

PROPOSED HIGHWAY PLANS

O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)

SECTION 34B-2

PROJECT NO. ACF-0881 (019)

STRUCTURE REPLACEMENT OVER POND CREEK
JOHNSON COUNTY

C-99-055-11

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	1
		ILLINOIS	CONTRACT NO. 78267	

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES AND MIXTURE REQUIREMENTS
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- 26-37 ROADWAY CROSS SECTIONS

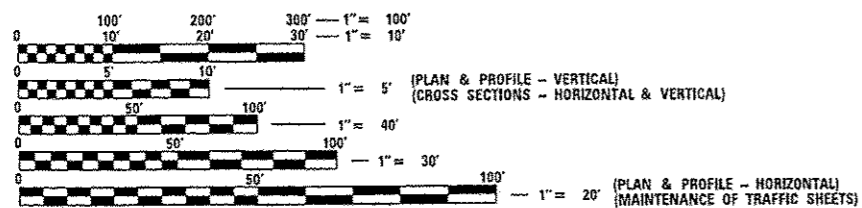
IDOT HIGHWAY STANDARDS

000001-06	701001-02
001001-02	701006-05
001006	701301-04
280001-07	701326-04
406201-01	701901-02
515001-03	B.L.R. 21-9
630001-10	B.L.R. 27-1
631011-09	
635006-03	
635011-02	
60101-01	

HIGHWAY CLASSIFICATION / TRAFFIC DATA

O.R. 163 OFF F.A.P. RTE. 881 (U.S. RTE. 45)
FUNCTIONAL CLASS: LOCAL ROAD (NON-URBAN)
DESIGN SPEED: 25 MPH
POSTED SPEED: 25 MPH
ADT: 10 (2014), 15 (2034)
DHV: 2 (2014)
0.0% TRUCKS

TOWNSHIP : BURNSIDE



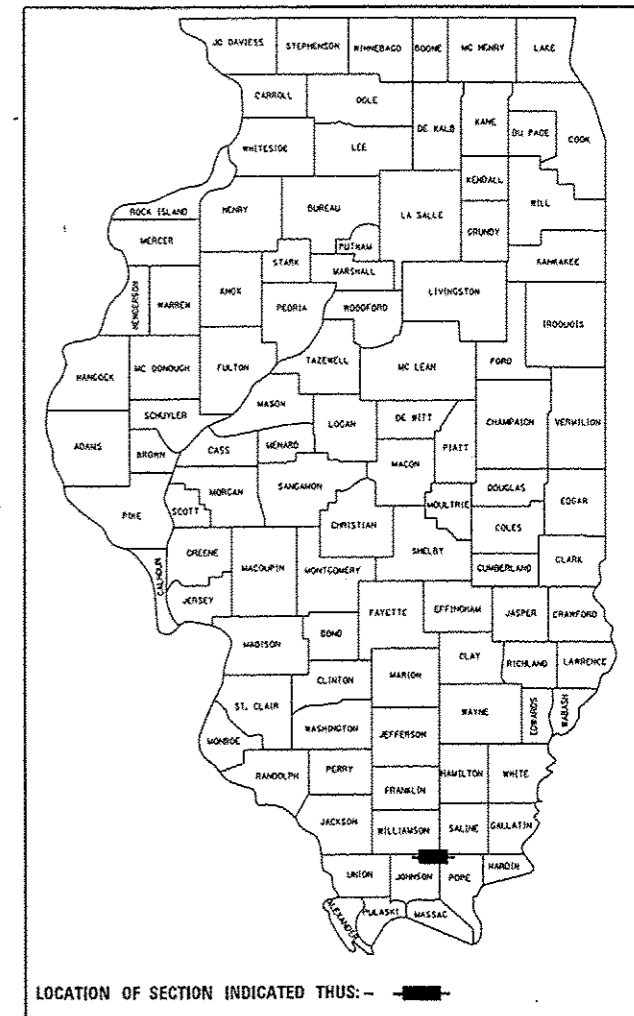
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

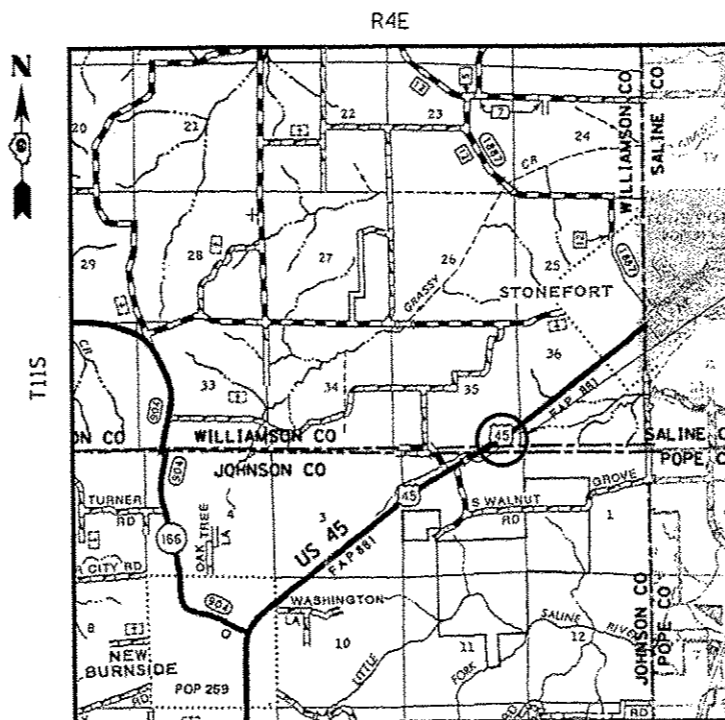
PROJECT MANAGER: DAVID PICHE, P.E. (618) 351-5227

CONTRACT NO. 78267

D-99-044-11



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -



LOCATION MAP



NET LENGTH = 225.14 FT. = 0.043 MILE

PROP. S.N. 044-0062
44' LONG SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE (17" DEPTH) CARRYING O.R. 163 OVER POND CREEK STA. 50+91.81, 0.50% GRADE, 0° SKEW ROADWAY IMPROVEMENTS, O.R. 163 STA. 50+14.86 TO STA. 52+40.00 CHANNEL REGRADING, POND CREEK STA. 828+00.00 TO STA. 830+00.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 21 2014
Jeffrey S. Keiser
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 21 2014
John D. Baranzelli, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

March 21 2014
Omer Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

SIGNATURE: Brian M. Bond
DATE SIGNED: 12/4/13
LICENSE EXPIRATION DATE: 11/30/15

SEAL

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

1. ALL STATION AND OFFSET REFERENCES ARE TO THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.
2. ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.
3. ANY REFERENCE WITHIN THESE PLANS TO A STANDARD SHALL BE INTERPRETED TO MEAN THE EDITION INDICATED BY THE SUB-NUMBER LISTED ON THIS SHEET OR THE COPY INCLUDED IN THESE PLANS.
4. PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF WORK. THE CONTRACTOR, HOWEVER, WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
5. STRUCTURES WITHIN PROJECT LIMITS

STRUCTURE NO.	OPERATING RATING	INVENTORY RATING	POSTING
S.N. 100-0058 (EXISTING STRUCTURE TO BE REMOVED AND REPLACED AS S.N. 044-0062)	HS 20.0	HS 12.0	N/A
6. THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.
7. WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUT SHALL BE CONSIDERED INCLUDED IN ITEM BEING CONSTRUCTED.
8. FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU.YD. (112 LBS/SQ.YD.-IN)
ALL AGGREGATE	2.05 TONS/CU.YD.
BITUMINOUS MATERIALS: ON PAVEMENT	0.09 GAL./SQ.YD.
RIPRAP	1.50 TONS/CU.YD.
9. COMMITMENTS:
NONE IDENTIFIED AS OF 1/31/2014.

MIXTURE REQUIREMENTS

LOCATION(S):	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE, MIX C, N50
AC/PG:	PG64-22
RAP % (MAX.):	SEE SPECIAL PROVISIONS
DESIGN AIR VOIDS:	4.0%, 50 CYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 mm
FRICITION AGGREGATE	C SURFACE

PREPARED BY: Joe Blaupier
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Carris Wilson
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: Carl [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: [Signature]
DISTRICT PROGRAM IMPLEMENTATION ENGINEER

EXAMINED BY: Dave [Signature]
DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: [Signature]
DISTRICT MATERIALS ENGINEER

DATE _____

FILE NAME *	USER NAME * Rob Heady	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND MIXTURE REQUIREMENTS O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)				O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default		PLOT SCALE * 40.0000 "/in.	CHECKED - JMM		REVISED -	CONTRACT NO. 78267							
		PLOT DATE * 11/26/2013	DATE - DECEMBER 2013		REVISED -	ILLINOIS FED. AID PROJECT							

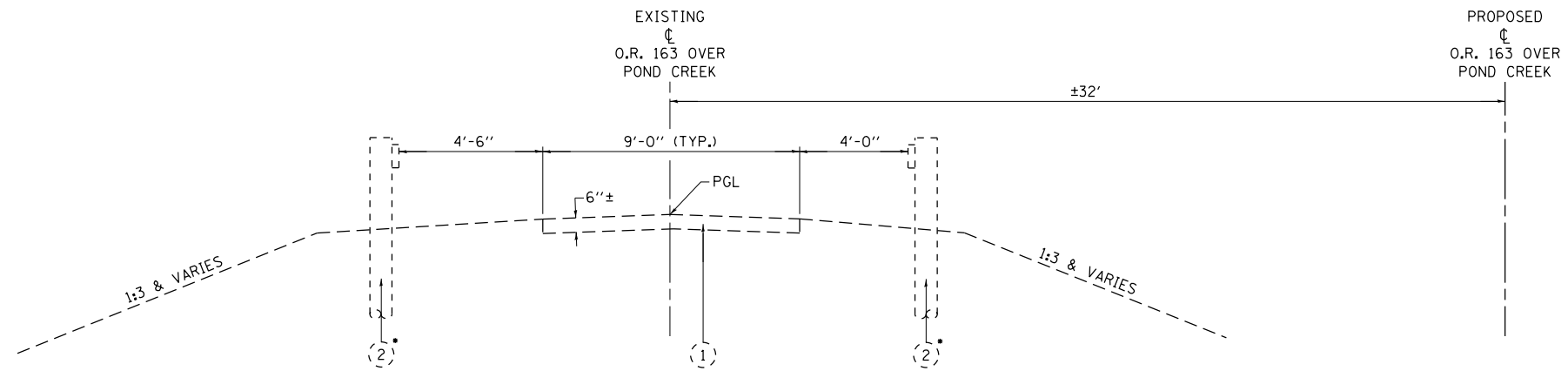
SUMMARY OF QUANTITIES		FUNDING - STP 80% FEDERAL, 20% STATE	
		CONSTRUCTION CODE - 0011	
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.25
20200100	EARTH EXCAVATION	CU YD	83
20300100	CHANNEL EXCAVATION	CU YD	750
25000200	SEEDING, CLASS 2	ACRE	0.50
25000350	SEEDING, CLASS 7	ACRE	0.50
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45
25000500	PHOSPHOROUS FERTILIZER NUTRIENT	POUND	45
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1
25100115	MULCH, METHOD 2	ACRE	0.50
25100630	EROSION CONTROL BLANKET	SO YD	770
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100
28000305	TEMPORARY DITCH CHECKS	FOOT	40
28000500	INLET AND PIPE PROTECTION	EACH	1

SUMMARY OF QUANTITIES		FUNDING - STP 80% FEDERAL, 20% STATE	
		CONSTRUCTION CODE - 0011	
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
28100107	STONE RIPRAP, CLASS A4	SO YD	379
28200200	FILTER FABRIC	SO YD	379
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	256
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	12
44004000	PAVED DITCH REMOVAL	FOOT	25
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	185
50300225	CONCRETE STRUCTURES	CU YD	68.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	7.0
50300280	CONCRETE ENCASEMENT	CU YD	4.2
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SO FT	777
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	8,990
50900305	STEEL RAILING, TYPE T1	FOOT	96
51201610	FURNISHING STEEL PILES HP12X63	FOOT	277

SUMMARY OF QUANTITIES		FUNDING - STP 80% FEDERAL, 20% STATE	
		CONSTRUCTION CODE - 0011	
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
51202305	DRIVING PILES	FOOT	277
51203610	TEST PILE STEEL HP12X63	EACH	1
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SO YD	77
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	216
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	51.5
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	31
67100100	MOBILIZATION	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DAY	4
78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
X0327301	RELOCATE EXISTING MAILBOX	EACH	1
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	136

SUMMARY OF QUANTITIES		FUNDING - STP 80% FEDERAL, 20% STATE	
		CONSTRUCTION CODE - 0011	
CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	70

FILE NAME : L:\1001\080610\10\12\Draw\Sheets\09702	USER NAME : Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		D.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Sheet 2	PLOT SCALE = 100.0000' / 1" =	DRAWN - BMB	REVISED -		163	348-2	JOHNSON	37	4		
	PLOT DATE = 12/10/2013	CHECKED - JMM	REVISED -		O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)		CONTRACT NO. 78267		ILLINOIS FED. AID PROJECT		
		DATE - DECEMBER 2013	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.



EXISTING TYPICAL ROADWAY APPROACH SECTION

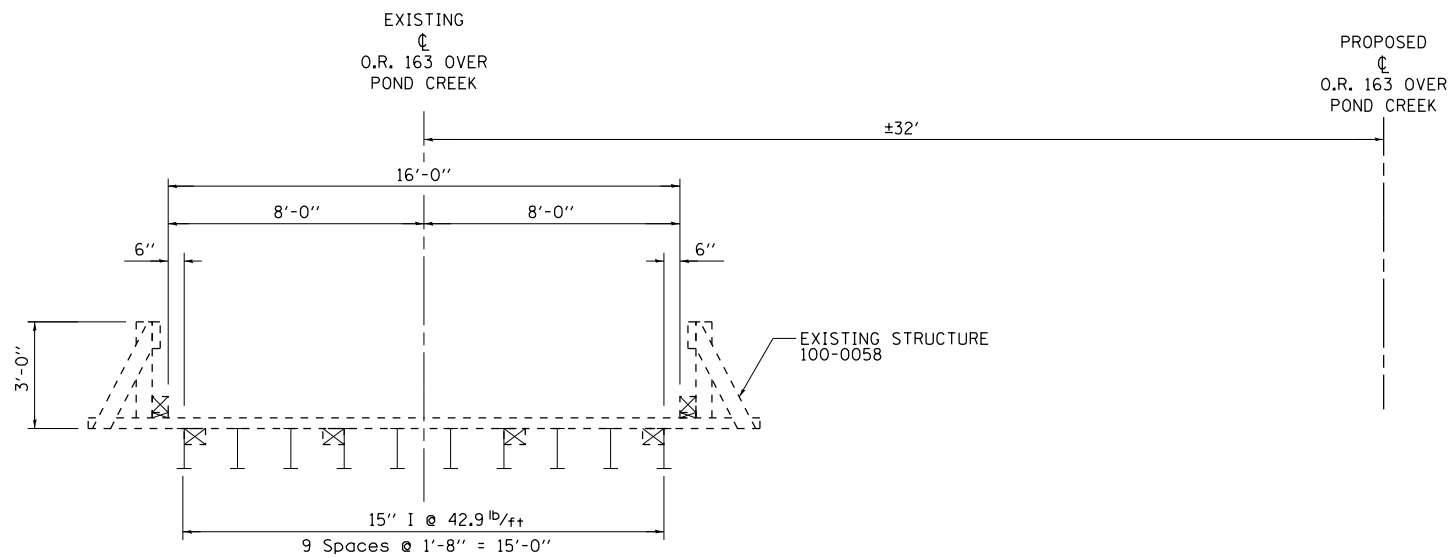
(LOOKING SOUTH)

STA. 0+15.38 TO STA. 0+68.38
 STA. 1+01.62 TO STA. 2+53.84

LEGEND

- (1) EXISTING AGGREGATE DRIVE
- (2) EXISTING WOODEN SUPPORT RAIL / STEEL PLATE BEAM GUARDRAIL

*NOTE: STEEL PLATE BEAM GUARDRAIL IS FROM STA. 0+36.47 TO STA. 0+52.32.
 WOODEN SUPPORT RAIL IS FROM STA. 0+52.32 TO STA. 1+15.65.

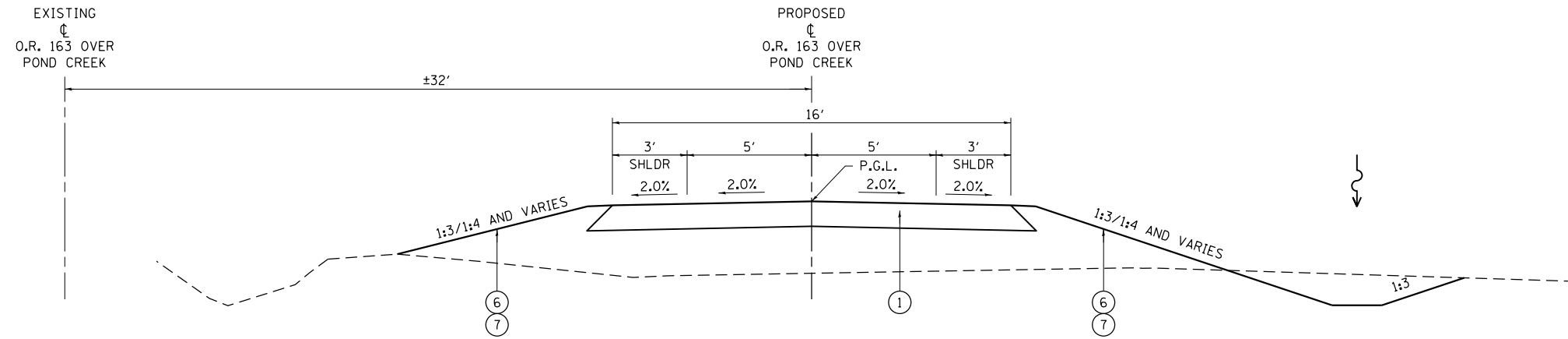


EXISTING TYPICAL SECTION AT STRUCTURE

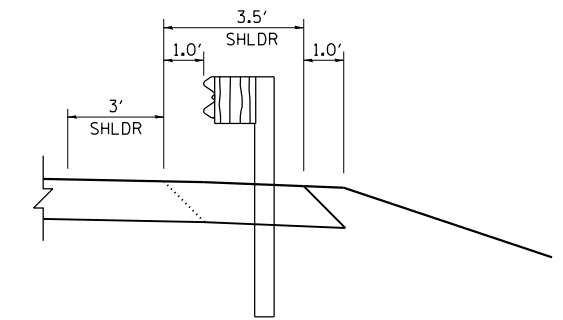
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STA. 0+68.38 TO STA. 1+01.62

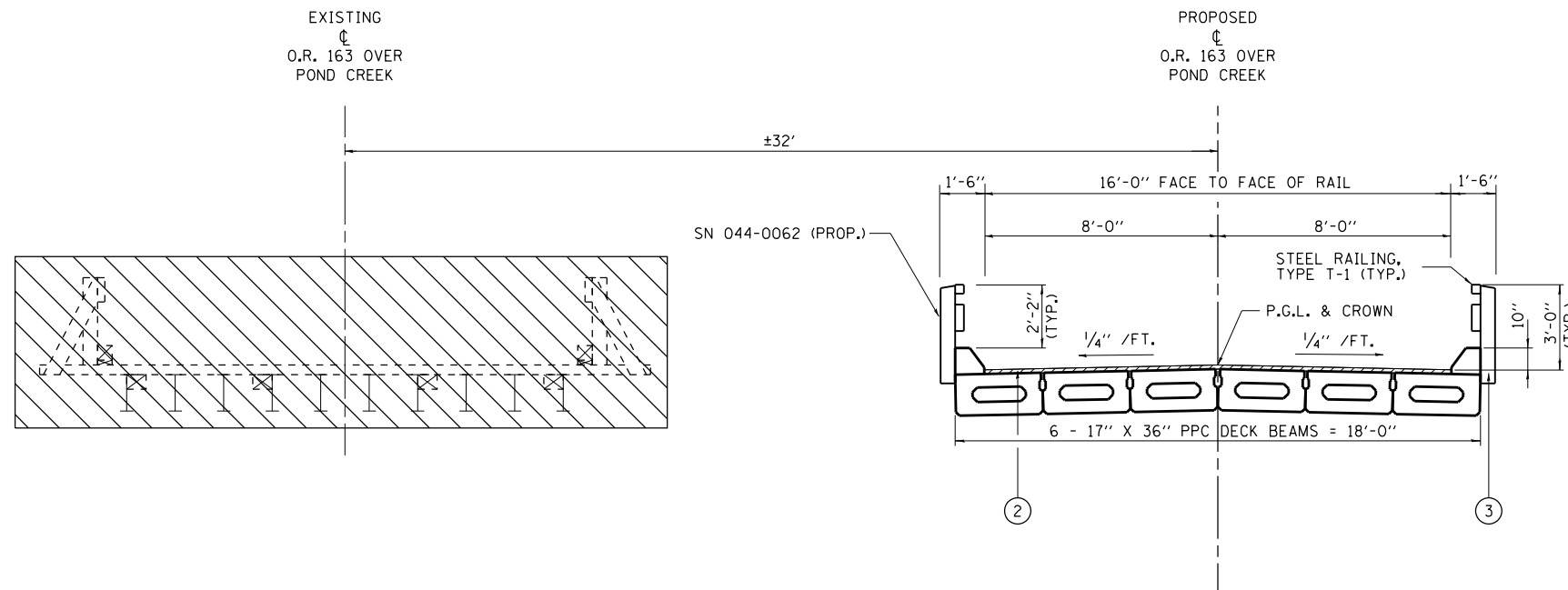
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	PLOT DATE = 11/26/2013	DATE - DECEMBER 2013	REVISED -			ILLINOIS FED. AID PROJECT					



PROPOSED TYPICAL ROADWAY APPROACH SECTION
(LOOKING SOUTH)

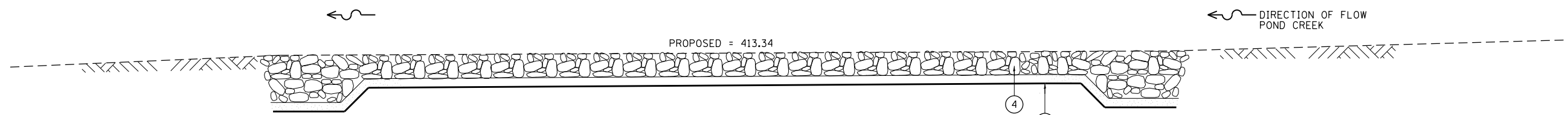


PROPOSED TYPICAL GUARDRAIL SECTION
STA. 50+32.54 TO 51+51.62
RT. AND LT.



PROPOSED TYPICAL SECTION AT STRUCTURE
(LOOKING SOUTH)

- LEGEND**
- ① PROPOSED AGGREGATE SURFACE COURSE, TYPE B 12"
 - ② PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
 - ③ PROPOSED STEEL RAILING TYPE T-1
 - ④ PROPOSED STONE RIPRAP, CLASS A4 WITH FILTER FABRIC
 - ⑤ FILTER FABRIC FOR RIPRAP
 - ⑥ SEEDING, CLASS 2
 - ⑦ MULCH, METHOD 2



← DIRECTION OF FLOW
POND CREEK

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 044-0062 (PROP.) PROPOSED TYPICAL SECTIONS - O.R. 163 OVER POND CREEK	O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 12/10/2013	DATE - DECEMBER 2013	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

ILLINOIS FED. AID PROJECT

EARTHWORK

STATION / LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE	EMBANKMENT	STRUCTURE EXCAVATION	STRUCTURE EXCAVATION ADJUSTED FOR 25% SHRINKAGE	EARTHWORK BALANCE WASTE (+) SHORTAGE (-)	CHANNEL EXCAVATION
	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)
U.S. ROUTE 45							
828+00.00 - 830+00.00							750
O.R. 163							
50+14.86 - 50+69.31	32	24	65	95	71	30	
51+14.31 - 52+40.00	51	38	137	90	68	-31	
TOTALS	83	62	202	185	139	-1	750

NOTE: REMAINDER OF EARTHWORK BALANCE CAN BE FILLED WITH CHANNEL EXCAVATION.

FILE NAME =	USER NAME = Rob Heady	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)	O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 11/26/2013	DATE - DECEMBER 2013	REVISED -			SCALE:	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		

PROP. ϕ O.R. 163
 CURVE-1 DATA
 PI STA. = 51+84.02
 $\Delta = 46^\circ 15' 15''$ (RT)
 $D = 63^\circ 39' 43''$
 $R = 90.00'$
 $T = 38.44'$
 $L = 72.66'$
 $E = 7.86'$
 P.C. STA = 51+45.58
 P.T. STA = 52+18.24

PROP. ϕ O.R. 163
 CURVE-2 DATA
 PI STA. = 52+65.35
 $\Delta = 54^\circ 45' 57''$ (LT)
 $D = 81^\circ 51' 04''$
 $R = 70.00'$
 $T = 36.26'$
 $L = 66.91'$
 $E = 8.83'$
 P.C. STA = 52+29.09
 P.T. STA = 52+96.00

GUARDRAIL REMOVAL, 31 L.F.
 REMOVE SIGN PANEL ASSEMBLY TYPE A
 RELOCATE SIGN PANEL ASSEMBLY TYPE A

RELOCATE EXISTING MAILBOX, 1 EA.
 TO STA. 50+22.53, 13.78' LT.

ϕ U.S. RTE 45 STA. 829+00.98
 ϕ O.R. 163 STA. 50+00.00

BEGIN IMPROVEMENTS
 STA. 50+14.86
 SEE DETAIL A
 THIS SHEET

EXISTING UTILITY TO BE RELOCATED
 BY OTHERS

EXIST. R.O.W.

U.S. RTE 45

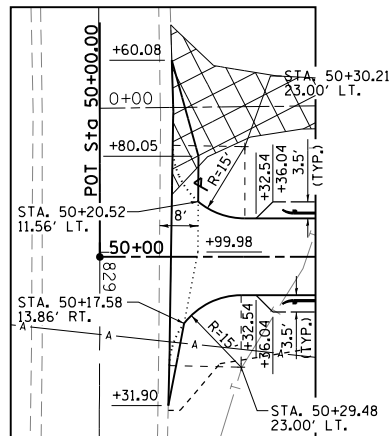
POND CREEK

EXIST. R.O.W.

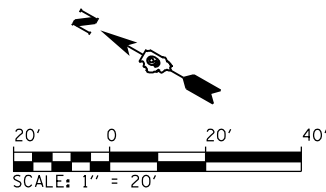
PROPOSED STRUCTURE
 S.N. 044-0062
 STA. 50+91.81, ϕ

END IMPROVEMENTS
 STA. 52+40.00

TRANSITION AGGREGATE SURFACE COURSE
 TO MATCH EXISTING (TYP.)

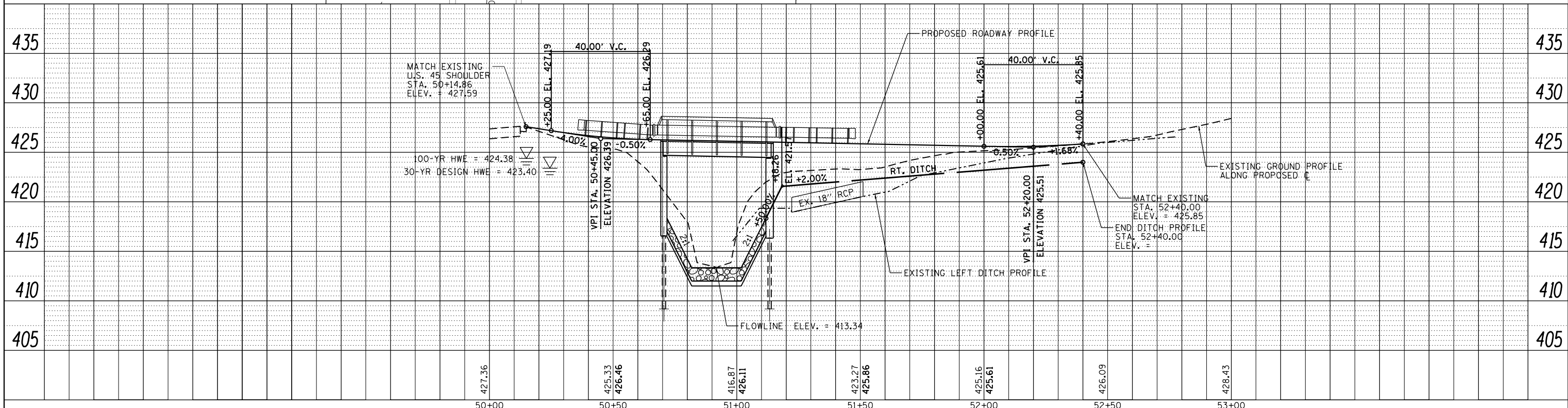


DETAIL A



PLAN	SURVEYED	DATE
	PLOTTED	
	NOTE BOOK	
	ALIGNED	
	CHECKED	
	FILE NAME	
	NO.	

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

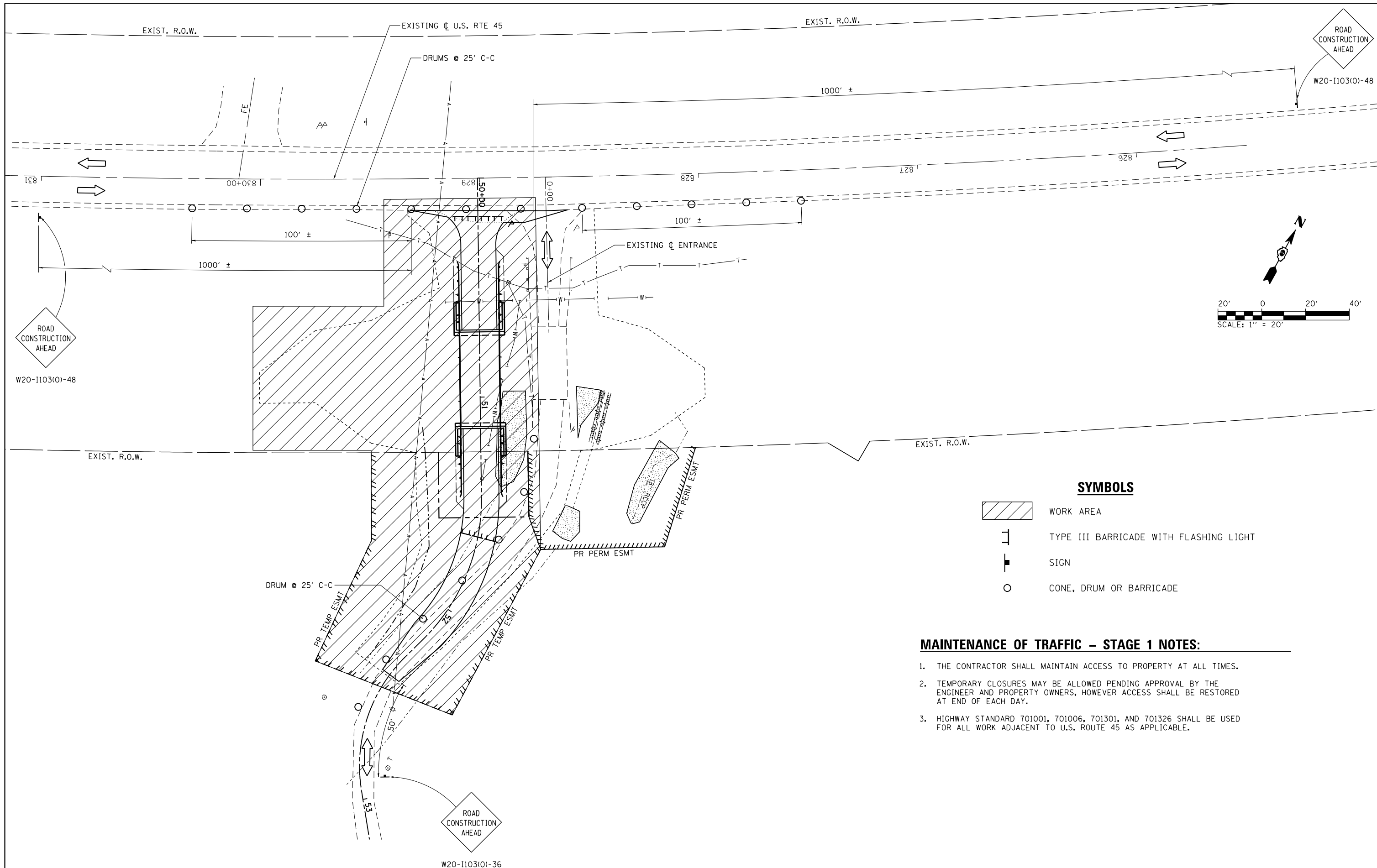


FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\1001\0806610\W0_12\Draw\Sheets\0978267-sh1-plnpr.f.dgn		DRAWN - BMB	REVISED -	163	34B-2	JOHNSON	37	8
Default	PLOT SCALE = 40.0000' / in.	CHECKED - JMM	REVISED -	CONTRACT NO. 78267				
	PLOT DATE = 12/11/2013	DATE - DECEMBER 2013	REVISED -	ILLINOIS FED. AID PROJECT				

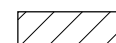



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SN 044-0062 (PROP.)
 PLAN AND PROFILE - O.R. 163 OVER POND CREEK

SCALE: SHEET 1 OF 1 SHEETS STA. 50+00 TO STA. 53+46.15



SYMBOLS

-  WORK AREA
-  TYPE III BARRICADE WITH FLASHING LIGHT
-  SIGN
-  CONE, DRUM OR BARRICADE

MAINTENANCE OF TRAFFIC – STAGE 1 NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTY AT ALL TIMES.
2. TEMPORARY CLOSURES MAY BE ALLOWED PENDING APPROVAL BY THE ENGINEER AND PROPERTY OWNERS, HOWEVER ACCESS SHALL BE RESTORED AT END OF EACH DAY.
3. HIGHWAY STANDARD 701001, 701006, 701301, AND 701326 SHALL BE USED FOR ALL WORK ADJACENT TO U.S. ROUTE 45 AS APPLICABLE.

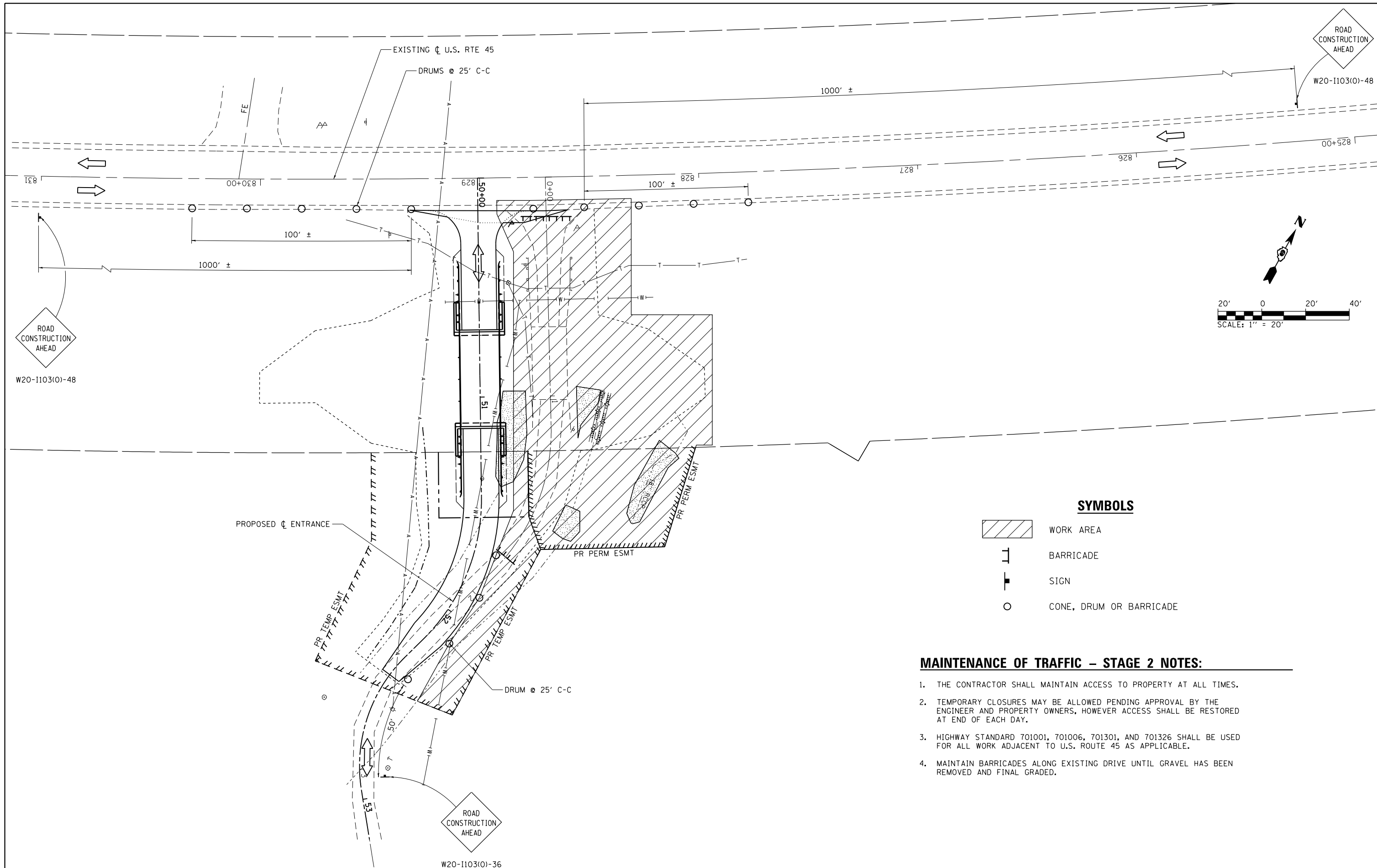
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Default	PLOT SCALE = 40.0000' / in.	CHECKED - JMM	REVISED -
	PLOT DATE = 11/26/2013	DATE - DECEMBER 2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**





**MAINTENANCE OF TRAFFIC – STAGE 1
O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)**

SCALE: 1" = 20' SHEET OF SHEETS STA. TO STA.

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	9
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				



SYMBOLS

-  WORK AREA
-  BARRICADE
-  SIGN
-  CONE, DRUM OR BARRICADE

MAINTENANCE OF TRAFFIC – STAGE 2 NOTES:

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTY AT ALL TIMES.
2. TEMPORARY CLOSURES MAY BE ALLOWED PENDING APPROVAL BY THE ENGINEER AND PROPERTY OWNERS, HOWEVER ACCESS SHALL BE RESTORED AT END OF EACH DAY.
3. HIGHWAY STANDARD 701001, 701006, 701301, AND 701326 SHALL BE USED FOR ALL WORK ADJACENT TO U.S. ROUTE 45 AS APPLICABLE.
4. MAINTAIN BARRICADES ALONG EXISTING DRIVE UNTIL GRAVEL HAS BEEN REMOVED AND FINAL GRADED.

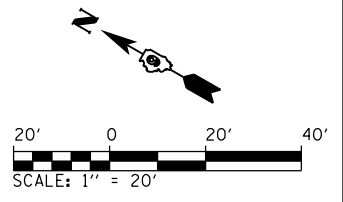
FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -
L:\IDOT\0806610\W0_12\Draw\Sheets\0978267-sht-staging-2.dgn		DRAWN - BMB	REVISED -
Default	PLOT SCALE = 40.0000' / in.	CHECKED - JMM	REVISED -
	PLOT DATE = 12/10/2013	DATE - DECEMBER 2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC – STAGE 2
O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)**

SCALE: 1" = 20' SHEET OF SHEETS STA. TO STA.

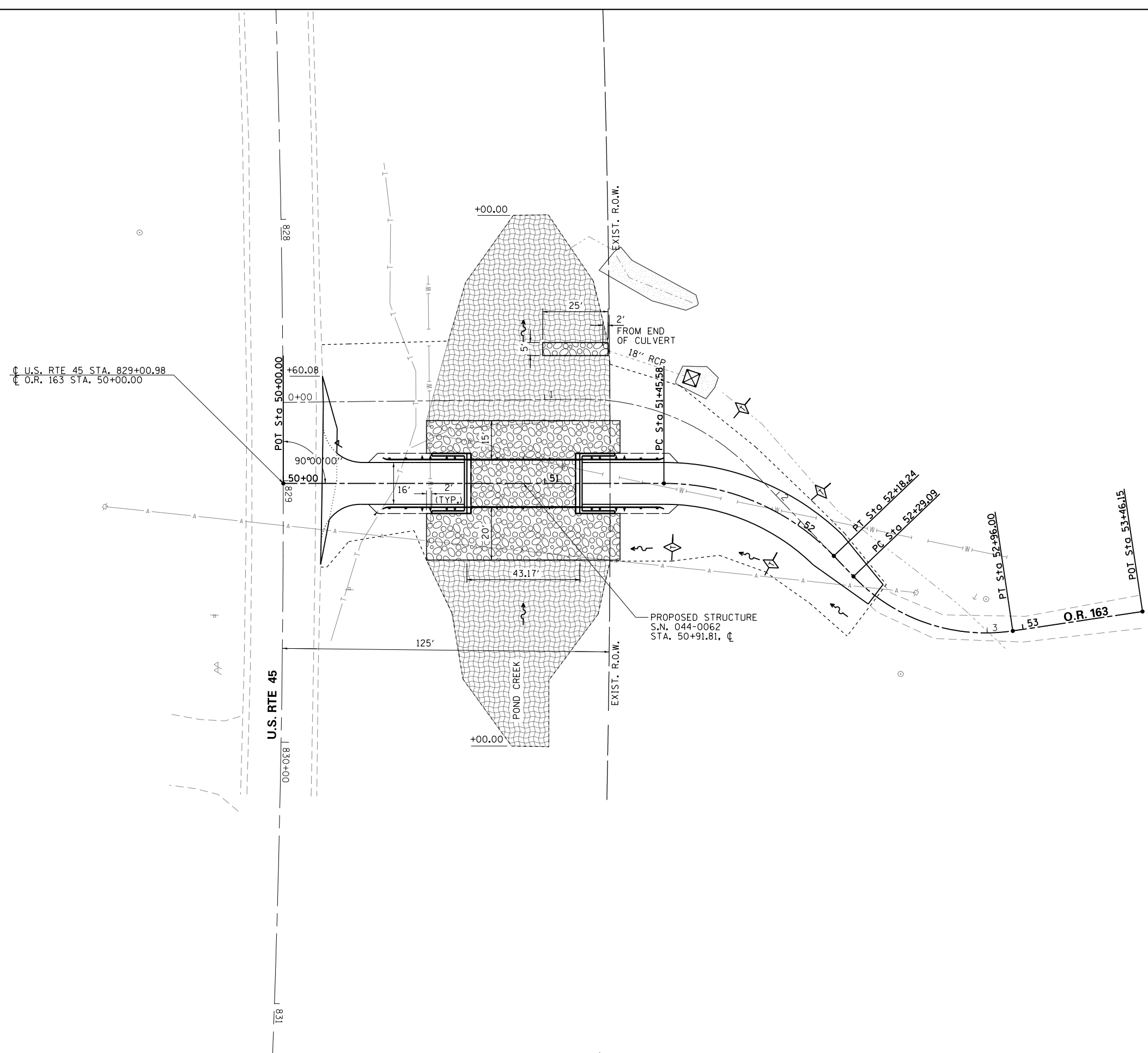
O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	10
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				



PROP. ζ O.R. 163
 CURVE-1 DATA
 PI STA. = 51+84.02
 Δ = 46° 15' 15" (RT)
 D = 63° 39' 43"
 R = 90.00'
 T = 38.44'
 L = 72.66'
 E = 7.86'
 P.C. STA = 51+45.58
 P.T. STA = 52+18.24

PROP. ζ O.R. 163
 CURVE-2 DATA
 PI STA. = 52+65.35
 Δ = 54° 45' 57" (LT)
 D = 81° 51' 04"
 R = 70.00'
 T = 36.26'
 L = 66.91'
 E = 8.83'
 P.C. STA = 52+29.09
 P.T. STA = 52+96.00

ζ U.S. RTE 45 STA. 829+00.98
 ζ O.R. 163 STA. 50+00.00



LEGEND	
	TEMPORARY DITCH CHECK, 10 L.F.
	INLET & PIPE PROTECTION, 1 EA
	STONE RIPRAP, CLASS A4 WITH FILTER FABRIC
	EROSION CONTROL BLANKET*

* NOTE: PLACE EROSION CONTROL BLANKET IN POND CREEK CHANNEL DEGRADING AREA TO TOP OF SIDE SLOPES AT LOCATIONS NOT COVERED BY STONE RIPRAP. ALL OTHER AREAS DISTURBED SHALL BE STABILIZED WITH MULCH, METHOD 2.

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -
L:\IDOT\0806610\W0_12\Draw\Sheets\0978267-sh1-Eros.dgn		DRAWN - BMB	REVISED -
Default	PLOT SCALE = 40.0000' / in.	CHECKED - JMM	REVISED -
	PLOT DATE = 12/10/2013	DATE - DECEMBER 2013	REVISED -

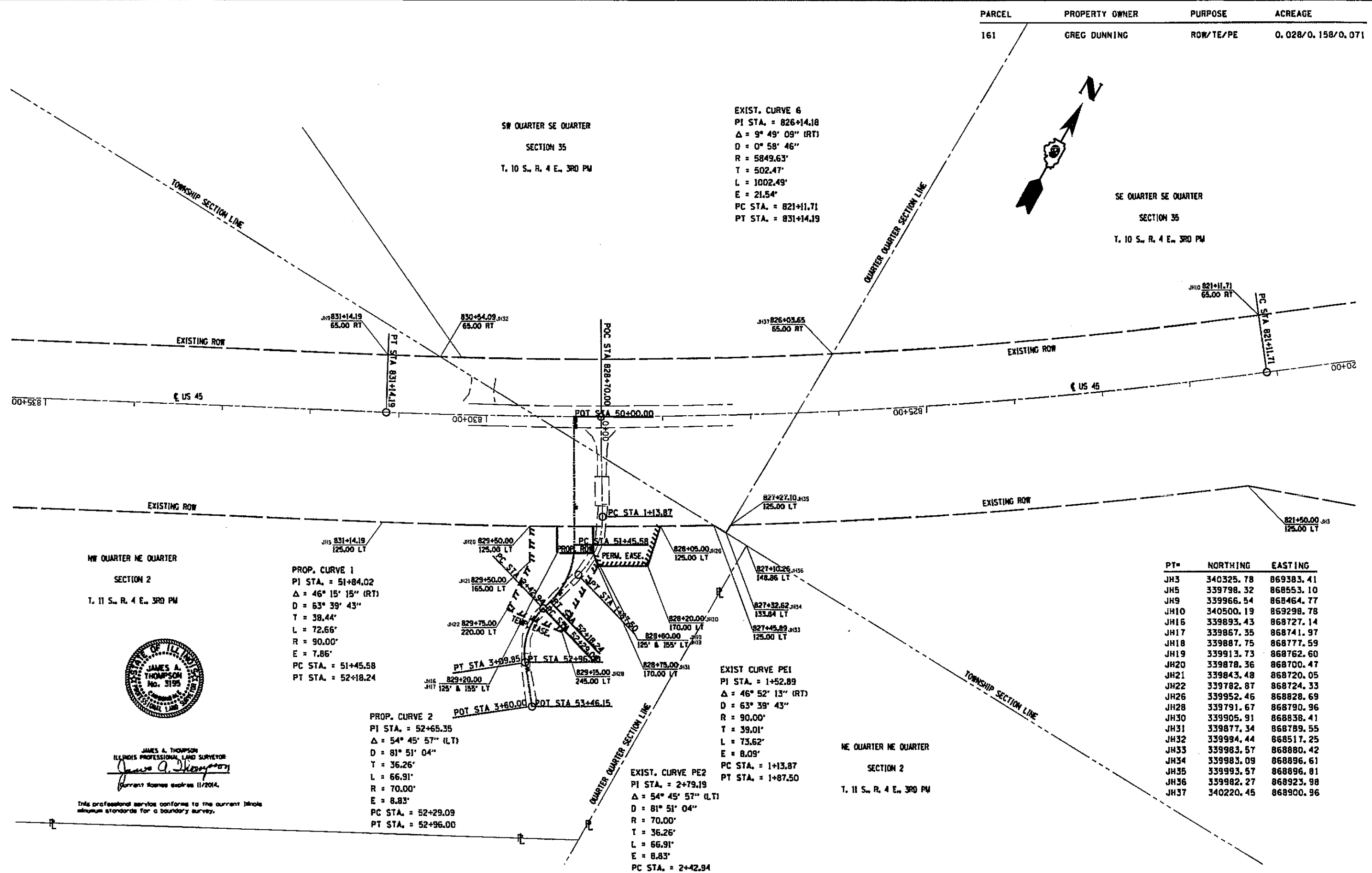
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN
 O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)**

SCALE: SHEET 1 OF 1 SHEETS STA. 50+00 TO STA. 53+46.15

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	11
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				

PARCEL	PROPERTY OWNER	PURPOSE	ACREAGE
161	GREG DUNNING	ROW/TE/PE	0.028/0.158/0.071



EXIST. CURVE 6
 PI STA. = 826+14.18
 $\Delta = 9^\circ 49' 09''$ (RT)
 $D = 0^\circ 58' 46''$
 $R = 5849.63'$
 $T = 502.47'$
 $L = 1002.49'$
 $E = 21.54'$
 PC STA. = 821+11.71
 PT STA. = 831+14.19

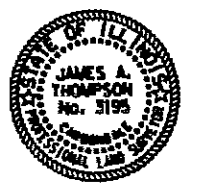
PROP. CURVE 1
 PI STA. = 51+84.02
 $\Delta = 46^\circ 15' 15''$ (RT)
 $D = 63^\circ 39' 43''$
 $T = 38.44'$
 $L = 72.66'$
 $R = 90.00'$
 $E = 7.86'$
 PC STA. = 51+45.58
 PT STA. = 52+18.24

PROP. CURVE 2
 PI STA. = 52+65.35
 $\Delta = 54^\circ 45' 57''$ (LT)
 $D = 81^\circ 51' 04''$
 $T = 36.26'$
 $L = 66.91'$
 $R = 70.00'$
 $E = 8.83'$
 PC STA. = 52+29.09
 PT STA. = 52+96.00

EXIST. CURVE PE1
 PI STA. = 1+52.89
 $\Delta = 46^\circ 52' 13''$ (RT)
 $D = 63^\circ 39' 43''$
 $R = 90.00'$
 $T = 39.01'$
 $L = 73.62'$
 $E = 8.09'$
 PC STA. = 1+13.87
 PT STA. = 1+87.50

EXIST. CURVE PE2
 PI STA. = 2+79.19
 $\Delta = 54^\circ 45' 57''$ (LT)
 $D = 81^\circ 51' 04''$
 $R = 70.00'$
 $T = 36.26'$
 $L = 66.91'$
 $E = 8.83'$
 PC STA. = 2+42.94
 PT STA. = 3+09.85

PT=	NORTHING	EASTING
JH3	340325.78	869383.41
JH5	339798.32	868553.10
JH9	339966.54	868464.77
JH10	340500.19	869298.78
JH16	339893.43	868727.14
JH17	339867.35	868741.97
JH18	339887.75	868777.59
JH19	339913.73	868762.60
JH20	339878.36	868700.47
JH21	339843.48	868720.05
JH22	339782.87	868724.33
JH26	339952.46	868828.69
JH28	339791.67	868790.96
JH30	339905.91	868838.41
JH31	339877.34	868789.55
JH32	339994.44	868517.25
JH33	339983.57	868880.42
JH34	339983.09	868896.61
JH35	339993.57	868896.81
JH36	339982.27	868923.98
JH37	340220.45	868900.96



JAMES A. THOMPSON
 ILLINOIS PROFESSIONAL LAND SURVEYOR
 No. 3193
 Commission Expires 11/2014

This professional services conforms to the current Illinois minimum standards for a boundary survey.

FILE NAME *	USER NAME * #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	R-99-014-12 RIGHT OF WAY PLANS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			US 45	348-2	JOHNSON	37	13	
#MODELNAME*	PLOT SCALE * #SCALE#	CHECKED -	REVISED -			SCALE: 1" = 100'	SHEET 1 OF 1 SHEETS	CONTRACT NO. 12267	ILLINOIS FED. AID PROJECT		
	PLOT DATE * #DATE#	DATE -	REVISED -			STA. 821+50.00 TO STA. 830+00.00					

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the engineer.
3. The embankment configuration shown shall be the minimum embankment that must be placed and compacted prior to the construction of the abutments.
4. Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
6. Backfill shall be placed behind the abutment after the superstructure has been poured and falsework removed. See Article 502.10 of the Standard Specifications.

DESIGN SCOUR TABLE

	N. ABUT.	S. ABUT.
Q100	414.87	414.64
Q500	414.87	414.64

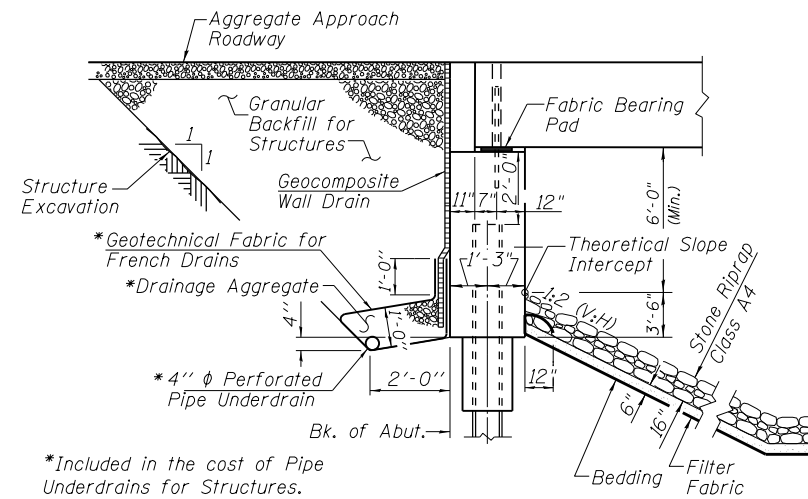
WATERWAY INFORMATION

Exist. Overtopping Elev. = 424.73 @ Sta. 1+56.95

Drainage Area = 2.37 Sq. Mi. Prop. Overtopping Elev. = 425.59 @ Sta. 52+09.16

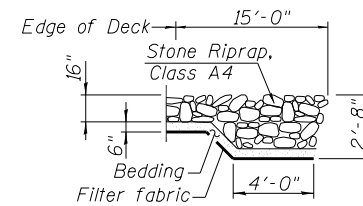
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	1080	192.11	289.56	421.83	0.00	0.00	421.83	421.83	
Design	30	1618	245.41	352.36	423.40	0.15	0.00	423.55	423.40
	50	1810	261.21	368.76	423.81	0.25	0.00	424.06	423.81
Base	100	2140	272.39	391.56	424.38	0.46	0.00	424.84	424.38
Overtop Exist.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Overtop Prop.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	3000	272.39	405.85	425.30	1.24	0.00	426.54	425.30

10 Yr. Velocity through Exist. Bridge = 5.82 ft/s
 10 Yr. Velocity through Prop. Bridge = 3.82 ft/s



*Included in the cost of Pipe Underdrains for Structures.

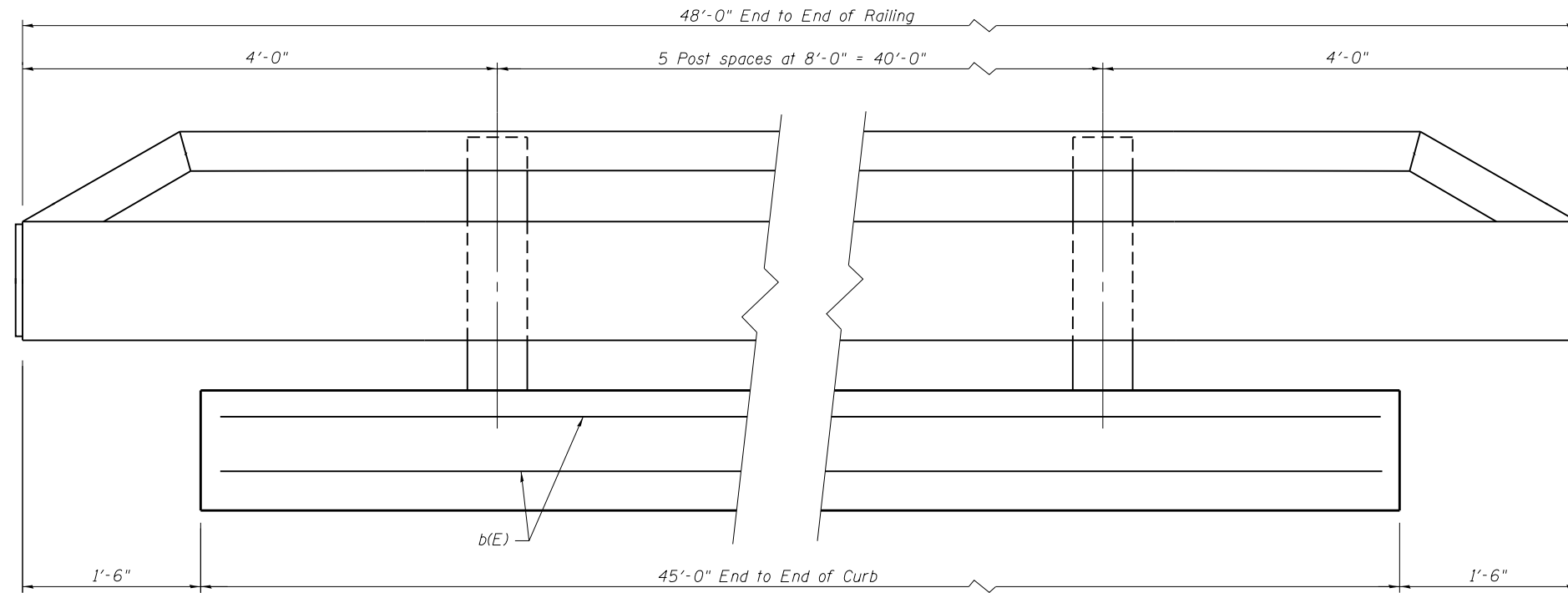
SECTION THRU ABUTMENT



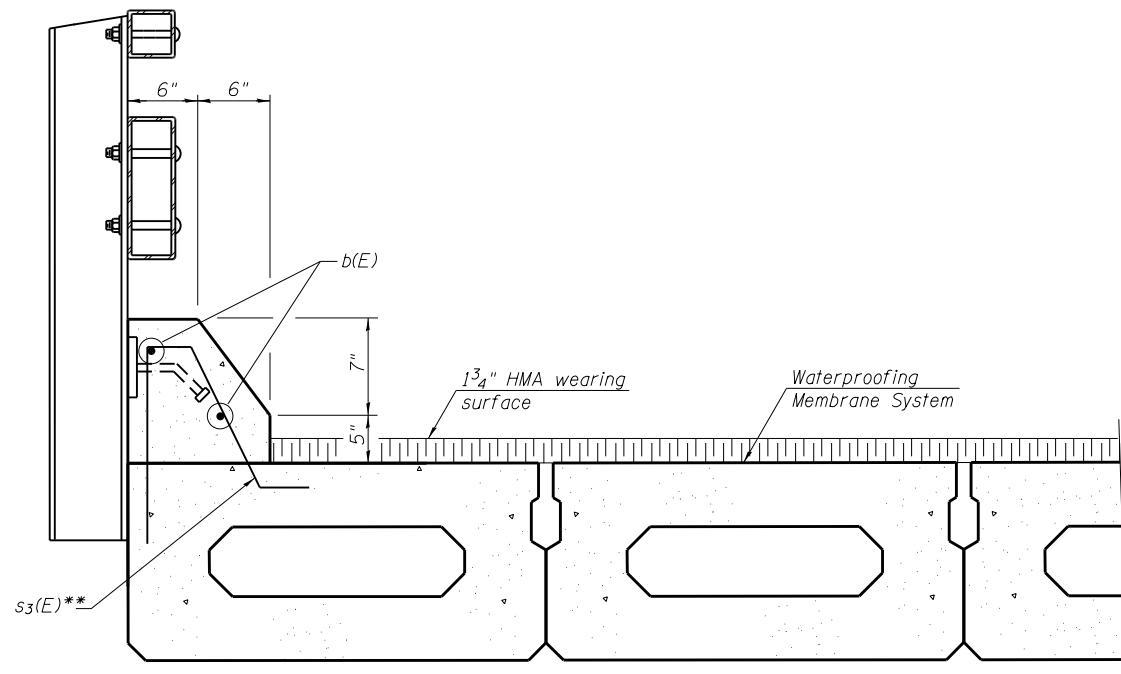
SECTION A-A

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		365	365
Filter Fabric	Sq. Yd.		365	365
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	12		12
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		185	185
Concrete Structures	Cu. Yd.		68.2	68.2
Concrete Superstructure	Cu. Yd.	7.0		7.0
Concrete Encasement	Cu. Yd.		4.2	4.2
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	777		777
Reinforcement Bars, Epoxy Coated	Pound	190	8800	8990
Steel Railing, Type T1	Foot	96		96
Furnishing Steel Piles, HP 12x63	Foot		277	277
Driving Piles	Foot		277	277
Test Pile Steel HP 12x63	Each		1	1
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	77		77
Geocomposite Wall Drain	Sq. Yd.		51.5	51.5
Granular Backfill for Structures	Cu. Yd.		136	136
Pipe Underdrains for Structures 4"	Foot		70	70
Portland Cement Mortar Fairing Course	Foot		216	216



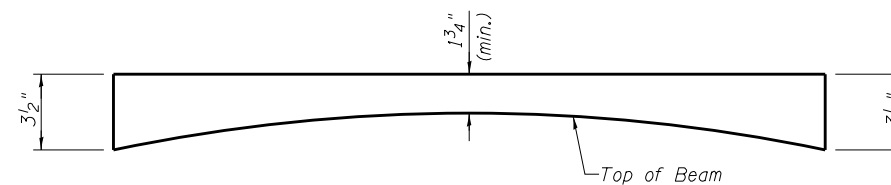
CURB AND RAILING ELEVATION
(Looking at inside face of Rail)



SECTION THRU CURB

**Place #4s₃(E) bars @ 12" cts. in exterior beams. s₃(E) bars included in cost of beam.

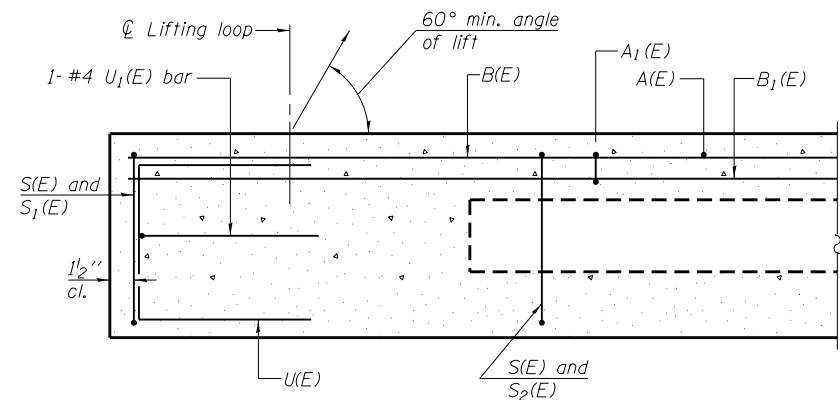
See Sheet 5 of 12 for additional Beam Details
See Sheet 7 of 12 for additional Railing Details



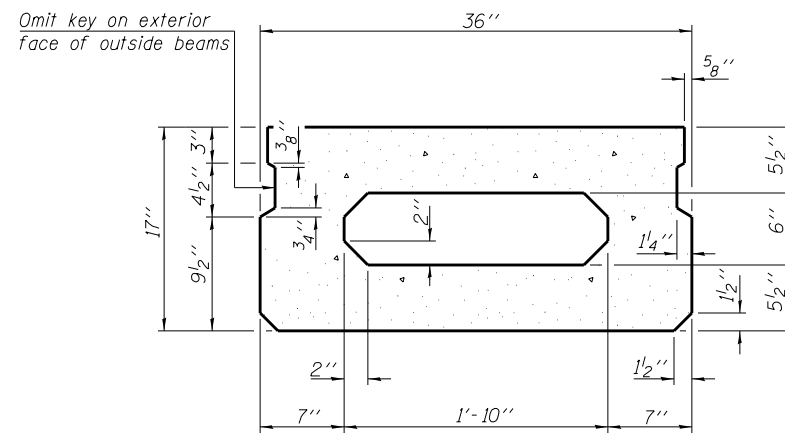
ANTICIPATED HOT-MIX ASPHALT WEARING SURFACE PROFILE
(For Information Only)

SUPERSTRUCTURE BILL OF MATERIAL

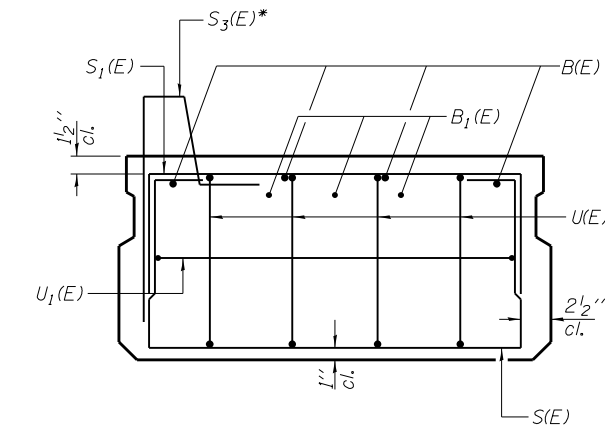
Bar	No.	Size	Length	Shape
b(E)	4	#5	44'-6"	—
Reinforcement Bars, Epoxy Coated			Pound	190
Concrete Superstructure			Cu. Yd.	7.0



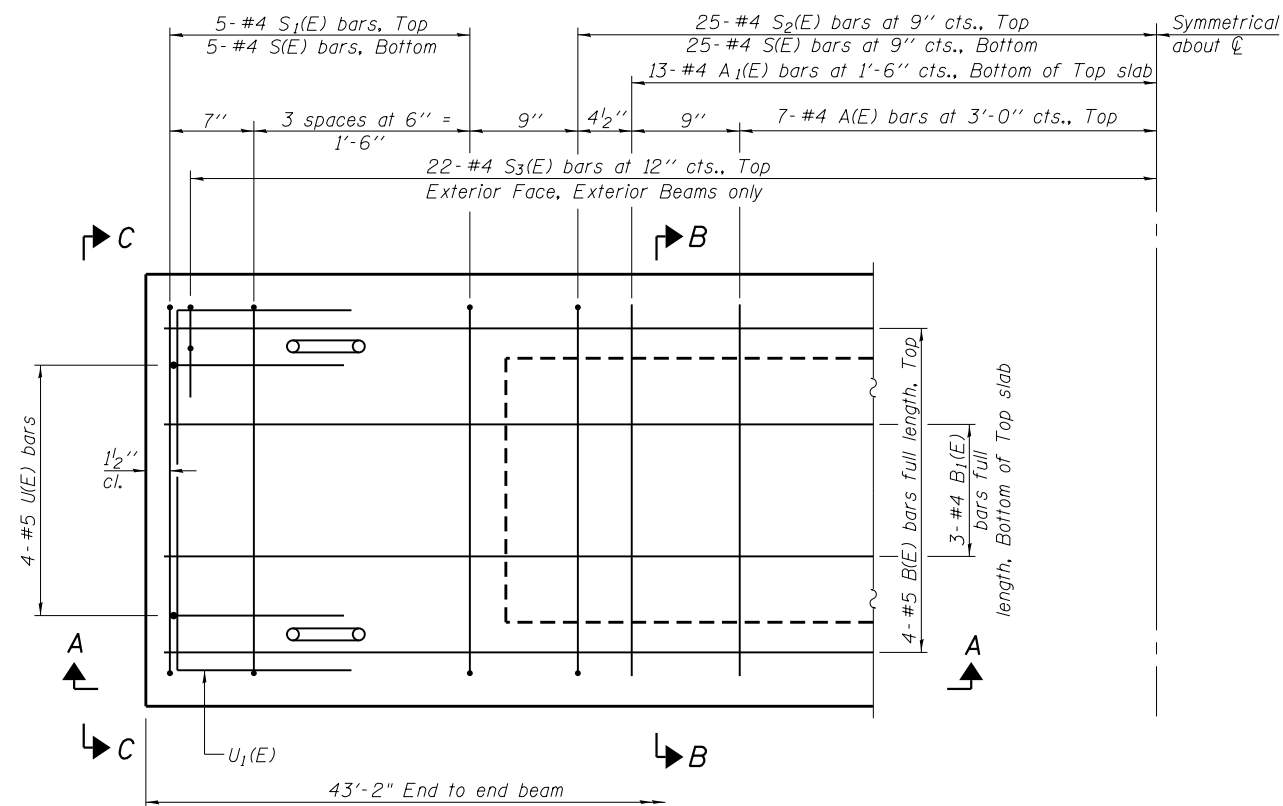
SECTION A-A



SECTION B-B
(Showing dimensions)

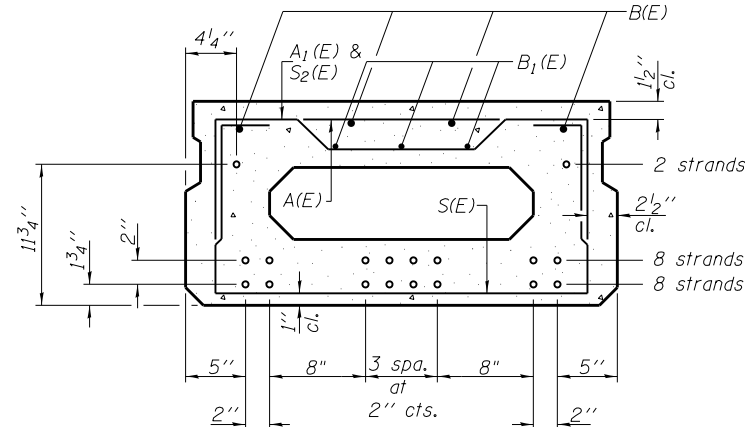


VIEW C-C
*Place S3(E) bars on exterior face of exterior beams only.



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE EXTERIOR BEAM ONLY
(For information only)

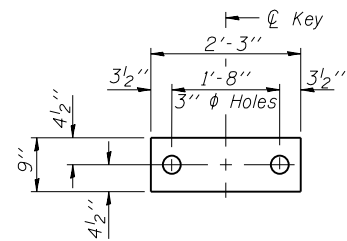
Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	26	#4	2'-10"	~
B(E)	4	#5	42'-10"	—
B1(E)	3	#4	42'-10"	—
S(E)	60	#4	5'-9"	⌋
S1(E)	10	#4	4'-3"	⌋
S2(E)	50	#4	4'-6"	⌋
S3(E)	43	#4	3'-9"	⌋
U(E)	8	#5	3'-8"	⌋
U1(E)	2	#4	5'-0"	⌋

Note: See sheet 6 of 12 for additional details and Bill of Material.

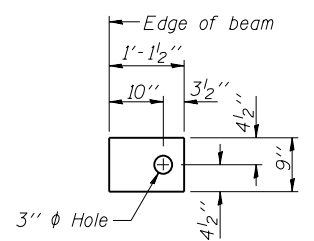
BAR LIST
ONE INTERIOR BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	26	#4	2'-10"	~
B(E)	4	#5	42'-10"	—
B1(E)	3	#4	42'-10"	—
S(E)	60	#4	5'-9"	⌋
S1(E)	10	#4	4'-3"	⌋
S2(E)	50	#4	4'-6"	⌋
U(E)	8	#5	3'-8"	⌋
U1(E)	2	#4	5'-0"	⌋

Note: See sheet 6 of 12 for additional details and Bill of Material.



FABRIC BEARING PAD
(Interior)

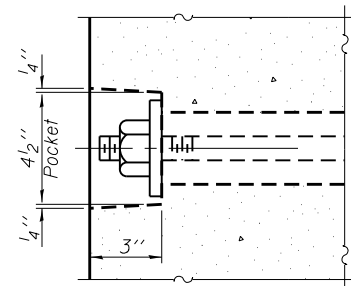


FABRIC BEARING PAD
(Exterior)

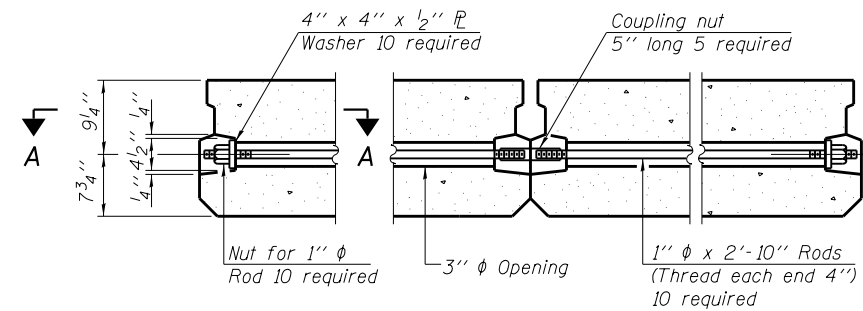
FIXED

Notes:

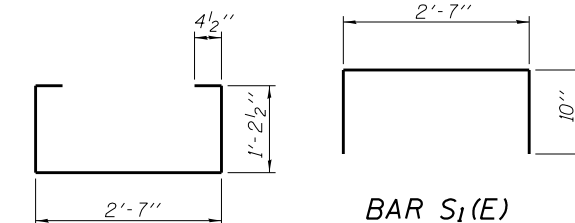
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

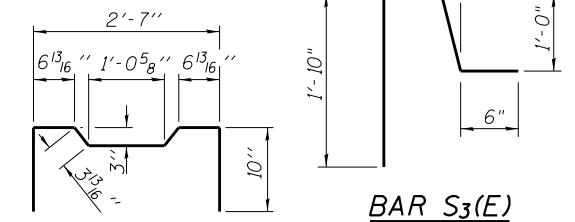


TYPICAL TRANSVERSE TIE ASSEMBLY



BAR S₁(E)

BAR S(E)



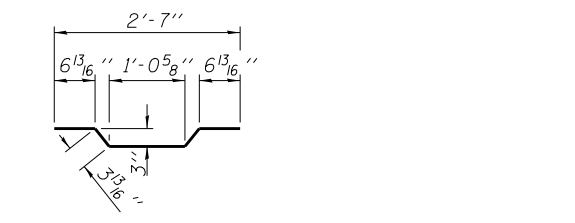
BAR S₃(E)

BAR S₂(E)

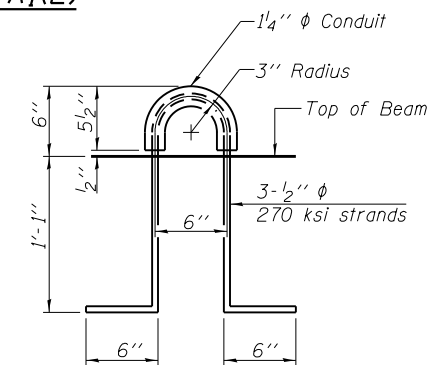


BAR U₁(E)

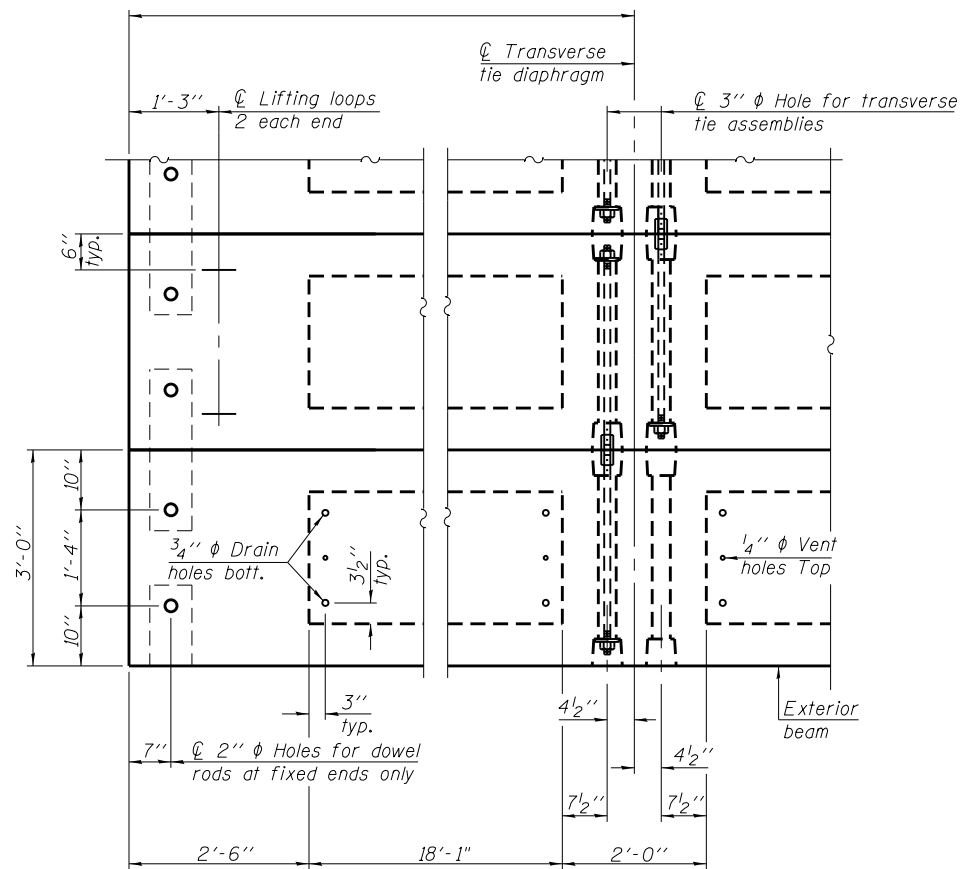
BAR U(E)



BAR A₁(E)



LIFTING LOOP DETAIL



PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

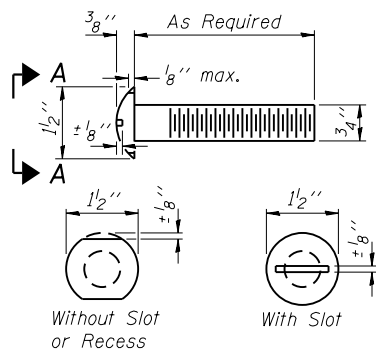
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
Cast anchor devices for rails into exterior beams at the spacing shown on sheet 4 of 12.

BILL OF MATERIAL

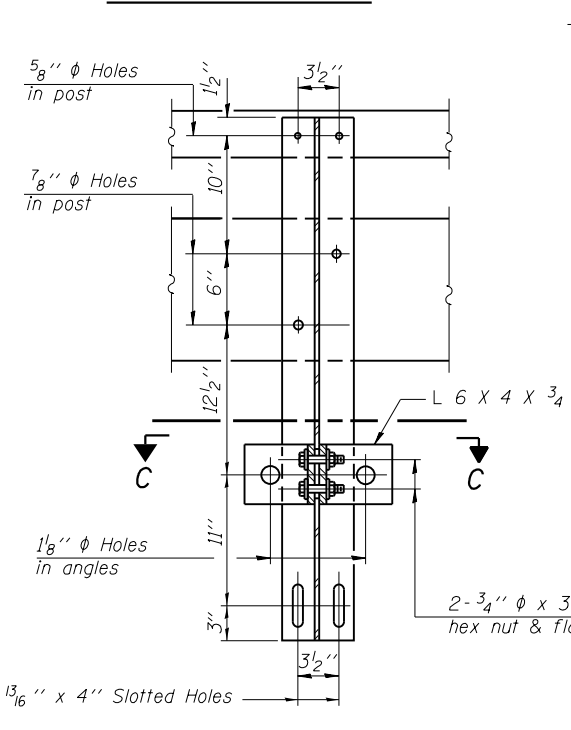
Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	777
---	---------	-----

USER NAME =	DESIGNED - BPD	REVISED -
PLOT SCALE =	CHECKED - WLB	REVISED -
PLOT DATE =	DRAWN - GLD	REVISED -
	CHECKED - DECEMBER 2013	REVISED -

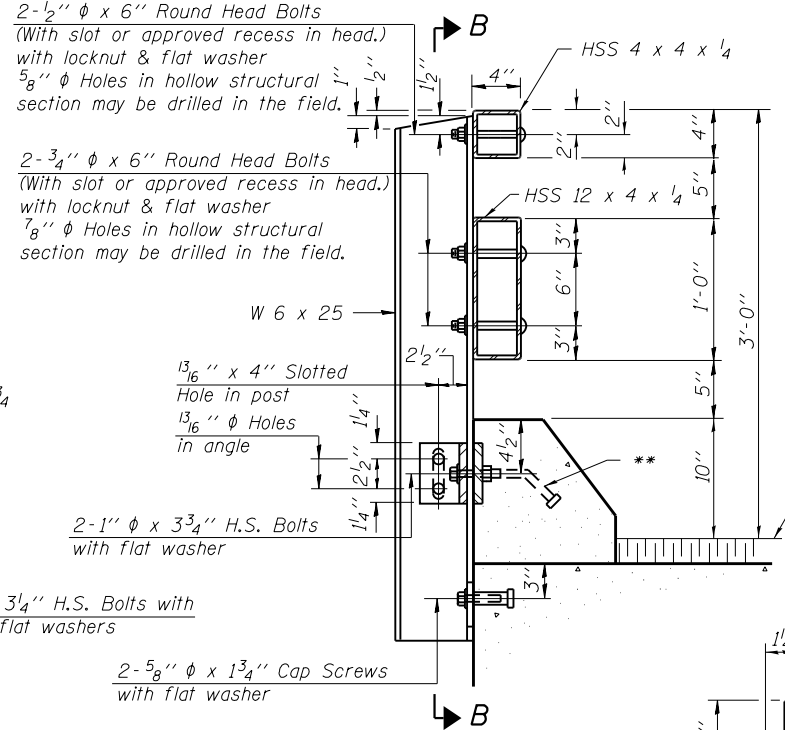
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	18
			CONTRACT NO. 78267	



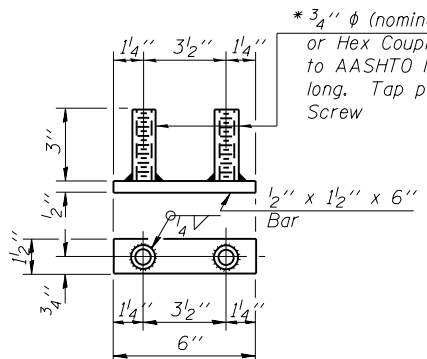
**VIEW A-A
ROUND HEAD BOLT**



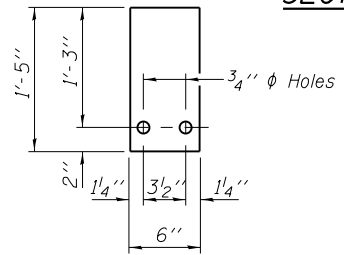
SECTION B-B



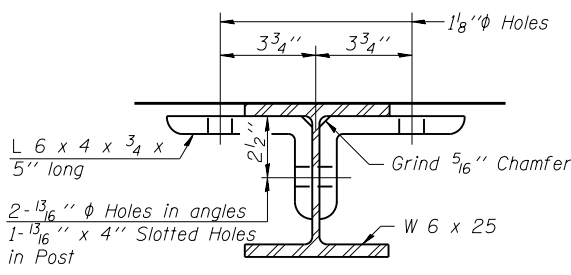
SECTION AT RAIL POST



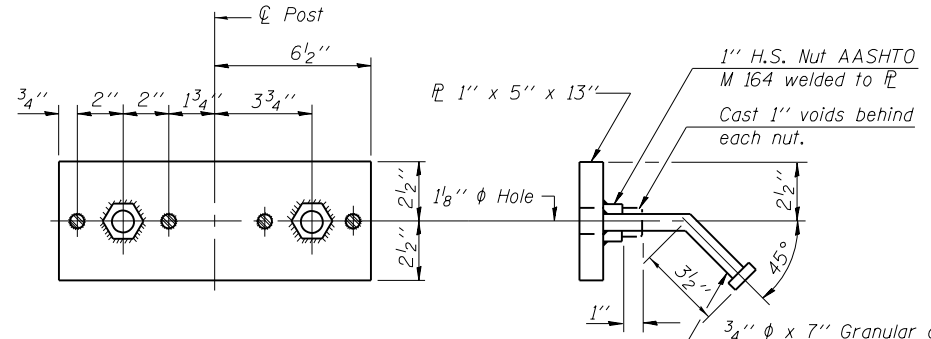
BOTTOM ANCHOR DEVICE



1/4 SHIM PLATE



SECTION C-C



TOP ANCHOR DEVICE

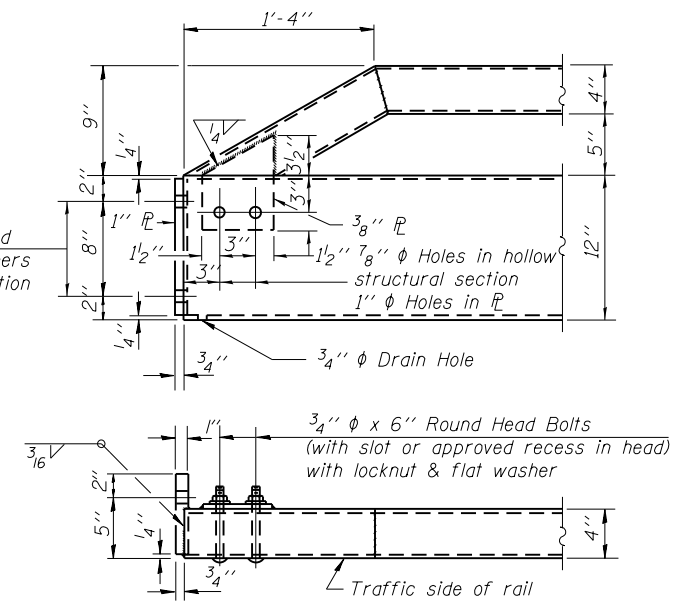
* Threaded areas shall be plugged or blocked off during casting of beam.

* 3/4 inch (nominal i.d.) XXS Pipe or Hex Coupler Nuts conforming to AASHTO M291, Grade A - 3" long. Tap pipe for 5/8 inch Cap Screw

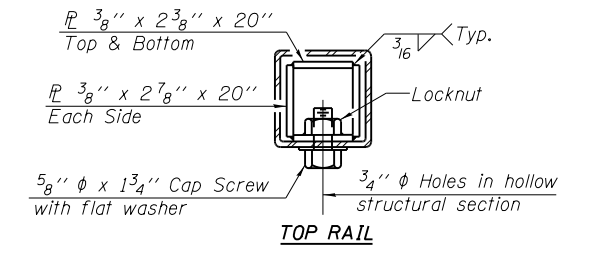
1" H.S. Nut AASHTO M 164 welded to 1" x 5" x 13" plate. Cast 1" voids behind each nut. 3/4 x 7" Granular or solid flux filled headed studs conforming to Art.1006.32 of the Std. Spec's. automatically end welded. 4 required per ft.

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

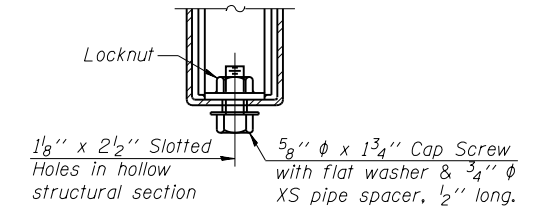
1/8 inch diameter Holes for 1 inch x 4 inch Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy. Std. 631026 or BLR 27-1.



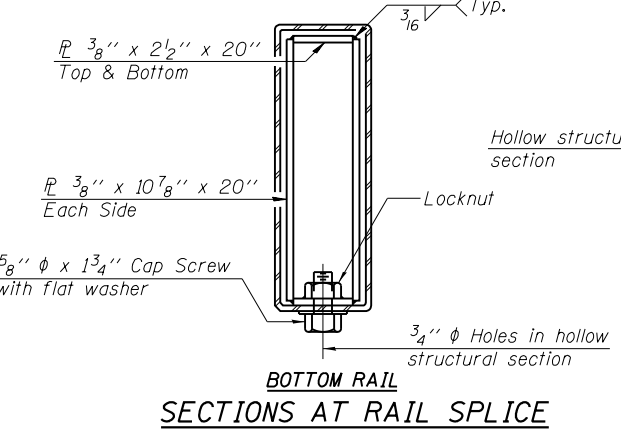
END OF RAIL DETAILS



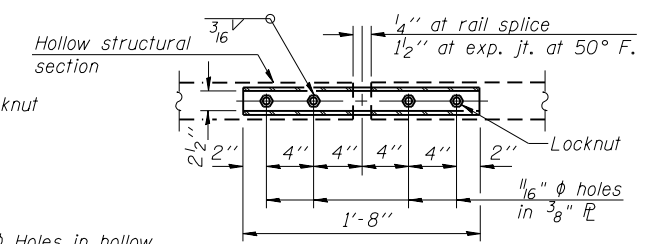
TOP RAIL



RAIL SPLICE CONNECTION AT EXPANSION JT.



SECTIONS AT RAIL SPLICE

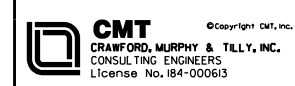


PLAN-BOTT. SPLICE R TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type T-1	Foot	96

R-24A 7-1-10 (9'-6" Maximum Post Spacing)



USER NAME =	DESIGNED - BPD	REVISED -
PLOT SCALE =	CHECKED - WLB	REVISED -
PLOT DATE =	DRAWN - GLD	REVISED -
	CHECKED - DECEMBER 2013	REVISED -

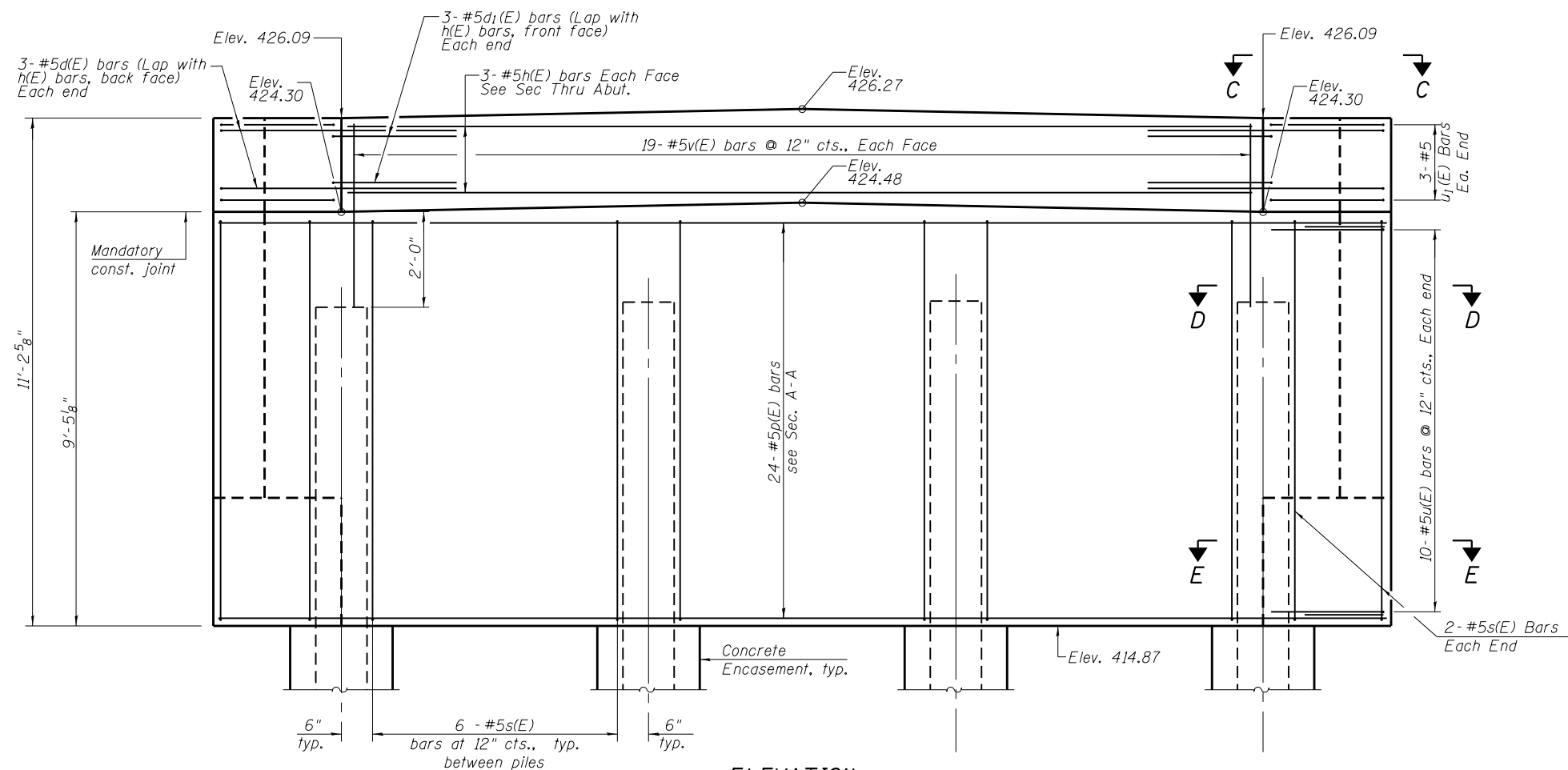
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE T-1
STRUCTURE NO. 044-0062**

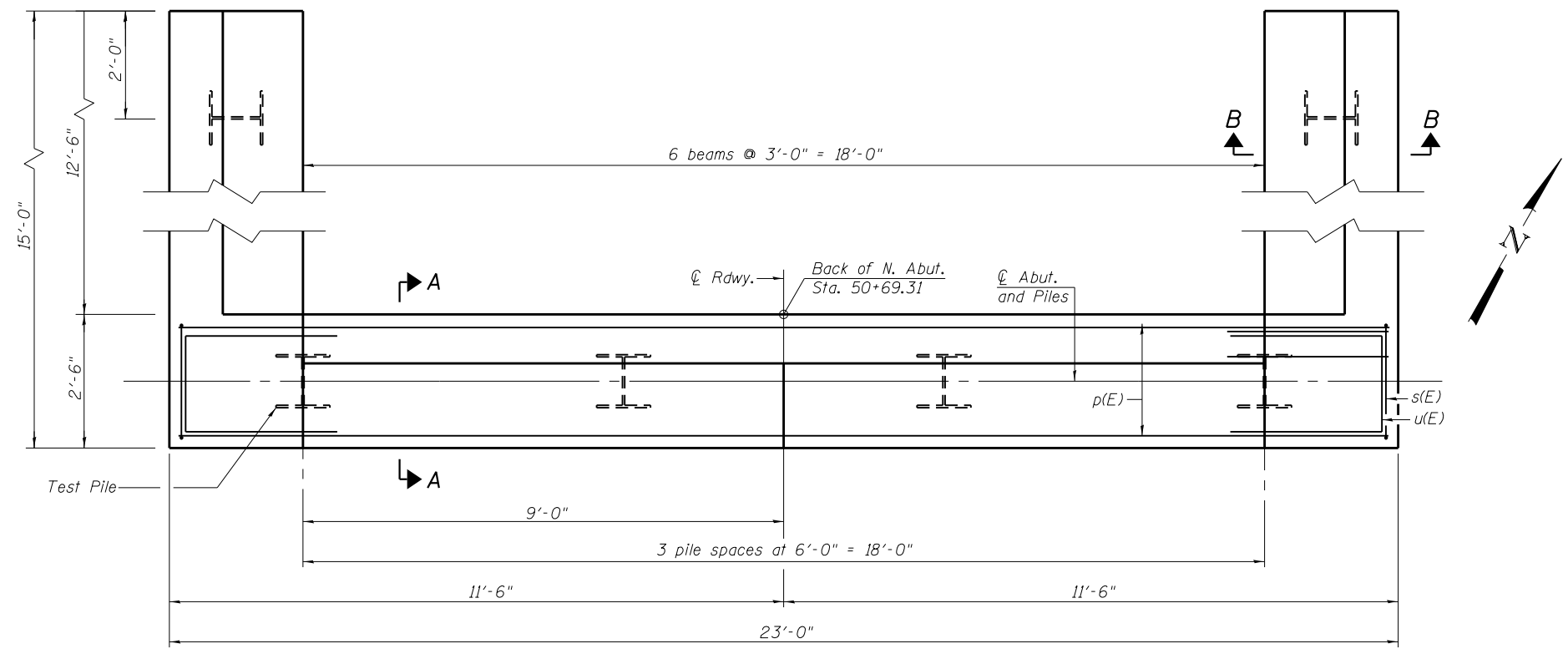
SHEET NO. 7 OF 12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	19
				CONTRACT NO. 78267

ILLINOIS FED. AID PROJECT



ELEVATION
(Looking North)



PLAN

Notes
Cast top of wingwall flush with exterior beam face after beams have been erected.
For Abutment Sections and Details, see Sheet 10 of 12.
2'-6" x 2'-6" x 1'-9 1/2" Abutment Corners to be included with Concrete Superstructures.

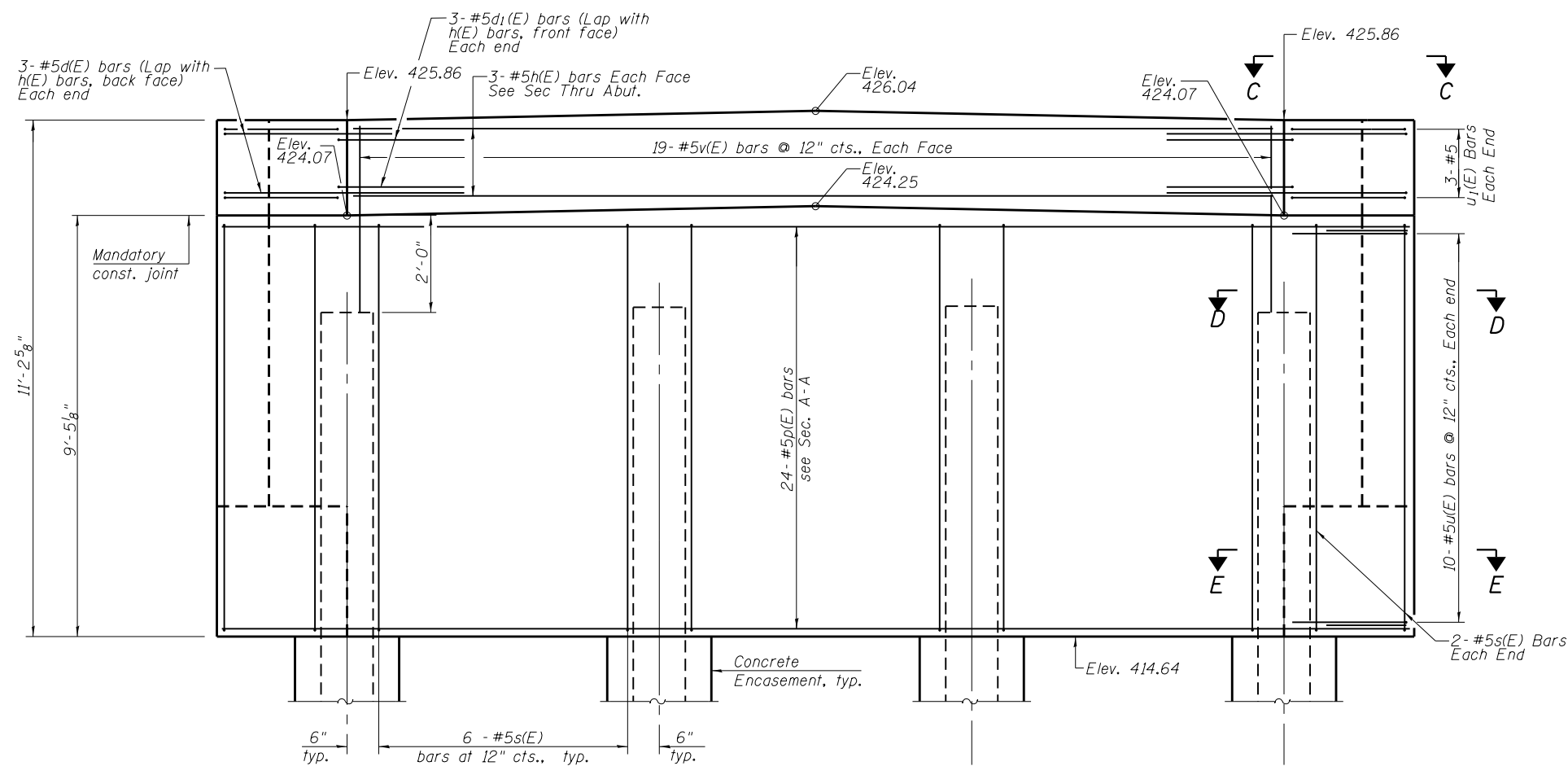
**BILL OF MATERIAL
NORTH ABUTMENT**

Bar	No.	Size	Length	Shape
d(E)	26	#5	6'-3"	┌┐
d1(E)	26	#5	4'-1"	┌┐
d2(E)	6	#6	6'-9"	┌┐
d3(E)	6	#6	4'-7"	┌┐
h(E)	6	#5	17'-8"	┌┐
h1(E)	40	#5	12'-2"	┌┐
n(E)	52	#6	6'-3"	┌┐
p(E)	24	#5	22'-8"	┌┐
p1(E)	20	#6	12'-2"	┌┐
s(E)	22	#5	23'-5"	┌┐
s1(E)	26	#5	9'-7"	┌┐
u(E)	20	#5	7'-3"	┌┐
u1(E)	6	#5	6'-6"	┌┐
u2(E)	6	#6	9'-10"	┌┐
v(E)	38	#5	4'-5"	┌┐
v1(E)	16	#5	4'-5"	┌┐
v2(E)	52	#6	8'-4"	┌┐
Structure Excavation	Cu. Yd.		95	
Concrete Structures	Cu. Yd.		34.1	
Reinforcement Bars, Epoxy Coated	Pound		4,400	
Furnishing Steel Piles, HP 12x63	Foot		128	
Driving Piles	Foot		128	
Test Pile, HP12x63	Each		1	
Concrete Encasement	Cu. Yd.		2.1	

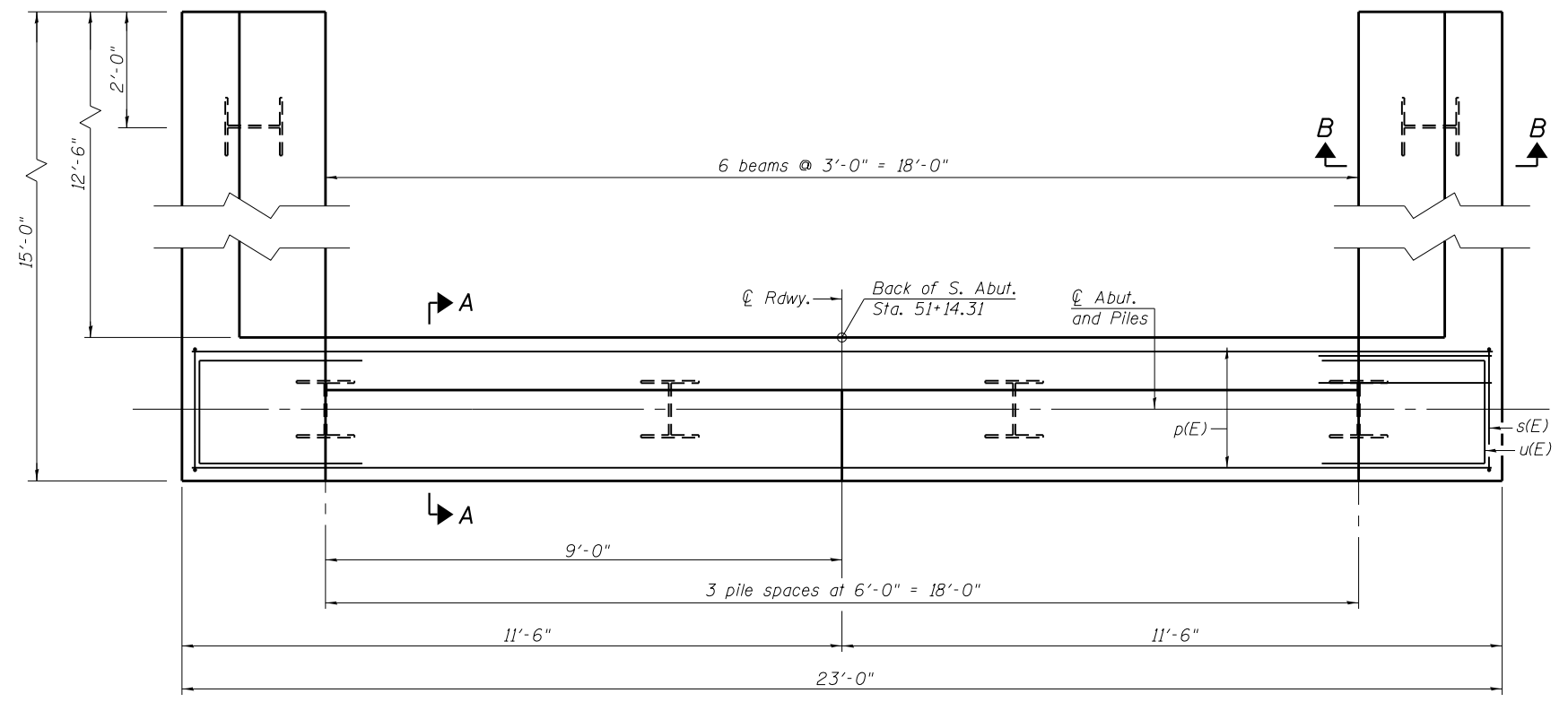
For details of piles and Concrete Encasement, see sheet 11 of 12.

PILE DATA

Type: HP 12x63
Nominal Required Bearing: 497k
Factored Resistance Available: 273k
Est. Length: 22.5 ft. (Wingwalls)
Est. Length: 27.5 ft. (Cap)
No. Production Piles: 5
No. Test Piles: 1



ELEVATION
(Looking South)



PLAN

Notes

Cast top of wingwall flush with exterior beam face after beams have been erected.

For Abutment Sections and Details, see Sheet 10 of 12.

2'-6" x 2'-6" x 1'-9 1/2" Abutment Corners to be included with Concrete Superstructures

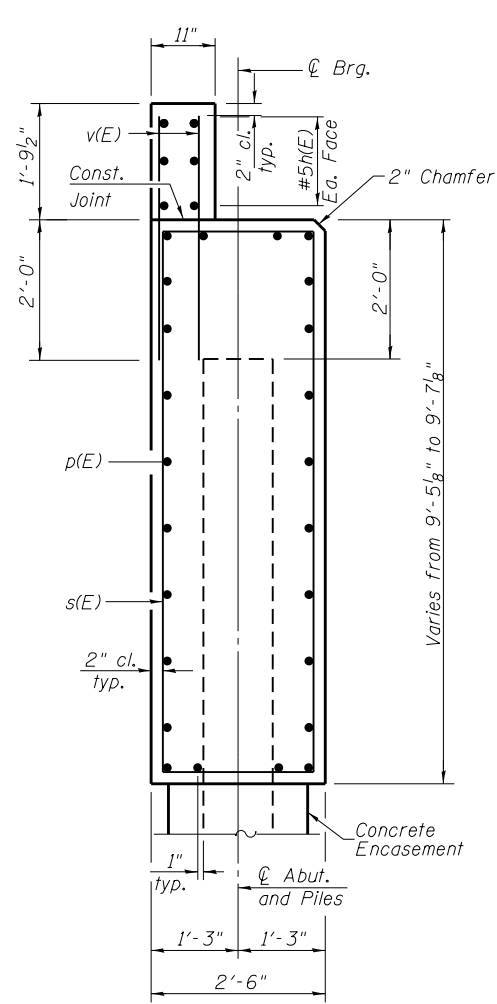
**BILL OF MATERIAL
SOUTH ABUTMENT**

Bar	No.	Size	Length	Shape
d(E)	26	#5	6'-3"	┌┐
d1(E)	26	#5	4'-1"	┌┐
d2(E)	6	#6	6'-9"	┌┐
d3(E)	6	#6	4'-7"	┌┐
h(E)	6	#5	17'-8"	—
h1(E)	40	#5	12'-2"	—
n(E)	52	#6	6'-3"	┌┐
p(E)	24	#5	22'-8"	—
p1(E)	20	#6	12'-2"	—
s(E)	22	#5	23'-5"	┌┐
s1(E)	26	#5	9'-7"	┌┐
u(E)	20	#5	7'-3"	┌┐
u1(E)	6	#5	6'-6"	┌┐
u2(E)	6	#6	9'-10"	┌┐
v(E)	38	#5	4'-5"	—
v1(E)	16	#5	4'-5"	—
v2(E)	52	#6	8'-4"	—
Structure Excavation		Cu. Yd.	90	
Concrete Structures		Cu. Yd.	34.1	
Reinforcement Bars, Epoxy Coated		Pound	4,400	
Furnishing Steel Piles, HP 12x63		Foot	149	
Driving Piles		Foot	149	
Concrete Encasement		Cu. Yd.	2.1	

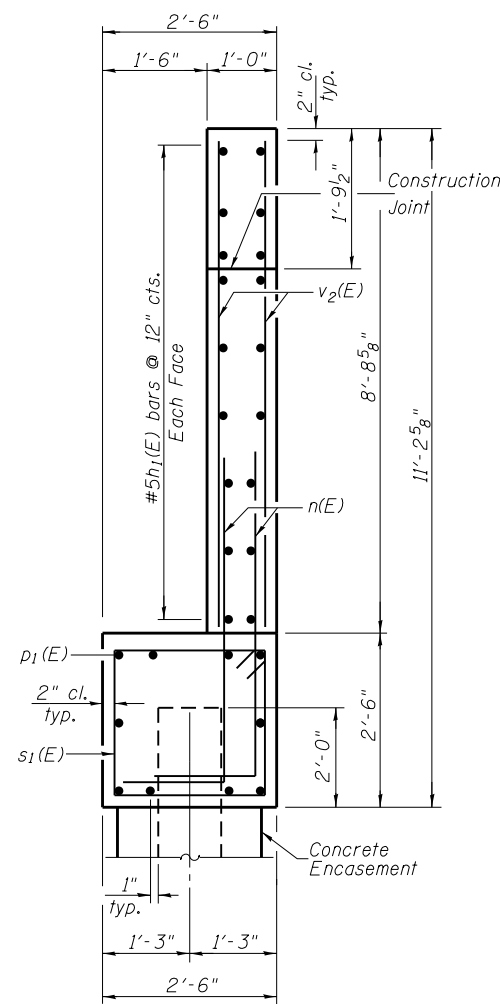
For details of piles and Concrete Encasement, see sheet 11 of 12.

PILE DATA

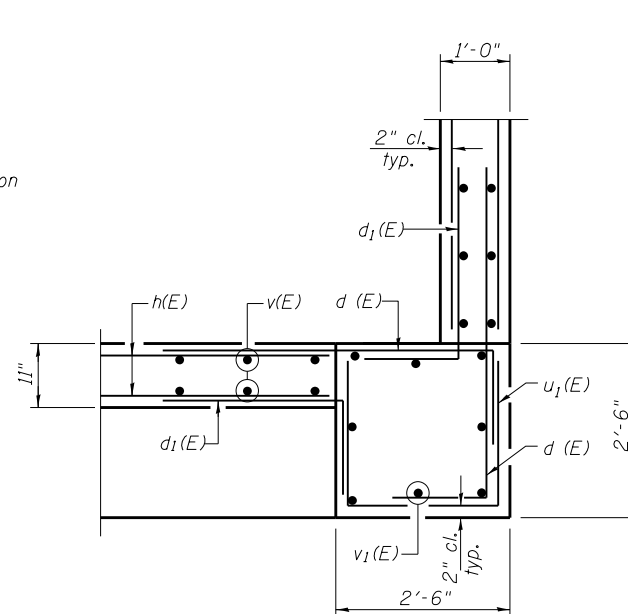
Type: HP 12x63
Nominal Required Bearing: 444k
Factored Resistance Available: 244k
Est. Length: 21.5 ft. (Wingwall)
Est. Length: 26.5 ft. (Cap)
No. Production Piles: 6
No. Test Piles: 0



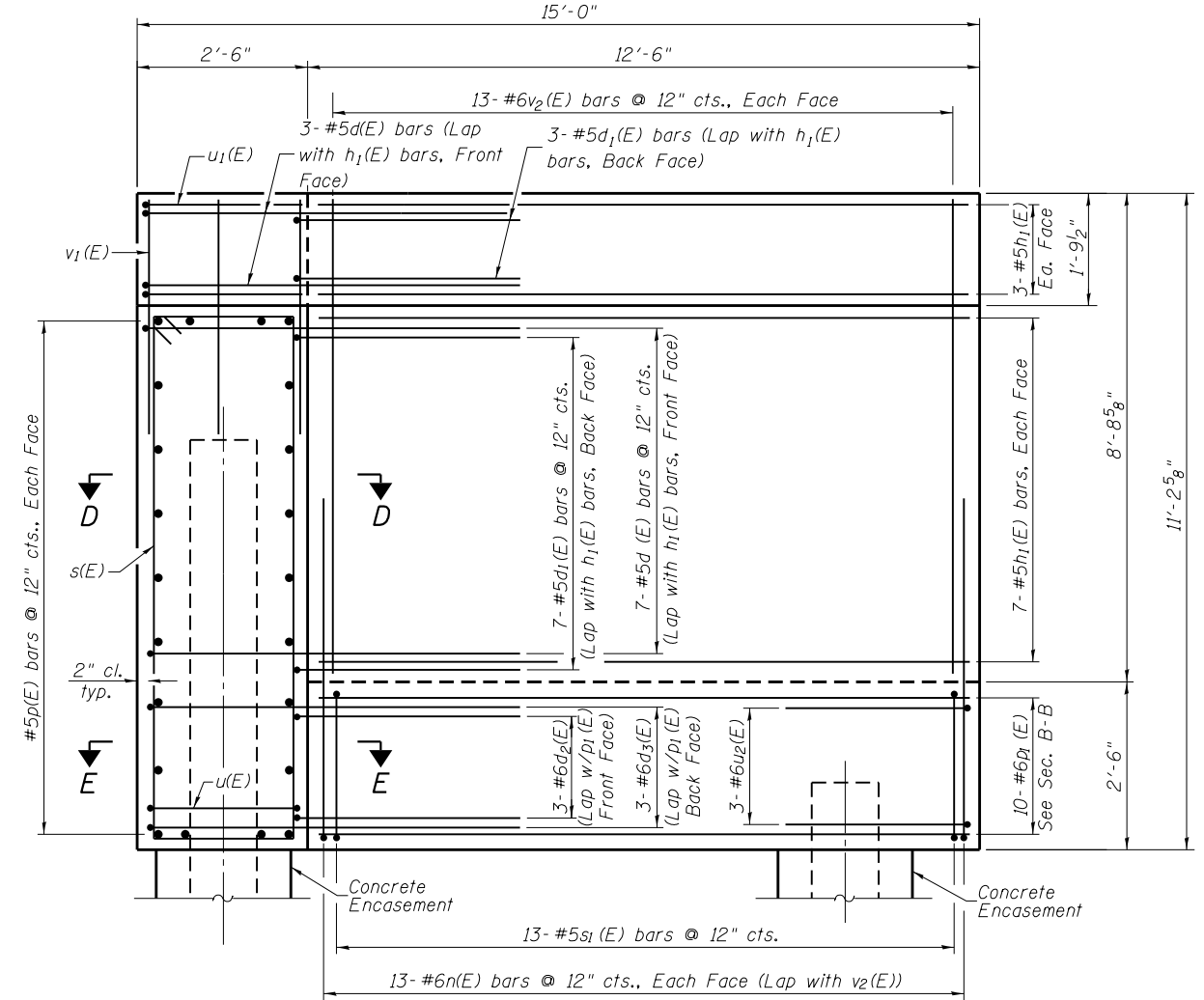
SECTION A-A



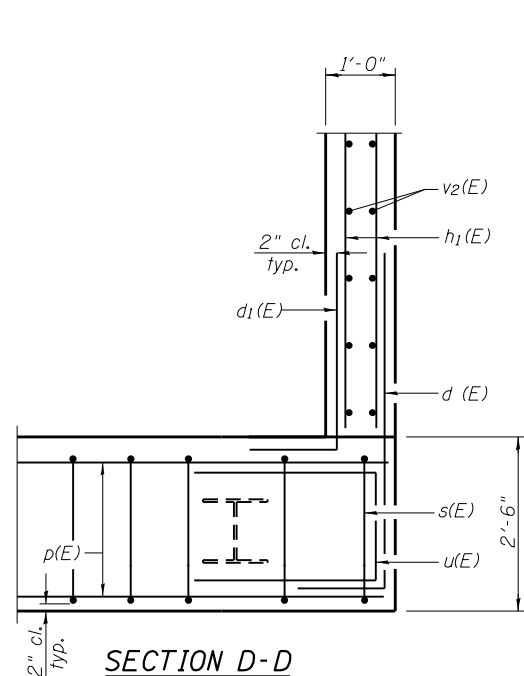
SECTION B-B



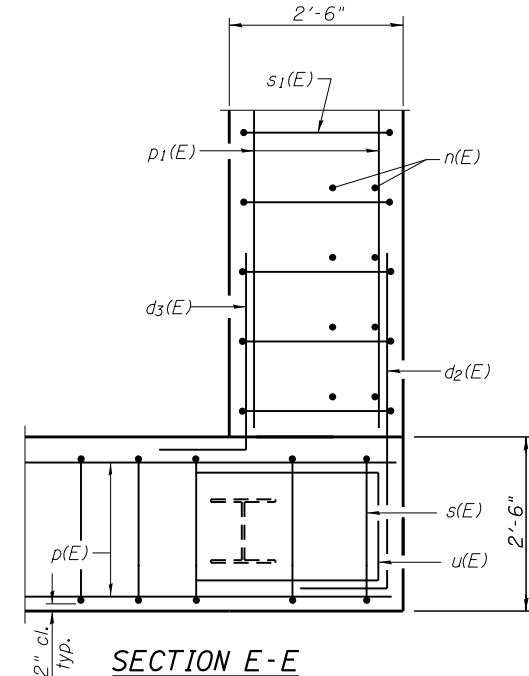
SECTION C-C



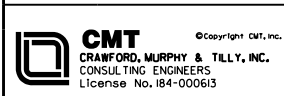
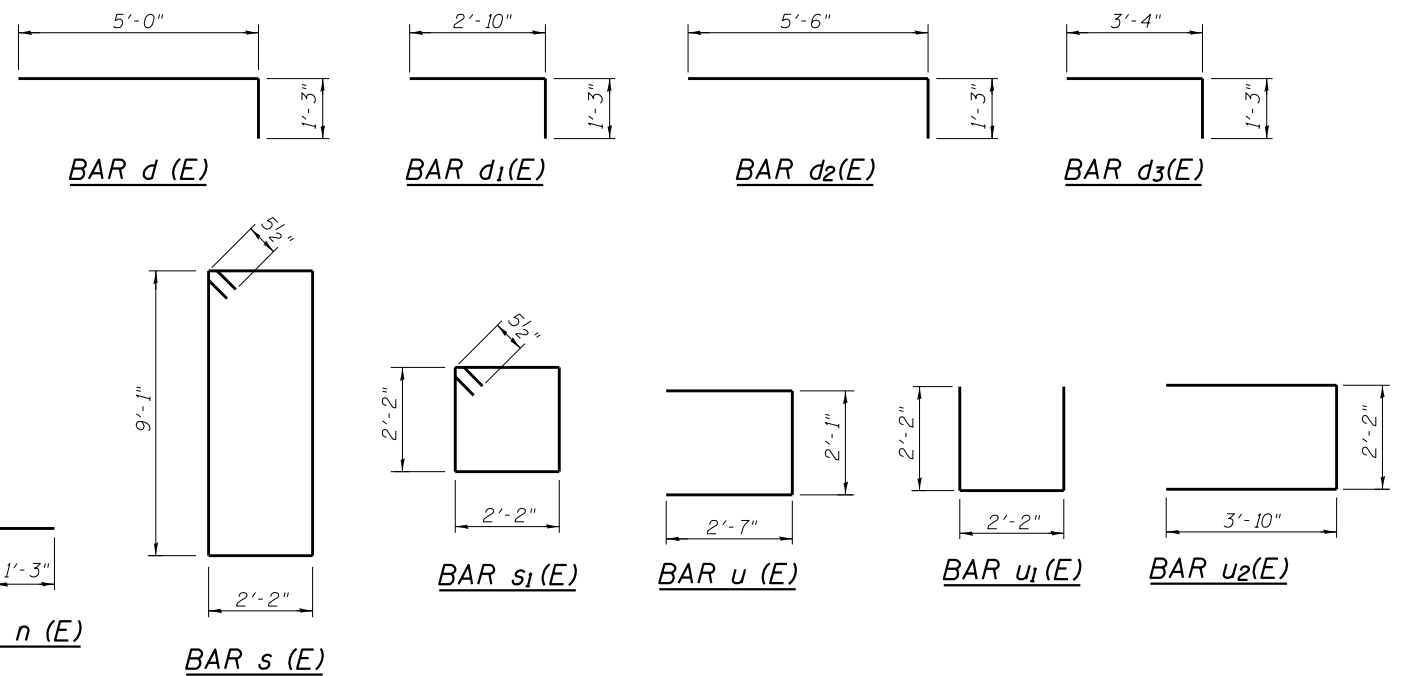
WINGWALL ELEVATION



SECTION D-D



SECTION E-E



USER NAME =	DESIGNED - BPD	REVISED -
PLOT SCALE =	CHECKED - WLB	REVISED -
PLOT DATE =	DRAWN - GLD	REVISED -
	CHECKED - DECEMBER 2013	REVISED -

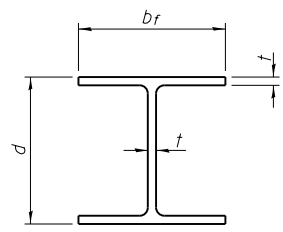
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH & SOUTH ABUTMENT DETAILS
STRUCTURE NO. 044-0062

SHEET NO. 10 OF 12 SHEETS

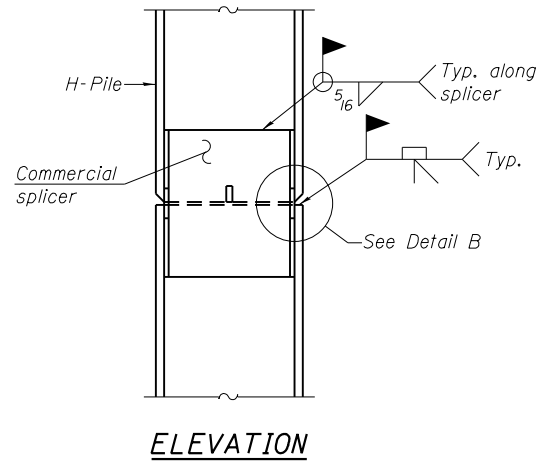
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	22
CONTRACT NO. 78267				

ILLINOIS FED. AID PROJECT

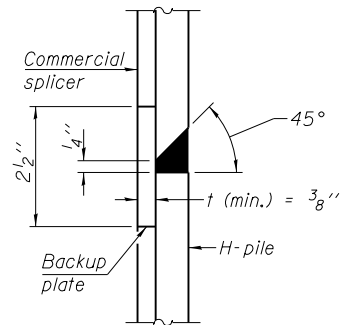


STEEL PILE TABLE

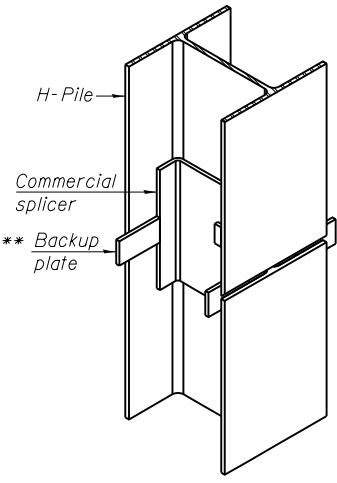
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

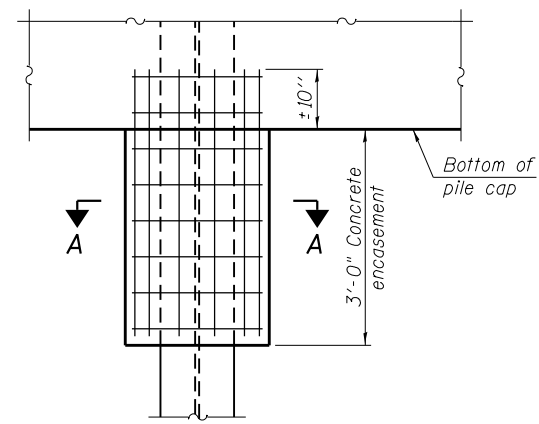


DETAIL "B"



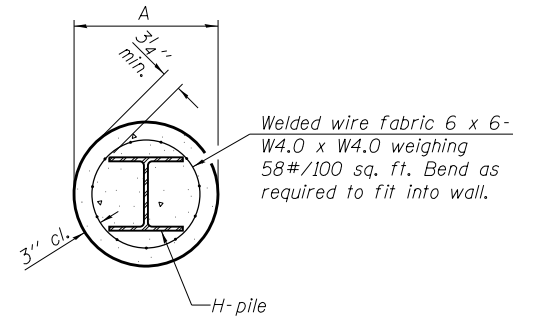
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



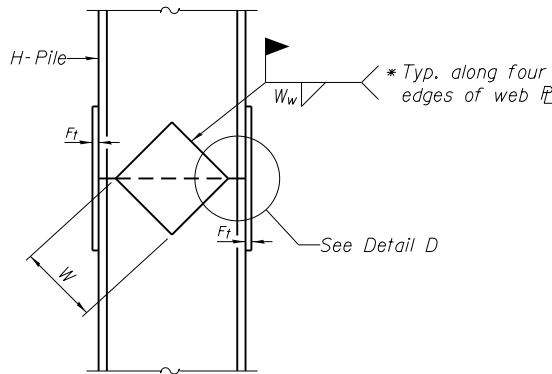
ELEVATION

PILE ENCASEMENT



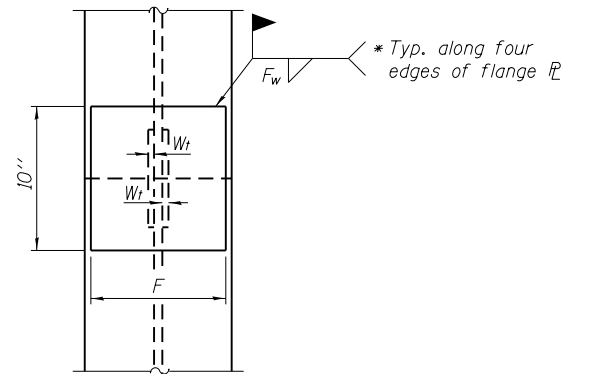
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION

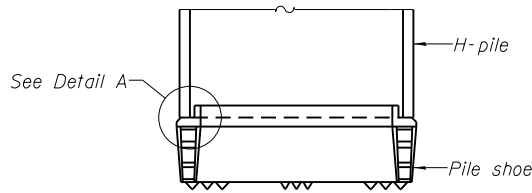
DETAIL D



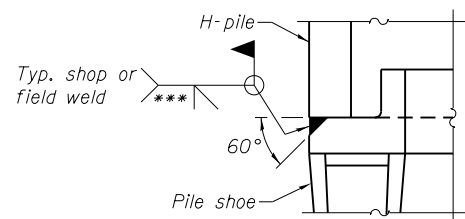
END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 1/2"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

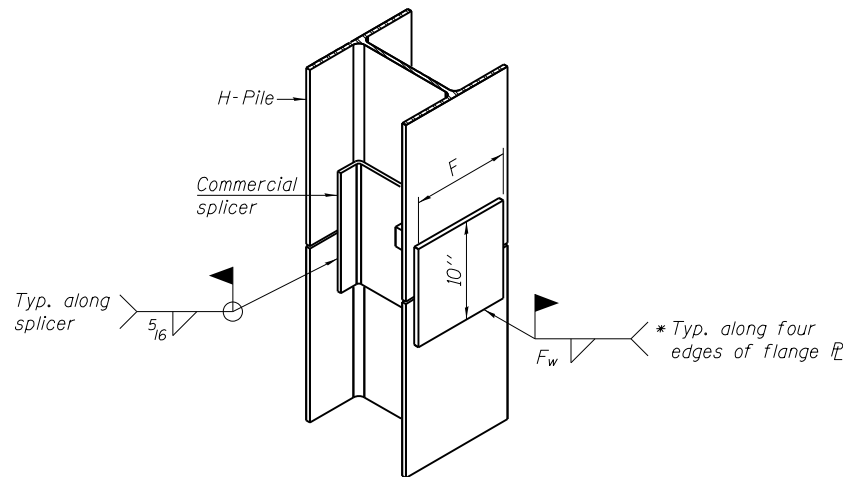


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



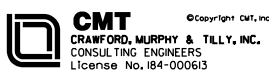
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 1-27-12



USER NAME =	DESIGNED - BPD	REVISED -
PLOT SCALE =	CHECKED - WLB	REVISED -
PLOT DATE =	DRAWN - GLD	REVISED -
	CHECKED - DECEMBER 2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 044-0062

SHEET NO. 11 OF 12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	23
CONTRACT NO. 78267				

ILLINOIS FED. AID PROJECT

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log

Q# 63 off US 45 Over stream

Sheet 1 of 1

Route: US 45 Structure Number: 100-0058

Date: 8/15/2011

Section 34B-1

Bored By: R Moberly

County: Williamson

Location: 1 mile So of Stonefort

Checked By: Rob Graeff

Boring No	D	B	Qu	W%	Surf Wat Elev:	D	B	Qu	W%
Station	P	L	tsf		Ground Water Elevation	T	O	tsf	
Offset	T	W			when Drilling	H	S		
Ground Surface	H	S			At Completion				
1-5					413.8				
1+14					408.3				
CL driveway									
425.3 Ft									
Gravel					Clay A7-6 with Sandy layers			4	1.6B 22
								6	
Stiff, moist, brown and grey, Silty Clay Loam A-6					398.8				
					Cored 26.5 to 31.5 feet				
					100% Recovery; 80% RQD				
					Very dense, dry, grey, Sandstone				
					Test @ 5,870 psi				
420.8									
Medium, moist, brown mottled grey, Silty Clay Loam A-6					30.0				
					Test @ 4,517 psi				
					393.8				
Medium, very moist, grey, Silty Clay Loam to Silt Loam A-4					Cored 31.5 to 36.5 feet				
					100% Recovery; 100% RQD				
					Very dense, dry, grey, Sandstone				
					Test @ 5,236 psi				
415.8									
Soft, very moist, grey mottled brown, Silty Clay Loam A-6					35.0				
					Test @ 3,450 psi				
					388.8				
					Cored 36.5 to 41.5 feet				
					60% Recovery (bottom 2' lost through damaged keeper ring)				
					95% RQD				
					Very dense, dry, grey, Sandstone				
410.8					40.0				
Medium, very moist, brown and tan, Silty Clay Loam A-6					Test @ 3,818 psi				
					383.8				
Medium, very moist, grey and brown, Silty Clay A-6 with Sand seams					Bottom of hole = 41.5 feet				
					Free water observed at 17.0 feet				
405.8									
Very soft, very moist, olive brown, Sandy Clay Loam A-4					Elevation referenced to 1955 plans; center bridge= 426.2 feet				
					45.0				
403.3					Borehole advanced with hollow stem auger (8" O.D., 3.25" I.D.)				
Medium, moist to very moist, grey, Clay to Silty Clay A7-6					To convert "N" values to "N60" multiply by 1.25				
400.8									
Stiff, moist, grey, Clay to Silty					50.0				

N-Std Penr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log

Q# 63 off US 45 Over stream

Sheet 1 of 1

Route: US 45 Structure Number: 100-0058

Date: 8/16/2011

Section 34B-1

Bored By: R Moberly

County: Williamson

Location: 1 mile So of Stonefort

Checked By: R Graeff

Boring No	D	B	Qu	W%	Surf Wat Elev:	D	B	Qu	W%
Station	P	L	tsf		Ground Water Elevation	T	O	tsf	
Offset	T	W			when Drilling	H	S		
Ground Surface	H	S			At Completion				
2-8					413.8				
0+59					407.1				
CL driveway									
426.6 Ft									
Gravel					Silty Clay Loam A-6			2	1.2B 25
								3	
Medium, moist, brown and grey, Silty Clay Loam A-4					399.6				
					2				
					3	0.7S	19		
					2			4	0.4B 28
					397.6			4	
422.1					Very dense, dry, grey, Sand:397.1				100/1"
Medium, moist to very moist, brown mottled grey, Silty Clay Loam A-6					30.0				
					Test @ 4,517 psi				
					393.8				
Medium, very moist, grey, Silty Clay A-6 with Sandstone boulders					Cored 29.4 to 34.4 feet				
					97% Recovery; 85% RQD				
					Very dense, dry, grey, Sandstone				
					Test @ 5,086				
419.6									
Very soft, very moist, grey, Silty Clay A-6 with Sandstone boulders					35.0				
					Test @ 5,738 psi				
					392.1				
417.1					Cored 34.4 to 39.4 feet				
					100% Recovery; 90% RQD				
					Very dense, dry, grey, Sandstone				
					Test @ 5,919 psi				
414.6									
Stiff, moist, brown mottled tan, Silty Clay Loam A-6					25				
					Test @ 4,992 psi				
					387.1				
415.0					Cored 39.4 to 44.4 feet				
					100% Recovery; 87% RQD				
					Very dense, dry, grey, Sandstone with two Clay Shale layers				
					40.0				
409.6					Test @ 5,779 psi				
Medium, very moist, brown mottled grey, Silty Clay Loam A-6					Bottom of hole = 44.4 feet				
					382.1				
407.1					Free water observed at 19.5 feet				
Medium, very moist, grey mottled brown, Silty Clay A-6 with Sand layers					45.0				
					Elevation referenced to 1955 plans; center bridge= 426.2 feet				
404.6					Borehole advanced with hollow stem auger (8" O.D., 3.25" I.D.)				
Stiff, moist, grey mottled brown, Clay to Silty Clay A7-6					To convert "N" values to "N60" multiply by 1.25				
402.1									
Stiff, moist, grey, Silty Clay to					50.0				

N-Std Penr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)



USER NAME =	DESIGNED - BPD	REVISED -
PLOT SCALE =	CHECKED - WLB	REVISED -
PLOT DATE	DRAWN - GLD	REVISED -
	CHECKED - DECEMBER 2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

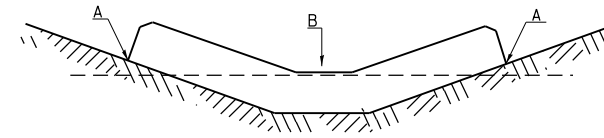
BORING LOGS
STRUCTURE NO. 044-0062

SHEET NO. 12 OF 12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	24
CONTRACT NO. 78267			ILLINOIS FED. AID PROJECT	

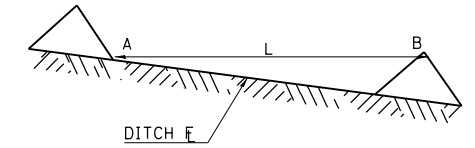
TEMPORARY DITCH CHECKS

PLACEMENT OF TEMPORARY
DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

SPACING BETWEEN TEMPORARY DITCH CHECKS

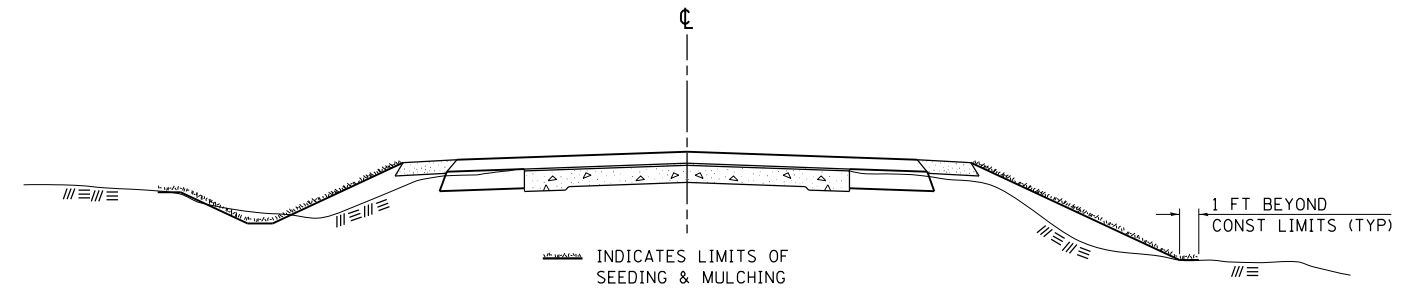


L = THE DISTANCE SUCH THAT POINTS
A AND B ARE OF EQUAL ELEVATION
B = THE LOW POINT
IN CENTER OF CHECK

REVISIONS	
DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10

STD. 9-108

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -
L:\IDOT\0806610\W0_12\Draw\Sheets\0978267-sht-Detail.dgn		DRAWN - BMB	REVISED -
	PLOT SCALE = 100.0000' / in.	CHECKED - JMM	REVISED -
SHT001	PLOT DATE = 12/11/2013	DATE - DECEMBER 2013	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

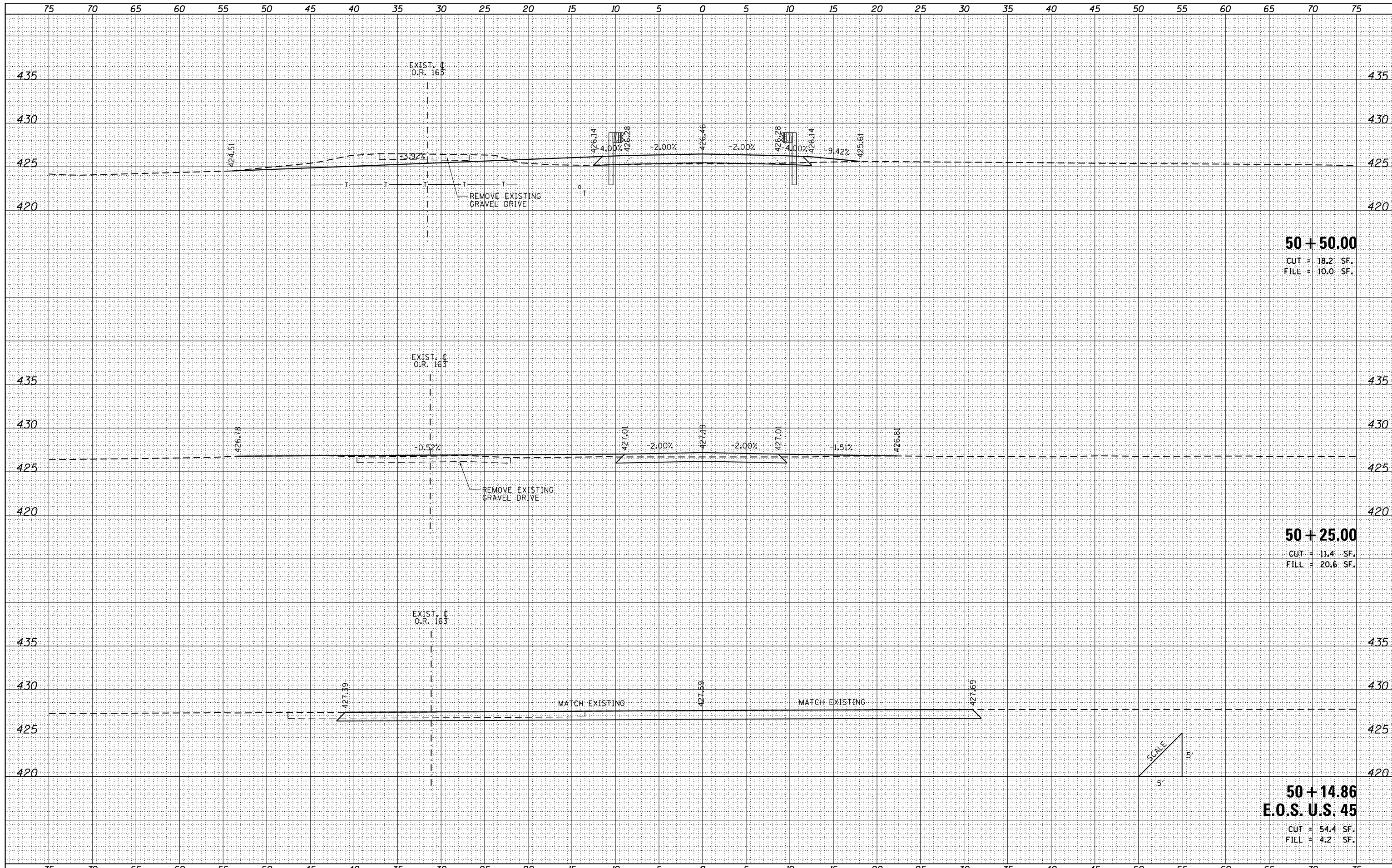
**DISTRICT DETAILS
O.R. 163 OFF U.S. ROUTE 45 (F.A.P. 881)**

SCALE: N/A SHEET OF SHEETS STA. TO STA.

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	25
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



50 + 50.00
 CUT = 18.2 SF.
 FILL = 10.0 SF.

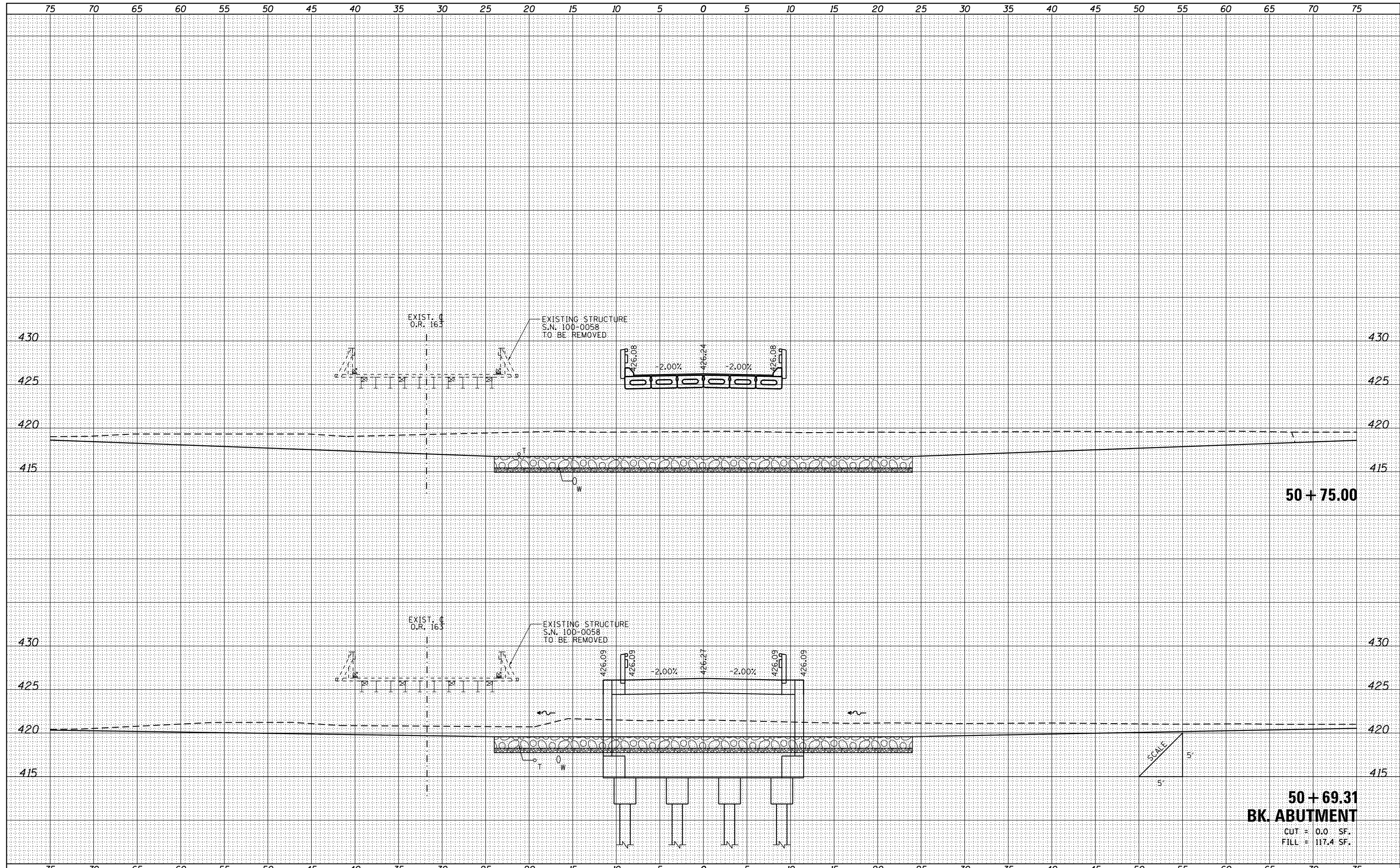
50 + 25.00
 CUT = 11.4 SF.
 FILL = 20.6 SF.

50 + 14.86
E.O.S. U.S. 45
 CUT = 54.4 SF.
 FILL = 4.2 SF.

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS O.R. 163 OVER POND CREEK			O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht.Entrance.dgn		DRAWN - BMB	REVISED -		163	34B-2	JOHNSON	37	26			
Default		PLOT SCALE = 10.0000' / in.	CHECKED - JMM		REVISED -	CONTRACT NO. 78267			ILLINOIS FED. AID PROJECT			
		PLOT DATE = 12/10/2013	DATE - DECEMBER 2013		REVISED -	SCALE:	SHEET	OF	SHEETS	STA. 50+14.86	TO STA. 50+50.00	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



50 + 75.00

**50 + 69.31
BK. ABUTMENT**

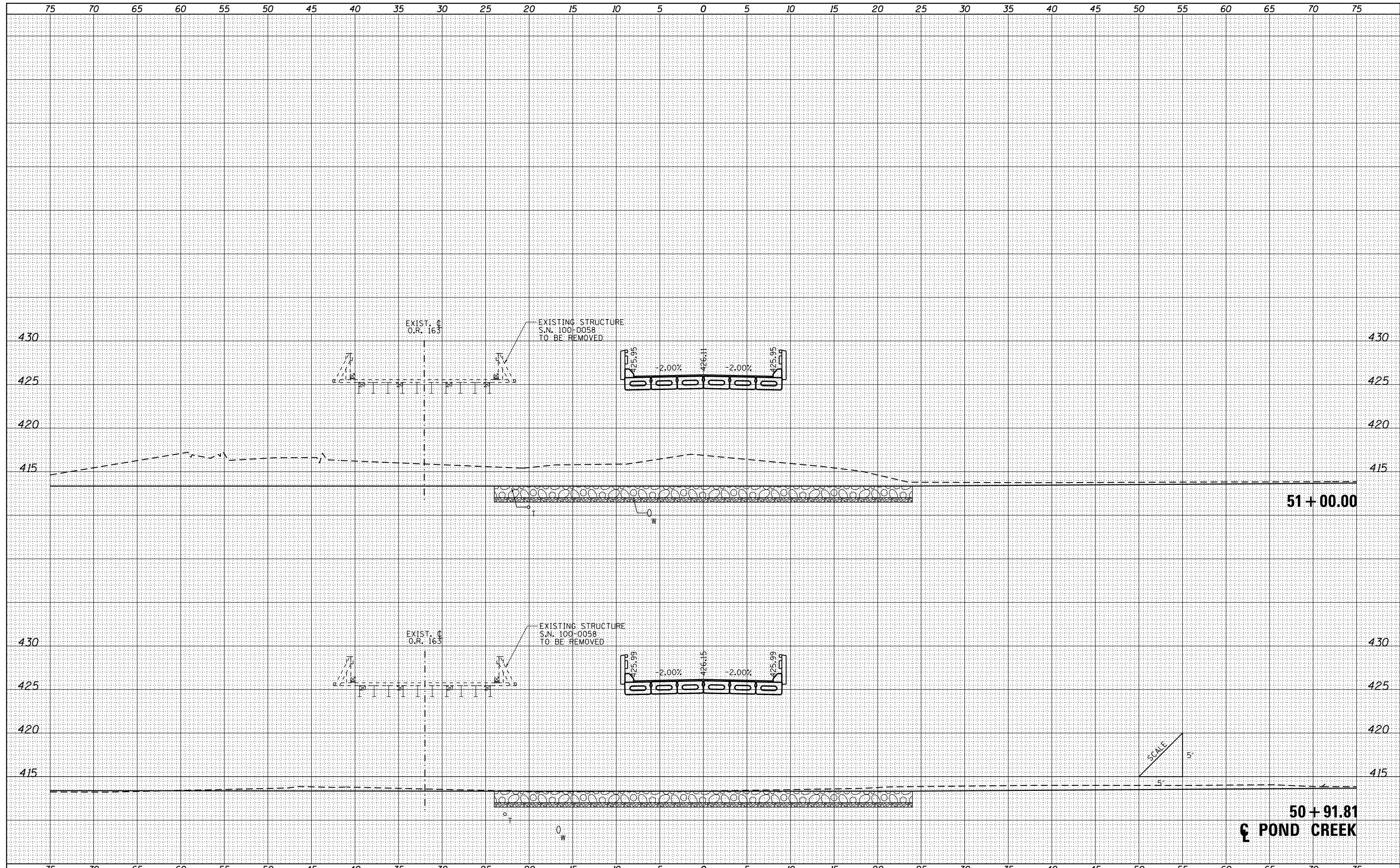
CUT = 0.0 SF.
FILL = 117.4 SF.

SCALE
5'
5'

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS O.R. 163 OVER POND CREEK				O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht.Entrance.dgn		DRAWN - BMB	REVISED -		163	34B-2	JOHNSON	37	27				
PLOT SCALE = 10.0000' / in.		CHECKED - JMM	REVISED -		CONTRACT NO. 78267								
PLOT DATE = 12/10/2013		DATE - DECEMBER 2013	REVISED -		ILLINOIS FED. AID PROJECT								
Default				SCALE:	SHEET	OF	SHEETS	STA. 50+69.31	TO STA. 50+75.00				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

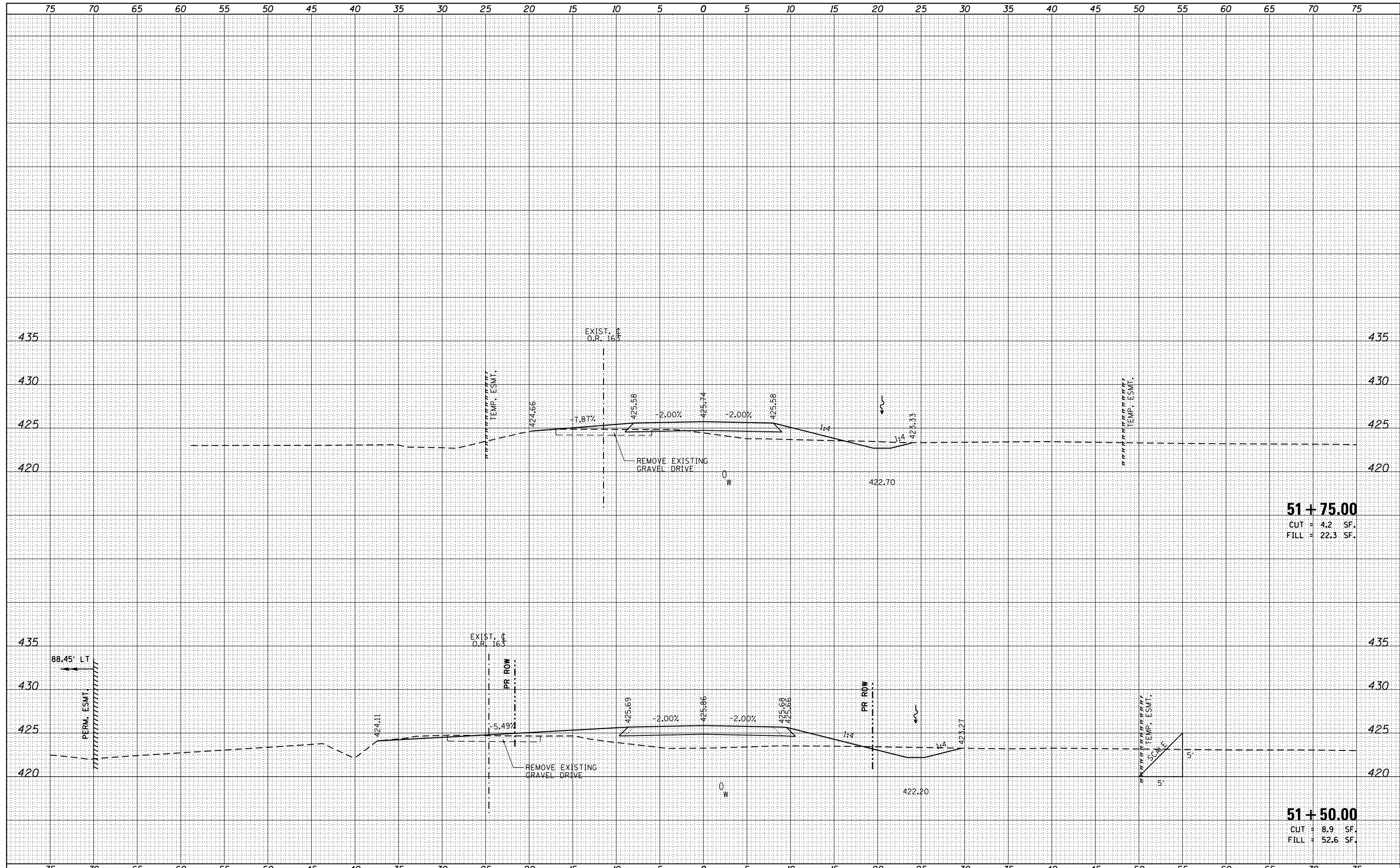
DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS O.R. 163 OVER POND CREEK				O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht.Entrance.dgn		DRAWN - BMB	REVISED -						163	34B-2	JOHNSON	37	28
Default		PLOT SCALE = 10.0000' / in.	REVISOR - JMM		REVISOR -	CONTRACT NO. 78267							
		PLOT DATE = 12/10/2013	DATE - DECEMBER 2013		REVISOR -	SCALE:	SHEET	OF	SHEETS	STA. 50+91.81	TO STA. 51+00.00	ILLINOIS FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
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SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



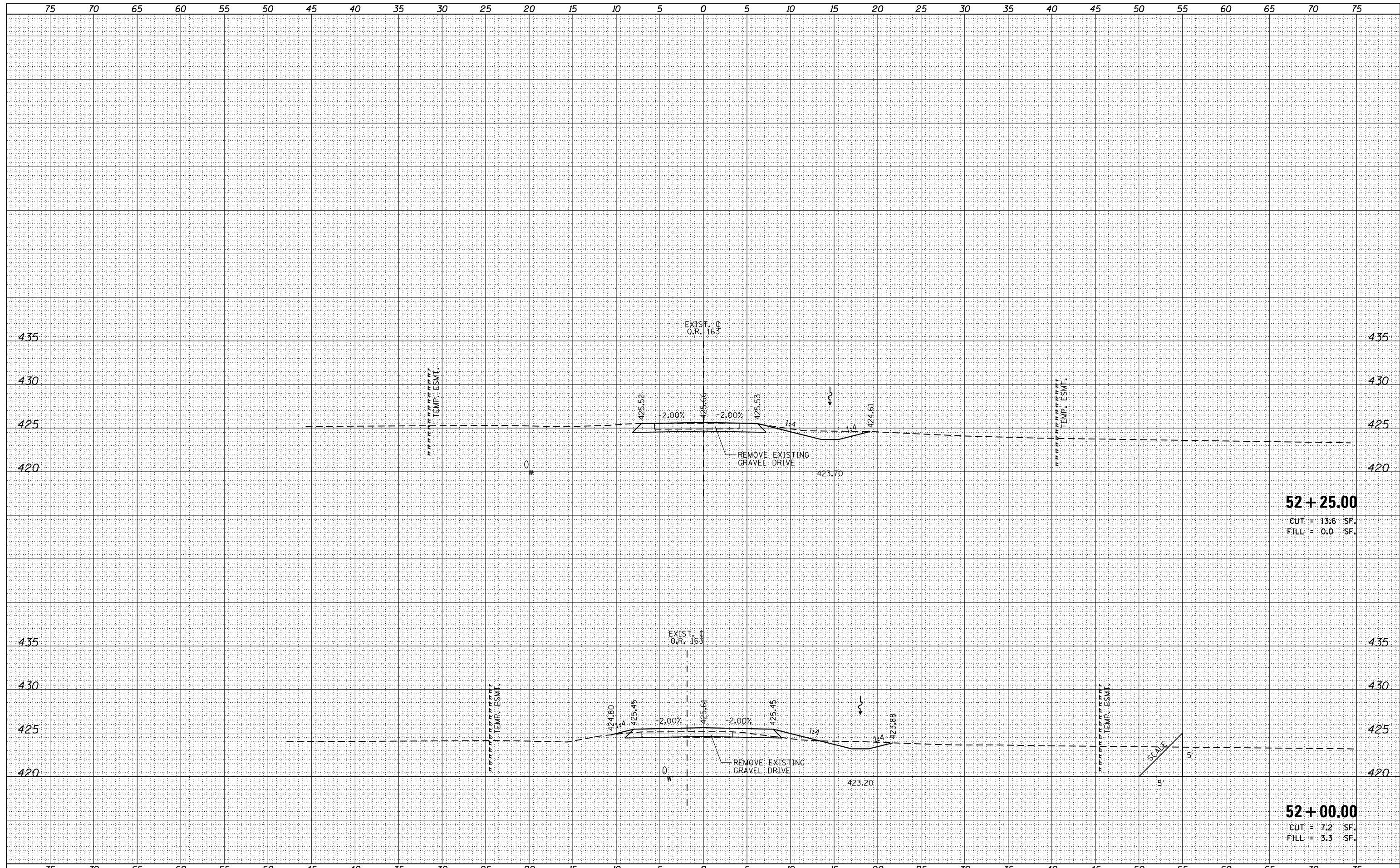
51 + 75.00
 CUT = 4.2 SF.
 FILL = 22.3 SF.

51 + 50.00
 CUT = 8.9 SF.
 FILL = 52.6 SF.

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS O.R. 163 OVER POND CREEK			O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht.Entrance.dgn	DRAWN - BMB	REVISIED -	163					34B-2	JOHNSON	37	30	
Default	PLOT SCALE = 10.0000' / in.	CHECKED - JMM	REVISIED -					CONTRACT NO. 78267				
	PLOT DATE = 12/10/2013	DATE - DECEMBER 2013	REVISIED -					ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



FILE NAME = L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-shsht.Entrance.dgn

USER NAME = Brian Bond
 PLOT SCALE = 10.0000' / in.
 PLOT DATE = 12/10/2013

DESIGNED - BMB
 DRAWN - BMB
 CHECKED - JMM
 DATE - DECEMBER 2013

REVISED -
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 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

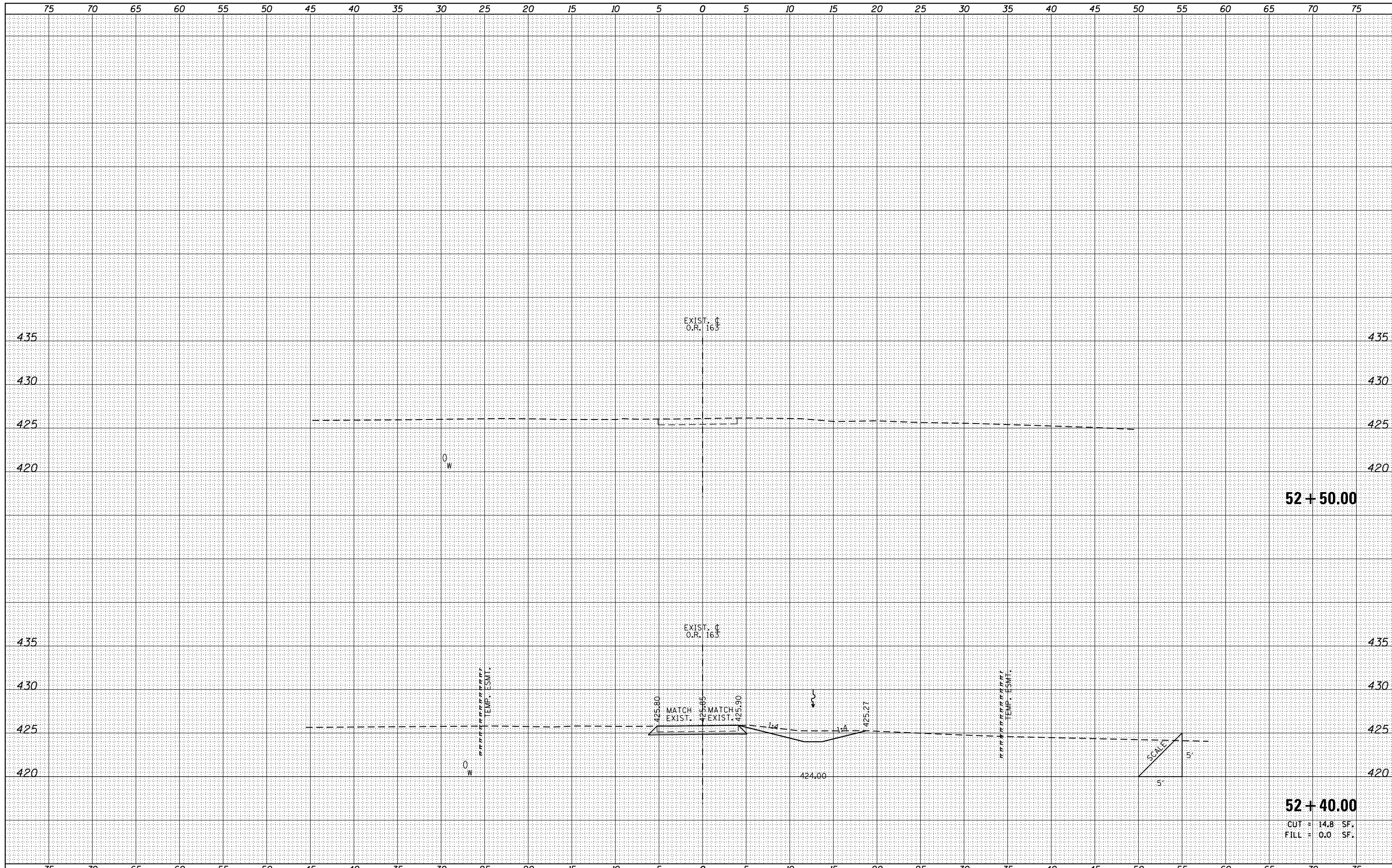
CROSS SECTIONS
 O.R. 163 OVER POND CREEK

SCALE: SHEET OF SHEETS STA. 52+00.00 TO STA. 52+25.00

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	31
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY NOTE BOOK NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY NOTE BOOK NO.	



52 + 50.00

52 + 40.00

CUT = 14.8 SF.
FILL = 0.0 SF.

FILE NAME =	USER NAME = Brian Bond
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht.Entrance.dgn	
Default	PLOT DATE = 12/10/2013

DESIGNED - BMB	REVISIED -
DRAWN - BMB	REVISIED -
CHECKED - JMM	REVISIED -
DATE - DECEMBER 2013	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

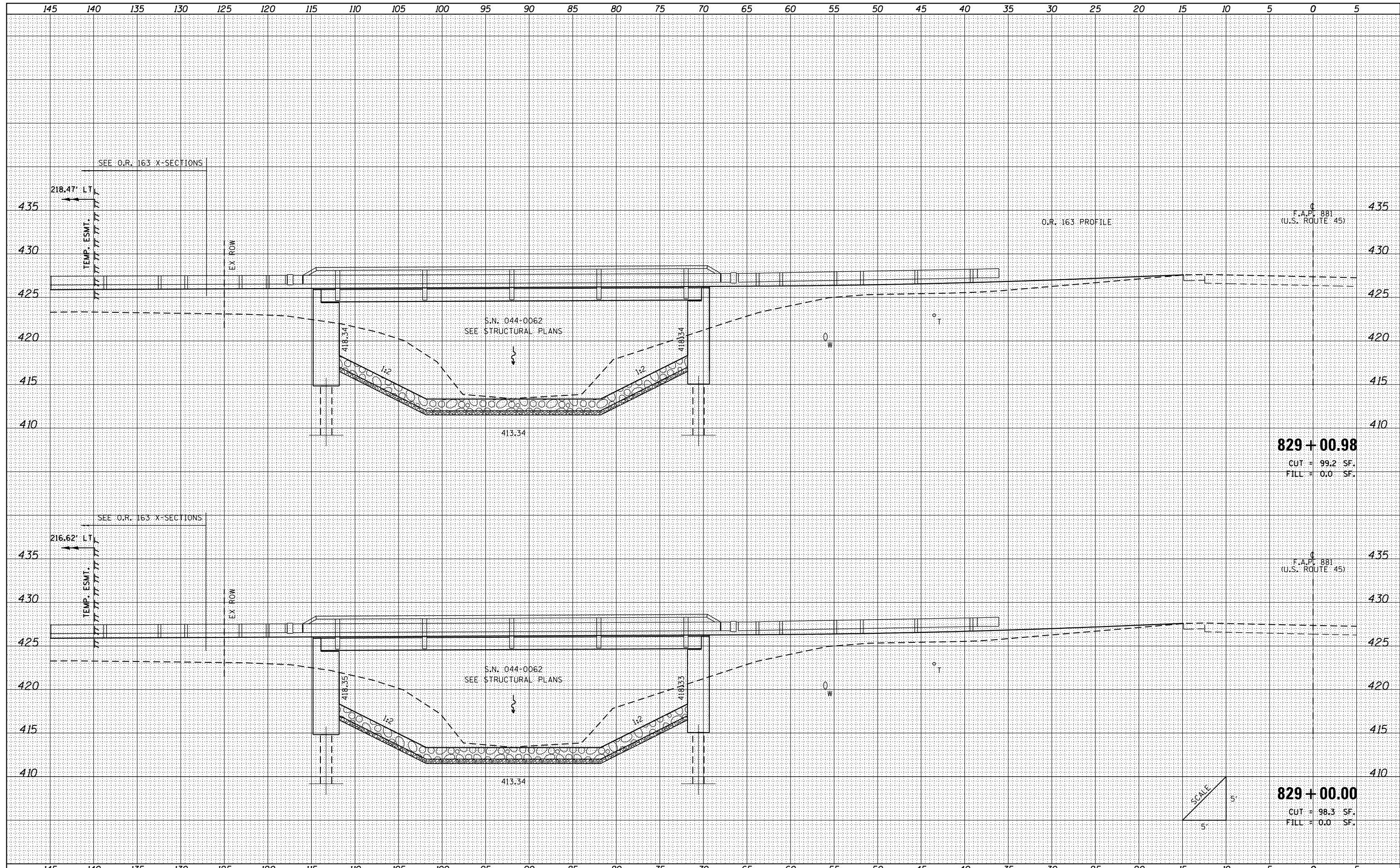
**CROSS SECTIONS
O.R. 163 OVER POND CREEK**

SCALE: SHEET OF SHEETS STA. 52+40.00 TO STA. 52+50.00

O.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
163	34B-2	JOHNSON	37	32
CONTRACT NO. 78267				
ILLINOIS FED. AID PROJECT				

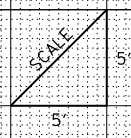
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



829 + 00.98
 CUT = 99.2 SF.
 FILL = 0.0 SF.

829 + 00.00
 CUT = 98.3 SF.
 FILL = 0.0 SF.



FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS F.A.P. 881 (U.S. ROUTE 45)			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
L:\IDOT\0806610\WO_12\Draw\Sheets\0978267-sh1-ssht-US45.dgn	PLLOT SCALE = 10.0000' / in.	DRAWN - BMB	REVISED -					163	34B-2	JOHNSON	37	35
Default	PLLOT DATE = 12/10/2013	CHECKED - JMM	REVISED -		SCALE: SHEET OF SHEETS STA. 829+00.00 TO STA. 829+00.98			CONTRACT NO. 78267				
		DATE - DECEMBER 2013	REVISED -					ILLINOIS FED. AID PROJECT				

