03-08-13 LETTING ITEM 087

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	1
	ILLINOIS	CONTRACT NO. 66832		

INDEX OF SHEETS

HIGHWAY STANDARDS

HIGHWAY STANDARDS
LISTED ON SHEET 2

100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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: CRAIG REED, P.E.
UNIT CHIEF: RUTH SCHWANKE
TOWNSHIP: PONTIAC

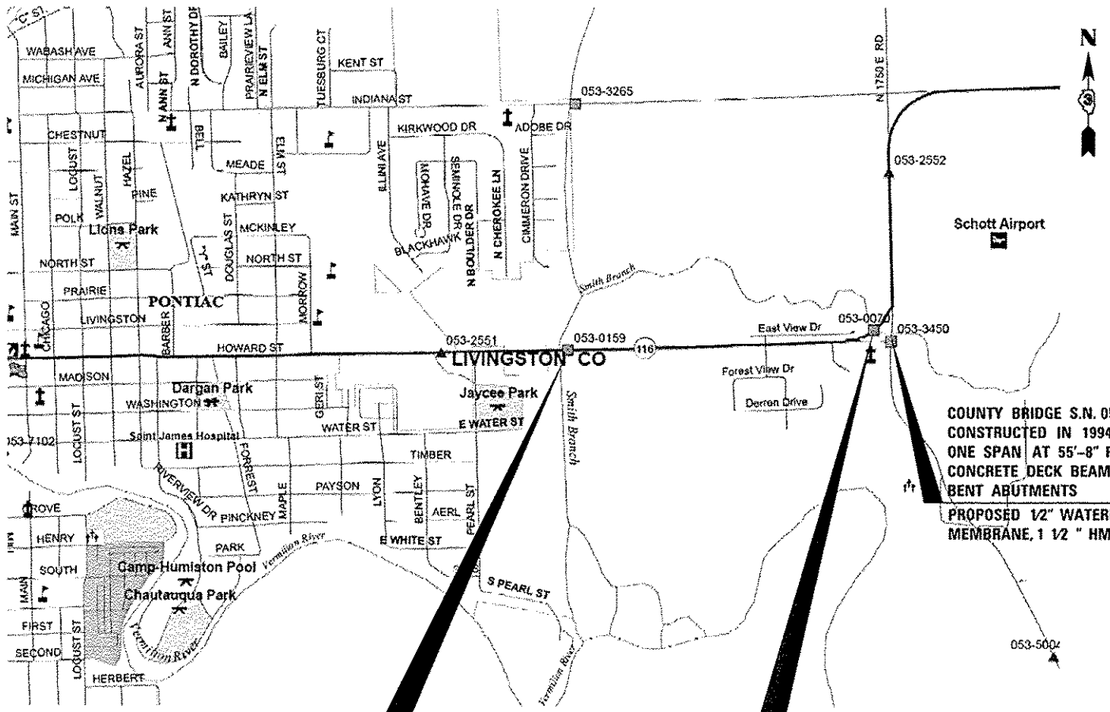
CONTRACT NO. 66832

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP 681 (IL 116)
SECTION (113 BR)BR & (113 BR-1)BR
PROJECT : F-0681(044)
BRIDGE REPLACEMENT
LIVINGSTON COUNTY

C-93-009-11



STA. 24+91.50 EXISTING S.N. 053-0159
CONSTRUCTED IN 1983
58'-3" X 36' SINGLE SPAN PCC DECK BEAMS WITH WATERPROOFING MEMBRANE AND HMA OVERLAY, ON A SUBSTRUCTURE OF BENT PILE ABUTMENTS.

PROPOSED S.N. 053-0190
70'-6" X 39'-2" SINGLE SPAN REINFORCED CONCRETE DECK ON WIDE FLANGE BEAMS ON INTEGRAL SPILL THRU ABUTMENTS

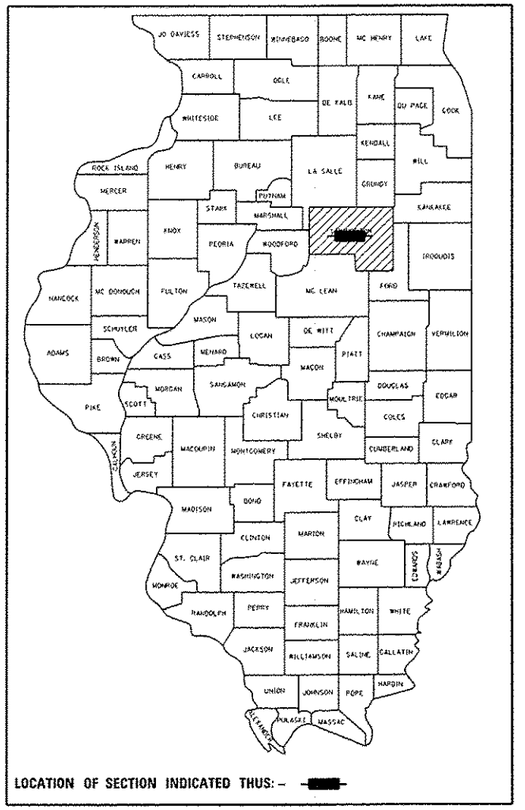
GROSS LENGTH = 1278 FT. = 0.24 MILE
NET LENGTH = 1278 FT. = 0.24 MILE

STA. 58+65 EXISTING S.N. 053-0070
CONSTRUCTED IN 1928, SUPERSTRUCTURE REPLACED IN 1983.
29'-10 3/8" x 42' SINGLE SPAN PCC DECK BEAMS WITH WATERPROOFING MEMBRANE AND HMA OVERLAY, ON CLOSED REINFORCED CONCRETE ABUTMENTS AND VERTICAL CANTILEVER WINGWALLS, SUPPORTED BY UNTREATED TIMBER PILES.

PROPOSED S.N. 053-0191
73' x 40'-8" THREE SPAN 15" REINFORCED CONCRETE SLAB BRIDGE ON STEEL H-PILES

COUNTY BRIDGE S.N. 053-3450
CONSTRUCTED IN 1994
ONE SPAN AT 55'-8" PRECAST PRESTRESSED CONCRETE DECK BEAMS ON CONCRETE PILE BENT ABUTMENTS
PROPOSED 1/2" WATERPROOFING MEMBRANE, 1 1/2 " HMA OVERLAY

D-93-016-11



LOCATION OF SECTION INDICATED THUS: -

FUNCTIONAL CLASSIFICATION

IL 116 - MINOR RURAL ARTERIAL
2009 ADT = 3,550
P.V. = 93.25% S.U. = 4.25% M.U. = 2.5%

C.H. 24 - CLASS IV ROAD
2007 ADT = 250
P.V. = 92.8% S.U. = 5.2% M.U. = 2%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Paul A. Loehr 12-14 20 13
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Feb 1 20 13
Dan D. Baranzelli, P.E. /BR
acting ENGINEER OF DESIGN AND ENVIRONMENT

Feb 1 20 13
Omer Osman, P.E. /BR
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GENERAL NOTES

1. 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.

2. THE HMA SURFACE OF ALL PRIVATE ENTRANCES 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.

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

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

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

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

7. 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.

8. ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.

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

10. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

11. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

12. 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.

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

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MAT (PRIME COAT) ON AGGREGATE BASES	0.375	GAL / SQ YD
BITUMINOUS MAT (PRIME COAT)	0.08	GAL / SQ YD
BITUMINOUS MAT (PRIME COAT) FOG COAT	0.08	GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN

14. MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

ELECTRIC - COMMONWEALTH EDISON COMPANY
GAS - NICOR
SEWER - CITY OF PONTIAC
TELEPHONE - VERIZON
CABLE - MEDIACOM
WATER - CITY OF PONTIAC / ILLINOIS AMERICAN WATER CORPORATION

15. RIPRAP LOCATIONS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

16. THE FOLLOWING ITEM AND APPROXIMATE QUANTITY IS INCLUDED IN THE "SCHEDULE OF PRICES" IN ORDER TO ESTABLISH A UNIT COST FOR WORK REQUIRED TO MAINTAIN ACCESS TO ENTRANCES AT ALL TIMES. THE ACTUAL QUANTITY OF THE ITEM SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

AGGREGATE FOR TEMPORARY ACCESS	100	TON

17. ANY POST CORED THROUGH PAVED SHOULDERS (GUARDRAIL OR TERMINAL END SECTION POSTS) SHALL HAVE THE VOID AROUND EACH POST FILLED WITH GROUT.

HIGHWAY STANDARDS

000001-06 - STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
001001-02 - AREAS OF REINFORCEMENT REBARS
001006 - DECIMAL OF AN INCH AND OF A FOOT
280001-07 - TEMPORARY EROSION CONTROL SYSTEMS
420401-09 - BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03 - NAME PLATE FOR BRIDGES
542301-03 - PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-01 - METAL END SECTION FOR PIPE CULVERT
601101-01 - CONCRETE HEADWALL FOR PIPE DRAIN
602301-03 - INLET - TYPE A
602601-02 - PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-03 - FRAME AND LIDS TYPE 1
604036-02 - GRATE TYPE B
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
631031-11 - 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' AWAY
701006-04 - OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-03 - OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04 - LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03 - LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03 - LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-13 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04 - LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-02 - TRAFFIC CONTROL DEVICES
704001-07 - TEMPORARY CONCRETE BARRIER
781001-03 - TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

COMMITMENTS

1. THE CONCRETE DECK BEAMS AND THE 4"x12" STEEL TUBING FROM THE BRIDGE RAIL FROM EXISTING S.N. 053-0159 SHALL BE SALVAGED AND DELIVERED TO THE PONTIAC MAINTENANCE YARD AS DIRECTED BY THE RESIDENT ENGINEER. THE RESIDENT ENGINEER SHALL COORDINATE WITH THE PONTIAC MAINTENANCE YARD FIELD TECHNICIAN FOR THE LOCATION AND PLACEMENT OF THE BEAMS.

   THE CONTRACTOR WILL SUPPLY THE NECESSARY EQUIPMENT TO OFFLOAD AND PLACE THE CONCRETE DECK BEAMS TO CREATE A THREE SIDED CONTAINMENT AREA THAT IS THREE BEAMS HIGH, WITH THE REMAINING BEAMS PLACED AT THE CORNERS FOR SUPPORT.

2. THE IMPROVEMENT OF C.R. 24 AND N 1750 E WITH VARIABLE DEPTH MILLING, 3/4" LEVELING BINDER AND 1 1/2" HMA SURFACE COURSE, AND THE 1/2" WATERPROOFING MEMBRANE WITH 1 1/2 " HMA SURFACE COURSE ON COUNTY BRIDGE S.N. 053-3450 WILL BE DONE AFTER ALL WORK IS COMPLETED ON IL 116.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: _____
DISTRICT STUDIES & PLANS ENGINEER

DATE: 12-14-12

EXAMINED BY: _____
DISTRICT CONSTRUCTION ENGINEER

_____
DISTRICT MATERIALS ENGINEER

_____
DISTRICT OPERATIONS ENGINEER

FILE NAME = c:\pw_work\pwidot\schwankerg\dms317861\D366832-sht-cover.dgn	USER NAME = Schwankerg	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/12/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	2
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		

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URBAN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	137	137		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	107	107		
20200100	EARTH EXCAVATION	CU YD	808	505	303	
20300100	CHANNEL EXCAVATION	CU YD	1027	1027		
20400800	FURNISHED EXCAVATION	CU YD	102	102		
20800150	TRENCH BACKFILL	CU YD	14	14		
25000210	SEEDING, CLASS 2A	ACRE	1.03	1.03		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	93	93		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	93	93		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	93	93		
25100630	EROSION CONTROL BLANKET	SQ YD	4330	4330		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	253	253		
28000305	TEMPORARY DITCH CHECKS	FOOT	126	126		
28000400	PERIMETER EROSION BARRIER	FOOT	674	674		

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URBAN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
28000500	INLET AND PIPE PROTECTION	EACH	5	5		
28100105	STONE RIPRAP, CLASS A3	SQ YD	56	56		
28100107	STONE RIPRAP, CLASS A4	SQ YD	1489		832	657
28200200	FILTER FABRIC	SQ YD	1545	56	832	657
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	106	106		
35501308	HOT-MIX ASPHALT BASE COURSE, 6"	SQ YD	654	654		
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	183	183		
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	58	58		
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	100	100		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	789	789		
40600300	AGGREGATE (PRIME COAT)	TON	13	13		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	1.2	1.2		
40600525	LEVELING BINDER (HAND METHOD), N50	TON	2.3	2.3		
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	527	527		

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FILE NAME =	USER NAME = Schwarberg	DESIGNED -	REVISED -
	66832-sht-500dgn	DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/13/2012	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BRIBR & (113 BR-IBR	LIVINGSTON	123	4
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

URBAN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	173	173		
40600990	TEMPORARY RAMP	SQ YD	248	248		
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	236	236		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	642	642		
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	107	107		
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	50	50		
44000100	PAVEMENT REMOVAL	SQ YD	774	774		
44004250	PAVED SHOULDER REMOVAL	SQ YD	43	43		
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	6	6		
48203100	HOT-MIX ASPHALT SHOULDERS	TON	178	178		
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1			1
50105220	PIPE CULVERT REMOVAL	FOOT	145	145		
50200100	STRUCTURE EXCAVATION	CU YD	380		190	190

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FILE NAME =	USER NAME = Schwenberg	DESIGNED -	REVISED
		DRAWN -	REVISED
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED
	PLOT DATE = 12/13/2012	DATE	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(13 BRBR & (13 BR-1BR	LIVINGSTON	123	5
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		

URBAN

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY 0004	BRIDGE 0011 EX S. N. 053-0159	BRIDGE 0011 EX S. N. 053-0070
50200300	COFFERDAM EXCAVATION	CU YD	208			208
50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1			1
50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1			1
50300100	FLOOR DRAINS	EACH	3			3
50300225	CONCRETE STRUCTURES	CU YD	213.5		55.1	158.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	504		230.8	273.2
50300260	BRIDGE DECK GROOVING	SQ YD	1023		496	527
50300265	SEAL COAT CONCRETE	CU YD	113			113
50300280	CONCRETE ENCASEMENT	CU YD	9.8		4.2	5.6
50300300	PROTECTIVE COAT	SQ YD	1240		614	626
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	1134		1134	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	146,070		57,680	88,390
50800515	BAR SPLICERS	EACH	562		562	

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Rev.

FILE NAME:	USER NAME = Schwenberg	DESIGNED -	REVISED -
	66832-sht-503-dgn	DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/13/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	013 BR(BR & 013 BR-1)(BR	LIVINGSTON	123	6
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
			URBAN	ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
51201600	FURNISHING STEEL PILES HP12X53	FOOT	230		230	
51201610	FURNISHING STEEL PILES HP12X63	FOOT	1670			1670
51202305	DRIVING PILES	FOOT	1900		230	1670
51203600	TEST PILE STEEL HP12X53	EACH	2		2	
51203610	TEST PILE STEEL HP12X63	EACH	2			2
51204650	PILE SHOES	EACH	12		12	
51500100	NAME PLATES	EACH	2		1	1
52100520	ANCHOR BOLTS, 1"	EACH	24		24	
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	1	1		
54215550	METAL END SECTIONS 15"	EACH	4	4		
54215553	METAL END SECTIONS 18"	EACH	2	2		
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1625	1625		
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	106		60	46
60235300	INLETS, TYPE A, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	2	2		

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FILE NAME =	USER NAME = Schwenberg	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/13/2012	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	013 BRBR & 413 BR-DBR	LIVINGSTON	123	7
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

URBAN

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ROADWAY 0004	CONSTRUCTION CODE: BRIDGE 0011 EX S.N. 053-0159	CONSTRUCTION CODE: BRIDGE 0011 EX S.N. 053-0070
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	215.75	215.75		
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	8		
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3	3		
*	63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	6	6		
	63200310	GUARDRAIL REMOVAL	FOOT	777	777		
	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	9	9		
	~~66900200~~	~~NON-SPECIAL WASTE DISPOSAL~~	~~CU YD~~	~~0~~			
	~~66900450~~	~~SPECIAL WASTE PLANS AND REPORTS~~	~~L SUM~~	~~0~~			
	~~66900530~~	~~SOIL DISPOSAL ANALYSIS~~	~~EACH~~	~~0~~			
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
	67100100	MOBILIZATION	L SUM	1	1		
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		

* Specialty Items

FILE NAME	USER NAME =	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE =	CHECKED -	REVISED -
	PLOT DATE =	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	013 BR/BR & 013 BR-1HBR	LIVINGSTON	123	8
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

80% FED.
20% STATE

URBAN

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
					ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5		
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	720	720		
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5548	5548		
	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	196	196		
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	100	100		
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1067	1067		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	425	425		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	350	350		
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	12114	12114		
*	78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	393	393		
*	78001140	PAINT PAVEMENT MARKING - LINE 8"	FOOT	288	288		
*	78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	240	240		
*	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	92	92		

* Specialty Items

FILE NAME =	USER NAME = Schwarzberg	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/13/2010	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BRBR & (113 BR-1BR	LIVINGSTON	123	9
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

80% FED.
20% STATE
URBAN

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12	12		
	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3	3		
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	19	19		
*	78200510	BARRIER WALL MARKERS, TYPE A	EACH	8	8		
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	9	9		
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	631	631		
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	15	15		
*	86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH	1	1		
	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1		
	542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	104	104		
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	35	35		
	X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	176		88	88
	X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1938	1938		
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	14		14	

M

* Specialty Items

Rev.

FILE NAME:	USER NAME = Schwankerg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
c:\pw_work\pwidot\schwankerg\d0431770\P-66832-sht-SOQ.dgn		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
	PLOT DATE = 12/13/2012	DATE -	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	10
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

80% FED.
20% STATE
URBAN

				CONSTRUCTION CODE		
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0004	BRIDGE 0011 EX S.N. 053-0159	BRIDGE 0011 EX S.N. 053-0070
Z0022800	FENCE REMOVAL	FOOT	120	120		
Z0026407	TEMPORARY SHEET PILING	SQ FT	436		436	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	305		145	160
Z0056610	STORM SEWER (WATER MAIN REQUIREMENTS) 15 INCH	FOOT	206	206		
⊙ Z0076600	TRAINEES	HOUR	2,000	2,000		
⊙ Z0076604	TRAINING PROGRAM GRADUATE	HOUR	2,000	2,000		

⊙ 0042

Rev.

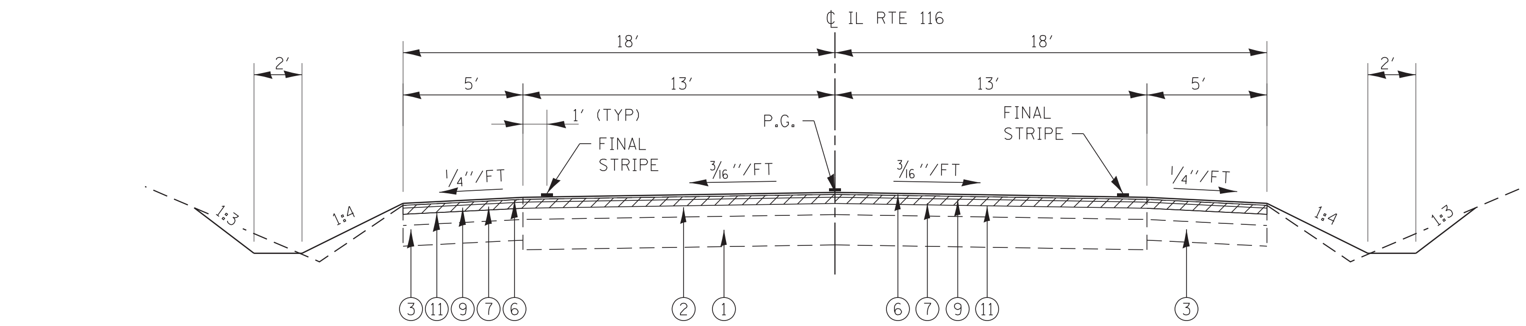
FILE NAME :	USER NAME : Schwenkerg	DESIGNED -	REVISED -
	PLOT SCALE : 50.0000 ' / in.	DRAWN -	REVISED -
	PLOT DATE : 12/13/2012	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

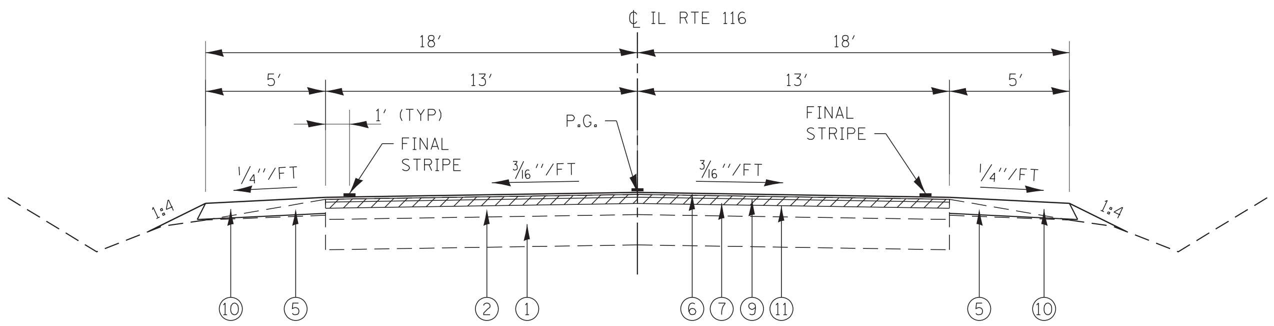
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(13 BR)BR & (13 BR-1)BR	LIVINGSTON	123	11
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		



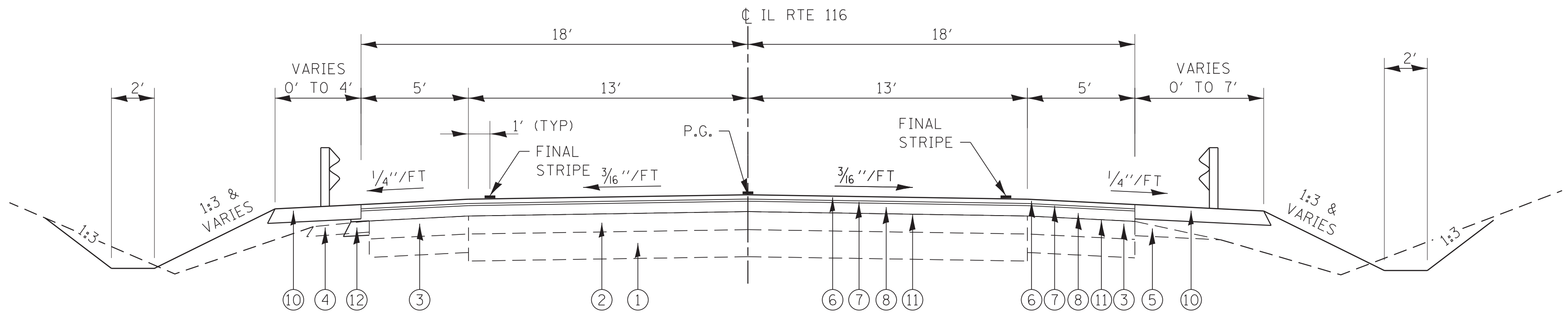
PROPOSED TYPICAL SECTION

STA. 26+70.00 TO STA. 28+28.29



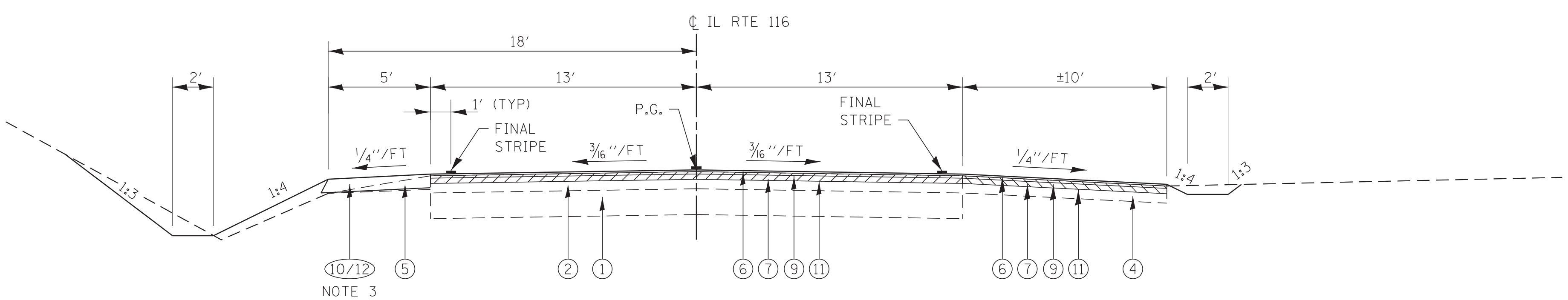
PROPOSED TYPICAL SECTION

STA. 28+28.29 TO STA. 29+05.00



PROPOSED TYPICAL SECTION

STA. 23+18.11 TO STA. 26+70.00
STRUCTURE, BRIDGE APPROACH PAVEMENT, CONNECTOR PAVEMENT OMISSION
STA. 24+20.25 TO STA. 25+62.75



PROPOSED TYPICAL SECTION

STA. 21+20.00 TO STA. 23+18.11

LEGEND

1. EXISTING CONCRETE PAVEMENT, 9″
2. EXISTING BITUMINOUS CONCRETE OVERLAY, ±6″
3. EXISTING HMA BASE COURSE WIDENING
4. EXISTING HOT-MIX ASPHALT SHOULDER
5. EXISTING AGGREGATE SHOULDER
6. PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 1 1/2″
7. PROPOSED HOT-MIX ASPHALT LEVELING BINDER (MACHINE METHOD), N50, 3/4″ (NOTE 1)
8. PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, VARIABLE DEPTH (NOTE 2)
9. PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
10. PROPOSED HOT-MIX ASPHALT SHOULDERS, 8″
11. PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
12. PROPOSED HOT-MIX ASPHALT BASE COURSE, 8″ (SEE STAGING TYPICAL SECTIONS)

NOTE 1: A 3/4″ LIFT OF LEVELING BINDER IS USED THROUGHOUT THE ENTIRE PROJECT. VARIABLE DEPTH LEVELING BINDER IS USED TO TRANSITION TO THE 2 1/4″ MINIMUM HMA BINDER COURSE THICKNESS. SEE MISC. DETAIL SHEET FOR HMA PAVEMENT THICKNESS TAPER DETAIL.

NOTE 2: ESTIMATED VARIABLE DEPTH HMA BINDER COURSE THICKNESS
STA. 21+20.00 TO STA. 23+25.00 - NONE ANTICIPATED
STA. 23+25.00 TO STA. 24+20.25 - VARIES 2 1/4″ TO 8 1/4″
STA. 25+62.75 TO STA. 26+70.00 - VARIES 2 1/4″ TO 9 1/2″
STA. 26+70.00 TO STA. 29+05.00 - NONE ANTICIPATED

NOTE 3: STA. 21+20.00 TO STA 22+65.00 - HMA SHOULDER
STA. 22+65.00 TO STA 23+18.11 - HMA BASE COURSE
(SEE STAGING TYPICAL SECTIONS)

MIXTURE REQUIREMENTS

	HMA BINDER AND BASE COURSE	HMA LEVELING BINDER	HMA SURFACE	HMA SHOULDERS BOTTOM LIFTS	HMA SHOULDERS TOP LIFTS
PG GRADE	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE			MIXTURE C		MIXTURE C
DENSITY TEST METHOD	CORES	SATISFACTION OF ENGINEER	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.

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	OATES ASSOCIATES Engineering + Architecture	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS
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	PLOT SCALE = 20.000 ′ / in.	CHECKED - JRR			
	PLOT DATE = 12/13/2012	DATE - 8/10/12			SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	12

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT

ENTRANCE SCHEDULE

STATION	OFFSET	ENTRANCE TYPE	ENTRANCE WIDTH "W" (FOOT)	ENTRANCE DEPTH "D" (FOOT)	EXISTING SURFACE TYPE	AGG SURF CSE B 40200800 (TON)	INCIDENTAL BIT SURF 40800050 (TON)
21+00	LT	FE	24	7	EARTH	29	
22+24	RT	PE	16	10	AGG		8
23+24	RT	PE	24	13	AGG		18
28+11	RT	FE	24	7	AGG	29	
28+17	LT	PE	13	22	AGG		17
TOTAL						58	43

PAVEMENT MARKING SCHEDULE

STATION	STATION	OFFSET	COMMENT	TEMP PVT MK LINE 4 (NOTE 1) 70300220 (FOOT)	TEMP PVT MK LINE 6 (NOTE 1) 70300240 (FOOT)	PAINT PVT MK LINE 4 (NOTE 2) 78001110 (FOOT)	PAINT PVT MK LINE 6 (NOTE 2) 78001130 (FOOT)	RAISED REFL PAVT MKR 78100100 (EACH)	RAISED REF PVT MKR BR 78100105 (EACH)	PAVT MARKING REMOVAL 78300100 (SQ FT)	RAISED REFL PVT MK REM 78300200 (EACH)
21+20	29+05	LT	EDGE LINE	785		1,570				153	
21+20	29+05	RT	EDGE LINE	785		1,570				77	
21+20	29+05	CL	CENTER LINE		196		393			98	10
21+20	24+26	CL	CENTER LINE					4			
24+26	25+56	CL	CENTER LINE						2		
25+56	29+05	CL	CENTER LINE					4			
TOTAL				1,570	196	3,140	393	8	2	328	10

PAVEMENT MARKING NOTES:

1. A QUANTITY FOR TEMPORARY PAVEMENT MARKING EQUAL TO THE AMOUNT OF PERMANENT PAVEMENT MARKING HAS BEEN INCLUDED IN THE PLANS IN THE EVENT THAT A TEMPORARY SHUTDOWN IS NECESSARY.
2. THE QUANTITY FOR PAINT PAVEMENT MARKING ACCOUNTS FOR TWO SEPARATE APPLICATIONS. BOTH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE.

PAVEMENT SCHEDULE

STATION	STATION	OFFSET	SUB GRAN MAT B 4 31101200 (SQ YD)	HMA BASE CSE 8 35501316 (SQ YD)	BIT MATLS PR CT 40600100 (GALLON)	AGG PR CT 40600300 (TON)	LEV BIND MM N50 40600625 (TON)	TEMPORARY RAMP 40600990 (SQ YD)	HMA BC IL-19.0, N50 40603080 (TON)	HMA SC "C" N50 40603310 (TON)	BR APPR PVT CON (FLX) 42001430 (SQ YD)	PAVEMENT REM 44000100 (SQ YD)	PAVED SHLD REMOVAL 44004250 (SQ YD)	HMA SHOULDERS 48203100 (TON)	HMA SURF REM VAR DP X4401198 (SQ YD)
21+20	24+20				69	1.7	51	82	75	73					376
21+20	24+20	RT			23	0.5	17		15	24					144
21+20	22+65	LT												36	
22+65	24+20	LT			7	0.2	6		14	7					
22+65	24+64	LT	73	51									19		
23+14	24+26	LT												20	
23+32	24+26	RT												23	
24+20	24+62										25	164			
25+20	25+63										25	166			
25+20	27+00	LT	33	13											
25+63	29+05				79	2.0	64	82	96	83					462
25+63	28+28	RT			12	0.3	4		18	12					46
25+63	28+33	LT			12	0.3	4		18	13					49
25+56	26+69	RT												20	
25+56	27+81	LT												42	
28+28	29+05	RT												19	
28+33	29+05	LT												18	
TOTAL			106	64	202	5	146	164	236	212	50	330	19	178	1,077

ROW MARKER SCHEDULE

STATION	OFFSET	FUR ERECT ROW MARKERS 66600105 (EACH)
21+60	40.00' LT	1
22+10	45.00' LT	1
23+15.03	36.31' RT	1
24+00	55.00' RT	1
26+50	55.00' RT	1
27+00	45.02' RT	1
27+50	40.02' RT	1
27+50	45.00' LT	1
28+00	39.91' LT	1
TOTAL		9

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	
		DRAWN - RGV	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

SCALE: NTS | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	13
		CONTRACT NO. 66832		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GUARDRAIL SCHEDULE

STATION	STATION	LOCATION	SPBGR TY A 6FT POSTS 63000001 (FOOT)	TRAF BAR TERM T6 63100085 (EACH)	TR BAR TRM T1 SPL TAN 63100167 (EACH)	TR BAR TRM T1 SPL FLR 63100169 (EACH)	GUARDRAIL REMOVAL 63200310 (FOOT)	GUARDRAIL MKR TYPE A 78200410 (EACH)	BAR WALL MKR TYPE A 78200510 (EACH)	TERMINAL MARKER - DA 78201000 (EACH)
23+35	24+63	SW QUAD					128			
23+48.1	23+98.1	NW QUAD			1			1		1
23+48.3	23+98.1	SW QUAD				1		1		1
23+72	24+63	NW QUAD					91			
23+98.1	24+41.3	NW QUAD		1				1		
23+98.1	24+41.3	SW QUAD		1				1		
24+41.3	25+41.8	WB							2	
24+41.3	25+41.8	EB							2	
25+20	25+98	SE QUAD					78			
25+20	26+61	NE QUAD					141			
25+41.8	25+84.9	SE QUAD		1				1		
25+41.8	25+84.9	NE QUAD		1				1		
25+84.9	26+34.7	SE QUAD			1			1		1
25+84.9	26+97.4	NE QUAD	112.5					1		
26+97.4	27+47.4	NE QUAD			1			1		1
TOTAL			112.5	4	3	1	438	9	4	4

SEEDING SCHEDULE

STATION	STATION	OFFSET	SEEDING CL 2A 25000210 (ACRE)	NITROGEN FERT NUTR 25000400 (POUND)	PHOSPHORUS FERT NUTR 25000500 (POUND)	POTASSIUM FERT NUTR 25000600 (POUND)	EROS CONTR BLANKET 25100630 (SQ YD)	TEMP EROS CONTR SEED 28000250 (POUND)
21+20	24+56	LT	0.20	18	18	18	875	60
21+20	24+56	RT	0.10	9	9	9	400	30
25+27	29+05	LT	0.20	18	18	18	750	60
25+27	29+05	RT	0.25	23	23	23	950	75
TOTAL			0.75	68	68	68	2,975	225

TREE REMOVAL SCHEDULE

STATION	STATION	OFFSET	TREE REMOV 6-15 20100110 (UNIT)	TREE REMOV OVER 15 20100210 (UNIT)
24+00	24+80	RT	94	77
25+00	25+75	RT	43	30
TOTAL			137	107

TRAFFIC CONTROL ITEMS

STATION	STATION	OFFSET	SHORT TERM PAVT MKING 70300100 (FOOT)	TEMP PVT MK LINE 4 70300220 (FOOT)	TEMP PVT MK LINE 24 70300280 (FOOT)	WORK ZONE PAVT MK REM 70301000 (SQ FT)	TEMP CONC BARRIER 70400100 (FOOT)	REL TEMP CONC BARRIER 70400200 (FOOT)	IMP ATTN TEMP NRD TL3 Z0030250 (EACH)	IMP ATTN REL NRD TL3 Z0030350 (EACH)
STAGE 1										
21+22	21+22	RT			28	56				
21+35	28+42	RT		705		235				
22+75	27+33	LT		455		152				
23+59	27+10						350			
23+59		CL							1	
27+10		4' RT							1	
29+02	29+02	LT			28	56				
STAGE 2										
21+20	29+05	RT	240			27				
21+20	29+05	LT	240			27				
21+20	29+05	CL	240			27				
21+82	28+91	LT		710		237				
22+50	27+90	RT		540		180				
22+99	27+22						75	350		
22+99		4' LT								1
27+22		4' LT								1
TOTAL			720	2,410	56	997	425	350	2	2

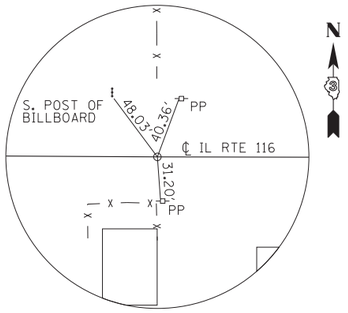
EARTHWORK SCHEDULE

STATION	STATION	EARTH EXCAVATION 20200100 (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (NOTE 1) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
21+00	29+05	505	380	465	-85
AT STRUCTURE (NOTE 2)		303	227		227
TOTAL		808	607	465	142

EARTHWORK NOTES:

1. ESTIMATED SHRINKAGE FACTOR = 25%.
2. THE ENGINEER SHALL DETERMINE IF EXCAVATION IS SUITABLE FOR USE AS FILL MATERIAL.

FILE NAME = $FILE$	USER NAME = Schwankerg	DESIGNED - RGV	OATES ASSOCIATES Engineering + Architecture	ILLINOIS Eastport Business Center 1 100 Eastport Court, Suite 1 Collinsville, IL 62234 tel 618.345.2202 fax 618.345.7233	MISSOURI Ladue Gas Building 720 Olive Street, Suite 1000 St. Louis, MO 63101 tel 314.588.9001 fax 314.588.9605 www.oatesassociates.com	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SCHEDULES OF QUANTITIES**	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - RGV						681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	14
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR								CONTRACT NO. 66832		
	PLOT DATE = 12/13/2012	DATE - 8/10/12					SCALE: NTS SHEET NO. 2 OF 2 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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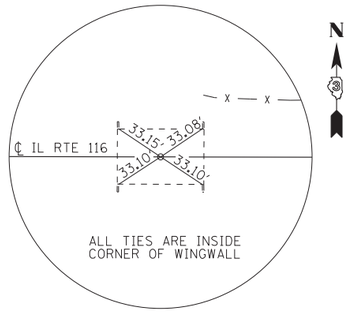

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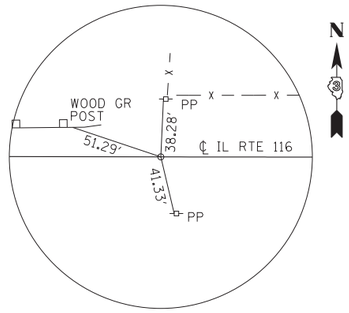

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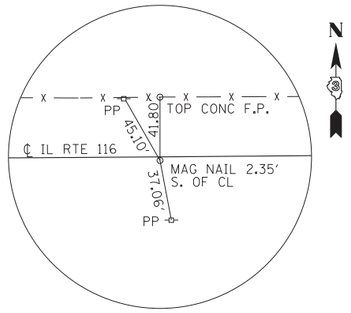

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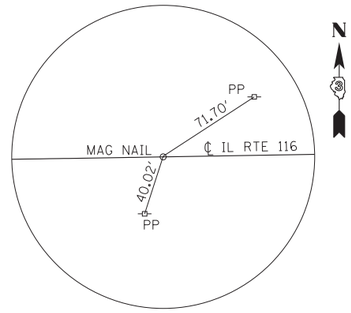

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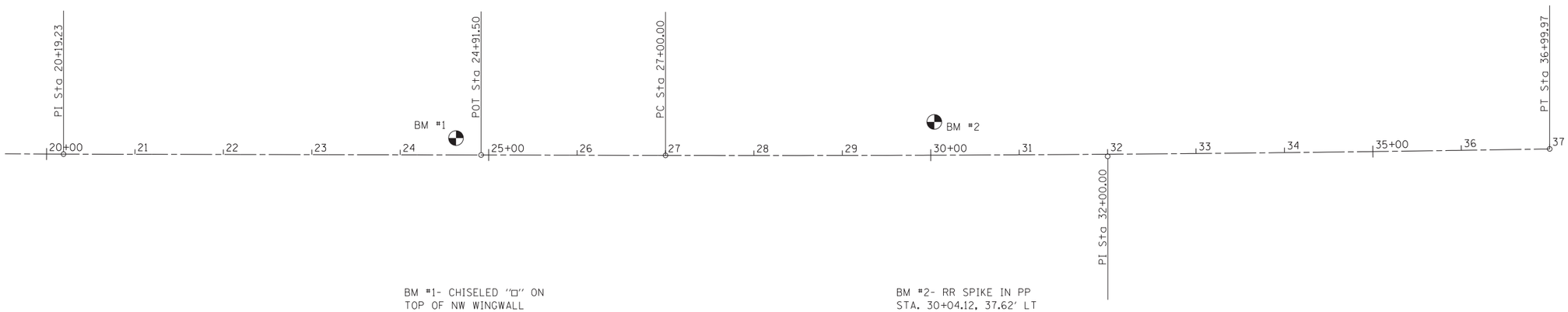

BM #1- CHISELED "□" ON
TOP OF NW WINGWALL
STA. 24+63.02, 19.09' LT
ELEVATION 640.84

BM #2- RR SPIKE IN PP
STA. 30+04.12, 37.62' LT
ELEVATION 641.79

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	PLOT TIME = $TIME$	DRAWN - RGV	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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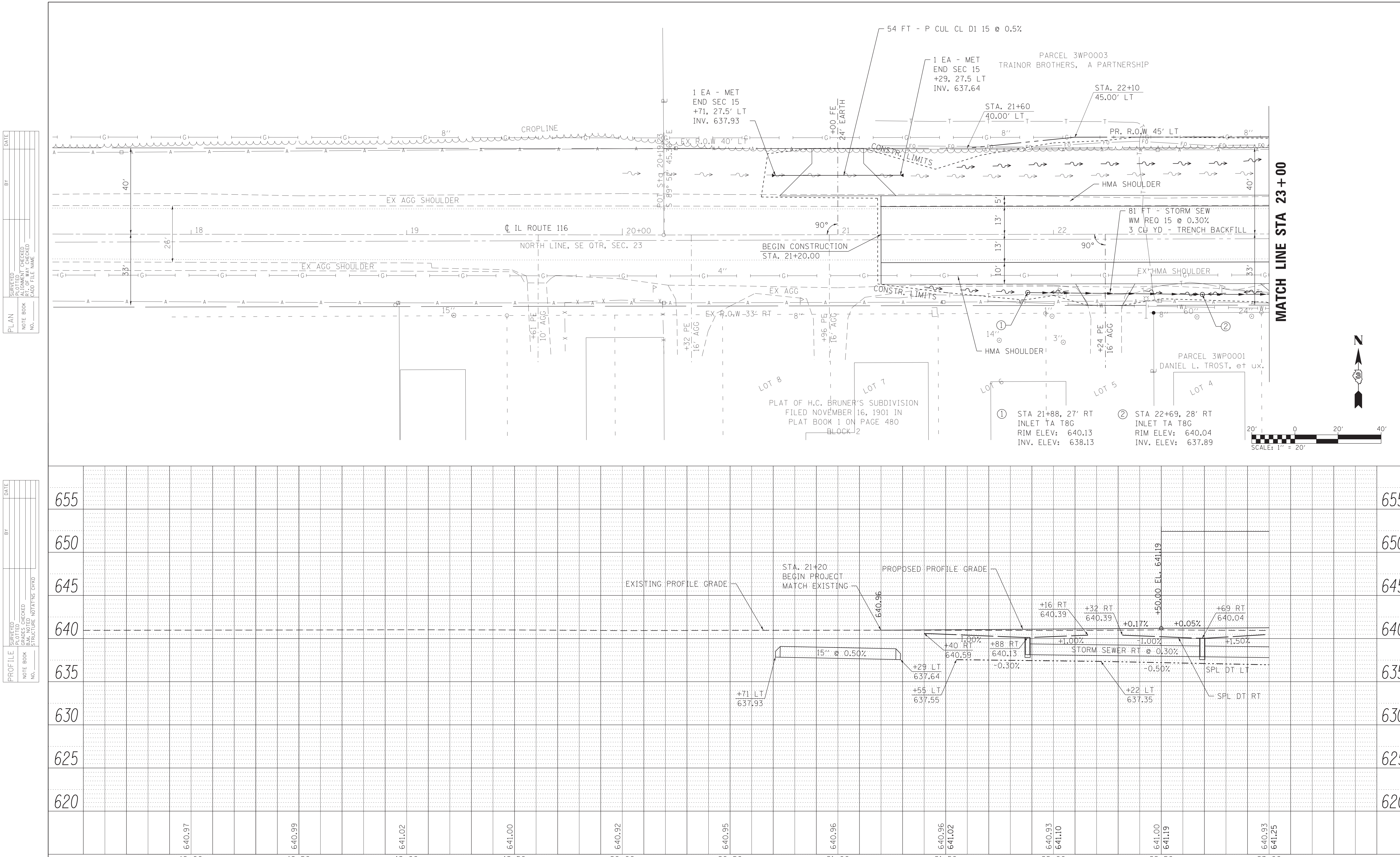
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT & TIES

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	15
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



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	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

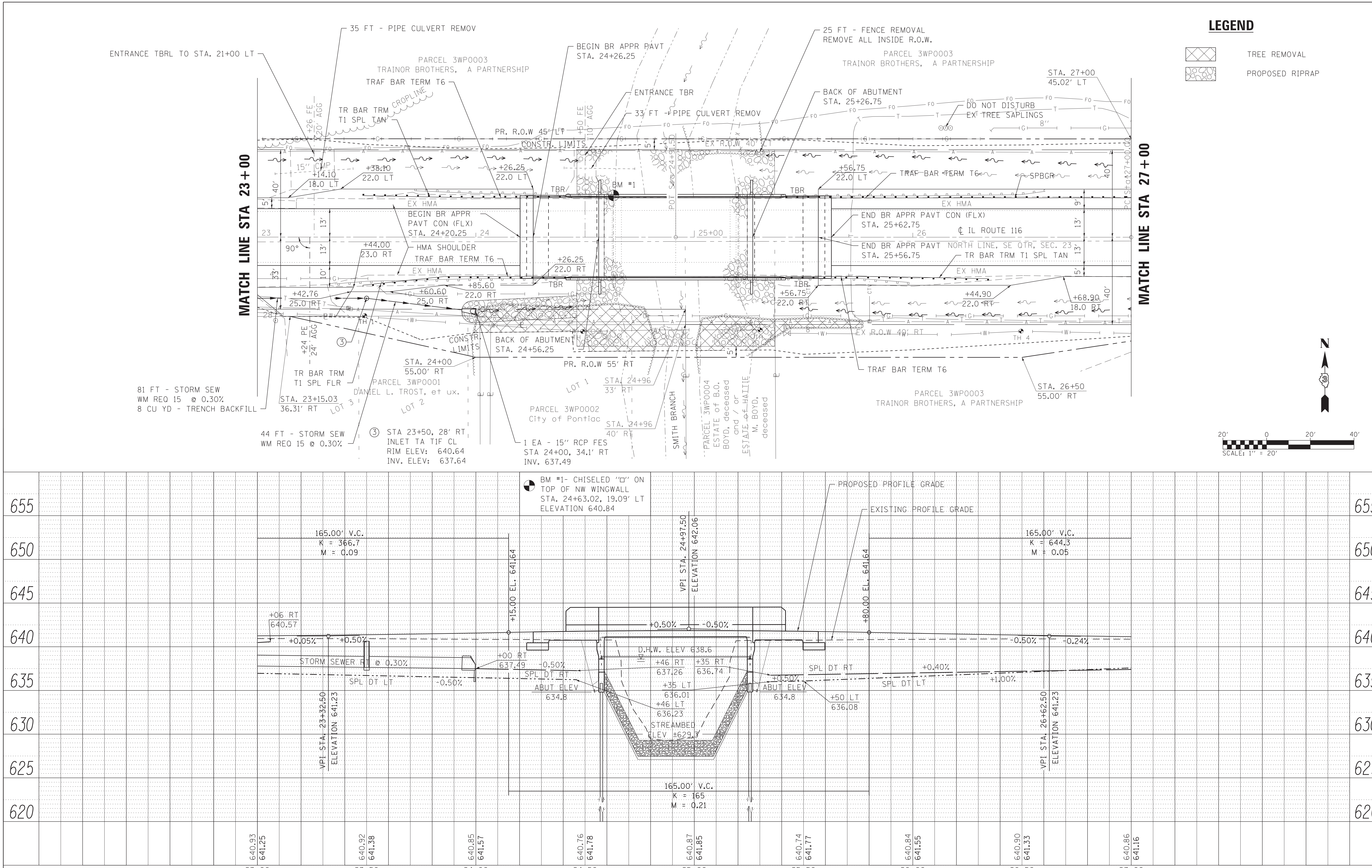
PLAN & PROFILE SHEETS

SCALE: | SHEET 1 OF 3 SHEETS | STA. 17+00 TO STA. 23+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	16

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



LEGEND
TREE REMOVAL
PROPOSED RIPRAP
MATCH LINE STA 23+00
MATCH LINE STA 27+00
35 FT - PIPE CULVERT REMOV
ENTRANCE TBRL TO STA. 21+00 LT
PARCEL 3WP0003
TRAINOR BROTHERS, A PARTNERSHIP
TRAF BAR TERM T6
TR BAR TRM
T1 SPL TAN
BEGIN BR APPR PAVT
STA. 24+26.25
ENTRANCE TBR
33 FT - PIPE CULVERT REMOV
PR. R.O.W 45' LT
CONSTR. LIMITS
EX R.O.W 40' LT
25 FT - FENCE REMOVAL
REMOVE ALL INSIDE R.O.W.
BACK OF ABUTMENT
STA. 25+26.75
DO NOT DISTURB
EX TREE SAPLINGS
STA. 27+00
45.02' LT
15" CMP
+14.10
18.0 LT
+38.10
22.0 LT
+26.25
22.0 LT
TBR
BM #1
+56.75
22.0 LT
TRAF BAR TERM T6
SPBGR
EX HMA
BEGIN BR APPR
PAVT CON (FLX)
STA. 24+20.25
25+00
END BR APPR PAVT CON (FLX)
STA. 25+62.75
℄ IL ROUTE 116
END BR APPR PAVT
STA. 25+56.75
NORTH LINE, SE QTR, SEC. 23
TR BAR TRM T1 SPL TAN
+44.00
23.0 RT
HMA SHOULDER
TRAF BAR TERM T6
+26.25
22.0 RT
+42.76
25.0 RT
+60.60
25.0 RT
+85.60
22.0 RT
+56.75
22.0 RT
+44.90
22.0 RT
+68.90
18.0 RT
TH 1
TH 4
+24 PE
24' AGG
CONSTR LIMITS
BACK OF ABUTMENT
STA. 24+56.25
EX R.O.W 40' RT
STA. 24+00
55.00' RT
PR. R.O.W 55' RT
TRAF BAR TERM T6
TR BAR TRM
T1 SPL FLR
PARCEL 3WP0001
DANIEL L. TROST, et ux.
LOT 1
LOT 2
LOT 3
STA. 24+96
33' RT
STA. 26+50
55.00' RT
PARCEL 3WP0003
TRAINOR BROTHERS, A PARTNERSHIP
81 FT - STORM SEW
WM REQ 15 @ 0.30%
8 CU YD - TRENCH BACKFILL
STA. 23+15.03
36.31' RT
PARCEL 3WP0002
City of Pontiac
STA. 24+96
40' RT
SMITH BRANCH
PARCEL 3WP0004
ESTATE of B.O. BOYD, deceased
and / or
ESTATE of HATTIE M. BOYD, deceased
44 FT - STORM SEW
WM REQ 15 @ 0.30%
③ STA 23+50, 28' RT
INLET TA T1F CL
RIM ELEV: 640.64
INV. ELEV: 637.64
1 EA - 15" RCP FES
STA 24+00, 34.1' RT
INV. 637.49
SCALE: 1" = 20'
BM #1- CHISELED "□" ON
TOP OF NW WINGWALL
STA. 24+63.02, 19.09' LT
ELEVATION 640.84
PROPOSED PROFILE GRADE
EXISTING PROFILE GRADE
165.00' V.C.
K = 366.7
M = 0.09
+15.00 EL. 641.64
VPI STA. 24+97.50
ELEVATION 642.06
+80.00 EL. 641.64
165.00' V.C.
K = 644.3
M = 0.05
+06 RT
640.57
+0.05%
+0.50%
+0.50%
-0.50%
-0.50%
-0.24%
D.H.W. ELEV 638.6
STORM SEWER RT @ 0.30%
+00 RT
637.49
-0.50%
SPL DT RT
+46 RT
637.26
+35 RT
636.74
SPL DT RT
+0.40%
+0.50%
+1.00%
SPL DT LT
-0.50%
ABUT ELEV
634.8
+35 LT
636.01
+46 LT
636.23
ABUT ELEV
634.8
+50 LT
636.08
SPL DT LT
STREAMBED
ELEV 629.3
VPI STA. 23+32.50
ELEVATION 641.23
VPI STA. 26+62.50
ELEVATION 641.23
165.00' V.C.
K = 165
M = 0.21
655
650
645
640
635
630
625
620
640.93 641.25
640.92 641.38
640.85 641.57
640.76 641.78
640.87 641.85
640.74 641.77
640.84 641.55
640.90 641.33
640.86 641.16
23+00
23+50
24+00
24+50
25+00
25+50
26+00
26+50
27+00
PLAN
PROFILE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

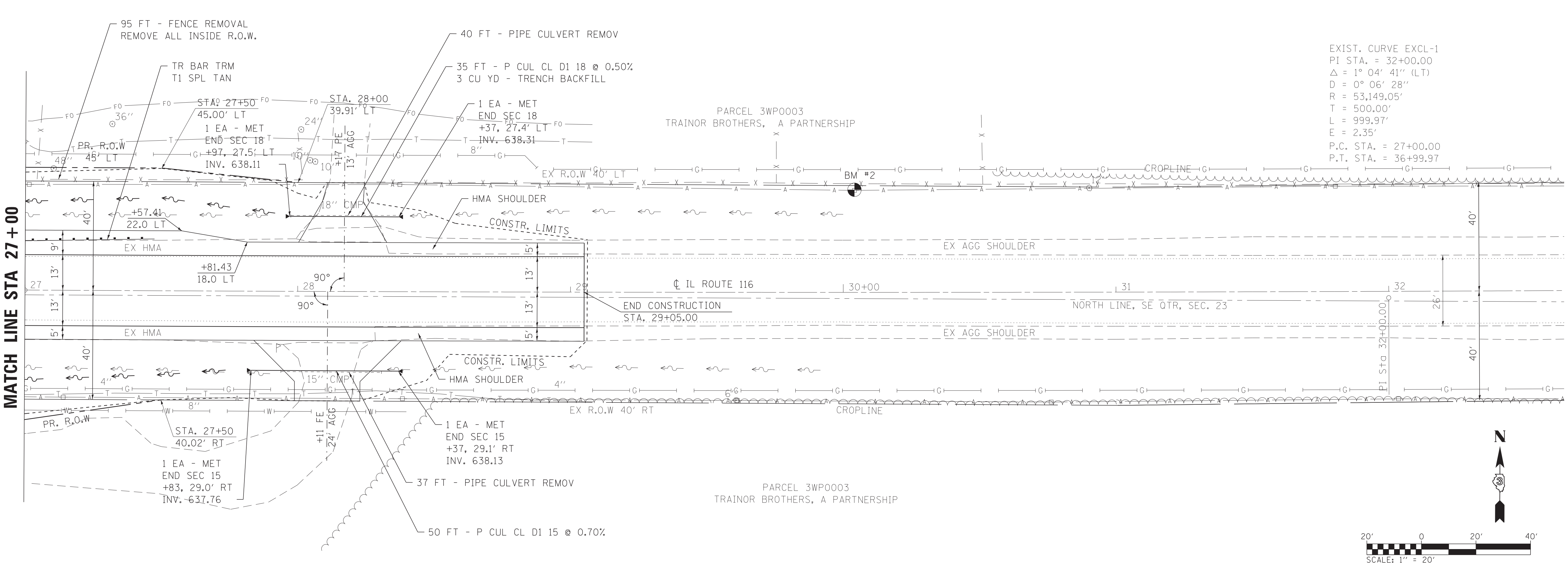
PLAN & PROFILE SHEETS

SCALE: | SHEET 2 OF 3 SHEETS | STA. 23+00 TO STA. 27+00

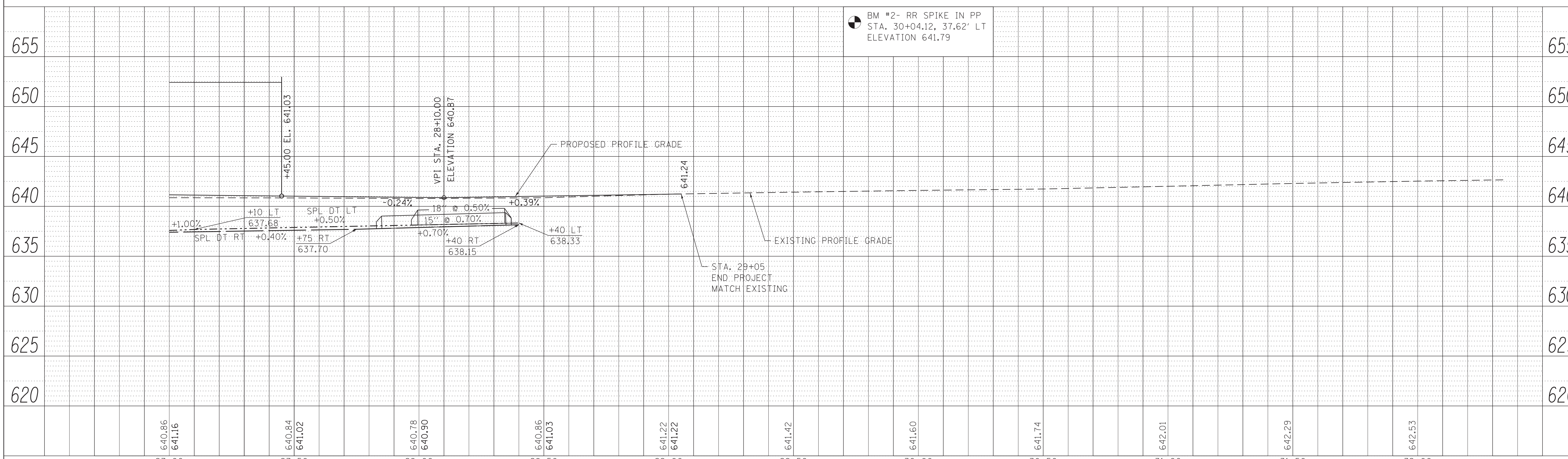
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	17

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



MATCH LINE STA 27+00
95 FT - FENCE REMOVAL
REMOVE ALL INSIDE R.O.W.
TR BAR TRM
T1 SPL TAN
STA. 27+50
45.00' LT
1 EA - MET
END SEC 18
+97, 27.5' LT
INV. 638.11
STA. 28+00
39.91' LT
40 FT - PIPE CULVERT REMOV
35 FT - P CUL CL D1 18 @ 0.50%
3 CU YD - TRENCH BACKFILL
1 EA - MET
END SEC 18
+37, 27.4' LT
INV. 638.31
PARCEL 3WP0003
TRAINOR BROTHERS, A PARTNERSHIP
EXIST. CURVE EXCL-1
PI STA. = 32+00.00
Δ = 1° 04' 41'' (LT)
D = 0° 06' 28''
R = 53,149.05'
T = 500.00'
L = 999.97'
E = 2.35'
P.C. STA. = 27+00.00
P.T. STA. = 36+99.97
PR. R.O.W
45' LT
EX R.O.W 40' LT
BM #2
CROPLINE
18'' CMP
HMA SHOULDER
CONSTR. LIMITS
+57.41
22.0 LT
EX HMA
EX AGG SHOULDER
+81.43
18.0 LT
90°
℄ IL ROUTE 116
END CONSTRUCTION
STA. 29+05.00
NORTH LINE, SE QTR, SEC. 23
PI Sta 32+00.00
EX HMA
EX AGG SHOULDER
CONSTR. LIMITS
HMA SHOULDER
15'' CMP
EX R.O.W 40' RT
CROPLINE
PR. R.O.W
STA. 27+50
40.02' RT
1 EA - MET
END SEC 15
+83, 29.0' RT
INV. 637.76
+11 FE
24' AGG
+17 PE
13' AGG
1 EA - MET
END SEC 15
+37, 29.1' RT
INV. 638.13
37 FT - PIPE CULVERT REMOV
50 FT - P CUL CL D1 15 @ 0.70%
PARCEL 3WP0003
TRAINOR BROTHERS, A PARTNERSHIP
N
SCALE: 1'' = 20'



BM #2- RR SPIKE IN PP
STA. 30+04.12, 37.62' LT
ELEVATION 641.79
+45.00 EL. 641.03
VPI STA. 28+10.00
ELEVATION 640.87
PROPOSED PROFILE GRADE
641.24
-0.24%
+0.39%
+1.00%
+10 LT
637.68
SPL DT LT
+0.50%
18' @ 0.50%
15'' @ 0.70%
+0.70%
SPL DT RT
+0.40%
+75 RT
637.70
+40 RT
638.15
+40 LT
638.33
EXISTING PROFILE GRADE
STA. 29+05
END PROJECT
MATCH EXISTING
655 650 645 640 635 630 625 620
640.86 641.16
640.84 641.02
640.78 640.90
640.86 641.03
641.22 641.22
641.42
641.60
641.74
642.01
642.29
642.53
27+00 27+50 28+00 28+50 29+00 29+50 30+00 30+50 31+00 31+50 32+00

PLAN — NOTE BOOK / NO. — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME — BY — DATE

PROFILE — NOTE BOOK / NO. — SURVEYED / PLOTTED / GRADES CHECKED / BM. NOTED / STRUCTURE NOTATNS CHK'D — BY — DATE

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	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

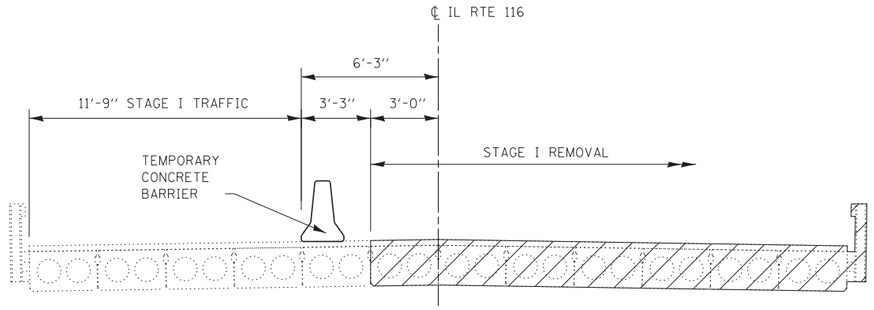
PLAN & PROFILE SHEETS

SCALE: | SHEET 3 OF 3 SHEETS | STA. 27+00 TO STA. 33+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BRIBR & (113- BR-1)BR	LIVINGSTON	123	18

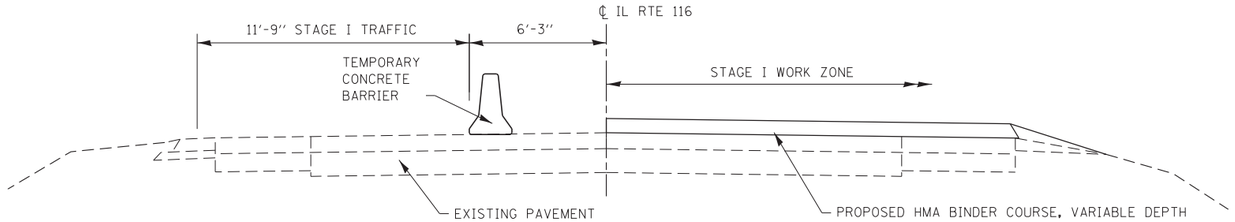
CONTRACT NO. 66832

ILLINOIS | FED. AID PROJECT



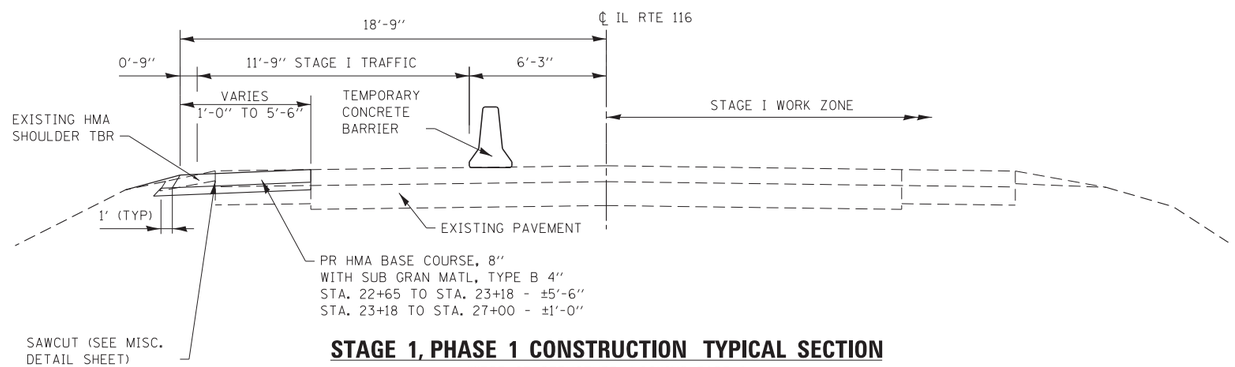
STAGE 1 CONSTRUCTION TYPICAL SECTION

(LOOKING EAST AT STRUCTURE)
FOR INFORMATION ONLY



STAGE 1, PHASE 2 CONSTRUCTION TYPICAL SECTION

(WEST OF STRUCTURE, LOOKING EAST &
EAST OF STRUCTURE, LOOKING EAST)



STAGE 1, PHASE 1 CONSTRUCTION TYPICAL SECTION

(WEST OF STRUCTURE, LOOKING EAST &
EAST OF STRUCTURE, LOOKING EAST)

STAGE CONSTRUCTION GENERAL NOTES

1. ONE LANE OF TRAFFIC ON ILLINOIS ROUTE 116 SHALL BE MAINTAINED AT ALL TIMES.
2. EMERGENCY ACCESS SHALL BE PROVIDED AT ALL TIMES.

SUGGESTED STAGE CONSTRUCTION

SUGGESTED STAGE 1

PHASE 1

1. UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701326, REMOVE THE EXISTING SHOULDER AND CONSTRUCT THE HMA BASE COURSE, 8" ON THE LT SIDE OF THE ROADWAY FROM STA. 22+65 TO STA. 27+00 AND CONSTRUCT THE RELOCATED FIELD ENTRANCE AT STA 21+00 LT. TRAFFIC CONTROL SURVEILLANCE SHALL BE PAID FOR THROUGHOUT THE DURATION THAT STANDARD 701326 IS UTILIZED.
2. INSTALL TEMPORARY TRAFFIC SIGNALS PRIOR TO CLOSING THE RT HALF OF ROADWAY.

PHASE 2

1. UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, DIRECT TRAFFIC TO THE LT LANE OF IL ROUTE 116.
2. CONSTRUCT TEMPORARY SHEET PILING AT WEST AND EAST SIDE OF EXISTING STRUCTURE AND REMOVE THE RT SIDE OF THE EXISTING STRUCTURE.
3. CONSTRUCT THE RT SIDE OF THE BRIDGE AND BRIDGE APPROACH PAVEMENT.
4. CONSTRUCT THE PROPOSED VARIABLE DEPTH HMA BINDER COURSE ON THE RT SIDE OF IL ROUTE 116, INCLUDING THE SHOULDER, FROM STA. 23+60 TO STA. 24+20 AND FROM STA. 25+63 TO STA. 26+70.
5. CONSTRUCT TEMPORARY RAMP AT STA. 23+60, STA. 24+20, STA. 25+63, AND STA. 26+70.
6. PLACE TEMPORARY AGGREGATE AT ENTRANCES, IF NECESSARY, TO MAINTAIN ACCESS.
7. INSTALL GUARDRAIL ON RT SIDE OF IL ROUTE 116 AND COMPLETE DRAINAGE IMPROVEMENTS.
8. INSTALL TEMPORARY PAVEMENT MARKING.

SUGGESTED STAGE 2

1. UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, DIRECT TRAFFIC TO THE RT LANE OF IL ROUTE 116.
2. REMOVE THE LT SIDE OF THE EXISTING STRUCTURE.
3. CONSTRUCT THE LT SIDE OF THE BRIDGE AND BRIDGE APPROACH PAVEMENT.
4. CONSTRUCT THE PROPOSED VARIABLE DEPTH HMA BINDER COURSE ON THE LT SIDE OF IL ROUTE 116, INCLUDING THE SHOULDER, FROM STA. 23+25 TO STA. 24+20 AND FROM STA. 25+63 TO STA. 26+70.
5. CONSTRUCT TEMPORARY RAMP AT STA. 23+25, STA. 24+20, STA. 25+63, AND STA. 26+70.
6. INSTALL GUARDRAIL ON THE LT SIDE OF IL ROUTE 116 AND COMPLETE DRAINAGE IMPROVEMENTS.

SUGGESTED STAGE 3

1. UTILIZING TRAFFIC CONTROL AND PROTECTION, STANDARD 701306, COMPLETE HMA SURFACE REMOVAL, VARIABLE DEPTH, FOR THE RT AND LT LANES OF IL ROUTE 116 FROM STA. 21+20 TO STA. 22+50 AND STA. 27+45 TO STA. 29+05.
2. CONSTRUCT TEMPORARY RAMP AT STA. 21+20 AND STA. 29+05 IF RE-OPENED TO TRAFFIC PRIOR TO PLACING LEVELING BINDER.
3. CONSTRUCT THE REMAINING PROPOSED VARIABLE DEPTH HMA BINDER COURSE / LEVELING BINDER FOR THE RT AND LT LANES AND SHOULDERS OF IL ROUTE 116 FROM STA. 22+50 TO STA. 24+20 AND STA. 25+63 TO STA. 27+45.
4. CONSTRUCT THE PROPOSED 3/4 " LEVELING BINDER FOR THE RT AND LT LANES OF IL ROUTE 116 FROM STA. 21+20 TO STA. 24+20 AND STA. 25+63 TO STA. 29+05. THE 3/4 " LEVELING BINDER SHALL ALSO BE PLACED ON THE SHOULDERS BETWEEN STA. 21+20 (23+18 LT) TO STA. 24+20 AND STA. 25+63 TO STA. 28+28 RT.
5. CONSTRUCT THE PROPOSED HMA SURFACE COURSE FOR THE RT AND LT LANES OF IL ROUTE 116 FROM STA. 21+20 TO STA. 24+20 AND STA. 25+63 TO STA. 29+05. THE HMA SURFACE COURSE SHALL ALSO BE PLACED ON THE SHOULDERS BETWEEN STA. 21+20 (23+18 LT) TO STA. 24+20 AND STA. 25+63 TO STA. 28+28 RT.
6. CONSTRUCT 5' HMA SHOULDERS ON THE LT SIDE OF IL ROUTE 116 FROM STA. 21+20 TO STA. 22+65 AND FROM STA. 28+28 TO STA. 29+05 ON BOTH SIDES OF IL ROUTE 116.
7. CONSTRUCT PROPOSED ENTRANCES AND ALL REMAINING IMPROVEMENTS.

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	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
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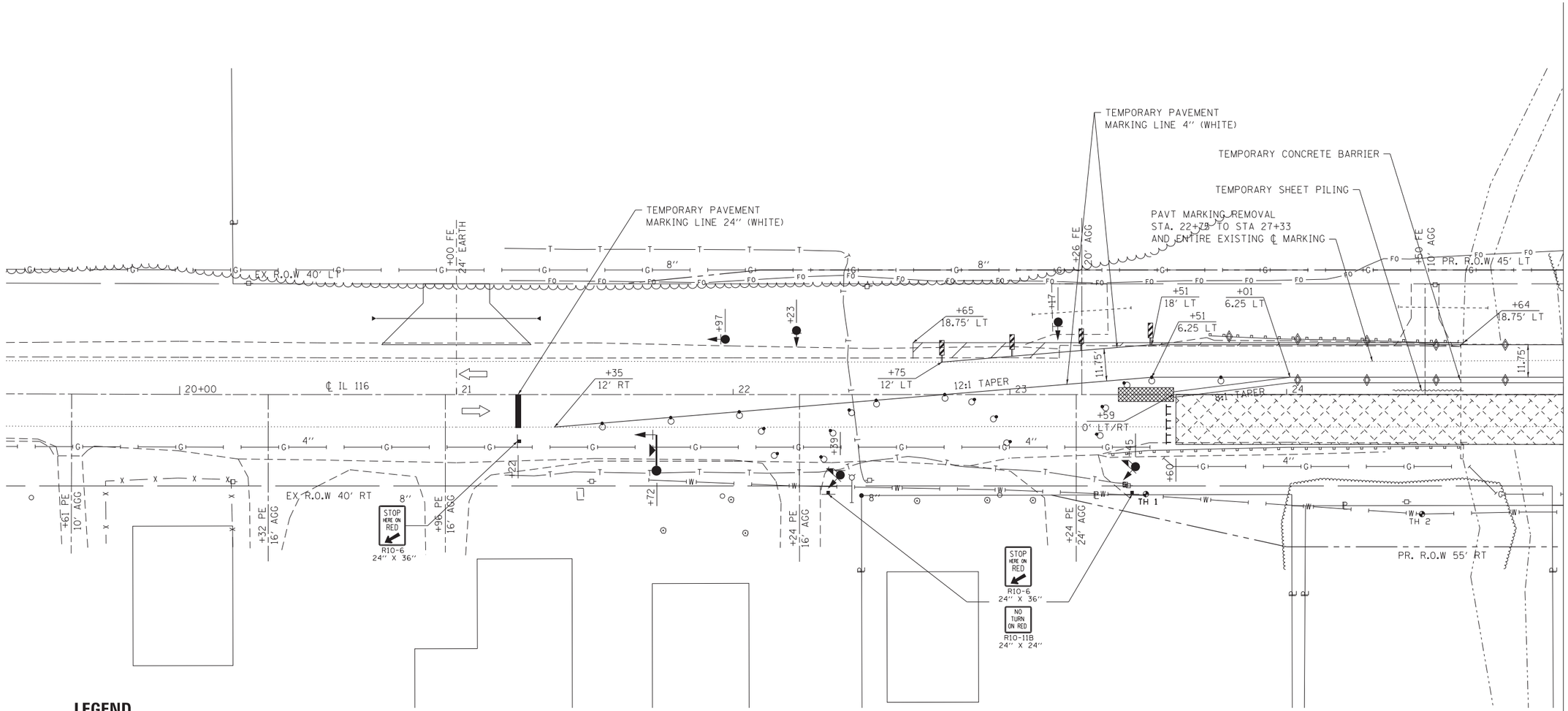
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 TYPICAL SECTIONS & STAGING NOTES

SCALE: | SHEET 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	19
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



LEGEND

PLEASE CONTACT THE TRAFFIC SIGNAL SECTION AT 815-434-8506 72 HOURS BEFORE INSTALLING TEMPORARY TRAFFIC SIGNALS.

- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED (SEE SPECIAL PROVISION)
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY PAVEMENT MARKING LINE, 24''
- IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE, 8''
- DIRECTION OF TRAFFIC

N

20' 0 20' 40'

SCALE: 1'' = 20'

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	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 CONSTRUCTION & TRAFFIC CONTROL

SCALE: 1''=20' | SHEET 2 OF 6 SHEETS | STA. 20+00 TO STA. 25+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	20
		CONTRACT NO. 66832		
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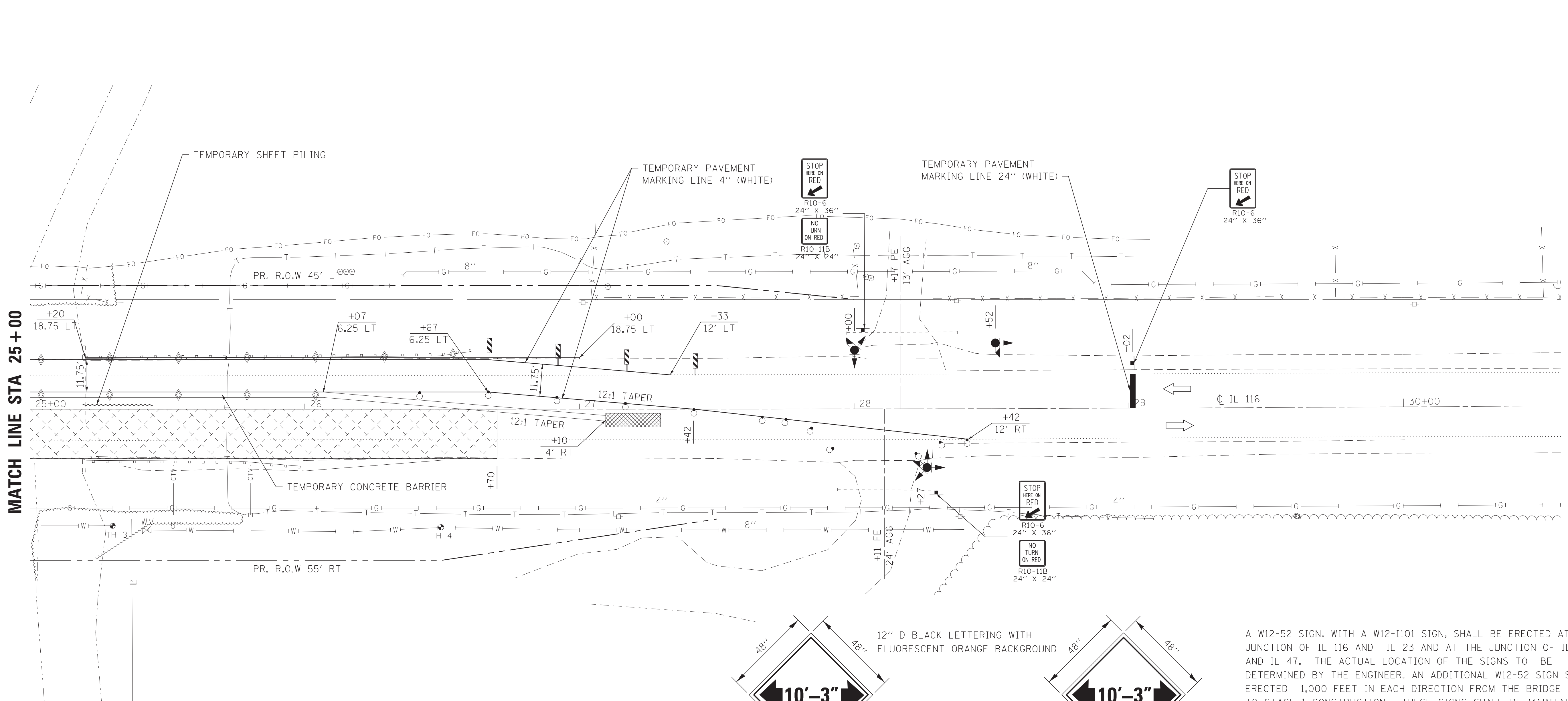
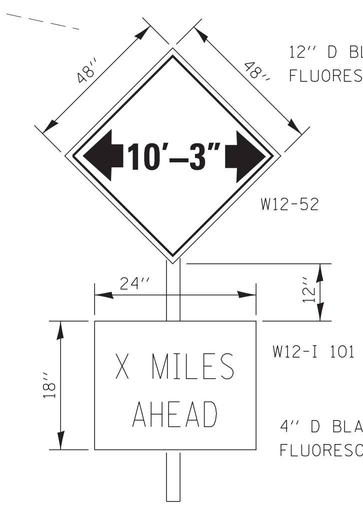


LEGEND

PLEASE CONTACT THE TRAFFIC SIGNAL SECTION AT 815-434-8506 72 HOURS BEFORE INSTALLING TEMPORARY TRAFFIC SIGNALS.

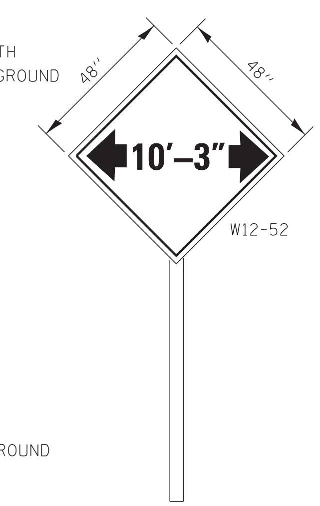
- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED (SEE SPECIAL PROVISION)
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY PAVEMENT MARKING LINE, 24″
- IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE, 8″
- DIRECTION OF TRAFFIC



12″ D BLACK LETTERING WITH FLUORESCENT ORANGE BACKGROUND

4″ D BLACK LETTERING WITH FLUORESCENT ORANGE BACKGROUND

AT JUNCTION OF IL 116 AND IL 23
AT JUNCTION OF IL 116 AND IL 47



A W12-52 SIGN, WITH A W12-I101 SIGN, SHALL BE ERECTED AT THE JUNCTION OF IL 116 AND IL 23 AND AT THE JUNCTION OF IL 116 AND IL 47. THE ACTUAL LOCATION OF THE SIGNS TO BE DETERMINED BY THE ENGINEER. AN ADDITIONAL W12-52 SIGN SHALL BE ERECTED 1,000 FEET IN EACH DIRECTION FROM THE BRIDGE PRIOR TO STAGE 1 CONSTRUCTION. THESE SIGNS SHALL BE MAINTAINED BY THE CONTRACTOR DURING STAGE 1 CONSTRUCTION AND SHALL BE REMOVED WHEN TRAFFIC IS OPEN FOR STAGE 2.

THE ENGINEER WILL NOTIFY SPRINGFIELD PERMITS, USING FORM OPER 2410, 21 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.

N

20′ 0 20′ 40′
SCALE: 1″ = 20′

WIDTH RESTRICTION SIGNING DETAILS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

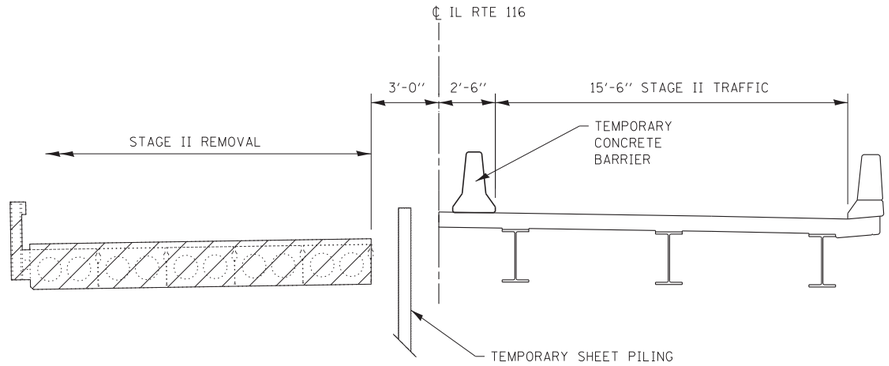
STAGE 1 CONSTRUCTION & TRAFFIC CONTROL

SCALE: 1″=20′ | SHEET 3 OF 6 SHEETS | STA. 25+00 TO STA. 30+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	21

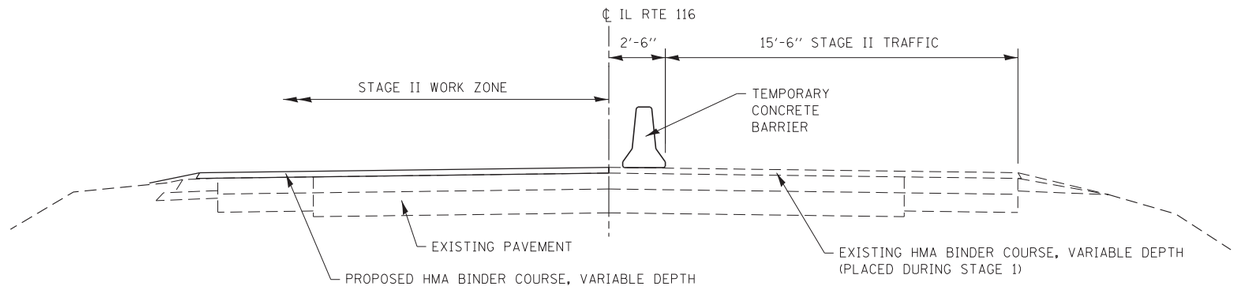
CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



STAGE 2 CONSTRUCTION TYPICAL SECTION

(LOOKING EAST AT STRUCTURE)
FOR INFORMATION ONLY



STAGE 2 CONSTRUCTION TYPICAL SECTION

(WEST OF STRUCTURE, LOOKING EAST &
EAST OF STRUCTURE, LOOKING EAST)

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	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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fax 618.345.7233
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120 Olive, Suite 1002
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tel 314.588.8381
fax 314.588.9405
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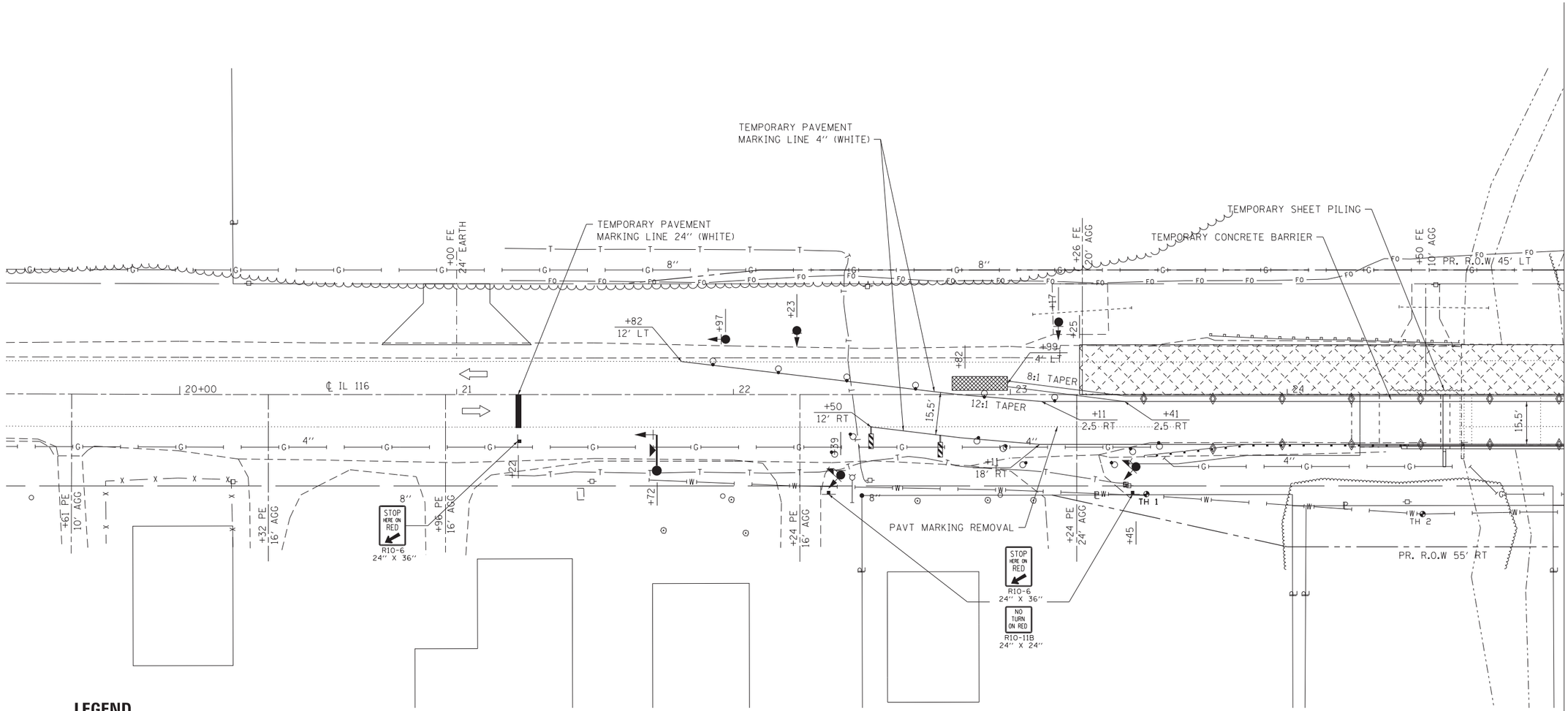
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 TYPICAL SECTIONS

SCALE: | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	22
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



LEGEND

PLEASE CONTACT THE TRAFFIC SIGNAL SECTION AT 815-434-8506 72 HOURS BEFORE INSTALLING TEMPORARY TRAFFIC SIGNALS.

- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED (SEE SPECIAL PROVISION)
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY PAVEMENT MARKING LINE, 24"
- IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE, 8"
- DIRECTION OF TRAFFIC

N

20' 0 20' 40'

SCALE: 1" = 20'

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	
	PLOT TIME = $TIME$	DRAWN - RGV	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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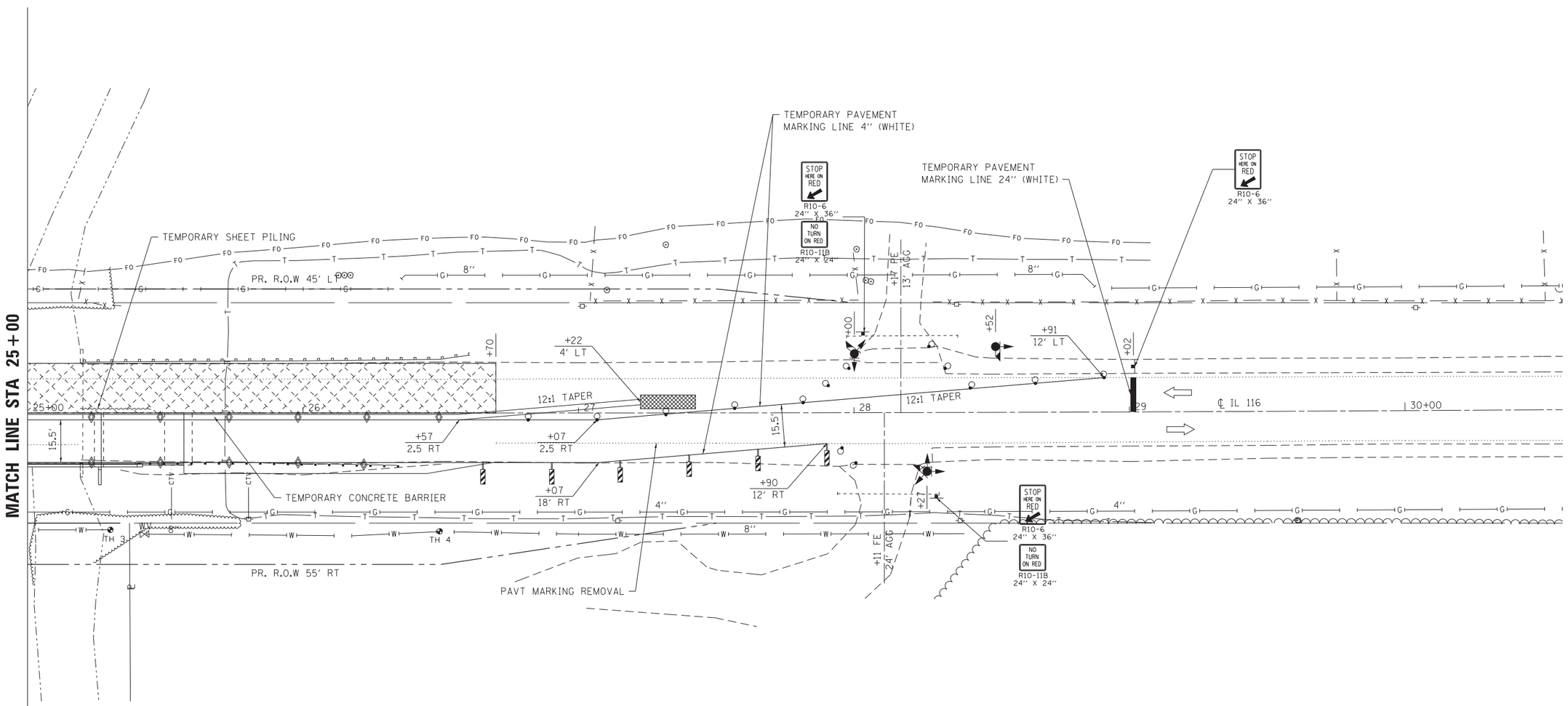
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 CONSTRUCTION & TRAFFIC CONTROL

SCALE: 1"=20' | SHEET 5 OF 6 SHEETS | STA. 20+00 TO STA. 25+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	23
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		



LEGEND

PLEASE CONTACT THE TRAFFIC SIGNAL SECTION AT 815-434-8506 72 HOURS BEFORE INSTALLING TEMPORARY TRAFFIC SIGNALS.

- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS
- TRAFFIC SIGNALS WITH BACKPLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED (SEE SPECIAL PROVISION)
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY PAVEMENT MARKING LINE, 24"
- IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3
- DOUBLE VERTICAL PANEL
- TYPE C BI-DIRECTIONAL REFLECTOR
- TYPE III BARRICADE WITH FLASHING LIGHTS
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
- WORK AREA
- SIGN
- HMA BASE COURSE, 8"
- DIRECTION OF TRAFFIC

N

20' 0 20' 40'

SCALE: 1" = 20'

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	
	PLOT TIME = $TIME$	DRAWN - RGV	
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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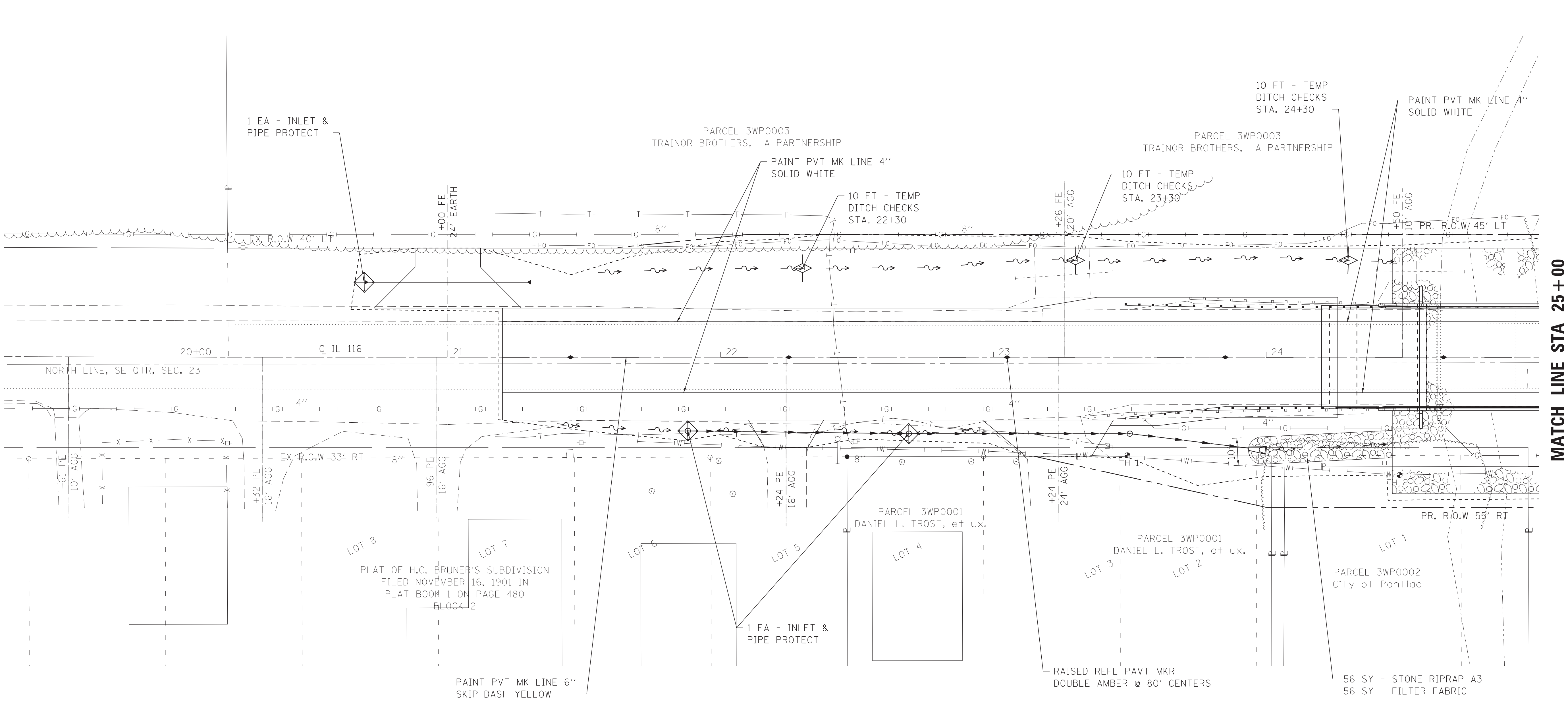
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 CONSTRUCTION & TRAFFIC CONTROL

SCALE: 1"=20' | SHEET 6 OF 6 SHEETS | STA. 25+00 TO STA. 30+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	24
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



NOTE: EROSION CONTROL BLANKET SHALL BE PLACED AT ALL AREAS WHERE PERMANENT SEEDING IS REQUIRED. BLANKET IS NOT SHOWN FOR CLARITY.

NOTE: SEE HIGHWAY STANDARD 000001 FOR EROSION CONTROL, LANDSCAPING, AND PAVEMENT MARKING LEGEND.

N

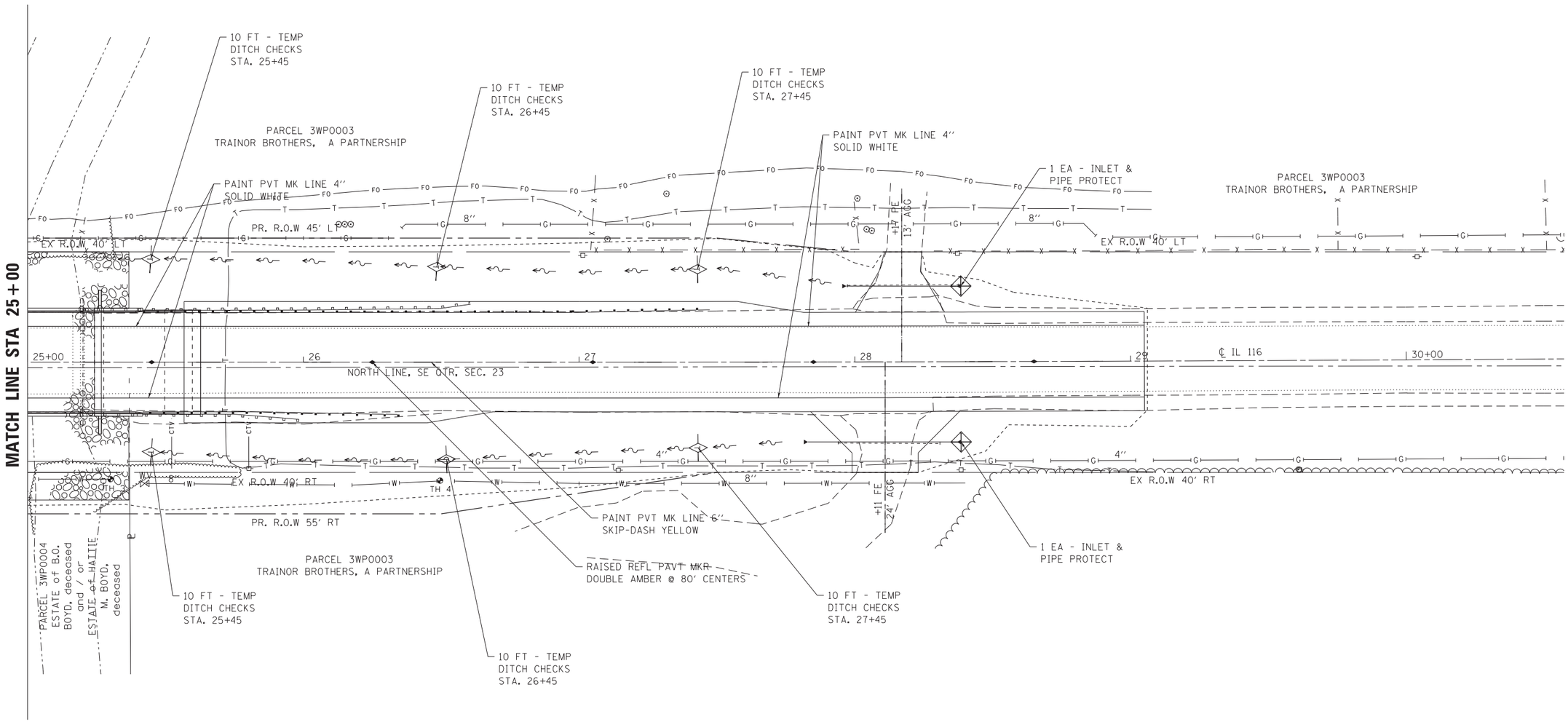
20′ 0 20′ 40′
SCALE: 1″ = 20′

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	OATES ASSOCIATES Engineering + Architecture	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	PLOT TIME = $TIME$	DRAWN - RGV		
	PLOT SCALE = 20.0000 ' / in.	CHECKED - JRR		
	PLOT DATE = 12/13/2012	DATE - 8/10/12		

EROSION CONTROL & PAVEMENT MARKING

SCALE: 1″=20′ | SHEET 1 OF 2 SHEETS | STA. 20+00 TO STA. 25+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	25
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		



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NOTE: SEE HIGHWAY STANDARD 000001 FOR EROSION CONTROL, LANDSCAPING, AND PAVEMENT MARKING LEGEND.

N

20' 0 20' 40'
SCALE: 1'' = 20'

FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED - RGV	
	PLOT TIME = $TIME$	DRAWN - RGV	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL & PAVEMENT MARKING

SCALE: 1''=20' | SHEET 2 OF 2 SHEETS | STA. 25+00 TO STA. 30+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	26
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

SO-DEEP Inc.

The Subsurface Utility Engineering Company

449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Corporate Headquarters
8397 Euclid Avenue
Manassas Park, VA 20111
(703) 361-6005

Control # SIMD445
Test Hole # 1
Plan Scale 1" = 20'
Sheet # 1 OF 2
Proposed BRIDGE
Date APRIL 18, 2012

City, County, State **PONTIAC, IL**
Gen. Loc. **RTE 116 JUST W. OF SMITH BRANCH**
Recorded Size/Material/Type **8" C.I. WATER LINE**
Foreman/Truck#/Form By **E. CARROLL / 223 / T. BARRETT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **640.84'** is **GIVEN**
Description: **(BM 1) CHIS "[ ]" FOUND, TOP OF NW WINGWALL, 19.09' LT OF CL STA 24+63.02, RTE 116**

B.M. 2 Elev. = **640.11'** is **GIVEN**
Description: **(CP 500) STEEL PIN FOUND, IN GRASS ROW, 27.07' LT OF CL STA 23+32.63, RTE 116**

Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **BLUE**
Soil Type **DARK BROWN**
Truck Location **GRAVEL LOT**
T.H. tied to **STEEL PIN**

8 3/4" C.I. WATER LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

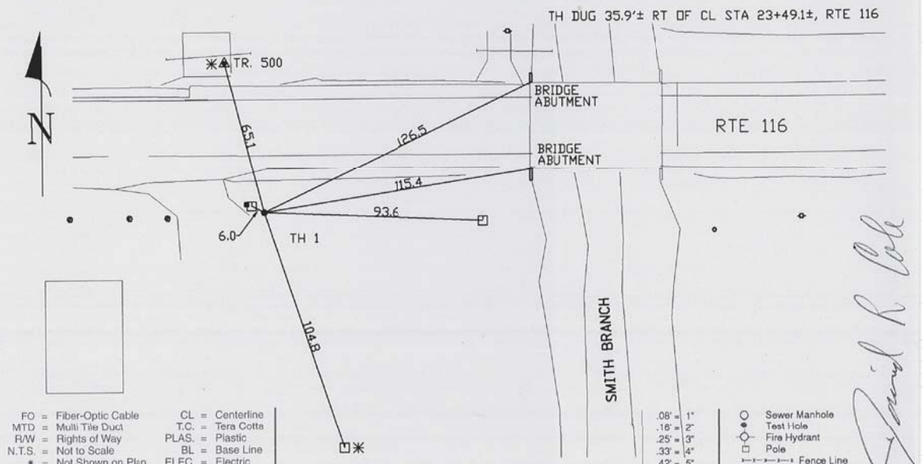
Remarks: NONE

Facing **EAST**

Width ±

Existing Grade of **GRAVEL LOT**
Survey Mark **STEEL PIN** (set by So-Deep)
Elev. **640.26'**

5.00' Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **635.26'**
Surveyed Elev. Bott. Util/Struc. (if required)



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
PCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
RPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

.08' = 1"
.16' = 2"
.25' = 3"
.33' = 4"
.42' = 5"
.50' = 6"
.58' = 7"
.67' = 8"
.75' = 9"
.83' = 10"
.92' = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
= T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

Performing out-of-sight work...with vision!™

Note: To Eliminate mistakes and check this work, So-Deep suggests you scale and plot all dimensions onto the plans and review all elevations carefully. So-Deep is responsible only for information shown on our forms.

SO-DEEP Inc.

The Subsurface Utility Engineering Company

449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Corporate Headquarters
8397 Euclid Avenue
Manassas Park, VA 20111
(703) 361-6005

Control # SIMD445
Test Hole # 2
Plan Scale 1" = 20'
Sheet # 1 OF 2
Proposed BRIDGE
Date APRIL 18, 2012

City, County, State **PONTIAC, IL**
Gen. Loc. **RTE 116 JUST W. OF SMITH BRANCH**
Recorded Size/Material/Type **8" C.I. WATER LINE**
Foreman/Truck#/Form By **E. CARROLL / 223 / T. BARRETT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **640.84'** is **GIVEN**
Description: **(BM 1) CHIS "[ ]" FOUND, TOP OF NW WINGWALL, 19.09' LT OF CL STA 24+63.02, RTE 116**

B.M. 2 Elev. = **640.11'** is **GIVEN**
Description: **(CP 500) STEEL PIN FOUND, IN GRASS ROW, 27.07' LT OF CL STA 23+32.63, RTE 116**

Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **BLUE**
Soil Type **DARK BROWN**
Truck Location **WOODED ROW**
T.H. tied to **HUB**

8 3/4" C.I. WATER LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

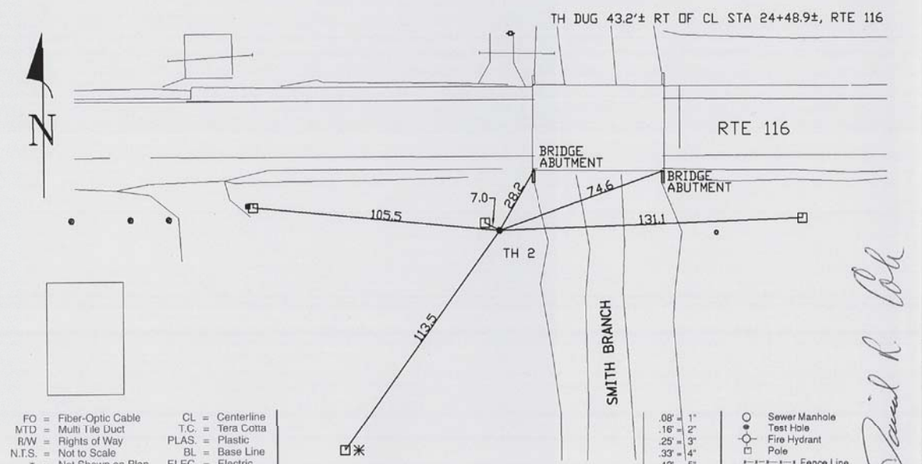
Remarks: NONE

Facing **EAST**

Width ±

Existing Grade of **WOODED ROW**
Survey Mark **HUB** (set by So-Deep)
Elev. **638.09'**

4.57' Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **633.51'**
Surveyed Elev. Bott. Util/Struc. (if required)



FO = Fiber-Optic Cable
MTD = Multi Tile Duct
R/W = Rights of Way
N.T.S. = Not to Scale
* = Not Shown on Plan
FCC = Precast Concrete
COND. = Conduit
CONC. = Concrete
O.D. = Outside Diameter
C.I. = Cast Iron
D.I. = Ductile Iron
FPC = Rough Pour Concrete

CL = Centerline
T.C. = Tera Cotta
PLAS. = Plastic
BL = Base Line
ELEC. = Electric
TELE = Telephone
T.H. = Test Hole
SW = Sidewalk
DW = Driveway
BM = Benchmark
C.B. = Catch Basin
GV = Gas Valve

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.75' = 9"
.83' = 10"
.92' = 11"

Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
Electric Manhole
= T.S. = Traverse Station
Valve
Water Meter
Telephone Manhole
Telephone Pedestal

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FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED -	OATES ASSOCIATES Engineering + Architecture	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	UTILITY BORINGS			
	PLOT TIME = $TIME$	DRAWN -						
	PLOT SCALE = 20.0000 ' / in.	CHECKED -						
	PLOT DATE = 12/13/2012	DATE -			SCALE: NTS	SHEET 1 OF 2 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	27
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

The Subsurface Utility Engineering Company

449 Munroe Falls Road
Tallmadge, OH 44278
(330) 794-4455

Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

Corporate Headquarters
8397 Euclid Avenue
Manassas Park, VA 20111
(703) 361-6005

Control # **SIMD445**
Test Hole # **3**
Plan Scale **1" = 20'**
Sheet # **2 OF 2**
Proposed **BRIDGE**
Date **APRIL 18, 2012**

City, County, State **PONTIAC, IL**
Gen. Loc. **RTE 116 JUST E. OF SMITH BRANCH**
Recorded Size/Material/Type **8" C.I. WATER LINE**
Foreman/Truck#/Form By **E. CARROLL / 223 / T. BARRETT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **640.84'** is **GIVEN**
Description: **(BM 1) CHIS "[ ]" FOUND, TOP OF NW WINGWALL, 19.09' LT OF CL STA 24+63.02, RTE 116**

B.M. 2 Elev. = **640.11'** is **GIVEN**
Description: **(CP 500) STEEL PIN FOUND, IN GRASS ROW, 27.07' LT OF CL STA 23+32.63, RTE 116**

Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **BLUE**
Soil Type **DARK BROWN**
Truck Location **GRASS ROW**
T.H. tied to **HUB**

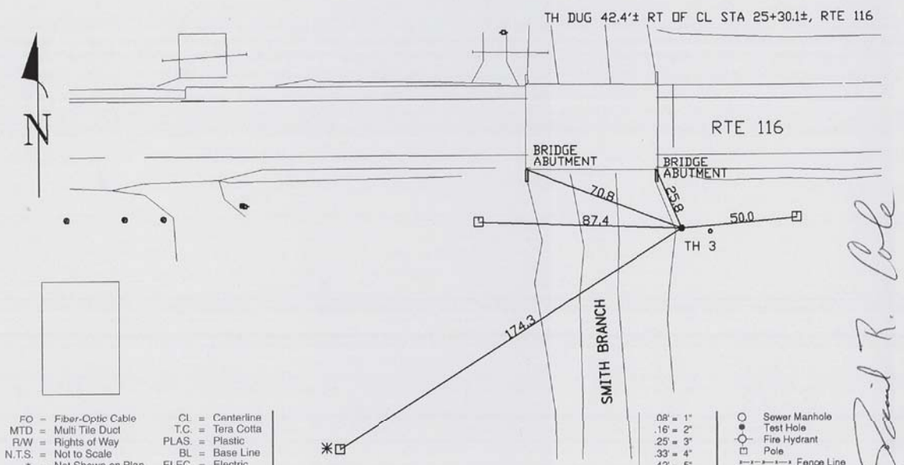
8 3/4" C.I. WATER LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: NONE

Facing **EAST**

Width ±

Existing Grade of **GRASS ROW**
Survey Mark **HUB** (set by So-Deep) Elev. **642.12'**
8.94' Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **633.18'**
Surveyed Elev. Bott. Util/Struc. (if required)



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CONC. = Concrete
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D.I. = Ductile Iron
RPC = Rough Pour Concrete

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T.C. = Tera Cotta
PLAS. = Plastic
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Sewer Manhole
Test Hole
Fire Hydrant
Pole
Fence Line
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Water Meter
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Telephone Pedestal

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Test Hole Certification Form
Utility Quality Level A Data

ASCE C/I 38-02

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Control # **SIMD445**
Test Hole # **4**
Plan Scale **1" = 20'**
Sheet # **2 OF 2**
Proposed **BRIDGE**
Date **APRIL 18, 2012**

City, County, State **PONTIAC, IL**
Gen. Loc. **RTE 116 JUST E. OF SMITH BRANCH**
Recorded Size/Material/Type **8" C.I. WATER LINE**
Foreman/Truck#/Form By **E. CARROLL / 223 / T. BARRETT**

Condition of paving prior to work **NO PAVING**

B.M. 1 Elev. = **640.84'** is **GIVEN**
Description: **(BM 1) CHIS "[ ]" FOUND, TOP OF NW WINGWALL, 19.09' LT OF CL STA 24+63.02, RTE 116**

B.M. 2 Elev. = **640.11'** is **GIVEN**
Description: **(CP 500) STEEL PIN FOUND, IN GRASS ROW, 27.07' LT OF CL STA 23+32.63, RTE 116**

Benchmarks Check **BY 0.02'**
Elevations are referenced to **B.M.#2**

So-Deep will attempt to use the BM/HI most applicable to your design. If however, BMs differ by more than .05', resulting differences could cause design conflicts.

Recorded Size/Type of utility **WAS FOUND**
There **WERE NOT** additional utilities in the test hole
The utility **WAS** in good condition
Paving Thickness and type **NO PAVING**
Color of ribbon installed **BLUE**
Soil Type **DARK BROWN**
Truck Location **GRASS ROW**
T.H. tied to **HUB**

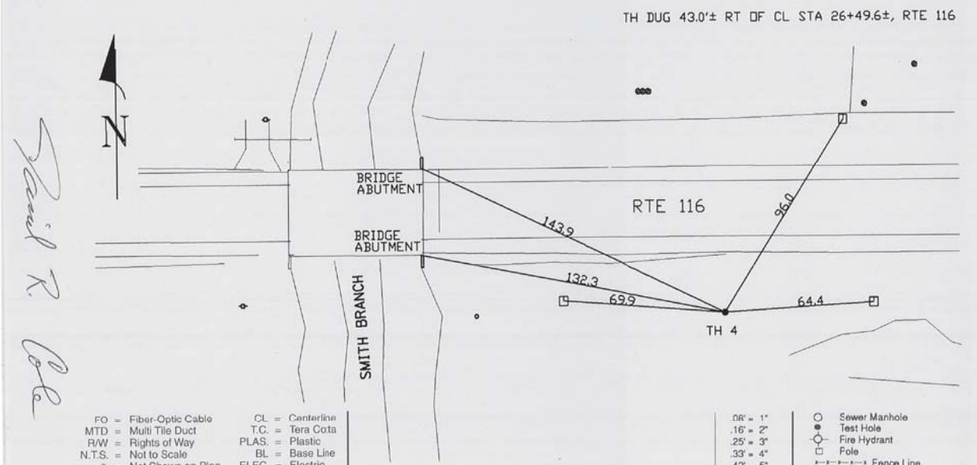
8 3/4" C.I. WATER LINE
Size/Material/Type
Portion of pipe exposed for O.D. measurement:
FULL

Remarks: NONE

Facing **EAST**

Width ±

Existing Grade of **GRASS ROW**
Survey Mark **HUB** (set by So-Deep) Elev. **641.33'**
6.70' Actual field measurement by ruler (not calculated)
Surveyed Elev. Top Util/Struc. **634.65'**
Surveyed Elev. Bott. Util/Struc. (if required)



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Test Hole
Fire Hydrant
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Telephone Pedestal

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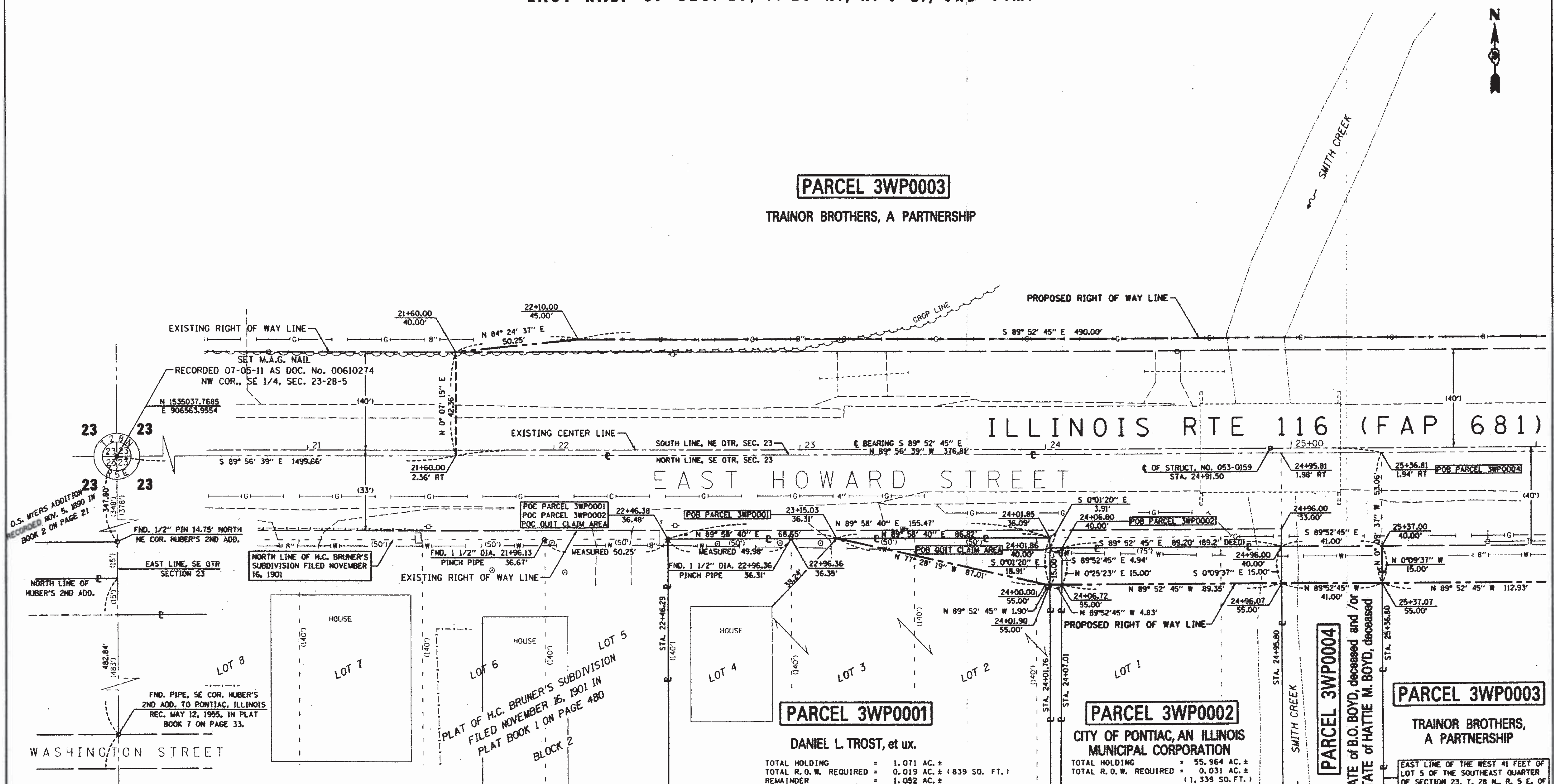
FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED -	OATES ASSOCIATES Engineering + Architecture	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	UTILITY BORINGS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT TIME = $TIME$	DRAWN -				681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	28
	PLOT SCALE = 20.0000 ' / in.	CHECKED -						CONTRACT NO. 66832		
	PLOT DATE = 12/13/2012	DATE -			SCALE: NTS SHEET 2 OF 2 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

DOCUMENT NO. _____ HIGHWAY PLAT BOOK NO. ____ PAGE ____

EAST HALF OF SEC. 23, T. 28 N., R. 5 E., 3RD P.M.



PARCEL 3WP0001

DANIEL L. TROST, et ux.

TOTAL HOLDING	=	1.071 AC. ±
TOTAL R.O.W. REQUIRED	=	0.019 AC. ± (839 SQ. FT.)
REMAINDER	=	1.052 AC. ±

EAST / WEST LINES OF THE PREMISES CONVEYED TO DANIEL L. TROST & DIANE E. TROST FROM CONRAD BRUE & ARLENE BRUE BY WARRANTY DEED RECORDED ON AUGUST 4, 1999 AS DOC. NO. 511560

PARCEL 3WP0002

CITY OF PONTIAC, AN ILLINOIS MUNICIPAL CORPORATION

TOTAL HOLDING	=	55.964 AC. ±
TOTAL R.O.W. REQUIRED	=	0.031 AC. ± (1,339 SQ. FT.)
REMAINDER	=	55.933 AC. ±
QUIT CLAIM AREA	=	73.00 SQ. FT.

EAST / WEST LINES OF THE PREMISES CONVEYED TO THE CITY OF PONTIAC, ILLINOIS, A MUNICIPAL CORP., FROM JOHN V. SHOCKEY & LOUISE SHOCKEY BY WARRANTY DEED RECORDED ON APRIL 27, 1969 IN BOOK 280 AT PAGE 102 AS DOCUMENT NO. 282991

PARCEL 3WP0003

TRAINOR BROTHERS, A PARTNERSHIP

EAST LINE OF THE WEST 41 FEET OF LOT 5 OF THE SOUTHEAST QUARTER OF SECTION 23, T. 28 N., R. 5 E. OF THE THIRD P.M.

WEST LINE OF LOT 5 OF THE SOUTHEAST QUARTER OF SECTION 23, T. 28 N., R. 5 E. OF THE THIRD P.M. AS SHOWN BY PLAT RECORDED ON PAGE 41 IN BOOK 3 OF THE SUBDIVISION RECORDS OF LIVINGSTON COUNTY RECORDED ON DECEMBER 2, 1909

NOTE: FOR THE PURPOSE OF THIS PLAT, BEARINGS AND DISTANCES ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, (GRID) EAST ZONE, (NAD-83, 2007 ADJ.).

ALL AREAS ARE BASED ON GROUND MEASUREMENTS

GRID TO GROUND COMBINED FACTOR = 1.00004400 (INVERSE OF COMBINED FACTOR)

0 20' 40' 60'

SURVEYOR'S STATEMENT

I, CURT A. BENDER, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. 681 (ILLINOIS RTE 116) WAS MADE BY WILLETT HOFMANN & ASSOCIATES, INC. UNDER MY DIRECTION, AT THE REQUEST OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

22 AUGUST 2011

Curt A. Bender

CURT A. BENDER, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3688 (EXPIRES NOVEMBER 2012)

CURT A. BENDER 35-3688 ILLINOIS PROFESSIONAL LAND SURVEYOR DIXON ILLINOIS

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T:815-284-3381 DESIGN FIRM #184-000916

DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

	PROJECT	JOB NO. R-93-002-11
SCALE: 1" = 20'	SHEET NO. 1 OF 2 SHEETS	STA. 21+60.00 TO STA. 25+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113BR)BR *	LIVINGSTON	123	29
ILLINOIS ROUTE 116		CONTRACT NO. 66832		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

* & (113 BR-1) BR

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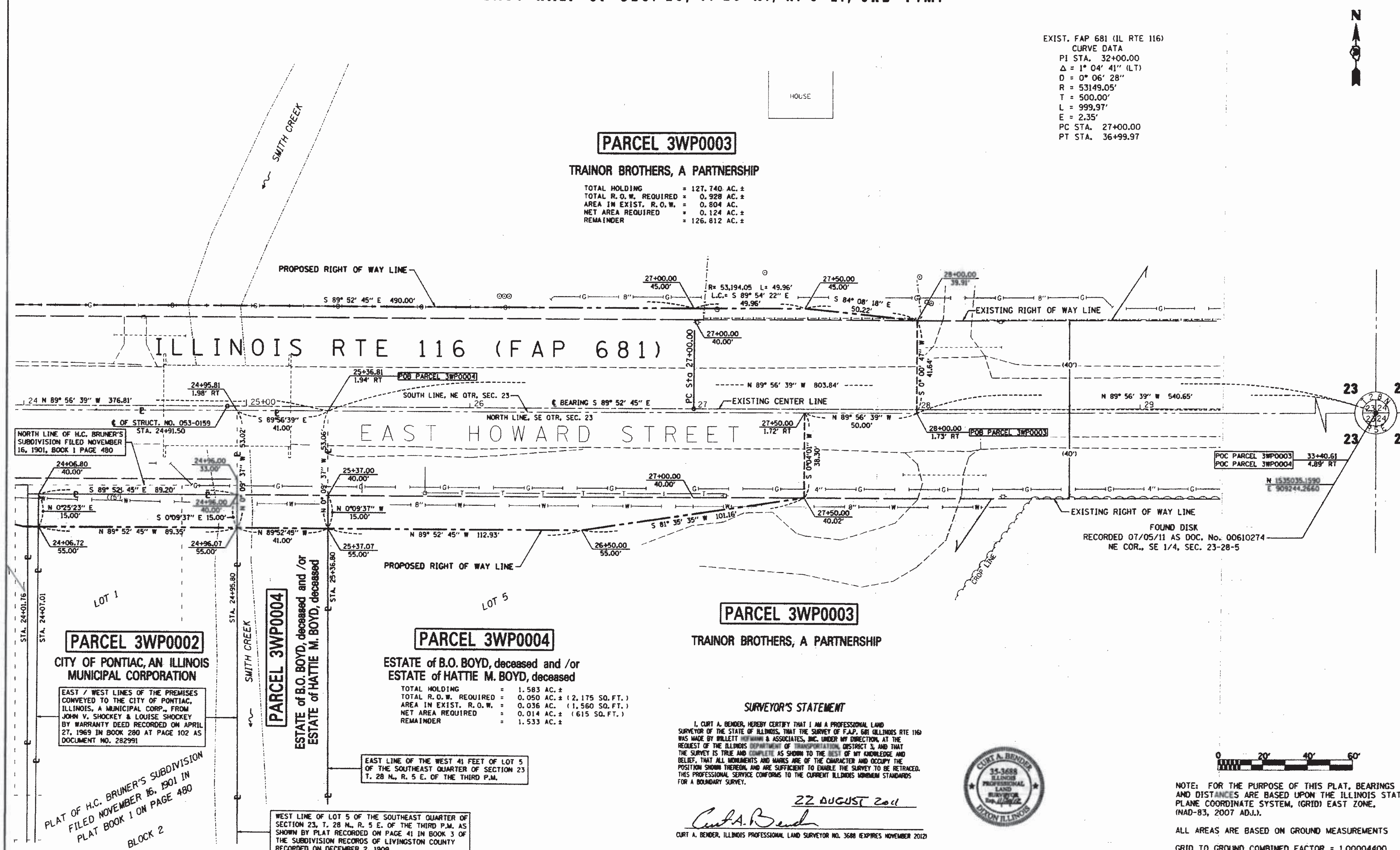
DOCUMENT NO. _____ HIGHWAY PLAT BOOK NO. ___ PAGE ___

EAST HALF OF SEC. 23, T. 28 N., R. 5 E., 3RD P.M.



EXIST. FAP 681 (IL RTE 116)
CURVE DATA
PI STA. 32+00.00
Δ = 1° 04' 41" (LT)
D = 0° 06' 28"
R = 53149.05'
T = 500.00'
L = 999.97'
E = 2.35'
PC STA. 27+00.00
PT STA. 36+99.97

PARCEL 3WP0003

TRAINOR BROTHERS, A PARTNERSHIP

TOTAL HOLDING	= 127.740 AC. ±
TOTAL R.O.W. REQUIRED	= 0.928 AC. ±
AREA IN EXIST. R.O.W.	= 0.804 AC.
NET AREA REQUIRED	= 0.124 AC. ±
REMAINDER	= 126.812 AC. ±

PARCEL 3WP0002

CITY OF PONTIAC, AN ILLINOIS MUNICIPAL CORPORATION

EAST / WEST LINES OF THE PREMISES CONVEYED TO THE CITY OF PONTIAC, ILLINOIS, A MUNICIPAL CORP., FROM JOHN V. SHOCKEY & LOUISE SHOCKEY BY WARRANTY DEED RECORDED ON APRIL 27, 1969 IN BOOK 280 AT PAGE 102 AS DOCUMENT NO. 282991

PARCEL 3WP0004

ESTATE of B.O. BOYD, deceased and /or ESTATE of HATTIE M. BOYD, deceased

PARCEL 3WP0004

ESTATE of B.O. BOYD, deceased and /or ESTATE of HATTIE M. BOYD, deceased

TOTAL HOLDING	= 1.583 AC. ±
TOTAL R.O.W. REQUIRED	= 0.050 AC. ± (2,175 SQ.FT.)
AREA IN EXIST. R.O.W.	= 0.036 AC. (1,560 SQ.FT.)
NET AREA REQUIRED	= 0.014 AC. ± (615 SQ.FT.)
REMAINDER	= 1.533 AC. ±

EAST LINE OF THE WEST 41 FEET OF LOT 5 OF THE SOUTHEAST QUARTER OF SECTION 23 T. 28 N., R. 5 E. OF THE THIRD P.M.

WEST LINE OF LOT 5 OF THE SOUTHEAST QUARTER OF SECTION 23, T. 28 N., R. 5 E. OF THE THIRD P.M. AS SHOWN BY PLAT RECORDED ON PAGE 41 IN BOOK 3 OF THE SUBDIVISION RECORDS OF LIVINGSTON COUNTY RECORDED ON DECEMBER 2, 1909

PARCEL 3WP0003

TRAINOR BROTHERS, A PARTNERSHIP

SURVEYOR'S STATEMENT

I, CURT A. BENDER, HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, THAT THE SURVEY OF F.A.P. 681 (ILLINOIS RTE 116) WAS MADE BY WILLETT HOFMANN & ASSOCIATES, INC. UNDER MY DIRECTION, AT THE REQUEST OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT 3, AND THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT ALL MONUMENTS AND MARKS ARE OF THE CHARACTER AND OCCUPY THE POSITION SHOWN THEREON, AND ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

22 AUGUST 2011

Curt A. Bender

CURT A. BENDER, ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3688 (EXPIRES NOVEMBER 2012)

CURT A. BENDER 35-3688 ILLINOIS PROFESSIONAL LAND SURVEYOR DIXON ILLINOIS

NOTE: FOR THE PURPOSE OF THIS PLAT, BEARINGS AND DISTANCES ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, (GRID) EAST ZONE. (NAD-83, 2007 ADJ.).

ALL AREAS ARE BASED ON GROUND MEASUREMENTS

GRID TO GROUND COMBINED FACTOR = 1.00004400 (INVERSE OF COMBINED FACTOR)

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED -	REVISED -		
DRAWN	REVISED -		
CHECKED -	REVISED -		
DATE -	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

SCALE: 1" = 20'	PROJECT / SHEET NO. 2 OF 2 SHEETS	JOB NO. R-93-002-11 / STA. 25+00.00 TO STA. 28+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113BR)BR ✱	LIVINGSTON	123	30
ILLINOIS ROUTE 116		CONTRACT NO. 66832		

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

✱ & (113 BR-1)BR

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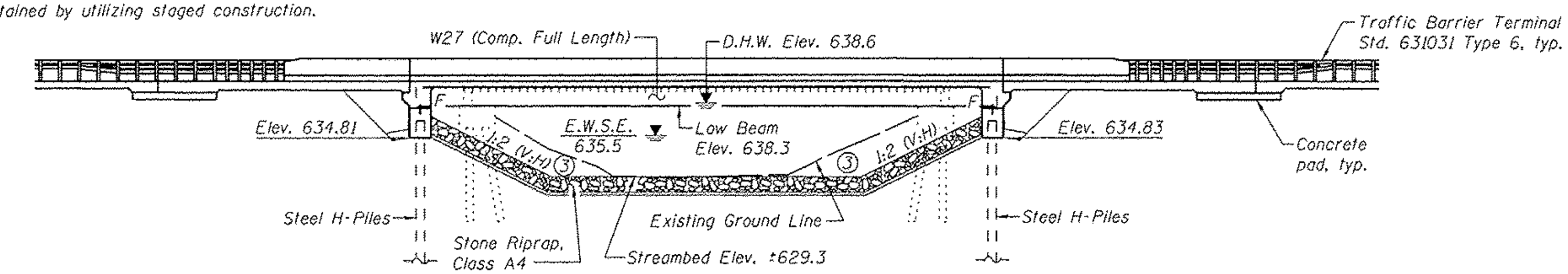
Bench Mark: BM #1-Chiseled square on top of Northwest wingwall Sta. 24+63.02, 19.09' LT, Elev. 640.84

Existing Structure: S.N. 053-0159 was originally built in 1983 as F.A. Route 681, Section 113BR which replaced S.N. 053-0069 built in 1928. The structure consists of a single span PPC deck beam superstructure on pile supported stub abutments. Riprap was added at the abutments in 2004. Five precast prestressed concrete deck beams were replaced in 2009. The back to back abutment length is 58'-3" while the out-to-out width measures 36'-0". Structure to be removed and replaced.

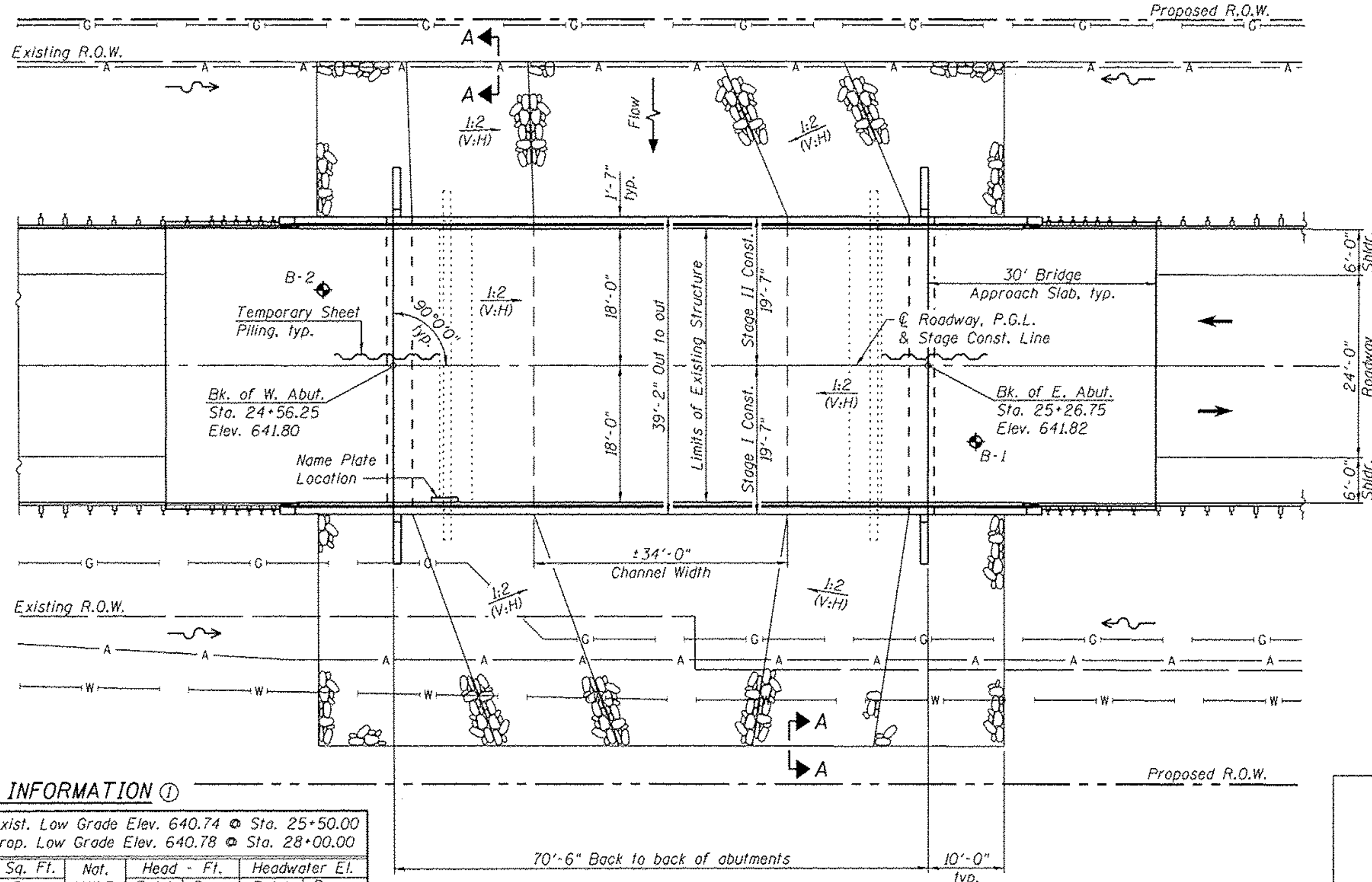
Traffic Control: One lane of traffic will be maintained by utilizing staged construction.

Salvage: None

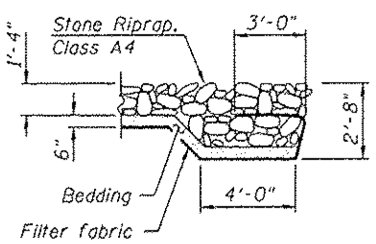
Notes:
1. Table assumes the 10 year backwater of the Vermilion River for the downstream boundary condition.
2. For riprap limits not shown, see Roadway Plans.
3. Remnants of existing 1928 abutments may be encountered during excavation, which shall be removed according to Section 501 of the Standard Specifications. If encountered, removal shall be paid for according to Section 109.04 of the Standard Specifications.



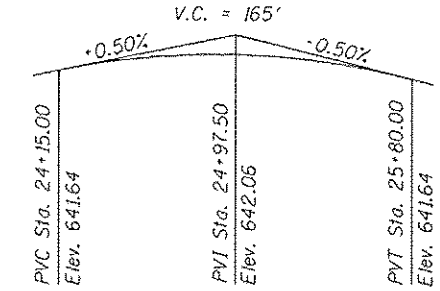
ELEVATION



PLAN



SECTION A-A



PROFILE GRADE
(along ℄ Roadway)

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

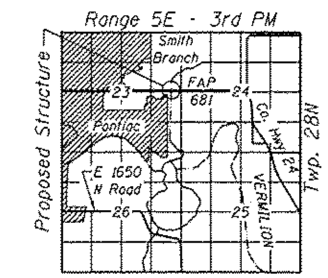
DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M 270 Grade 50W)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.078g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.133g
Soil Site Class = C

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

STATION 24+91.50
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 681 SEC. (113 BR)BR
LOADING HL-93
STR. NO. 053-0190

NAME PLATE
See Std. 515001



LOCATION SKETCH

WATERWAY INFORMATION ①

Drainage Area = 11.9 Sq. Mi.			Exist. Low Grade Elev. 640.74 @ Sta. 25+50.00 / Prop. Low Grade Elev. 640.78 @ Sta. 28+00.00						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1,760	298	456	638.2	0.5	0.4	638.7	638.7
Design	50	2,850	307	467	638.6	2.0	0.8	640.6	639.3
Base	100	3,330	307	467	638.7	2.2	1.0	640.9	639.7
Exist. Overtopping	100	3,330	307		638.7	2.2		640.9	
Prop. Overtopping	460	4,000		467	639.2		1.9		640.9
Max Calc.	500	4,510	307	467	639.2	2.2	1.9	641.4	641.1

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	E. Abut.	W. Abut.
	634.8	634.8

APPROVED
For Structural Adequacy Only
D. Carl Puzey SES
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER DANIEL GEORGE LUTZ 081 006772 STATE OF ILLINOIS
12/03/2012
EXP. 11/30/2014

GENERAL PLAN AND ELEVATION
IL 116 OVER SMITH BRANCH
F.A.P. RTE. 681
SECTION (113 BR)BR
LIVINGSTON COUNTY
STATION 24+91.50
STRUCTURE NO. 053-0190

GATES ASSOCIATES Engineering + Architecture

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PLOT SCALE =	DRAWN - DBB	REVISED
PLOT DATE =	CHECKED - JAD	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	31

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts $^{3}/_{4}$ in. ϕ, holes $^{13}/_{16}$ in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = AASHTO M 270 Grade 50W = 78,680 pounds

All structural steel shall be AASHTO M 270 Grade 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

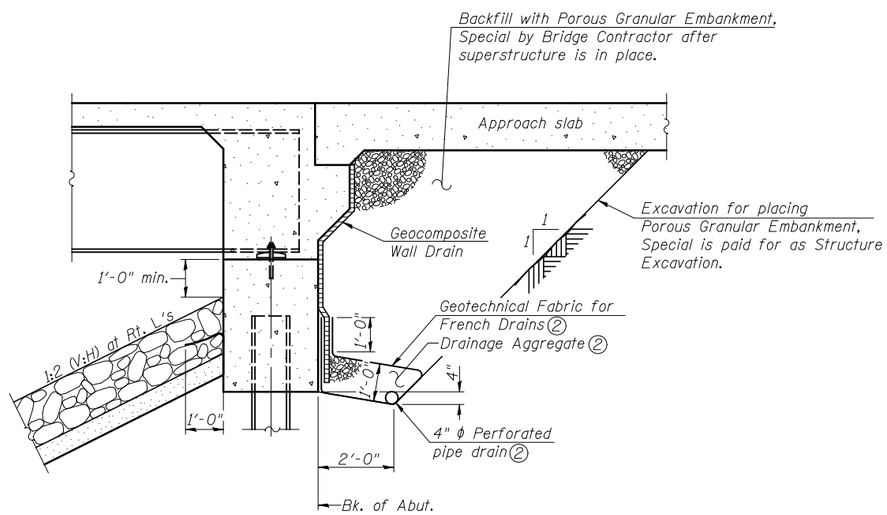
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The Contractor is advised that the existing PPC deck beams are 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 the removal and replacement of the structure.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	-	832	832
Filter Fabric	Sq. Yd.	-	832	832
Removal of Existing Structures No. 1	Each	-	-	1
Structure Excavation	Cu. Yd.	-	190	190
Concrete Structures	Cu. Yd.	-	55.1	55.1
Concrete Superstructure	Cu. Yd.	230.8	-	230.8
Bridge Deck Grooving	Sq. Yd.	496	-	496
Concrete Encasement	Cu. Yd.	-	4.2	4.2
Protective Coat	Sq. Yd.	614	-	614
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	1,134	-	1,134
Reinforcement Bars, Epoxy Coated	Pound	49,030	8,650	57,680
Bar Splicers	Each	458	104	562
Furnishing Steel Piles HP12x53	Foot	-	230	230
Driving Piles	Foot	-	230	230
Test Pile Steel HP12x53	Each	-	2	2
Pile Shoes	Each	-	12	12
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	24	-	24
Geocomposite Wall Drain	Sq. Yd.	-	60	60
Asbestos Bearing Pad Removal	Each	-	-	14
Temporary Sheet Piling	Sq. Ft.	-	436	436
Pipe Underdrains for Structures 4"	Foot	-	145	145
Porous Granular Embankment, Special	Cu. Yd.	-	88	88

INDEX OF SHEETS



SECTION THRU INTEGRAL ABUTMENT (1)

Notes:
(1) 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 or as directed by the Engineer. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
(2) Included in the cost of Pipe Underdrains for Structures 4".

GATES ASSOCIATES Engineering + Architecture

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Collinsville, IL 62234
tel 618.345.2220
fax 618.345.7235

MISSOURI
Laclede Gas Building
720 Olive, Suite 1600
St. Louis, MO 63101
tel 314.666.6591
fax 314.666.9606

www.oatesassociates.com

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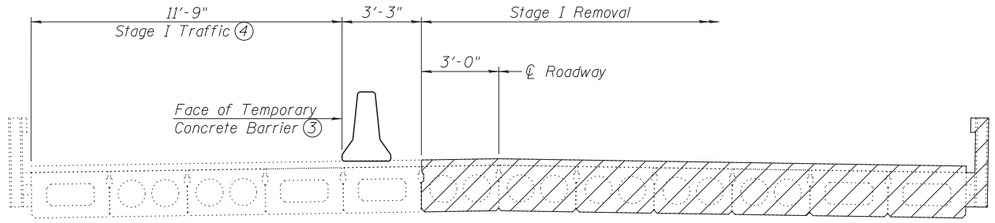
	CHECKED - JAD	REVISED
PLOT SCALE =	DRAWN - DBB	REVISED
PLOT DATE =	CHECKED - JAD	REVISED

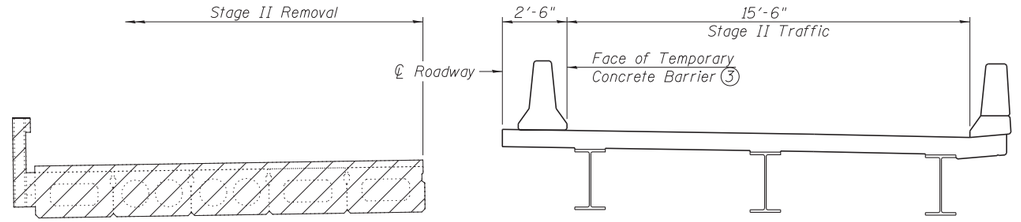
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 053-0190
SHEET NO. 2 OF 22 SHEETS

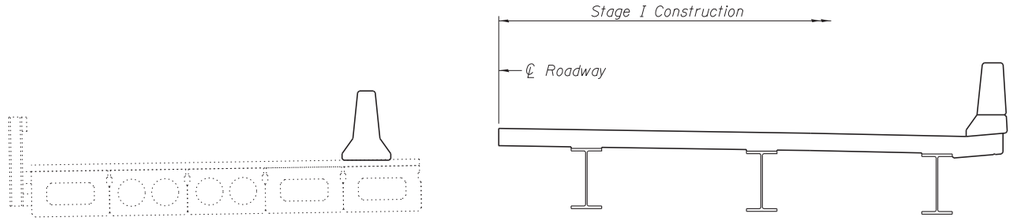
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR	LIVINGSTON	123	32
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



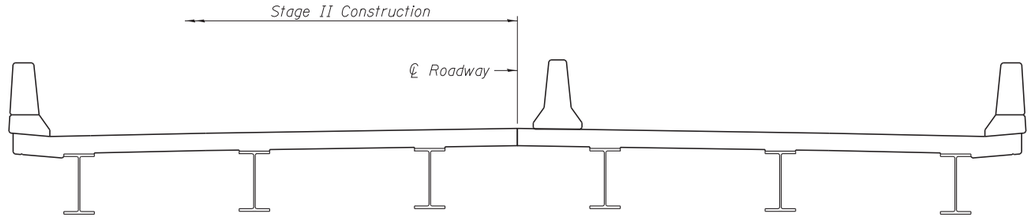
STAGE I REMOVAL ①④



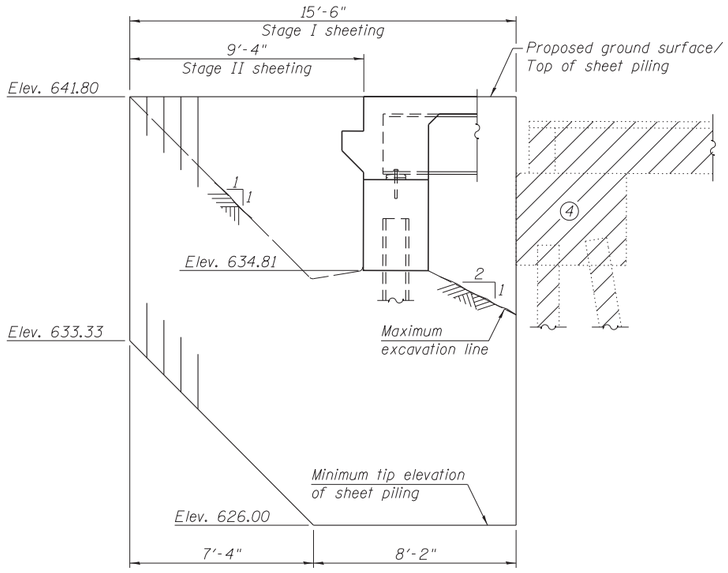
STAGE II REMOVAL ①④



STAGE I CONSTRUCTION ①



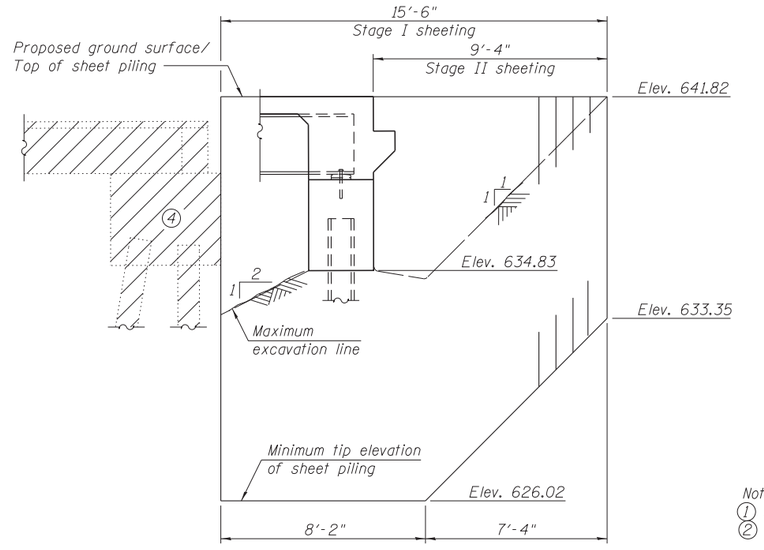
STAGE II CONSTRUCTION ①



WEST ABUTMENT

Minimum Section

Modulus = 10 in^3/ft



EAST ABUTMENT

Minimum Section

Modulus = 10 in^3/ft

Notes:

① All views shown looking east.

② 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.

③ For details of Temporary Concrete Barrier, see sheet 4 of 22. For quantity of Temporary Concrete Barrier, see Roadway Plans.

④ Hatched area indicates Removal of Existing Structures.

TEMPORARY SHEET PILING DETAIL ②

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St. Louis, MO 63101
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fax 314.588.9605

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USER NAME =	DESIGNED - DBB	REVISED
	CHECKED - JAD	REVISED
PLOT SCALE =	DRAWN - DBB	REVISED
PLOT DATE =	CHECKED - JAD	REVISED

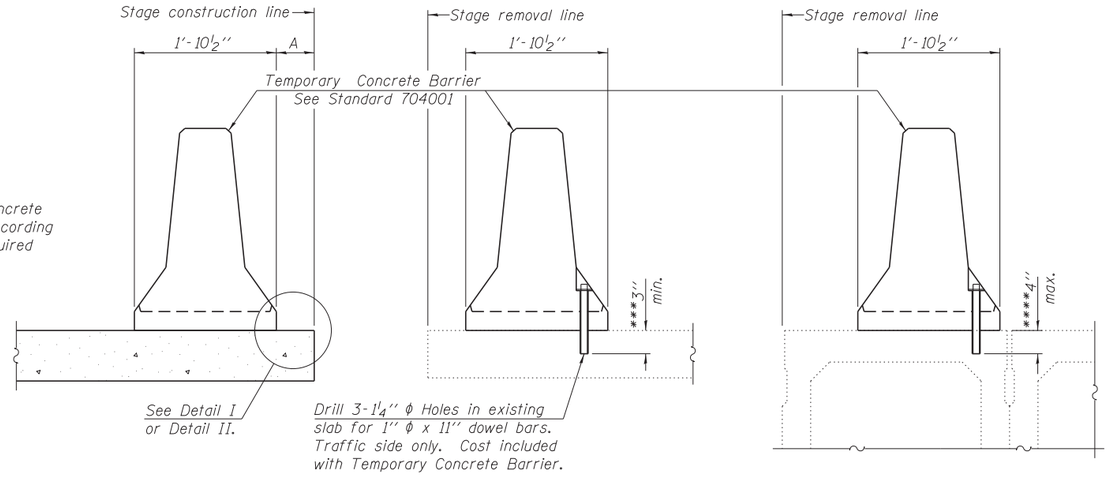
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 053-0190

SHEET NO. 3 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	33
		CONTRACT NO. 66832		
	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".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7' 'x "W" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℙ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

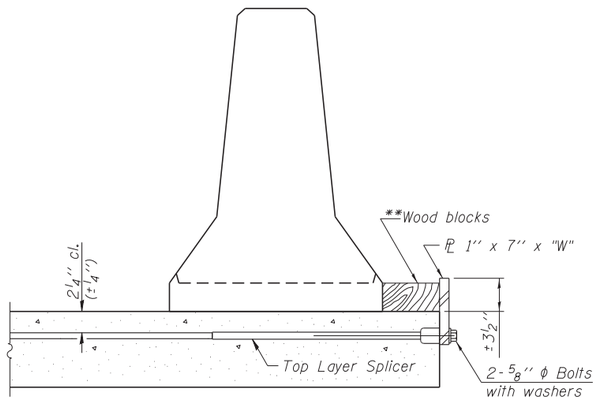
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" 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.

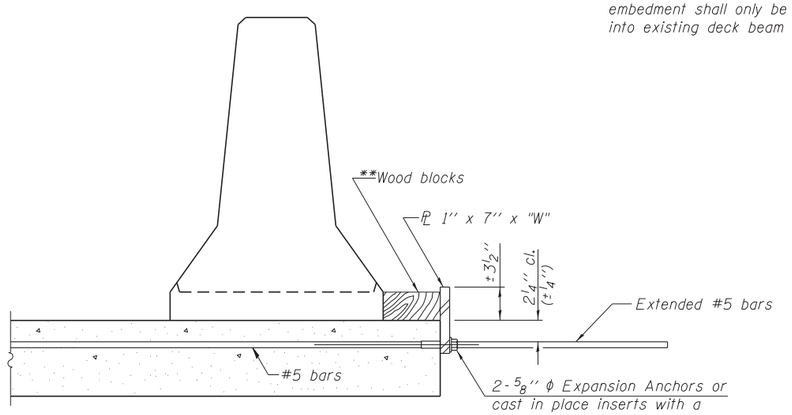
SECTIONS THRU SLAB OR DECK BEAM

*** 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.



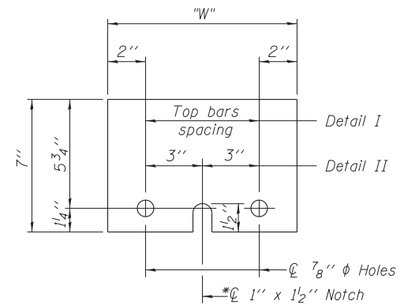
DETAIL I



DETAIL II

** 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"



STEEL RETAINER ℙ 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10

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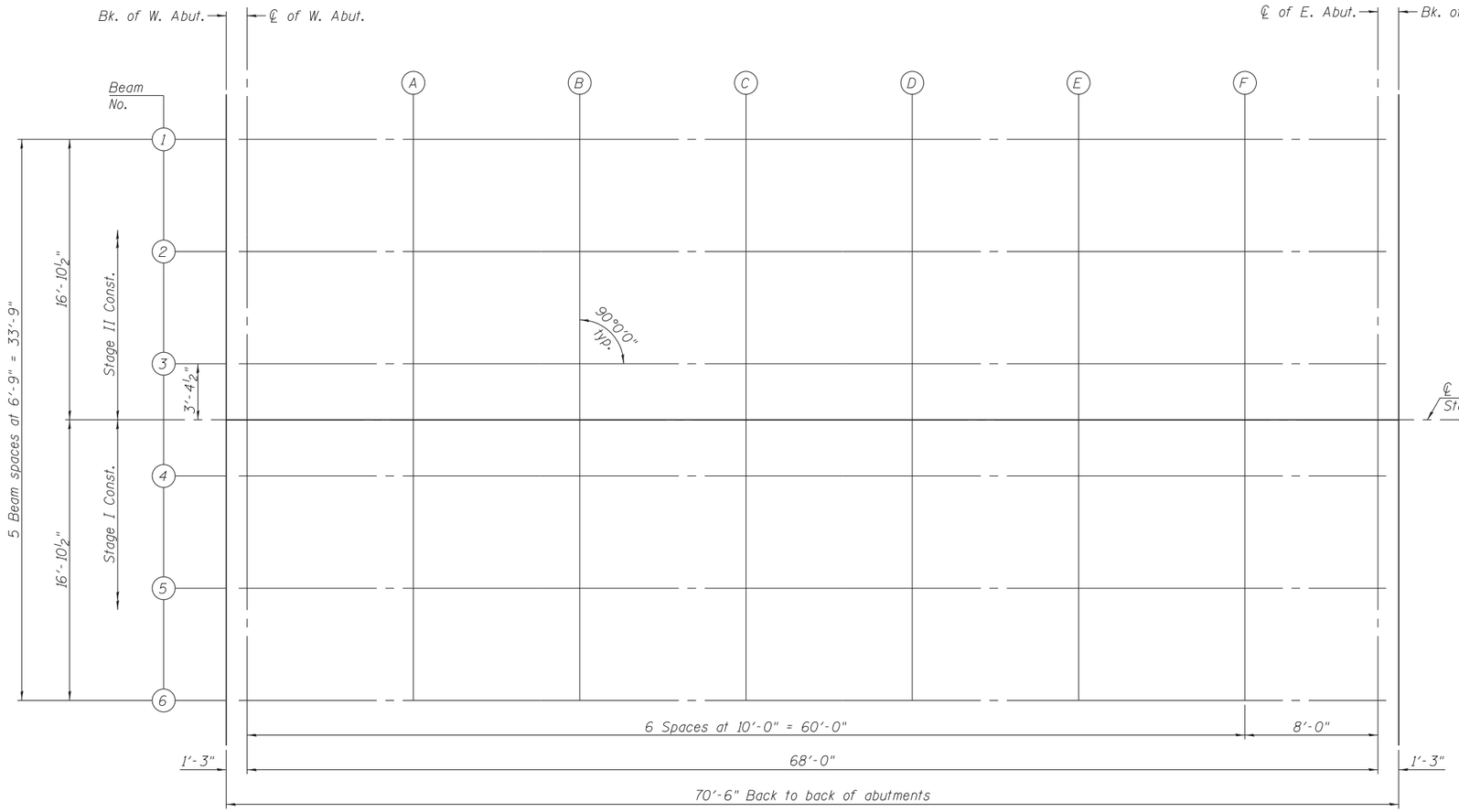
DEPARTMENT OF TRANSPORTATION

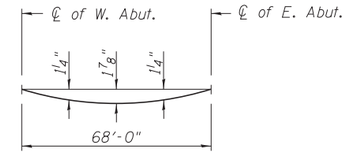
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 053-0190

SHEET NO. 4 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	34
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

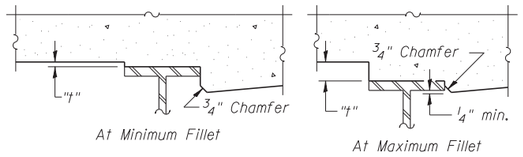


PLAN



DEAD LOAD DEFLECTION DIAGRAM ①

(Includes weight of concrete only.)



FILLET HEIGHTS ②

Notes:

① The deflections shown are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on sheet 6 of 22.

② To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 6 of 22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 053-0190
SHEET NO. 5 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	35
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	-16.88	641.51	641.51
℄ of W. Abut.	24+57.50	-16.88	641.51	641.51
A	24+67.50	-16.88	641.53	641.60
B	24+77.50	-16.88	641.55	641.67
C	24+87.50	-16.88	641.56	641.71
D	24+97.50	-16.88	641.56	641.71
E	25+07.50	-16.88	641.56	641.67
F	25+17.50	-16.88	641.55	641.61
℄ of E. Abut.	25+25.50	-16.88	641.54	641.54
Bk. of E. Abut.	25+26.75	-16.88	641.54	641.54

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	-10.13	641.64	641.64
℄ of W. Abut.	24+57.50	-10.13	641.64	641.64
A	24+67.50	-10.13	641.66	641.73
B	24+77.50	-10.13	641.68	641.80
C	24+87.50	-10.13	641.69	641.84
D	24+97.50	-10.13	641.69	641.84
E	25+07.50	-10.13	641.69	641.80
F	25+17.50	-10.13	641.68	641.74
℄ of E. Abut.	25+25.50	-10.13	641.67	641.67
Bk. of E. Abut.	25+26.75	-10.13	641.67	641.67

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	-3.38	641.75	641.75
℄ of W. Abut.	24+57.50	-3.38	641.75	641.75
A	24+67.50	-3.38	641.77	641.84
B	24+77.50	-3.38	641.79	641.91
C	24+87.50	-3.38	641.79	641.95
D	24+97.50	-3.38	641.80	641.94
E	25+07.50	-3.38	641.79	641.91
F	25+17.50	-3.38	641.79	641.84
℄ of E. Abut.	25+25.50	-3.38	641.77	641.77
Bk. of E. Abut.	25+26.75	-3.38	641.77	641.77

℄ ROADWAY, P.G.L. & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	0.00	641.80	641.80
℄ of W. Abut.	24+57.50	0.00	641.80	641.80
A	24+67.50	0.00	641.82	641.89
B	24+77.50	0.00	641.84	641.96
C	24+87.50	0.00	641.85	642.00
D	24+97.50	0.00	641.85	642.00
E	25+07.50	0.00	641.85	641.96
F	25+17.50	0.00	641.84	641.89
℄ of E. Abut.	25+25.50	0.00	641.83	641.83
Bk. of E. Abut.	25+26.75	0.00	641.82	641.82

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	3.38	641.75	641.75
℄ of W. Abut.	24+57.50	3.38	641.75	641.75
A	24+67.50	3.38	641.77	641.84
B	24+77.50	3.38	641.79	641.91
C	24+87.50	3.38	641.79	641.95
D	24+97.50	3.38	641.80	641.94
E	25+07.50	3.38	641.79	641.91
F	25+17.50	3.38	641.79	641.84
℄ of E. Abut.	25+25.50	3.38	641.77	641.77
Bk. of E. Abut.	25+26.75	3.38	641.77	641.77

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	10.13	641.64	641.64
℄ of W. Abut.	24+57.50	10.13	641.64	641.64
A	24+67.50	10.13	641.66	641.73
B	24+77.50	10.13	641.68	641.80
C	24+87.50	10.13	641.69	641.84
D	24+97.50	10.13	641.69	641.84
E	25+07.50	10.13	641.69	641.80
F	25+17.50	10.13	641.68	641.74
℄ of E. Abut.	25+25.50	10.13	641.67	641.67
Bk. of E. Abut.	25+26.75	10.13	641.67	641.67

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	24+56.25	16.88	641.51	641.51
℄ of W. Abut.	24+57.50	16.88	641.51	641.51
A	24+67.50	16.88	641.53	641.60
B	24+77.50	16.88	641.55	641.67
C	24+87.50	16.88	641.56	641.71
D	24+97.50	16.88	641.56	641.71
E	25+07.50	16.88	641.56	641.67
F	25+17.50	16.88	641.55	641.61
℄ of E. Abut.	25+25.50	16.88	641.54	641.54
Bk. of E. Abut.	25+26.75	16.88	641.54	641.54

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TOP OF SLAB ELEVATIONS
STRUCTURE NO. 053-0190
SHEET NO. 6 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	36
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

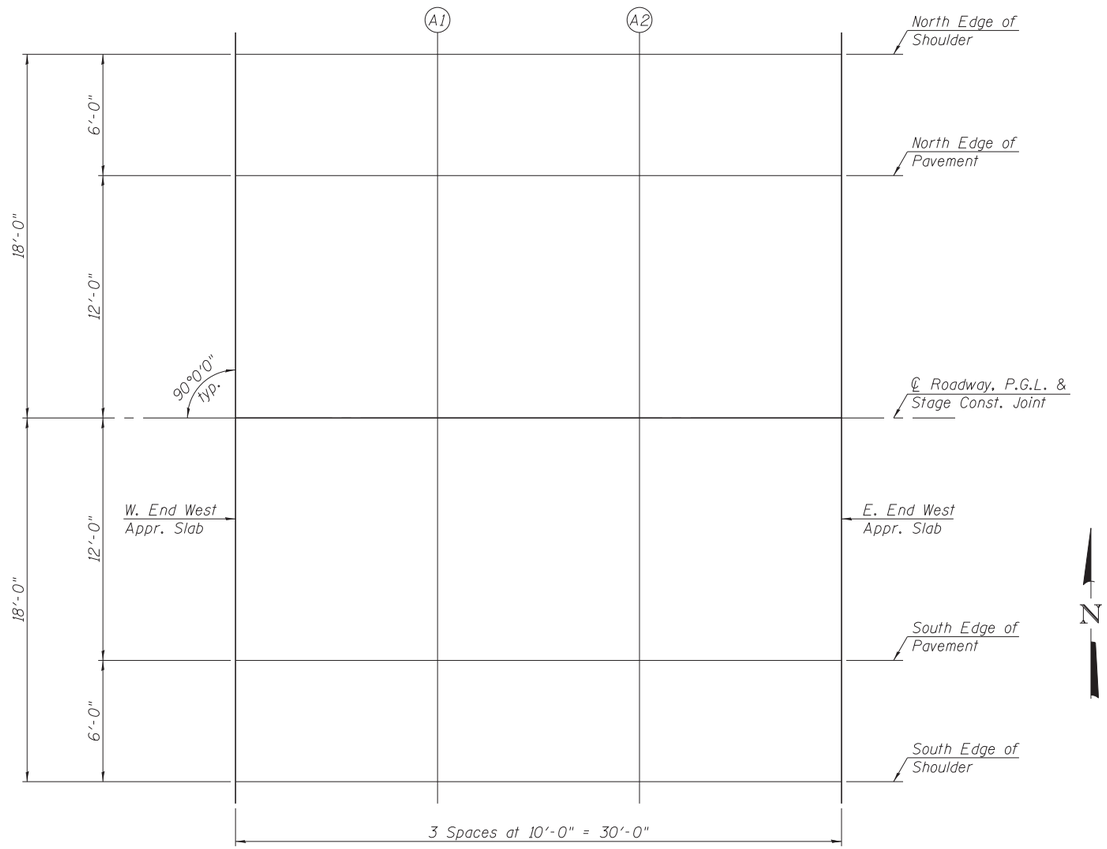
Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	24+26.25	-18.00	641.38
A1	24+36.25	-18.00	641.42
A2	24+46.25	-18.00	641.46
E. End West Appr. Slab	24+56.25	-18.00	641.49

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	24+26.25	-12.00	641.51
A1	24+36.25	-12.00	641.55
A2	24+46.25	-12.00	641.58
E. End West Appr. Slab	24+56.25	-12.00	641.61

℄ ROADWAY, P.G.L. & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	24+26.25	0.00	641.70
A1	24+36.25	0.00	641.74
A2	24+46.25	0.00	641.77
E. End West Appr. Slab	24+56.25	0.00	641.80



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	24+26.25	12.00	641.51
A1	24+36.25	12.00	641.55
A2	24+46.25	12.00	641.58
E. End West Appr. Slab	24+56.25	12.00	641.61

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End West Appr. Slab	24+26.25	18.00	641.38
A1	24+36.25	18.00	641.42
A2	24+46.25	18.00	641.46
E. End West Appr. Slab	24+56.25	18.00	641.49

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TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 053-0190
SHEET NO. 7 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	37
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

NORTH EDGE OF SHOULDER

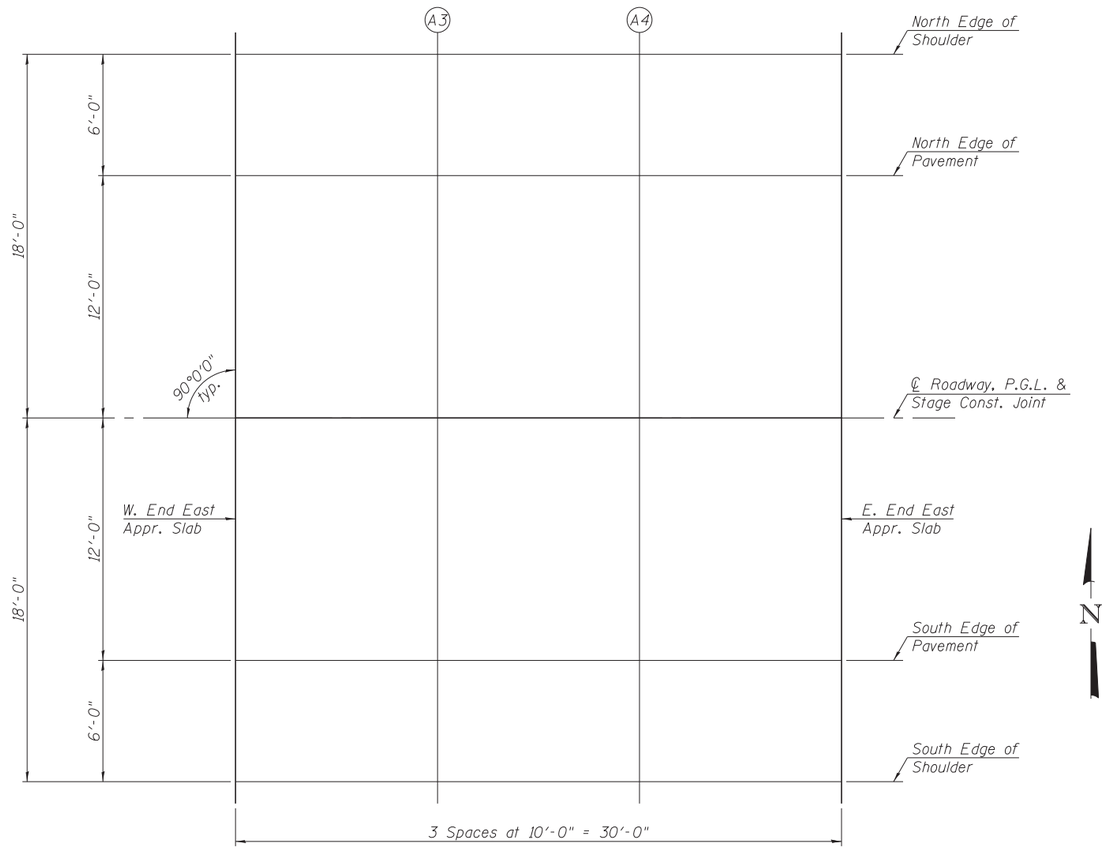
Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	25+26.75	-18.00	641.51
A3	25+36.75	-18.00	641.49
A4	25+46.75	-18.00	641.46
E. End East Appr. Slab	25+56.75	-18.00	641.43

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	25+26.75	-12.00	641.64
A3	25+36.75	-12.00	641.62
A4	25+46.75	-12.00	641.59
E. End East Appr. Slab	25+56.75	-12.00	641.56

℄ ROADWAY, P.G.L. & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	25+26.75	0.00	641.82
A3	25+36.75	0.00	641.80
A4	25+46.75	0.00	641.78
E. End East Appr. Slab	25+56.75	0.00	641.74



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	25+26.75	12.00	641.64
A3	25+36.75	12.00	641.62
A4	25+46.75	12.00	641.59
E. End East Appr. Slab	25+56.75	12.00	641.56

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End East Appr. Slab	25+26.75	18.00	641.51
A3	25+36.75	18.00	641.49
A4	25+46.75	18.00	641.46
E. End East Appr. Slab	25+56.75	18.00	641.43

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TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 053-0190

SHEET NO. 8 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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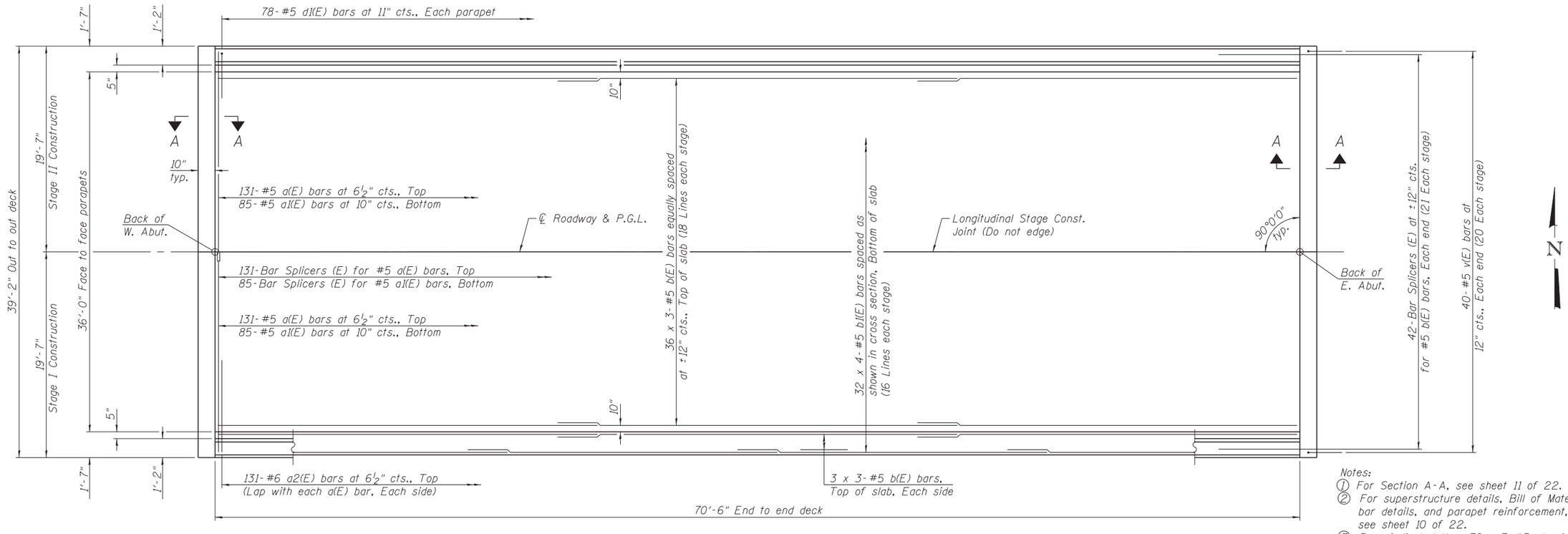
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

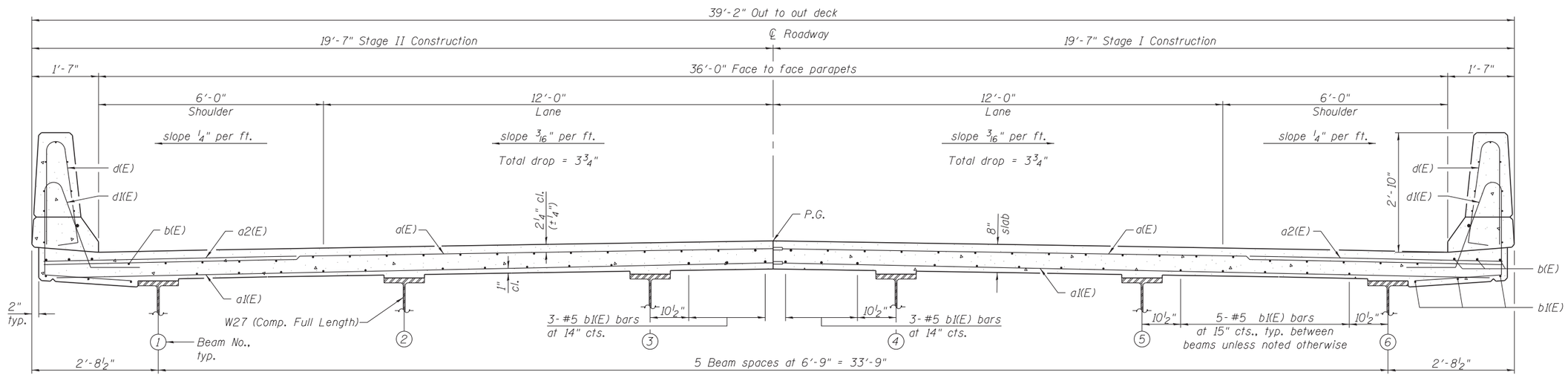


PLAN

Notes:
1. For Section A-A, see sheet 11 of 22.
2. For superstructure details, Bill of Material, bar details, and parapet reinforcement, see sheet 10 of 22.
3. Bars indicated thus 36 x 3-#5 etc. indicates 36 lines of bars with 3 lengths per line.
4. For details of Bar Splicers, see sheet 19 of 22.

MINIMUM BAR LAP

#5 bar = 2'-7"



CROSS SECTION

(Looking East)

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SUPERSTRUCTURE
STRUCTURE NO. 053-0190
SHEET NO. 9 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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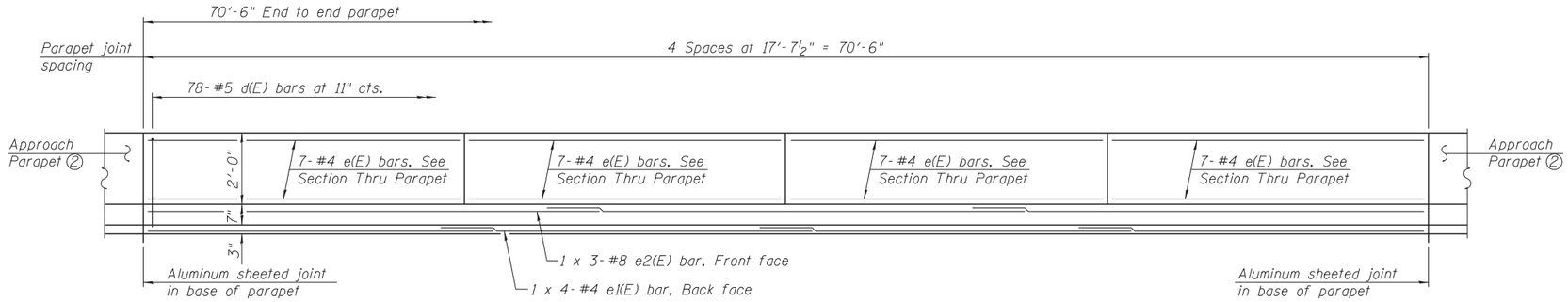
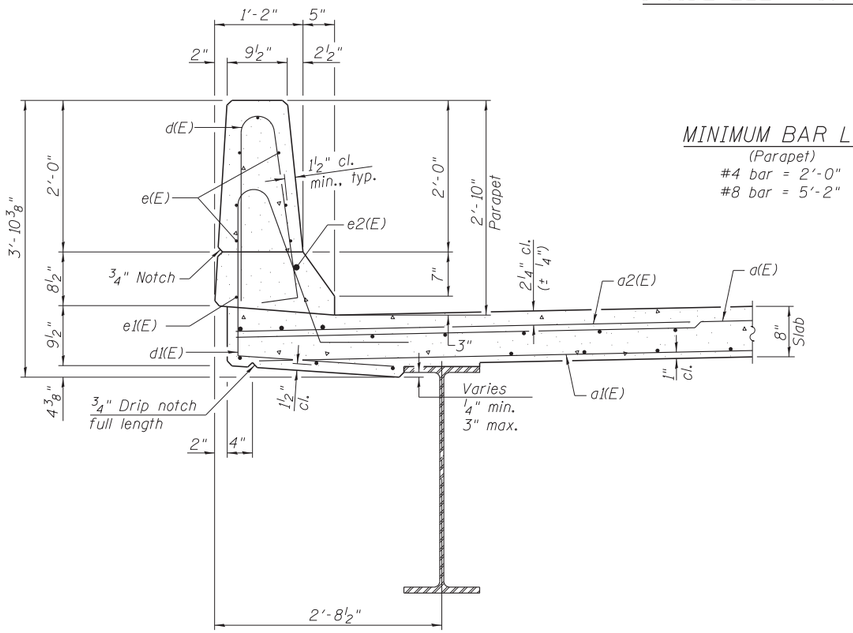
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



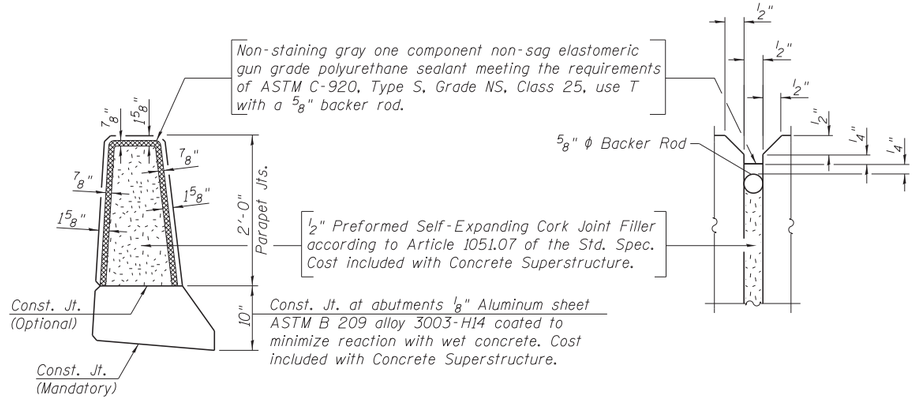
INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

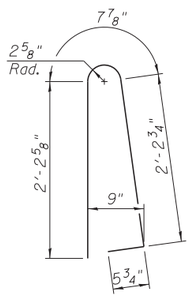


PARAPET JOINT DETAILS

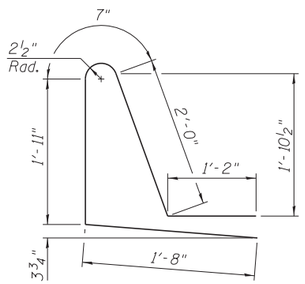
Notes:
① Bars indicated thus 1 x 4-#4 etc. indicates 1 line of bars with 4 lengths per line.
② For Approach Parapet details, see sheet 13 of 22.

SUPERSTRUCTURE BILL OF MATERIAL

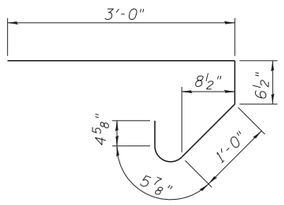
Bar	No.	Size	Length	Shape
d(E)	262	#5	19'-1"	
d1(E)	170	#5	18'-9"	
d2(E)	262	#6	6'-6"	
b(E)	126	#5	25'-2"	
b1(E)	128	#5	19'-6"	
d(E)	156	#5	5'-7"	
d1(E)	156	#5	7'-4"	
e(E)	56	#4	17'-3"	
e1(E)	8	#4	19'-1"	
e2(E)	6	#8	26'-10"	
m(E)	20	#6	19'-3"	
m1(E)	24	#6	8'-8"	
m2(E)	8	#6	6'-4"	
m3(E)	4	#6	2'-4"	
s(E)	116	#5	5'-5"	
s1(E)	72	#4	8'-2"	
v(E)	80	#5	3'-10"	
Concrete Superstructure			Cu. Yd.	110.6
Reinforcement Bars, Epoxy Coated			Pound	22,640



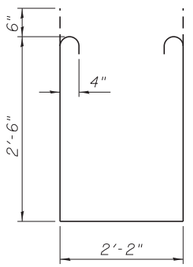
BAR d(E)



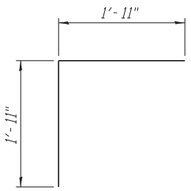
BAR d1(E)



BAR s(E)



BAR s1(E)



BAR v(E)

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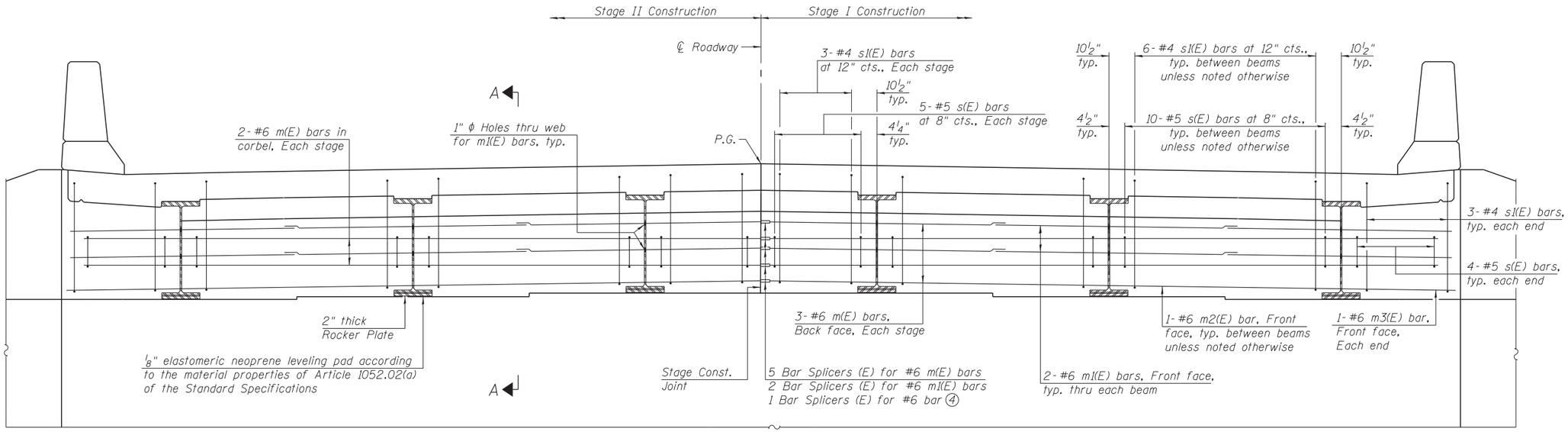
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 10 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	40
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



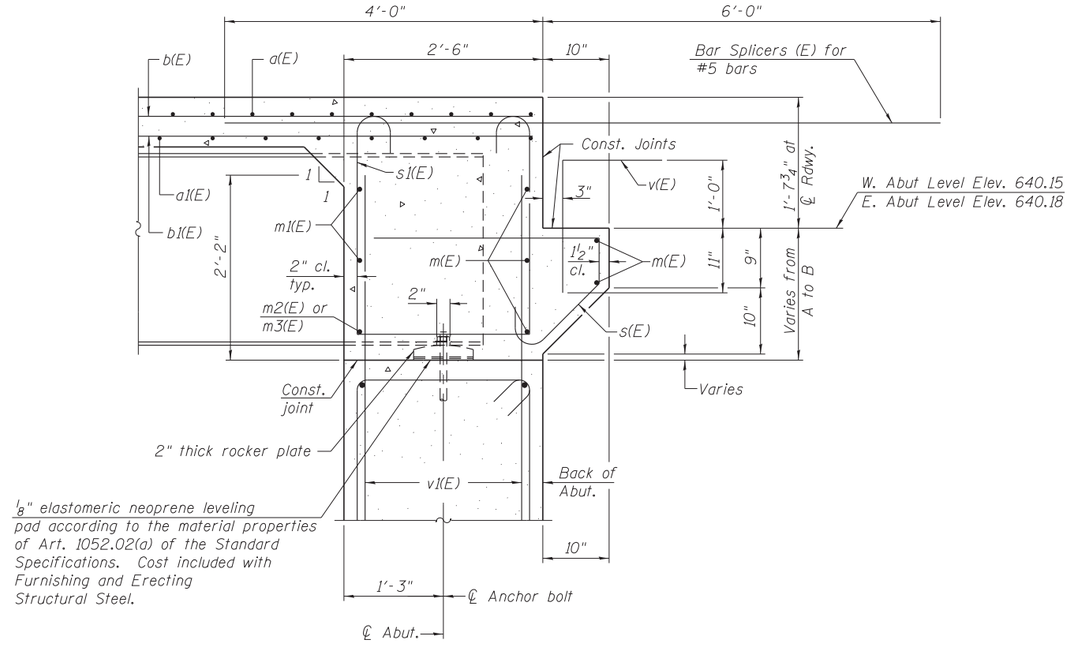
DIAPHRAGM ELEVATION AT ABUTMENT

(Looking East)

Notes:
① Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 22.
② Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 22.
③ For details of bars s(E) and s1(E), see sheet 10 of 22.
④ Use bar splicer in place of m2(E) bar between beams at stage construction line.

MINIMUM BAR LAP

#6 bar = 3'-4"



SECTION A-A

DIMENSION TABLE

Location	A	B
W. Abut.	1'-7⅜"	1'-10⅛"
E. Abut.	1'-7⅜"	1'-10¼"

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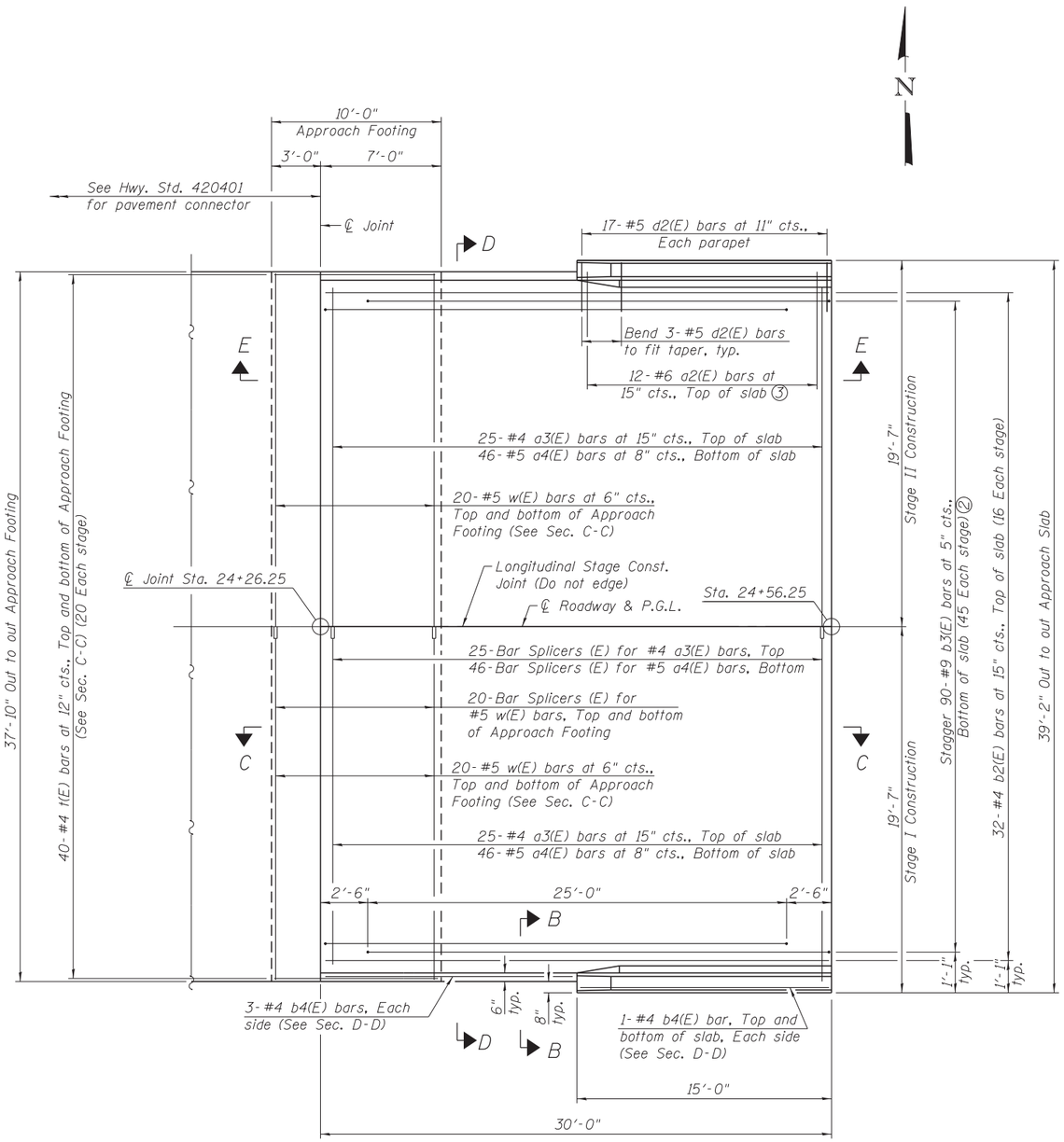
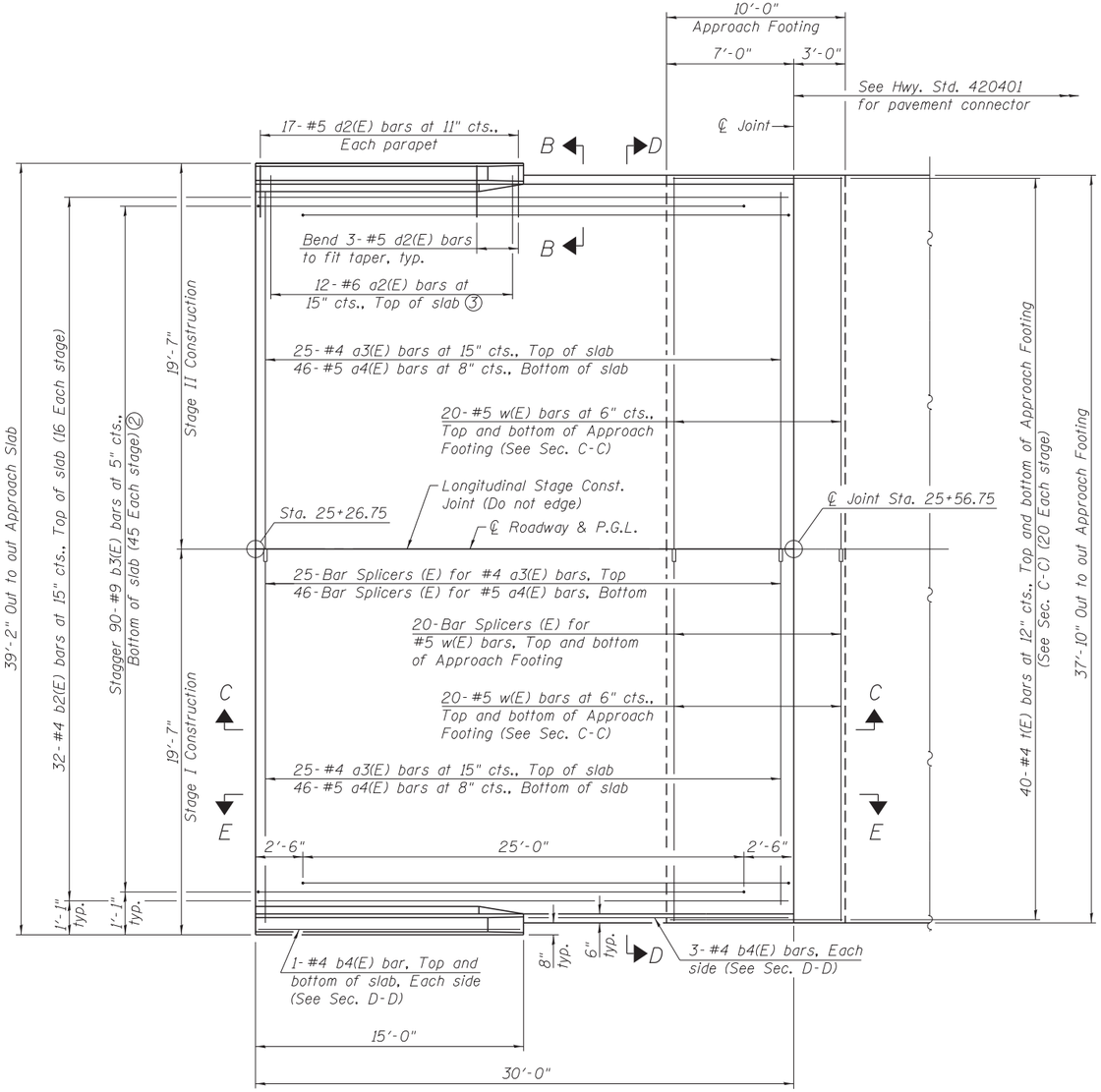
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 11 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	41
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



WEST APPROACH PLAN



EAST APPROACH PLAN

Notes:
① For parapet reinforcement, Sections C-C & D-D, and Views B-B & E-E, see sheet 13 of 22.
② Tilt #9 b3(E) bars as required to maintain clearance.
③ Space between a3(E) bars, typical each parapet.

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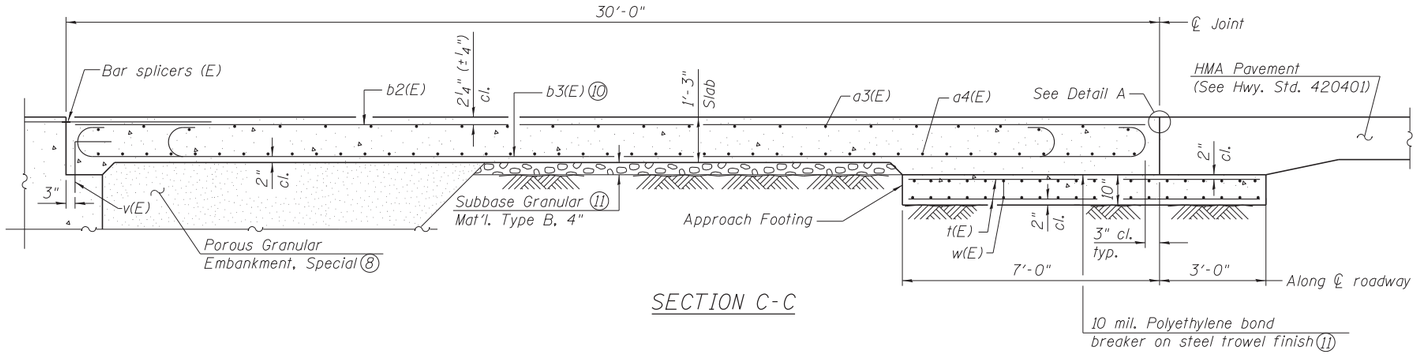
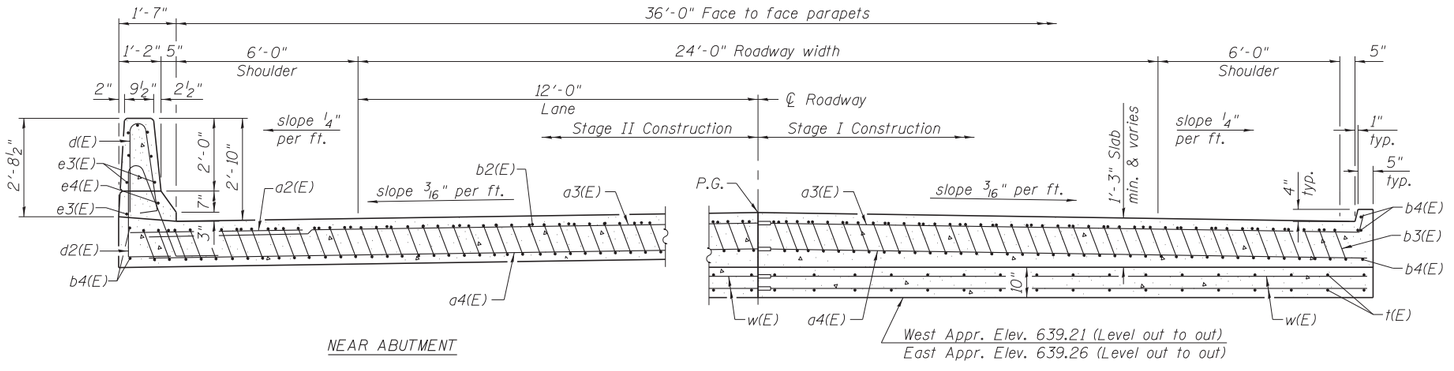
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 12 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR &(113 BR-1)BR	LIVINGSTON	123	42
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

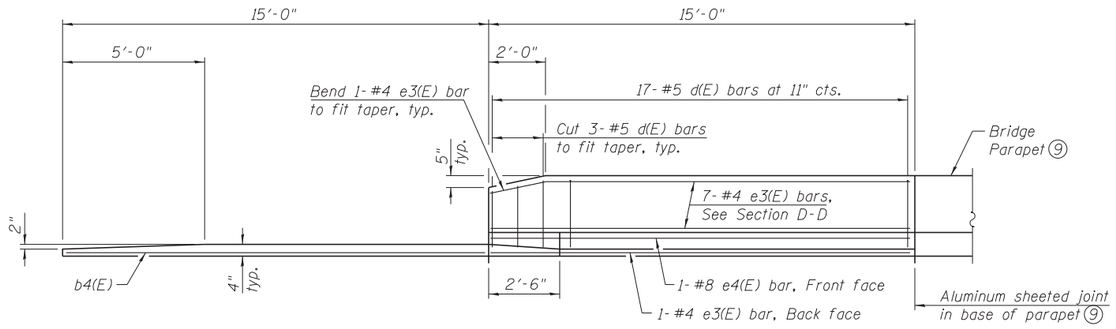


SECTION C-C

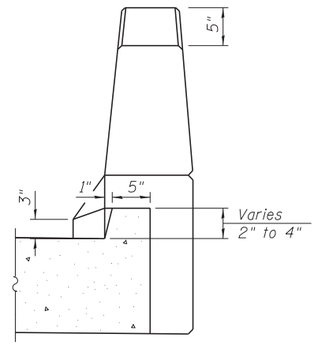


SECTION D-D

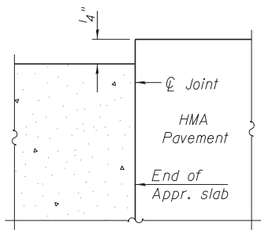
(See Plan for dimensions not shown)



VIEW E-E

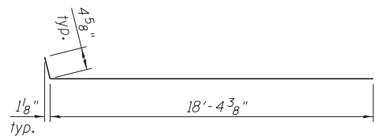


VIEW B-B

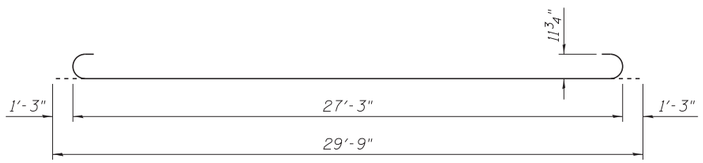


FLEXIBLE PAVEMENT

DETAIL A



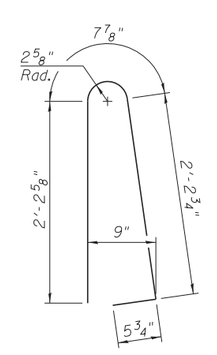
BAR a3(E)



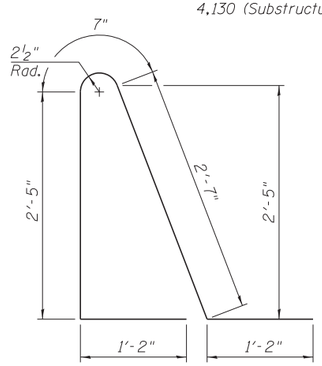
BAR b3(E)

Notes:

1. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
2. Approach footing concrete shall be paid for as Concrete Structures.
3. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
4. For v(E) bar details, see sheet 10 of 22.
5. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
6. For bar splicer details, see sheet 19 of 22.
7. Cost of excavation for approach footing included with Concrete Structures.
8. For Porous Granular Embankment, Special and drainage treatment details, see sheet 2 of 22.
9. For additional parapet details, see sheet 10 of 22.
10. Tilt #9 b3(E) bars as required to maintain clearance.
11. Cost included with Concrete Superstructure.
12. Calculated weight of Reinforcement Bars, Epoxy Coated = 26,390 (Superstructure) 4,130 (Substructure)



BAR d(E)



BAR d2(E)

TWO APPROACHES

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	
a3(E)	100	#4	18'-9"	
a4(E)	184	#5	18'-7"	
b2(E)	64	#4	29'-8"	
b3(E)	180	#9	29'-9"	
b4(E)	20	#4	14'-8"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e3(E)	32	#4	14'-8"	
e4(E)	4	#8	14'-8"	
t(E)	160	#4	9'-8"	
w(E)	160	#5	18'-7"	
Concrete Structures			Cu. Yd.	23.3
Concrete Superstructure			Cu. Yd.	120.2
(12) Reinforcement Bars, Epoxy Coated			Pound	30,520

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BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 13 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	43
		CONTRACT NO. 66832		
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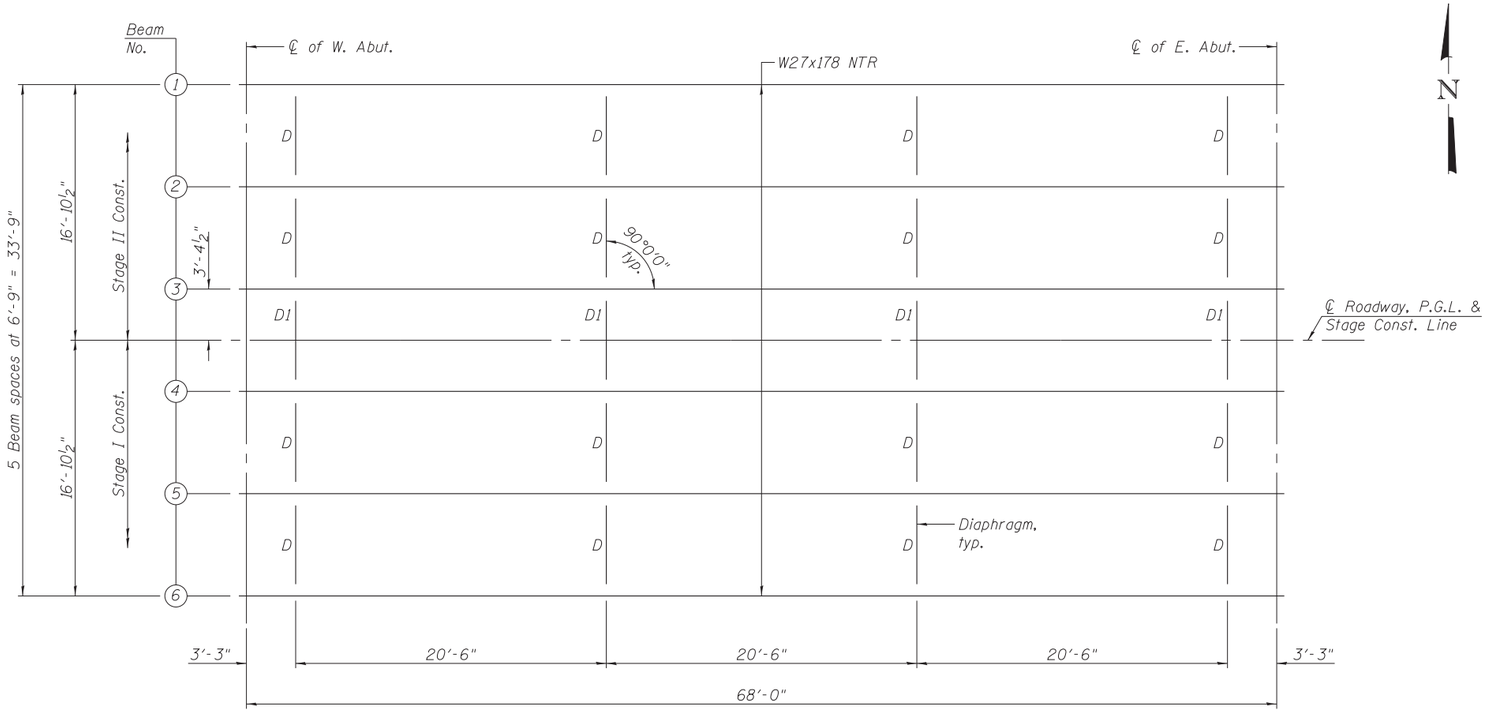
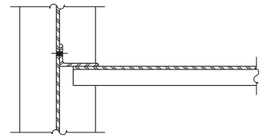
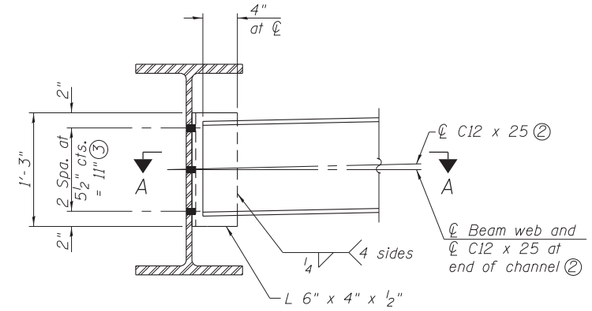


PLAN

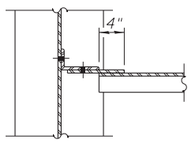


SECTION A-A

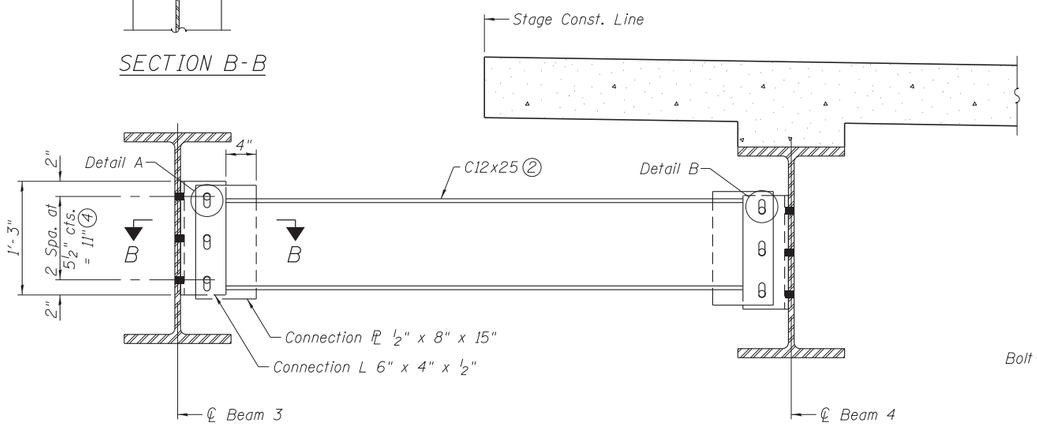


INTERIOR DIAPHRAGM D

(16 Required)

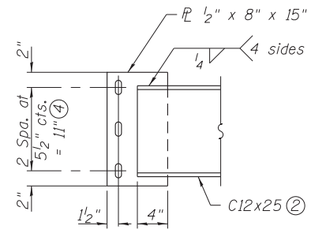


SECTION B-B

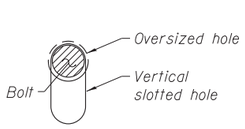


INTERIOR DIAPHRAGM D1 ④⑤

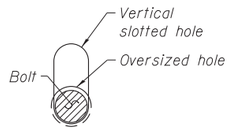
(4 Required)



CONNECTION ℙ DETAIL ④



DETAIL A ④⑤



DETAIL B ④⑤

Notes:

① Two hardened washers required for each set of oversized holes.

② Alternate channels C12x30 are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.

③ $^{3}/_{4}$" ϕ HS bolts. $^{15}/_{16}$" ϕ holes.

④ Use $^{3}/_{4}$" ϕ HS bolts. Provide $^{13}/_{16}$" x $1\,^{7}/_{8}$" vertical slotted holes in connection plates attached to channel diaphragms only. Provide $^{15}/_{16}$" ϕ oversized holes in the beam webs and both legs of the connection angle. Two hardened washers required for each set of oversized holes. Two $^{5}/_{16}$" structural plate washers required for each set of slotted holes.

⑤ The Fabricator shall detail connection plate locations on channel to allow for differential deflection during Stage II deck and parapet pour. Before the deck and parapet concrete is poured, the bolts in the Beam 3 connection shall be positioned at the top of the slotted holes and the bolts in the Beam 4 connection shall be positioned at the bottom of the slotted holes. The bolts shall be finger tight until the Stage II deck and parapet concrete is poured, allowing the Stage II beams to deflect vertically without stressing the D1 diaphragms or Stage I beams. The bolts shall be fully tightened after the Stage II deck and parapet concrete is poured. The diaphragm connection shall be detailed so that the centerline of beam web and centerline of diaphragm channel align in their final position.

⑥ All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.

⑦ Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

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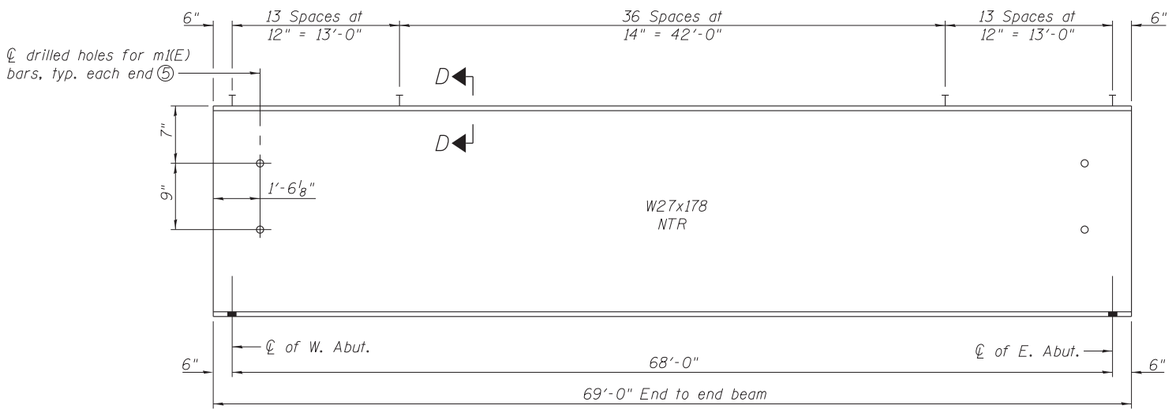
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 053-0190
SHEET NO. 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	44
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



BEAM ELEVATION

(6 Required)

TOP OF BEAM ELEVATIONS*

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ of W. Abut.	640.80	640.94	641.04	641.04	640.94	640.80
℄ of E. Abut.	640.83	640.96	641.07	641.07	640.96	640.83

*For fabrication only.

INTERIOR BEAM MOMENT TABLE		
		0.5 Span
I_s	(in^4)	7,020
$I_c(n)$	(in^4)	17,132
$I_c(3n)$	(in^4)	12,426
S_s	(in^3)	505
$S_c(n)$	(in^3)	706
$S_c(3n)$	(in^3)	637
DC1	(k/')	0.881
M_{DC1}	('k)	508.2
DC2	(k/')	0.150
M_{DC2}	('k)	86.5
DW	(k/')	0.300
M_{DW}	('k)	173.1
M_{L+IM}	('k)	975.5
M_u (Strength I)	('k)	2,710.1
$\phi_f M_n$	('k)	3,291.9
f_s DC1	(ksi)	12.08
f_s DC2	(ksi)	1.63
f_s DW	(ksi)	3.26
f_s (L+IM)	(ksi)	16.58
f_s (Service II)	(ksi)	38.52
$0.95R_hF_{yf}$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	-
$\phi_f F_n$	(ksi)	-
V_f	(k)	23.9

INTERIOR GIRDER REACTION TABLE		
		Abutments
R_{DC1}	(k)	30.0
R_{DC2}	(k)	5.1
R_{DW}	(k)	10.2
R_{L+IM}	(k)	75.7
R_{Total}	(k)	121.0

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	24

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

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.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

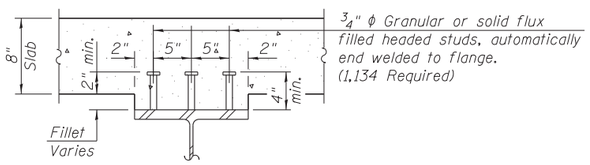
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_{sL+IM}$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

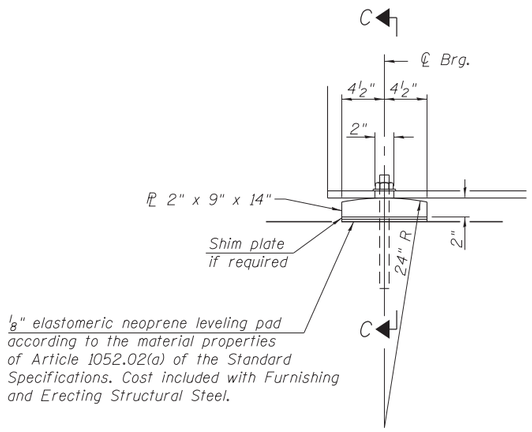
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

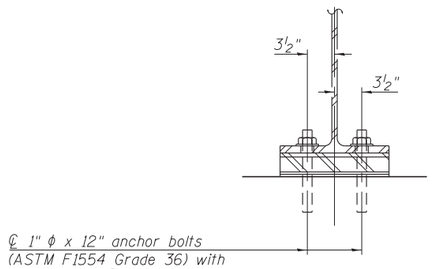
V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION D-D



ELEVATION AT ABUTMENT



SECTION C-C

FIXED BEARING

(12 Required)

Notes:

1. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
2. Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
3. Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
4. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
5. For hole ϕ, see sheet 11 of 22.

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BEAM AND BEARING DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 15 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	45
		CONTRACT NO. 66832		
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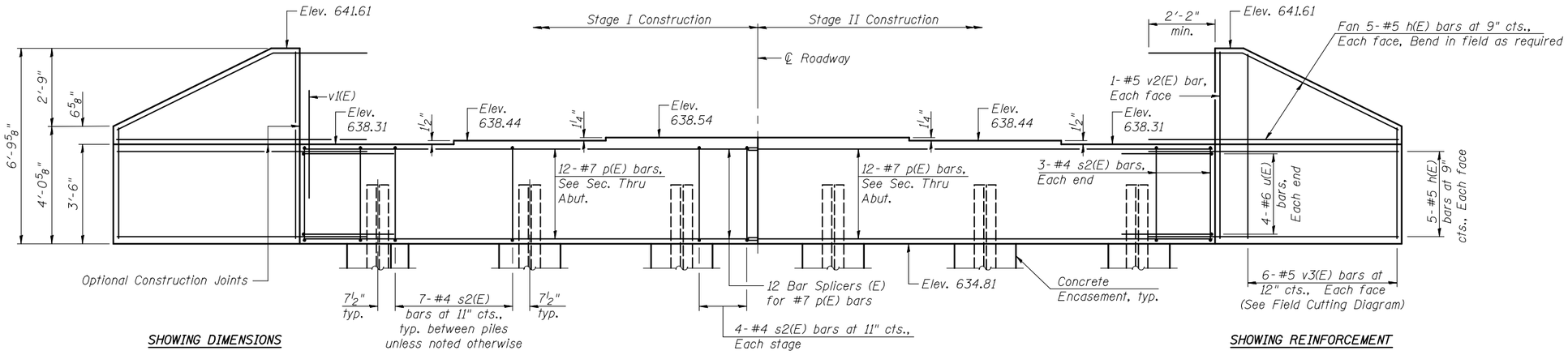
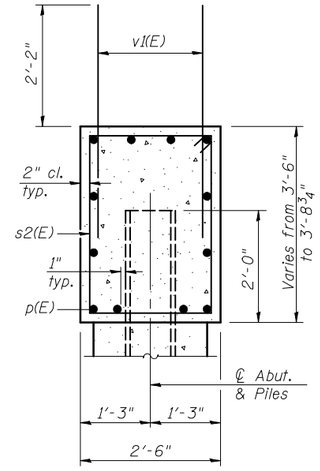
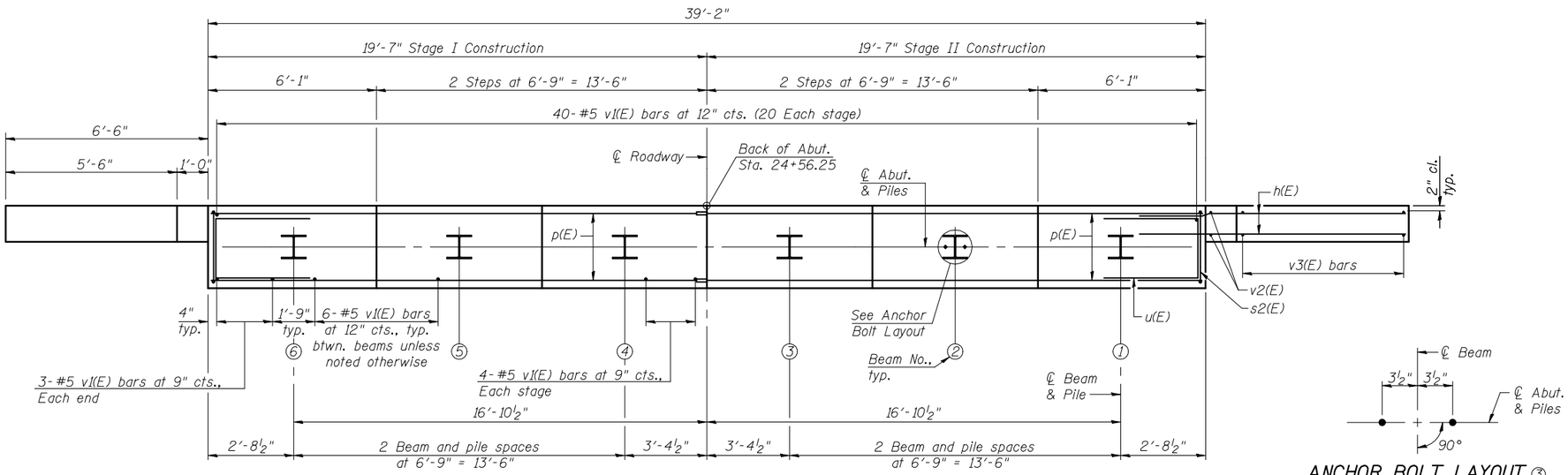


SHOWING DIMENSIONS **SHOWING REINFORCEMENT**

ELEVATION
(Looking West)



SEC. THRU ABUT.



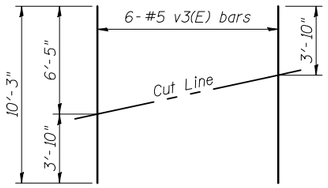
PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#5	8'-6"	——
p(E)	24	#7	19'-3"	——
s2(E)	42	#4	11'-5"	□
u(E)	8	#6	10'-11"	⊐
v1(E)	78	#5	4'-4"	——
v2(E)	4	#5	6'-6"	——
v3(E)	12	#5	10'-3"	——
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	15.9	
Concrete Encasement		Cu. Yd.	2.1	
Reinforcement Bars, Epoxy Coated		Pound	2,260	
Furnishing Steel Piles HP12x53		Foot	100	
Driving Piles		Foot	100	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	6	

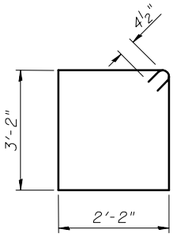
PILE DATA

Type: Steel HP12x53 with pile shoes
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 20'
No. Production Piles: 5
No. Test Piles: 1

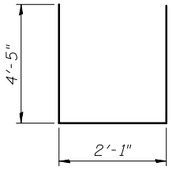


FIELD CUTTING DIAGRAM

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



BAR s2(E)



BAR u(E)

ANCHOR BOLT LAYOUT ③

Notes:
① Pour steps monolithically with cap.
② For details of piles and Concrete Encasement, see sheet 18 of 22.
③ Space reinforcement in cap to miss anchor bolts.
④ For details of Bar Splicers, see sheet 19 of 22.

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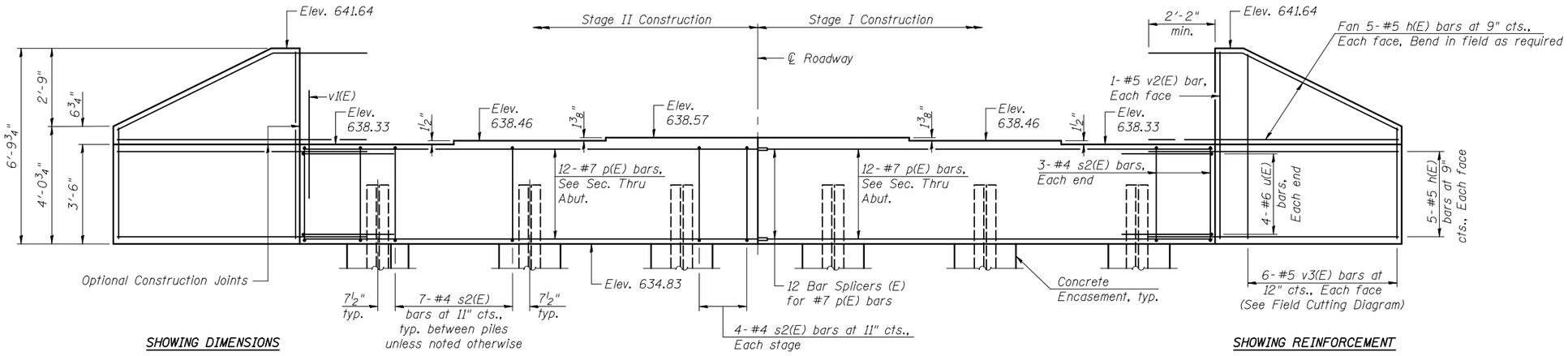
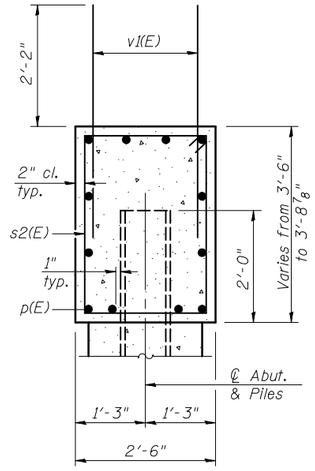
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 16 OF 22 SHEETS

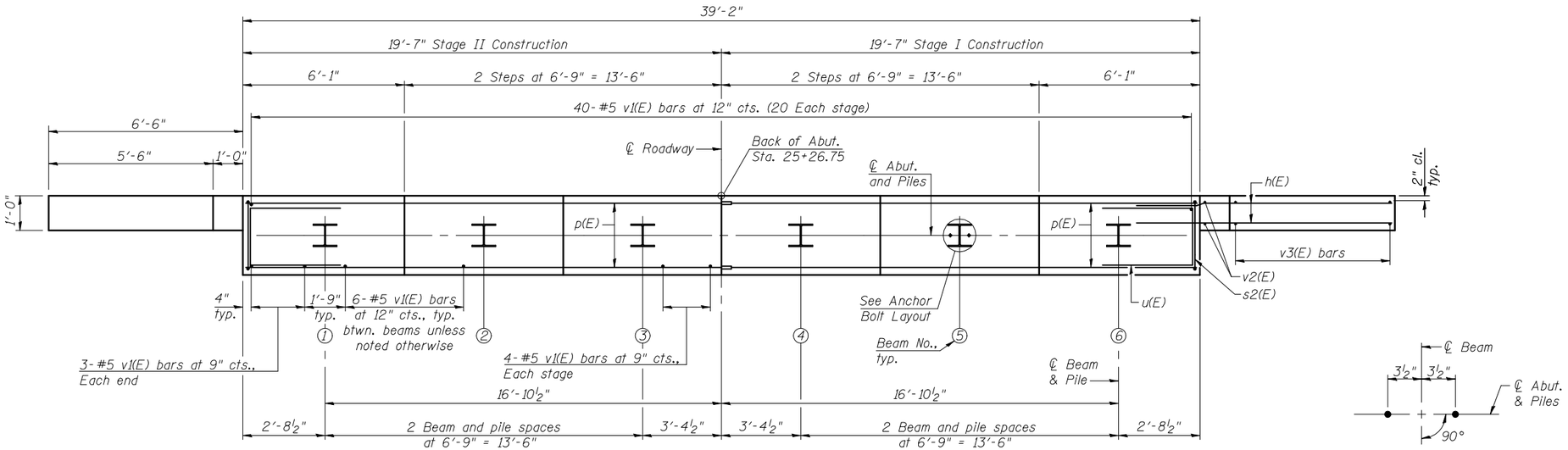
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR	LIVINGSTON	123	46
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



ELEVATION
(Looking East)



SEC. THRU ABUT.



PLAN

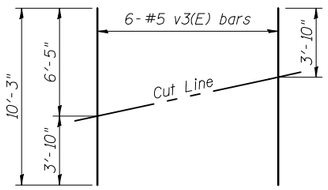
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	40	#5	8'-6"	———
p(E)	24	#7	19'-3"	———
s2(E)	42	#4	11'-5"	□
u(E)	8	#6	10'-11"	▭
v1(E)	78	#5	4'-4"	———
v2(E)	4	#5	6'-6"	———
v3(E)	12	#5	10'-3"	———
Structure Excavation		Cu. Yd.	95	
Concrete Structures		Cu. Yd.	15.9	
Concrete Encasement		Cu. Yd.	2.1	
Reinforcement Bars, Epoxy Coated		Pound	2,260	
Furnishing Steel Piles HP12x53		Foot	130	
Driving Piles		Foot	130	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	6	

ANCHOR BOLT LAYOUT ③

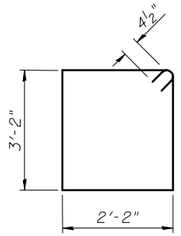
PILE DATA

Type: Steel HP12x53 with pile shoes
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 26'
No. Production Piles: 5
No. Test Piles: 1

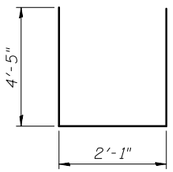


FIELD CUTTING DIAGRAM

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



BAR s2(E)



BAR u(E)

Notes:
① Pour steps monolithically with cap.
② For details of piles and Concrete Encasement, see sheet 18 of 22.
③ Space reinforcement in cap to miss anchor bolts.
④ For details of Bar Splicers, see sheet 19 of 22.

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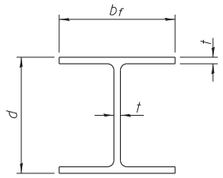
DEPARTMENT OF TRANSPORTATION

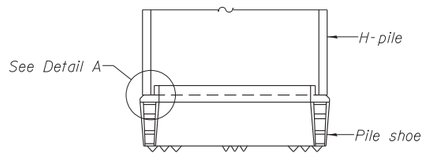
EAST ABUTMENT DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 17 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR	LIVINGSTON	123	47
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

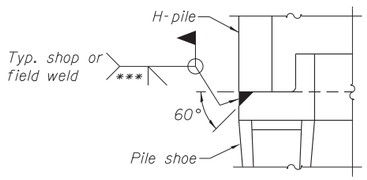


STEEL PILE TABLE

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

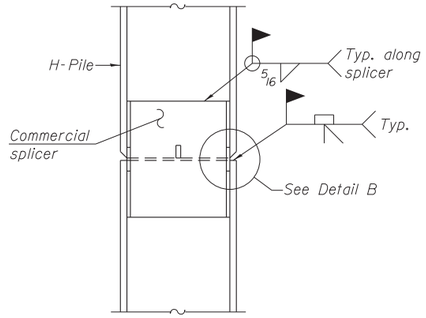


ELEVATION

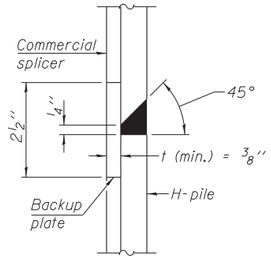


DETAIL A

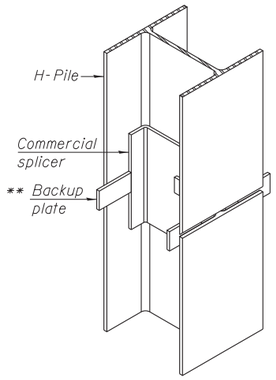
H-PILE SHOE ATTACHMENT



ELEVATION

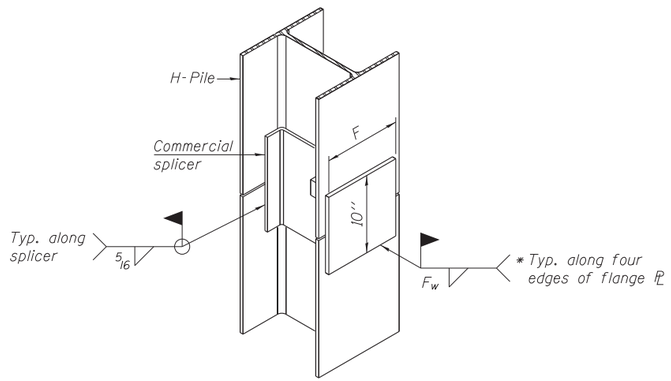


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



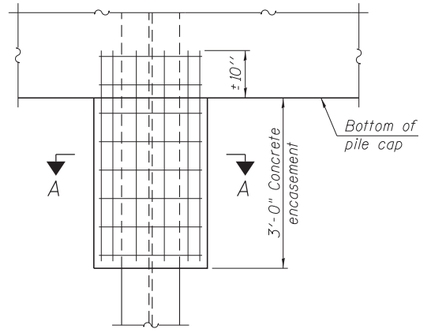
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

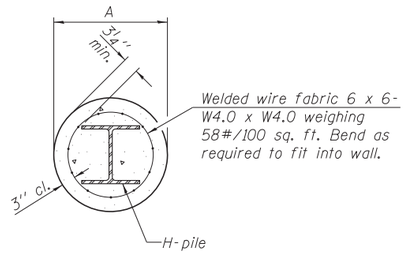
* Interrupt welds 1/4" from end of web and/or each flange.

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

*** Weld size per pile shoe manufacturer (5/16" min.).



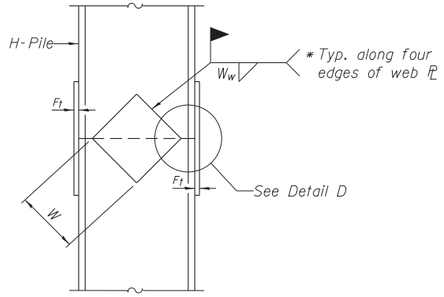
ELEVATION



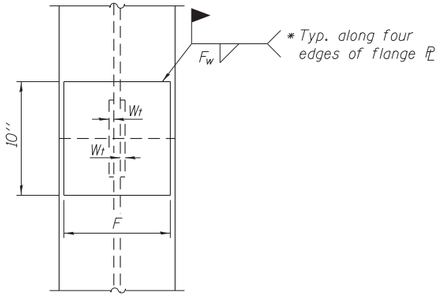
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

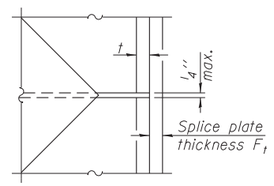
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

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

WELDED PLATE FIELD SPLICE

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

F-HP 1-27-12

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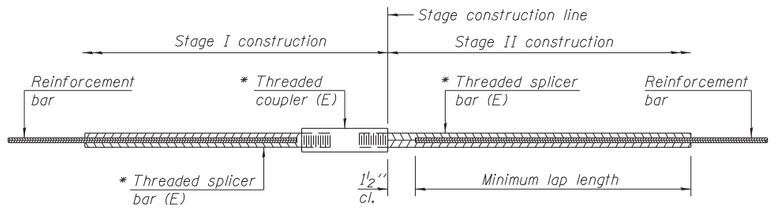
HP PILE DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 18 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	48
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

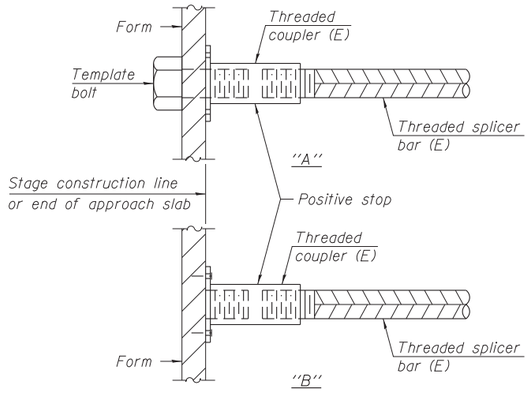
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

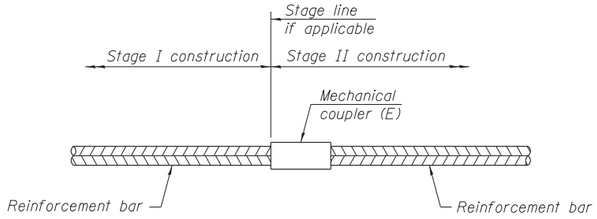
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	216	Table 3
Abutment Diaphragm	#6	16	Table 3
Top of Appr. Slab	#4	50	Table 4
Bottom of Appr. Slab	#5	92	Table 3
Appr. Footing	#5	80	Table 3
Abutment Cap	#7	24	Table 4



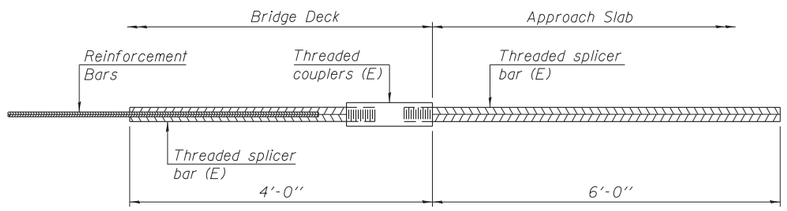
INSTALLATION AND SETTING METHODS

"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.



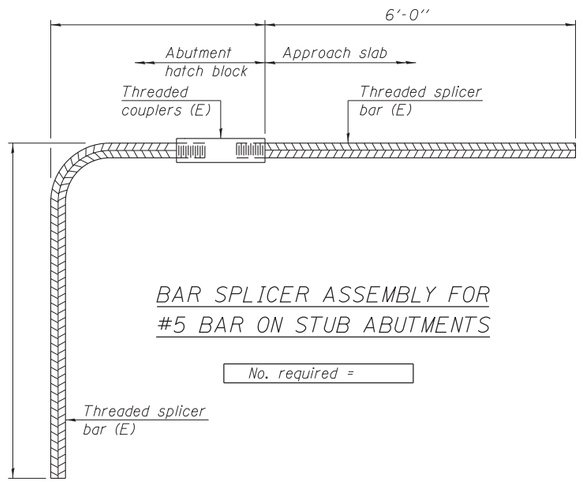
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 84



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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 and mechanical splicers for alternatives.

BSD-1 1-27-12

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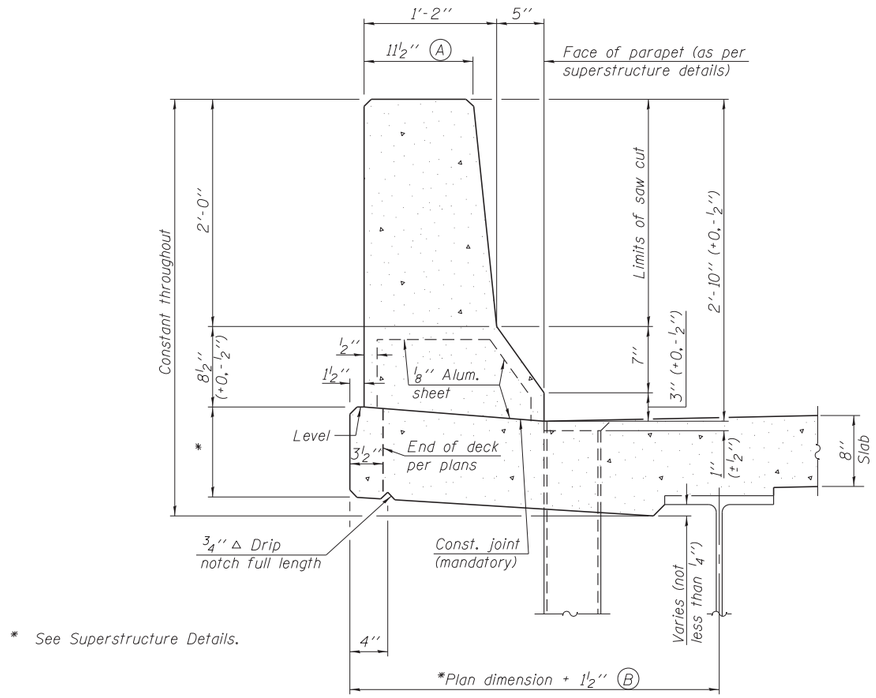
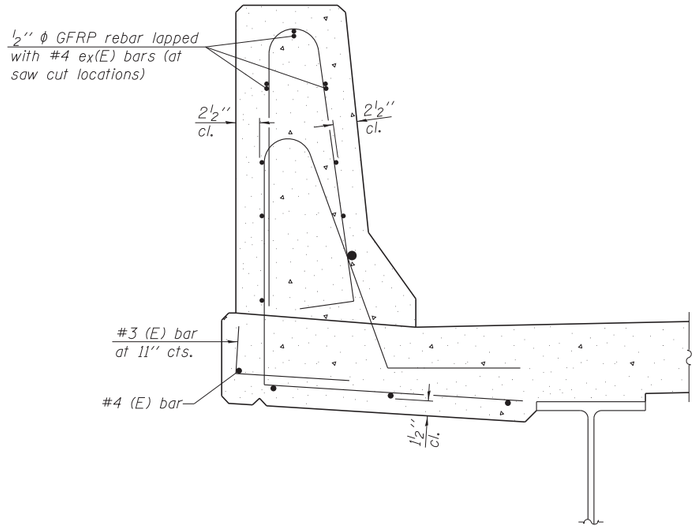
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 053-0190
SHEET NO. 19 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	49
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



* See Superstructure Details.

SECTION
(Showing dimensions)



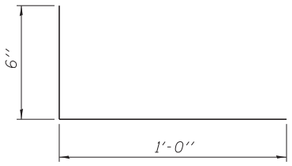
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

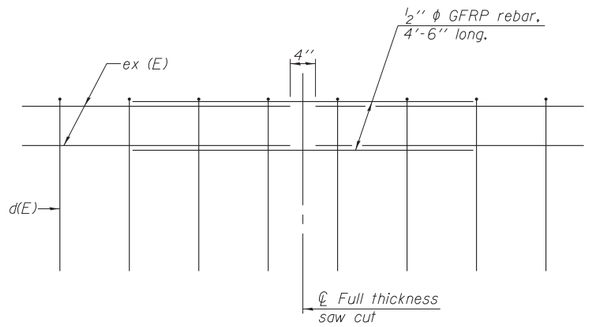
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. of parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

SFP-34 1-27-12

OATES ASSOCIATES Engineering + Architecture
ILLINOIS: Eastport Business Center 1, 101 Lanter Court, Suite 1, Collinsville, IL 62234, tel 618.345.2200, fax 618.345.7233
MISSOURI: Ladeide Gas Building, 720 Olive, Suite 1660, St. Louis, MO 63101, tel 314.588.8361, fax 314.588.9806
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PLOT DATE =	CHECKED -	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 053-0190
SHEET NO. 20 OF 22 SHEETS

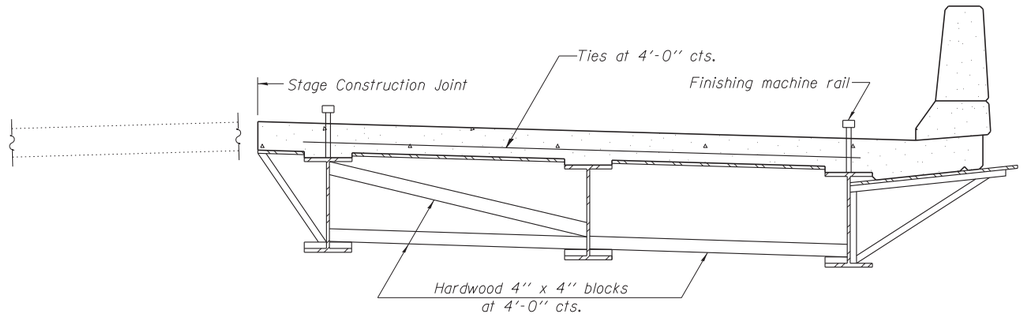
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR &)113 BR-1)BR	LIVINGSTON	123	50
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

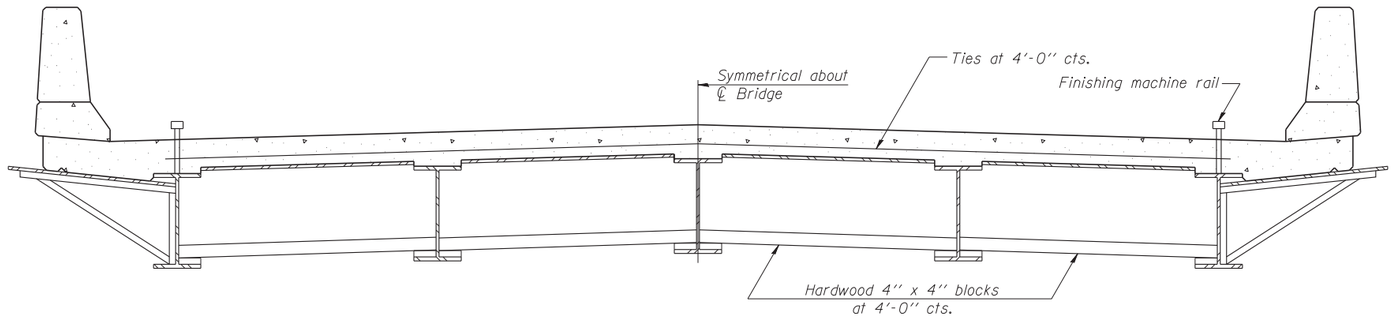
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

SB-1 7-1-10

OATES ASSOCIATES
Engineering + Architecture
ILLINOIS
Eastport Business Center 1
100 Lamar Court, Suite 1
Collinsville, IL 62234
tel 618.345.2200
fax 618.345.7233
MISSOURI
Ladede Gas Building
720 Olive, Suite 1600
St. Louis, MO 63101
tel 314.588.8361
fax 314.588.9606
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER STRUCTURE NO. 053-0190

SHEET NO. 21 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	51
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 3/4/81

ROUTE FA 681 (IL 116) DESCRIPTION IL 116 over Smith Branch LOGGED BY F. Pickard

SECTION 113-BR LOCATION E 1/2, SEC. 23, TWP. 28N, RNG. 5E

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 053-0159
Station 24+93

BORING NO. 1 (East Abut.)
Station 25+33
Offset 10.00ft Rt.
Ground Surface Elev. 640.70 ft

Surface Water Elev. ft
Stream Bed Elev. ft

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

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Medium, Brown, Silty Clay Loam Fill				
	638.70			
Medium, Brown, Sandy Loam Fill		2		
		1	0.8	20.0
		2	P	
	636.70			
Stiff, Dark Brown, Silty Clay		1		
	-5			
		3	1.1	20.0
		6	S	
	634.20			
Medium, Sight Gray, Silty Clay		1		
		2	0.6	26.0
		1	B	
	631.70			
Stiff, Olive/Gray, Silty Clay Loam		1		
	-10			
		3	1.8	24.0
		3	P	
	629.20			
Very Stiff, Gray, Silty Clay Till		4		
	627.70			
		8	2.7	16.0
Vedium, Yellow, Gravel		10	B	
	626.70			12.0
Hard, Gray, Silty Loam Till		7		
	-15			
		8	5.7	12.0
		7	S	
	624.20			
Stiff, Yellowish/Gray, Sandy Till (with 3/4" Limestone pieces)		13		
		26	1.4	10.0
		28	S	
	621.70			
Very Stiff, Mottled, Silty Clay Loam Till		5		
	-20			
Very Stiff, Mottled, Silty Clay Loam Till *(continued)*		13	3.4	17.0
		19	S	
	619.20			
Hard, Reddish/Gray, Silty Clay Loam Till		12		
		13	4.3	13.0
		18	P	
	-25	7		
		16	4.0	16.0
		32	P	
	614.20			
Hard, Gray, Silty Clay Loam Till		13		
		27	4.5	14.0
		32	P	
	611.70			
Hard, Blueish/Green, Weathered Shale		37		
	-30			
		63/2"		7.0
	606.70			
Limestone	605.70	-35		
End of Boring				
	-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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Page 1 of 1

Date 3/4/81

ROUTE FA 681 (IL 116) DESCRIPTION IL 116 over Smith Branch LOGGED BY F. Pickard

SECTION 113-BR LOCATION E 1/2, SEC. 23, TWP. 28N, RNG. 5E

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 053-0159
Station 24+93

BORING NO. 2 (West Abut.)
Station 24+47
Offset 10.00ft Lt.
Ground Surface Elev. 640.70 ft

Surface Water Elev. ft
Stream Bed Elev. ft

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

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff, Dark Brown, Silty Clay Loam Fill				
	638.70			
Stiff, Black, Silty Clay Loam Fill		1		
		2	1.3	27.0
		3	P	
	636.70			
Medium, Blackish/Gray, Silty Clay Loam		2		
	-5			
		4	0.8	21.0
		4	B	
	634.20			
Medium, Black, Sandy Loam		1		
		2	0.8	23.0
		4	S	
	631.70			
Stiff, Yellowish/Gray, Silty Clay		1		
	-10			
		3	1.2	27.0
		4	B	
	629.20			
Very Stiff, Gray, Silty Clay Loam		3		
		12	2.1	16.0
		22	B	
	-15	15		
		15	3.5	17.0
		36	B	
	624.20			
Dense, Gray to White, Weathered, Shaley Limestone		100/ 2"		
	621.70			
	-20	35		
Hard, Gray, Gravel and Clay		65/5"	4.0 P	13.0
Limestone @ 23.0' *(continued)*	617.70			
End of Boring				
	-25			
	-30			
	-35			
	-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, form 137 (Rev. 8-99)

OATES ASSOCIATES
Engineering + Architecture

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Eastport Business Center 1
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PLOT DATE =	CHECKED -	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

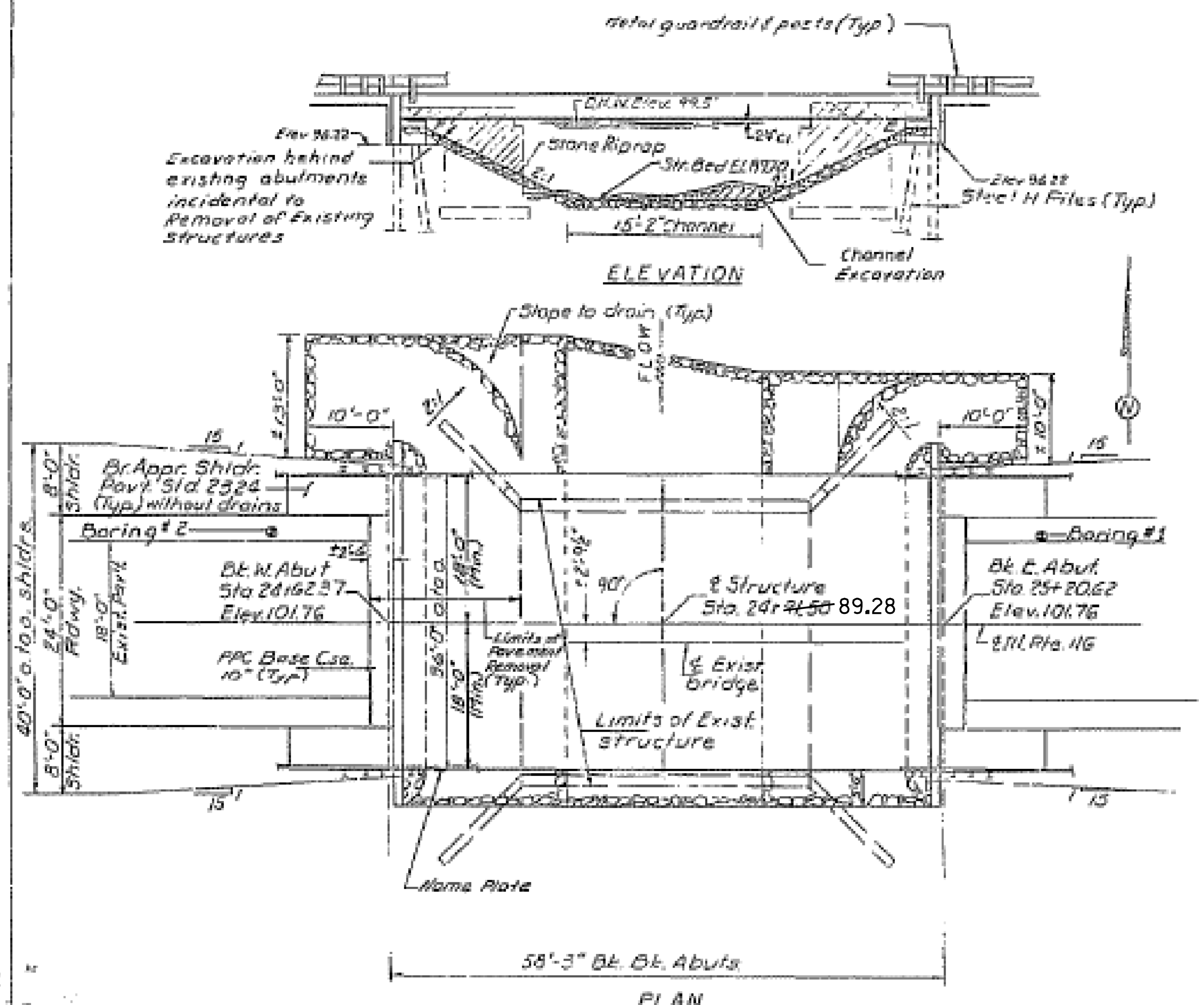
SOIL BORING LOGS
STRUCTURE NO. 053-0190

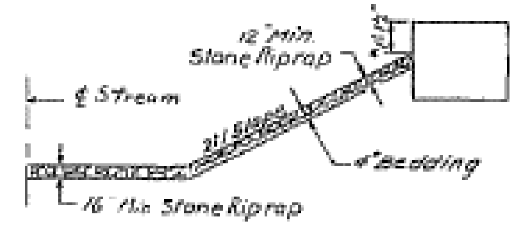
SHEET NO. 22 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	52
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

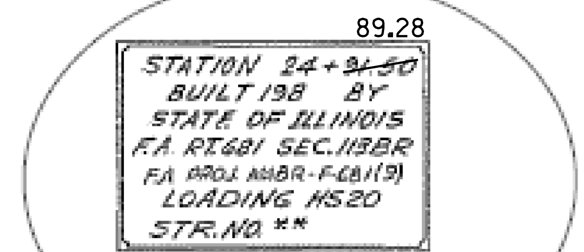
B.M. - Railroad spike in telephone pole 38.5' Rt. Sta. 25+77 Elev. 100.00'
Existing structure: #053-0069 Bu. T as S.B.I. Rte. 116 Sec 115 OR at Sta. 24+85, in 1928 - 32'-4" Bk.-Bk. R.C. single span slab structure supported on closed abutments, and 32'-1" o. to o. of slab. Contractor shall remove the existing superstructure and part of substructure and replace it with 21" P.P.C. Dk. Bms. The Rd. will be closed during construction. No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

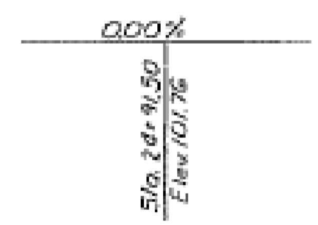




SEC. THRU STONE RIPRAP
* Below low seat elevation



NAME PLATE
See Std. 2113
** Struct. No. to be supplied by the District



PROFILE GRADE
Along ℄ Rdwy.

GENERAL NOTES

See Proposal for Boring Data.

All structural steel shall be shop painted with two coats of basic lead silico chromate paint.

Layout of stone riprap may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall drive one steel test pile in a permanent location at East Abut. as directed by the Engineer before ordering the remainder of piles.

The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Spec. except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of ½".

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

A Calcium Nitrite Corrosion Inhibitor, as covered in the Spec. Prov., shall be used in the concrete for P.P.C. deck beams.

TOTAL BILL OF MATERIAL

ITEM	Unit	Super	Sub.	Total
Pavement Removal	Sq. Yds.	52		52
Bit. Concrete Surface Course, Class I	Tons	21		21
Port. Cement Concr. Base Course 10"	Sq. Yds.	14		14
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yds.		90	90
Class X Concrete	Cu. Yds.	6.4	42.1	48.5
P.P.C. Deck Beams (21" depth)	Sq. Ft.	1984		1984
Structural Steel	Lbs.	2560		2560
Steel Railing, Type S-1	Lin. Ft.	117		117
Reinforcement Bars	Lbs.	110	3200	3310
Steel Piles HP 8×36	Lin. Ft.		280	280
Test Pile Steel HP 8×36	Each		1	1
Name Plates	Each	1		1
Stone Riprap	Sq. Yds.			360
Port. Cement Mortar Fairing Course	Lin. Ft.	606		606
Preformed Joint Seal 2½"	Lin. Ft.	37		37
Waterproofing Membrane System	Sq. Yds.	224		224

WATERWAY INFORMATION

Drainage 11.01 Sq. Mi. Low Grade Elev. 101.76 (Prop.) 101.0 (Exist.)

Flood	Freq. Yrs.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	1858	217	320	99.3'	1.74	0.0	101.04	99.3
Base	100	2125	217	332	99.7'	1.76	1.0	101.46	100.7
Max. Calc.	500	2755		332	100.1'		1.58		101.68

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

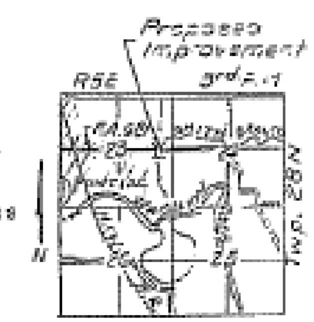
f'c = 5,000 p.s.i.
f'ci = 4,000 p.s.i.
f's = 270,000 p.s.i. ½" ø strands
fsi = 189,000 p.s.i. ½" ø strands

Design Specifications: 1977 AASHTO 1978, 1979, 1980 & 1981 Interim Specifications

FIELD UNITS

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)

LOADING HS20-44
Allow 25 lbs./sq. ft. for future wear. Surf.



LOCATION PLAN

GENERAL PLAN
ILL. RTE. 116 OVER SMITH BRANCH
F.A. RTE. 681 SEC. 113 BR
LIVINGSTON COUNTY
STA. 24+91.50 89.28

DESIGNED	Robert T. Doss
CHECKED	Stuart K. Crane
DRAWN	F.M.
CHECKED	SKD

January 7, 1982
EXAMINED
PASSED
APPROVED

F.A. 63, 2-1-83, 2-8-83 Rev. RTB Rev. 2/10/83 EAS

FILE NAME =	USER NAME = schwankerg	DESIGNED -	REVISED -
c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-existing-bridge-plans.dgn		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 1/11/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

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

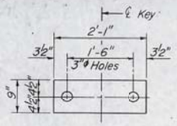
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	53

CONTRACT NO. 66832
ILLINOIS FED. AID PROJECT

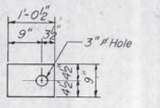
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
* * *				
* 681	113BR	LIVINGSTON	25	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. A.I.R. PROJECT		

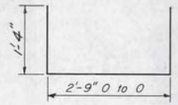
SHEET NO. 2
4 SHEETS



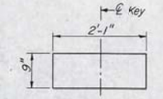
FABRIC BEARING PAD
(Interior)



FABRIC BEARING PAD
(Exterior)

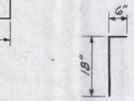


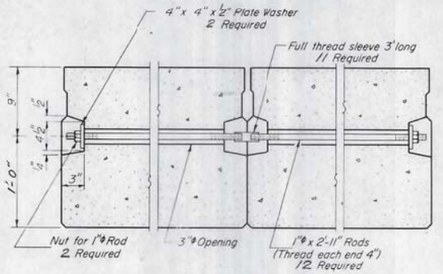
U BAR



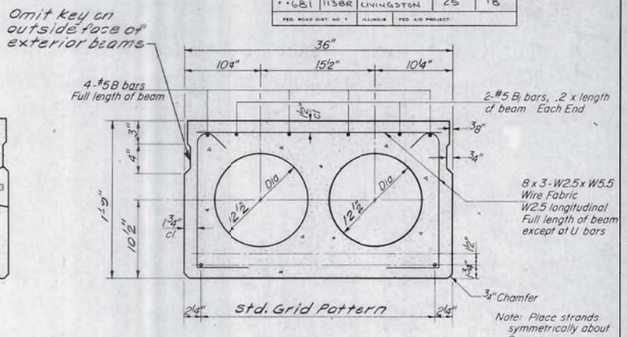
GRAPHITED ASBESTOS
BEARING PAD
(Interior)

GRAPHITED ASBESTOS
BEARING PAD
(Exterior)

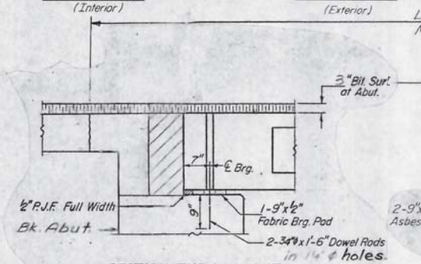




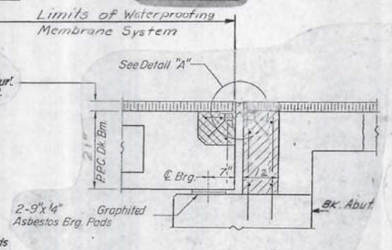
TYPICAL TRANSVERSE TIE ASSEMBLY



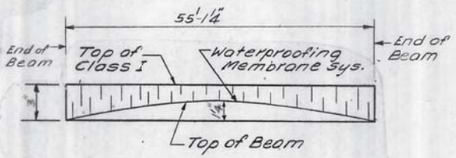
TYPICAL SECTION
16-½" ϕ Strands, Each Strand Stressed to 28,900 Lbs.
6 - Strands 14" up, 8 - Strands 3¼" up, 2 - strands 9" up



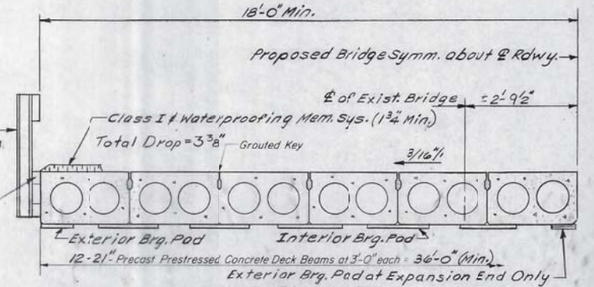
SECTION THRU W. ABUT.
AT ℄ RDWY.



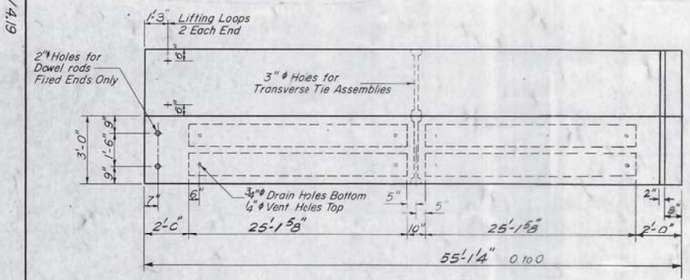
SECTION THRU E. ABUT.
AT ℄ RDWY.



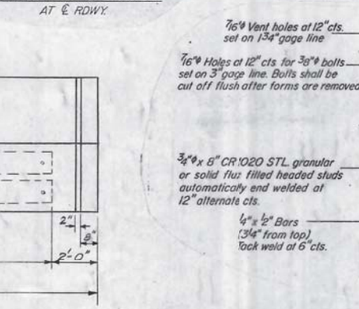
ANTICIPATED CAMBER DIAGRAM



HALF CROSS SECTION
(Looking West)

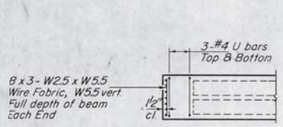


PLAN

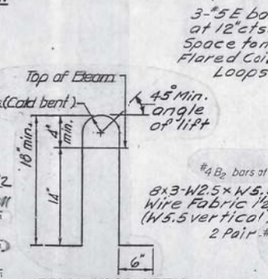


DETAIL "A"

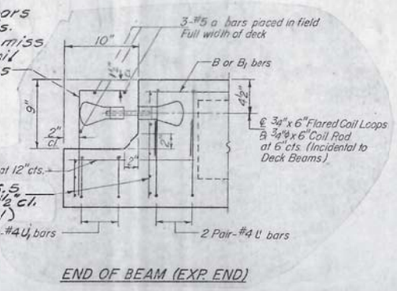
NOTE:
Cross Hatched areas to be poured after beams have been erected, joints at abut. and retainer channels are in place.
Ends of beams shall be aligned at the expansion joints. Any lineal variation in the beam lengths shall be placed at the fixed joint.
See End of Beam Detail for reinforcement.



END PLAN (FIXED END)



LIFTING LOOP DETAIL



END OF BEAM (EXP. END)

NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be ⅝" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs. or 2 - ½" ϕ - 270 ksi strands.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Dowel Rods to be grouted after beams are in place and allowed to cure min. 24 hrs. prior to grouting the shear keys.

BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	3	#5	35'-9"	———
Precast Prestressed Concrete Deck Beams (21")			Sq. Ft.	1984
Class X Concrete			Cu. Yds.	6.4
Reinforcement Bars			Lbs.	110

DESIGNED	Robert T. Bono		
CHECKED	Steven K. Doerner		
DRAWN	SM		
CHECKED	SKD		

January 7, 1982
EXAMINED James J. Kaufmann
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

PD-3-S 6-15-80
I-6-83, 2-9-83 Rev. RTB Rev. 8/10/83 EMS 6-3/16-83

P.P.C. DECK BEAMS
F.A. RT. 681 SEC. 113-BR
LIVINGSTON COUNTY
STA. 24+91.5

II/4.19

FILE NAME = $FILES$	USER NAME = Schwanberg	DESIGNED -	
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	PLOT SCALE = 20.0000 ' / in.	CHECKED -	
	PLOT DATE = 12/13/2012	DATE -	

OATES ASSOCIATES
Engineering + Architecture
ILLINOIS: Eastport Business Center 1, 100 Lakin Court, Suite 1, Glen Ellyn, IL 60137, tel 815.345.2200, fax 815.345.7233
MISSOURI: Laclede Gas Building, 720 Olive, Suite 1900, St. Louis, MO 63101, tel 314.588.8010, fax 314.588.8605
www.oatesassociates.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

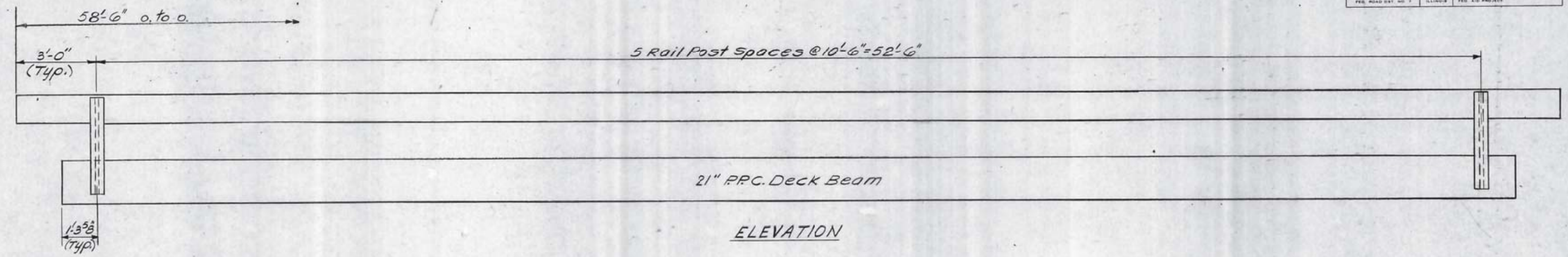
SCALE: | SHEET 2 OF 9 SHEETS | STA. | TO STA.

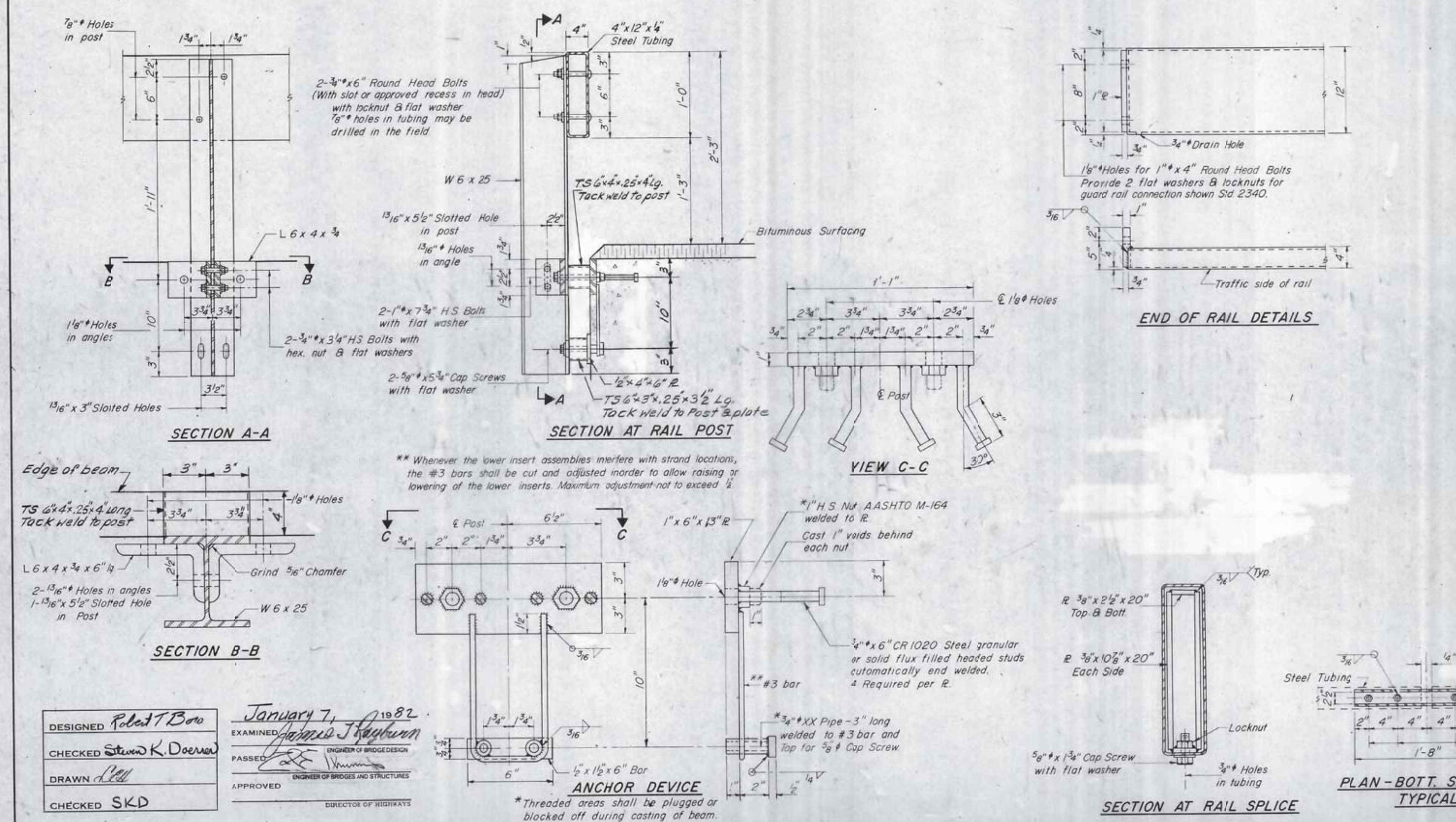
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	54
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.681	113BR	LIVINGSTON	25	19

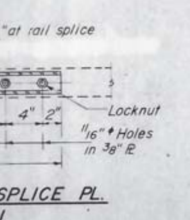
SHEET NO. 3
4 SHEETS





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

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted inorder to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.ASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The 1/2"x4"x6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the plates and concrete.

The 3/4"ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1"ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8"ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	177

TYPE S-1
STEEL RAILING
F.A. RT. 681 SEC. 113-BR
LIVINGSTON COUNTY
STA. 24+91.5

DESIGNED	Robert T Boro
CHECKED	Steven K. Doerner
DRAWN	
CHECKED	SKD

January 7, 1982
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

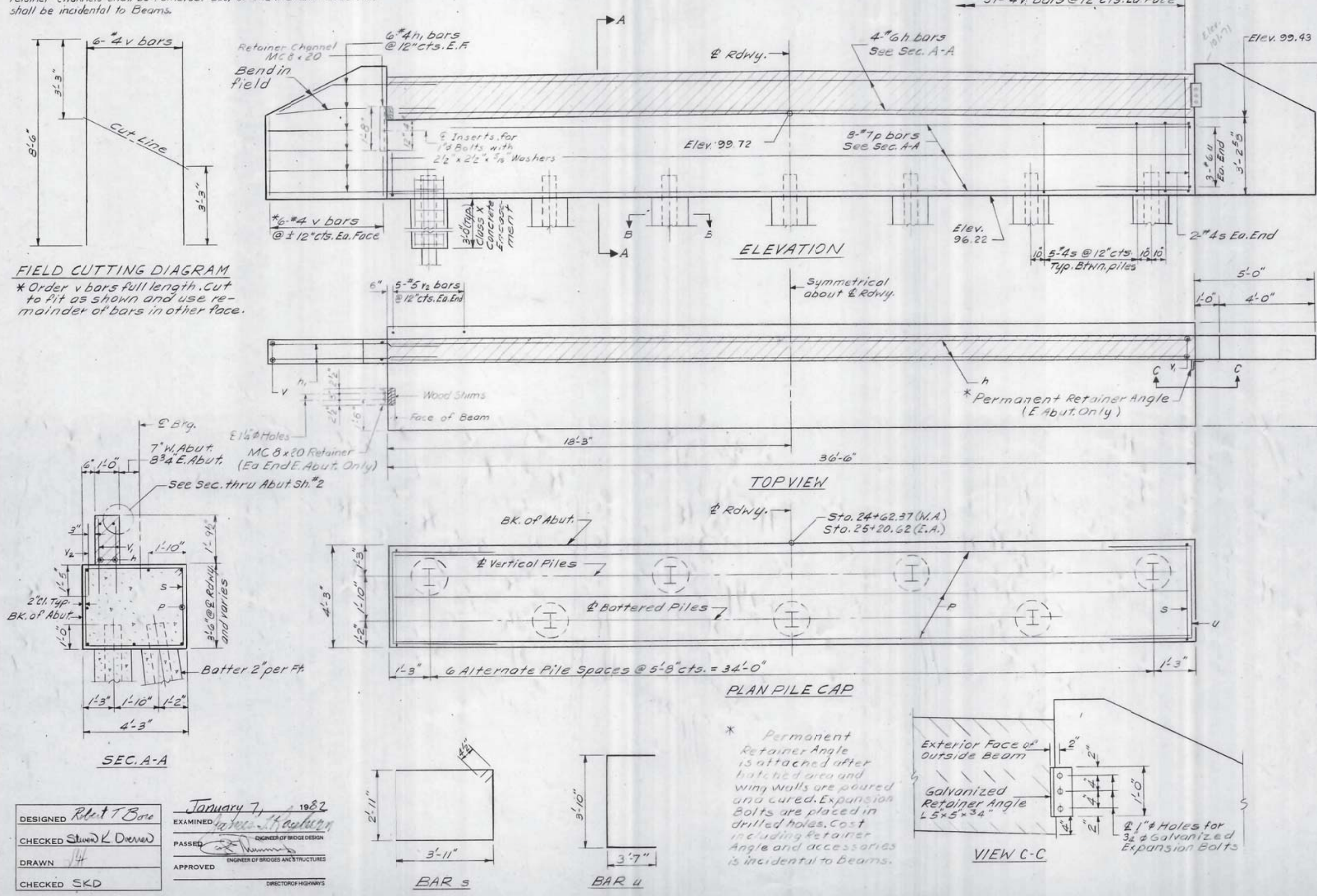
FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED -	OATES ASSOCIATES	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS FOR INFORMATION ONLY	F.A.P. RTE. 681	SECTION (113 BR)BR & (113 BR-1)BR	COUNTY LIVINGSTON	TOTAL SHEETS 123	SHEET NO. 55
	PLOT TIME = $TIME$	DRAWN -						CONTRACT NO. 66832		
	PLOT SCALE = 20.0000 ' / in.	CHECKED -			SCALE:	SHEET 3 OF 9 SHEETS	STA.	TO STA.		
	PLOT DATE = 12/13/2012	DATE -				ILLINOIS FED. AID PROJECT				

Notes:
Hatched area shall be poured after beams are in place. Class X concrete included with super structure.
All edges shall have standard 3/4" chamfers except as noted.
After 9"x10" Expansion Notch is poured and cured the retainer channels shall be removed. Cost of channel and accessories shall be incidental to Beams.

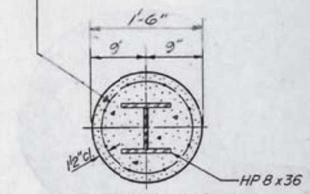
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 681	113BR	LIVINGSTON	25	20

SHEET NO. 4
4 SHEETS



Welded wire fabric 6"x6" mesh #4 wire-weighing 58#/100 sq. ft.
The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.
Forms for encasement may be omitted when soil conditions will permit.



SECTION B-B

PILE DATA
Type: HP 8 x 36
Capacity: Driven to Refusal
Est. Length: 16' (W), 28' (E)
No. Req'd: 7 (W. Abut.)
6 + 1 test pile (E. Abut.)
REQUIRED LENGTH: 28' (W)
28' (E)

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	8	#6	36'-3"	—
h1	48	#4	7'-0"	—
p	16	#7	36'-3"	—
s	68	#4	14'-5"	□
u	12	#6	11'-0"	[
v	24	#4	8'-6"	—
v1	148	#4	3'-0"	—
v2	20	#5	3'-0"	—
Class X Concrete			Cu. Yds.	42.1
Reinforcement Bars			Lbs.	3200
Steel H-Piles (8 x 36)			Lin. Ft.	280
Test Piles, Steel HP8x36			Each	1

DESIGNED	Robert T Bore
CHECKED	Steven K Overend
DRAWN	JH
CHECKED	SKD

January 7, 1982
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

ABUTMENTS
F.A. RT. 681 SEC. 113-BR
LIVINGSTON COUNTY
STA. 24+91.5

1-6-83, 2-1-83, 2-8-83 Rev. RTB Rev. 3-15-83 EAS

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OATES ASSOCIATES
Engineering • Architecture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: SHEET 4 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	56

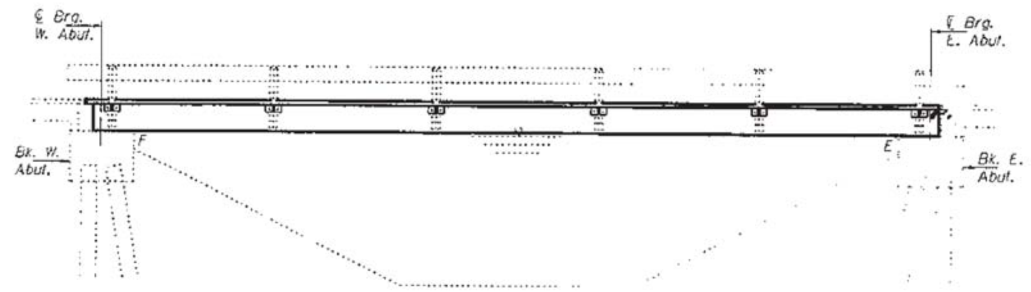
CONTRACT NO. 66832
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

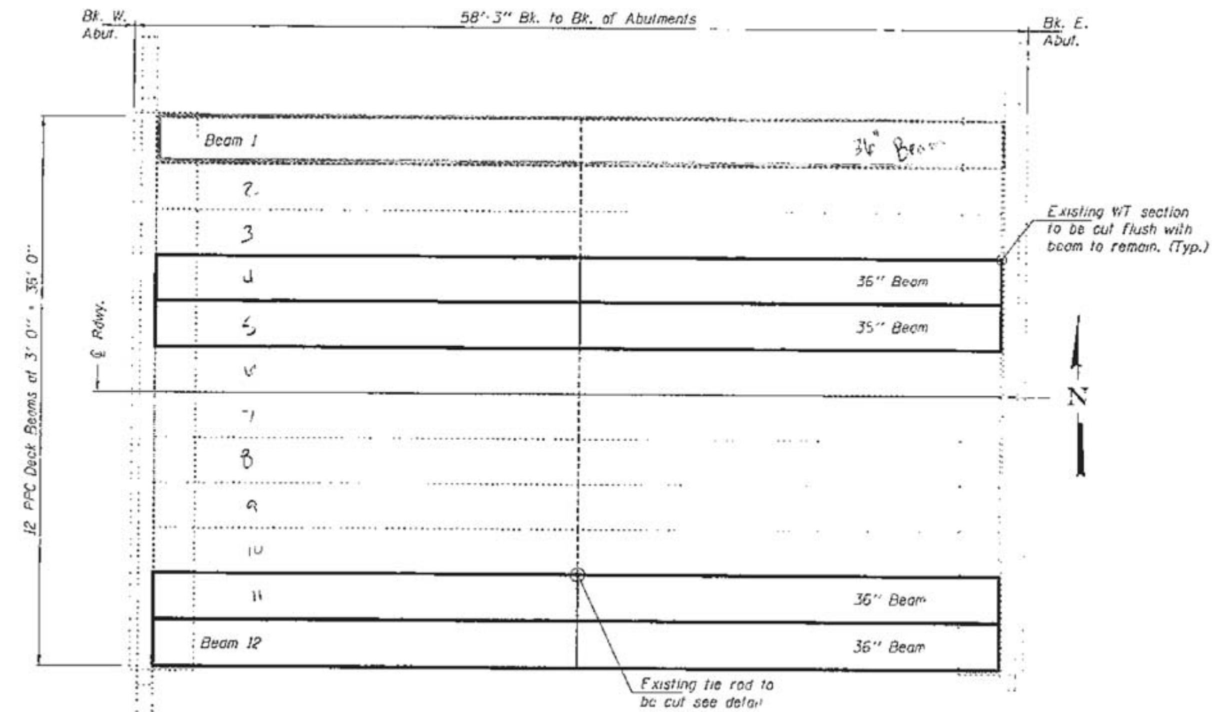
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(13BR)I	LIVINGSTON	15	11

SHEET NO. 1
5 SHEETS

Contract Number: 66821



ELEVATION



PLAN

GENERAL NOTES

The contractor is advised that the existing PPC deck beams are 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.

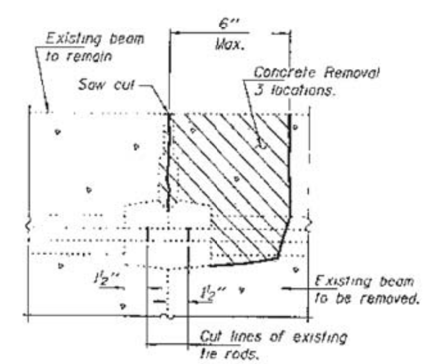
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new or existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

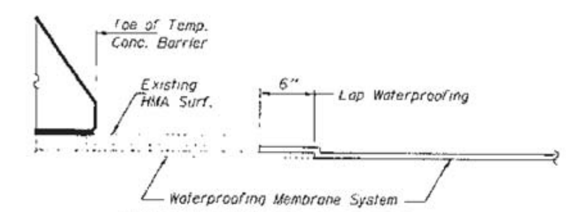
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Temporary concrete barrier shall only be anchored into the overlay and not into the PPC deck beams.

Any damage done to the bridge during beam removal shall be repaired by the contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams



BEAM REMOVAL DETAIL AT TRANSVERSE TIES



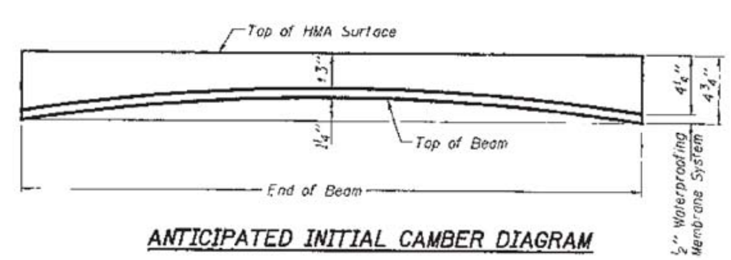
WATERPROOFING TREATMENT

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	661
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	657
Hot Mix Asphalt Surface Removal	Sq. Yd.	9.9
HMA Surface Course Mix "C" N50	Tons	17.0
PC Mortar Fairing Course	Foot	276
Asbestos Bearing Pad Removal	Each	4
Removing & Re erecting Existing Railing	Foot	59
Waterproofing Membrane System	Sq. Yd.	83.4

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2008



ANTICIPATED INITIAL CAMBER DIAGRAM

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (½"ϕ low lax strands)
f'si = 201,960 psi (½"ϕ low lax strands)

PLAN AND ELEVATION
FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	Adrian T. Holloway
CHECKED	
DRAWN	boliva
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES

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	PLOT DATE = 12/13/2012	DATE -

OATES ASSOCIATES Engineering + Architecture

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: SHEET 5 OF 9 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	57

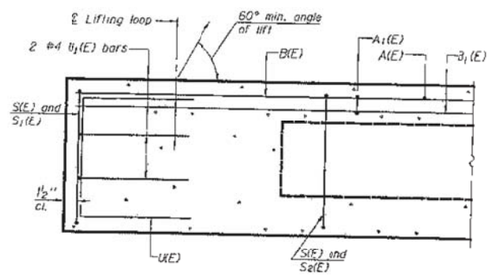
CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT

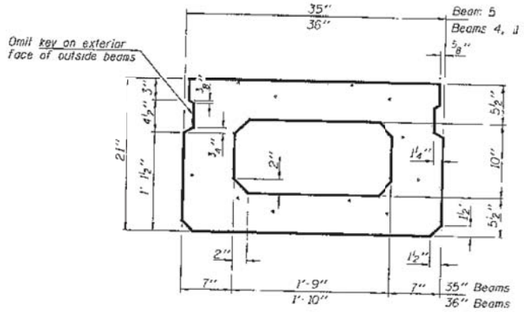
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(113BR)1	LIVINGSTON	15	12
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

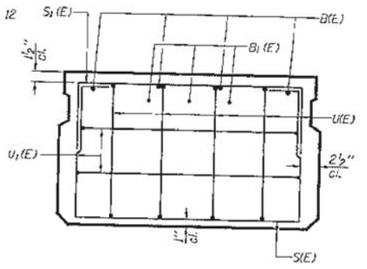
SHEET NO. 2
5 SHEETS
Contract Number: 66821



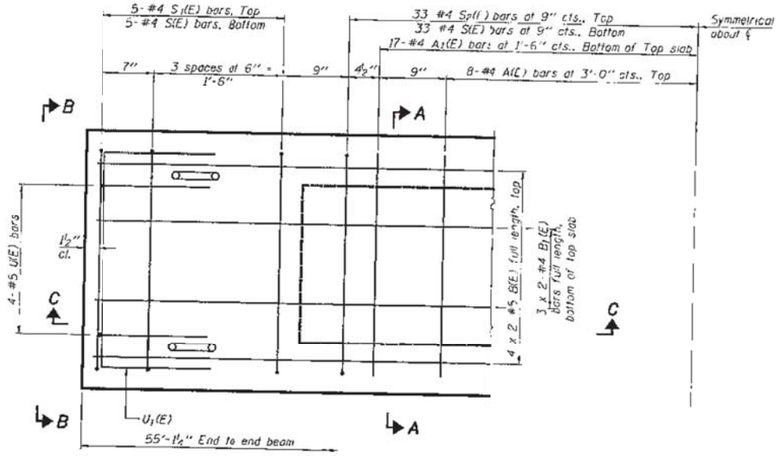
SECTION C-C



SECTION A-A
(showing dimensions)



VIEW B-B



PLAN VIEW

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

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

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

BAR LIST 35" BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	16	#4	2'-6"	
A1(E)	34	#4	2'-10"	
B(E)	8	#5	28'-7"	
B1(E)	6	#4	28'-4"	
S(E)	76	#4	6'-4"	
S1(E)	10	#4	5' 6"	
S2(E)	66	#4	5'-9"	
U(E)	8	#5	4'-0"	
U1(E)	4	#4	4' 11"	

BAR LIST 36" BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	16	#4	2' 7"	
A1(E)	34	#4	2'-11"	
B(E)	8	#5	28' 7"	
B1(E)	6	#4	28' 4"	
S(E)	76	#4	6'-5"	
S1(E)	10	#4	5' 7"	
S2(E)	66	#4	5'-10"	
U(E)	8	#5	4' 0"	
U1(E)	4	#4	5'-0"	

MINIMUM BAR LAPS
#4 bar = 1' 8"
#5 bar = 2'-2"

Note:
See sheet 3 of 5 for additional details and Bill of Material.
Bars indicated thus 4 x 2-#5 etc. indicates 4 lines of bars with 2 lengths per line.

REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	ATH	EXAMINED	MAY 12, 2008
CHECKED	AJB	PASSED	ENGINEER OF STRUCTURAL DETAILS
DRAWN	baliva		ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	ATH AJB		

PD-2136-0 8-29-07

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	PLOT DATE = 12/13/2012	DATE -	

OATES ASSOCIATES
Engineering + Architecture
ILLINOIS: Eastport Business Center 1, 100 Lester Court, Suite 1, Carbondale, IL 62234, tel: 618.345.7200, fax: 618.345.7220
MISSOURI: Laclede Gas Building, 720 Olive, Suite 1900, St. Louis, MO 63101, tel: 314.588.8301, fax: 314.588.9005
www.oatesassociates.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 6 OF 9 SHEETS | STA. | TO STA.

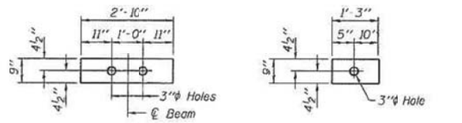
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	58
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(113BR)I	LIVINGSTON	15	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
5 SHEETS

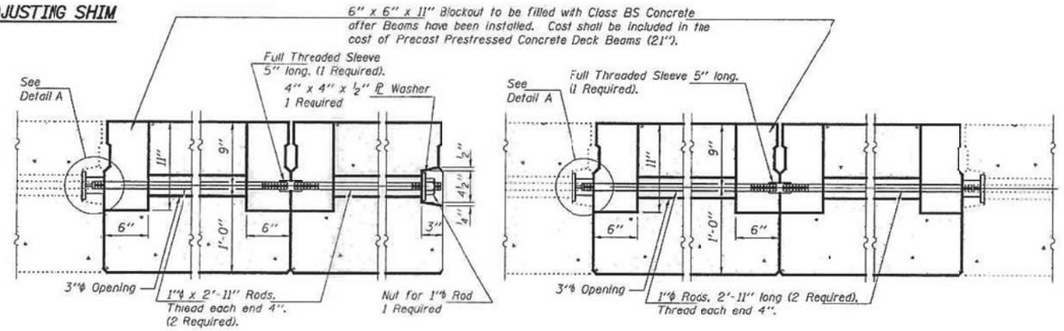
Contract Number: 66821



FABRIC BEARING PAD **FABRIC ADJUSTING SHIM**

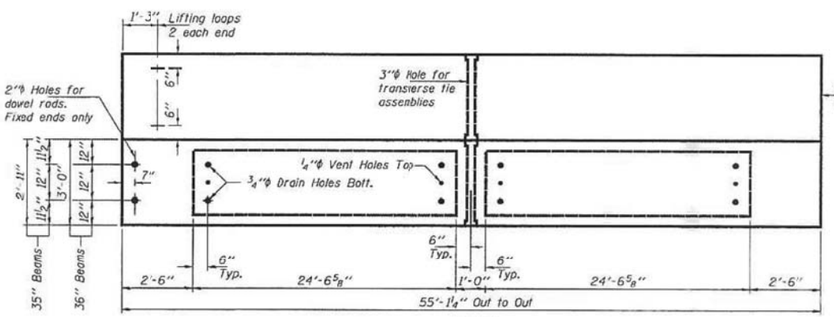
FIXED

Note: Omit holes when using expansion bearings.



TRANSVERSE TIE ASSEMBLY
(Typ. beam 11 & 12 replacement)

TRANSVERSE TIE ASSEMBLY
(Typ. beam 4 & 5 replacement)



PLAN

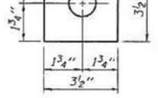
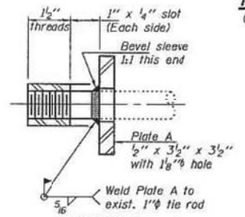
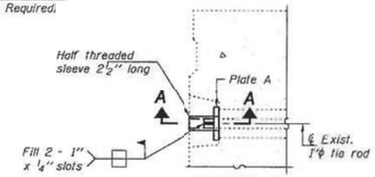


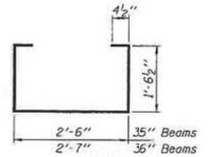
PLATE A
(3 Required)



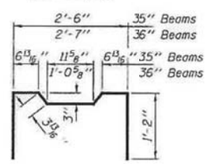
SECTION A-A
(3 Required)



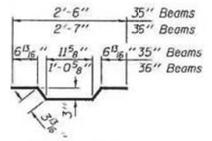
DETAIL A



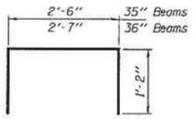
BAR S(E)



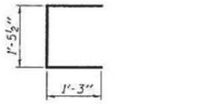
BAR S_2(E)



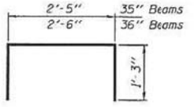
BAR A_1(E)



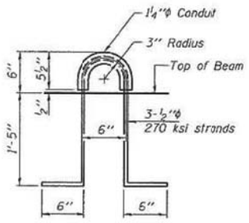
BAR S_1(E)



BAR U(E)



BAR U_1(E)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	657

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal dicmeter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1"ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706 (IL M00), Grade 60. (See Special Provisions)

Two ⅛" fabric adjusting shims of the dimensions shown shall be provided for each bearing pad location.

A minimum 2½"ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

PD-2136-0D 8-29-07

REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159

...\deck beams fy08\0530159.dgn 5/12/2008 3:48:28 PM

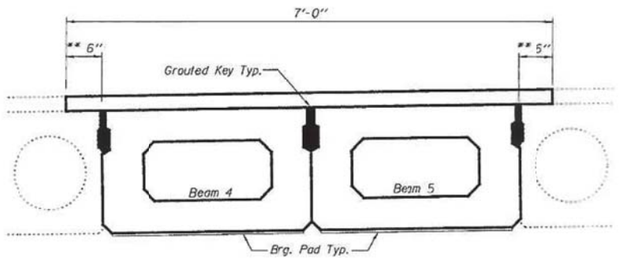
FILE NAME = $FILES$	USER NAME = Schwankerg	DESIGNED -	OATES ASSOCIATES Engineering + Architecture	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS FOR INFORMATION ONLY	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT TIME = $TIME$	DRAWN -				681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	59
	PLOT SCALE = 20.0000 ' / in.	CHECKED -						CONTRACT NO. 66832		
	PLOT DATE = 12/13/2012	DATE -			SCALE: SHEET 7 OF 9 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

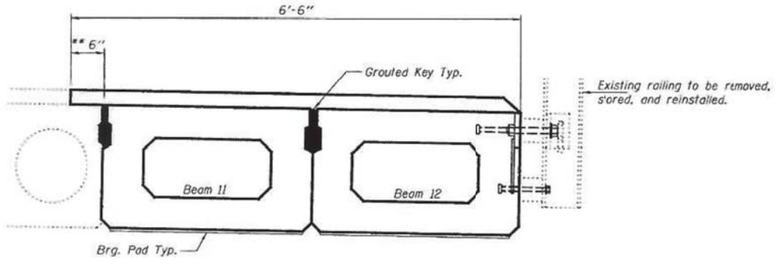
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(113BR)1	LIVINGSTON	15	14
FED.ROAD DIST. NO.:	ILLINOIS	FED.AID PROJECT:		

SHEET NO. 4
5 SHEETS

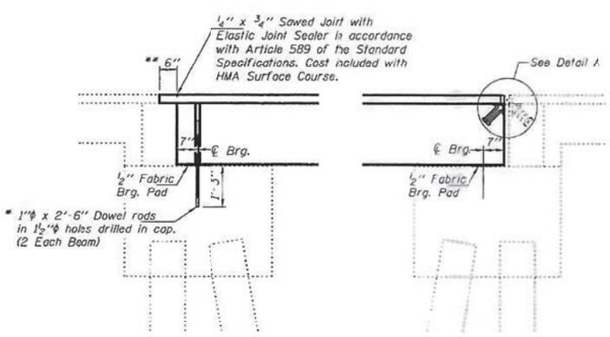
Contract Number: 66821





PARTIAL DECK CROSS SECTION

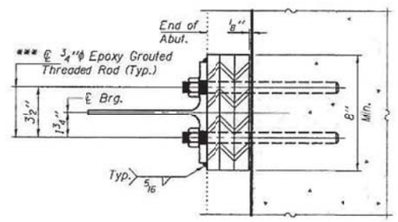
** Limits of HMA Surface Removal. Existing waterproofing to remain. Lap new waterproofing 6" over existing.



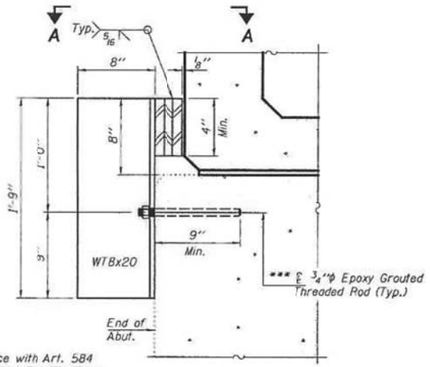
TYPICAL SECTION AT W. ABUTMENT

TYPICAL SECTION AT E. ABUTMENT

* Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

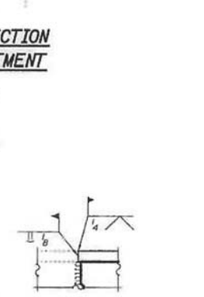


SECTION A-A

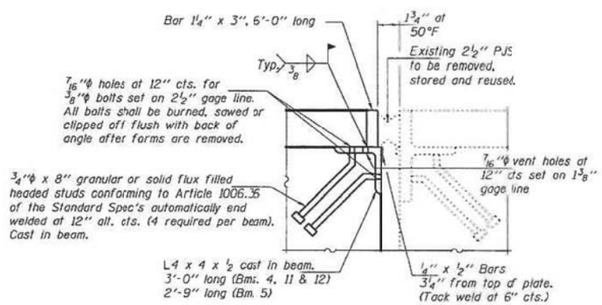


*** In accordance with Art. 584 of the Standard Specifications.

RETAINER AT BEAM 12, ℄ BRG E. ABUT.
(Outside face only)
(Cost included with PPC Deck Beams)



ELEVATION NEW JOINT ℙ TO EXISTING JOINT ℙ



DETAIL A
(Cost included with PPC Deck Beams)

REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 8 OF 9 SHEETS | STA. | TO STA.

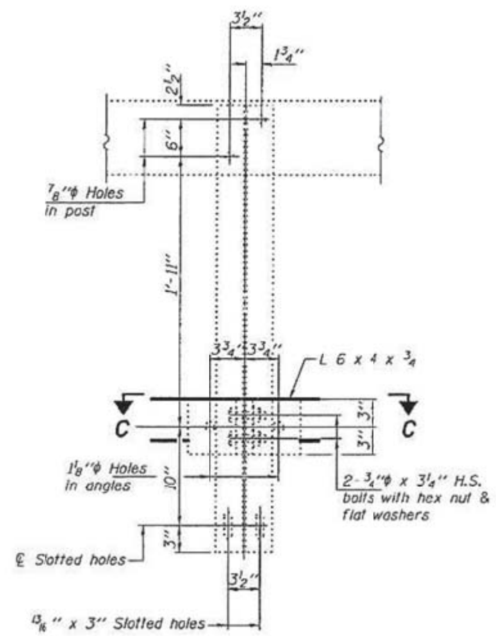
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	60
		CONTRACT NO. 66832		
		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

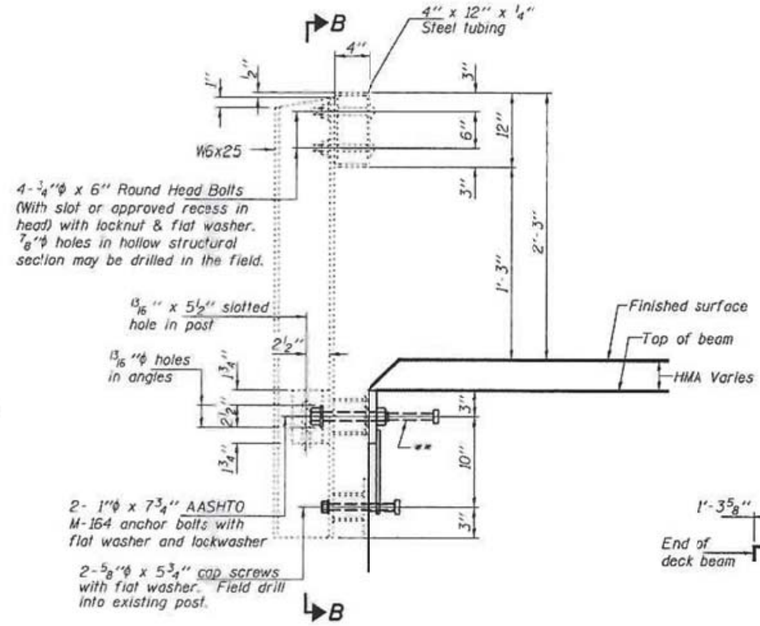
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 681	(13BR)I	LIVINGSTON	15	15

SHEET NO. 5
5 SHEETS

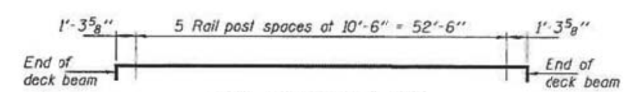
Contract Number: 66821



SECTION B-B



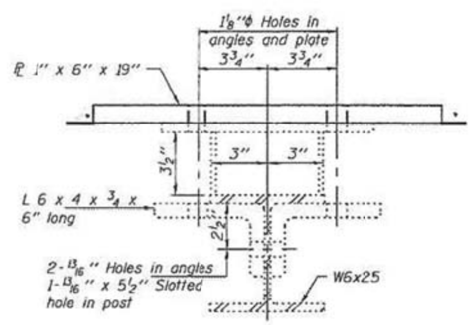
SECTION AT RAIL POST



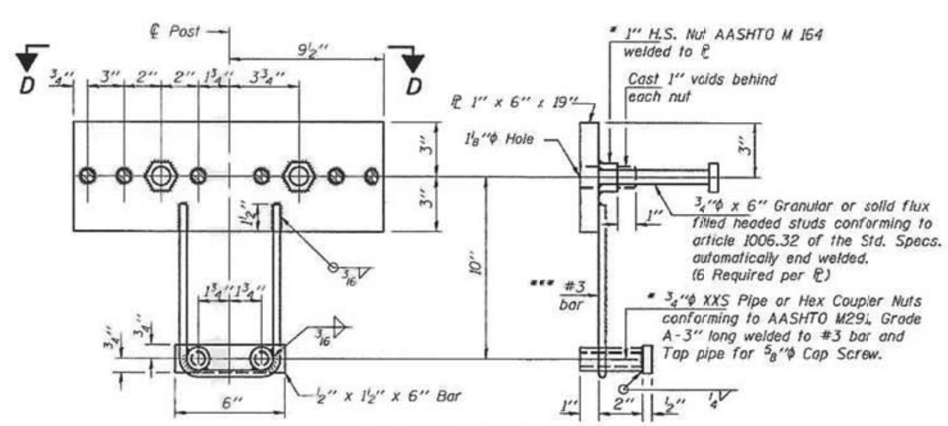
RAIL POST SPACING

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudnal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



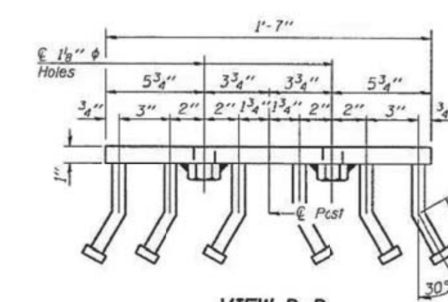
SECTION C-C



ANCHOR DEVICE

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

*** Whenever the lower insert assemblies interfere with strand locations the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed ½″.



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Removing & Re-erecting Existing Railing	Foot	59

REPAIR DETAILS
FAP 681
LIVINGSTON COUNTY
SN 053-0159

DESIGNED	ATH
CHECKED	AJB
DRAWN	balive
CHECKED	ATH AJB

MAY 12, 2008
EXAMINED [signature]
ENGINEER OF STRUCTURAL SERVICES
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

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	PLOT DATE = 12/13/2012	DATE -

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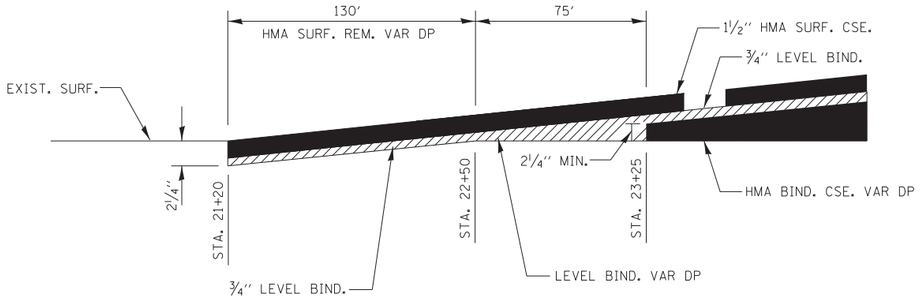
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

SCALE: SHEET 9 OF 9 SHEETS STA. TO STA.

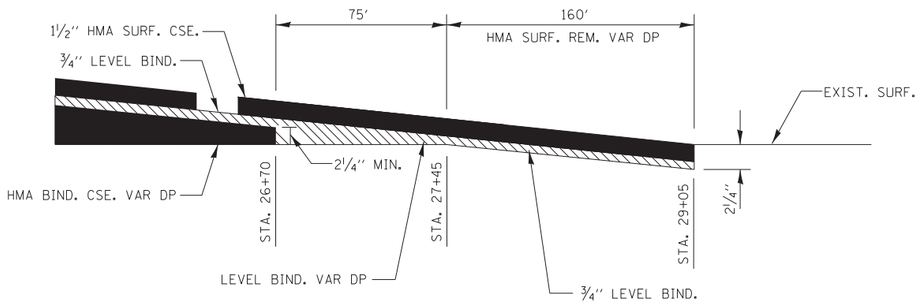
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	61

CONTRACT NO. 66832
ILLINOIS FED. AID PROJECT



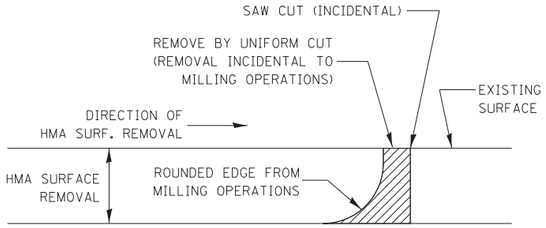
HMA PAVEMENT THICKNESS TAPER – WEST OF BRIDGE

NOT TO SCALE



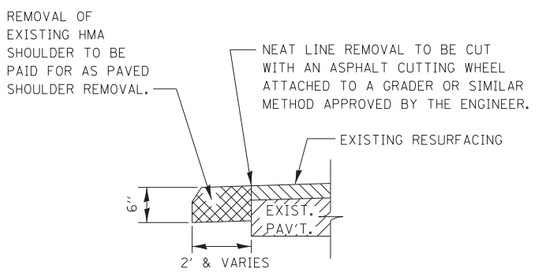
HMA PAVEMENT THICKNESS TAPER – EAST OF BRIDGE

NOT TO SCALE

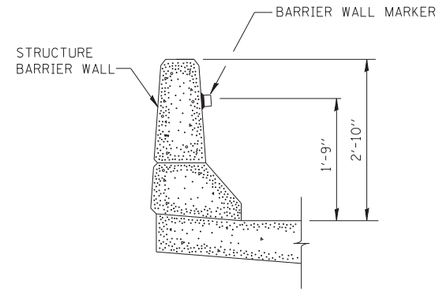


NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA SURFACE REMOVAL DETAIL



REMOVAL OF EXISTING HMA SHOULDER



BARRIER WALL MARKER

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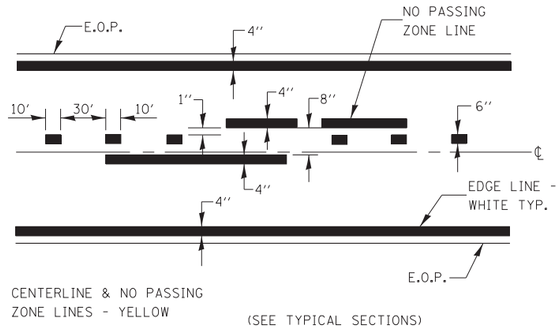
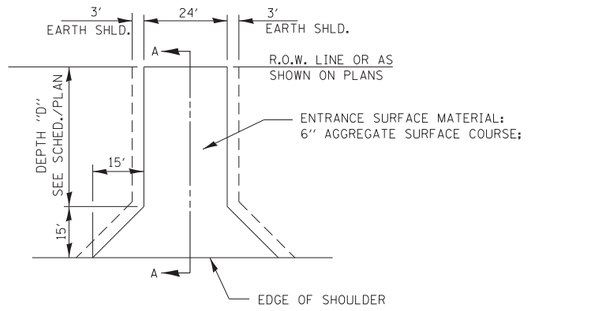
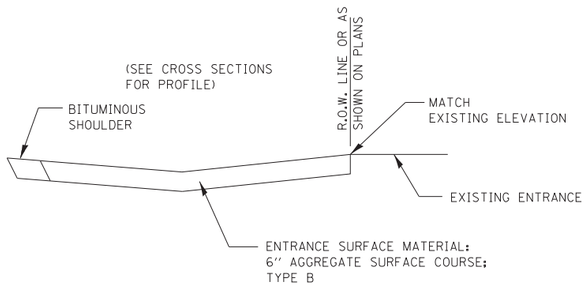
	PLOT DATE = 12/13/2012	DATE -			SCALE:	SHEET 1 OF 2 SHEETS	STA.	TO STA.			ILLINOIS FED. AID PROJECT		

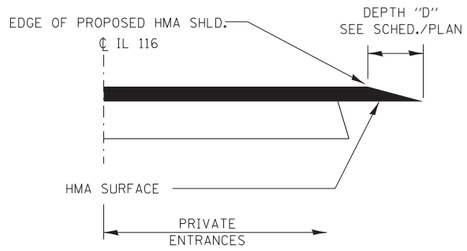


PAVEMENT MARKING

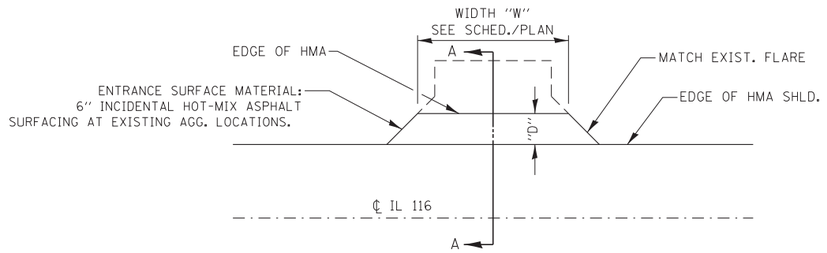




FIELD ENTRANCE DETAIL



SECTION A–A
DETAILS AT ENTRANCES



PLAN AT PRIVATE ENTRANCES

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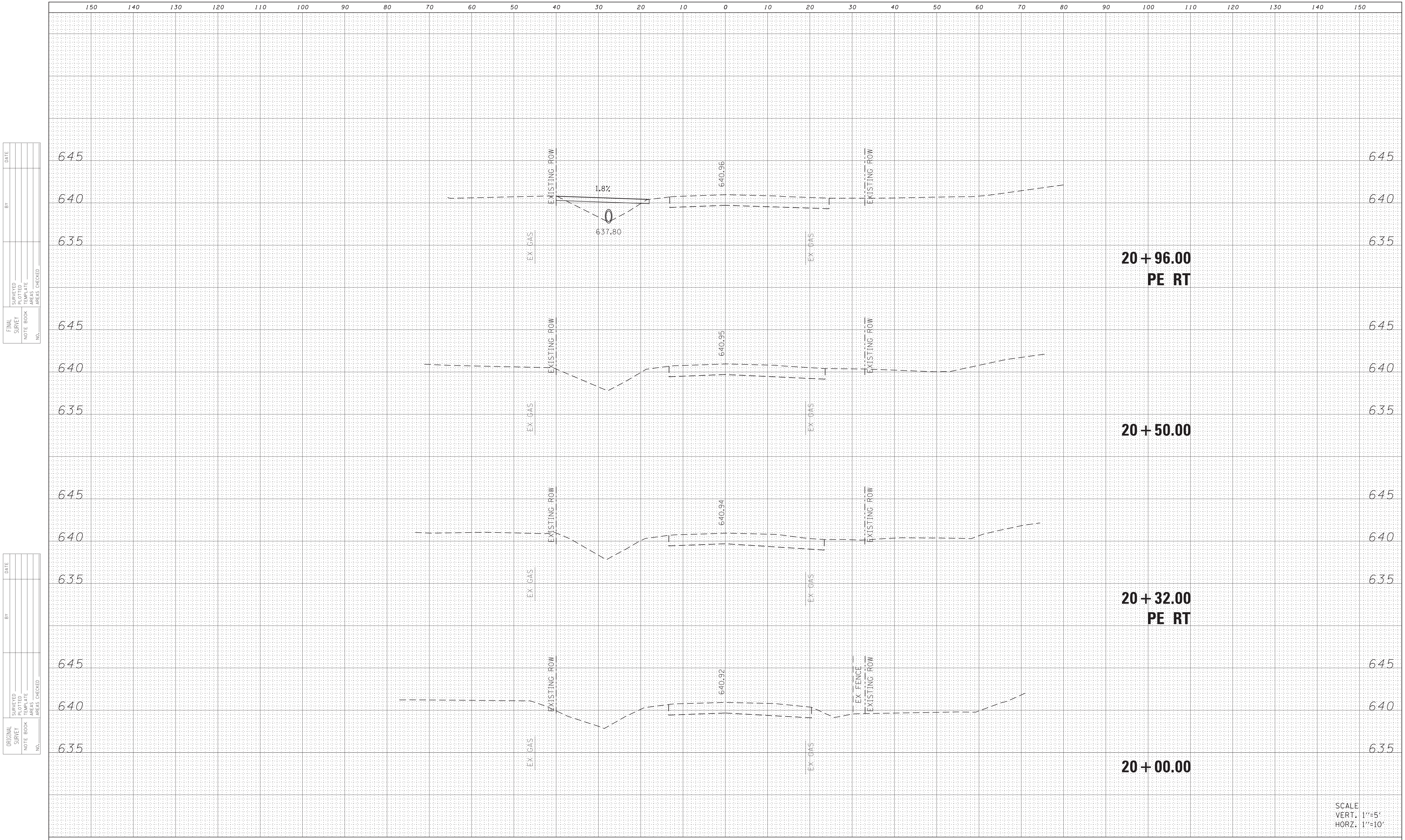

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	PLOT SCALE = 10.0000 ' / in.	CHECKED - JRR
	PLOT DATE = 12/13/2012	DATE - 8/10/12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

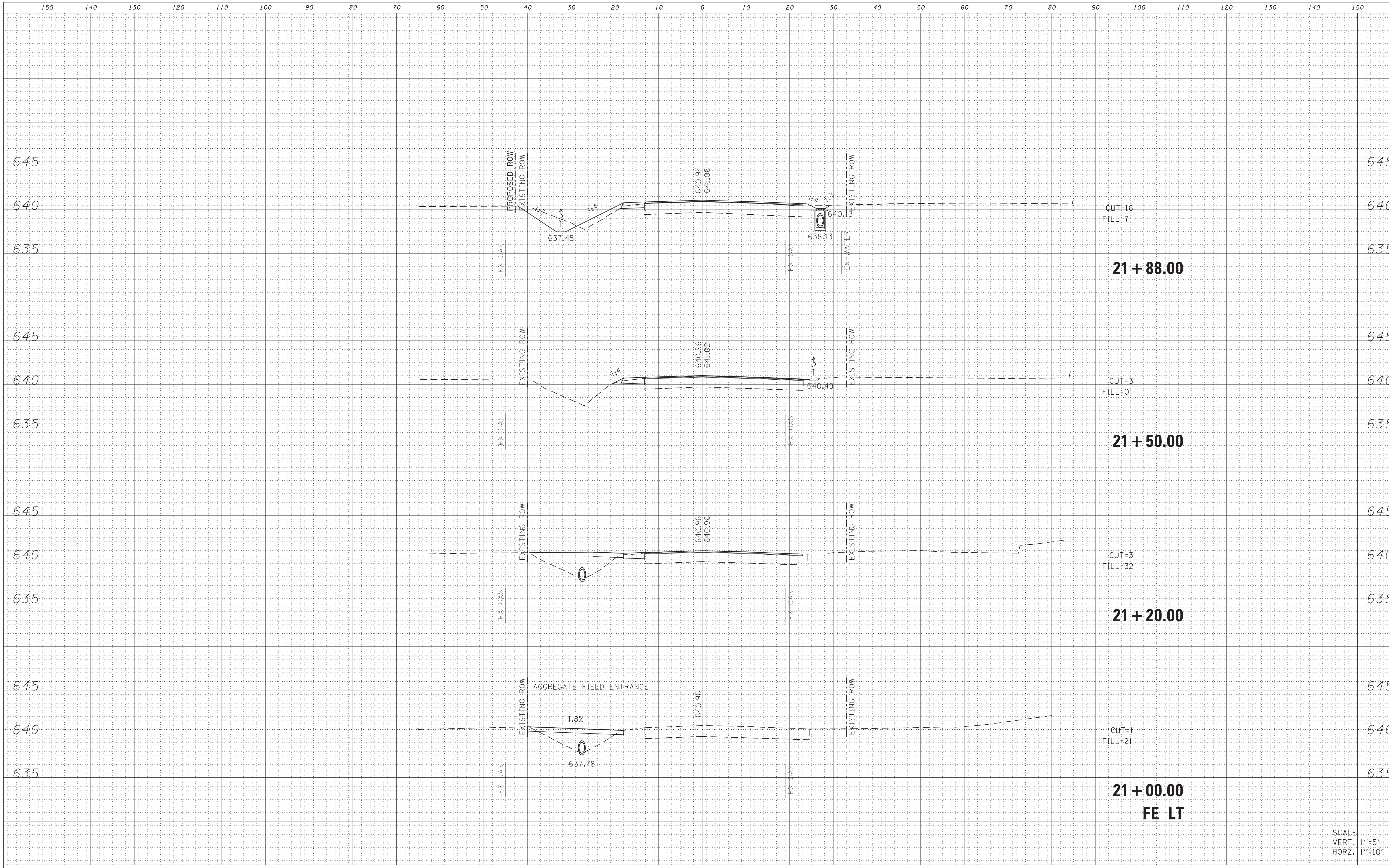
CROSS SECTIONS

SCALE: | SHEET 1 OF 8 SHEETS | STA. 20+00.00 TO STA. 20+96.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	64

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



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

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USER NAME = Schwankerg
PLOT TIME = $TIME$
PLOT SCALE = 10.0000 ' / in.
PLOT DATE = 12/13/2012

DESIGNED - RGV
DRAWN - RGV
CHECKED - JRR
DATE - 8/10/12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

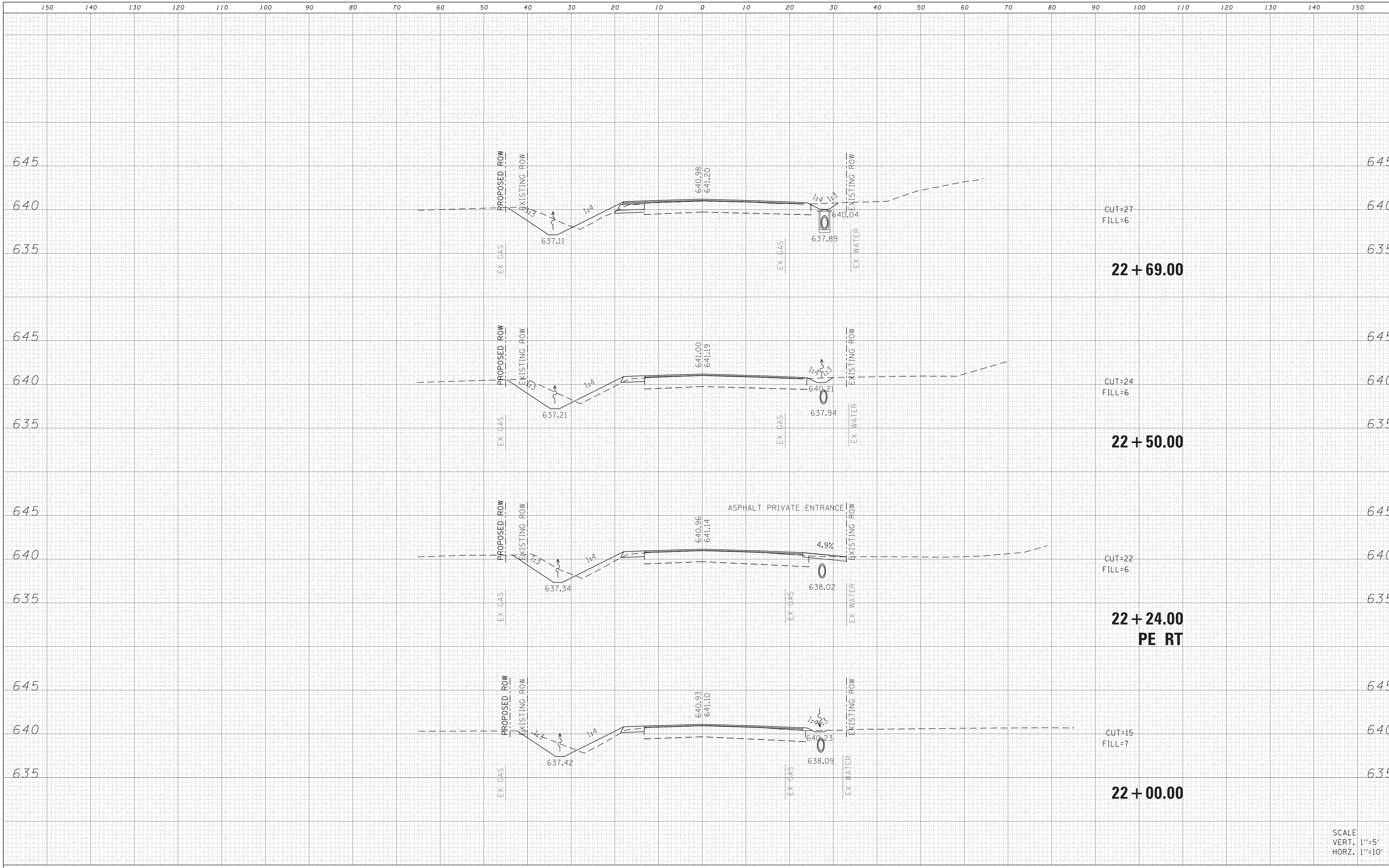
CROSS SECTIONS

SCALE: | SHEET 2 OF 8 SHEETS | STA. 21+00.00 TO STA. 21+88.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)	LIVINGSTON	123	65

CONTRACT NO. 66832

ILLINOIS | FED. AID PROJECT



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DESIGNED - RGV
DRAWN - RGV
CHECKED - JRR
DATE - 8/10/12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: SHEET 3 OF 8 SHEETS STA. 22+00.00 TO STA. 22+69.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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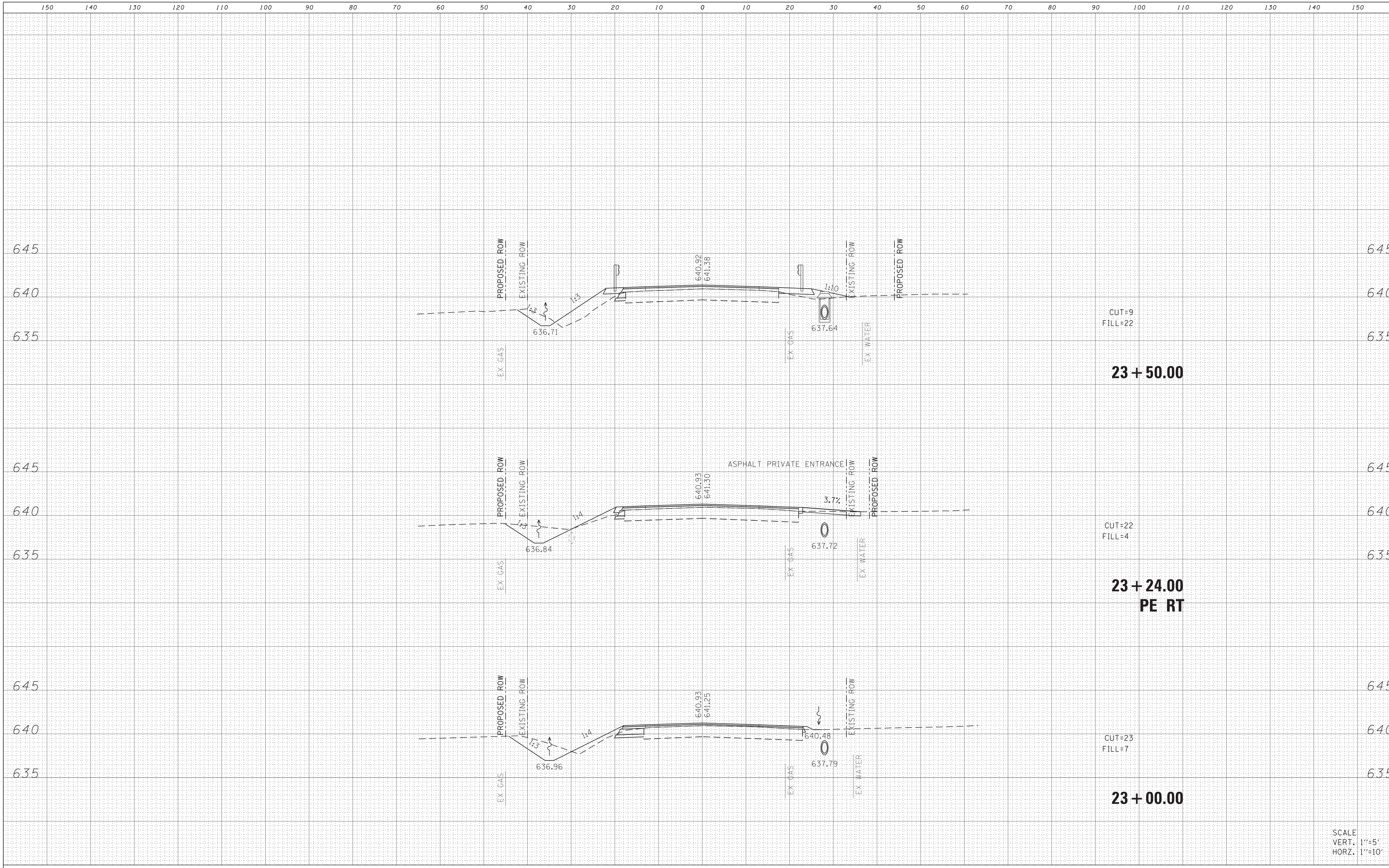
CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



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	PLOT DATE = 12/13/2012	DATE - 8/10/12	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

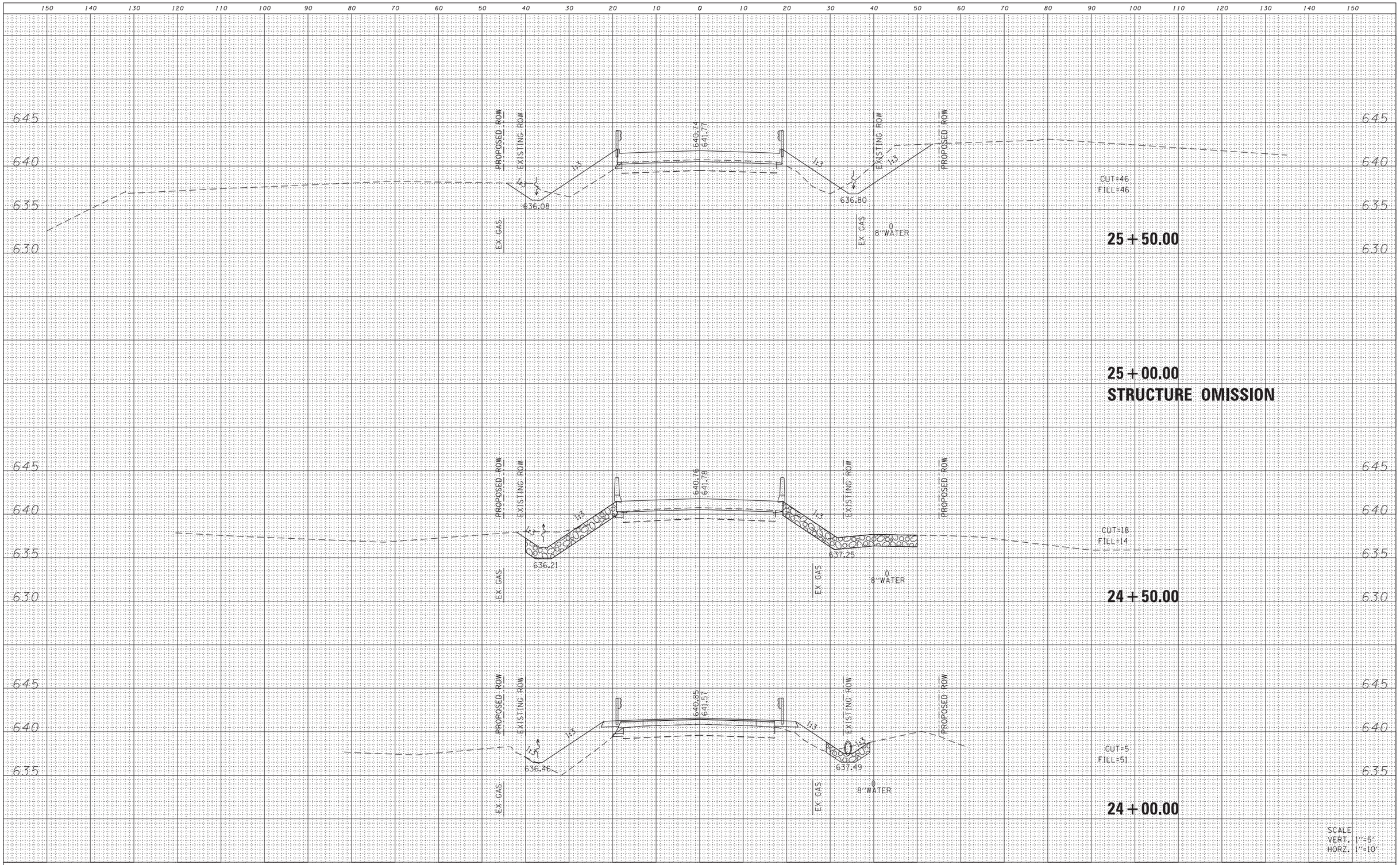
SCALE: | SHEET 4 OF 8 SHEETS | STA. 23+00.00 TO STA. 23+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	67

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT

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



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SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS		
NO.	AREAS CHECKED	

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	PLOT SCALE = 10.0000 ' / in.	CHECKED - JRR	
	PLOT DATE = 12/13/2012	DATE - 8/10/12	

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CROSS SECTIONS

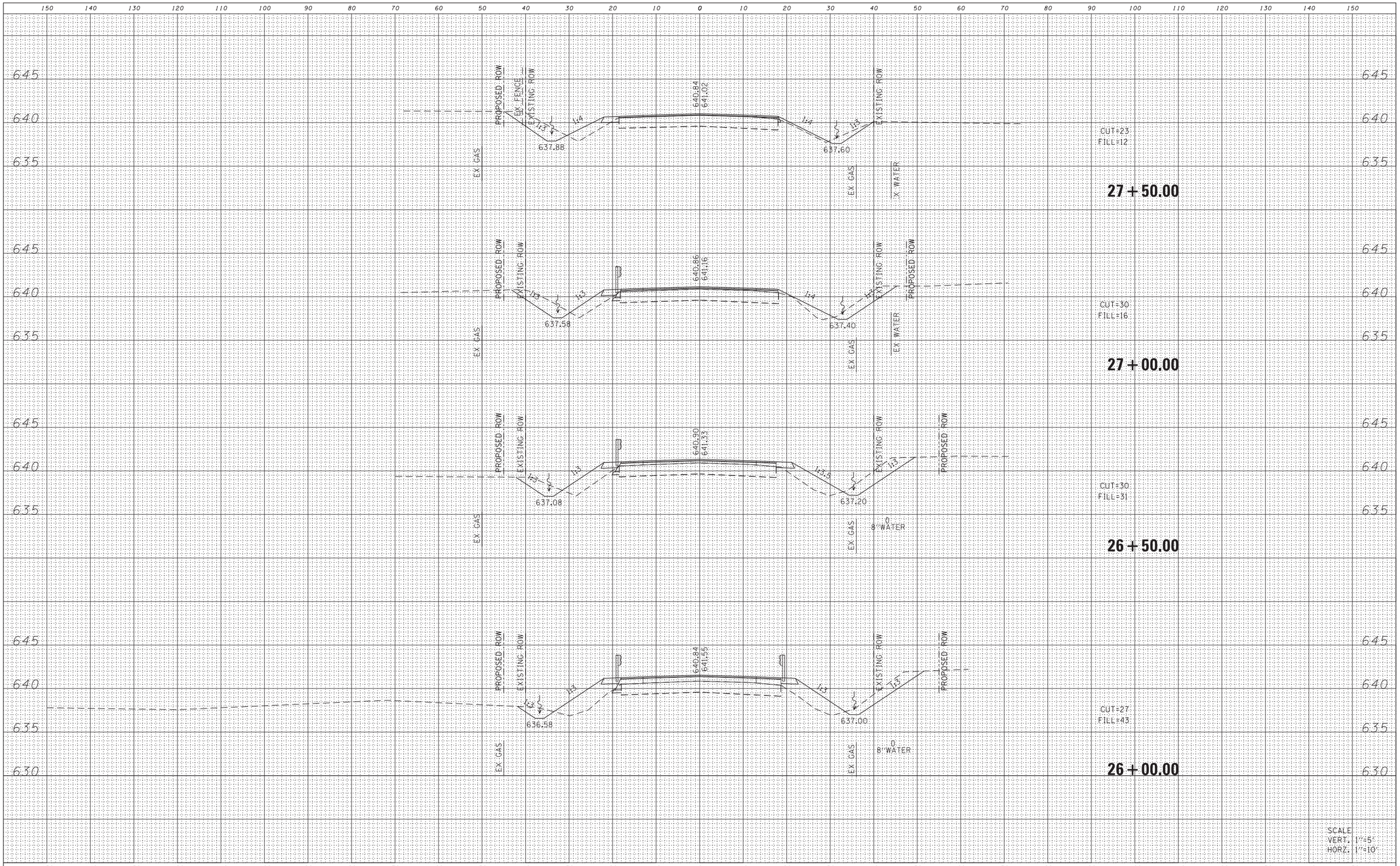
SCALE: SHEET 5 OF 8 SHEETS STA. 24+00.00 TO STA. 25+50.00

SCALE
VERT. 1"=5'
HORZ. 1"=10'

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	68
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

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



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fax 618.345.7233

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720 Olive, Suite 1900
St. Louis, MO 63101
tel 314.588.9600
fax 314.588.9605

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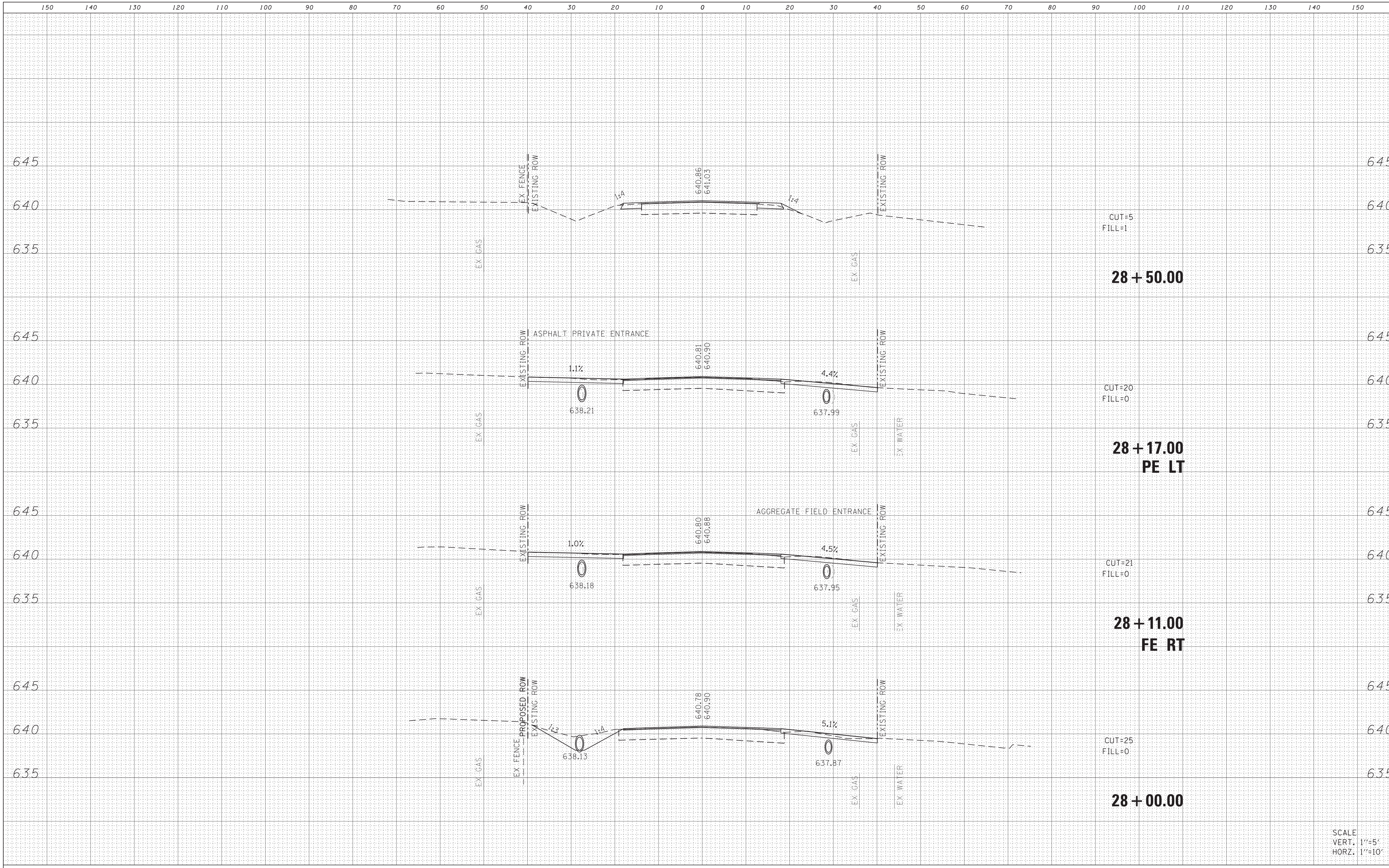
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 6 OF 8 SHEETS | STA. 26+00.00 | TO STA. 27+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	69
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



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	PLOT DATE = 12/13/2012	DATE - 8/10/12

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 7 OF 8 SHEETS | STA. 28+00.00 TO STA. 28+50.00

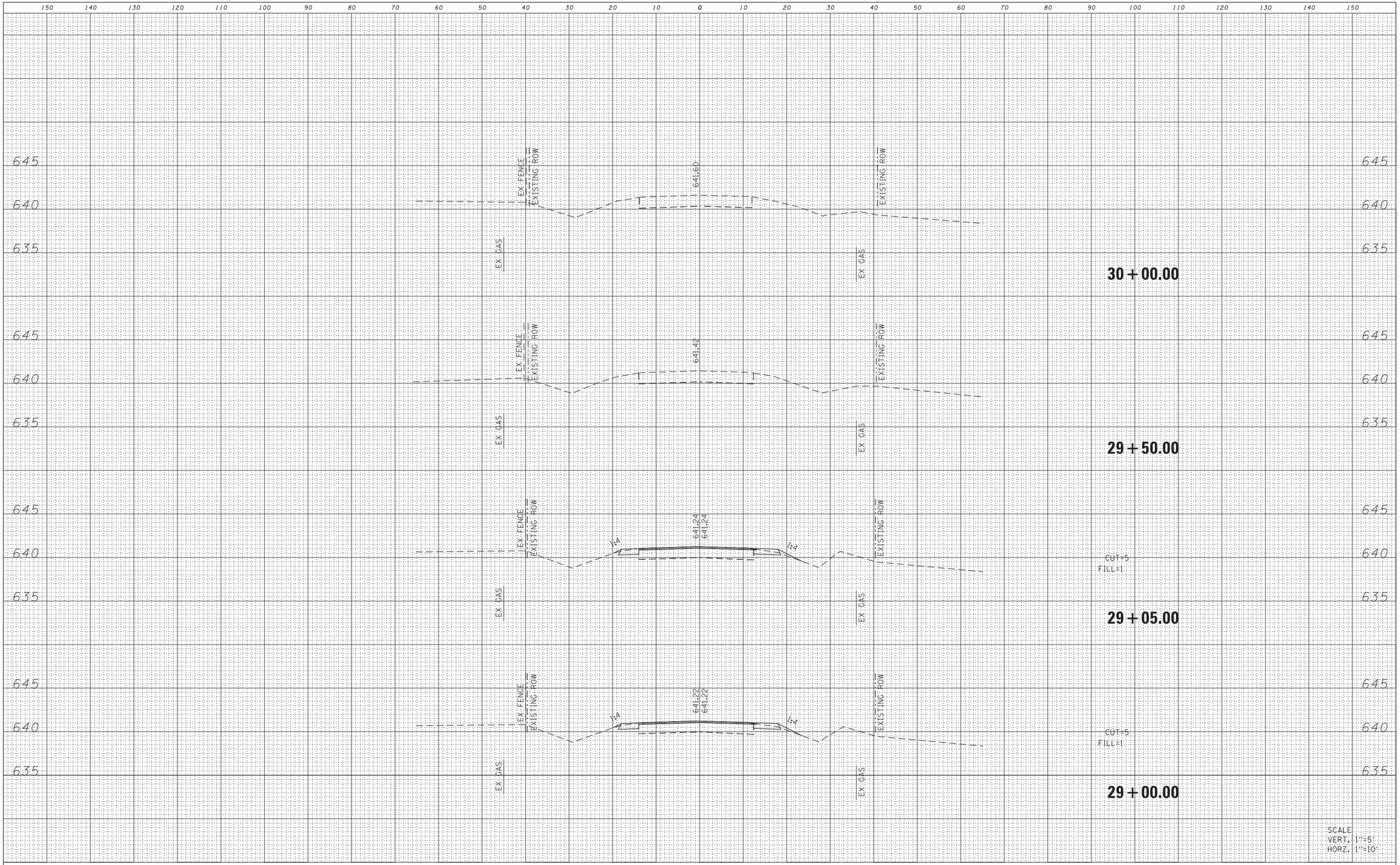
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1) BR	LIVINGSTON	123	70

CONTRACT NO. 66832

ILLINOIS | FED. AID PROJECT

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

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



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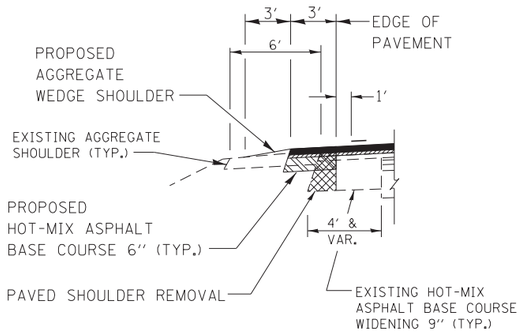
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET 8 OF 8 SHEETS | STA. 29+00.00 | TO STA. 30+00.00

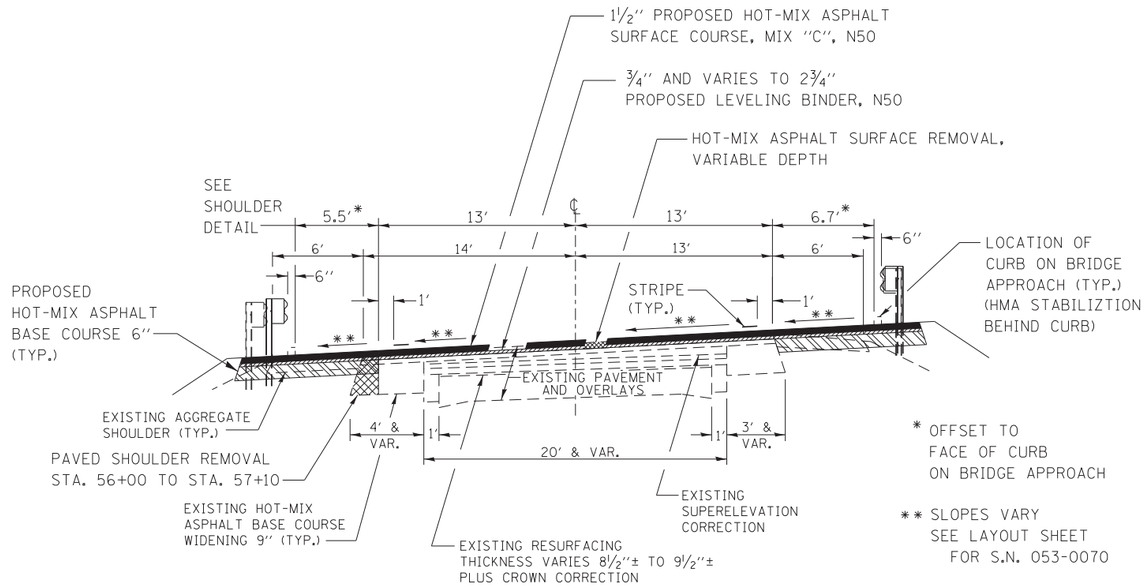
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	71
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



SHOULDER DETAIL

IL 116

STA. 56+00 TO STA. 57+10 (LEFT)
STA. 56+66.71 TO STA. 56+78.30 (RIGHT)
STA. 60+15.62 TO STA. 60+93 (RIGHT)



TYPICAL SECTION NO. 1

IL 116

STA. 56+00 TO STA. 58+48±
STA. 58+83± TO STA. 60+93

MIXTURE REQUIREMENTS

	HMA BINDER AND BASE COURSE	HMA LEVELING BINDER	HMA SURFACE	HMA SHOULDERS BOTTOM LIFTS	HMA SHOULDERS TOP LIFTS
PG GRADE	PG 64-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE			MIXTURE C		MIXTURE C
DENSITY TEST METHOD	CORES	SATISFACTION OF ENGINEER	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/OA SPECIFICATION.

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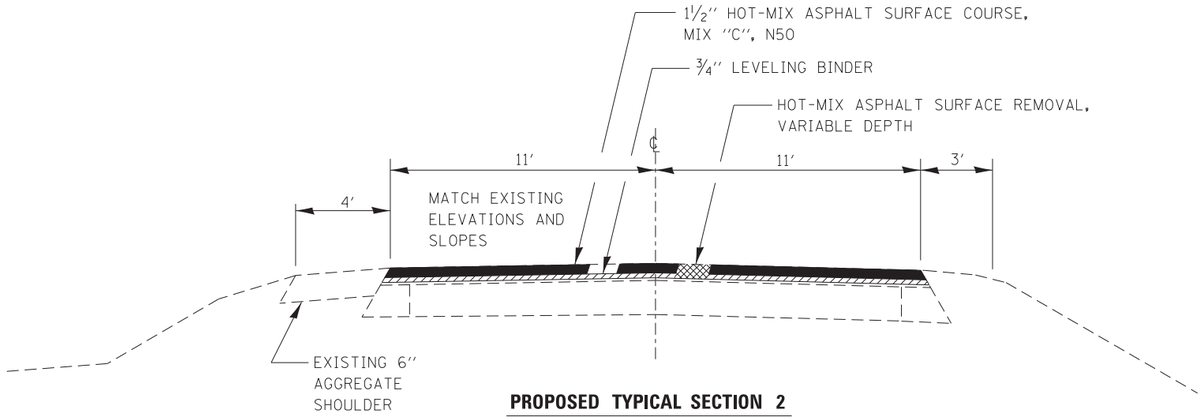
	PLOT DATE = 12/13/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 116
TYPICAL SECTIONS

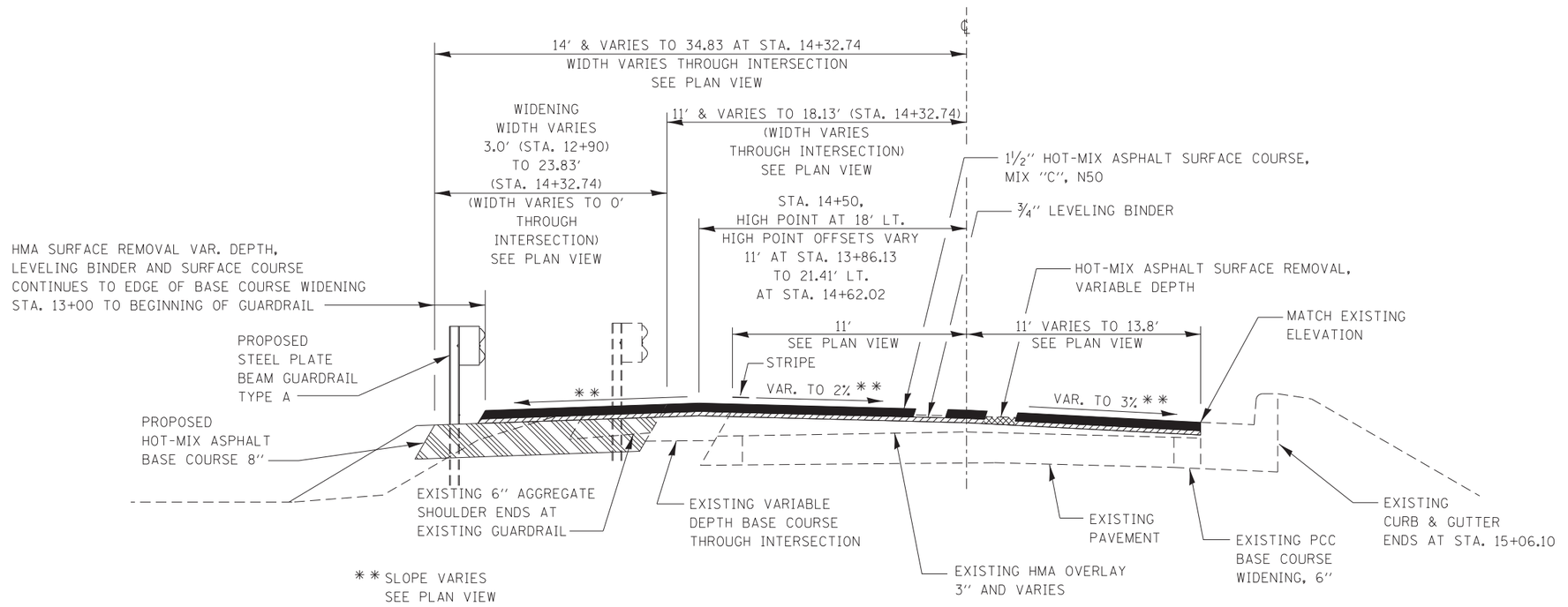
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	72
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



PROPOSED TYPICAL SECTION 2

C.R. 24
STA. 12+00 TO STA. 12+90 (CR 24)



PROPOSED TYPICAL SECTION 3

C.R. 24
STA. 12+90 TO STA. 15+06.10 (CR 24)

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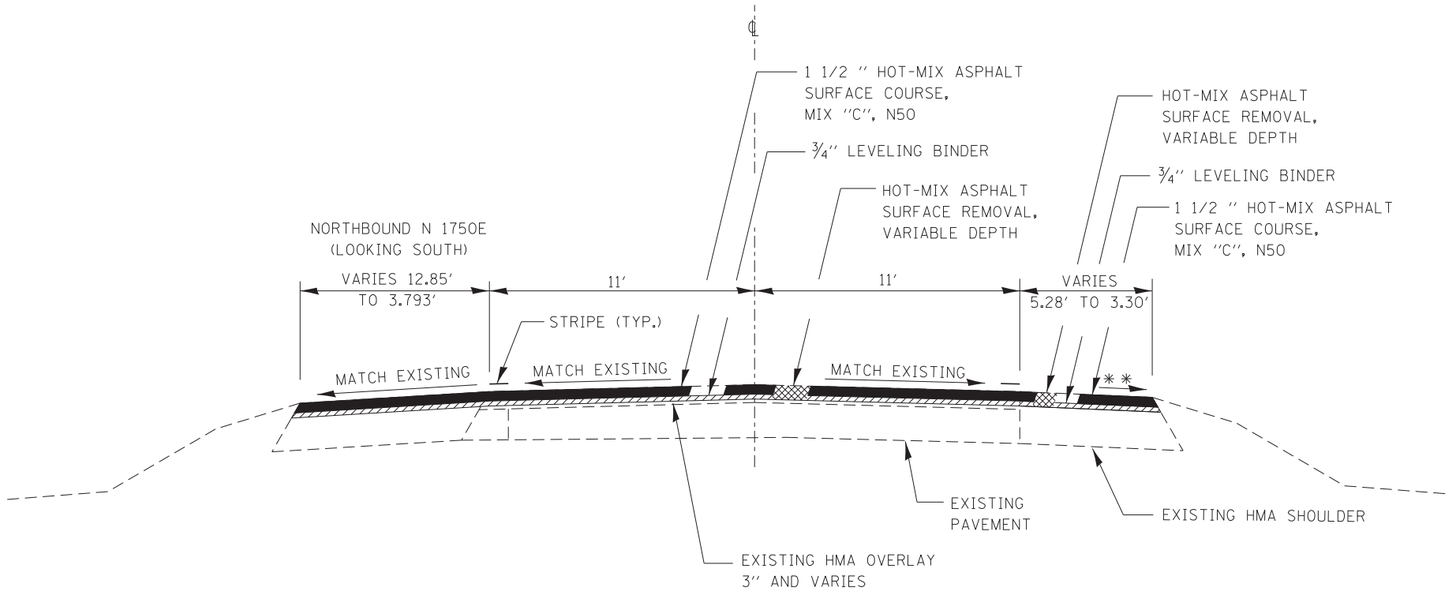
	PLOT DATE = 12/12/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR
TYPICAL SECTIONS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

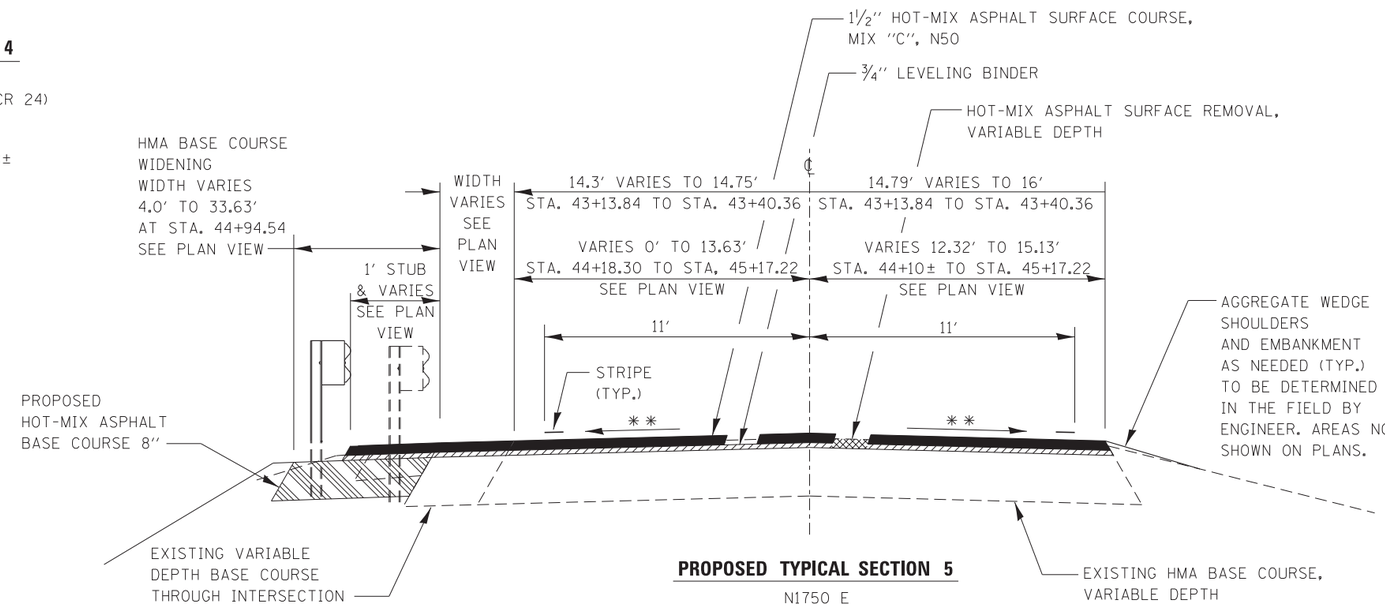
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	73
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		



PROPOSED TYPICAL SECTION 4

C.R. 24.
STA. 15+06.10 TO STA. 15+74.37 (CR 24)

N 1750E (LOOKING SOUTH)
STA. 43+40.36 TO STA. 44+10±



PROPOSED TYPICAL SECTION 5

N1750 E
LOOKING NORTH
STA. 43+13.84 (BUTT JT.) TO STA. 43+40.36

STA. 43+40.36 TO STA. 44+10± N 1750E
SHOWN WITH CR 24 STA. 15+06.10 TO STA. 15+74.37

STA. 44+10± TO STA. 45+17.22

STA. 45+17.22 TO STA. 45+72.59
BRIDGE OMISSION

MATCH EXISTING PAVEMENT ELEVATIONS AND SLOPES STA. 43+13.84 TO STA. 43+40.36 SOUTHBOUND

MATCH EXISTING PAVEMENT ELEVATIONS AND SLOPES STA. 43+13.84 TO STA. 44+18.30 NORTHBOUND

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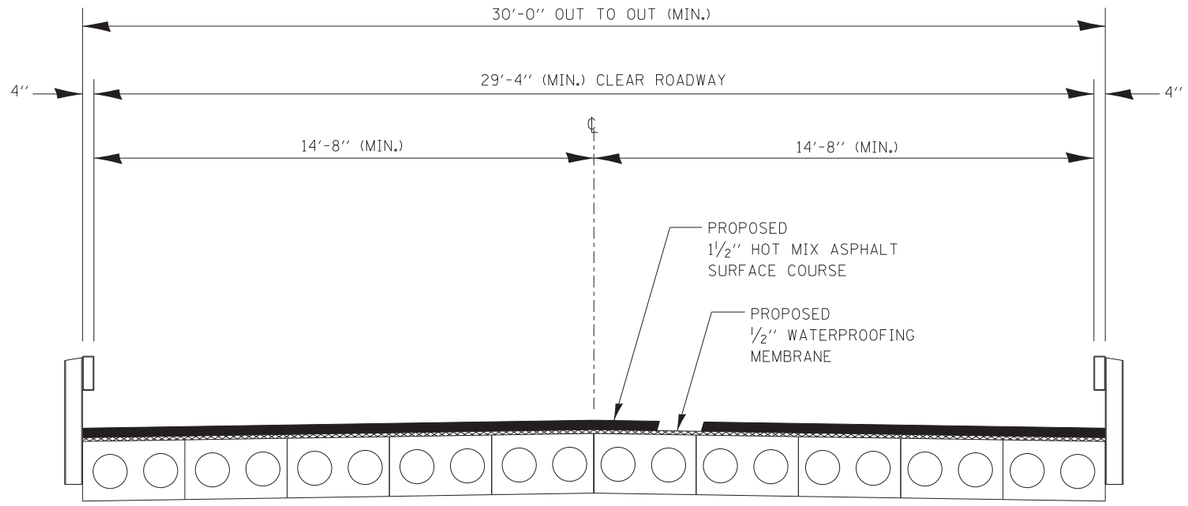
	PLOT DATE = 12/12/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR
TYPICAL SECTIONS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

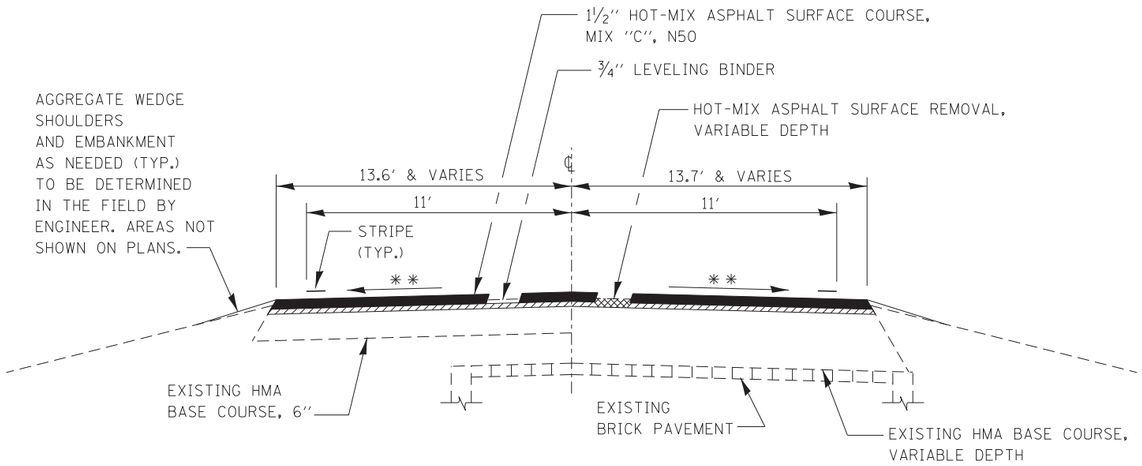
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	74
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



PROPOSED TYPICAL SECTION 6

S.N. 053–3450

STA. 45+17.22 TO STA. 45+72.59



PROPOSED TYPICAL SECTION 7

N1750 E

STA. 45+72.59 TO STA. 48+06.87

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR
TYPICAL SECTIONS

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	75
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

PAVEMENT SCHEDULE

STA TO STA	LENGTH	PAVEMENT WIDTH	PAVEMENT AREA	HMA BASE COURSE 6" (WIDTH VARIES)	HMA BASE COURSE 8" (WIDTH VARIES)	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	MIXTURE FOR CRACKS JOINTS & FLANGEWAYS	HMA LEVELING BINDER N50 (HAND METH)	HMA LEVELING BINDER N50 (MACH METH) 3/4"	HMA SURFACE REMOVAL BUTT JOINT	HMA SURFACE COURSE MIX. "C" N 50 1 1/2"	PAVED SHOULDER REMOVAL	AGGREGATE WEDGE SHOULDER, TYPE B	HMA SURFACE REMOVAL, VARIABLE DEPTH	TEMP RAMP	WATERPROOFING MEMBRANE SYSTEM
	FOOT	FOOT	SQ YD	SQ YD	SQ YD	GALLON	TON	TON	TON	TON	SQ YD	TON	SQ YD	TON	SQ YD	SQ YD	SQ FT
IL 116																	
56+00.00 56+30.00	30.00	26.0	86.7	11		12.8	0.2	0.0	0.0	4	87	8	10	1		14	
56+30.00 57+07.35	77.35	26.0	223.5	40		34.2	0.5	0.1	0.1	14		23	15	3	223		
57+07.35 57+82.85	75.50	26.0	218.1	175		51.1	0.8	0.1	0.2	23		41			218		
57+82.85 57+98.82	15.97	26.0	46.1	37		10.9	0.2	0.0	0.0	8		9				14	
57+98.82 58+28.97	30.15	26.0	87.1	20													
S.N. 053-0070 (EX) / S.N. 053-0191 (PR)																	
59+01.03 59+31.19	30.16	26.0	87.1	34												14	
59+31.19 60+15.62	84.43	26.0	243.9	201		57.8	0.5	0.1	0.2	56		46			244		
60+15.62 60+63.00	47.38	26.0	136.9	87		29.1	0.3	0.0	0.1	9		20		2	137		
60+63.00 60+93.00	30.00	26.0	86.7	48		17.6	0.2	0.0	0.1	6	87	12		1		14	
SUB-TOTALS				654		213.5	2.6	0.3	0.8	120	173	158	24	6	822	58	0.0
CR 24																	
11+06.40 15+74.37	467.97	22' & VAR.	1374.2		153	198.5	3.05	0.5	0.8	148		143			1374	13	
N1750 E																	
43+13.84 45+17.22	203.38	VAR.	453.6		31	59.0	0.91	0.1	0.2	38		38			454	13	
COUNTY S.N. 053-3450																	
45+17.22 45+72.59												15					1625
45+72.59 50+00.00	427.41	VAR.	892.8			116.1	1.79	0.3	0.4	75		75			893		
SUB-TOTALS				0	183	373.5	5.7	0.9	1.4	262	0	272	0	0	2721	27	1625
TOTALS				654	183	587.0	8	1.2	2.3	381	173	430	24	6	3543	84	1625

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	76
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

PAVEMENT MARKING												
LOCATION	TEMPORARY PAVEMENT MARKING- LINE 4''		TEMPORARY PAVEMENT MARKING- LINE 24''	PAINT PAVEMENT MARKING LINE 4''		PAINT PAVEMENT MARKING LINE 8''	PAINT PAVEMENT MARKING LINE 12''	PAINT PAVEMENT MARKING LINE 24''	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	WORK ZONE PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	WHITE	YELLOW		WHITE	YELLOW							
	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH	SQ FT	EACH
IL 116				1952	1972				2	1		2
CR 24	221	601	42	1280	1552	288	240	46			40	
N1750 E	197	549	12	2018	200			46			30	
TOTALS	418	1150	54	5250	3724	288	240	92	2	1	70	2

TEMPORARY PAVEMENT MARKINGS QUANTITIES APPLY TO THE DETOUR.

PAINT PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS

EARTHWORK				
LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (NOTE 1)	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
IL 116 WEST OF S.N. 053-0070 (EX) /S.N. 053-0191 (PR)	23.1	17.3	124.6	-107.3
EAST OF S.N. 053-0070 (EX) /S.N. 053-0191 (PR)	68.4	51.3	185.2	-133.9
CR 24	20.8	19.1	15.8	3.3
N1750 E NORTH OF S.N. 053-3450	5.8	0.3	0.2	0.1
SOUTH OF S.N. 053-3450	0	0	0.0	0.0
TOTALS	118.1	88.0	325.8	-237.8

NOTE 1. ESTIMATED SHRINKAGE FACTOR IS 25%

EARTHWORK BALANCE FROM CONSTRUCTION AT S.N. 053-0159 (WASTE)	142
EARTHWORK BALANCE (SHORTAGE)	-95.8

GUARDRAIL						
LOCATION	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FT POSTS	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) FLARED	TRAFFIC BARRIER TERMINAL TYPE 6	GUARDRAIL REMOVAL	GUARDRAIL MARKER TYPE A	TERMINAL MARKER DIRECT APPLIED
	FOOT	EACH	FOOT	FOOT	EACH	EACH
IL 116 WEST OF S.N. 053-0070(EX) /S.N. 053-0191 (PR)	40.625	2	2	183	3	1
EAST OF S.N. 053-0070(EX) /S.N. 053-0191 (PR)	65.625	2	2		3	1
CR 24	87.5	1		156	4	1
TOTALS	193.75	5	4	339	10	3

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	77
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

PLAN

NOTE BOOK NO.

SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.T. OF WAY CHECKED
CADD FILE NAME

BY

DATE

PROFILE

NOTE BOOK NO.

SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHKD

BY

DATE

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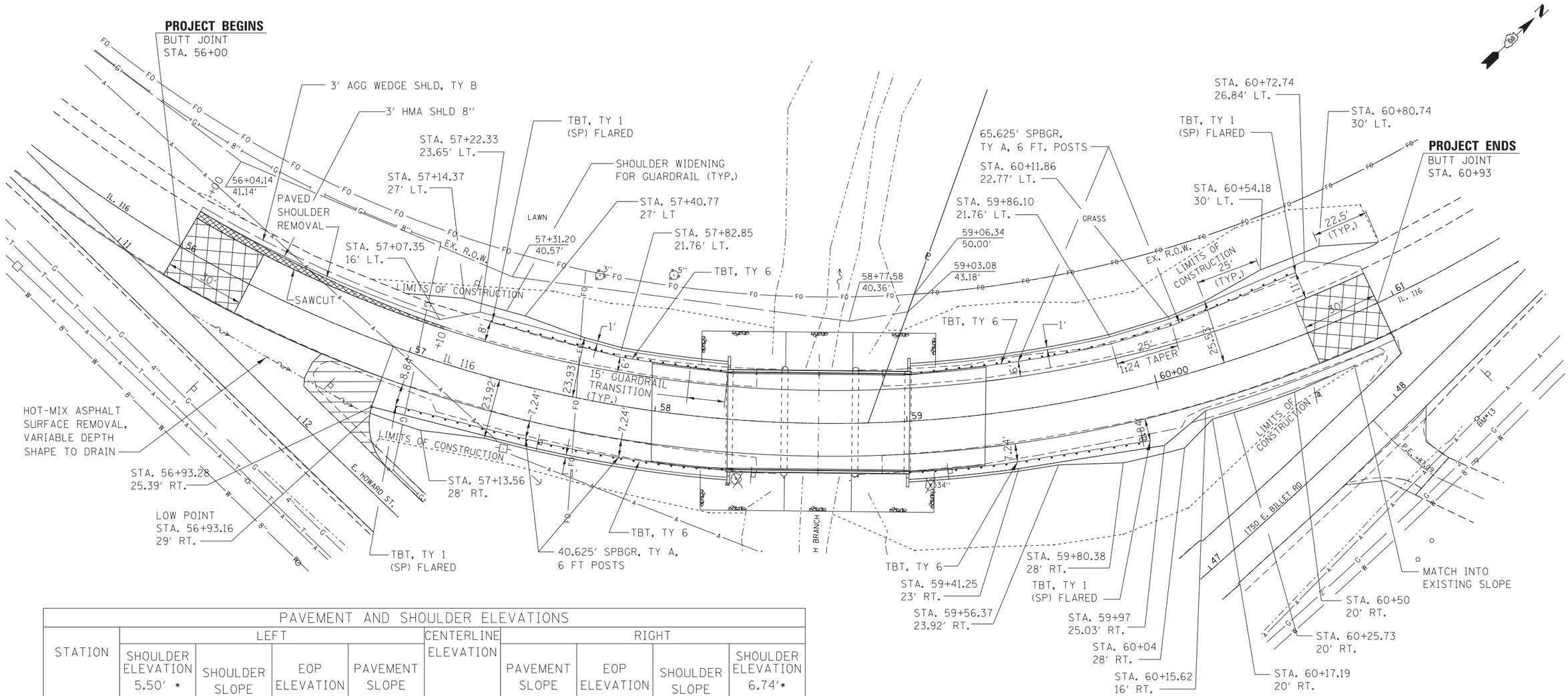
	PLOT DATE = 12/14/2012	DATE - 02/28/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 116 PLAN & PROFILE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR-1)BR & (113 BR-1)BR	LIVINGSTON	123	78
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		



PAVEMENT AND SHOULDER ELEVATIONS

STATION	LEFT				CENTERLINE ELEVATION	RIGHT			
	SHOULDER ELEVATION 5.50' * OFFSET	SHOULDER SLOPE	EOP ELEVATION	PAVEMENT SLOPE		PAVEMENT SLOPE	EOP ELEVATION	SHOULDER SLOPE	SHOULDER ELEVATION 6.74'* OFFSET
MATCH EXISTING PAVEMENT ELEVATIONS									
56+00.00	650.060	0.0974	650.596	0.0467	651.203	0.0306	651.601	-0.0056	651.563
56+50.00	649.556	0.0742	649.964	0.0520	650.640	0.0369	651.120	-0.0107	651.048
57+00.00	649.197	0.0693	649.578	0.0548	650.290	0.0403	650.814	-0.0031	650.793
57+50.00	649.028	0.0645	649.383	0.0575	650.130	0.0505	650.787	0.0368	651.035
57+96.00	649.033	0.0600	649.363	0.0600	650.143	0.0599	650.922	0.0598	651.325
S.N. 053-0191 (PROP)									
59+50.00	648.966	0.0663	649.331	0.0601	650.112	0.0578	650.864	0.0552	651.236
60+00.00	648.754	0.0863	649.229	0.0602	650.012	0.0513	650.679	0.0404	650.951
60+50.00	648.740	0.0927	649.250	0.0607	650.039	0.0451	650.625	0.0021	650.639
MATCH EXISTING PAVEMENT ELEVATIONS									
60+93.00	648.927	0.0865	649.403	0.0559	650.130	0.0395	650.644	0.0027	650.662

* OFFSET TO FACE OF CURB ON BRIDGE APPROACH

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	PLOT SCALE = 20.0000 ' / in.	DRAWN -	REVISED -						
	PLOT DATE = 12/13/2012	CHECKED -	REVISED -						
		DATE -	REVISED -		SCALE:	SHEET OF SHEETS	STA.	TO STA.	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	79
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

RESIDENT ENGINEER
SHALL VERIFY ELEVATIONS
IN THE FIELD

EASTBOUND SLOPES
MEASURED FROM EOP

MATCH EXISTING ELEVS
FOR SOUTHBOUND EOP
FROM STA. 15+29.66 TO SOUTH

MATCH EXISTING ELEVS
FOR NORTHBOUND EOP
FROM STA. 44+18.30 TO SOUTH

CR 24 ELEVATIONS

STATION	EASTBOUND SLOPE FROM EOP %	CENTERLINE	WESTBOUND SLOPE FROM CENTERLINE %	WESTBOUND 11′ OFFSET FROM CENTERLINE	WESTBOUND VARIABLE OFFSET FROM CENTERLINE	WESTBOUND EDGE OF HMA WIDENING (ON SURFACE COURSE)	WESTBOUND WIDENING ELEVATIONS*
13+00.00	MATCH EXISTING	650.290	MATCH EXISTING	650.122			
13+17.20	2.60	650.202	-0.84	650.109		649.943	
13+38.20	2.76	650.107	0.00	650.110		649.880	
13+50.00	2.82	650.050	0.06	650.110			649.961
13+65.67	2.90	650.059	1.34	650.206			650.084
13+79.20	2.97	650.044	2.00	650.264			650.153
13+86.13	3.00	649.991	2.00	650.211			650.100
14+00.00	3.00	649.910	2.00		650.140		
14+10.00	3.00	649.898	2.00		650.138		
14+30.00	3.00	649.791	2.00		650.071		
14+40.00	3.00	649.704	2.00		649.950		
14+50.00	3.00	649.618	2.00	649.816	649.978		
14+66.10	3.00	649.674	2.00	649.894			
14+99.39	2.00	649.738	1.49	649.902			
15+07.89	1.95	649.757	0.32	649.793			
15+29.66	MATCH EXISTING	649.852	MATCH EXISTING				

* ON SURFACE COURSE AT FACE OF GUARDRAIL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

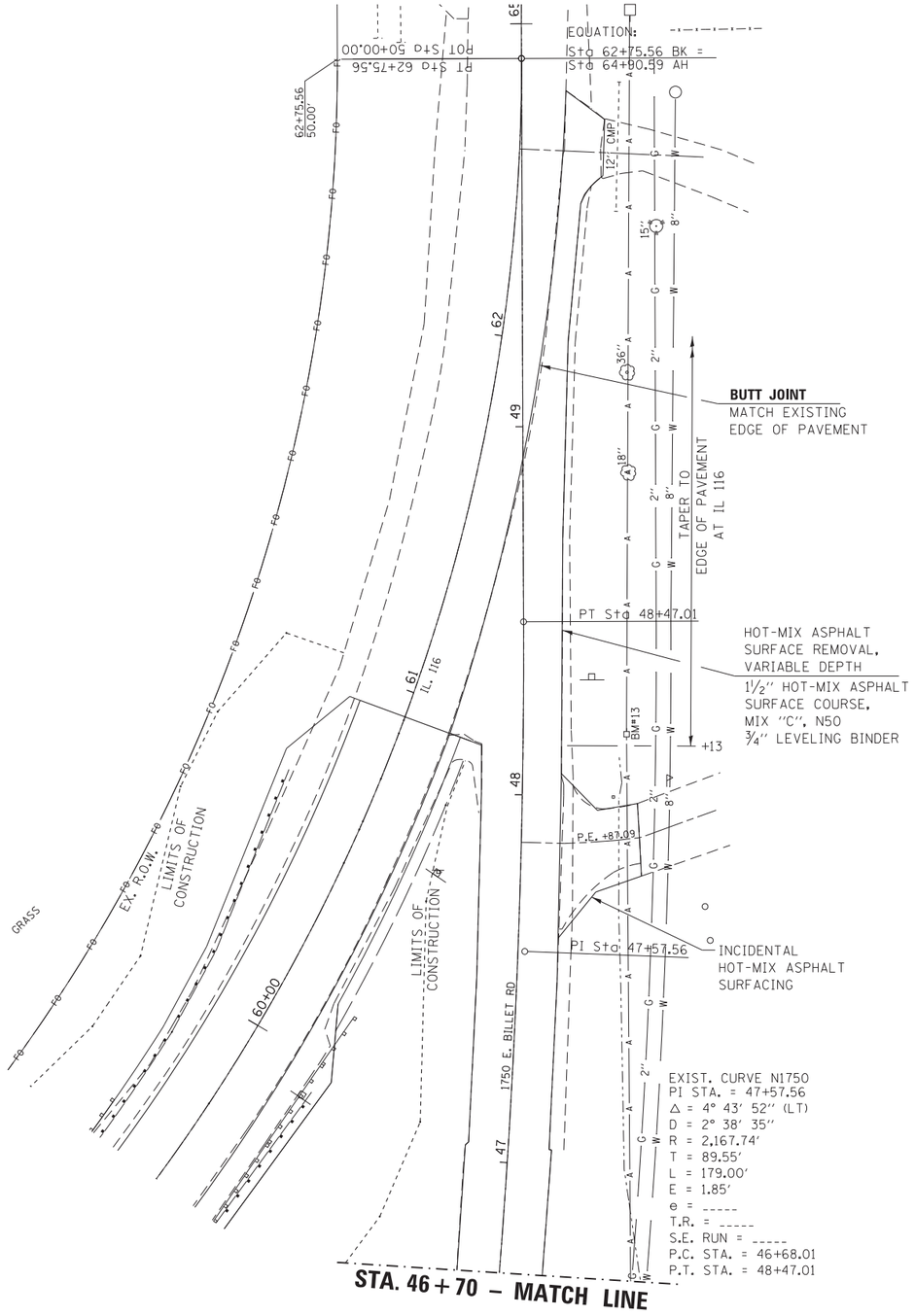
DETOUR
PLAN VIEW

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	80

CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT



N

N1750 ELEVATIONS			
STATION	CENTERLINE	SOUTHBOUND EOP	NORTHBOUND EOP
44+18.30			649.588
44+50.00	650.087	650.923	
44+60.50	650.148	649.944	
44+89.82	650.319	650.115	650.092
45+00.00	650.378		
45+08.61	650.429	650.161	650.071
45+17.21	650.479	(MATCH BRIDGE)	(MATCH BRIDGE)
45+25.00	650.533	(MATCH BRIDGE)	(MATCH BRIDGE)
45+50.00	650.693	(MATCH BRIDGE)	(MATCH BRIDGE)
45+72.59	650.411	(MATCH BRIDGE)	(MATCH BRIDGE)
45+75.00	650.407	650.215	650.209
46+00.00	650.372	650.167	650.184
46+25.00	650.338	650.174	650.146

0 20 40 60
SCALE IN FEET

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR
PLAN VIEW

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	81
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

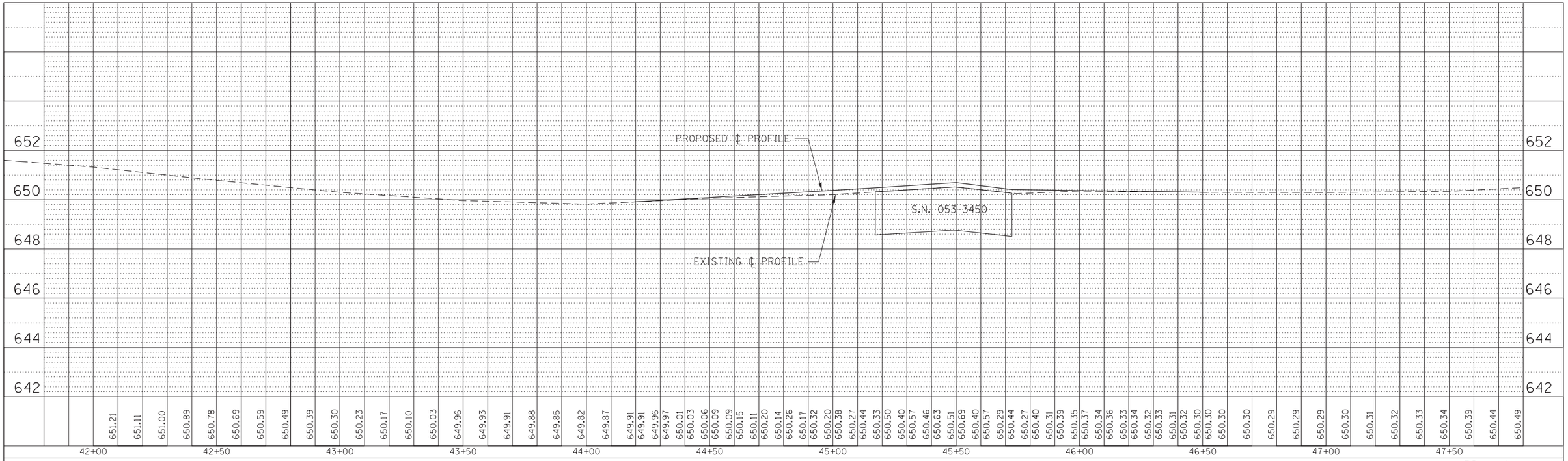
PLAN

SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME

NOTE BOOK
NO.

BY

DATE



N1750

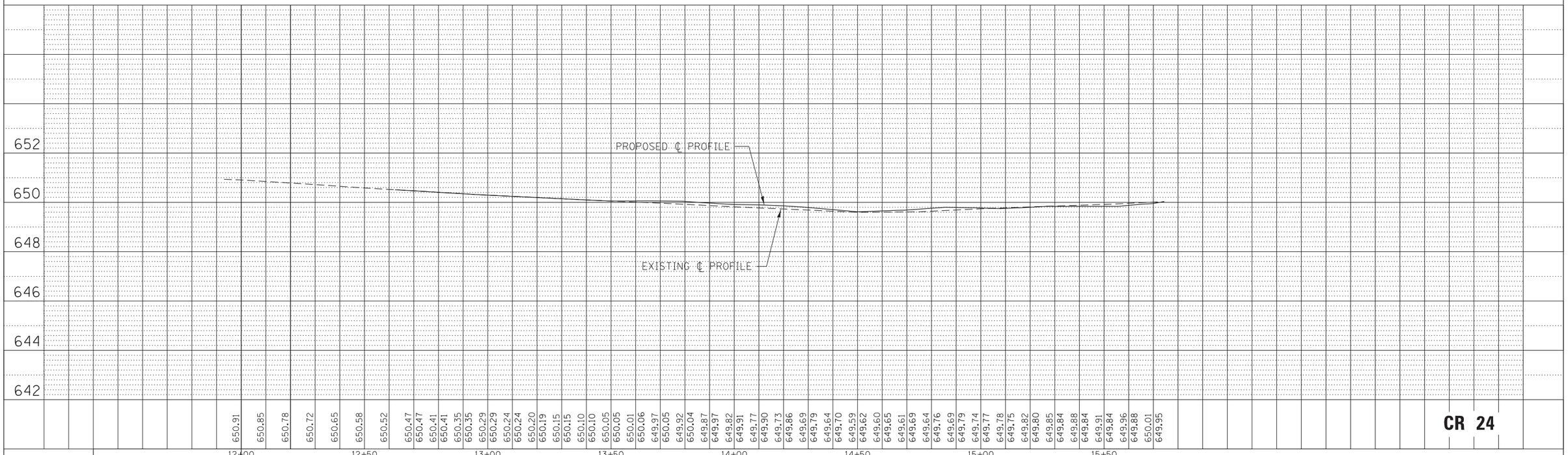
PROFILE

SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD

NOTE BOOK
NO.

BY

DATE



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROFILES

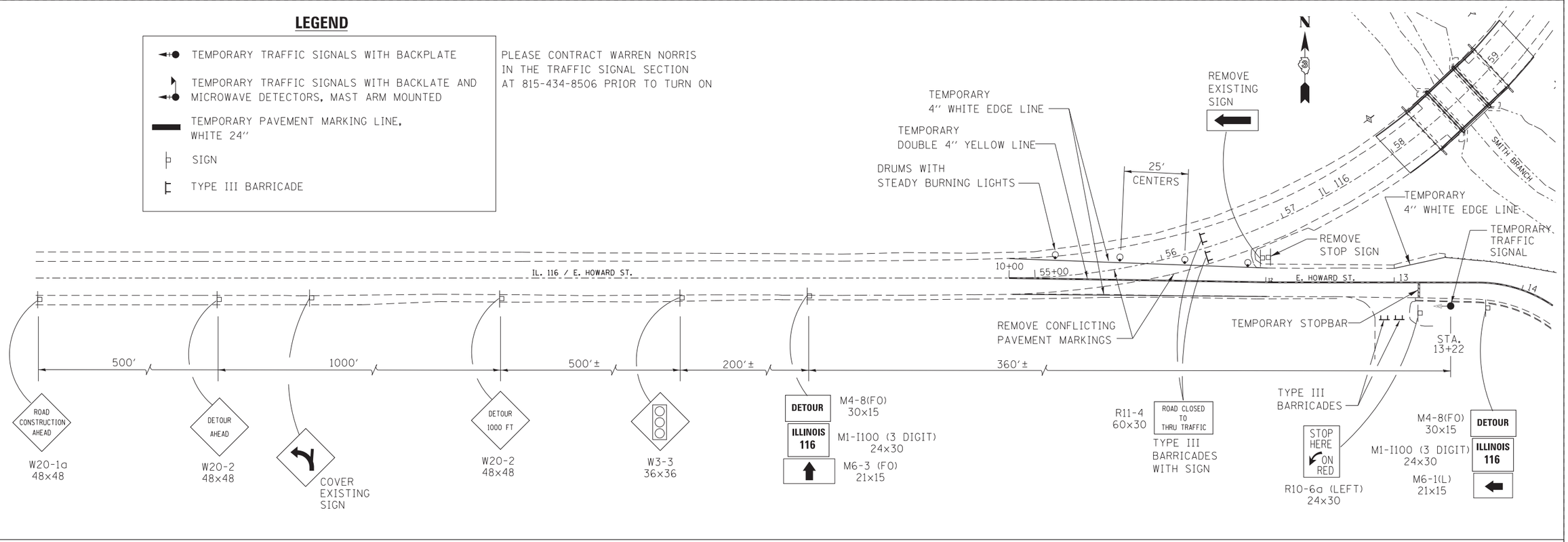
SCALE: | SHEET OF SHEETS | STA. | TO STA.

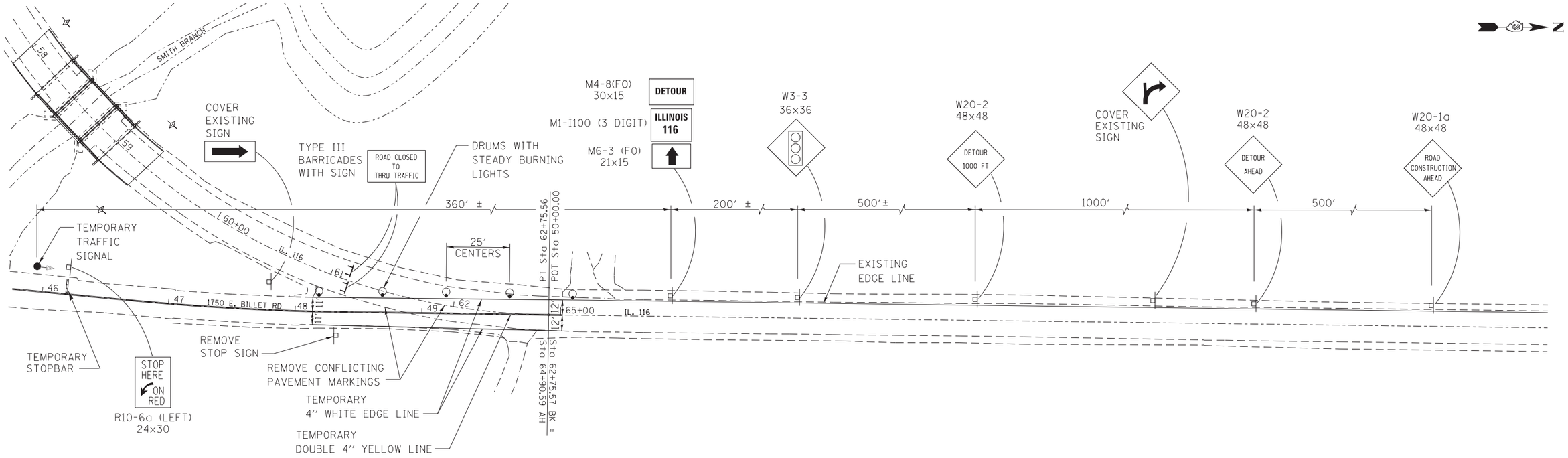
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	82
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

LEGEND

- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TEMPORARY TRAFFIC SIGNALS WITH BACKLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED
- TEMPORARY PAVEMENT MARKING LINE, WHITE 24''
- SIGN
- TYPE III BARRICADE

PLEASE CONTRACT WARREN NORRIS
IN THE TRAFFIC SIGNAL SECTION
AT 815-434-8506 PRIOR TO TURN ON





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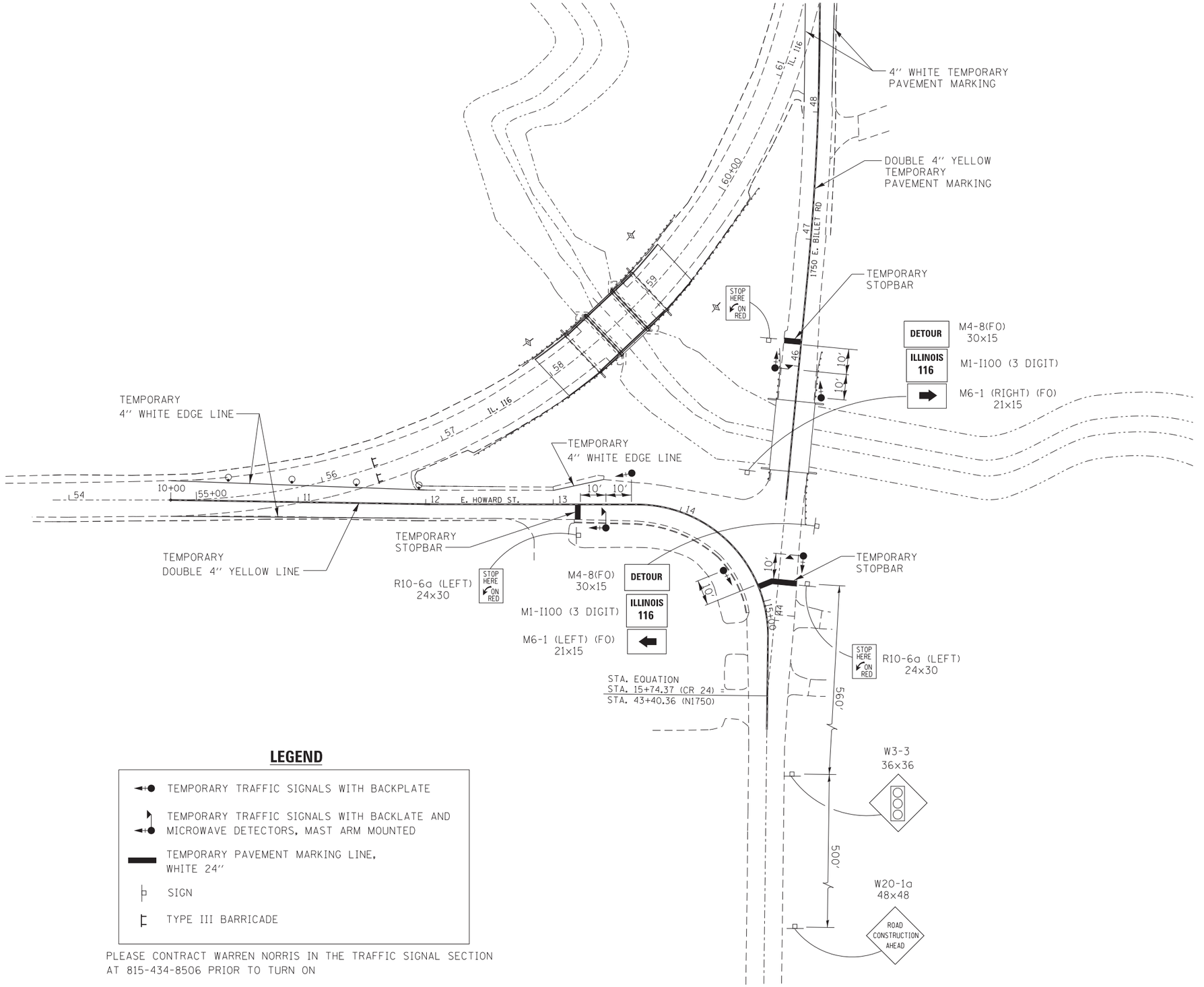
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 116
TRAFFIC CONTROL DETAIL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	83
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



LEGEND

- TEMPORARY TRAFFIC SIGNALS WITH BACKPLATE
- TEMPORARY TRAFFIC SIGNALS WITH BACKLATE AND MICROWAVE DETECTORS, MAST ARM MOUNTED
- TEMPORARY PAVEMENT MARKING LINE, WHITE 24''
- SIGN
- TYPE III BARRICADE

PLEASE CONTRACT WARREN NORRIS IN THE TRAFFIC SIGNAL SECTION AT 815-434-8506 PRIOR TO TURN ON

FILE NAME = c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-SN05300070-details.dgn	USER NAME = Schwankerg	DESIGNED -	REVISED -
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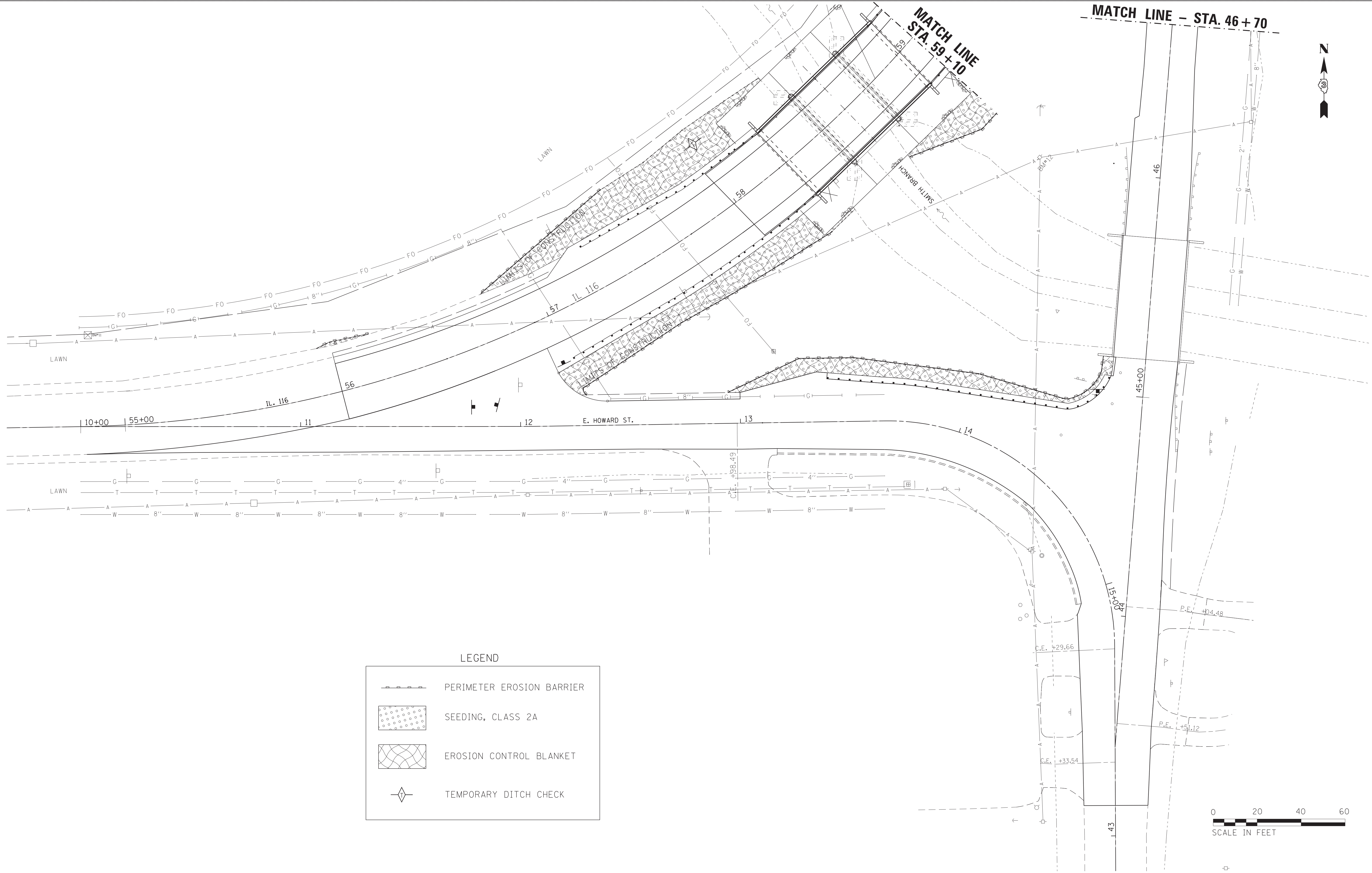
	PLOT DATE = 12/13/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 116
TRAFFIC CONTROL DETAIL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	84
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



LEGEND

	PERIMETER EROSION BARRIER
	SEEDING, CLASS 2A
	EROSION CONTROL BLANKET
	TEMPORARY DITCH CHECK

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Default		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

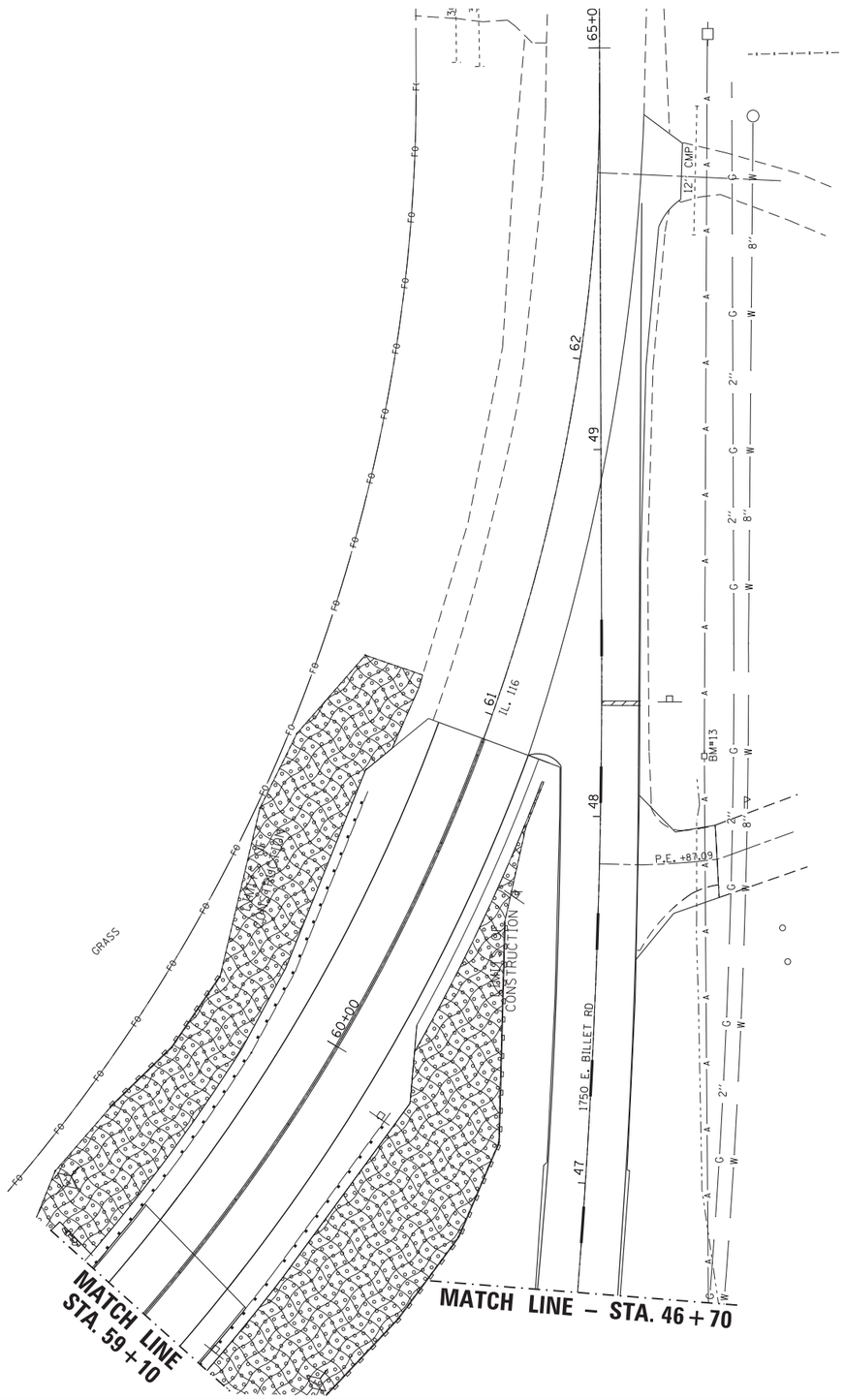
IL 116 & COUNTY ROADS
EROSION CONTROL

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	85

CONTRACT NO. 66832

ILLINOIS | FED. AID PROJECT



N

LEGEND

- PERIMETER EROSION BARRIER
- SEEDING, CLASS 2A
- EROSION CONTROL BLANKET
- TEMPORARY DITCH CHECK

0 20 40 60
SCALE IN FEET

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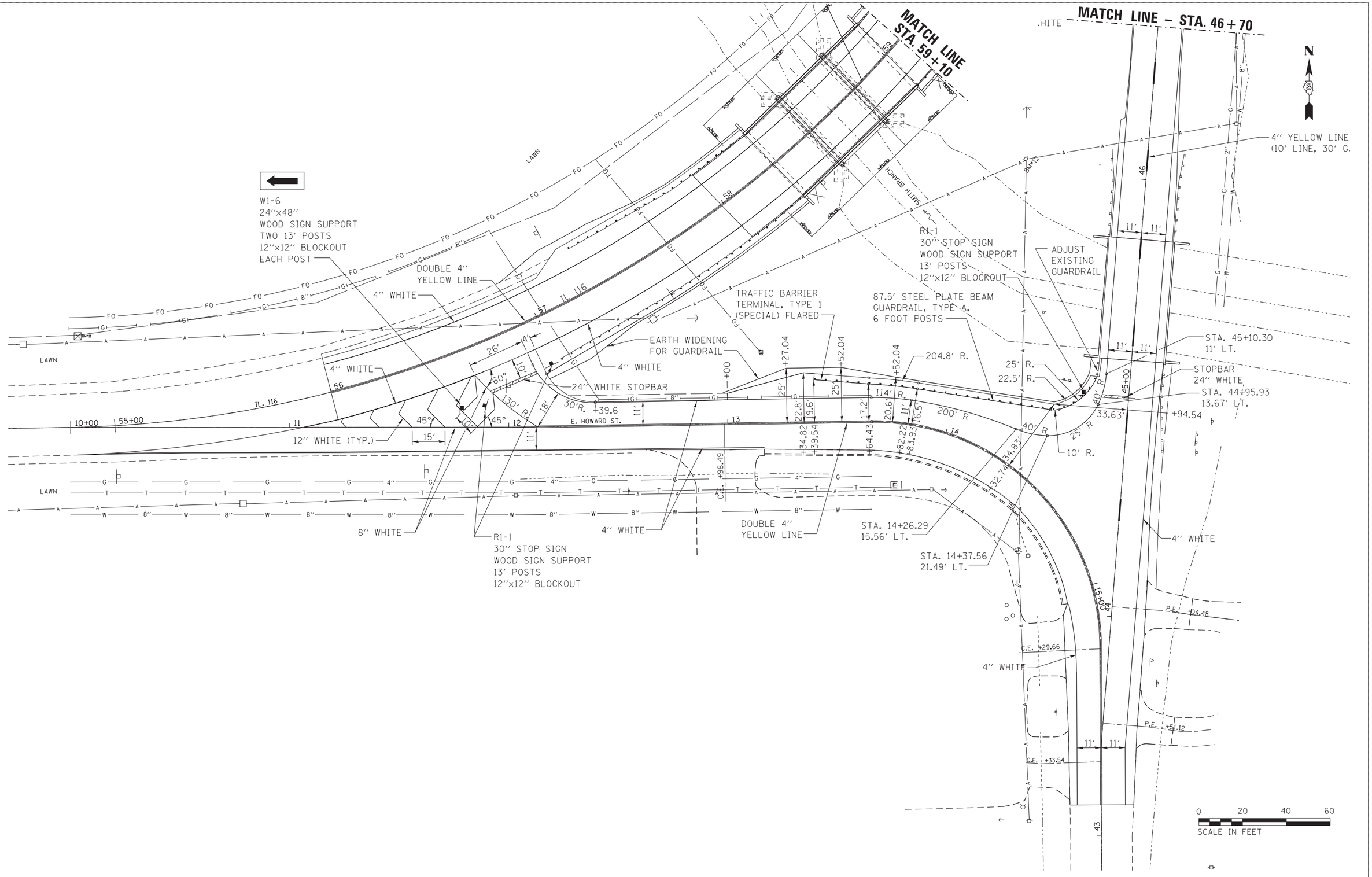
Default	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 116 & COUNTY ROADS
EROSION CONTROL

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	86
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



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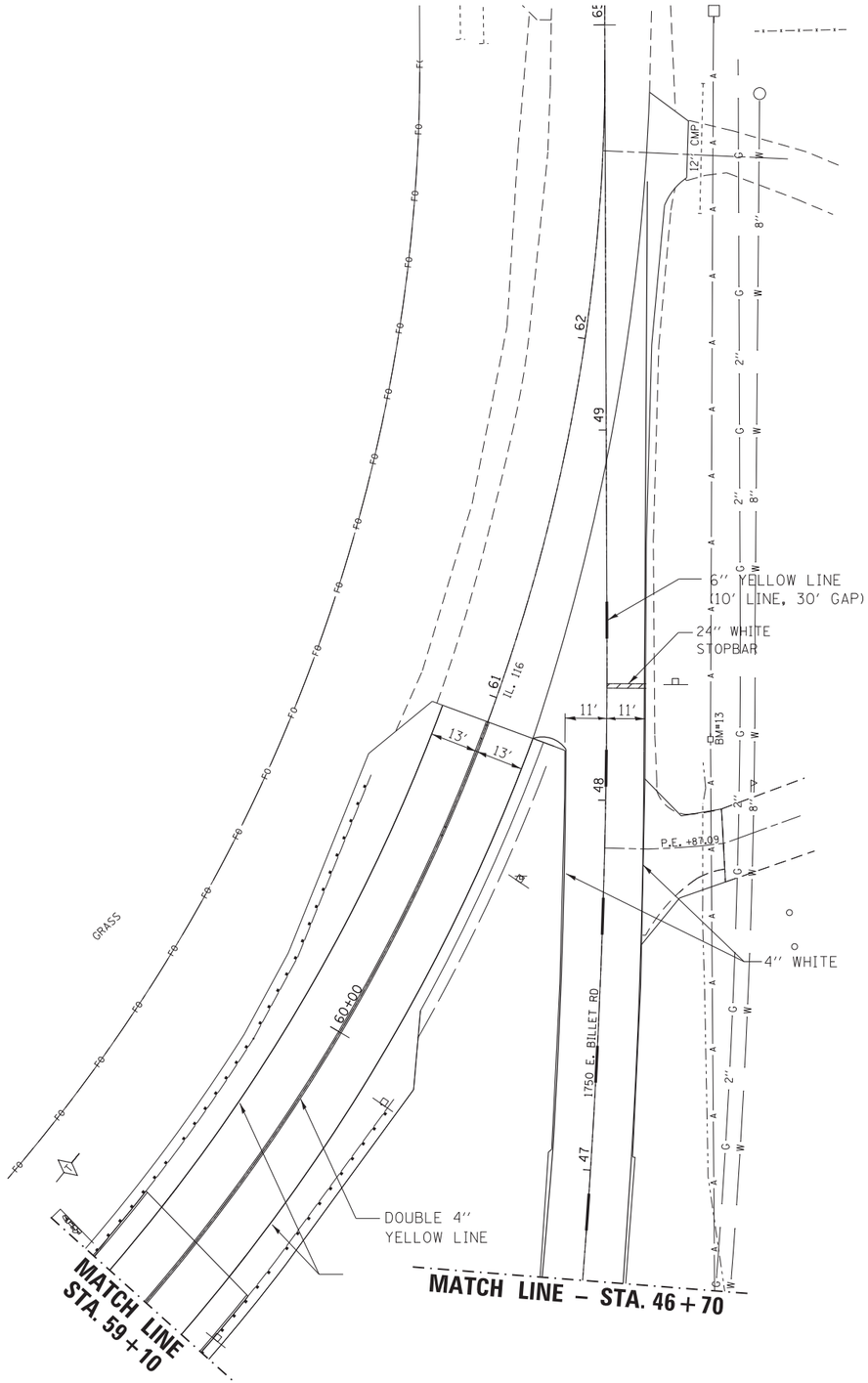
	PLOT DATE = 12/12/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING
& COUNTY ROAD GUARDRAIL LAYOUT

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	87
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



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		DRAWN -	REVISED -
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Default	PLOT DATE = 12/12/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING
& COUNTY ROAD GUARDRAIL LAYOUT

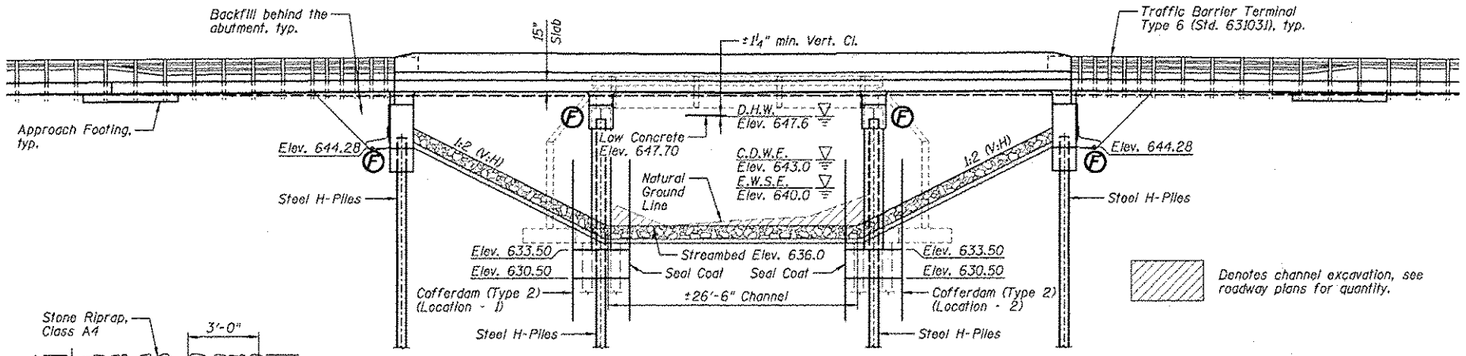
SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	88
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

Benchmarks: BM #12 Railroad spike in power pole, Station 59+07/80' RT, Elevation = 649.15
BM #13 Railroad spike in power pole with transformer, Station 61+09/57' RT, Elevation = 649.62

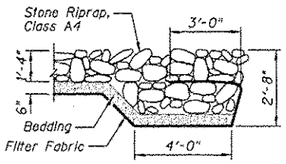
Existing Structure: S.N. 053-0070 was constructed in 1928 as Section 113B, and the superstructure was replaced in 1983 as Section 113BR-1. The superstructure consists of a single span with fourteen precast prestressed concrete deck beams with a 4" bituminous overlay and steel rail on each fascia beam. The substructure consists of closed reinforced concrete abutments and vertical cantilever wingwalls supported on untreated timber piles. The back to back of abutment dimension measures 29'-10 5/8" and the out to out deck dimension measures 42'-0" with no skew. Bridge to be closed and traffic detoured during construction.

No Salvage.

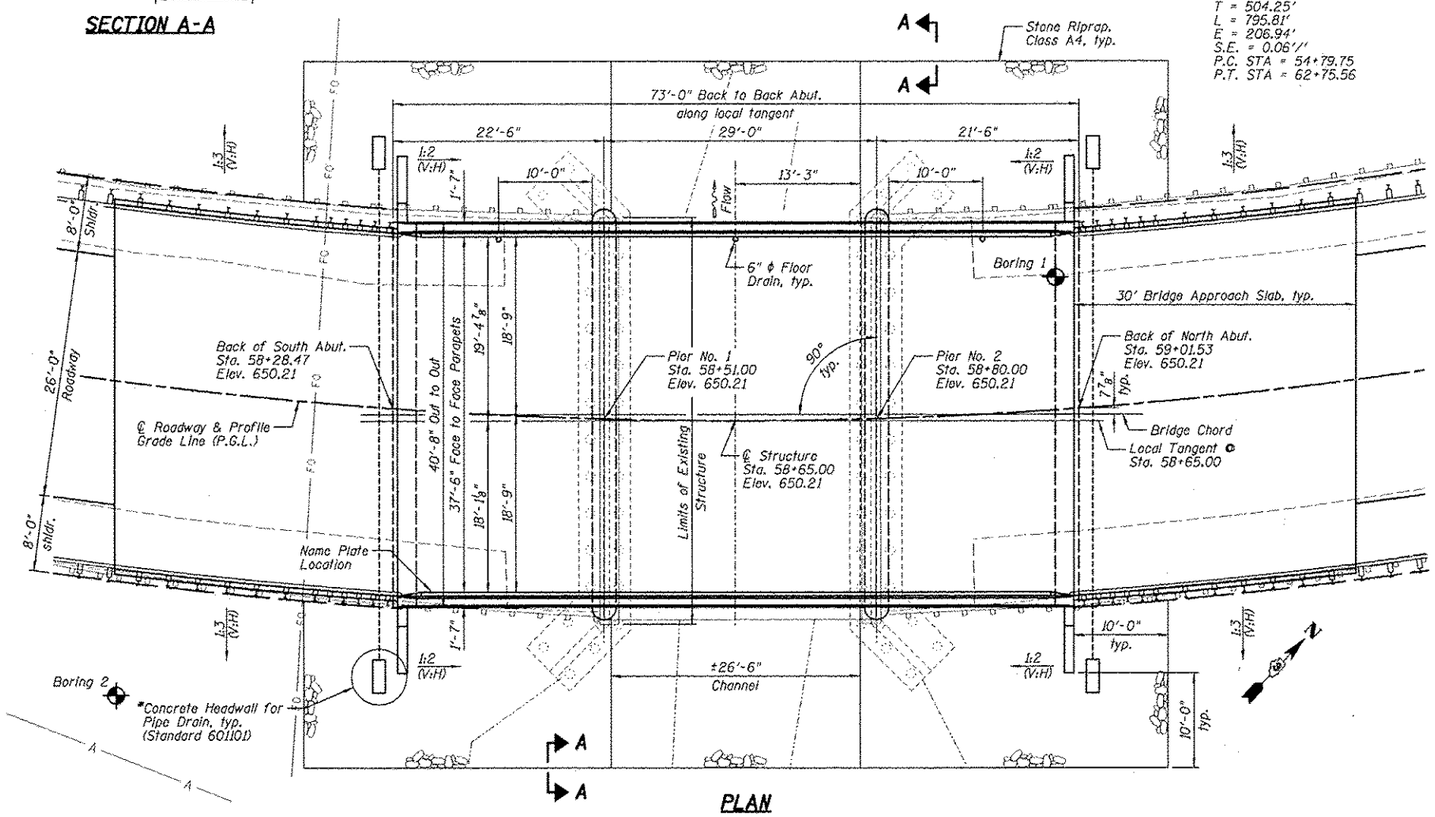


ELEVATION

Denotes channel excavation, see roadway plans for quantity.



SECTION A-A



PLAN

*Included in the cost of Pipe Underdrains for Structures 4".

CURVE DATA:

F.A.P. 681 (IL Rte. 116)
PI STA. = 59+84.00
Δ = 89° 15' 08" (LT)
D = 11° 12' 55"
R = 510.87'
T = 504.25'
L = 795.81'
E = 206.94'
S.E. = 0.06'/'
P.C. STA = 54+79.75
P.T. STA = 62+75.56

WATERWAY INFORMATION

Existing Low Grade Elev. 649.81 @ Sta. 59+00
Drainage Area = 7.74 Sq. Mi.
Proposed Low Grade Elev. 649.85 @ Sta. 59+70

Flood	Freq.	Q	Opening Sq. Ft.		Nat.	Head - Ft.		Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
	10	1390	250	407	646.0	0.1	0.0	646.1	646.1
Design	50	2270	271	503	647.6	0.8	0.1	648.3	647.7
Base	100	2660	271	513	647.9	1.1	0.3	649.0	648.1
Overtopping	200	3080	271	513	648.1	2.2	0.4	650.3	648.5
Max. Calc.	500	3620	271	513	648.5	2.5	0.6	651.0	649.1

10 Yr. Velocity = 3.4 ft/sec. (Proposed)
10 Yr. Velocity = 5.9 ft/sec. (Existing)

SCOUR INFORMATION

	Design Scour Elevation (ft.)			
	South Abutment	Pier 1	Pier 2	North Abutment
Q100	644.28	621.35	621.35	644.28
Q500	644.28	618.75	618.75	644.28

LOADING HL-93

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

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, Customary U.S. Units, 6th Edition.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi (Cast-In-Place)
fy = 60,000 psi (Reinforcement)

SEISMIC DATA

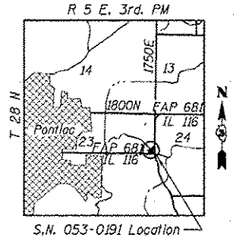
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.078 g
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.133 g
Soil Site Class = C

INDEX OF SHEETS

JOSEPH M. LOWRANCE 081-006446 LICENSED STRUCTURAL ENGINEER OF BLOOMINGTON ILLINOIS

Joseph M. Lowrance Date 11-30-12
JOSEPH M. LOWRANCE
ILLINOIS STRUCTURAL ENGINEER
NO. 081-006446
Exp. Date 11/30/14

APPROVED
For Structural Adequacy Only
D. Carl Purvis, PE
Engineer of Bridges & Structures



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL ROUTE 116 OVER
SMITH BRANCH
F.A.P. ROUTE 681 - SECTION (113 BR-1)BR
LIVINGSTON COUNTY
STATION 58+65.00
STRUCTURE NO. 053-0191

Farnsworth GROUP, INC.
2709 McGraw Drive
Bloomington, Illinois 61704
309/663-8435, 309/663-1571 fax

DATE - 11/27/12

	DESIGNED - TCR	REVISED
	CHECKED - JML	REVISED
	DRAWN - JWK	REVISED
	CHECKED - MSW	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. B1 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BRBR & (113 BR-1)BR	LIVINGSTON	123	69
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

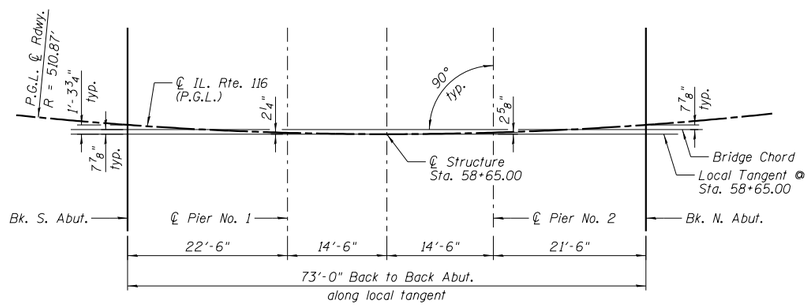
24-8740

TOTAL BILL OF MATERIAL

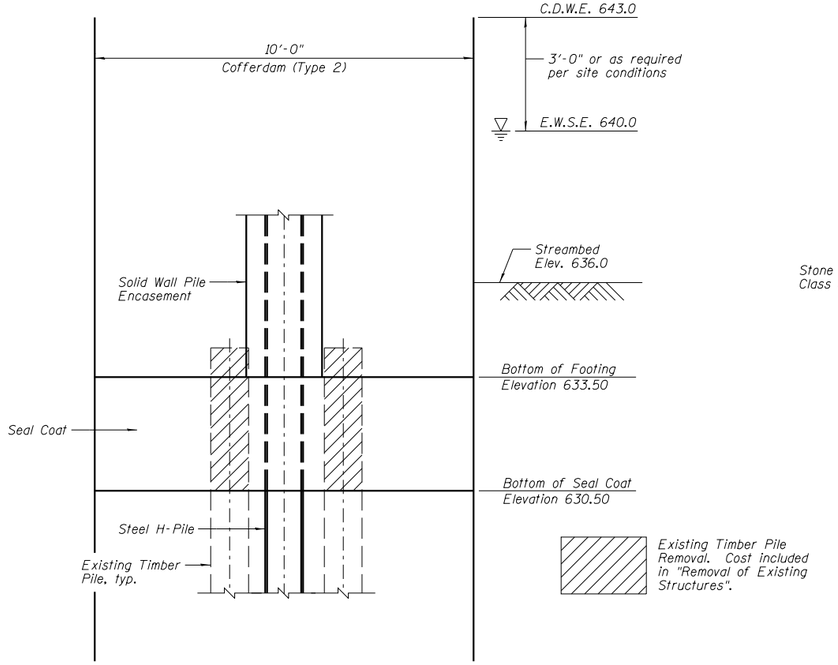
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		657	657
Filter Fabric	Sq. Yd.		657	657
Removal of Existing Structures No. 2	Each	1		1
Structure Excavation	Cu. Yd.		190	190
Cofferdam Excavation	Cu. Yd.		208	208
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Floor Drains	Each	3		3
Concrete Structures	Cu. Yd.	24.4	134.0	158.4
Concrete Superstructure	Cu. Yd.	273.2		273.2
Bridge Deck Grooving	Sq. Yd.	527		527
Seal Coat Concrete	Cu. Yd.		113.0	113.0
Concrete Encasement	Cu. Yd.		5.6	5.6
Protective Coat	Sq. Yd.	626		626
Reinforcement Bars, Epoxy Coated	Pound	76,190	12,200	88,390
Furnishing Steel Piles HP12x63	Foot		1,670	1,670
Driving Piles	Foot		1,670	1,670
Test Pile Steel HP12x63	Each		2	2
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		46	46
Pipe Underdrains for Structures 4"	Foot		160	160
Porous Granular Embankment, Special	Cu. Yd.		88	88

GENERAL NOTES:

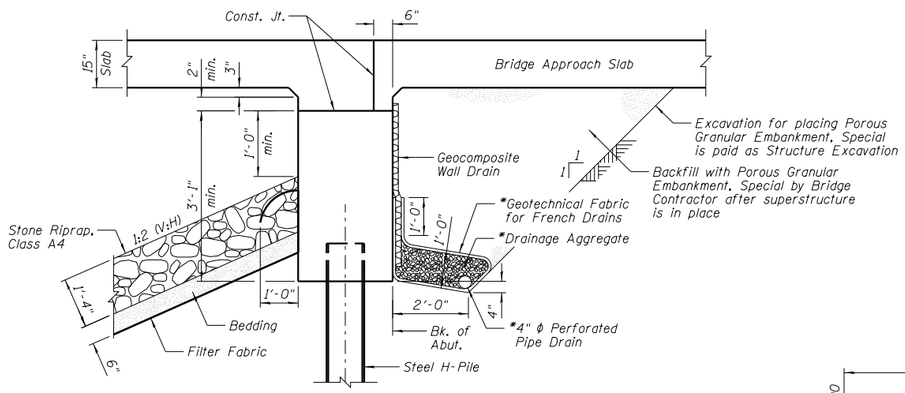
1.) Reinforcement bars designated (E) shall be epoxy coated.
2.) Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
3.) The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
4.) Seal Coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in Seal Coat thickness shall be submitted to the Engineer for approval with the cofferdam design.
5.) 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.
6.) Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
7.) Slipforming of Parapets is not allowed.
8.) The cost of removing the existing bituminous overlay shall be included in the cost of "Removal of Existing Structures".
9.) The Contractor is advised that the existing PPC deck beams are 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 the removal and replacement of the structure.



OFFSET DETAIL



SEAL COAT SCHEMATIC



SECTION THRU NORTH ABUTMENT

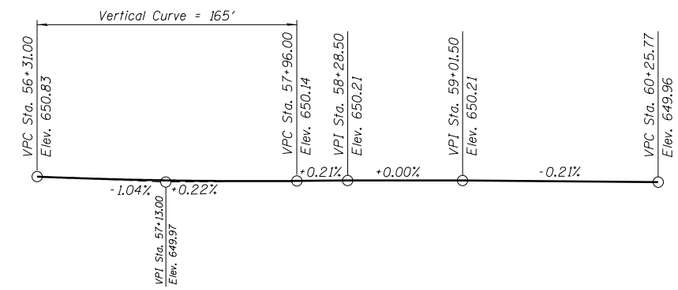
(Similar for South Abutment)

NOTES:
1.) *Included in the cost of Pipe Underdrains for Structures 4".
2.) 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)

STATION 58+65.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 681 - SEC. (113 BR-1)BR
LOADING HL-93
STRUCTURE NO. 053-0191

NAME PLATE

See Std. 515001



PROFILE GRADE

(Along ℄ Roadway)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 053-0191
SHEET NO. 82 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	90
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

WEST FACE OF PARAPET

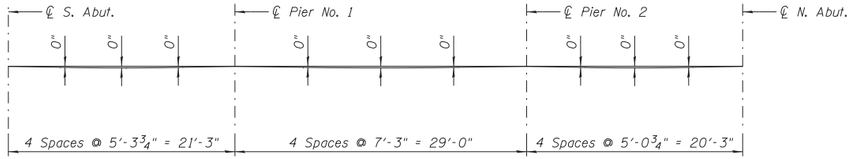
Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevation Adjusted for Dead Load Deflection
N. End of South Appr.	58+27.61	- 18.50	649.10	649.10
℄ Piles South Abut.	58+28.40	- 18.43	649.10	649.10
A	58+38.78	- 18.75	649.08	649.09
℄ Pier No. 1	58+50.45	- 19.20	649.06	649.06
B	58+60.84	- 19.39	649.05	649.05
C	58+71.24	- 19.37	649.05	649.05
℄ Pier No. 2	58+80.59	- 19.17	649.06	649.06
D	58+90.96	- 18.77	649.08	649.09
℄ Piles North Abut.	59+01.60	- 18.43	649.10	649.10
S. End of North Appr.	59+02.39	- 18.50	649.10	649.10

℄ ROADWAY & PROFILE GRADE LINE (P.G.L.)

Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevation Adjusted for Dead Load Deflection
N. End of South Appr.	58+28.97	0.00	650.21	650.21
℄ Piles South Abut.	58+29.72	0.00	650.21	650.21
A	58+39.74	0.00	650.21	650.21
℄ Pier No. 1	58+51.00	0.00	650.21	650.21
B	58+61.00	0.00	650.21	650.21
C	58+71.00	0.00	650.21	650.21
℄ Pier No. 2	58+80.00	0.00	650.21	650.21
D	58+90.01	0.00	650.21	650.21
℄ Piles North Abut.	59+00.28	0.00	650.21	650.21
S. End of North Appr.	59+01.03	0.00	650.21	650.21

EAST FACE OF PARAPET

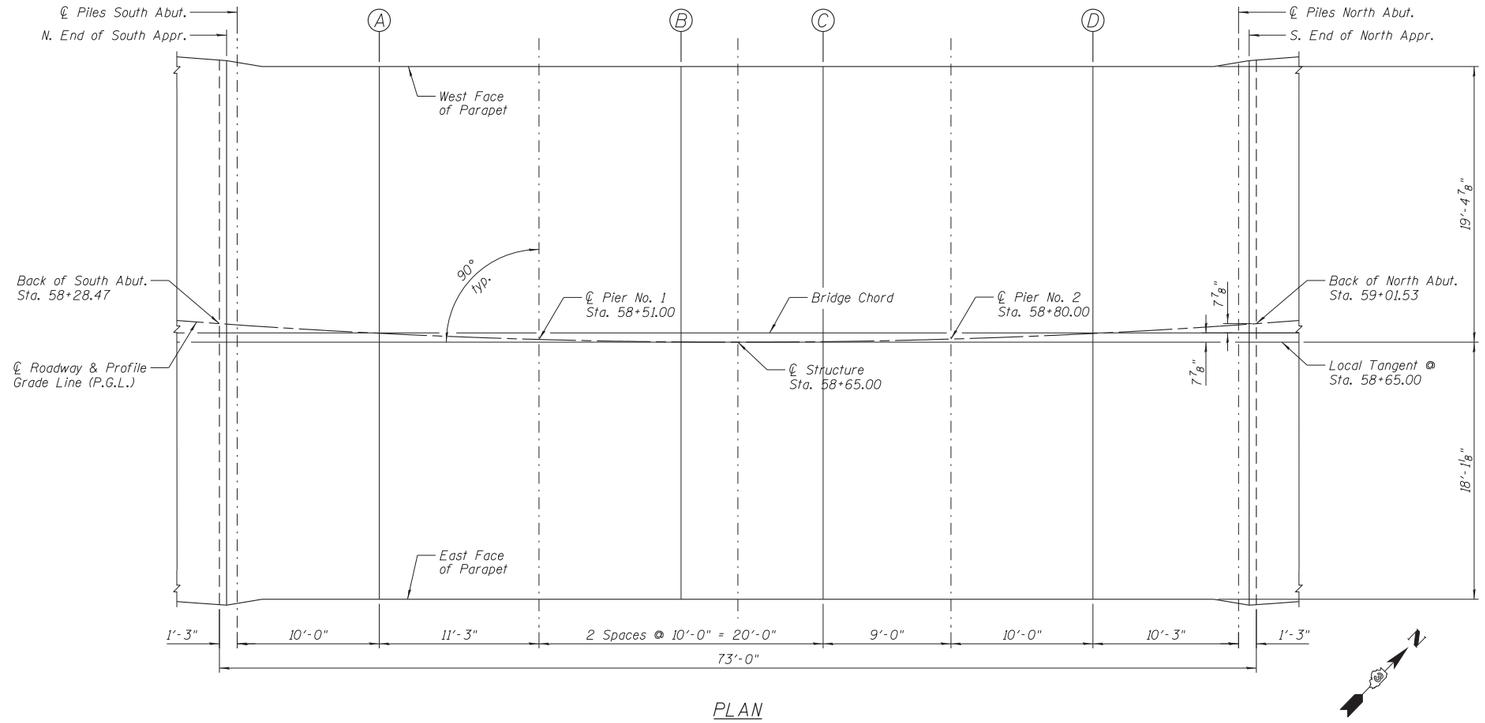
Location	Station	Offset	Theoretical Grade Elevation	Theoretical Grade Elevation Adjusted for Dead Load Deflection
N. End of South Appr.	58+30.31	19.74	651.39	651.39
℄ Piles South Abut.	58+31.02	19.56	651.38	651.38
A	58+40.63	18.70	651.33	651.33
℄ Pier No. 1	58+51.48	18.28	651.31	651.31
B	58+61.14	18.11	651.30	651.30
C	58+70.79	18.13	651.30	651.30
℄ Pier No. 2	58+79.48	18.31	651.31	651.31
D	58+89.13	18.69	651.33	651.33
℄ Piles North Abut.	58+98.97	19.56	651.38	651.38
S. End of North Appr.	58+99.69	19.74	651.39	651.39



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

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."



PLAN

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 053-0191

SHEET NO. 83 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	91
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

24-8740

WEST CURB LINE

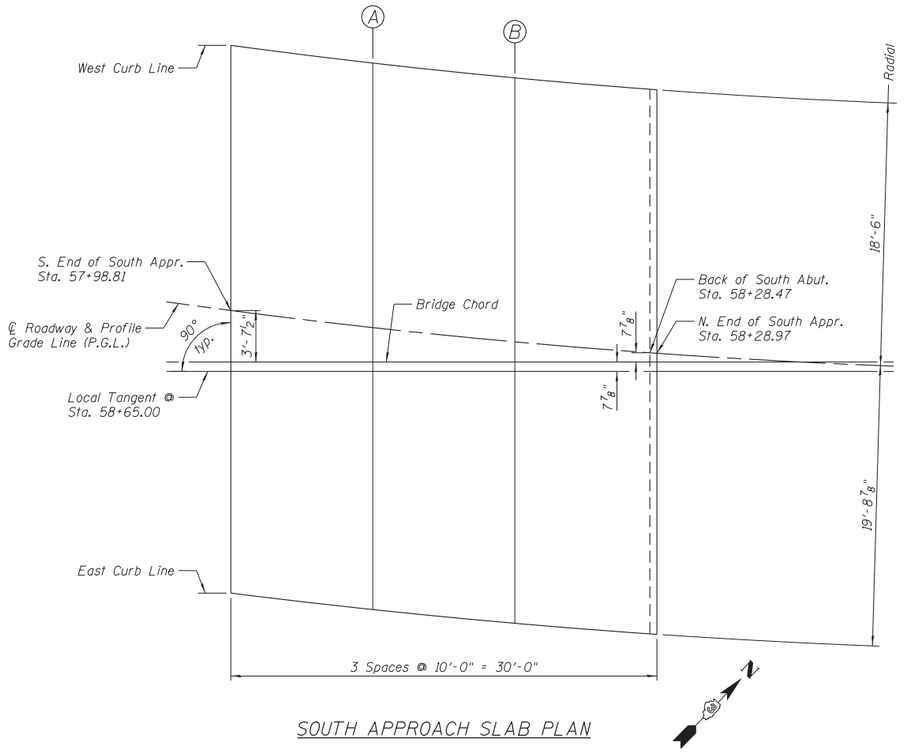
Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr.	57+96.31	- 18.50	649.03
A	58+06.77	- 18.50	649.05
B	58+17.20	- 18.50	649.08
Back of South Abut.	58+27.09	- 18.50	649.10
N. End of South Appr.	58+27.61	- 18.50	649.10

℄ ROADWAY & PROFILE GRADE LINE (P.G.L.)

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr.	57+98.81	0.00	650.15
A	58+08.89	0.00	650.17
B	58+18.94	0.00	650.19
Back of South Abut.	58+28.47	0.00	650.21
N. End of South Appr.	58+28.97	0.00	650.21

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End of South Appr.	58+01.29	19.74	651.34
A	58+10.98	19.74	651.36
B	58+20.66	19.74	651.38
Back of South Abut.	58+29.83	19.74	651.39
N. End of South Appr.	58+30.31	19.74	651.39



SOUTH APPROACH SLAB PLAN

WEST CURB LINE

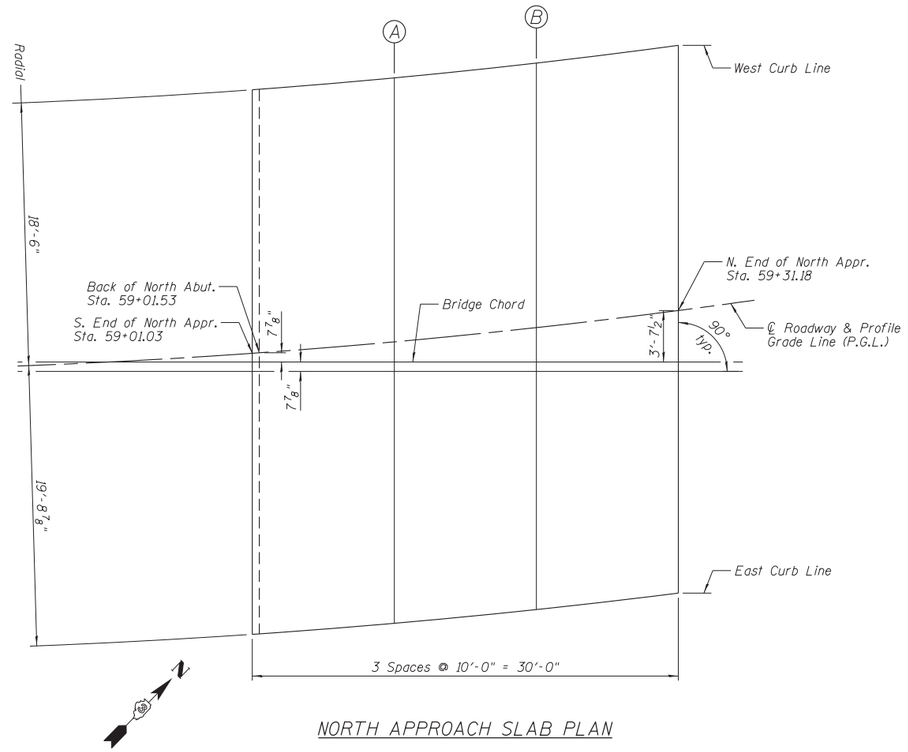
Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr.	59+02.39	- 18.50	649.10
Back of North Abut.	59+02.91	- 18.50	649.10
A	59+12.80	- 18.50	649.08
B	59+23.23	- 18.50	649.06
N. End of North Appr.	59+33.69	- 18.50	649.04

℄ ROADWAY & PROFILE GRADE LINE (P.G.L.)

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr.	59+01.03	0.00	650.21
Back of North Abut.	59+01.53	0.00	650.21
A	59+11.06	0.00	650.19
B	59+21.11	0.00	650.17
N. End of North Appr.	59+31.18	0.00	650.15

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
S. End of North Appr.	58+99.69	19.74	651.39
Back of North Abut.	59+00.17	19.74	651.39
A	59+09.34	19.74	651.38
B	59+19.02	19.74	651.36
N. End of North Appr.	59+28.71	19.74	651.34



NORTH APPROACH SLAB PLAN

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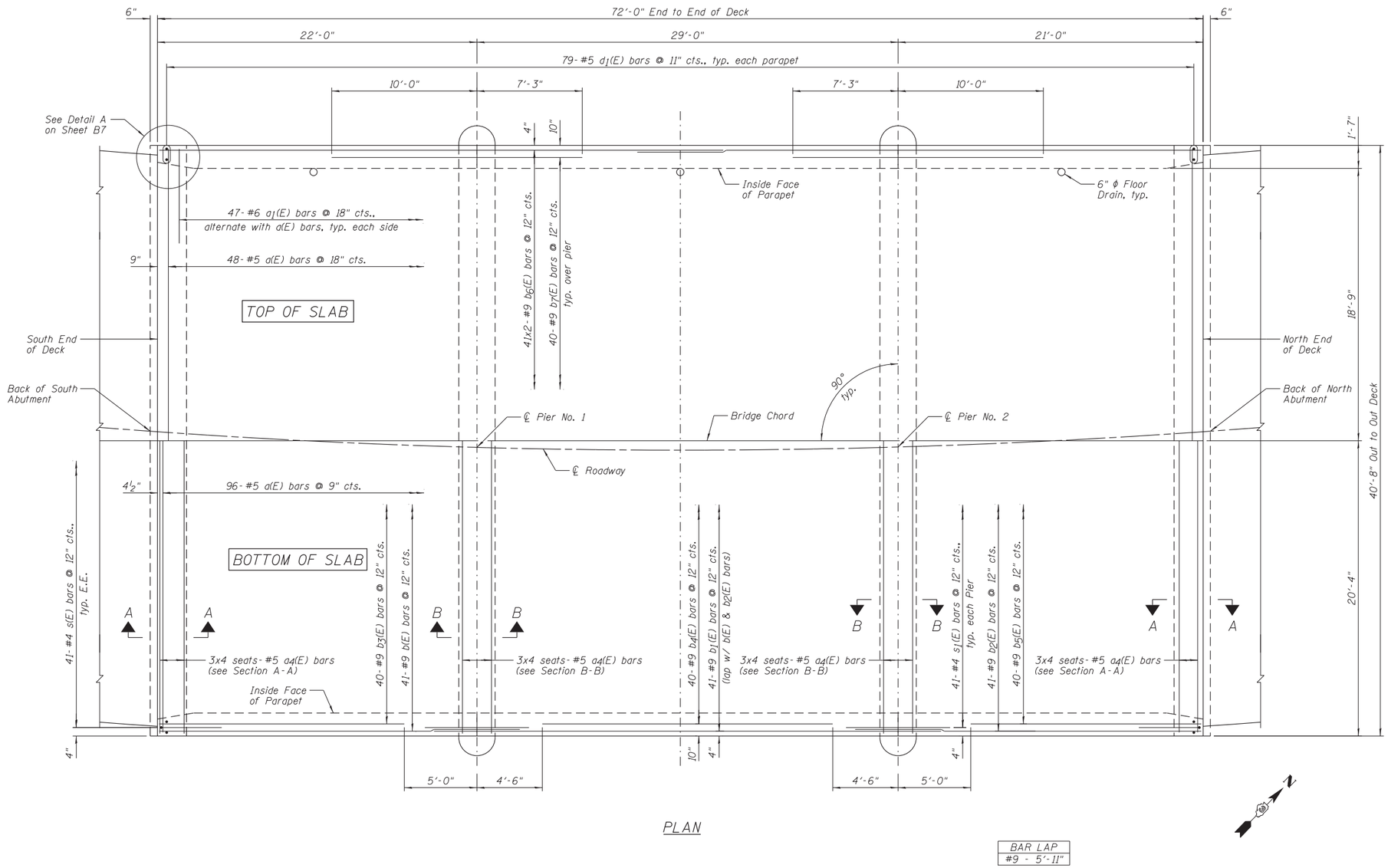
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 053-0191

SHEET NO. 84 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	92
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		



PLAN

BAR LAP
#9 - 5'-11"

NOTES:

1.) See Sheet B7 for Superstructure Details and Bill of Material.
2.) See Sheet B6 for Sections A-A and B-B.

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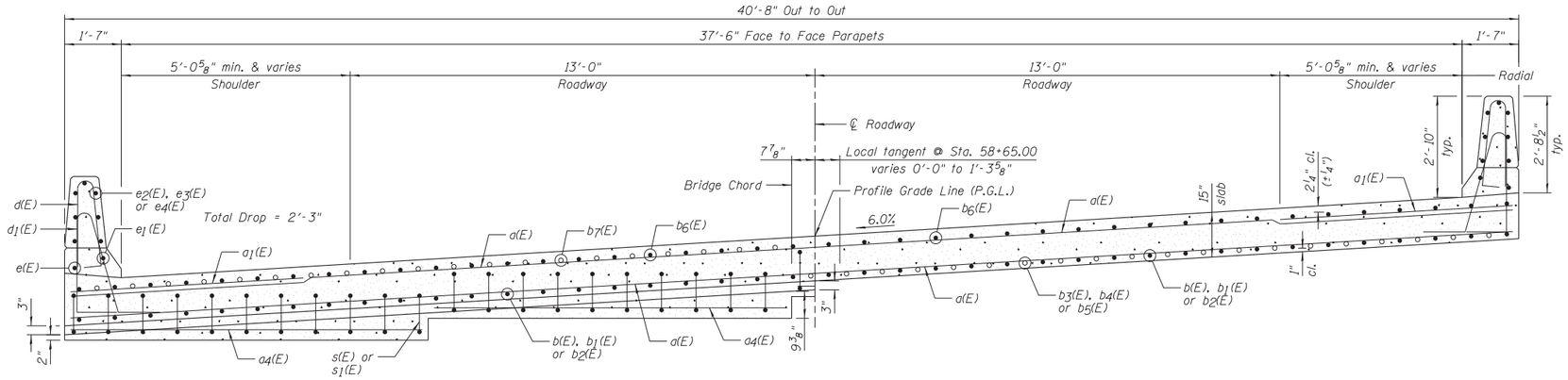
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN
STRUCTURE NO. 053-0191
SHEET NO. B5 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	93
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

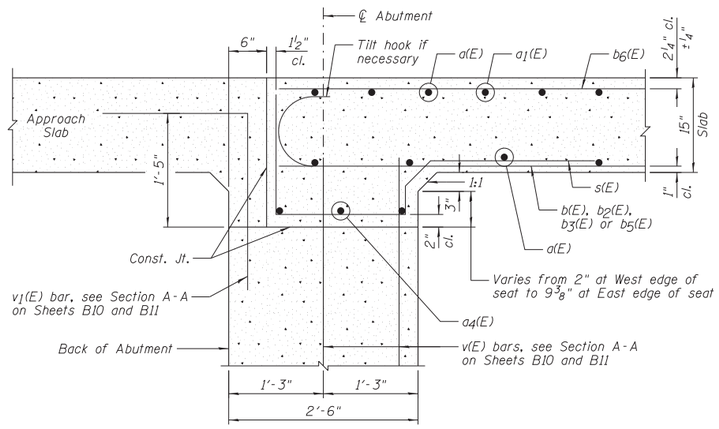


SECTION NEAR SUPPORT

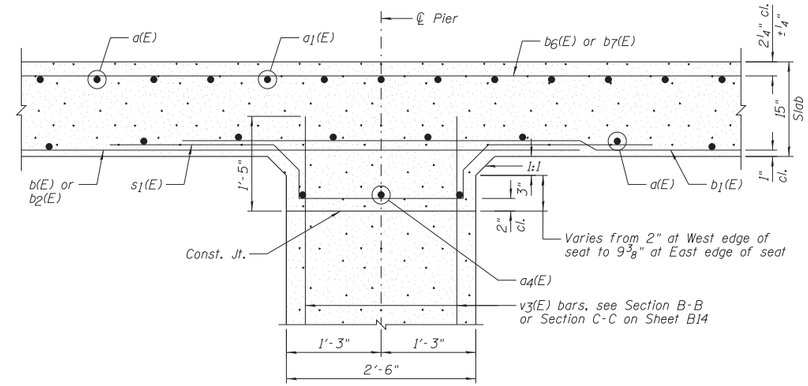
SECTION NEAR MIDSPAN

CROSS SECTION

(Looking North @ ℄ Bridge)



SECTION A-A



SECTION B-B

NOTES:

1.) For Section thru Parapet, See Sheet B7.
2.) For locations of Sections A-A and B-B, see Sheet B5.

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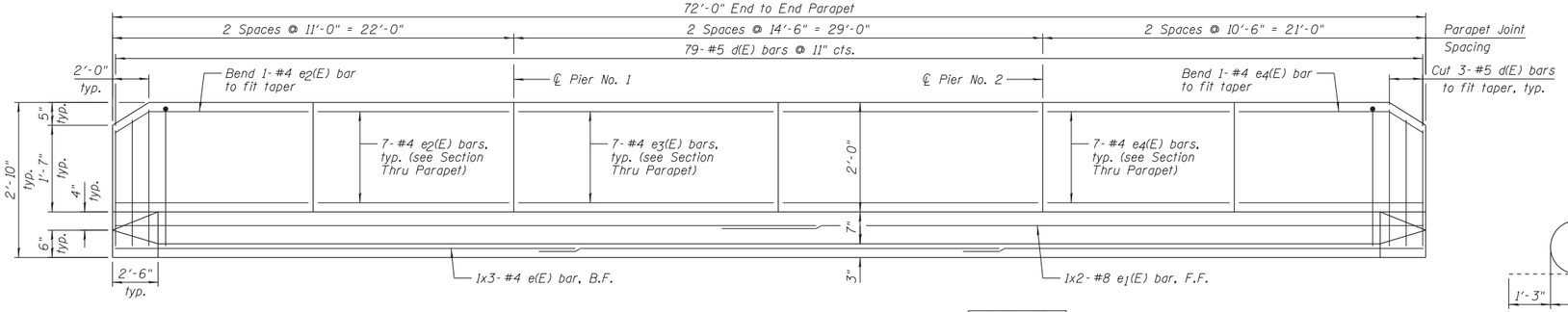
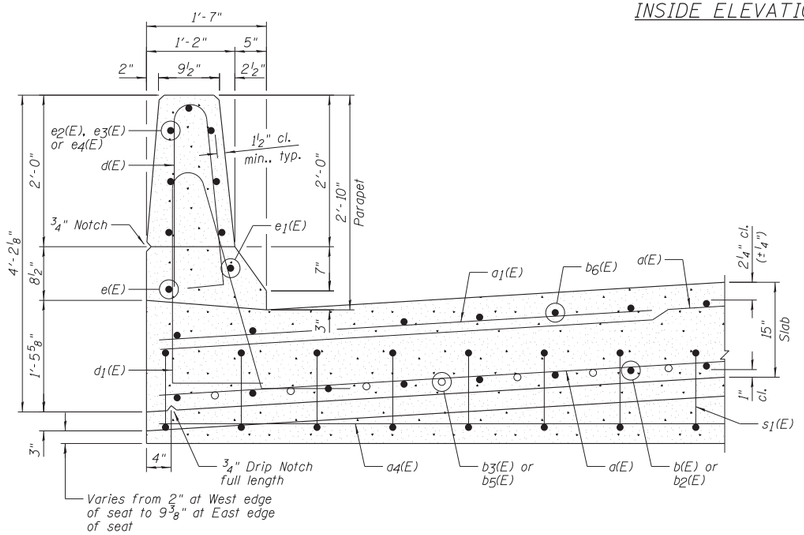
SUPERSTRUCTURE CROSS SECTION
STRUCTURE NO. 053-0191
SHEET NO. B6 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	94
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

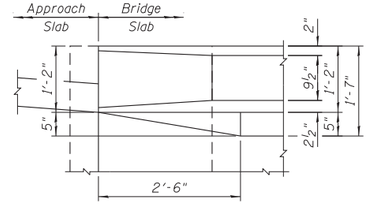


INSIDE ELEVATION OF PARAPET

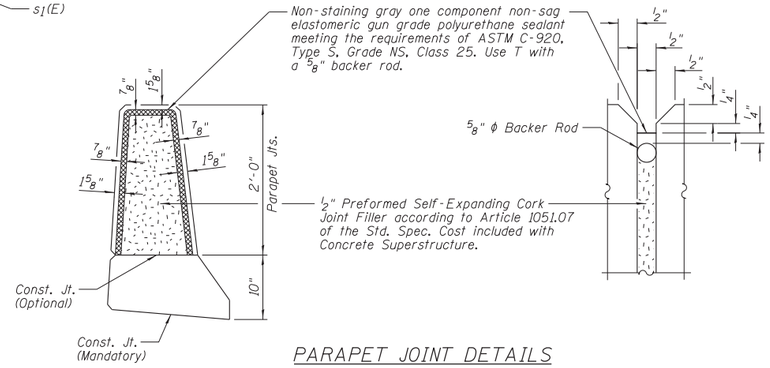
BAR LAP	
#4	2'-0"
#8	5'-2"



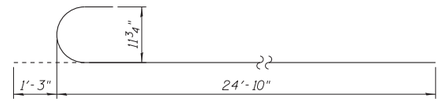
SECTION THRU PARAPET -NEAR ABUTMENT



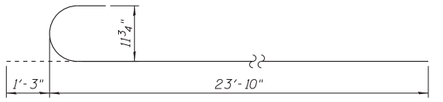
DETAIL A



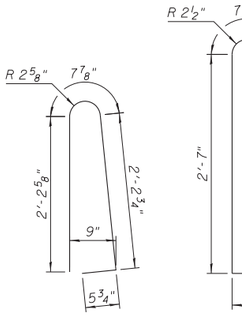
PARAPET JOINT DETAILS



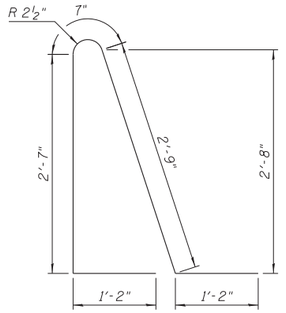
b(E) BAR



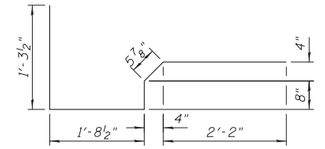
b2(E) BAR



d(E) BAR

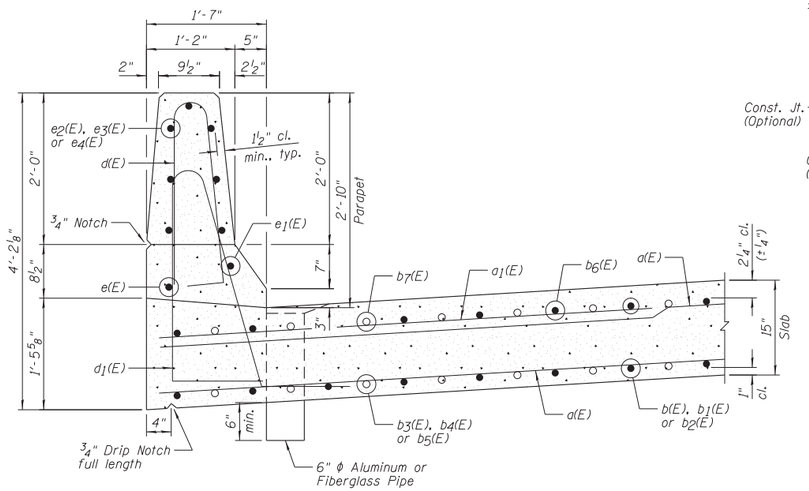


d1(E) BAR

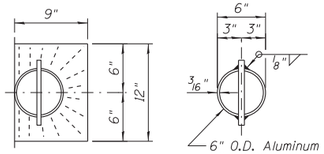


s(E) BAR

SUPERSTRUCTURE BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
a(E)	144	#5	40'-4"	
a1(E)	94	#6	6'-6"	
a4(E)	48	#5	9'-10"	
b(E)	41	#9	26'-1"	
b1(E)	41	#9	34'-11"	
b2(E)	41	#9	25'-1"	
b3(E)	40	#9	16'-10"	
b4(E)	40	#9	20'-0"	
b5(E)	40	#9	15'-10"	
b6(E)	82	#9	38'-10"	
b7(E)	80	#9	17'-3"	
d(E)	158	#5	5'-7"	
d1(E)	158	#5	8'-3"	
e(E)	6	#4	25'-3"	
e1(E)	4	#8	38'-5"	
e2(E)	28	#4	10'-8"	
e3(E)	28	#4	14'-2"	
e4(E)	28	#4	10'-2"	
s(E)	82	#4	6'-4"	
s1(E)	82	#4	8'-10"	
Item			Unit	Quantity
Concrete Superstructure			Cu. Yd.	161.7
Reinforcement Bars, Epoxy Coated			Pound	46,430

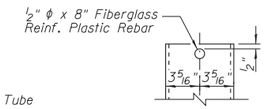


SECTION THRU PARAPET -NEAR MIDSPAN

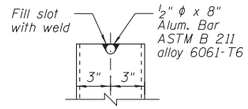


TOP PLAN

TOP PLAN (Showing Aluminum Tube)



FIBERGLASS PIPE



ALUMINUM TUBE

NOTES:

1.) Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
2.) The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.

NOTES:

1.) B.F. denotes Back Face and F.F. denotes Front Face.
2.) Inside Elevation of Parapet view is exaggerated vertically to show reinforcement.
3.) Bars indicated thus 1x2-#4 etc. indicates 1 line of bars with 2 lengths per line.

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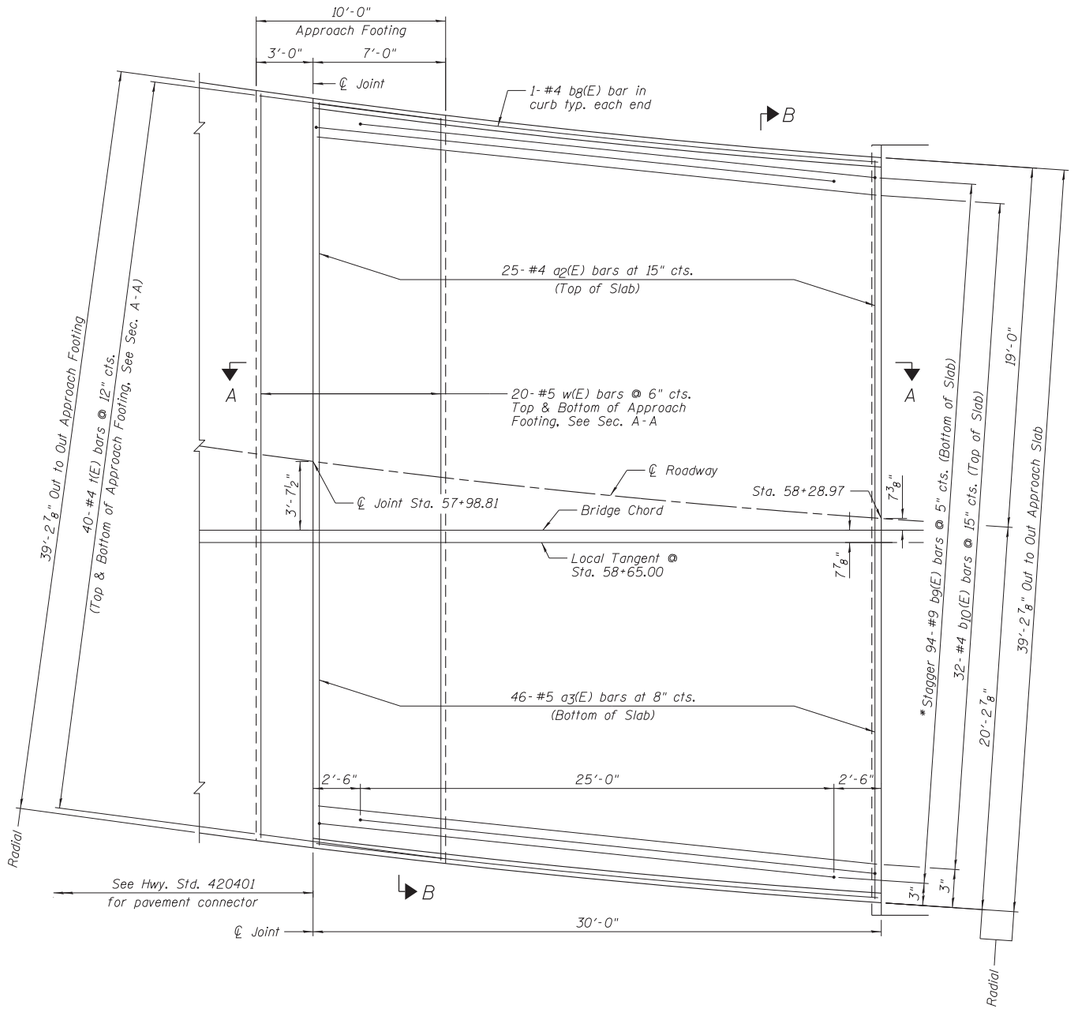
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 053-0191
SHEET NO. 87 OF 17 SHEETS

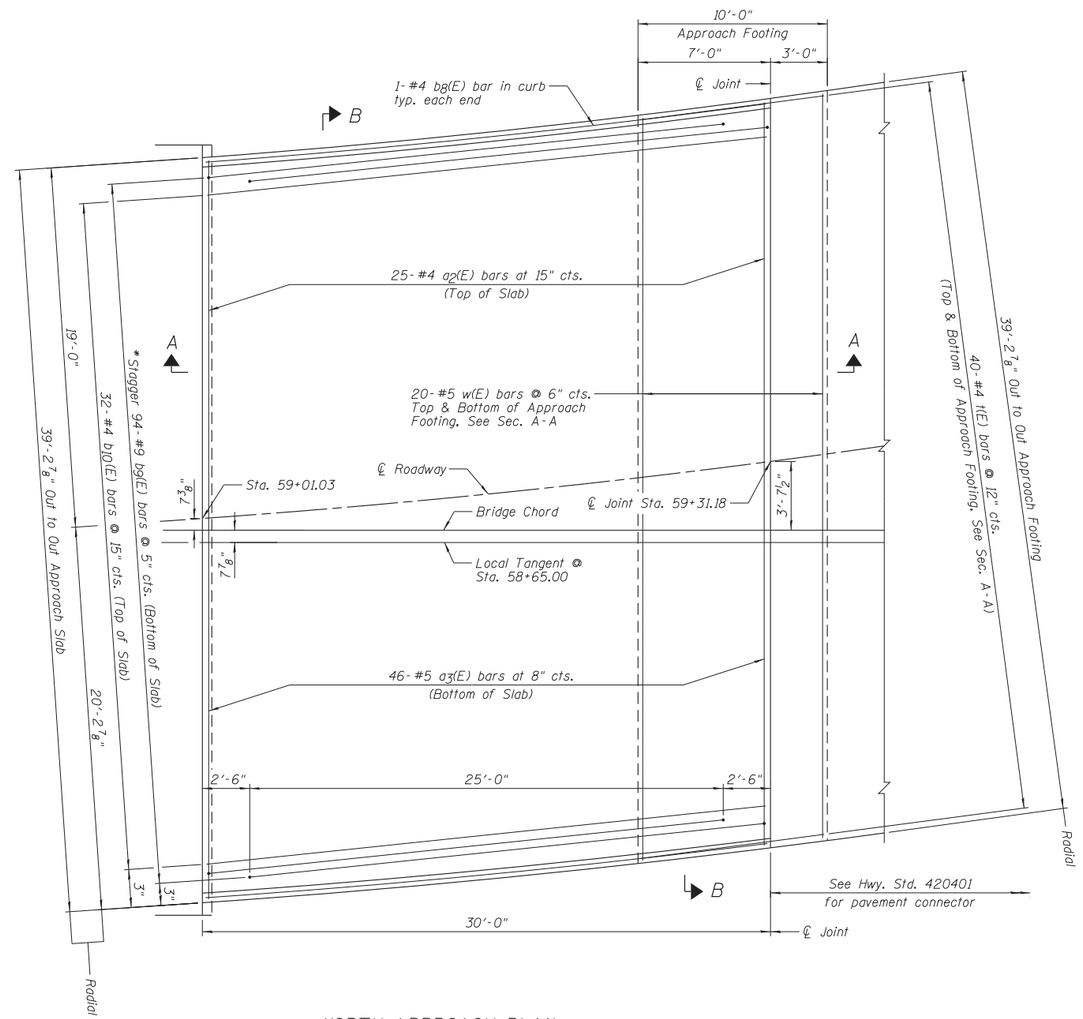
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	95
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

24-8740



SOUTH APPROACH PLAN

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



NORTH APPROACH PLAN

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

NOTES:

1.) See Sheet B9 for Sections A-A and B-B.
2.) ag(E) and a3(E) bar spacings measured along Local Tangent.

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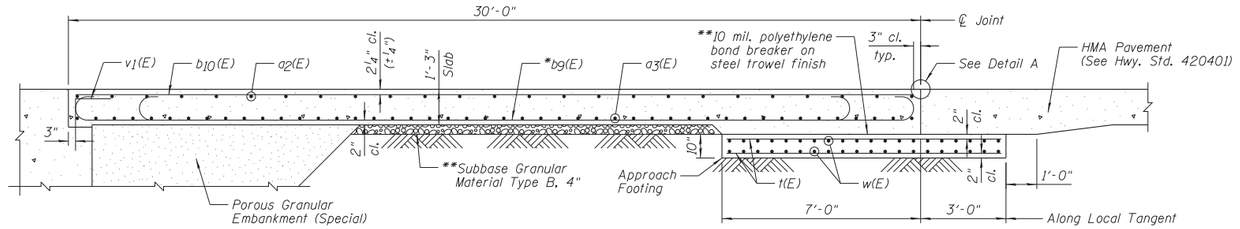
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 053-0191
SHEET NO. B8 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	96
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

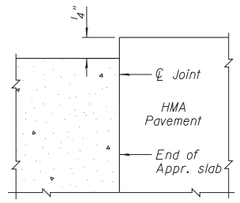
24-8740



SECTION A-A

* Tilt #9 b9(E) bars as required to maintain clearance.

** Cost included with Concrete Superstructure.

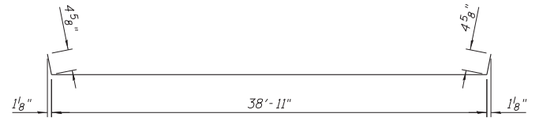


FLEXIBLE PAVEMENT

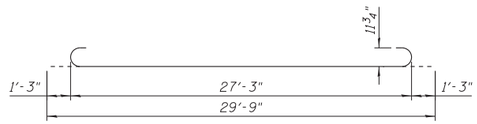
DETAIL A

TWO APPROACHES
BILL OF MATERIAL

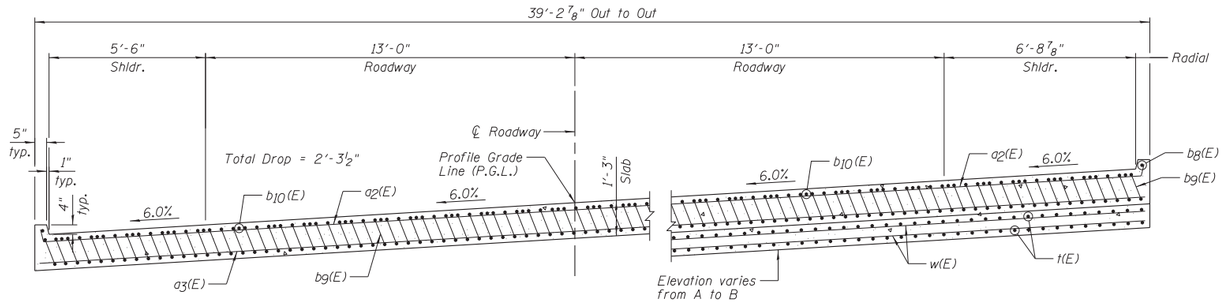
Bar	No.	Size	Length	Shape
a2(E)	50	#4	39'-9"	
a3(E)	92	#5	39'-0"	
b8(E)	4	#4	29'-10"	
b9(E)	188	#9	29'-9"	
b10(E)	64	#4	29'-10"	
t(E)	160	#4	9'-9"	
w(E)	80	#5	39'-3"	
Item			Unit	Quantity
Concrete Structures			Cu. Yd.	24.4
Concrete Superstructure			Cu. Yd.	111.5
Reinforcement Bars, Epoxy Coated			Pound	29,760



a2(E) BAR



b9(E) BAR



NEAR ABUTMENT

SECTION B-B

AT APPROACH FOOTING

Location	Elevation A (East End)	Elevation B (West End)
North Approach	649.29	646.93
South Approach	649.29	646.92

NOTES:

1.) Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
2.) Approach footing concrete shall be paid for as Concrete Structures.
3.) Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
4.) For v1(E) bar details, see Sheets B10 & B11.
5.) The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
6.) Cost of excavation for approach footing included with Concrete Structures.
7.) For Porous Granular Embankment (Special) and drainage treatment details, see Sheet B2.

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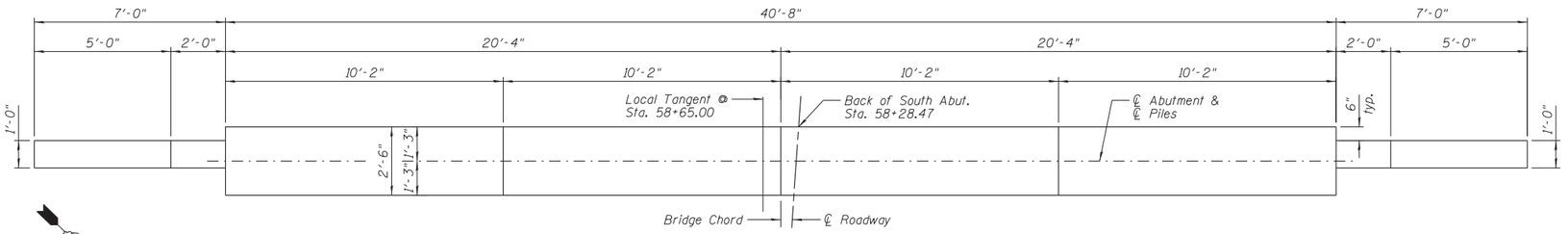
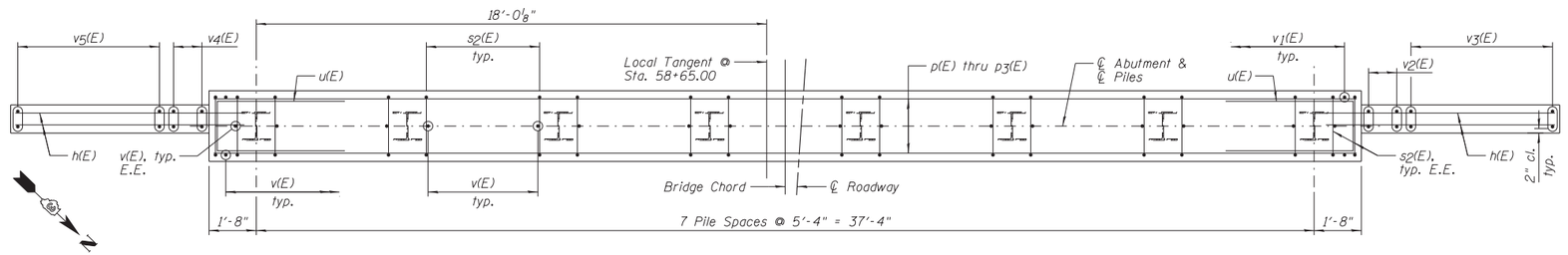
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 053-0191
SHEET NO. B9 OF 17 SHEETS

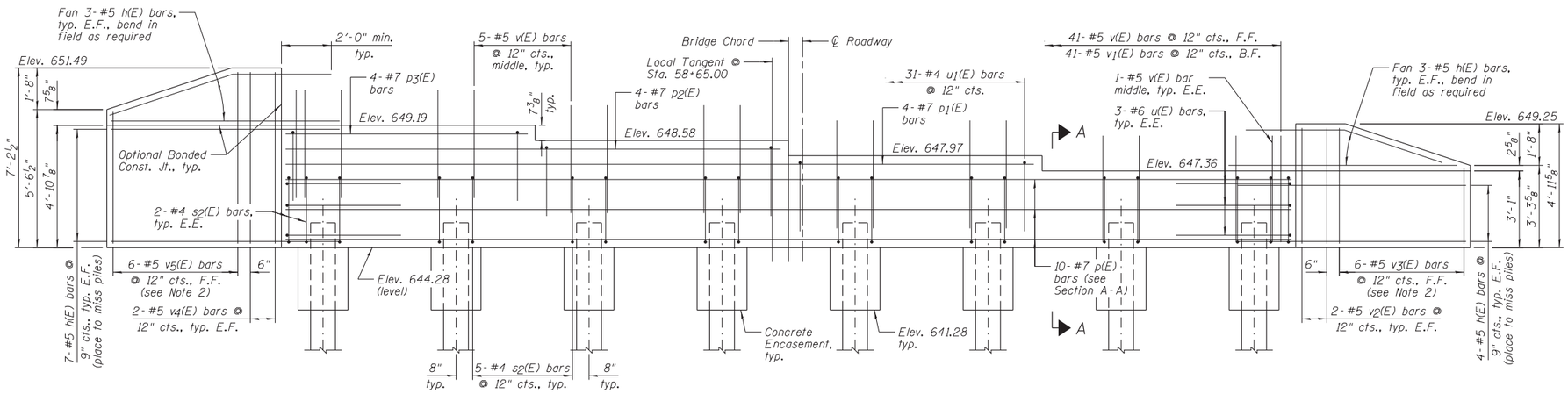
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	97
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



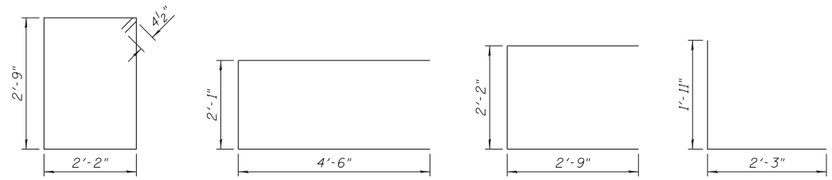
TOP VIEW ABUTMENT (SHOWING STEPS)



PLAN - PILE CAP

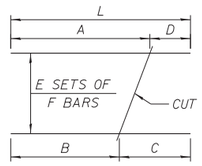


ELEVATION
(Looking South)



s2(E) BAR u(E) BAR u1(E) BAR v1(E) BAR

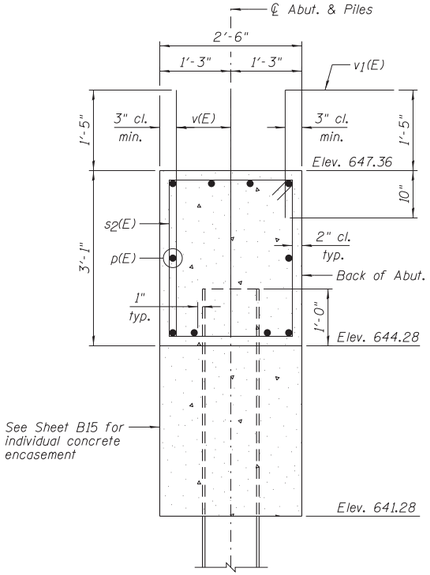
BAR CUTTING DIAGRAM



BAR	A	B	C	D	E	F	L
v3(E)	4'-6"	2'-8"	4'-6"	2'-8"	1	6	7'-2"
v5(E)	6'-9"	5'-0"	6'-9"	5'-0"	1	6	11'-9"

PILE DATA:

Pile Type and Size	Steel-HP 12x63
Nominal Required Bearing	281 kips
Factored Resistance Available	155 kips
Estimated Pile Length	45 Feet
Number of Production Piles	7
Number of Test Piles	1



SECTION A-A

NOTES:

1.) Pour steps monolithically with cap.
2.) Order v3(E) and v5(E) bars full length. Cut according to Bar Cutting Diagram. Use remainder of bars in back face.
3.) Bend or cut h(E) bars to miss piles.
4.) E.E. denotes Each End, F.F. denotes Front Face, B.F. denotes Back Face and E.F. denotes Each Face.

SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	34	#5	9'-1"	———
p(E)	10	#7	40'-4"	———
p1(E)	4	#7	30'-2"	———
p2(E)	4	#7	20'-0"	———
p3(E)	4	#7	9'-10"	———
s2(E)	39	#4	10'-7"	□
u(E)	6	#6	11'-1"	⊏
u1(E)	31	#4	7'-8"	⊏
v(E)	78	#5	4'-4"	———
v1(E)	41	#5	4'-2"	———
v2(E)	4	#5	4'-6"	———
v3(E)	6	#5	7'-2"	— —
v4(E)	4	#5	6'-9"	———
v5(E)	6	#5	11'-9"	— —

Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	44
Structure Excavation	Cu. Yd.	95
Concrete Structures	Cu. Yd.	17.9
Concrete Encasement	Cu. Yd.	2.8
Reinforcement Bars, Epoxy Coated	Pound	2,870
Furnishing Steel Piles HP12x63	Foot	315
Driving Piles	Foot	315
Test Pile Steel HP12x63	Each	1
Geocomposite Wall Drain	Sq. Yd.	23
Pipe Underdrains for Structures 4"	Foot	80

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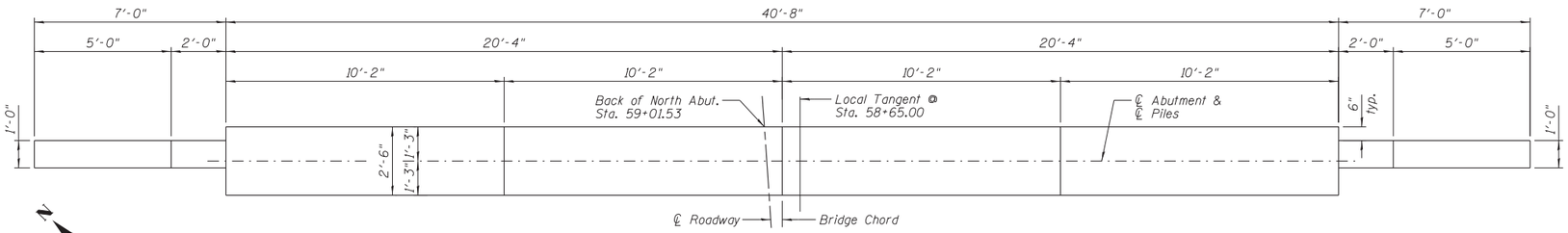
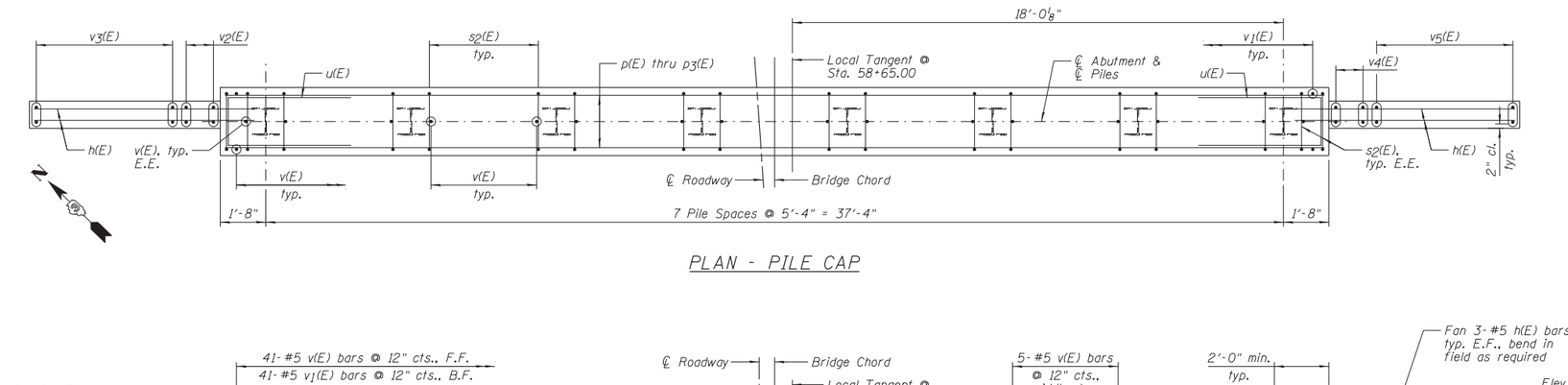
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 053-0191
SHEET NO. B10 OF 17 SHEETS

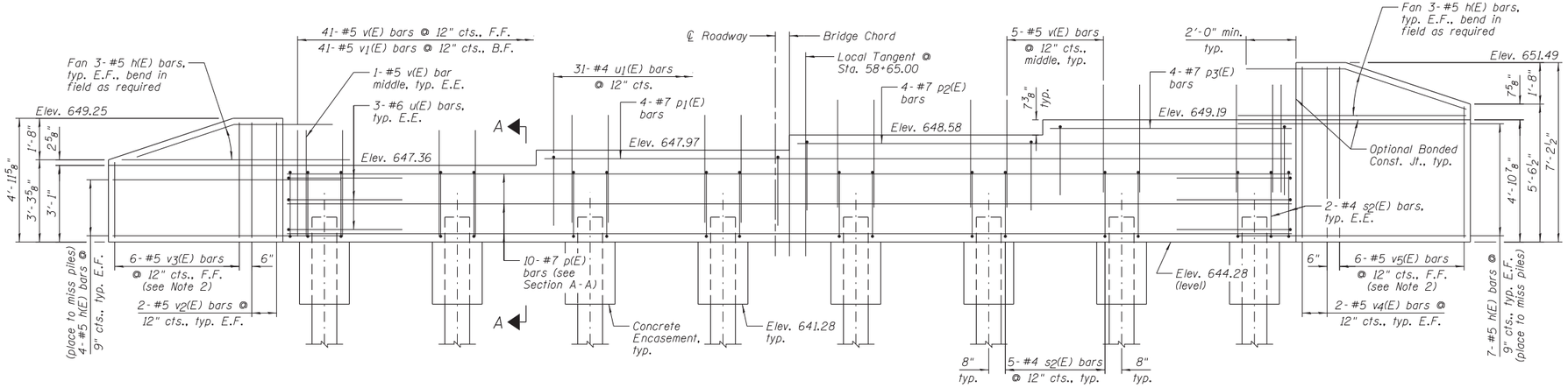
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	98
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			



TOP VIEW ABUTMENT (SHOWING STEPS)

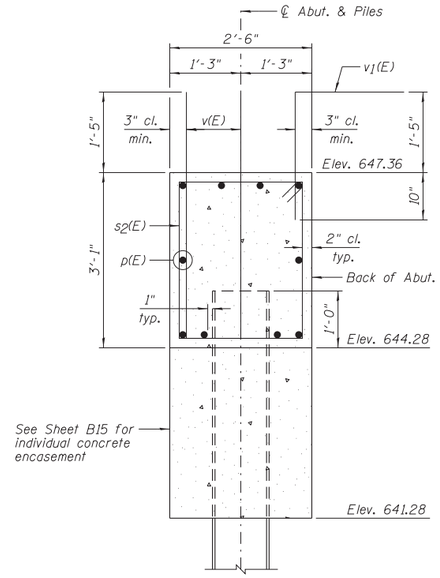


PLAN - PILE CAP

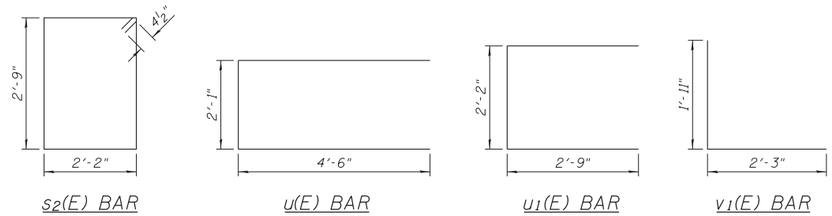


ELEVATION

(Looking North)

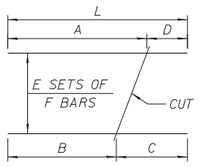


SECTION A-A



s2(E) BAR u(E) BAR u1(E) BAR v1(E) BAR

BAR CUTTING DIAGRAM



BAR	A	B	C	D	E	F	L
v3(E)	4'-6"	2'-8"	4'-6"	2'-8"	1	6	7'-2"
v5(E)	6'-9"	5'-0"	6'-9"	5'-0"	1	6	11'-9"

PILE DATA:

Pile Type and Size	Steel-HP 12x63
Nominal Required Bearing	376 kips
Factored Resistance Available	207 kips
Estimated Pile Length	50 Feet
Number of Production Piles	8
Number of Test Piles	0

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	34	#5	9'-1"	
p(E)	10	#7	40'-4"	
p1(E)	4	#7	30'-2"	
p2(E)	4	#7	20'-0"	
p3(E)	4	#7	9'-10"	
s2(E)	39	#4	10'-7"	
u(E)	6	#6	11'-1"	
u1(E)	31	#4	7'-8"	
v(E)	78	#5	4'-4"	
v1(E)	41	#5	4'-2"	
v2(E)	4	#5	4'-6"	
v3(E)	6	#5	7'-2"	
v4(E)	4	#5	6'-9"	
v5(E)	6	#5	11'-9"	

Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	44
Structure Excavation	Cu. Yd.	95
Concrete Structures	Cu. Yd.	17.9
Concrete Encasement	Cu. Yd.	2.8
Reinforcement Bars, Epoxy Coated	Pound	2,870
Furnishing Steel Piles HP12x63	Foot	400
Driving Piles	Foot	400
Geocomposite Wall Drain	Sq. Yd.	23
Pipe Underdrains for Structures 4"	Foot	80

NOTES:

1.) Pour steps monolithically with cap.
2.) Order v3(E) and v5(E) bars full length. Cut according to Bar Cutting Diagram. Use remainder of bars in back face.
3.) Bend or cut h(E) bars to miss piles.
4.) E.E. denotes Each End, F.F. denotes Front Face, B.F. denotes Back Face and E.F. denotes Each Face.

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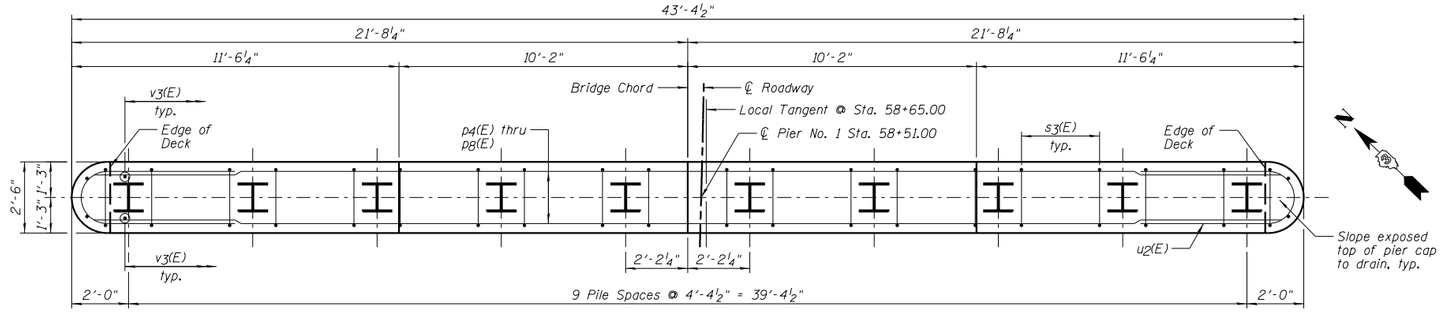
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

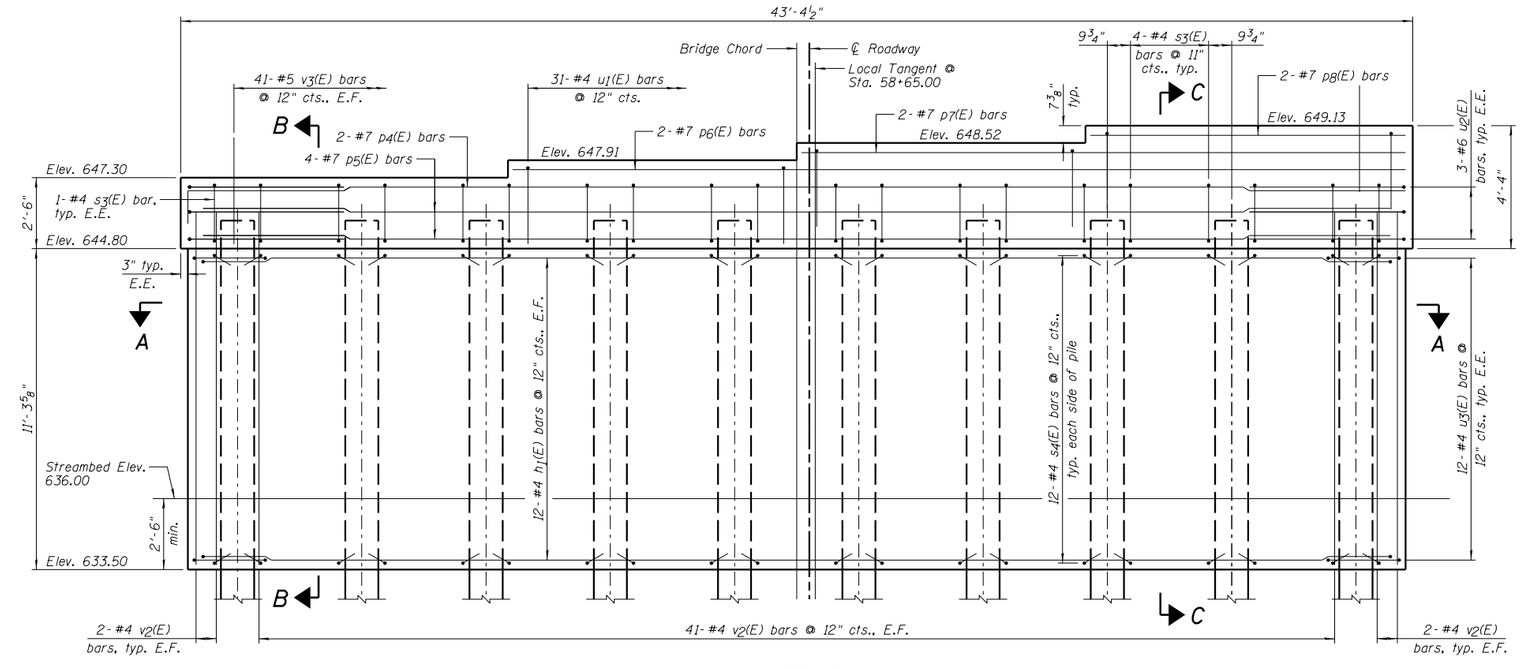
NORTH ABUTMENT
STRUCTURE NO. 053-0191
SHEET NO. B11 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	99
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

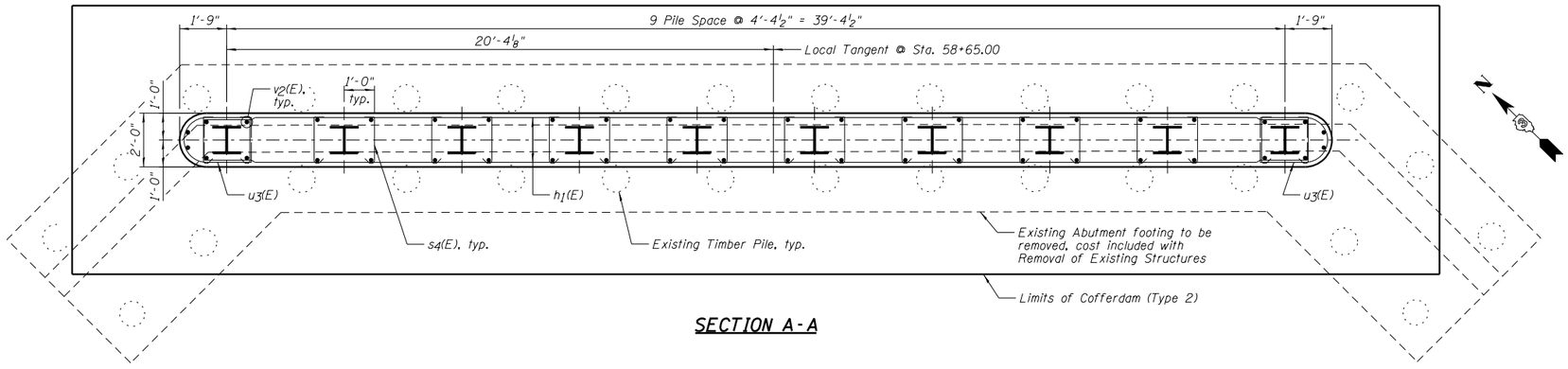
24-8740



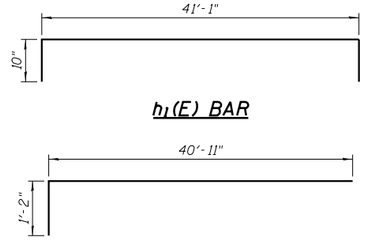
TOP PLAN



ELEVATION
(Looking North)

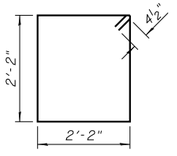


SECTION A-A

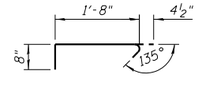


h1(E) BAR

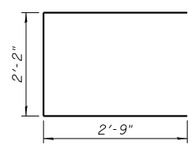
p4(E) BAR



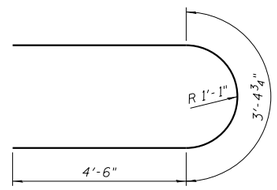
s3(E) BAR



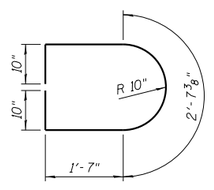
s4(E) BAR



u1(E) BAR



u2(E) BAR



u3(E) BAR

PIER NO. 1 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	12	#4	42'-9"	
p4(E)	2	#7	42'-1"	
p5(E)	4	#7	40'-11"	
p6(E)	2	#7	30'-3"	
p7(E)	2	#7	20'-1"	
p8(E)	2	#7	9'-11"	
s3(E)	38	#4	9'-5"	
s4(E)	240	#4	2'-9"	
u1(E)	31	#4	7'-8"	
u2(E)	6	#6	12'-5"	
u3(E)	24	#4	7'-5"	
v2(E)	90	#4	12'-5"	
v3(E)	82	#5	3'-9"	

Item	Unit	Quantity
Cofferdam Excavation	Cu. Yd.	104
Cofferdam (Type 2) (Location - 1)	Each	1
Concrete Structures	Cu. Yd.	49.1
Seal Coat Concrete	Cu. Yd.	56.5
Reinforcement Bars, Epoxy Coated	Pound	3,230
Furnishing Steel Piles HP12x63	Foot	550
Driving Piles	Foot	550

PILE DATA:

Pile Type and Size	*Steel-HP 12x63 with ¾" End Plate
Nominal Required Bearing	329 kips
Factored Resistance Available	161 kips
Estimated Pile Length	55 Feet
Number of Production Piles	10
Number of Test Piles	0

*See weld detail on Sheet B15.

NOTES:

1.) Pour steps monolithically with cap.
2.) E.F. Denotes Each Face and E.E. Denotes Each End.
3.) See Sheet B14 for Sections B-B and C-C.

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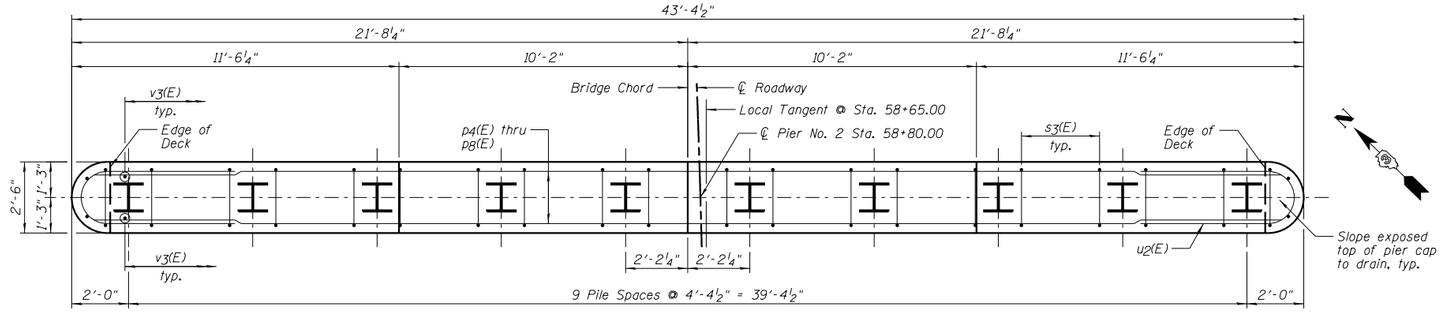
DEPARTMENT OF TRANSPORTATION

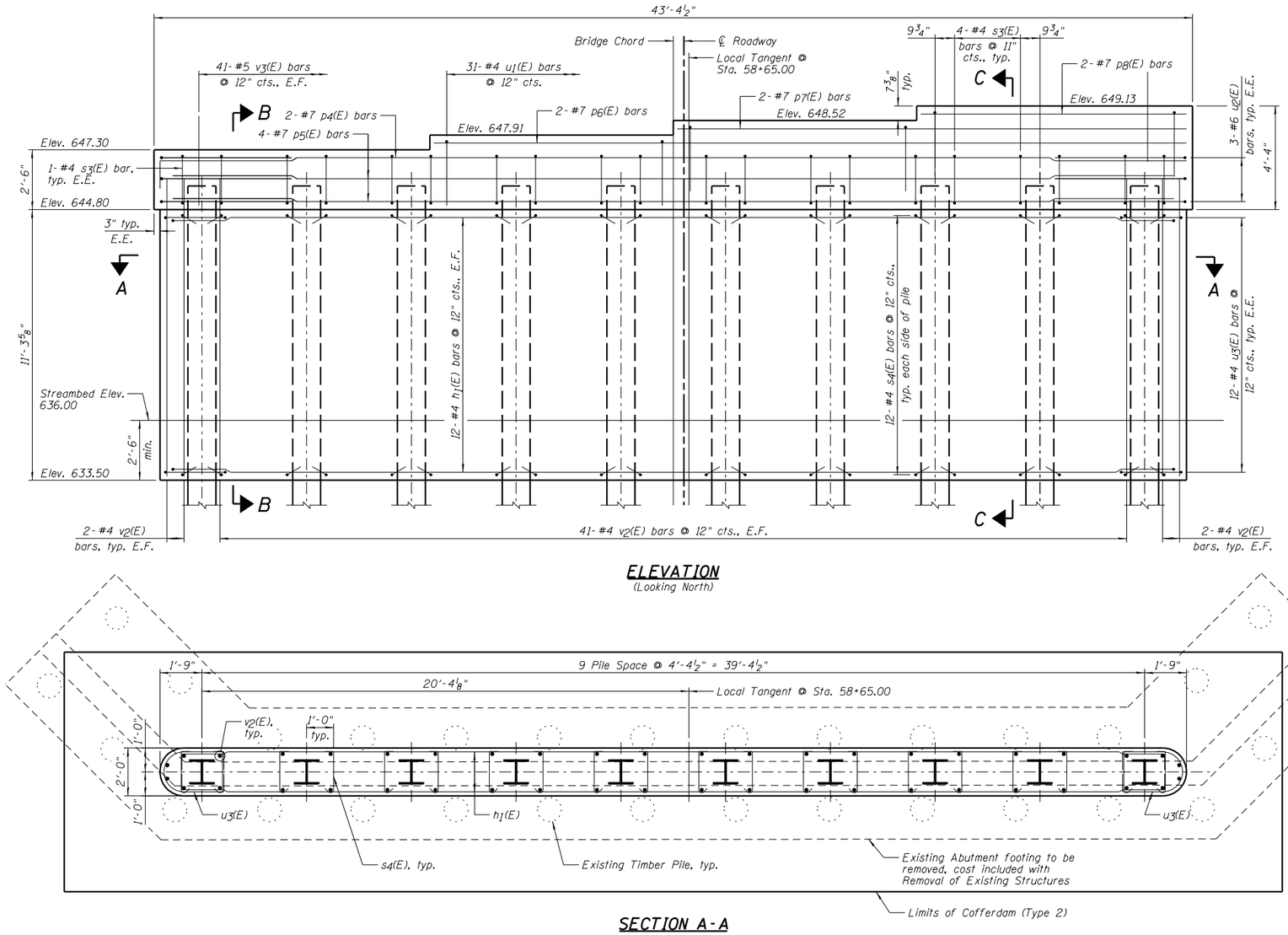
PIER NO. 1
STRUCTURE NO. 053-0191
SHEET NO. B12 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	100
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

24-8740

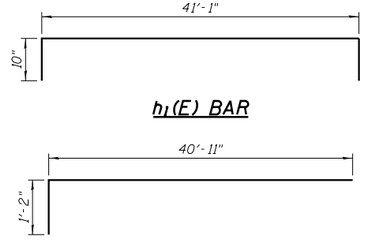


TOP PLAN



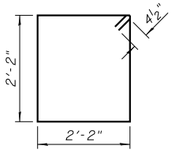
ELEVATION
(Looking North)

SECTION A-A

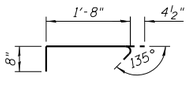


h1(E) BAR

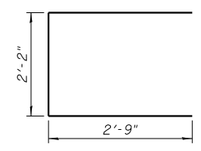
p4(E) BAR



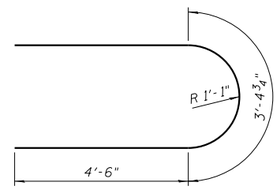
s3(E) BAR



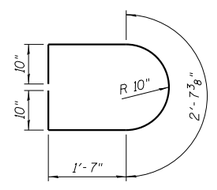
s4(E) BAR



u1(E) BAR



u2(E) BAR



u3(E) BAR

PIER NO. 2 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	12	#4	42'-9"	
p4(E)	2	#7	42'-1"	
p5(E)	4	#7	40'-11"	
p6(E)	2	#7	30'-3"	
p7(E)	2	#7	20'-1"	
p8(E)	2	#7	9'-11"	
s3(E)	38	#4	9'-5"	
s4(E)	240	#4	2'-9"	
u1(E)	31	#4	7'-8"	
u2(E)	6	#6	12'-5"	
u3(E)	24	#4	7'-5"	
v2(E)	90	#4	12'-5"	
v3(E)	82	#5	3'-9"	

Item	Unit	Quantity
Cofferdam Excavation	Cu. Yd.	104
Cofferdam (Type 2) (Location - 2)	Each	1
Concrete Structures	Cu. Yd.	49.1
Seal Coat Concrete	Cu. Yd.	56.5
Reinforcement Bars, Epoxy Coated	Pound	3,230
Furnishing Steel Piles HP12x63	Foot	405
Driving Piles	Foot	405
Test Pile Steel HP12x63	Each	1

PILE DATA:

Pile Type and Size	*Steel-HP 12x63 with ¾" End Plate
Nominal Required Bearing	474 kips
Factored Resistance Available	240 kips
Estimated Pile Length	45 Feet
Number of Production Piles	9
Number of Test Piles	1

*See weld detail on Sheet B15.

NOTES:

1.) Pour steps monolithically with cap.
2.) E.F. Denotes Each Face and E.E. Denotes Each End.
3.) See Sheet B14 for Sections B-B and C-C.

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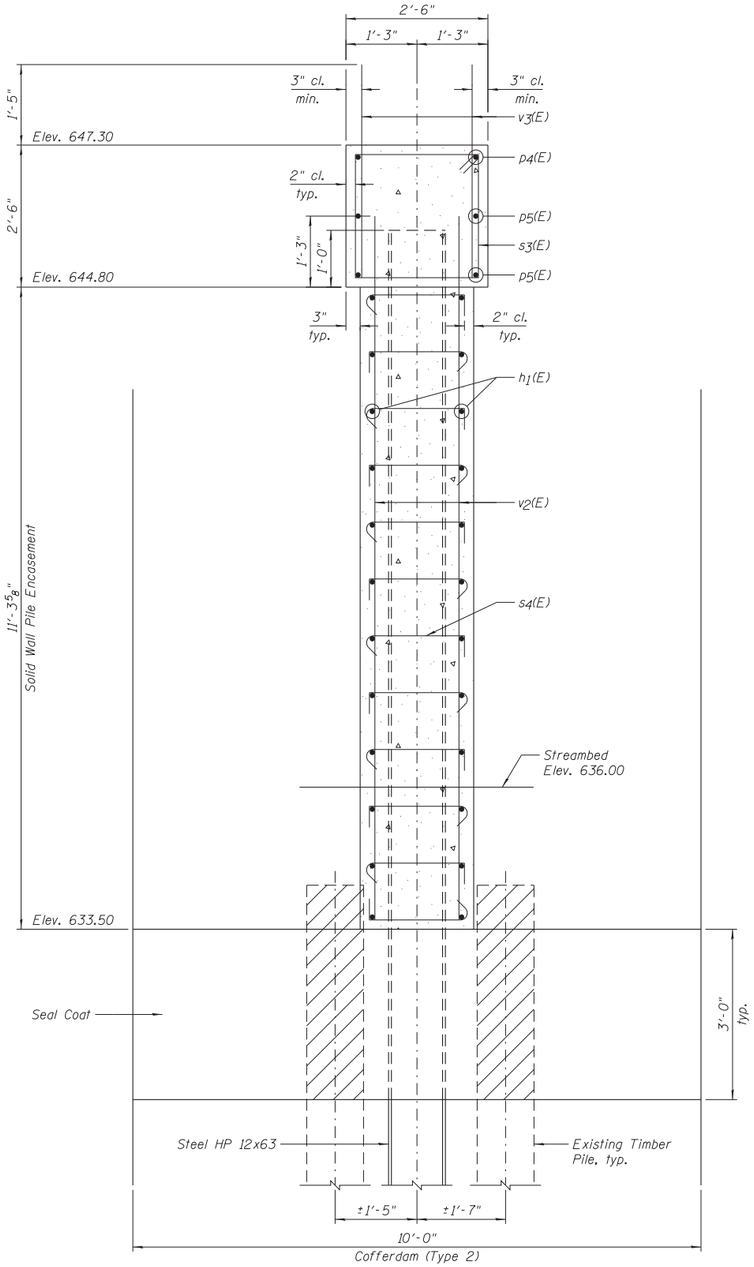
PIER NO. 2
STRUCTURE NO. 053-0191
SHEET NO. B13 OF 17 SHEETS

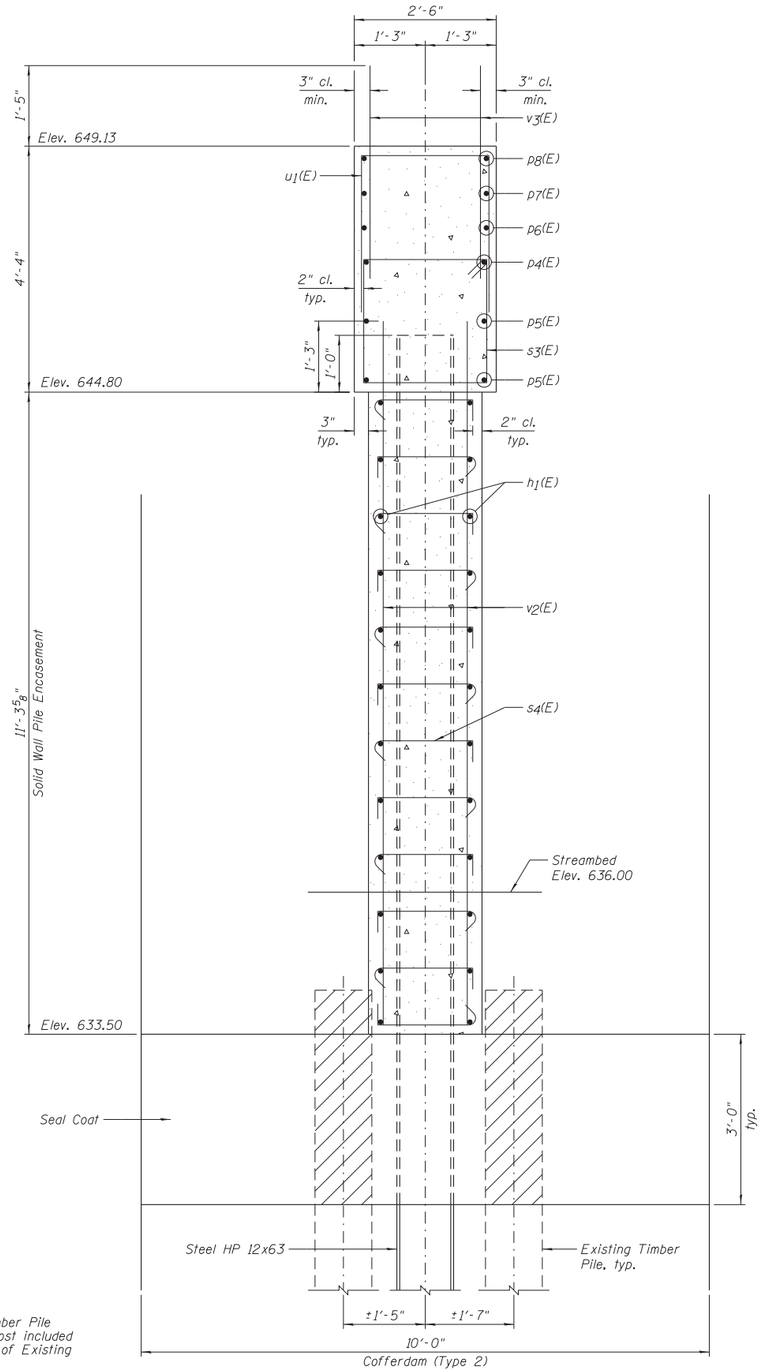
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	101
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

24-8740



SECTION B-B

Existing Timber Pile Removal. Cost included in "Removal of Existing Structures".



SECTION C-C

NOTES:

1.) See Sheets B12 & B13 for location of Sections B-B and C-C.
2.) See Sheets B12 & B13 for Bill of Material, Bar Bending Diagrams and Pile Data.

Farnsworth GROUP, INC.
2709 McGraw Drive
Bloomington, Illinois 61704
309/663-8435, 309/663-1571 fax

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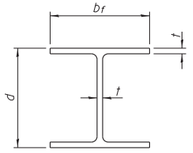
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

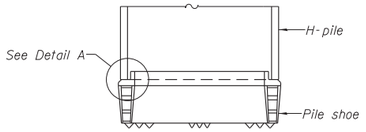
PIER DETAILS
STRUCTURE NO. 053-0191
SHEET NO. B14 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	102
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

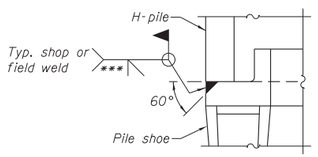


STEEL PILE TABLE

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

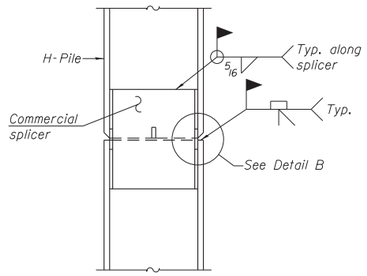


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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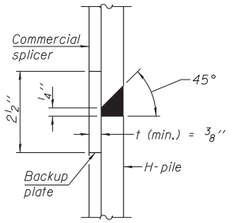
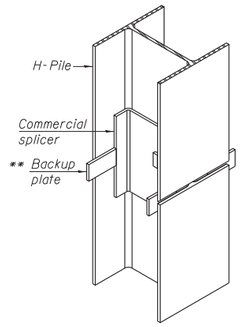
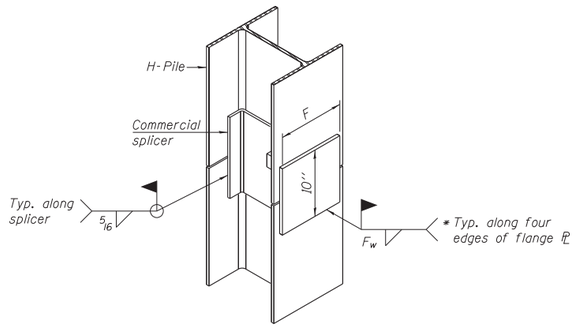


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



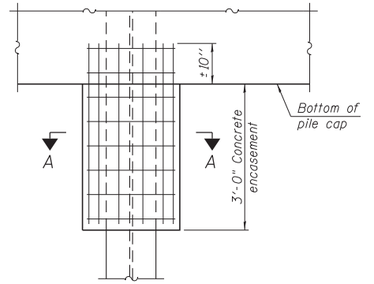
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

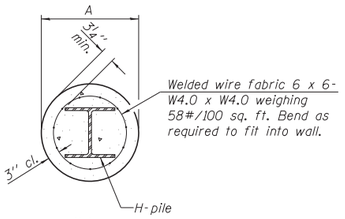
* Interrupt welds 1/4" from end of web and/or each flange.

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

*** Weld size per pile shoe manufacturer (5/16" min.).



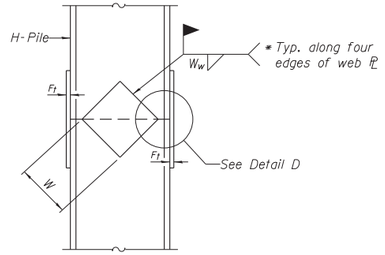
ELEVATION



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

SECTION A-A

PILE ENCASEMENT



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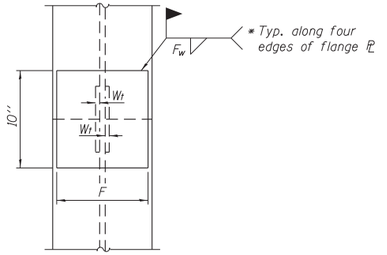
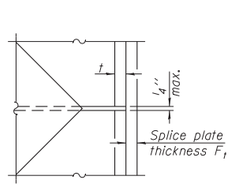


END VIEW

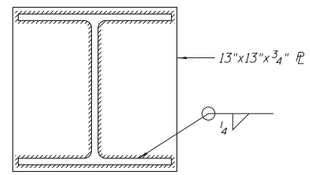


DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

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



END PLATE WELD DETAIL

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2709 McGraw Drive
Bloomington, Illinois 61704
309/663-8435, 309/663-1571 fax

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 053-0191
SHEET NO. B15 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	103
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 1/2/80

ROUTE IL 116 (FAP 681) DESCRIPTION IL 116 over Tributary of Vermilion River, 1 mile East of Pontiac LOGGED BY J. Legan

SECTION (113 BR-1)BR LOCATION SW 1/4 of NE 1/4, SEC. 24 TWP. 28N, RNG. 5E, 3rd PM

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE

STRUCT. NO. 053-0070 (Exist.) 053-0191 (Prop.)
Station 58+65

BORING NO. 1 (N.E. Quad.)
Station 59+00
Offset 14.00ft Lt.
Ground Surface Elev. 649.96 ft

Surface Water Elev 638.96 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion 626.0 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Brown Silty Clay Loam			
647.96			
Stiff Dark Brown Silty Clay Loam	2		
	2	1.3	23.0
	3	P	
645.96			
Very Stiff Dark Brown Silty Clay Loam with Thin Gray Layers of Clay	3		
-5	4	2.3	23.0
	6	P	
643.46			
Stiff Black Silty Clay Loam with Thin Gray Layers of Clay	3		
	3	1.2	30.0
	5	S	
640.96			
Medium Black Silty Clay			
-10	2		
	3	1.0	34.0
	3	B	
638.46			
Very Stiff Yellow/Brown Silt	5		
	6	2.5	26.0
	7	S	
635.96			
Stiff Gray Silt with Small Amounts of Clay	3		
-15	5	1.7	22.0
	9	B	
	4		
	5	1.9	22.0
	8	B	
630.96			
Very Stiff Gray Silt			
-20	3		
Very Stiff Gray Silt *(continued)*	7	3.5	24.0
	11	S	
628.46			
Stiff Gray Silty Clay	2		
	3	1.6	28.0
	5	B	
625.96 ▽			
Very Loose Tan Fine & Coarse Sand with Free Water at 24.0'			
-25	0		
	1		21.0
Sand came up 5' into Auger	1		
	-	-	-
620.96			
Hard Gray Silty Clay Till			
-30	21		
619.46	79/10"	4.0	10.0
Hard Light Gray Clay & Limestone Pieces - Weathered Limestone 618.46		P	7.0
Very Stiff Bluish Gray Silty Clay with Thin Layers of Weathered Shale	15		
	13	3.9	14.0
	20	S	
615.96			
Stiff Light Gray Weathered Limestone Pieces			
-35	27		
	12		16.0
	16		
613.46			
Stiff Blue/Green/Gray Silty Clay with Layers of Black Shale	12		
	19	1.8	17.0
	23	S	
610.96			
Very Stiff Blue/Gray Clay			
-40	8		

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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 1/2/80

ROUTE IL 116 (FAP 681) DESCRIPTION IL 116 over Tributary of Vermilion River, 1 mile East of Pontiac LOGGED BY J. Legan

SECTION (113 BR-1)BR LOCATION SW 1/4 of NE 1/4, SEC. 24, TWP. 28N, RNG. 5E, 3rd PM

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE

STRUCT. NO. 053-0070 (Exist.) 053-0191 (Prop.)
Station 58+65

BORING NO. 1 (N.E. Quad.)
Station 59+00
Offset 14.00ft Lt.
Ground Surface Elev. 649.96 ft

Surface Water Elev. 638.96 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter ft
Upon Completion 626.0 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Blue/Gray Clay *(continued)*	15	3.2	20.0
	32	S	
	18		
	28	2.0	15.0
	36	S	
605.96			
Very Stiff Blue/Gray & Reddish Brown Leached Clay	14		
-45	28	2.3	15.0
	41	S	
603.46			
Hard Blue/Gray & Reddish Brown Leached Clay	16		
	35	4.2	15.0
	47	S	
600.96			
Very Stiff Bluish Gray Clay Till			
600.00 -50	50/5.5"	3.5	17.0
End of Boring		S	
-55			
-60			

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, form 137 (Rev. 8-99)

Farnsworth GROUP, INC.
2709 McGraw Drive
Bloomington, Illinois 61704
309/663-8435, 309/663-1571 fax

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 053-0191
SHEET NO. B16 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	104
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 1/3/80

ROUTE IL 116 (FAP 681) DESCRIPTION IL 116 over Tributary of Vermilion River, 1 mile East of Pontiac LOGGED BY J. Legan

SECTION (113 BR-1)BR LOCATION SW 1/4 of NE 1/4, SEC. 24 TWP. 28N, RNG. 5E, 3rd PM

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE

STRUCT. NO. 053-0070 (Exist.) 053-0191 (Prop.)
Station 58+65
BORING NO. 2 (S.W. Quad.)
Station 58+03
Offset 33.00ft Rt.
Ground Surface Elev. 649.89 ft

Surface Water Elev 638.96 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion 641.9 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Soil Description
				Dark Brown Silty Clay Loam
647.89				
	5			Very Stiff Light Yellow/Brown Silty Clay Till
	8	3.9	25.0	
	6	S		
645.89				
	5			Hard Olive & Yellow/Brown Silty Clay Loam Till (2" Coarse Sand & Fine Gravel at 4.5')
-5				
	5	4.9	13.0	
	7	S		
643.39				
	4			Very Stiff Olive & Yellow/Brown Silty Clay Loam Till with 1/2" Pieces of Limestone
	7 ▽	3.7	20.0	
	9	S		
640.89				
-10	5			Very Loose Yellow/Brown Coarse Sand & Fine Gravel
	6		20.0	
639.39				
	6	1.6	24.0	Stiff Gray Silt
		B		
638.39				
	4			Very Stiff Gray Silt (small amount of Clay at 18')
	8	2.5	23.0	
	7	P		
-15	2			
	6	1.8	25.0	
	8	P		
	1			
	3	2.0	26.0	
	3	P		
-20	2			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Soil Description
	3	2.0	29.0	Very Stiff Gray Silt (small amount of Clay at 18') *(continued)*
	6	P		
628.39				
	2			Stiff Gray Silty Clay
	4	1.6	27.0	
	6	B		
625.89				
	6			Loose Tan Coarse Sand & Fine Gravel
-25				
	7		21.0	
	9			
	-	-	-	
620.89				
-30	9			Hard Blue/Gray Clay
	17	4.7	16.0	
	21	S		
618.39				
	6			Very Stiff Dark Gray Clay Loam
	11	3.7	17.0	
	16	S		
	8			
-35				
	17	2.0	17.0	
	32	S		
613.39				
	12			Very Stiff Reddish/Brown Clay
	28	3.9	14.0	
	49	S		
-40	14			

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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
ILLINOIS DOT

SOIL BORING LOG

Date 1/3/80

ROUTE IL 116 (FAP 681) DESCRIPTION IL 116 over Tributary of Vermilion River, 1 mile East of Pontiac LOGGED BY J. Legan

SECTION (113 BR-1)BR LOCATION SW 1/4 of NE 1/4, SEC. 24, TWP. 28N, RNG. 5E, 3rd PM

COUNTY Livingston DRILLING METHOD Hollow Stem Auger HAMMER TYPE

STRUCT. NO. 053-0070 (Exist.) 053-0191 (Prop.)
Station 58+65
BORING NO. 2 (S.W. Quad.)
Station 58+03
Offset 33.00ft Rt.
Ground Surface Elev. 649.89 ft

Surface Water Elev. 638.96 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion 641.9 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	Soil Description
	35	3.7	14.0	Very Stiff Reddish/Brown Clay *(continued)*
	38	S		
608.39				
				Stiff Gray Clay (some 1/2" Stone Pieces in Sample Tube)
	14			
	27	1.7	15.0	
	50	S		
605.89				
				Hard Gray Clay
-45	20			
	32	4.8	14.0	
	46	S		
603.89				
				End of Boring
-50				
-55				
-60				

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

BBS, form 137 (Rev 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 053-0191
SHEET NO. 8 OF 17 SHEETS

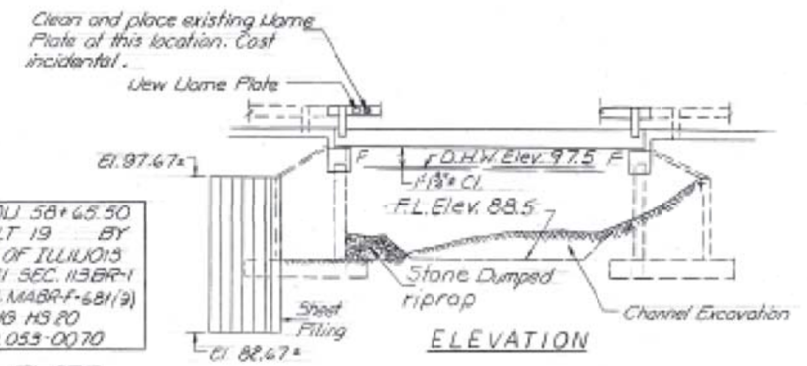
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	105
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

B. M. Square cut in top of southwest wingwall, left of Sta. 58+50 Elev. 100.00
Existing structure: #053-0070 Built 1927 as S.B.I. Rte. 116 Sec. 113 B. The existing single span R.C. slab on closed abutments measures 29'-10⅝" Bk. to Bk. and has a 42'-2" water table. The contractor shall adequately brace the existing abutments prior to removal of the entire superstructure and portions of the substructure. This brace shall remain in place through completion of construction. The contractor shall construct a new superstructure and new abutment caps. Also parts of the existing south abutment shall be repaired. Traffic shall be detoured during construction. No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

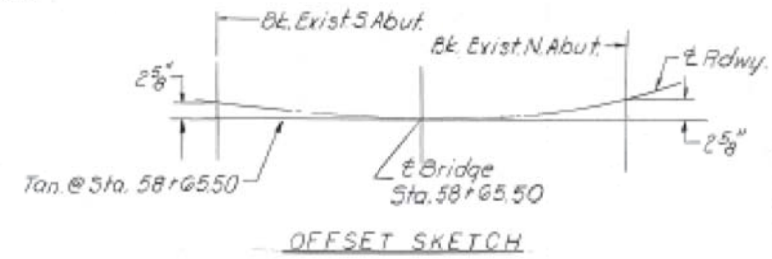
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. F.A. 681	113BR-1	LIVINGSTON	25	21

SHEET NO. 1
5 SHEETS

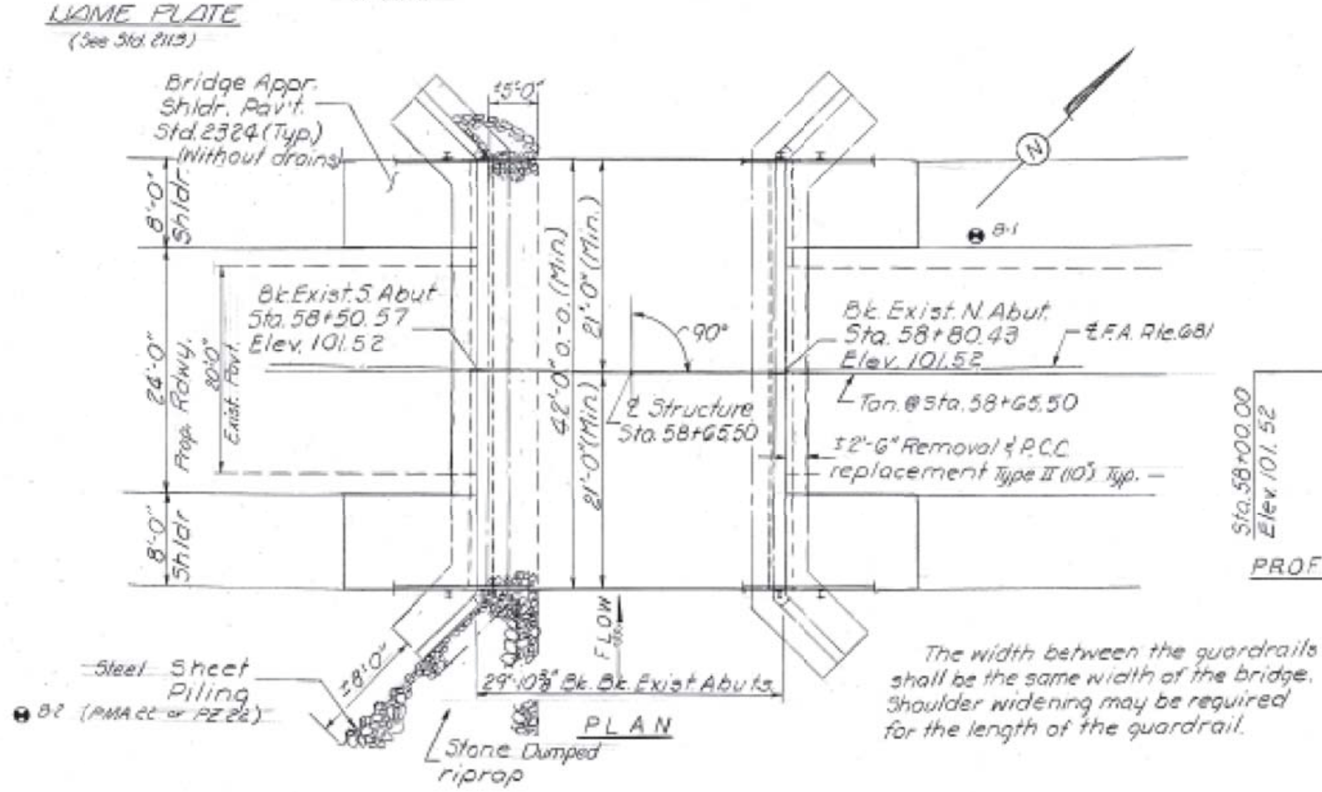


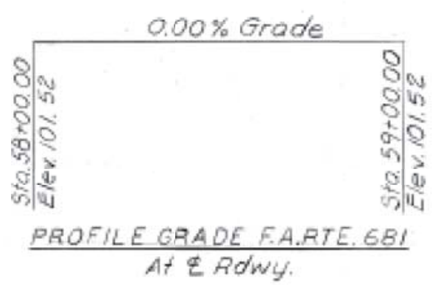
STATION 58+65.50
REBUILT 19 BY
STATE OF ILLINOIS
FA. RT. 681 SEC. 113BR-1
F.A. PROJ. MABR-F-681(9)
LOADING HS 20
STR. NO. 053-0070

NAME PLATE
(See Std. 2113)



CURVE DATA
P.I. Sta. 59+84.00
Δ = 89° 12'
D = 11° 12'
T = 504.25'
L = 796.07'
R = 511.57'
E = 206.80'
P.C. Sta. 54+79.75
P.T. Sta. 62+75.82
S.E. = 0.06 ¹⁄₁ (Prop.)





The width between the guardrails shall be the same width of the bridge. Shoulder widening may be required for the length of the guardrail.

GENERAL NOTES

See Proposal for Boring Data.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The top surface of the beams shall be finished in accordance with Article 505.06 of the Std. Specs. except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of ¼"

Expansion bolts shall consist of approved expansion anchors, providing min. certified proof load = 4,080 Lbs. and ¾"Φ x 12" hooked bolts.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

A Calcium Nitrite Corrosion Inhibitor, as covered in the Special Provisions shall be used in the concrete for precast prestressed concrete deck beams.

Removal of existing rail shall be incidental to Removal of Existing Superstructures.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Structure Excavation	Cu. Yds.		35	35
Reinforcement Bars	Lbs.		1180	1180
Steel Railing Type S-1	Lin. Ft.	60		60
Bituminous Concrete Surface Course Class I	Tons	12.1		12.1
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		4.9	4.9
Expansion Bolts ¾"Φ	Each		56	56
Class X Concrete	Cu. Yds.		17.6	17.6
P.P.C. Deck Beams (17")	Sq. Ft.	1260		1260
Name Plates	Each	1		1
P.C. Mortar Fairing Course	Lin. Ft.	390		390
Waterproofing Membrane System	Sq. Yds.	158.7		158.7
Steel Sheet Piling	Sq. Ft.		120	120
Pavement Removal & P.C.C. Replacement Type II (10")	Sq. Yds.	13.3		13.3
*** Epoxy Crack Sealing	Lin. Ft.		8	8
*** Repair Concrete Structures	Sq. Ft.		10.3	10.3
Temporary Wall Bracing System	L.S.			L.S.
Stone Dumped Riprap	Sq. Yds.		42	42

*** See Special Provisions

WATERWAY INFORMATION

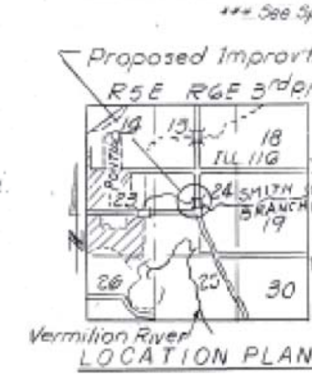
Drainage Area 7.41 Sq. Mi. Low Grade Elev. 101.36' (Prop) 101.0' (Exist.)									
Flood	Freq. Yrs.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	1424	231	231	97.5'	0.0	0.0	97.5	97.5
Base	100	1634	235*	240	97.8'	0.0	0.0	97.8	97.8
Max. Calc.	500	2122	235*	287	98.4'	1.56	1.56	99.96	99.96

* Exist. Low concrete Elev. 97.63

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi.
fy = 60,000 psi. (Reinf.)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi. f'ci = 4000 p.s.i.
f's = 270,000 psi. (½" Φ Strands)
f'si = 189,000 psi. (½" Φ Strands)



Design Specifications: 1977 AASHTO, 1978 1979, 1980 & 1981 Interim Specifications
Allow 25#/sq. ft for future Wear. Surf.
LOADING HS20 44

GENERAL PLAN
ILL. RTE 116 OVER SMITH BRANCH
F.A. RTE. 681 SEC. 113 BR-1
LIVINGSTON COUNTY
STA. 58+65.50

DESIGNED Robt T. Bro
CHECKED Steven K. Dreman
DRAWN F.M.
CHECKED R.T.B.

January 10, 1983
EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED [signature] ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

FILE NAME = c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-existing-bridge-plans.dgn	USER NAME = Schwankerg	DESIGNED -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	DRAWN -	REVISED -
	PLOT DATE = 12/14/2012	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

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

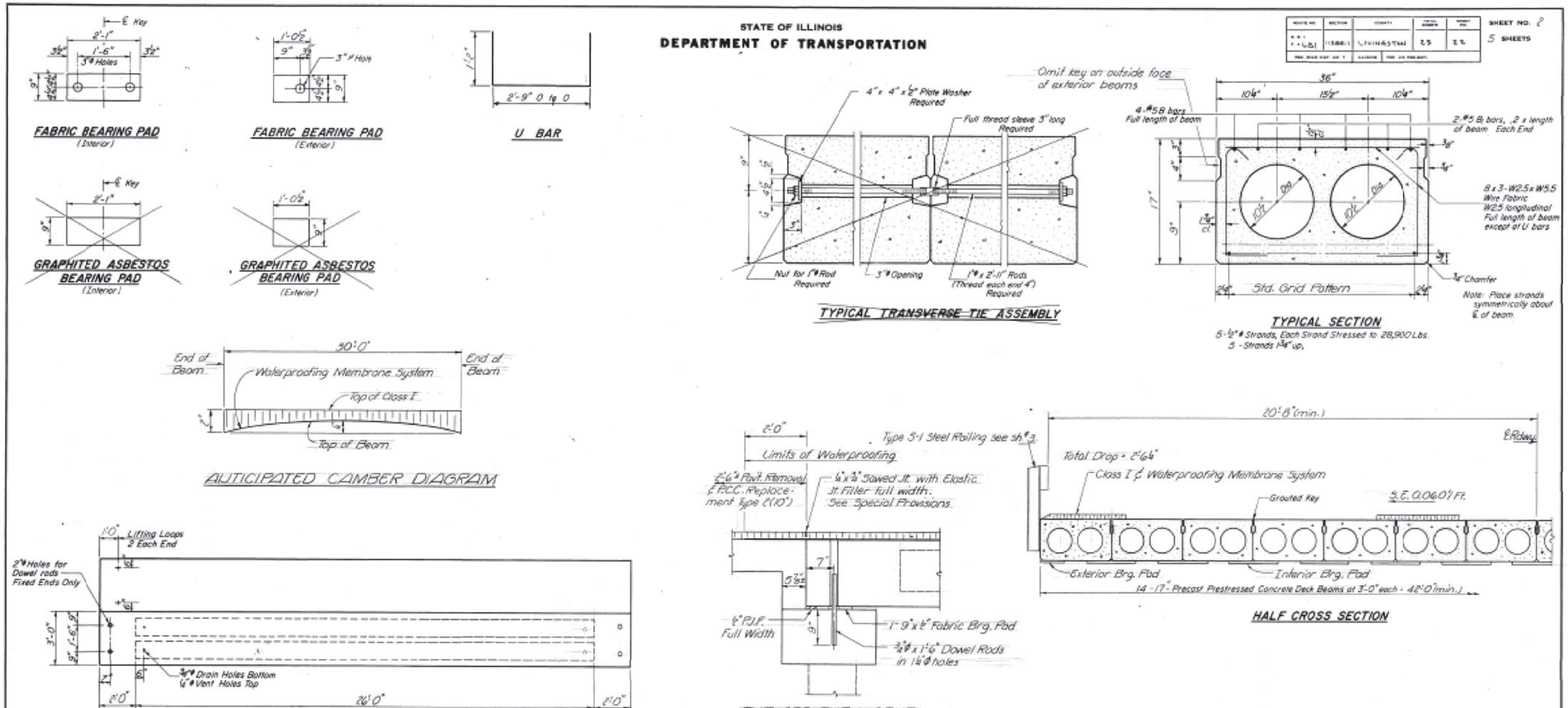
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	106

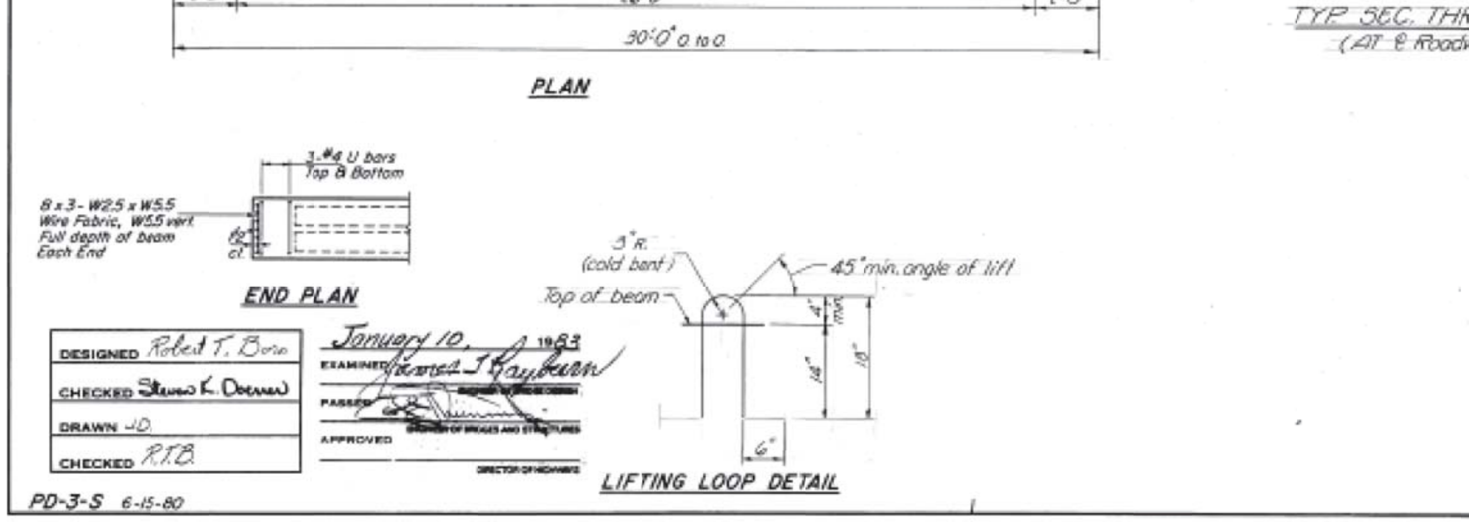
CONTRACT NO. 66832
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 681	113BR-1	LIVINGSTON	25	22

SHEET NO. 2
5 SHEETS





NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be 1/2" diameter, 6 x 25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 11,000 lbs. or 2 - 1/2" - 270 ksi strands. as shown.

Dowel Rods to be grouted after beams are in place and allowed to cure (min. 24 Hrs) prior to grouting the shear keys.

Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Concrete Deck Beams (17")		Sq. Ft.	1260	

P.P.C. DECK BEAMS
F.A. RT. 681 SEC. 113BR-1
LIVINGSTON COUNTY
STA. 58+65.50

FILE NAME =	USER NAME = Schwankerg	DESIGNED -	REVISED -
c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-existing-bridge-plans.dgn		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	107

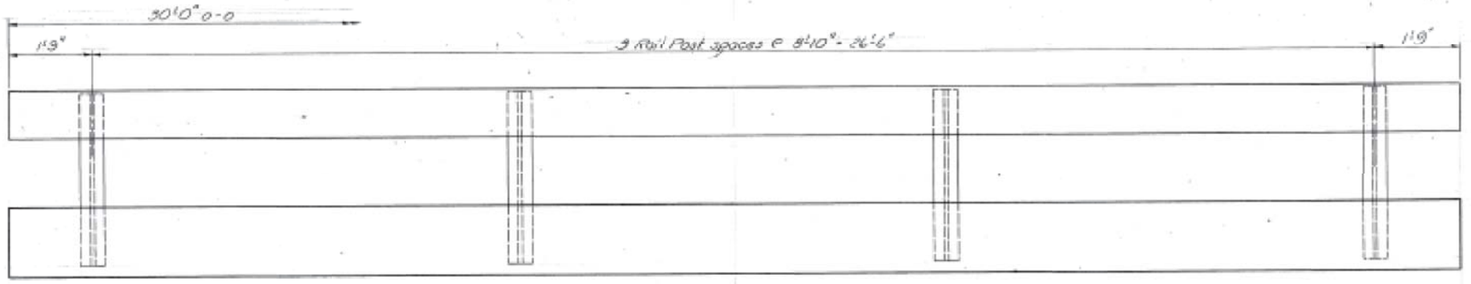
CONTRACT NO. 66832

ILLINOIS FED. AID PROJECT

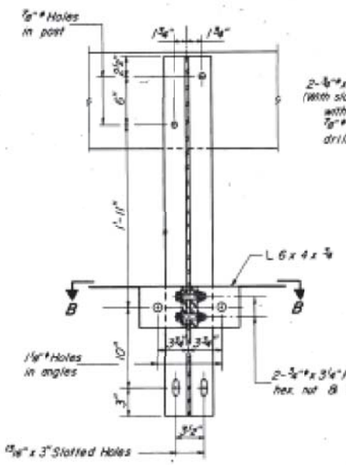
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	108

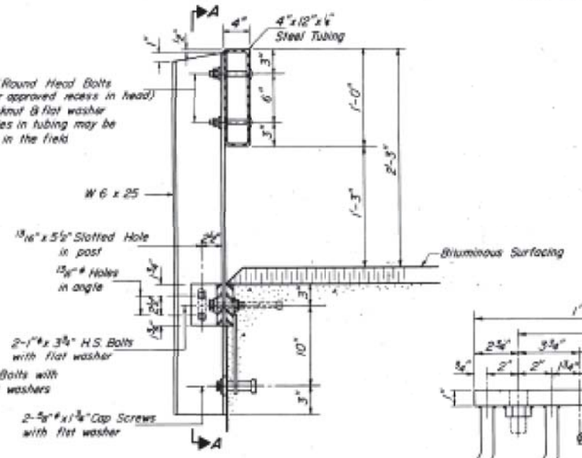
SHEET NO. 3 OF 5 SHEETS



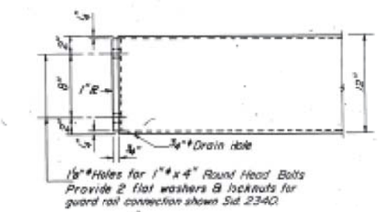
INSIDE ELEVATION



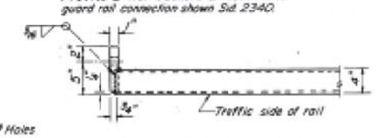
SECTION A-A



SECTION AT RAIL POST



13/16" Holes for 1" x 4" Round Head Bolts
Provide 2 flat washers & locknuts for guard rail connection shown Std. 2340.



END OF RAIL DETAILS

NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

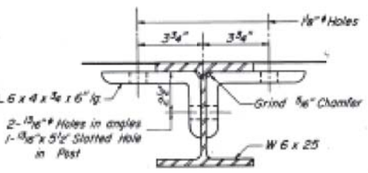
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

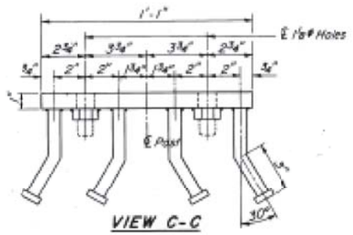
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post and concrete.

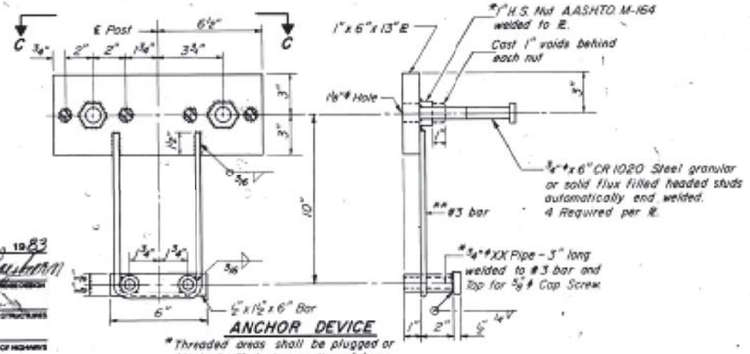
The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.



SECTION B-B



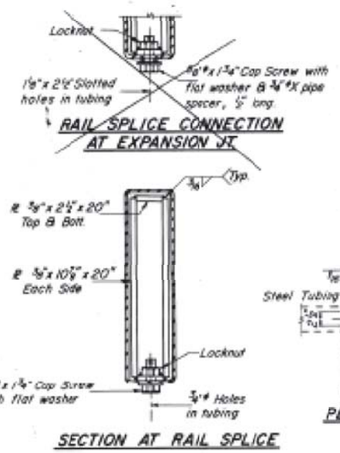
VIEW C-C



** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted inorder to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 5".

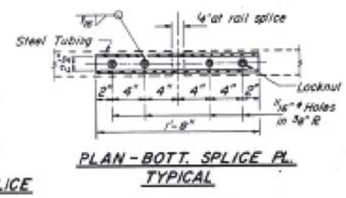
ANCHOR DEVICE

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



RAIL SPLICE CONNECTION AT EXPANSION JT.

SECTION AT RAIL SPLICE



PLAN - BOTT. SPLICE PL. TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Lin. Ft.	40

TYPE S-1 STEEL RAILING
F.A. RT. 681 SEC. 113BR-1
LIVINGSTON COUNTY
STA. 58+65.50

DESIGNED	Robert T. Borie
CHECKED	Steven K. Schwanke
DRAWN	J.D.
CHECKED	R.T.B.

January 10, 1983

EXAMINED: James J. Kaufmann — DIRECTOR OF HIGHWAYS

PASSED: — BUREAU OF BRIDGES AND STRUCTURES

APPROVED: — DIRECTOR OF HIGHWAYS

R-23A 8-30-80 (10'-3" Maximum Post Spacing)

FILE NAME =	USER NAME = Schwankerg	DESIGNED -	REVISED -
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	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS FOR INFORMATION ONLY

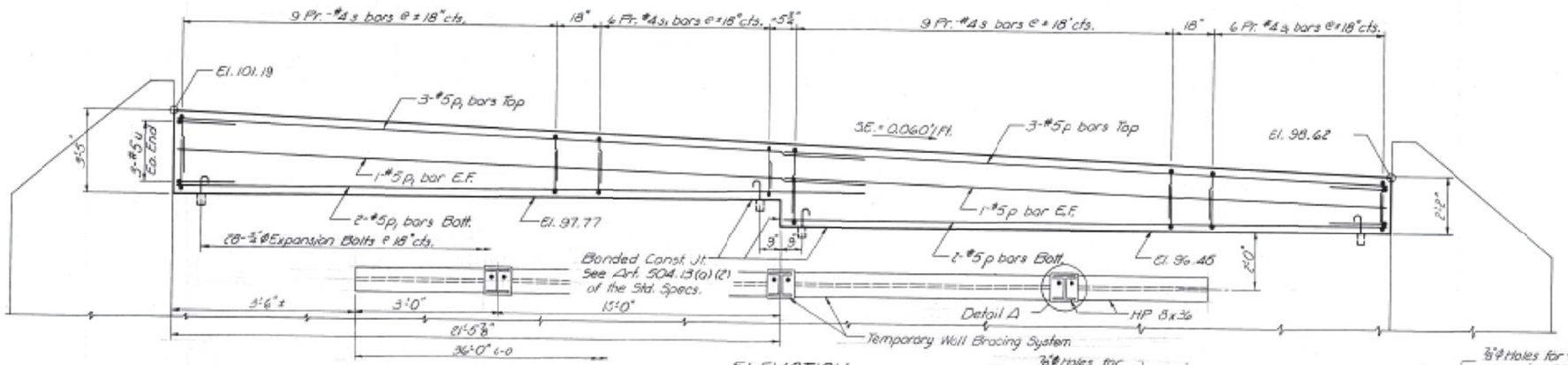
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	108
		CONTRACT NO. 66832		
		ILLINOIS FED. AID PROJECT		

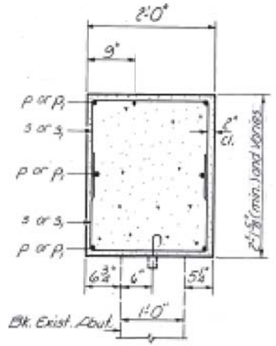
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	25	24
PED. PROJECT NO. P	CALENDAR	PED. OR PROJECT		

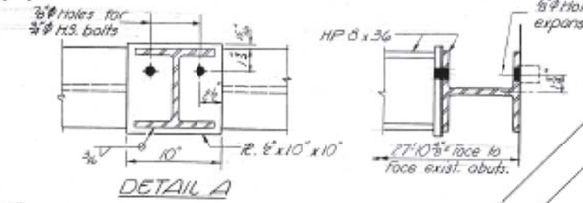
SHEET NO. 4
5 SHEETS



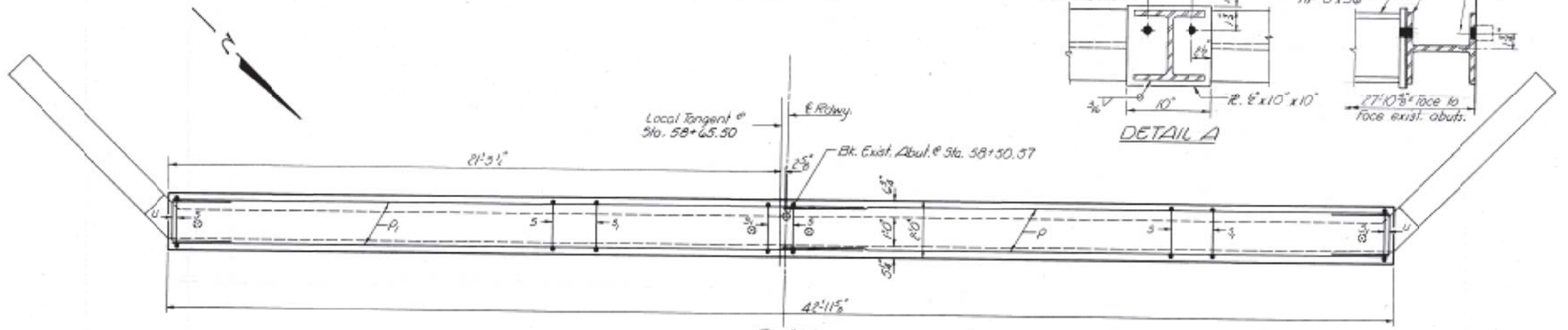
ELEVATION



SEC. THRU ABUT.

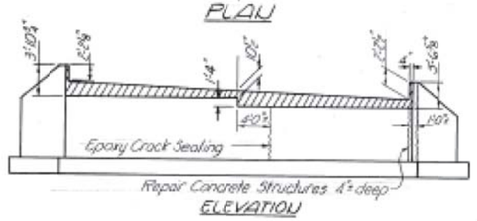


DETAIL A

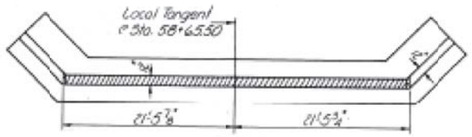


PLAN

Note:
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.



ELEVATION

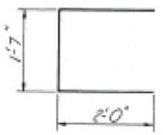


PLAN

CONCRETE REMOVAL

TEMPORARY WALL BRACING SYSTEM

Before any removal of the existing structure the bracing system shall be completely in place.
Connections shall be approved by the Engineer.
Shim plates shall be used between the ℄ plate and the whaler to insure full contact.
After completion of the new superstructure the bracing system shall be removed.
No joint required.



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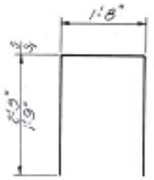


BARS s(s1)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p	7	#5	21'-0"	——
p1	7	#5	15'-0"	——
s	36	#4	6'-2"	⊓
s1	24	#4	5'-2"	⊓
u	6	#5	5'-7"	⊏
Class X Concrete		Cu. Yds.		8.9
Reinforcement Bars		Lbs.		390
Concrete Removal		Cu. Yds.		2.6
Expansion Bolts ¾"ø		Each		28

SOUTH ABUTMENT
F.A. RT. 681 SEC. 113BR-1
LIVINGSTON COUNTY
STA. 58+65.50

DESIGNED	Robert T. Burke
CHECKED	Steven L. Overman
DRAWN	J.D.
CHECKED	R.T.B.

January 10, 1983
EXAMINED James J. Rayburn
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

FILE NAME =	USER NAME = Schwankerg	DESIGNED -	REVISED -
c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-existing-bridge-plans.dgn	DRAWN -	REVISED -	
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
FOR INFORMATION ONLY

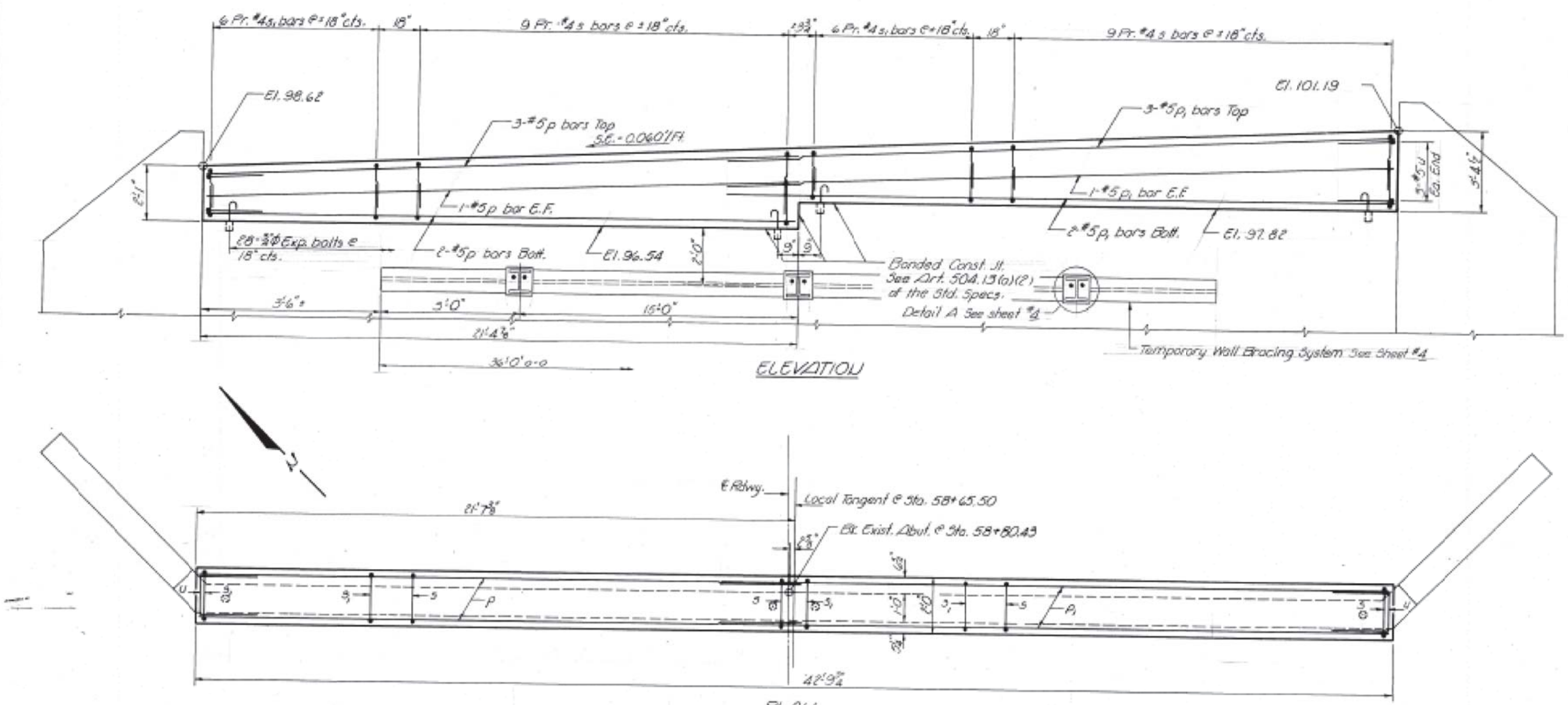
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

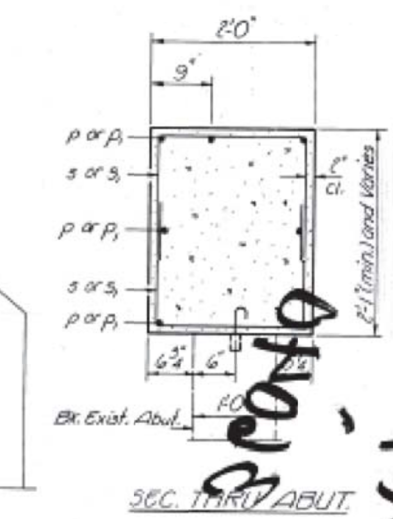
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	109
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RT. 681	113 BR-1	LIVINGSTON	25	25

SHEET NO. 5 — 5 SHEETS



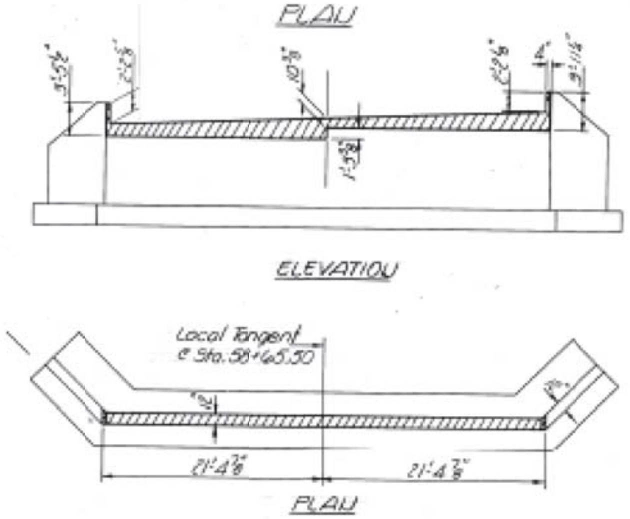


BILL OF MATERIAL

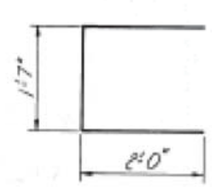
Bar	No.	Size	Length	Shape
p	7	#5	21'-0"	—
p,	7	#5	23'-0"	—
s	36	#4	6'-2"	⊓
s,	24	#4	5'-2"	⊓
u	6	#5	3'-7"	⊏

Class X Concrete	Cu. Yds.	8.7
Reinforcement Bars	Lbs.	590
Concrete Removal	Cu. Yds.	2.4
Expansion Bolts 3/4"φ	Each	28

Note:
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.



CONCRETE REMOVAL



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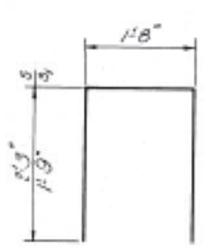

BARS s & s,

NORTH ABUTMENT
F.A. RT. 681 SEC. 113BR-1
LIVINGSTON COUNTY
STA. 58+65.50

DESIGNED Robert T. Bona
CHECKED Steven K. Owens
DRAWN J.O.
CHECKED R.T.B.

January 10, 1983
EXAMINED
PASSED
APPROVED

FILE NAME = c:\pw_work\pwidot\schwankerg\dms31786\D366832-sht-existing-bridge-plans.dgn	USER NAME = Schwankerg	DESIGNED -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	DRAWN -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	110

CONTRACT NO. 66832

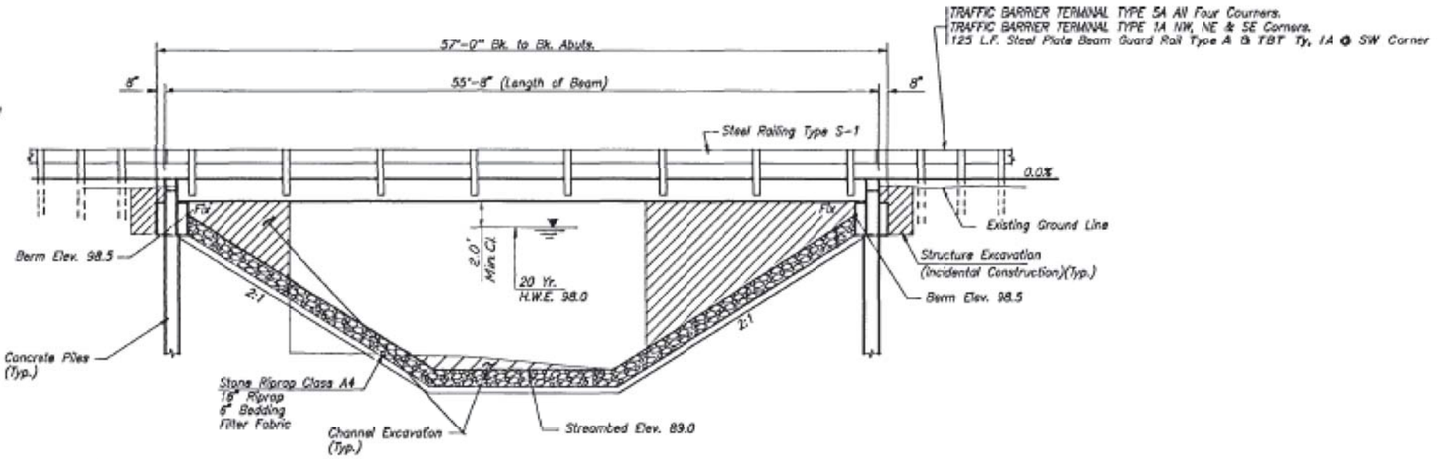
ILLINOIS FED. AID PROJECT

B.M. #1 – R.R. Spike E. Side P.P. at S.W. Corner, Elev. 101.59

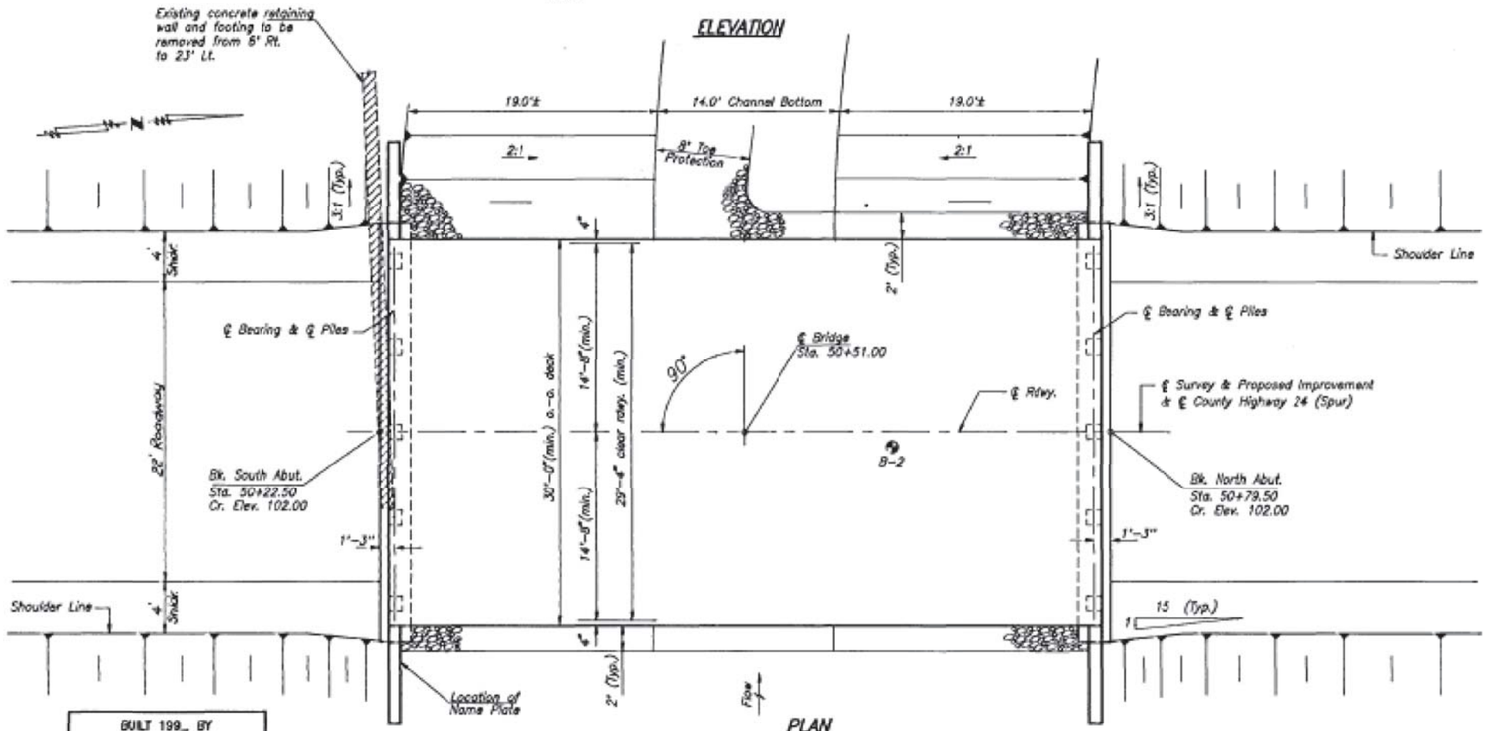
B.M. #2 – R.R. Spike W. Side P.P. on E. Side Road N. Drive to first house North of Br., Elev. 101.17

Existing Structure – One Span Reinforced Concrete Slab on Closed Concrete Abutments, 32.4' c.-c. of deck, 29.6' fc.-fc. of Abutments, Concrete Retaining Wall at Southwest Corner.

Proposed Structure & portion of Retaining Wall to be removed by Contractor. No Salvage.
Existing Structure No. 053-3044



ELEVATION



PLAN

9-1

BUILT 199_ BY
LIVINGSTON COUNTY
COUNTY HIGHWAY 24 (SPUR)
SECTION 90-00133-01-BR
LOADING HS20
STR. NO. 053-3450

LETTERING FOR NAME PLATE

SEE STANDARD 2113

DESIGN STRESSES

SUPERSTRUCTURE

f'c = 5,000 p.s.i.
f'ci = 4,000 p.s.i.
f's = 270,000 p.s.i. (strand)
f'si = 189,000 p.s.i. (strand)
fy = 60,000 p.s.i. (reinf.)

Loading HS 20-44

Design stresses provide for future wearing surface of 25 psf.

SUBSTRUCTURE

f'c = 3,500 p.s.i.
fc = 1,400 p.s.i.
fs = 24,000 p.s.i. (reinf.)
n = 9

WATERWAY INFORMATION

Drainage Area	7.8 sq. mi.
Present Opening	229 sq. ft.
Required Opening	288 sq. ft.
Proposed Opening	288 sq. ft.
Design Discharge(20 Yr.)	1120 cfs
Created Head	< 0.5 ft.
100 Yr. Discharge	1580 cfs
Created Head	< 1.0 ft.

GENERAL NOTES

Class X Concrete shall be used throughout.
All reinforcement bars shall be lapped as shown on the plans.
The Standard Specifications adopted by the Department of Transportation July 1, 1988 shall apply to this work.
One concrete test pile shall be driven in a permanent location in South Abutment as directed by the Engineer before ordering the remainder of the piles.
Abutment piles shall be driven a minimum 10 feet into undisturbed earth.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			300
Removal of Existing Structures	Each			1
Class X Concrete	Cu. Yd.		18.1	18.1
Precast Prestr. Conc. Deck Beams (21" Depth)	Sq. Ft.	1670		1670
Reinforcement Bars	Pound		1910	1910
Furnishing Concrete Piles	Lin. Ft.		272	272
Driving Concrete Piles	Lin. Ft.		272	272
Test Pile, Concrete	Each		1	1
Name Plates	Each		1	1
Steel Railing, Type S-1	Lin. Ft.	112		112
Stone Riprap Class A4	Sq. Yd.			213
Filter Fabric for use with Riprap	Sq. Yd.			213

This structure has been designed to be stable for scour conditions in accordance with the FHWA Technical Advisory - T 5140.23, "Evaluating Scour at Bridges" and Hydraulic Engineering Circular 18 - Evaluating Scour at Bridges."

I certify 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 the requirements of the current AASHTO Standard Specifications for Highway Bridges.

Robert E. Hahn
Illinois Structural
No. 2675
(expires 11/30/94)

GENERAL PLAN AND ELEVATION
COUNTY HIGHWAY 24 (SPUR)
SECTION 90-00133-01-BR
LIVINGSTON COUNTY
STATION 50+51

suby, oglesby and bartolomucci
consulting engineers and surveyors
1333 south 31st street, springfield, illinois 62704

DRAWN	DATE	JOB NO.	SHEET NO.
B.W.W.	3-9-94	89-61	6 of 16
CHECKED RCB			

89-61GPE

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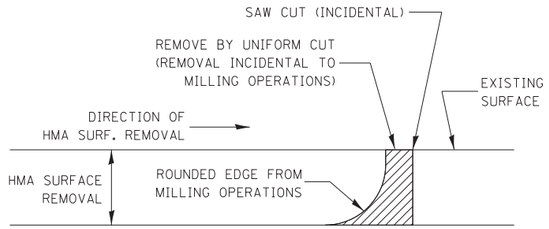
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS FOR INFORMATION ONLY

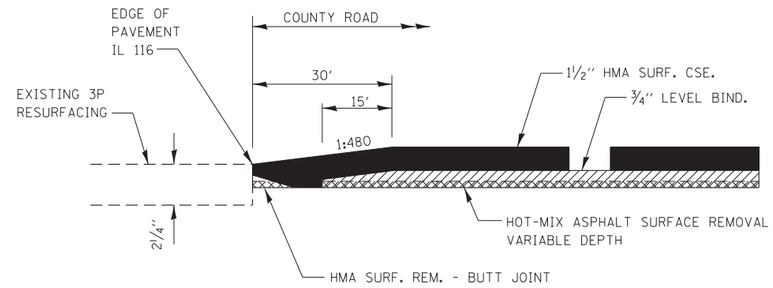
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	111
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

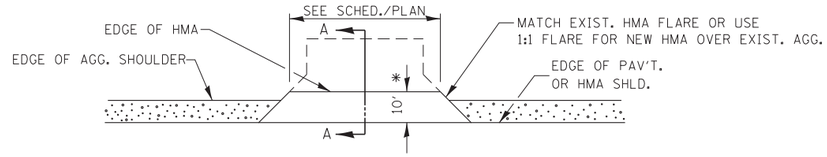


NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA DETAIL AT BUTT JOINTS



BUTT JOINT AT IL 116



PLAN AT PRIVATE & COMMERCIAL ENTRANCES

(DO NOT RESURFACE FIELD ENTRANCES)

* PROPOSED HMA RESURFACING AT PUBLIC EDUCATIONAL FACILITY ENTRANCES SHALL BE EXTENDED TO THE RIGHT-OF-WAY LIMITS.

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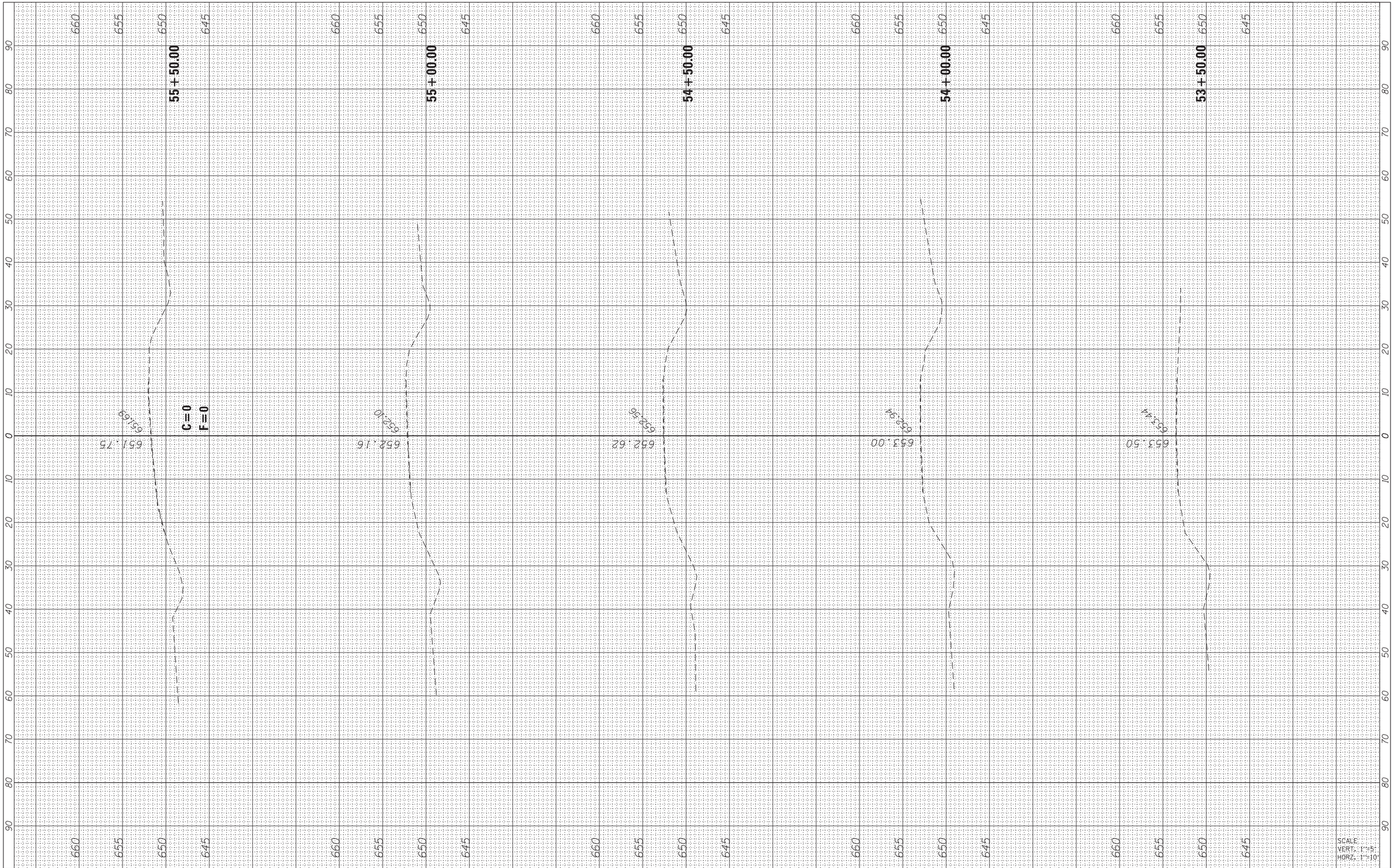
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

-	SHEET	OF	SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	112
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

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



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	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 116

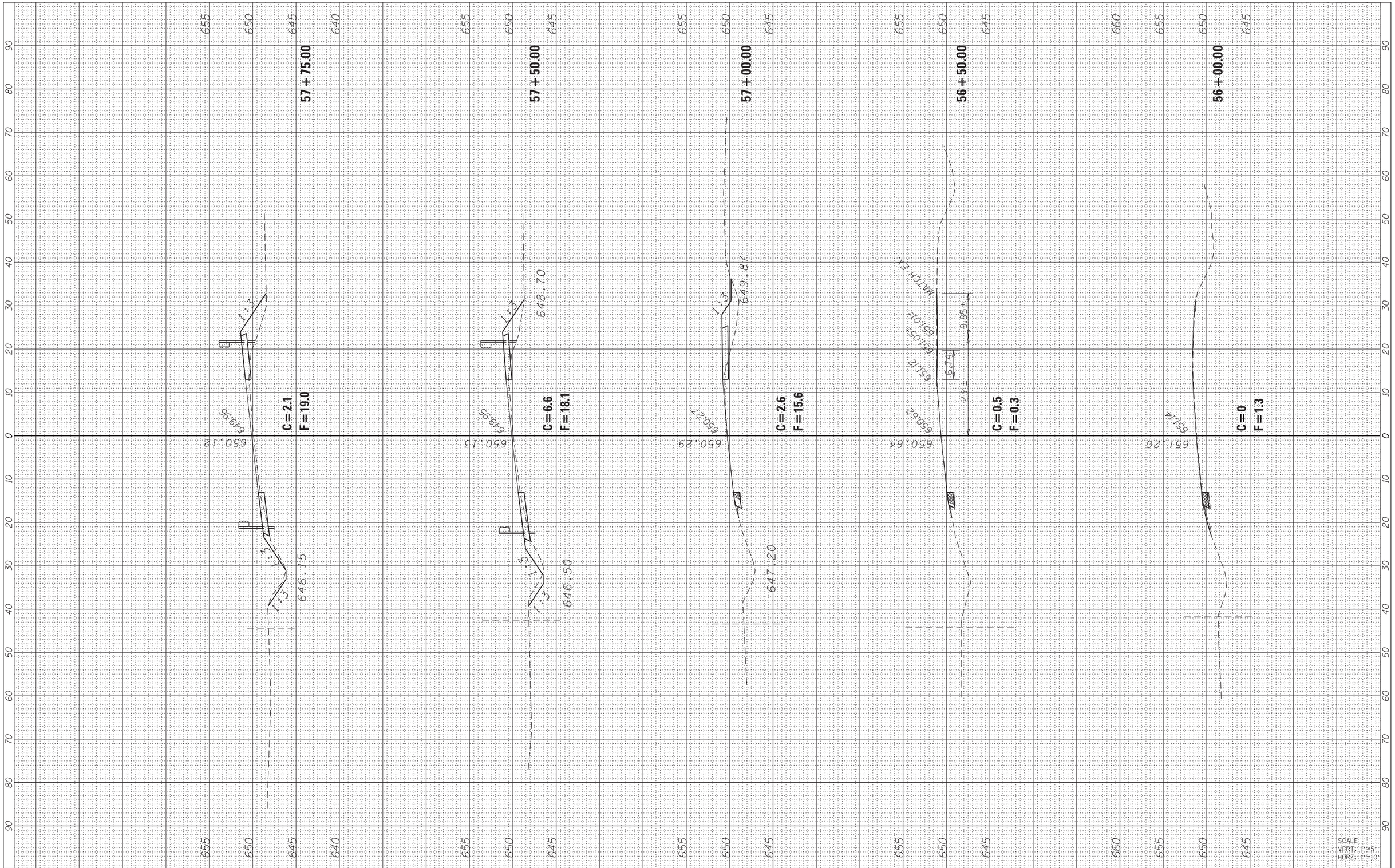
SCALE: | SHEET OF SHEETS | STA. 53+50.00 | TO STA. 55+50.00

SCALE
VERT. 1"=5'
HORZ. 1"=10'

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	113
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

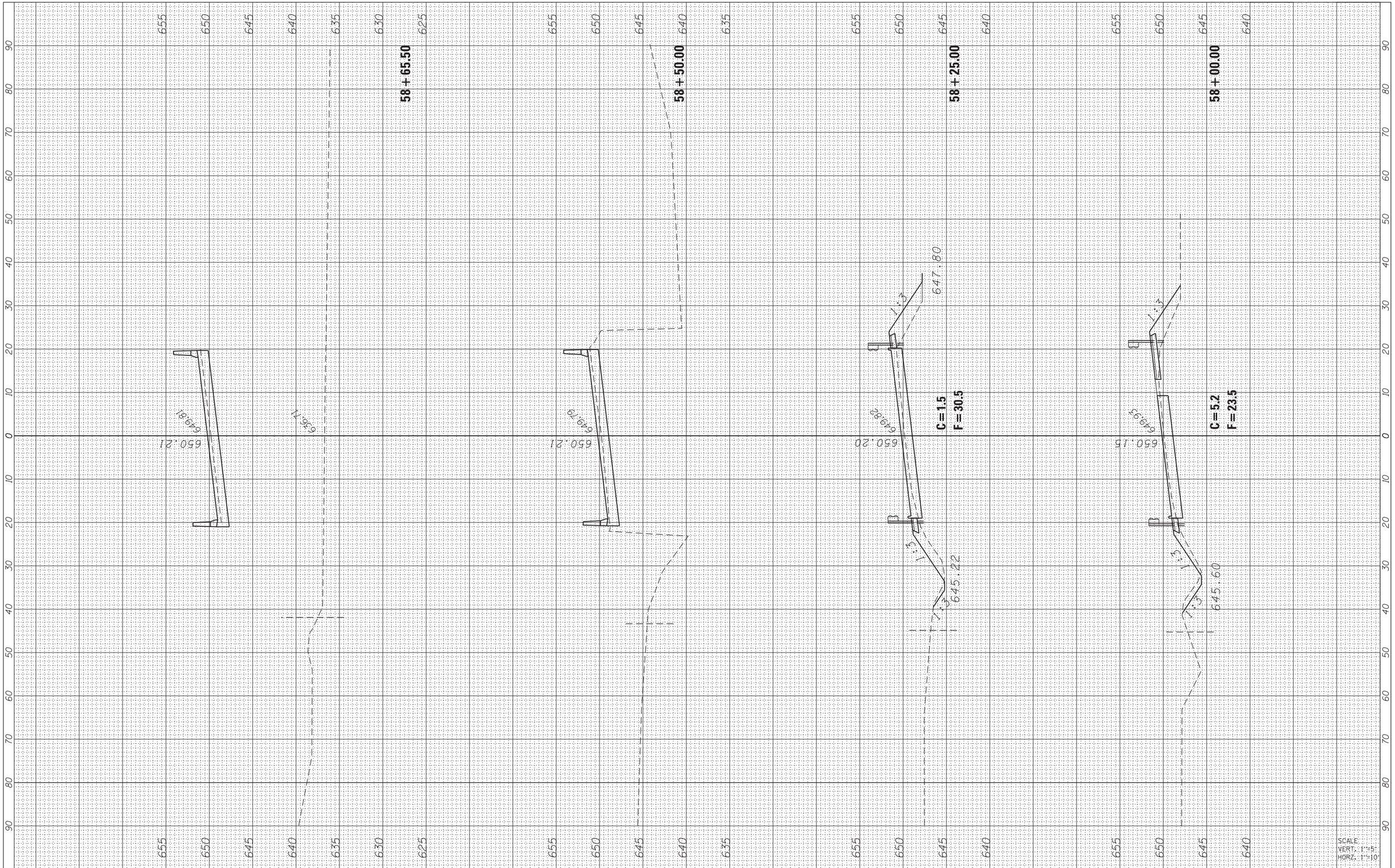
CROSS SECTIONS
IL 116

SCALE: | SHEET OF SHEETS | STA. 56+00.00 | TO STA. 57+75.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	114
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 116

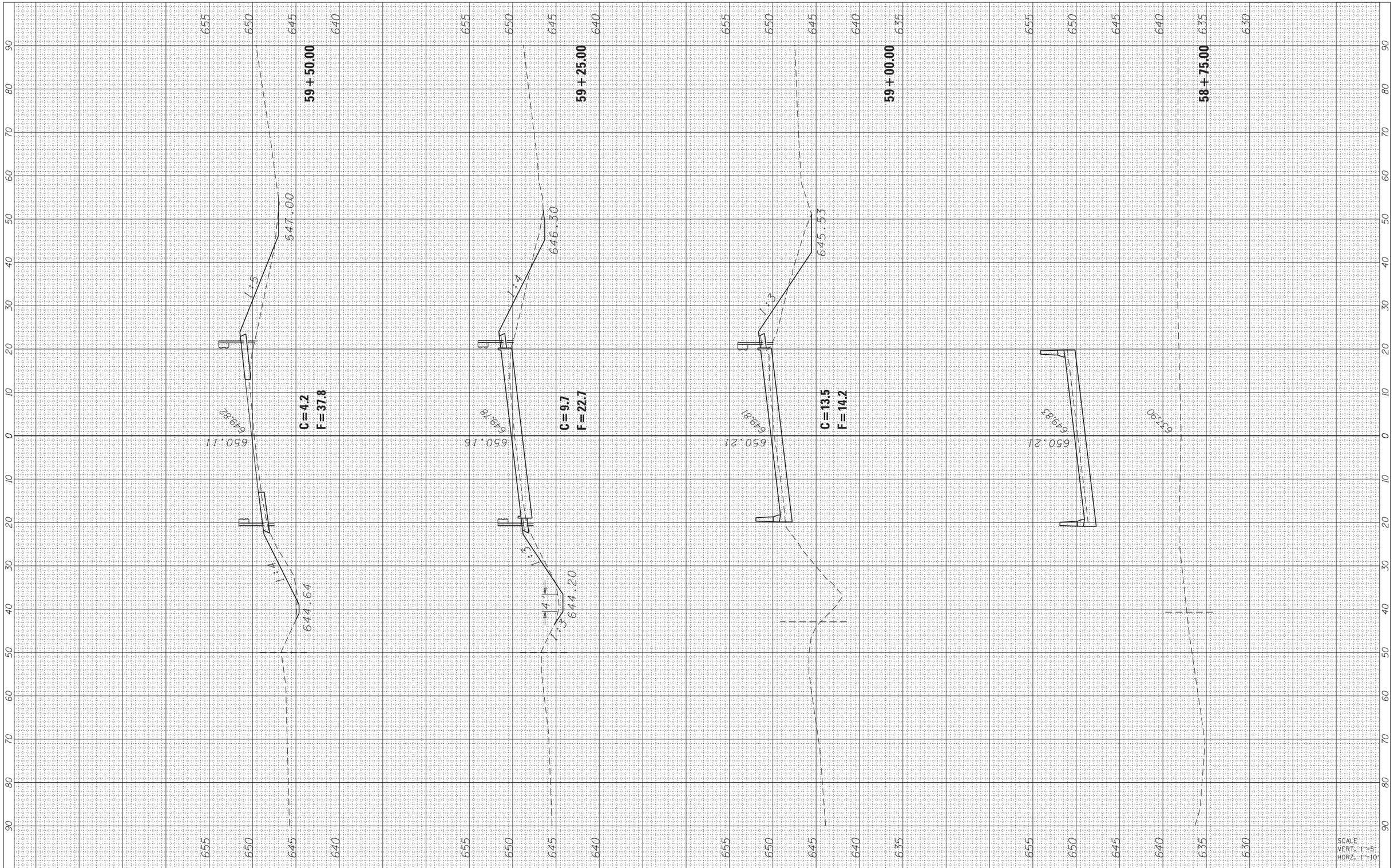
SCALE: | SHEET OF SHEETS | STA. 58+00.00 | TO STA. 58+65.50

SCALE:
VERT. 1"=5'
HORZ. 1"=10'

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	115
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

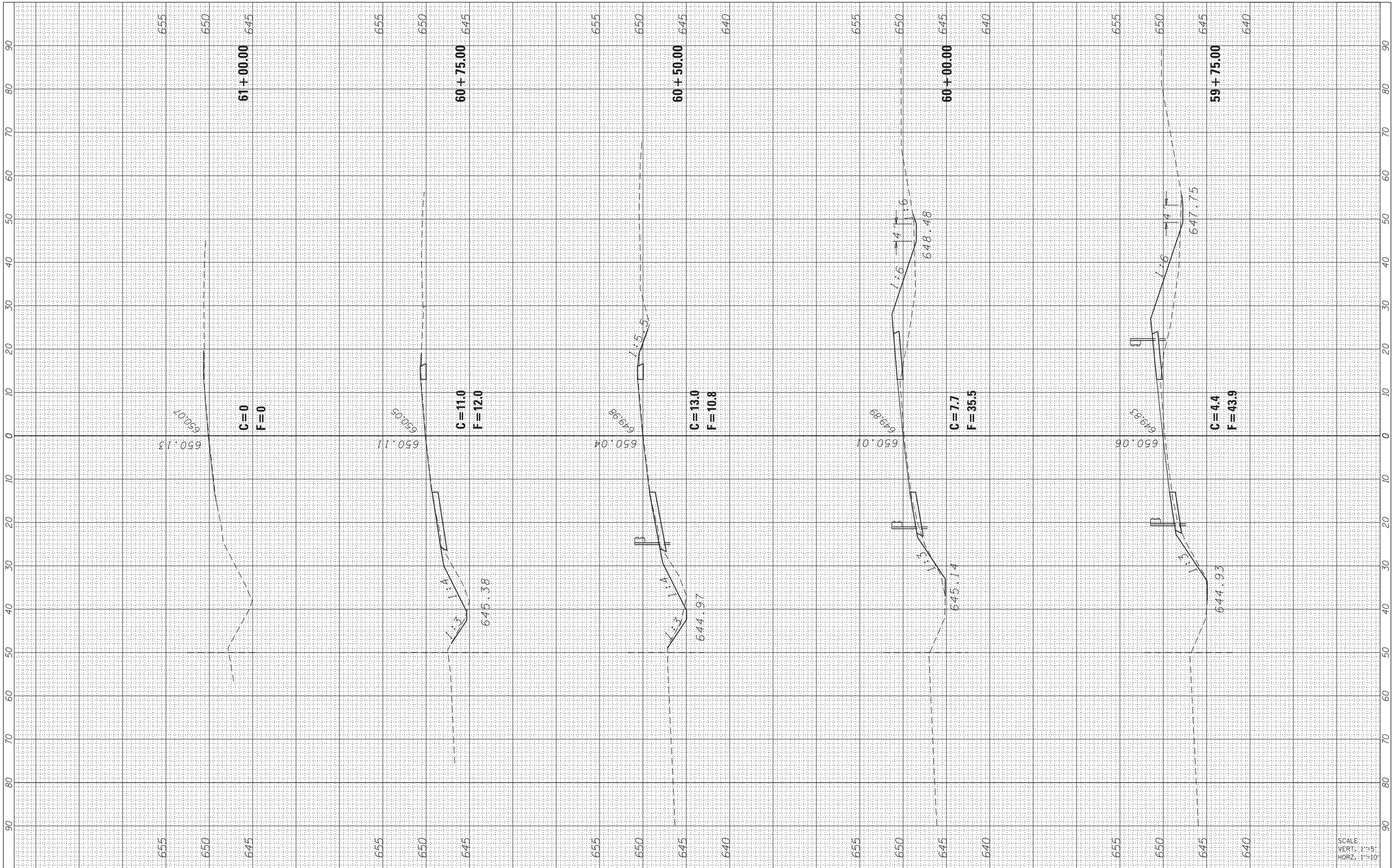
CROSS SECTIONS
IL 116

SCALE: | SHEET OF SHEETS | STA. 58+75.00 | TO STA. 59+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	116
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

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



SCALE
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HORZ. 1"=10'

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	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

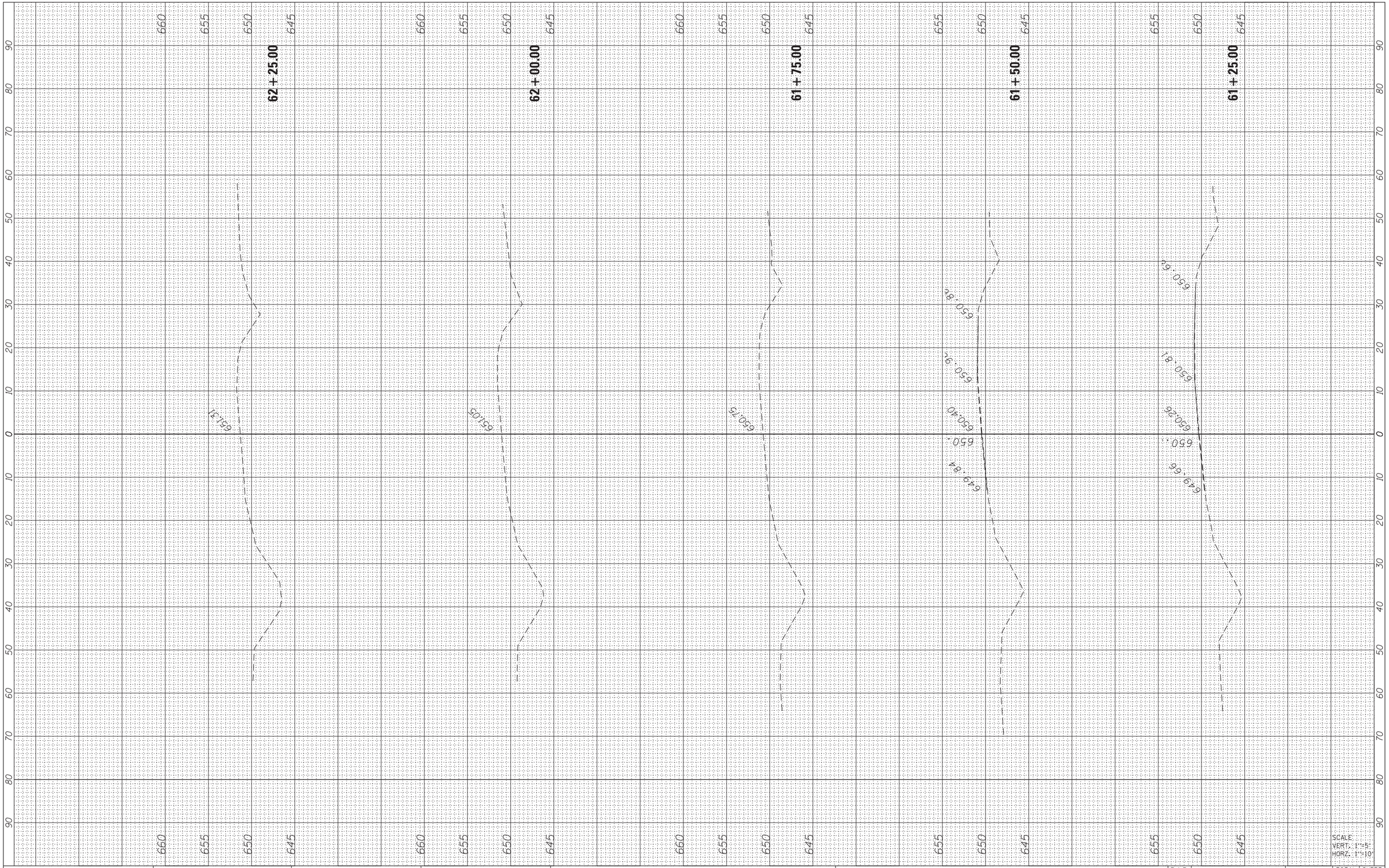
CROSS SECTIONS
IL 116

SCALE: | SHEET OF SHEETS | STA. 59+75.00 | TO STA. 61+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	117
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

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



SCALE
VERT. 1"=5'
HORZ. 1"=10'

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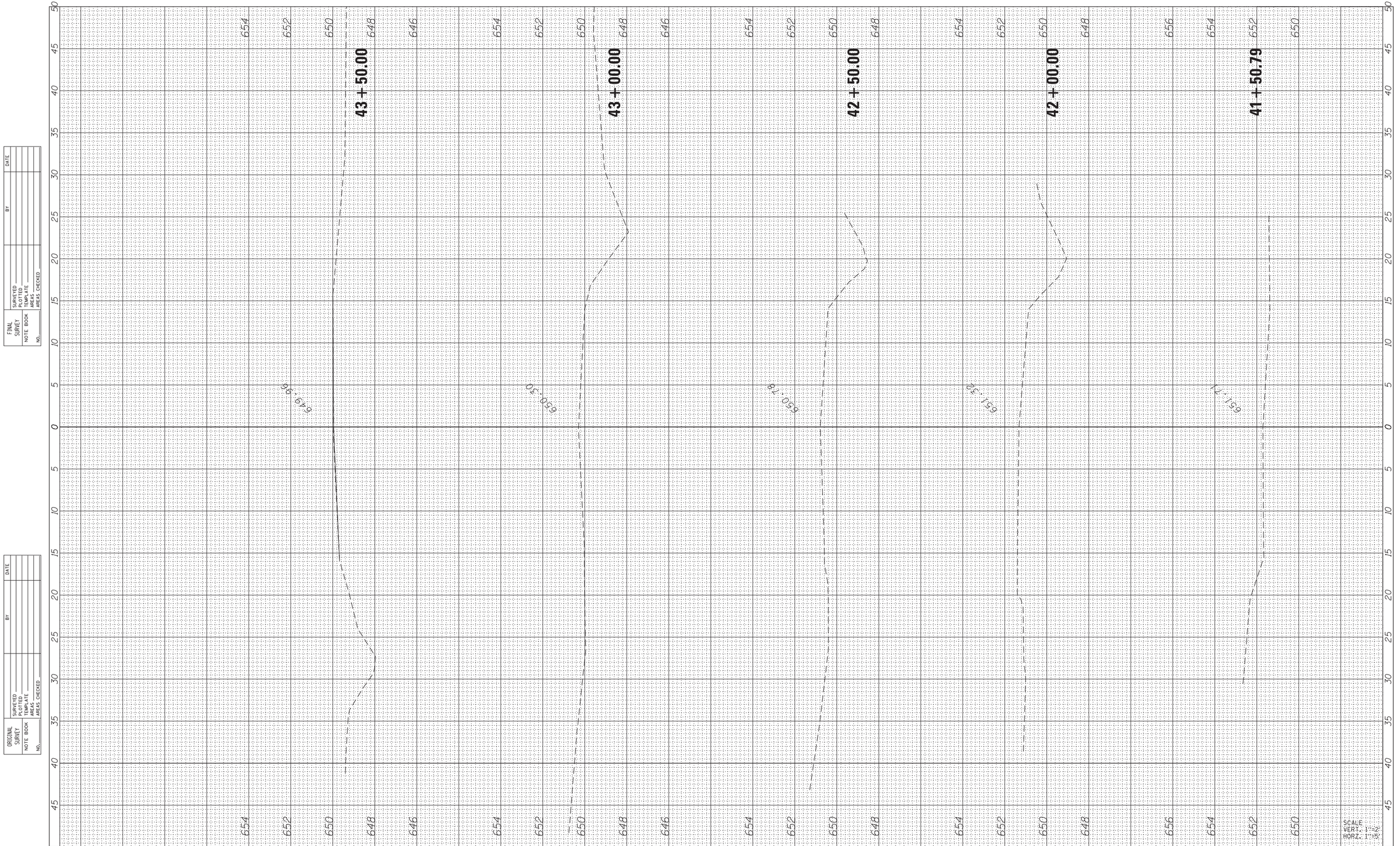
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
IL 116

SCALE: | SHEET OF SHEETS | STA. 61+25.00 | TO STA. 62+25.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	118
		CONTRACT NO. 66832		
	ILLINOIS	FED. AID PROJECT		



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

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

SCALE:
VERT. 1"=5'
HORZ. 1"=50'

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

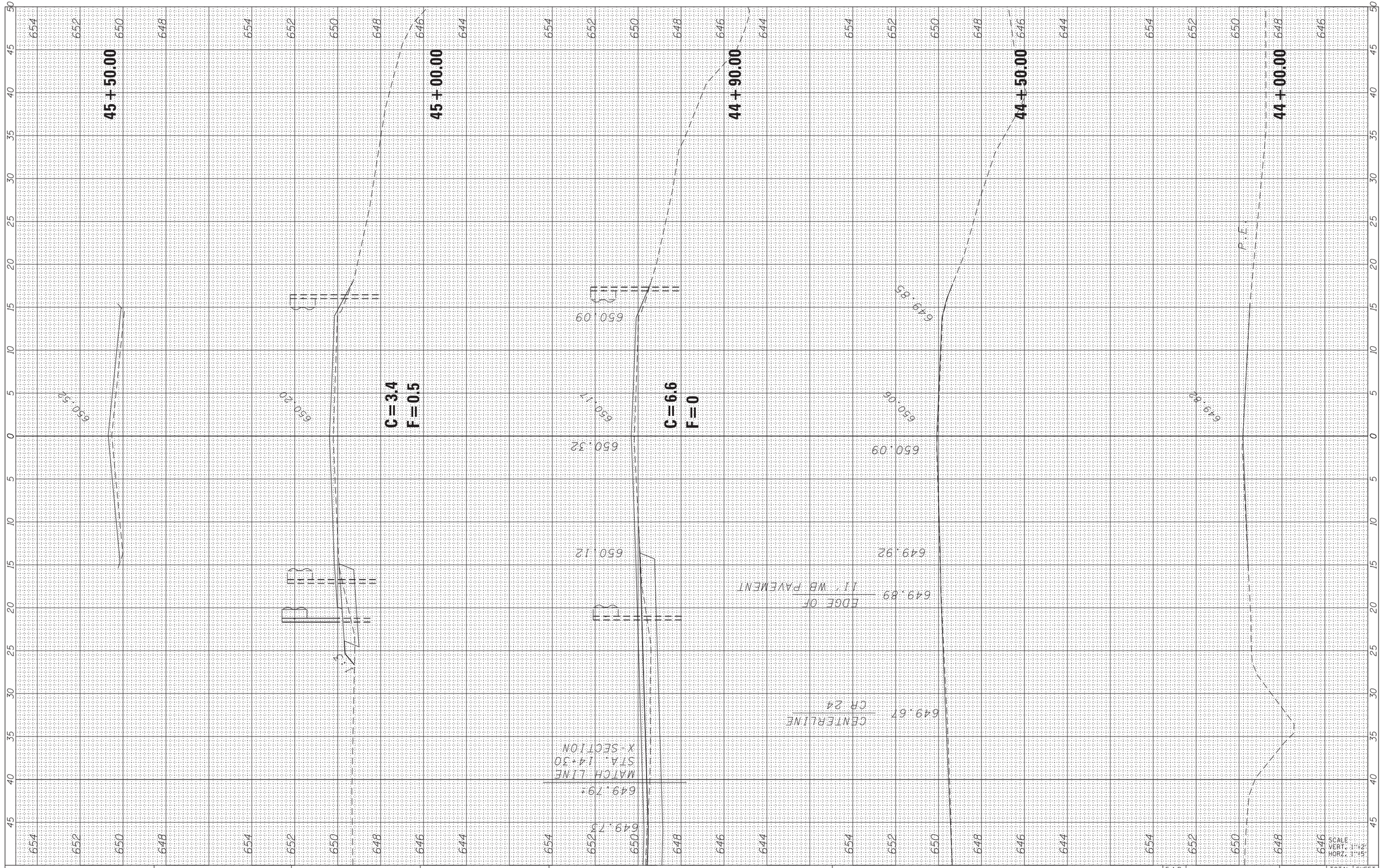
CROSS SECTIONS N 1750E RD.

SCALE: | SHEET OF SHEETS | STA. 41+50.79 | TO STA. 43+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	119
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

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



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS N 1750E RD.

SCALE: | SHEET OF SHEETS | STA. 44+00.00 | TO STA. 45+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	120
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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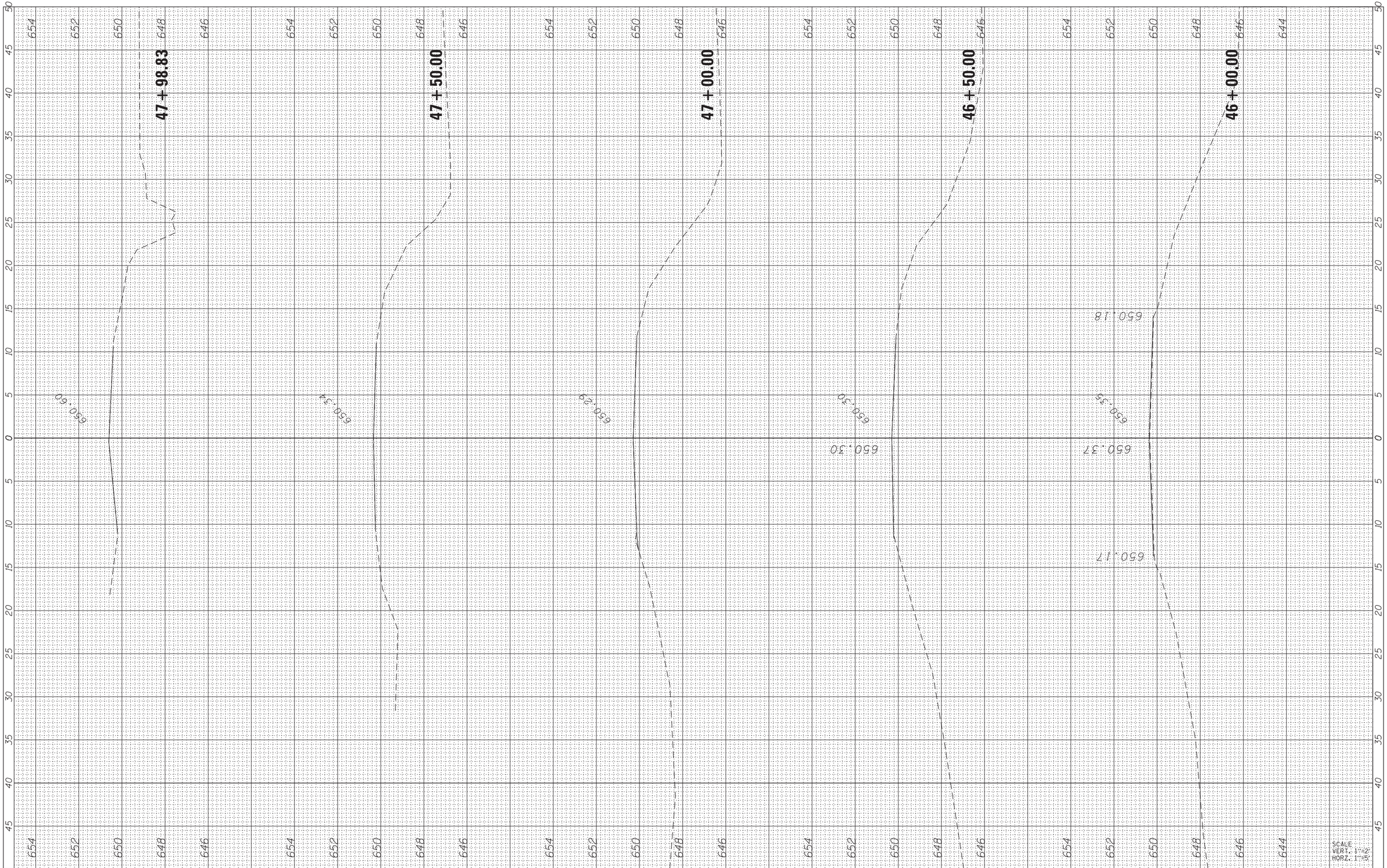

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

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$MODELNAME$	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS N 1750E RD.

SCALE: | SHEET OF SHEETS | STA. 46+00.00 | TO STA. 47+98.83

SCALE
VERT. 1"=5'
HORZ. 1"=5'

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	121
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

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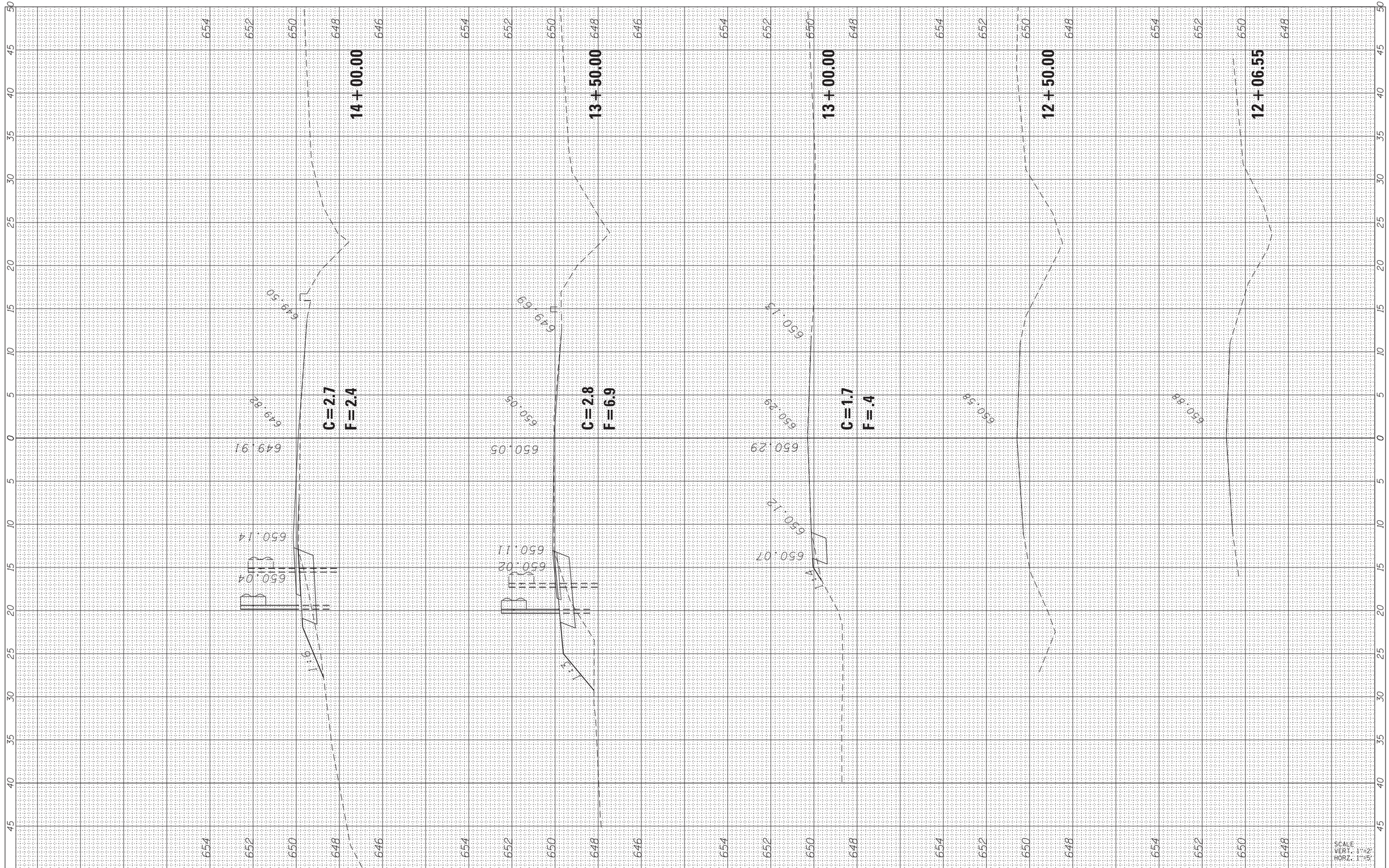
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		



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$MODELNAME$	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS HOWARD ST. (C.R. 24)

SCALE: | SHEET OF SHEETS | STA. 12+06.55 | TO STA.14+00.00

SCALE:
VERT. 1"=5'
HORZ. 1"=5'

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	122
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

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

ORIGINAL SURVEY		BY	DATE
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NOTE BOOK	TEMPLATE		
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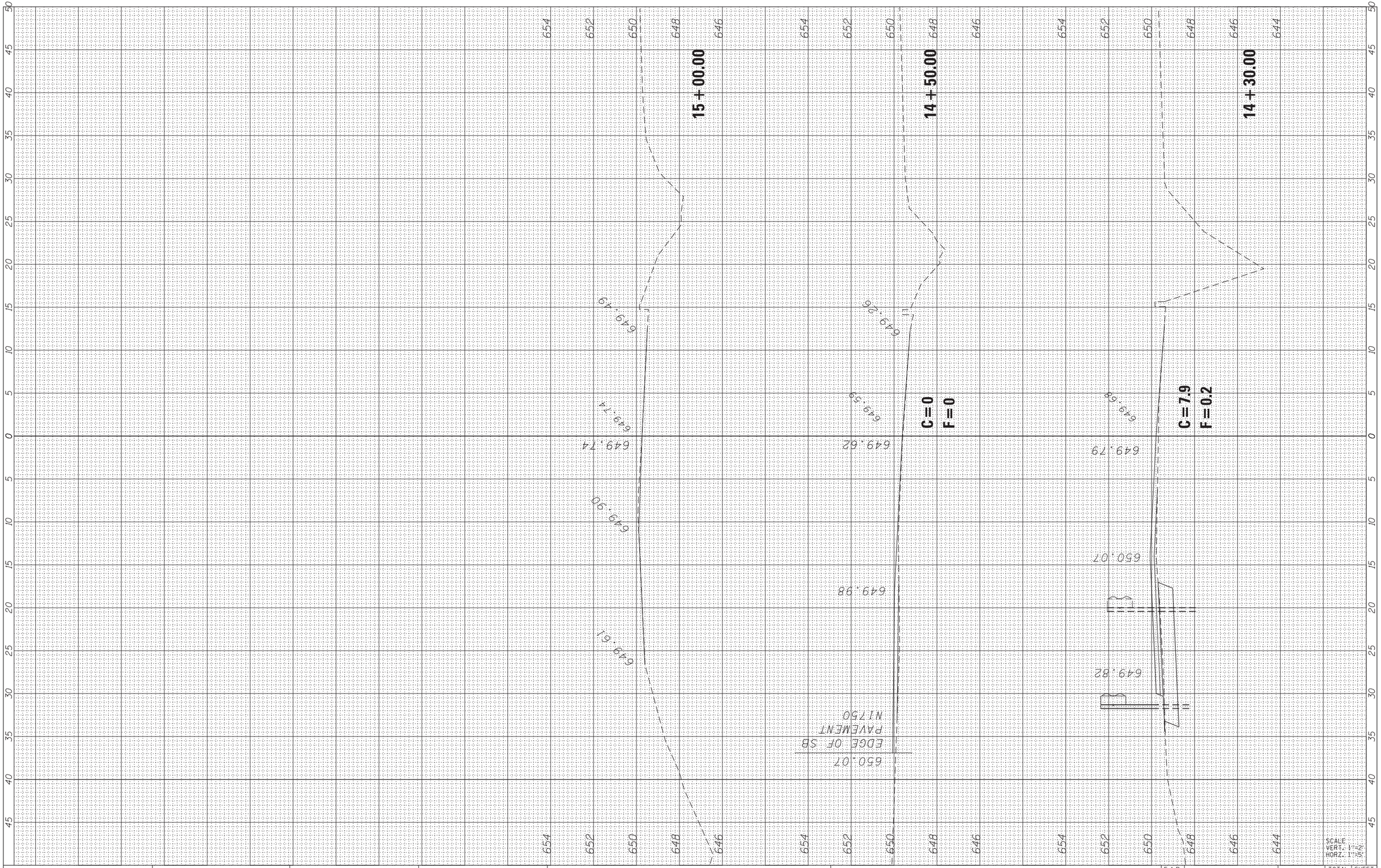
NO.	AREAS CHECKED		



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$MODELNAME$	PLOT DATE = 12/14/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS HOWARD ST. (C.

SCALE: | SHEET OF SHEETS | STA. 14+30.00 | TO STA. 15+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
681	(113 BR)BR & (113 BR-1)BR	LIVINGSTON	123	123
		CONTRACT NO. 66832		
	ILLINOIS FED. AID PROJECT			

SCALE
VERT. 1"=5'
HORZ. 1"=5'