

04-24-2015 LETTING ITEM 151

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE

PROJECT BRS-0405(106)
SECTION 10-00056-03-BR
WARREN COUNTY
PROPOSED STRUCTURE NO. 094-3039
OVERFLOW BRIDGE
JOB NO C-94-062-15

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1	10-00056-03-BR	WARREN	21	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 89686	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	SCHEDULE OF QUANTITIES
5.	PLAN AND PROFILE
6-12.	STATION CROSS SECTIONS
13-19.	BRIDGE PLANS
20-21.	BORINGS

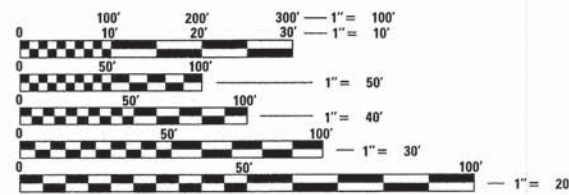
HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701901-04	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

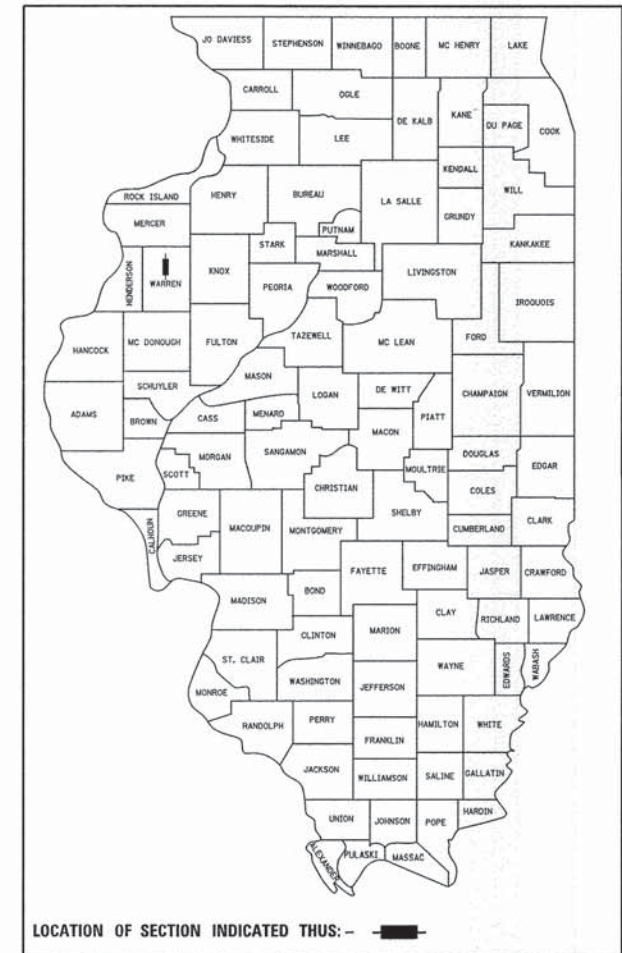
FRONTIER COMMUNICATIONS
145 S. HALL ST.
ROSEVILLE, IL 61473
ATTN: BILL DANIEL
(402) 250-1095

AMEREN IP NORTH
1050 W. MAN ST.
BELLEVILLE, IL 62222
ATTN: MARTIN FULLER
(618) 236-6281

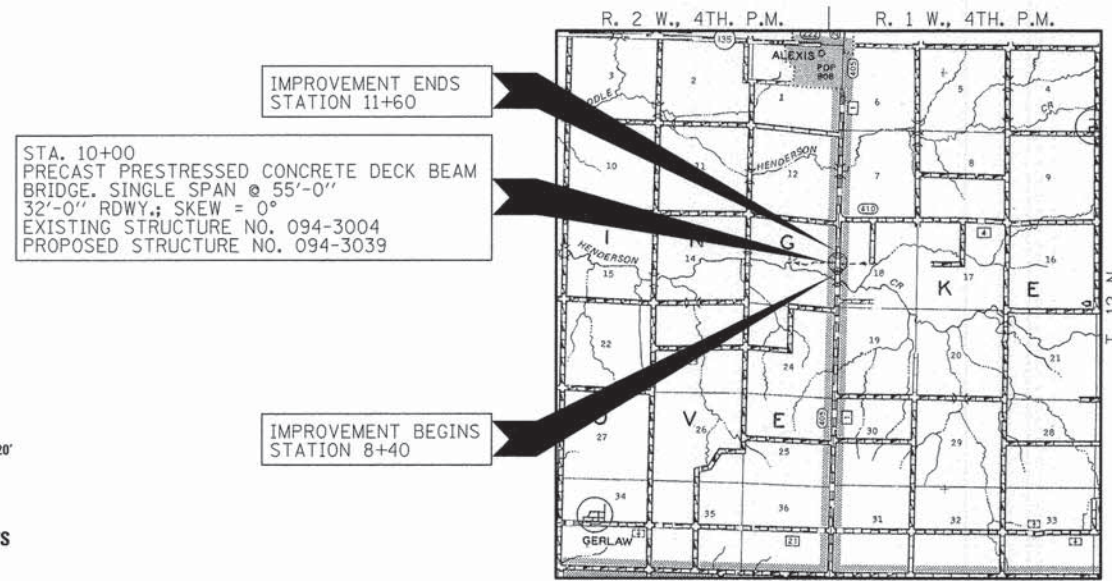


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CATALOG NO. 035252-00
CONTRACT NO. 89686



FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
DESIGN SPEED: 50 MPH
DESIGN TRAFFIC: 950 ADT (2035)

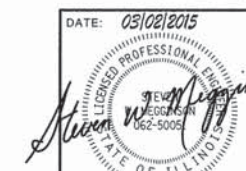


LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 320 FEET = 0.061 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	<i>March 2 2015</i> COUNTY ENGINEER
PASSED	<i>March 2nd 2015</i> DISTRICT FOUR ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	<i>March 2 2015</i> DEPUTY DIRECTOR OF HIGHWAYS REGION THREE ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com
184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	CONSTRUCTION
			TYPE CODE 0011
			QUANTITY
20200100	EARTH EXCAVATION	CU YD	115
20300100	CHANNEL EXCAVATION	CU YD	210
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	108
28000400	PERIMETER EROSION BARRIER	FOOT	570
28100835	STONE DUMPED RIPRAP, CLASS B5	TON	250
35100100	AGGREGATE BASE COURSE, TYPE A	TON	80
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	398
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	244
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	38
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	52
48101200	AGGREGATE SHOULDERS, TYPE B	TON	180
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	31.0
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1760
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3130
50901050	STEEL RAILING, TYPE SM	FOOT	108
51201400	FURNISHING STEEL PILES HP10X42	FOOT	540
51202305	DRIVING PILES	FOOT	540
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	200
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	96
58700300	CONCRETE SEALER	SQ FT	122
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	65
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	116
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	450

^ SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	CONSTRUCTION
			TYPE CODE 0011
			QUANTITY
78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.3
Z0013798	CONSTRUCTION LAYOUT	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 (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2015; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- 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 PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DISTURBED BY CONSTRUCTION OPERATIONS.
- ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO MEAN THE LATEST STANDARDS OF THE DEPARTMENT.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MIGHT NOT BE SHOWN ON THE PLANS, ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER. THE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ADJACENT PROPERTY AT ALL TIMES DURING CONSTRUCTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE BASE COURSE	2.05 TON/CU.YD.
RIPRAP SPECIAL	1.75 TON/CU.YD.
HOT-MIX ASPHALT	112 LBS/SQ.YD./IN.
AGGREGATE SHOULDERS	2.0 TON/CU.YD.
BITUMINOUS MATERIALS (PRIME COAT)	
ON PAVEMENT	0.05 LB./SQ.FT. (RESIDUAL)
INTERMEDIATE LIFTS (FOG COAT)	0.025 LB./SQ.FT. (RESIDUAL)
ON AGGREGATE SURFACE	0.25 LB./SQ.FT.
- EARTH SURFACES SHALL BE SEEDED WITHIN 14 DAYS OF THE END OF ACTIVE DISTURBANCE. THE AREA TO BE SEEDED SHALL CONSIST OF ALL BARE EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER
SEEDING, CLASS 2 (SPECIAL) = 0.3 ACRES
- TEMPORARY SEEDING SHALL BE COMPLETED ON ALL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 14 CALENDAR DAYS.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S. MEAN SEA LEVEL DATUM.
- PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

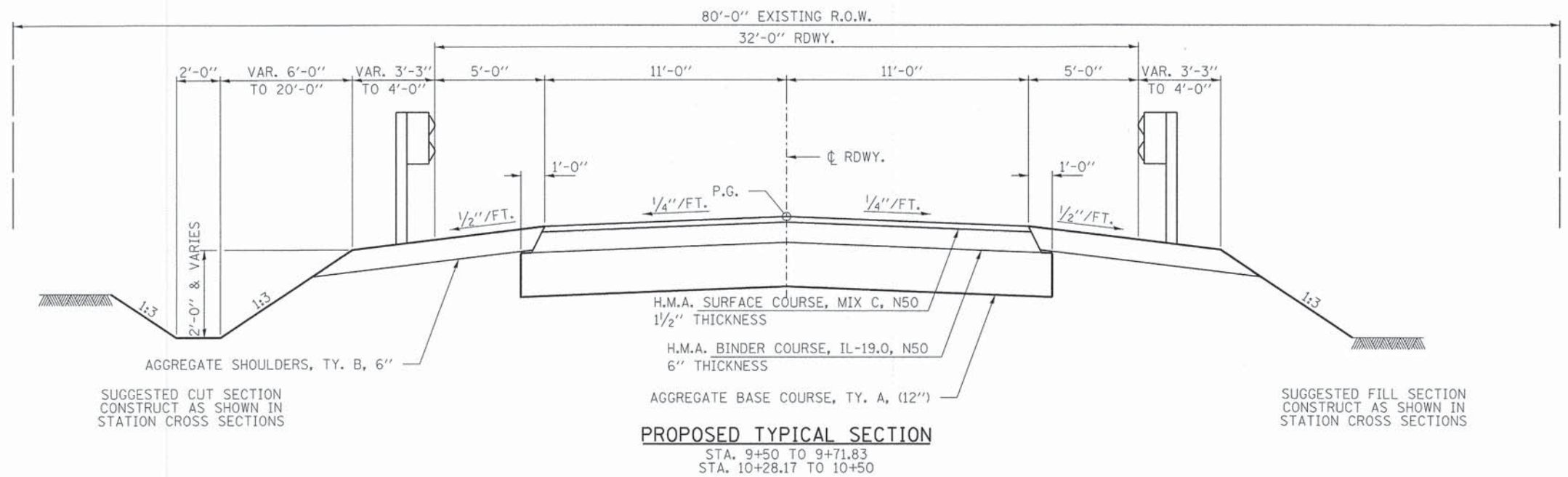
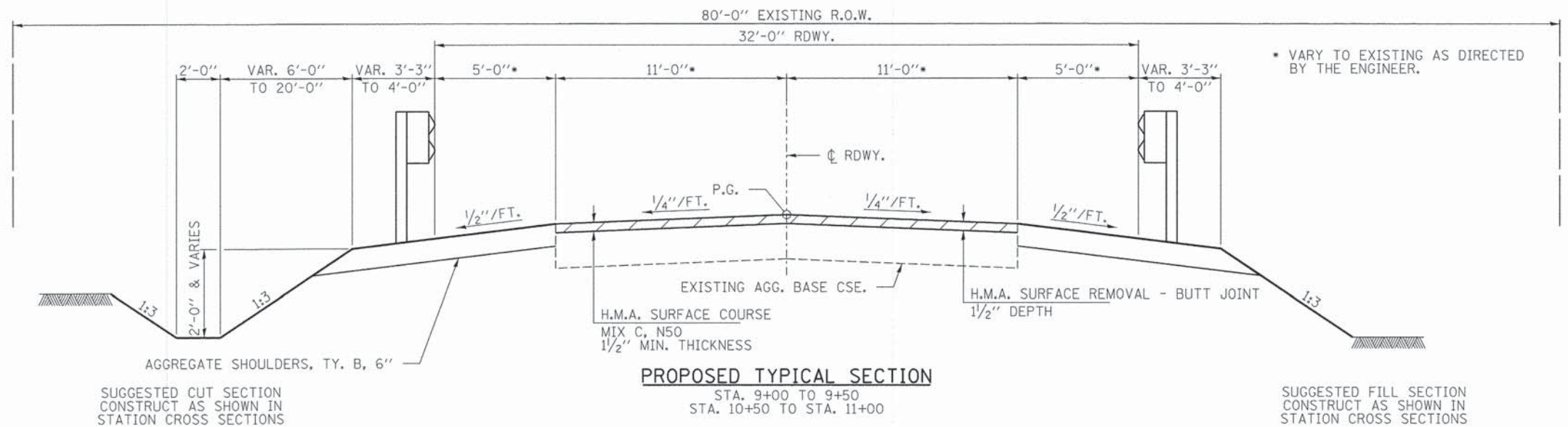
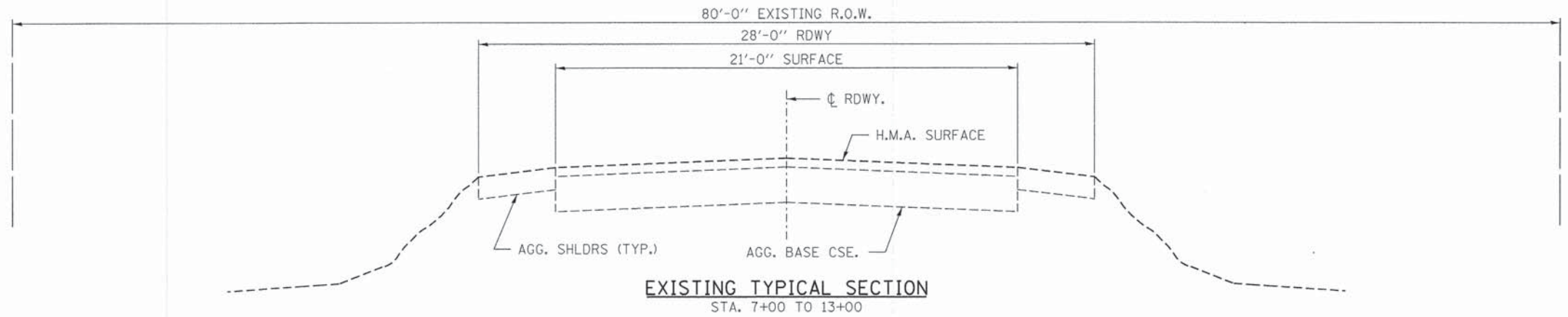
THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:
 BDE FORM 2289 (CULTURAL AND NATURAL RESOURCES REVIEW OF BORROW AREAS)
 BDE FORM 2290 (WASTE/USE AREA REVIEW)
 A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
 COLOR PHOTOGRAPHS DEPICTING THE USE AREA
 BORROW AREA ENTRY AGREEMENT FORM - D4 P10101

 PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE, THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

 ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED

 PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.
- COMMITMENTS AS OF 3/2/2015:
THE COUNTY WILL REPLACE THE FIELD ENTRANCE FROM RIGHT STATION 9+18 AT A LOCATION OUTSIDE THE PROJECT LIMITS.

FILE NAME = 180124-rlt-summery.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	SUMMARY OF QUANTITIES AND GENERAL NOTES	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 208 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			1	10-00056-03-BR	WARREN	21	2
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184-00089	PLOT DATE = 3/2/2015	CHECKED - S.W.M.	REVISED -			OVERFLOW BRIDGE		CONTRACT NO. 89686		
		DATE - 03/02/15	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BRS-0405(105)				



FILE NAME = 100124-shr-typsections.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	TYPICAL CROSS SECTIONS			C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3005 EYEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.T.M.	REVISED -		1	10-00056-03-BR	WARREN	21	3			
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184-000885	PLOT DATE = 3/2/2015	CHECKED - S.W.M.	REVISED -		OVERFLOW BRIDGE			CONTRACT NO. 89686				
		DATE - 03/02/15	REVISED -		SCALE: H1:V2 SHEET NO. 1 OF 1 SHEETS STA. TO STA.			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BR5-0405(106)				

ROADWAY SCHEDULE						
LOCATION	AGGREGATE SHOULDERS	HOT-MIX ASPHALT SURFACE COURSE	HOT-MIX ASPHALT BINDER COURSE	AGGREGATE BASE COURSE	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT SURFACE REMOVAL
	TYPE B	MIX "C", N50	IL-19.0, N50	TYPE A		BUTT JOINT
	TON	TON	TON	TON	POUND	SQ YD
LT STA 8+40.38 TO LT STA 9+71.83	42					
RT STA 8+40.38 TO RT STA 9+71.83	42					
CL STA 9+00 TO CL STA 9+71.83		15	19	40	199	122
CL STA 9+71.83 TO CL STA 10+28.17		22				
CL STA 10+28.17 TO CL STA 11+00		15	19	40	199	122
LT STA 10+28.17 TO LT STA 11+59.63	44					
RT STA 10+28.17 TO RT STA 11+59.63	44					
TOTAL	172	52	38	80	398	244
USE	180	52	38	80	398	244

EARTHWORK SUMMARY						
LOCATION	EARTH EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE EXCAVATION *	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU YD			CU YD	CU YD	CU YD
STA 8+30 TO STA 9+71.83	58	25%	100%	44	111	-67
STA 9+71.83 TO STA 10+28.17	0	25%	100%	0	0	0
STA 10+28.17 TO STA 11+65	57	25%	100%	43	50	-7
CHANNEL EXCAVATION	210	25%	70%	110		110
TOTAL	115			197	161	36
USE	115			200	160	36

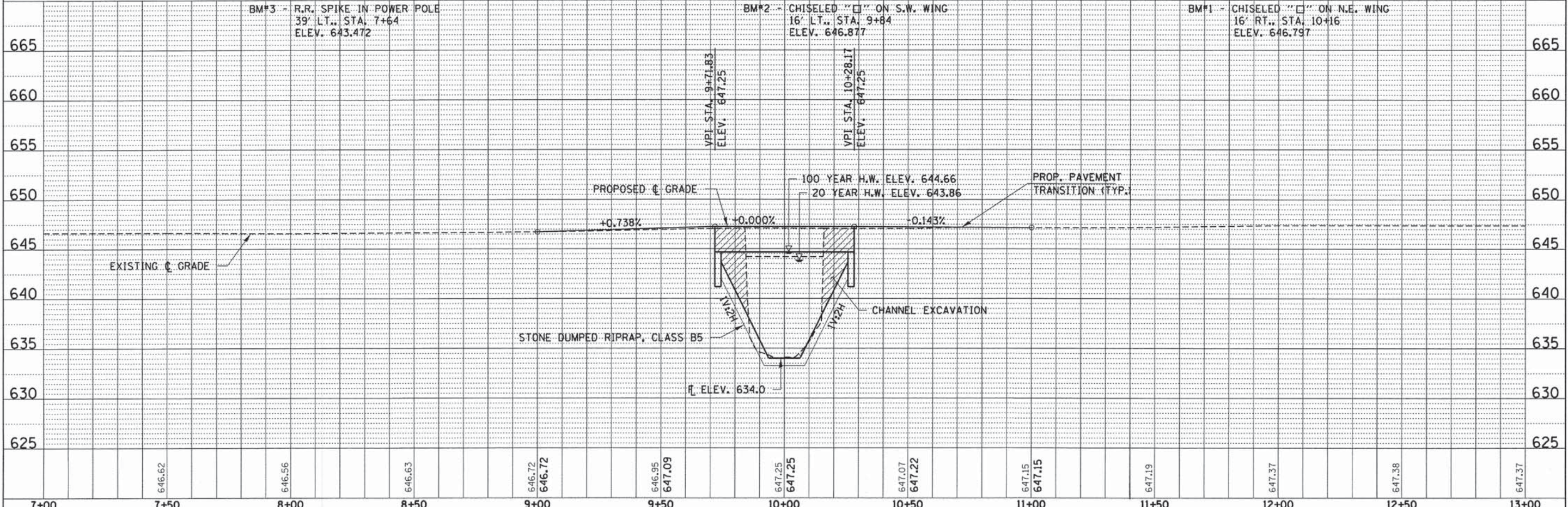
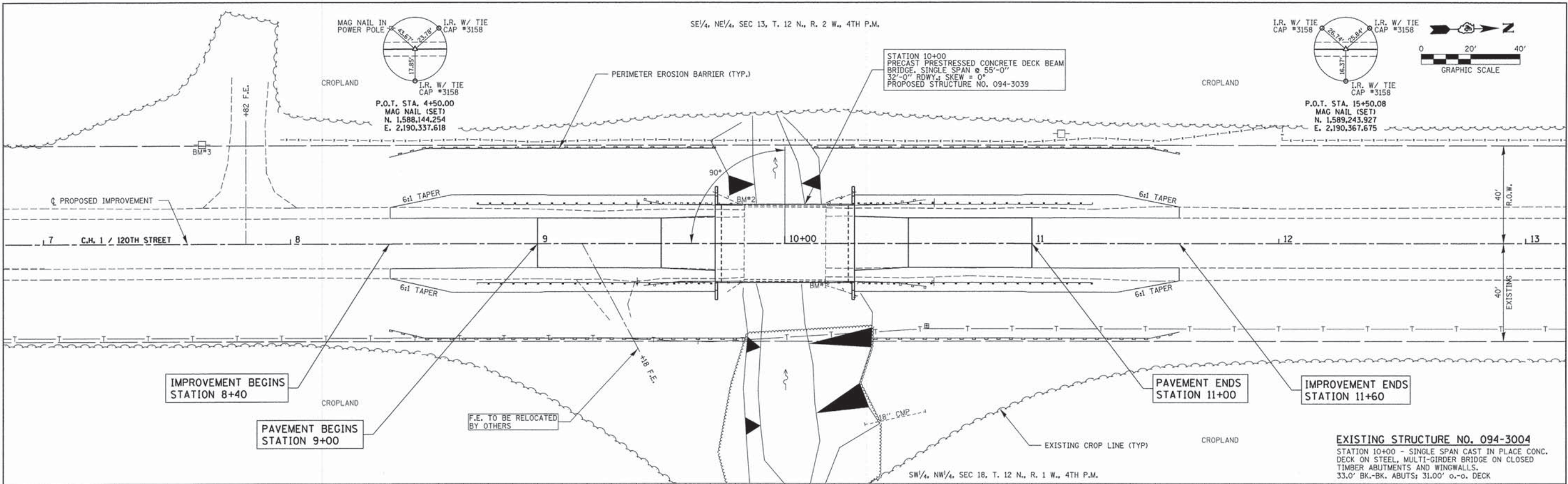
* AVAILABLE EXCAVATION = EXCAVATION X (1 - SHRINKAGE FACTOR) X % USED (WASTE)

GUARDRAIL SCHEDULE					
LOCATION	TRAFFIC BARRIER TERMINAL	TRAFFIC BARRIER TERMINAL	GUARDRAIL REMOVAL	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKERS TYPE A
	TYPE 6A	TYPE 1, SPECIAL (TANGENT)	FOOT	EACH	EACH
LT STA 8+77.02 TO STA 9+71.83	1	1	29	1	2
RT STA 8+77.02 TO STA 9+71.83	1	1	29	1	2
LT STA 10+28.17 TO STA 11+22.98	1	1	29	1	2
RT STA 10+28.17 TO STA 11+22.98	1	1	29	1	2
TOTAL	4	4	116	4	8

PAVEMENT MARKING SCHEDULE		
LOCATION	PAINT PAVEMENT MARKING LINE 4"	
	SOLID WHITE EDGE LINE	SKIP DASH YELLOW CENTERLINE
	FOOT	FOOT
LT. STA 9+00 TO LT. STA 11+00	200	
CL STA 9+00 TO CL STA 11+00		50
RT. STA 9+00 TO RT. STA 11+00	200	
SUBTOTAL	400	50
TOTAL	450	

MIXTURE REQUIREMENTS	
LOCATION(S):	CH 1 / 120TH STREET
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE
PG:	PG 64-22
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	IL 9.5 mm
(MIXTURE GRADATION):	
FRICITION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS
QUALITY CONTROL PROGRAM:	QC/QA

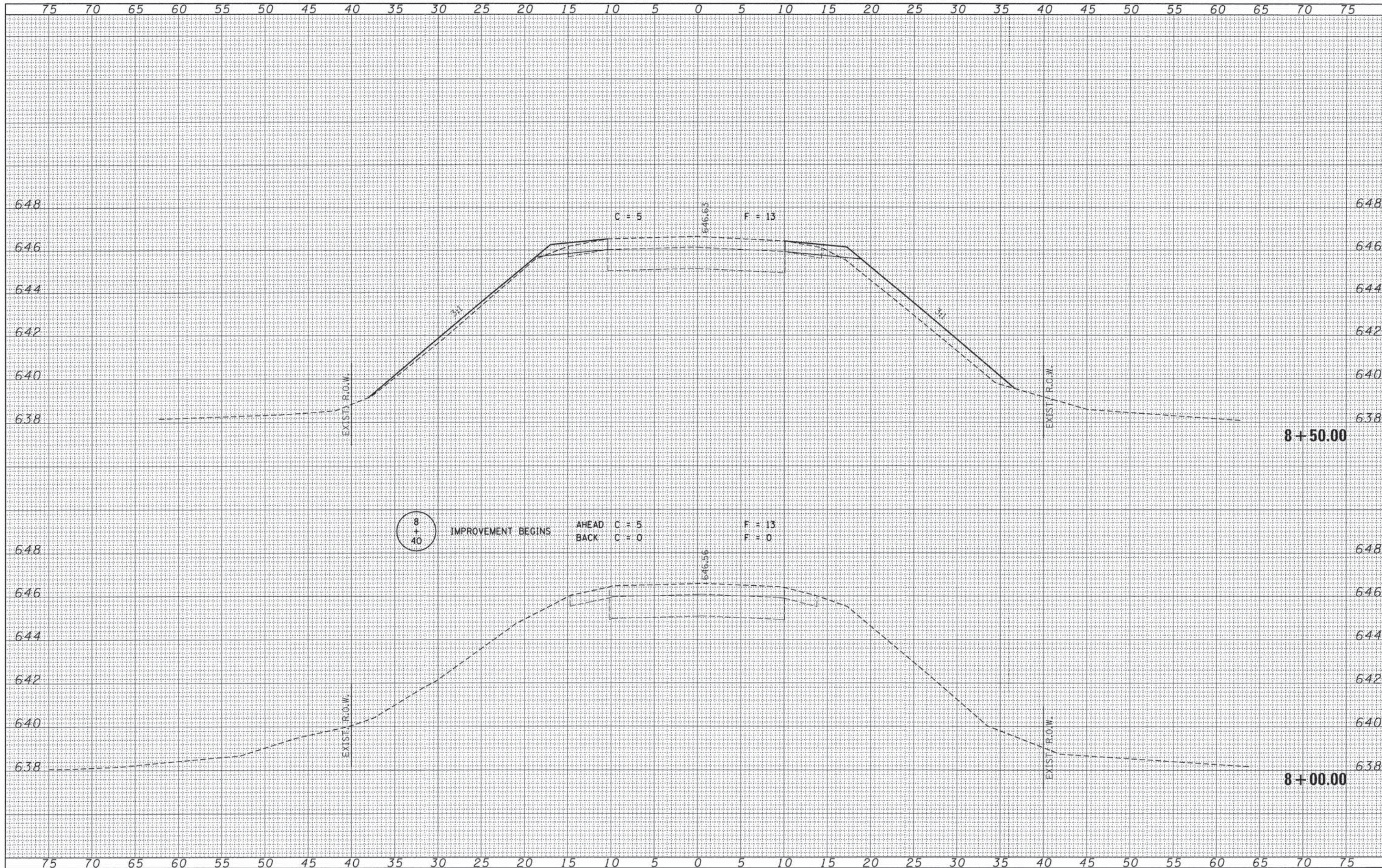
MIXTURE REQUIREMENTS	
LOCATION(S):	CH 1 / 120TH STREET
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE
PG:	PG 64-22
DESIGN AIR VOIDS:	4% @ Ndes 50
MIXTURE COMPOSITION:	IL 19.0
(MIXTURE GRADATION):	
FRICITION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS
QUALITY CONTROL PROGRAM:	QC/QA



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FILE NAME = 100124-ah-pp1.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	PLAN & PROFILE C.H. 1 / 120TH STREET	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			1	10-00056-03-BR	WARREN	21	5
3881 STEVENSON DRIVE, SUITE 301	PLOT DATE = 3/2/2015	CHECKED - S.W.M.	REVISED -			OVERFLOW BRIDGE		CONTRACT NO. 89686		
SPRINGFIELD, ILLINOIS 62703	DATE = 03/02/15	DATE = 03/02/15	REVISED -			SCALE: 20H:5V	SHEET NO. 1 OF 1 SHEETS	STA. 7+00.00 TO STA. 13+00.00	ILLINOIS FED. AID PROJECT BR5-0405106	



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

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

FILE NAME = 100124-sht-xxx.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 303 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62761
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-000993

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2015

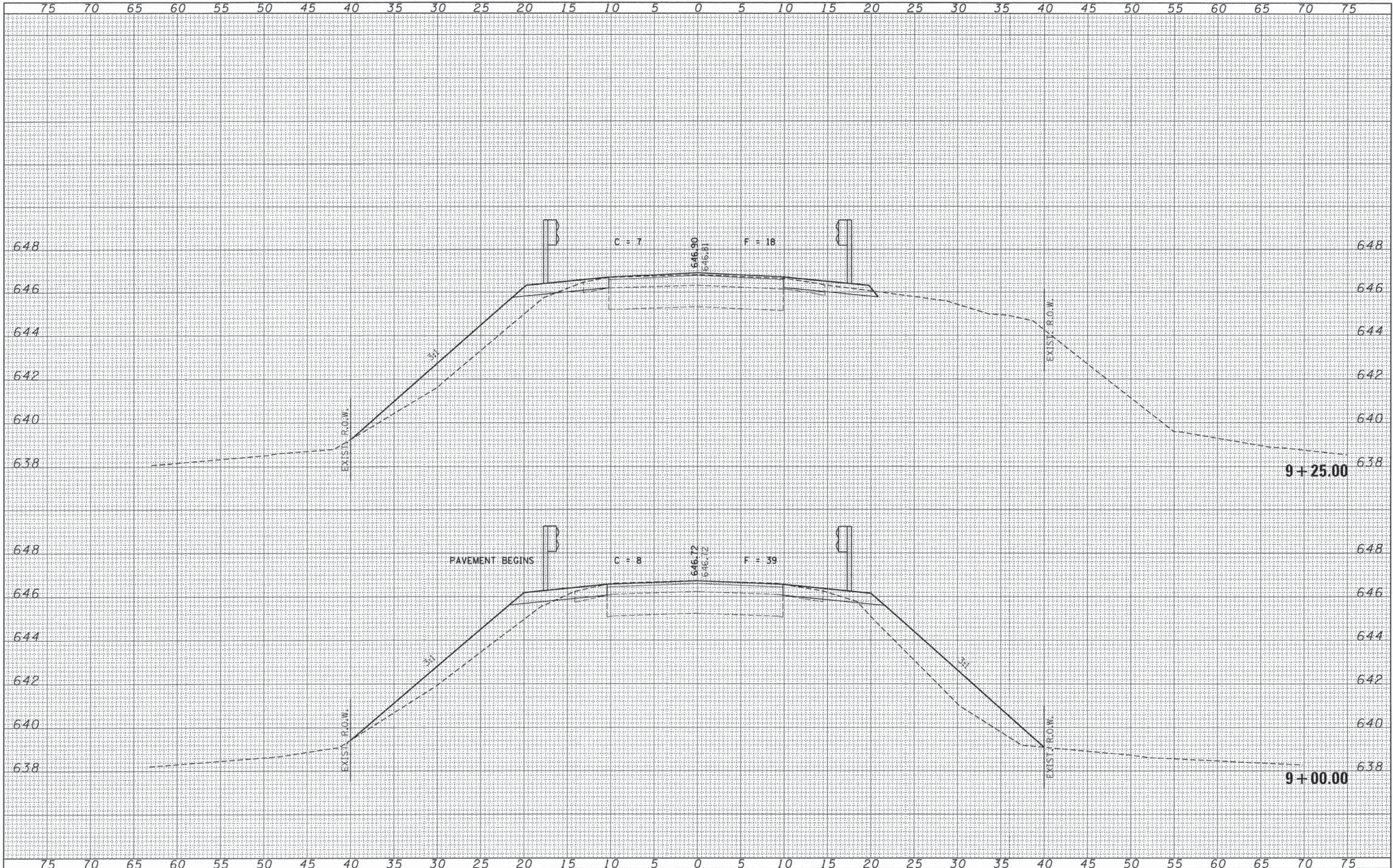
DESIGNED	- J.W.F.	REVISED	-
DRAWN	- D.T.M.	REVISED	-
CHECKED	- S.W.M.	REVISED	-
DATE	- 03/02/15	REVISED	-

STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT

SCALE: H5:V2
 SHEET NO. 1 OF 7 SHEETS
 STA. 8+00.00 TO STA. 8+50.00

STATION CROSS SECTIONS
 C.H. 1 / 120TH STREET

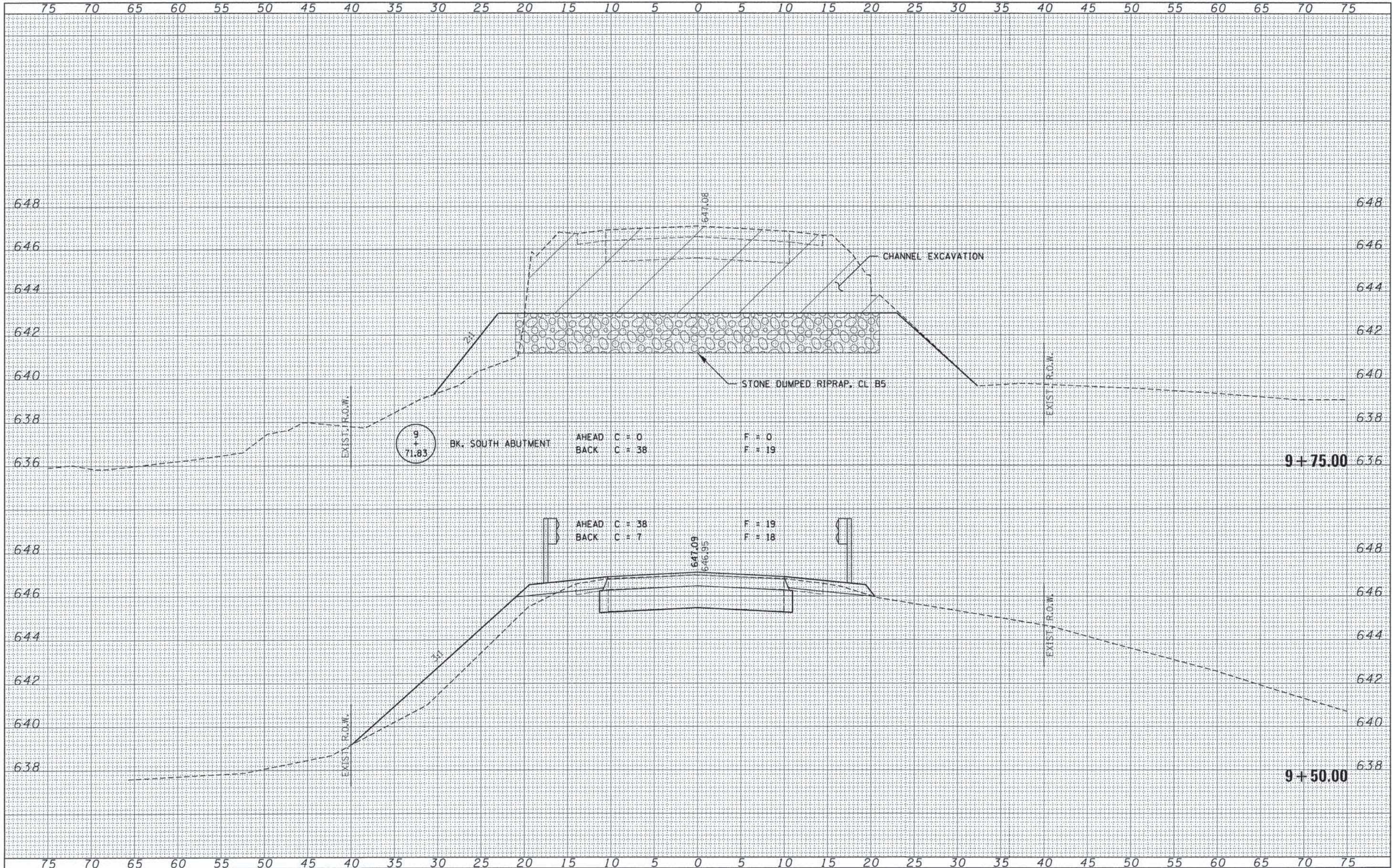
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	10-00056-03-BR	WARREN	21	6
OVERFLOW BRIDGE			CONTRACT NO. 89686	
ILLINOIS FED. AID PROJECT BR5-0405106				



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

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

FILE NAME = 100124-ht-axs.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 1/120TH STREET		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3036 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959		DRAWN - D.T.M.	REVISED -		1	10-00056-03-BR	WARREN	21	7	CONTRACT NO. 89686		
	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		SCALE: H5:V2		SHEET NO. 2 OF 7 SHEETS		STA. 9+00.00 TO STA. 9+25.00		ILLINOIS FED. AID PROJECT BRS-04051061	
	PLOT DATE = 3/2/2015	DATE - 03/02/15	REVISED -									



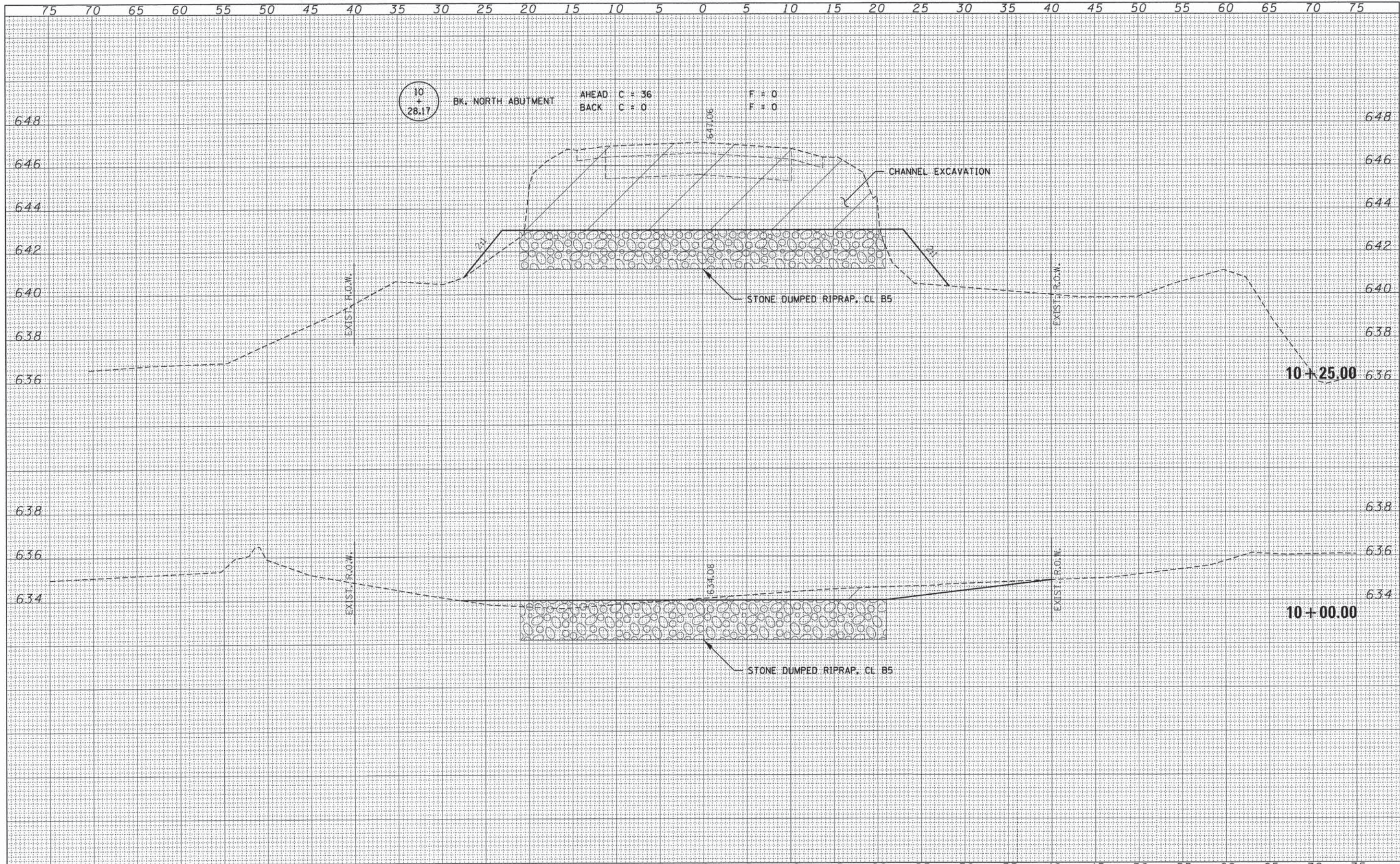
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FINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
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ORIGINAL SURVEY	
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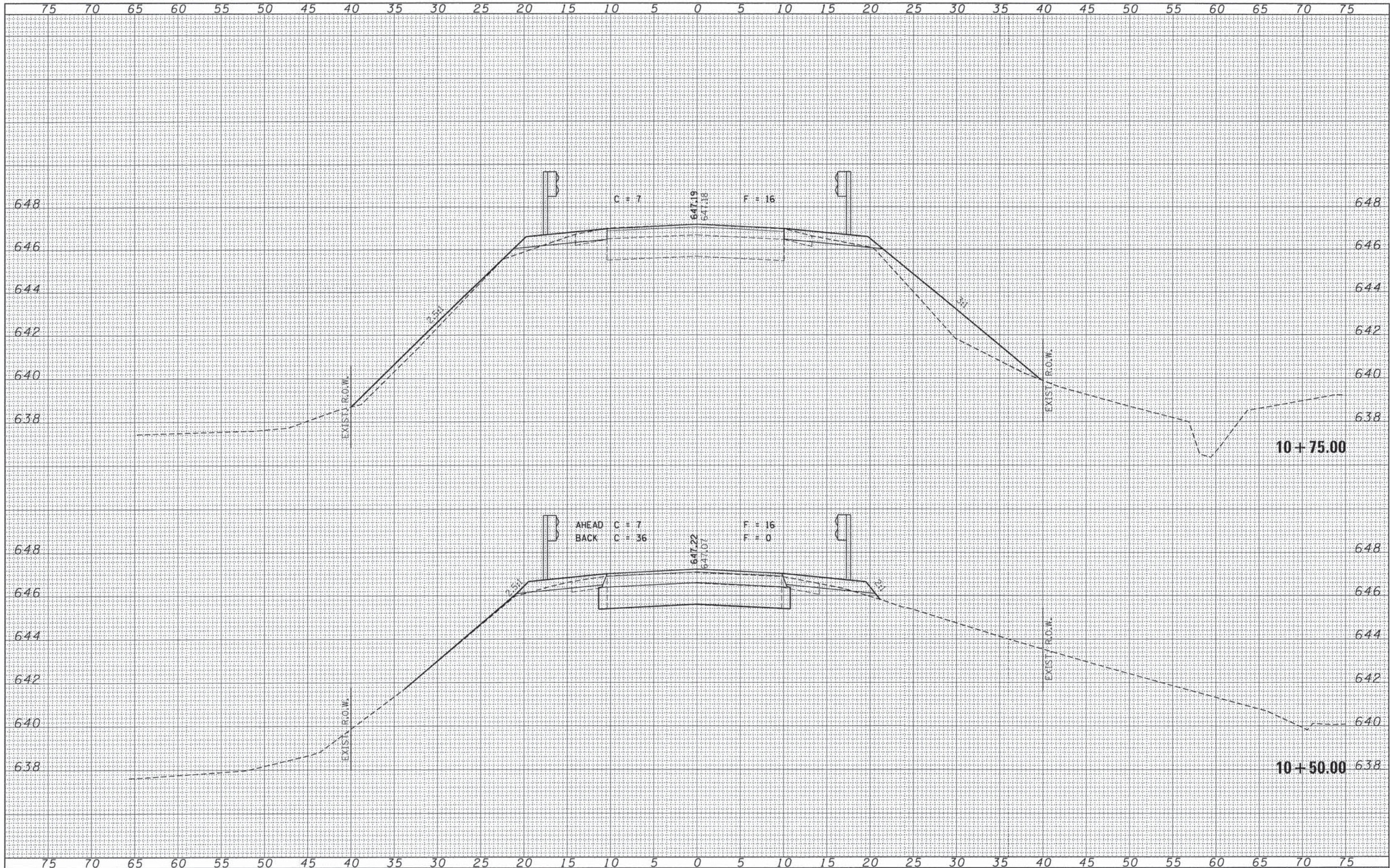
FILE NAME = 100124-sht-ssx.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 1 / 120TH STREET		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3388 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000959	PLOT SCALE =	DRAWN - D.T.M.	REVISED -		1	10-00056-03-BR	WARREN	21	8		
PLOT DATE = 3/2/2015	DATE = 03/02/15	CHECKED - S.W.M.	REVISED -		OVERFLOW BRIDGE		CONTRACT NO. 89686		ILLINOIS/FED. AID PROJECT BR5-04051069		
		DATE = 03/02/15	REVISED -		SCALE: H5:V2	SHEET NO. 3 OF 7 SHEETS	STA. 9+50.00	TO STA. 9+75.00			

DATE	
BY	
REVIEWED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
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REVIEWED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
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NO.	



FILE NAME = 100124-shr-xxx.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 1 / 120TH STREET		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - D.T.M.	REVISED -		1	10-00056-03-BR	WARREN	21	9	CONTRACT NO. 89686 <small>ILLINOIS FED. AID PROJECT BR5-0405(106)</small>	
3045 STEVENSON DRIVE, SUITE 200 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000989		CHECKED - S.W.M.	REVISED -		SCALE: H5:V2		SHEET NO. 4 OF 7 SHEETS		STA. 10+00.00 TO STA. 10+25.00		
		DATE - 03/02/15	REVISED -								



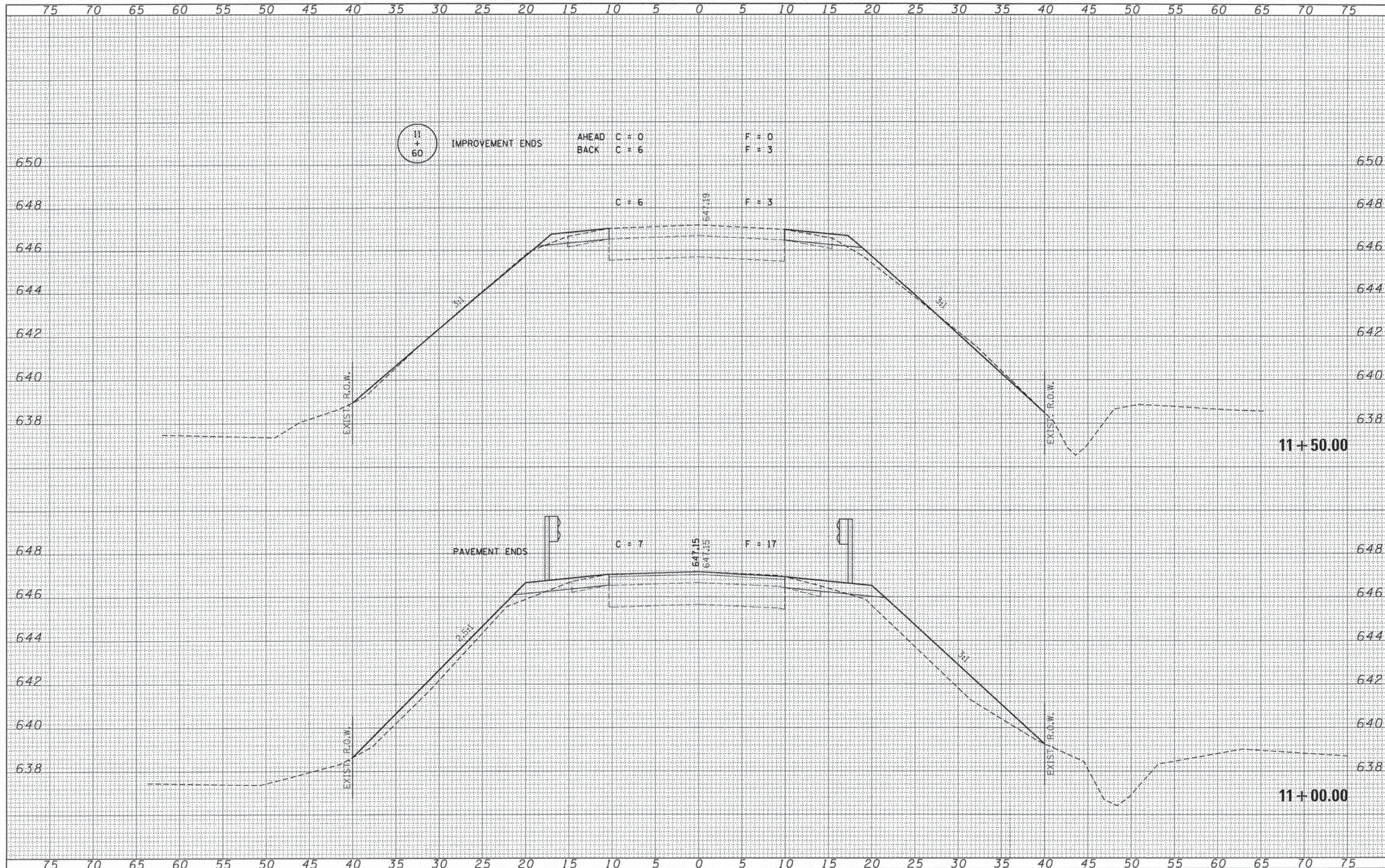
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BY	
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
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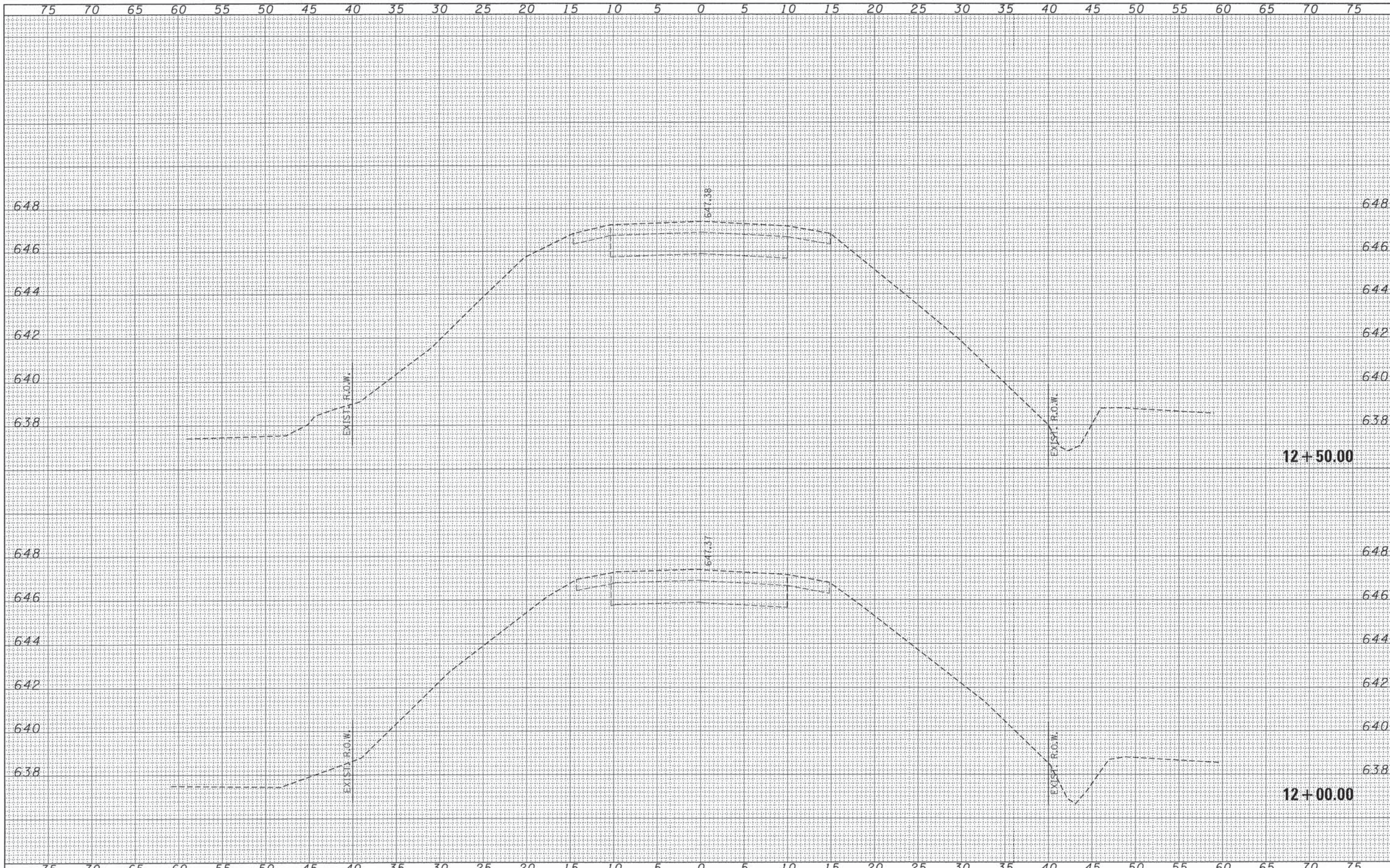
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HAMPTON, LENZINI AND RENWICK, INC. 388 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000859	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			1	10-00056-03-BR	WARREN	21	10	
PLOT DATE = 3/2/2015	CHECKED - S.W.M.	DATE - 03/02/15	REVISED -			OVERFLOW BRIDGE		CONTRACT NO. 89686			
						SCALE: H5:V2		SHEET NO. 5 OF 7 SHEETS		STA. 10+50.00 TO STA. 10+75.00	

DATE	
BY	
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NOTE BOOK	
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AREAS CHECKED	

DATE	
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ORIGINAL SURVEY	
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TEMPLATE	
NOTE BOOK	
NO.	
AREAS CHECKED	



FILE NAME = 100124-sht-xxx.dgn	USER NAME =	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 1/120TH STREET		C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3585 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000989	PLOT SCALE =	DRAWN - D.T.M.	REVISED -		1	10-00056-03-BR	WARREN	21	11	CONTRACT NO. 89686 ILLINOIS FED. AID PROJECT BR5-040501061	
	PLOT DATE = 3/2/2015	CHECKED - S.W.M.	REVISED -		SCALE: H5:V2		SHEET NO. 6 OF 7 SHEETS		STA. 11+00.00 TO STA. 11+50.00		
		DATE - 03/02/15	REVISED -								



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

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

FILE NAME = 100124-sht-sss.dgn
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 3588 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62709
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-000999

USER NAME =
 PLOT SCALE =
 PLOT DATE = 3/2/2015

DESIGNED - J.W.F.
 DRAWN - D.T.M.
 CHECKED - S.W.M.
 DATE - 03/02/15

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT

SCALE: H5:V2
 SHEET NO. 7 OF 7 SHEETS
 STA. 12+00.00 TO STA. 12+50.00

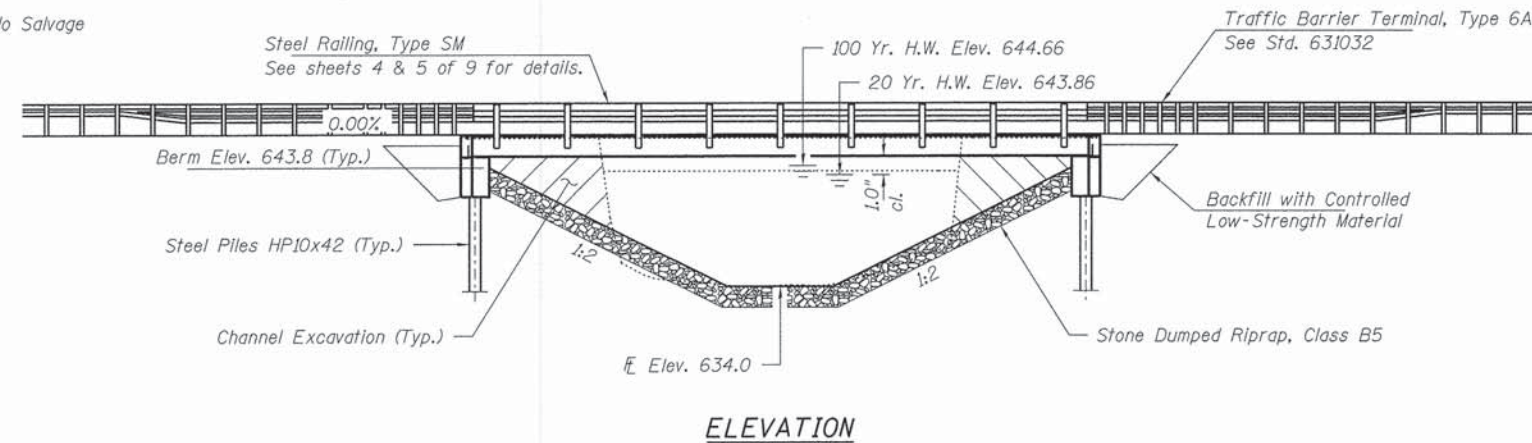
STATION CROSS SECTIONS
 C.H. 1 / 120TH STREET

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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OVERFLOW BRIDGE			CONTRACT NO. 89686	
ILLINOIS FED. AID PROJECT BR5-04051060				

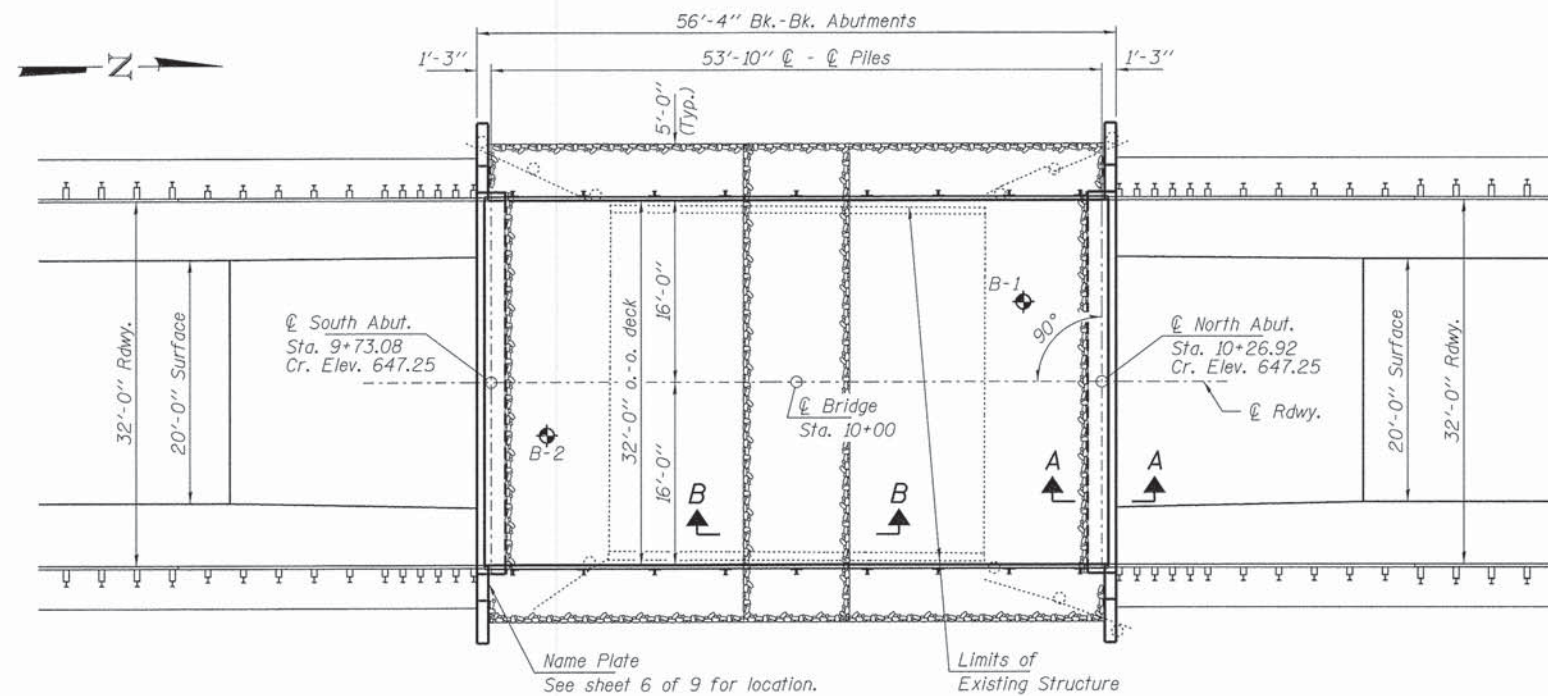
BENCHMARK: Chiseled "□" on S.W. Wing, 16' Lt. Sta. 9+84, Elev. 646.877

EXISTING STRUCTURE NO. 094-3004: Sta. 10+00 - Single span cast in place concrete deck on steel multi-girder bridge on closed timber abutments and wingwalls. 31.3' fc.-fc. Abuts.; 31.0' o.-o. deck Structure to be closed to traffic during construction.

No Salvage



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims.

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.097g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.142g
Soil Site Class = D

Design Scour Elevations (ft.)		
	S. Abut.	N. Abut.
Q100	641.3	641.3

WATERWAY INFORMATION

		Discharge		Waterway Opening (sq. ft.)		Natural H.W.E		Head (ft.)		Headwater Elev.	
		(cfs)	(cfs)	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
20	MAIN CHANNEL (SN 094-3035)		2216	2216							
	RELIEF STRUCTURE		270	310							
	TOTAL	6279	2486	2526	643.86	0.35	0.35	644.21	644.21		
100	MAIN CHANNEL (SN 094-3035)		2641	2641							
	RELIEF STRUCTURE		280	350							
	TOTAL	9118	2921	2991	644.66	0.48	0.48	645.14	645.14		

I certify that to the best of my knowledge, information and belief, this bridge 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 LRFD Specifications."

Steven W. Megginson 03/02/2015
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



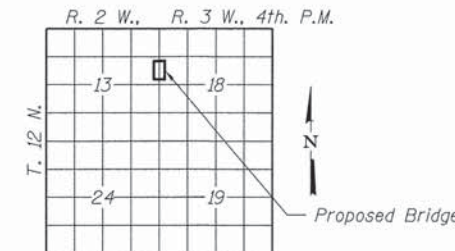
Expires 11-30-2016

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 21"x48" PPC Deck Beam
3. 21"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type SM
6. Abutments
7. Pile Details
- 8.-9. Borings

GENERAL NOTES

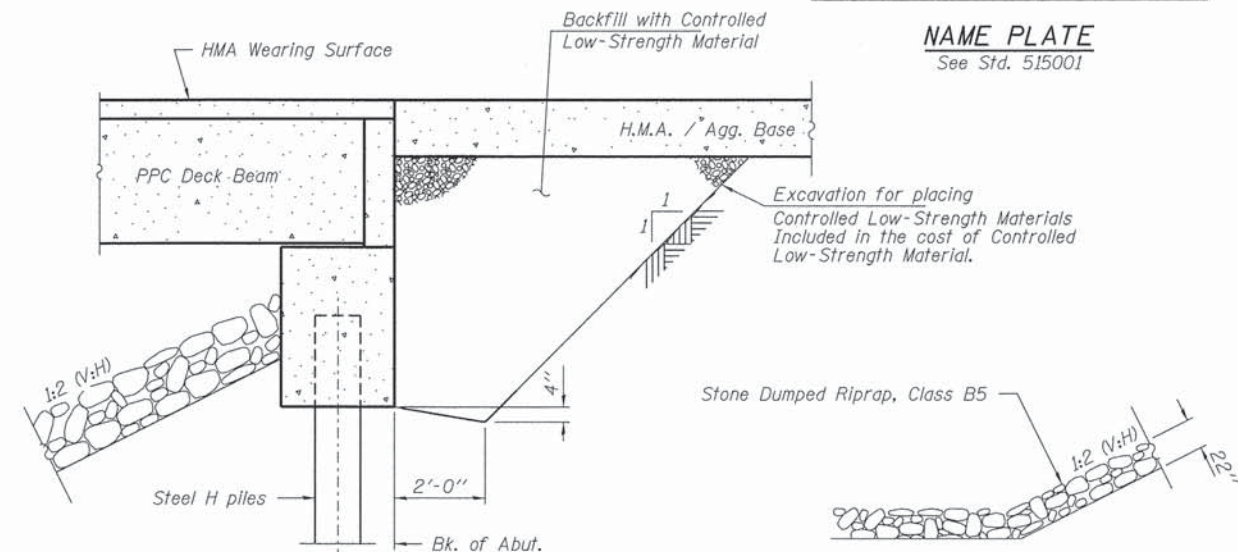
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
All bars to be epoxy coated.
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
Concrete sealer shall be applied to the designated areas of the abutments.



LOCATION SKETCH

OVERFLOW BRIDGE
BUILT 2011 BY
WARREN COUNTY
SEC. 10-00056-03-BR
F.A.S. 405 / C.H. 1
STR. NO. 094-3039
LOADING HL-93

NAME PLATE
See Std. 515001



SECTION A-A
(Horiz. dim. @ Rt. L's)

SECTION B-B

Note: See Special Provisions for Stone Dumped Riprap, Class B5

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			210
Stone Dumped Riprap, Class B5	Ton			250
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	22.4		22.4
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		31.0	31.0
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,760		1,760
Reinforcement Bars, Epoxy Coated	Pound		3,130	3,130
Steel Railing, Type SM	Foot	108		108
Furnishing Steel Piles HP10x42	Foot		540	540
Driving Piles	Foot		540	540
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1
Waterproofing Membrane System	Sq. Yd.	200		200
P.C. Mortar Fairing Course	Foot		96	96
Controlled Low-Strength Material	Cu. Yd.			65
Concrete Sealer	Sq. Ft.		122	122

FILE NAME = 100124-sht-brdgdg.dgn	USER NAME =
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PLOT SCALE =	
PLOT DATE = 3/2/2015	

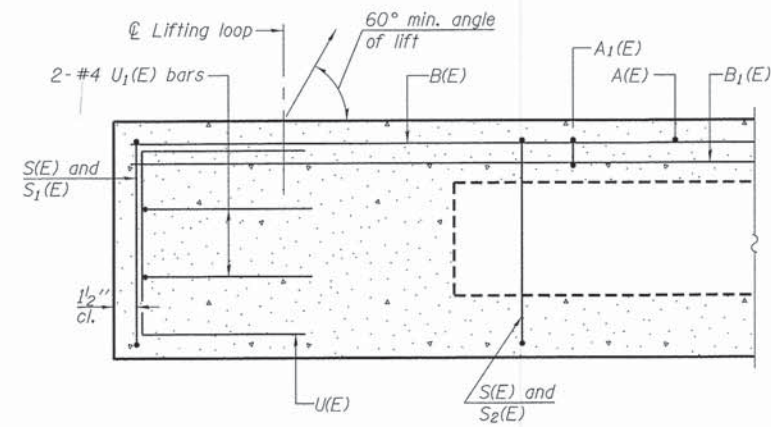
DESIGNED - A.S.L.	REVISED -
CHECKED - S.W.M.	REVISED -
DRAWN - D.T.M.	REVISED -
CHECKED - J.W.F.	REVISED -

STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

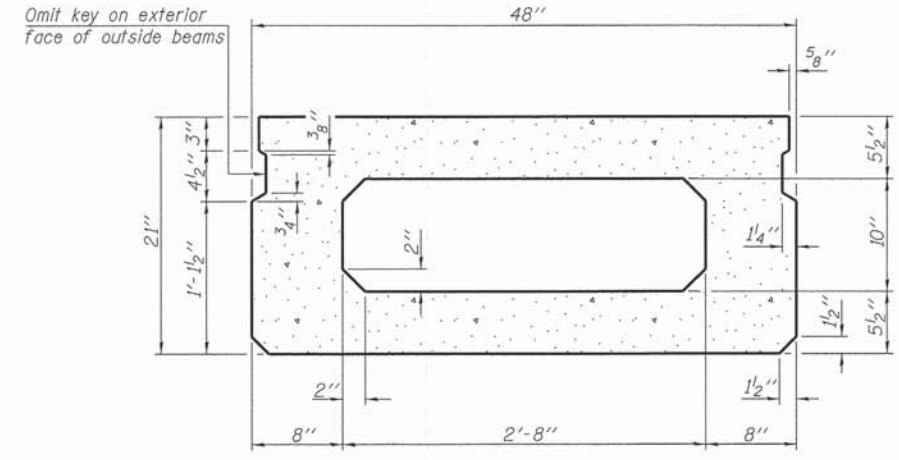
GENERAL PLAN & ELEVATION
STRUCTURE NO. 094-3039

SHEET NO. 1 OF 9 SHEETS

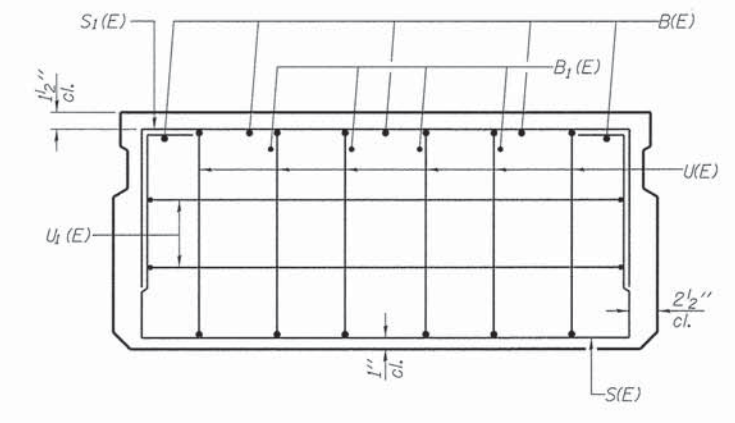
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OVERFLOW BRIDGE			CONTRACT NO. 89686	
ILLINOIS FED. AID PROJECT BR5-0405(106)				



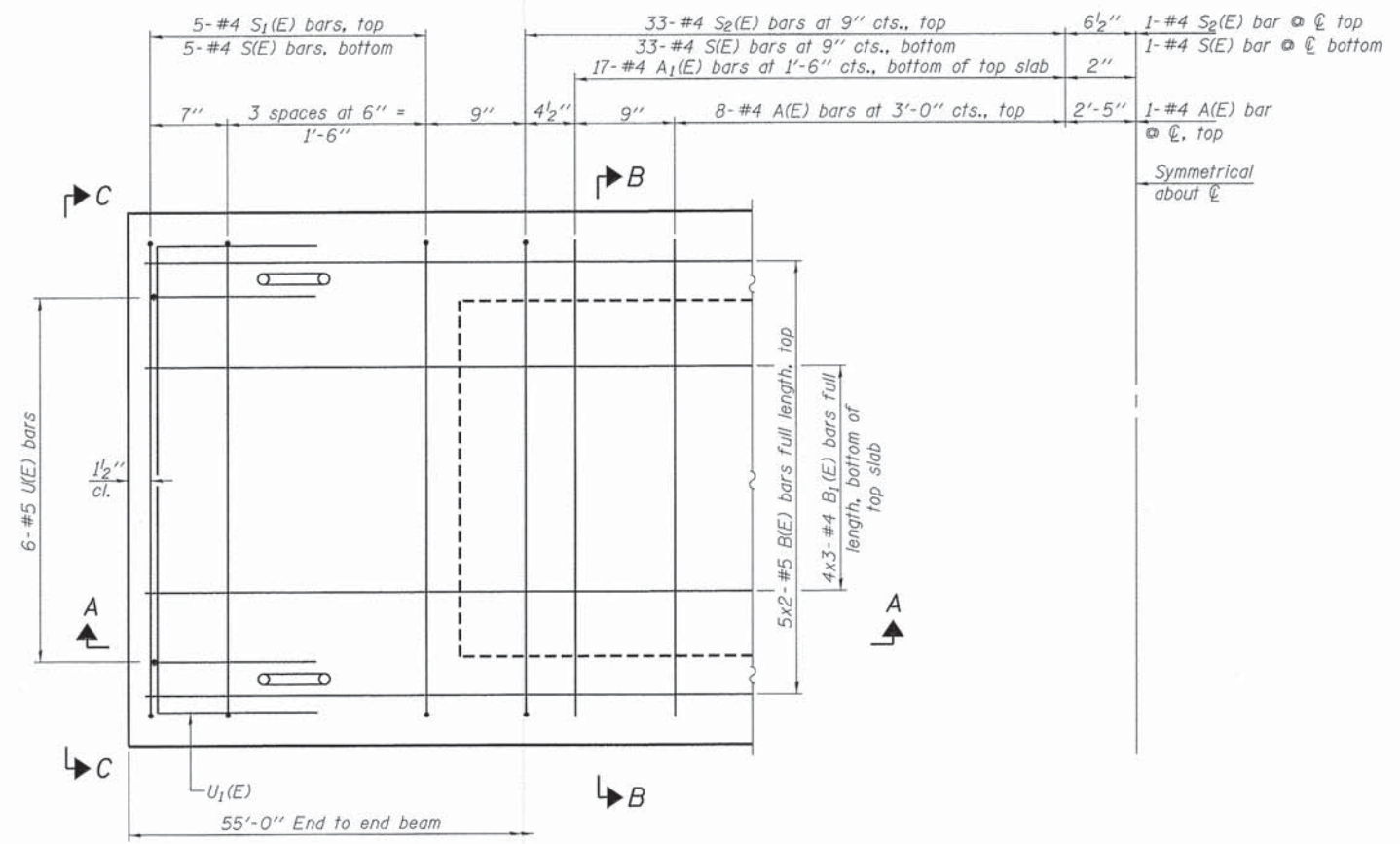
SECTION A-A



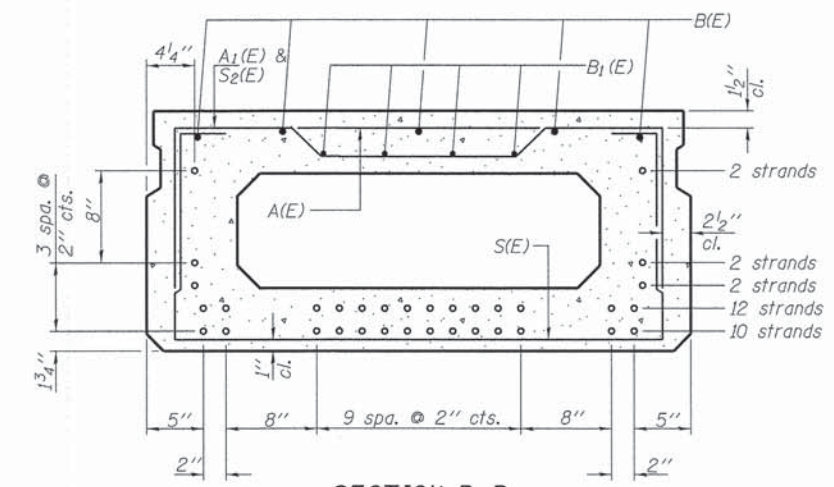
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



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 BEAM ONLY
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	17	#4	3'-7"	—
A1(E)	34	#4	3'-10"	~
B(E)	10	#5	28'-8"	—
B1(E)	12	#4	19'-7"	—
S(E)	77	#4	7'-5"	U
S1(E)	10	#4	5'-11"	U
S2(E)	67	#4	6'-2"	U
U(E)	12	#5	4'-0"	U
U1(E)	4	#4	6'-0"	U

Note: See sheets 3 & 4 of 9 for additional details and Bill of Material.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

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.
Bars indicated thus 5x2-#5 etc. indicates 54 lines of bars with 2 lengths per line.

PD-2148-0 7-1-10

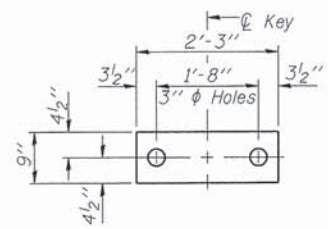
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ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT DATE = 3/2/2015	DRAWN - D.T.M.	REVISED -
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STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

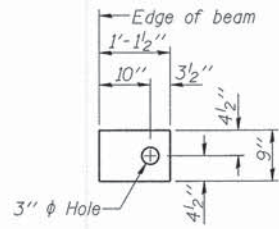
21" x 48" PPC DECK BEAM
STRUCTURE NO. 094-3039

SHEET NO. 2 OF 9 SHEETS

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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OVERFLOW BRIDGE			CONTRACT NO. 89686	
ILLINOIS FED. AID PROJECT BRS-04051061				



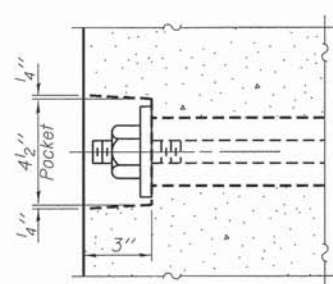
FABRIC BEARING PAD
(14-Interior)



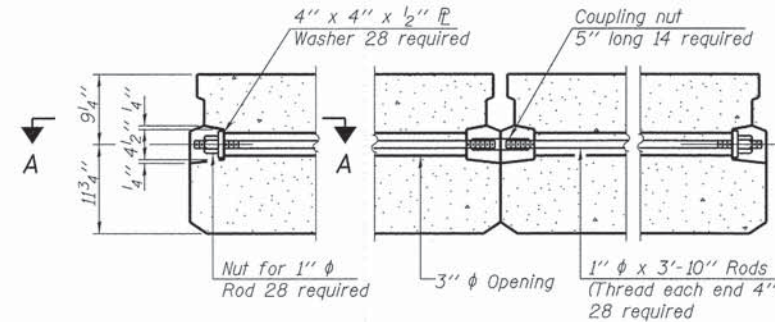
FABRIC BEARING PAD
(4-Exterior)

FIXED

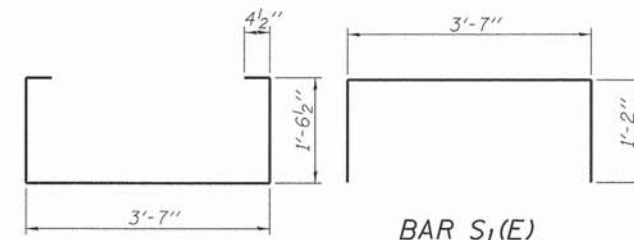
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



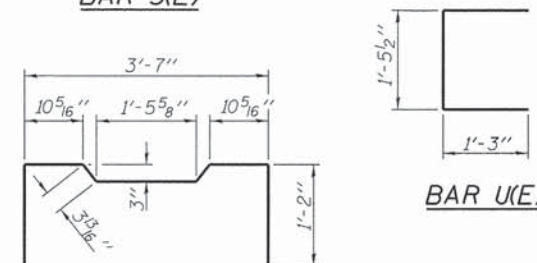
SECTION A-A



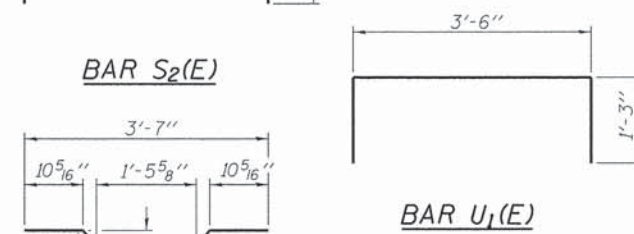
TYPICAL TRANSVERSE TIE ASSEMBLY



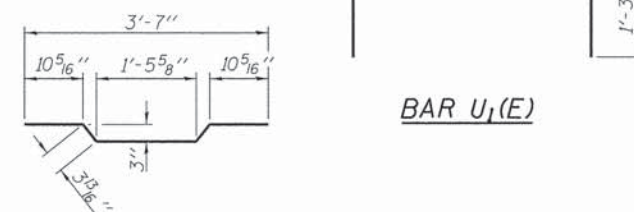
BAR S(E)



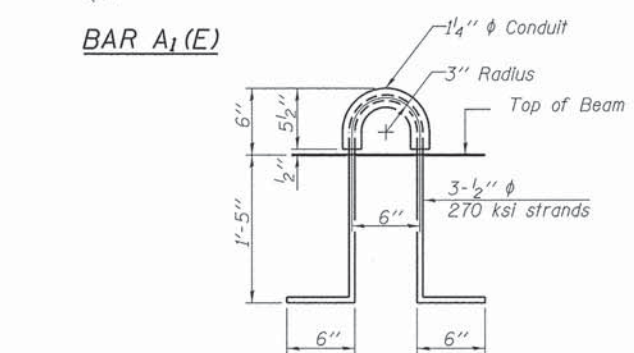
BAR UE(E)



BAR S2(E)

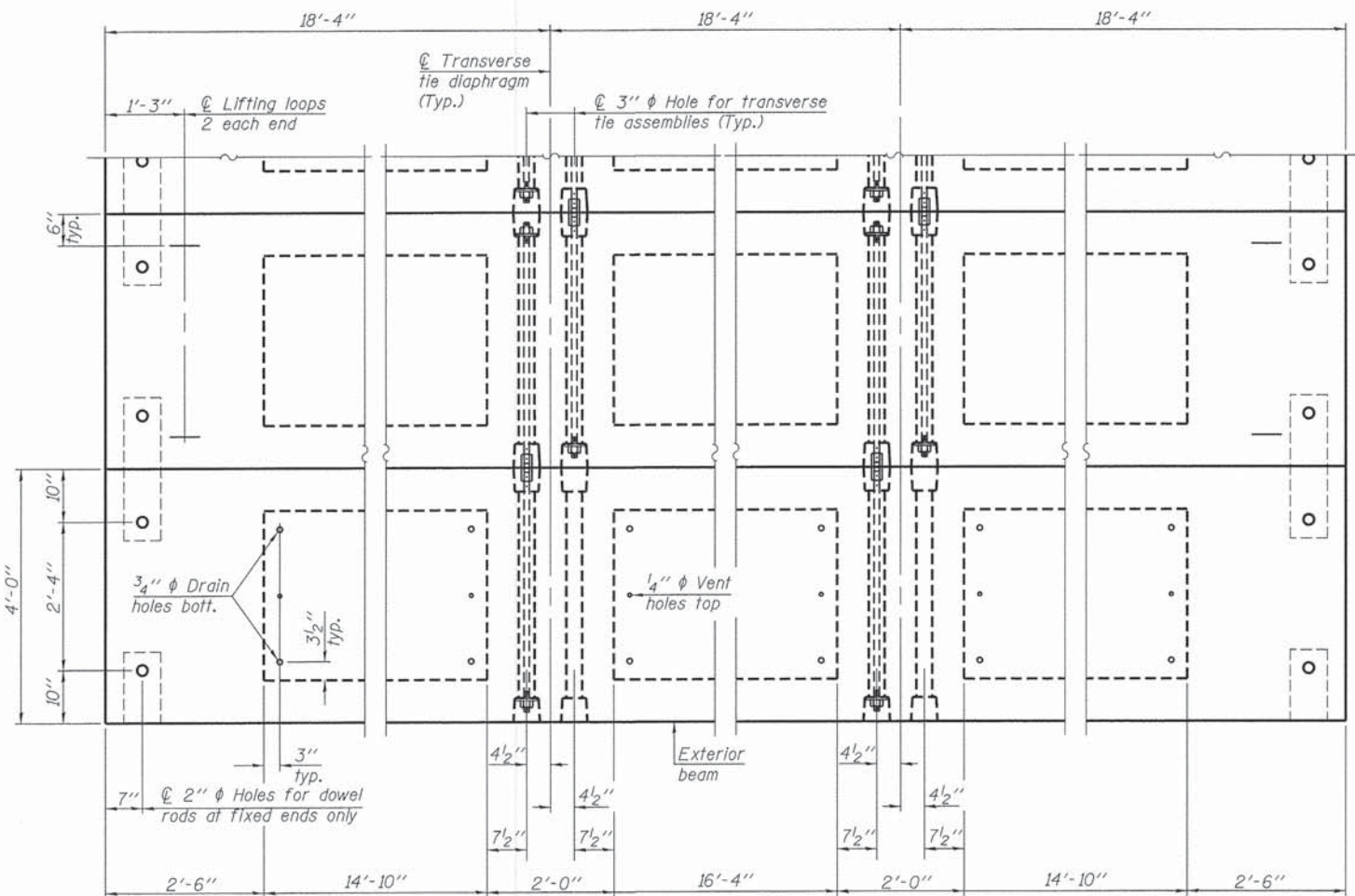


BAR U1(E)



BAR A1(E)

LIFTING LOOP DETAIL



PLAN VIEW

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" diameter 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. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). 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 1021.07 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. All reinforcement shall be epoxy coated.

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

BILL OF MATERIAL

Material	Unit	Quantity
Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1,760
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	22.4
Waterproofing Membrane Sys.	Sq. Yd.	200
PC Mortar Fairing Course	Foot	96

PD-2148-OD

7-1-10

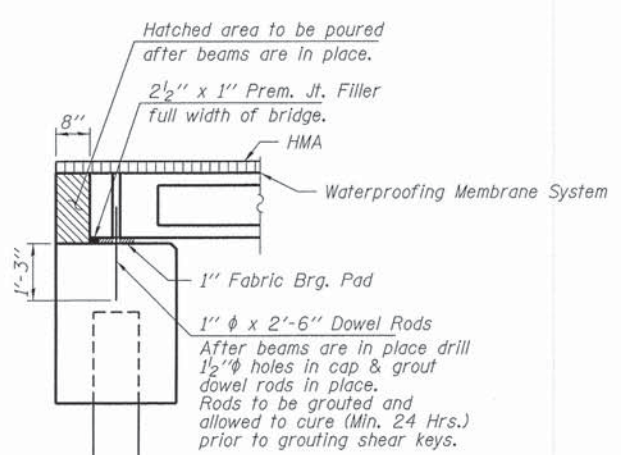
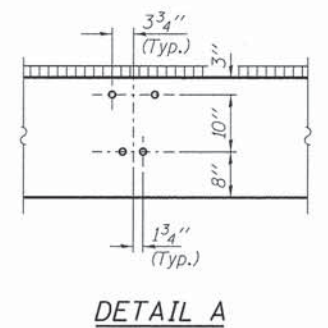
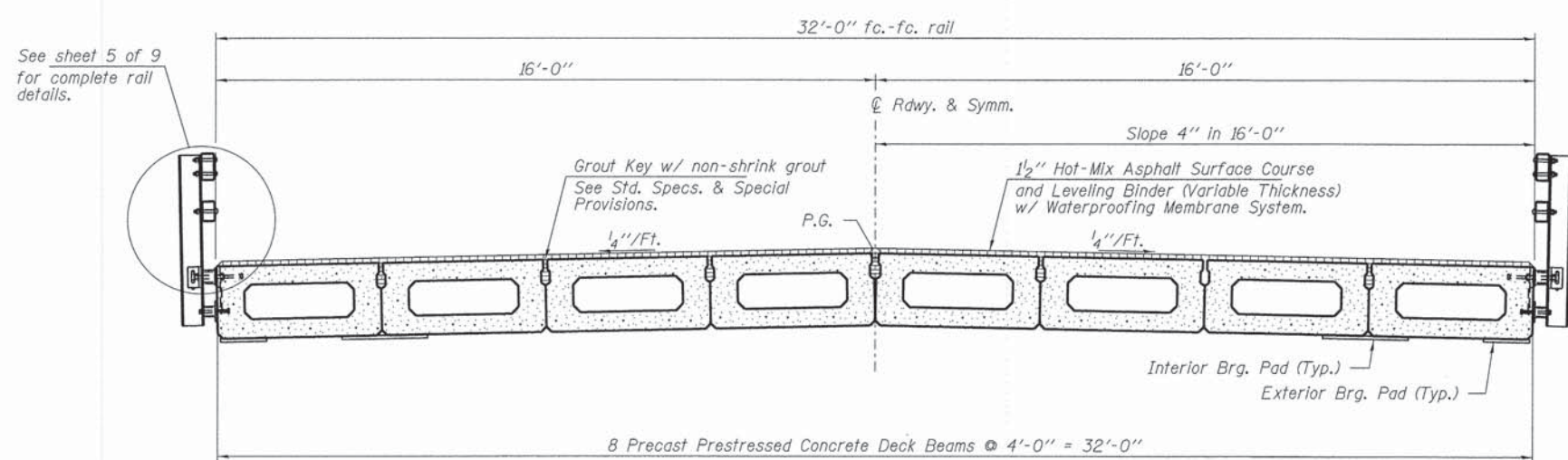
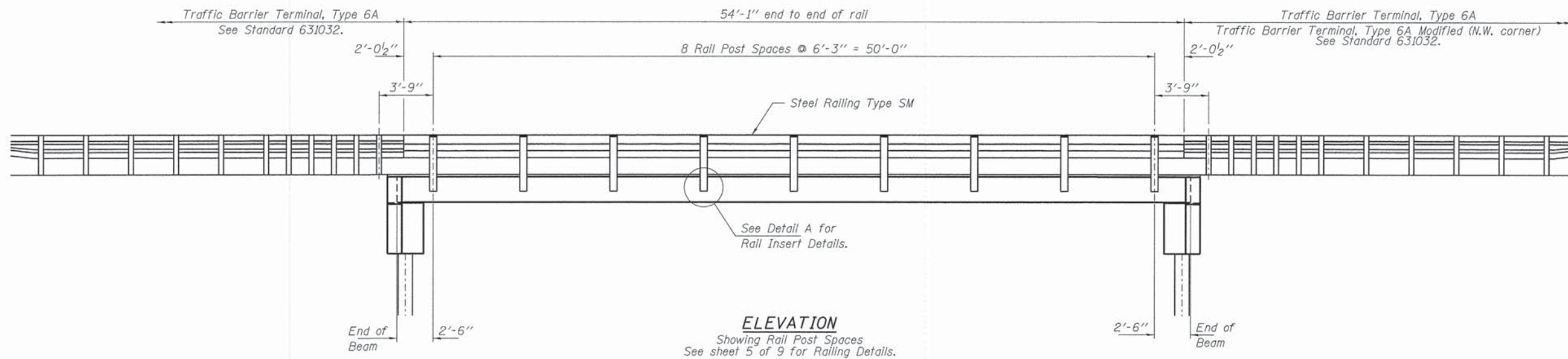
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3088 STEVENSON DRIVE, SUITE 201		DRAWN - D.T.M.	REVISED -
SPRINGFIELD, ILLINOIS 62703		CHECKED - J.W.F.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM	PLOT SCALE =		
LS / PE / SE CORP. 184-022959	PLOT DATE = 3/2/2015		

STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

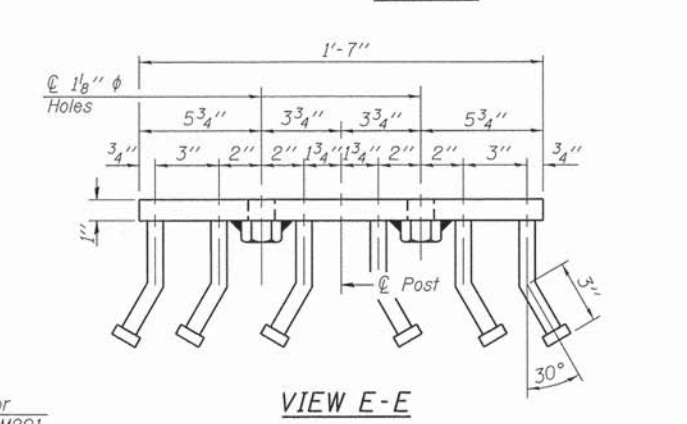
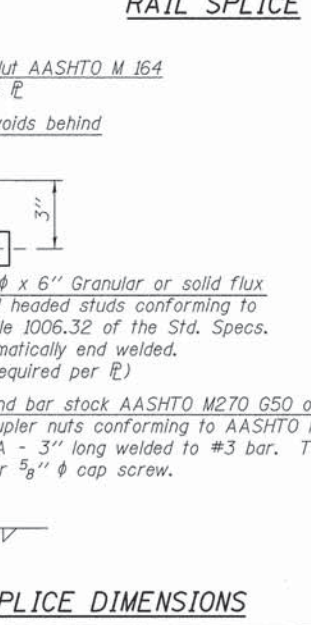
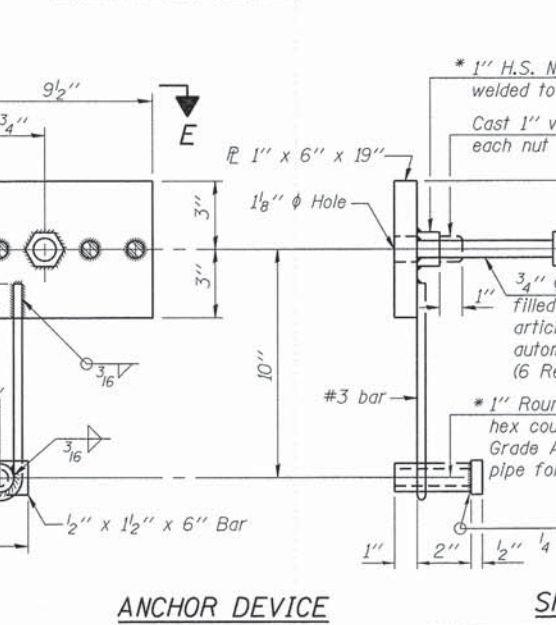
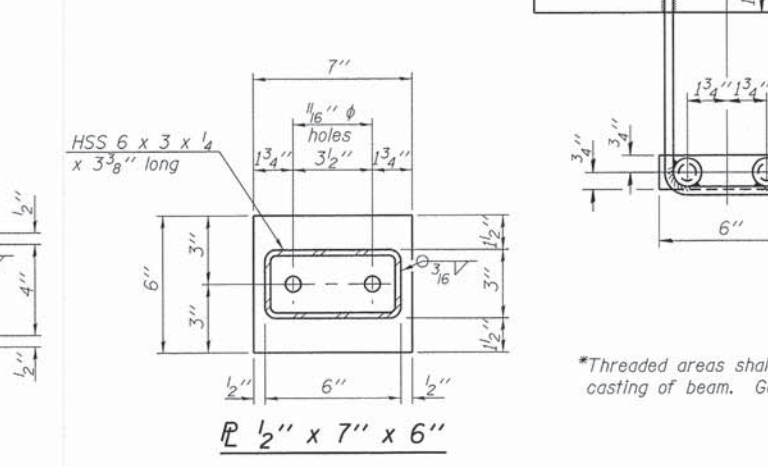
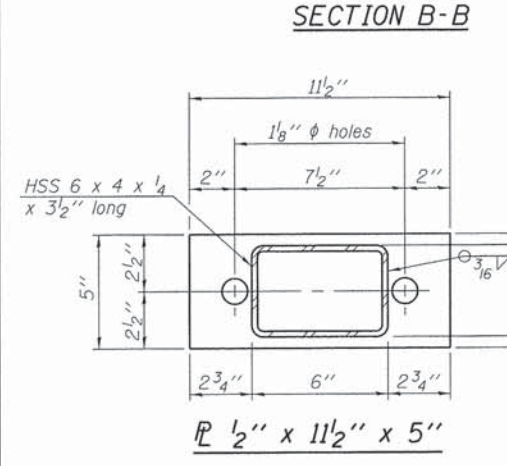
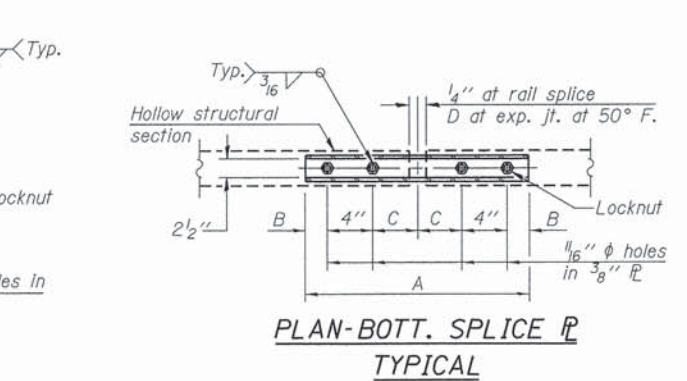
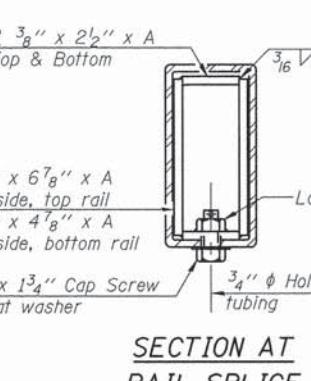
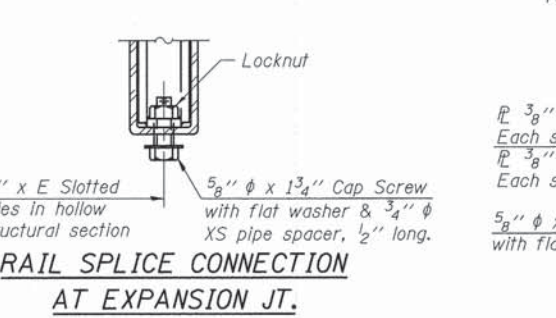
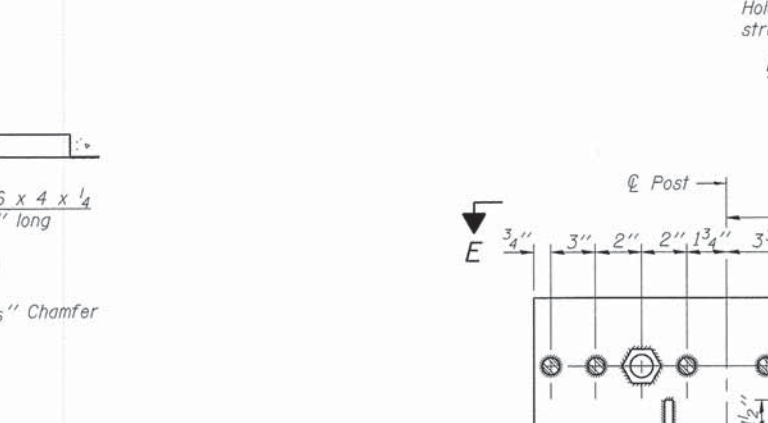
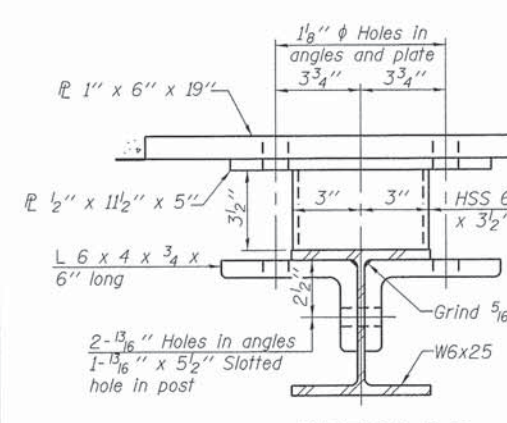
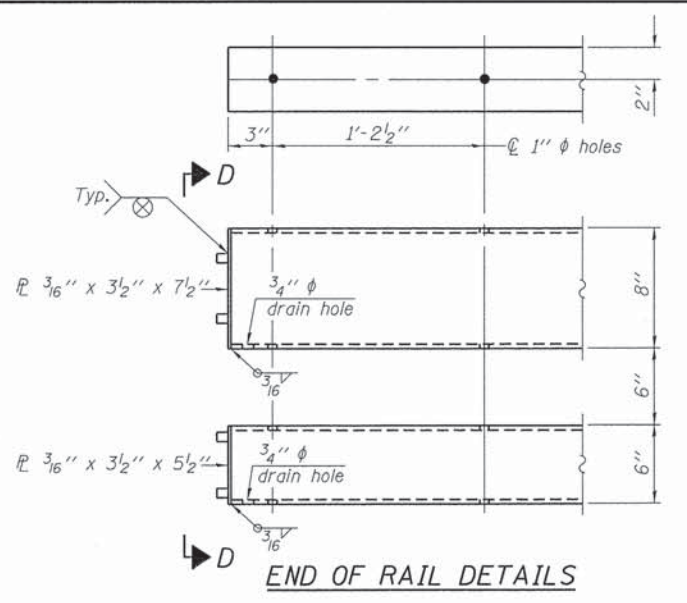
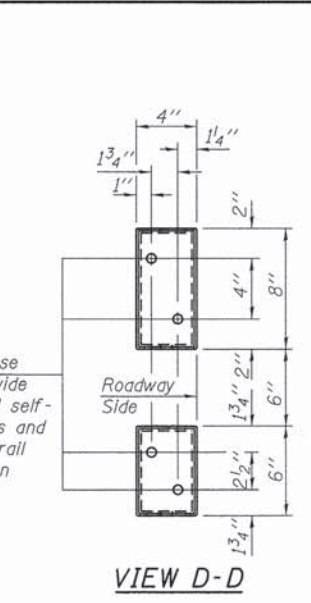
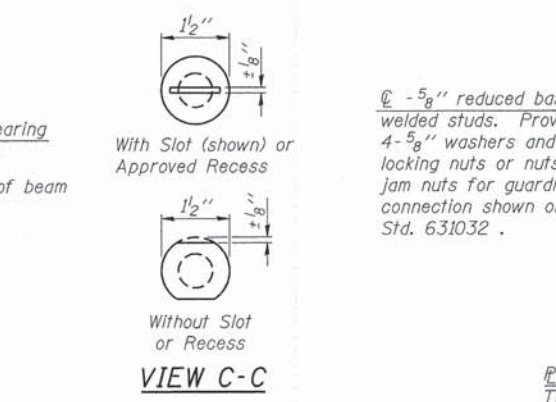
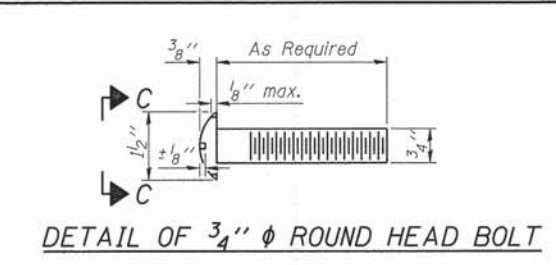
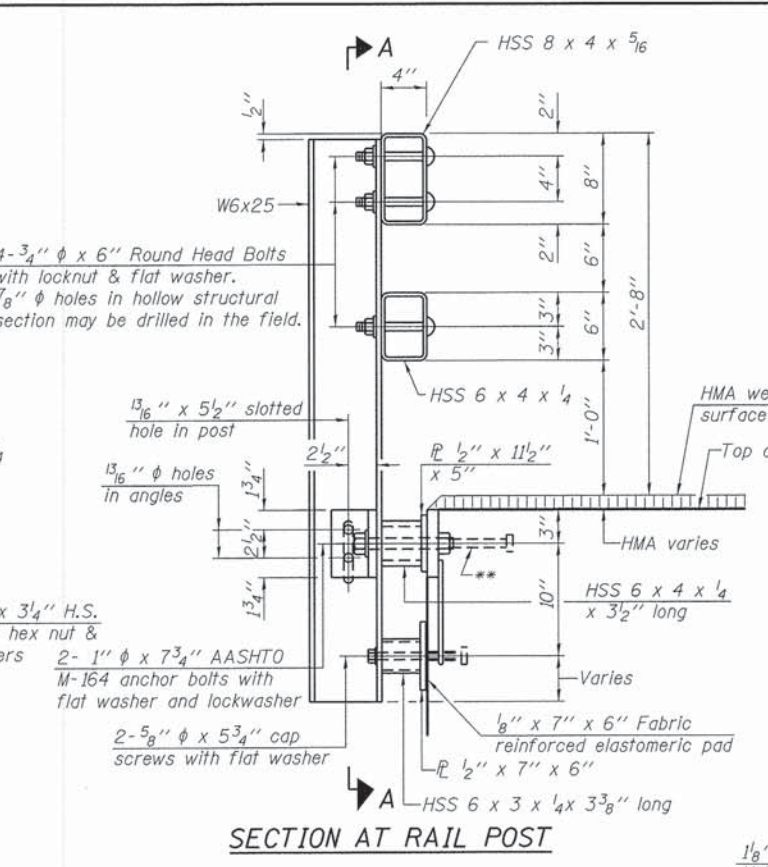
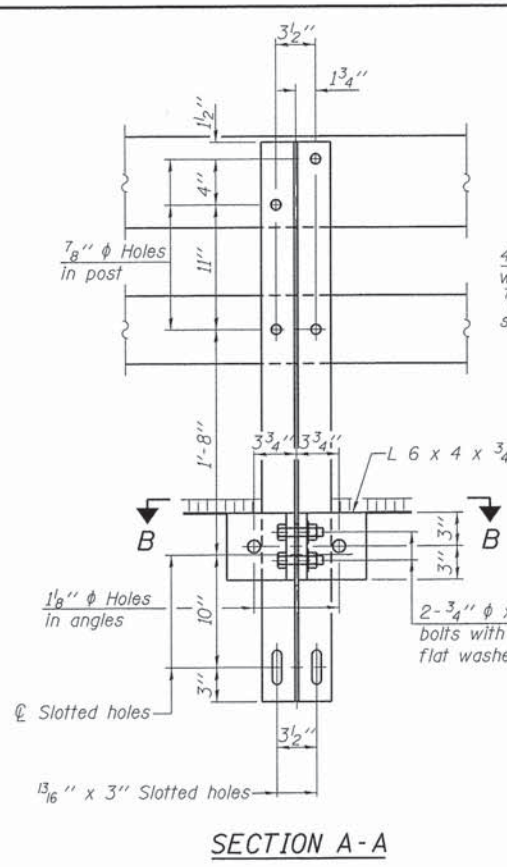
21" x 48" PPC DECK BEAM DETAILS
STRUCTURE NO. 094-3039

SHEET NO. 3 OF 9 SHEETS

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	10-00056-03-BR	WARREN	21	15
OVERFLOW BRIDGE			CONTRACT NO. 89686	
ILLINOIS FED. AID PROJECT BRS-04051061				



FILE NAME = 100124-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 094-3039	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS/PE/BE CORP. 184-000599	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			1	10-00056-03-BR	WARREN	21	16	
	PLOT DATE = 3/2/2015	DRAWN - D.T.M.	REVISED -			OVERFLOW BRIDGE					
		CHECKED - J.W.F.	REVISED -			CONTRACT NO. 89686					
						SHEET NO. 4 OF 9 SHEETS					



Notes:
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 All steel rail members 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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	108

R-34HMAWS 1-12-15 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

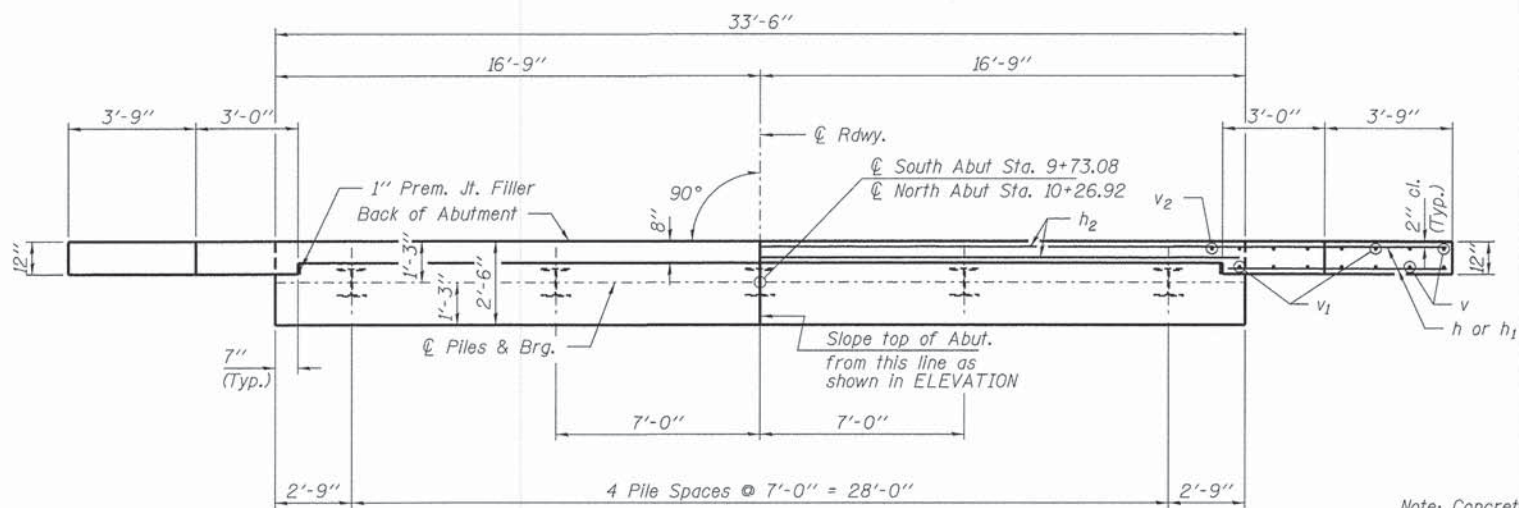
FILE NAME = 100124-sht-bridge.dgn
 USER NAME =
 HAMPTON, LENZINI AND RENWICK, INC.
 2001 STEVENSON DRIVE, SUITE 301
 SPRINGFIELD, ILLINOIS 62703
 PLOT SCALE =
 PLOT DATE = 3/2/2015

DESIGNED - A.S.L.
 CHECKED - S.W.M.
 DRAWN - D.T.M.
 CHECKED - J.W.F.
 REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT

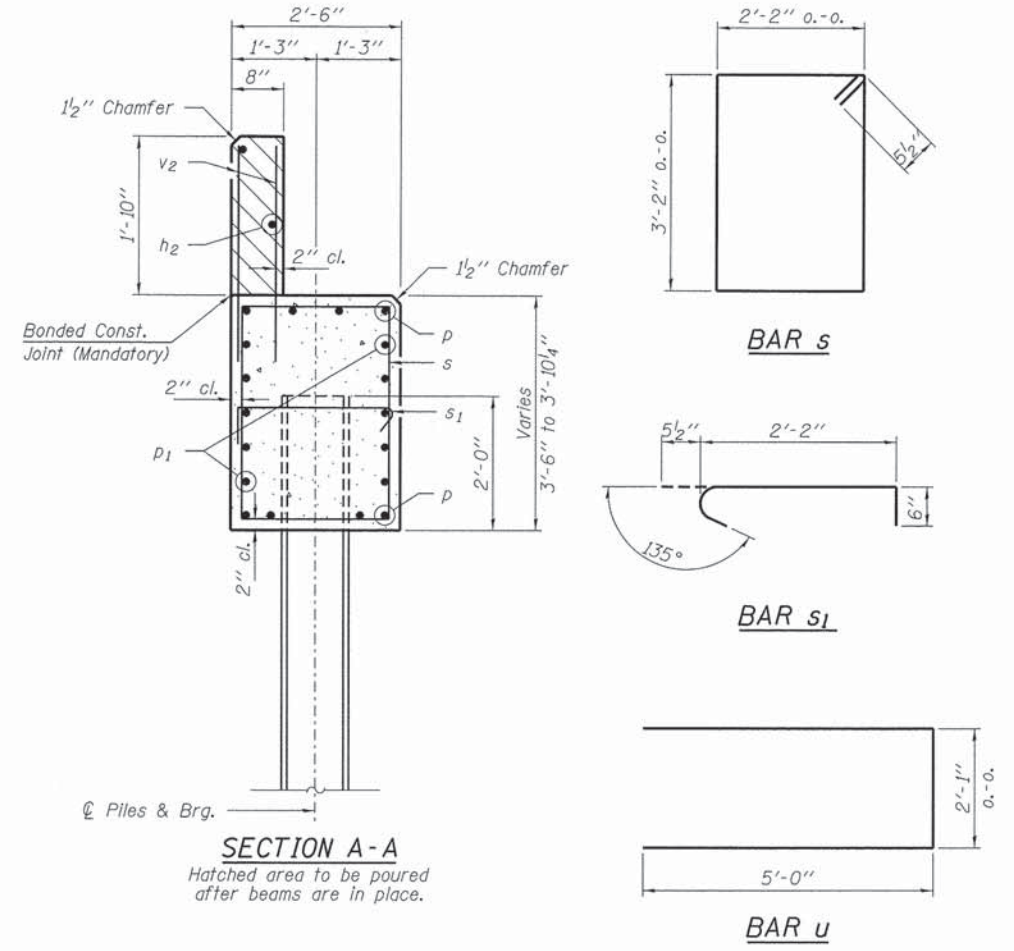
STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE
 STRUCTURE NO. 094-3039
 SHEET NO. 5 OF 9 SHEETS

C.H. SECTION COUNTY TOTAL SHEETS SHEET NO.
 1 10-00056-03-BR WARREN 21 17
 OVERFLOW BRIDGE CONTRACT NO. 89686
 ILLINOIS FED. AID PROJECT BR5-0405106



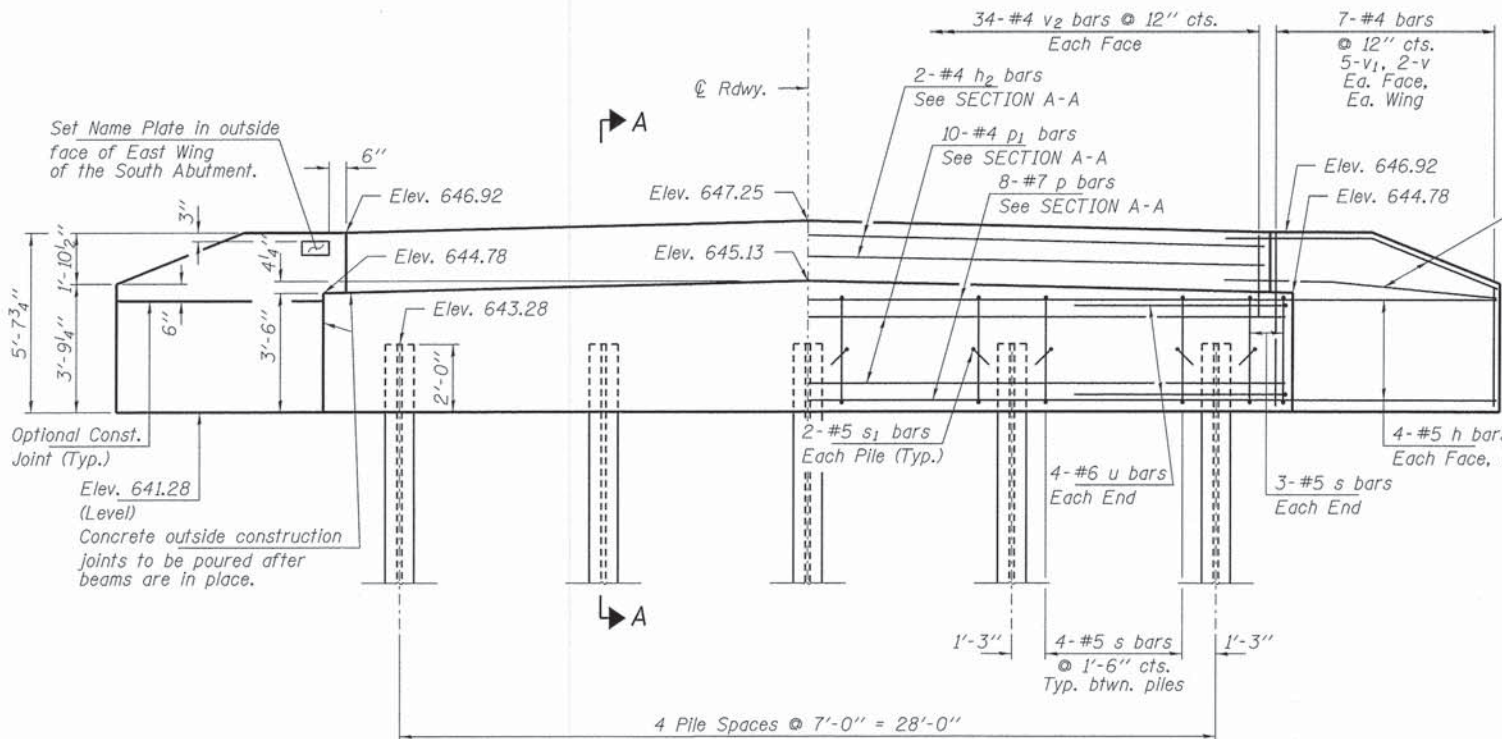
PLAN

Note: Concrete sealer shall be applied to all exposed surfaces of the bearing area.



SECTION A-A

Hatched area to be poured after beams are in place.



ELEVATION

Note: Extend h bars into abutment cap.

Use 2-#4 h bars (B.F.)
Use 2-#4 h1 bars (F.F.)
Each Wing
Bend in field.

PILE DATA

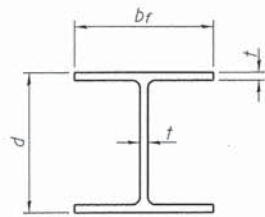
Type _____ Steel HPI0x42
No. Req'd. (2 Abuts.) _____ *10
Factored Resistance Available (Rf) _____ 184 Kips/Pile
Nominal Required Bearing (Rn) _____ 335 Kips/Pile
Est. Length _____ 60 Ft/Pile

Notes: *Includes one test pile to be driven in permanent location at the South Abutment.
The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - 2 ABUTS.

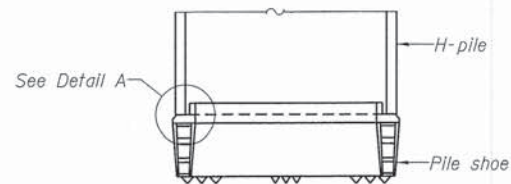
BAR	NO.	SIZE	LENGTH	SHAPE	
h	40	#5	8'-0"	—	
h1	8	#5	6'-6"	—	
h2	4	#4	33'-2"	—	
p	16	#7	33'-2"	—	
p1	20	#4	33'-2"	—	
s	44	#5	11'-7"	□	
s1	20	#5	3'-2"	┌	
u	16	#6	12'-1"	U	
v	16	#4	3'-6"	—	
v1	40	#4	4'-7"	—	
v2	136	#4	2'-8"	—	
Concrete Structures				Cu. Yd.	31.0
Reinforcement Bars, Epoxy Coated				Pound	3,130
Steel Piles HPI0x42				Foot	540
Test Pile Steel HPI0x42				Each	1
Name Plates				Each	1
Concrete Sealer				Sq. Ft.	122

All reinforcement bars shall be epoxy coated

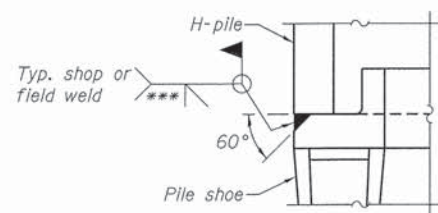


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 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 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"

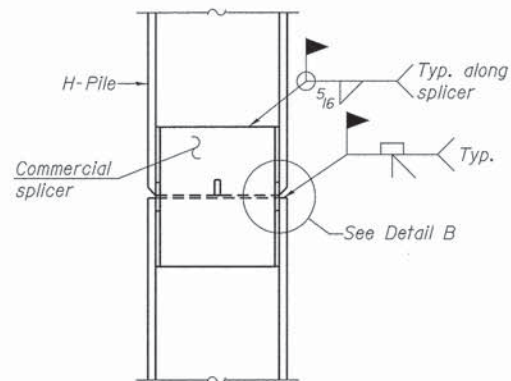


ELEVATION

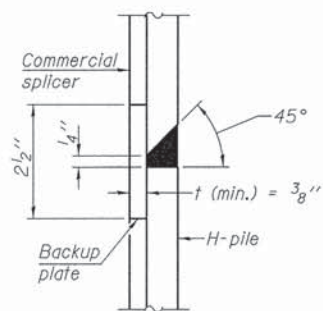


DETAIL A

H-PILE SHOE ATTACHMENT

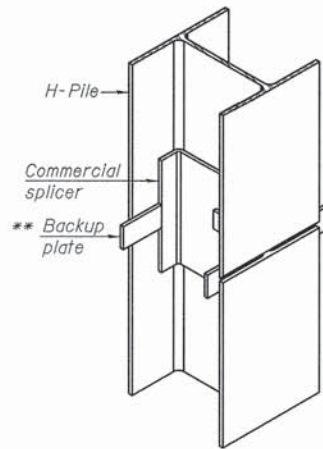


ELEVATION

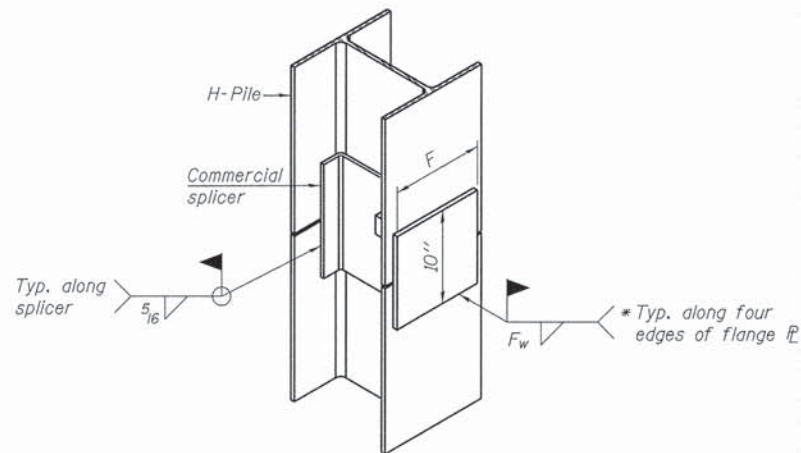


DETAIL "B"

WELDED COMMERCIAL SPLICE



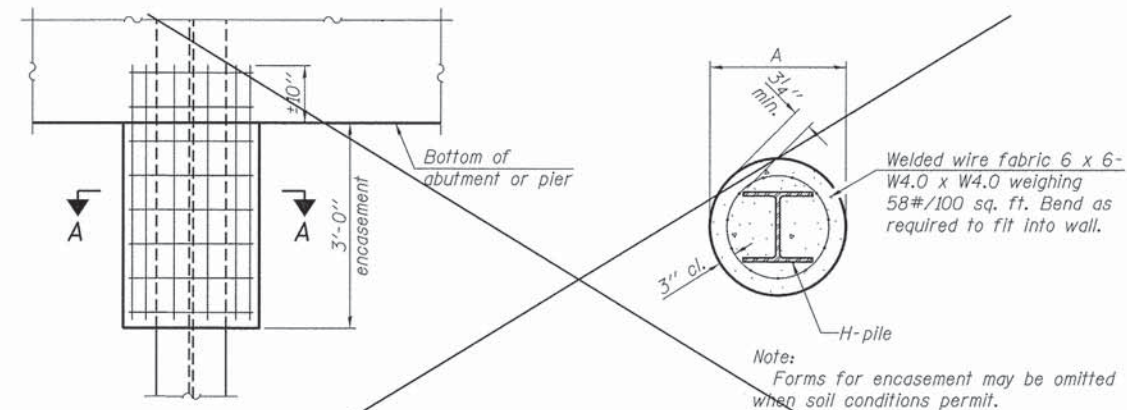
ISOMETRIC VIEW



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

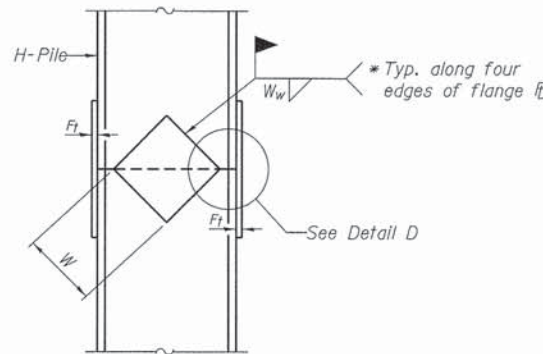
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



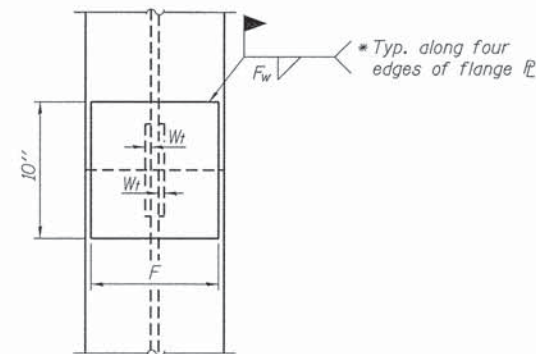
ELEVATION

SECTION A-A

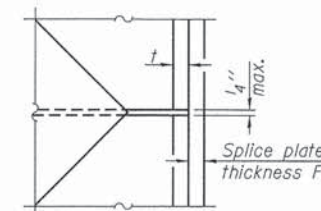
PILE ENCASEMENT
Not Required



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	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"

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

F-HP

7-1-10

FILE NAME = 100124-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 094-3039	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 / FB / SE CORP. 184.000959		CHECKED - S.W.M.	REVISED -			1	10-00056-03-BR	WARREN	21	19	
	PLOT SCALE =	DRAWN - D.T.M.	REVISED -			OVERFLOW BRIDGE CONTRACT NO. 89686					
	PLOT DATE = 3/2/2015	CHECKED - J.W.F.	REVISED -			ILLINOIS FED. AID PROJECT BRS-0405(106)					
						SHEET NO. 7 OF 9 SHEETS					

BORING NO. B-01
DATE 06-03-10
W. & A. FILE NO. 5296

WHITNEY & ASSOCIATES
INCORPORATED
2408 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

PROJECT STRUCTURE NO. 094-3004; COUNTY HIGHWAY 1 LOCATION Warren County, Illinois
SHEET 1 OF 6
BORING LOCATION Station 10+20; 7' Left of Centerline DRILLED BY Fehli
BORING TYPE Hollow Stem Auger WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.B.S.C. SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)28.5 FT
GROUND SURFACE ELEVATION 647.0 GROUND WATER ELEVATION AT 3 HRS (-)16.9 FT
BORING DISCONTINUED AT ELEVATION (-)71.0 FT GROUND WATER ELEVATION AT COMPLETION (-)22.6 FT

DEPTH IN FEET	DESCRIPTION	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
0	BITUMINOUS CONCRETE						
0	CRUSHED LIMESTONE						
0	Stiff, Brown, Dark Brown And Dark Gray SILTY CLAY						
04		SS	1	1.4	1.3	95	24
			2(3)				
			2	1.3	1.2	94	25
			2(4)				
08	Very Stiff, Dark Gray SILTY CLAY	SS	5	2.5	2.4	101	19
			6(12)				
12	Stiff, Gray SILTY CLAY	SS	6	2.0	1.9	98	21
			7				
			8(15)				
			2	1.6	1.4	96	23
			3	1.7	1.6	97	21
			4(7)				
			2				
			3(6)				
16	Medium, Gray And Orange-Brown SILTY CLAY	SS	2	1.0	0.9	92	26
			2				
			2(4)				
20	Medium, Gray SILTY CLAY	SS	2	1.1	1.0	93	25
			2				
			3(5)				
			2	0.8	0.6	91	27
			2(4)				
24	Medium, Gray SANDY CLAY LOAM	SS	2	0.9	0.8	92	26
			2				
			2(4)				

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F. FALLING 30 INCHES
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING NO. B-01
(CONTINUATION)
DATE 05-03-10

PROJECT Structure No. 094-3004; County Highway 1
LOCATION Warren County, Illinois
SHEET 2 OF 6
W. & A. FILE NO. 5296

BORING LOG

DEPTH IN FEET	DESCRIPTION	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
	See Sheet 1 of 6						
	619.0	SS	1	0.4	0.3	90	27
			1(2)				
30	Soft, Gray SILTY CLAY LOAM	SS	1	0.4	0.3	91	27
			2				
	615.0		1(3)				
34	Loose, Brown, Medium- To Coarse-Grained SAND	SS	3				
			5				
			3(8)				
38	Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL	SS	3	1.7	1.5	116	19
			4				
	609.0		5(9)				
42		SS	4	1.6	1.3	115	20
			5				
			6(11)				
46	Stiff, Gray SILTY CLAY LOAM	SS	5	1.2	1.1	109	23
			5				
			6(11)				
50		SS	6	1.0	0.7	112	19
			5				
			7(12)				
54	Medium, Gray SANDY CLAY LOAM	SS	6	1.0	0.7	112	19
			5				
			7(12)				

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F. FALLING 30 INCHES
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING NO. B-01
(CONTINUATION)
DATE 05-03-10

PROJECT Structure No. 094-3004; County Highway 1
LOCATION Warren County, Illinois
SHEET 3 OF 6
W. & A. FILE NO. 5296

BORING LOG

DEPTH IN FEET	DESCRIPTION	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
	See Sheet 2 of 6						
	587.0						
60	Hard, Gray CLAY SHALE	SS	101/8"	4.5+	7.3	117	12
64							
	581.0						
68	Hard, Gray SHALE	SS	104/3"	4.5+	-	-	10
	576.0						
72	EXPLORATORY BORING DISCONTINUED	SS	97/3"	4.5+	-	-	11
76							
80							
84							

NOTE: Center of Bridge - Station 10+00

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F. FALLING 30 INCHES
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING-01

BORING NO. B-02
 DATE 05-03-10
 W. & A. FILE NO. 5288
 SHEET 4 OF 6

WHITNEY & ASSOCIATES
 INCORPORATED
 2408 West Nebraska Avenue
 PEORIA, ILLINOIS 61604

BORING LOG

PROJECT STRUCTURE NO. 094-3004; COUNTY HIGHWAY 1 LOCATION Warren County, Illinois
 BORING LOCATION Station 9+78; 7' Right of Centerline DRILLED BY Fehi
 BORING TYPE Hollow Stem Auger WEATHER CONDITIONS Partly Cloudy & Mild
 SOIL CLASSIFICATION SYSTEM U.S.B.S.C. SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)30.0 FT.
 GROUND SURFACE ELEVATION 647.0 GROUND WATER ELEVATION AT _____ HRS.
 BORING DISCONTINUED AT ELEVATION (-)71.0 Ft. GROUND WATER ELEVATION AT COMPLETION (-)20.1 Ft.

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
OIL AND CHIPS	3"						
BITUMINOUS CONCRETE	7"						
CRUSHED LIMESTONE	12"						
Stiff, Dark Brown And Brown SILTY CLAY	04	SS	4 4 3(7) 4	1.2	1.1	99	21
641.0 Medium, Dark Brown And Brown SILTY CLAY		SS	5 6(11)	1.2	1.1	97	23
637.0 Stiff, Dark Brown And Brown SILTY CLAY	08	SS	2 2 2(4)	1.0	0.8	90	28
634.0 Medium, Dark Gray SILTY CLAY	12	SS	2 2 3(5) 1	1.5	1.4	94	25
632.0 Stiff, Gray And Orange-Brown SILTY CLAY		SS	2 2 2(4)	1.0	0.9	90	27
630.0 Medium, Gray And Orange-Brown SILTY CLAY	16	SS	2 2 3(5)	1.5	1.3	94	25
625.0 Soft, Gray And Orange-Brown SILTY CLAY	20	SS	1 1 2(3) 2 2 2(4) 1	0.6	0.5	90	29
	24	SS	1 1 1(2) 1 1 2(3)	1.0	0.9	92	27
		SS	1 1 1 1 1 2(3)	0.5	0.4	90	28
		SS	1 1 1 1 1 2(3)	0.5	0.4	91	28

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING NO. B-02
 (CONTINUATION) DATE 05-03-10
 SHEET 5 OF 6
 W. & A. FILE NO. 5288

PROJECT Structure No. 094-3004; County Highway 1
 LOCATION Warren County, Illinois

BORING LOG

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 4 of 6							
Very Soft, Gray And Orange-Brown SANDY CLAY LOAM	30	SS	1 0 1(1)	0.3	0.2	94	25
614.0							
Medium, Gray, Unweathered GLACIAL SILTY CLAY TILL	34	SS	1 1 2(3)	0.5	0.3	95	24
609.0							
Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL	38	SS	2 2 3(5)	1.0	0.9	110	22
603.0							
Very Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL	42	SS	4 5 8(11)	1.7	1.5	112	20
599.0							
Loose, Gray, Fine- To Medium-Grained SAND With Some Fine-Grained Gravel	46	SS	4 4 5(9)	2.3	2.2	115	17
593.0							
Medium-Density, Gray, Fine- To Medium-Grained SAND With Some Fine-Grained Gravel	50	SS	3 4 5(9)	-	-	-	-
	54	SS	5 7 8(15)	-	-	-	-

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING NO. B-02
 (CONTINUATION) DATE 05-03-10
 SHEET 6 OF 6
 W. & A. FILE NO. 5288

PROJECT Structure No. 094-3004; County Highway 1
 LOCATION Warren County, Illinois

BORING LOG

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 5 of 6							
589.0							
Hard, Gray CLAY SHALE	60	SS	20 50 40(4)	4.5+	5.2	117	14
	64	SS	103(4)	4.5+	4.6	116	15
	68	SS	98(4)	4.5+	-	-	13
576.0							
EXPLORATORY BORING DISCONTINUED	72						
	76						
	80						
	84						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING-02