

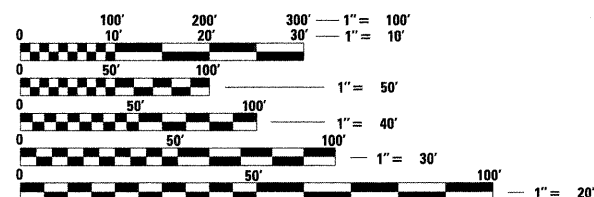
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HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-09	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631031-09	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-03	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
701321-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS _____



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

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

PROJECT ENGINEER: JOE KANNEL, P.E.
 UNIT CHIEF: MICHELE LINDEMANN, P.E.

DISTRICT 3 NO. (815) 434-6131

CONTRACT NO. 66960

03-11-11 LETTING ITEM 010

STATE OF ILLINOIS

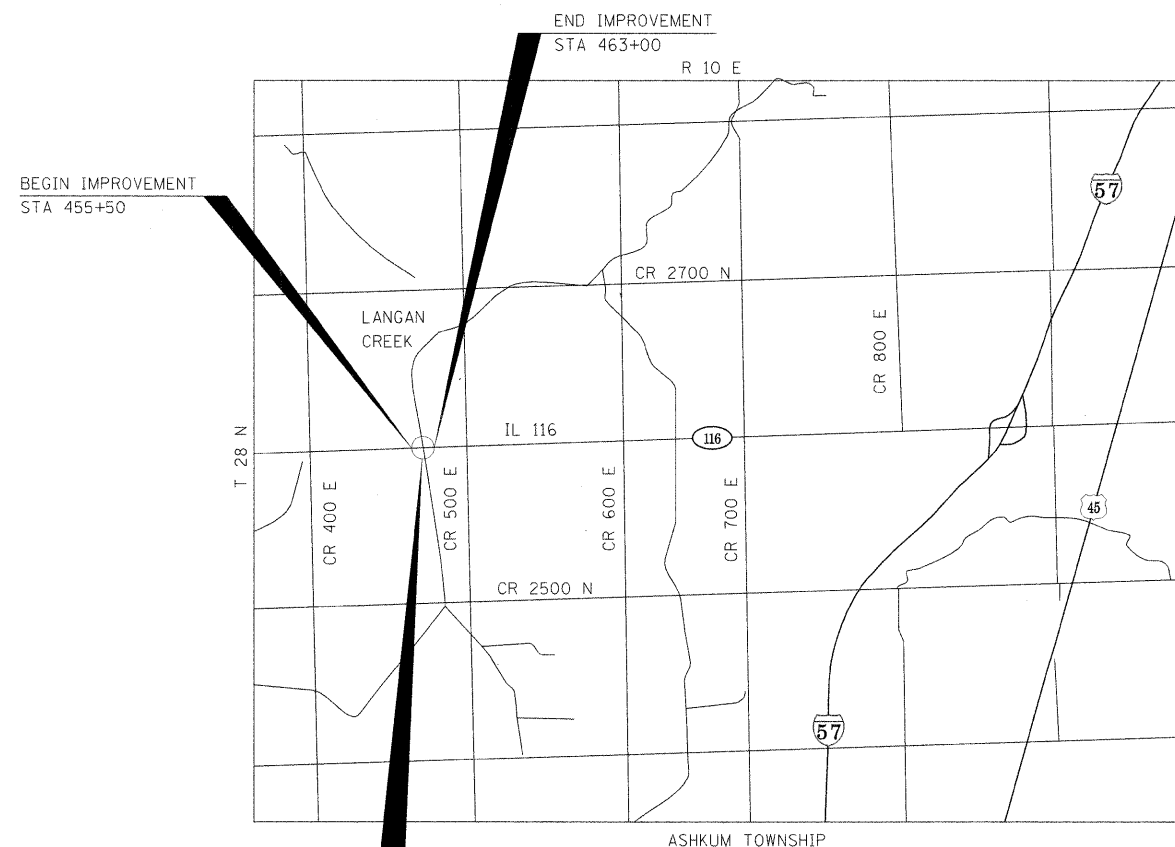
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 681 (IL 116)
 SECTION (117) BR-1
 PROJECT: ACBRF-0681(043)
 BRIDGE REPLACEMENT
 IROQUOIS COUNTY

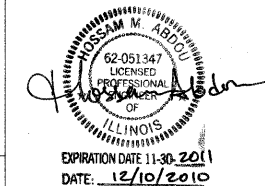
C-93-161-10



STA 459+40
 REMOVAL AND REPLACEMENT OF THE
 EXISTING STRUCTURE OVER LANGAN CREEK
 EXISTING S.N. 038-0122
 PROPOSED S.N. 038-0220

LOCATION MAP
 NOT TO SCALE

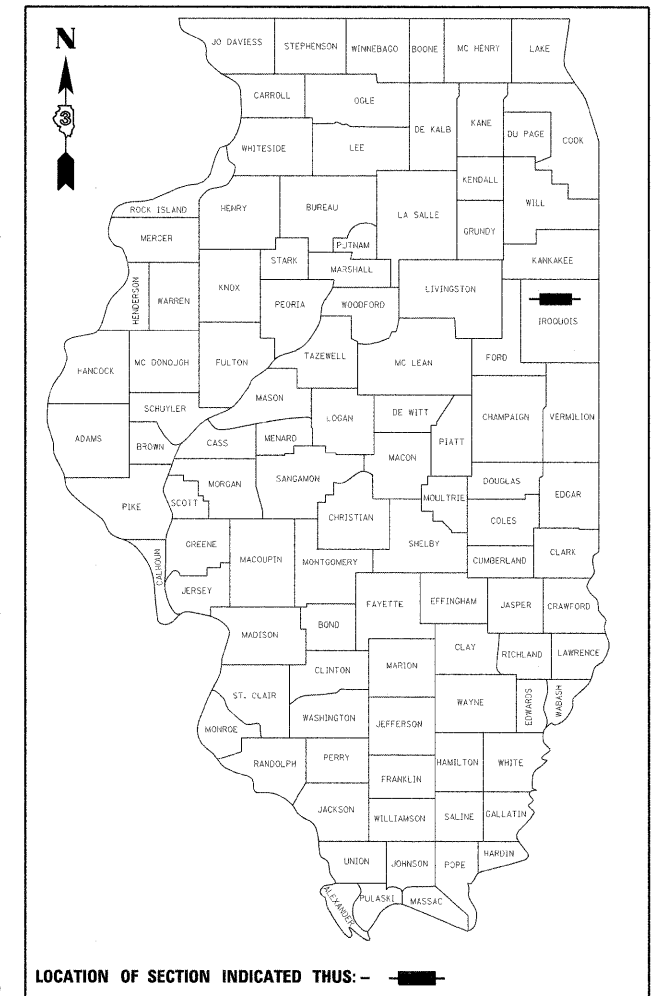
GROSS LENGTH = 750 FT. = 0.14 MI.
 NET LENGTH = 615 FT. = 0.12 MI.



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 Alfred Benesch & Company
 205 North Michigan Avenue, Suite 2400
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 312-565-0450
 Job No. 3938

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66960		

D-93-065-10



LOCATION OF SECTION INDICATED THUS: —

FUNCTIONAL CLASSIFICATION

MINOR ARTERIAL (RURAL)

F.A.P. ROUTE 681 (IL 116)

2011 ADT = 1130

P.C. = 71.5% S.U. = 9.5% M.U. = 19.0%

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED 12-15-2010

Heaven Regan
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

February 4, 2011

Scott E. Stitt PE
 acting ENGINEER OF DESIGN AND ENVIRONMENT

February 4, 2011

Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS

GENERAL NOTES

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

THE HMA SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY, IN A WORKMANLIKE MANNER, AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SAW CUT THE HMA SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE HMA SURFACE.

THE BASE COURSE WIDENING SHALL BE CARRIED THROUGH ALL ENTRANCES, SIDE ROADS, AND MAILBOX TURNOUTS. EXCEPTIONS WILL BE SHOWN ON THE PLANS.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

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.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION.

SHORT TERM PAVEMENT MARKINGS SHALL BE USED FOR THE PRIME COAT APPLICATION AND EACH RESURFACING LIFT.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW HMA PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.

ALL ELEVATIONS REFERRING TO U.S.C.S. MEAN SEA LEVEL DATUM.

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENTS ARE:
EIEC
FRONTIER

COMMITMENTS

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS INCLUDED IN THESE PLANS.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
BIT MATERIALS (PRIME COAT) ON AGGREGATE BASES	0.375	GAL / SQ YD
BITUMINOUS MATERIALS (PRIME COAT)	0.08	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.05	GAL / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT /100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (MACHINE METHOD)	0.0005	TONS / SQ YD
SUPPLEMENTAL WATERING	3	GAL / SQ YD / APPLICATION
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Don Bernick
DISTRICT STUDIES & PLANS ENGINEER

DATE: 12-15-10

EXAMINED BY: Herbert J. ...
DISTRICT CONSTRUCTION ENGINEER
Wayne J. ...
DISTRICT MATERIALS ENGINEER
Bruce A. ...
DISTRICT OPERATIONS ENGINEER



FILE NAME = ...\\sheets\\0366960-shr-gennote.dgn	USER NAME = jsalman	DESIGNED - PSB	REVISED - JMS 10-27-2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & COMMITMENTS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MW	REVISED - JMS 11-30-2010					681	(117) BR-1	IROQUOIS	41	2
	PLOT SCALE = #SCALE#	CHECKED - JMS	REVISED -					CONTRACT NO. 66960				
	PLOT DATE = 12/09/2010	DATE - 10-28-2010	REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
					SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.				

80% FEDERAL / 20% STATE				80% FED. 20% STATE
CODE NO.	PAY ITEM	UNIT	BRIDGE 0011 SN (038-0220)	
20200100	EARTH EXCAVATION	CU YD	1259	
20400800	FURNISHED EXCAVATION	CU YD	2079	
25000300	SEEDING, CLASS 3	ACRE	0.6	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	41	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	41	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	41	
25100630	EROSION CONTROL BLANKET	SQ YD	2259	
28000305	TEMPORARY DITCH CHECKS	FOOT	11	
28000400	PERIMETER EROSION BARRIER	FOOT	1500	
28100107	STONE RIPRAP, CLASS A4	SQ YD	492	
28200200	FILTER FABRIC	SQ YD	492	
31100200	SUBBASE GRANULAR MATERIAL, TYPE A	CU YD	5	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	17	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	286	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	1	
40600525	LEVELING BINDER (MACHINE METHOD), N50	TON	76	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	520	
40600990	TEMPORARY RAMP	SQ YD	437	
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	752	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	149	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	
44000100	PAVEMENT REMOVAL	SQ YD	785	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	505	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1	
50105220	PIPE CULVERT REMOVAL	FOOT	46	
50200100	STRUCTURE EXCAVATION	CU YD	650	
50300100	FLOOR DRAINS	EACH	6	
50300225	CONCRETE STRUCTURES	CU YD	132.8	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	268.0	
50300260	BRIDGE DECK GROOVING	SQ YD	450	
50300280	CONCRETE ENCASEMENT	CU YD	9.8	
50300300	PROTECTIVE COAT	SQ YD	596	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	77090	
50800515	BAR SPLICERS	EACH	441	
51201600	FURNISHING STEEL PILES HP12X53	FOOT	1045	
51202305	DRIVING PILES	FOOT	1045	
51203600	TEST PILE STEEL HP12X53	EACH	2	

80% FEDERAL / 20% STATE				80% FED. 20% STATE
CODE NO.	PAY ITEM	UNIT	BRIDGE 0011 SN (038-0220)	
51500100	NAME PLATES	EACH	1	
54214311	END SECTIONS, EQUIVALENT ROUND-SIZE 36"	EACH	6	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	40	
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	600	
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	3	
63200310	GUARDRAIL REMOVAL	FOOT	780	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	2	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7	
67100100	MOBILIZATION	L SUM	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	LSUM	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	80	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4148	
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1354	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	665	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	665	
78001110	PAINT PAVEMENT MARKING - LINE 4 "	FOOT	3000	
78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	375	
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	
78200410	GUARDRAIL MARKERS, TYPE A	EACH	7	
78200530	BARRIER WALL MARKERS, TYPE C	EACH	54	
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	
54205491	PIPE CULVERTS, CLASS D, TYPE 1 EQUIVALENT ROUND-SIZE 36"	FOOT	680	
X4810100	TEMPORARY SHOULDERS	SQ YD	292	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION- LOCATION 1	EACH	1	
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION- LOCATION 2	EACH	1	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	59	
Z0026407	TEMPORARY SHEET PILING	SQ FT	1362	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES, 4"	FOOT	104	

• SPECIALTY ITEM

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Chicago, Illinois 60601
312-565-0450
Job No. 3938

FILE NAME =	USER NAME = carpentardj	DESIGNED - PSB	REVISED - PSB 10-15-2010
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	PLOT DATE = Dec 16, 2010 - 07:56:25 AM	DATE - 10-28-2010	REVISED - XXX

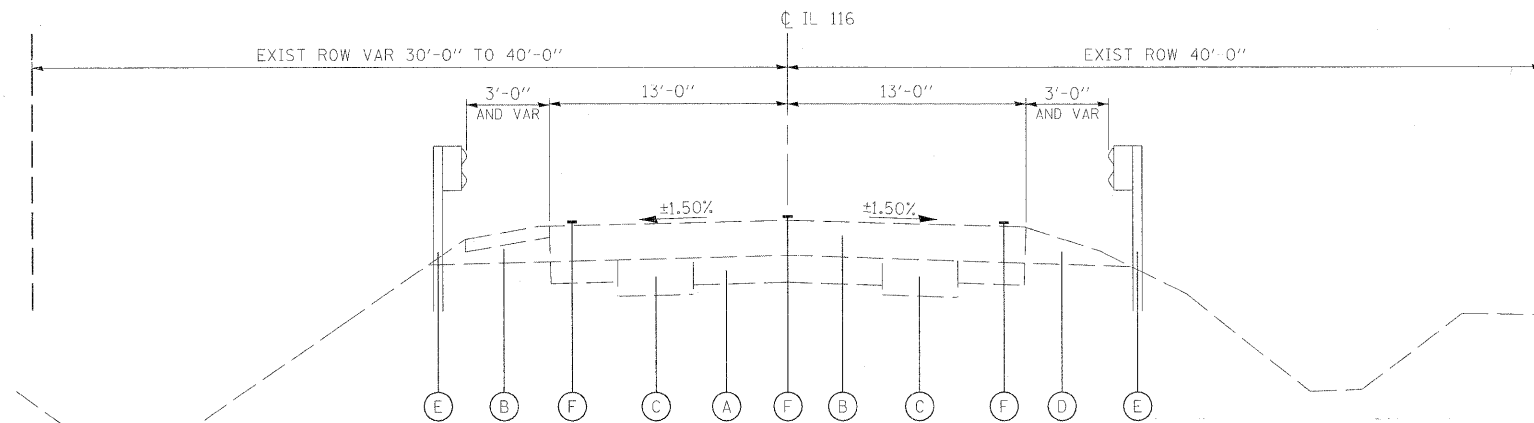
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

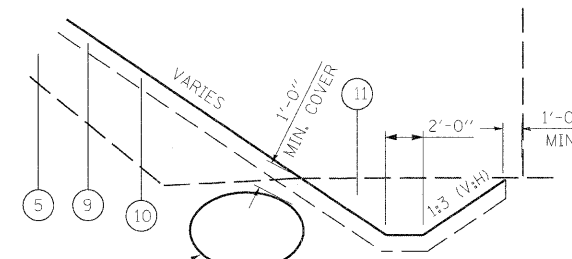
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	3
CONTRACT NO. 66960				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

Rev.

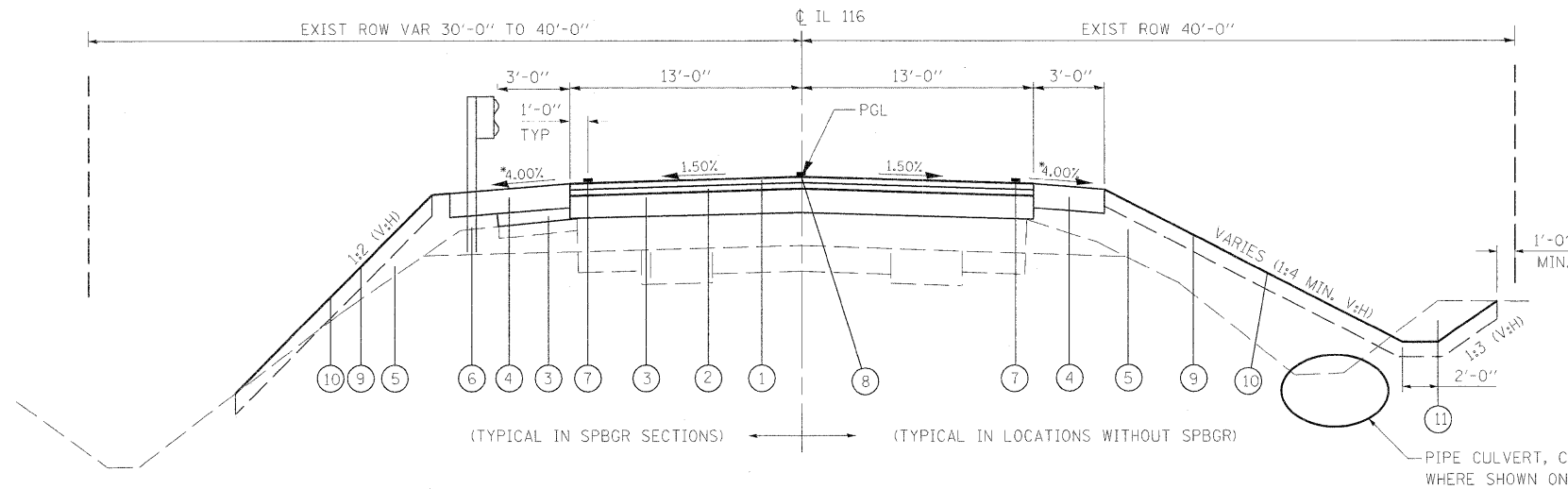


PIPE CULVERT, CLASS D, TYPE 1, EQRS 36" WHERE SHOWN ON THE PLANS



EXISTING TYPICAL SECTION

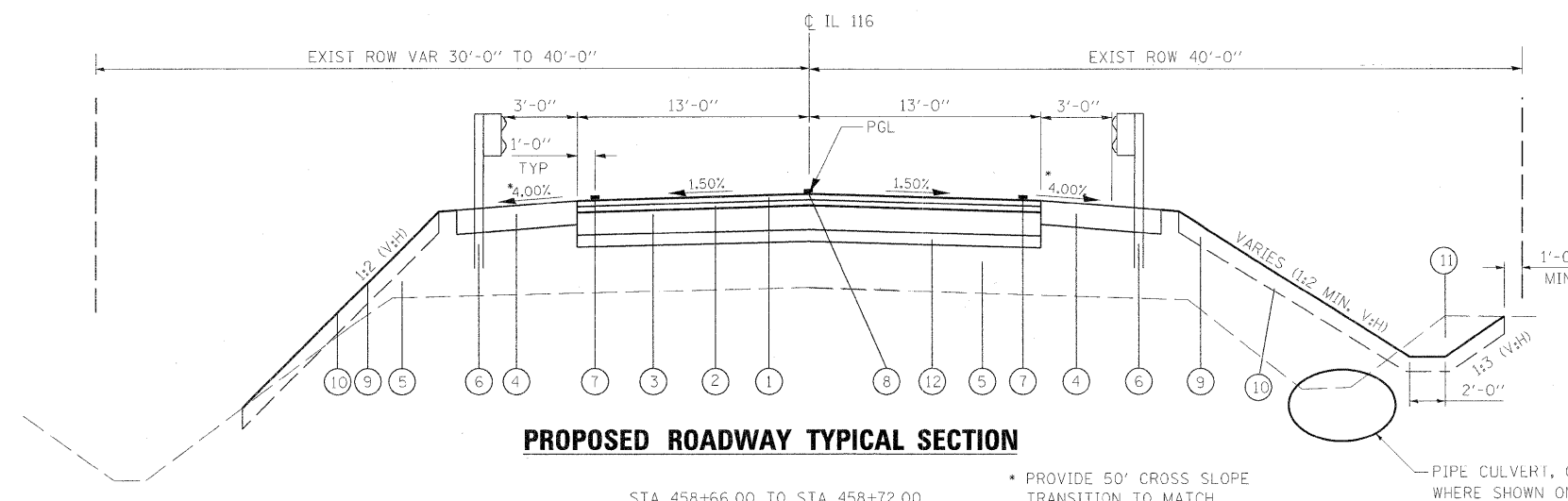
STA 456+00.00 TO STA 459+24.00
BRIDGE OMISSION STA 459+24.00 TO STA 459+56.00
STA 459+56.00 TO STA 463+00.00



PROPOSED ROADWAY TYPICAL SECTION

STA 455+50.00 TO STA 458+66.00
BRIDGE OMISSION STA 458+72.00 TO STA 460+07.00
STA 460+13.00 TO STA 463+00.00

* PROVIDE 50' CROSS SLOPE
TRANSITION TO MATCH
PROPOSED BRIDGE APPROACH



PROPOSED ROADWAY TYPICAL SECTION

STA 458+66.00 TO STA 458+72.00
STA 460+07.00 TO STA 460+13.00

* PROVIDE 50' CROSS SLOPE
TRANSITION TO MATCH
PROPOSED BRIDGE APPROACH

- ① HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (1.5")
- ② LEVELING BINDER (MACHINE METHOD), N50 (3/4")
- ③ HOT-MIX ASPHALT BINDER COURSE, IL-19.0 N50 DEPTH VARIES (SEE NOTE 2, THIS SHEET). LIFTS NOT TO EXCEED 4".
- ④ HOT-MIX ASPHALT SHOULDERS (8" PLACED IN TWO LIFTS OF 4")
- ⑤ FURNISHED EXCAVATION
- ⑥ STEEL PLATE BEAM GUARDRAIL, TYPE A 6 FT POSTS
- ⑦ PAINT PAVEMENT MARKING - LINE, 4" SOLID WHITE
- ⑧ PAINT PAVEMENT MARKING - LINE, 4" DASHED
- ⑨ SEEDING, CLASS 3
- ⑩ EROSION CONTROL BLANKET
- ⑪ EARTH EXCAVATION
- ⑫ SUBBASE GRANULAR MATERIAL, TYPE A (4")
- A EXIST CONCRETE PAVEMENT
- B VARIABLE DEPTH HMA PAVEMENT
- C EXIST HMA WIDENING
- D EXIST AGGREGATE SHOULDER
- E EXIST STEEL PLATE BEAM GUARDRAIL
- F EXIST PAVEMENT MARKING

MIX DESIGN TABLE

	HMA BINDER	HMA SURFACE	HMA SHOULDERS	HMA LEVEL BINDER
PG GRADE**	PG64-22	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE		MIXTURE C		
DENSITY TEST METHOD	CORES	CORES	CORES*	CORES

* MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE, THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

** WHEN RAP EXCEEDS 20%, THE VIRGIN ASPHALT BINDER SHALL BE REDUCED BY ONE GRADE (I.E. 25% RAP WOULD REQUIRE A VIRGIN ASPHALT BINDER GRADE OF PG64-22 TO BE REDUCED TO A PG58-22).

NOTES:

1. FRONT SLOPE SHALL BE 1:2 MIN. (V:H) BEHIND GUARDRAIL AND 1:4 MIN. (V:H) IN NON-GUARDRAIL SECTIONS.
2. DEPTH OF BINDER COURSE VARIES TO EITHER MATCH EXISTING HMA PAVEMENT, OR TO TRANSITION ROADWAY AT THE BRIDGE APPROACH FOOTING.



FILE NAME =	USER NAME = jsalman	DESIGNED - PSB	REVISED - JMS 10-27-2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS	F.A.P. RTE.		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\sheets\0366960-sh1-typical.dgn		DRAWN - MW	REVISED - JMS 11-30-2010			681	(117) BR-1	IROQUOIS	41	4	
PLOT SCALE = #SCALE#		CHECKED - JMS	REVISED -			CONTRACT NO. 66960					
PLOT DATE = 12/29/2010		DATE - 10-28-2010	REVISED -								
						SCALE: 5		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	
						FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

SCHEDULE OF QUANTITIES

EARTHWORK						
LOCATION			EARTH EXCAVATION	EARTH EX. ADJ. FOR SHRINKAGE (1)	TOPSOIL (2)	FURNISHED EXCAVATION (3)
			CU YD	CU YD	CU YD	CU YD
STA. 456+00	TO	STA. 457+00	13	10	38	101
STA. 456+00	TO	STA. 457+00	18	14	155	259
STA. 457+00	TO	STA. 457+68	32	24	86	117
STA. 457+68	TO	STA. 004+58	18	14	36	55
STA. 004+58	TO	STA. 458+50	9	7	66	126
STA. 458+50	TO	STA. 458+75	2	2	34	67
STA. 458+75	TO	STA. 459+00	2	2	32	61
STA. 459+00	TO	STA. 459+13	1	1	19	40
STA. 459+13	TO	STA. 459+65	9	7	81	175
STA. 459+65	TO	STA. 460+00	6	5	53	108
STA. 460+00	TO	STA. 460+50	3	2	78	154
STA. 460+50	TO	STA. 461+00	3	2	78	148
STA. 461+00	TO	STA. 462+00	12	9	183	344
STA. 462+00	TO	STA. 463+00	16	12	176	324
TOTAL:			144	108	1115	2079

(1) QUANTITY OF EARTH EXCAVATION ADJUSTED FOR A SHRINKAGE FACTOR OF 25% AFTER TOPSOIL REMOVAL

(2) BASED ON 6 INCHES OF TOPSOIL REMOVAL

(3) INCLUDES 6 INCHES OF TOPSOIL REMOVAL

SEEDING AND FERTILIZER						
LOCATION			SEEDING CLASS 3	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
			ACRE	POUND	POUND	POUND
STA. 455+50	TO	STA. 457+00	0.07	5.99	5.99	5.99
STA. 457+00	TO	STA. 458+68	0.05	4.01	4.01	4.01
STA. 458+68	TO	STA. 458+00	0.03	2.22	2.22	2.22
STA. 458+00	TO	STA. 458+50	0.04	3.05	3.05	3.05
STA. 458+50	TO	STA. 458+75	0.02	1.35	1.35	1.35
STA. 458+75	TO	STA. 459+00	0.02	1.15	1.15	1.15
STA. 459+00	TO	STA. 459+13	0.01	0.64	0.64	0.64
STA. 459+13	TO	STA. 459+65	0.04	3.36	3.36	3.36
STA. 459+65	TO	STA. 460+00	0.03	2.28	2.28	2.28
STA. 460+00	TO	STA. 460+50	0.04	3.07	3.07	3.07
STA. 460+50	TO	STA. 461+00	0.04	2.70	2.70	2.70
STA. 461+00	TO	STA. 462+00	0.07	5.48	5.48	5.48
STA. 462+00	TO	STA. 463+00	0.07	6.03	6.03	6.03
TOTAL:			0.60	41	41	41

PAVEMENT AND SHOULDERS							
LOCATION			HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	BITUMINOUS MATERIALS (PRIME COAT)	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	LEVELING BINDER (MACHINE METHOD), N50	PAVEMENT REMOVAL
			TON	GAL	TON	TON	SQ YD
STA. 455+80	TO	STA. 458+72	412	154	78	40	
STA. 455+80	TO	STA. 457+69	340	132	71	36	
STA. 455+50	TO	STA. 463+00					785
STA. 455+50	TO	STA. 456+40					260
STA. 462+10	TO	STA. 463+00					260
TOTAL:			752	286	149	76	785

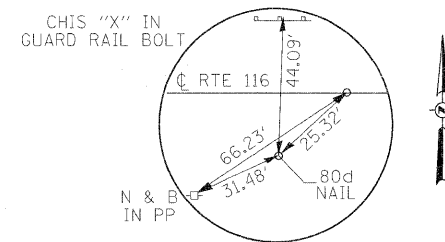
GUARDRAIL						
LOCATION			GUARDRAIL REMOVAL	SPBGR TYPE A 6 FT POSTS	TBT TYPE 6	TBT TYPE 1, SPECIAL (FLARED)
			FOOT	FOOT	EACH	EACH
RIGHT SIDE						
STA. 455+50	TO	STA. 460+70	520.00			
STA. 456+81	TO	STA. 458+43		162.5		2
STA. 459+94	TO	STA. 460+86				
LEFT SIDE						
STA. 455+50	TO	STA. 460+70	260.00			
STA. 460+36	TO	STA. 461+98		162.5		2
STA. 455+80	TO	STA. 458+43		275		3
STA. 458+43	TO	STA. 458+87			1	
STA. 459+93	TO	STA. 460+36			1	
STA. 458+43	TO	STA. 458+87			1	
STA. 459+93	TO	STA. 460+36			1	
STA. 456+31	TO	STA. 456+31				1
STA. 462+48	TO	STA. 462+48				1
STA. 460+86	TO	STA. 460+86				1
TOTAL:			780	600	4	3

PAVEMENT MARKINGS				
LOCATION		*TEMPORARY PAVEMENT MARKING - LINE 4"	PAINT PAVMENT MARKING, -LINE 4"	PAINT PAVMENT MARKING, -LINE 6"
		FOOT	FOOT	FOOT
STA. 455+50	TO STA. 463+00	375	3000	375
TOTAL:		375	3000	375
* DASH LINES AFTER PLACING LEVELING BINDER AND TOP COURSE				

WORK ZONE TRAFFIC CONTROL						
LOCATION	TEMP CONC. BARRIER	RELOCATE TEMP. CONC. BARRIER	IMPACT ATTEN., TEMP.	TEMPORARY PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 24"	IMPACT ATTEN., RELOC.
STA. 456+07 TO STA. 462+73	665	665	2	3773	48	2
TOTAL:						

TEMPORARY EROSION CONTROL					
TEMPORARY DITCH CHECKS		PERIMETER EROSION BARRIER			
STATION	OFFSET	STATION	STATION	RT/LT	FOOT
STA. 455+70	35' RT	STA. 455+50	TO STA. 463+00	RT	750
STA. 457+00	35' RT	STA. 455+50	TO STA. 463+00	LT	750
STA. 458+00	35' RT				
STA. 459+80	35' LT				
STA. 460+00	35' RT				
STA. 461+00	35' LT				
STA. 461+00	35' RT				
STA. 461+82	35' LT				
STA. 462+00	35' RT				
STA. 462+80	35' LT				
STA. 463+20	35' RT				
TOTAL:		11	TOTAL:		

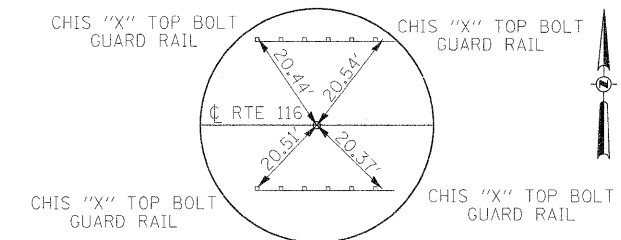




POT STA 445+00.69

NAIL

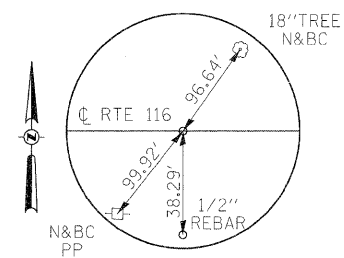
N 1,535,432.1810
E 1,064,011.2620



POT STA 459+40.00

NAIL

N 1,535,477.7220
E 1,065,449.8500



POT STA 467+35.64

NAIL

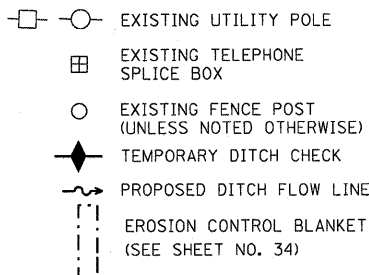
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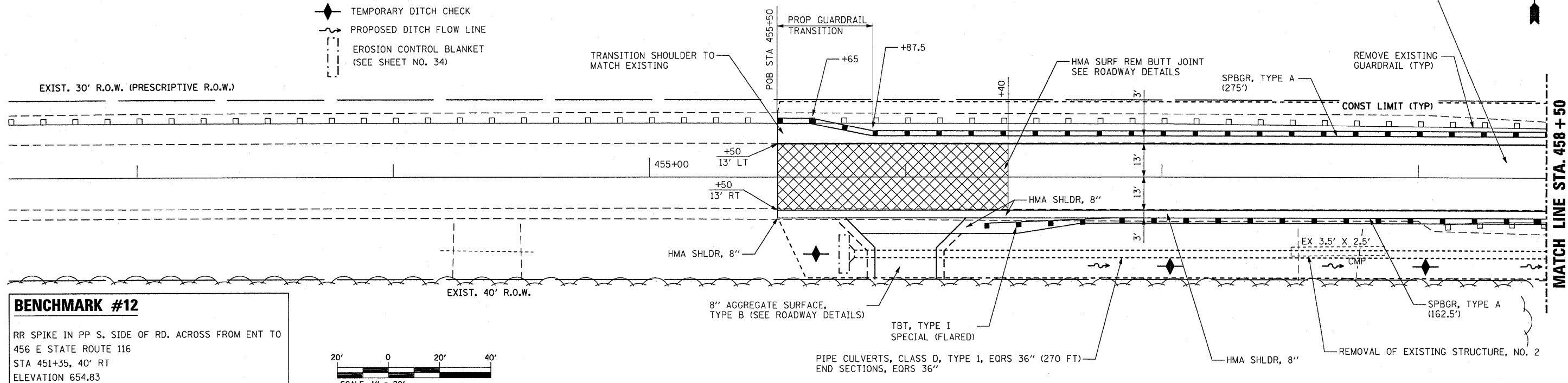
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		DRAWN - MW	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66960	
		CHECKED - JMS	REVISED -									
		DATE -	REVISED -									

PROFILE		BY	DATE
SURVEYED _____			
PLOTTED _____			
NOTE BOOK _____			
GRADES CHECKED _____			
B.M. NOTED _____			
STRUCTURE NOTAT'NS CHK'D _____			
NO. _____			

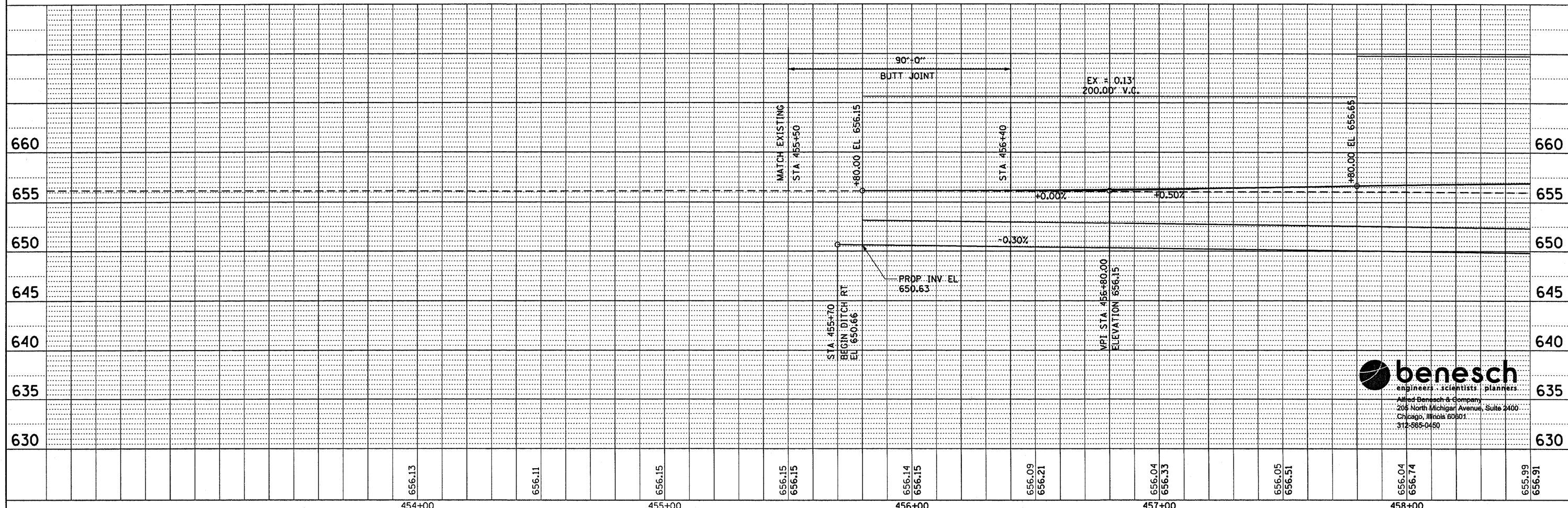
HMA BUTT JOINT



HMA SURFACE COURSE, MIX "C", N50 (1 1/2")
LEVELING BINDER (MACHINE MODIFIED), N50 (3/4") 8
HMA BINDER COURSE, IL-90, N50 (VARIES) (TYP)



RR SPIKE IN PP S. SIDE OF RD. ACROSS FROM ENT TO
456 E STATE ROUTE 116
STA 451+35, 40' RT
ELEVATION 654.83



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Chicago, Illinois 60601
312-565-0450

FILE NAME =	USER NAME = carpenterd.j	DESIGNED - DC	REVISED - JMS 11-30-2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				PLAN AND PROFILE				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ar\pw\work\pwidat\carpenterd.j\dms68283\036960-shr\plnprf1 MERGED.dgn	DRAWN - MRW	REVISED - XXX										681	(117) BR-1	IROQUOIS	41	7
PLOT SCALE = 20.0000 ' / IN.	CHECKED - JMS	REVISED - XXX										CONTRACT NO. 66360				
PLOT DATE = Dec 16, 2010 - 07:53:49 AM	DATE - 10-30-2010	REVISED - XXX														
				SCALE: 1" = 20'		SHEET NO. 1 OF 2 SHEETS		STA. 455+50 TO STA. 458+50		FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT						

PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	AT ANY CHECKED		
	CAO FILE NAME		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		

BENCHMARK #10

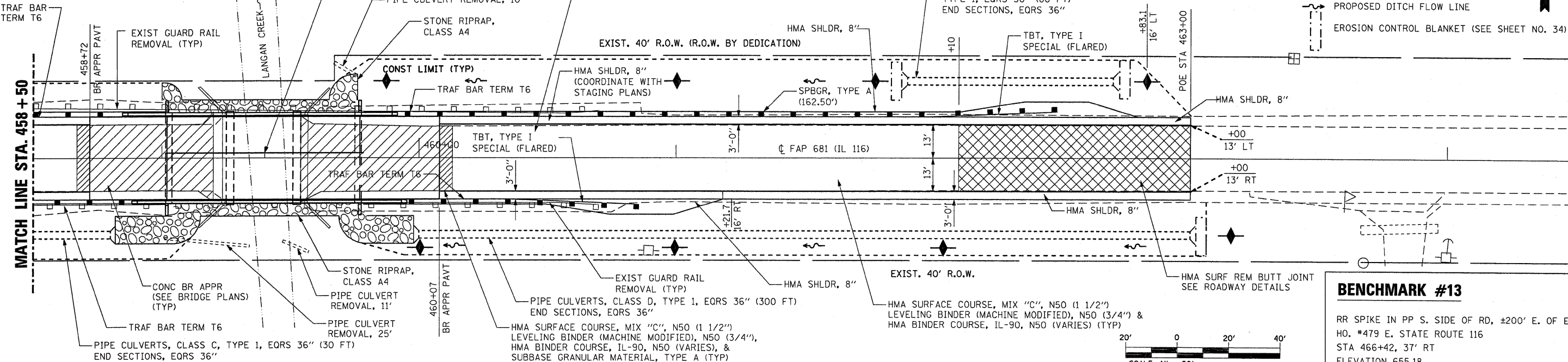
CHIS "C" ON SW CORNER OF BRIDGE ON WINGWALL
STA 459+24, 18' RT
ELEVATION 655.54

STA 459+40
EXIST S.N. 038-0122
(TO BE REMOVED)
PROP S.N. 038-0220
THREE SPAN REINFORCED
CONCRETE BRIDGE

PAVEMENT REMOVAL:
STA 458+66 TO STA 459+24
STA 459+56 TO STA 460+13
EXISTING BRIDGE OMISSION:
STA 459+24 TO STA 459+56

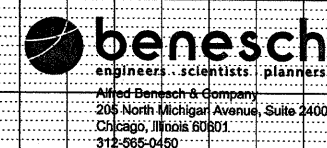
LEGEND

- PAVEMENT REMOVAL AND REPLACEMENT
- HMA BUTT JOINT
- PAVEMENT REMOVAL AND BR APPR PAVEMENT CONNECTOR
- EXISTING UTILITY POLE
- EXISTING TELEPHONE SPLICE BOX
- EXISTING FENCE POST (UNLESS NOTED OTHERWISE)
- TEMPORARY DITCH CHECK
- PROPOSED DITCH FLOW LINE
- EROSION CONTROL BLANKET (SEE SHEET NO. 34)

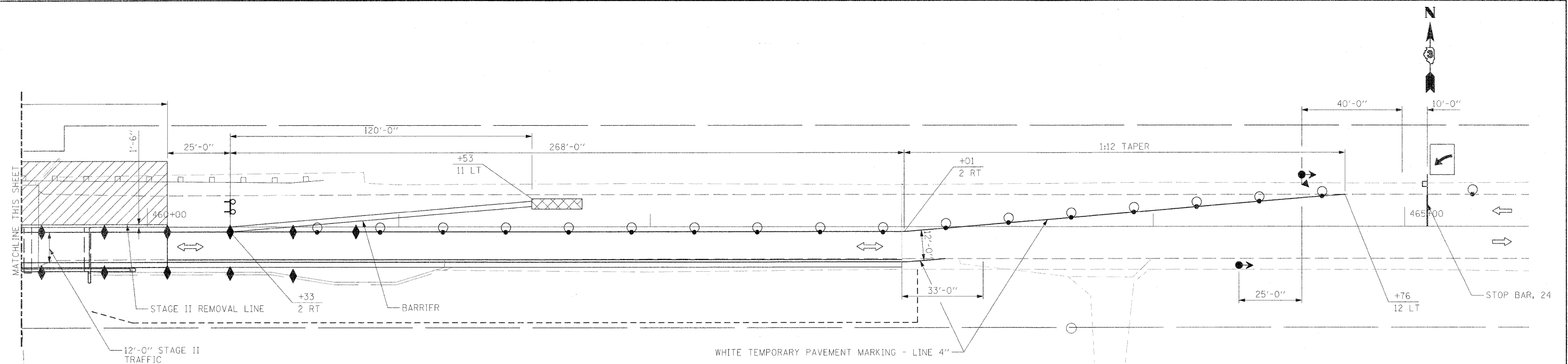
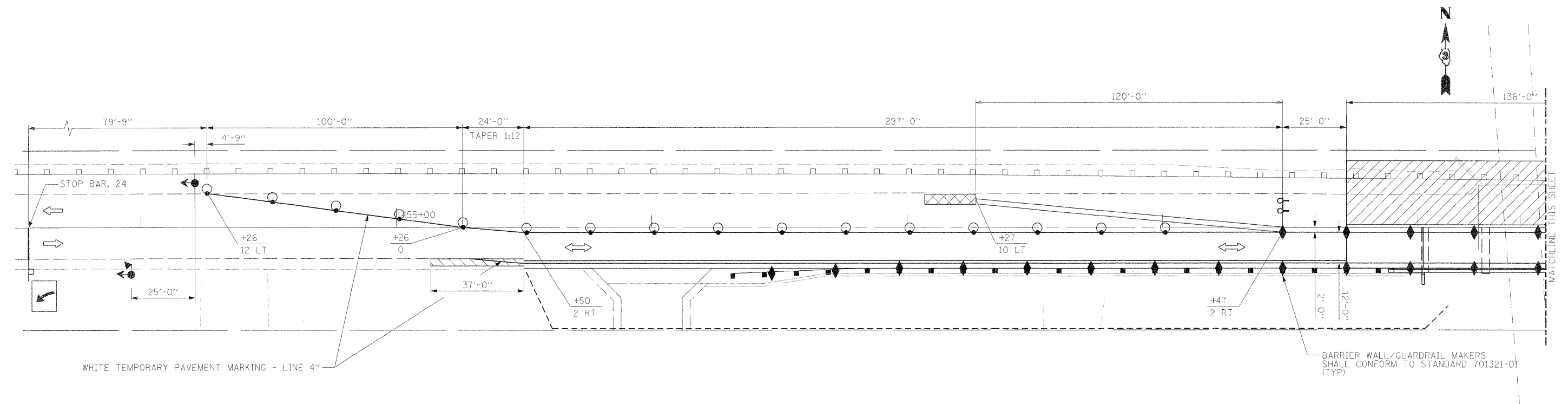


BENCHMARK #13

RR SPIKE IN PP S. SIDE OF RD, ±200' E. OF ENT TO
HO. #479 E. STATE ROUTE 116
STA 466+42, 37' RT
ELEVATION 655.18



FILE NAME =	USER NAME = carpenterdj	DESIGNED - DC	REVISED - JMS 11-30-2010	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		PLAN AND PROFILE		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\carpenterdj\dms68283\036968-shr-plnprf2 MERGED.dgn		DRAWN - MRW	REVISED - XXX					681	(117) BR-1	IROQUOIS	41	8
		CHECKED - JMS	REVISED - XXX					CONTRACT NO. 66960				
		DATE - 10-30-2010	REVISED - XXX					FED. ROAD DIST. NO. 3 ILLINOIS FED. AID PROJECT				



LEGEND

	WORK AREA		SIGN
	TEMPORARY HMA SHOULDER, 8"		TYPE III BARRICADE WITH FLASHING LIGHTS
	TEMPORARY CONCRETE BARRIER		CRYSTAL, BIDIRECTIONAL BARRIER WALL/GUARDRAIL MARKER
	DRUM WITH STEADY BURNING LIGHT		IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
	TRAFFIC SIGNAL WITH BACKPLATE		
	MICROWAVE DETECTOR		

NOTES

- SEE HIGHWAY STANDARD 701321 FOR ADDITIONAL TRAFFIC CONTROL INFORMATION.
- TEMPORARY BRIDGE TRAFFIC SIGNALS, CONCRETE BARRIER, AND IMPACT ATTENUATORS WILL BE PAID FOR SEPARATELY.
- SEE SPECIAL PROVISION "TEMPORARY BRIDGE TRAFFIC SIGNALS (STANDARD 701316 OR 701321)" REGARDING MICROWAVE DETECTORS.

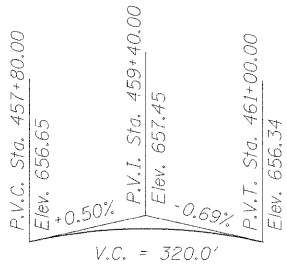
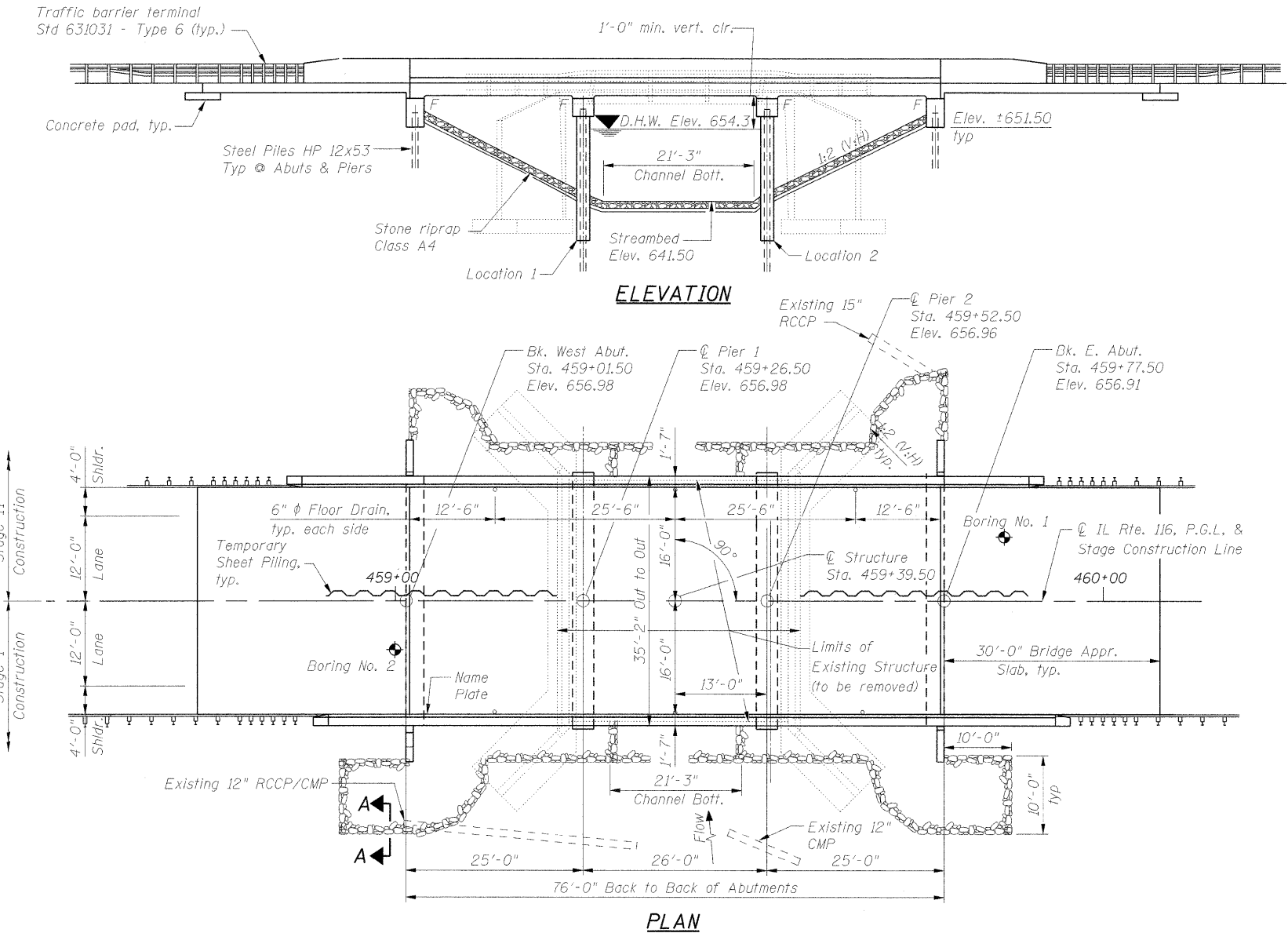


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		DRAWN - MW	REVISED - JMS 12-03-2010						681	(117) BR-1	IROQUOIS	41	11
		CHECKED - JMS	REVISED -						CONTRACT NO. 66960				
		DATE - 10-28-2010	REVISED -						ILLINOIS FED. AID PROJECT				

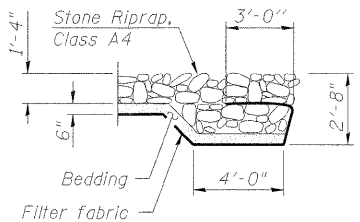
Bench Mark: BM#12 RR spike in PP S. side of road across from entrance to 456 E. State Route 116.
Sta 451+90 40' RT. Elev. 654.83

Existing Structure: Structure 038-0122 over Langan Creek was originally constructed in 1972 as a single-span Precast Prestressed Concrete (PPC) deck beam bridge. It has closed concrete abutments constructed on spread footings. There are eleven PPC beams, each 3' wide and 1'-5" thick. The structure is 33'-0" wide out-to-out (32'-6" clear width between the bridge rails) and it has a span length of 33'-0" back-to-back of abutments. In 2008 the 7 beams on the north side of the bridge were replaced. Traffic to be maintained using stage construction.

No salvage.



PROFILE GRADE
(along IL Rte. 116)



SECTION A-A

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
with 2008 and 2009 Interims

DESIGN STRESSES

FIELD UNITS

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

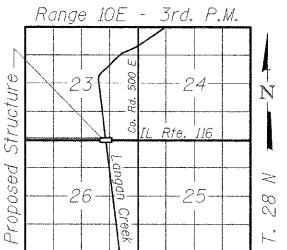
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{a1}) = 0.077g
Design Spectral Acceleration at 0.2 sec. (S_{a2}) = 0.132g
Soil Site Class = C

STATION 459+40
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 681 SEC. (117) BR-1
LOADING HL-93
STR. NO. 038-0220

NAME PLATE

See Std. 515001



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
[Signature]
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
HOSSAM M. ABDOL
081-005637
REGISTERED STRUCTURAL ENGINEER
CHICAGO, IL
EXPIRATION DATE 11-30-2012
DATE 12/10/2010

WATERWAY INFORMATION

Drainage Area = 14.5 sq. mi. Low Grade Elev. 655.65 @ Sta. 463+00									
Flood	Freq. Yr.	Q	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	50	961	276	466	653.1	0.0	0.0	0.0	653.1
Base	100	1100	289	559	654.6	0.1	0.0	0.0	654.7
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	1428	289	589	655.0	0.3	0.0	0.0	655.3

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	651.45	641.50	641.50	651.45

GENERAL PLAN AND ELEVATION

ILLINOIS ROUTE 116 OVER

LANGAN CREEK

F.A.P. RTE. 681 - SEC. (117) BR-1

IROQUOIS COUNTY

STATION 459+40

STRUCTURE NO. 038-0220

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job No. 3938

FILE NAME =
...\\038-0220-66968-001-gpe.dgn

USER NAME = joreisher

DESIGNED - JDC
CHECKED - JMS

REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 038-0220

SHEET NO. 1 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	12
CONTRACT NO. 66960				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

GENERAL NOTES

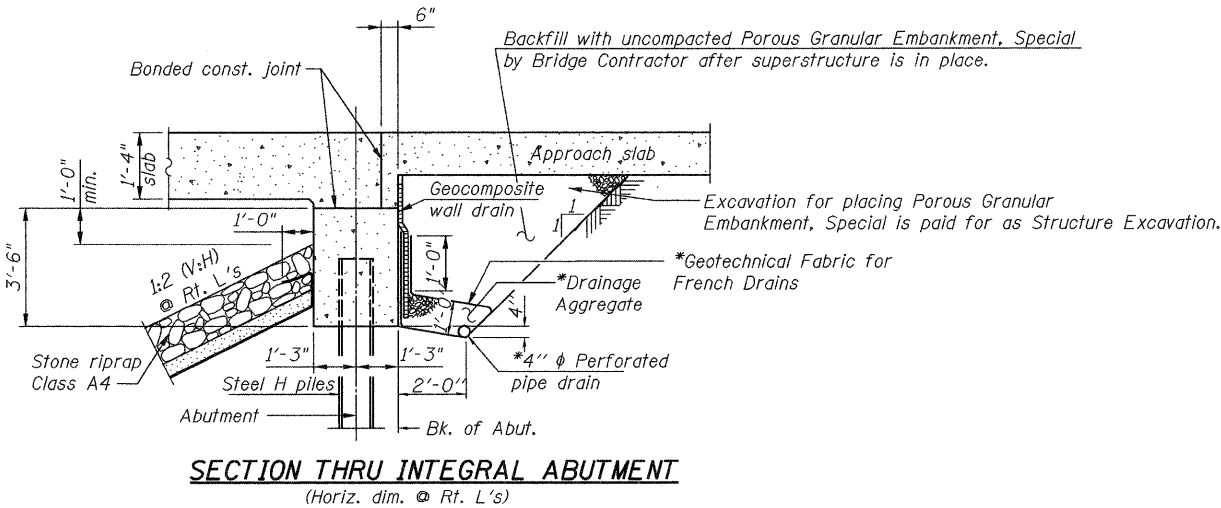
1. Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60. See Special Provision.
2. Reinforcement Bars designated (E) shall be epoxy coated.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
5. The contractor is advised that the existing superstructure is in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
6. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 Removal to ensure the remaining portion will not be prematurely damaged.
7. The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.

INDEX OF SHEETS

1. General Plan and Elevation
2. General Notes, Index of Sheets and Total Bill of Material
3. Stage Construction and Temporary Sheetting
4. Stage Construction Beam Removal
5. Top of Slab Elevations
6. Top of West Approach Slab Elevations
7. Top of East Approach Slab Elevations
8. Deck Plan and Cross Section
9. Integral Abutment and Pier Diaphragm Details
10. Superstructure Details
11. Bridge Approach Slab Details 1 of 2
12. Bridge Approach Slab Details 2 of 2
13. West Abutment Details
14. East Abutment Details
15. Pier 1 Details
16. Pier 2 Details
17. HP Pile Details
18. Bar Splicer Assembly Details
19. Concrete Parapet Slipforming Option
20. Temporary Concrete Barrier for Stage Construction
21. Soil Boring Logs 1 of 2
22. Soil Boring Logs 2 of 2

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		59	59
Stone Riprap, Class A4	Sq. Yd.		492	492
Filter Fabric	Sq. Yd.		492	492
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		650	650
Floor Drains	Each	6		6
Concrete Structures	Cu. Yd.		132.8	132.8
Concrete Superstructure	Cu. Yd.	268		268
Bridge Deck Grooving	Sq. Yd.	450		450
Concrete Encasement	Cu. Yd.		9.8	9.8
Protective Coat	Sq. Yd.	596		596
Reinforcement Bars, Epoxy Coated	Pound	64,810	12,280	77,090
Bar Splicers	Each	279	162	441
Furnishing Steel Piles, HP12x53	Ft.		1045	1045
Driving Piles	Ft.		1045	1045
Test Pile Steel, HP12X53	Each		2	2
Temporary Sheet Piling	Sq. Ft.		1362	1362
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		40	40
Pipe Underdrains For Structures, 4"	Ft.		104	104
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1



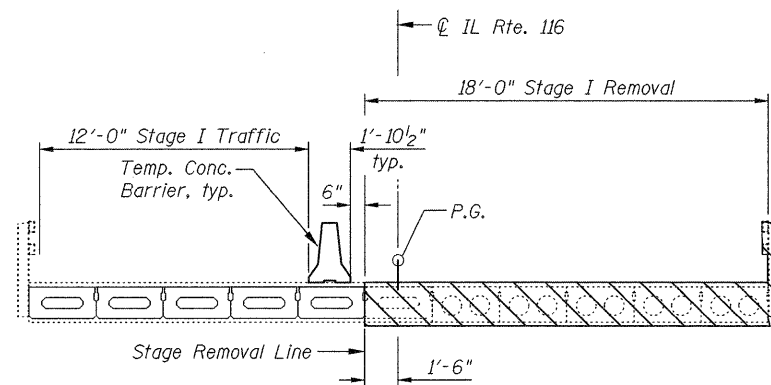
* Included in the cost of Pipe Underdrains for Structures.

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).

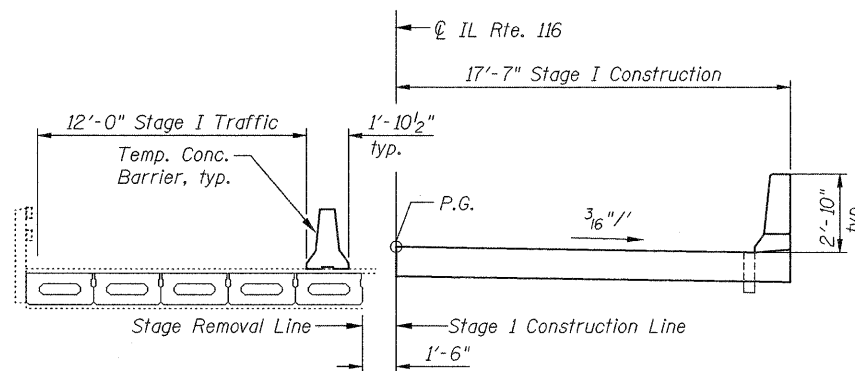
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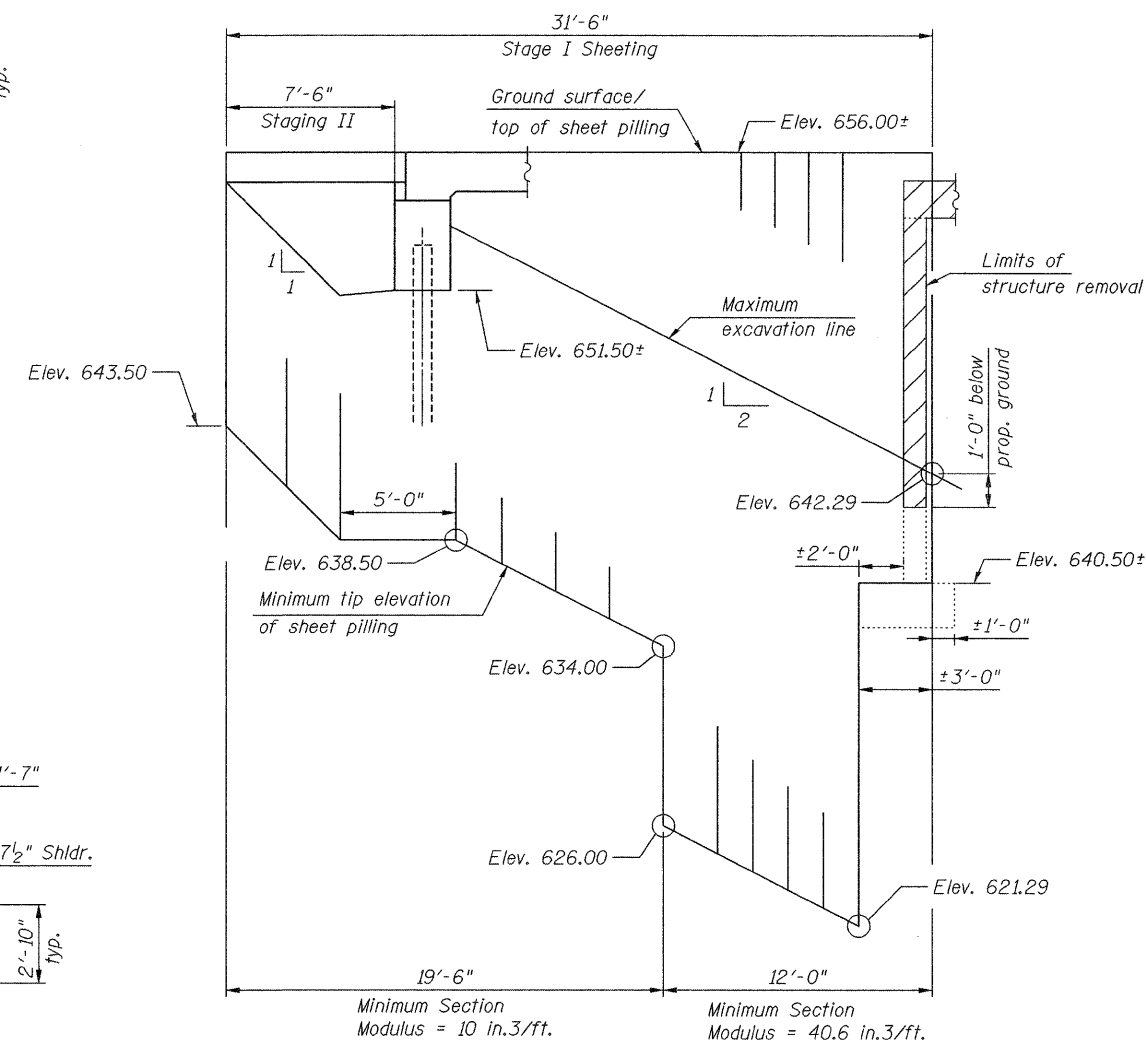
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...\\038-0220-66960-002-gnts.dgn		CHECKED - JMS	REVISED -			681	(117) BR-1	IROQUOIS	41	13	
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	PLOT DATE = 01/24/2011	CHECKED - JDC	REVISED -			SHEET NO. 2 OF 22 SHEETS					
						FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			



STAGE I REMOVAL
(Looking Upstation)



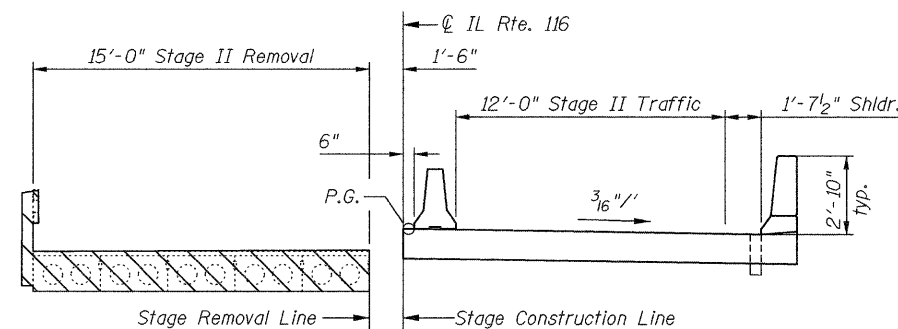
STAGE I CONSTRUCTION
(Looking Upstation)



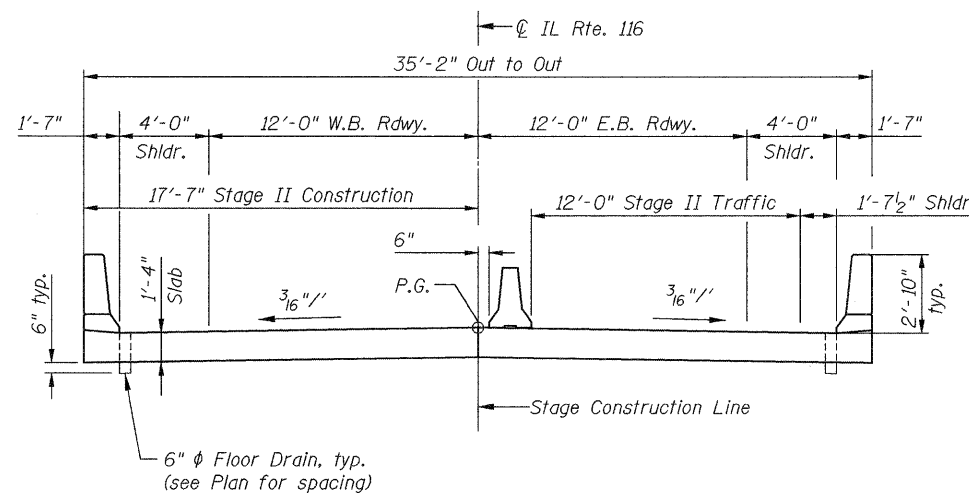
TEMPORARY SHEET PILING

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Sheet Piling	Sq. Ft.	1362



STAGE II REMOVAL
(Looking Upstation)



STAGE II CONSTRUCTION
(Looking Upstation)

NOTES:

- For details of temporary concrete barrier, see sheet 20 of 22.
- If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
- The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

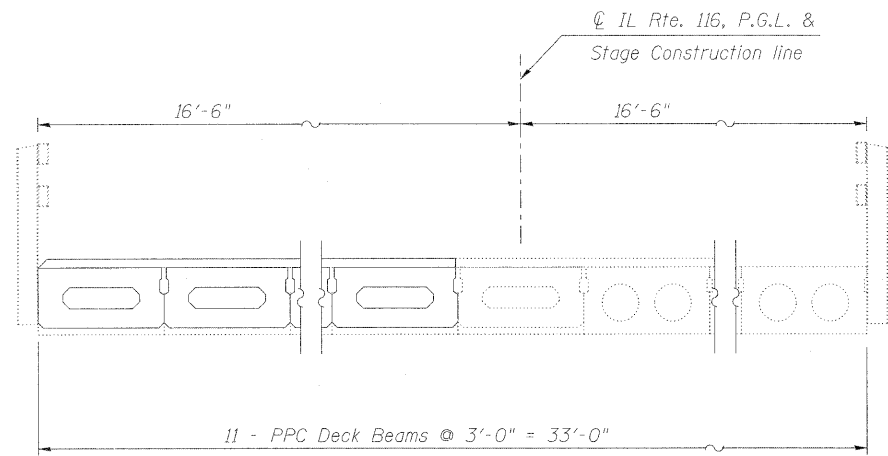
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Job No. 3938

FILE NAME = ...\\038-0220-66960-003-Stage.dgn	USER NAME = rgrimm	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION AND TEMPORARY SHEETING STRUCTURE NO. 038-0220	SHEET NO. 3 OF 22 SHEETS	F.A.P. RTE. 681	SECTION (117) BR-1	COUNTY IROQUOIS	TOTAL SHEETS 41	SHEET NO. 14
		CHECKED - JMS	REVISED -				CONTRACT NO. 66960				
PLOT SCALE = \$SCALE\$	DRAWN - MRW	CHECKED - JDC	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
PLOT DATE = 01/24/2011											

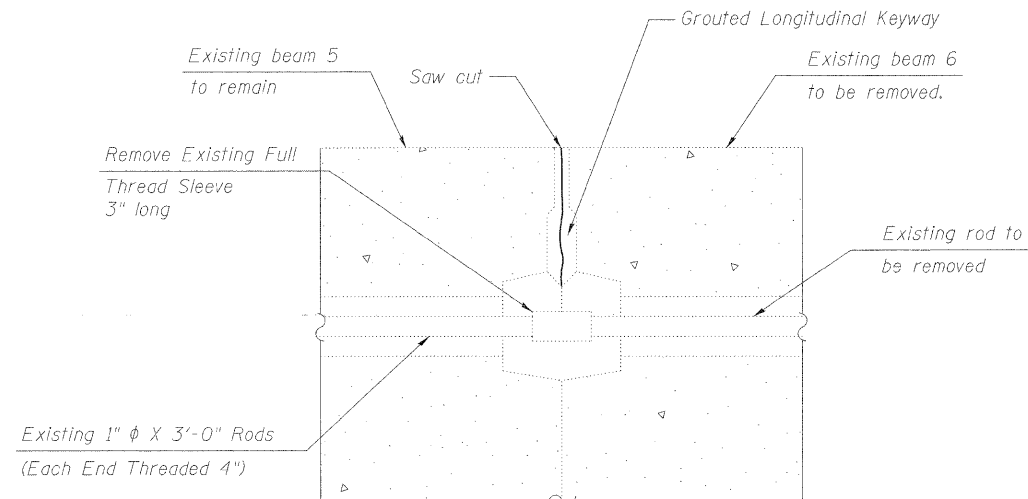
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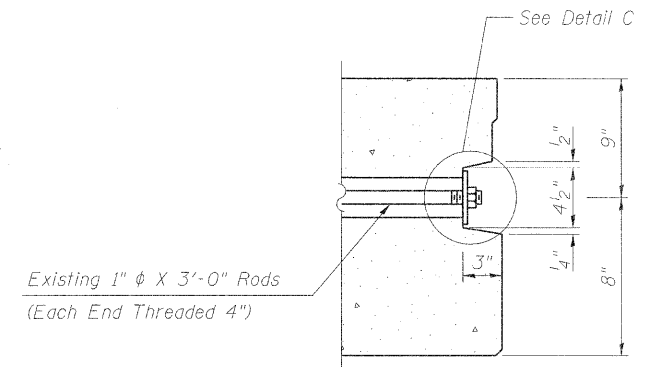
01/24/2011



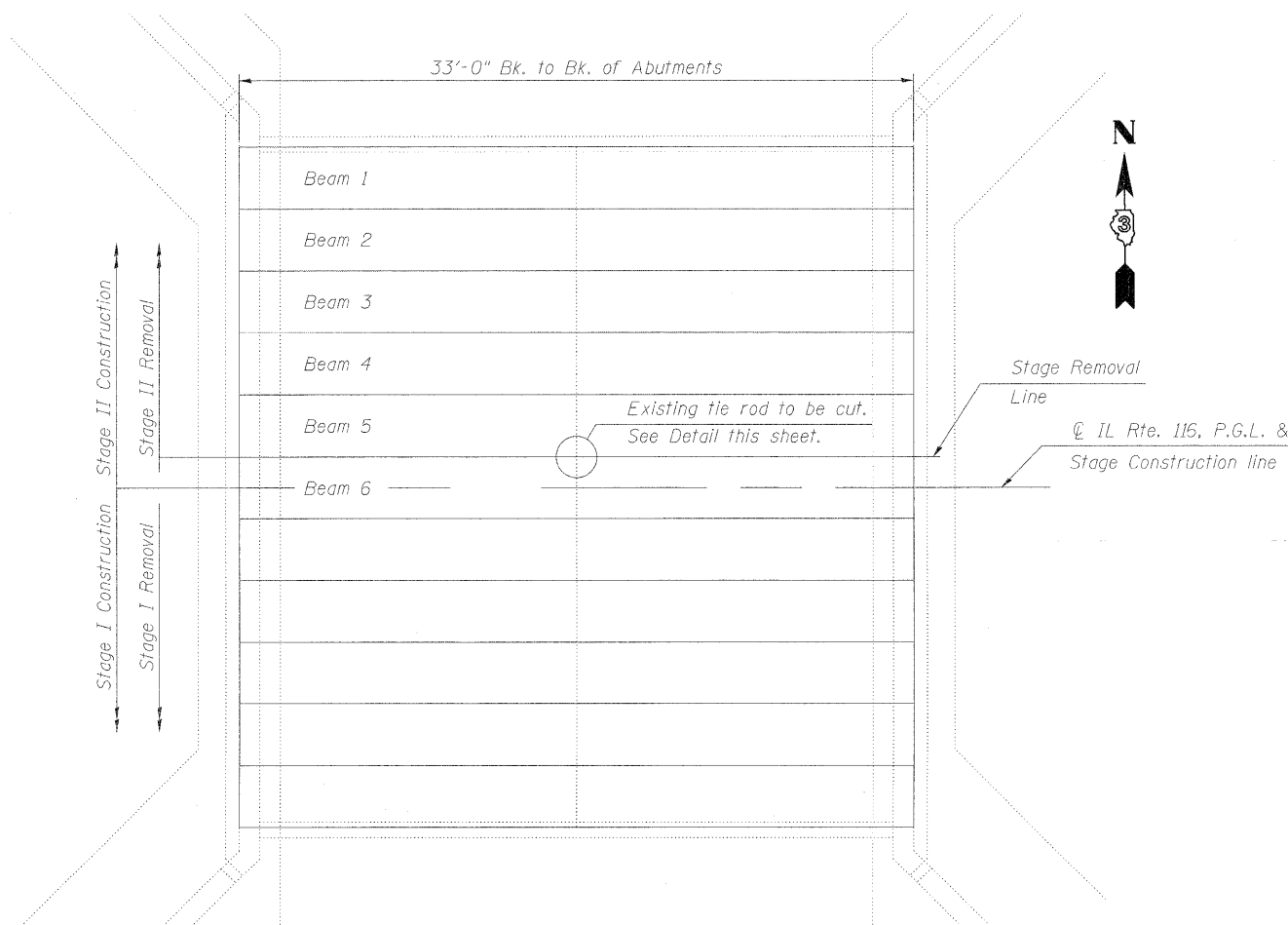
PARTIAL CROSS SECTION



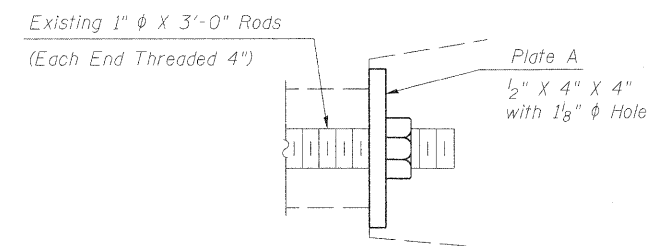
**BEAM REMOVAL DETAIL
AT TRANSVERSE TIE**



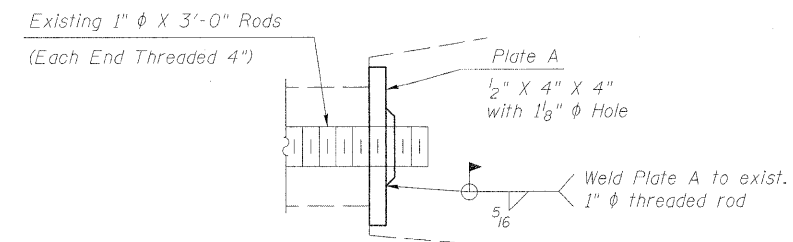
**EXISTING BEAM 5
TIE MODIFICATION**



PLAN



***ALTERNATE A**



ALTERNATE B

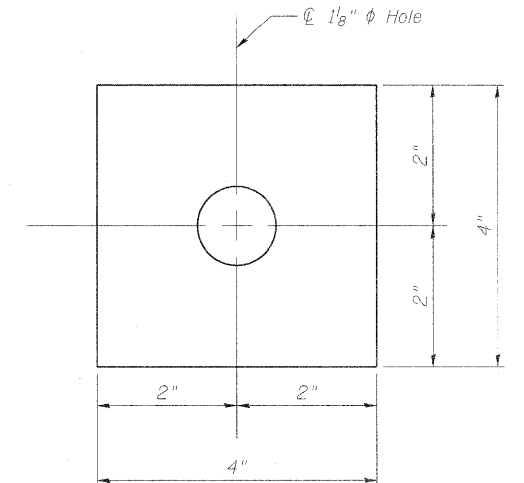


**PLATE A
(1 Required)**

**DETAIL C
(1 Required)**

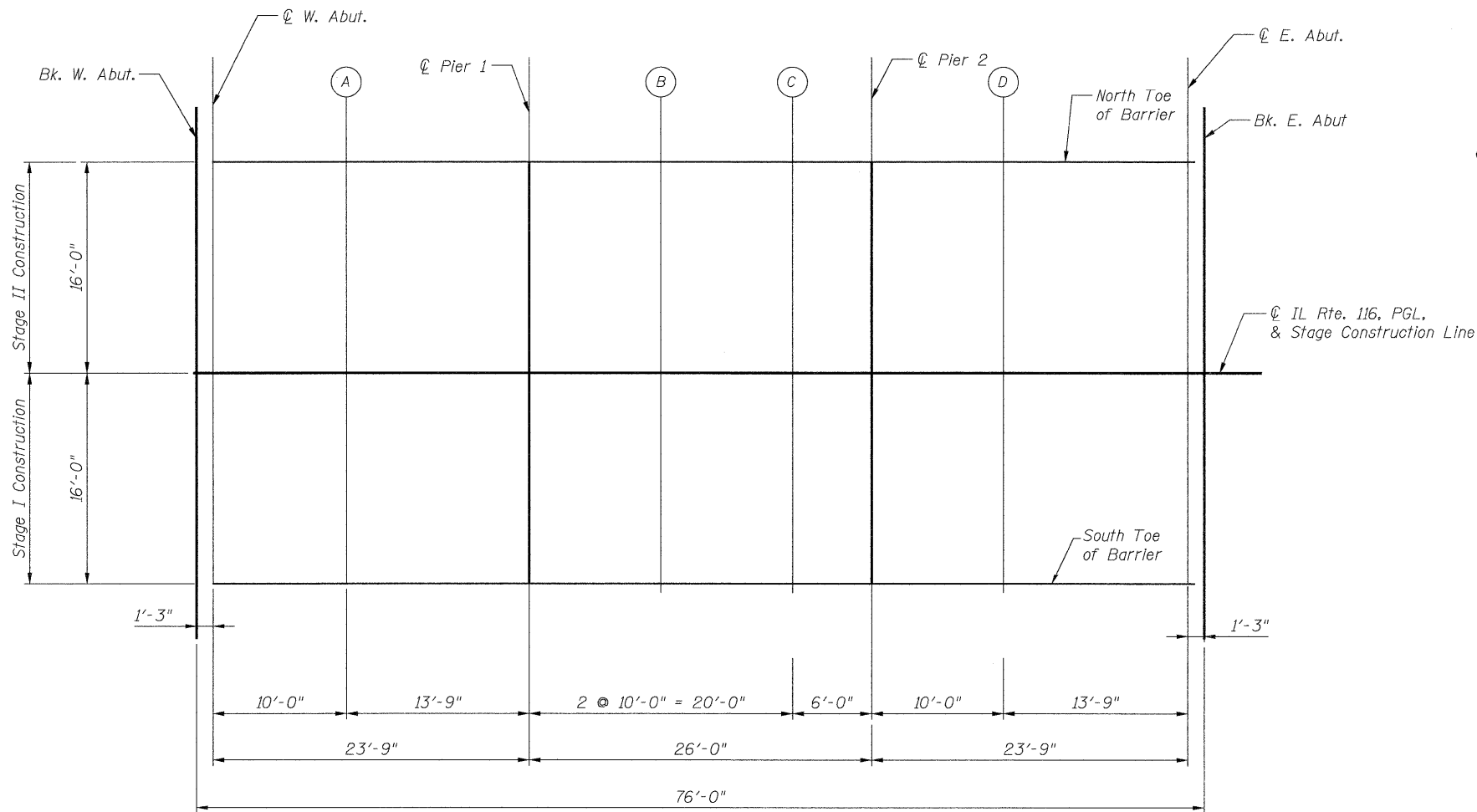
* Alternate A is the preferred method and should be used if the existing threaded sleeve can be unscrewed.

NOTES:

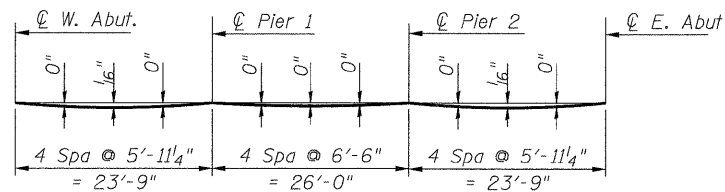
- Contractor is responsible to maintain lateral stability of existing beams during beam removal and transverse tie modification.
- All cost shown on this sheet will be included in the cost of Removal of Existing Structures.

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Job No. 3938

FILE NAME = ...038-0220-66960-004-Bmrem.dgn	USER NAME = joreisher	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION BEAM REMOVAL STRUCTURE NO. 038-0220	SHEET NO. 4 OF 22 SHEETS	F.A.P. RTE. 681	SECTION (117) BR-1	COUNTY IROQUOIS	TOTAL SHEETS 41	SHEET NO. 15
PLOT SCALE = \$SCALE\$	DRAWN - MRW	CHECKED - JMS	REVISED -				CONTRACT NO. 66960				
PLOT DATE = 12/09/2010	CHECKED - JDC	REVISED -	REVISED -				ILLINOIS FED. AID PROJECT				



PLAN



DEAD LOAD DEFLECTION DIAGRAM

The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection."

NORTH TOE OF BARRIER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. West Abut.	459+01.50	-16.00	656.74	656.74
W. Abut.	459+02.75	-16.00	656.74	656.74
A	459+12.75	-16.00	656.75	656.75
Pier 1	459+26.50	-16.00	656.74	656.74
B	459+36.50	-16.00	656.74	656.74
C	459+46.50	-16.00	656.73	656.73
Pier 2	459+52.50	-16.00	656.72	656.72
D	459+62.50	-16.00	656.70	656.70
E. Abut.	459+76.25	-16.00	656.67	656.67
Bk. East Abut.	459+77.50	-16.00	656.67	656.67

IL RTE. 116, PGL & Stage Construction Joint

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. West Abut.	459+01.50	0.00	656.98	656.98
W. Abut.	459+02.75	0.00	656.98	656.98
A	459+12.75	0.00	656.99	656.99
Pier 1	459+26.50	0.00	656.98	656.98
B	459+36.50	0.00	656.98	656.98
C	459+46.50	0.00	656.97	656.97
Pier 2	459+52.50	0.00	656.96	656.96
D	459+62.50	0.00	656.94	656.94
E. Abut.	459+76.25	0.00	656.91	656.91
Bk. East Abut.	459+77.50	0.00	656.91	656.91

SOUTH TOE OF BARRIER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. West Abut.	459+01.50	16.00	656.74	656.74
W. Abut.	459+02.75	16.00	656.74	656.74
A	459+12.75	16.00	656.75	656.75
Pier 1	459+26.50	16.00	656.74	656.74
B	459+36.50	16.00	656.74	656.74
C	459+46.50	16.00	656.73	656.73
Pier 2	459+52.50	16.00	656.72	656.72
D	459+62.50	16.00	656.70	656.70
E. Abut.	459+76.25	16.00	656.67	656.67
Bk. East Abut.	459+77.50	16.00	656.67	656.67

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	458+72.00	-16.42	656.71
A1	458+82.00	-16.42	656.72
A2	458+92.00	-16.00	656.74
E. End of West Appr. Pav't.	459+02.00	-16.00	656.74

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	458+72.00	-12.00	656.77
A1	458+82.00	-12.00	656.79
A2	458+92.00	-12.00	656.80
E. End of West Appr. Pav't.	459+02.00	-12.00	656.80

IL RTE. 116, PGL & Stage Construction Joint

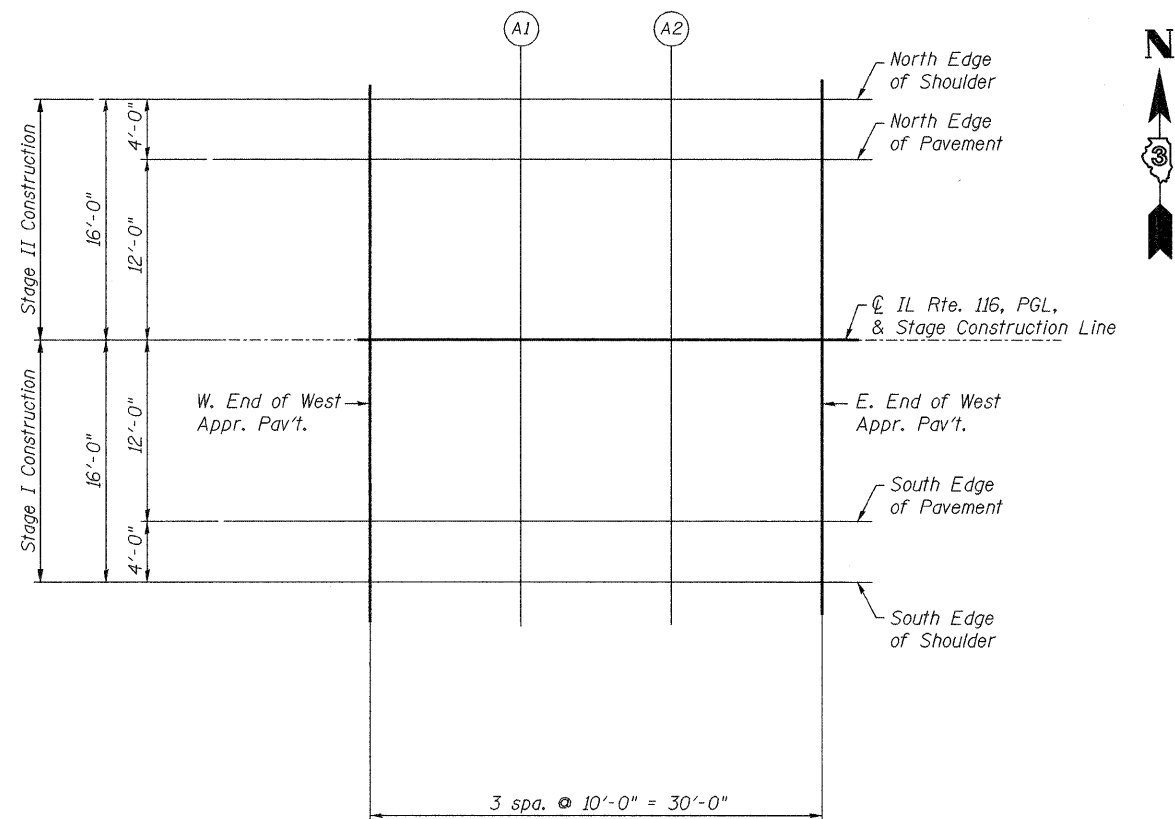
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	458+72.00	0.00	656.95
A1	458+82.00	0.00	656.97
A2	458+92.00	0.00	656.98
E. End of West Appr. Pav't.	459+02.00	0.00	656.98

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	458+72.00	12.00	656.77
A1	458+82.00	12.00	656.79
A2	458+92.00	12.00	656.80
E. End of West Appr. Pav't.	459+02.00	12.00	656.80

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Pav't.	458+72.00	16.42	656.71
A1	458+82.00	16.42	656.72
A2	458+92.00	16.00	656.74
E. End of West Appr. Pav't.	459+02.00	16.00	656.74



WEST APPROACH SLAB

PLAN

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FILE NAME = ... \038-0220-66960-006-aprel1.dgn	USER NAME = rgrmm	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 038-0220	SHEET NO. 6 OF 22 SHEETS	F.A.P. RTE. 681	SECTION (117) BR-1	COUNTY IROQUOIS	TOTAL SHEETS 41	SHEET NO. 17
	PLOT SCALE = #SCALE#	CHECKED - JMS	REVISED -								
	PLOT DATE = 01/24/2011	DRAWN - LLR	REVISED -								
		CHECKED - JDC	REVISED -				FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 66960		

x:\3900s\3938\Structures\1116overLanganCreek\Final\Plans\038-0220-66960-006-aprel1.dgn

14:46:25

01/24/2011

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	459+77.00	-16.00	656.67
B1	459+87.00	-16.00	656.65
B2	459+97.00	-16.42	656.61
E. End of East Appr. Pav't.	460+07.00	-16.42	656.58

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	459+77.00	-12.00	656.73
B1	459+87.00	-12.00	656.71
B2	459+97.00	-12.00	656.68
E. End of East Appr. Pav't.	460+07.00	-12.00	656.64

IL RTE. 116, PGL & Stage Construction Joint

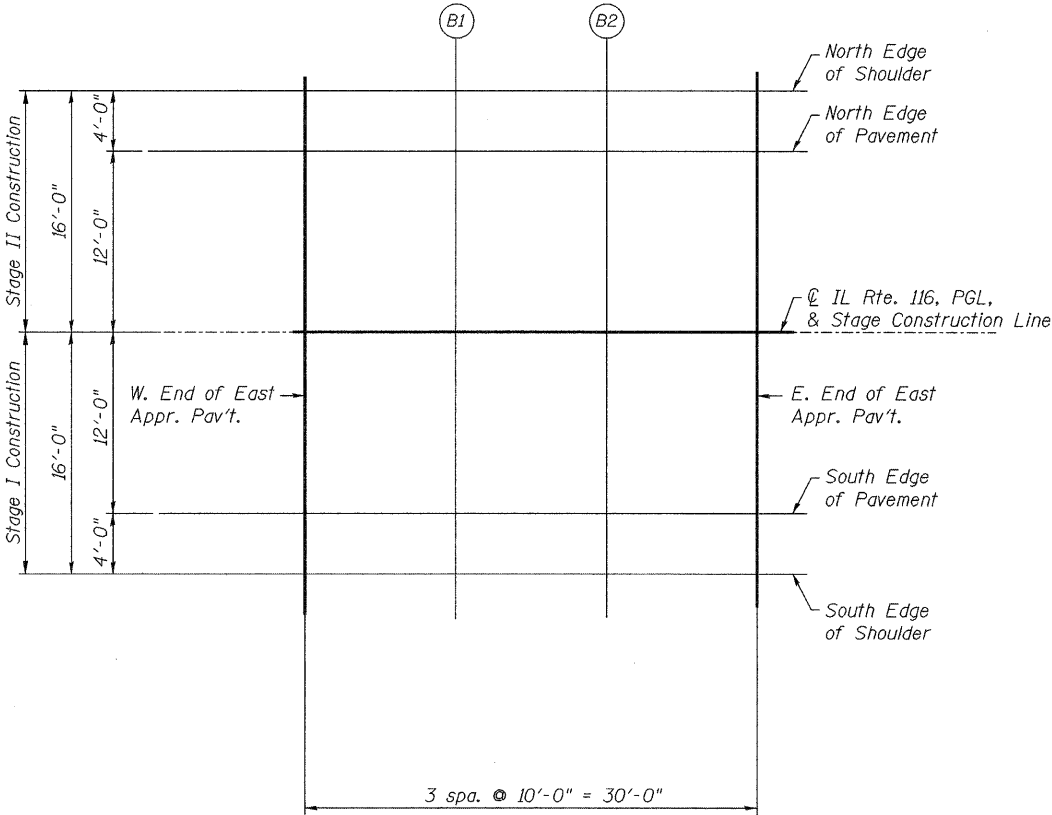
Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	459+77.00	0.000	656.91
B1	459+87.00	0.000	656.89
B2	459+97.00	0.000	656.86
E. End of East Appr. Pav't.	460+07.00	0.000	656.82

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	459+77.00	12.00	656.73
B1	459+87.00	12.00	656.71
B2	459+97.00	12.00	656.68
E. End of East Appr. Pav't.	460+07.00	12.00	656.64

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Pav't.	459+77.00	16.00	656.67
B1	459+87.00	16.00	656.65
B2	459+97.00	16.42	656.61
E. End of East Appr. Pav't.	460+07.00	16.42	656.58



EAST APPROACH SLAB

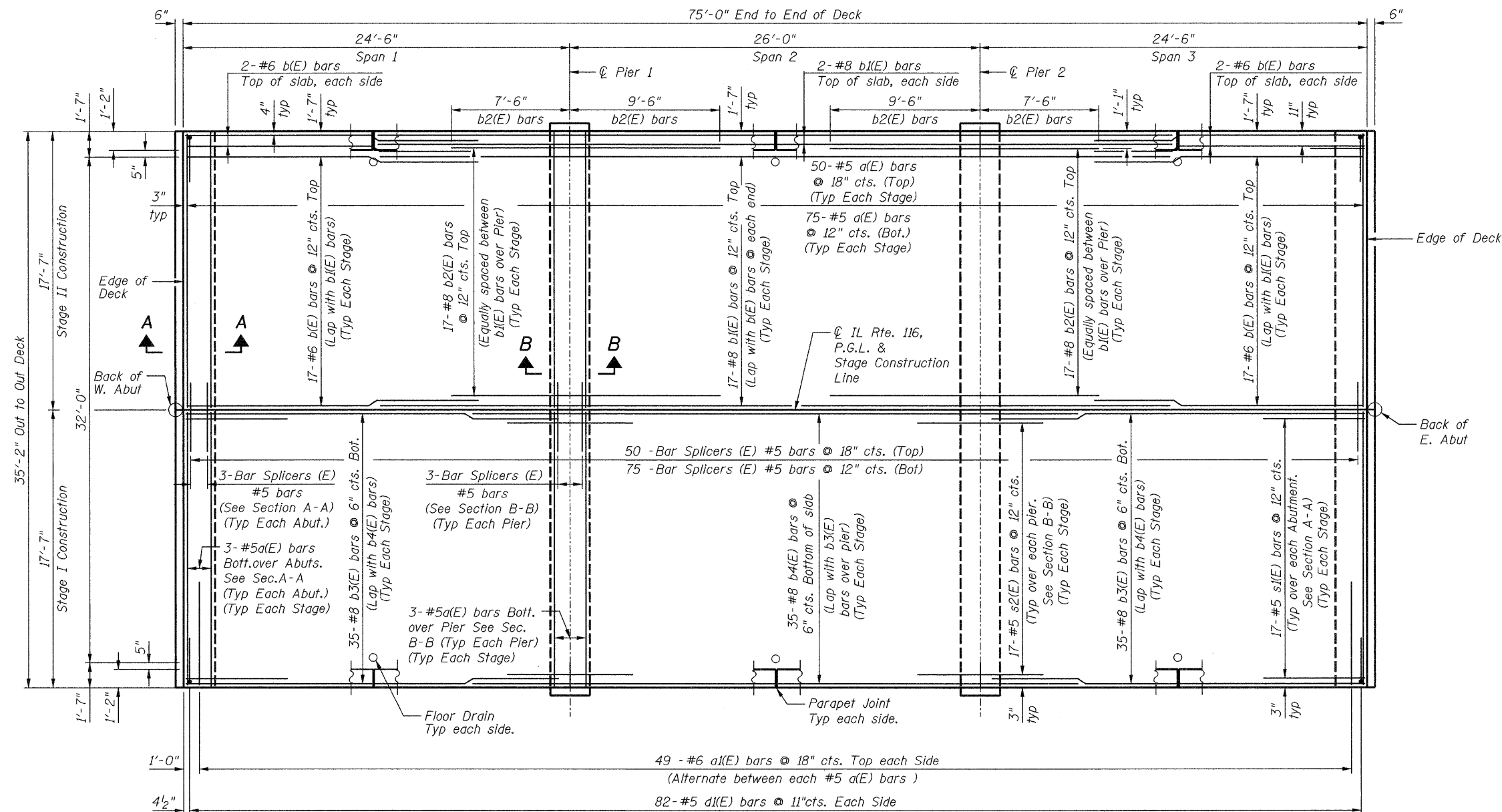
PLAN

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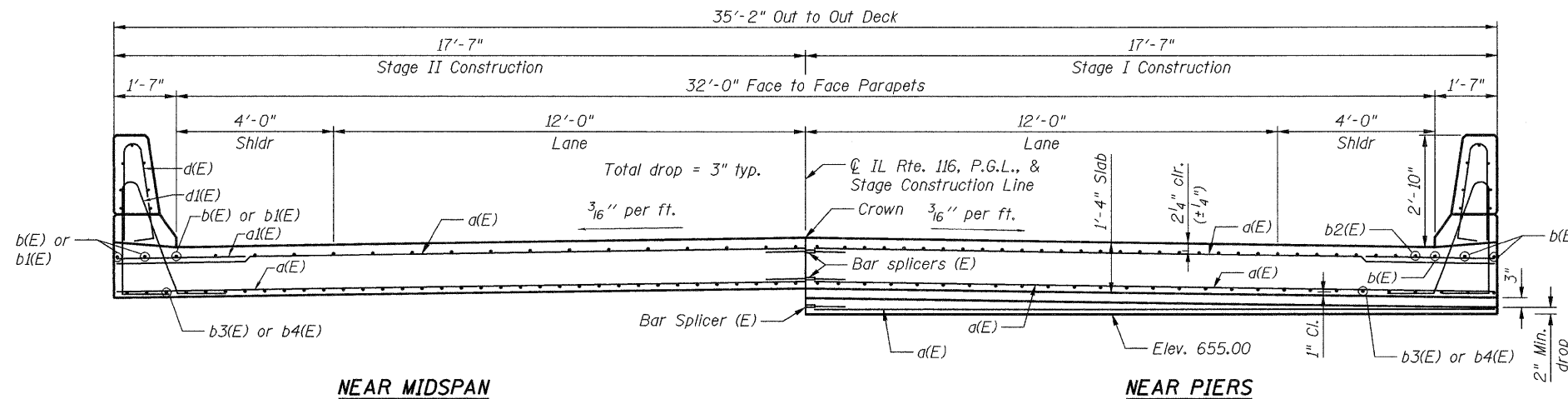
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Job No. 3938

FILE NAME = ...\\038-0220-66960-007-apre12.dgn	USER NAME = rgrimm	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 038-0220	SHEET NO. 7 OF 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JMS	REVISED -				681	(117) BR-1	IROQUOIS	41	18
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	PLOT DATE = 01\24\2011	CHECKED - JDC	REVISED -								



PLAN



NEAR MIDSPAN

NEAR PIERS

DECK CROSS SECTION
(Looking Upstation)

NOTES:

1. For Section A-A and Section B-B, See Sheet 9 of 22.
2. For Superstructure Details and Bill of Material, See Sheet 10 of 22.
3. See Sheet 10 of 22 for parapet reinforcement.
4. Minimum bar lap:
#8 bar (Bot) = 5'-5"
#8 bar (Top) = 6'-2"
5. For Floor Drain location, see sheet 1 of 22.



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FILE NAME =
...038-0220-66960-008-dkplnxs1.dgn

USER NAME = rgrimm
PLOT SCALE = \$SCALE\$
PLOT DATE = 01/24/2011

DESIGNED - JDC
CHECKED - JMS
DRAWN - MRW
CHECKED - JDC

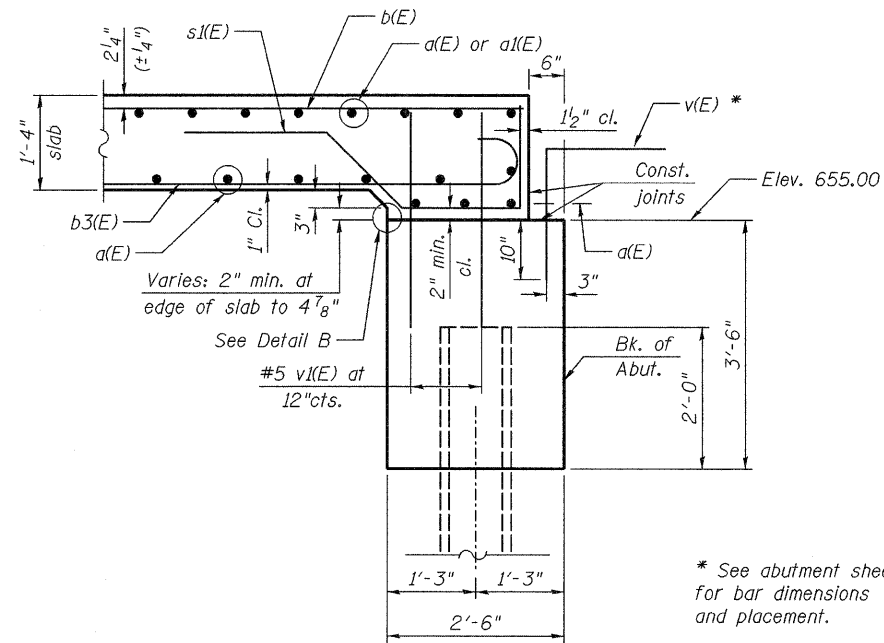
REVISED -
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REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

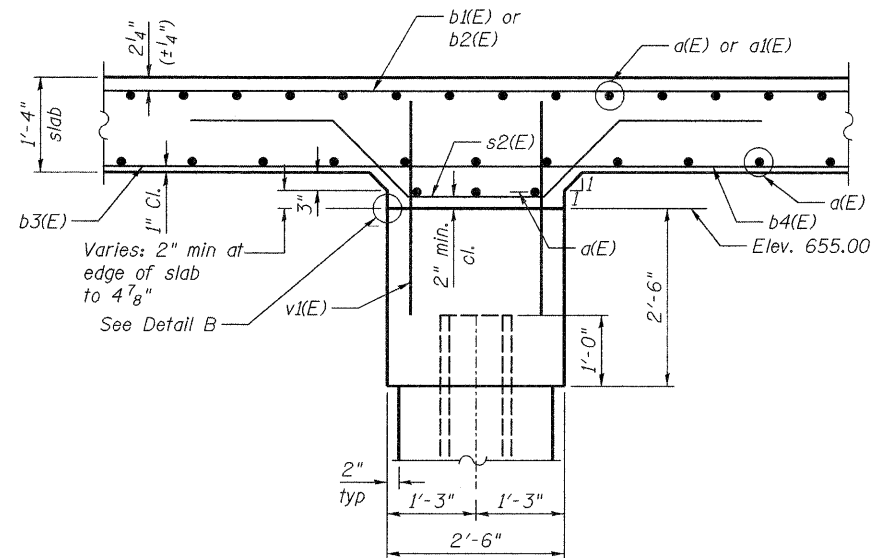
DECK PLAN AND CROSS SECTION
STRUCTURE NO. 038-0220

SHEET NO. 8 OF 22 SHEETS

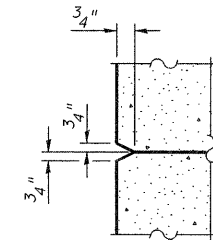
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	19
CONTRACT NO. 66960				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



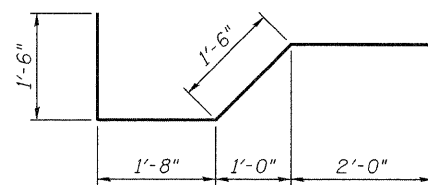
SECTION A-A



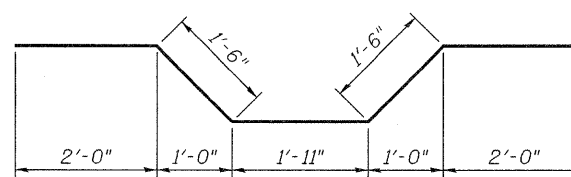
SECTION B-B



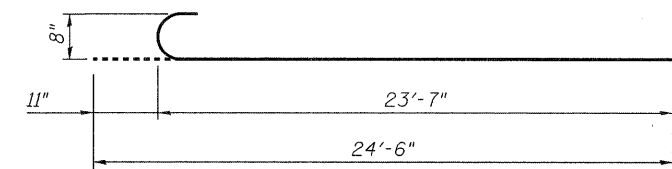
DETAIL "B"



BAR s1(E)



BAR s2(E)

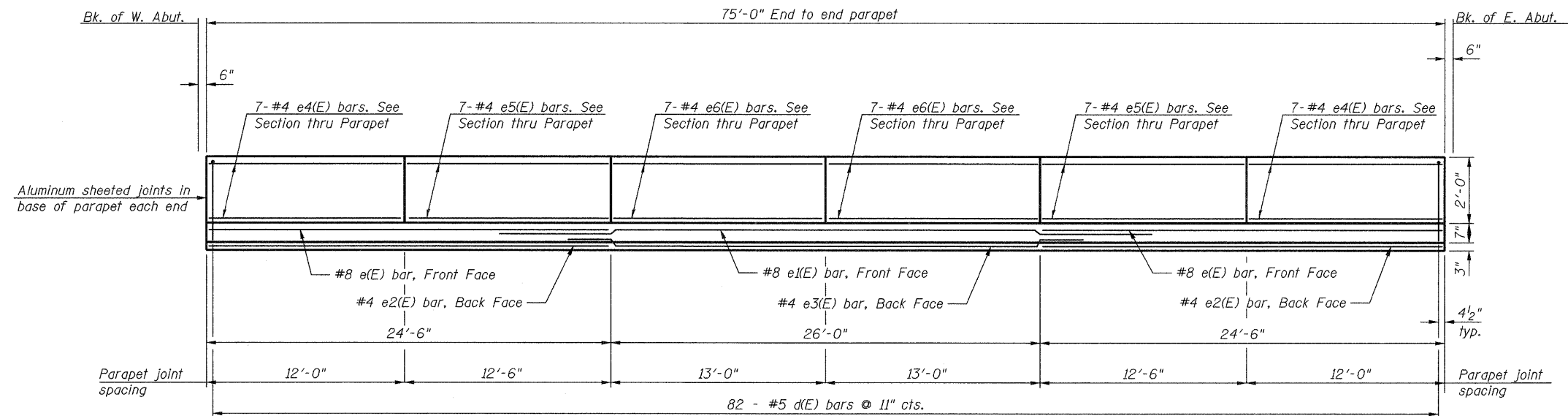


BAR b3(E)



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FILE NAME = ...\\038-0220-66960-009-diadtl.dgn	USER NAME = rgrum	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTEGRAL ABUTMENT AND PIER DIAPHRAGM DETAILS STRUCTURE NO. 038-0220	SHEET NO. 9 OF 22 SHEETS	F.A.P. RTE. 681	SECTION (117) BR-1	COUNTY IROQUOIS	TOTAL SHEETS 41	SHEET NO. 20
		CHECKED - JMS	REVISED -								
	PLOT SCALE = \$SCALE\$	DRAWN - MRW	REVISED -								
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							CONTRACT NO. 66960				
							ILLINOIS FED. AID PROJECT				

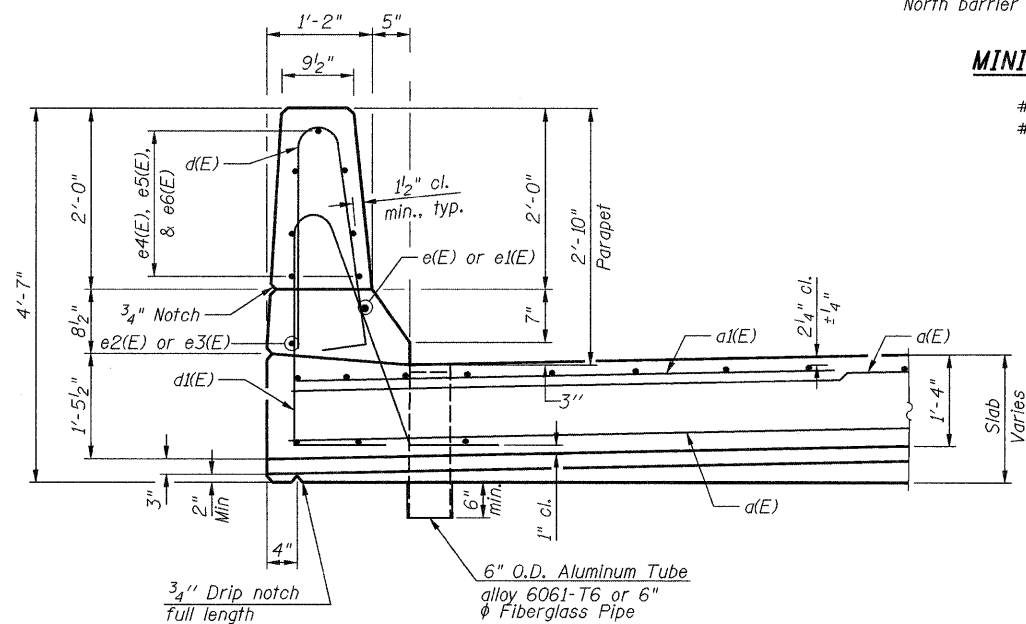


INSIDE ELEVATION OF PARAPET

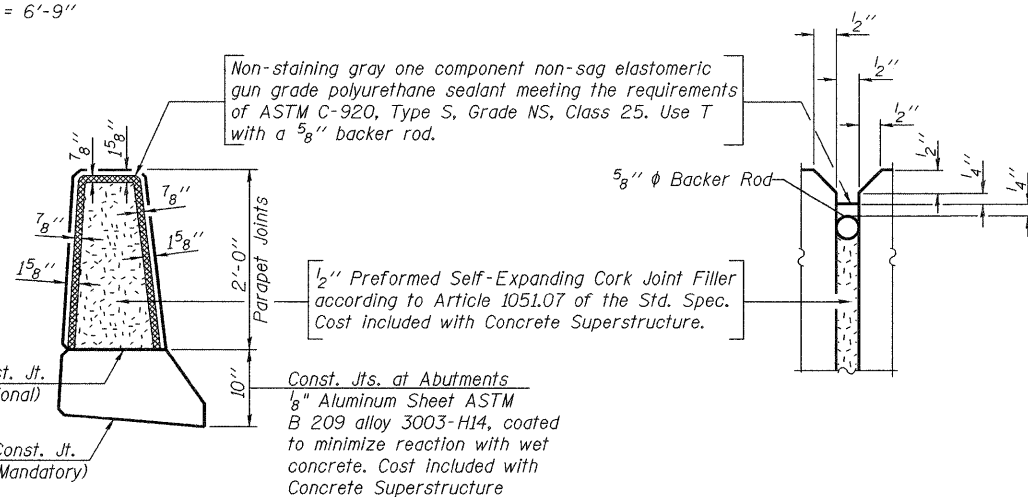
North barrier shown. South barrier is similar.

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-7"
#8 bar = 6'-9"



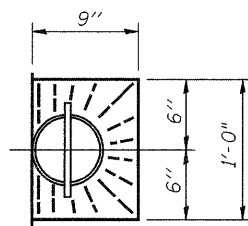
SECTION THRU PARAPET



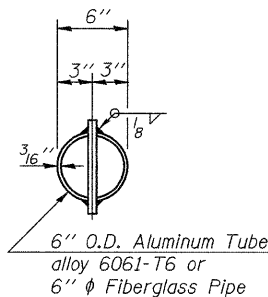
PARAPET JOINT DETAILS

NOTES:

- The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.
- Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

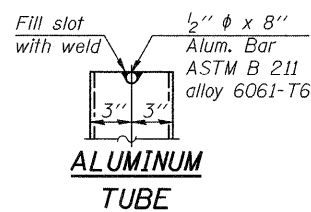


TOP PLAN

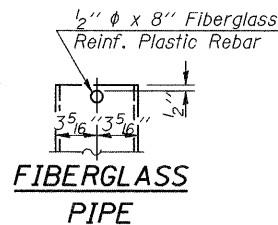


TOP PLAN

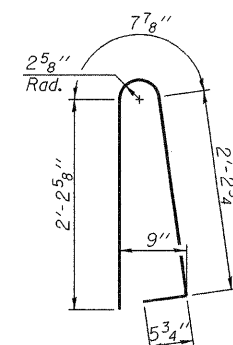
(Showing Aluminum Tube)



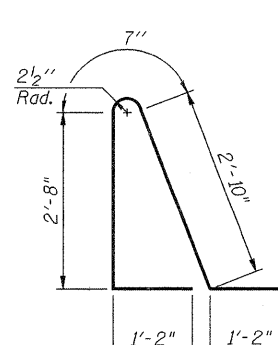
ALUMINUM TUBE



FIBERGLASS PIPE



BAR d(E)



BAR d(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	274	#5	17'-1"	
a1(E)	98	#6	6'-6"	
b(E)	76	#6	18'-6"	
b1(E)	38	#8	50'-0"	
b2(E)	68	#8	17'-0"	
b3(E)	140	#8	24'-6"	
b4(E)	70	#8	38'-6"	
d(E)	164	#5	5'-7"	
d1(E)	164	#5	8'-5"	
e(E)	4	#8	24'-4"	
e1(E)	2	#8	39'-6"	
e2(E)	4	#4	24'-4"	
e3(E)	2	#4	31'-2"	
e4(E)	28	#4	11'-8"	
e5(E)	28	#4	12'-2"	
e6(E)	28	#4	12'-8"	
s1(E)	68	#5	6'-8"	
s2(E)	68	#5	8'-11"	
Reinforcement Bars, Epoxy Coated				Pound
Concrete Superstructure				Cu. Yd.
				37,120
				153.3



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FILE NAME =
...038-0220-66960-010-supr-dtl.dgn

USER NAME = rgrmm
PLOT SCALE = #SCALE#
PLOT DATE = 01/24/2011

DESIGNED - JDC
CHECKED - JMS
DRAWN - MRW
CHECKED - JDC

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

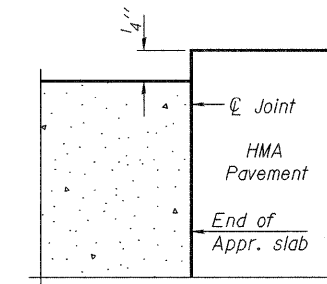
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 038-0220

SHEET NO. 10 OF 22 SHEETS

F.A.P. RTE. 681 SECTION (117) BR-1 COUNTY IROQUOIS TOTAL SHEETS 41 SHEET NO. 21 CONTRACT NO. 66960
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT

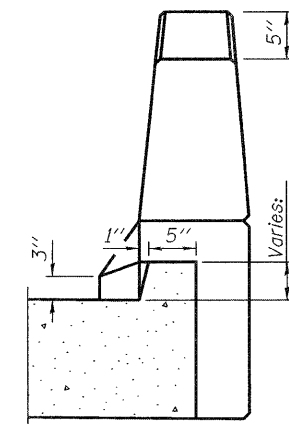
NOTES:

1. See sheet 12 of 22 for Sections C-C & D-D and View E-E.
2. a2(E), a3(E), and w(E) bar spacings measured perpendicular to ϕ Rdwy.

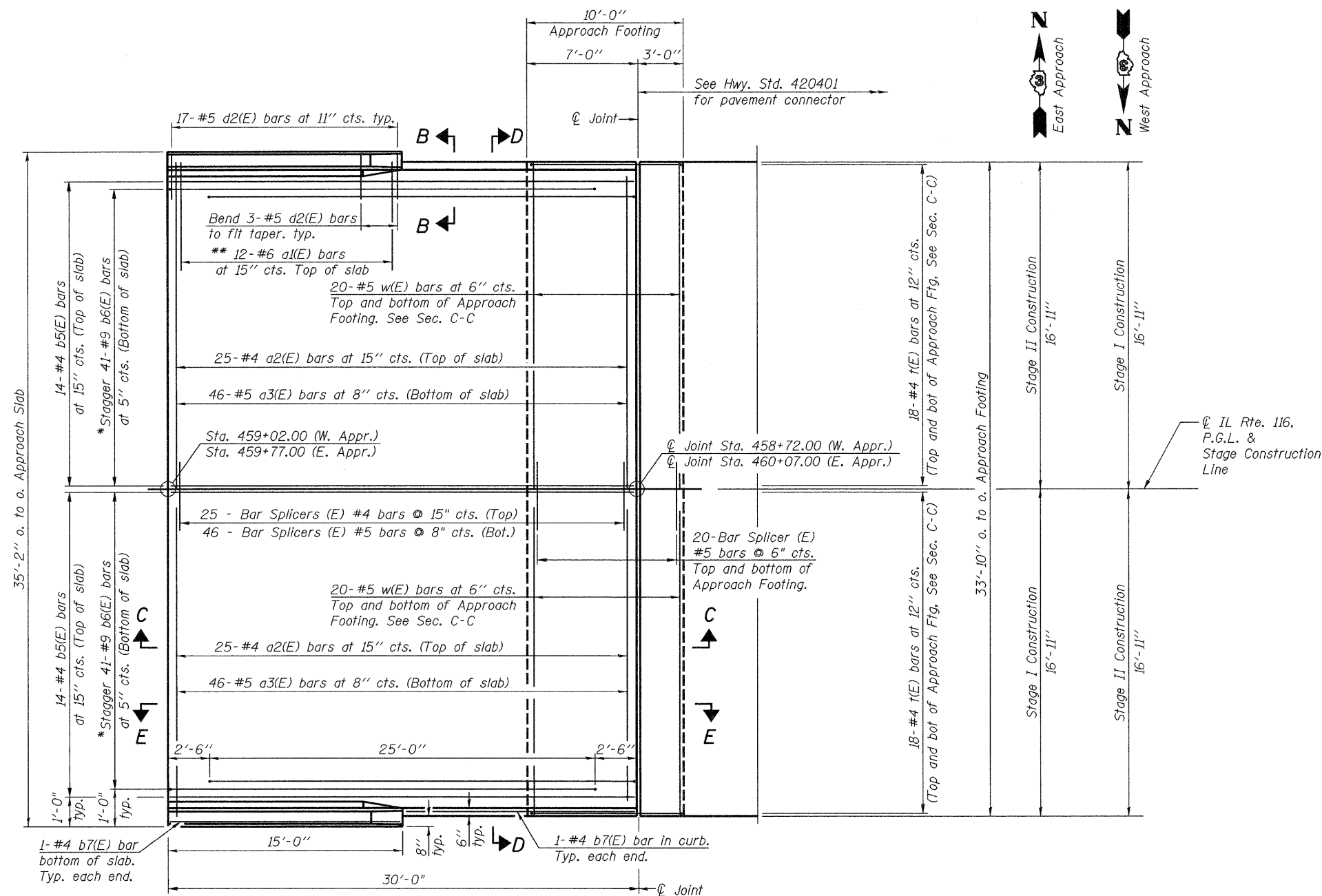


FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B



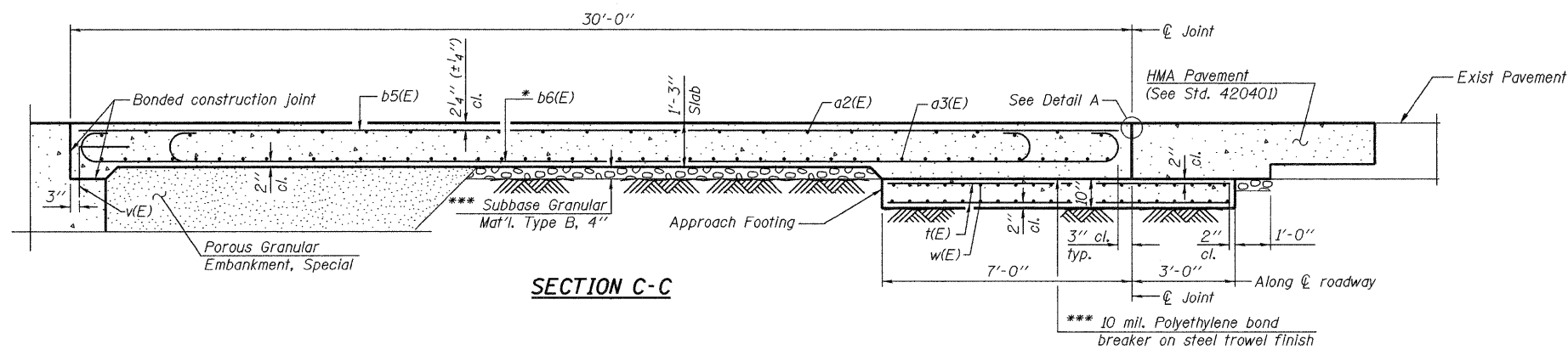
PLAN

- * Tilt #9 b6(E) bars as required to maintain clearance.
- ** Alternate with a1(E) bars, typ. ea. parapet.



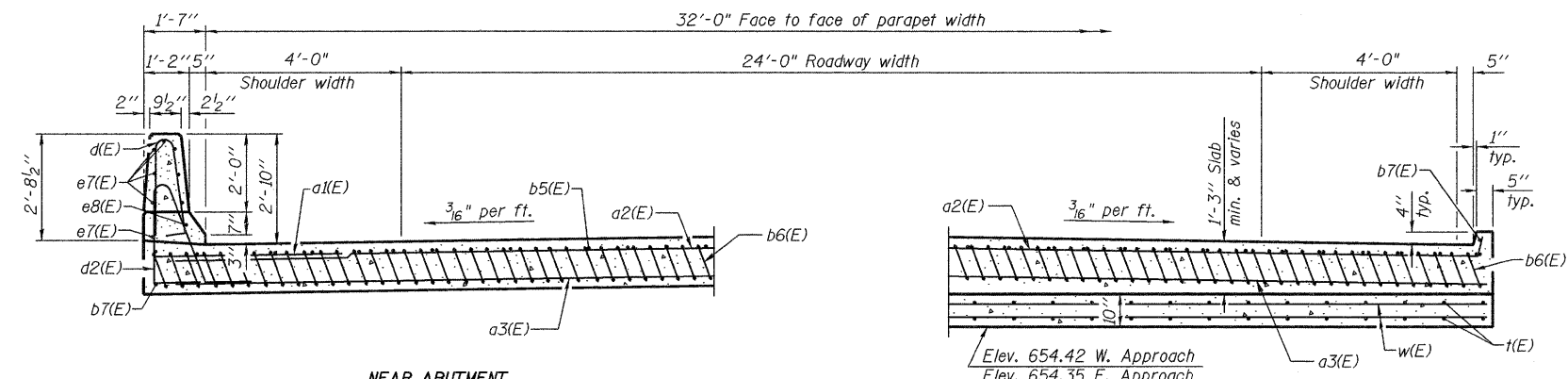
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Job No. 3938

FILE NAME =	USER NAME = rgrmm	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS 1 OF 2 STRUCTURE NO. 038-0220	SHEET NO. 11 OF 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\038-0220-66960-011-apsldtl.dgn		CHECKED - JMS	REVISED -				681	(117) BR-1	IROQUOIS	41	22
	PLOT SCALE = #SCALE#	DRAWN - MRW	REVISED -								
	PLOT DATE = 01\24\2011	CHECKED - JDC	REVISED -								
							FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 66960	



SECTION C-C

- NOTES:**
1. See sheet 11 of 22 for Detail A and View B-B.
 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 13 & 14 of 22.
 6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 7. For bar splicer details, see sheet 18 of 22.
 8. Cost of excavation for approach footing included with Concrete Structures.
 9. For Porous Granular Embankment, Special, and drainage treatment details see sheet 2 of 22.



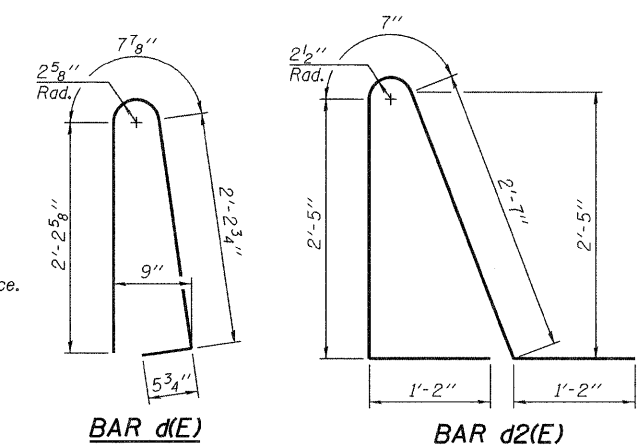
NEAR ABUTMENT

SECTION D-D

(See Plan for dimensions not shown)

AT APPROACH FOOTING

* Tilt #9 b6(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.

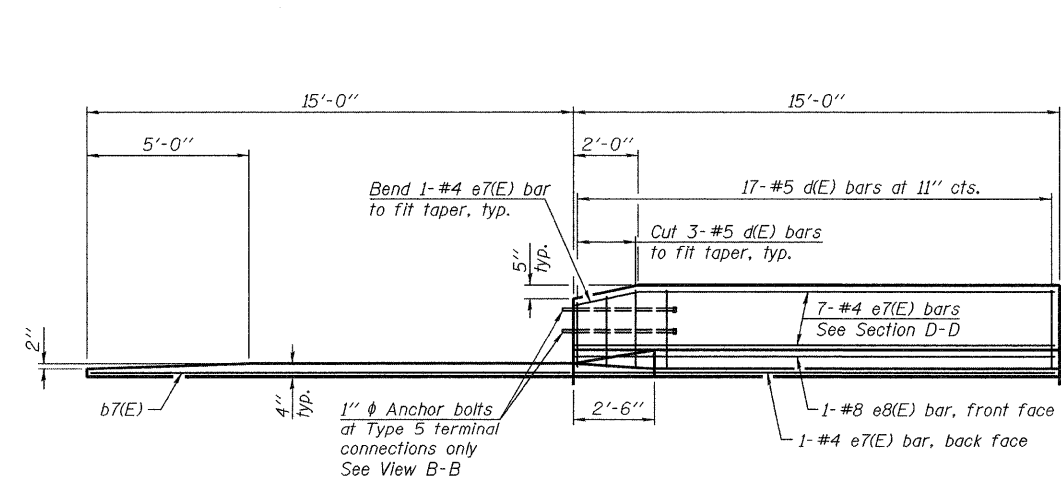


BAR d(E)

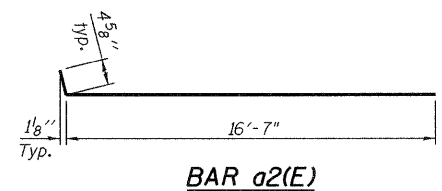
BAR d2(E)

**TWO APPROACHES
BILL OF MATERIAL**

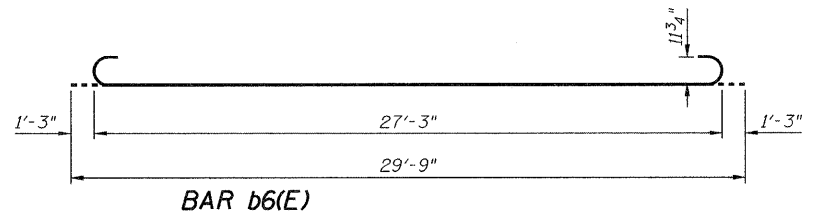
Bar	No.	Size	Length	Shape
a1(E)	48	#6	6'-6"	
a2(E)	100	#4	17'-0"	
a3(E)	184	#5	16'-7"	
b5(E)	56	#4	29'-8"	
b6(E)	164	#9	29'-9"	
b7(E)	8	#4	14'-8"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e7(E)	32	#4	14'-8"	
e8(E)	4	#8	14'-8"	
t(E)	144	#4	9'-8"	
w(E)	160	#5	16'-7"	
Concrete Superstructure			Cu. Yd.	114.7
Concrete Structures			Cu. Yd.	20.9
Reinforcement Bars, Epoxy Coated			Pound	27,690



VIEW E-E

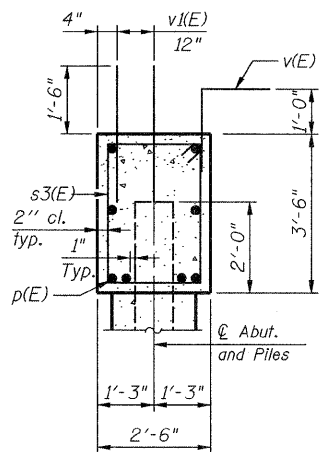
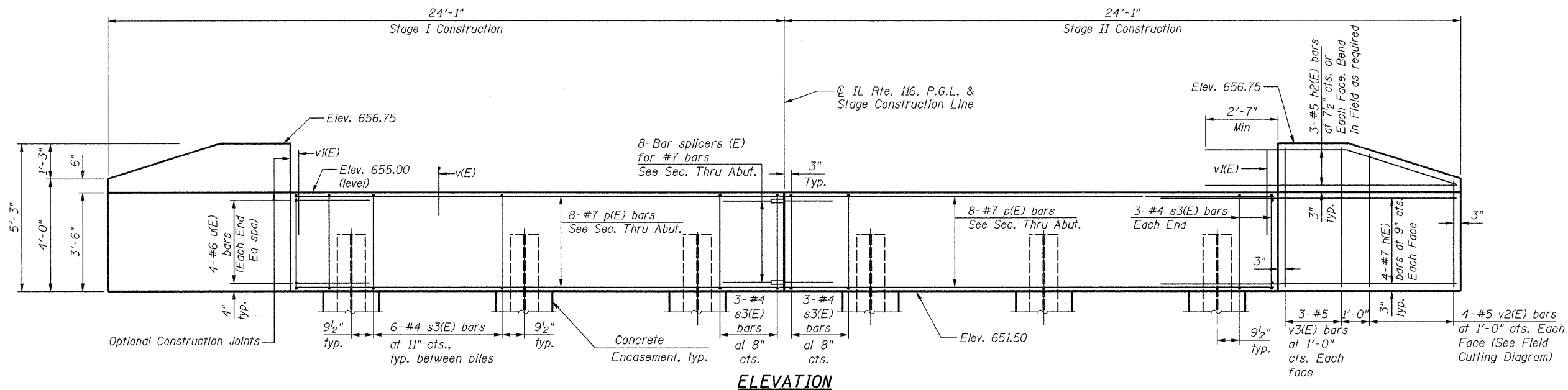


BAR a2(E)

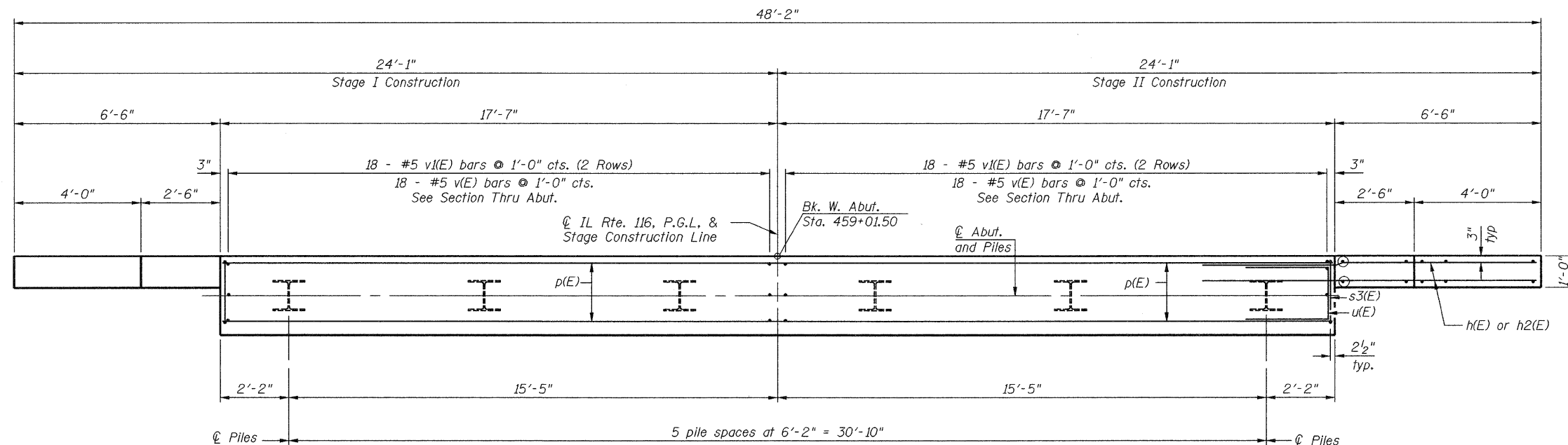


BAR b6(E)

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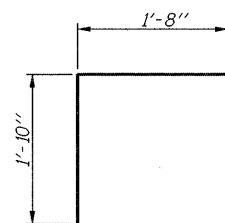
SEC. THRU ABUT.



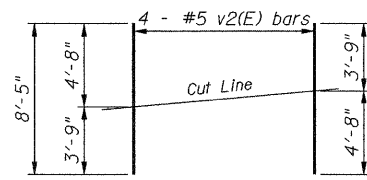
PLAN

PILE DATA

Type: Steel HP12x53
Nominal Required Bearing: 211 kips
Factored Resistance Available: 106 kips
Est. Length: 30 ft.
No. Production Piles: 6
No. Test Piles: 0

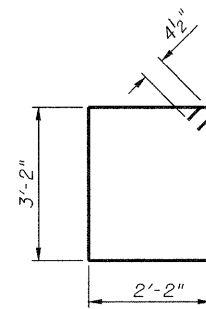


BAR v(E)

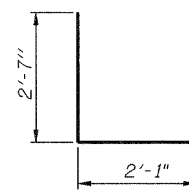


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.
(8 Total bars)



BAR s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#7	10'-6"	
h2(E)	12	#5	9'-1"	
p(E)	16	#7	17'-3"	
s3(E)	36	#4	11'-5"	
u(E)	8	#6	7'-3"	
v(E)	36	#5	3'-6"	
v1(E)	72	#5	3'-0"	
v2(E)	8	#5	8'-5"	
v3(E)	12	#5	4'-11"	
Structure Excavation				
			Cu. Yd.	329
Concrete Structures				
			Cu. Yd.	13.7
Reinforcement Bars, Epoxy Coated				
			Pound	1,850
Furnishing Steel Piles, HP12x53				
			Foot	180
Driving Piles				
			Foot	180
Concrete Encasement				
			Cu. Yd.	2.1

NOTES:

- For details of Bar Splicers, see sheet 18 of 22.
- For details of piles and Concrete Encasement, see sheets 17 of 22.
- Minimum bar lap:
#5 bar = 2'-7"
#7 bar = 4'-2"



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PLOT DATE = 01/24/2011

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DRAWN - MRW
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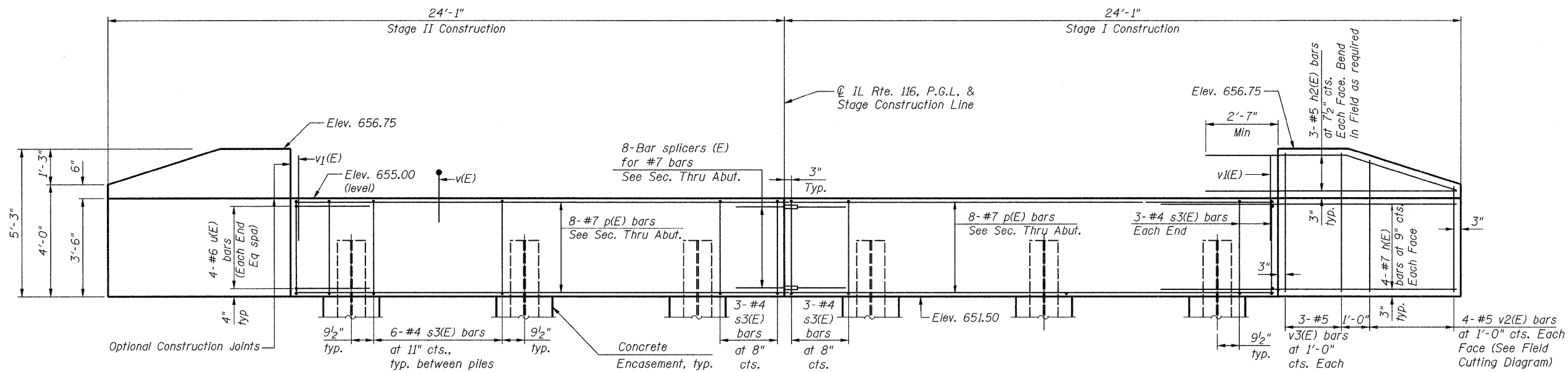
REVISED -
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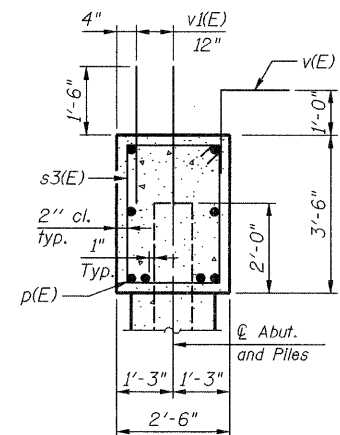
WEST ABUTMENT DETAILS
STRUCTURE NO. 038-0220

SHEET NO. 13 OF 22 SHEETS

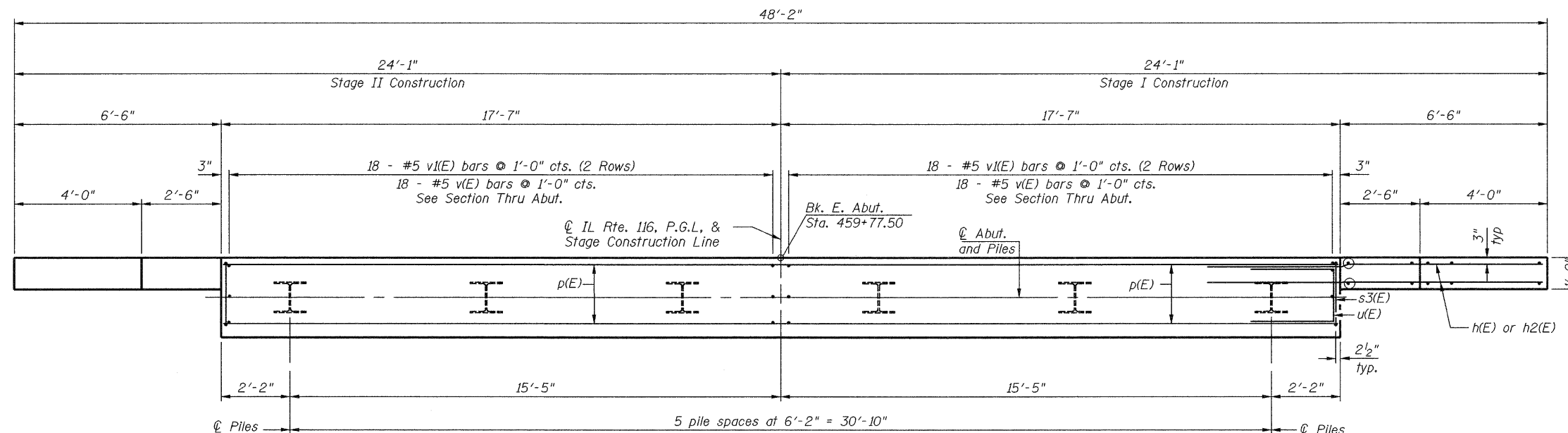
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	24
CONTRACT NO. 66960				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



ELEVATION



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL

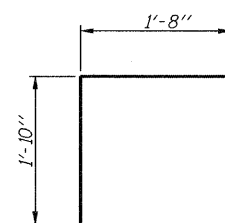
Bar	No.	Size	Length	Shape
h(E)	16	#7	10'-6"	
h2(E)	12	#5	9'-1"	
p(E)	16	#7	17'-3"	
s3(E)	36	#4	11'-5"	
u(E)	8	#6	7'-3"	
v(E)	36	#5	3'-6"	
v1(E)	72	#5	3'-0"	
v2(E)	8	#5	8'-5"	
v3(E)	12	#5	4'-11"	
Structure Excavation				
			Cu. Yd.	312
Concrete Structures				
			Cu. Yd.	13.4
Reinforcement Bars, Epoxy Coated				
			Pound	1,850
Furnishing Steel Piles, HP12x53				
			Foot	150
Driving Piles				
			Foot	150
Test Pile Steel, HP12x53				
			Each	1
Concrete Encasement				
			Cu. Yd.	2.1

PILE DATA

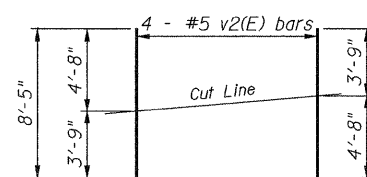
Type: Steel HP12x53
 Nominal Required Bearing: 223 kips
 Factored Resistance Available: 112 kips
 Est. Length: 30 ft.
 No. Production Piles: 5
 No. Test Piles: *1

*1 Test Pile to be driven in a permanent location.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated above.

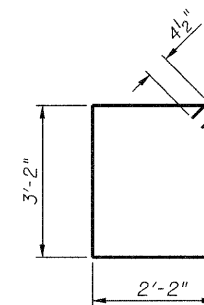


BAR v(E)

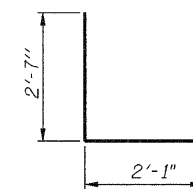


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face. (8 Total bars)



BAR s3(E)



BAR u(E)

NOTES:

- For details of Bar Splicers, see sheet 18 of 22.
- For details of piles and Concrete Encasement, see sheet 17 of 22.
- Minimum bar lap:
 #5 bar = 2'-7"
 #7 bar = 4'-2"



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 PLOT DATE = 01/24/2011

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 DRAWN - MRW
 CHECKED - JDC

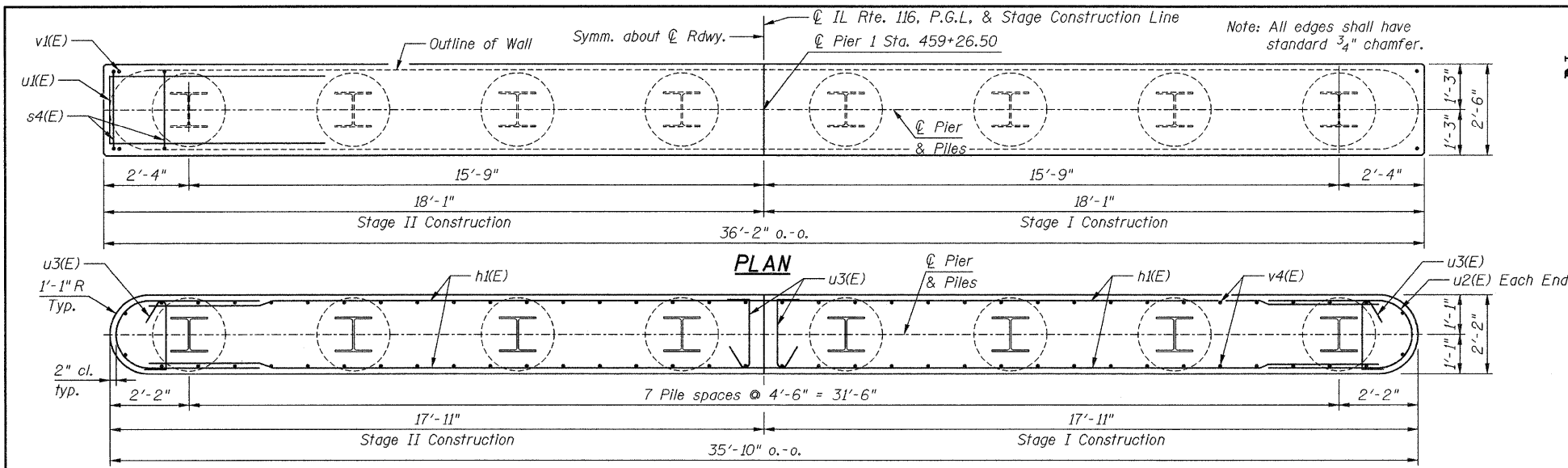
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 DEPARTMENT OF TRANSPORTATION**

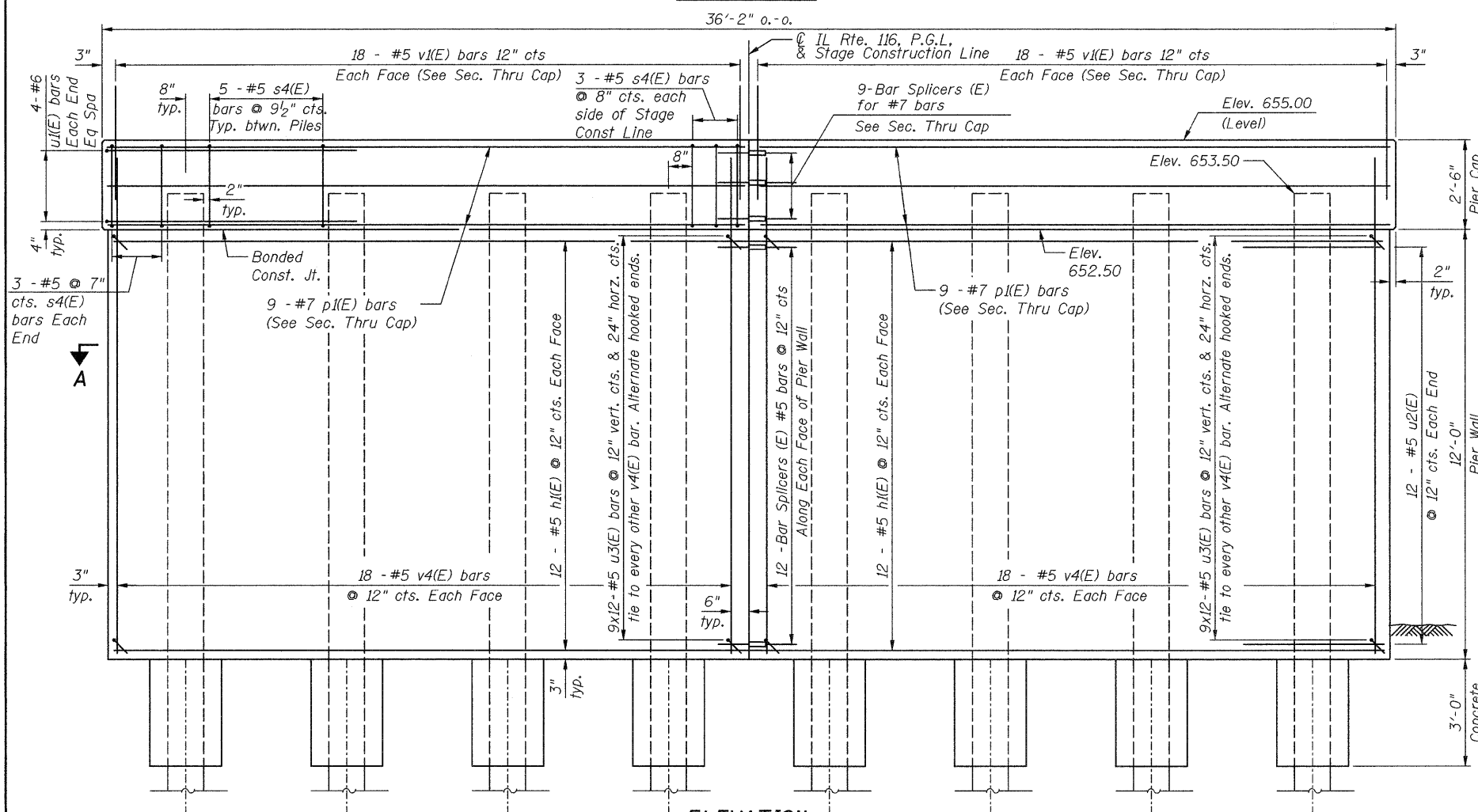
**EAST ABUTMENT DETAILS
 STRUCTURE NO. 038-0220**

SHEET NO. 14 OF 22 SHEETS

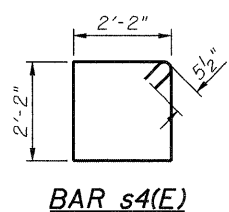
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	25
CONTRACT NO. 66960				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



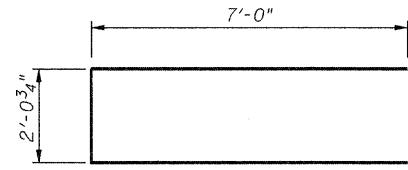
SECTION A-A



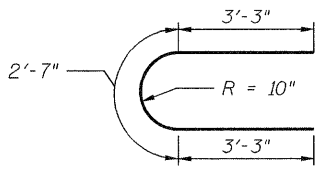
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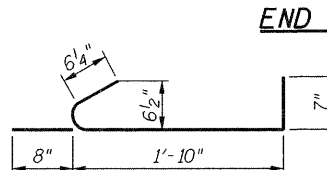
BAR s4(E)



BAR u1(E)



BAR u2(E)

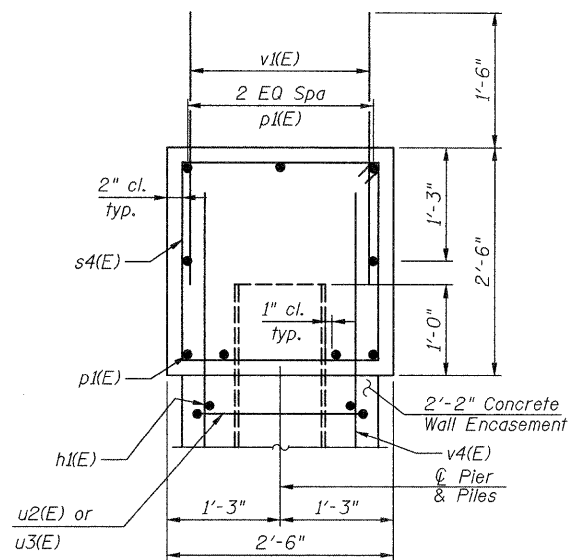


BAR u3(E)

END VIEW

NOTES:

- For details of Bar Splicers, see sheet 18 of 22.
- For details of piles and Concrete Encasement, see sheet 17 of 22.
- If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
- Bars indicates thus:
9 x 12 - #5 etc., indicates 9 lines of #5 bars with 12 lengths per line.



SEC. THRU CAP.

BILL OF MATERIAL - PIER

Bar	No.	Size	Length	Shape
p1(E)	18	#7	17'-9"	
h1(E)	48	#5	16'-8"	
s4(E)	42	#5	9'-7"	
u1(E)	8	#6	16'-1"	
u2(E)	24	#5	9'-1"	
u3(E)	216	#5	3'-1"	
v1(E)	72	#5	3'-0"	
v4(E)	72	#5	13'-10"	
Structure Excavation			Cu. Yd.	5
Concrete Structures			Cu. Yd.	42.4
Reinforcement Bars, Epoxy Coated			Pound	4,290
Furnishing Steel Piles, HP12x53			Foot	315
Driving Piles			Foot	315
Test Pile Steel, HP12x53			Each	1
Underwater Structure Excavation Protection - Location 1			Each	1
Concrete Encasement			Cu. Yd.	2.8

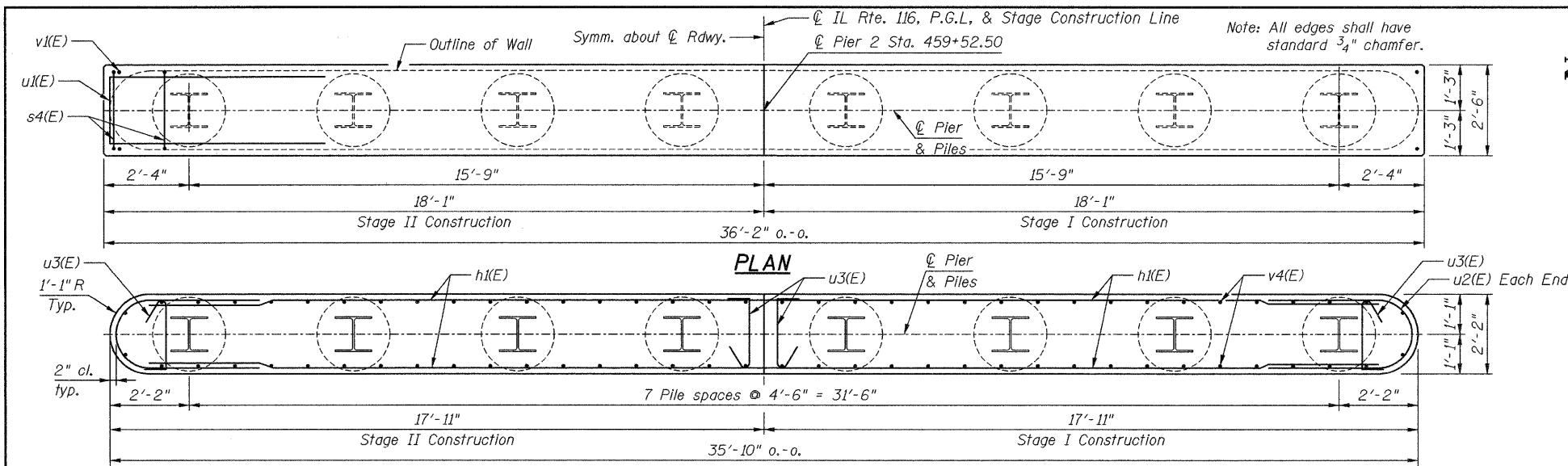
PILE DATA

Type: Steel HP12x53
 Nominal Required Bearing: 278 kips
 Factored Resistance Available: 139 kips
 Est. Length: 45 ft.
 No. Production Piles: 7
 No. Test Piles: *1

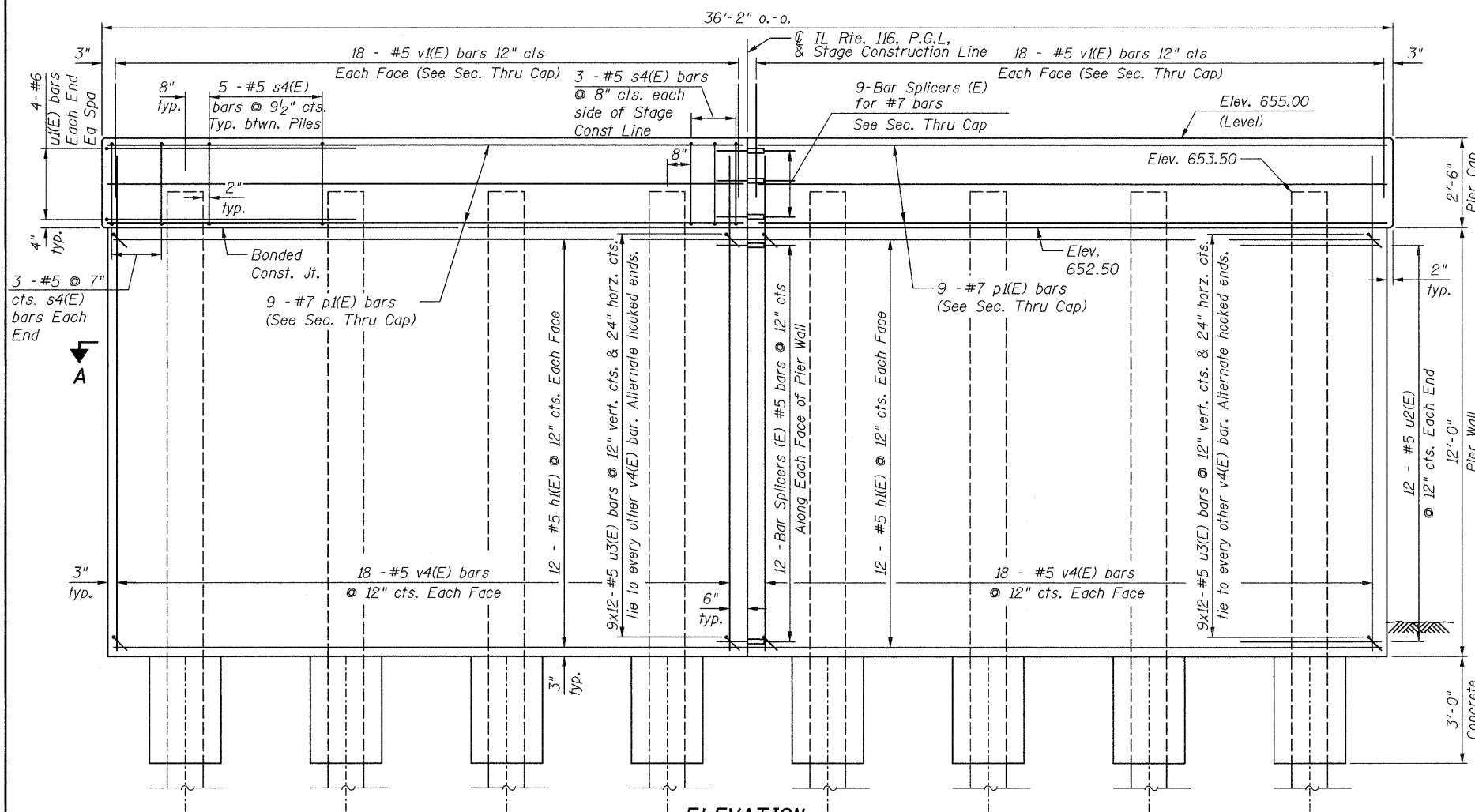
*1 Test Pile to be driven in a permanent location. The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated above.

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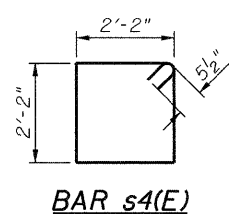
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PLOT DATE = 01/24/2011	CHECKED - JDC	REVISED -	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



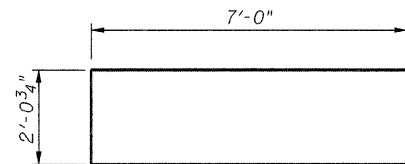
SECTION A-A



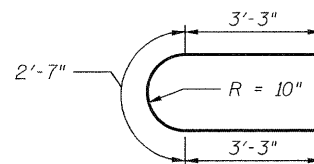
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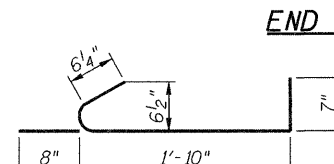
BAR s4(E)



BAR u1(E)



BAR u2(E)

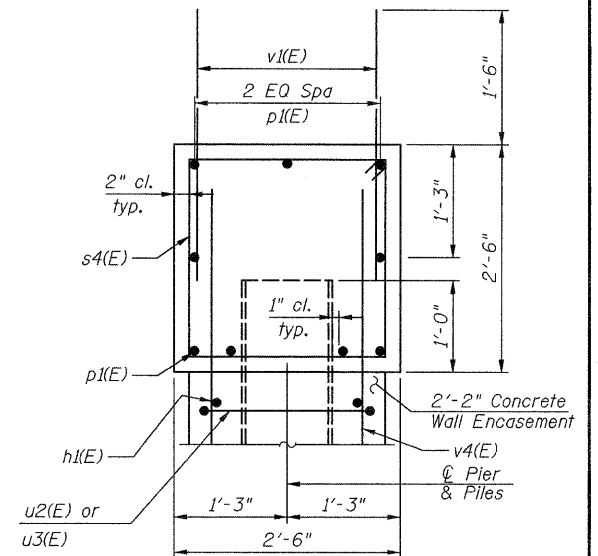


BAR u3(E)

END VIEW

NOTES:

- For details of Bar Splicers, see sheet 18 of 22.
- For details of piles and Concrete Encasement, see sheet 17 of 22.
- If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
- Bars indicate thus:
9 x 12 - #5 etc., indicates 9 lines of #5 bars with 12 lengths per line.



SEC. THRU CAP.

BILL OF MATERIAL - PIER

Bar	No.	Size	Length	Shape
p1(E)	18	#7	17'-9"	
h1(E)	48	#5	16'-8"	
s4(E)	42	#5	9'-7"	
u1(E)	8	#6	16'-1"	
u2(E)	24	#5	9'-1"	
u3(E)	216	#5	3'-1"	
v1(E)	72	#5	3'-0"	
v4(E)	72	#5	13'-10"	
Structure Excavation	Cu. Yd.		4	
Concrete Structures	Cu. Yd.		42.4	
Reinforcement Bars, Epoxy Coated	Pound		4,290	
Furnishing Steel Piles, HP12x53	Foot		400	
Driving Piles	Foot		400	
Underwater Structure Excavation Protection - Location 2	Each		1	
Concrete Encasement	Cu. Yd.		2.8	

PILE DATA

Type: Steel HP12x53
Nominal Required Bearing: 264 kips
Factored Resistance Available: 132 kips
Est. Length: 50 ft.
No. Production Piles: 8
No. Test Piles: 0

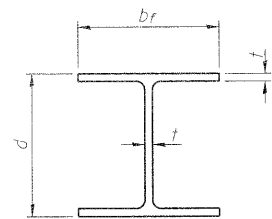
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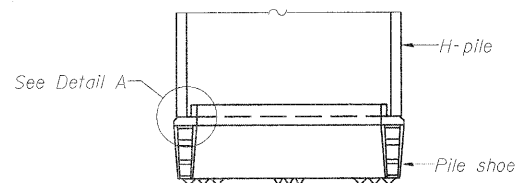
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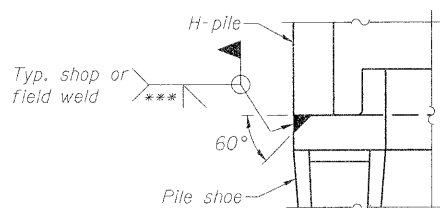


STEEL PILE TABLE

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

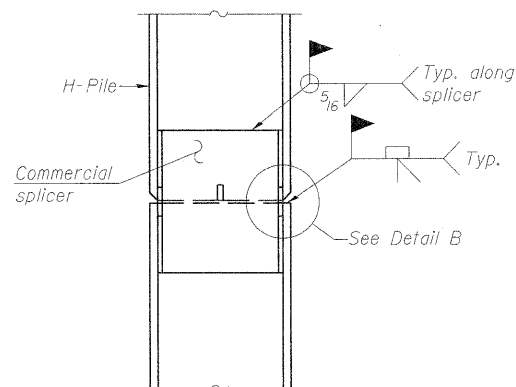


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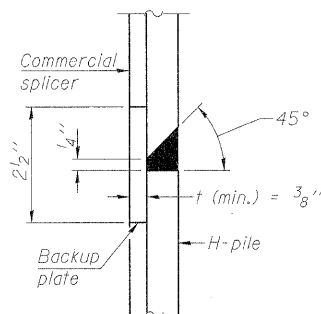


DETAIL A

H-PILE SHOE ATTACHMENT

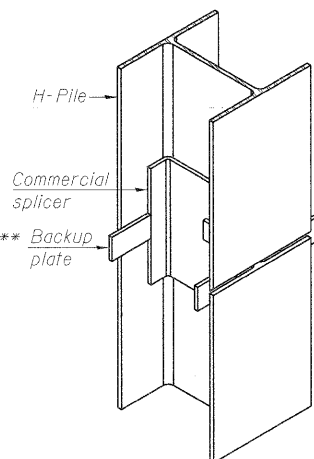


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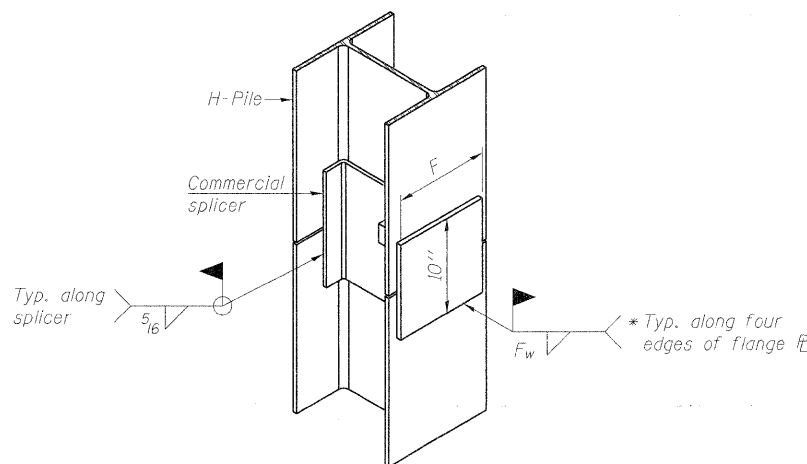


DETAIL "B"

WELDED COMMERCIAL SPLICE



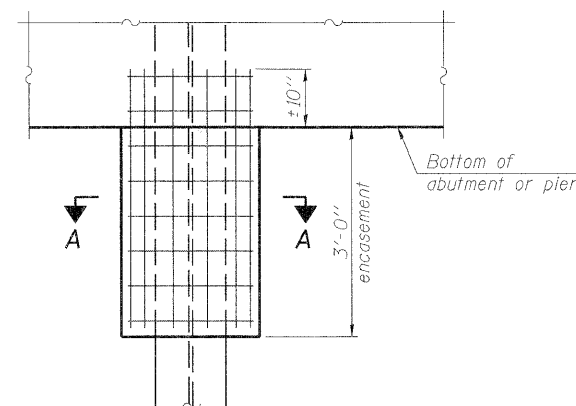
ISOMETRIC VIEW



ISOMETRIC VIEW

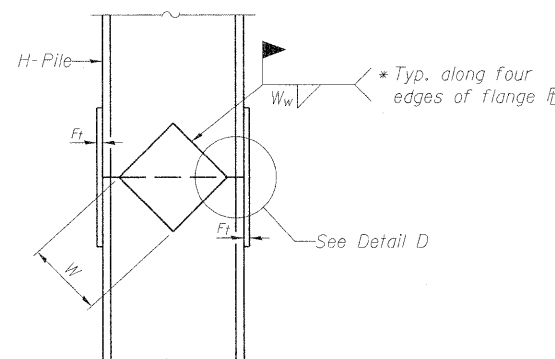
WELDED COMMERCIAL SPLICE ALTERNATE

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

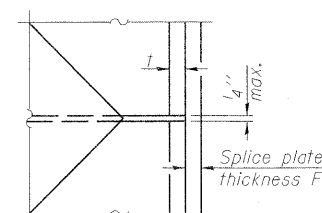


ELEVATION

PILE ENCASEMENT

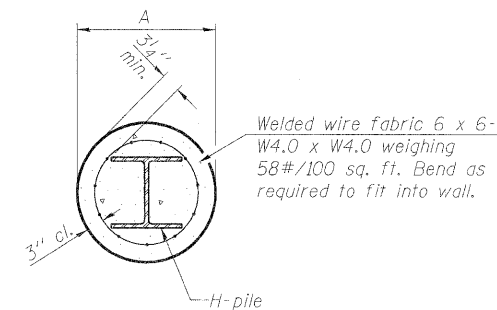


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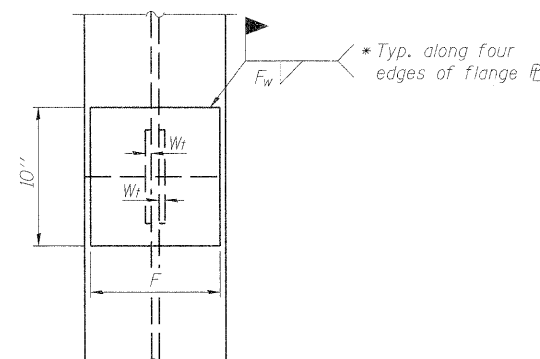


DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A



END VIEW

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

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



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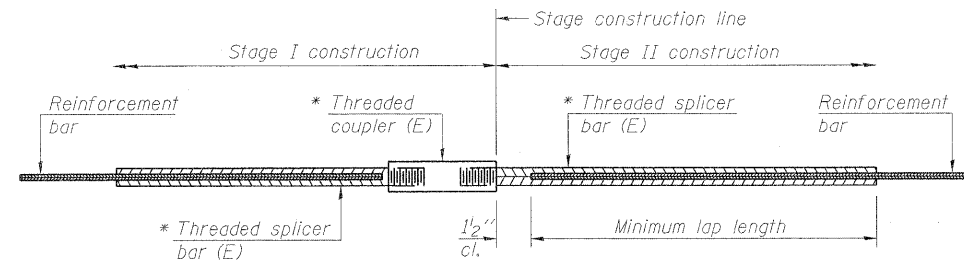
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		MRW	
		CHECKED -	REVISED -
		JDC	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 038-0220

SHEET NO. 17 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	28
CONTRACT NO. 66960				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

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

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

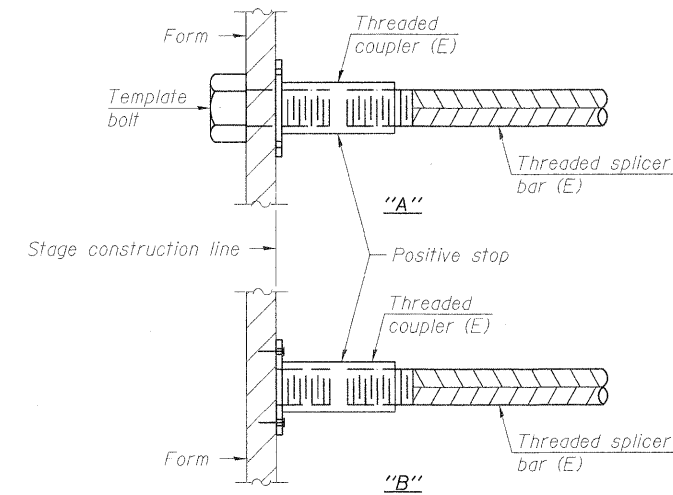
Table 3: Epoxy bar, 0.8 Class C

Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Table 5: Epoxy bar, Top bar lap, Class B

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

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



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.

Bar Size	No. Assemblies Required	Location
#4	25	West Approach
#4	25	East Approach
#5	137	Deck
#5	46	West Approach
#5	46	East Approach
#5	24	Pier 1 Wall
#5	24	Pier 2 Wall
#5	40	West Approach Footing
#5	40	East Approach Footing
#7	8	West Abutment
#7	8	East Abutment
#7	9	Pier 1 Cap
#7	9	Pier 2 Cap

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

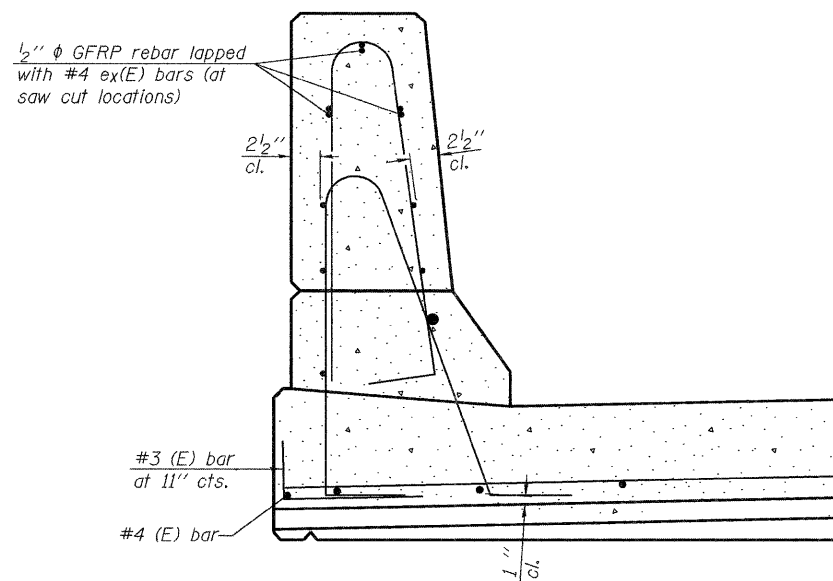
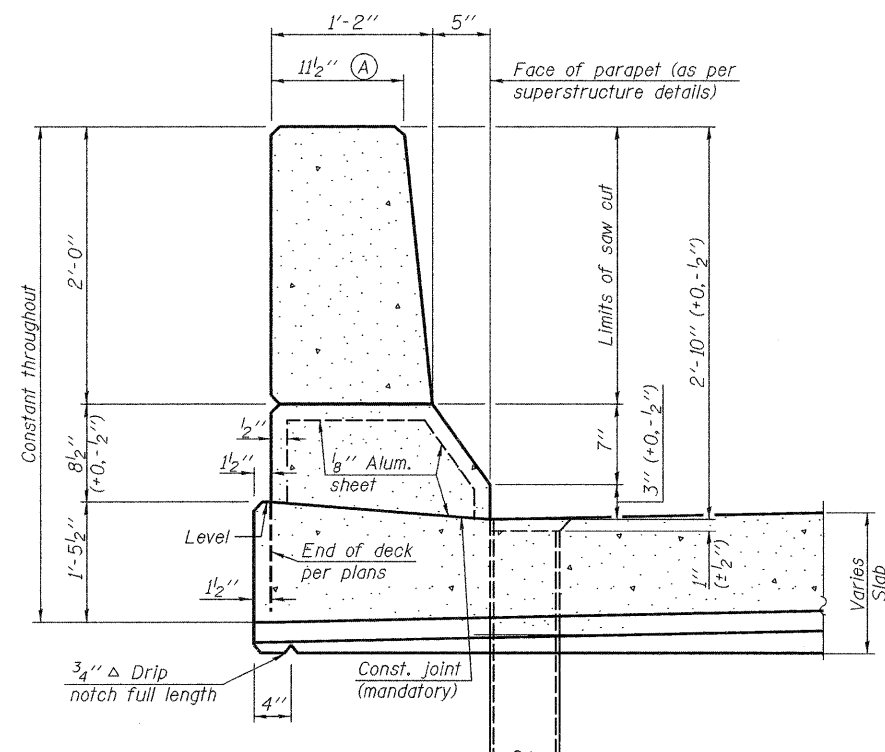
See approved list of bar splicer assemblies for alternatives.



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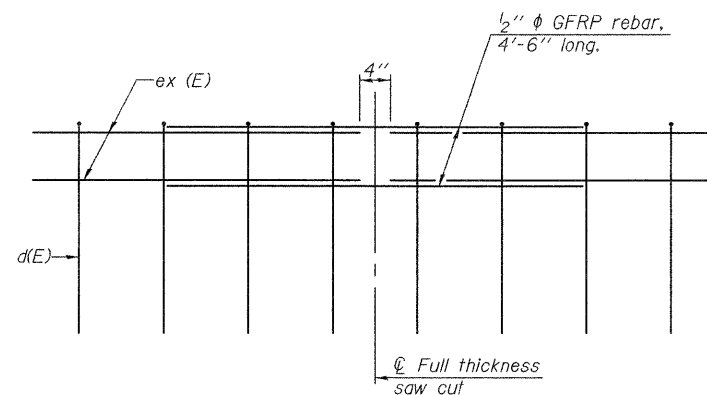
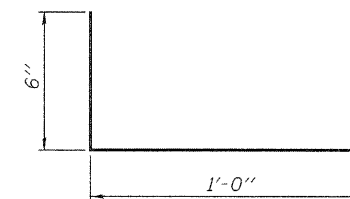
Job No. 3938

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		CHECKED - JMS	REVISED -								
	PLOT SCALE = %SCALE%	DRAWN - MRW	REVISED -								
	PLOT DATE = 12/09/2010	CHECKED - JDC	REVISED -								
							CONTRACT NO. 66960				
							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimension A which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A = 0.0165 cu. yds./ft. of parapet. Place aluminum sheet in curb portion at abutment only. Full thickness saw cut at all joint locations in lieu of cork joint filler.



GFRP REBAR STIFFENING DETAIL

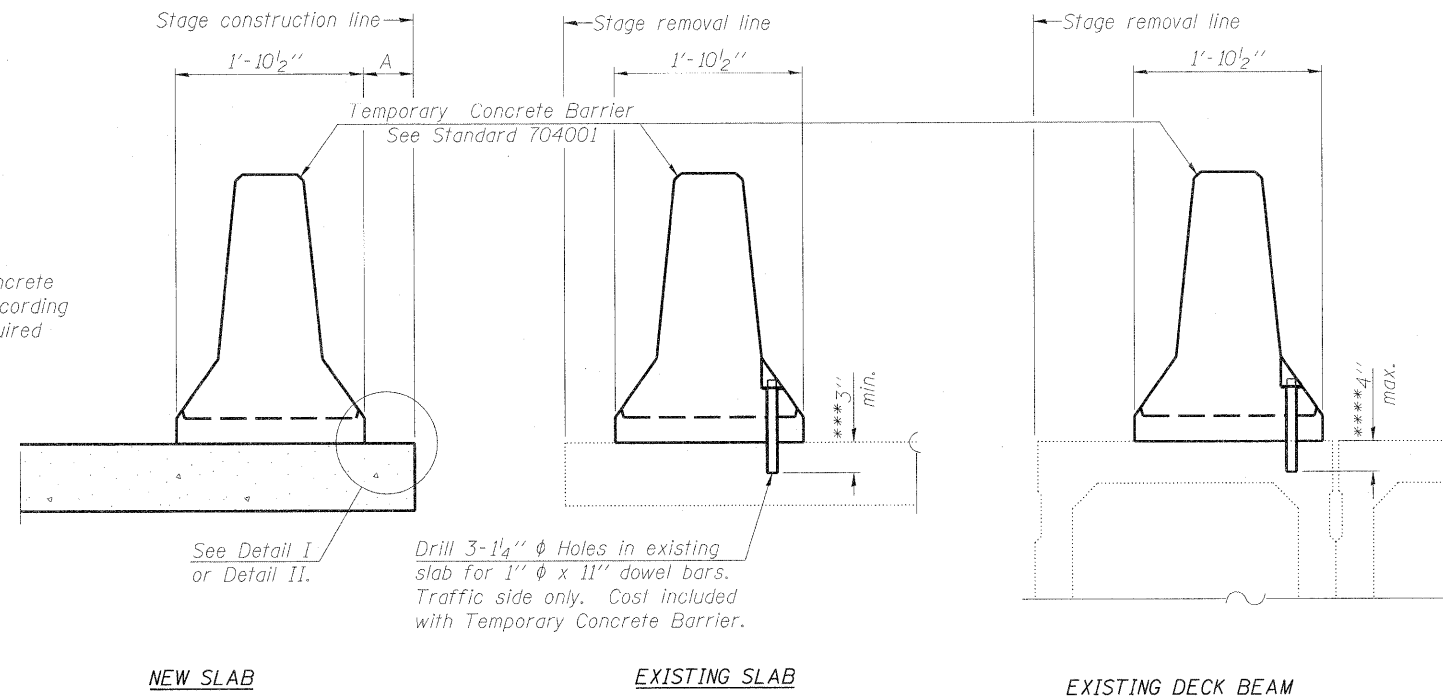
(Place as shown in parapet section
at each parapet joint location.)



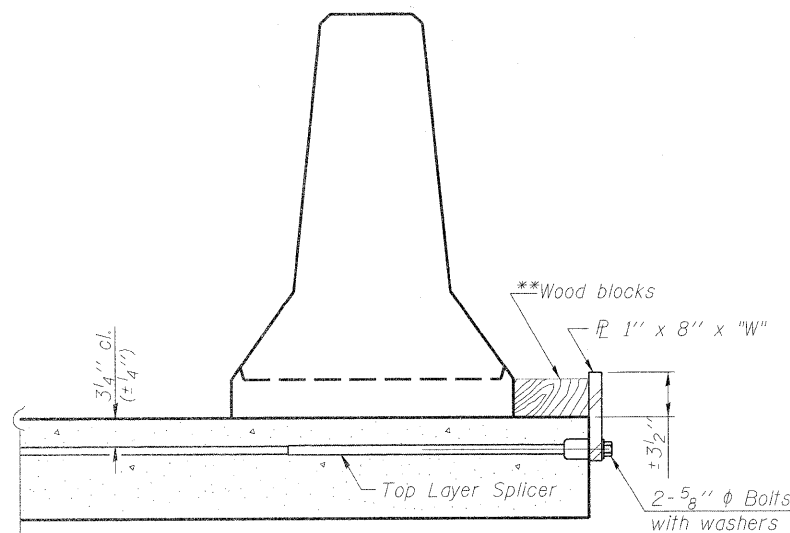
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450

FILE NAME = ...\\038-0220-66960-019-slpfm.dgn	USER NAME = rgrimm	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 038-0220	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - JMS	REVISED -			681	(117) BR-1	IROQUOIS	41	30	
	PLOT SCALE = \$SCALE\$	DRAWN - MRW	REVISED -			CONTRACT NO. 66960					
	PLOT DATE = 01/24/2011	CHECKED - JDC	REVISED -			SHEET NO. 19 OF 22 SHEETS					
						FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

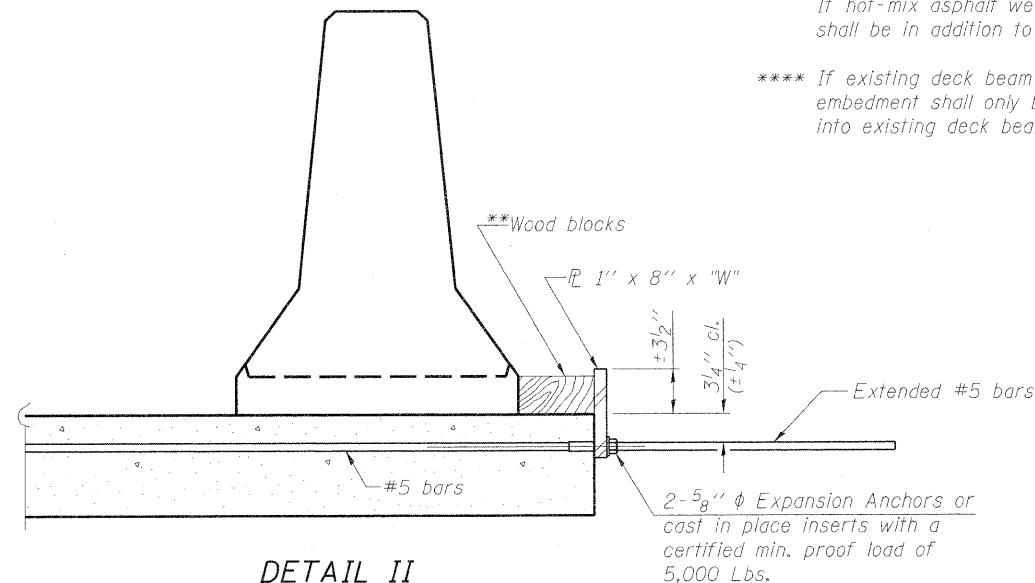
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM



DETAIL I



DETAIL II

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

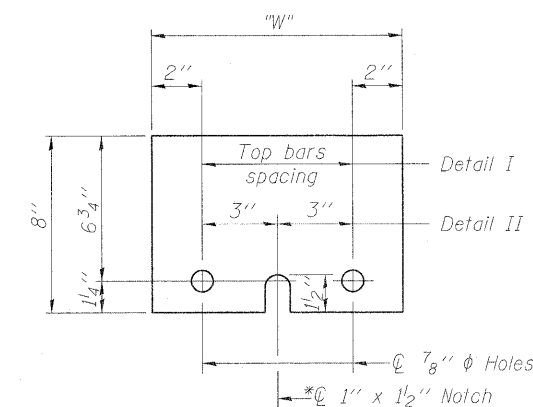
"W" = Top bars spacing + 4"

NOTES

Detail I - With Bar Splicer or Couplers: Connect one (1) 1" x 8" x "W" steel $\bar{P}$ to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate $\bar{C}$ of each barrier panel.

Detail II - With Extended Reinforcement Bars: Connect one (1) 1" x 8" x "W" steel $\bar{P}$ to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate $\bar{C}$ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 8" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



STEEL RETAINER $\bar{P}$ 1" x 8" x "W"

* Required only with Detail II



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Job No. 3938

FILE NAME =
...038-0220-66960-020-tempconcbarr.dgn

USER NAME = joreisher

DESIGNED - JDC
CHECKED - JMS

REVISD -
REVISD -

PLOT SCALE = 1/8"=1'-0"
PLOT DATE = 12/09/2010

DRAWN - MRW
CHECKED - JDC

REVISD -
REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 038-0220

SHEET NO. 20 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	31
CONTRACT NO. 66960				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



Page 1 of 2

Date 5/21/09

ROUTE	FAP 681 (IL 116)	DESCRIPTION	IL 116 over Langan Creek, 3.81 Miles West of I 57	LOGGED BY	LM
--------------	------------------	--------------------	---	------------------	----

SECTION (117 BR) LOCATION NE 1/4, SEC. 26, TWP. 28N, RNG. 10E, 3rd PM

COUNTY	Iroquois	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME Automatic
--------	----------	-----------------	-------------------	-------------	---------------

STRUCT. NO. 038-0122 (Exist.)
Station 459+40

BORING NO. 2 (S.W. Quad.)
Station 459+00
Offset 7.00ft Rt.
Ground Surface Elev. 655.94

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev.	643.66	ft
Stream Bed Elev.	641.71	ft
Groundwater Elev.:		
First Encounter		ft
Upon Completion	637.9	ft ∇
After Hrs.		ft

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Augered Bit. Pav't, Concrete & Black Silty Clay Loam Fill			
650.94	-5	3	
Stiff to Very Stiff Gray/ Brown Silty Loam/Silty Clay Loam with fine Sand layers Loess		3	2.0
		3	P
648.94			
Hard Brown Silty Clay/Silty Clay Loam		2	
		4	4.0
		5	S
646.44			
Very Stiff Gray & Brown Silty Clay with Silt layers & pockets	-10	2	
		2	2.5
		5	S
643.94			
Hard Gray Silty Clay/Clay		6	
		8	5.0
		10	S
	-15	4	
		6	5.4
		9	S
		4	
		5	4.5
		9	S
636.44			
Very Stiff Gray Clay/Silty Clay	-20		

Very Stiff Gray Clay/Silty Clay (continued)		4		
		5	3.3	25.1
		7	S	
		3		
		5	3.7	24.1
		8	S	
	631.44			
Stiff Gray Silty Clay Loam/ Silty Loam with layers of Gray Silt	-25	3		
		3	1.5	24.0
		3	P	
		2		
		3	1.5	25.1
		3	P	
	-30	1		
		4	2.0	22.9
		5	P	
	623.94			
Very Stiff Gray Silt with layers of Silty Loam/ Silty Clay Loam		3		
		4	3.5	24.5
		5	P	
	621.44			
Hard Dark Gray Clay/ Silty Clay Till	-35	5		
		9	7.0	21.2
		12	S	
		5		
		9	5.8	22.8
		11	S	
	-40			

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)



Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450

Job No. 3938

Illinois Department of Transportation

Page 2 of 2

Date 5/21/09

ROUTE	FAP 681 (IL 116)	DESCRIPTION	IL 116 over Langan Creek 3.81 Miles West of I 57	LOGGED BY	JM
-------	------------------	-------------	--	-----------	----

SECTION (117 BR) LOCATION NE 1/4 SEC. 26 TWP. 28N RNG. 10E 3rd PM

COUNTY	Irroquois	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	CME Automatic
--------	-----------	-----------------	-------------------	-------------	---------------

STRUCT. NO. 038-0122 (Exist.)
Station 459+40

BORING NO. 2 (S.W. Quad.)
Station 459+00
Offset 7.00ft Rt.
Ground Surface Elev. 655.94

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev.	<u>643.66</u>	ft
Stream Bed Elev.	<u>641.71</u>	ft
Groundwater Elev.:		
First Encounter		ft
Upon Completion	<u>637.9</u>	ft
After Hrs.		ft

Sample Number	Depth (ft)	Soil Description	Moisture (%)	Specific Gravity	Unit Weight (pcf)
Hard Dark Gray Clay/ Silty Clay Till (continued)	7				
	11	9.8	13.9		
	15	S			
	613.94				
Hard/Dense Gray Clay Silt, Fine Sand, Coarse Sand layers (free water) up to 1' thick	11				
	13	6.6	22.2		
	20	S			
	-45				
	10				
	14		15.0		
	21				
	10				
	16		18.7		
	18				
Hard Gray Silty Clay Loam Till	-50				
	8				
	8		35.5		
	16				
	603.94				
Hard Gray Silty Clay Loam Till	48				
	100/5'	>12 S	13.9		
	-55				
End of Boring	61				
	100/3'	>12 S	10.7		
	599.44				

9	
2	
0	
1	
3	
9	
7	

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS LOG 2 OF 2
STRUCTURE NO. 038-0220

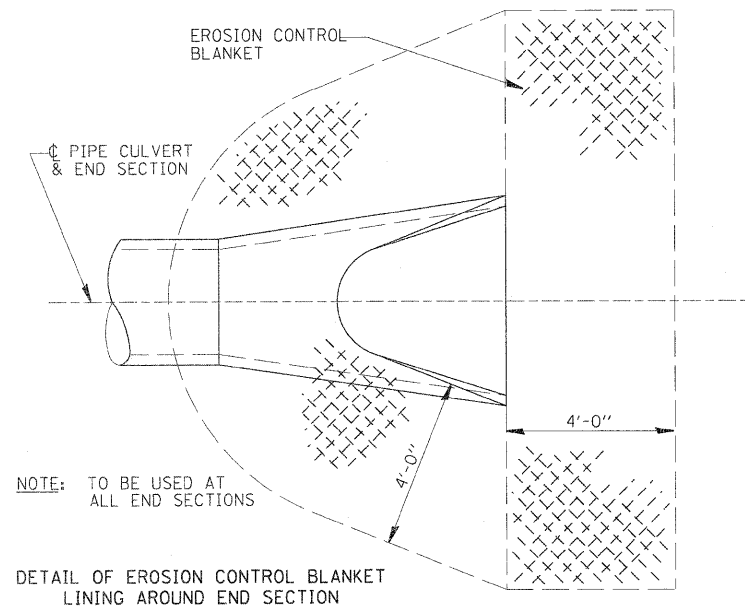
SHEET NO. 22 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(117) BR-1	IROQUOIS	41	33
CONTRACT NO. 66960				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID	PROJECT	

\\3900s\3938\structures\llf6over\langancreek\final\plans\038-0220-66960-022-logs2.dgn

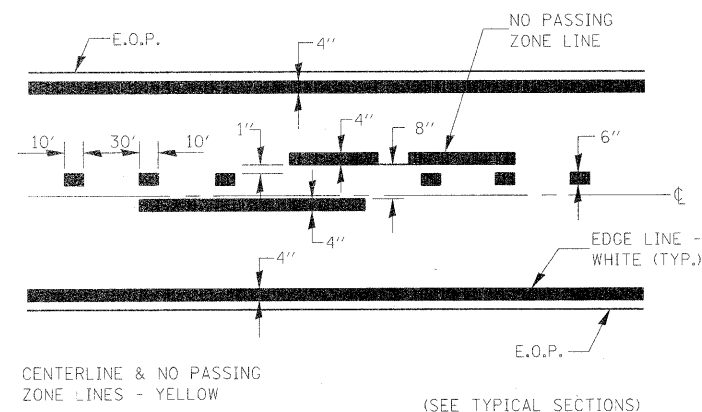
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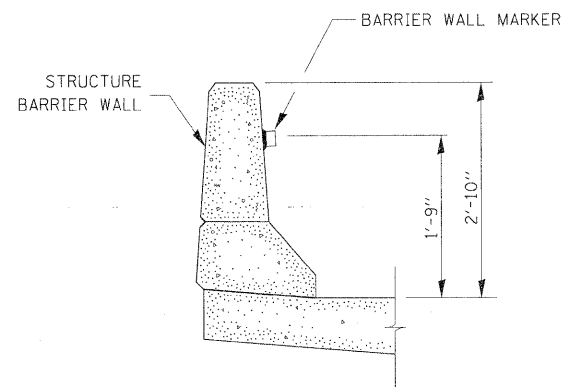


NOTE: PRC FLARED END SECTION SHOWN. TREATMENT SAME FOR OTHER END SECTIONS.

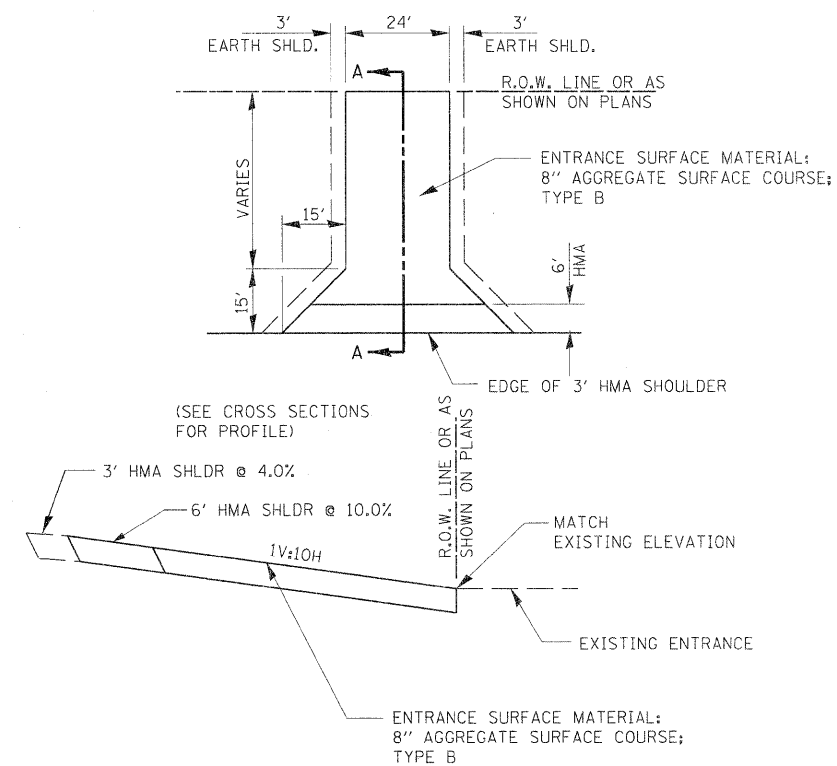
DETAIL OF EROSION CONTROL BLANKET LINING AROUND END SECTION



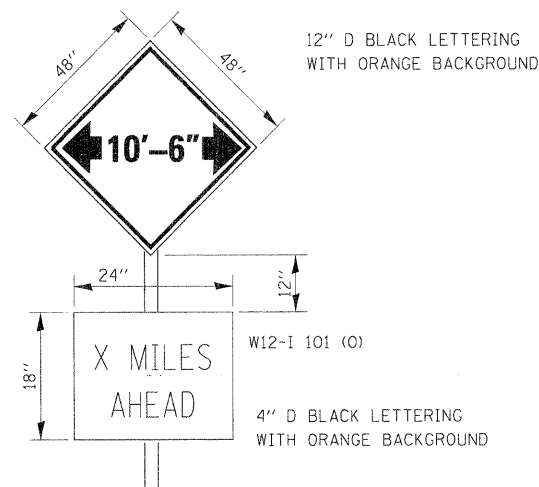
PAVEMENT MARKING



BARRIER WALL MARKER



FIELD ENTRANCE DETAIL



TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

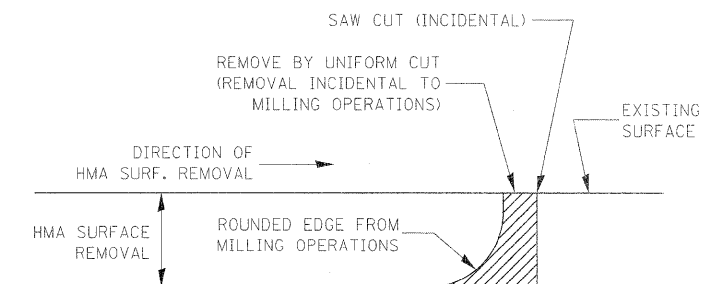
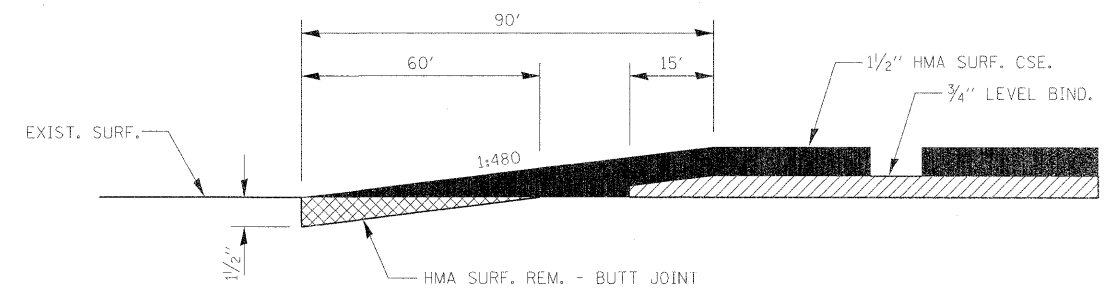
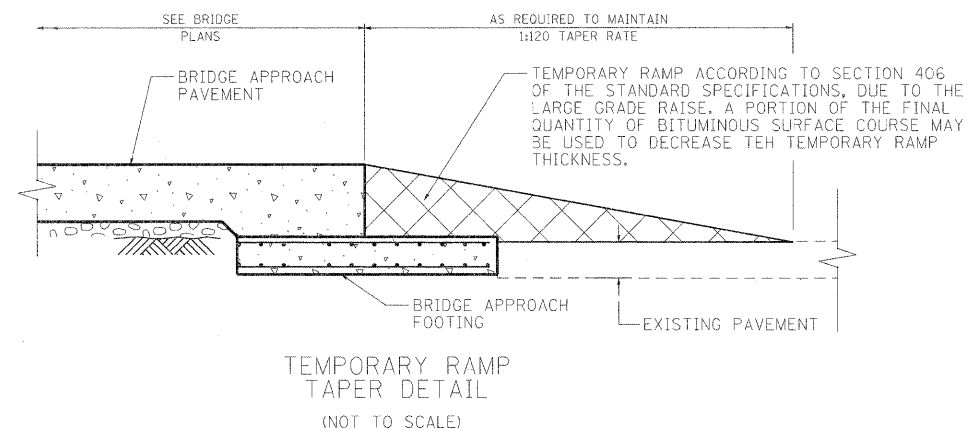
LOCATIONS

WB IL 116 AT I-57, 3.8 MILES AHEAD
EB IL 116 AT IL 115, 8.7 MILES AHEAD
EB & WB 250 FEET AFTER ROAD CONSTRUCTION AHEAD SIGNS, 1/4 MILE AHEAD

WIDTH RESTRICTION SIGNING DETAILS STAGE I ONLY

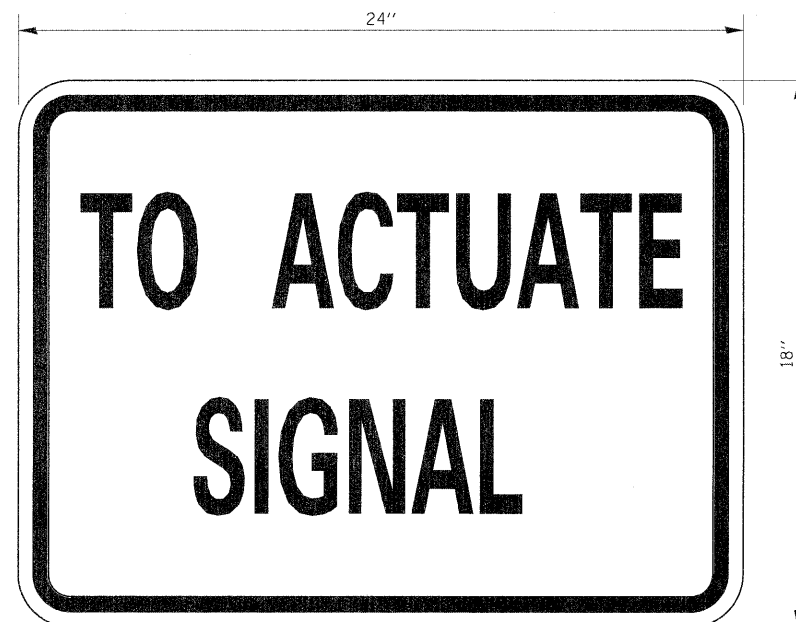


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		DRAWN - MW	REVISED - JMS 12-03-2010					681	(117) BR-1	IROQUOIS	41	34
		CHECKED - JMS	REVISED - XXX					CONTRACT NO. 66960				
		DATE - 10-28-2010	REVISED - XXX		SCALE: NONE	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



NOTE:

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



SIZE: 24" x 18"

4" CAPITAL LETTERS - BLACK

1/2" BORDER - BLACK

WHITE REFLECTIVE - TYPE B
ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE
STOP LINE AS DIRECTED BY THE ENGINEER.

HMA DETAIL AT BUTT JOINTS



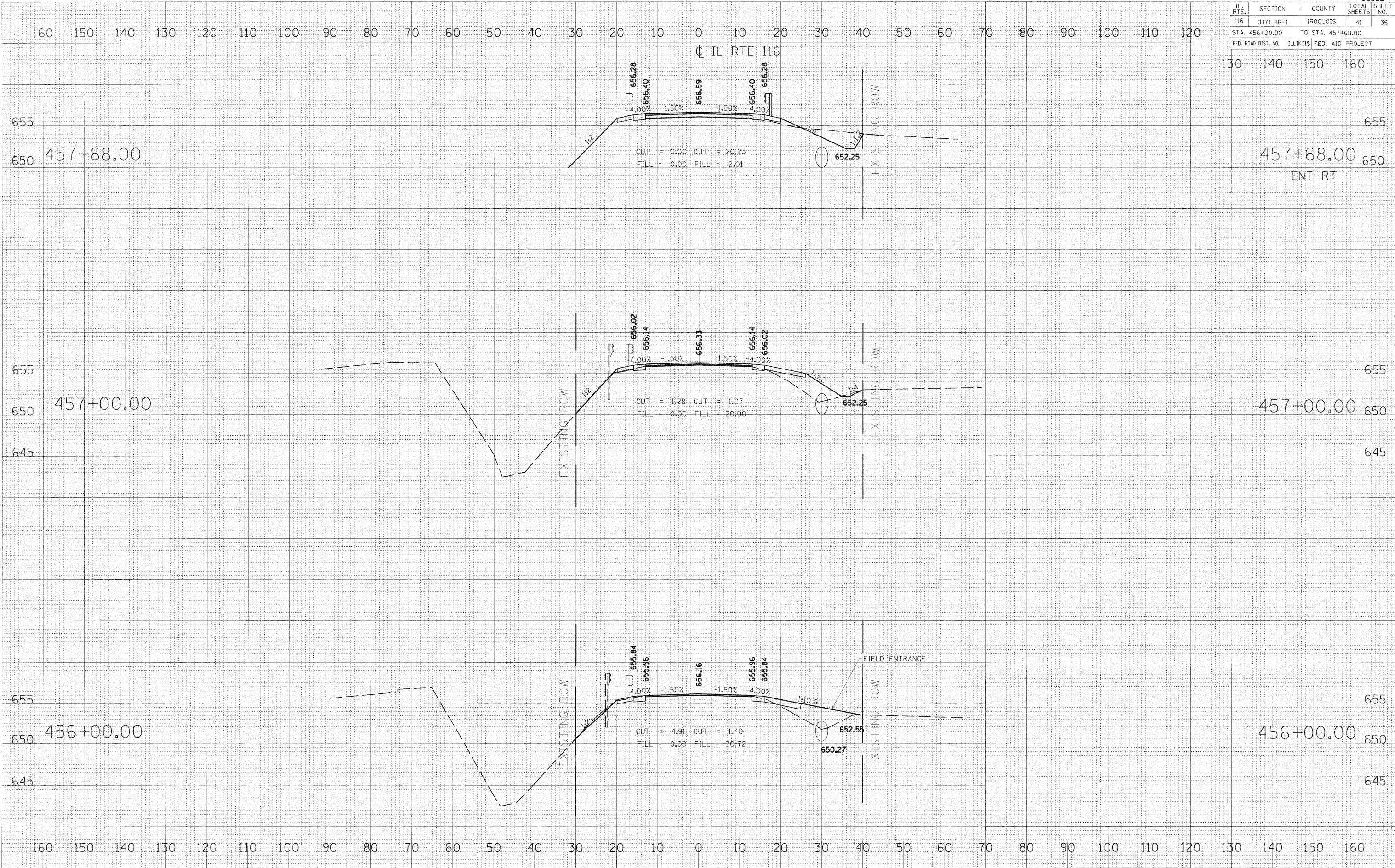
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PLOT DATE = 12/09/2010	DATE - 10-28-2010	REVISED - XXX											
				SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				

DATE	BY
FINAL	SURVEYED
SURVEY	NOTE BOOK
NO.	AREAS CHECKED

DATE	BY
ORIGINAL	SURVEYED
SURVEY	NOTE BOOK
NO.	AREAS CHECKED

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PLOT SCALE = 85CAL@
USER NAME = jpalmer

CONTRACT NO. 66960				
IL RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	(117) BR-1	IRROQUOIS	41	36
STA. 456+00.00		TO STA. 457+68.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



130 140 150 160



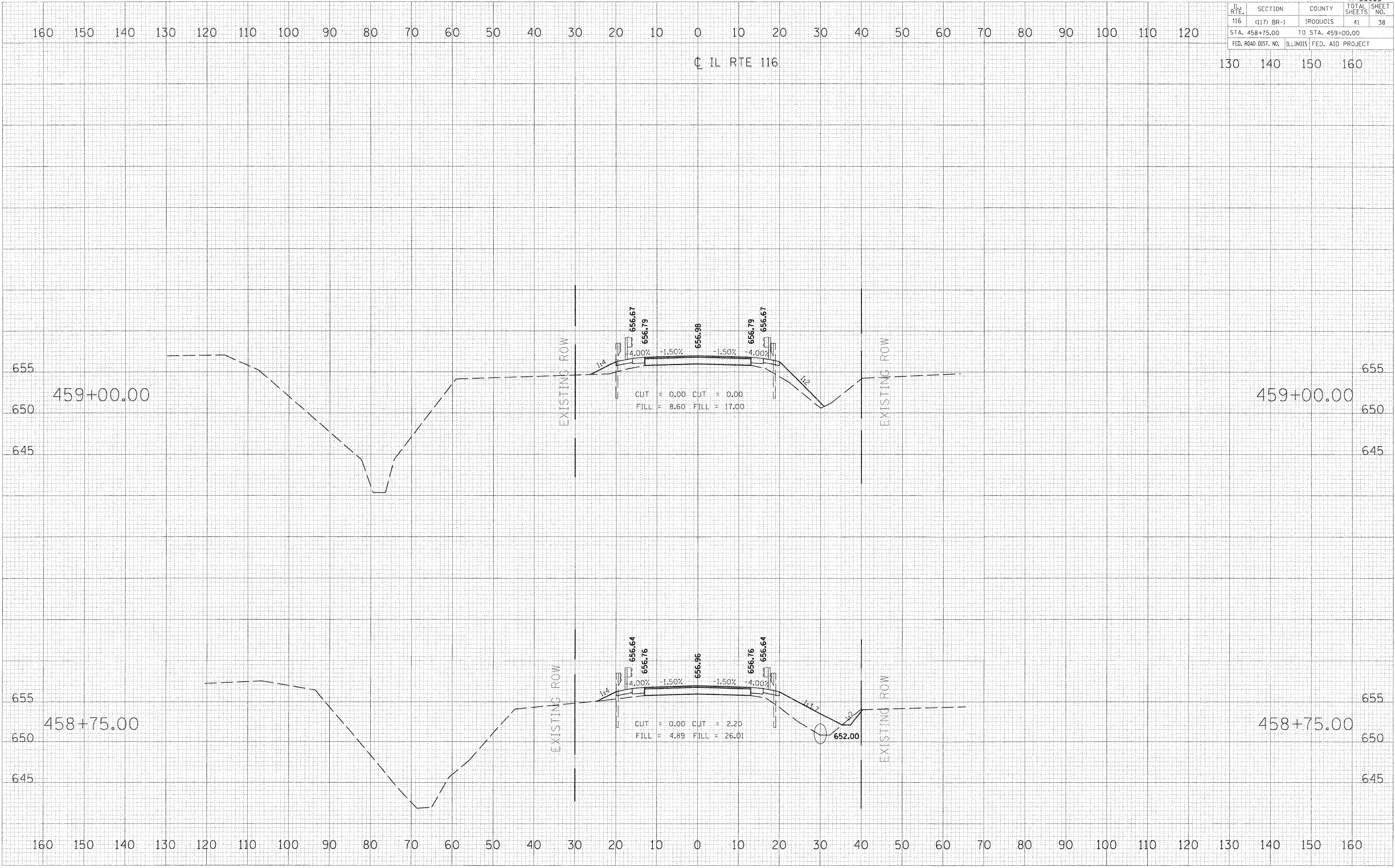
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NOTE BOOK	AREAS AREAS CHECKED		
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USER NAME = jealmen
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NOTE BOOK	TEMP. PLATE		
NO.	AREAS CHECKED		

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NOTE BOOK	TEMP. PLATE		
NO.	AREAS CHECKED		

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CONTRACT NO. 66960				
IL RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	(117) BR-1	IROQUOIS	41	38
STA. 458+75.00		TO STA. 459+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 66960				
IL. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
116	(117) BR-1	IRROUOIS	41	40
STA. 460+50.00 TO STA. 462+00.00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY	SURVEYED	DATE
NO. 1	PLOTTED	BY
	TEMPLATE	
	AS	
	AREA CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NO. 1	PLOTTED	BY
	TEMPLATE	
	AS	
	AREA CHECKED	

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USER NAME = jgallan

