02-28-14 LETTING ITEM 058

CONTRACT NO.				
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	1

CONTRACT NO: 61A02

INDEX OF SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED PLANS FOR FEDERAL AID HIGHWAY

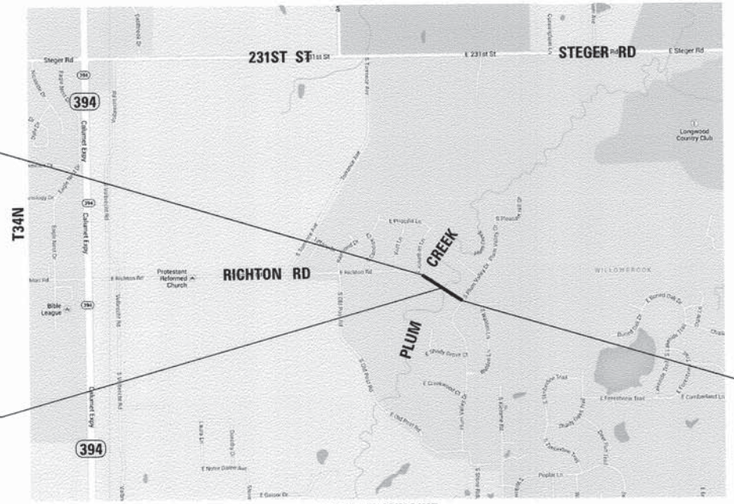
T.R. 428 (RICHTON ROAD)
RICHTON ROAD OVER PLUM CREEK
BRIDGE RECONSTRUCTION
PROJECT BROS-0197(124)
SECTION 11-02118-01-BR
CRETE TOWNSHIP
WILL COUNTY

JOB NO.: C-91-403-12

LOCATION OF SECTION INDICATED THUS: -

THIS PROJECT IS LOCATED IN CRETE TOWNSHIP

RANGE 15E, 3RD P.M.



BEGIN IMPROVEMENT
STA 10+50.18

PROP STRUCTURE
SN 099-3286

END IMPROVEMENT
STA 15+43.51

LOCATION MAP
SCALE: NTS

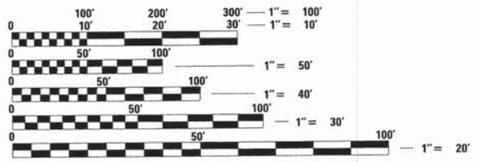
GROSS LENGTH = 493.33 FT. = 0.093 MILE
NET LENGTH = 493.33 FT. = 0.093 MILE

DESIGN DESIGNATION AND TRAFFIC DATA

2013 ADT VEHICLES
RICHTON RD = 1350

FUNCTIONAL CLASSIFICATION: LOCAL ROAD

DESIGN SPEED 30 MPH
POSTED SPEED 30 MPH



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

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

MARK R. BENDOR
081-006516
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2014
DATE: 12/05/2013

MICHAEL P. MAGNUSON
62-046623
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2015
DATE 12/05/2013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED December 4th, 2013
Anthony Perrotti
CRETE TOWNSHIP HIGHWAY COMMISSIONER

PASSED DECEMBER 17 2013
C J Holt C.J. HOLT
DISTRICT 1 ENGINEER LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW December 17 2013
John Fortmann
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10204

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CONTRACT NO. 61A02

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E., 847-705-4406, SCHAUMBURG, IL

IDOT DISTRICT 1 STANDARDS

BD-32 BUTT JOINT AND HMA TAPER DETAILS

BD-34 DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL

BD-51 BENCHING DETAIL FOR EMBANKMENT WIDENING

IDOT HIGHWAY STANDARDS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

280001-07 TEMPORARY EROSION CONTROL SYSTEMS

420401-10 BRIDGE APPROACH PAVEMENT CONNECTOR

515001-03 NAME PLATE FOR BRIDGES

601101-01 CONCRETE HEADWALL FOR PIPE DRAIN

606001-05 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

630001-10 STEEL PLATE BEAM GUARDRAIL

630201-06 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL

630301-06 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS

631031-12 TRAFFIC BARRIER TERMINAL, TYPE 6

635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT

635011-02 REFLECTOR MARKER AND MOUNTING DETAILS

701901-03 TRAFFIC CONTROL DEVICES

UTILITY CONTACT INFORMATION

AQUA ILLINOIS
MICHAEL CAP
1000 SOUTH SCHUYLER AVE
KANKAKEE, IL 60901
OFFICE: (815) 614-2029
CELLULAR: (815) 450-8502

AT&T
STEVE PESOLA
1000 COMMERCE DRIVE
OAK BROOK, IL 60523
OFFICE: (630) 573-5703
CELLULAR: (815) 412-5255

COMCAST
TED WYMAN
688 INDUSTRIAL DRIVE
ELMHURST, IL 60126
OFFICE: (630) 600-6349

COMED
BRAD SCHINADARGAR
200 S. GOVERNORS HIGHWAY
UNIVERSITY PARK, IL 60466
OFFICE: (708) 235-2692
CELLULAR: (708) 625-2399

NICOR
DUC LE
1844 FERRY RD
NAPERVILLE, IL 60563
OFFICE: (630) 317-2242

GENERAL NOTES

1. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
2. ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.
3. ALL DAMAGE TO TOWNSHIP, CITY, COUNTY OR STATE OWNED UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. THIS SHALL INCLUDE ALL TEMPORARY REPAIRS REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS. SPLICING OF ELECTRICAL CABLE SHALL NOT BE ALLOWED. ELECTRIC CABLE SHALL BE REPLACED FROM POLE TO POLE OR CONTROLLER.
4. EXCEPT WHERE MODIFIED BY THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS OR THE DETAILS IN THE PLANS, ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2012; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2014; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" MAY 1996 FIFTH EDITION; THE "DETAILS" IN THE PLANS; AND THE "SPECIAL PROVISIONS" IN THE CONTRACT DOCUMENTS.

   ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST IDOT STANDARDS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE STRUCTURE GEOTECHNICAL REPORT IS INCLUDED IN THE PROJECT SPECIFICATIONS FOR REVIEW AND INFORMATION.
6. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES (48 HOUR NOTIFICATION IS REQUIRED).
7. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, WILL COUNTY, AND CRETE TOWNSHIP.
8. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON TOWNSHIP, CITY, COUNTY OR STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE CRETE TOWNSHIP HIGHWAY DEPARTMENT.
9. THE ILLINOIS DEPARTMENT OF TRANSPORTATION IS NOT THE OWNER OF RECORD FOR THIS BRIDGE. THOSE SEEKING HISTORIC, AS-BUILT OR OTHER EXISTING DOCUMENTS MUST CONTACT THE OWNER OF RECORD TO MAKE ARRANGEMENTS FOR ACCESS TO THIS INFORMATION. OWNER OF RECORD:
   CRETE TOWNSHIP HIGHWAY DEPARTMENT
   ANTHONY RECUPITO, HIGHWAY COMMISSIONER
   25405 S. STATE ST., CRETE, IL. 60417
10. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
11. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS. STATIONS ARE PROVIDED ON THE PLANS.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
13. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AT THE DIRECTION OF THE ENGINEER. THIS WORK IS INCIDENTAL TO THE CONTRACT.
15. CLEARING SHALL BE DONE TO THE CONSTRUCTION LIMITS OF THE PROJECT. SEE SECTION 201.01(A) OF THE STANDARD SPECIFICATIONS. CLEARING WILL NOT BE MEASURED FOR PAYMENT.
16. THE PROJECT HYDRAULIC REPORT CAN BE OBTAINED FROM THE CRETE TOWNSHIP HIGHWAY DEPARTMENT.
17. THE CONTRACTOR MUST RETURN ALL EXISTING MOT SIGNS TO CRETE TOWNSHIP FREE OF DAMAGE AFTER THE COMPLETION OF THE PROJECT. THIS WORK IS INCIDENTAL TO TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
18. THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES A 10 FOOT MINIMUM HORIZONTAL CLEARANCE FROM THE OVERHEAD COMED 12KV LINES. IF THIS MINIMUM CLEARANCE CANNOT BE MAINTAINED, THE CONTRACTOR SHALL REQUEST FROM COMED A POWER OUTAGE. COMED REQUIRES UP TO 16 WEEKS OF LEAD TIME FOR ANY OUTAGE. ANY NECESSARY OUTAGE WILL BE AT THE EXPENSE OF THE CONTRACTOR AND SHALL NOT IMPACT SCHEDULE.
19. PROJECT WORK HOURS:
   7 AM TO 5 PM - MONDAY THRU FRIDAY
   9 AM TO 3 PM - SATURDAY
   NO WORK ON SUNDAY

EROSION CONTROL GENERAL NOTES

1. THE CONSTRUCTION LIMITS WILL BE STAKED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. PAYMENT FOR THIS WORK WILL BE INCLUDED WITHIN THE ITEM CONSTRUCTION LAYOUT, LS. THE CONSTRUCTION LIMITS MAY BE ADJUSTED BY THE ENGINEER TO PRESERVE TREES AND NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR CHANGED CONSTRUCTION LIMITS. ALL WORK AND EQUIPMENT SHALL REMAIN WITHIN THESE LIMITS THROUGHOUT THE DURATION OF THIS PROJECT.
2. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE THE PROJECT SITE IS OTHERWISE DISTURBED.
3. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED 2012.
4. THE WILL-SOUTH COOK SOIL AND WATER CONSERVATION DISTRICT (WSCSWCD) MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND SWPPP SHALL BE MAINTAINED ON SITE AT ALL TIMES.
6. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS), A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW BY WSCSWCD.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE WSCSWCD. THESE ADDITIONAL ITEMS ARE INCIDENTAL TO THE CONTRACT.
8. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURE IS PROHIBITED.
9. IT IS THE RESPONSIBILITY OF THE LANDOWNER AND/OR GENERAL CONTRACTOR TO INFORM ANY SUB-CONTRACTOR(S) WHO MAY PERFORM WORK ON THIS PROJECT, OF THE REQUIREMENTS IN IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS (NPDES) PERMIT REQUIREMENTS SET FORTH BY THE ILLINOIS EPA.
10. PERIMETER EROSION CONTROL BARRIER SHALL BE ERECTED ADJACENT TO TEMPORARY CONSTRUCTION FENCE. THE RESIDENT ENGINEER SHALL HAVE FINAL DETERMINATION OF THE PLACEMENT AND LOCATION OF THE PERIMETER EROSION CONTROL BARRIER.
11. COMPLETED SLOPES (SECTION OF ROAD EMBANKMENT) SHALL BE SEEDED AND BLANKETED AS THE EXCAVATION PROCEEDS TO THE EXTENT CONSIDERED DESIRABLE AND PRACTICAL. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PROLONG FINAL GRADING AND SHAPING SO THAT THE ENTIRE PROJECT CAN BE PERMANENTLY SEEDED AT ONE TIME.
12. CLEANING OF VEHICLES AND EQUIPMENT SHALL BE PERFORMED IN A MANNER TO REDUCE THE AMOUNT OF POLLUTANTS TRIBUTARY TO STORM SEWERS AND OPEN WATERS TO THE MAXIMUM EXTENT POSSIBLE.
13. REFER TO STORM WATER POLLUTION PREVENTION PLAN FOR INSPECTION AND MAINTENANCE SCHEDULES, AND SEQUENCE OF ACTIVITIES.
14. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUN OFF. LEAKY EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
15. WHEN STREAM SHORELINE DISTURBANCE IS NECESSARY, THE STREAM SHORELINE SHALL BE STABILIZED WITHIN FORTY EIGHT (48) HOURS AFTER DISTURBANCE IS COMPLETED OR WORK IS INTERRUPTED.
16. WORK ALONG THE STREAM BANKS OF PLUM CREEK SHALL BE LIMITED TO PERIODS OF LOW FLOW. IF WORK MUST TAKE PLACE UNDER FLOWING CONDITIONS, THEN ADDITIONAL EROSION CONTROL MEASURES WILL BE NECESSARY AS DETERMINED BY THE WSCSWCD. THESE ADDITIONAL ITEMS WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
17. THE USE OF HAY BALES IS NOT ALLOWED FOR EROSION CONTROL.

FILE NAME =	DESIGNED - EJA	REVISED -
$FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, EROSION CONTROL NOTES, AND IDOT STANDARDS

SCALE: NTS | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	2
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES			URBAN 0004	CONSTRUCTION CODE		
				80% FED 20% LOCAL ROADWAY 0004	80% FED 20% LOCAL BRIDGE 0011	100% LOCAL BRIDGE 0011
CODE	ITEM	UNIT	TOTAL QUANTITY	URBAN	URBAN	URBAN
20100110	TREE REMOVAL (6 TO 15 UNITS)	UNIT	100	100		
20101000	TEMPORARY FENCE	FOOT	258	258		
20101100	TREE TRUNK PROTECTION	EACH	3	3		
20200100	EARTH EXCAVATION	CU YD	1935	1935		
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	650	650		
25000312	SEEDING, CLASS 4A	ACRE	0.25	0.25		
25000320	SEEDING, CLASS 5	ACRE	0.25	0.25		
25000350	SEEDING, CLASS 7	ACRE	0.25	0.25		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	23		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	23		
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.5	0.5		
25100630	EROSION CONTROL BLANKET	SQ YD	994	994		
28000400	PERIMETER EROSION BARRIER	FOOT	923	923		
28200200	FILTER FABRIC	SQ YD	707		707	

* SPECIALITY ITEM

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PLOT DATE = 12/5/2013	DATE - DECEMBER 9, 2013	REVISED -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	3
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES			URBAN 0004	CONSTRUCTION CODE		
				80% FED 20% LOCAL	80% FED 20% LOCAL	100% LOCAL
				ROADWAY 0004	BRIDGE 0011	BRIDGE 0011
CODE	ITEM	UNIT	TOTAL QUANTITY	URBAN	URBAN	URBAN
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	1106	1106		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	120	120		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	153	153		
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	270	270		
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N50	TON	67	67		
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	49	49		
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	444	444		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
50200100	STRUCTURE EXCAVATION	CU YD	49		49	
50300225	CONCRETE STRUCTURES	CU YD	65.3		65.3	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	290.8		290.8	
50300260	BRIDGE DECK GROOVING	SQ YD	526		526	
50300300	PROTECTIVE COAT	SQ YD	674		674	
50400745	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BULB T-BEAMS 72"	FOOT	542		542	

* SPECIALITY ITEM

FILE NAME =	DESIGNED - EJA	REVISED -
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USER NAME = jworthington	CHECKED - MPM	REVISED -
PLOT DATE = 12/5/2013	DATE - DECEMBER 9, 2013	REVISED -

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DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	4
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

	CODE	ITEM	UNIT	URBAN 0004 TOTAL QUANTITY	CONSTRUCTION CODE: 80% FED 20% LOCAL ROADWAY 0004 URBAN	80% FED 20% LOCAL BRIDGE 0011 URBAN	100% LOCAL BRIDGE 0011 URBAN
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	66070		66070	
	51201800	FURNISHING STEEL PILES HP14X73	FOOT	650		650	
	51202305	DRIVING PILES	FOOT	650		650	
	51203800	TEST PILE STEEL HP14X73	EACH	2		2	
	51204650	PILE SHOES	EACH	12		12	
	51500100	NAME PLATES	EACH	1		1	
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	109		109	
	60608250	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.06	FOOT	58	58		
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	25	25		
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
	63200310	GUARDRAIL REMOVAL	FOOT	303	303		
	67100100	MOBILIZATION	L SUM	1	1		
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	5	5		

* SPECIALITY ITEM

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DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	5
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

	CODE	ITEM	UNIT	URBAN 0004 TOTAL QUANTITY	CONSTRUCTION CODE: 80% FED 20% LOCAL ROADWAY 0004 URBAN	80% FED 20% LOCAL BRIDGE 0011 URBAN	100% LOCAL BRIDGE 0011 URBAN
*	78200420	GUARDRAIL MARKERS, TYPE B	EACH	4	4		
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
	Z0013797	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	73	73		
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
	Z0018010	DRAINAGE SCUPPERS, DS-33	EACH	4		4	
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	142		142	
#	Z0076600	TRAINEES	HOUR	1000	1000		
#	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000	1000		
	X2810108	STONE RIPRAP, CLASS A4 (SPECIAL)	SQ YD	707		707	
	X4404400	PAVEMENT REMOVAL (SPECIAL)	SQ YD	777	777		
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	293		293	
	X6700410	ENGINEER'S FIELD OFFICE, TYPE A (SPECIAL)	CAL MO	6			
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
	XX005642	GATEWAY MONUMENT SIGN COMPLETE	EACH	2			2

* SPECIALITY ITEM

\# CONSTRUCTION TYPE CODE 0042

FILE NAME =	DESIGNED - EJA	REVISED -
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DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	6
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

			URBAN 0004	CONSTRUCTION CODE 80% FED 20% LOCAL ROADWAY 0004	CONSTRUCTION CODE 80% FED 20% LOCAL BRIDGE 0011	CONSTRUCTION CODE 100% LOCAL BRIDGE 0011
CODE	**ITEM**	**UNIT**	**TOTAL QUANTITY**	**URBAN**	**URBAN**	**URBAN**
XX006729	PERIMETER EROSION BARRIER, ROLLED EXCELSIOR	FOOT	869	869		
XX006821	CONCRETE TRUCK WASHOUT	L SUM	1	1		
* XX006858	RAILING	FOOT	258		258	

* SPECIALITY ITEM

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DEPARTMENT OF TRANSPORTATION

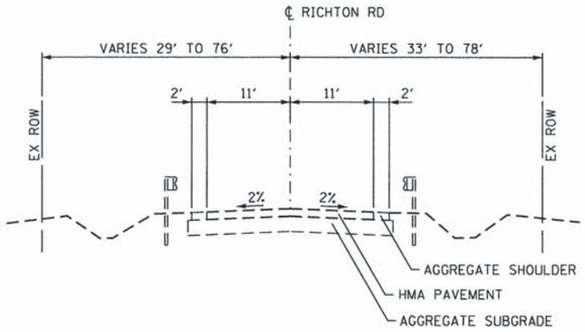
SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	7

CONTRACT NO. 61A02

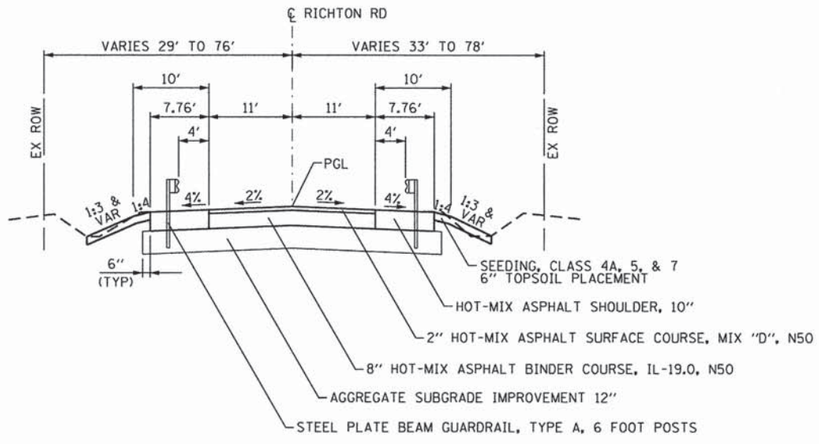
ILLINOIS | FED. AID PROJECT



RICHTON RD EXISTING TYPICAL SECTION

(LOOKING EAST)
STA. 10+80.17 TO STA. 15+13.51

STRUCTURAL DESIGN TRAFFIC: YEAR 2023
PV = 1471 SU = 0 MU = 46
ROAD/STREET CLASSIFICATION: CLASS III
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
P = 50% S = 50% M = 50%
TRAFFIC FACTOR: ACTUAL TF = 0.18 AC TYPE= *
MINIMUM TF = 3.16
PG GRADE: BINDER = PG64-22 SURFACE=SBS-PG64-28
SUBGRADE SUPPORT RATING:
SSR = POOR (STA. 10+50.17 TO STA. 15+43.51)



RICHTON RD PROPOSED TYPICAL SECTION

(LOOKING EAST)
STA. 10+80.17 TO STA. 12+24.50
STA. 13+93.50 TO STA. 15+13.51
BRIDGE & APPROACH SLABS OMISSION STA. 12+24.50 TO STA. 13+93.50

HOT-MIX ASPHALT REQUIREMENTS

MIXTURE TYPE	THICKNESS	AIR VOIDES @ NDES
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL-9.5mm)	2"	4% @ 50 Gyr
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	8" (2 LIFTS)	4% @ 50 Gyr
HOT-MIX ASPHALT SHOULDER, 10" (HMA BINDER IL-19mm)	10" (3 LIFTS)	4% @ 50 Gyr

UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT MIXTURES IS 112 LBS/SQ YD/IN.

* THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS. FOR USE OF RECYCLED MATERIALS, SEE SPECIAL PROVISIONS.

FILE NAME =	DESIGNED - EJA	REVISED -	benesch engineers · scientists · planners	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING AND PROPOSED TYPICAL SECTIONS, HMA REQUIREMENTS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
$FILEA$	DRAWN - JLW	REVISED -				428	11-02118-01-BR	WILL	50	8
USER NAME = $USER$	CHECKED - MPM	REVISED -						CONTRACT NO. 61A02		
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -			SCALE: NTS SHEET NO. 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

SCHEDULES

EARTHWORK SCHEDULE

(1) STAGE & LOCATION	(2) EARTH EXCAVATION (CU. YD.)	(3) EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE (25% FACTOR) (CU. YD.)	(4) EMBANKMENT (CU. YD.)	(5) EARTHWORK BALANCE WASTE (+) OR BORROW (-) (CU. YD.)	(6) TOPSOIL EXCAVATION (CU. YD.)	(7) TOPSOIL PLACEMENT (CU. YD.)
STA. 10+80.17 TO STA. 12+24.50	395	296	63	233	185	95
STA. 13+93.50 TO STA. 15+13.51	1,035	776	952	-176	270	170
BRIDGE OMMISSION AREA, STA. 12+24.50 TO STA. 13+93.50	505	379	290	89	195	80
TOTAL	**1,935**			**145**	**650**	**345**

PAVEMENT AND SHOULDERS

LOCATION	AGGREGATE SUBGRADE IMPROVEMENT, 12"	BITUMINOUS MATERAILS (PRIME COAT)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N50	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	HOT-MIX ASPHALT SHOULDERS, 10"	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.06
	SQ YD	GAL	SQ YD	TON	TON	SQ YD	SQ YD	SQ YD
BRIDGE	0	0	0	0	0	0	0	0
WEST OF BRIDGE	1106	66	79	149	37	24	226	0
EAST OF BRIDGE	0	54	75	121	30	24	218	58
TOTAL	1106	120	153	270	67	49	444	58

LANDSCAPING AND EROSION CONTROL

LOCATION	TEMPORARY FENCE	SEEDING, CLASS 4A	SEEDING, CLASS 5	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	PERIMETER EROSION BARRIER, ROLLED EXCELSIOR	STABILIZED CONSTRUCTION ENTRANCE
	FOOT	ACRE	ACRE	ACRE	POUND	POUND	TON	SQ YD	FOOT	FOOT	SQ YD
BRIDGE	0	0	0	0	0	0	0	0	0	0	0
WEST OF BRIDGE	100	0.08	0.08	0.08	23	23	0.5	395	493	229	73
EAST OF BRIDGE	158	0.12	0.12	0.12	0	0	0	599	430	640	0
TOTAL	258	0.25	0.25	0.25	23	23	0.5	994	923	869	73

GUARDRAIL

LOCATION	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL MARKERS, TYPE A	GUARDRAIL MARKERS, TYPE B
	FOOT	EACH	EACH	EACH	EACH	EACH
BRIDGE	0	0	0	0	0	4
WEST OF BRIDGE	25	2	2	2	3	0
EAST OF BRIDGE	0	2	2	2	2	0
TOTAL	25	4	4	4	5	4

REMOVAL

LOCATION	TREE REMOVAL (6 to 15 UNITS DIAMETER)	PAVEMENT REMOVAL (SPECIAL)	GUARDRAIL REMOVAL
	UNIT	SQ YD	FOOT
BRIDGE	41	0	0
WEST OF BRIDGE	32	421	152
EAST OF BRIDGE	27	355	151
TOTAL	100	777	303

FILE NAME =	DESIGNED - EJA	REVISED -
$FILEA$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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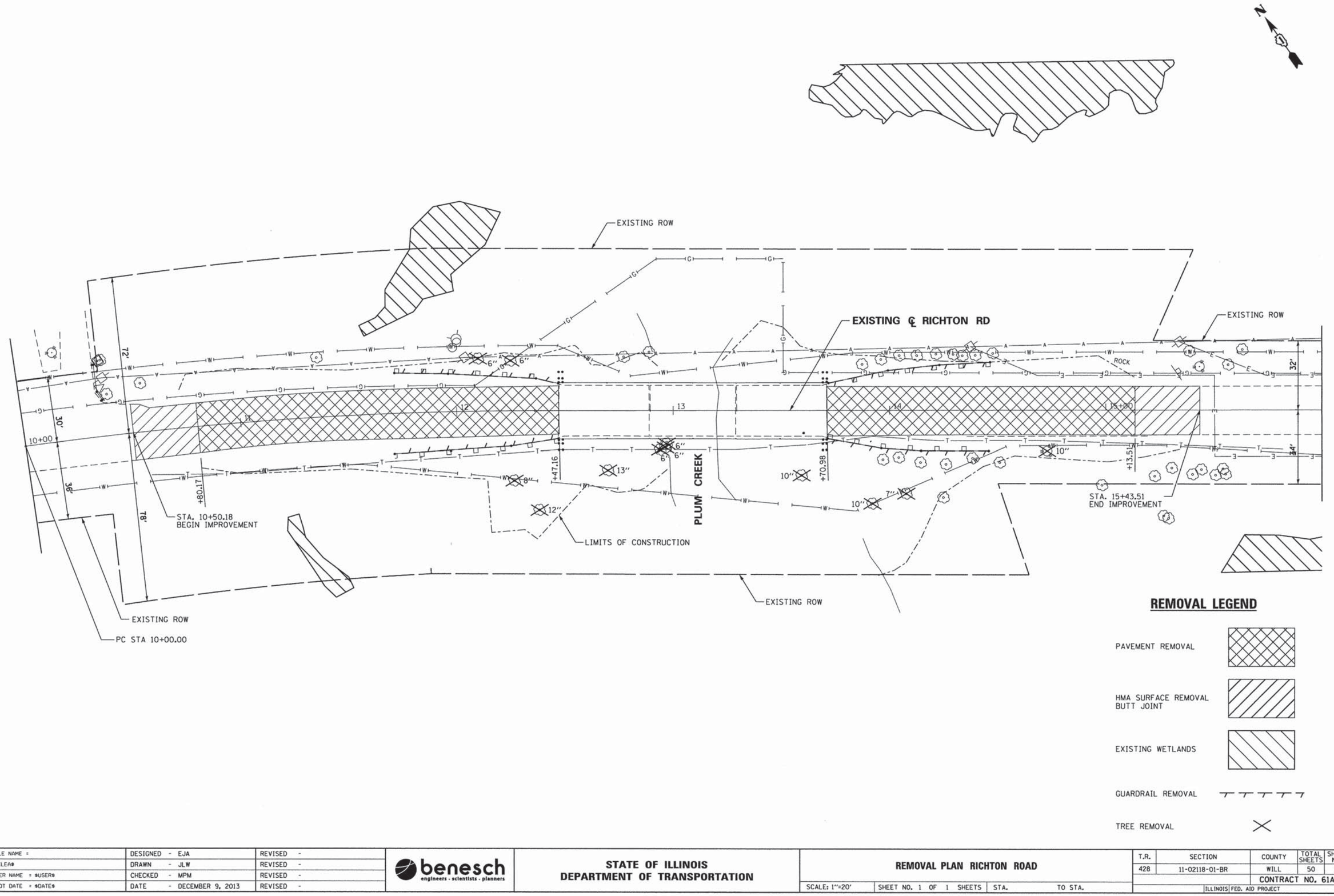
SCHEDULE OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	9
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			



REMOVAL LEGEND

PAVEMENT REMOVAL

HMA SURFACE REMOVAL
BUTT JOINT

EXISTING WETLANDS

GUARDRAIL REMOVAL

TREE REMOVAL

FILE NAME =	DESIGNED - EJA	REVISED -
$FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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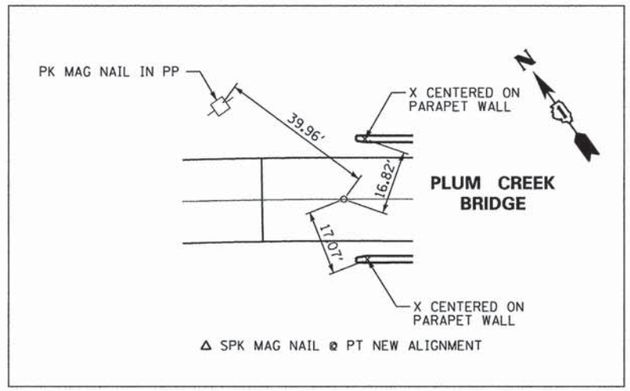
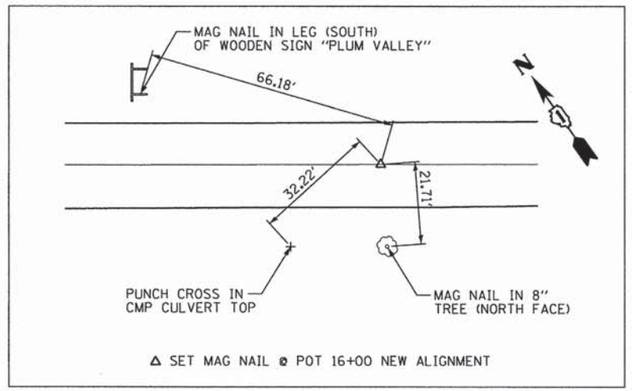
REMOVAL PLAN RICHTON ROAD

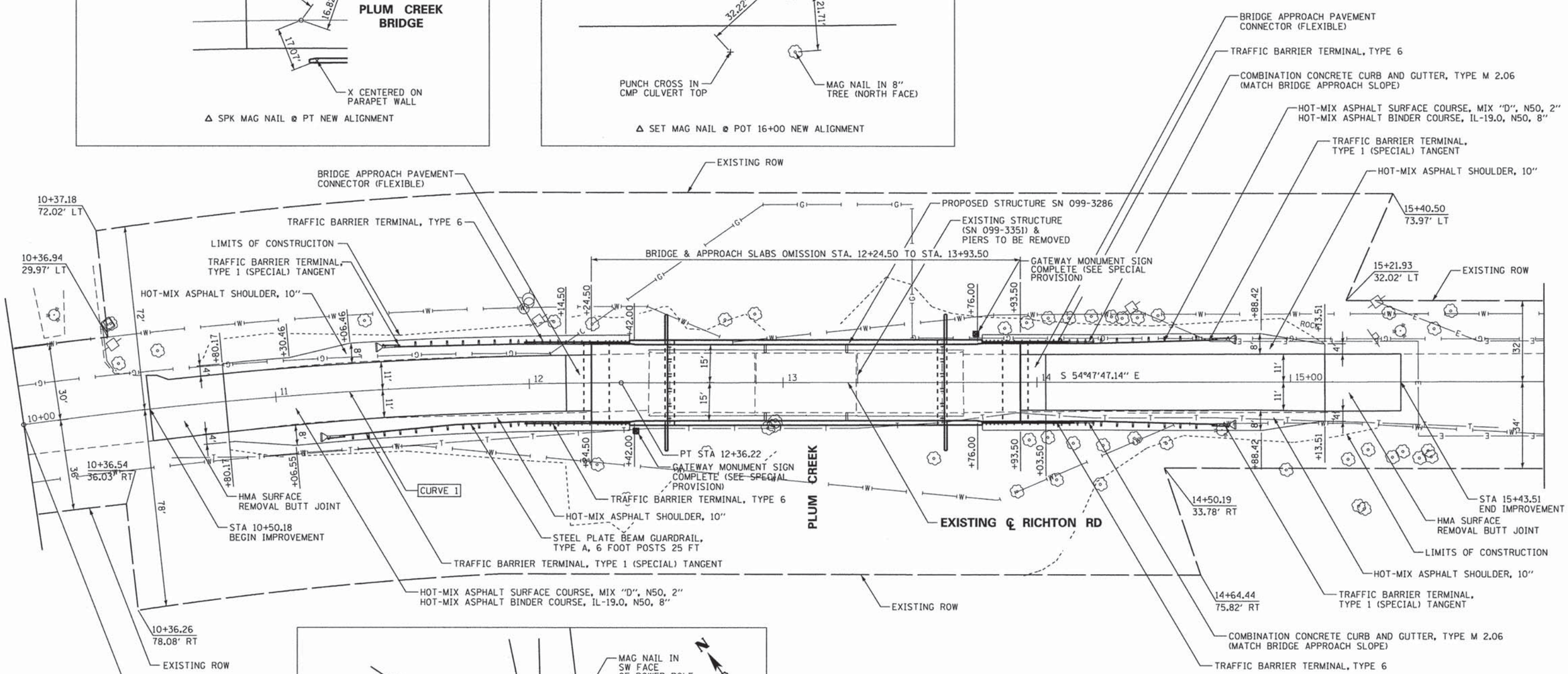
SCALE: 1"=20' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

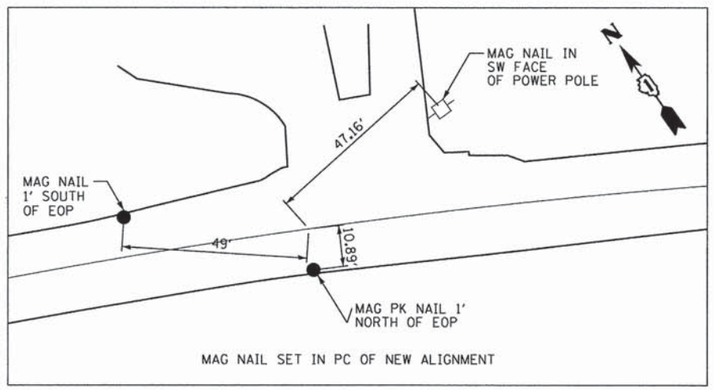
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	10
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			





BENCHMARK: CHISELED SQUARE ON NW WINGWALL AGAINST PARAPET WALL. STA. 12+47.11, 13.06' LT. ELEV. 674.93 (NAVD88)





CURVE 1

P.I. STA = 11+18.30 (N 1,745,772.3068 E 1,198,760.9288)
Δ = 7°49'51.79" (RT)
R = 1728.3350'
T = 118.2966'
L = 236.2248'
E = 4.0437'
e = N.C.
P.C. STA = 10+00.00 (N 1,745,826.6965 E 1,198,655.8771)
P.T. STA = 12+36.22 (N 1,745,704.1108 E 1,198,857.5900)

FILE NAME =	DESIGNED - EJA	REVISED -
$FILEA$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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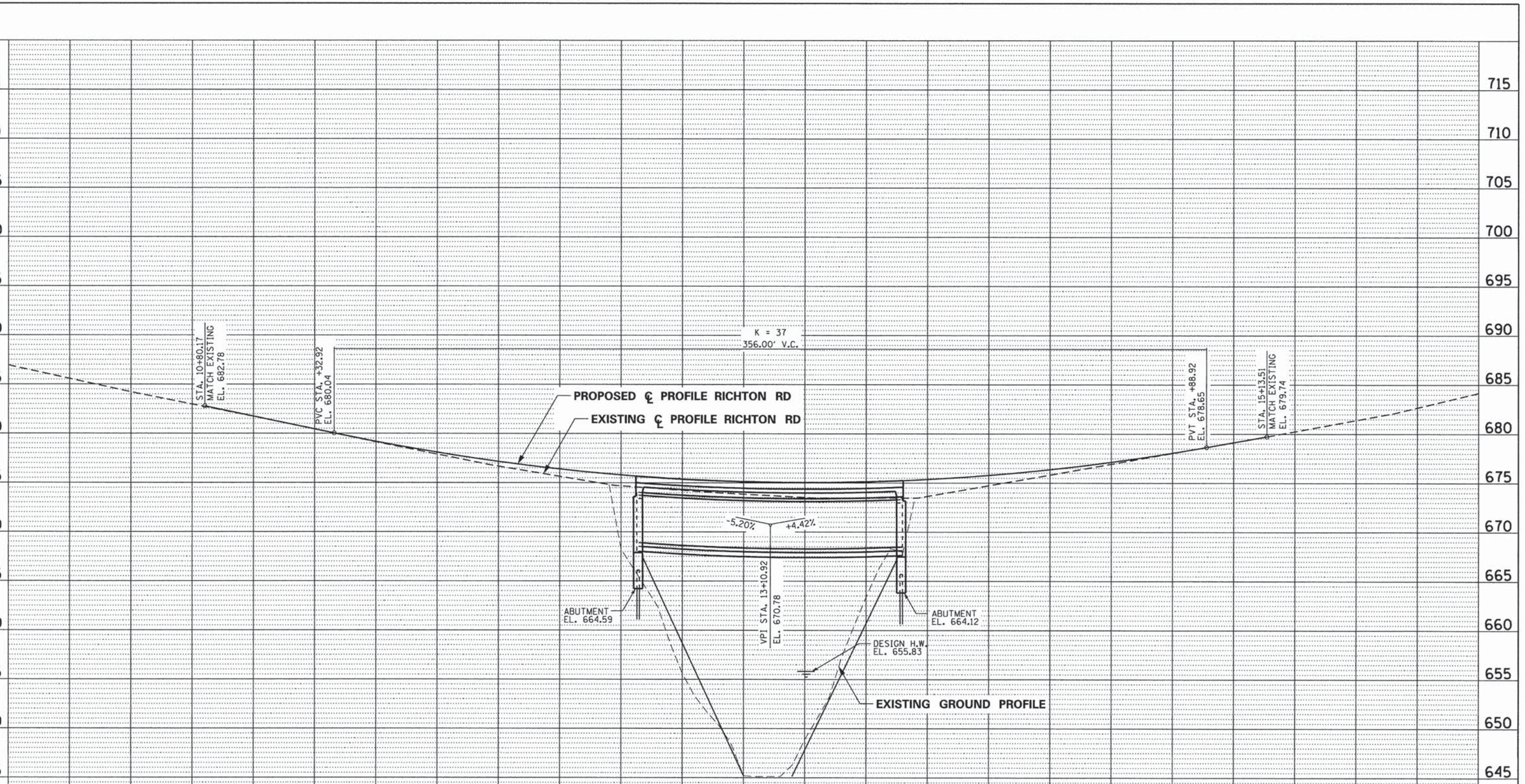
PROPOSED PLAN RICHTON ROAD

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

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	11
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
PROJECT CHECKED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
C400 FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
PROJECT CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE



FILE NAME =	DESIGNED - EJA	REVISED -
$ FILE1$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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DEPARTMENT OF TRANSPORTATION

PROPOSED PROFILE RICHTON ROAD

SCALE: H 1"=20', V 1"=5' | SHEET NO. 1 OF 1 SHEETS | STA. 10+80.17 TO STA. 15+13.51

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	12
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

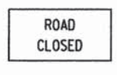
1

2

3

4

5



6

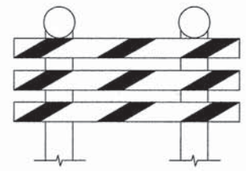
7

8

9

10

11



12

TYPICAL LAYOUT OF SIGNS

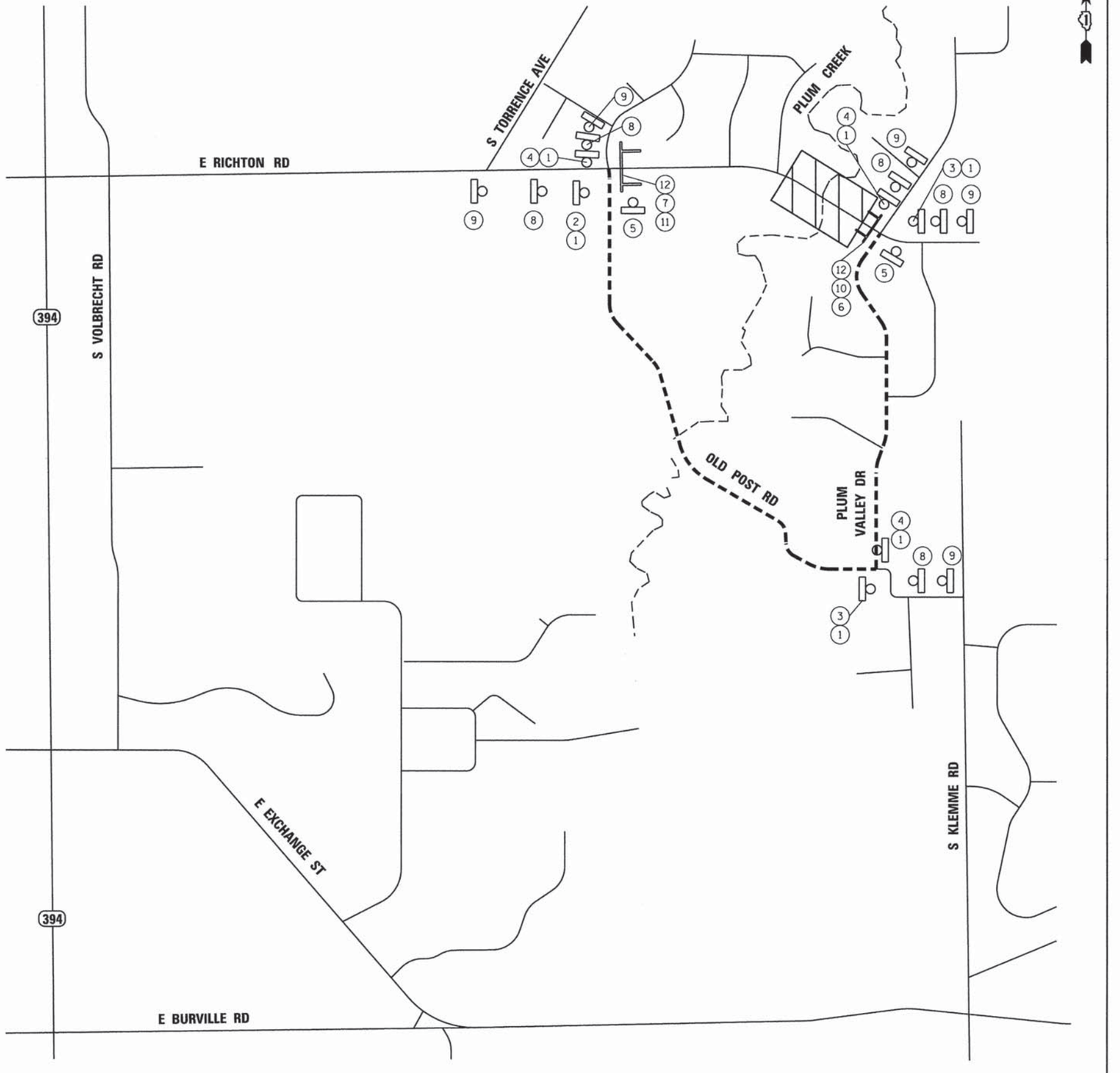
LEGEND

TYPE III BARRICADE

EXISTING GUIDE SIGN ASSEMBLY

NOTE

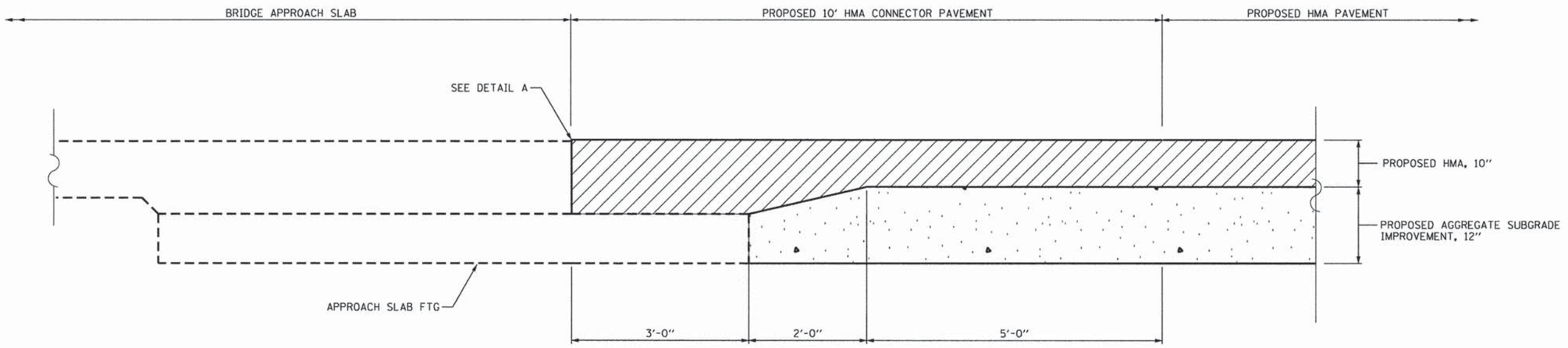
THE CONTRACTOR SHALL INSPECT ALL EXISTING DETOUR SIGNING AND CONFIRM WITH THE TOWNSHIP THE TYPE, CONDITION, AND LOCATION OF ALL EXISTING SIGNS. THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY FOR INSPECTION, MAINTENANCE AND REPLACEMENT OF ALL DETOUR SIGNS THROUGHOUT THE DURATION OF THE PROJECT. ANY SIGNING THAT IS DAMAGED OR REMOVED DUE TO NO FAULT OF THE CONTRACTOR SHALL BE REPLACED IN KIND. THE COST OF SIGN REPLACEMENT WILL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL). AT THE END OF THE PROJECT, THE CONTRACTORSHALL REMOVE ALL SIGNS AND RETURN THEM TO THE TOWNSHIP.



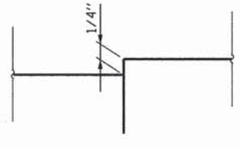
(NOT TO SCALE)

FILE NAME =	DESIGNED - EJA	REVISED -	benesch engineers · scientists · planners	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RICHTON ROAD DETOUR PLAN
$FILEA$	DRAWN - JLW	REVISED -			SCALE: N.T.S. SHEET NO. 1 OF 1 SHEETS STA. TO STA.
USER NAME = $USER$	CHECKED - MPM	REVISED -			
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -			

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	13
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			



BRIDGE APPROACH PAVEMENT CONNECTOR (HMA)



DETAIL A

NOTE:

1. SEE HWY. STD. 420401 FOR DETAILS NOT SHOWN.

FILE NAME =	DESIGNED - EJA	REVISED -
$FILEA$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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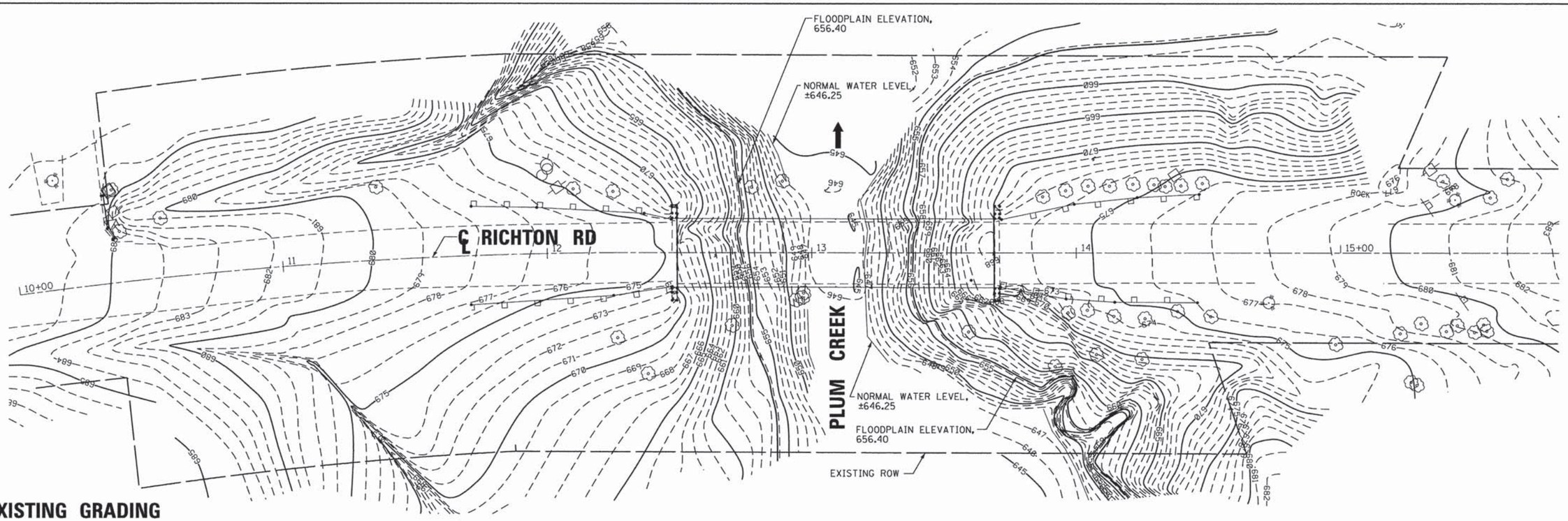
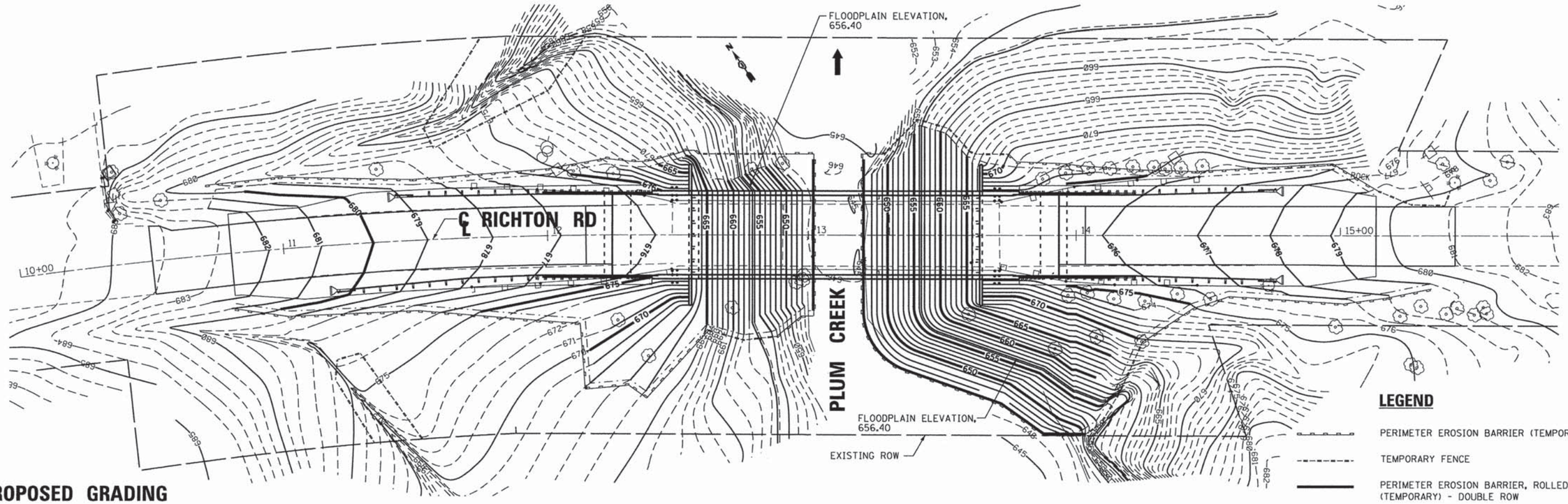
ROADWAY DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	14
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			



EXISTING GRADING



PROPOSED GRADING

LEGEND

PERIMETER EROSION BARRIER (TEMPORARY)

TEMPORARY FENCE

PERIMETER EROSION BARRIER, ROLLED EXCELSIOR (TEMPORARY) - DOUBLE ROW

FILE NAME =	DESIGNED - EJA	REVISED -
$FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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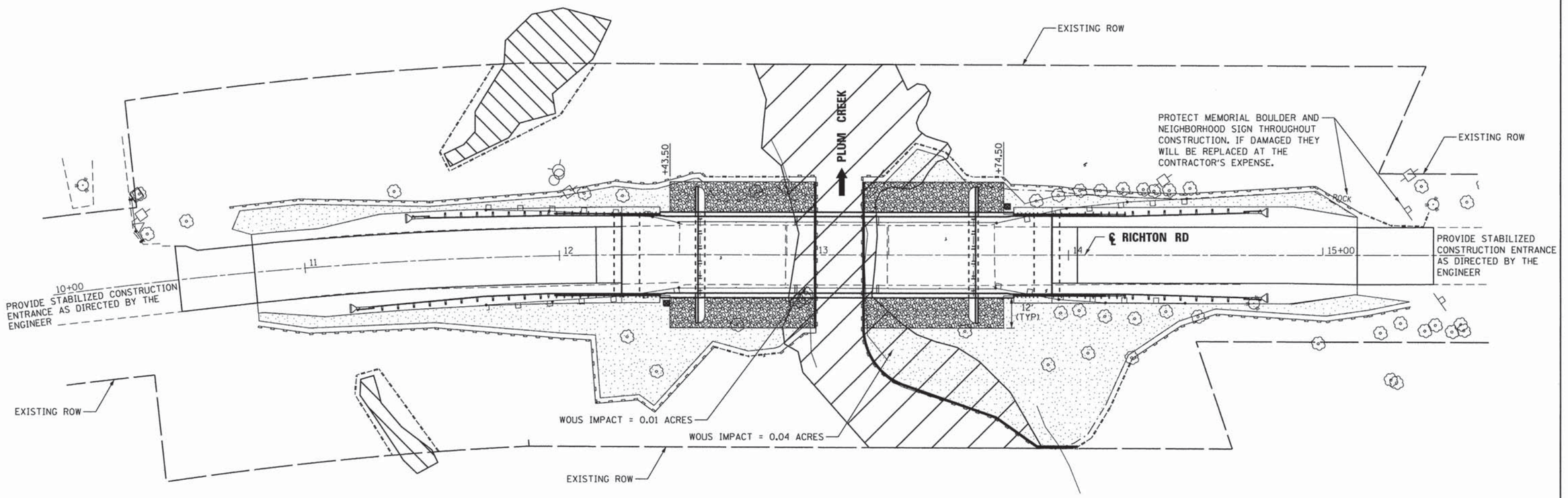
PROPOSED GRADING PLAN

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

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	15
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			



LEGEND

- PERIMETER EROSION BARRIER (TEMPORARY)
- TEMPORARY FENCE
- PERIMETER EROSION BARRIER, ROLLED EXCELSIOR (TEMPORARY) - DOUBLE ROW
- STONE RIPRAP, CLASS A4 (SPECIAL)
- SEEDING, CLASS 4A, 5, AND 7 WITH EROSION CONTROL BLANKET (FOR LIMITS OF SEEDING SEE GENERAL NOTE 1)
- EXISTING WETLANDS (NOT IMPACTED)
- WATERS OF THE U.S. (NOT IMPACTED)

FILE NAME =	DESIGNED - EJA	REVISED -
$FILEA$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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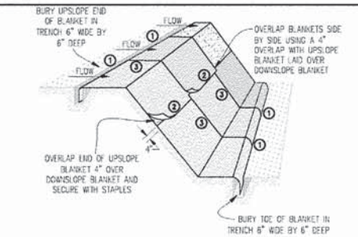
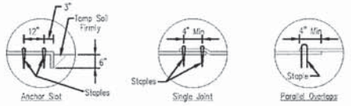
EROSION AND SEDIMENT CONTROL PLAN AND LANDSCAPING PLAN

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

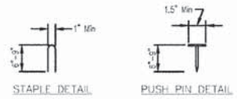
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	16
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

EROSION CONTROL BLANKET PLAN





DETAIL 1 DETAIL 2 DETAIL 3



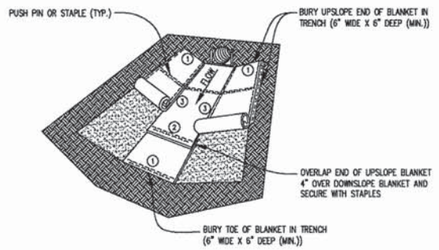
STAPLE DETAIL PUSH PIN DETAIL

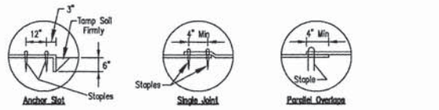
NOTES:

1. Staples shall be placed in a diamond pattern at 2 per s.y. for stiched blankets. Non-stiched shall use 4 staples per s.y. of material. This equates to 200 staples with stiched blanket and 400 stapels with non-stiched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

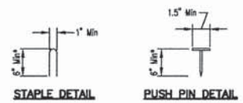
EROSION CONTROL BLANKET INSTALLATION DETAILS

EROSION CONTROL BLANKET - TURF REINFORCEMENT MAT (TRM)





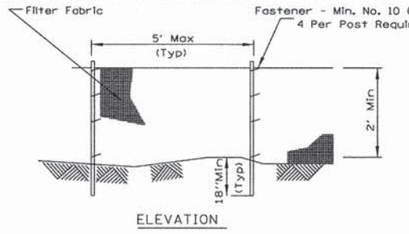
DETAIL 1 DETAIL 2 DETAIL 3



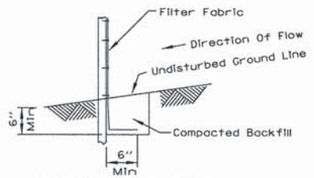
STAPLE DETAIL PUSH PIN DETAIL

*Note:
1. For sandy soil conditions, staple or push pin shall be a minimum 8 inches.

PERIMETER EROSION BARRIER PLAN



ELEVATION



FABRIC ANCHOR DETAIL

NOTES:

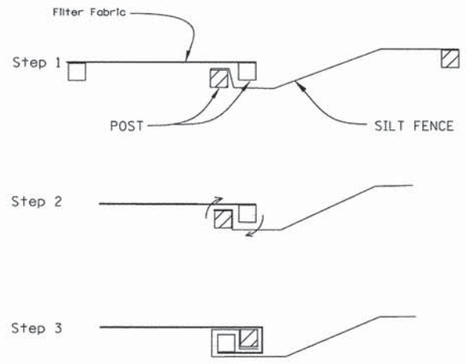
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification Article 1080.02
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-620 SHEET 1 OF 2 DATE 11-20-01

PERIMETER EROSION BARRIER



ATTACHING TWO SILT FENCES

NOTES:

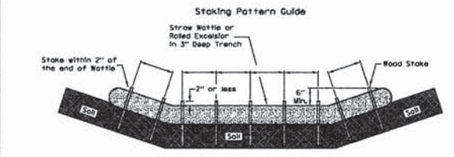
1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Drive both posts a minimum of 18 inches into the ground and bury the flap.

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

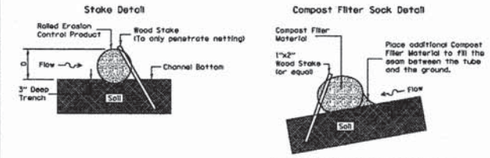
STANDARD DWG. NO. IL-620(W) SHEET 2 OF 2 DATE 1-29-99

ROLLED EROSION CONTROL PRODUCTS



Notes:

1. Overlap minimum is the diameter of the roll.
2. 4' spacing for wattles.
3. 2' spacing for rolled excelsior.
4. Or space according to manufacturer's specifications.



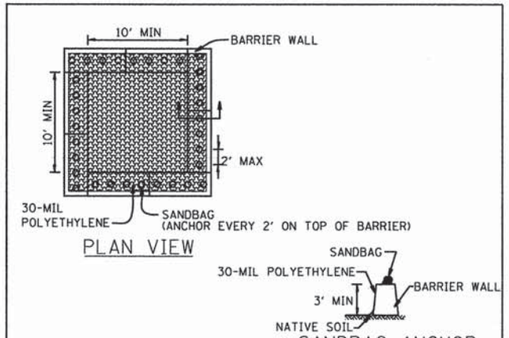
When compost filter sock ditch check is used, place a compost berm upstream of the filter sock (see IUM 805). A trench is not required.

Notes:

1. Drawings are not to scale.
2. Ends of wattles or rolled excelsior shall be turned at least 6" upslope.
3. Recommended stakes are 1 1/8" wide x 1 1/8" thick x 30" long
4. Stakes shall not extend above the straw wattle more than 2".
5. Spacing: The toe of the upstream ditch check shall create a horizontal line with the top of the downstream ditch check.
6. When compost filter sock ditch check is used, place a compost berm upstream of the filter sock (see IUM 805). A trench is not required.

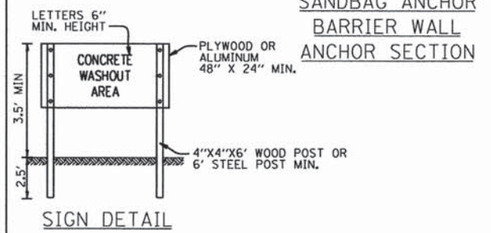
REFERENCE Project Designed Date Checked Date Approved Date

STANDARD DWG. NO. IUM-514 SHEET 1 OF 1 DATE 8-19-11



PLAN VIEW

SANDBAG ANCHOR BARRIER WALL ANCHOR SECTION



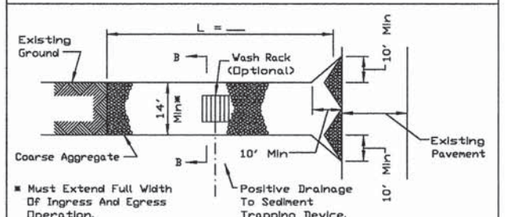
SIGN DETAIL

NOTES:

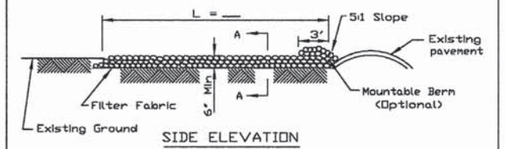
1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

TEMPORARY CONCRETE WASHOUT FACILITY - BARRIER WALL

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW



SIDE ELEVATION

NOTES:

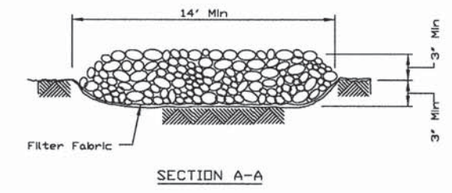
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE Project Designed Date Checked Date Approved Date

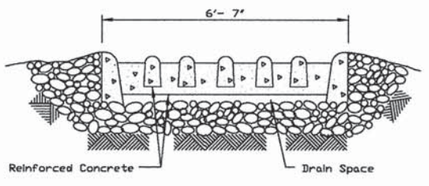
NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630 SHEET 1 OF 2 DATE 8-18-94

STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A-A



SECTION B-B

REFERENCE Project Designed Date Checked Date Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630 SHEET 2 OF 2 DATE 8-18-94

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$FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL DETAILS

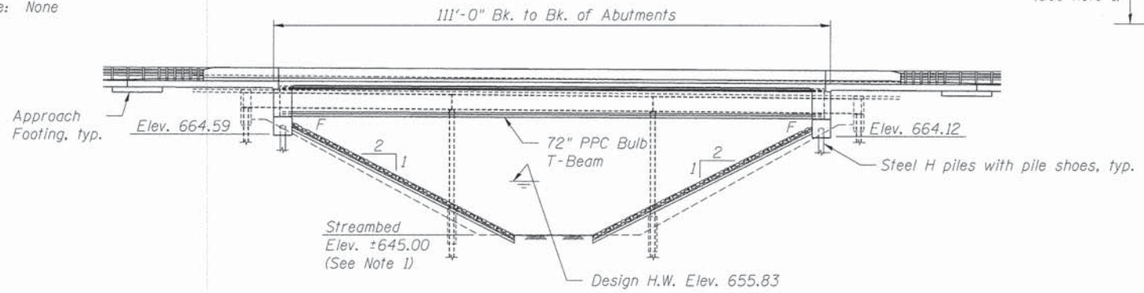
SCALE: NTS | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	17
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

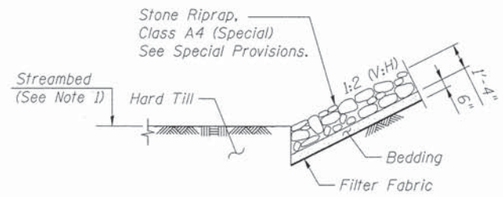
Benchmark: Chiseled square on NW wingwall against parapet wall, Sta. 12+47.11, 13.06' /Lt. Elev. 674.93 (NAVD88).

Existing Structure: SN 099-3351 was originally built in 1978 as Richton Road over Plum Creek and consists of a three span non-continuous W30x90 weathering steel beam superstructure on pile bent abutments and piers. The bridge is 124'-1½" back to back of abutments and 26'-0" out to out. Bridge was closed to traffic in 2012. Structure to be removed and replaced while traffic utilizes the existing detour.

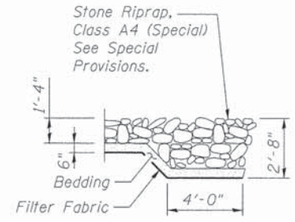
Salvage: None



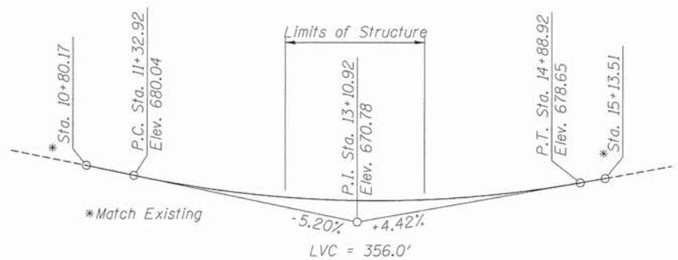
ELEVATION



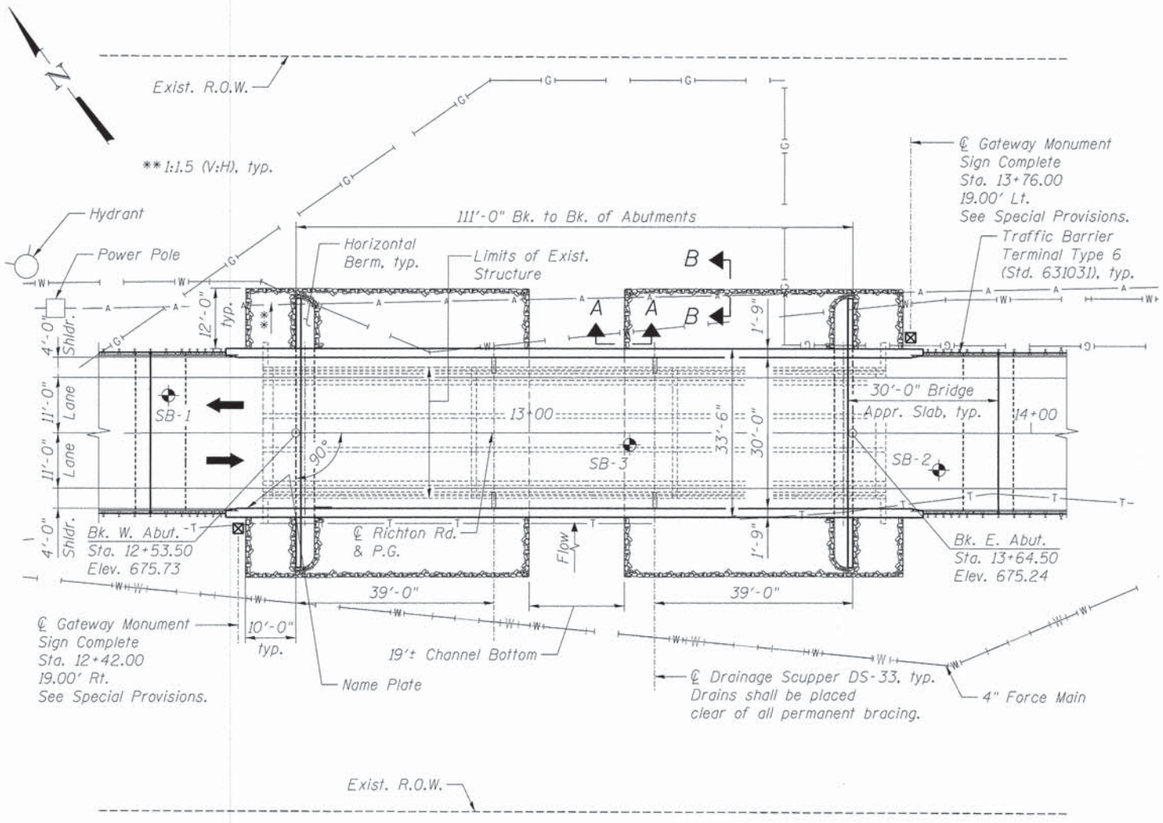
SECTION A-A



SECTION B-B



PROFILE GRADE
(along ℄ Richton Road)



PLAN

WATERWAY INFORMATION

Drainage Area = 32.3 sq mi

Existing Low Grade Elev. 673.47 at Sta. 13+70
Proposed Low Grade Elev. 675.03 at Sta. 13+25

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1152	352	332	655.01	0.66	0.06	655.67	655.07
Design	30	1500	401	379	655.83	0.69	0.05	656.52	655.88
Base	100	1800	436	413	656.40	0.70	0.05	657.10	656.45
Overtopping Existing	–	–	–	–	–	–	–	–	–
Overtopping Proposed	–	–	–	–	–	–	–	–	–
Max. Calc.	500	2370	493	469	657.29	0.72	0.04	658.01	657.33

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)	
W. Abut.	E. Abut.
664.59	664.12

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
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f_{pu} = 270,000 psi (½" ϕ low lax. strands)
f_{pbt} = 201,960 psi (½" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.068 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.120 g
Soil Site Class = C

PLUM CREEK
BUILT 20__ BY
CRETE TOWNSHIP
SEC. 11-02118-01-BR
T.R. 428 STA. 13+09.00
STR. NO. 099-3286 LOADING HL-93

NAME PLATE

(See Std. 515001)

NOTES:

1. Replace disturbed stream bed with natural earth material.
2. For utilities to be relocated, see Roadway Plans and Special Provisions.

LEGEND

- SB-1 - Indicates Soil Boring Location and Number
- -G- Exist. Underground Gas Line
- -W- Exist. Underground Water Line
- -A- Exist. Aerial Line
- -T- Exist. Underground Telephone

MARK R. BENDORF
081-006516
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2014
DATE: 12/05/2013

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 Bridge Design Specification.

LOCATION SKETCH

GENERAL PLAN AND ELEVATION
RICHTON ROAD OVER PLUM CREEK
T.R. 428 - SEC. 11-02118-01-BR
WILL COUNTY
STATION 13+09.00
STRUCTURE NO. 099-3286

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10204

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	PLOT DATE = 12/5/2013	CHECKED - MRB/MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. S1 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	18
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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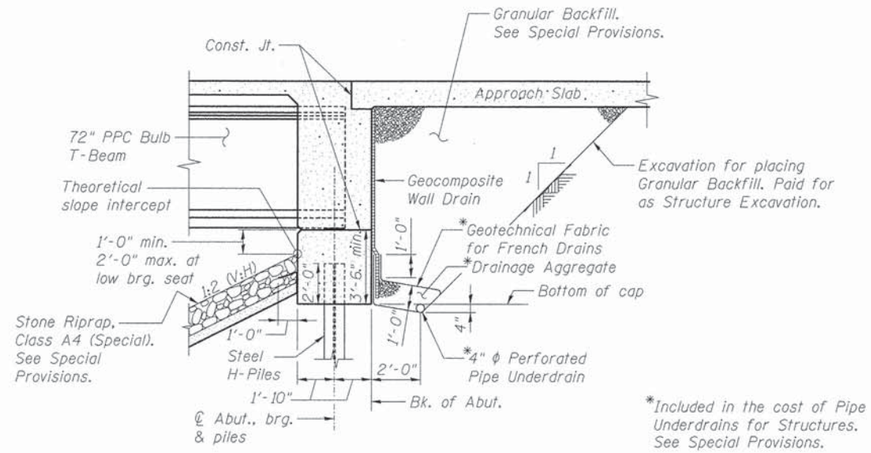
GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
3. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
4. Slip forming of the parapets is not allowed.
5. The existing bridge is closed to traffic and has a Sufficiency Rating = 29.0. Prior to starting the work, the Contractor shall submit to the Engineer for review and acceptance a Demolition Plan in accordance with Article 501 of the Standard Specifications.
6. The removal of the existing broken concrete under the bridge shall be included in the cost of "Removal of Existing Structures" and shall be done to the limits and depth of the proposed grouted riprap. No additional compensation will be made for removal outside these limits than is required to complete the work.
7. The contractor shall not allow concrete or other demolition or construction materials or debris to fall or roll into the creek during demolition and construction operations. Any cost associated with preventive measures shall not be paid for separately but be considered as included in the unit price(s) for the associated work.
8. The Contractor shall maintain at all times a 10 foot minimum horizontal clearance from the overhead ComEd 12 kV lines. If this minimum clearance cannot be maintained, the Contractor shall request from ComEd a power outage. ComEd requires up to 16 weeks of lead time for any outage. Any necessary outage will be at the expense of the Contractor.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Filter Fabric	Sq Yd		707	707
Removal of Existing Structures	Each			1
Structure Excavation	Cu Yd		49	49
Concrete Structures	Cu Yd		65.3	65.3
Concrete Superstructure	Cu Yd	290.8		290.8
Bridge Deck Grooving	Sq Yd	526		526
Protective Coat	Sq Yd	674		674
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams 72"	Foot	542.0		542.0
Reinforcement Bars, Epoxy Coated	Pound	54,250	11,820	66,070
Furnishing Steel Piles HP14x73	Foot		650	650
Driving Piles	Foot		650	650
Test Pile Steel HP14x73	Each		2	2
Pile Shoes	Each		12	12
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq Yd		109	109
Drainage Scuppers, DS-33	Each	4		4
Pipe Underdrains For Structures, 4"	Foot		142	142
Stone Riprap, Class A4 (Special)	Sq Yd		707	707
Granular Backfill for Structures	Cu Yd		293	293
Gateway Monument Sign Complete	Each	2		2
Railing	Foot	258		258



*Included in the cost of Pipe Underdrains for Structures. See Special Provisions.

SECTION THRU INTEGRAL ABUTMENT

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

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Chicago, Illinois 60601
312-565-0450 Job No. 10204

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 099-3286
SHEET NO. S2 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	19
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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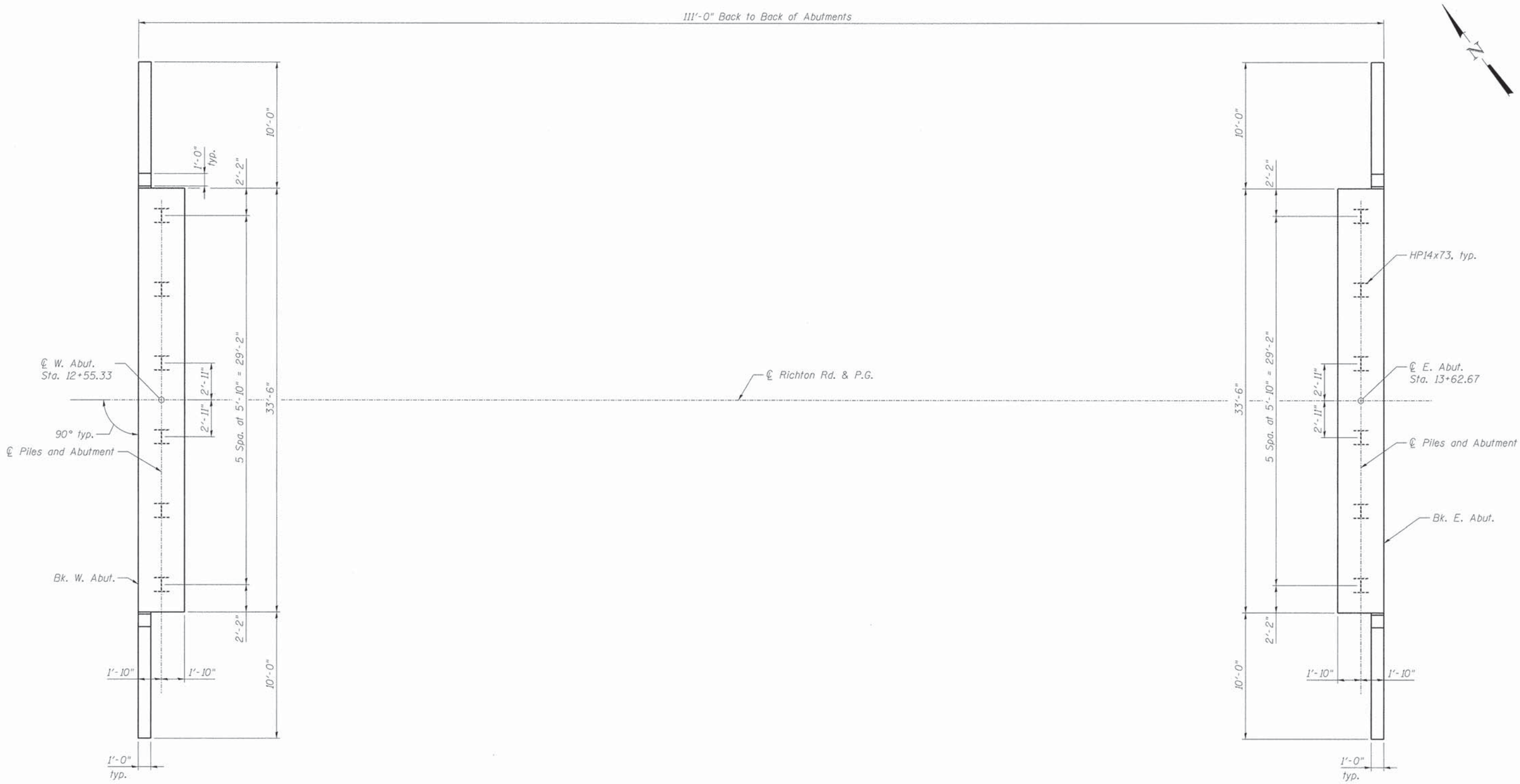

PLAN

LEGEND:

I Indicates vertical pile.

NOTE:

There will be one test pile at each abutment. Location to be determined in the field by the Engineer.

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	PLOT DATE = 12/5/2013	CHECKED - MRB/MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOOTING LAYOUT
STRUCTURE NO. 099-3286
SHEET NO. S3 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	20
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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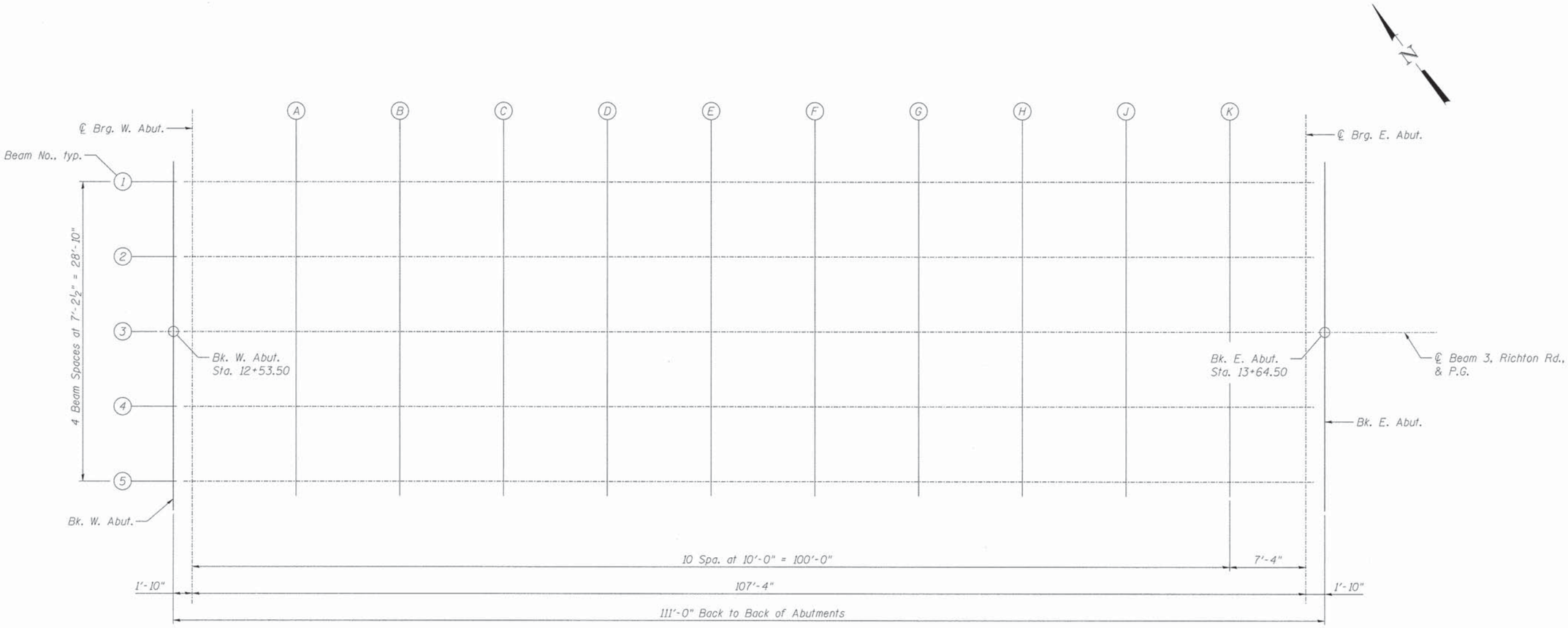

PLAN

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATION LAYOUT
STRUCTURE NO. 099-3286
SHEET NO. S4 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	21
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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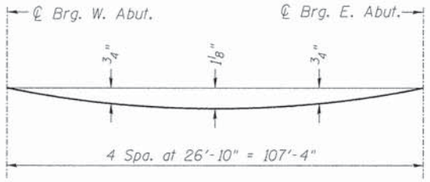
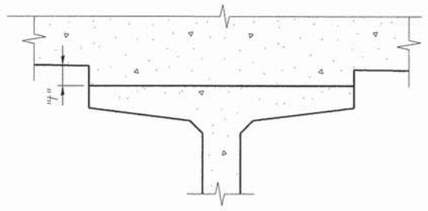


DEAD LOAD DEFLECTION DIAGRAM

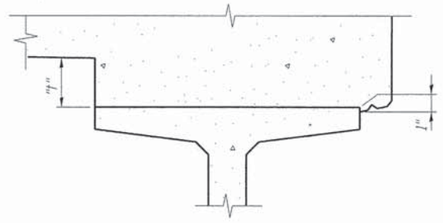
(Includes weight of concrete, excluding beams)

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 below.



INTERIOR BEAM

To determine "t": After all PPC beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet height "t" above top flange of beams.



EXTERIOR BEAM

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	12+53.50	-14.42	675.49	675.49
℄ Brg. W. Abut.	12+55.33	-14.42	675.45	675.45
A	12+65.33	-14.42	675.28	675.30
B	12+75.33	-14.42	675.13	675.18
C	12+85.33	-14.42	675.01	675.08
D	12+95.33	-14.42	674.91	674.99
E	13+05.33	-14.42	674.85	674.93
F	13+15.33	-14.42	674.80	674.89
G	13+25.33	-14.42	674.79	674.87
H	13+35.33	-14.42	674.80	674.87
J	13+45.33	-14.42	674.85	674.89
K	13+55.33	-14.42	674.91	674.93
℄ Brg. E. Abut.	13+62.67	-14.42	674.98	674.98
Bk. E. Abut.	13+64.50	-14.42	675.00	675.00

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	12+53.50	-7.21	675.62	675.62
℄ Brg. W. Abut.	12+55.33	-7.21	675.58	675.58
A	12+65.33	-7.21	675.41	675.44
B	12+75.33	-7.21	675.26	675.31
C	12+85.33	-7.21	675.14	675.21
D	12+95.33	-7.21	675.04	675.13
E	13+05.33	-7.21	674.98	675.07
F	13+15.33	-7.21	674.94	675.03
G	13+25.33	-7.21	674.92	675.01
H	13+35.33	-7.21	674.94	675.00
J	13+45.33	-7.21	674.98	675.02
K	13+55.33	-7.21	675.04	675.06
℄ Brg. E. Abut.	13+62.67	-7.21	675.11	675.11
Bk. E. Abut.	13+64.50	-7.21	675.13	675.13

BEAM 3 & ℄ RICHTON ROAD & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	12+53.50	0.00	675.73	675.73
℄ Brg. W. Abut.	12+55.33	0.00	675.70	675.70
A	12+65.33	0.00	675.52	675.55
B	12+75.33	0.00	675.37	675.43
C	12+85.33	0.00	675.25	675.32
D	12+95.33	0.00	675.16	675.24
E	13+05.33	0.00	675.09	675.18
F	13+15.33	0.00	675.05	675.14
G	13+25.33	0.00	675.03	675.12
H	13+35.33	0.00	675.05	675.12
J	13+45.33	0.00	675.09	675.14
K	13+55.33	0.00	675.16	675.18
℄ Brg. E. Abut.	13+62.67	0.00	675.22	675.22
Bk. E. Abut.	13+64.50	0.00	675.24	675.24

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	12+53.50	7.21	675.62	675.62
℄ Brg. W. Abut.	12+55.33	7.21	675.58	675.58
A	12+65.33	7.21	675.41	675.44
B	12+75.33	7.21	675.26	675.31
C	12+85.33	7.21	675.14	675.21
D	12+95.33	7.21	675.04	675.13
E	13+05.33	7.21	674.98	675.07
F	13+15.33	7.21	674.94	675.03
G	13+25.33	7.21	674.92	675.01
H	13+35.33	7.21	674.94	675.00
J	13+45.33	7.21	674.98	675.02
K	13+55.33	7.21	675.04	675.06
℄ Brg. E. Abut.	13+62.67	7.21	675.11	675.11
Bk. E. Abut.	13+64.50	7.21	675.13	675.13

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	12+53.50	14.42	675.49	675.49
℄ Brg. W. Abut.	12+55.33	14.42	675.45	675.45
A	12+65.33	14.42	675.28	675.30
B	12+75.33	14.42	675.13	675.18
C	12+85.33	14.42	675.01	675.08
D	12+95.33	14.42	674.91	674.99
E	13+05.33	14.42	674.85	674.93
F	13+15.33	14.42	674.80	674.89
G	13+25.33	14.42	674.79	674.87
H	13+35.33	14.42	674.80	674.87
J	13+45.33	14.42	674.85	674.89
K	13+55.33	14.42	674.91	674.93
℄ Brg. E. Abut.	13+62.67	14.42	674.98	674.98
Bk. E. Abut.	13+64.50	14.42	675.00	675.00

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF DECK ELEVATIONS
STRUCTURE NO. 099-3286
SHEET NO. 55 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	22
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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NORTH EDGE OF SHOULDER

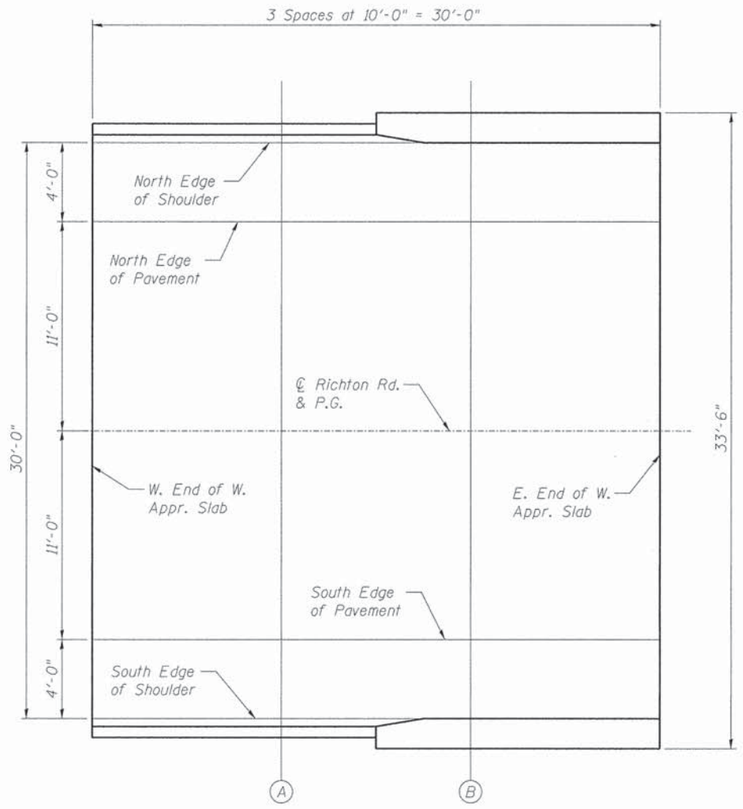
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	12+24.50	-15.00	676.15
A	12+34.50	-15.00	675.90
B	12+44.50	-15.00	675.66
E. End of W. Appr. Slab	12+54.50	-15.00	675.46
W. End of E. Appr. Slab	13+63.50	-15.00	674.98
C	13+73.50	-15.00	675.09
D	13+83.50	-15.00	675.24
E. End of E. Appr. Slab	13+93.50	-15.00	675.41

NORTH EDGE OF PAVEMENT

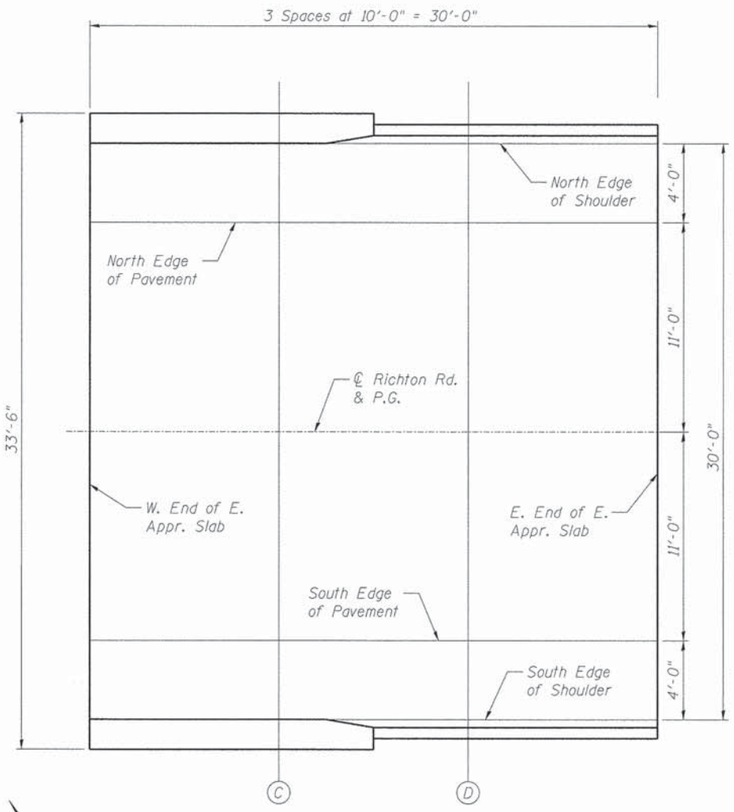
Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	12+24.50	-11.00	676.24
A	12+34.50	-11.00	675.98
B	12+44.50	-11.00	675.75
E. End of W. Appr. Slab	12+54.50	-11.00	675.54
W. End of E. Appr. Slab	13+63.50	-11.00	675.06
C	13+73.50	-11.00	675.18
D	13+83.50	-11.00	675.32
E. End of E. Appr. Slab	13+93.50	-11.00	675.49

℄ RICHTON ROAD & P.G.

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	12+24.50	0.00	676.41
A	12+34.50	0.00	676.15
B	12+44.50	0.00	675.92
E. End of W. Appr. Slab	12+54.50	0.00	675.71
W. End of E. Appr. Slab	13+63.50	0.00	675.23
C	13+73.50	0.00	675.35
D	13+83.50	0.00	675.49
E. End of E. Appr. Slab	13+93.50	0.00	675.66



WEST APPROACH SLAB



EAST APPROACH SLAB

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	12+24.50	11.00	676.24
A	12+34.50	11.00	675.98
B	12+44.50	11.00	675.75
E. End of W. Appr. Slab	12+54.50	11.00	675.54
W. End of E. Appr. Slab	13+63.50	11.00	675.06
C	13+73.50	11.00	675.18
D	13+83.50	11.00	675.32
E. End of E. Appr. Slab	13+93.50	11.00	675.49

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Appr. Slab	12+24.50	15.00	676.15
A	12+34.50	15.00	675.90
B	12+44.50	15.00	675.66
E. End of W. Appr. Slab	12+54.50	15.00	675.46
W. End of E. Appr. Slab	13+63.50	15.00	674.98
C	13+73.50	15.00	675.09
D	13+83.50	15.00	675.24
E. End of E. Appr. Slab	13+93.50	15.00	675.41

PLAN

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TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 099-3286
SHEET NO. S6 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	23
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

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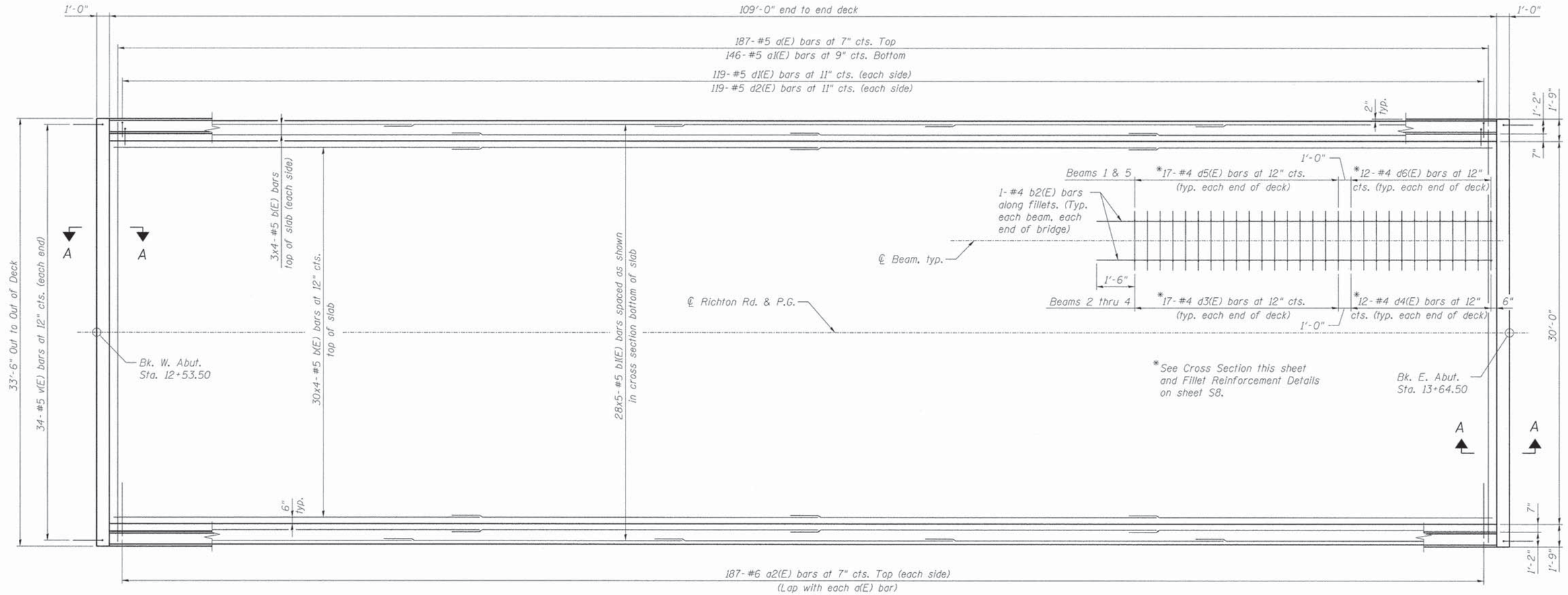
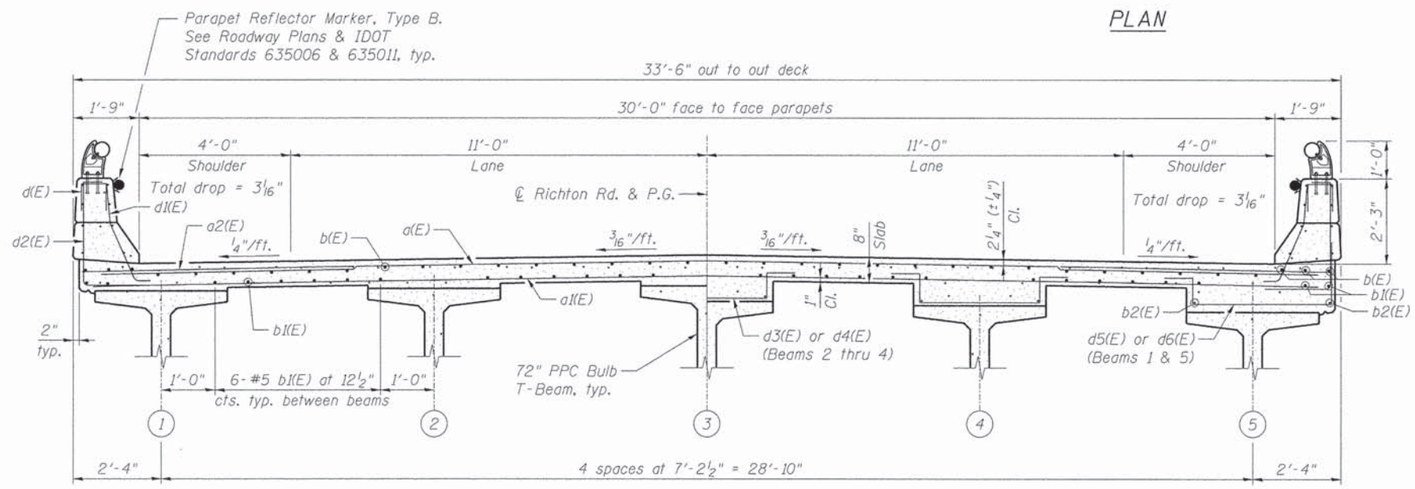


PLAN

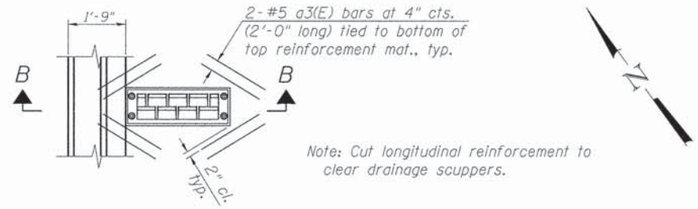


AT MIDSPAN

CROSS SECTION

(Looking Upstation)

NEAR ABUTMENT



Note: Cut longitudinal reinforcement to clear drainage scuppers.

SCUPPER REINFORCEMENT

(4 Thus)

NOTES:

1. For Superstructure Details, Bill of Material, Section B-B, and parapet reinforcement, see sheet S8
2. For Section A-A and diaphragm details, see sheet S10.
3. Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

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SUPERSTRUCTURE
STRUCTURE NO. 099-3286
SHEET NO. S7 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	24
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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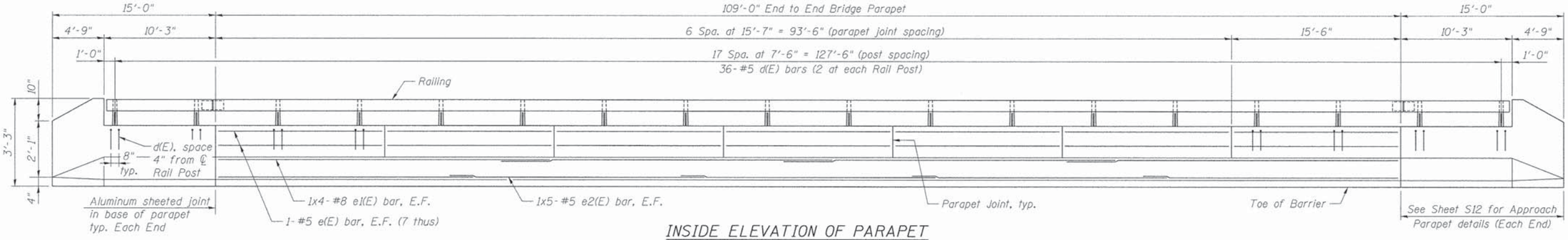
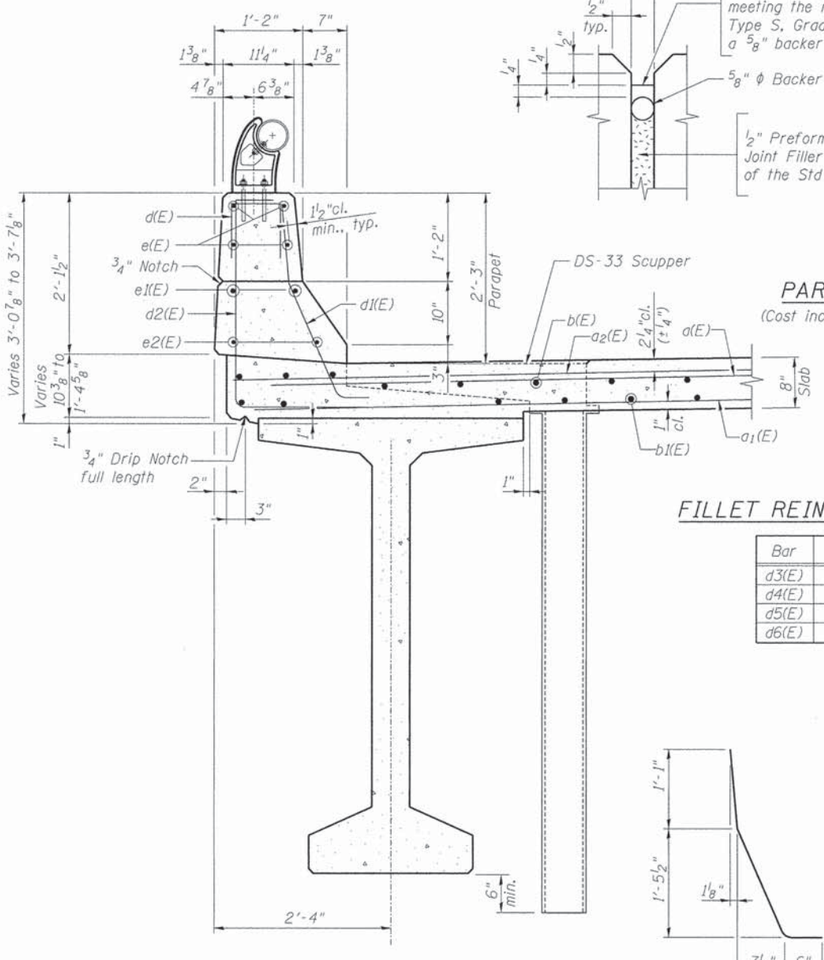
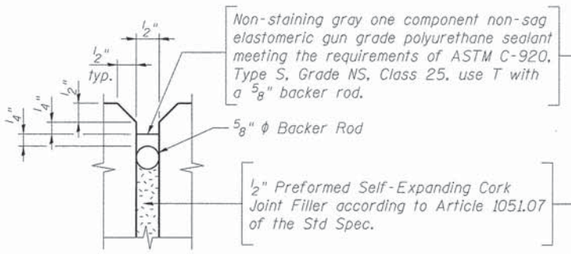
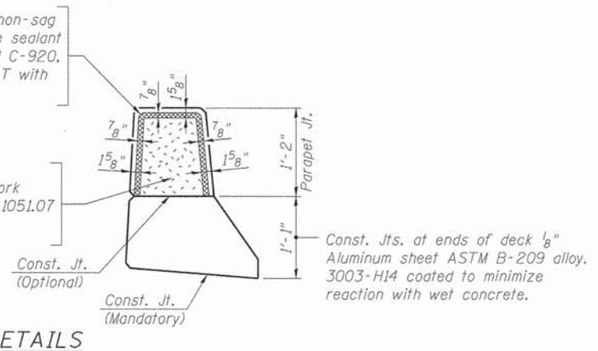


INSIDE ELEVATION OF PARAPET



SECTION B-B



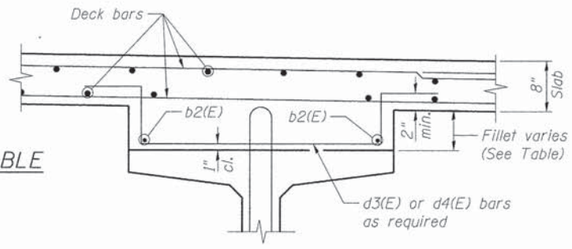


PARAPET JOINT DETAILS

(Cost included with Concrete Superstructure)

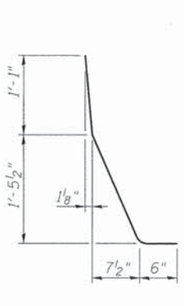
FILLET REINFORCEMENT TABLE

Bar	Fillet Range
d3(E)	2 1/2" to 5"
d4(E)	5" to 7 1/2"
d5(E)	2 1/2" to 5"
d6(E)	5" to 7 1/2"

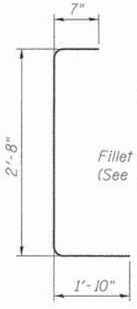


FILLET REINFORCEMENT DETAIL

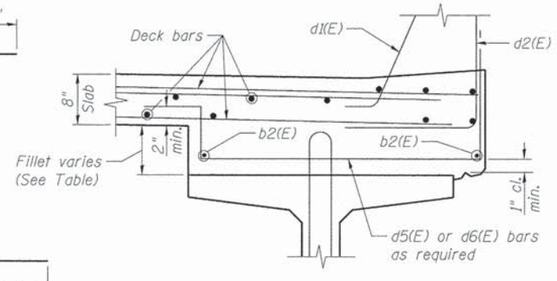
(Beams 2 thru 4)



BAR d1(E)

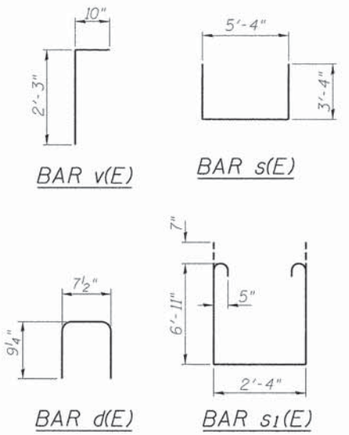


BAR d2(E)



FILLET REINFORCEMENT DETAIL

(Beams 1 & 5)



SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	187	#5	32'-10"	
d1(E)	146	#5	32'-10"	
d2(E)	374	#6	6'-6"	
d3(E)	32	#5	2'-0"	
b(E)	144	#5	29'-8"	
b1(E)	140	#5	24'-4"	
b2(E)	20	#4	29'-10"	
d(E)	72	#5	2'-2"	
d1(E)	238	#5	3'-3"	
d2(E)	238	#5	5'-1"	
d3(E)	102	#4	5'-4"	
d4(E)	72	#4	5'-9"	
d5(E)	68	#4	6'-8"	
d6(E)	48	#4	7'-1"	
e(E)	56	#5	15'-3"	
e1(E)	16	#8	31'-1"	
e2(E)	20	#5	23'-9"	
m(E)	14	#6	33'-2"	
m1(E)	40	#6	6'-4"	
m2(E)	20	#6	1'-9"	
m3(E)	8	#6	4'-8"	
m4(E)	4	#6	0'-11"	
m5(E)	30	#5	4'-0"	
s(E)	56	#5	12'-0"	
s1(E)	44	#5	17'-4"	
v(E)	68	#5	3'-1"	
Reinforcement Bars, Epoxy Coated			Lbs.	32,680
Concrete Superstructure			Cu. Yds.	187.6

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

MINIMUM BAR LAP

(Deck)	(Parapet)
#4 bar = 2'-7"	#4 bar = 2'-0"
#5 bar = 3'-3"	#5 bar = 2'-6"
#6 bar = 3'-10"	#8 bar = 5'-2"

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	PLOT DATE = 12/5/2013	CHECKED - MFH/MRB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 099-3286
SHEET NO. S8 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	25
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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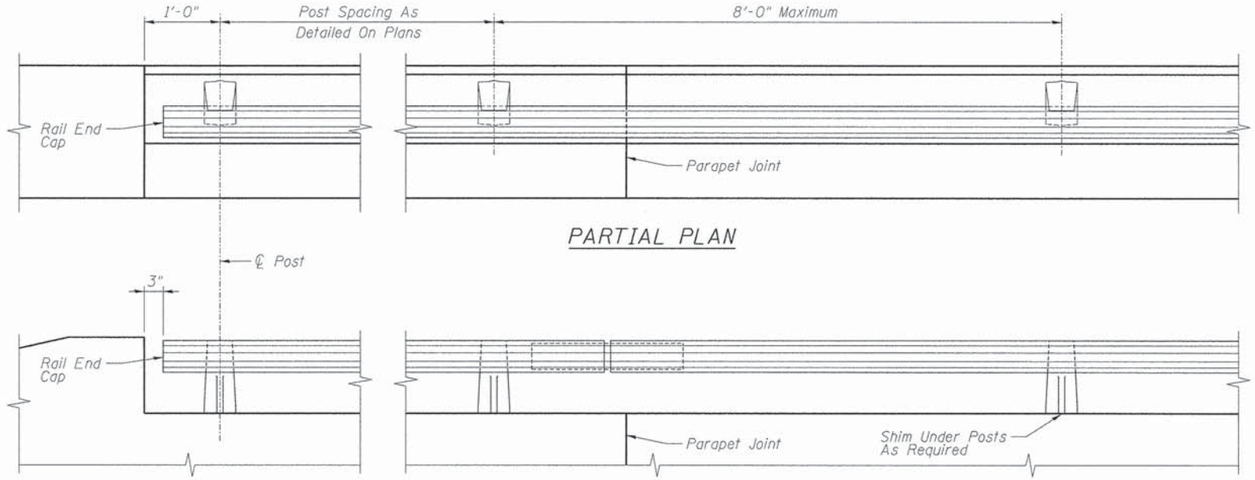
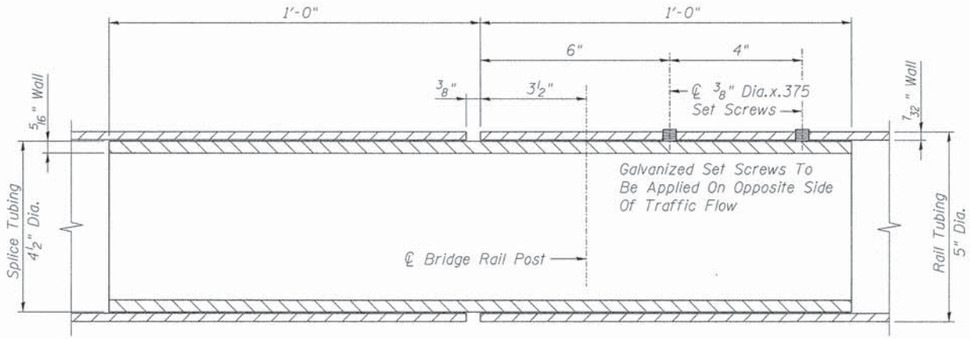


PARTIAL PLAN

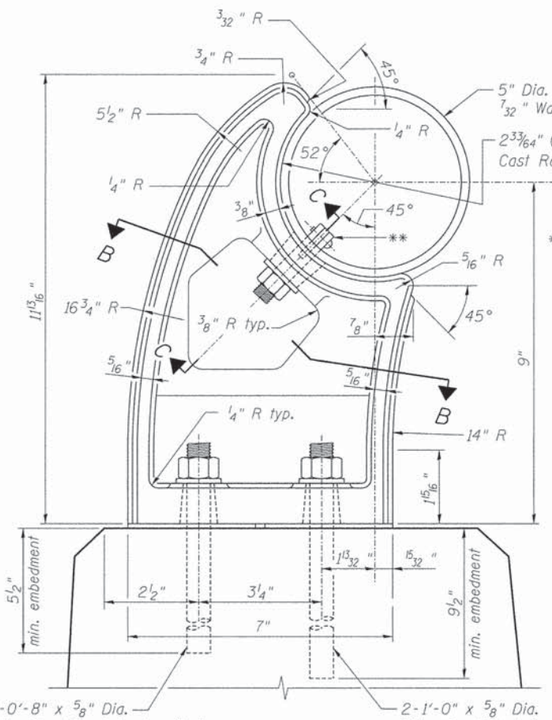
PARTIAL ELEVATION



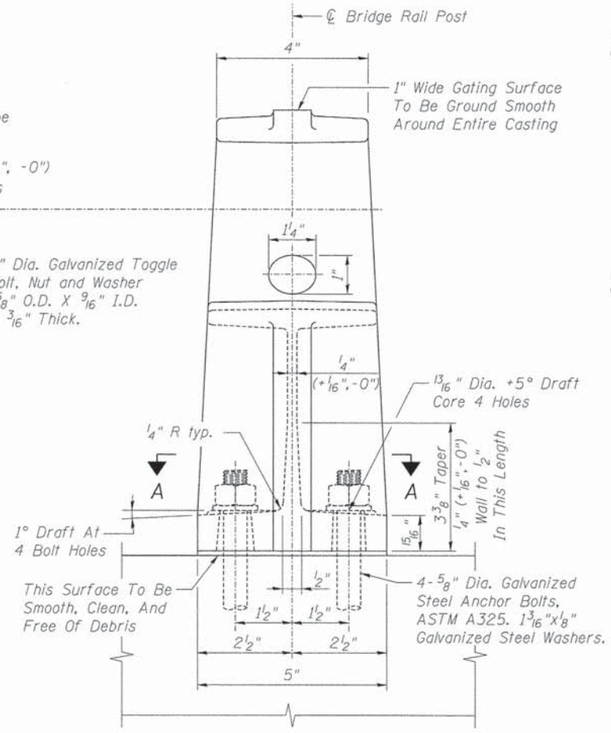
INSIDE SPLICE DETAIL

NOTES:

1. Railing to conform to vertical and horizontal alignment.
2. Joints to be placed 25'-0" center to center, max.
3. Slip joint to be placed in panels to match end of deck.
4. Design weight: 6 1/4 lbs. per foot.
5. Unless otherwise specified all draft to be 3°.
6. All unmarked Radii to be 1/8" R.
7. After fabrication all exposed surfaces of aluminum shall be given an anodic oxide coating, dyed black, conforming to the requirements of ASTM designation: B 580, Type B, Architectural Class I. See Special Provisions.
8. Three aluminum shims per post, one at 1/8" and two at 1/16" shall be provided for 25 percent of the posts.
9. At the Contractor option, either cast in place anchor devices or drilled and set anchor rods may be used to attach the posts to the concrete. Drilling and setting of anchor rods shall be according to Article 509.06. Cost of anchor devices and rods shall be included in the cost of Railing.

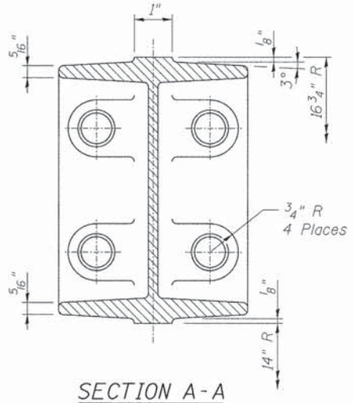


RAILING DETAILS

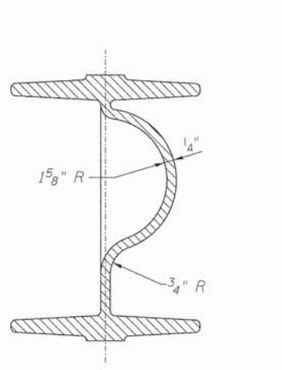


BILL OF MATERIAL

Item	Unit	Total
Railing	Ft.	258



SECTION A-A



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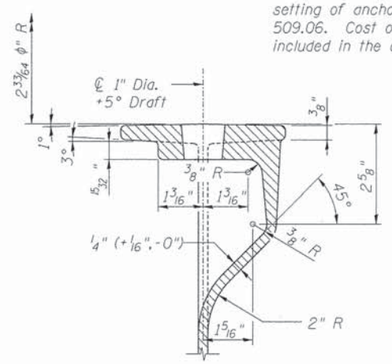

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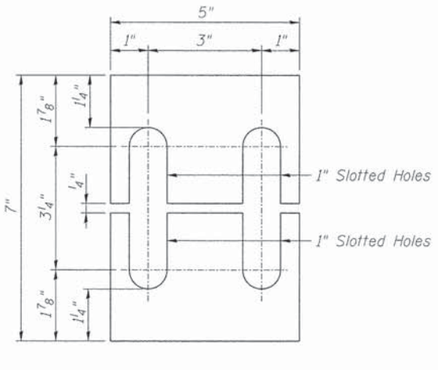
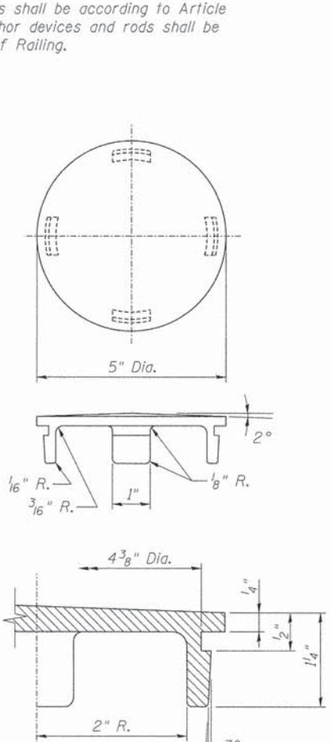


SHIM DETAIL



RAIL END CAP DETAILS

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STATE OF ILLINOIS
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ALUMINUM RAIL DETAILS
STRUCTURE NO. 099-3286
SHEET NO. 59 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	26
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

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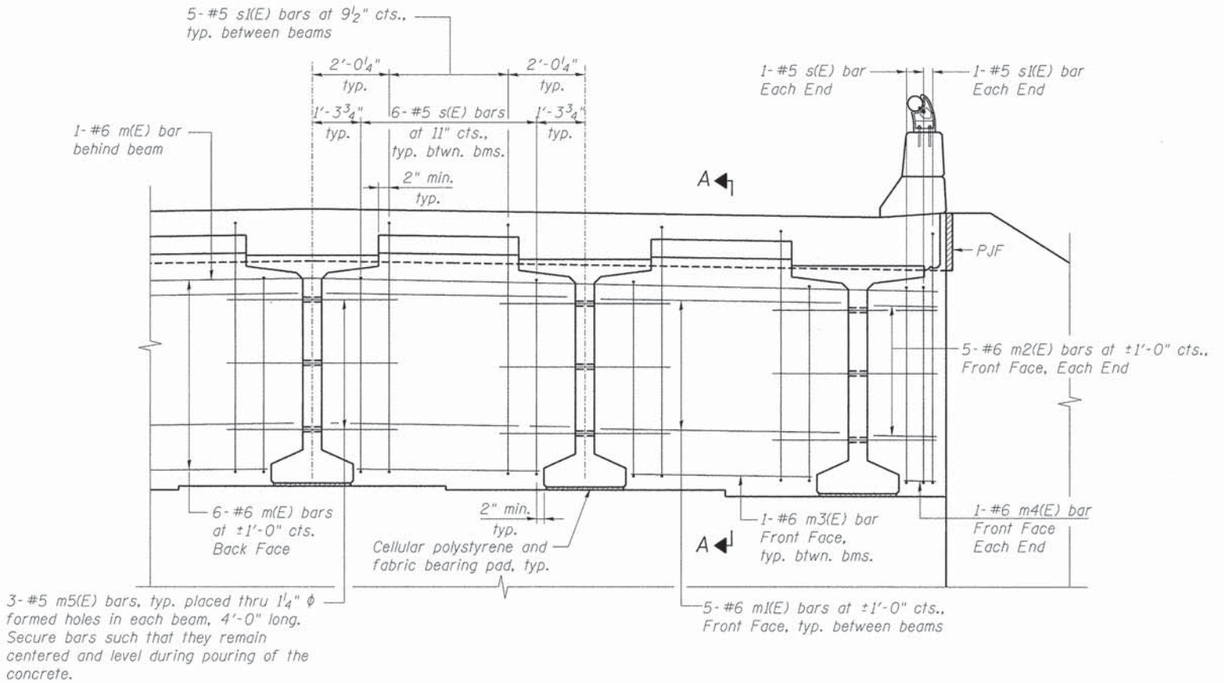
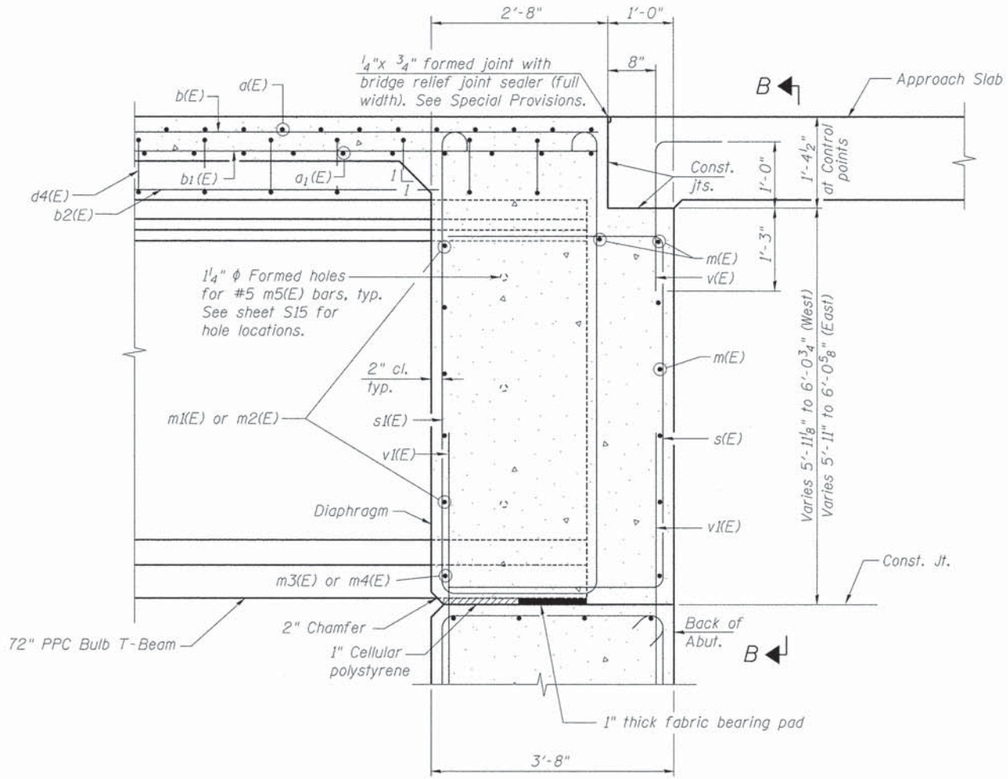
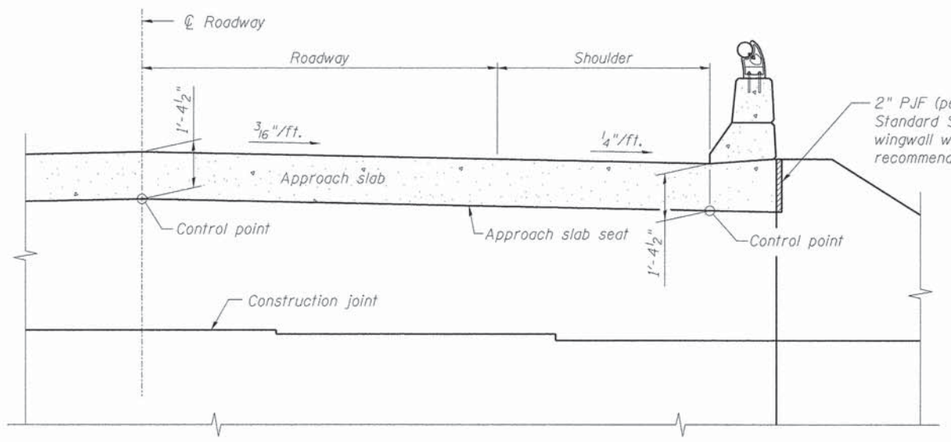


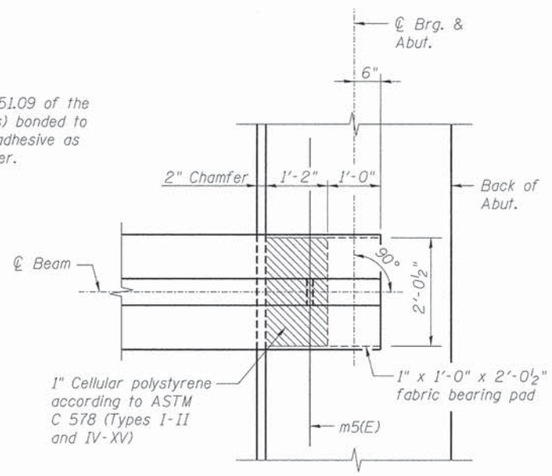
DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A



SECTION B-B



PARTIAL PLAN AT ABUTMENT
(Showing bottom flange of beam)

NOTES:

1. Reinforcement bars in diaphragm are billed with superstructure on sheet S8.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet S8.
3. For details of bars s(E), s1(E) and v(E) see sheet S8.
4. The approach slab seat shall have a constant slope determined from the control points shown.
5. Cost of cellular polystyrene is included with Concrete Superstructure.
6. Cost of fabric bearing pad is included with PPC Bulb T-Beams.

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DPBTI-0 8-31-12

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	PLOT DATE = 12/5/2013	CHECKED - MFH/MRB	REVISED -

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DIAPHRAGM DETAILS
STRUCTURE NO. 099-3286
SHEET NO. S10 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	27
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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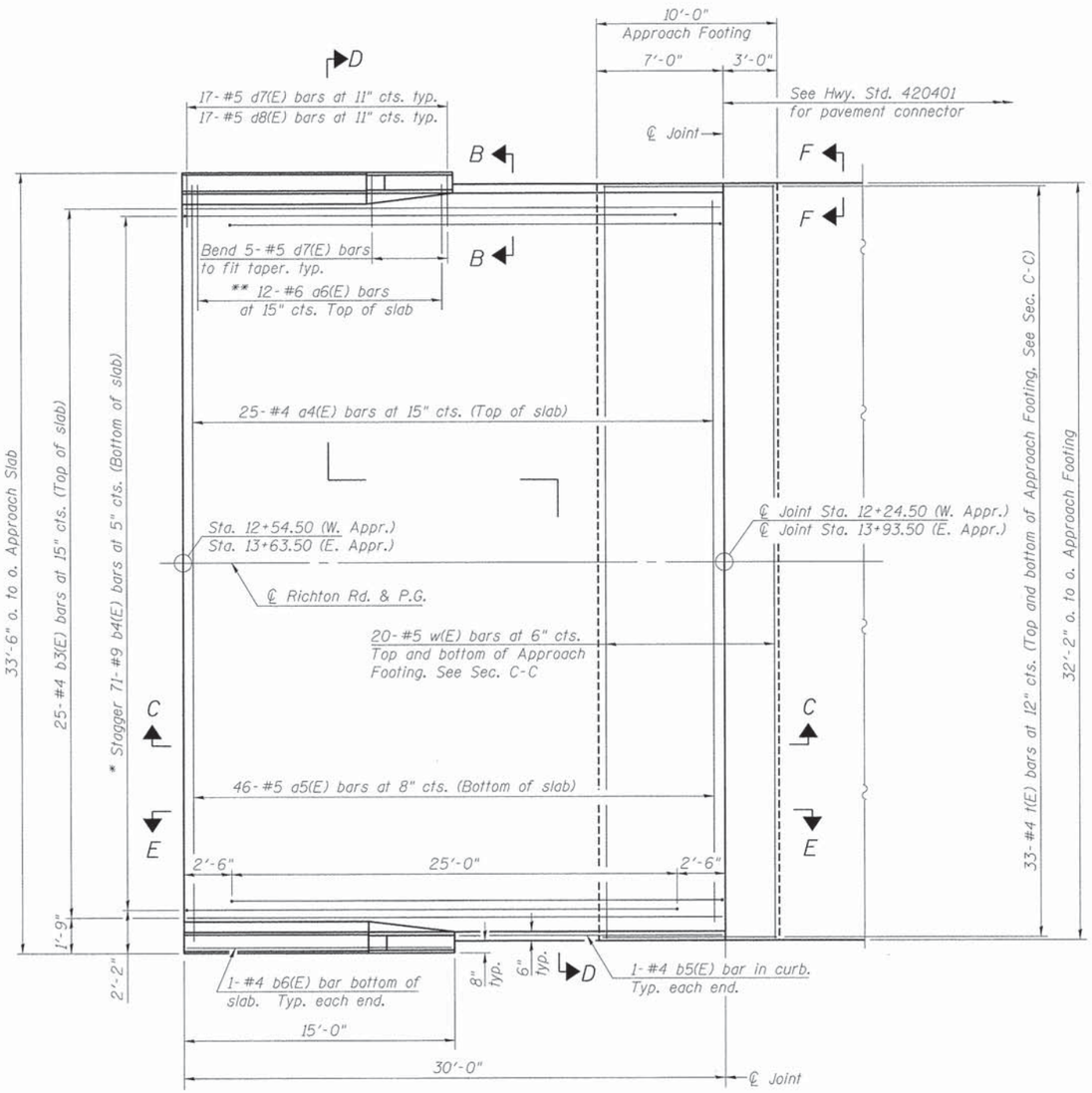
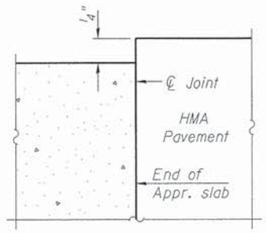


PLAN

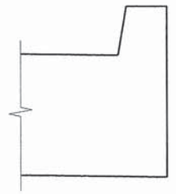
(East approach slab shown, west slab opposite hand)

* Tilt #9 b4(E) bars as required to maintain clearance.
** Space between a4(E) bars, typ. ea. parapet.

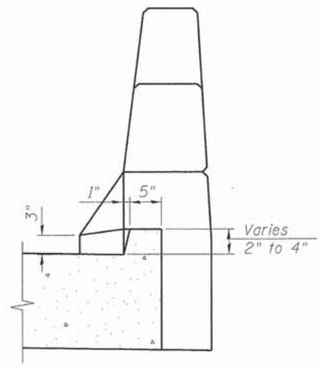


FLEXIBLE PAVEMENT

DETAIL A



VIEW F-F



VIEW B-B

NOTE:

See sheet S12 for Sections C-C & D-D and View E-E.

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BRIDGE APPROACH SLAB DETAILS 1 OF 2
STRUCTURE NO. 099-3286
SHEET NO. S11 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	28
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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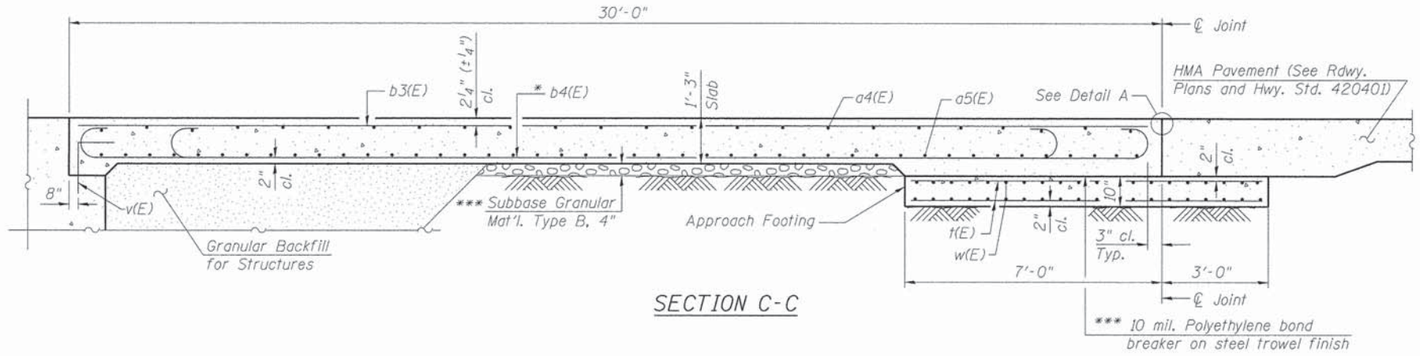
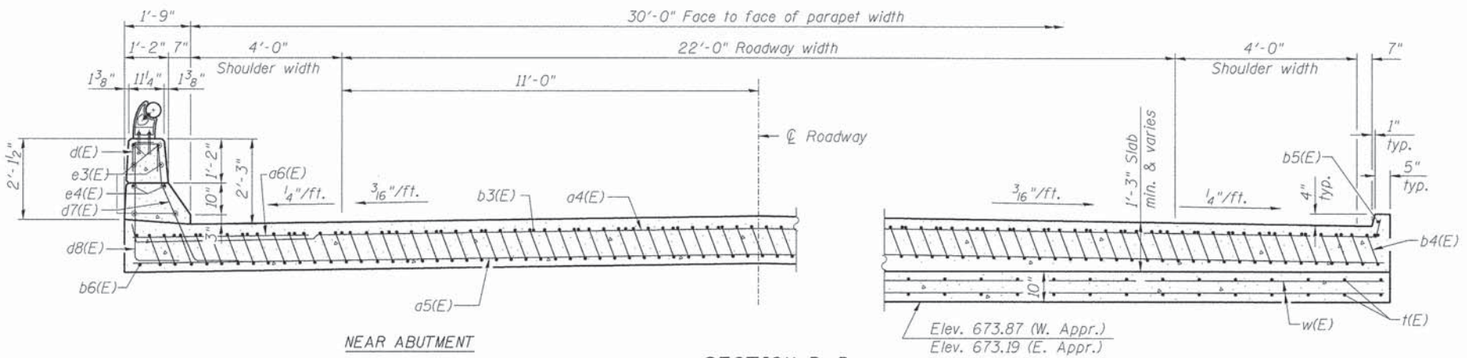


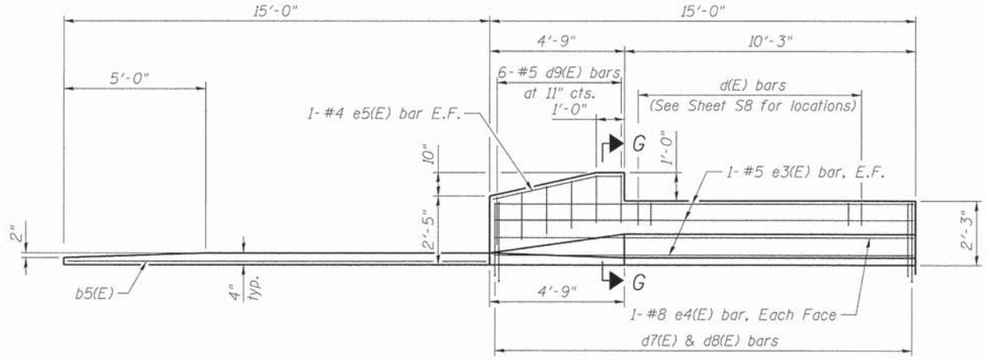
SECTION C-C



NEAR ABUTMENT

SECTION D-D

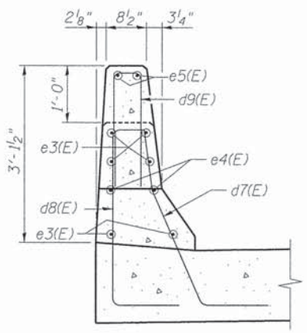
(See Plan for dimensions not shown)



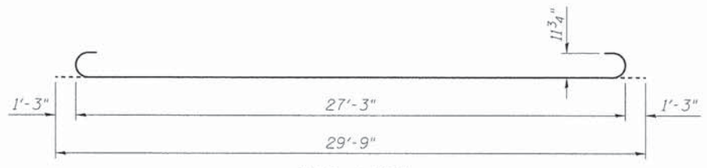
VIEW E-E

BAR a4(E)

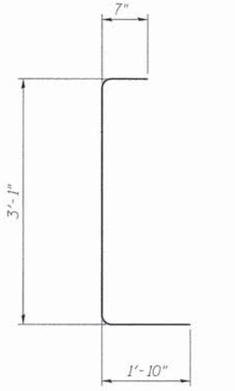
AT APPROACH FOOTING



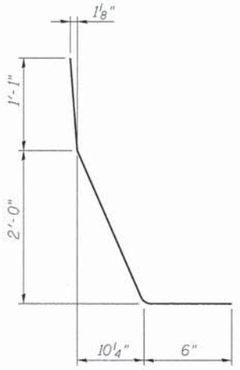
SECTION G-G



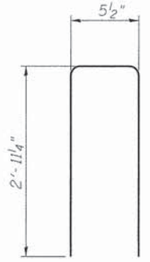
BAR b4(E)



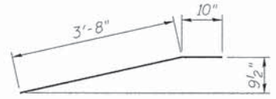
BAR d8(E)



BAR d7(E)



BAR d9(E)



BAR e5(E)

NOTES:

1. See sheet S11 of for Detail A.
2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v(E) bar details, see sheet S8.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. Cost of excavation for approach footing included with Concrete Structures.
8. For Granular Backfill for Structures and drainage treatment details, see sheet S2.
9. For additional parapet details, see sheet S8.

* Tilt #9 b4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a4(E)	50	#4	32'-5"	
a5(E)	92	#5	31'-10"	
a6(E)	48	#6	6'-6"	
b3(E)	50	#4	29'-8"	
b4(E)	142	#9	29'-9"	
b5(E)	4	#4	14'-8"	
b6(E)	4	#4	14'-8"	
d7(E)	68	#5	3'-10"	
d8(E)	68	#5	5'-6"	
d9(E)	24	#5	6'-4"	
e3(E)	24	#5	14'-8"	
e4(E)	8	#8	14'-8"	
e5(E)	8	#4	4'-6"	
t(E)	132	#4	9'-8"	
w(E)	80	#5	31'-10"	
Concrete Superstructure			Cu. Yd.	103.2
Concrete Structures			Cu. Yd.	19.9
Reinforcement Bars, Epoxy Coated			Pound	25,080

Note: d(E) bars in parapet included in Bill of Materials on sheet S8.

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BRIDGE APPROACH SLAB DETAILS 2 OF 2
STRUCTURE NO. 099-3286
SHEET NO. S12 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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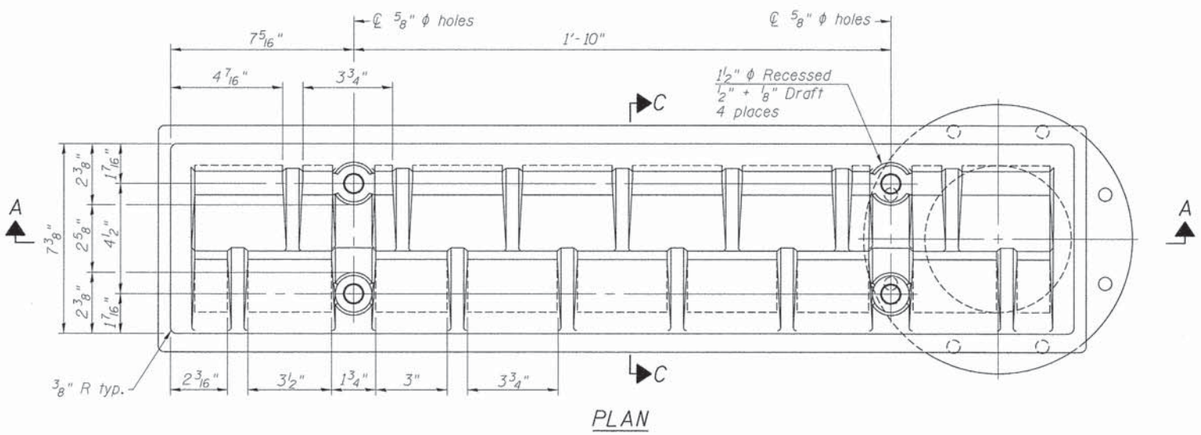
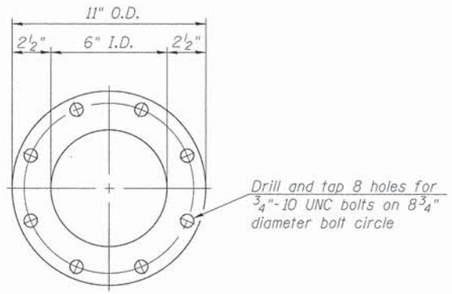


PLAN



VIEW B-B

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

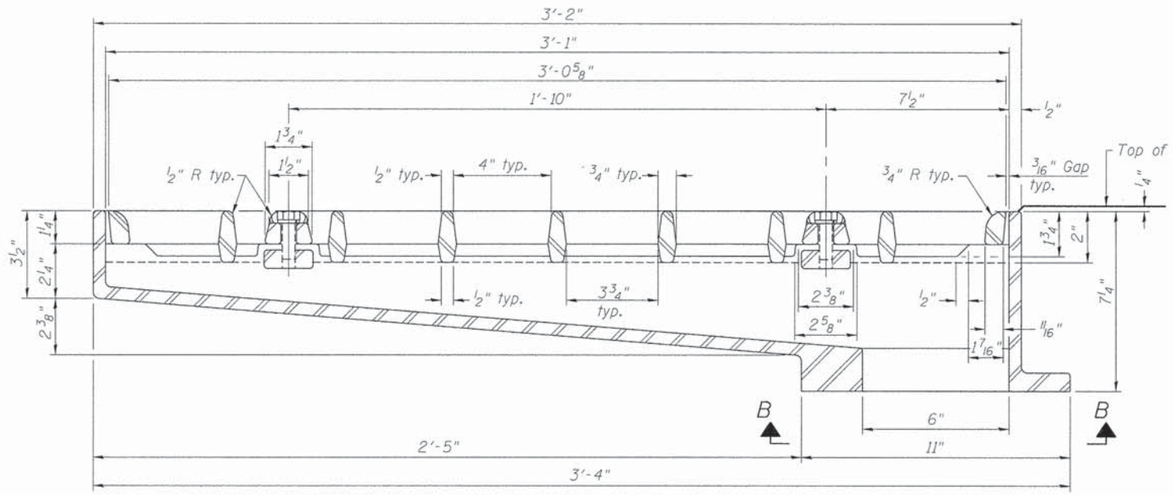
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

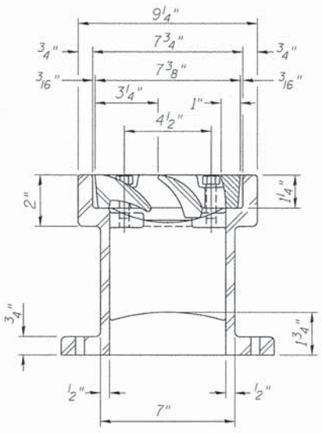
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-33.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

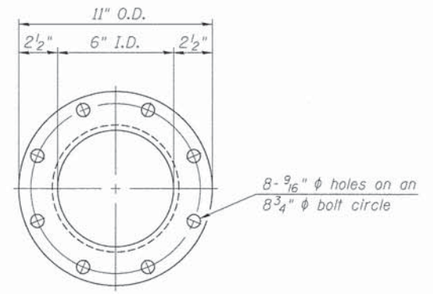


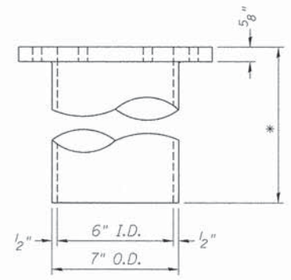
SECTION A-A

See sheet of for scupper location relative to parapet.



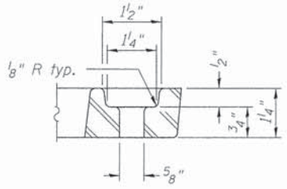
SECTION C-C



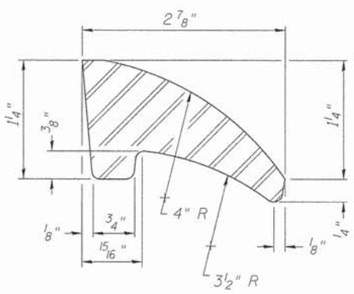


DOWNSPOUT

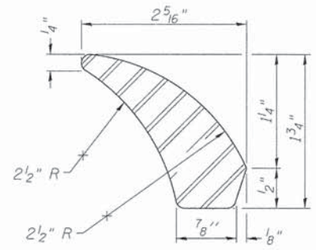
* 72" beam plus fillet plus 6" (min). See sheet S8.



BOLT HOLE DETAIL



FIRST VANE DETAIL



SECOND VANE DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-33	Each	4

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DS-33 7-1-10

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-33
STRUCTURE NO. 099-3286
SHEET NO. S13 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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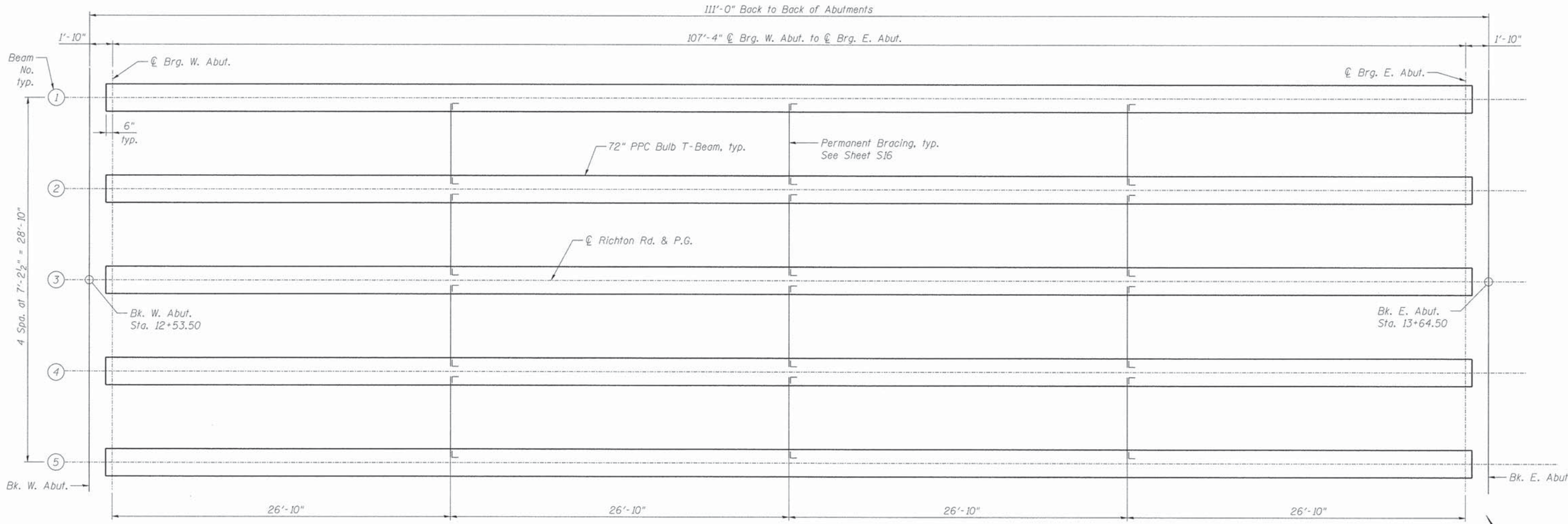
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		



FRAMING PLAN

INTERIOR BEAM MOMENT TABLE		
		0.5 Span
I	(in^4)	545,894
I'	(in^4)	1,034,456
S_b	(in^3)	14,915
S_b'	(in^3)	19,640
S_t	(in^3)	15,421
S_t'	(in^3)	53,516
$DC1$	(k/')	1.699
M_{DC1}	('k)	2,448
$DC2$	(k/')	0.180
M_{DC2}	('k)	259
DW	(k/')	0.300
M_{DW}	('k)	432
M_{L+IM}	('k)	2,005

INTERIOR BEAM REACTION TABLE		
		Abutment
R_{DC1}	(k)	91.2
R_{DC2}	(k)	9.7
R_{DW}	(k)	16.1
R_{L+IM}	(k)	92.3
R_{Total}	(k)	209.3

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
$DC1$: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: 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.).
M_{DC2}: 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.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

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DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 099-3286
SHEET NO. S14 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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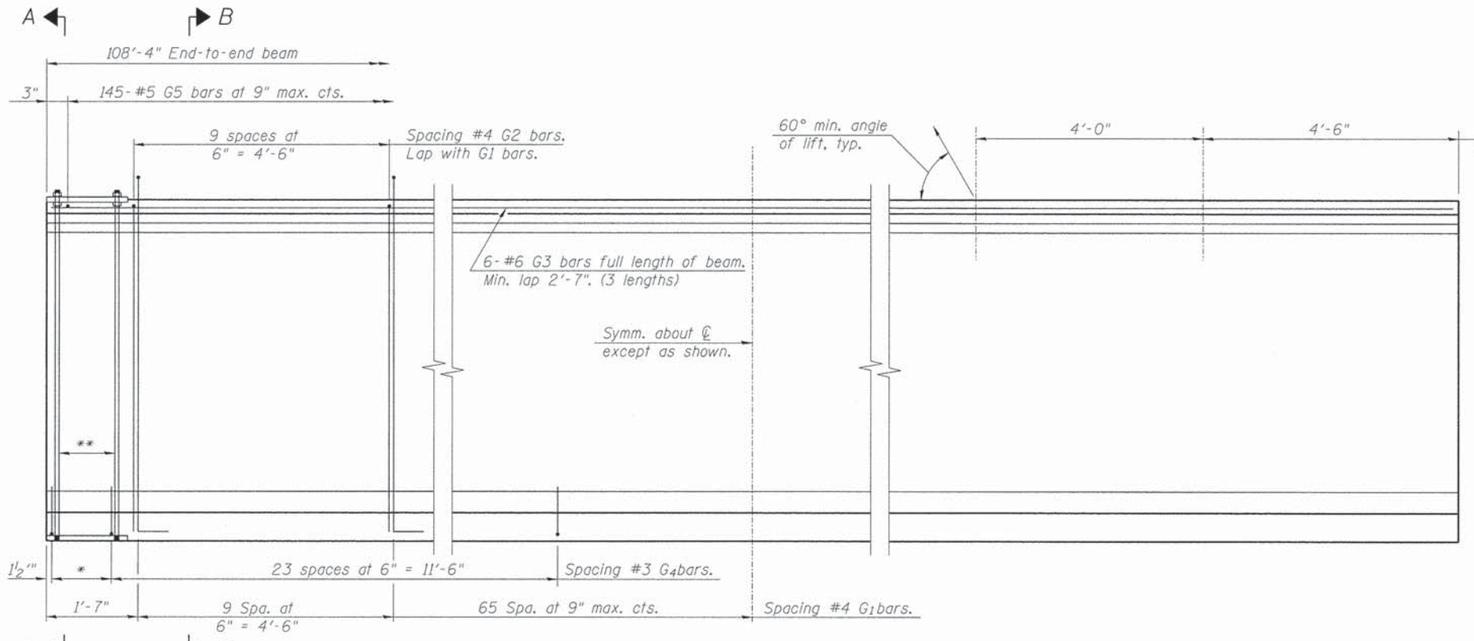
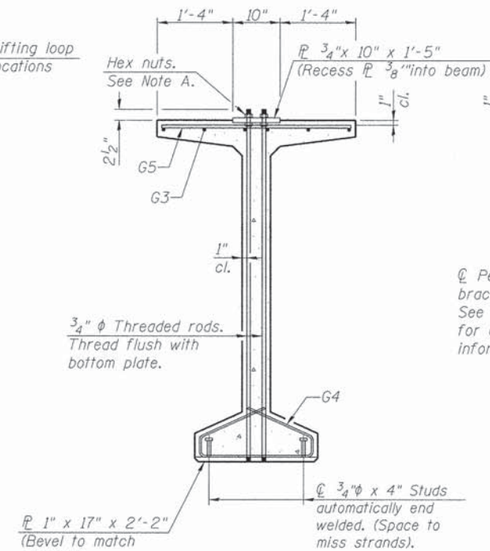


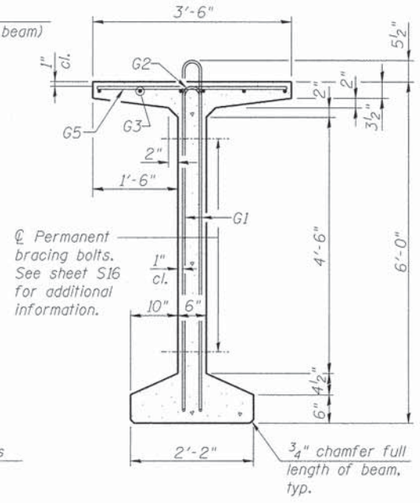
* 4 spaces at 3¼"= 1'-1".
** 5-¾"ϕ threaded dowel rods at 3¼"cts., each face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

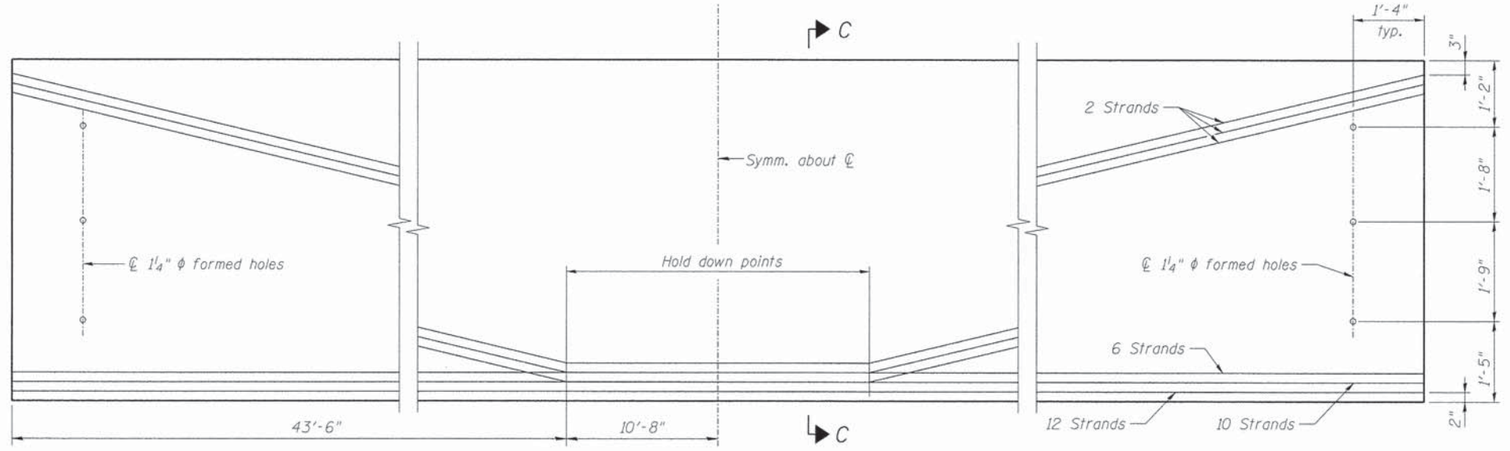
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



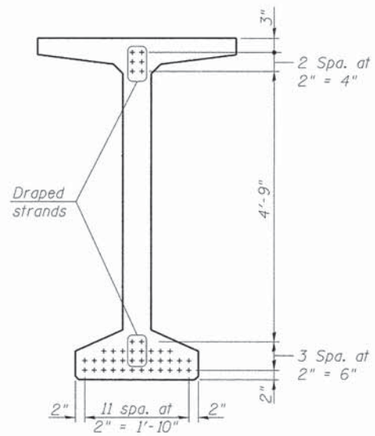
SECTION A-A



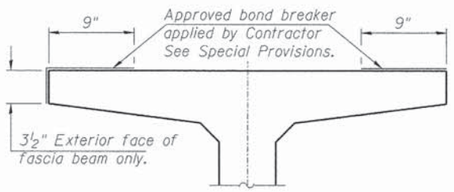
SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C



SECTION THRU TOP FLANGE
(Showing limits of bond breaker)

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G1	149	#4	13'-7"	⊓
G2	20	#4	11'-8"	⊓
G3	18	#6	37'-9"	—
G4	56	#3	4'-11"	⌓
G5	145	#5	3'-4"	—

***For information only

NOTES:

1. See sheet S16 for additional details and Bill of Material.
2. Required release strength, f'ci, shall be 5,000 psi.
3. Apply approved bond breaker as shown in Section thru Top Flange full length of beam. See Special Provisions.

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PBT-4-72 11-16-12

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72" PPC BULB T-BEAM
STRUCTURE NO. 099-3286
SHEET NO. S15 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	32
		CONTRACT NO. 61A02		
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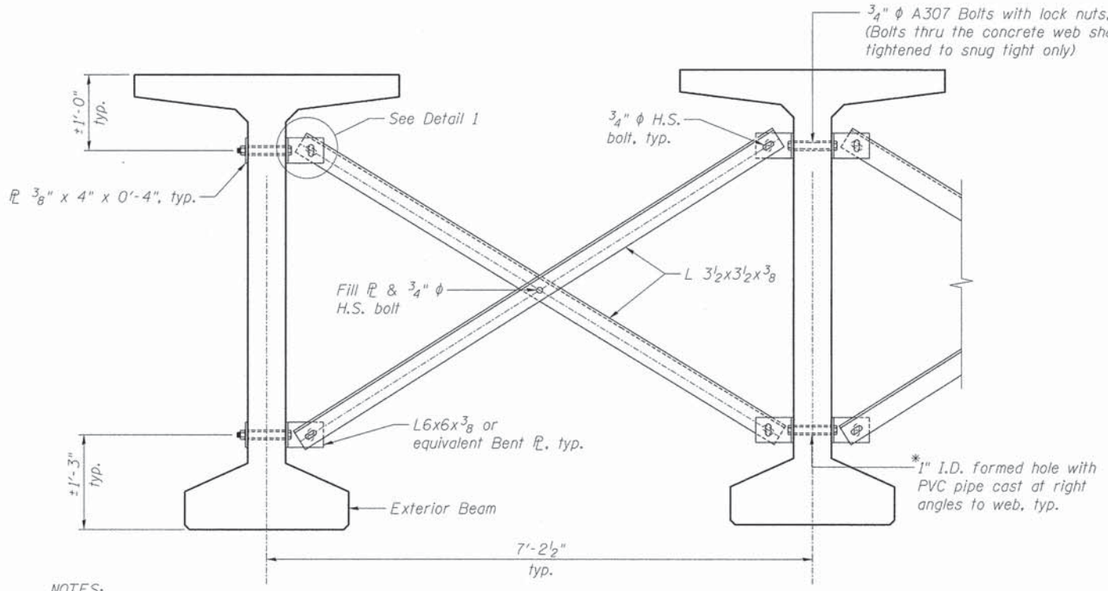
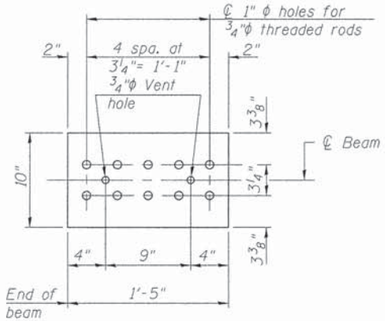


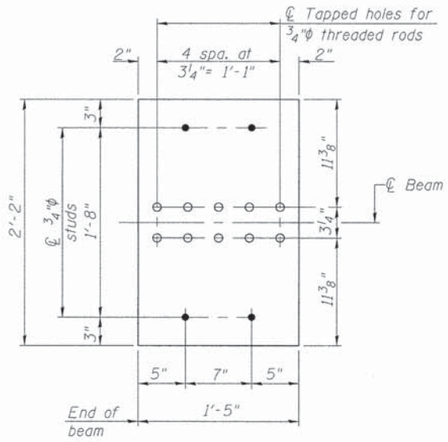
NOTES:
1. All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
2. Two hardened washers are required for each set of oversized holes.
3. All holes shall be $\frac{15}{16}$"ϕ unless otherwise noted.
4. $\frac{5}{16}$"x3"x0'-3" plate washers are required over all slotted holes.
5. All bolts shall be galvanized according to AASHTO M232.
6. Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
7. Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 72".

*Fabricator shall locate hole to miss strands within permissable tolerances.

PERMANENT BRACING DETAILS FOR 72" BULB T-BEAMS

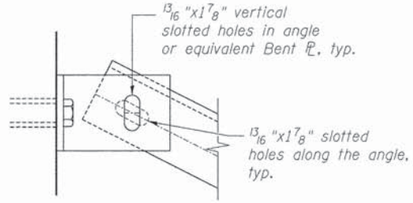


TOP PLATE

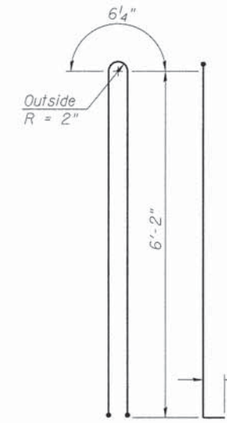


BOTTOM PLATE

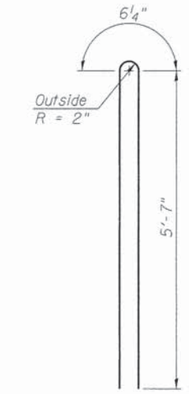
See bearing details for pintle hole locations when required.



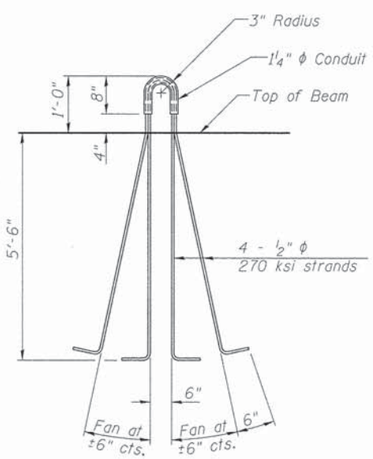
DETAIL 1



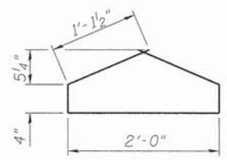
BAR G1



BAR G2



LIFTING LOOP DETAIL



BAR G4

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 72"	Ft.	542

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10204

FILE NAME = 099_3286_61A02_16_bulb2.dgn	USER NAME = rgrimm	DESIGNED - AWH	REVISED -
		CHECKED - MRB/MFH	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/5/2013	CHECKED - MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

72" PPC BULB T-BEAM DETAILS
STRUCTURE NO. 099-3286
SHEET NO. S16 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	33
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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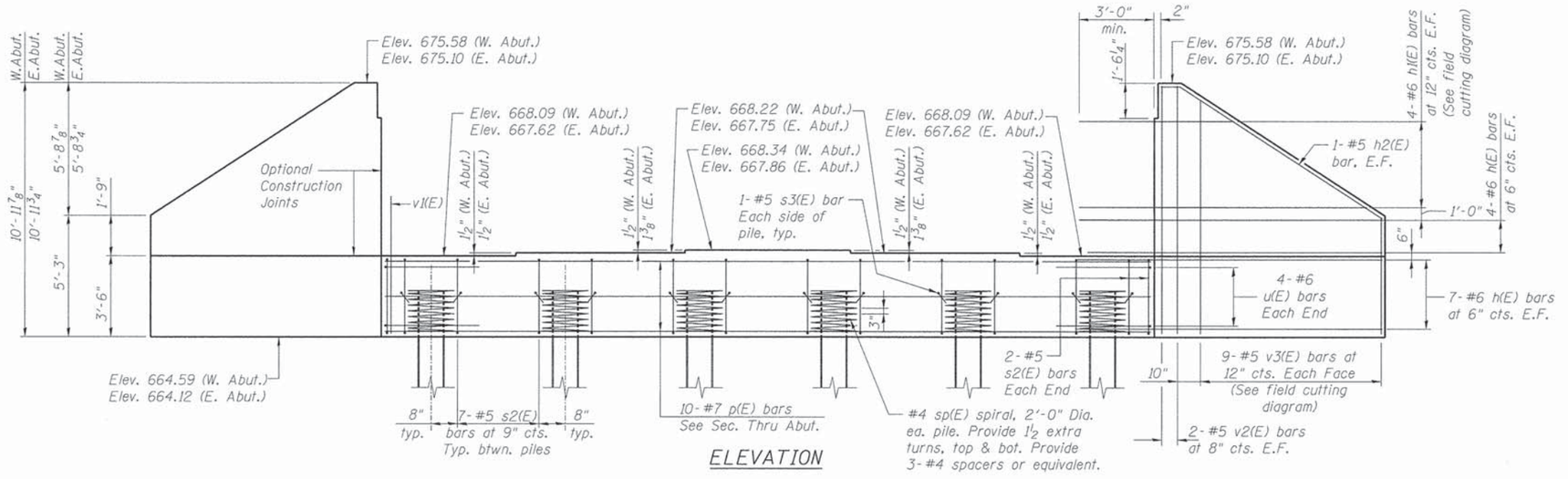

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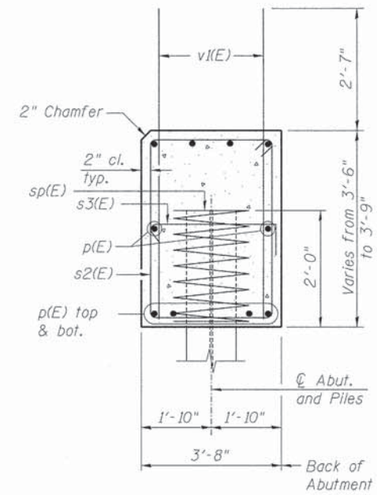
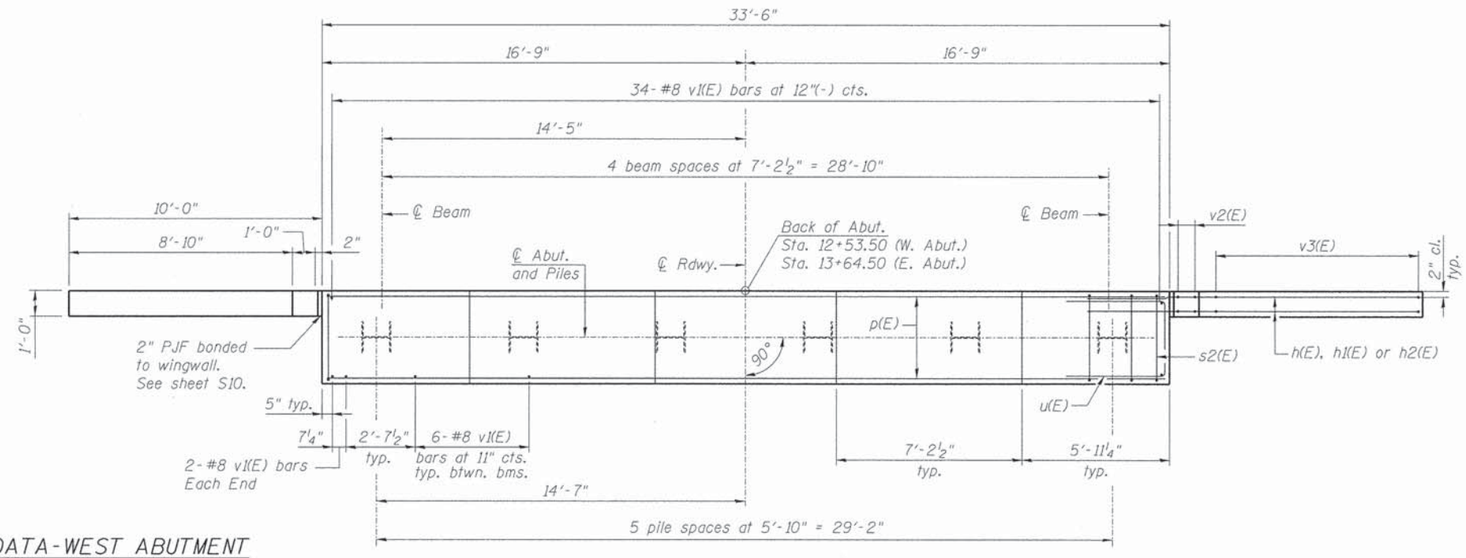


SEC. THRU ABUT.



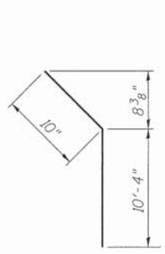
PLAN

PILE DATA-WEST ABUTMENT

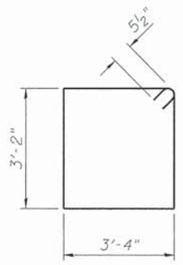
Type: HP14x73
Nominal Required Bearing: 505K
Factored Resistance Available: 278K
Est. Length: 63 ft.
No. Production Piles: 5
No. Test Piles: 1

PILE DATA-EAST ABUTMENT

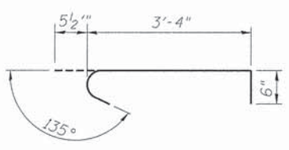
Type: HP14x73
Nominal Required Bearing: 505K
Factored Resistance Available: 278K
Est. Length: 67 ft.
No. Production Piles: 5
No. Test Piles: 1



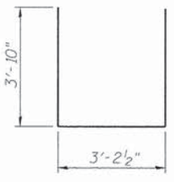
BAR $h_2(E)$



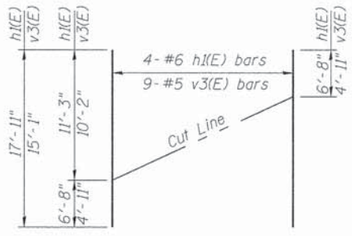
BAR $s_2(E)$



BAR $s_3(E)$



BAR u(E)



FIELD CUTTING DIAGRAM

Order h1(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

BOTH ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	88	#6	12'-10"	
h1(E)	16	#6	17'-11"	
h2(E)	8	#5	11'-2"	
p(E)	20	#7	33'-2"	
s2(E)	78	#5	13'-11"	
s3(E)	24	#5	4'-4"	
* sp(E)	12	#4	2'-0"	
u(E)	16	#6	10'-11"	
v1(E)	124	#8	5'-11"	
v2(E)	16	#5	10'-7"	
v3(E)	36	#5	15'-1"	

Structure Excavation	Cu. Yd.	49
Concrete Structures	Cu. Yd.	45.4
Reinforcement Bars, Epoxy Coated	Pound	8,310
Furnishing Steel Piles, HP 14x73	Foot	650
Driving Piles	Foot	650
Test Pile Steel HP 14x73	Each	2
Pile Shoes	Each	12

* Length is height of spiral.

NOTES:

1. For details of piles, see sheet S18.
2. Pour steps monolithically with cap.
3. E.F. indicates Each Face.

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Chicago, Illinois 60601
312-565-0450 Job No. 10204

FILE NAME = 099_3286_61A02_17_abut.dgn	USER NAME = rgrimm	DESIGNED - AWH	REVISED -
		CHECKED - MRB/MFH	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/5/2013	CHECKED - MRB/MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST AND EAST ABUTMENT DETAILS
STRUCTURE NO. 099-3286
SHEET NO. S17 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	34
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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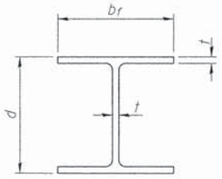
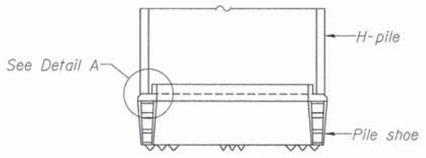


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''



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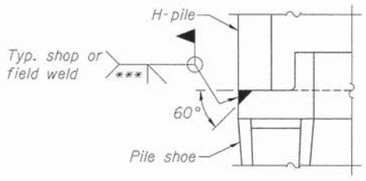
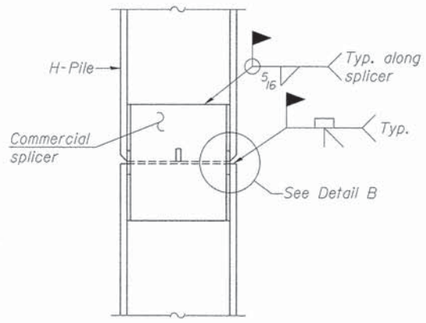


DETAIL A

H-PILE SHOE ATTACHMENT



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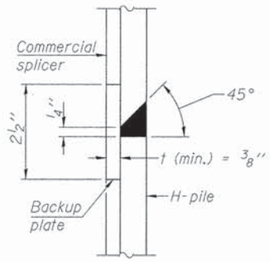
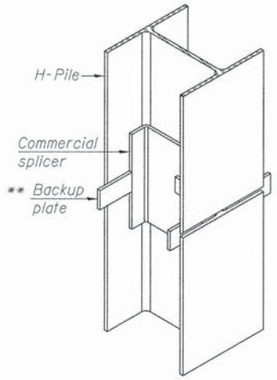
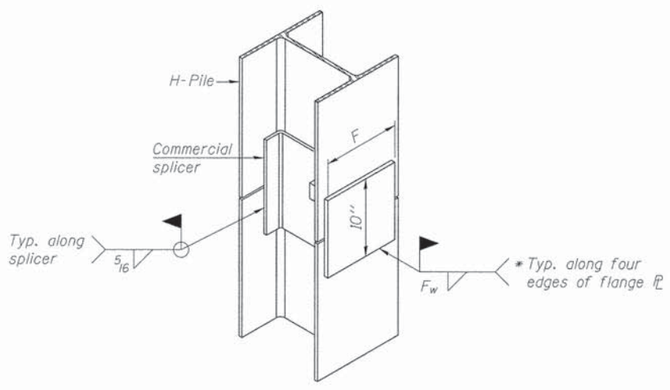


DETAIL "B"

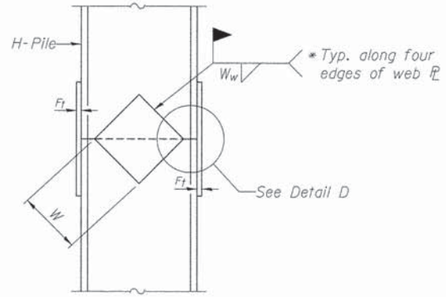


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



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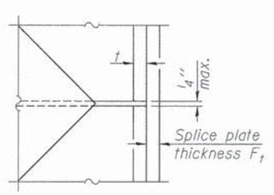
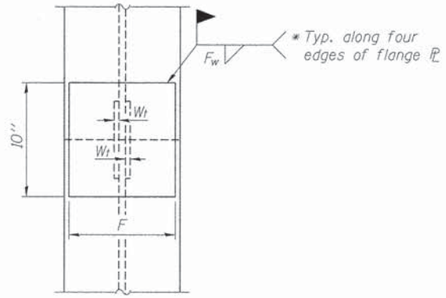


DETAIL D



END VIEW

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds $\frac{1}{4}''$ from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).

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

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Chicago, Illinois 60601
312-565-0450 Job No. 10204

FILE NAME =	USER NAME = rgrimm	DESIGNED - AWH	REVISED -
099_3286_61A02_18_pile.dgn		CHECKED - MRB/MFH	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/5/2013	CHECKED - MRB/MFH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 099-3286
SHEET NO. S18 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	35
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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Illinois Department of Transportation
Division of Highways
Alfred Benesch

SOIL BORING LOG

Date 11/5/12

ROUTE Richton Road DESCRIPTION West Abutment LOGGED BY JL

SECTION LOCATION Near Crete, IL, SEC. 7, TWP. 34N, RNG. 15E

COUNTY Will DRILLING METHOD Mud Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-1
Station 12+28
Offset 7.00ft Lt
Ground Surface Elev. 675.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After 24 Hrs. 652.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
674.10				Asphalt
	13			SANDY LOAM (SM) 5-15% fine gravel; 60-70% fine to coarse sand; nonplastic; light gray; moist; medium dense (Crushed Limestone)
	6			
671.60	5			
	2			CLAY (CH) 10-20% fine to medium sand; high plasticity;dark grayish brown with dark greenish gray; wet; stiff (Fill)
-5	5			
669.10	4			
668.10		4.5 P	19.3	SILTY CLAY LOAM (CL) 10-20% fine to coarse sand; medium plasticity; dark grayish brown with yellowish red; wet; stiff (Till)
	3			CLAY (CH) 10-20% fine to coarse sand; high plastic; dark grayish brown with dark greenish gray; wet; stiff (Till)
	5	2.8 S		
-10	5			
664.10				
663.00		2.8 P	17.6	SILTY CLAY LOAM (CL) 10-20% fine to coarse sand; medium plastic; dark grayish brown with dark gray and yellowish red; wet; very stiff (Till)
		4.0 P		CLAY (CH) 10-20% fine to coarse sand; high plastic; grayish brown with gray; wet; medium stiff (Till)
	2			
	2	0.8		
-15	3	B		
659.10				
658.30		1.0 P	23.5	SILTY CLAY (CL) 5-15% fine to medium sand; medium plasticity; greenish gray with grayish brown slightly mottled with yellowish red; wet; medium stiff (Till)
		1.3 P		
	3			SILTY CLAY (CL) same as above except stiff (Till)
	5	3.6		
655.10 -20	6	S		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	3			SILTY CLAY LOAM (CL) 10-20% fine to coarse sand; medium plasticity; dark grayish brown with gray brown; wet to saturated; stiff (Till)
	4	1.1		
	4	B		
650.60	2			
	4			SILTY CLAY (CL) medium plastic; dark gray slightly mottled with black; saturated; very stiff (Till)
650.10 -25	7			
	1			SILTY CLAY (CL) medium plasticity; dark gray mottled with dark yellowish red; saturated; medium stiff (Till)
	1	0.5		
647.10	2	B		
		1.7 P	24.4	CLAY (CL) 30-40% fine sand; medium plasticity; dark gray with dark grayish brown; saturated; stiff (Till)
-30		1.0 P		
642.10	7			CLAY (CH) 10-20% fine to medium sand; high plasticity; dark grayish brown; saturated; hard (Till)
	10	2.0		
-35	12	S		
	6			
	9			
635.10 -40	12			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Alfred Benesch

SOIL BORING LOG

Date 11/5/12

ROUTE Richton Road DESCRIPTION West Abutment LOGGED BY JL

SECTION LOCATION Near Crete, IL, SEC. 7, TWP. 34N, RNG. 15E

COUNTY Will DRILLING METHOD Mud Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-1
Station 12+28
Offset 7.00ft Lt
Ground Surface Elev. 675.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After 24 Hrs. 652.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY LOAM (CL) 10-20% fine to medium sand; medium plasticity; dark grayish brown; saturated; hard (Till)
	6			
	10	5.2		
-45	14	B		
625.90	4			
	10	4.9		CLAY (CL) 30-40% fine to medium sand; medium plasticity; grayish brown mottled with yellowish red; saturated; hard (Till)
-50	14	B		
	22			
	24			
620.10 -55	30			
				CLAY (CL) 40-50% fine to medium sand; medium plasticity; dark grayish brown; saturated; hard (Till)
	8			
	9	3.3		
615.10 -60	12	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				CLAY (CL) 35-45% fine to medium sand; medium plasticity; grayish brown; saturated; hard (Till)
	6			
	9	2.6		
610.10 -65	13	B		
				SILTY CLAY LOAM (CL) 15-25%fine to medium sand; medium plasticity; grayish brown; saturated; hard (Till)
	6			
	10	2.6		
-70	14	B		
603.10				SAND (SP) 95-100% fine sand; nonplastic; grayish brown; saturated; very dense (Alluvium)
	14			
	26			
600.10 -75	34			
				SAND (SP/SM) 0-10% fine to coarse gravel 85-95% fine to coarse sand; nonplastic; grayish brown; saturated; very dense (Alluvium)
	12			
	13			
595.10 -80	24			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Alfred Benesch

SOIL BORING LOG

Date 11/5/12

ROUTE Richton Road DESCRIPTION West Abutment LOGGED BY JL

SECTION LOCATION Near Crete, IL, SEC. 7, TWP. 34N, RNG. 15E

COUNTY Will DRILLING METHOD Mud Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-1
Station 12+28
Offset 7.00ft Lt
Ground Surface Elev. 675.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion ft
After 24 Hrs. 652.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
594.60				SAND (SP/SM) same as above (Alluvium)
593.60				LIMESTONE fractured, rough drilling
592.60	50/0.25"			LIMESTONE
				End of Boring
-85				
-90				
-95				
-100				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

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Chicago, Illinois 60601
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		CHECKED - MRB	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/5/2013	CHECKED - MRB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS 1 OF 3
STRUCTURE NO. 099-3286
SHEET NO. S19 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	36
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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Illinois Department of Transportation
Division of Highways
Alfred Benesch

SOIL BORING LOG

Page 1 of 3

Date 11/6/12

ROUTE Richton Road **DESCRIPTION** East Abutment **LOGGED BY** JL

SECTION **LOCATION** Near Crete, IL, **SEC.** 7, **TWP.** 34N, **RNG.** 15E

COUNTY Will **DRILLING METHOD** Mud Rotary **HAMMER TYPE** CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-2
Station 13+82
Offset 7.00ft Rt
Ground Surface Elev. 674.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion 659.1 ft ▽
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt	673.10				
SANDY LOAM (SM) 5-15% fine gravel 70-80% fine to coarse sand; nonplastic; light grayish brown; moist; medium dense (Fill)	672.60		5 2 4		
SILTY CLAY LOAM (CL) 10-20% fine to coarse sand; medium plasticity; yellowish brown with grayish brown; wet; stiff (Fill)	670.60		3 4 5	5.5 B	
SILTY CLAY LOAM (CL) 10-20% fine to coarse sand; medium plasticity; yellowish brown with grayish brown; wet; stiff (Till)	665.60	-5	5 4 6	5.4 S	
CLAY (CL) 30-40% fine to coarse sand; medium plasticity; yellowish brown with grayish brown ; wet; stiff (Till)	663.10	-10	3 4 5		
SILTY CLAY (CL) medium plasticity; yellowish brown slightly mottled with reddish brown ; wet; stiff (Till)	662.75 662.00			2.5 P	18.5
SILTY CLAY LOAM (CL) 15-25% fine to coarse sand; medium plasticity; black with yellowish brown slightly mottled with; wet; very stiff (Till)		▽-15	3 4 7	2.8 S	
CLAY (CL) 30-40% fine to medium sand; medium plasticity; grayish brown with yellowish brown ; wet; very stiff (Till)	658.10		2 4 4	2.4 B	
SILTY CLAY LOAM (CL) 15-25% fine to medium sand; medium plasticity; grayish brown with yellowish brown ; wet; stiff (Till)	656.10				
SILTY CLAY (CL) 5-15% fine to medium sand; medium plasticity; brown with grayish brown slightly mottled with; wet; stiff (Till)	655.60 654.10	-20			16.3

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY (CL) 10-20% fine to medium sand; medium plasticity; dark grayish brown with grayish brown and; wet; stiff (Till)			4 6 8	1.8 B	
CLAY (CL) 30-40% fine sand; medium plasticity; dark gray with reddish brown; wet; very stiff (Till)	650.60				
CLAY (CL) same as above except stiff (Till)	648.10	-25	4 4 6		
CLAY (CL) 30-40% fine sand; medium plasticity; grayish brown heavily mottled with yellowish red and; saturated; stiff (Till)	647.20 646.60			1.3 P 0.8 P	22.8
SILTY CLAY (CL) 10-20% fine sand; medium plasticity; grayish brown heavily mottled with yellowish red and; saturated; medium stiff (Till)		-30	2 3 2		
CLAY (CL) 40-50% fine to coarse sand; medium plasticity; grayish brown with dark gray ; saturated; medium stiff (Till)	643.10				
SILTY CLAY LOAM (CL) 10-20% fine sand; medium plasticity; dark gray; saturated; stiff (Till)	642.10			1.8 P	18.3
SILTY CLAY LOAM (CL) 15-25% fine to medium sand; medium plasticity; dark grayish brown; saturated; hard (Till)	634.10	-35 -40	6 10 15	3.8 B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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SOIL BORING LOG

Page 2 of 3

Date 11/6/12

ROUTE Richton Road **DESCRIPTION** East Abutment **LOGGED BY** JL

SECTION **LOCATION** Near Crete, IL, **SEC.** 7, **TWP.** 34N, **RNG.** 15E

COUNTY Will **DRILLING METHOD** Mud Rotary **HAMMER TYPE** CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-2
Station 13+82
Offset 7.00ft Rt
Ground Surface Elev. 674.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion 659.1 ft ▽
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM (CL) 15-25% fine to medium sand; medium plasticity; dark grayish brown; saturated; hard (Till)		-45	6 12 13	3.7 B	
	620.60	-50	6 11 15	5.9 B	
SANDY LOAM (SM) 55-65% fine sand; low plasticity; dark grayish brown; saturated; (Till)	615.60	-55	9 12 18		
CLAY (CL) 20-30% fine to medium sand; medium plasticity; dark grayish brown; saturated;	614.10	-60	6 10 15	4.6 B	

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
hard (Till)					
SILTY CLAY LOAM (CL) 15-25% fine to medium sand; medium plasticity; grayish brown slightly mottled with reddish brown; saturated; hard (Till)	607.10	-65	6 11 15	4.1 B	
rough drilling driller noted gravel (Till)	606.10				
CLAY (CH) 5-15% fine sand; high plasticity; dark gray; saturated; hard (Till)	603.10	-70	6 8 9	2.4 B	
SAND (SP) 95-100% fine sand; nonplastic; grayish brown; saturated; very dense (Alluvium)	596.90	-75	13 18 20		
rough drilling driller noted gravel (Alluvium)	595.60				
SILT (ML) 5-15% fine sand; low plasticity; grayish brown; saturated; very dense (Alluvium)	594.20	-80	12 20 50/4.25"		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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SOIL BORING LOG

Page 3 of 3

Date 11/6/12

ROUTE Richton Road **DESCRIPTION** East Abutment **LOGGED BY** JL

SECTION **LOCATION** Near Crete, IL, **SEC.** 7, **TWP.** 34N, **RNG.** 15E

COUNTY Will **DRILLING METHOD** Mud Rotary **HAMMER TYPE** CME Automatic

STRUCT. NO. 099-3286
Station

BORING NO. SB-2
Station 13+82
Offset 7.00ft Rt
Ground Surface Elev. 674.10 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter ft
Upon Completion 659.1 ft ▽
After Hrs. ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
LIMESTONE *(continued)*	593.10				
End of Boring		-85 -90 -95 -100			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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SOIL BORING LOGS 2 OF 3
STRUCTURE NO. 099–3286

SHEET NO. S20 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	37
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
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SOIL BORING LOG

Date 11/5/12

ROUTE Richton Road DESCRIPTION Channel Flow Line LOGGED BY JL

SECTION _____ LOCATION Near Crete, IL, SEC. 7, TWP. 34N, RNG. 15E

COUNTY Will DRILLING METHOD Soil Probe HAMMER TYPE _____

STRUCT. NO. 099-3286
Station _____

BORING NO. SB-3
Station 13+20
Offset 2.00ft Rt
Ground Surface Elev. 649.90 ft

Surface Water Elev. 646.41 ft
Stream Bed Elev. 644.41 ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
(CL) % sand; medium plasticity; yellowish brown slightly mottled with gray ; wet; stiff (Peoria) 648.90				
(CL) 0-10% fine gravel 10-20% fine to coarse sand; medium plasticity; grayish brown with yellowish brown ; wet; stiff (Till) 647.90				
(CL) 10-20% fine sand; medium plasticity; greenish gray slightly mottled with black ; wet; stiff (Till) 646.90				
(CL) same as above except medium stiff (Till) 645.90	-5			
(CL) % sand; medium plasticity; greenish gray slightly mottled with black ; wet; very stiff (Till) 644.40				
(CL) 5-15% fine sand; medium plasticity; grayish brown; wet; very stiff (Till) 641.90				
End of Boring	-10			
	-15			
	-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

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Chicago, Illinois 60601
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SOIL BORING LOGS 3 OF 3
STRUCTURE NO. 099-3286
SHEET NO. S21 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	38
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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PLUM VALLEY BRIDGE

GENERAL NOTES AND SPECIFICATIONS

1. Drawings and Specifications

These drawings and the specifications and notes hereon are an instrument of service only. They shall be used for no other purpose than the construction of the structure named hereon without the written consent of the Structural Engineer, George P. Wright, Jr.

The Structural Engineer shall make any and all revisions, additions and deletions to these working drawings and specifications. Revisions, additions and deletions to the Structural Engineer's working drawings and specifications by others shall void the Structural Engineer's responsibility for any part of the working drawings and specifications affected directly or indirectly by the changes.

2. Dimensions and Quantities

All dimensions shown on these working drawings, with the exception of footing depth, are believed to be correct; however, no guarantee of dimensional accuracy is made or implied. The Contractor shall be solely responsible for confirming all measurements affecting his work. The dimensions and quantities shown hereon are for guidance only. The work to be completed shall be paid for on a lump sum basis, and the contract price shall include all items of material, labor and equipment usage required to complete the work called for in the contract in a finished and workmanlike manner acceptable to the Structural Engineer and the Owner. Any differences between "As Built" dimensions and quantities and those shown on these working drawings, except for piling depth, shall be assumed to have been verified by the Contractor before making his lump sum bid proposal for the complete work. Piling shall be furnished and driven at the unit prices per foot stated in the contract. If it is required by site conditions that the footings be redesigned to accommodate lower allowable soil pressure than those used in the original design, quantities of excess concrete, reinforcing steel, excavation and sheeting shall be paid for at the unit prices stated in the contract for extra work.

3. Referenced Specifications

The design of the work and the construction thereof are intended to be in conformance with the following referenced specifications:

a. Standard Specifications for Road and Bridge Construction, adopted 7-1-76 Illinois Department of Transportation. (abbreviated IDOT hereinafter)

b. Standard Specifications for Highway Bridges, adopted by the American Association of State Highway and Transportation Officials Eleventh Edition 1973. (abbreviated AASHTO hereinafter)

c. Building Code Requirements for Reinforced Concrete ACI 318-71, American Concrete Institute. (abbreviated ACI hereinafter)

d. American Society for Testing Materials, individual sections as applicable. (abbreviated ASTM hereinafter)

The above specifications are hereby made a part of the specifications for the work shown on these drawings. Specific references are given in the text of Notes and Specifications for Excavation, Backfill, Concrete, Reinforcing Steel, etc, on following drawings, and as follows on this drawing.

The designation Engineer in IDOT shall mean the Structural Engineer for this project.

4. Contractor's Responsibilities

The responsibilities of the Contractor shall include but not be limited to the items which follow: The Owner, Owner's employees, the Civil Engineer or the Structural Engineer shall not be responsible in these matters whatsoever.

a. The Contractor shall have sole responsibility to comply with and enforce all applicable local, county, state and federal laws and requirements for the safety of his employees, suppliers, subcontractors, the public. Such responsibility shall include enforcement of all applicable provisions of the Occupational Safety and Health Act (OSHA), and regulations adopted pursuant thereto.

b. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures; and for safety precautions and programs, including the safety and adequacy of shoring, forms, sheeting, safety railing, and scaffolding to be used on this project which shall be designed to adequately support any and all dead loads and construction loads which may come upon them.

c. The Contractor shall indemnify and hold harmless the Owner, the Civil Engineer, and the Structural Engineer and their directors, officers, agents, servants and employees from any and all losses, expenses, damages (including loss of use), demands and claims, arising out of or occasioned by matters covered by this Contract and the work hereunder, and to defend any suit or action brought against them, or any of them, based upon any such injury or alleged injury (including death) or damage (including loss of use), and to pay all damages, judgments, costs and expenses, including attorney's fees, in connection with said damages, injuries, claims, demands or suits, or resulting therefrom.

d. In furtherance of the indemnity set forth in subparagraph c, above, but not in limitation thereof, the Contractor shall take out and maintain, at its own cost and expense, and before commencing any of its operations hereunder, the following kinds and minimum limits of insurance coverage:

1. Workmen's Compensation, Occupation Disease	Statutory or unlimited Amounts
2. Employer's Liability	$100,000
3. Comprehensive General (Including blanket Assumed Contractural Liability) Liability Insurance	
(a) Bodily Injury	$500,000 per person
	$1,000,000 each occurrence
(b) Property Damage	$ 50,000 each occurrence
	$100,000 aggregate premises and contractural
4. Comprehensive Automobile Liability (Including owned, non-owned, hired vehicles)	
(a) Bodily Injury	$100,000 each person
	$300,000 each occurence
(b) Property Damage	$ 50,000 each occurrence

All such policies shall be written and issued by companies satisfactory to the Engineer. Compliance with the required insurance coverage shall be evidenced by certificates of such insurance to be forwarded to the Engineer at its business address. Such certificates shall contain a stipulation to the effect that the insurance, covered by the certificate will not be cancelled by lapse of time or otherwise except upon not less than ten (10) days prior written notice to that effect, by United States Registered or Certified Mail to the Engineer at its business address.

NOTES AND SPECIFICATIONS FOR CLEARING, EXCAVATION, BACKFILLING AND EMBANKMENT

The work specified herein shall be that done between a north-south line 40 feet west of the face of the west abutment and a north-south line 40 feet east of the face of the east abutment. Embankment east and west of the area above defined shall be furnished by the Owner.

1. Cleaning

Any clearing required as designated by the Structural Engineer shall conform to the applicable provisions of IDOT as follows: Sections 201.01 thru 201.04 and 201.06 thru 201.08.

2. Excavation

Excavation shall be that required to provide for the new footings with the slopes above the level of the top of footing being maintained in a stable condition until all project work prior to permitted backfilling has been completed.

The work shall conform to the applicable provisions of IDOT as follows: Sections 502.01, 502.02, 502.03, 502.05, 502.08 thru 502.10. The following provisions shall supersede IDOT where there is a conflict:

Excavation for footings shall be accomplished so as to allow footing concrete to be placed against: (a) undisturbed earth, or (b) sheeting drive into undisturbed earth along the footing outline with subsequent excavation within the sheeting to plan depth. If the latter method is used, the sheeting shall be left in place.

The use of sheeting shall be at the option of the Contractor, and no compensation for sheeting material or labor to place same shall be paid him, whether he uses sheeting for the footings as shown on the plans or for any revised footing design needed because of soil bearing capacity.

3. Backfilling and Approach Embankment

Backfilling and approach embankment within the area defined above shall be completed by the Contractor in conformance with IDOT Sections 502.11 and 502.14.

NOTES AND SPECIFICATIONS FOR CAST IN PLACE CONCRETE STRUCTURES

The work specified herein shall conform to the applicable provisions of IDOT as follows: Sections 503.01 thru 503.06, 503.07(b), 503.09 (as modified by notes on drawings), 503.13, and 503.15. The cost of any and all appurtenances called for on the drawings shall be included in the lump sum price stated in the contract.

All references in IDOT to the "Engineer" shall mean the Structural Engineer, George P. Wright, Jr., except that any proportioning of concrete mixtures shall be determined by the Contractor or his Concrete Supplier so as to furnish concrete in the completed structure in accordance with all applicable provisions of IDOT Section 504.

The Structural Engineer shall engage a Testing Laboratory to make all tests as required by Section 504 of IDOT. The Contractor shall reimburse the Structural Engineer for the cost of all testing expense including transportation as billed to the Structural Engineer by the Testing Laboratory plus a servicecharge of 20% to compensate the Structural Engineer for his handling and review of the testing reports. A schedule of Testing Laboratory fees shall be available to bidders at the Structural Engineer's Office prior to bidding.

The Structural Engineer shall not furnish to prospective bidders any approximate proportions for concrete as is called for in IDOT Section 504.08 (the last paragraph beginning on page 288). The responsibility for such approximate proportions shall rest solely with the prospective bidder or his concrete supplier.

1. Concrete

All concrete shall be Class X as called for in IDOT, except that Handrail Concrete shall have a maximum size of coarse aggregate passing a 1" sieve. All concrete shall conform to the requirements of applicable provisions of IDOT as follows: Sections 504.01 thru 504.04, 504.07 thru 504.15 except that all proportioning of mixes shall be the responsibility of the Contractor or his Concrete Supplier. The Contractor shall furnish his proposed portions for concrete mixes to the Structural Engineer at least 7 calendar days before ordering any concrete delivered to the job site. The furnishing of such proposed proportions to the Structural Engineer shall be for information purposes to assure that proper controls of the mixes are being proposed. The Structural Engineer's review shall in no way relieve the Contractor's responsibility to provide concrete in the completed structure meeting the requirements of IDOT Section 504.

A minimum of three test specimens taken from each days pour shall be required. The specimens shall be taken by the Contractor at the direction of the Testing Laboratory and shall be transported to the Testing Laboratory by Testing Laboratory personnel.

Superstructure concrete shall not be placed until the last concrete placed in the substructure has cured and attained a modulus of rupture of 650 psi. A minimum of 24 hours notice shall be given to the Structural Engineer, so that he may inspect the footing excavation with bars in place and inspect the wall and superstructure forms with bars in place at least 2 hours before any scheduled placement of concrete.

2. Falsework and Forms

All falsework and forms shall conform to the applicable provisions of IDOT as follows: Sections 504.05 and 504.06. All provisions and understandings of Sections 504.05 and 504.06 shall apply and be conformed to by the Contractor. The Contractor shall submit detailed plans for falsework and form work for examination by the Structural Engineer. If such plans are not satisfactory to the Structural Engineer, the Contractor shall make such changes in them as may be required, but it is understood that the Structural Engineer's concurrence in the use of the plans as submitted or corrected shall in no way relieve the Contractor of full responsibility for obtaining satisfactory results and for safety and adequacy of load carrying capacity.

3. Curing of Concrete

All concrete placed on this project shall be cured and protected in conformance with the applicable provisions of IDOT as follows: Section 625.01, 625.02, 625.03, 625.04(c) and (d), 625.06, 625.07, and 625.08.

4. Reinforcing Steel for Concrete

The furnishing and placement of all reinforcing steel for this project shall conform to the applicable provisions of IDOT as follows: Section 512.01 thru 512.06 and 710.13 (a) and (b). The bars shall conform to ASTM A615 Grade 40 deformed bars.

5. Preformed Expansion Joint Filler

The preformed joint filler shall conform to the provisions of IDOT Sections 715.01 and 715.04.

6. Scuppers and Weep Holes

The pipe used for the deck scuppers and the abutment and wing wall weepers shall be of a good quality commercially available galvanized tubing.

NOTES AND SPECIFICATIONS FOR STRUCTURAL STEEL, STEEL PILING, AND STEEL RAILING

The work specified herein shall conform to the applicable provisions of IDOT as follows: Sections 507.01; 507.02 as herein modified: 507.03 thru 507.05; 507.07; 507.08; 507.11 thru 507.13; 508.01 thru 508.03; 513.01; 513.02 (b); 513.05 (a) thru (c); 513.07 (a) and (d); 513.08 thru 513.11; 513.13 thru 513.15; 513.17; 513.18; 513.19 (b), (c), (f), and (i).

Sections 507.02 (a) and 513.02 (b) shall be modified as follows: Structural Steel and Steel Piles shall conform to ASTM-A588 - "weathering type" - high - strength low - alloy structural steel. (AASHTO M222)

Steel Railings including posts, fastening material, and fasteners shall be galvanized as per AASHTO-M111 and ASTM-A385.

Structural Steel and Steel Piles shall not be painted.

Steel Railings, if that alternate is included in the contract, shall conform to Base Sheet R-24 in the IDOT Bridge Manual except as modified on these project drawings.

Payment for all Structural Steel and Steel Railings including all fastening material and fasteners shall be included in the lump sum contract price for the project.

Payment for all Steel Piles and Pile Driving shall be as follows:

1. Test Piles

Lump sum for furnishing and driving one Test Pile at the East Abutment in the permanent location of an abutment pile. The test pile shall be 70 feet in length and shall be driven 10 feet deeper after the bearing capacity called for on the substructure drawing is attained, or to refusal, whichever occurs first.

2. Furnishing Steel Piles

Price per foot for furnishing the remaining 15 piles from a list prepared by the Structural Engineer based on the results of the test pile.

3. Driving Steel Piles

Price per foot for driving the remaining 15 piles to specified bearing capacity or to refusal except that minimum penetration shall be 20 feet in natural ground unless refusal shall occur first.

NOTES AND SPECIFICATIONS FOR PRECAST TRANSVERSE DECK SLABS

All Precast Deck Slabs shall conform to the applicable provisions of IDOT as follows: Sections 505.01 thru 505.05. They shall also conform to the design shown on these project drawings.

Payment for furnishing and erecting Precast Deck Slabs including all fastening material, fasteners, curb stirrups and bolting inserts shall be included in the lump sumcontract price for the bridge.

NOTES AND SPECIFICATIONS FOR BITUMINOUS PAVEMENT

It is intended that the Bituminous Wearing Surface shown on these project drawings will be furnished and applied to the bridge by the contractor constructing and paving the road abutting the bridge site.

RICHTON ROAD
OVER
PLUM CREEK
099-3351

FOR INFORMATION ONLY

George P. Wright, Jr.

GEORGE P. WRIGHT
Consulting Structural Engineer
306 Douglas Park Forest, Ill.
312-748-2880

JOSEPH A. SCHUDT & ASSOCIATES
civil engineers surveyors land planners
3920 West 216th Street
Matteson, Illinois 60443
phones: local 312-748-1683
chicago 312-785-6162

revisions: APRIL 22nd, 1977
BUILT 1978

date: APRIL 5, 1977
scale:
design:
drawn: LAM AD
checked: JAPW

BRIDGE OVER PLUM CREEK
RICHTON ROAD - PLUM VALLEY - CRETE TWP. ILL.
COVER SHEET - NOTES & SPECIFICATIONS

sheet 51 of 55
project number: 75-35

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10204

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		CHECKED - MRB	REVISED -
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	PLOT DATE = 12/5/2013	CHECKED - MRB	REVISED -

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EXISTING PLANS 1 OF 5
STRUCTURE NO. 099-3286
SHEET NO. S22 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	39
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

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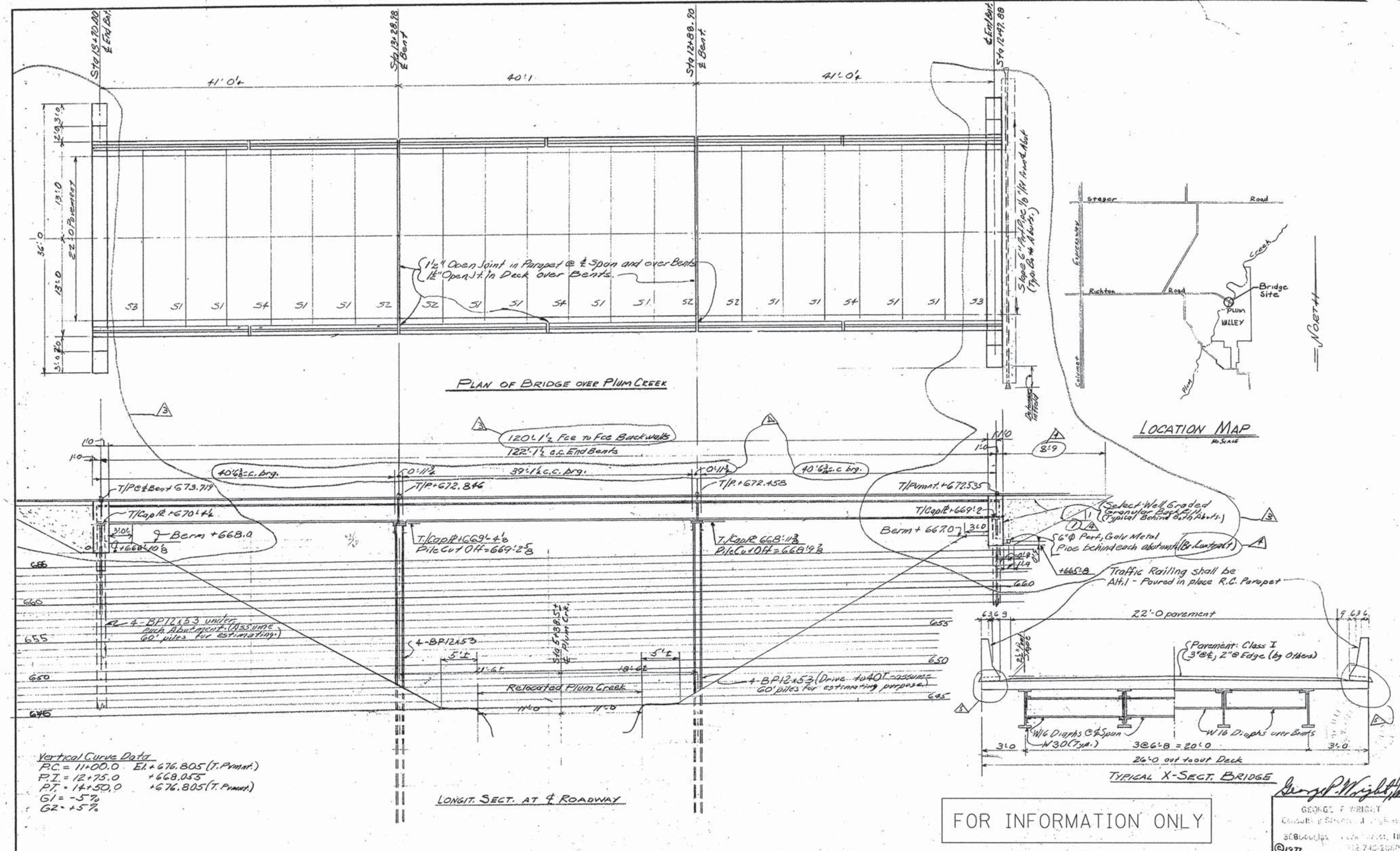

JOSEPH A. SCHUDT & ASSOCIATES
civil engineers surveyors land planners

3920 West 216th Street
Matteson, Illinois 60443
phones: local 312-748-1683
chicago 312-785-6162

revisions: 1 Add. Loc. Map, Corr. ch'gs; Corr. Beat line, Add. Brg. Berm, 7/26/77; 2 Lower Br. 5'; Increase Length V.C. from 100' to 350', Cont'd; 8/7/77; 3 Alts to Abuts; Add Abut Drains; 4 9-7-77 - Correct Dims Add Drain Pipe @ Abuts to Contract; 5 Revise scupper - As Built - 8-18-78

date: 4/5/77
design: G.P.W.
drawn: G.P.W.
checked: J.P.W.

Bridge over Plum Creek
Richton Road - Plum Valley - Crete Twp. Illinois
General Plan & Elevation

sheet S2 of S5
project number: 75-35

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FILE NAME = 099_3286_61A02_23_Exist2.dgn	USER NAME = rgrimm	DESIGNED - AWH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS 2 OF 5
		CHECKED - MRB	REVISED -		STRUCTURE NO. 099-3286
	PLOT SCALE =	DRAWN - RMG	REVISED -		
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	40
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

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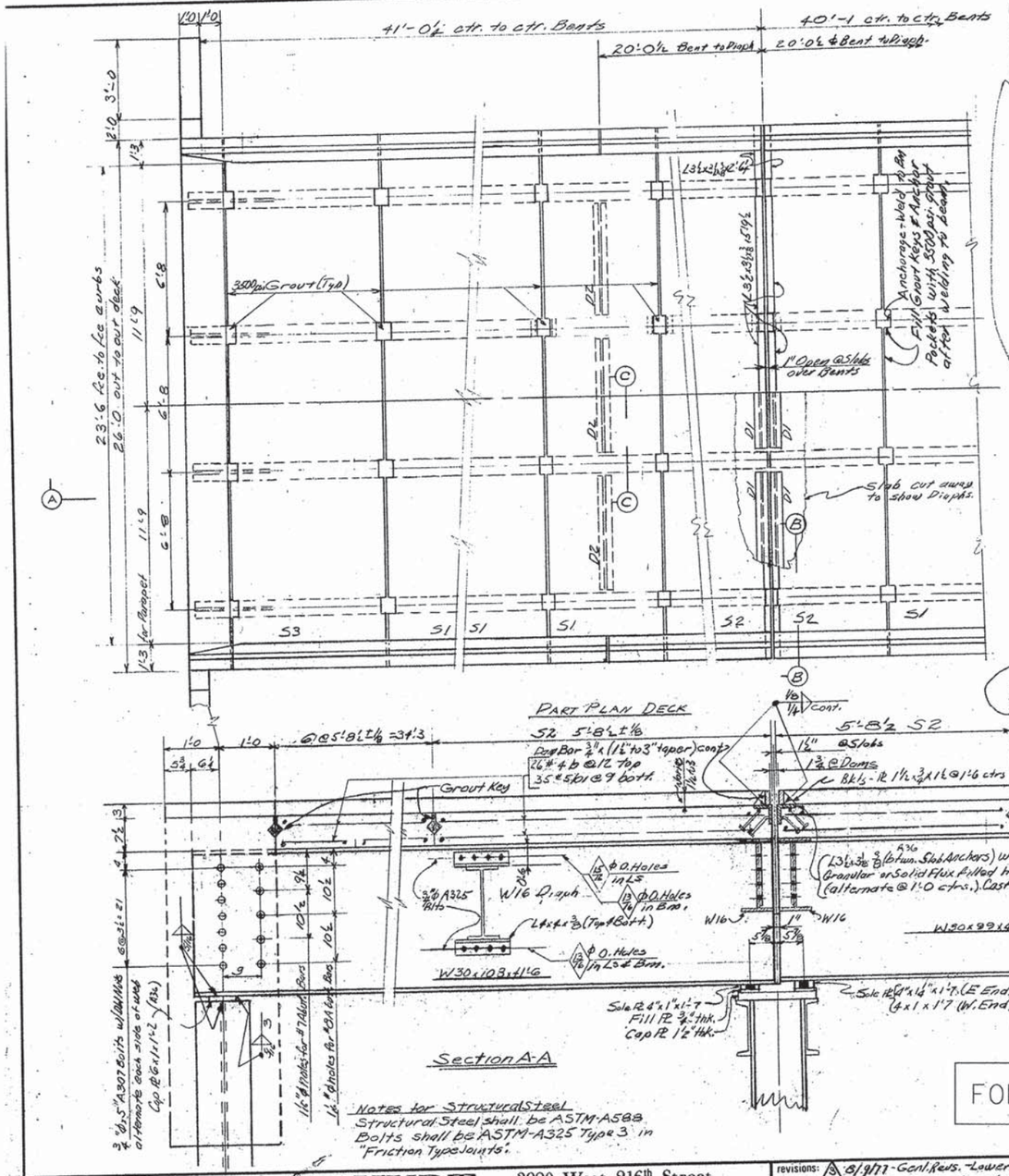

Bill of Bars One Slab - 21 Req'd				
No.	Size	Mk.	Lgth.	Location
13	#5	a	25'-7	Top
26	#4	b	5'-6	"
9	#5	a1	25'-9	Bottom
35	#5	b1	5'-6	"

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George P. Wright
GEORGE P. WRIGHT
Consulting Structural Engineer
308 Douglas Park Forest, Ill.
312-748-2880
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JOSEPH A. SCHUDT & ASSOCIATES
civil engineers surveyors land planners
3920 West 216th Street
Matteson, Illinois 60443
phones: local 312-748-1683
chicago 312-785-6162

revisions:
1. 8/8/77 - Genl. Revs. - Lower Br. 5's - Revs. Abuts. #5 bars.
2. 9-7-77 - Release Permat, Add Slab Reinf. acct. T.B.T. Cable Supports, Detail Scuppers - Release for Constr.
3. 8-18-78 - Revise Scuppers - "As Built" G.P.W.

date: 4/5/77
scale:
design: G.P.W.
drawn: J.P.W. & G.P.W.
checked: G.P.W.

Bridge over Plum Creek
Richton Road - Plum Valley - Crete Twp, Illinois
Superstructure Design

sheet GW 7704 S3 of S5
project number: 75-35

GAF 680-280

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	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 12/5/2013	CHECKED - MRB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS 3 OF 5
STRUCTURE NO. 099-3286
SHEET NO. S24 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	41
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		

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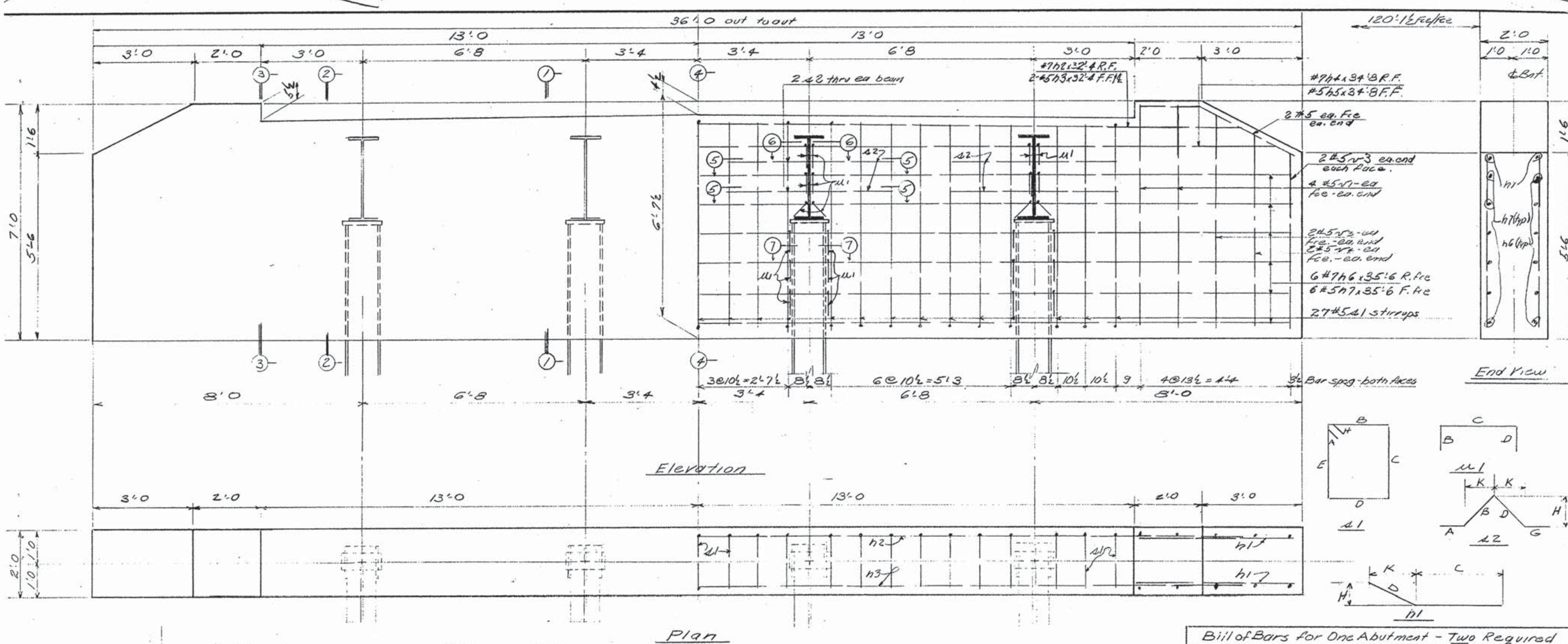

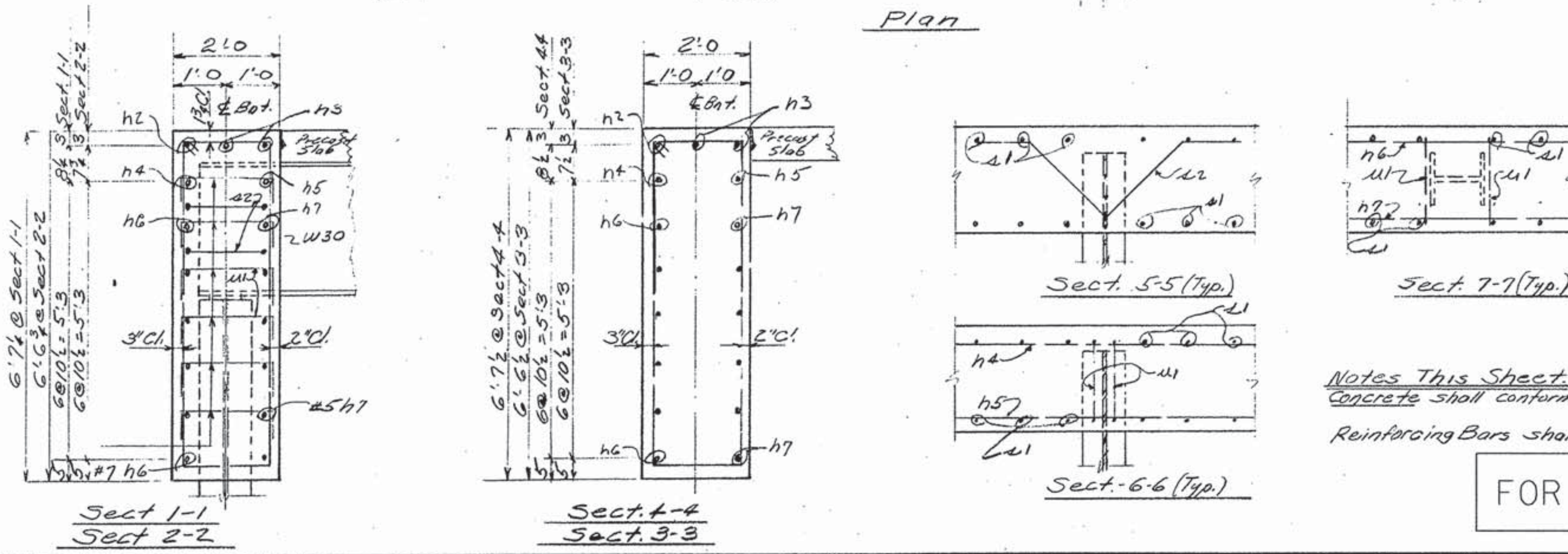

Bill of Bars for One Abutment - Two Required

MK.	No.	Size	A&G	B	C	D	E	H	K	Lgth	Location
v1	8	5			Str.					6'-6	Wing vert
v3	4	5			"					6'-3	" "
v4	4	5			"					5'-9	" "
v5	4	5			"					5'-3	" "
h1	4	5			3'-2	1-9		9 3/8	18 3/8	4-11	Top Wing
h2	1	7			Str.					32'-4	Horiz R.F.
h3	2	5			"					"	" F.F.
h4	1	7			"					34'-8	" RF
h5	1	5			"					"	" FF
h6	6	7			"					35'-6	" RF
h7	6	5			"					"	" FF
s1	27	5	5½	1'-7	6'-2	1'-7	6'-2			16'-6	Body verts.
s2	8	7	12	26	0	26		18½	18½	9'-4	Thru Bms.
u1	48	6		6	1'-7	6				2'-7	Fy @ Bms.

Notes This Sheet.

Concrete shall conform to IDOT-Class X; f'c = 3500 psi at 14 da.

Reinforcing Bars shall conform to ASTM-A615 Gr60 (f'y = 60 ksi.)

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George P. Wright Jr.

GEORGE P. WRIGHT
Consulting Structural Engineer
308 Douglas Park Forest, Ill.
312-748-2880
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JOSEPH A. SCHUDT & ASSOCIATES
civil engineers surveyors land planners
3920 West 216th Street
Matteson, Illinois 60443
phones: local 312-748-1683
chicago 312-785-6162

revisions: 8-9-77: General Revision
9/7-77 - Release for Constr.
8-18-78 "As Built"

date: 8/9/77
scale: N.T.S.
design: GPW
drawn: GPW, JPW
checked: GPW

Bridge over Plum Creek
Richton Road - Plum Valley - Crete Twp., Ill.
Abutment Design

sheet S4 of S5
project number: 75-35

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FILE NAME =	USER NAME = rgrimm	DESIGNED - AWH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS 4 OF 5 STRUCTURE NO. 099-3286	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 12/5/2013	CHECKED - MRB	REVISED -		SHEET NO. S25 OF S26 SHEETS		ILLINOIS FED. AID PROJECT			

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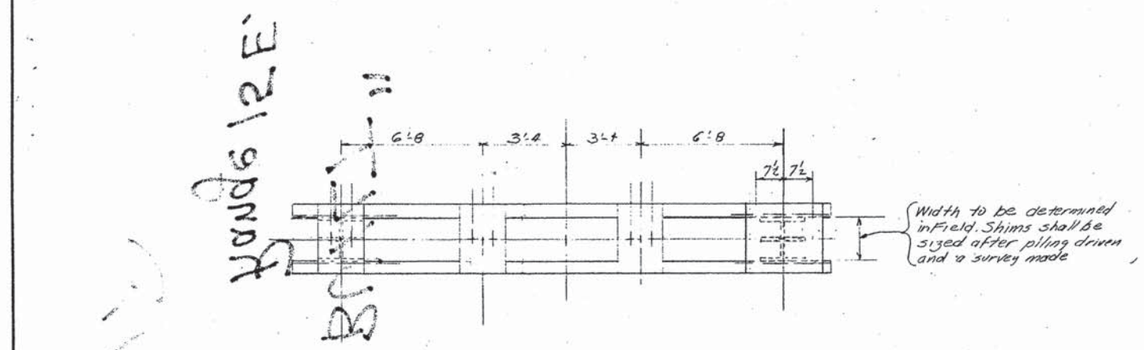
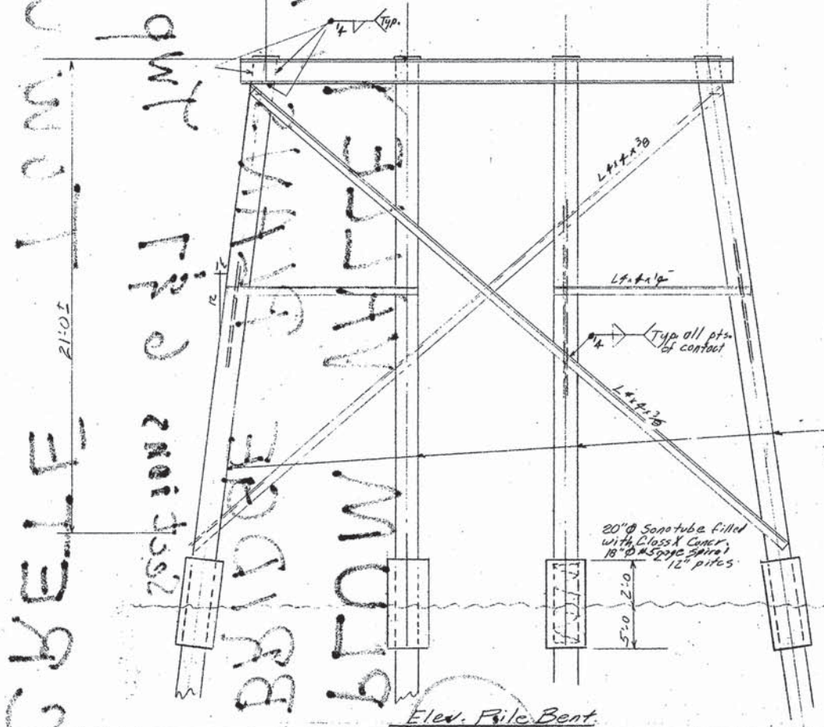
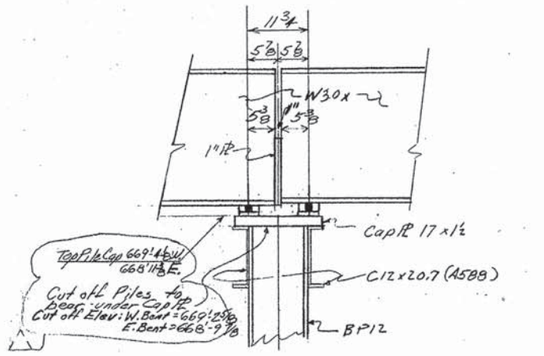
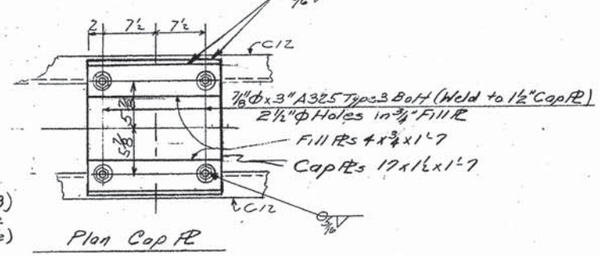


Plan Pile Cap





Elev. Top of Pile Cap:



Plan Cap PL

See S4 of S5 for notes on Piling & Pile Driving

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Note: All Material Billed this Sht. A588

George P. Wright Jr.

GEORGE P. WRIGHT
Consulting Structural Engineer
308 Douglas · Park Forest, Ill.
312-748-2880
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JOSEPH A. SCHUDT & ASSOCIATES
civil engineers · surveyors · land planners
3920 West 216th Street
Matteson, Illinois 60443
phones: local 312-748-1683
chicago 312-785-6162

revisions:
1 Corr. Cap. Elevs. 8/9/77 - Revs. Cap PL & Fills & Brgs to suit available mat'l. 9-7-77 - Release for Construction 8-18-78 "As Built" G.P.W.

date: APRIL 5, 1977
scale:
design: G.P.W.
drawn: G.P.W.
checked: G.P.W.

Bridge over Plum Creek
Richton Road - Plum Valley - Crete Twp, Illinois
Steel Pile Bents

sheet GW7702 S5 of S5
project number: 75-35

GAF 880-280

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS 5 OF 5
STRUCTURE NO. 099-3286
SHEET NO. S26 OF S26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-02118-01-BR	WILL	50	43
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			

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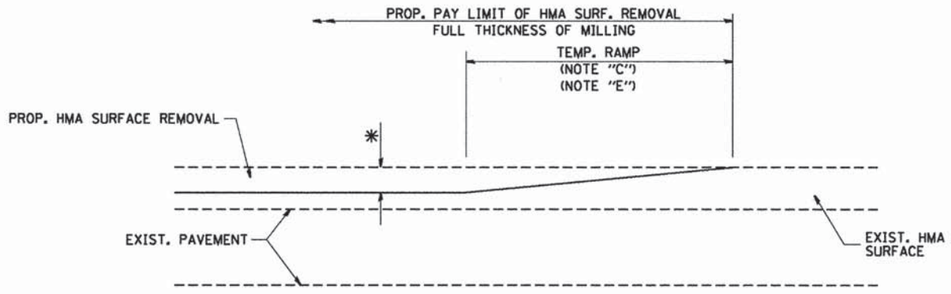
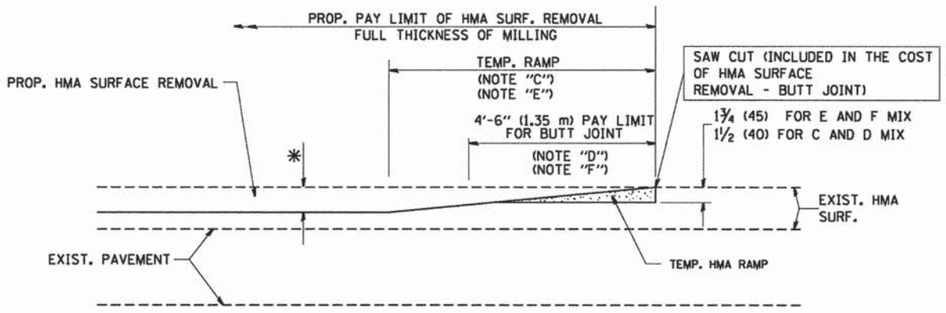


MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

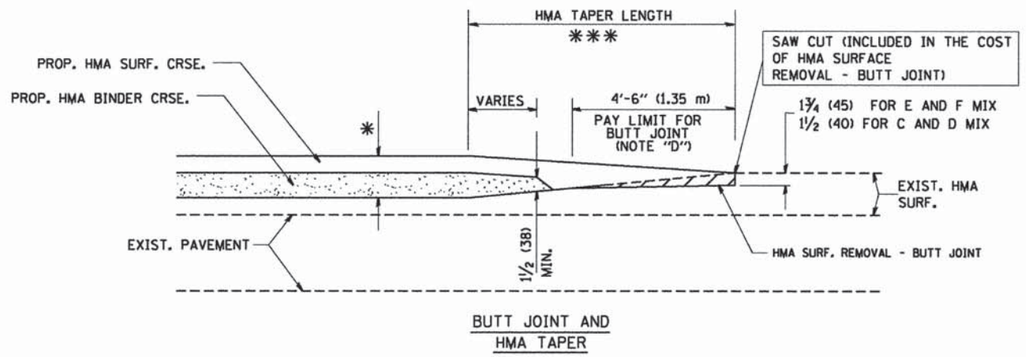


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

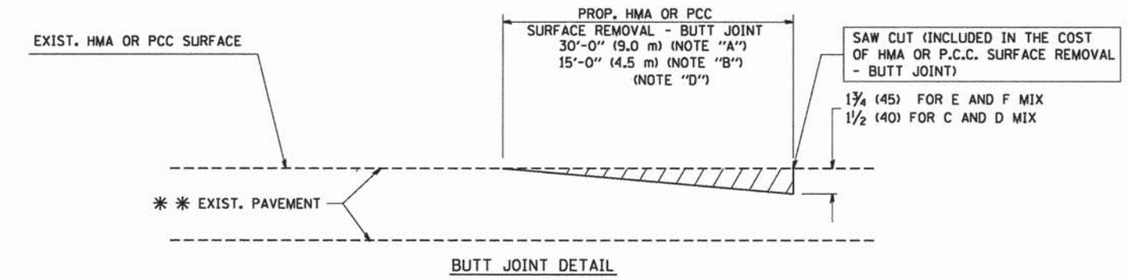
OPTION 2

TYPICAL TEMPORARY RAMP

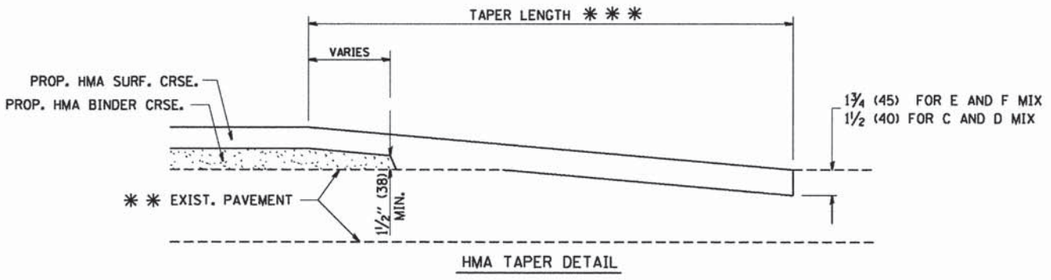


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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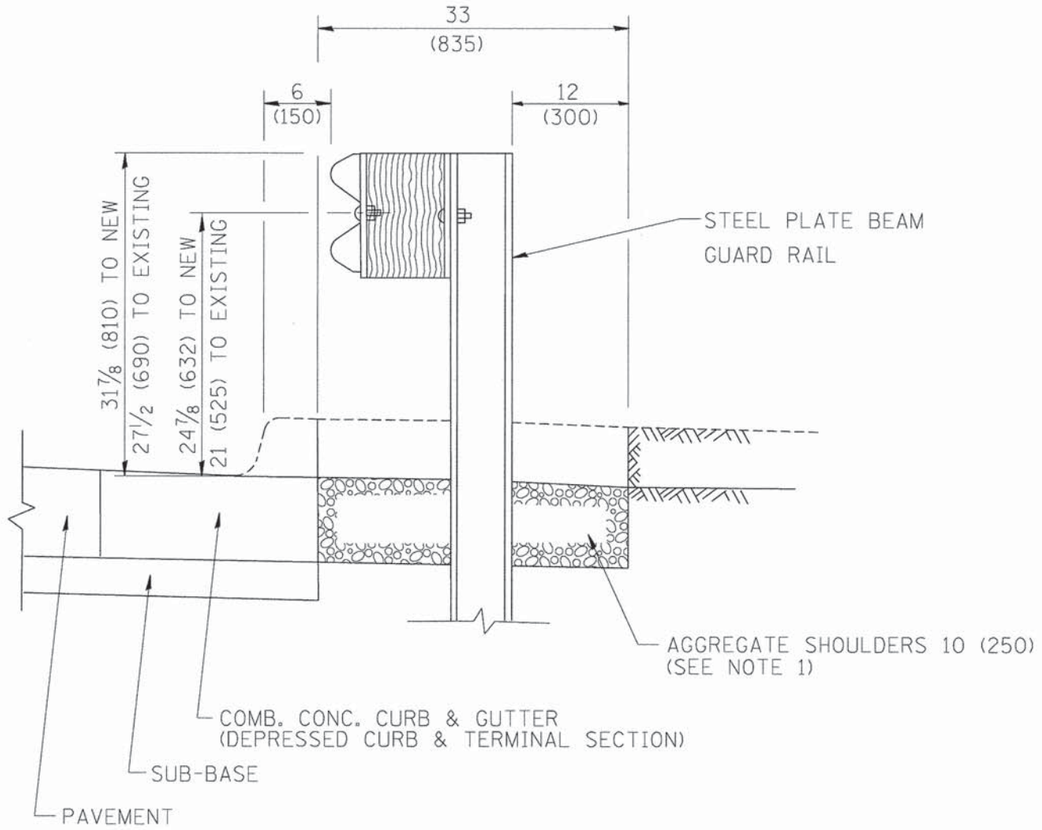
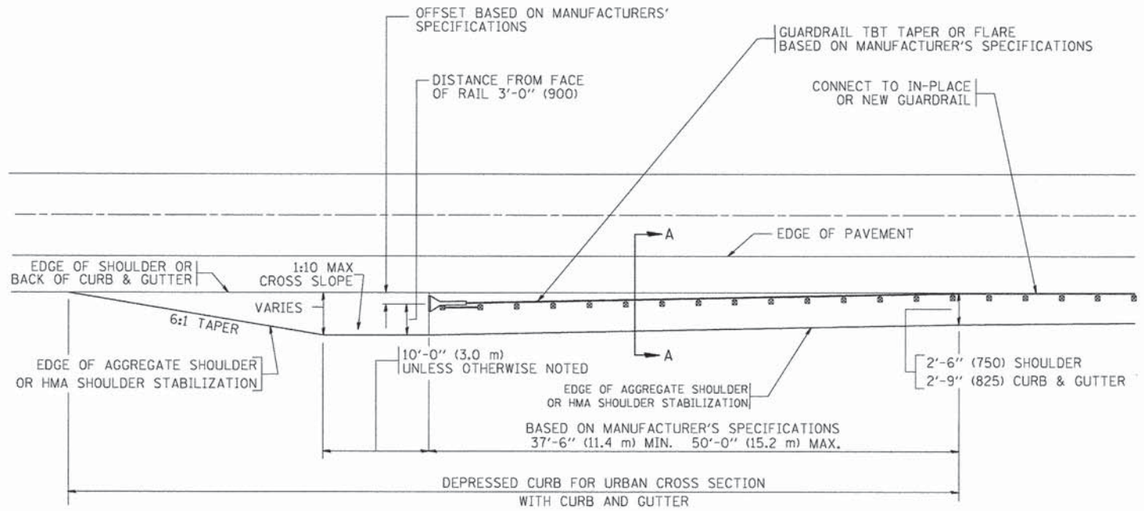
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SECTION A-A

NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL.

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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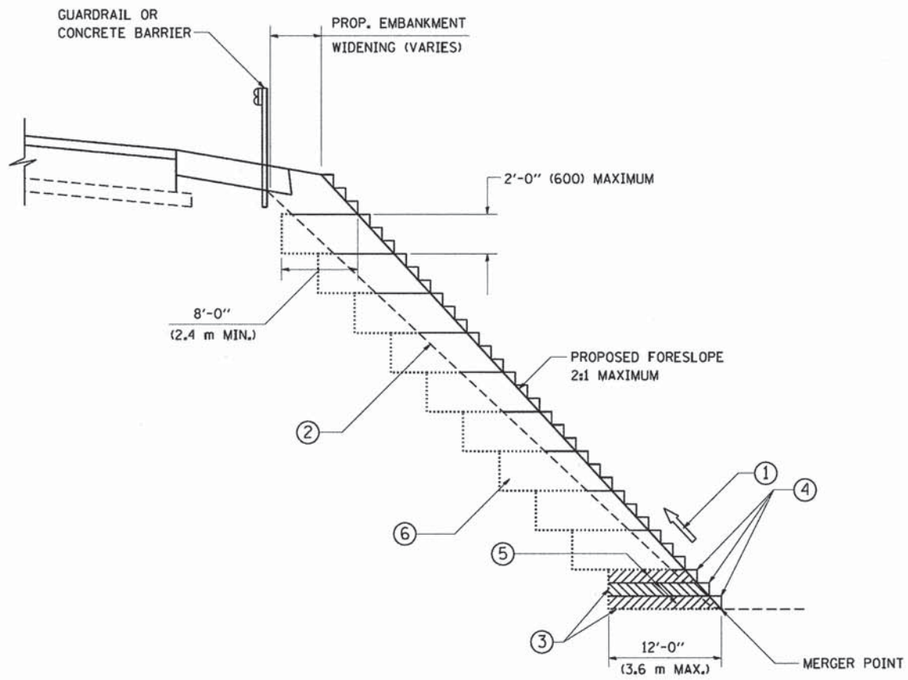
	BD600-10 (BD 34)	CONTRACT NO. 61A02		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DRAWN - CADD	REVISED -
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	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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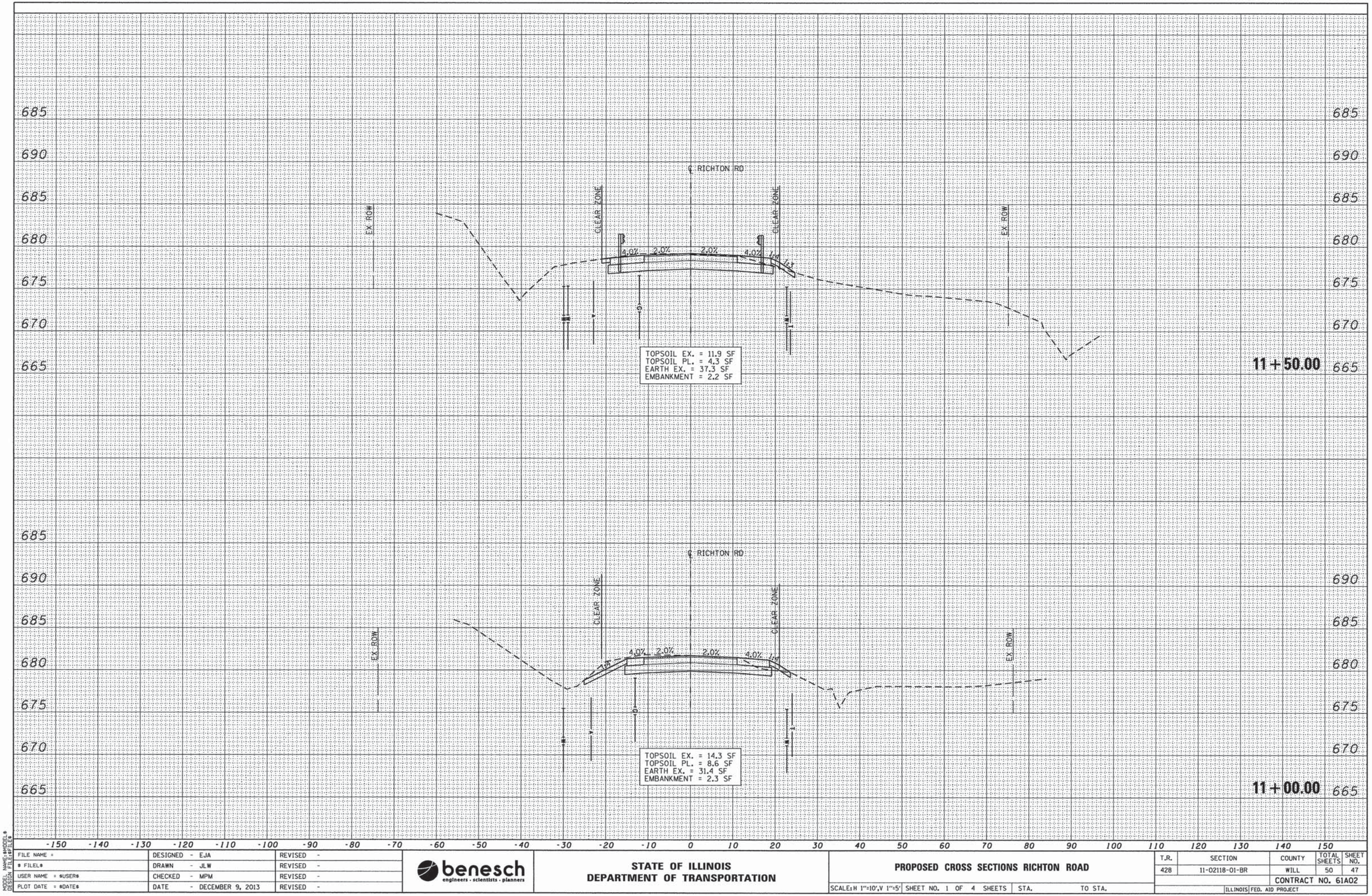
	BD-51	CONTRACT NO. 61A02		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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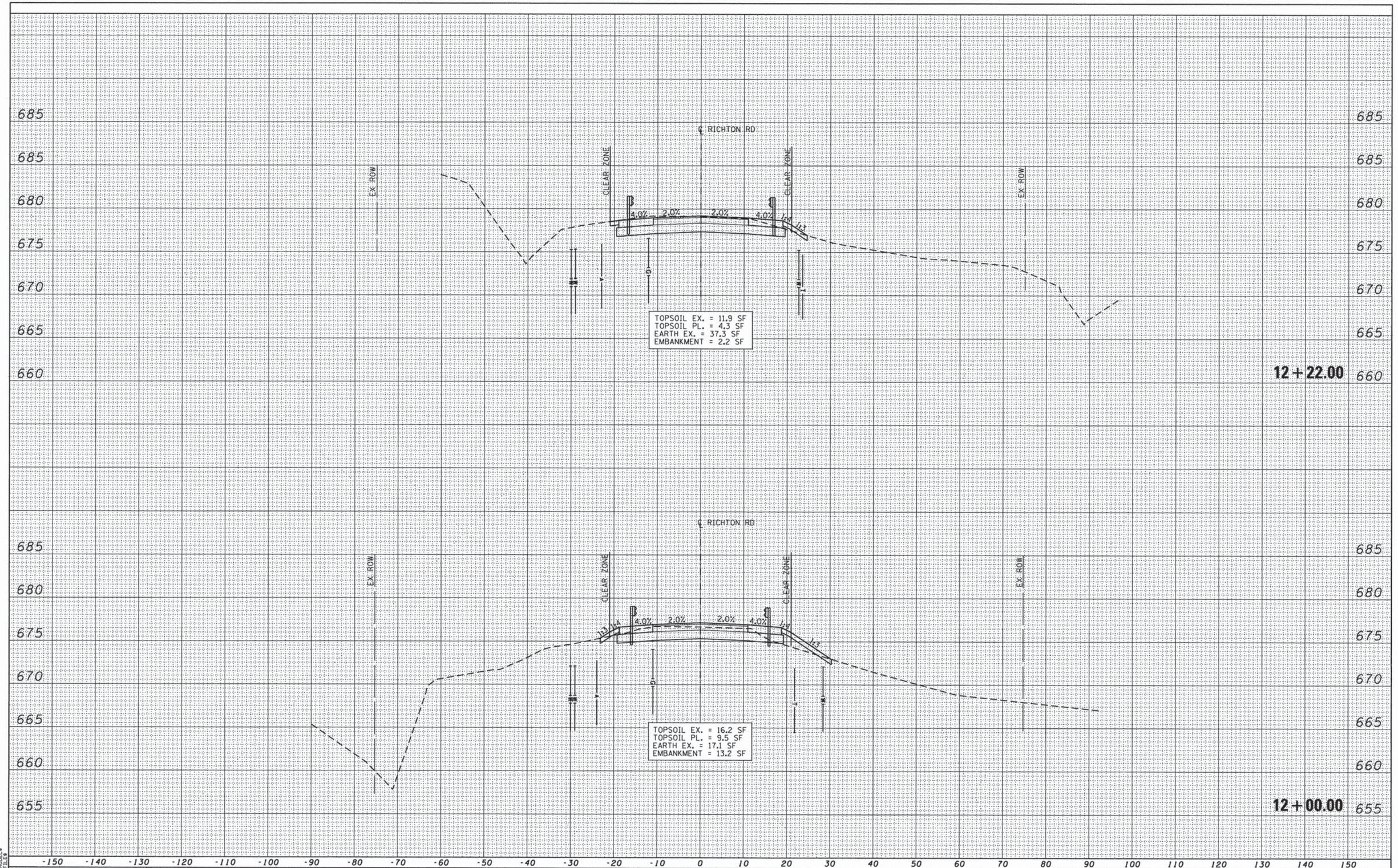
DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS RICHTON ROAD

SCALE: H 1"=10', V 1"=5' | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	47
		CONTRACT NO. 61A02		
	ILLINOIS FED. AID PROJECT			



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USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS RICHTON ROAD

SCALE: H 1"=10', V 1"=5' | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	48
		CONTRACT NO. 61A02		
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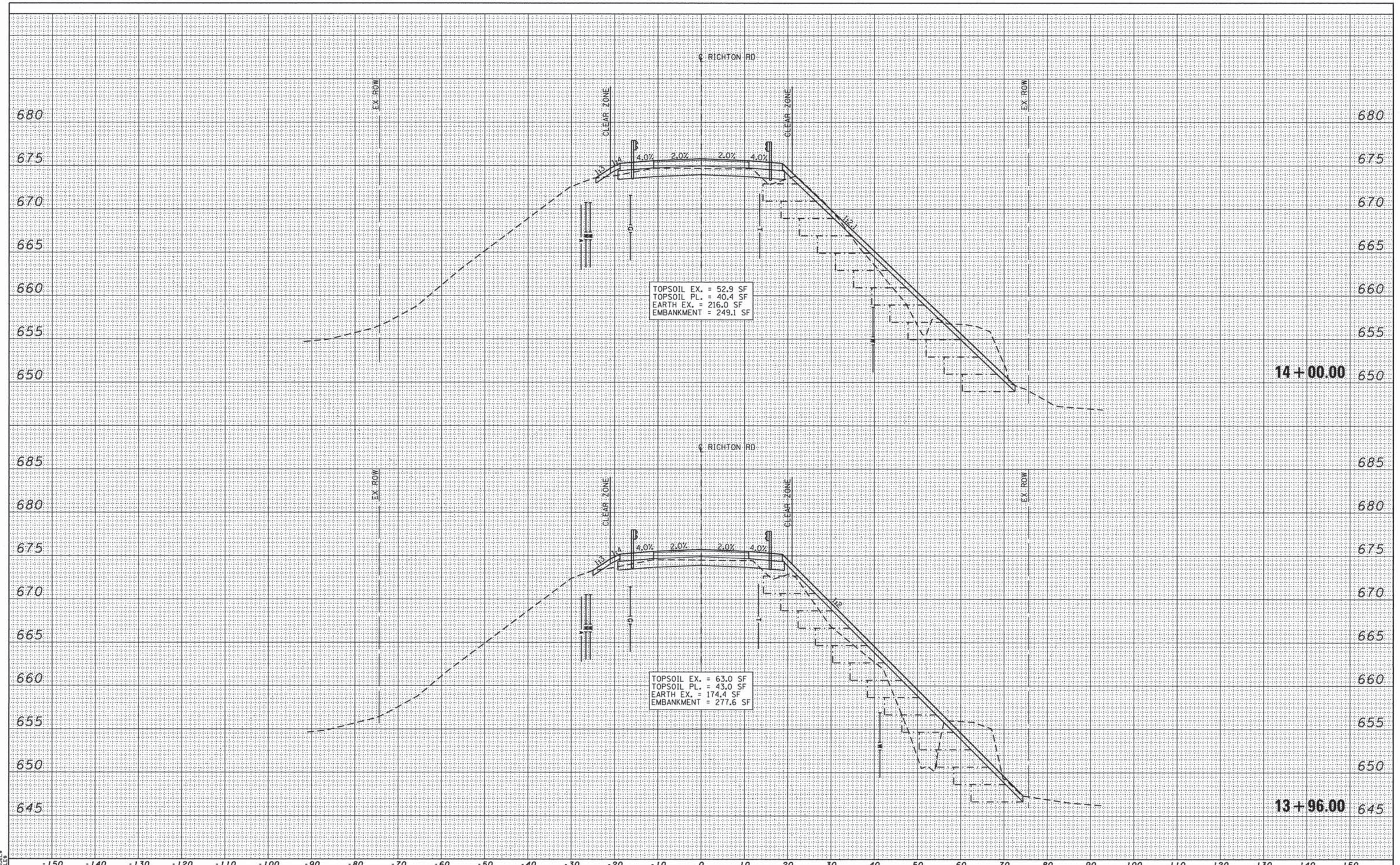

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FILE NAME =	DESIGNED - EJA	REVISED -
$ FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
PLOT DATE = $DATE$	DATE - DECEMBER 9, 2013	REVISED -

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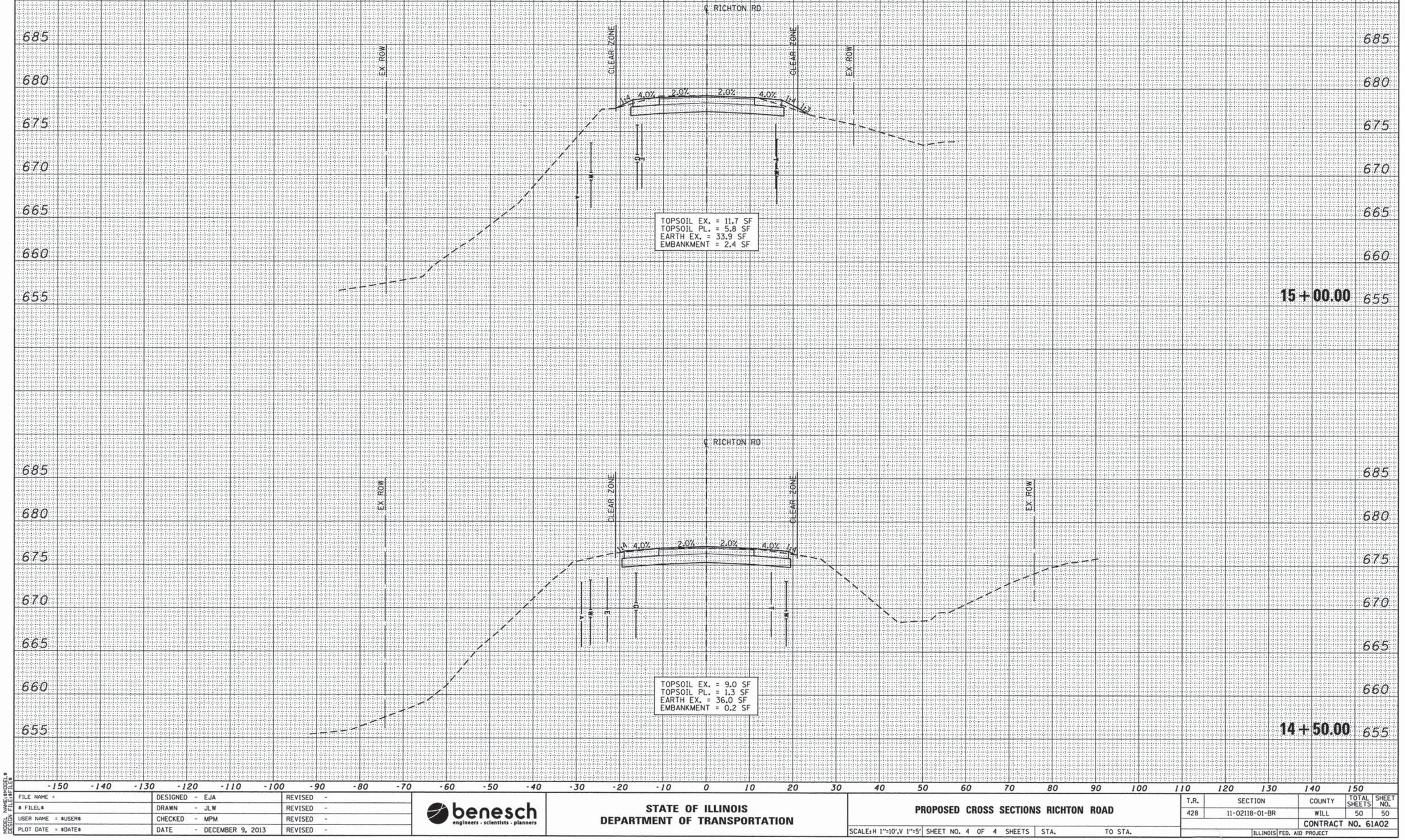
PROPOSED CROSS SECTIONS RICHTON ROAD

SCALE: H 1"=10', V 1"=5' | SHEET NO. 3 OF 4 SHEETS | STA. | TO STA.

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
428	11-02118-01-BR	WILL	50	49
		CONTRACT NO. 61A02		
		ILLINOIS FED. AID PROJECT		



MODEL NAME =$MODEL$
DESIGN FILE=$FILE$

FILE NAME =	DESIGNED - EJA	REVISED -
$ FILE$	DRAWN - JLW	REVISED -
USER NAME = $USER$	CHECKED - MPM	REVISED -
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