

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 27	13-00140-00-BR	WILLIAMSON	37	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99528		

**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4.	TYPICAL CROSS SECTIONS
5-6.	PLAN AND PROFILE
7-8.	DETOUR PLAN
9.	PAVEMENT MARKING PLAN
10.	GUARDRAIL & SHOULDER PLAN
11.	GUARDRAIL DETAIL
12-19.	STATION CROSS SECTIONS
20-35.	BRIDGE PLANS
36-37.	EXISTING PLANS

SEE PROPOSAL BOOKLET FOR HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENIG FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-12	TRAFFIC BARRIER TERMINAL, TYPE 6
631033-05	TRAFFIC BARRIER TERMINAL, TYPE 6B
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701901-03	TYPICAL PAVEMENT MARKINGS
780001-04	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

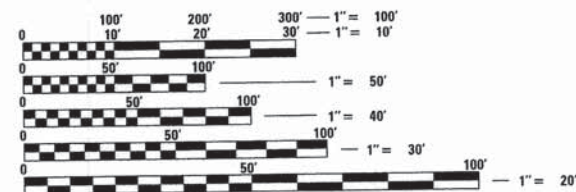
**UTILITIES**

SOUTHERN ILLINOIS POWER COOP  
11543 LAKE OF EGYPT ROAD  
MARION, ILLINOIS 62959  
ATTN: DARIN HOUCHEIN

FRONTIER COMMUNICATIONS  
208 W. UNION  
MARION, ILLINOIS 62959  
ATTN: DARRELL SENIOR

LAKE EGYPT WATER DICSTRIC  
C/O CLARIDA & ZIEGLER ENGINEERING COMPANY  
410 NORTH COURT STREET  
P.O. BOX 937  
MARION, ILLINOIS 62959  
ATTN: JOE BOYKE  
(618)993-6411

SOUTHEASTERN ILLINOIS ELECTRIC COOP  
585 ILLINOIS 142  
ELDORADO, ILLINOIS 62930  
ATTN: ERIC JUNG



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.

**CONTRACT NO. 99528 PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS**

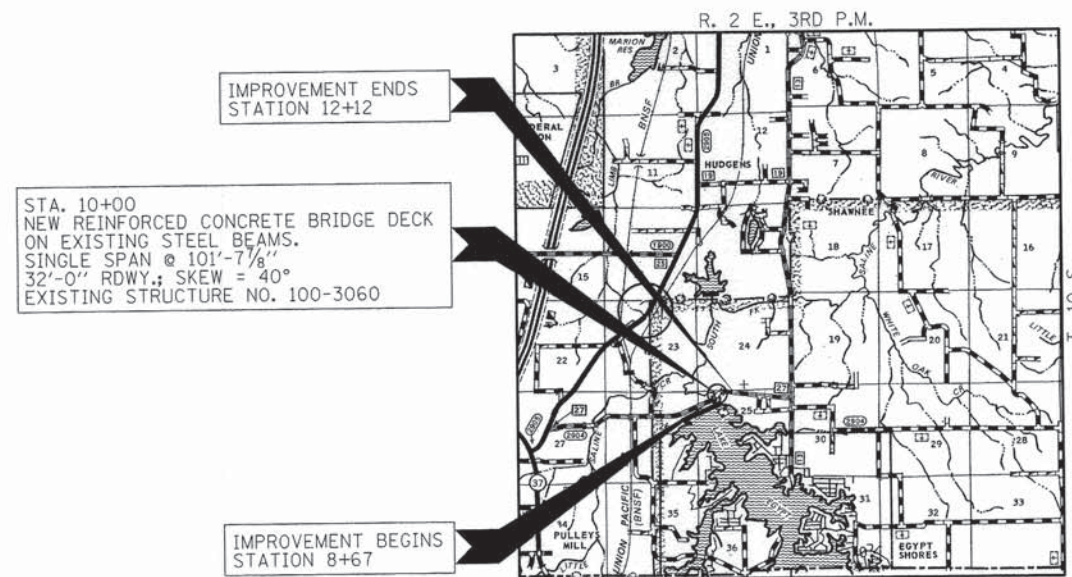
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
SURFACE TRANSPORTATION PROGRAM  
OFF SYSTEM BRIDGE**

**PROJECT RS-2904(205)  
SECTION 13-00140-00-BR  
WILLIAMSON COUNTY  
C.H. 27 / F.A.S. 2904  
C-99-508-14**



LOCATION OF SECTION INDICATED THUS: - [thick black line] -

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR  
DESIGN SPEED: 55 MPH  
DESIGN TRAFFIC: 3086 ADT (2013)



**LOCATION MAP**

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 345 FEET = 0.065 MILES

**WARNING**

**WILLIAMSON COUNTY HIGHWAY DEPARTMENT**

APPROVED April 3 2014  
*[Signature]*  
COUNTY ENGINEER

PASSED April 4 2014  
*[Signature]*  
DISTRICT NINE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review  
April 4 2014  
*[Signature]*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FIVE ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE: 04/02/2014

EXPIRES 11/30/2015

**HAMPTON, LENZINI AND RENWICK, INC.**  
CIVIL ENGINEERS • STRUCTURAL ENGINEERS • LAND SURVEYORS  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217-546.3400 www.hirengineering.com

184.00089 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

PROJECT NUMBER: 13.0267.130 DATE: 04/02/14

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE	
		0014	
		UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	60
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	31
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	70
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	418
50102400	CONCRETE REMOVAL	CU YD	4.6
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50300100	FLOOR DRAINS	EACH	14
50300255	CONCRETE SUPERSTRUCTURE	CU YD	121.7
50300260	BRIDGE DECK GROOVING	SQ YD	329
50300300	PROTECTIVE COAT	SQ YD	453
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1800
50500505	STUD SHEAR CONNECTORS	EACH	1040
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	34370
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	90
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	4
52100520	ANCHOR BOLTS, 1"	EACH	8
58700300	CONCRETE SEALER	SQ FT	1690
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	100
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	1
63200310	GUARDRAIL REMOVAL	FOOT	401
67100100	MOBILIZATION	L SUM	1
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	685
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	5
* 78200420	GUARDRAIL MARKERS, TYPE B	EACH	2
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE	
		0014	
		UNIT	TOTAL
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.1
* ^ X6310214	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	2
* ^ X6311217	TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL)	EACH	2
* ^ X6310190	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED), MODIFIED	EACH	1
^ XX008438	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1
^ Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	4
* ^ Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
* ^ Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1

^ SEE SPECIAL PROVISIONS

\* SPECIALTY ITEMS

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED, JANUARY 1, 2012", THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE LOCATION OF EXISTING GAS AND WATER MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE. BUT THE LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASCERTAINING THEIR EXACT LOCATION FROM THE INDIVIDUAL COMPANIES AND BY FIELD INSPECTION.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY THE CONTRACTOR'S OPERATIONS.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ADJUTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.  

HOT-MIX ASPHALT	112 LBS/SQ YD/INCH
POROUS GRANULAR EMBANKMENT	2.05 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.  
ESTIMATED QUANTITY = 0.1 ACRES

FILE NAME = 130267-ahd-summary.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>SUMMARY OF QUANTITIES AND GENERAL NOTES</b>				C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3048 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - R.D.H.	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	27	13-00140-00-BR	WILLIAMSON	37	2
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -						CONTRACT NO. 99528				
		DATE - 04/02/14	REVISED -						ILLINOIS FED. AID PROJECT RS-2904205				

EARTHWORK SUMMARY							
LOCATION	EARTH EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) / SHORTAGE (-)	
	20200100			CU YD		CU YD	CU YD
	CU YD			CU YD		CU YD	CU YD
STA 8+67.00 TO STA 9+49.17	18	25.00%	100.00%	14	0	14	
STA 10+50.83 TO STA 12+12.00	38	25.00%	100.00%	29	2	27	
<b>TOTAL</b>	56			43	2	41	
USE	60					45	

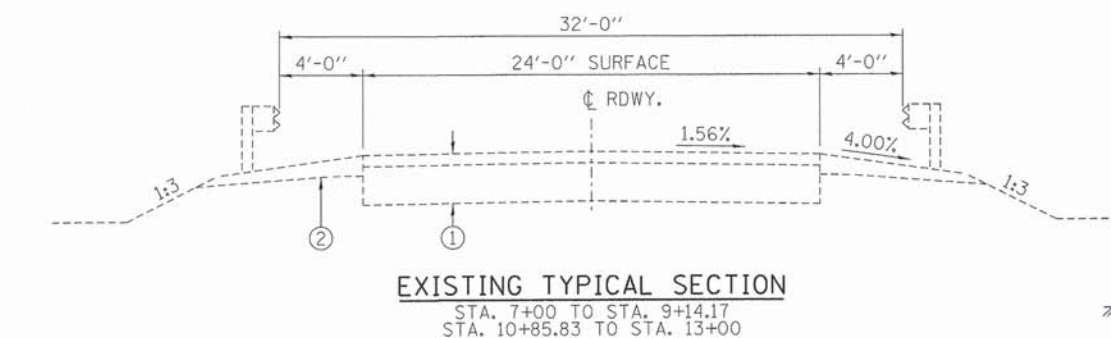
WASTE 45 CU. YDS

PAVEMENT MARKING SCHEDULE						
LOCATION	PAINT PAVEMENT MARKING - LINE 4"			RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	EDGE LINE WHITE	NO PASSING YELLOW	SKIP DASH CENTERLINE YELLOW			
		78001110		78100100	78100105	78300200
	FOOT	FOOT	FOOT	EACH	EACH	EACH
LT. STA 8+90 TO LT. STA 10+85	195					
LCL. STA 8+90 TO LCL. STA 9+50		60				
CL. STA 8+90 TO CL. STA 10+85			40	2	1	2
RCL. STA 8+90 TO LCL. STA 10+85		195				
RT. STA 8+90 TO RT. STA 10+85	195					
<b>SUBTOTAL</b>	390	255	40	2	1	2
<b>TOTAL</b>		685		2	1	2

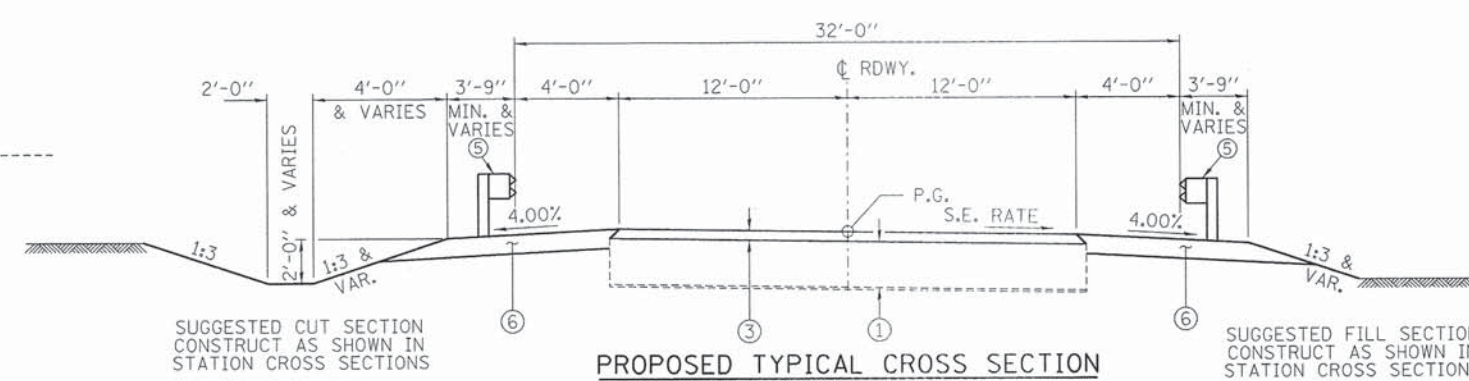
ROADWAY SCHEDULE			
LOCATION	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N90 (1.5")	HOT-MIX ASPHALT SURFACE REMOVAL BUTT JOINT	AGGREGATE SHOULDERS TYPE B, 6"
	40603320	40600982	48101500
	TON	SQ YD	SQ YD
STA 8+67 TO STA 9+49.17	20	38	119
STA 10+50.83 TO STA 12+12	11	32	299
<b>TOTAL</b>	31	70	418

HMA - MIXTURE REQUIREMENTS	
LOCATION(S):	C.H. 27
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE
AC/PG:	PG 64-22
RAP % (MAX):	SEE BDE SPECIAL PROVISION 80306
DESIGN AIR VOIDS:	4% @ Ndes 90
MIXTURE COMPOSITION:	IL 9.5
(GRADATION MIXTURE):	
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS. \ SQ. YD. \ INCH

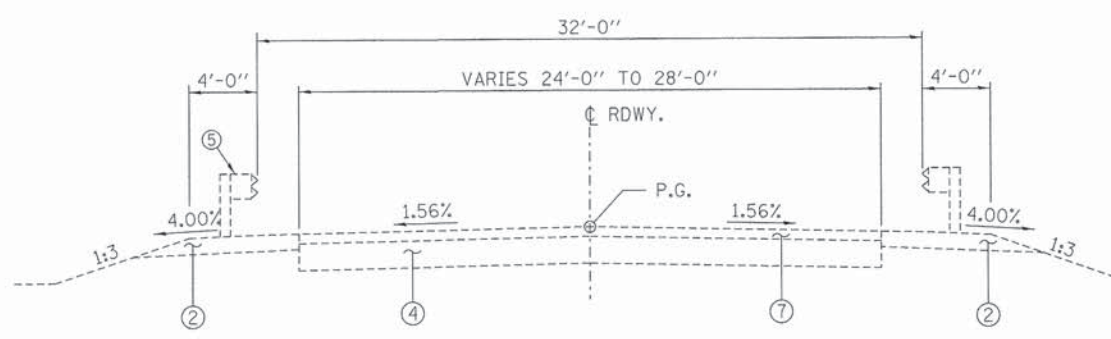
GUARDRAIL SCHEDULE									
LOCATION	STEEL PLATE BEAM GUARDRAIL, TYPE A 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (FLARED),	GUARDRAIL REMOVAL	GUARDRAIL MARKERS TYPE A	GUARDRAIL MARKERS TYPE B	TERMINAL MARKER DIRECT APPLIED	TRAFFIC BARRIER TERMINAL TYPE 6 (MODIFIED)	TRAFFIC BARRIER TERMINAL TYPE 6B (MODIFIED)	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) FLARED, MODIFIED
	63000001	63100169	63200310	78200410	78200420	78201000		X6310187	X6310190
	FOOT	EACH	FOOT	EACH	EACH	EACH	EACH	EACH	EACH
LT. STA 8+68.17 TO LT. STA 11+80.75	50	1	231	3	1	1	1	1	
RT. STA 8+70.72 TO RT. STA 11+60.03	50		170	2	1	1	1	1	1
<b>TOTAL</b>	100	1	401	5	2	2	2	2	1



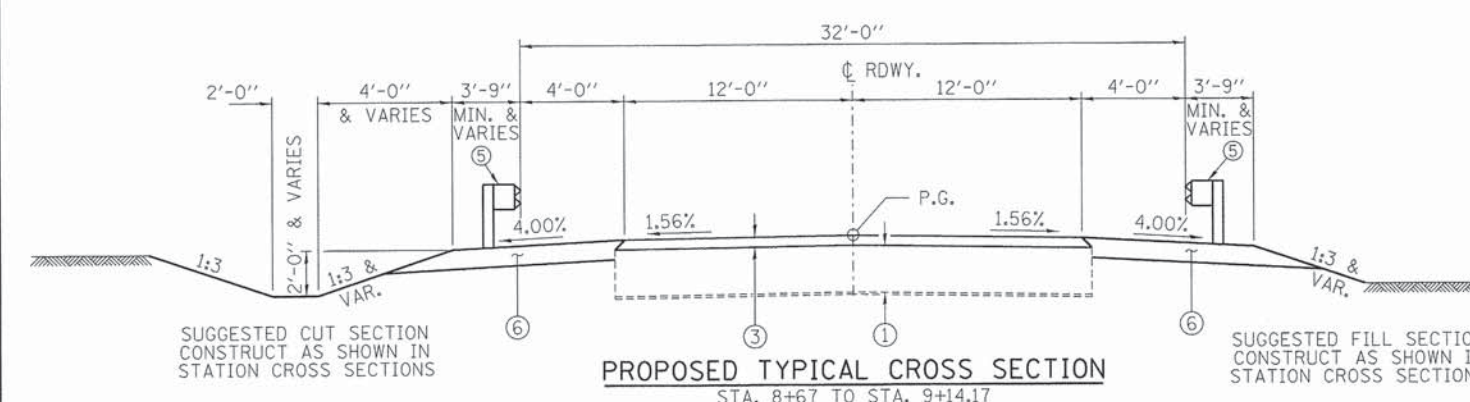
**EXISTING TYPICAL SECTION**  
 STA. 7+00 TO STA. 9+14.17  
 STA. 10+85.83 TO STA. 13+00



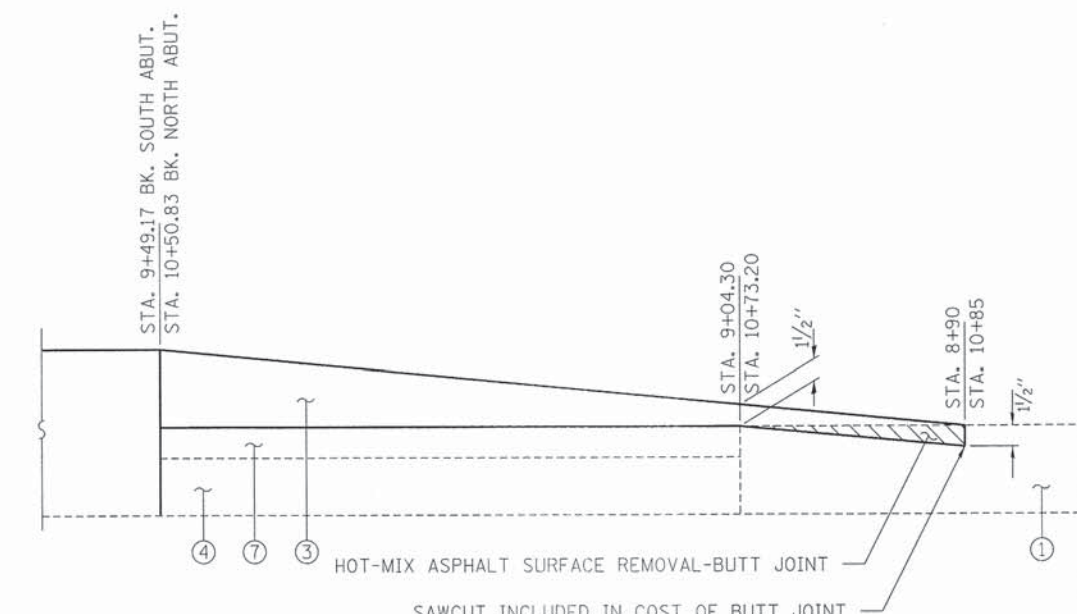
**PROPOSED TYPICAL CROSS SECTION**  
 STA. 10+85 TO STA. 12+12



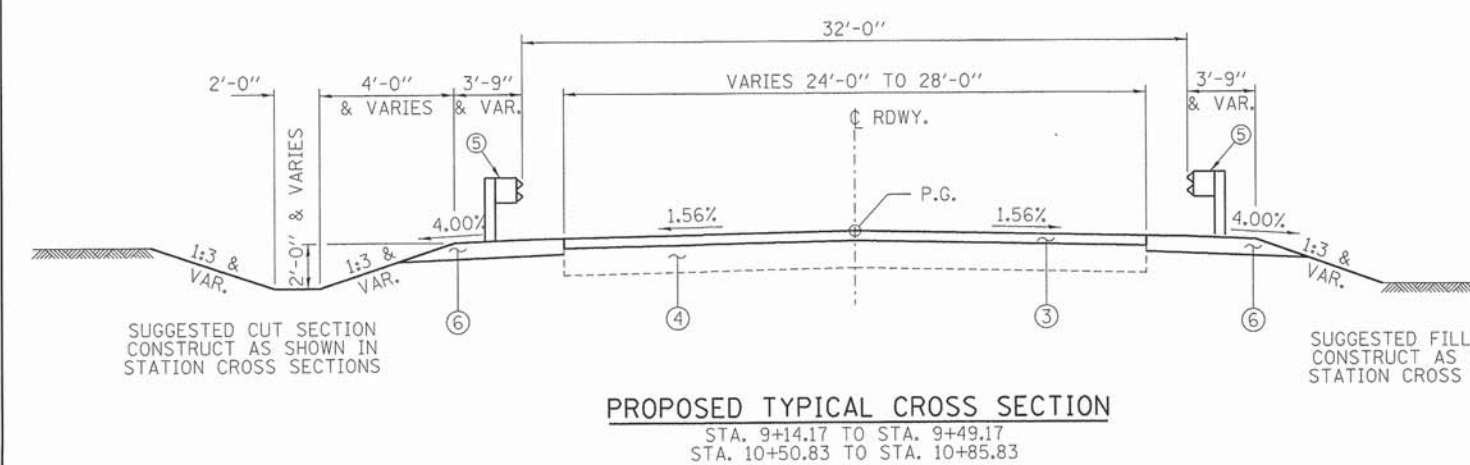
**EXISTING TYPICAL CROSS SECTION**  
 STA. 9+14.17 TO STA. 9+49.17  
 STA. 10+50.83 TO STA. 10+85.83



**PROPOSED TYPICAL CROSS SECTION**  
 STA. 8+67 TO STA. 9+14.17



**PAVEMENT TRANSITION DETAIL**

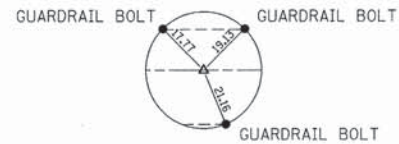


**PROPOSED TYPICAL CROSS SECTION**  
 STA. 9+14.17 TO STA. 9+49.17  
 STA. 10+50.83 TO STA. 10+85.83

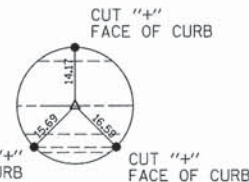
**LEGEND**

- ① EXISTING HOT-MIX ASPHALT PAVEMENT (5"-7") ON AGGREGATE BASE (10").
- ② EXISTING AGGREGATE SHOULDERS.
- ③ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90 (1 1/2" THICKNESS MINIMUM)
- ④ EXISTING CONCRETE BRIDGE APPROACH PAVEMENT (12").
- ⑤ TRAFFIC BARRIER TERMINALS. SEE LAYOUT PLAN FOR STATIONING.
- ⑥ AGGREGATE SHOULDERS, TYPE B 6"
- ⑦ EXISTING HOT-MIX ASPHALT SURFACE

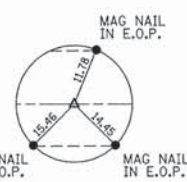
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HAMPSON, LENZINI AND RENWICK, INC. 3081 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - R.D.H.	REVISED -		27	13-00140-00-BR	WILLIAMSON	37	4	CONTRACT NO. 99528		
PLOT SCALE =		CHECKED - M.D.C.	REVISED -		SCALE:		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		[ILLINOIS] FED. AID PROJECT RS-2904205	
PLOT DATE = 4/2/2014		DATE - 04/02/14	REVISED -									



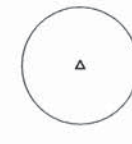
P.O.T. STA. 6+27.45  
MAG NAIL (SET)  
N. 349219.50  
E. 807288.28



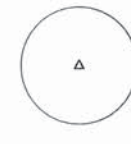
P.O.T. STA. 10+00.00  
DRILL HOLE (SET)  
N. 349428.39  
E. 807596.75



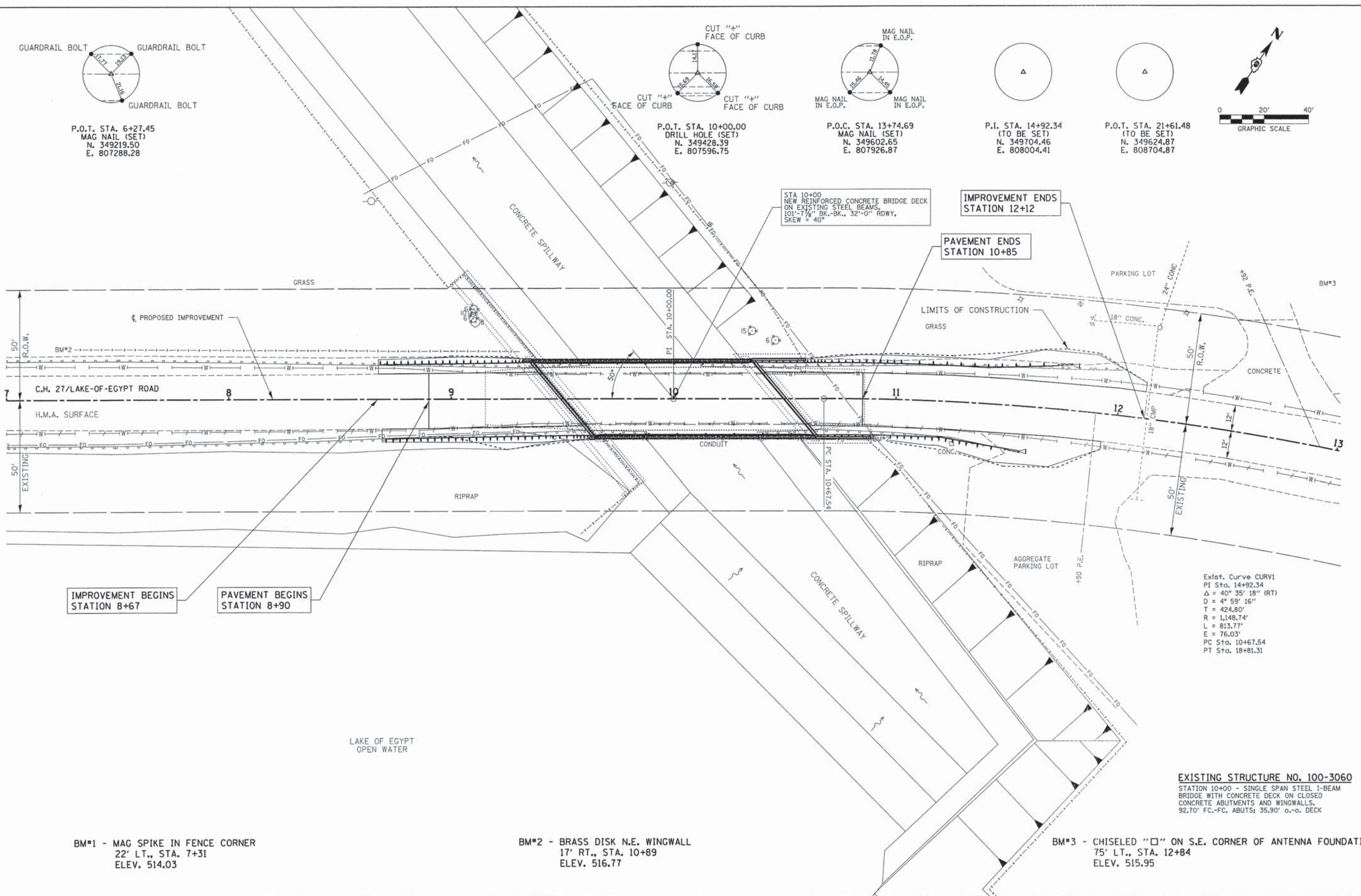
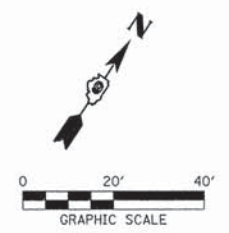
P.O.C. STA. 13+74.69  
MAG NAIL (SET)  
N. 349602.65  
E. 807926.87



P.I. STA. 14+92.34  
(TO BE SET)  
N. 349704.46  
E. 808004.41



P.O.T. STA. 21+61.48  
(TO BE SET)  
N. 349624.87  
E. 808704.87



IMPROVEMENT BEGINS STATION 8+67

PAVEMENT BEGINS STATION 8+90

IMPROVEMENT ENDS STATION 12+12

PAVEMENT ENDS STATION 10+85

STA 10+00  
NEW REINFORCED CONCRETE BRIDGE DECK  
ON EXISTING STEEL BEAMS.  
101'-7 1/8" BK.-BK., 32'-0" RDWY,  
SKEW = 40°

Exlst. Curve CURV1  
PI Sta. 14+92.34  
 $\Delta = 40^\circ 35' 18''$  (RT)  
D = 4° 59' 16"  
T = 424.80'  
R = 1,148.74'  
L = 813.77'  
E = 76.03'  
PC Sta. 10+67.54  
PT Sta. 18+81.31

**EXISTING STRUCTURE NO. 100-3060**  
STATION 10+00 - SINGLE SPAN STEEL I-BEAM  
BRIDGE WITH CONCRETE DECK ON CLOSED  
CONCRETE ABUTMENTS AND WINGWALLS.  
92.70' FC.-FC. ABUTS; 35.90' o.-o. DECK

BM#1 - MAG SPIKE IN FENCE CORNER  
22' LT., STA. 7+31  
ELEV. 514.03

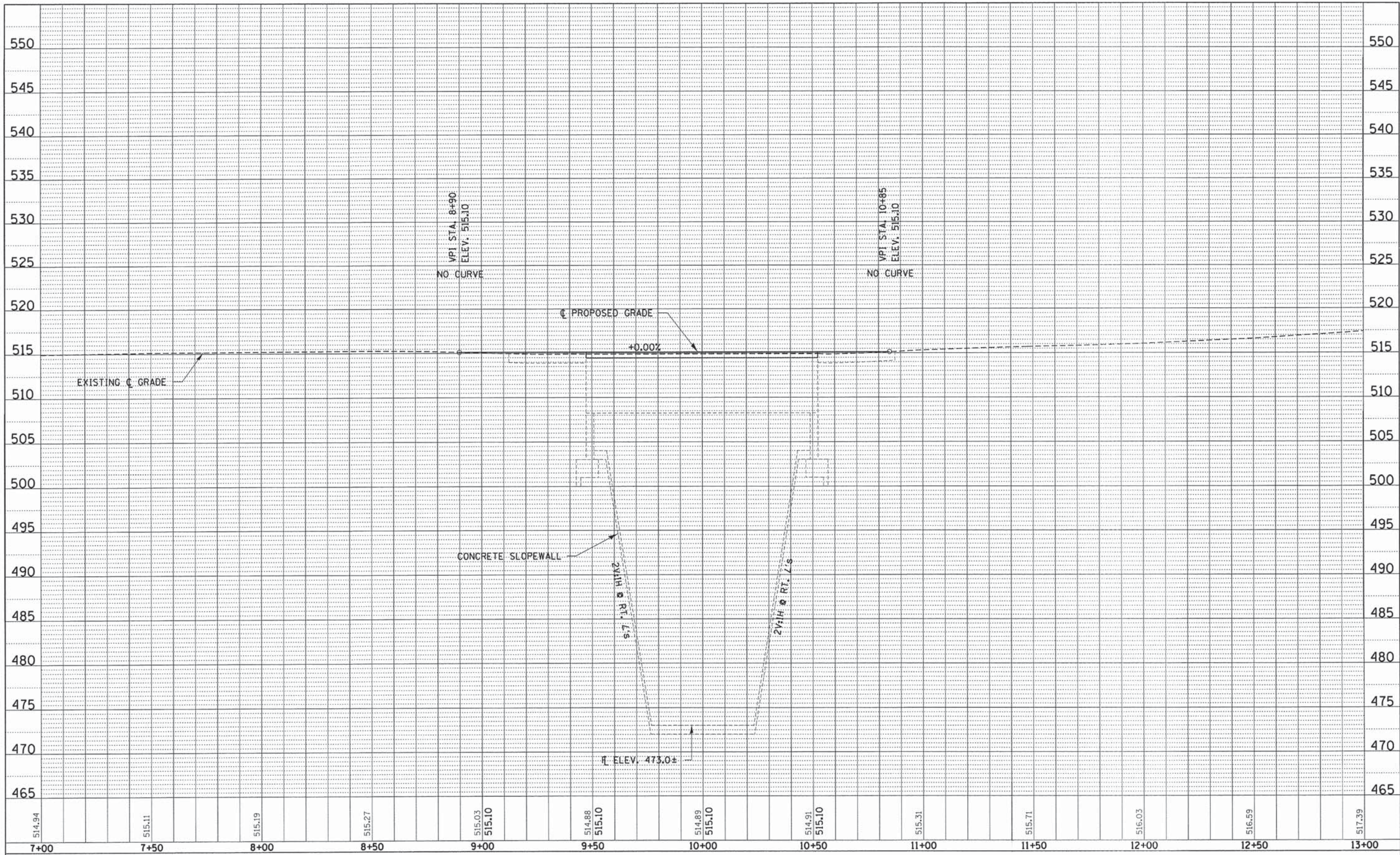
BM#2 - BRASS DISK N.E. WINGWALL  
17' RT., STA. 10+89  
ELEV. 516.77

BM#3 - CHISELED "□" ON S.E. CORNER OF ANTENNA FOUNDATION  
75' LT., STA. 12+84  
ELEV. 515.95

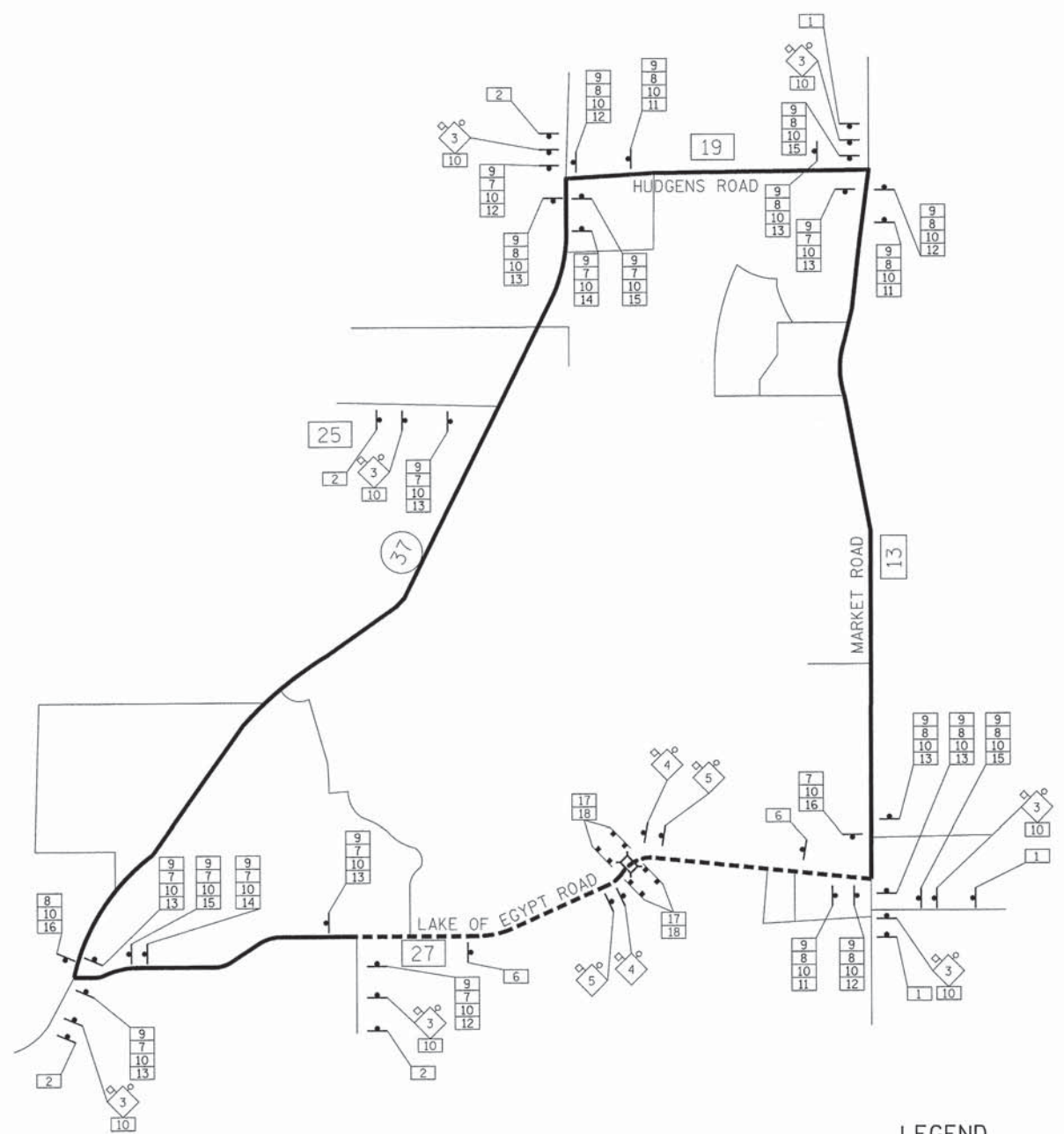
FILE NAME = 130267-sht-r&p.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>PLAN</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE COMP. 184.000959	PLOT SCALE =	DRAWN - L.G.C.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	5	
PLOT DATE = 4/2/2014	CHECKED - M.D.C.	DATE - 04/02/14	REVISED -			CONTRACT NO. 99528					
						ILLINOIS FED. AID PROJECT RS-29042051					
						SCALE: 1:20 SHEET NO. 1 OF 1 SHEETS STA. 7+00.00 TO STA. 13+00.00					

REVISIONS	BY	DATE
PLANNED		
ALIGNED		
CHECKED		
FILE NAME		
NO.		

REVISIONS	BY	DATE
GRADES		
CHECKED		
PLOTTED		
STRUCTURE		
NOTATIONS		
NO.		



FILE NAME = 130267-ah-r-p&p.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>PROFILE</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - L.G.C.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	6	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184-202923	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -			CONTRACT NO. 99528					
		DATE - 04/02/14	REVISED -			SCALE: 20H:5V	SHEET NO. 1 OF 1 SHEETS	STA. 7+00.00 TO STA. 13+00.00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT RS-2904(205)		



NOTE: TRAFFIC CONTROL ADJACENT TO BRIDGE SHALL BE ACCORDING TO STANDARD BLR 21.

- LEGEND**
- DETOUR ROUTE
  - ROAD OPEN TO LOCAL TRAFFIC ONLY
  - 48" x 48" CONSTRUCTION WARNING SIGN, WITH AMBER FLASHING LIGHT AND ORANGE WARNING FLAG (OPTIONAL) NUMBER DENOTES SIGN TYPE
  - MULTIPLE DETOUR SIGNS WITH DIRECTION AND ROAD NAME PLATES NUMBER DENOTES TYPE
  - SINGLE DETOUR SIGN, NUMBER DENOTES TYPE
  - TYPE III BARRICADE W/AMBER FLASHING LIGHTS

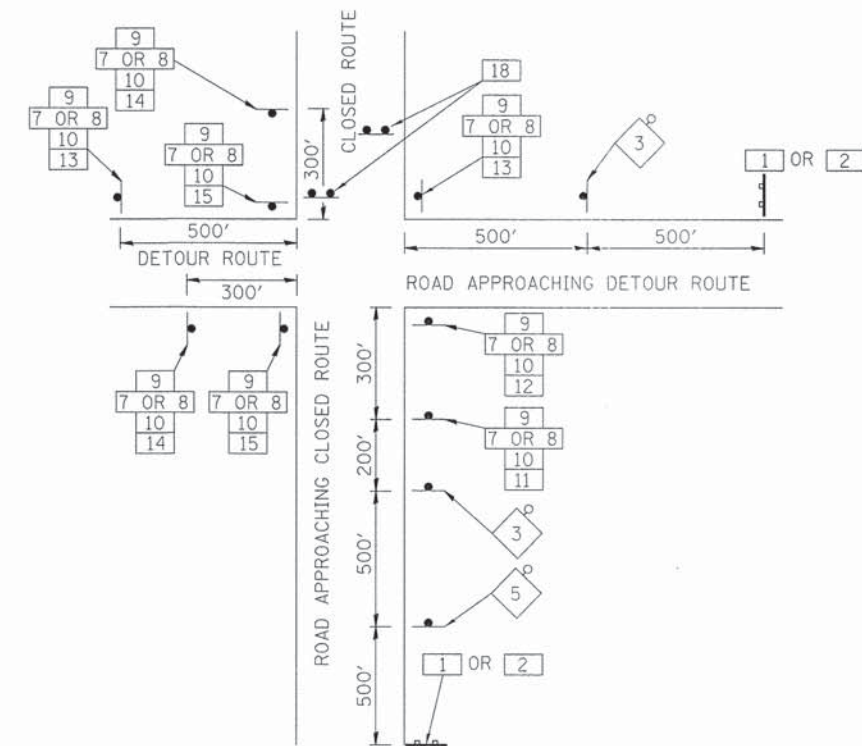
**SIGN LEGEND**

- ① R11-3 60" x 30" WITH 2 AMBER FLASHING LIGHTS. (3 REQ'D)
- ② R11-3 60" x 30" WITH 2 AMBER FLASHING LIGHTS. (4 REQ'D)
- ③ W20-2, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (7 REQ'D)
- ④ W20-3, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (2 REQ'D)
- ⑤ W20-3, 48" x 48" WITH AMBER FLASHING LIGHT AND FLAG. (2 REQ'D)
- ⑥ R11-4 60" x 30" (2 REQ'D)
- ⑦ M3-1 24" x 12" (12 REQ'D)
- ⑧ M3-3 24" x 12" (13 REQ'D)
- ⑨ M4-8 24" x 12" (23 REQ'D)
- ⑩ M1-I100 24" x 12" (32 REQ'D)
- ⑪ M5-1 L 21" x 15" (3 REQ'D)
- ⑫ M6-1 21" x 15" (5 REQ'D)
- ⑬ M6-3 21" x 15" (9 REQ'D)
- ⑭ M5-1 R 21" x 15" (2 REQ'D)
- ⑮ M6-1 21" x 15" (4 REQ'D)
- ⑯ M4-8A 24" x 18" (2 REQ'D)
- ⑰ R11-2 48" x 30" (4 REQ'D)
- ⑱ TYPE III BARRICADES WITH TWO FLASHING LIGHTS EACH. HIGHWAY STD. 701901 (4 REQ'D)

FILE NAME = 138267-sht-detour.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>DETOUR PLAN</b>		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793	PLOT SCALE =	DRAWN - R.D.H.	REVISED -		27	13-00140-00-BR	WILLIAMSON	37	7	CONTRACT NO. 99528	
<b>HLR</b> ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000559	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -		SCALE:	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.		ILLINOIS/FED. AID PROJECT RS-29042051	
		DATE - 04/02/14	REVISED -								

**DETOUR GENERAL NOTES**

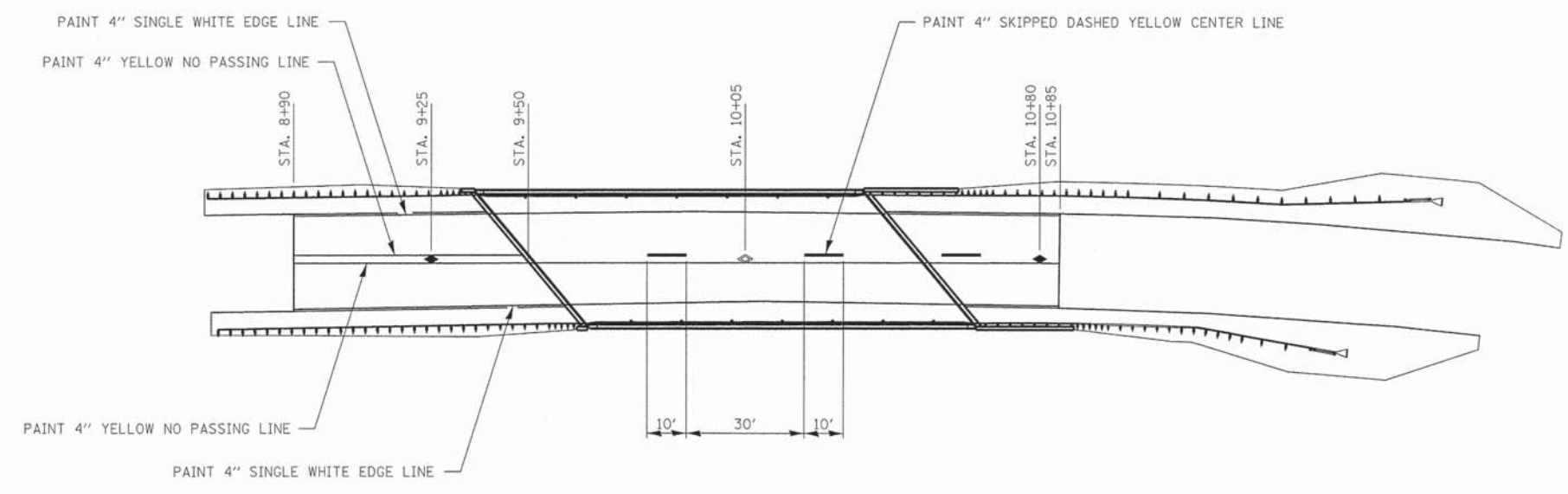
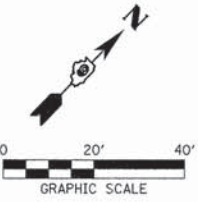
- ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JAN. 1, 2012", "THE QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES ADOPTED 2010", THE DETAILS IN THESE PLANS, THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" WITH THE STATE OF ILLINOIS SUPPLEMENT, AND THE SPECIAL PROVISIONS FOR TRAFFIC CONTROL AND PROTECTION.
- THE CONTRACTOR SHALL SCHEDULE ALL WORK IN AN EXPEDIENT MANNER TO REDUCE THE LENGTH OF TIME THAT THE DETOUR NEEDS TO BE IN EFFECT.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING AT LEAST THREE WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT. THE ENGINEER WILL CONTACT THE APPROPRIATE LOCAL AGENCIES AND INTERESTED PARTIES.
- IF REQUESTED BY THE ENGINEER A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR SHALL BE HELD AT LEAST TWO WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT.
- THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF HIS REPRESENTATIVES ON THE CONSTRUCTION SITE AND HIS REPRESENTATIVE RESPONSIBLE FOR THE DETOUR SIGNING PRIOR TO THE START OF THE WORK. THE WILLIAMSON COUNTY DEPARTMENT OF HIGHWAYS REPRESENTATIVE FOR THE DETOUR IS:  
  
GREGORY SMOTHERS, P.E.  
WILLIAMSON COUNTY HIGHWAY DEPARTMENT  
1817 N. COURT ST.  
MARION, ILLINOIS 62959  
(618) 997-2147
- THE ENGINEER WILL FIELD LOCATE THE POSITIONS OF ANY SIGNS IF REQUESTED BY THE CONTRACTOR IN WRITING AT LEAST THREE WEEKS PRIOR TO THE DAY THE DETOUR IS TO BE IN EFFECT.
- LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- THE ROAD SHALL NOT BE CLOSED UNTIL ALL SIGNING IS ERECTED IN ACCORDANCE WITH THE DETOUR PLAN AND INSPECTED AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL BARRICADES, SIGNS, LIGHTS, AND OTHER DEVICES ARE IN PLACE AND OPERATING 24 HOURS EACH DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME THE DETOUR IS IN EFFECT.
- THE TRAFFIC CONTROL SHOWN ON THE DETOUR PLAN IS THE MINIMUM NECESSARY TO ENSURE THIS ROAD CLOSURE. THE CONTRACTOR SHALL MAKE ALL CHANGES IN TRAFFIC CONTROL DEEMED NECESSARY BY THE ENGINEER. ADDITIONS AND DELETIONS OF TRAFFIC CONTROL FOR THIS DETOUR SHALL BE INCLUDED IN THE PAY ITEM "TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR".
- ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE DETOUR IS IN EFFECT SHALL BE COMPLETELY COVERED BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- ALL DETOUR SIGNING SHALL BE POST MOUNTED.
- ALL DETOUR SIGNING EXCEPT REGULATORY SIGNS SHALL HAVE BLACK LEGENDS ON FLUORESCENT ORANGE SHEETING AND STANDARD BLACK BORDERS. THE FLUORESCENT ORANGE REFLECTIVE SHEETING SHALL MEET THE REQUIREMENTS OF ARTICLE 1106.01 OF THE STANDARD SPECIFICATIONS. ALL DETOUR SIGNING SHALL BE NEW OR LIKE NEW CONDITION. THE ENGINEER SHALL BE THE SOLE JUDGE OF THE CONDITION AND ACCEPTANCE OF THE SIGNS.
- THE SIZES OF ALL SIGNS NOT SPECIFIED IN THESE PLANS SHALL BE AS REQUIRED BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE ILLINOIS SUPPLEMENT.
- AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED FOR THIS DETOUR SHALL MEET THE REQUIREMENTS FOR TYPE A-LOW INTENSITY FLASHING LIGHTS IN ARTICLE 1106.02 OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING THE HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION SHALL BE USED.
- THE MINIMUM DIMENSIONS OF THE ORANGE WARNING FLAGS SHOWN IN THE PLANS ARE 18" BY 18".
- ALL BARRICADES SHALL HAVE REFLECTORIZED STRIPING ON BOTH SIDES OF THE BARRICADES. THE TYPE III BARRICADES USED AT THE POINT OF CLOSURE TO THRU TRAFFIC SHALL NOT EXCEED 8'-0" IN WIDTH EACH, FOR A SINGLE APPROACH LANE.
- THE "ROAD CLOSED" (R11-2), SIGNS SHALL BE MOUNTED ABOVE THE TOP OF THE BARRICADE. ALL TYPE III BARRICADES SHALL HAVE TWO (2) AMBER TYPE A-LOW INTENSITY FLASHING LIGHTS SPACED NEAR THE CENTERLINE OF THE SUPPORTS.
- THE ROAD NAME SIGN SHALL HAVE A BLACK LEGEND ON FLUORESCENT ORANGE REFLECTIVE SHEETING. THE SIGN BLANK SHALL BE A 9" BY VARIABLE OR A 12" BY VARIABLE WITH DESIGN SERIES C LETTERS. THE CAPITAL LETTERS SHALL BE 6" WITH 5" LOWER CASE.
- DURING NON-WORKING HOURS AT THE POINT OF ROAD CLOSURE TO ALL TRAFFIC THE CONTRACTOR SHALL PROVIDE A MEANS TO RESTRAIN THE BARRICADES FROM EASY MOVEMENT BY VANDALS. THE CHOSEN METHOD SHALL BE APPROVED BY THE ENGINEER.
- CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IMMEDIATELY BEHIND THE TYPE III BARRICADES DURING NON-WORKING HOURS. IN ANY EVENT ARTICLE 701.11 OF THE STANDARD SPECIFICATIONS SHALL APPLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VISIBILITY OF ALL DETOUR AND CONSTRUCTION SIGNING, INCLUDING BRUSHING BACK VEGETATION IF DEEMED NECESSARY BY THE ENGINEER.
- THE FOLLOWING ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARDS ARE APPLICABLE FOR THIS WORK: STANDARD 701901, BLR 21
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST TWO (2) DAYS BEFORE THE ROAD IS TO BE OPENED TO TRAFFIC. THE ENGINEER WILL CONTACT THE APPROPRIATE LOCAL AGENCIES AND INTERESTED PARTIES.



**TYPICAL INTERSECTION  
AT POINT OF DETOUR**

FILE NAME = 130267-sht-detour.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>DETOUR PLAN</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	8
PLOT DATE = 4/2/2014		CHECKED - M.D.C.	REVISED -			CONTRACT NO. 99528			ILLINOIS FED. AID PROJECT RS-2904(205)	
		DATE - 04/02/14	REVISED -			SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	



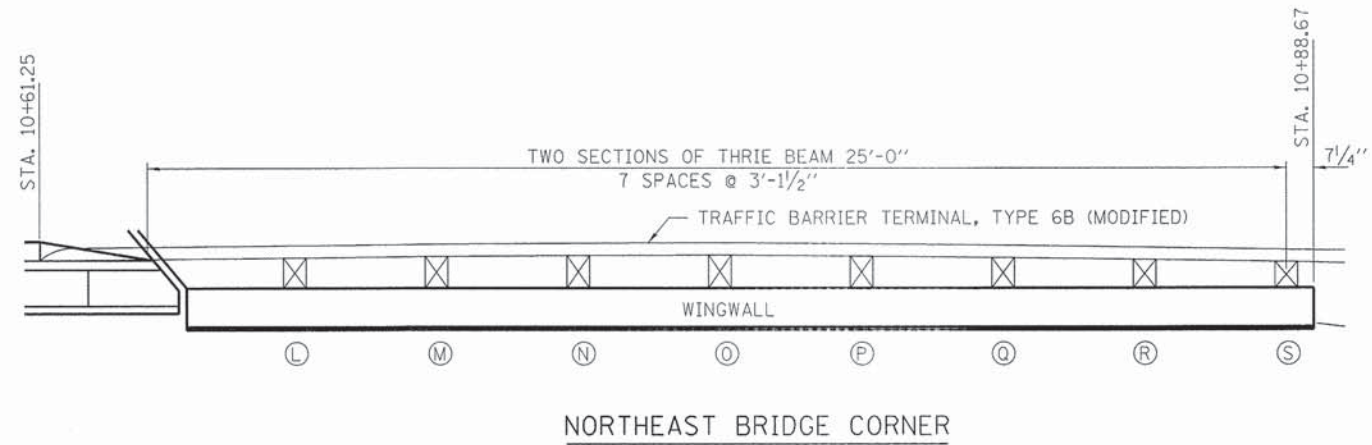
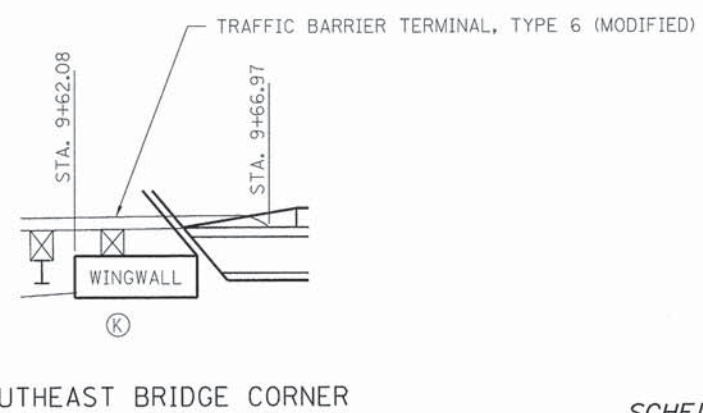
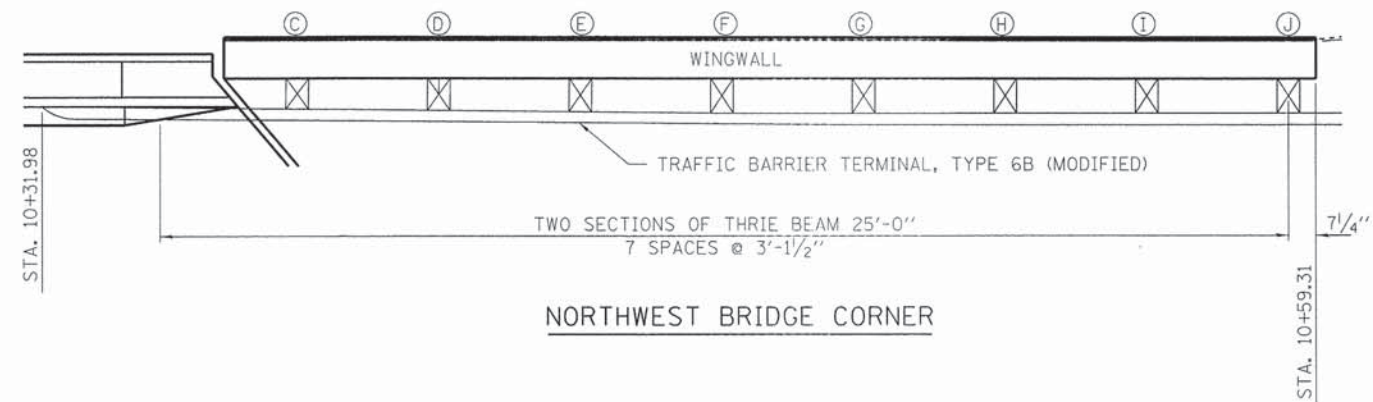
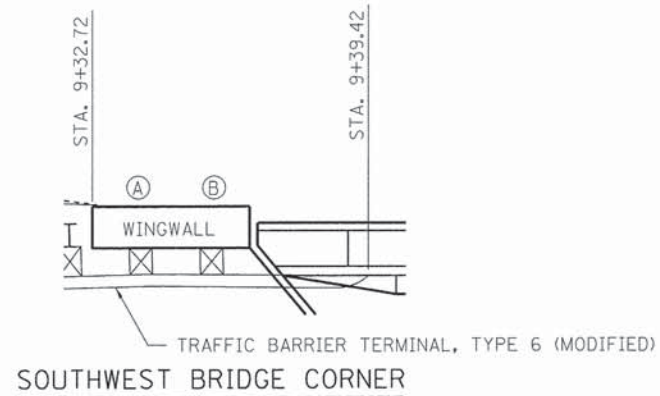


**LEGEND**

- ◆ RAISED REFLECTIVE PAVEMENT MARKER - AMBER 2-WAY
- ◇ RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE) - AMBER 2-WAY

FILE NAME = 130267-sht-pvmtmrk.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>PAVEMENT MARKING PLAN</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> <small>3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793</small>	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	9
<b>ILR</b> <small>ILLINOIS PROFESSIONAL DESIGN FIRM 1.5 / PE / SE CORP. 184.000559</small>	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -			<b>CONTRACT NO. 99528</b>				
DATE - 04/02/14				SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.		<small>ILLINOIS FED. AID PROJECT RS-29042051</small>				





**SCHEDULE OF WOOD BLOCKOUTS**

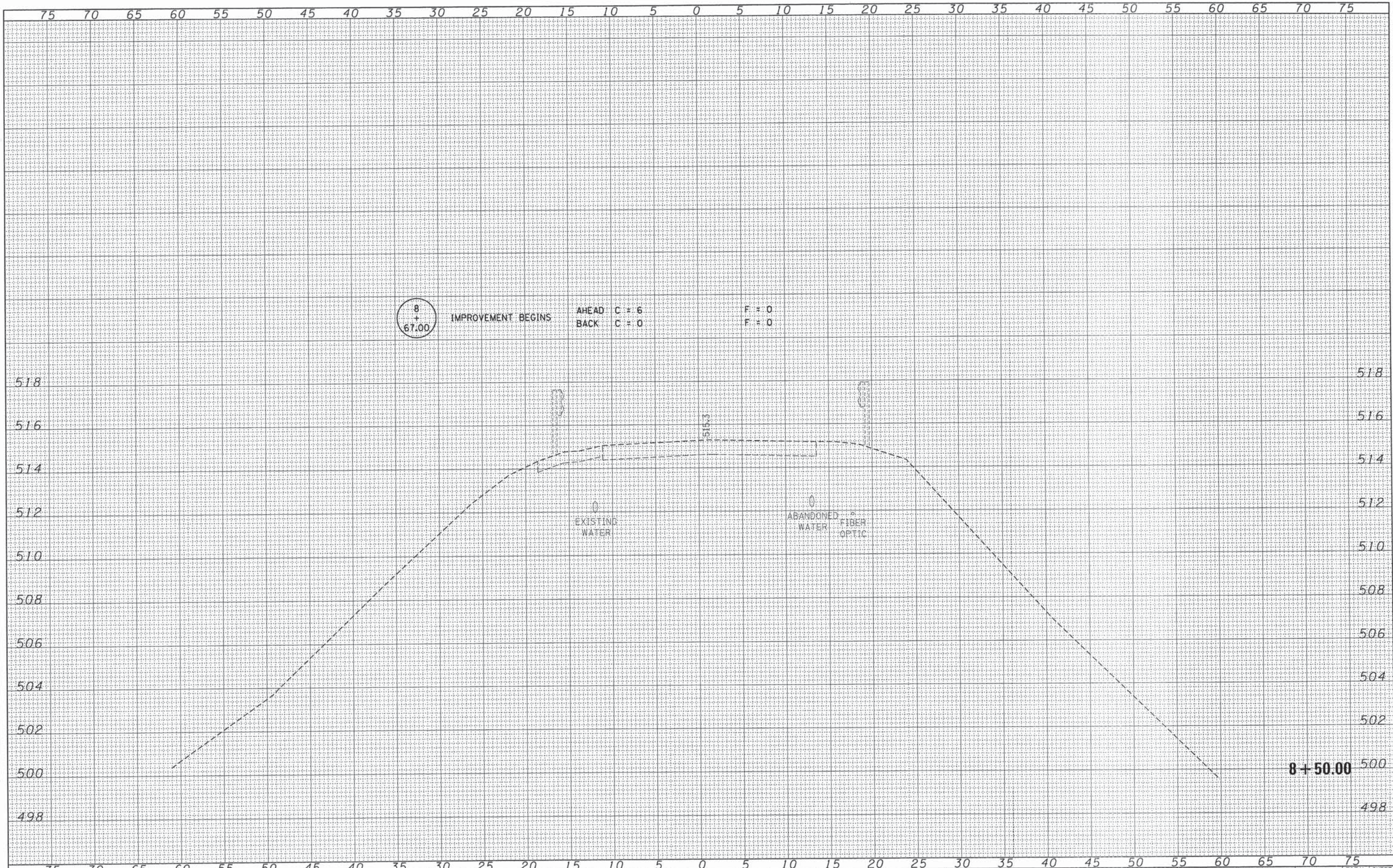
ITEM	LOCATION	BLOCKOUT THICKNESS (IN.)
A	LT. STA. 9+33.79	7
B	LT. STA. 9+35.35	7
C	LT. STA. 10+36.84	8 1/8
D	LT. STA. 10+39.96	8 1/2
E	LT. STA. 10+43.09	8 1/8
F	LT. STA. 10+46.21	9 1/4
G	LT. STA. 10+49.33	9 1/4
H	LT. STA. 10+52.46	9 1/4
I	LT. STA. 10+55.58	9 1/4
J	LT. STA. 10+58.71	9 1/4
K	RT. STA. 9+62.91	7
L	RT. STA. 10+66.19	8
M	RT. STA. 10+69.32	8 3/8
N	RT. STA. 10+72.44	8 5/8
O	RT. STA. 10+75.57	8 3/4
P	RT. STA. 10+78.69	8 3/8
Q	RT. STA. 10+81.82	8
R	RT. STA. 10+84.94	7 1/2
S	RT. STA. 10+88.07	6 1/8

**TRAFFIC BARRIER DETAIL NOTES**

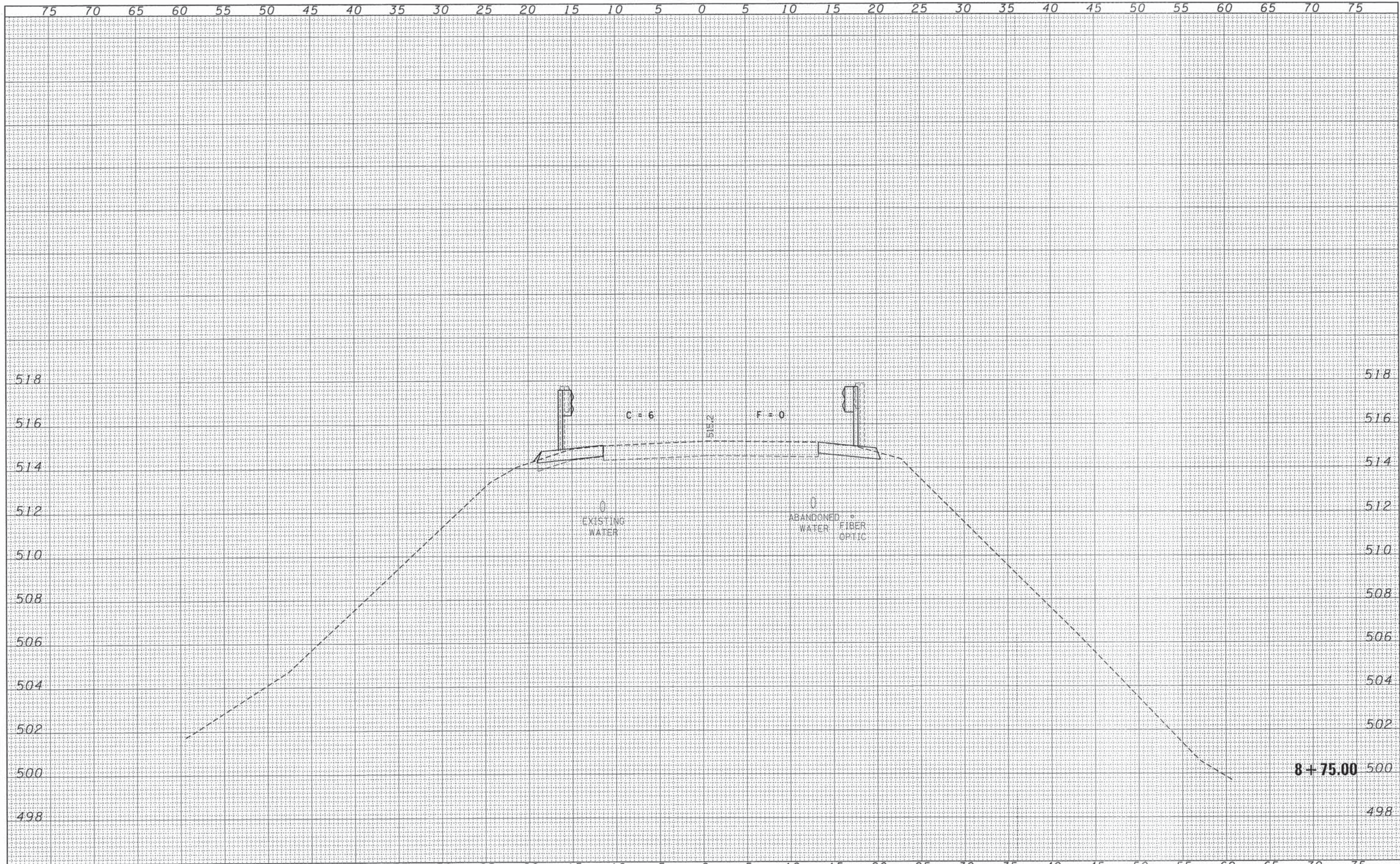
- WHERE THE TRAFFIC BARRIER TERMINALS ARE LOCATED IN FROM OF THE WINGWALL PARAPETS, THE CONTRACTOR SHALL ATTACH THE TRAFFIC BARRIER TERMINALS TO THE FACE OF THE WINGWALL PARAPETS WITH WOOD BLOCKOUTS. REQUIRED SPACING OF THE BLOCKOUTS SHALL BE ACCORDING TO STANDARDS 631031 AND 631033.
- THE CONTRACTOR SHALL VARY THE THICKNESS OF THE BLOCKOUT TO MAINTAIN A 16 FOOT MINIMUM OFFSET FROM THE ROADWAY CENTERLINE TO THE FACE OF THE GUARDRAIL AS GIVEN ON THE GUARDRAIL LAYOUT SHEET. THE BLOCKOUT THICKNESS DIMENSIONS GIVEN IN THE SCHEDULE ARE APPROXIMATE.
- THE STEEL RAIL AND BLOCKOUTS SHALL BE ATTACHED TO THE CONCRETE WITH 3/4" EPOXY GROUTED ANCHOR BOLTS. TWO ANCHOR BOLTS SHALL BE USED AT EACH LOCATION.
- DETAILS OF TRAFFIC BARRIER TERMINALS AND CONNECTIONS NOT SHOWN SHALL BE ACCORDING TO STANDARDS 631031 AND 631033.

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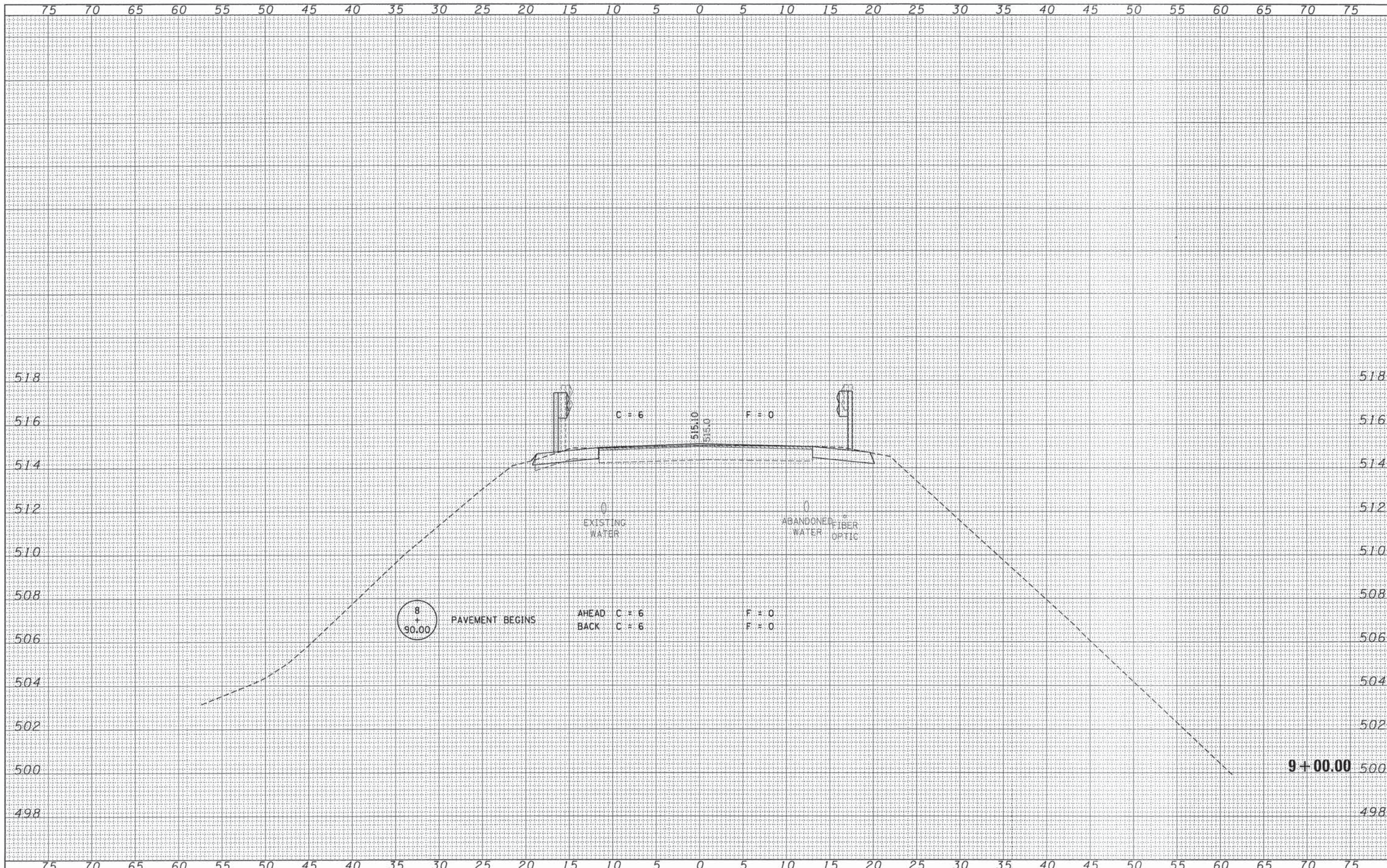
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HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62776 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PG / SE CORP. 184-000959	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		27	13-00140-00-BR	WILLIAMSON	37	12			
PLOT DATE = 4/2/2014	DATE - 04/02/14	CHECKED - M.D.C.	REVISED -		SCALE: 5H:2V		SHEET NO. 1 OF 8 SHEETS		STA. 8+50.00 TO STA. 8+50.00		CONTRACT NO. 99528	
		DATE - 04/02/14	REVISED -		ILLINOIS FED. AID PROJECT R5-2904(205)							



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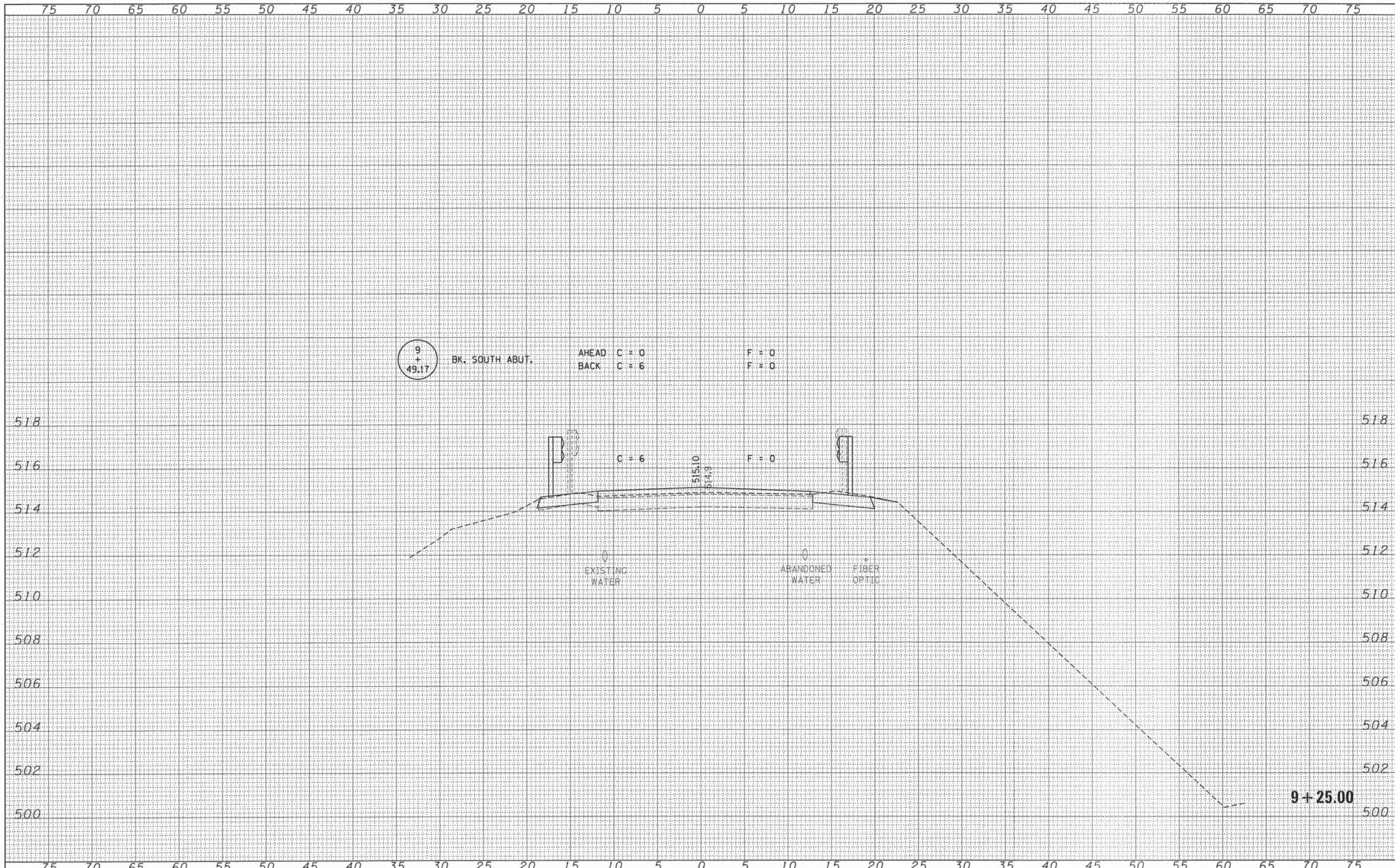
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HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000993	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		SCALE: 5Hx2V	SHEET NO. 2 OF 8 SHEETS	STA. 8+75.00	TO STA. 8+75.00	27	13-00140-00-BR	WILLIAMSON	37	13
PLOT DATE = 4/2/2014	DATE - 04/02/14	CHECKED - M.D.C.	REVISED -						CONTRACT NO. 99528				
									ILLINOIS FED. AID PROJECT RS-29042051				



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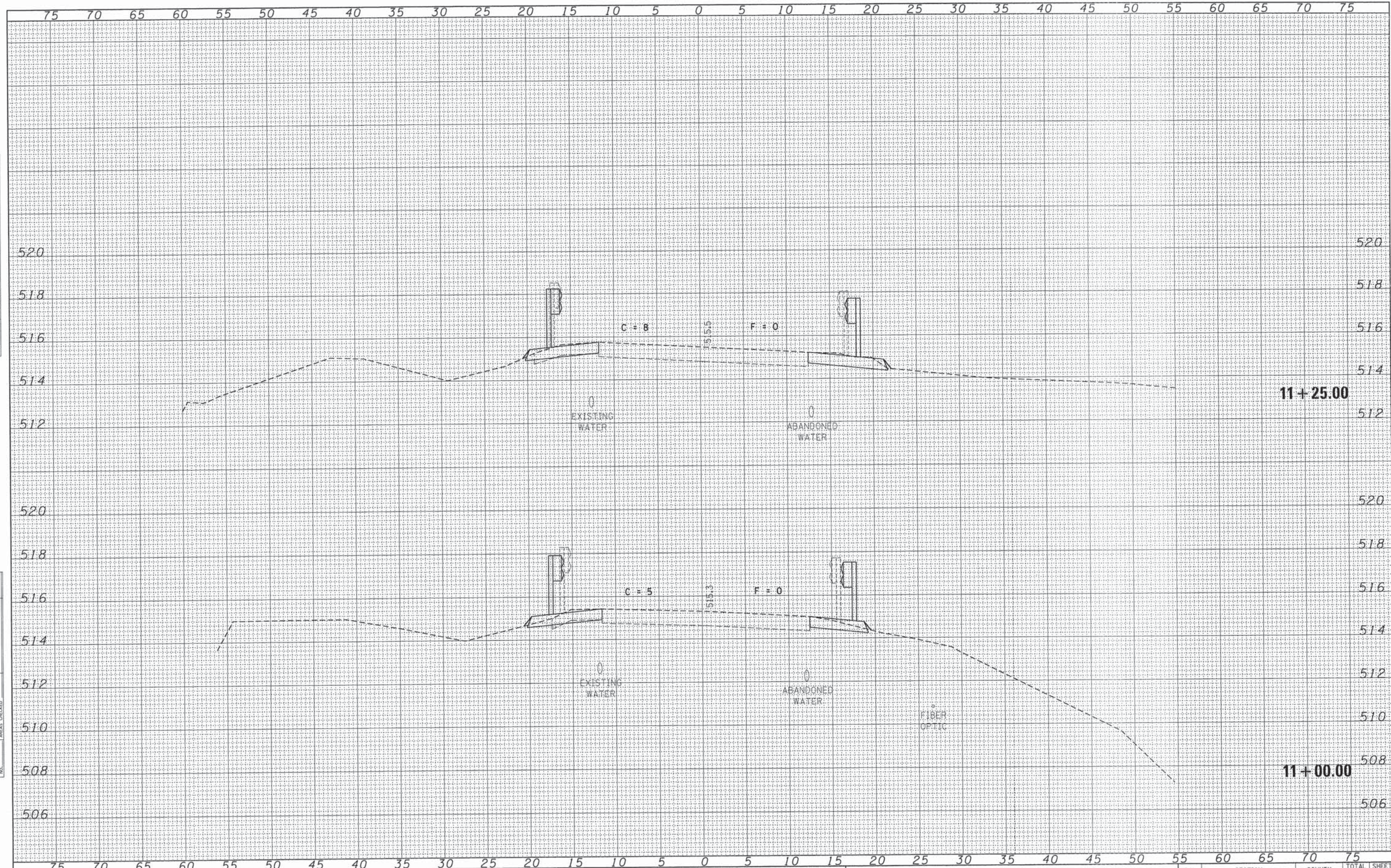
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<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3999 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781 <b>HLR</b> ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000859	PLOT SCALE =	DRAWN - L.G.C.	REVISED -					27	13-00140-00-BR	WILLIAMSON	37	15
	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -			SCALE: 5H:2V		SHEET NO. 4 OF 8 SHEETS		STA. 9+25.00 TO STA. 9+25.00		CONTRACT NO. 99528
		DATE - 04/02/14	REVISED -									ILLINOIS FED. AID PROJECT RS-28042051



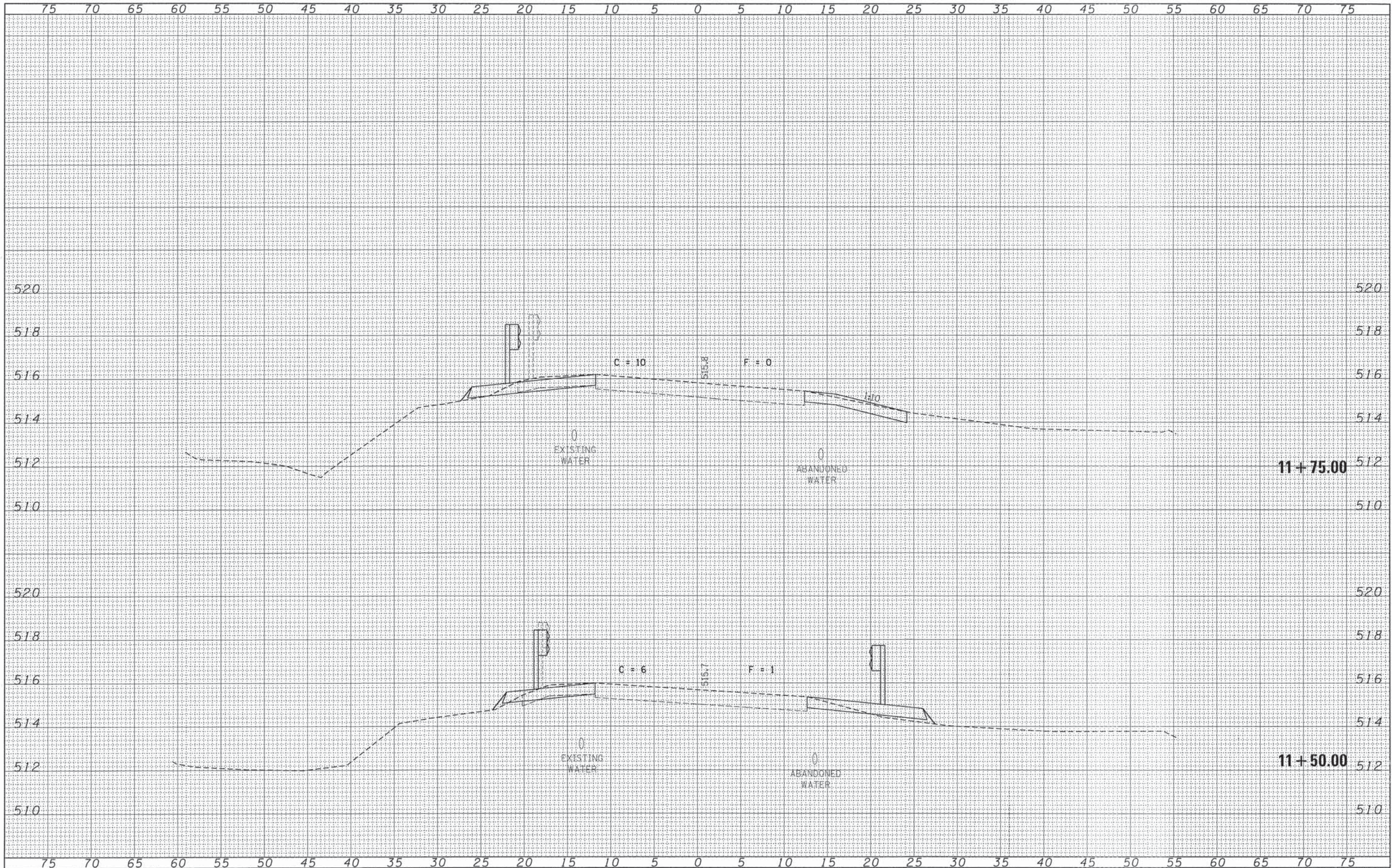


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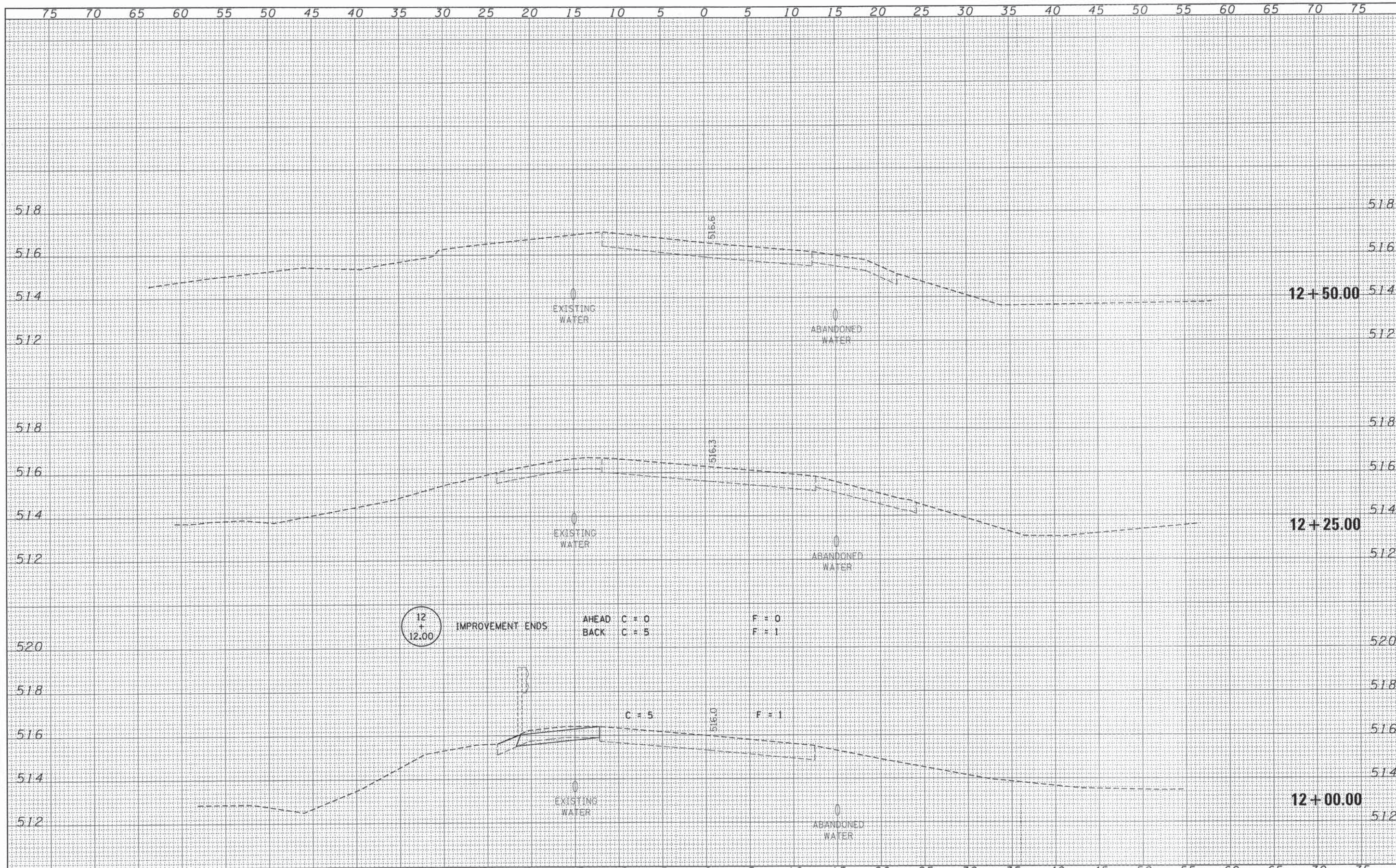
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM 14 1/2 P.E. BE CORP. 184-00088	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		SCALE: 5H:2V	SHEET NO. 6 OF 8 SHEETS	STA. 11+00.00	TO STA. 11+25.00	27	13-00140-00-BR	WILLIAMSON	37	17
PLOT DATE = 4/2/2014		CHECKED - M.D.C.	REVISED -						CONTRACT NO. 99528				
		DATE - 04/02/14	REVISED -						ILLINOIS FED. AID PROJECT RS-290(205)				



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FILE NAME = 130267-sht-xxx.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>STATION CROSS SECTIONS</b>		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760	PLOT SCALE =	DRAWN - L.G.C.	REVISED -		27	13-00140-00-BR	WILLIAMSON	37	18	CONTRACT NO. 99528	
<b>ILR</b> ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.00399	PLOT DATE = 4/2/2014	CHECKED - M.D.C.	REVISED -		SCALE: 5H:2V	SHEET NO. 7 OF 8 SHEETS	STA. 11+50.00 TO STA. 11+75.00	ILLINOIS FED. AID PROJECT RS-2904(205)			
		DATE - 04/02/14	REVISED -								



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FILE NAME = 130267-sh1-sxs.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>WILLIAMSON COUNTY HIGHWAY DEPARTMENT</b>	<b>STATION CROSS SECTIONS</b>				
<b>HAMPTON, LENZINI AND RENWICK, INC.</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00059		DRAWN - L.G.C.	REVISED -		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - M.D.C.	REVISED -		27	13-00140-00-BR	WILLIAMSON	37	19
		DATE - 04/02/14	REVISED -		CONTRACT NO. 99528				(ILLINOIS) FED. AID PROJECT RS-2904(205)
PLOT SCALE =				SCALE: 5H:2V	SHEET NO. 8 OF 8 SHEETS		STA. 12+00.00 TO STA. 12+50.00		

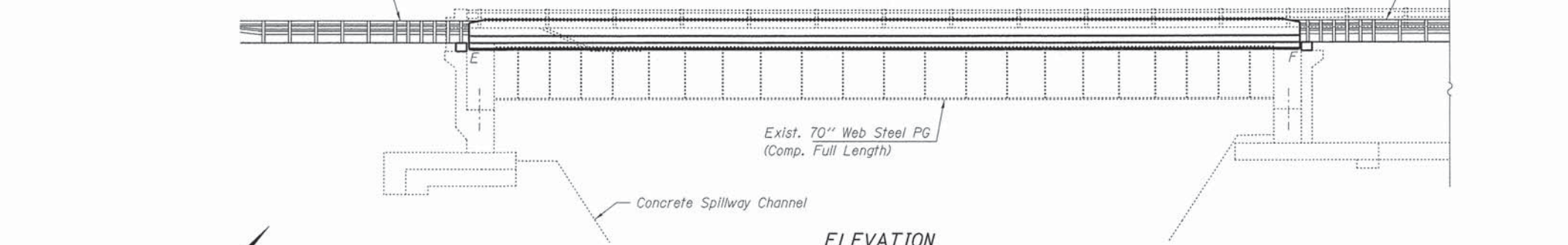
BENCHMARK: BM#1 N.W. corner of bridge 15' Rt., Sta. 151+02, Elev. 462.61.

EXISTING STRUCTURE: SN 100-3060. Single span steel I-beam bridge with concrete deck on closed stub abutments and wingwalls. 101'-7 7/8" bk.-bk. abuts.; 35'-10" o.-o. deck. Existing bridge deck to be removed and replaced using road closure.

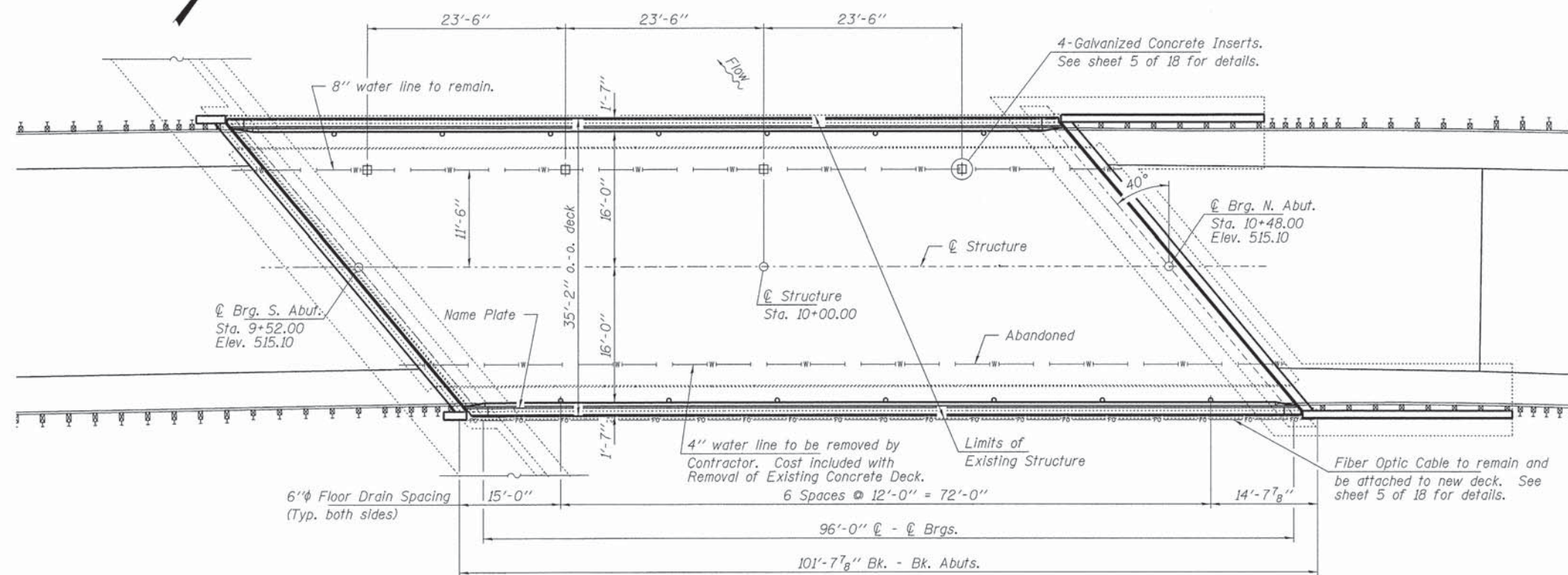
Salvage: None

Traffic Barrier Terminal, Type 6 (Special)  
See Std. 631031. (South end only.)

Traffic Barrier Terminal, Type 6B (Special)  
See Std. 631031. (North end only.)

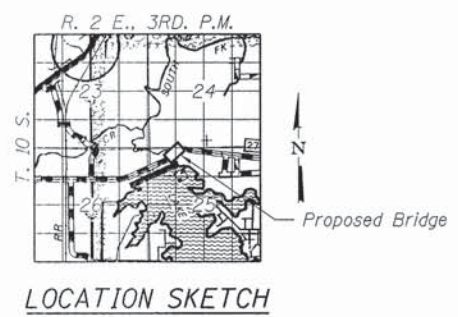


ELEVATION



PLAN

- INDEX OF STRUCTURE SHEETS**
1. General Plan and Elevation
  2. General Data
  - 3-4. Top of Slab Elevations
  5. Superstructure
  - 6-7. Superstructure Details
  8. Preformed Joint Strip Seal
  9. Structural Steel
  - 10-11. Structural Steel Details
  12. Bearing Details
  13. South Abutment Removal Details
  14. North Abutment Removal Details
  15. South Abutment Details
  16. North Abutment Details
  - 17-18. Existing Plan Sheets



LOCATION SKETCH

**DESIGN SPECIFICATIONS (NEW CONSTRUCTION)**

2012 AASHTO LRFD Bridge Design Specifications

**LOADING HL-93 (NEW CONSTRUCTION)**

Allow 25 #/sq. ft. for future wearing surface.

**DESIGN STRESSES**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)  
 $f_y = 33,000$  psi (existing structural steel)  
 36,000 psi (M270 Grade 36 - new structural steel)

Design Scour Elevations (ft.)		
	S. Abut.	N. Abut.
Q100	497.92	500.92
Q500	497.92	500.92

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.190g  
 Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.747g  
 Soil Site Class = B

"I certify that to the best of my knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."

*Scott M. Shoup*  
 ILLINOIS STRUCTURAL NO. 081-6529  
 04/02/2014



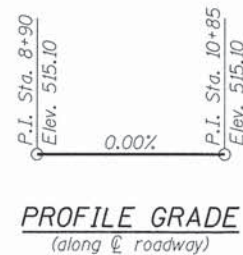
Expires 11-30-2014

**GENERAL PLAN AND ELEVATION**  
**C.H. 27 OVER**  
**LAKE OF EGYPT DAM SPILLWAY**  
**SECTION 13-00140-00-BR**  
**WILLIAMSON COUNTY**  
**STATION 10+00**  
**STRUCTURE NO. 100-3060**

FILE NAME = 130267-sht-br-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION STRUCTURE NO. 100-3060 SHEET NO. 1 OF 18 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.jlrengineering.com		CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	20
184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY		CONTRACT NO.		
	PLOT DATE = 4/2/2014	CHECKED - T.J.A.	REVISED -			ILLINOIS FED. AID PROJECT				

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.  
 Bolts 3/4 in.  $\phi$ , holes 13/16 in.  $\phi$ , unless otherwise noted.  
 No field welding is permitted except as specified in the contract documents.  
 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 and girders 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 cannot be removed by grinding 1/4 inch 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 or girders, 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 the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.  
 Concrete Sealer shall be applied to the designated areas of the Abutments and parapet removal faces.  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
 The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1.  
 Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.  
 Slip-Forming of the parapets is not allowed.  
 Cleaning and painting of the existing structural steel shall be as specified in the special provisions for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 5 ft (measured along the beam) of either side of the deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning - SSPC-SP15.  
 The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning 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 shall be 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 Interstate Green (Munsell No 7.5G 4/8).



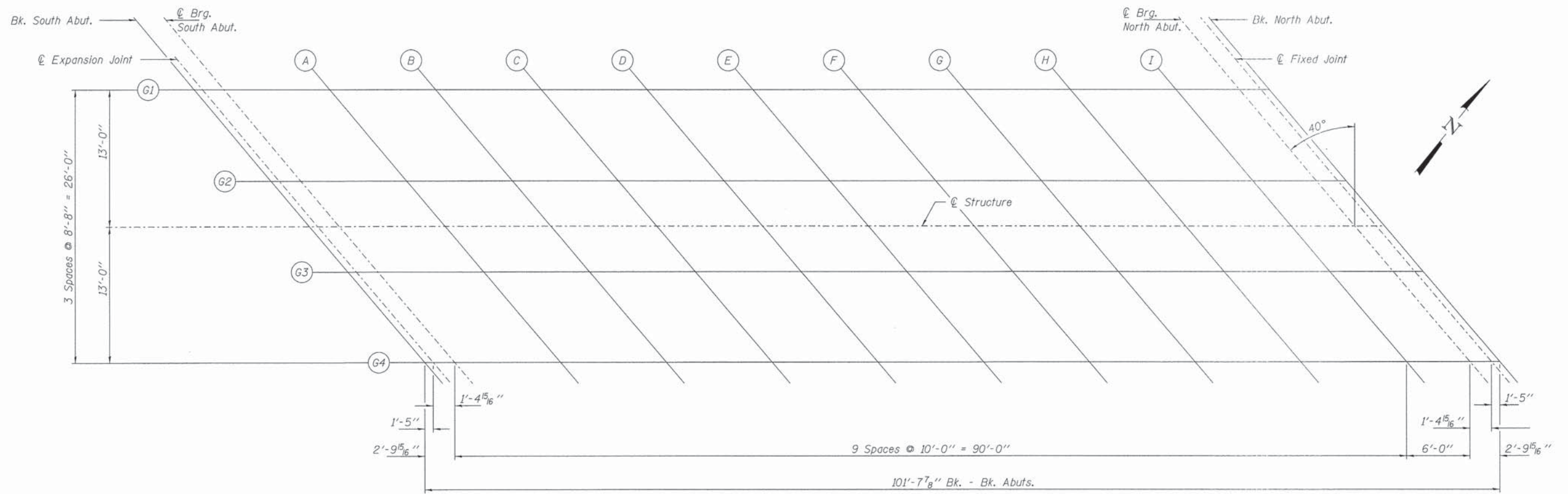
LAKE OF EGYPT DAM SPILLWAY  
 BUILT 2011 BY  
 WILLIAMSON COUNTY  
 FAS ROUTE 2904 / C.H. 27  
 SEC. 13-00140-00-BR  
 STR. NO. 100-3060  
 LOADING HL 93

**NAME PLATE**  
 See Std. 515001

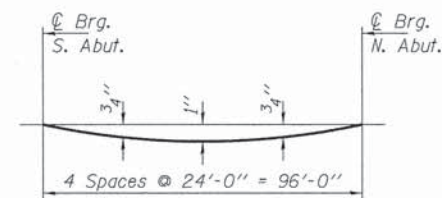
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.			4.6
Removal of Existing Concrete Deck	Each			1
Floor Drains	Each	14		14
Concrete Superstructure	Cu. Yd.	116.2	5.5	121.7
Bridge Deck Grooving	Sq. Yd.	329		329
Protective Coat	Sq. Yd.	433	20	453
Furnishing and Erecting Structural Steel	Pound	1,800		1,800
Stud Shear Connectors	Each	1,040		1,040
Reinforcement Bars, Epoxy Coated	Pound	34,030	340	34,370
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	90		90
Elastomeric Bearing Assembly, Type I	Each		4	4
Anchor Bolts, 1"	Each		8	8
Concrete Sealer	Sq. Ft.		1,690	1,690
Jack and Remove Existing Bearings	Each		4	4
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum			1
Cleaning and Painting Steel Bridge No. 1	L. Sum			1

FILE NAME = 138267-sht-bridge.dgn	USER NAME =	DESIGNED = S.M.S.	REVISED =	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DATA STRUCTURE NO. 100-3060</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3600 www.jlrengineering.com	CHECKED = T.J.A.	REVISIONS				27	13-00140-00-BR	WILLIAMSON	37	21	
184.000559 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORPORATION	PLOT SCALE =	DRAWN = D.A.B.	REVISED =			LAKE EGYPT RD OVER SPILLWAY CONTRACT NO.					
	PLOT DATE = 4/2/2014	CHECKED = T.J.A.	REVISED =			[ILLINOIS] FED. AID PROJECT					

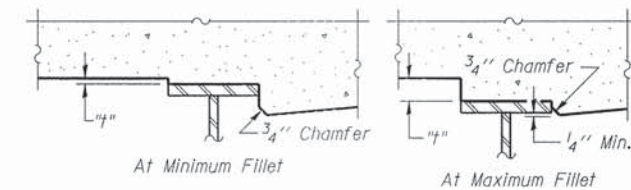


PLAN



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 grade elevations adjusted for dead load deflections as shown on sheet 4 of 18.



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 3 & 4 of 18. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 3 & 4 of 18, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

FILE NAME = 130267-sht-bridge.dgn 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.545.3400 www.tlrengineering.com 184.000995 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION	USER NAME =	DESIGNED - S.M.S.	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>TOP OF SLAB ELEVATIONS</b> <b>STRUCTURE NO. 100-3060</b> SHEET NO. 3 OF 18 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE =	CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	22	
	PLOT DATE = 4/2/2014	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY		CONTRACT NO.		ILLINOIS FED. AID PROJECT	
		CHECKED - T.J.A.	REVISED -								

**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	9+27.36	-13.00	514.89	514.89
☉ S. Exp. Joint	9+28.74	-13.00	514.89	514.89
☉ Brg. S. Abut.	9+30.18	-13.00	514.89	514.89
A	9+40.18	-13.00	514.89	514.92
B	9+50.18	-13.00	514.89	514.94
C	9+60.18	-13.00	514.89	514.96
D	9+70.18	-13.00	514.89	514.97
E	9+80.18	-13.00	514.89	514.97
F	9+90.18	-13.00	514.89	514.97
G	10+00.18	-13.00	514.89	514.95
H	10+10.18	-13.00	514.89	514.93
I	10+20.18	-13.00	514.89	514.91
☉ Brg. N. Abut.	10+26.18	-13.00	514.89	514.89
☉ N. Joint	10+27.62	-13.00	514.89	514.89
Bk. N. Abut.	10+29.01	-13.00	514.89	514.89

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	9+41.90	-4.33	515.03	515.03
☉ S. Exp. Joint	9+43.29	-4.33	515.03	515.03
☉ Brg. S. Abut.	9+44.73	-4.33	515.03	515.03
A	9+54.73	-4.33	515.03	515.06
B	9+64.73	-4.33	515.03	515.08
C	9+74.73	-4.33	515.03	515.10
D	9+84.73	-4.33	515.03	515.11
E	9+94.73	-4.33	515.03	515.11
F	10+04.73	-4.33	515.03	515.11
G	10+14.73	-4.33	515.03	515.09
H	10+24.73	-4.33	515.03	515.07
I	10+34.73	-4.33	515.03	515.05
☉ Brg. N. Abut.	10+40.73	-4.33	515.03	515.03
☉ N. Joint	10+42.17	-4.33	515.03	515.03
Bk. N. Abut.	10+43.56	-4.33	515.03	515.03

**☉ STRUCTURE**

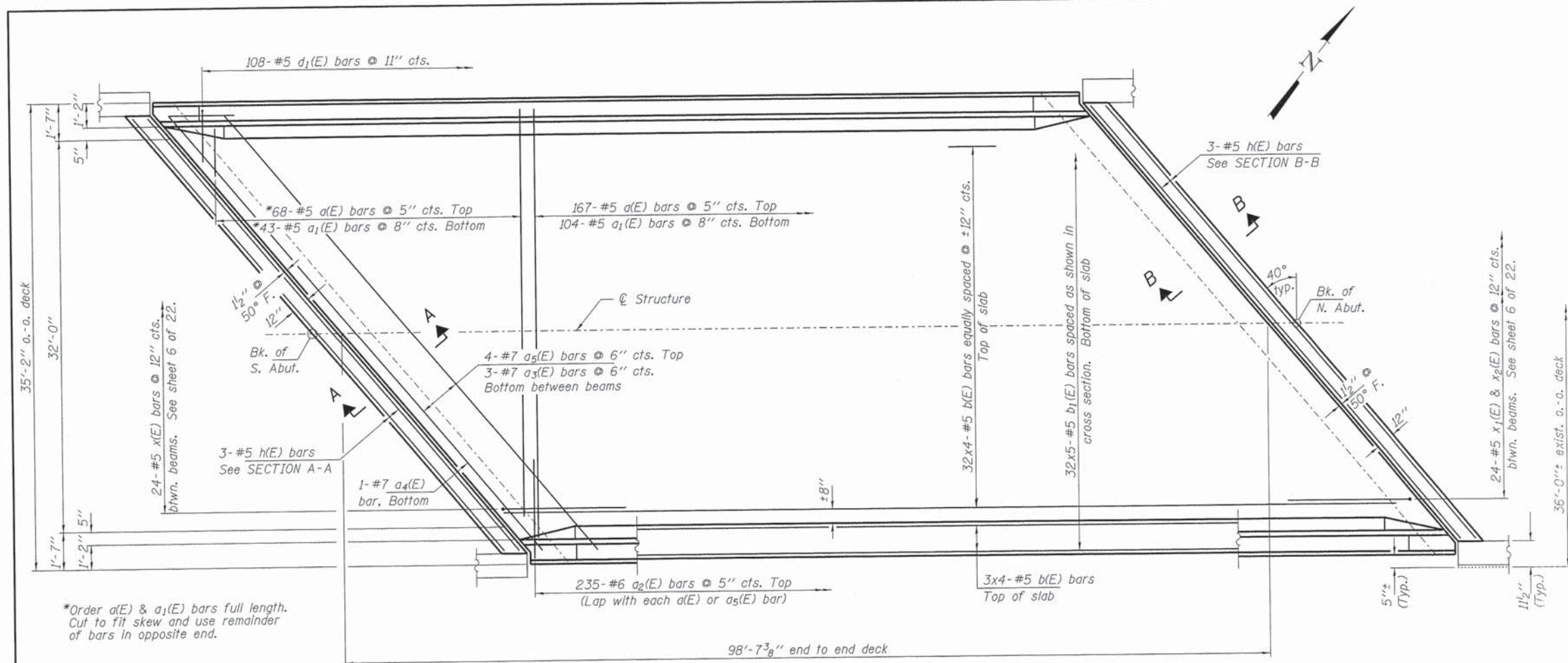
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	9+49.17	0.00	515.10	515.10
☉ S. Exp. Joint	9+50.56	0.00	515.10	515.10
☉ Brg. S. Abut.	9+52.00	0.00	515.10	515.10
A	9+62.00	0.00	515.10	515.13
B	9+72.00	0.00	515.10	515.15
C	9+82.00	0.00	515.10	515.17
D	9+92.00	0.00	515.10	515.18
E	10+02.00	0.00	515.10	515.18
F	10+12.00	0.00	515.10	515.17
G	10+22.00	0.00	515.10	515.16
H	10+32.00	0.00	515.10	515.14
I	10+42.00	0.00	515.10	515.12
☉ Brg. N. Abut.	10+48.00	0.00	515.10	515.10
☉ N. Joint	10+49.44	0.00	515.10	515.10
Bk. N. Abut.	10+50.83	0.00	515.10	515.10

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	9+52.81	4.33	515.03	515.03
☉ S. Exp. Joint	9+54.19	4.33	515.03	515.03
☉ Brg. S. Abut.	9+55.64	4.33	515.03	515.03
A	9+65.64	4.33	515.03	515.06
B	9+75.64	4.33	515.03	515.08
C	9+85.64	4.33	515.03	515.10
D	9+95.64	4.33	515.03	515.11
E	10+05.64	4.33	515.03	515.11
F	10+15.64	4.33	515.03	515.11
G	10+25.64	4.33	515.03	515.09
H	10+35.64	4.33	515.03	515.07
I	10+45.64	4.33	515.03	515.05
☉ Brg. N. Abut.	10+51.64	4.33	515.03	515.03
☉ N. Joint	10+53.08	4.33	515.03	515.03
Bk. N. Abut.	10+54.46	4.33	515.03	515.03

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	9+60.08	13.00	514.89	514.89
☉ S. Exp. Joint	9+61.47	13.00	514.89	514.89
☉ Brg. S. Abut.	9+62.91	13.00	514.89	514.89
A	9+72.91	13.00	514.89	514.92
B	9+82.91	13.00	514.89	514.94
C	9+92.91	13.00	514.89	514.96
D	10+02.91	13.00	514.89	514.97
E	10+12.91	13.00	514.89	514.97
F	10+22.91	13.00	514.89	514.97
G	10+32.91	13.00	514.89	514.95
H	10+42.91	13.00	514.89	514.93
I	10+52.91	13.00	514.89	514.91
☉ Brg. N. Abut.	10+58.91	13.00	514.89	514.89
☉ N. Joint	10+60.35	13.00	514.89	514.89
Bk. N. Abut.	10+61.74	13.00	514.89	514.89



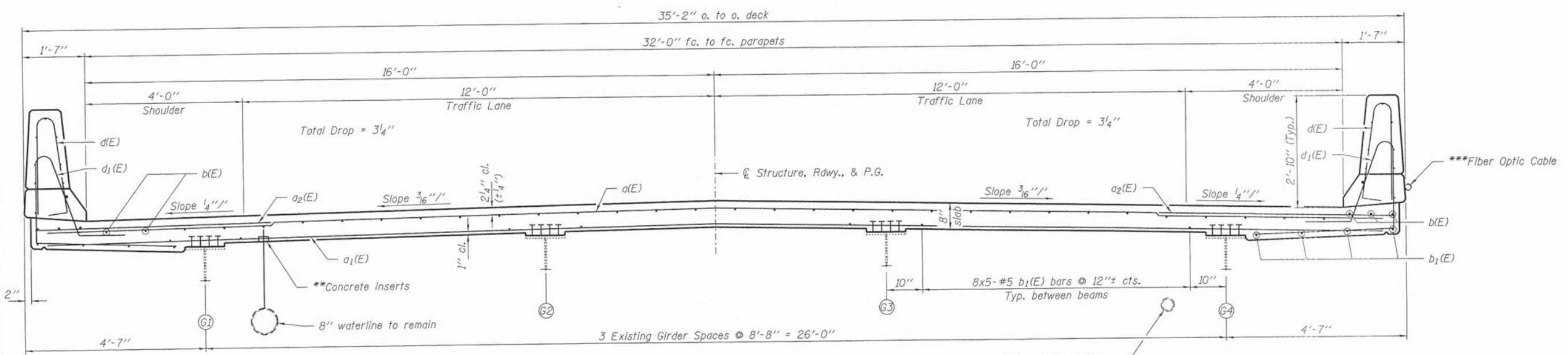
Notes:  
 See sheets 6 & 7 of 18 for superstructure details and Bill of Material.  
 Bars indicated thus 32x4-#5 etc. indicates 32 lines of bars with 4 lengths per line.  
 See sheet 7 of 18 for parapet reinforcement.  
 See sheet 6 of 18 for Section A-A and Section B-B.  
 Dimensions are based on a Rolled Rail Strip Seal Joint.  
 If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.

**MIN. BAR LAP**  
 #5 bars = 2'-0"

\*\* For 7/8" rods with a6(E) bars thru inserts (1,100 lb min. capacity). Cost of inserts and temporary support included with Concrete Superstructure.  
 \*\*\* Maximum support spacing is 6'-6" with a 30 pound minimum anchor capacity. Cost of temporary support of fiber optic cable and reconnecting to new superstructure is included with Concrete Superstructure.

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

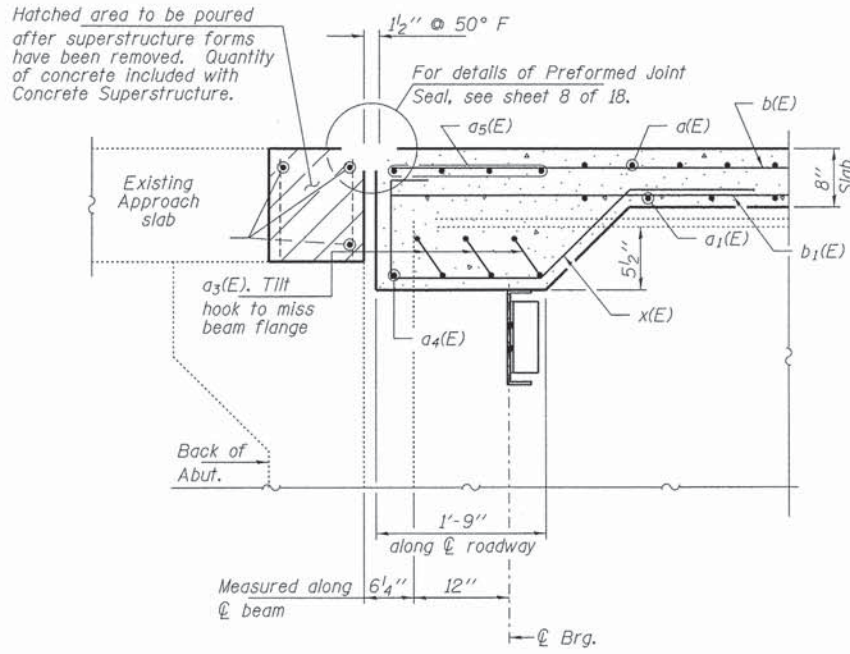
**PLAN**



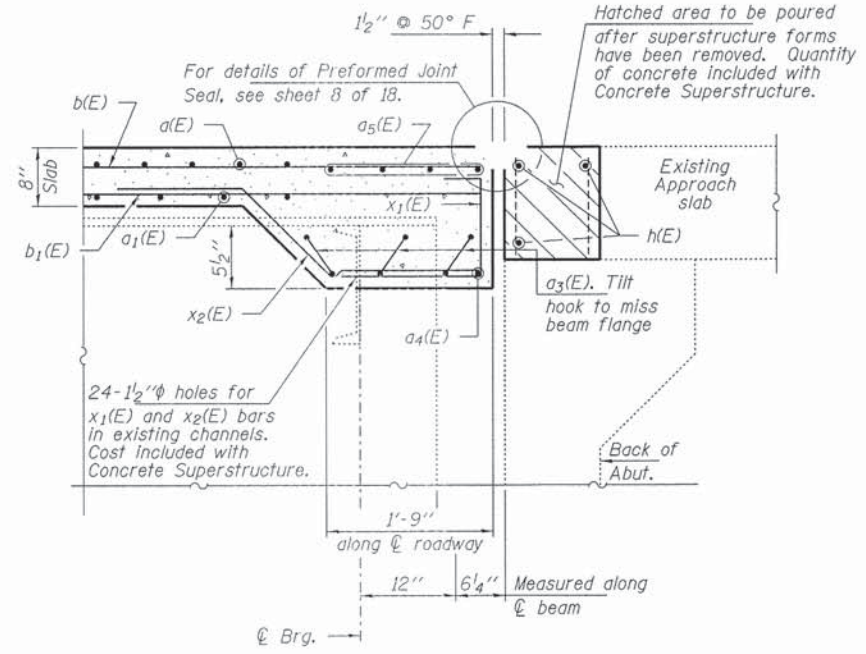
**CROSS SECTION**  
 (Looking North)

FILE NAME = 138267-shr-bridge.dgn 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.348.3400 www.hlrengineering.com 184.000008 ILLINOIS PROFESSIONAL DESIGN FIRM L2 / PE / SE CORPORATION	USER NAME =	DESIGNED - S.M.S.	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE</b> <b>STRUCTURE NO. 100-3060</b> SHEET NO. 5 OF 18 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	24
	PLOT DATE = 4/2/2014	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY	CONTRACT NO.		ILLINOIS FED. AID PROJECT	
	CHECKED - T.J.A.	REVISED -								



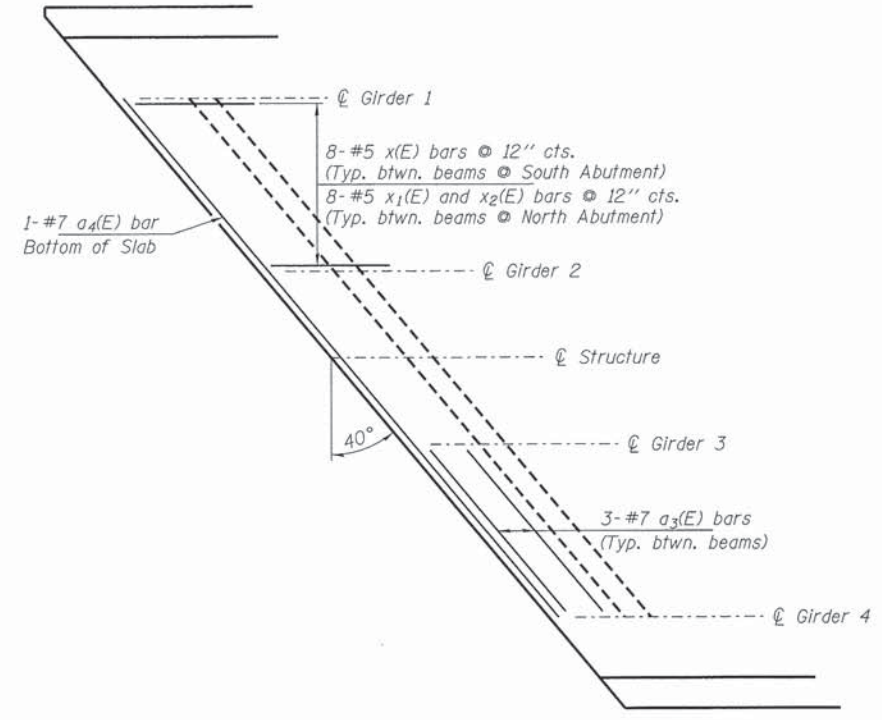


SECTION A-A

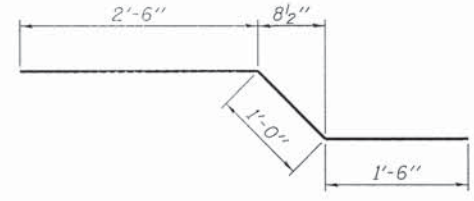
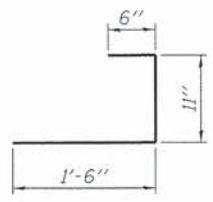
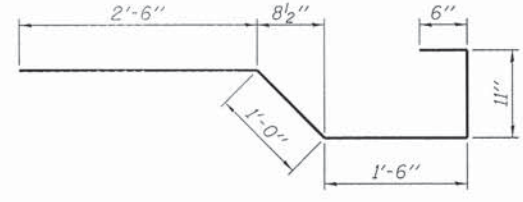
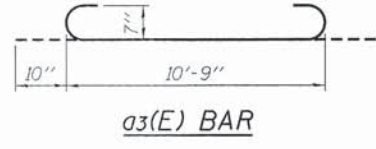


SECTION B-B

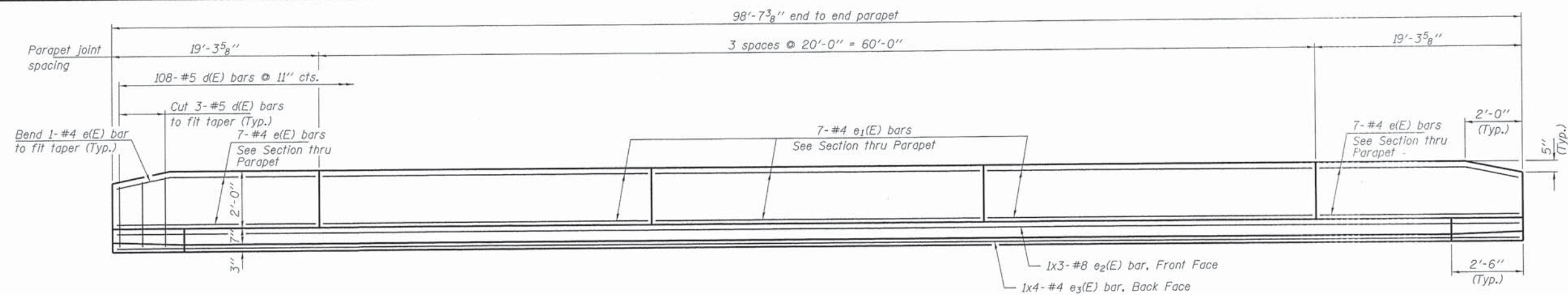
Note:  
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.



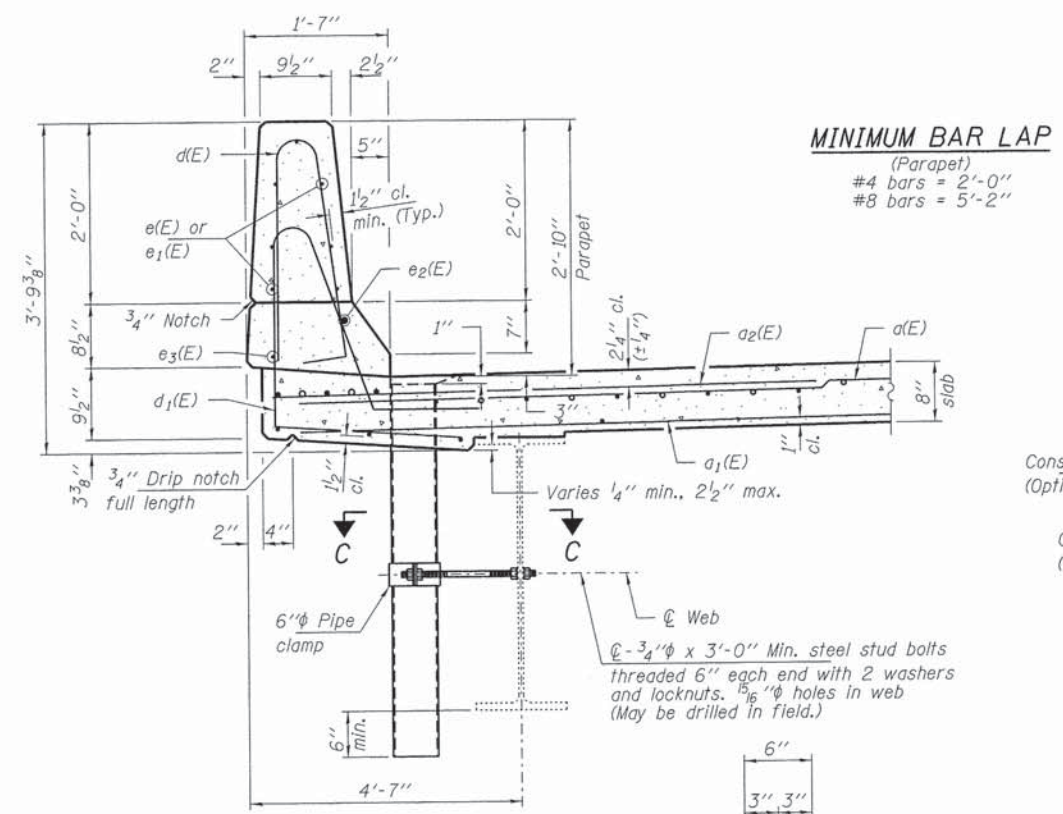
END PLAN



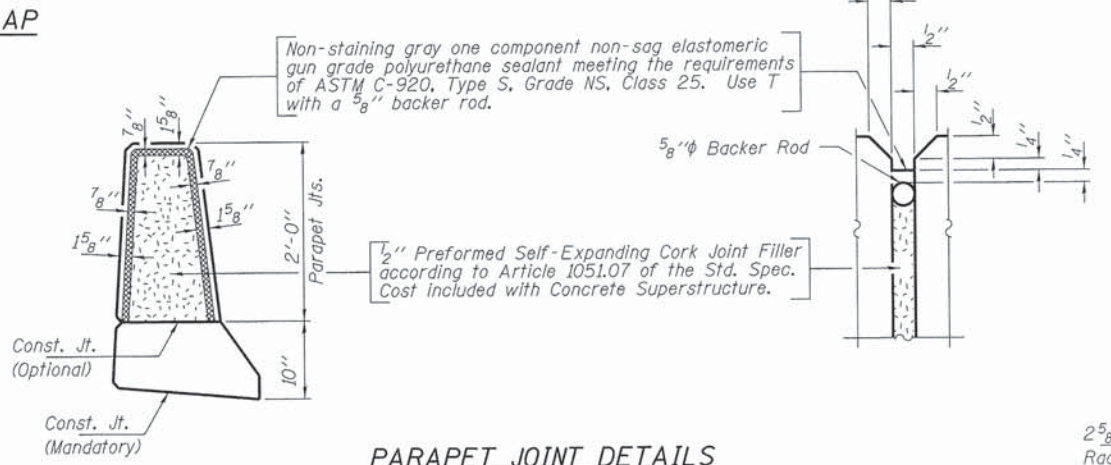
FILE NAME = 138267-sht-bridge.dgn 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.illengr.com 184.000285 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORPORATION	USER NAME =	DESIGNED - S.M.S.	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE DETAILS STRUCTURE NO. 100-3060</b>	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	25
	PLOT DATE = 4/2/2014	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY CONTRACT NO.				
		CHECKED - T.J.A.	REVISED -			ILLINOIS FED. AID PROJECT				
SHEET NO. 6 OF 18 SHEETS										



INSIDE ELEVATION OF PARAPET

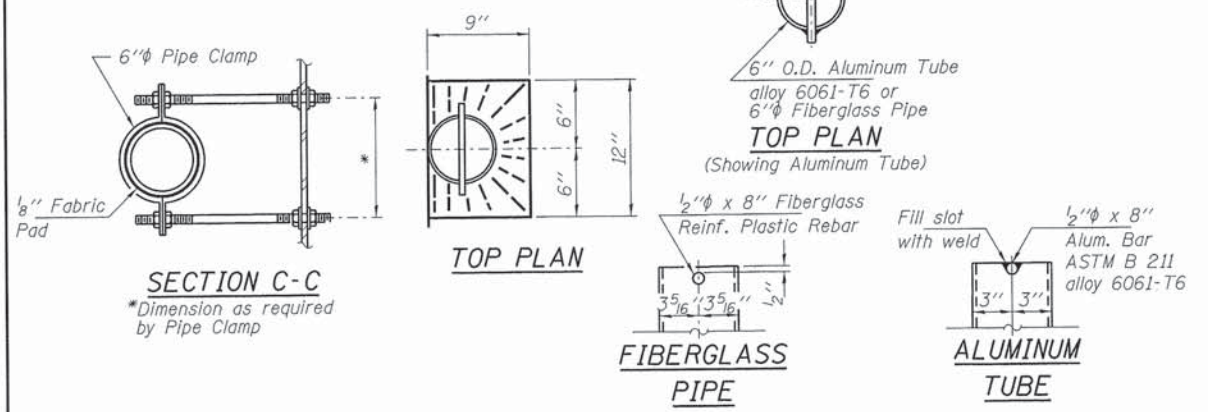


SECTION THRU PARAPET



PARAPET JOINT DETAILS

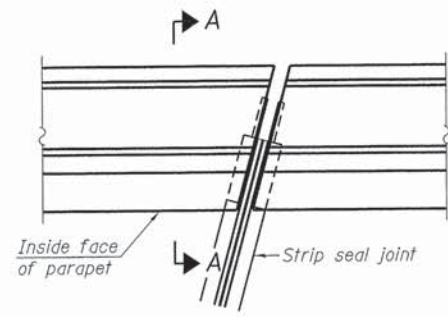
Notes:  
 Drains shall be located clear of all diaphragms.  
 The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SPI prior to painting.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.



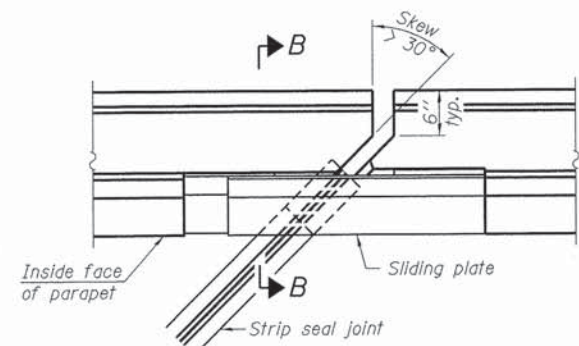
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	235	#5	34'-6"	—
a1(E)	147	#5	33'-10"	—
a2(E)	470	#6	8'-3"	—
a3(E)	18	#7	12'-5"	—
a4(E)	2	#7	33'-6"	—
a5(E)	8	#7	45'-0"	—
a6(E)	4	#4	1'-0"	—
b(E)	152	#5	26'-1"	—
b1(E)	160	#5	21'-4"	—
d(E)	216	#5	5'-7"	—
d1(E)	216	#5	8'-11"	—
e(E)	28	#4	19'-0"	—
e1(E)	42	#4	19'-8"	—
e2(E)	6	#8	36'-5"	—
e3(E)	8	#4	26'-2"	—
h(E)	6	#5	44'-0"	—
x(E)	24	#5	6'-5"	—
x1(E)	24	#5	2'-11"	—
x2(E)	24	#5	5'-0"	—
Concrete Superstructure		Cu. Yd.	116.2	
Bridge Deck Grooving		Sq. Yd.	329	
Protective Coat		Sq. Yd.	453	
Reinforcement Bars, Epoxy Coated		Pound	34,030	

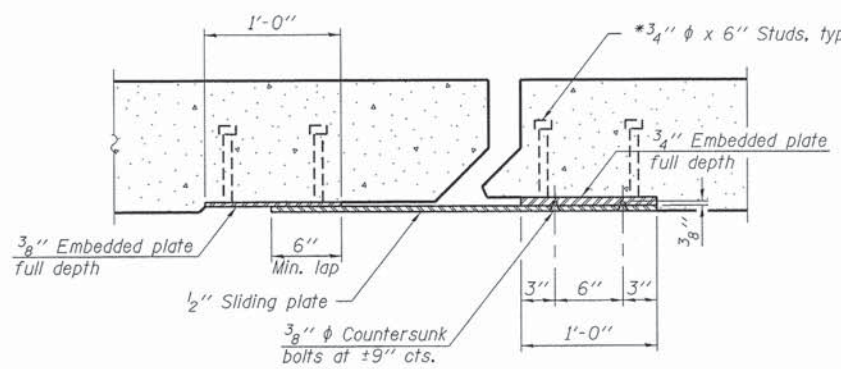
Bars indicated thus 1x3-#8 etc. indicates 1 line of bars with 3 lengths per line.  
 a6(E) bars are for Concrete Inserts, detailed on sheet 5 of 18.



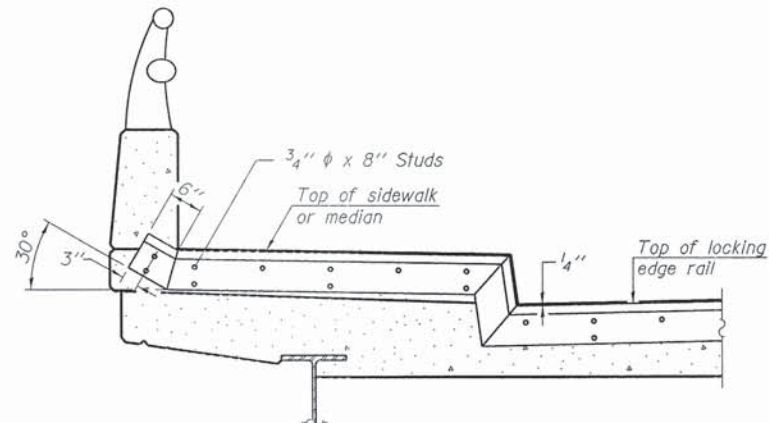
**PLAN**  
(For skews  $\leq 30^\circ$ )



**PLAN**  
(For skews  $> 30^\circ$ )  
Showing point block

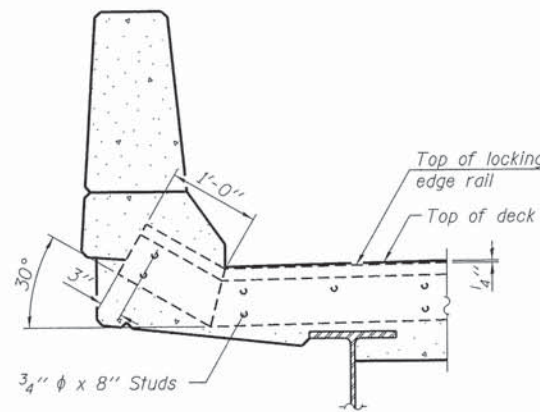


**SECTION C-C**

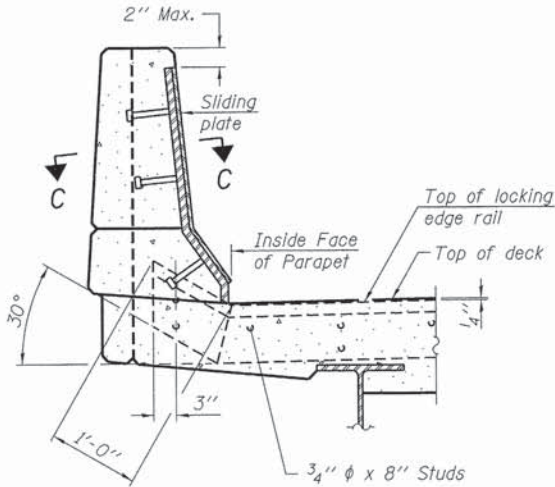


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

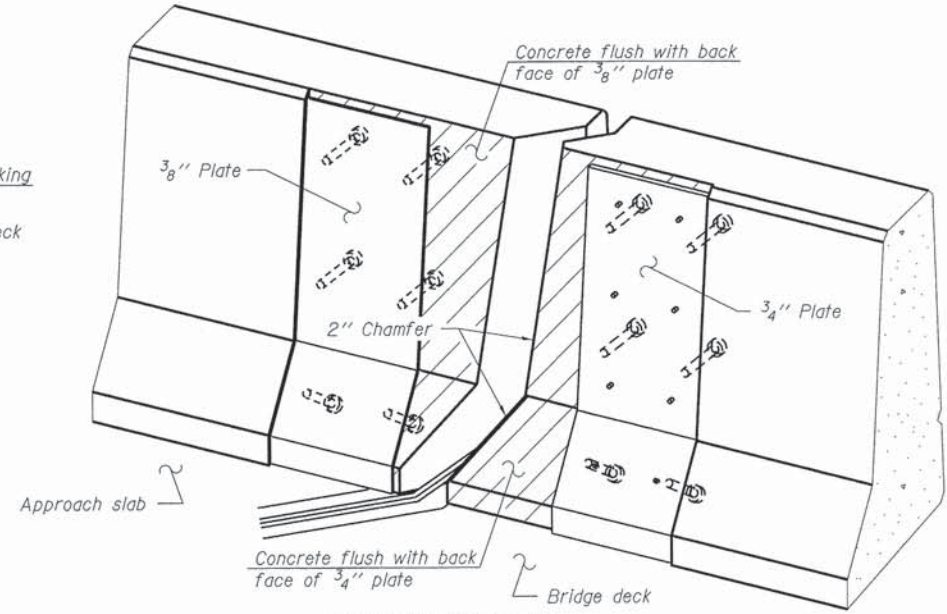
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



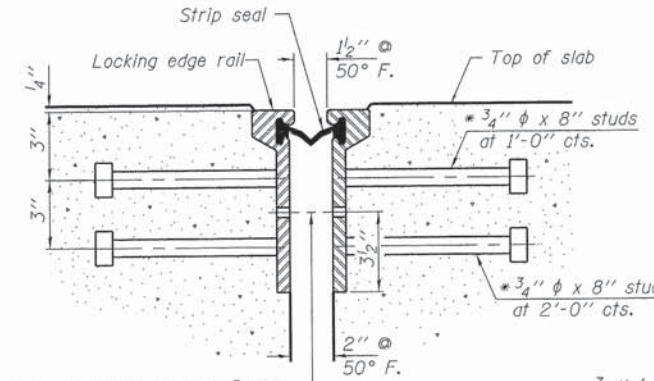
**SECTION A-A**



**SECTION B-B**

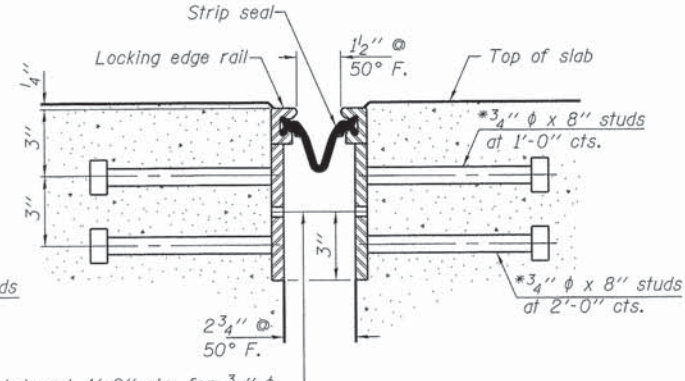


**TRIMETRIC VIEW**  
(Showing back plates only)



**SECTION THRU ROLLED RAIL JOINT**

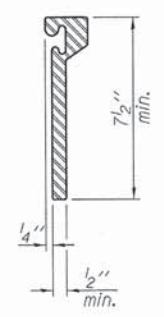
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



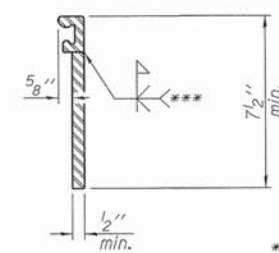
**SECTION THRU WELDED RAIL JOINT**

7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

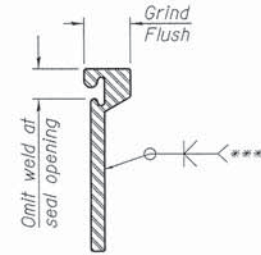
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

\*\*\* Back gouge not required if complete joint penetration is verified by mock-up.

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

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	90

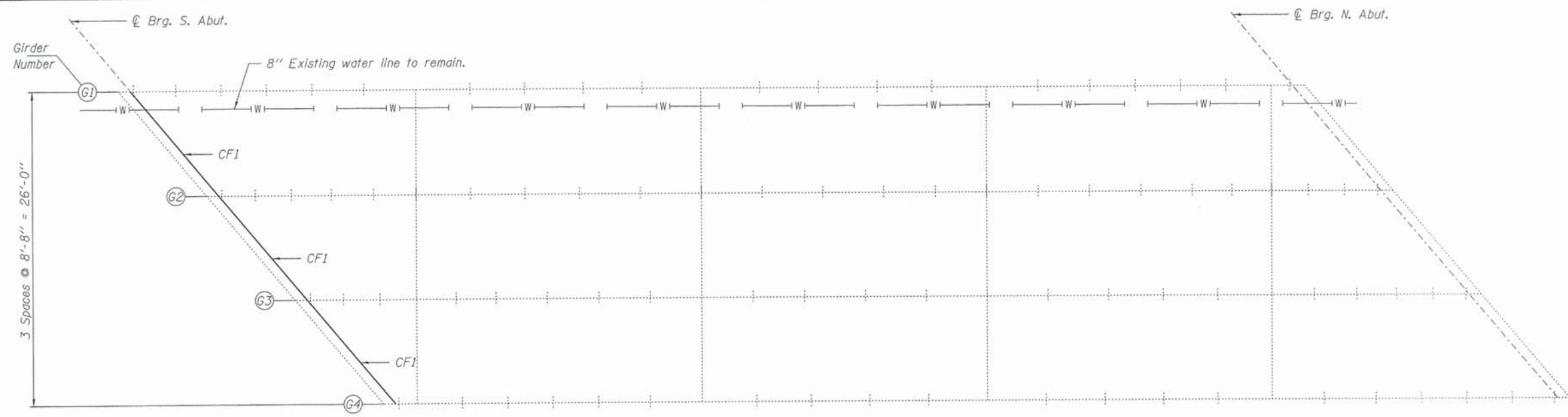
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2085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlsengineering.com	PLOT SCALE =	CHECKED - T.J.A.	REVISED -
184.000559 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. CORPORATION	PLOT DATE = 4/2/2014	DRAWN - D.A.B.	REVISED -
		CHECKED - T.J.A.	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

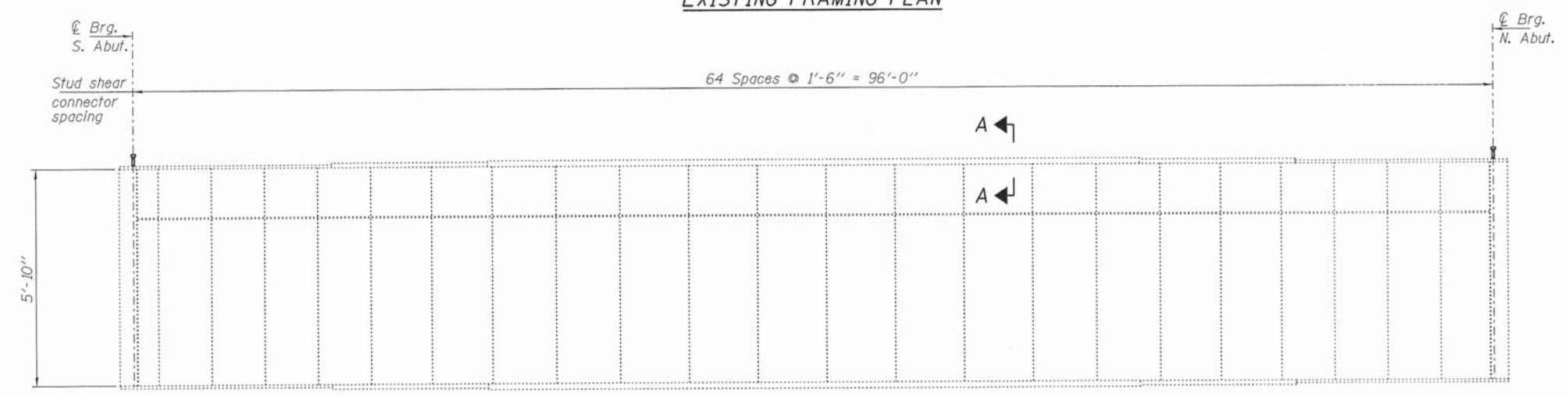
**PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 100-3060**

SHEET NO. 8 OF 18 SHEETS

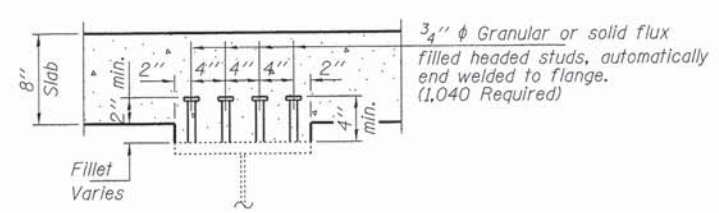
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27	13-00140-00-BR	WILLIAMSON	37	27
LAKE EGYPT RD OVER SPILLWAY			CONTRACT NO.	
[ILLINOIS] FED. AID PROJECT				



**EXISTING FRAMING PLAN**



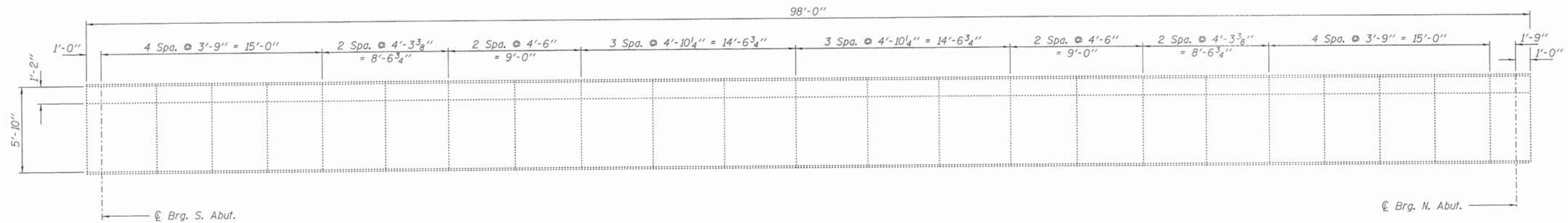
**EXISTING GIRDER ELEVATION**



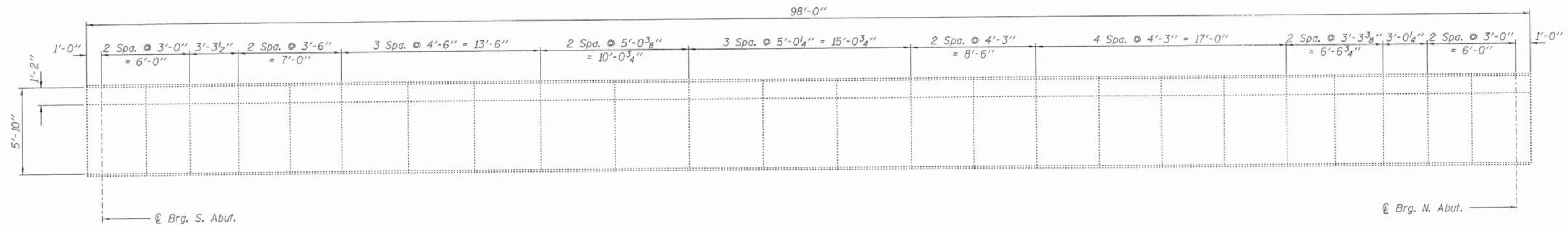
**SECTION A-A**

**Notes:**  
 Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.  
 For additional structural steel details see sheets 10 and 11 of 18.

FILE NAME = 138267-shr-bridge.dgn 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.548.3400 www.jhengineering.com 	USER NAME =	DESIGNED - S.M.S.	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURAL STEEL</b> <b>STRUCTURE NO. 100-3060</b> SHEET NO. 9 OF 18 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	28
ILLINOIS PROFESSIONAL DESIGN FIRM L.L.P. / S.E. CORPORATION	PLOT DATE = 4/2/2014	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY		CONTRACT NO.		(ILLINOIS) FED. AID PROJECT
		CHECKED - T.J.A.	REVISED -							

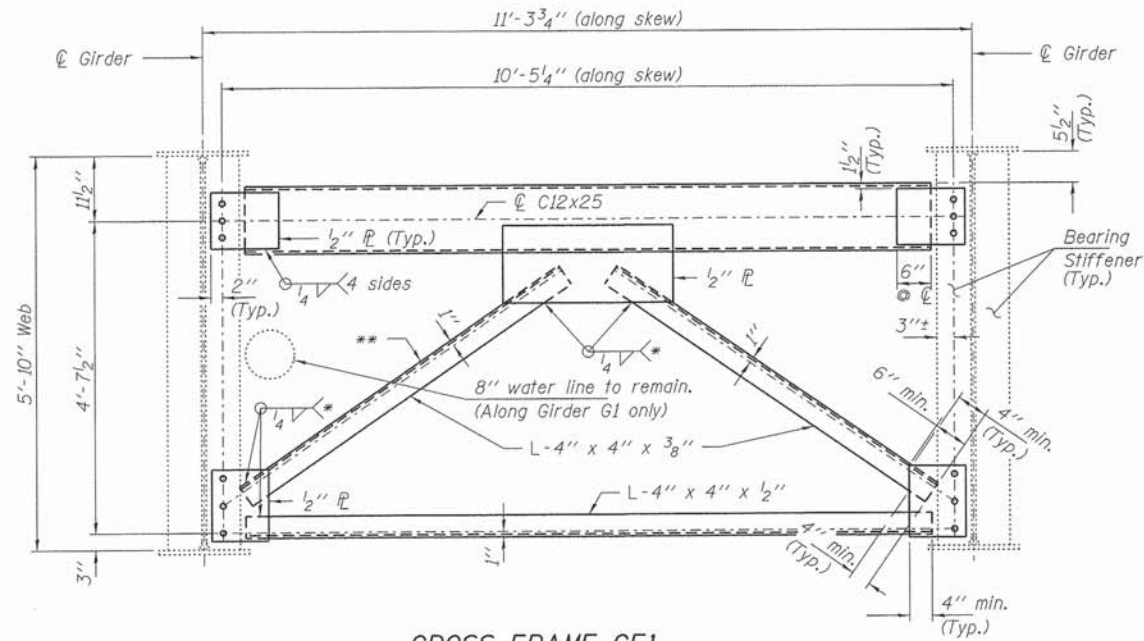


ELEVATIONS G1 & G4



ELEVATIONS G2 & G3

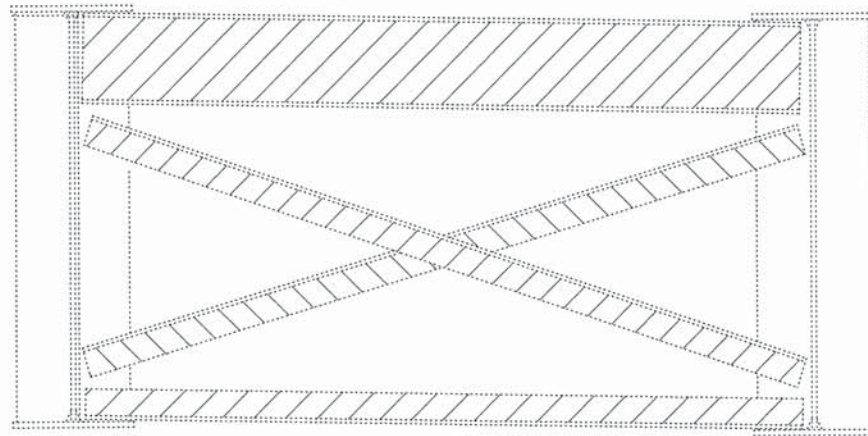
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	PLOT SCALE =	CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	29	
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		CHECKED - T.J.A.	REVISED -								



**CROSS FRAME CF1**  
(South Abut.)  
(3-required)

- \* Weld on near side of 1/2" plate.
- \*\* Adjacent diagonal of cross frame may be omitted if required for clearances of the existing water line.

**Notes:**  
Individual cross frames at supports shall not be disconnected during the bearing replacements.  
Bolts for cross frame connections shall be 3/4" φ, holes 15/16" φ.  
Two hardened washers required for each set of oversized holes.



**EXISTING END CROSS FRAME REMOVAL**  
(South Abut.)  
(3-required)

**Notes:**  
Existing welds to be removed using the air-arc method and grind smooth all weld material remaining on the bearing stiffeners.  
Hatch areas indicate structural steel removal. Cost included with Furnishing and Erecting Structural Steel.

INTERIOR GIRDER MOMENT TABLE			
	0.15 Span I	0.26 Span I	0.5 Span I
$I_s$	(in <sup>4</sup> ) 40,753	61,489	77,422
$I_c(n)$	(in <sup>4</sup> ) 95,700	128,371	152,320
$I_c(3n)$	(in <sup>4</sup> ) 73,335	98,362	116,958
$I_c(cr)$	(in <sup>4</sup> ) 47,836	68,908	85,058
$S_s$	(in <sup>3</sup> ) 1,139	1,696	2,113
$S_c(n)$	(in <sup>3</sup> ) 1,531	2,115	2,555
$S_c(3n)$	(in <sup>3</sup> ) 1,419	1,976	2,397
$S_c(cr)$	(in <sup>3</sup> ) 1,218	1,766	2,140
DC1	(k/ft) 1.12	1.19	1.24
MDC1	(k) 690	1,072	1,399
DC2	(k/ft) 0.23	0.23	0.23
MDC2	(k) 150	200	260
DW	(k/ft) 0.22	0.22	0.22
MDW	(k) 125	193	250
$M_k + IM$	(k) 1,192	1,802	2,271
$M_u$ (Strength I)	(k) 3,299	5,033	6,423
$\phi_r M_n$	(k)	-	-
$f_s$ DC1	(ksi) 7.3	7.6	7.9
$f_s$ DC2	(ksi) 1.1	1.2	1.3
$f_s$ DW	(ksi) 1.1	1.2	1.3
$f_s$ (k+IM)	(ksi) 9.3	10.2	10.7
$f_s$ (Service II)	(ksi) 21.6	23.3	24.4
$0.95R_n F_{yr}$	(ksi) 31.4	31.4	31.4
$f_s$ (Total)(Strength I)	(ksi) 28.4	30.6	32.1
$\phi_r F_n$	(ksi) 33.0	33.0	33.0
$V_r$	(k) 36.1	36.1	36.1

INTERIOR GIRDER REACTION TABLE	
	Abut.
$R_{DC1}$	(k) 57.1
$R_{DC2}$	(k) 10.8
$R_{DW}$	(k) 10.5
$R_k + IM$	(k) 115.2
$R_{Total}$	(k) 193.6

- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(cr), S_c(cr)$ : Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing  $f_s$  (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- MDC1: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_k + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- $M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + IM$
- $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
- $f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
 $M_{DC1} / S_{nc}$
- $f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
 $M_{DC2} / S_c(3n)$  or  $M_{DC2} / S_c(cr)$  as applicable.
- $f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
 $M_{DW} / S_c(3n)$  or  $M_{DW} / S_c(cr)$  as applicable.
- $f_s$  (k+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).  
 $M_k + IM / S_c(n)$  or  $M_k + IM / S_c(cr)$  as applicable.
- $f_s$  (Service II): Sum of stresses as computed below (ksi).  
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (k + IM)$
- $0.95R_n F_{yr}$ : Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- $f_s$  (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).  
 $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (k + IM)$
- $\phi_r F_n$ : Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
- $V_r$ : Maximum factored shear range in span computed according to Article 6.10.10.

**Note:**  
 $M_k$  and  $R_k$  include the effects of centrifugal force and superelevation.

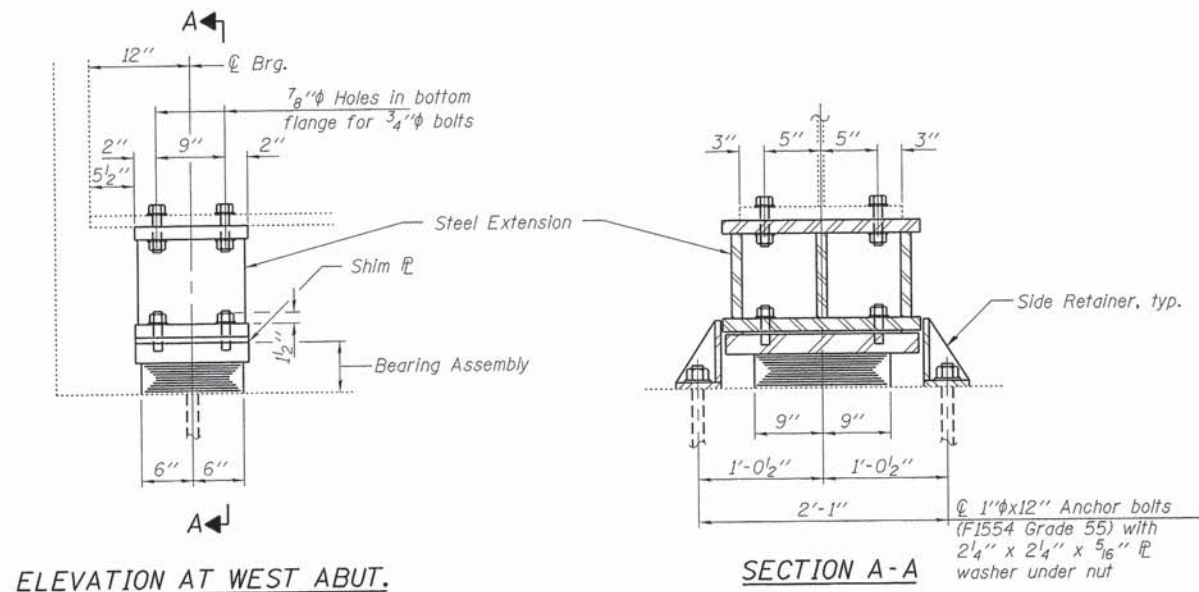
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3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.541.3400 www.hdr.com		CHECKED - T.J.A.	REVISED -
164.000009 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. FRIESE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/2/2014	CHECKED - T.J.A.	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS  
STRUCTURE NO. 100-3060

SHEET NO. 11 OF 18 SHEETS

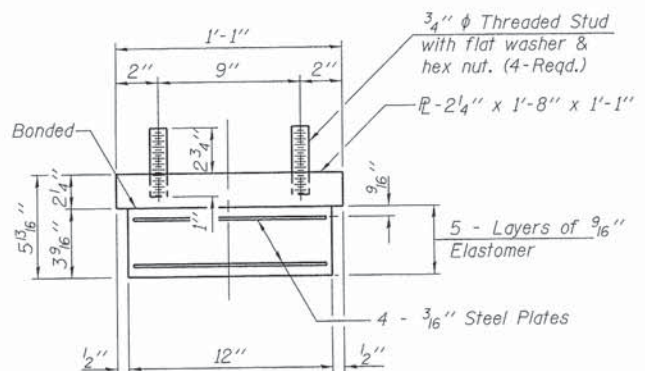
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27	13-00140-00-BR	WILLIAMSON	37	30
LAKE EGYPT RD OVER SPILLWAY			CONTRACT NO.	
[ILLINOIS] FED. AID PROJECT				



ELEVATION AT WEST ABUT.

SECTION A-A

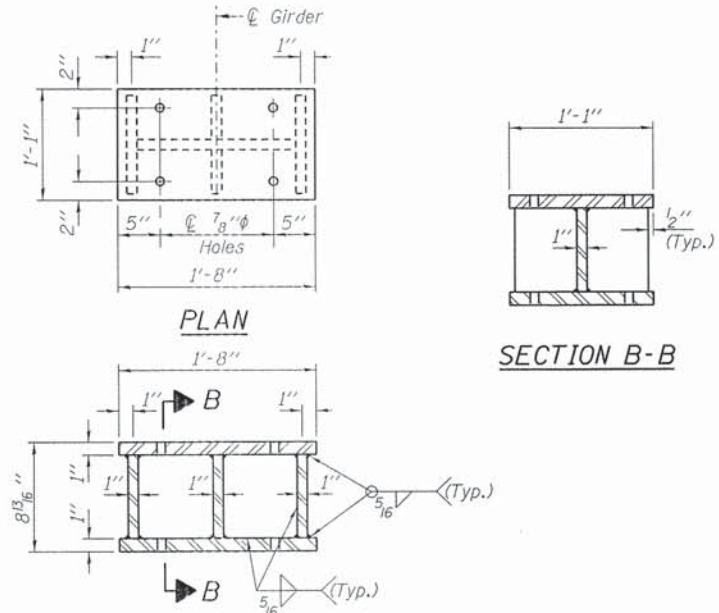
**TYPE I ELASTOMERIC EXP. BRG. AT SOUTH ABUTMENT**  
(4 Required)



BEARING ASSEMBLY

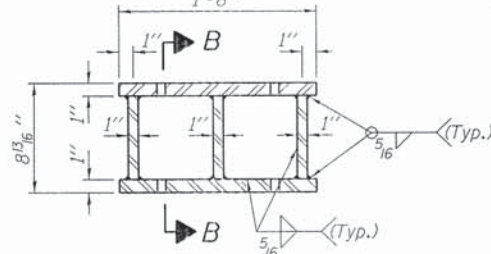
Note:  
Shim plates shall not be placed under Bearing Assembly.

Notes:  
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, steel extensions, field drilled holes and bolts required for the elastomeric bearing shall be included in the cost of Elastomeric Bearing Assembly, Type I.



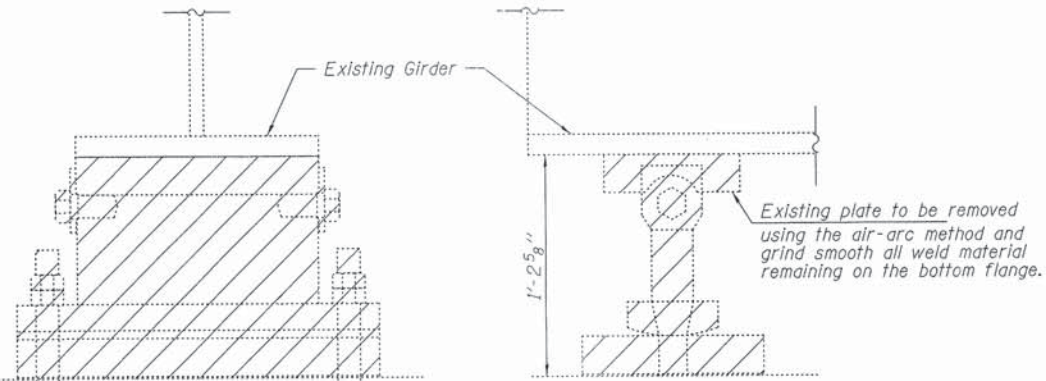
PLAN

SECTION B-B



ELEVATION

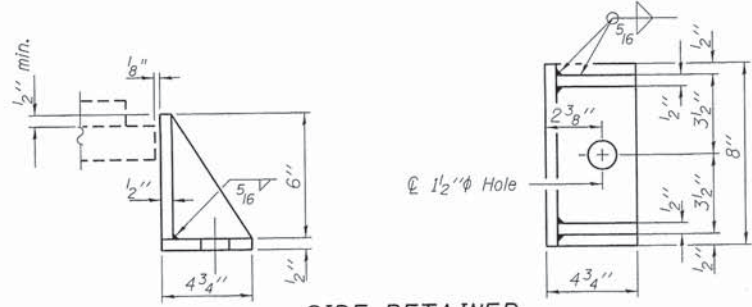
STEEL EXTENSION



EXISTING BEARING REMOVAL DETAIL

Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost is included in Jack and Remove Existing Bearings.

Cost is included with Jack and Remove Existing Bearings. Hatch areas indicate existing bearing removal.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

**BILL OF MATERIAL**

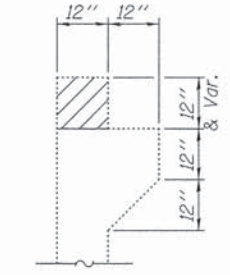
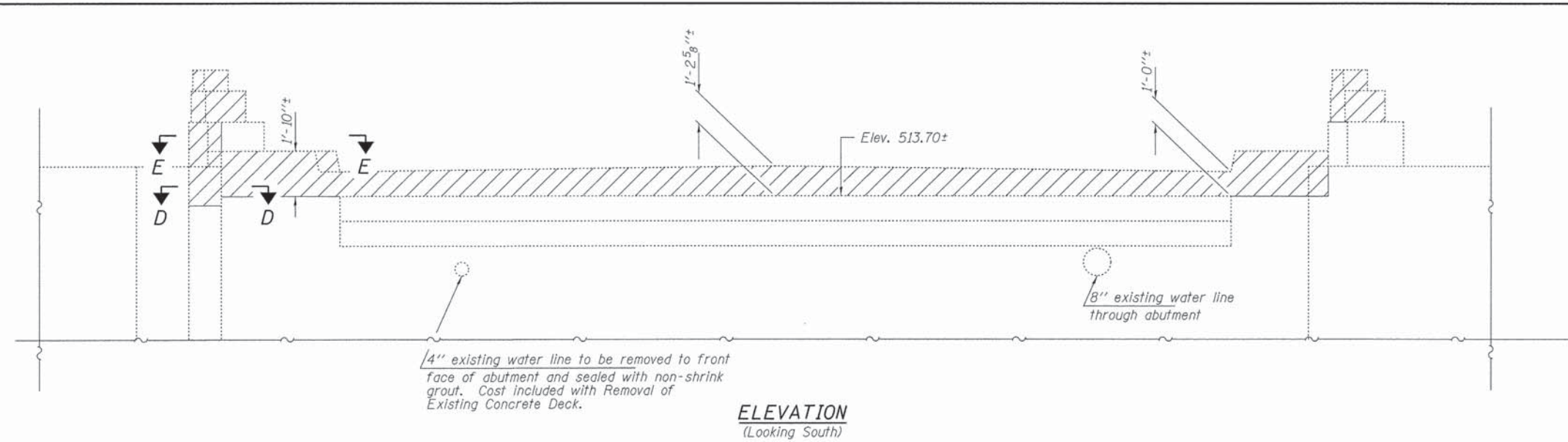
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	4
Anchor Bolts, 1"	Each	8
Jack and Remove Existing Bearings	Each	4

FILE NAME = 130267-shr-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.jllengineering.com		CHECKED - T.J.A.	REVISED -
184.000599 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/2/2014	CHECKED - T.J.A.	REVISED -

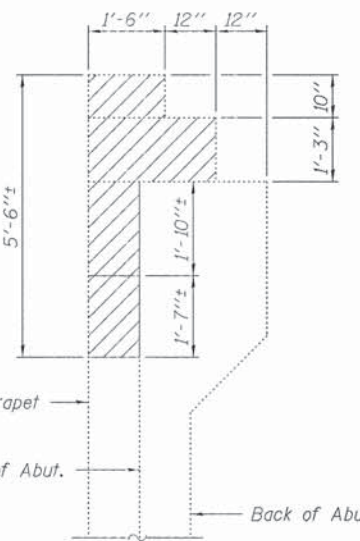
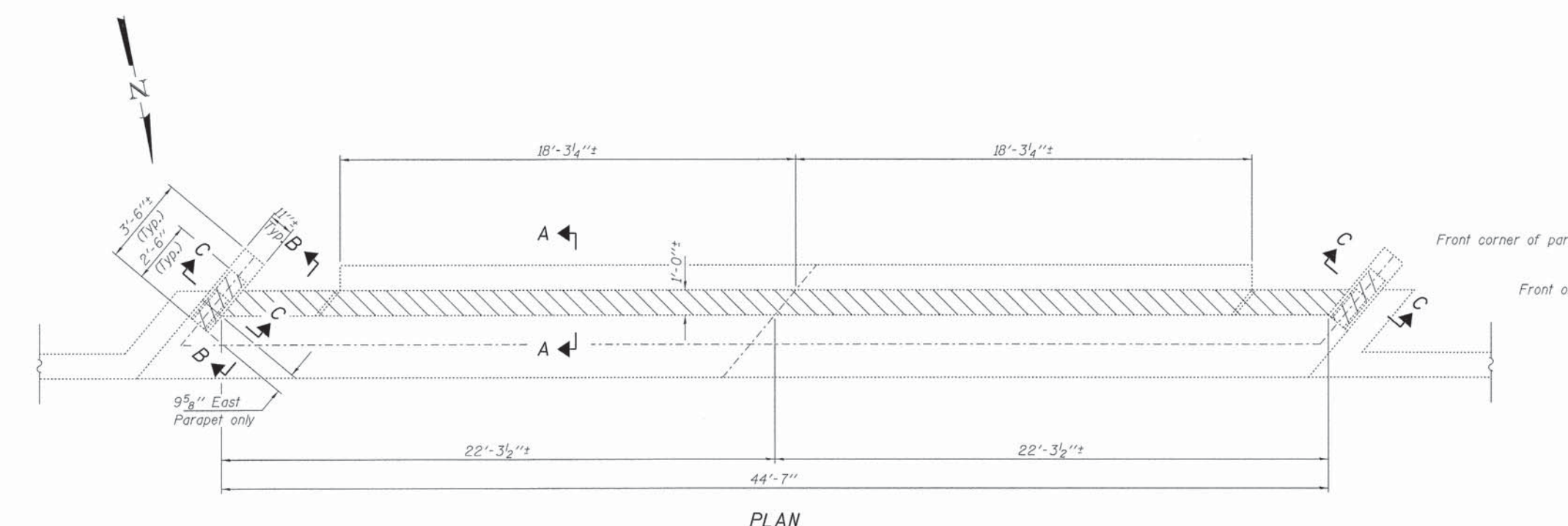
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS  
STRUCTURE NO. 100-3060  
SHEET NO. 12 OF 18 SHEETS

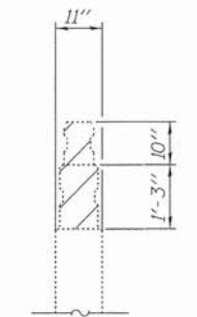
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27	13-00140-00-BR	WILLIAMSON	37	31
LAKE EGYPT RD OVER SPILLWAY			CONTRACT NO.	
ILLINOIS FED. AID PROJECT				



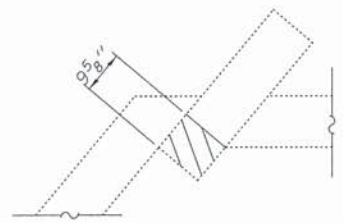
**SECTION A-A**



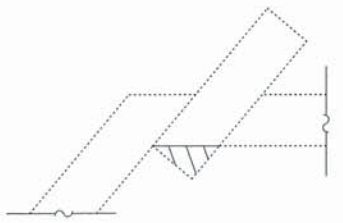
**SECTION B-B**  
(East Parapet Only)



**SECTION C-C**



**SECTION E-E**  
(East Parapet Only)



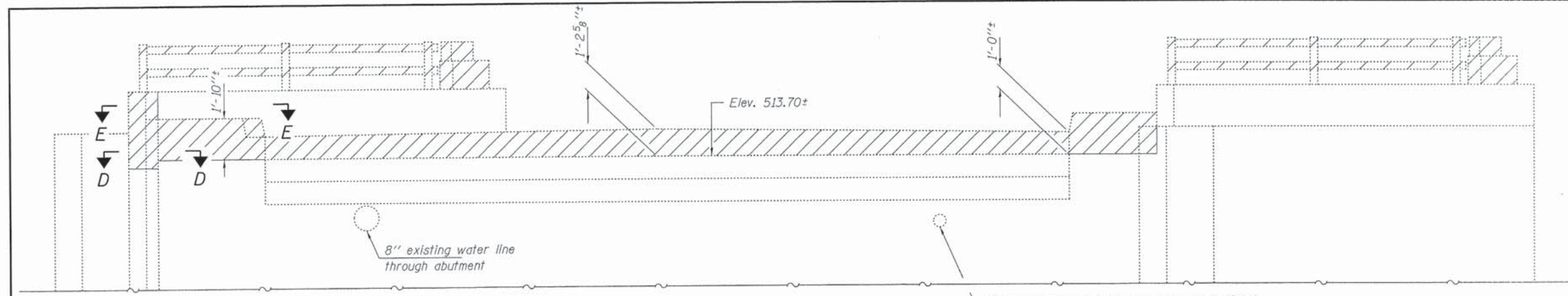
**SECTION D-D**  
(East Parapet Only)

**Notes:**  
Hatched areas indicate Concrete Removal.  
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.  
Existing reinforcement not used in new construction shall be cut off, ground smooth and sealed with epoxy. Cost is included in Concrete Removal.

**BILL OF MATERIAL**

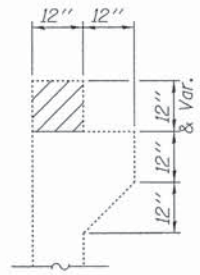
Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.3



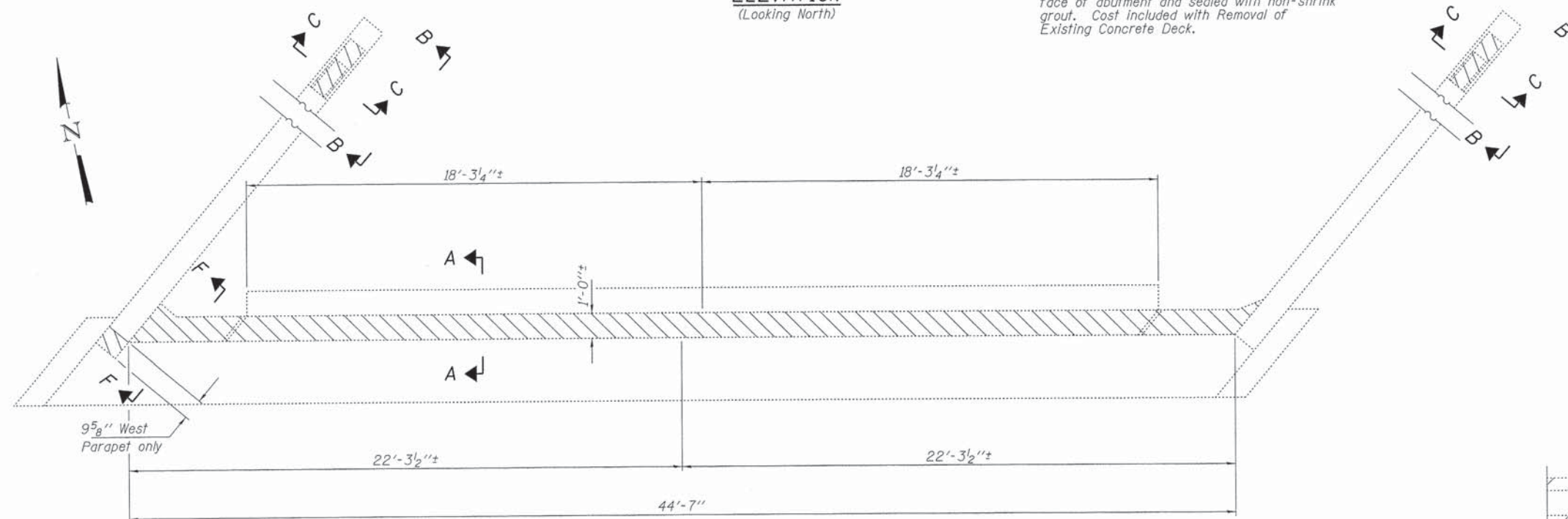


**ELEVATION**  
(Looking North)

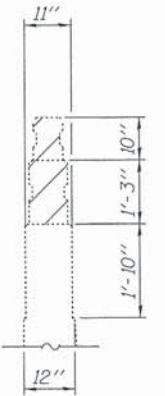
4" existing water line to be removed to front face of abutment and sealed with non-shrink grout. Cost included with Removal of Existing Concrete Deck.



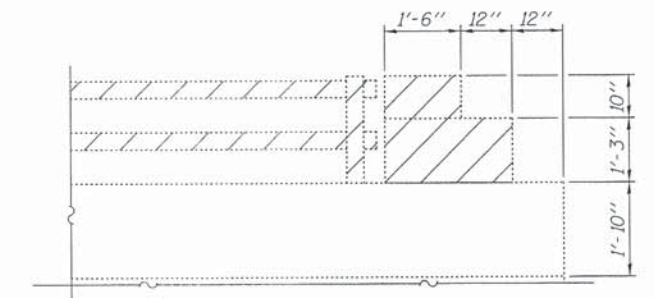
**SECTION A-A**



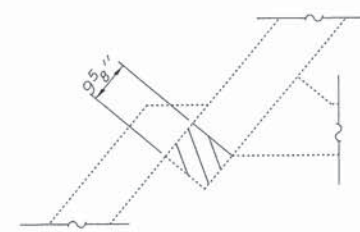
**PLAN**



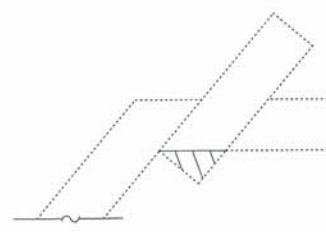
**SECTION C-C**



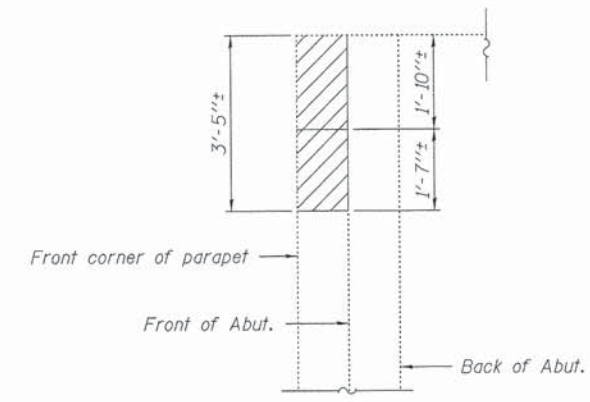
**SECTION B-B**



**SECTION E-E**  
(West Parapet Only)



**SECTION D-D**  
(West Parapet Only)



**SECTION F-F**  
(West Parapet Only)

**Notes:**  
Hatched areas indicate Concrete Removal.  
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.  
Existing reinforcement not used in new construction shall be cut off, ground smooth and sealed with epoxy. Cost is included in Concrete Removal.  
Cost of existing steel rail removal shall be included in Removal of Existing Concrete Deck.

**BILL OF MATERIAL**

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	2.3

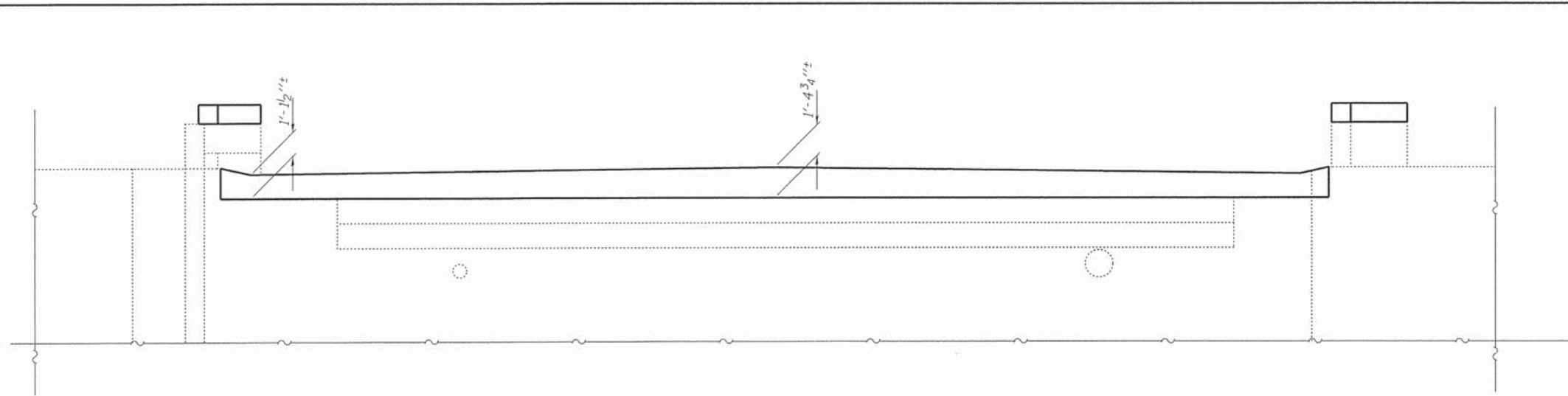
FILE NAME = 138267-shr-bridge.dgn	USER NAME =	DESIGNED - S.M.S.	REVISED -
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com		CHECKED - T.J.A.	REVISED -
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -
	PLOT DATE = 4/2/2014	CHECKED - T.J.A.	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

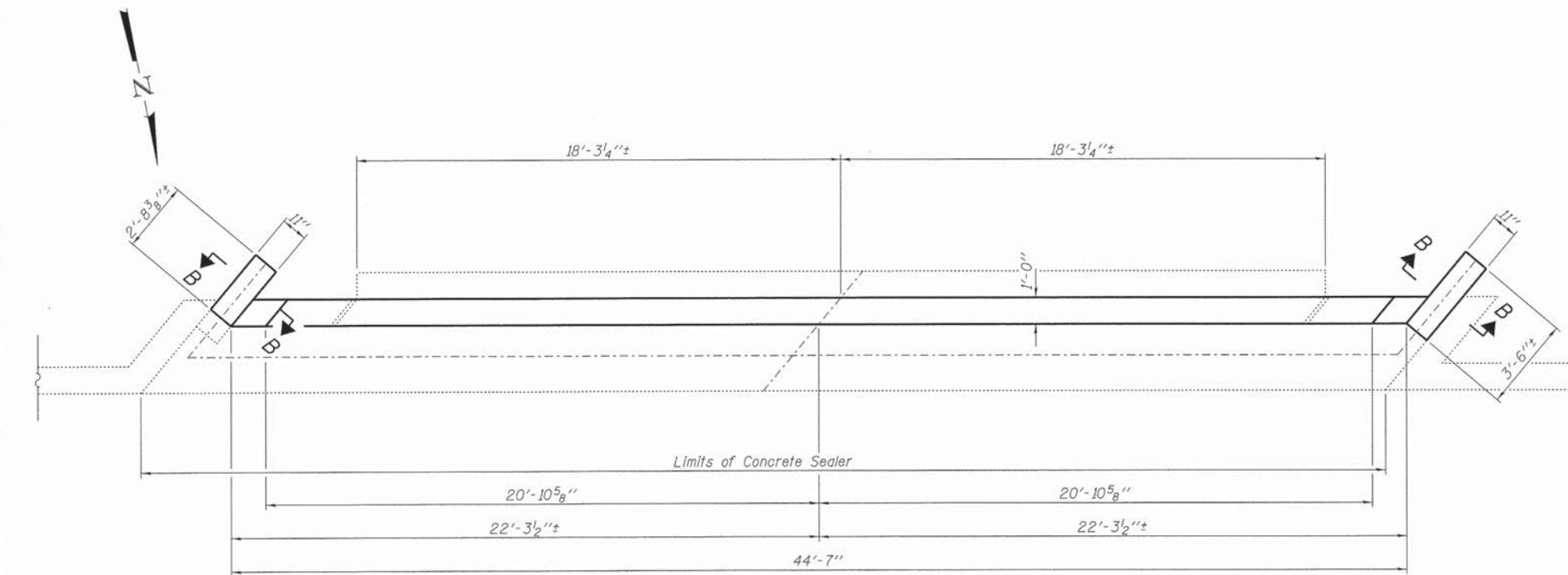
**NORTH ABUTMENT REMOVAL DETAILS**  
**STRUCTURE NO. 100-3060**

SHEET NO. 14 OF 18 SHEETS

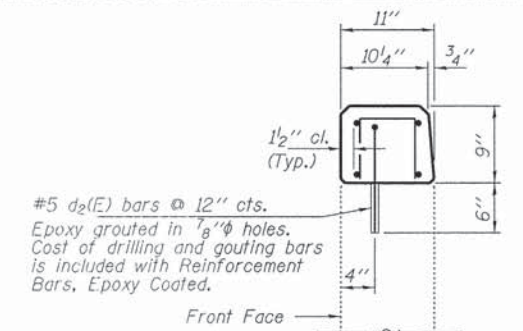
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27	13-00140-00-BR	WILLIAMSON	37	33
LAKE EGYPT RD OVER SPILLWAY			CONTRACT NO.	
[ILLINOIS] FED. AID PROJECT				



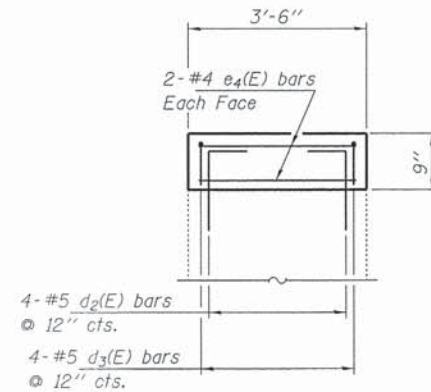
**ELEVATION**  
(Looking South)



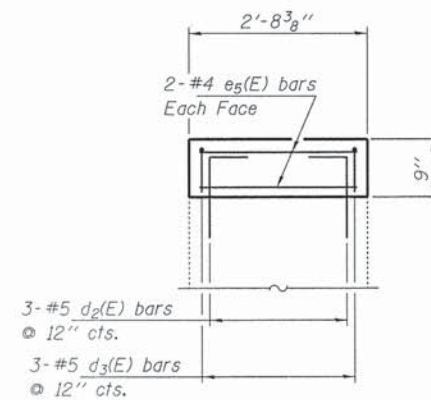
**PLAN**



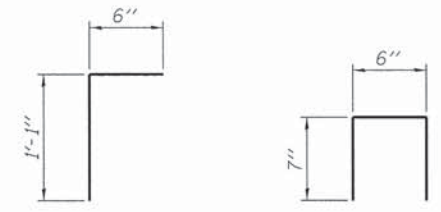
**SECTION B-B**



**ELEVATION OF PARAPET**  
(West Parapet)



**ELEVATION OF PARAPET**  
(East Parapet)



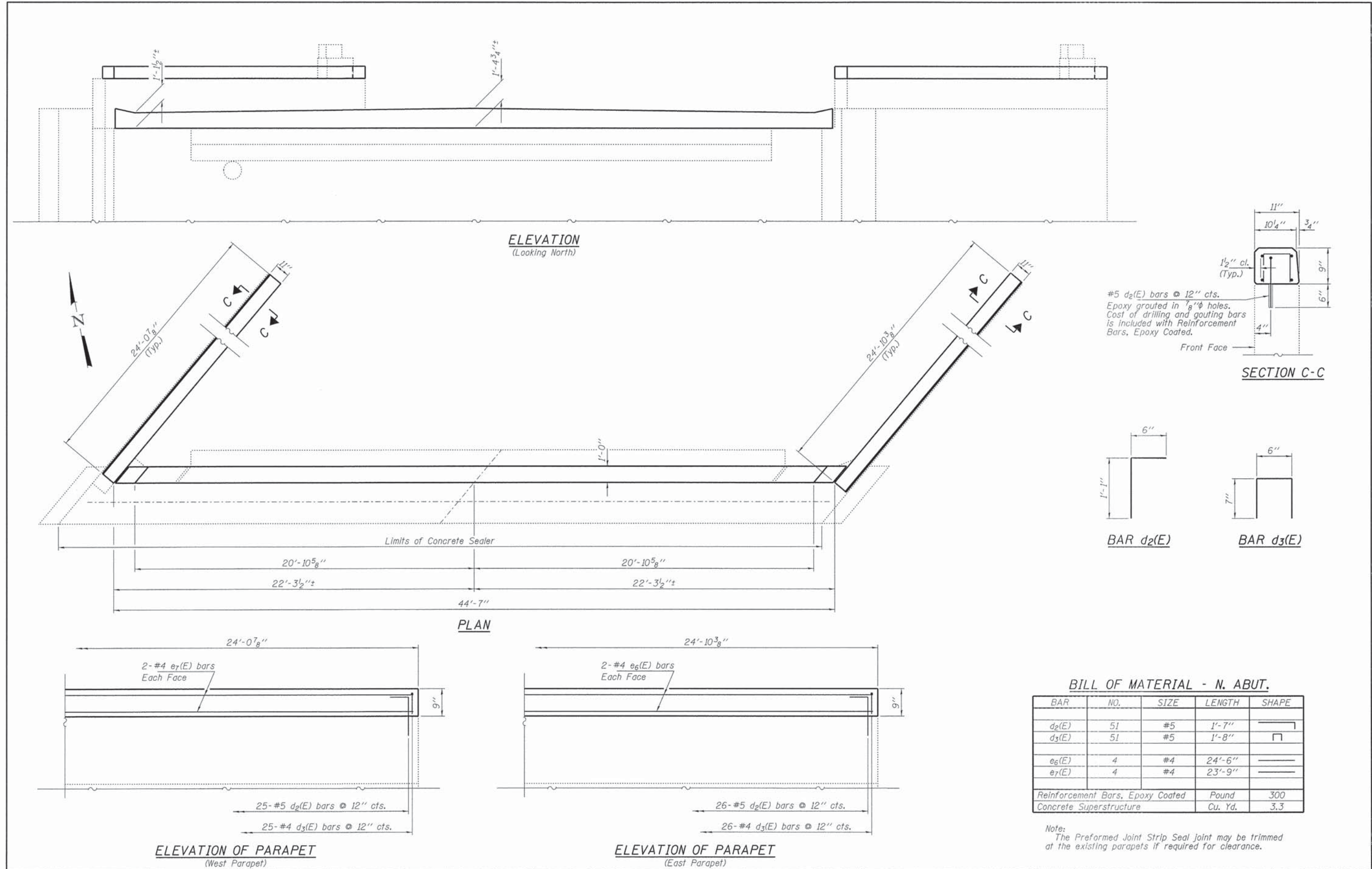
**BAR d2(E)**

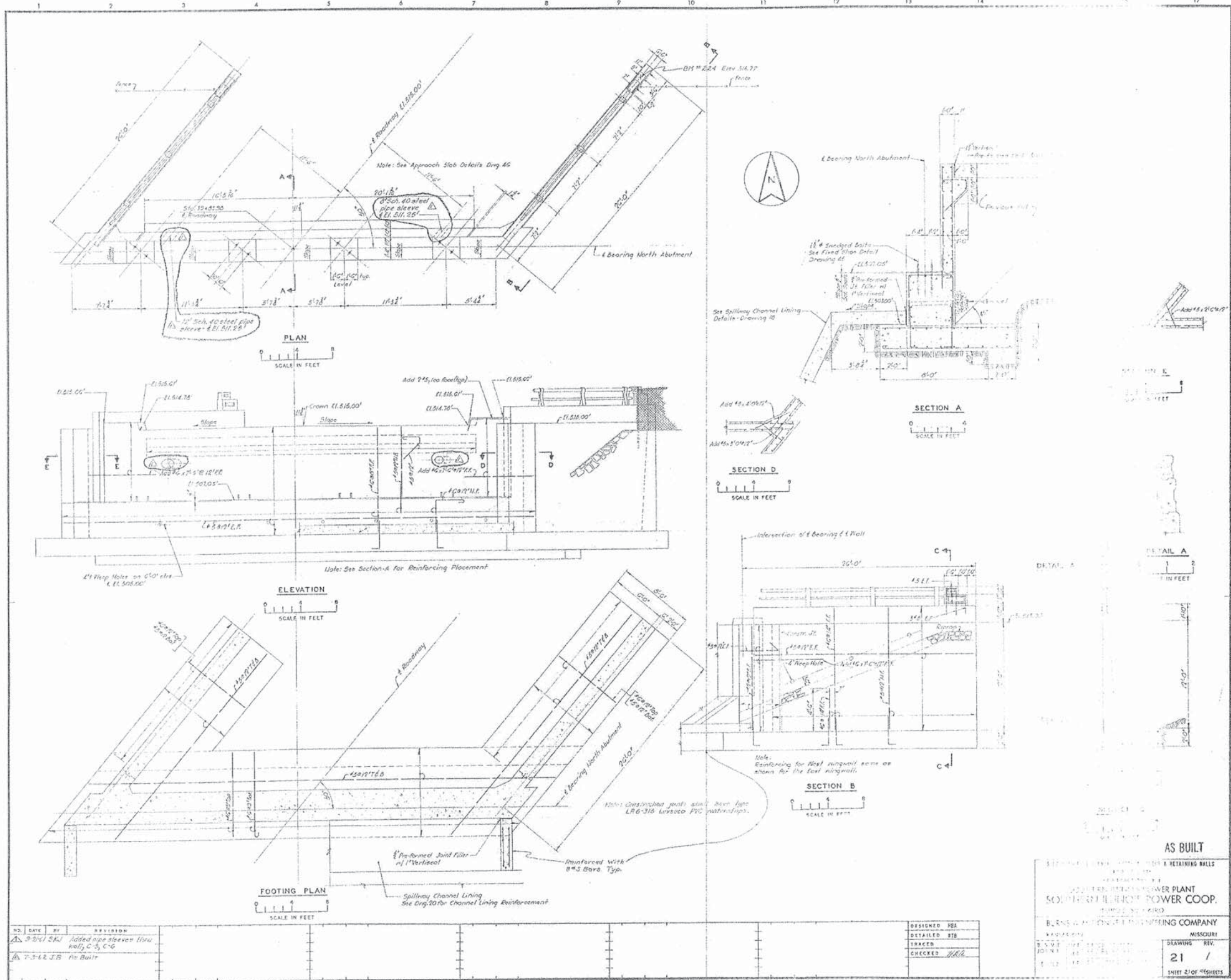
**BAR d3(E)**

**BILL OF MATERIAL - S. ABUT.**

BAR	NO.	SIZE	LENGTH	SHAPE
d <sub>2</sub> (E)	7	#5	1'-7"	U
d <sub>3</sub> (E)	7	#5	1'-8"	□
e <sub>4</sub> (E)	4	#4	3'-2"	—
e <sub>5</sub> (E)	4	#4	2'-4"	—
Reinforcement Bars, Epoxy Coated			Pound	40
Concrete Superstructures			Cu. Yd.	2.2

Note:  
The Preformed Joint Strip Seal joint may be trimmed at the existing parapets if required for clearance.





NO.	DATE	BY	REVISION
1	3-31-11	SKJ	Added pipe sleeve thru wall, C-5, C-6
2	7-3-12	J.B.	As Built

DESIGNED	REL
DETAILED	RTB
TRACED	
CHECKED	HOB

**AS BUILT**

RETAINING WALLS  
 SOLE FLOOR, WATER POWER PLANT  
 SOUTHERN ILLINOIS POWER COOP.  
 BURNS & MCDONNELL ENGINEERING COMPANY  
 MISSOURI

DRAWING NO. 21 /  
 SHEET 21 OF 45 SHEETS

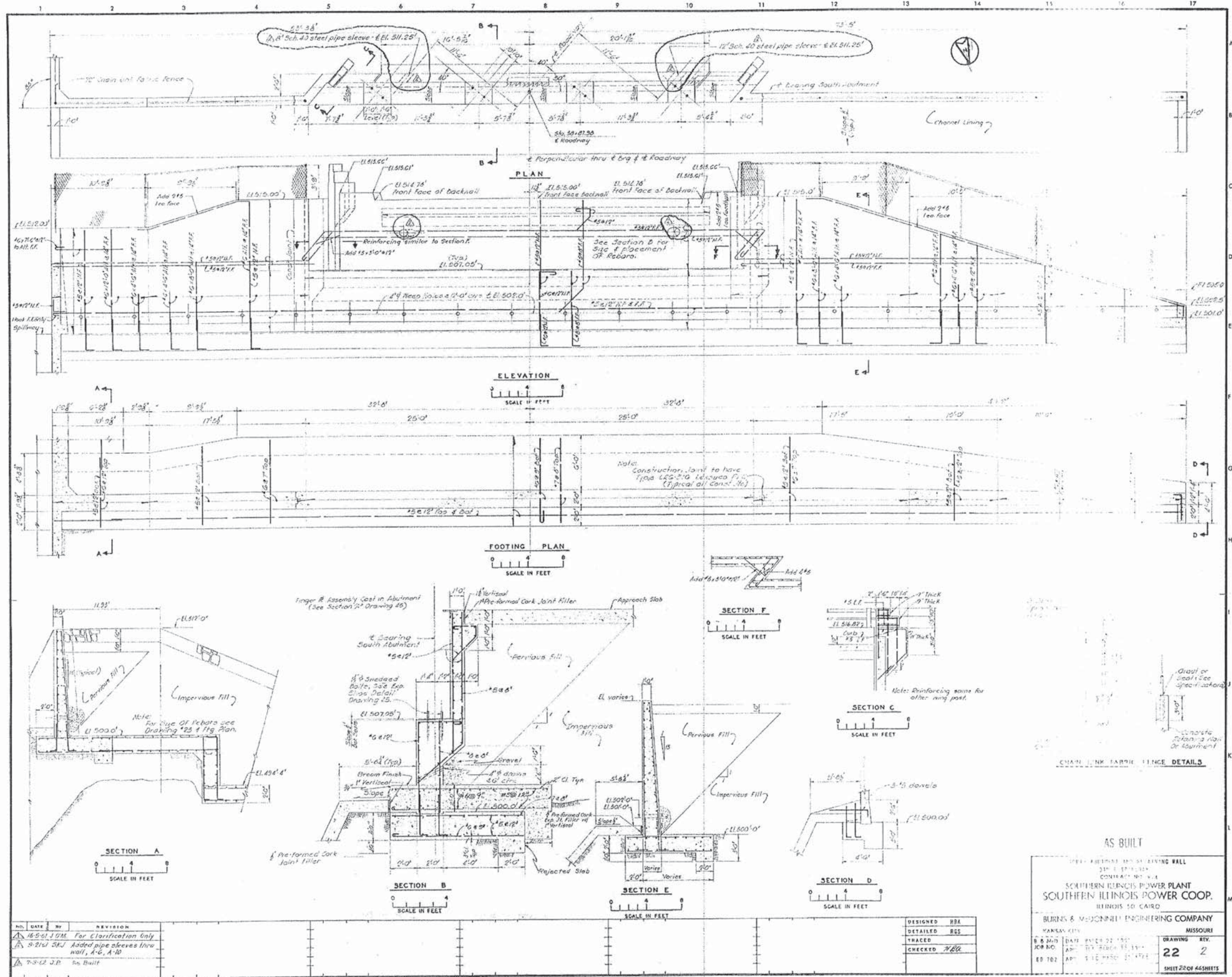
FILE NAME = 130267-sht-bridge.dgn  
 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 217.546.3400 www.tbengineering.com  
 184.000959  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 LB / PE / SE CORPORATION

USER NAME	DESIGNED	REVISION
	S.M.S.	-
	T.J.A.	-
	D.A.B.	-
	T.J.A.	-

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**EXISTING PLAN SHEETS**  
**STRUCTURE NO. 100-3060**  
 SHEET NO. 17 OF 18 SHEETS

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27	13-00140-00-BR	WILLIAMSON	37	36
LAKE EGYPT RD OVER SPILLWAY				CONTRACT NO.
ILLINOIS FED. AID PROJECT				



NO.	DATE	BY	REVISION
1	10-5-01	J.S.M.	For Clarification Only
2	9-21-01	S.K.J.	Added pipe sleeves thru wall, A-C, A-10
3	7-3-02	J.D.	As Built

DESIGNED	HBA
DETAILED	RES
TRACED	
CHECKED	T.B.

AS BUILT

SPILLWAY ABUTMENT AND RETAINING WALL  
 31<sup>ST</sup> E. ST. P. 1214  
 CONTRACT NO. 13-00140-00-BR  
 SOUTHERN ILLINOIS POWER PLANT  
 SOUTHERN ILLINOIS POWER COOP.  
 BUREAU OF CIVIL ENGINEERING  
 MISSOURI

BURNS & MCDONNELL ENGINEERING COMPANY  
 MISSOURI

DRAWING NO. 22  
 SHEET 22 OF 46 SHEETS

FILE NAME = #FILE#	USER NAME =	DESIGNED - S.M.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLAN SHEETS STRUCTURE NO. 100-3060 SHEET NO. 18 OF 18 SHEETS	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 217.548.3400 www.hlrengineering.com		CHECKED - T.J.A.	REVISED -			27	13-00140-00-BR	WILLIAMSON	37	37	
HLR 184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORPORATION	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			LAKE EGYPT RD OVER SPILLWAY CONTRACT NO.					
	PLOT DATE = #DATE#	CHECKED - T.J.A.	REVISED -			[ILLINOIS] FED. AID PROJECT					