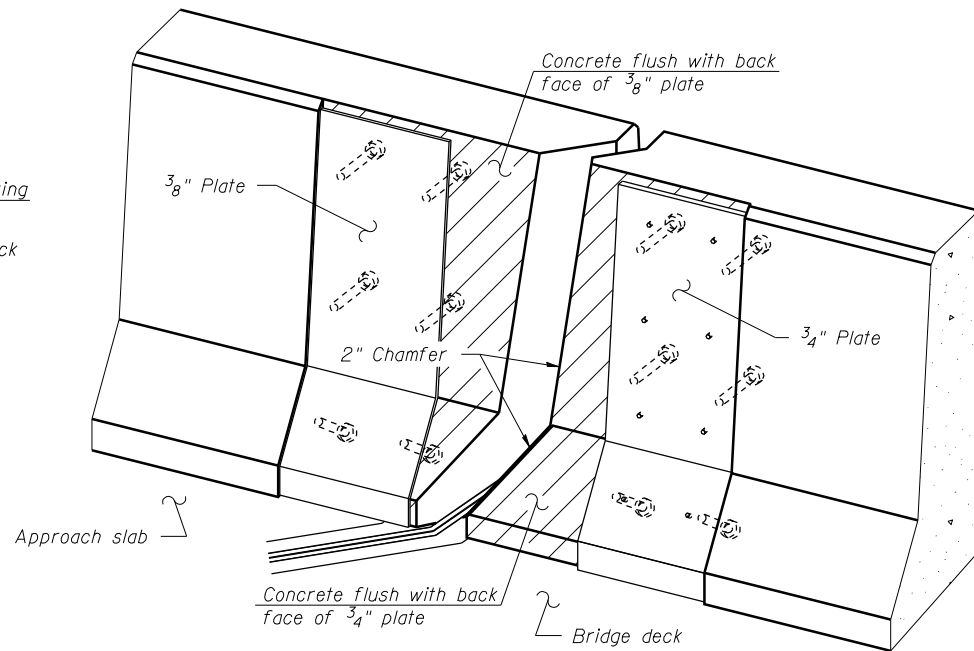
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



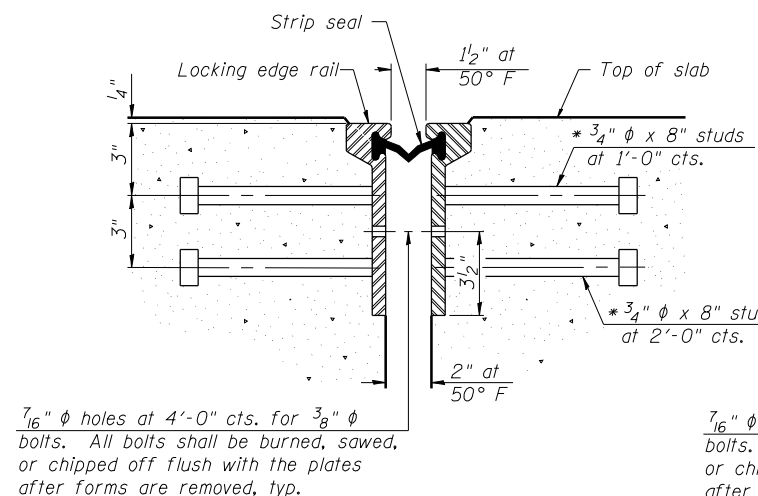
SECTION A-A



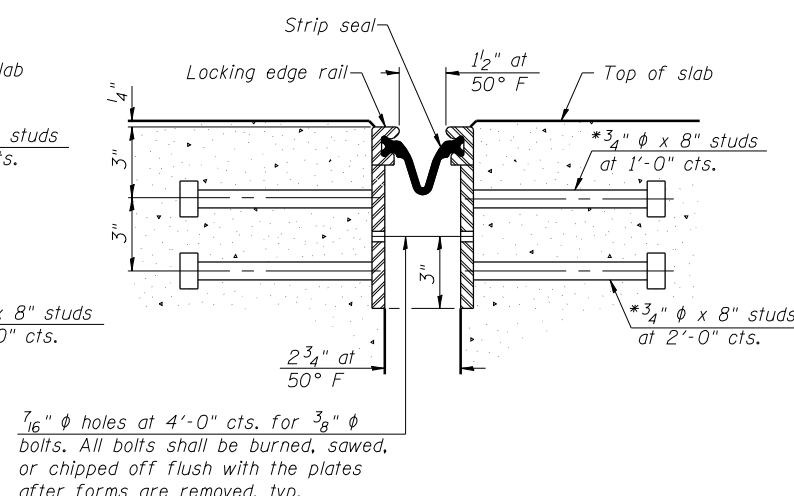
SECTION B-B



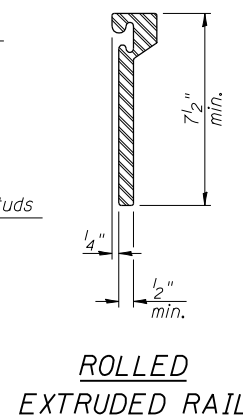
TRIMETRIC VIEW (Showing back plates only)



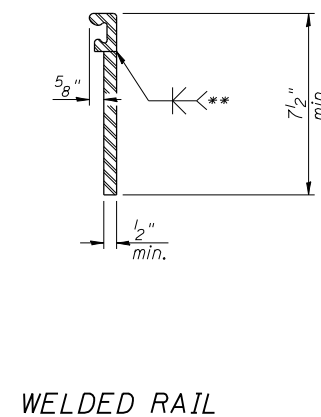
SECTION THRU ROLLED RAIL JOINT



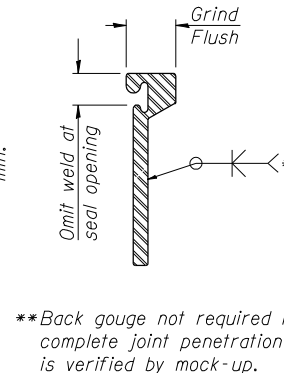
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews > 30 degrees included in the cost of Preformed Joint Strip Seal.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	102

EJ-SSJ

7-1-10

FILE NAME = \sheet 24 (pfs)tdgn

USER NAME = bselbel

DESIGNED -

REVISED -

Illinois Design Firm Number 184.001670

CHECKED -

REVISED -

PLOT SCALE =

DRAWN - WJS

REVISED -

PLOT DATE = 11/4/51 PM 12/20/2011

CHECKED - CJF

REVISED -

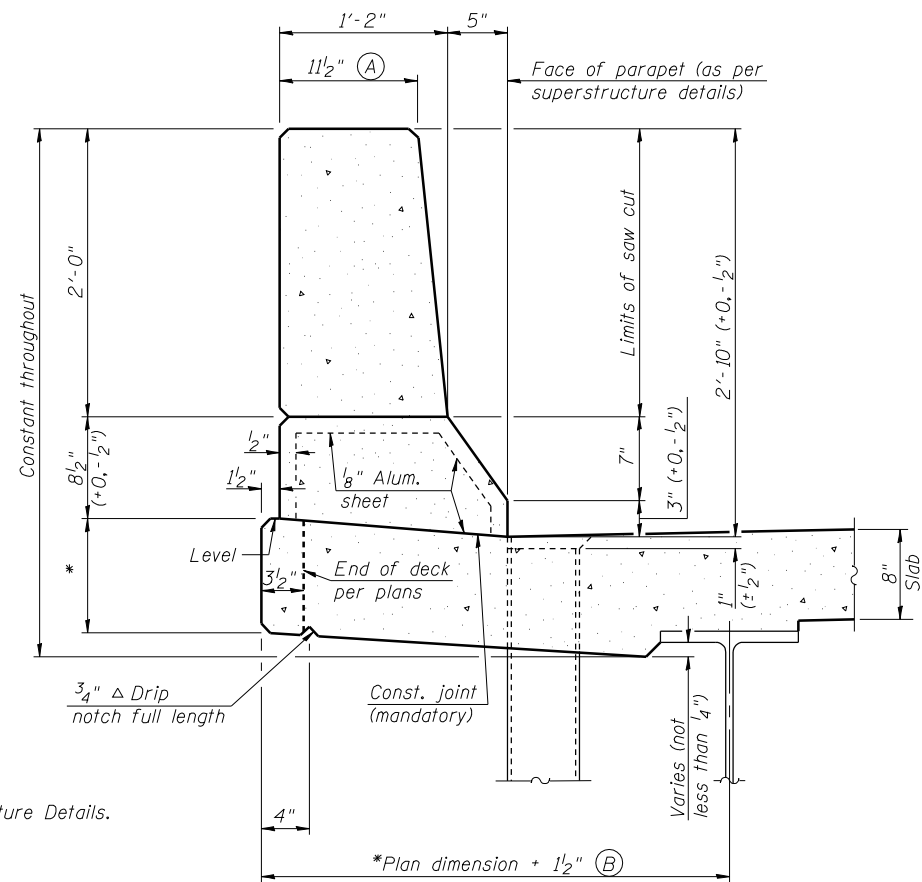
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 079-0020**

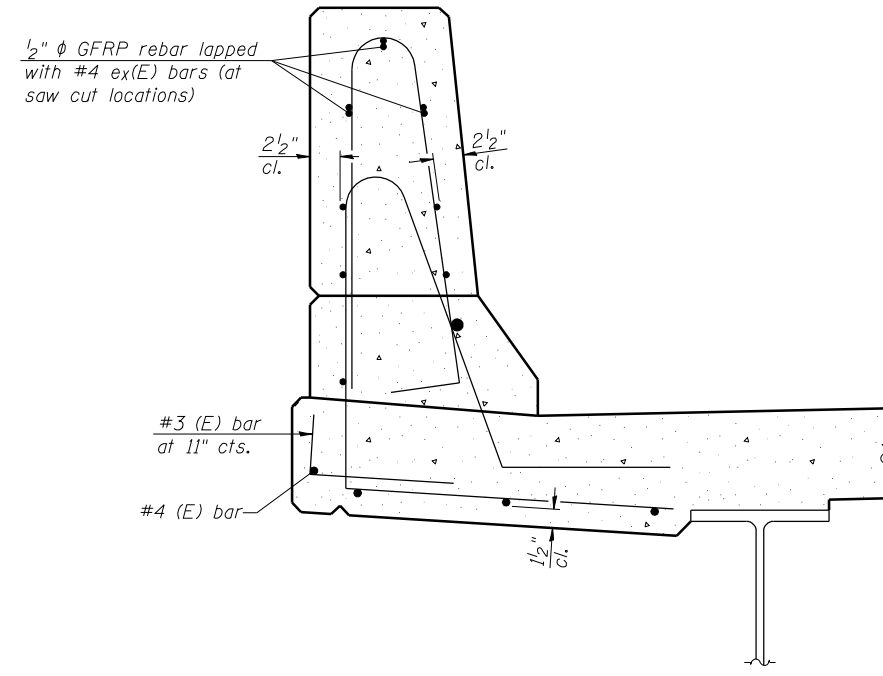
SHEET NO. 24 OF 26 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
858	12VB-II	RANDOLPH	72	70
				CONTRACT NO. 76409

ILLINOIS FED. AID PROJECT

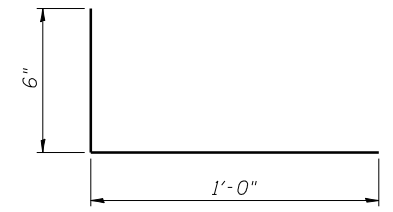


SECTION
(Showing dimensions)

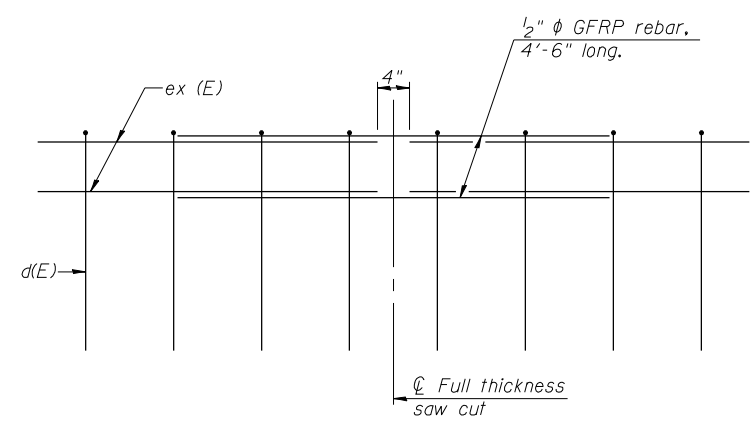


SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES
 All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.
 Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.
 Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR

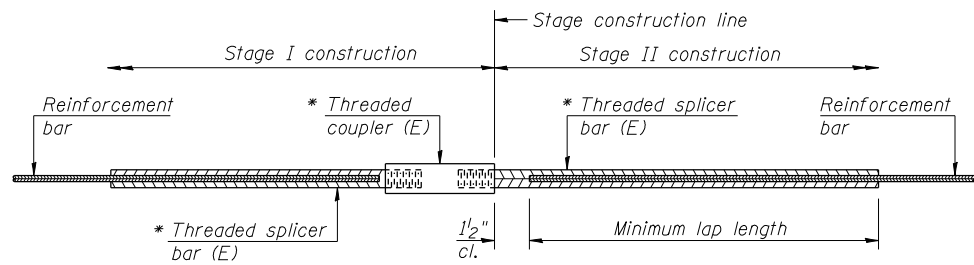


GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

* See Superstructure Details.

SFP-34 7-1-10

FILE NAME = \sheet 25 (parpet sf dt)1.dgn USER NAME = bselbel DESIGNED - CHECKED - DRAWN - WJS CHECKED - CJF PLOT SCALE = PLOT DATE = 11:53:23 AM 12/20/2011	USER NAME = bselbel Illinois Design Firm Number 184,001670 DRAWN - WJS CHECKED - CJF	DESIGNED - CHECKED - DRAWN - WJS CHECKED - CJF	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 079-0020	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						858	12VB-11	RANDOLPH	72	71
SHEET NO. 25 OF 26 SHEETS						CONTRACT NO. 76409				
						ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

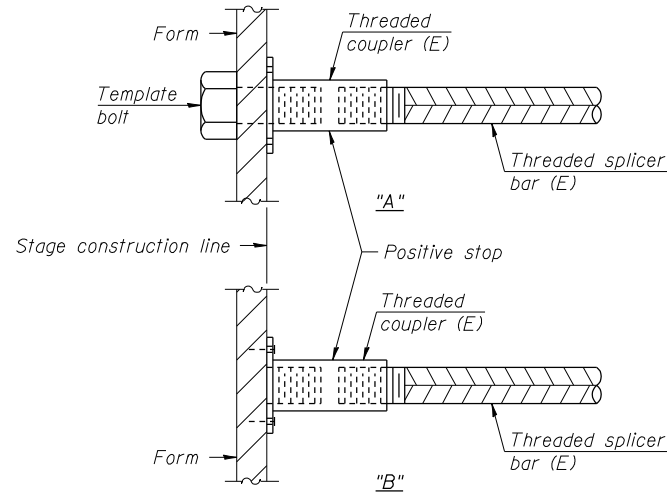
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

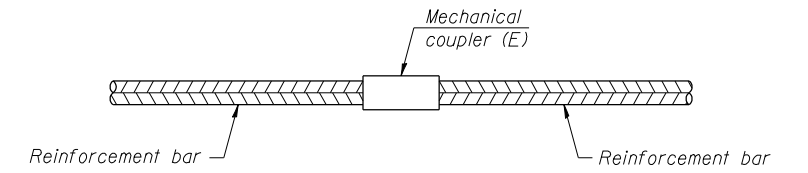
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



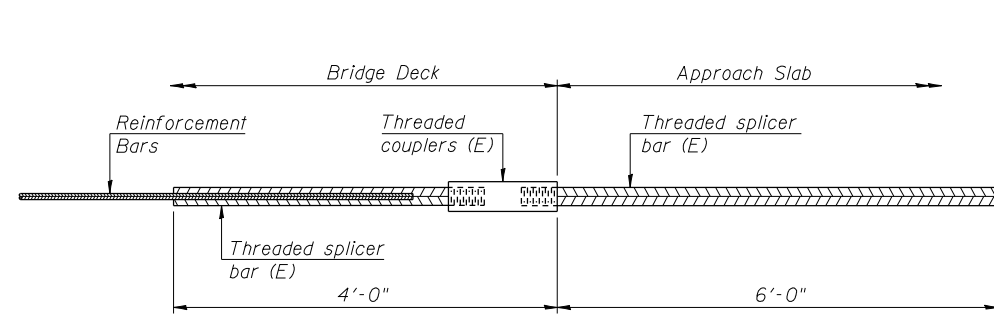
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E): Indicates epoxy coating.



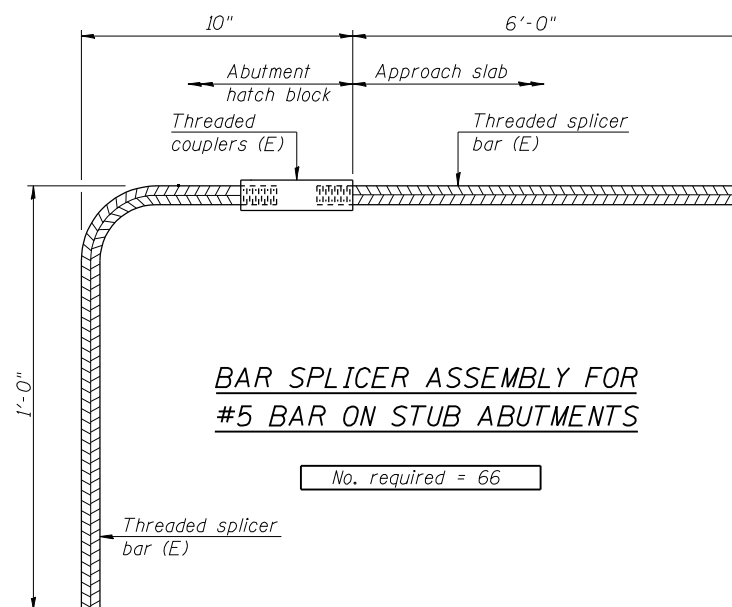
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 66

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

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