

04-26-13 LETTING ITEM 068

SEE SHEET 2 FOR INDEX OF SHEETS,
GENERAL NOTES, AND STANDARDS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**
FAP ROUTE 665 (IL 116)
SECTION (144-B-1)BR
BRIDGE REPLACEMENT & ROADWAY IMPROVEMENTS
FULTON COUNTY
C-94-017-08
PROJECT ACF-0665(015)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	1
		ILLINOIS	CONTRACT NO. 68778	



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

**IMPROVEMENTS LOCATED IN
FAIRVIEW TOWNSHIP**

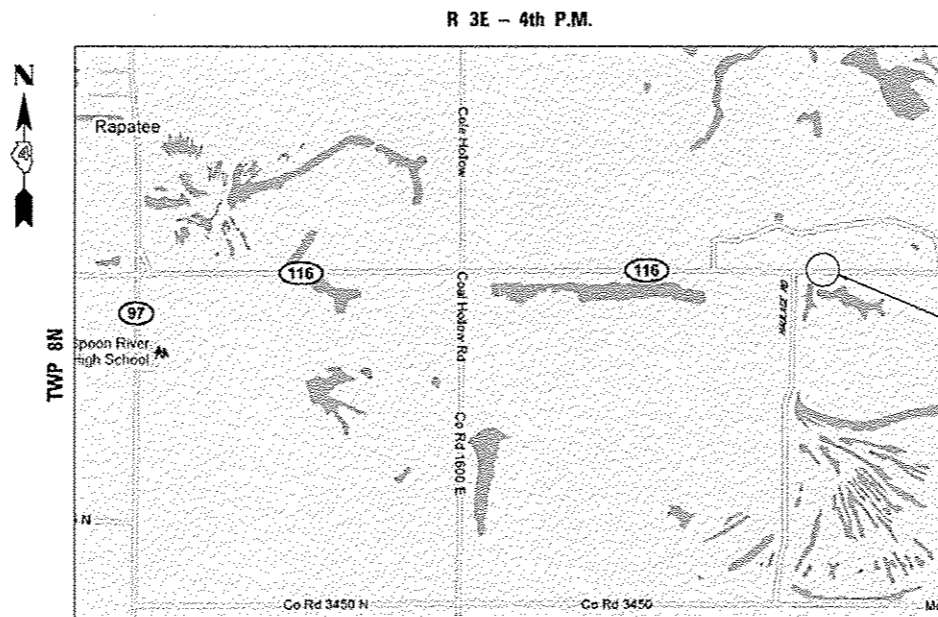
ADT: 1,500(2007)
POSTED SPEED: 55 MPH

ALIGNMENT, TIES, BENCHMARKS	HORIZONTAL	
PLAN & PROFILE	HORIZONTAL	
	VERTICAL	
MAINTENANCE OF TRAFFIC	HORIZONTAL	
	VERTICAL	
EROSION CONTROL PLAN	HORIZONTAL	
	VERTICAL	
CROSS SECTIONS	HORIZONTAL	
	VERTICAL	

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 MANAGER: MICHAEL MOHAMMED (309)671-3462
PROJECT ENGINEER: CHRISTOPHER MAUSHARD (309)671-3453
CONTRACT NO. 68778
CATALOG NO. 033710-00D



FAIRVIEW TOWNSHIP



LOCATION MAP

GROSS AND NET LENGTH = 440.64 FT = 0.083 MILE

IMPROVEMENT LOCATION

IL ROUTE 116 OVER AN
UNNAMED DRAINAGE AREA
EXISTING STRUCTURE: 029-0041
PROPOSED STRUCTURE: 029-0075
BEGIN PROJECT: STA. 396+13.48
END PROJECT: STA. 400+54.12



Fred M. Lin

FRED M. LIN, P.E.
ILLINOIS REGISTERED ENGINEER NO. 062-056704
REGISTRATION EXPIRES NOV. 30, 2013



PREPARED BY:
LIN ENGINEERING, LTD.
WESTMONT, IL 60559
(630) 323-5168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 30, 2013
Joseph Phocopus
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 22, 2013
John D. Baranzoli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

March 22, 2013
Ona Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

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HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREA OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-09	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-11	TRAFFIC BARRIER TERMINAL, TYPE G
667101-02	PERMANENT SURVEY MARKERS
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
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
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-03	TYPICAL PAVEMENT MARKINGS
60101-01	CONCRETE HEADWALL FOR PIPE DRAIN

DISTRICT STANDARDS

280001-04	TYPICAL APPLICATION OF SILT FILTER FENCE
630101-04	GUARDRAIL EROSION CONTROL TREATMENTS
635101-04	GUARDRAIL AND BARRIER WALL DELINEATION
667101-04	PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS T.Y.I.-T.Y.II
780001-04	TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES

MicroStation and GEOPAK files of this project will be made available to the Contractor. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the sole responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

UTILITIES - LOCATIONS/INFORMATION ON PLANS

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines and other utilities as shown on the plans are based on careful field investigation and the best information available, but they are not guaranteed. All utility locations shown on the plans are based on the approximate locations supplied by the utility company. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

PROPERTY OWNER ACCESS REQUIREMENT

Access must be maintained to all existing properties during construction per Article 107.09 unless arrangements are made in writing by the Contractor with the property owners with a copy to the Engineer for short-term closures.

CLEARING

At locations where clearing may be required beyond the limits of the proposed excavation or embankment, the Contractor shall restore the disturbed earth by blading and shaping to blend with the adjacent ground. The clearing will not be paid for separately but shall be included in the cost of the excavation pay items in the plans. Payment for reseeding or resodding will be as provided in the plans.

TREE REMOVAL

The District Four Tree Committee should be contacted and prior approval obtained for any tree removal beyond the limits/locations included in the plans.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site. Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications. Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- BDE Form 2289 (Environmental Survey Request)
- A location map showing the size limits and location of the use area
- Signed Property Owner Agreement form • D4 P10100
- Color photographs depicting the use area
- Borrow Area Entry Agreement form • D4 P10101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

AGGREGATE BASE COURSE, TYPE B

Aggregate Base Course, Type B shall be required for all granular construction of side roads, entrances, and mailbox turnouts, whether or not portions of the surfaces thus constructed are to be covered with a bituminous surface, except where noted differently on the plans.

AGGREGATE FOR TEMPORARY ACCESS

The material used for construction of permanent aggregate driveways shall be gravel or crushed stone, as directed by the Engineer, to replace in kind the existing aggregate driveways. An estimated quantity of 10 tons has been provided and shall be used for temporary access to side roads and entrances.

BITUMINOUS MATERIALS (PRIME COAT) RATES

Surface Type	Estimated Truck Application Rate	Residual Rate
Milled (HMA OR PCC)	0.10 gal/sy (0.00034 ton/sy)	0.08 gal/sy
Existing Pavement	0.06 gal/sy (0.00022 ton/sy)	0.03 gal/sy
Fog Coat (between lifts)	0.05 gal/sy (0.00022 ton/sy)	0.03 gal/sy

Note: Estimated truck application rate is used for estimating quantities.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	HMA SHOULDER LOWER LIFTS	HMA SHOULDER SURFACE LIFT	HMA SURFACE, 1 1/2"	LEVELING BINDER
Mixture Uses(s):				
RAP % (Max)**:	25%	15%	15%	10%
AC/PG:	64-22	64-22	64-22	SBS OR SBR 76-22
Design Air Voids:	4.0% @ N = 50	4.0% @ N = 50	4.0% @ N = 50	4.0% @ N = 50
Mixture Composition:	IL 12.5	IL 9.5 OR 12.5	IL 9.5 OR 12.5	IL 4.75
Friction Aggregate	N.A.	MIX C	MIX D	N.A.

Notes: Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal maximum aggregate size.

NO PASSING ZONE VERIFICATION

The resident engineer shall contact IDOT Bureau of Operations to verify the location of no passing zones prior to placement of centerline striping.

ENGINEERS FIELD OFFICE

Add the following sentence to the end of paragraph 670.02 (i) and 670.04 (e):

All of the telephone lines provided shall have unpublished numbers.

PROJECT SPECIFIC GENERAL NOTES

PLAN ELEVATIONS - VERTICAL DATUM

Basis of vertical datum taken from District 4 control monument station 95-4634FU.


WIDTH RESTRICTION

Contractor shall notify Don Hoffman, Traffic Control Supervisor (309-671-4488), 21 days in advance of installing any lane closure. If not notified by 21 days, lane closures shall be delayed at contractor's expense.

COMMITMENTS

Commitments shall not be altered without the approval of all the parties to which the commitment was made.

No commitments were made for this project.

 LIN ENGINEERING, LTD. Consulting Engineers <small>Springfield, Illinois</small>	USER NAME : USER*	DESIGNED - RWK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STANDARDS, GENERAL NOTES AND COMMITMENTS IL ROUTE 116			F.A.P. RIE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLLOT SCALE : #SCALE#	DRAWN - RWK	REVISED -		665	1144-B-11BR	FULTON	48	2			
	PLLOT DATE : #DATE#	CHECKED - ST	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 1 SHEETS STA. TO STA.			CONTRACT NO. 65778				
		DATE - 11/2012	REVISED -		ILLINOIS FED. AID PROJECT							

82

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				0004		0040
				80/20	100% STATE FUNDS	80/20
20100500	TREE REMOVAL, ACRES	ACRE	0.25	0.25		
20200100	EARTH EXCAVATION	CU YD	20	20		
20300100	CHANNEL EXCAVATION	CU YD	786	786		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	342	342		
* 25000210	SEEDING, CLASS 2A	ACRE	0.25	0.25		
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23	23		
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23	23		
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23	23		
* 25100115	MULCH, METHOD 2	ACRE	0.25	0.25		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100	100		
28000400	PERIMETER EROSION BARRIER	FOOT	724	724		
28100707	STONE DUMPED RIPRAP, CLASS A4	SO YD	515			515
28200200	FILTER FABRIC	SO YD	515			515
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SO YD	350	350		

*SPECIALTY ITEM



USER NAME : Plotted by Roadway7	DESIGNED - RWK	REVISED -
	DRAWN - RWK	REVISED -
PLOT SCALE = 2.0000 "/> <td>CHECKED - ST</td> <td>REVISED -</td>	CHECKED - ST	REVISED -
PLOT DATE	DATE - 11/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
IL ROUTE 116			
SCALE: N/A	SHEET NO. 1 OF 6 SHEETS	STA.	TO STA.

F.A.P. RTE. 665	SECTION 1144-B-1BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 3
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				0004		0040
80/20	100% STATE FUNDS	80/20				
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	10	10		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	145	145		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	147	147		
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	41	41		
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	45	45		
44000100	PAVEMENT REMOVAL	SQ YD	242	242		
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	489	489		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	172	172		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1			1
50200100	STRUCTURE EXCAVATION	CU YD	165			165
50300225	CONCRETE STRUCTURES	CU YD	53.3			53.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	179.4			179.4
50300260	BRIDGE DECK GROOVING	SQ YD	360			360
50300280	CONCRETE ENCASEMENT	CU YD	4.2			4.2



USER NAME : Plotted by Roadways7
 DESIGNED - RWK
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 CHECKED - ST
 DATE - 11/2012

REVISED -
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 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
 IL ROUTE 116

SCALE: N/A SHEET NO. 2 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-116R	FULTON	48	4
CONTRACT NO. 68778			ILLINOIS FED. AID PROJECT	

141

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				80/20	100% STATE FUNDS	80/20
50300300	PROTECTIVE COAT	SQ YD	457			457
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1			1
50500505	STUD SHEAR CONNECTORS	EACH	1080			1080
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	47930			47930
50800515	BAR SPLICERS	EACH	483			483
51201400	FURNISHING STEEL PILES HP10x42	FOOT	150			150
51202305	DRIVING PILES	FOOT	150			150
51203400	TEST PILE STEEL HP10x42	EACH	2			2
51204650	PILE SHOES	EACH	12			12
51500100	NAME PLATES	EACH	1			1
52100520	ANCHOR BOLTS, 1"	EACH	24			24
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	64			64
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50	50		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		

* SPECIALTY ITEM



USER NAME : Plotted by Roadways?
 CONSULTING ENGINEERS
 Springfield, Illinois
 PLOT SCALE : 2,0000 1/1 in.
 PLOT DATE :

DESIGNED - RWK
 DRAWN - RWK
 CHECKED - ST
 DATE - 11/2012

REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
 IL ROUTE 116

SCALE: N/A SHEET NO. 3 OF 6 SHEETS STA. TO STA.

F.A.P. REL. 665	SECTION (144-B-1)BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 5
CONTRACT NO. 68778			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM			CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				0004		0040
				80/20	100% STATE FUNDS	80/20
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	202	202		
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	2	2		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	12		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	1		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	77	77		

*SPECIALTY ITEM



USER NAME - Plotted by Roadways7	DESIGNED - RWK	REVISED -
PLLOT SCALE - 2,0000' / 1" =	DRAWN - RWK	REVISED -
PLLOT DATE -	CHECKED - ST	REVISED -
	DATE - 11/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
IL ROUTE 116			
SCALE: N/A	SHEET NO. 4 OF 6 SHEETS	STA.	TO STA.

F.A.P. RTE. 665	SECTION (144-B-1)BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 6
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				0004		0040
				80/20	100% STATE FUNDS	80/20
* 70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	3132	3132		
* 70300570	PAVEMENT MARKING TAPE, TYPE III, 24"	FOOT	154	154		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	1352	1352		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400	400		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	378	378		
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
70600330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	3988	3988		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2	2		
* 78100300	REPLACEMENT REFLECTOR	EACH	25	25		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	5	5		
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	64	64		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
78300100	PAVEMENT MARKING REMOVAL	SO FT	556	556		

* SPECIALTY ITEM



USER NAME - Plotted by Roadways?	DESIGNED - RWK	REVISED -
PLOT SCALE - 2.0000' / in.	DRAWN - RWK	REVISED -
PLOT DATE -	CHECKED - ST	REVISED -
	DATE - 11/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL ROUTE 116

SCALE: N/A SHEET NO. 5 OF 6 SHEETS STA. TO STA.

F.A.P. RTG. 665	SECTION 1144-B-11BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 7
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				ROADWAY	ROADWAY	STRUCTURAL
				0004		0040
				80/20	100% STATE FUNDS	80/20
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	2		2	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	101			101
X2503100	MOWING	UNIT	17.6		17.6	
X4810200	AGGREGATE SHOULDER REMOVAL	CU YD	103	103		
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	25	25		
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	108	108		
Z0004552	APPROACH SLAB REMOVAL	SO YD	233	233		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	4			4
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	138			138
Z0062456	TEMPORARY PAVEMENT	SO YD	366	366		
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SO FT	336			336

+ NON-PARTICIPATING 100% STATE



USER NAME : Plotted by Roadways7	DESIGNED - RWK	REVISED -
PLOT SCALE : 2.0000 / in.	DRAWN - RWK	REVISED -
PLOT DATE :	CHECKED - ST	REVISED -
	DATE - 11/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL ROUTE 116

SCALE: N/A SHEET NO. 6 OF 6 SHEETS STA. TO STA.

F.A.P. RTE. 665	SECTION 1144-B-1BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 8
CONTRACT NO. 68778			ILLINOIS FED. AID PROJECT	

TREE REMOVAL, ACRES

STA	STA	OFFSET	AREA (SQ FT)
396+50	397+35	LT	394.6
398+25	398+53	LT	27.1
TOTAL			421.70
TOTAL ACRE			0.01
ROUNDED TOTAL			0.25

TOPSOIL FURNISH AND PLACE, 4"

STATION	LENGTH	DISTANCE	AVERAGE LENGTH	AREA
	FT	FT	FT	SQ YD
396+13.48	0.00			
		36.52	1.38	5.59
396+50.00	2.75			
		50.00	13.38	74.35
397+00.00	24.01			
		50.00	14.81	82.26
397+50.00	5.60			
		50.00	2.80	15.56
398+00.00	0.00			
		50.00	0.00	0.00
398+50.00	0.00			
		50.00	1.78	9.89
399+00.00	3.56			
		50.00	14.65	81.39
399+50.00	25.74			
		50.00	12.96	72.02
400+00.00	0.19			
		54.12	0.09	0.56
400+54.12	0.00			
TOTAL				342

SEEDING, CLASS 2A

STA	STA	OFFSET	AREA (SQ FT)
396+13	397+80	LT	1127.3
398+25	400+54	LT	470.8
396+33	397+96	RT	433.2
398+41	399+98	RT	1142.9
TOTAL			3174.33
TOTAL ACRE			0.07
ROUNDED TOTAL			0.25

NITROGEN FERTILIZER NUTRIENT

SEEDING, CLASS 2A	0.25	ACRE
Application Rate = 90 # / Acres		
Quantity	23	POUND

PHOSPHOROUS FERTILIZER NUTRIENT

SEEDING, CLASS 2A	0.25	ACRE
Application Rate = 90 # / Acres		
Quantity	23	POUND

POTASSIUM FERTILIZER NUTRIENT

SEEDING, CLASS 2A	0.25	ACRE
Application Rate = 90 # / Acres		
Quantity	23	POUND

MULCH, METHOD 2

STA	STA	OFFSET	AREA (SQ FT)
396+13	397+80	LT	1127.3
398+25	400+54	LT	470.8
396+33	397+96	RT	433.2
398+41	399+98	RT	1142.9
TOTAL			3174.33
TOTAL ACRE			0.07
ROUNDED TOTAL			0.25

TEMPORARY EROSION CONTROL SEEDING

SEEDING, CLASS 2A	0.25	ACRE
Application Rate = 100 # / Acres * 4 Applications		
Quantity	100	POUND

PERIMETER EROSION BARRIER

STA	STA	OFFSET	LENGTH (FT)
396+13	397+77	LT	166.9
398+25	400+54	LT	230.5
396+33	397+96	RT	164.7
398+44	399+98	RT	161.7
TOTAL			724

AGGREGATE BASE COURSE, TYPE B 4"

Jobsite	350	SQ YD

AGGREGATE FOR TEMPORARY ACCESS

Jobsite	10	TON

BITUMINOUS MATERIALS (PRIME COAT)

STA	STA	OFFSET	AREA (SQ YD)
396+25	397+66	LT	57.1
396+33	397+78	RT	57.7
396+50	397+50	CL	244.8
398+44	399+90	LT	61.9
398+56	399+98	RT	57.3
398+71	399+71	CL	244.6
TOTAL AREA			723
Application rate: 0.1 gal/SQ YD			72.3
2 Applications, TOTAL			145

HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT

STA	STA	AREA (SQ YD)
396+50.00	396+80.00	73.3
399+41.00	399+71.00	73.3
TOTAL		147

PAVEMENT REMOVAL

STA	STA	AREA (SQ YD)
397+50	398+03	126.5
398+22	398+71	114.9
TOTAL		242

HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50

STA	STA	OFFSET	TON
396+50	397+50	CL	20.6
398+71	399+71	CL	20.5
TOTAL			41

HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"

STA	STA	OFFSET	SQ YD
396+50.15	397+50.15	CL	244.4
398+70.92	399+71.00	CL	244.6
TOTAL			489

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

STA	STA	AREA (SQ YD)
397+50	397+57	22.6
398+65	398+71	22.4
TOTAL		45

HOT-MIX ASPHALT SHOULDER, 8"

STA	STA	OFFSET	AREA (SQ YD)
396+25	397+65	LT	73.2
398+43	399+90	LT	99.0
TOTAL			172

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

STA	STA	OFFSET	FOOT
397+10	397+22	LT	12.5
397+22	397+34	RT	12.5
398+87	398+99	LT	12.5
398+99	399+11	RT	12.5
TOTAL			50

TRAFFIC BARRIER TERMINAL, TYPE 6

STA	STA	OFFSET	EACH
397+22	397+69	LT	1
397+34	397+81	RT	1
398+40	398+87	LT	1
398+52	398+99	RT	1
TOTAL			4

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

STA	STA	OFFSET	EACH
396+60	397+10	LT	1
396+72	397+22	RT	1
398+99	399+49	LT	1
399+11	399+61	RT	1
TOTAL			4

GUARDRAIL REMOVAL

STA	STA	OFFSET	FOOT
397+49	398+50	LT	101
397+53	398+54	RT	101
TOTAL			202

PERMANENT SURVEY MARKERS, TYPE I

Jobsite	2	EACH

ENGINEER'S FIELD OFFICE, TYPE A

Jobsite	4	CAL MO

MOBILIZATION

STAGES 1 & 2	1	L SUM

TRAFFIC CONTROL AND PROTECTION, STANDARD 701201

STAGE 1 & 2	1	L SUM

TRAFFIC CONTROL AND PROTECTION, STANDARD 701306

STAGE 3	1	L SUM

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321

STAGE 1 & 2	1	EACH

TRAFFIC CONTROL AND PROTECTION, STANDARD 701326

Prestage	1	L SUM

TRAFFIC CONTROL SURVEILLANCE

Jobsite	10	CAL DA

TEMPORARY BRIDGE TRAFFIC SIGNALS

STAGE 1 & 2	1	EACH

TEMPORARY RUMBLE STRIPS

Jobsite	12	EACH
3 PER APPROACH PER STAGE		

CHANGEABLE MESSAGE SIGN

Jobsite	1	CAL MO

SHORT TERM PAVEMENT MARKING

Jobsite	77	FOOT

PAVEMENT MARKING TAPE, TYPE III 4"

STAGE 1	STA	STA	TYPE	LENGTH (FOOT)
	394+50	401+21	4" SOLID WHITE	673
	394+84	402+87	4" SOLID WHITE	804
	401+68	402+87	4" SOLID WHITE	118
SUB TOTAL				1595

STAGE 2	STA	STA	TYPE	LENGTH (FOOT)
	392+90	400+51	4" SOLID WHITE	761
	392+90	394+46	4" SOLID WHITE	157
	394+89	395+52	4" SOLID WHITE	64
	396+01	401+50	4" SOLID WHITE	555
SUB TOTAL				1537
TOTAL				3132

PAVEMENT MARKING TAPE, TYPE III 24"

STAGE 1	STA	TYPE	LENGTH (FOOT)
	393+90	24" SOLID WHITE	22
	394+68	24" SOLID WHITE	22
	395+81	24" SOLID WHITE	22
	401+75	24" SOLID WHITE	22
SUB TOTAL			88

STAGE 2	STA	TYPE	LENGTH (FOOT)
	394+91	24" SOLID WHITE	22
	395+81	24" SOLID WHITE	22
	402+10	24" SOLID WHITE	22
SUB TOTAL			66
TOTAL			154



USER NAME = #USER*
DESIGNED - RWK
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PLOT SCALE = #SCALE*
CHECKED - ST
PLOT DATE = #DATE*
DATE - 11/2012

REVISOR -
REVISOR -
REVISOR -
REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
IL ROUTE 116

SCALE: N/A
SHEET NO. 1 OF 2 SHEETS
STA. TO STA.

F.A.P. R.T.E. SECTION COUNTY TOTAL SHEETS SHEET NO.
665 (144-B-1)BR FULTON 48 9
CONTRACT NO. 68778
ILLINOIS FED. AID PROJECT

WORK ZONE PAVEMENT MARKING REMOVAL

PAY ITEM	LENGTH (FT)	WIDTH (FT)	AREA (SQ FT)
70300520	3132	0.3	1044
70300570	154	2	308
TOTAL			1352

TEMPORARY CONCRETE BARRIER

STAGE 1

STA	OFFSET	STA	OFFSET	FOOT
395+98	1.7 LT	396+73	5.9 RT	75
396+73	5.9 RT	399+26	5.9 RT	250
399+26	5.9 RT	399+95	1.6 LT	75
TOTAL				400

RELOCATE TEMPORARY CONCRETE BARRIER

STAGE 2

STA	OFFSET	STA	OFFSET	FOOT
396+51	1.6 RT	397+11	3.8 LT	60.3
397+11	3.8 LT	399+22	3.8 LT	211.5
399+22	3.8 LT	399+93	4.5 RT	106
TOTAL				378

EPOXY PAVEMENT MARKING - LINE 4"

STA	STA	OFFSET	TYPE	LENGTH (FT)
392+90	402+87	LT	4" SOLID WHITE	997
392+90	402+87	CL	4" DBL YELLOW	1994
392+90	402+87	RT	4" SOLID WHITE	997
TOTAL				3988

GUARDRAIL MARKERS, TYPE A

Jobsite	Quantity	Unit
	5	EACH

BARRIER WALL MARKERS, TYPE B

Jobsite	Quantity	Unit
	64	EACH

TERMINAL MARKER - DIRECT APPLIED

Jobsite	Quantity	Unit
	4	EACH

PAVEMENT MARKING REMOVAL

STA	STA	OFFSET	LENGTH (FT)	AREA (SQ FT)
393+90	397+00	CL	620	207
399+00	401+75	CL	550	183
395+40	400+38	RT	498	166
TOTAL				556

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

STA	STA	RRMPS
397+87	398+35	2
TOTAL		2

RAISED REFLECTIVE PAVEMENT MARKER

Jobsite	Quantity	Unit
	2	EACH

REPLACEMENT REFLECTOR

Jobsite	Quantity	Unit
	25	EACH

RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL

Jobsite	Quantity	Unit
	25	EACH

GUARDRAIL AGGREGATE EROSION CONTROL

STA	STA	OFFSET	AREA (SQ YD)	TONS
396+25	397+65	LT	56.0	25.5
396+33	397+78	RT	58.0	26.4
398+43	399+90	LT	58.8	26.8
398+56	399+98	RT	64.7	29.5
TOTAL				108

APPROACH SLAB REMOVAL

APPROACH	AREA (SQ FT)	AREA (SQ YD)
NORTH	1050	116.7
SOUTH	1050	116.7
TOTAL		233

CONSTRUCTION LAYOUT

Jobsite	Quantity	Unit
	1	LSUM

IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3

Jobsite	Quantity	Unit
	2	EACH

IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3

Jobsite	Quantity	Unit
	2	EACH

TEMPORARY PAVEMENT

STA	STA	AREA (SQ YD)
395+50	400+28	366
TOTAL		366

EXCAVATION TABLE

LOCATION	CHANNEL EXCAVATION			EARTHWORK			FURNISHED EXCAVATION WASTE (+) SHORTAGE (-)
	20300100 CHANNEL EXCAVATION (CU YD)	EMBANKMENT	CHANNEL EXCAVATION ADJ. FOR SHRINKAGE	20200100 EARTH EXCAVATION (CD YD)	EMBANKMENT	EARTH EXCAVATION ADJ. FOR SHRINKAGE	
IL 116	786	0	590	20	5	15	+600

AGGREGATE SHOULDER REMOVAL

STA	STA	VOLUME (CU YD)
396+00	400+54	103
TOTAL		103

MOWING

MOWING	Quantity	4.4	UNIT
Application Rate = 1 / 30 DAYS			
	Quantity	17.6	UNIT



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DESIGNED - RWK
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PLOT SCALE = \$SCALE*
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PLOT DATE = \$DATE*

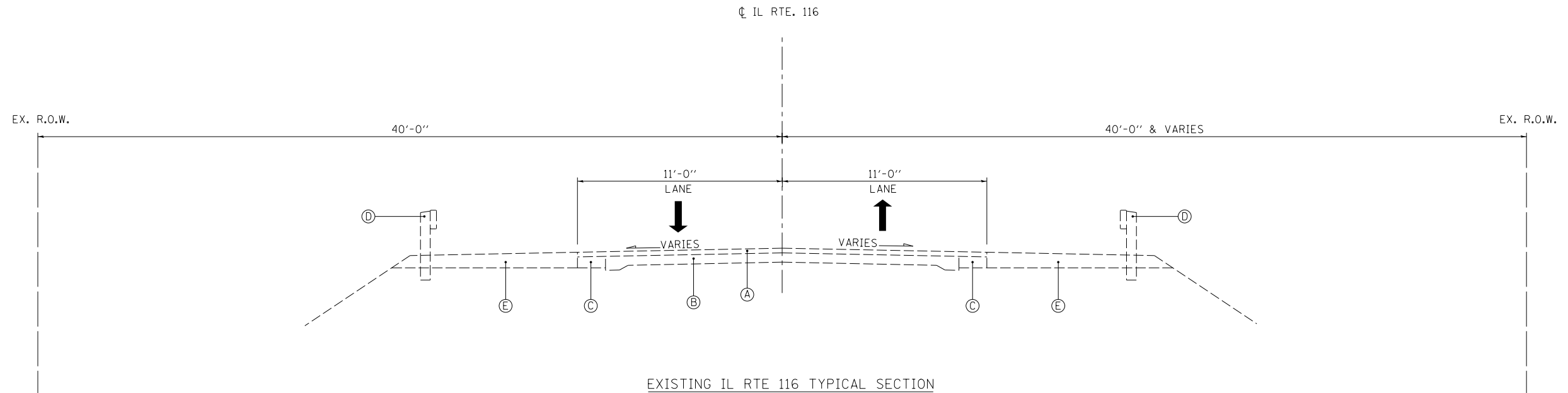
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

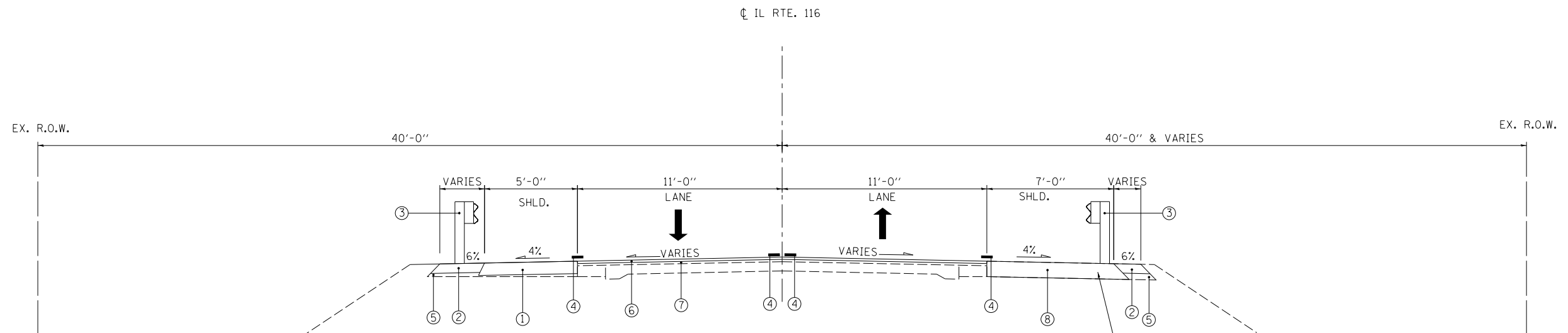
SCHEDULE OF QUANTITIES
IL ROUTE 116
SCALE: N/A SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	10
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				



EXISTING IL RTE 116 TYPICAL SECTION

STA. 396+13.48 TO STA. 398+01.25
 STA. 398+19.16 TO STA. 400+54.12



PROPOSED IL RTE 116 TYPICAL SECTION

STA. 395+51.77 RT TO STA. 397+56.20 RT
 STA. 396+13.48 LT TO STA. 397+44.32 LT
 STA. 398+76.97 RT TO STA. 400+38.08 RT
 STA. 398+65.20 LT TO STA. 400+54.12 LT

MILLING AND RESURFACING, 1 1/2" LIMITS

STA. 396+50.00 TO STA. 397+50.15
 STA. 398+70.92 TO STA. 399+71.00

2" HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50
 8" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

LEGEND

EXISTING CONDITIONS

- Ⓐ EXISTING HMA SURFACE COURSE, 3"
- Ⓑ EXISTING PAVEMENT (9-6-9)
- Ⓒ EXISTING BIT. WIDENING
- Ⓓ EXISTING GUARDRAIL
- Ⓔ EXISTING AGGREGATE SHOULDER

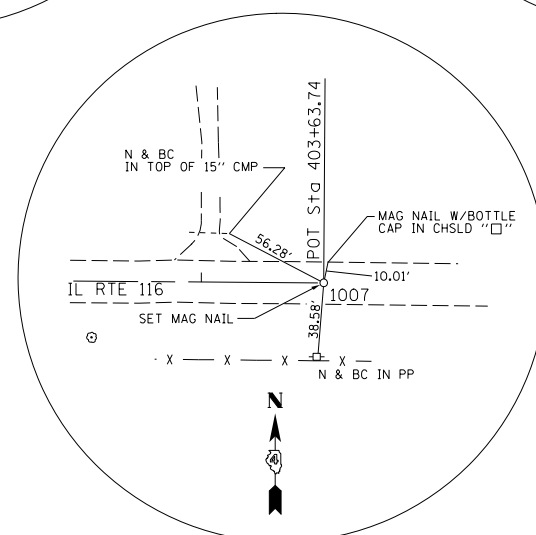
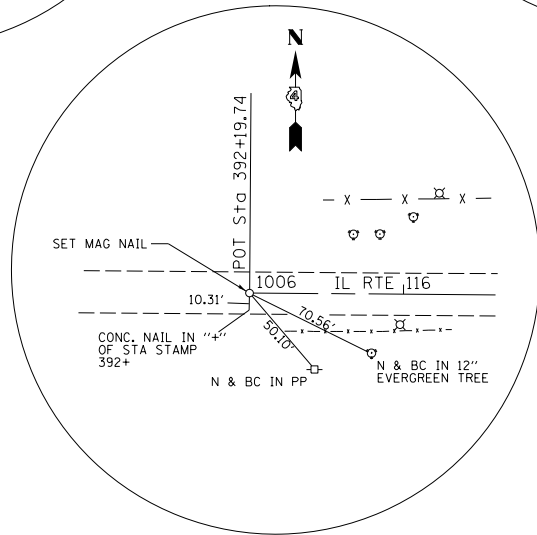
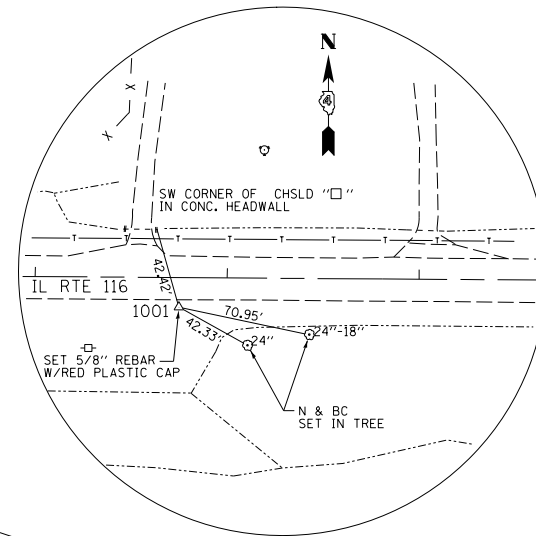
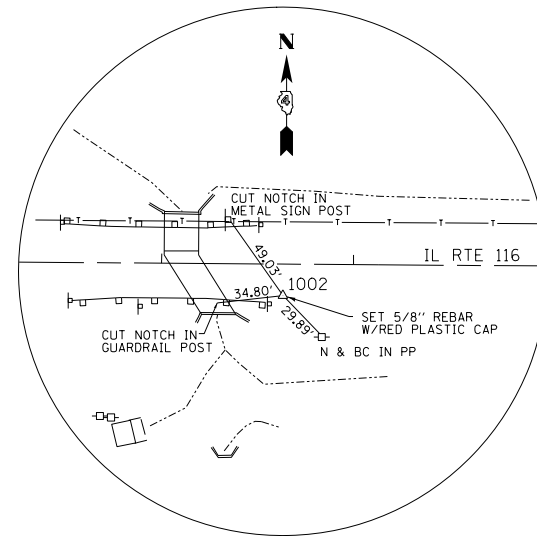
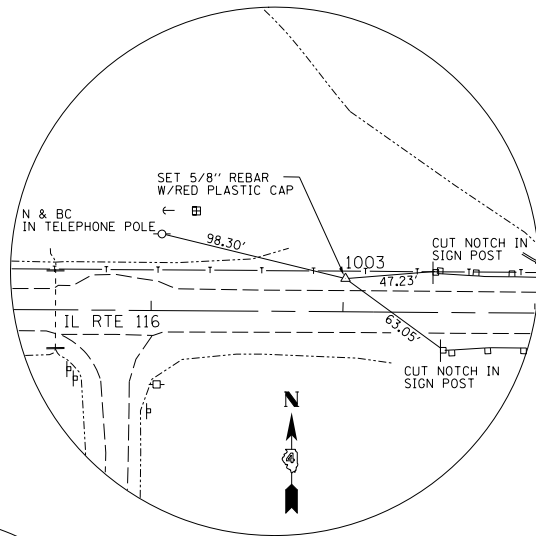
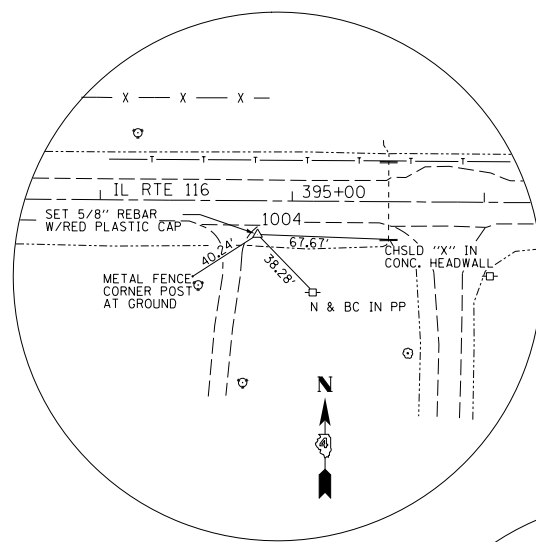
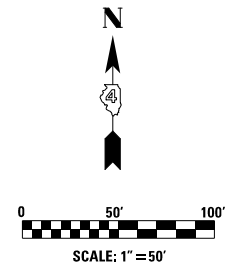
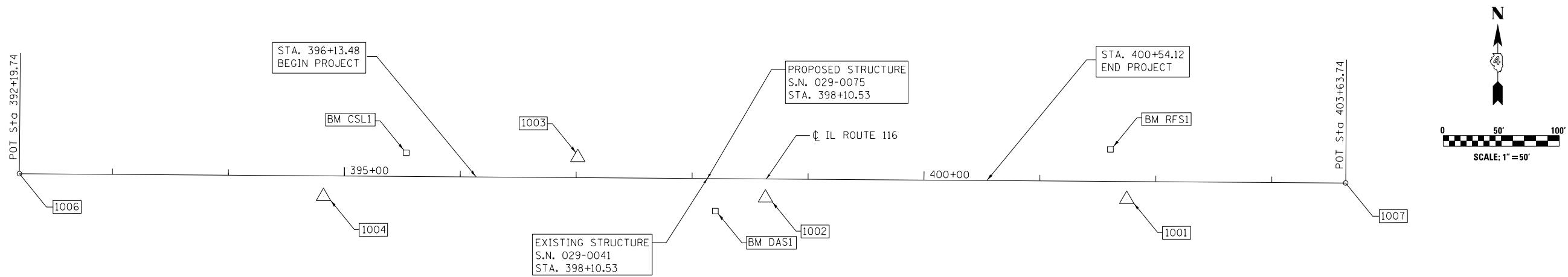
PROPOSED CONDITIONS

- ① HMA SHOULDER, 8"
- ② GUARDRAIL AGGREGATE EROSION CONTROL
- ③ STEEL PLATE BEAM GUARDRAIL, TYPE A
- ④ EPOXY PAVEMENT MARKINGS
- ⑤ AGGREGATE SHOULDER REMOVAL
- ⑥ HMA SURFACE REMOVAL, 1 1/2"
- ⑦ HMA SURFACE COURSE, MIX "D", N50
- ⑧ TEMPORARY PAVEMENT, 10"

USER NAME = *USER*	DESIGNED - RWK	REVISED -
	DRAWN - RWK	REVISED -
PLOT SCALE = *SCALE*	CHECKED - ST	REVISED -
PLOT DATE = *DATE*	DATE - 11/2012	REVISED -

TYPICAL SECTIONS IL ROUTE 116		SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.
		ILLINOIS FED. AID PROJECT			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	11
CONTRACT NO. 68778				



BENCHMARKS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
CSL1	1471092.1535	2309589.8185	695.60	EXCL116	395+50.00	20.70 LT	CHISELED "C" IN TOP OF N. HEADWALL OF CROSSROAD CULV
DAS1	1471041.6548	2309859.4698	687.42	EXCL116	398+20.00	27.90 RT	CHISELED "C" SW. COR. WINGWALL BRDGE OVER DYKEMEN CRK
RFS1	1471092.4399	2310202.8344	697.42	EXCL116	401+63.00	25.3 LT	CHISELED "C" IN TOP OF E. HEADWALL UNDER FIELD ENT

NOTE:
ALL STATION OFFSETS ARE REFERENCED TO THE CENTERLINE OF IL ROUTE 116

HORIZONTAL CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
1001	1471051.6209	2310214.5210	697.91	EXCL116	401+74.97	15.44 RT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
1002	1471052.8716	2309902.8789	690.69	EXCL116	398+63.33	16.38 RT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
1003	1471087.7318	2309740.9780	691.71	EXCL116	397+01.19	17.34 LT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
1004	1471054.3705	2309521.6559	697.72	EXCL116	394+82.10	17.56 RT	SET PIN & CAP FOR WORK POINT TOPO SURVEY POINT
1006	1471073.7780	2309259.4210	N/A	EXCL116	392+19.74	CENTERLINE	SET MAG NAIL AT CENTERLINE OF PAVEMENT
1007	1471065.7280	2310403.3910	N/A	EXCL116	403+63.74	CENTERLINE	SET MAG NAIL AT CENTERLINE OF PAVEMENT



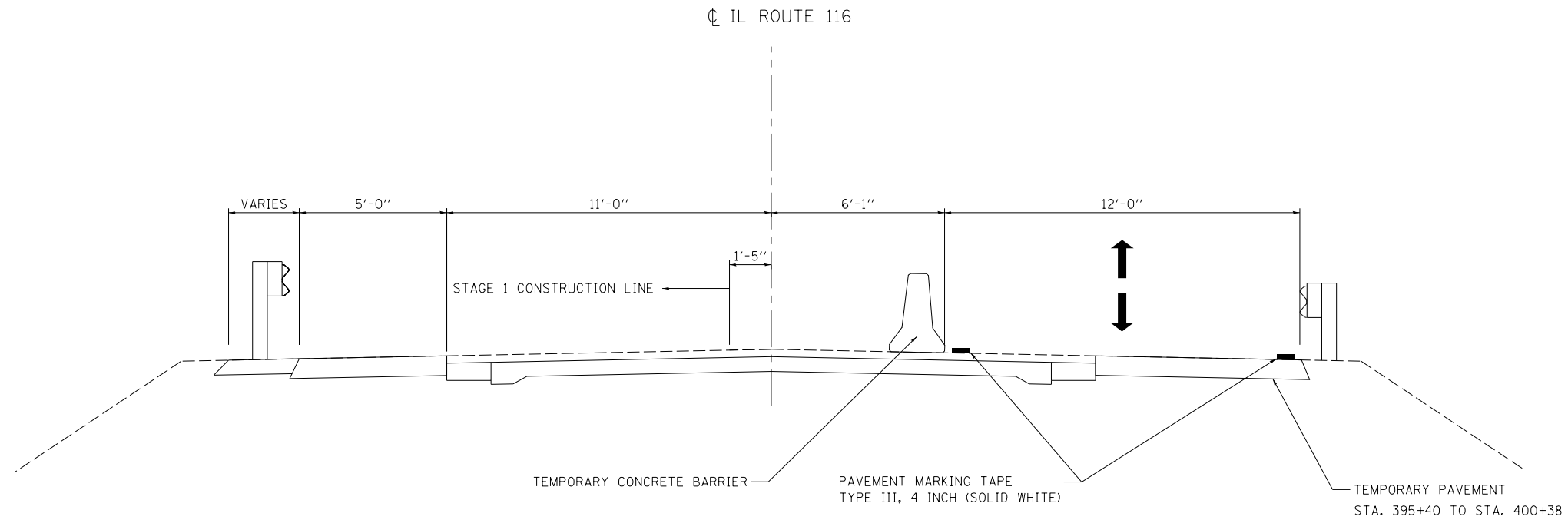
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

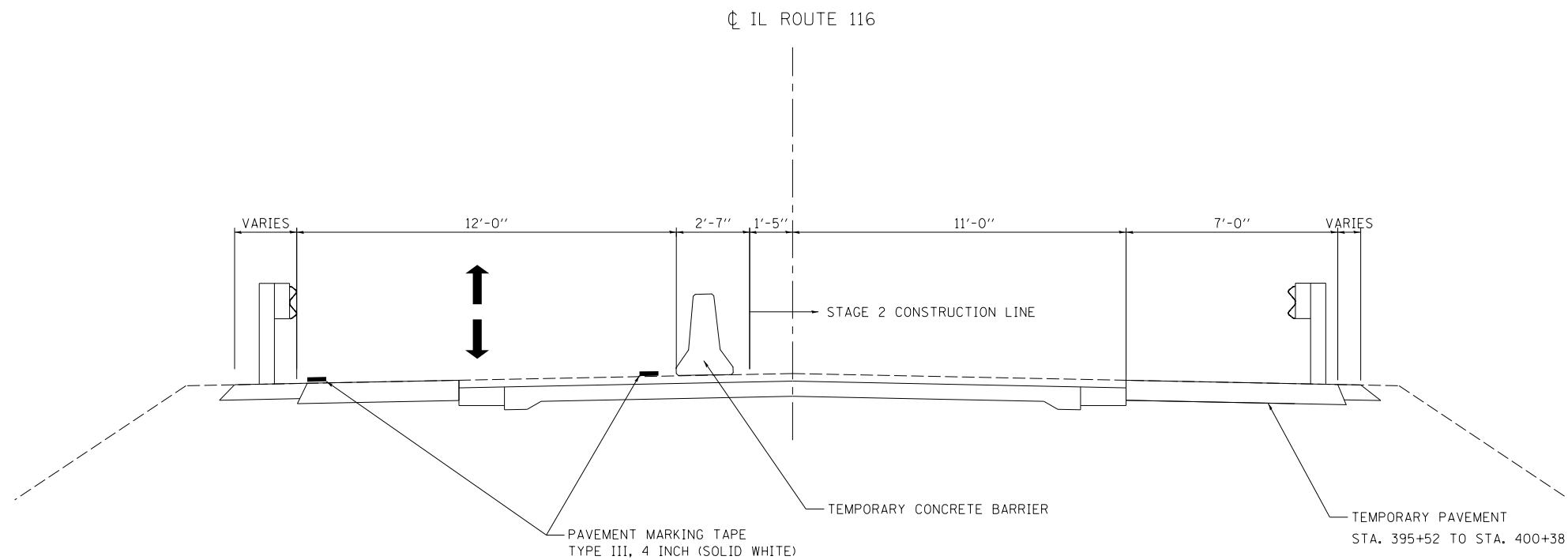
**ALIGNMENT, TIES, AND BENCHMARKS
IL ROUTE 116**

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 392+19.74 TO STA. 403+63.74

F.A.P. RTE. 665	SECTION (144-B-1)BR	COUNTY FULTON	TOTAL SHEETS 48	SHEET NO. 12
			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				



STAGE 1 CONSTRUCTION
(LOOKING EAST)













STAGE 2 CONSTRUCTION
(LOOKING EAST)

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PLOT DATE = *DATE*	DATE - 11/2012	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	14
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68778	

LEGEND

-  WORK ZONE
-  IMPACT ATTENUATORS, TEMPORARY
-  TYPE III BARRICADE
-  DRUMS
-  TEMPORARY CONCRETE BARRIER
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

PRESTAGE CONSTRUCTION:

1. CONSTRUCT TEMPORARY PAVEMENT ON SOUTH SIDE OF IL RTE 116 FROM STA. 395+40 TO STA. 400+38 UNDER HIGHWAY STANDARD 701326. TEMPORARY PAVEMENT TO REMAIN IN PLACE AFTER COMPLETION OF CONTRACT.

STAGE 1 CONSTRUCTION:

1. REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS AND MARKERS UNDER HIGHWAY STANDARD 701201. GRINDING OF EXISTING PAVEMENT IS NOT ALLOWED.
2. CLOSE NORTH HALF OF IL 116 IN ACCORDANCE WITH HIGHWAY STANDARD 701321-11/701201 AND AS SHOWN IN THE PLANS.
3. PERFORM NORTH HALF STRUCTURAL AND SHOULDER RECONSTRUCTION AS SHOWN IN THE PLANS.

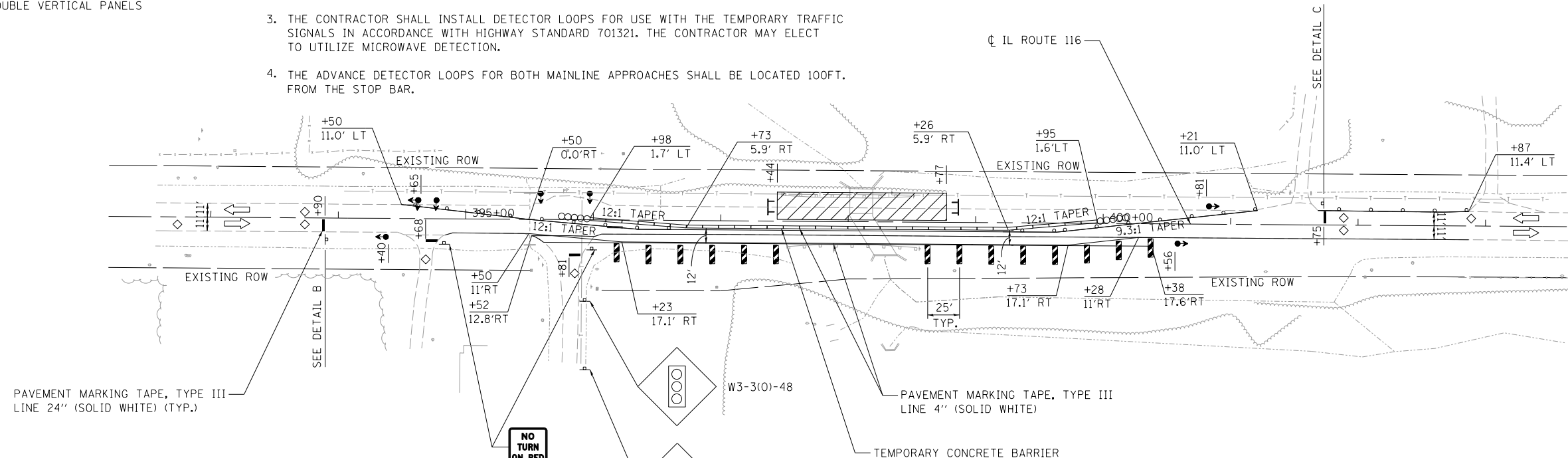
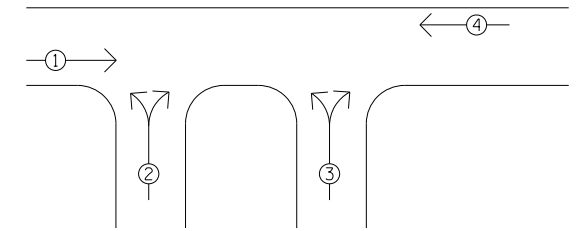
NOTES:

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321 EXCEPT WHERE MODIFIED ON THIS PLAN SHEET.
2. FOUR PHASE SIGNAL OPERATION IS REQUIRED FOR STAGE 1. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS. THE CONTRACTOR SHALL CONTACT PAUL GRANT, DISTRICT 4 TRAFFIC SIGNAL TECHNICIAN, AT (309) 671-4474, FORTY-EIGHT HOURS PRIOR TO SIGNAL TURN ON.
3. THE CONTRACTOR SHALL INSTALL DETECTOR LOOPS FOR USE WITH THE TEMPORARY TRAFFIC SIGNALS IN ACCORDANCE WITH HIGHWAY STANDARD 701321. THE CONTRACTOR MAY ELECT TO UTILIZE MICROWAVE DETECTION.
4. THE ADVANCE DETECTOR LOOPS FOR BOTH MAINLINE APPROACHES SHALL BE LOCATED 100FT. FROM THE STOP BAR.

NOTES CONT.:

5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLAN SHEETS OR AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.
7. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE TEMPORARY BRIDGE SIGNAL INSTALLATION. THERE WILL BE NO ADDITIONAL COMPENSATION.

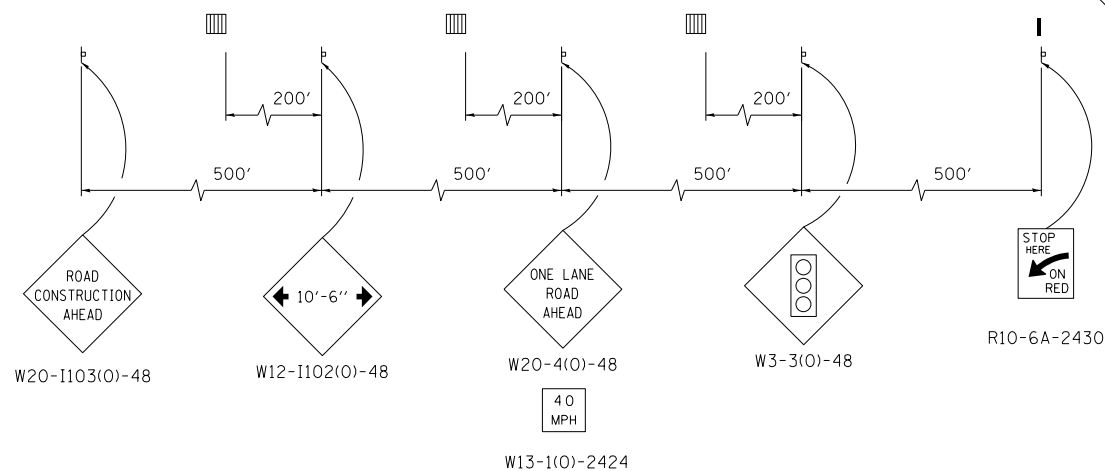
TRAFFIC SIGNAL SEQUENCE



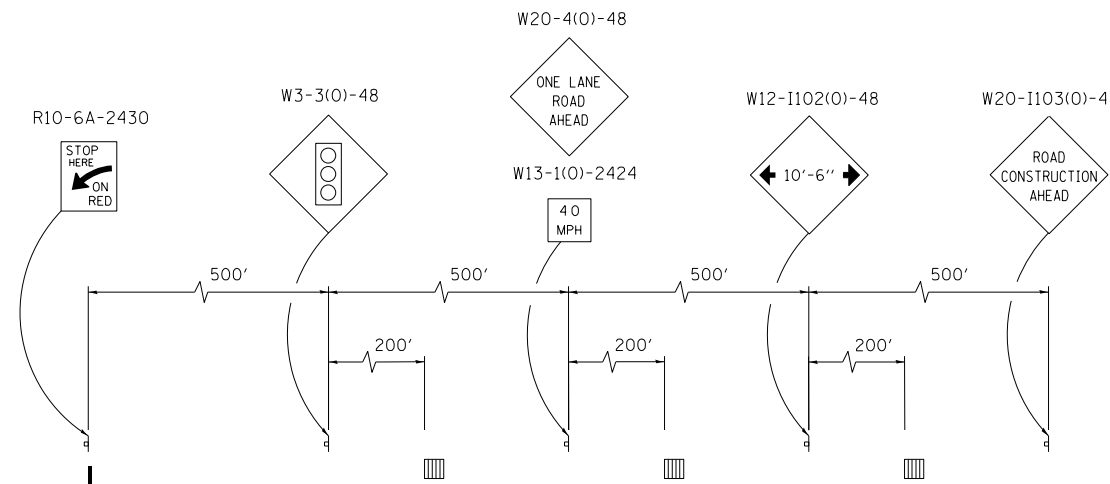
PAVEMENT MARKING TAPE, TYPE III
LINE 24" (SOLID WHITE) (TYP.)

PAVEMENT MARKING TAPE, TYPE III
LINE 4" (SOLID WHITE)

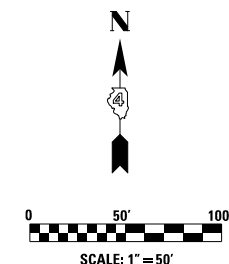
TEMPORARY CONCRETE BARRIER



DETAIL B













DETAIL C



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PLOT SCALE = *SCALE*	DRAWN - RWK	REVISED -
PLOT DATE = *DATE*	CHECKED - ST	REVISED -
	DATE - 11/2012	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	15
CONTRACT NO. 68778			ILLINOIS FED. AID PROJECT	

LEGEND

-  WORK ZONE
-  IMPACT ATTENUATORS, TEMPORARY
-  TYPE III BARRICADE
-  DRUMS
-  TEMPORARY CONCRETE BARRIER
-  SIGN
-  DETECTOR LOOPS
-  TRAFFIC SIGNAL
-  TEMPORARY RUMBLE STRIPS
-  DOUBLE VERTICAL PANELS

STAGE 2 CONSTRUCTION:

1. REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS UNDER HIGHWAY STANDARD 701201. GRINDING OF EXISTING PAVEMENT IS NOT ALLOWED.
2. CLOSE SOUTH HALF OF IL 116 IN ACCORDANCE WITH HIGHWAY STANDARD 701321-11/701201 AND AS SHOWN IN THE PLANS.
3. PERFORM SOUTH HALF STRUCTURAL AND SHOULDER RECONSTRUCTION AS SHOWN IN THE PLANS.

STAGE 3 CONSTRUCTION:

1. RESURFACE 1/2" OF MAINLINE PAVEMENT AS SHOWN IN THE PLANS, UNDER HIGHWAY STANDARD 701306.
2. PLACE PROPOSED PAVEMENT MARKINGS AS SHOWN IN THE PLANS AND UNDER HIGHWAY STANDARD 780001-03.

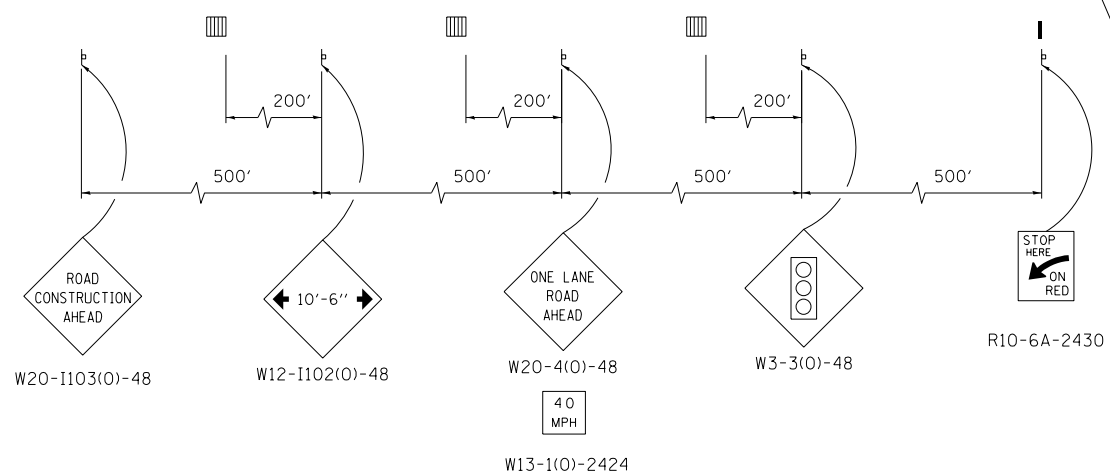
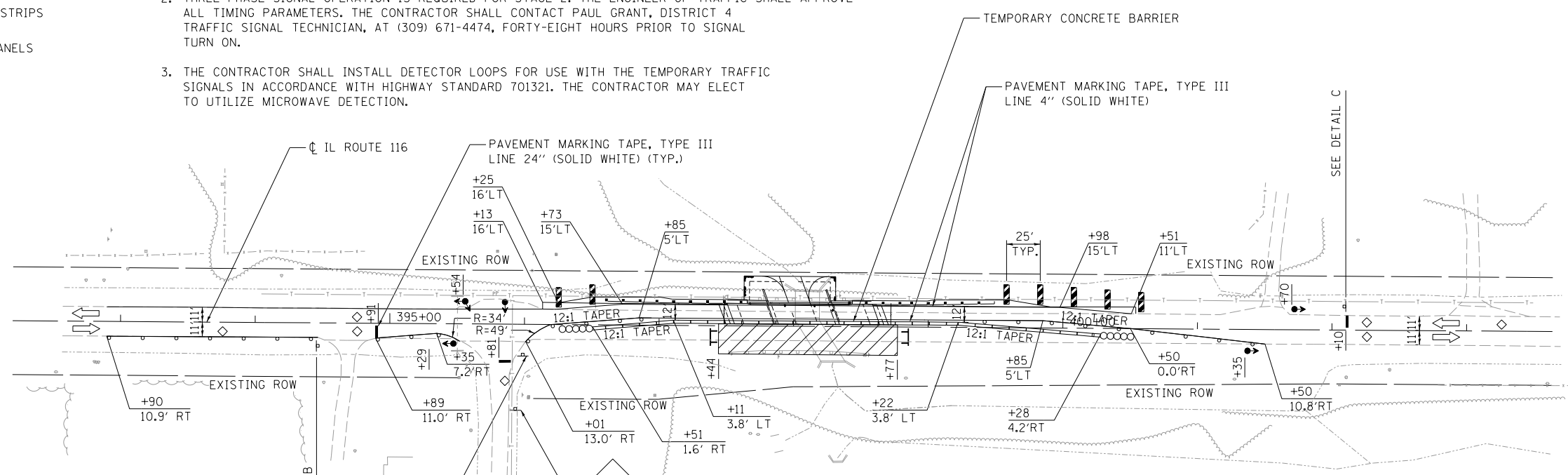
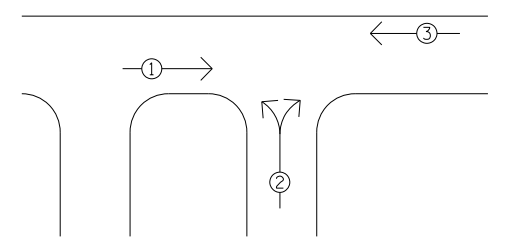
NOTES:

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321 EXCEPT WHERE MODIFIED ON THIS PLAN SHEET.
2. THREE PHASE SIGNAL OPERATION IS REQUIRED FOR STAGE 2. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS. THE CONTRACTOR SHALL CONTACT PAUL GRANT, DISTRICT 4 TRAFFIC SIGNAL TECHNICIAN, AT (309) 671-4474, FORTY-EIGHT HOURS PRIOR TO SIGNAL TURN ON.
3. THE CONTRACTOR SHALL INSTALL DETECTOR LOOPS FOR USE WITH THE TEMPORARY TRAFFIC SIGNALS IN ACCORDANCE WITH HIGHWAY STANDARD 701321. THE CONTRACTOR MAY ELECT TO UTILIZE MICROWAVE DETECTION.

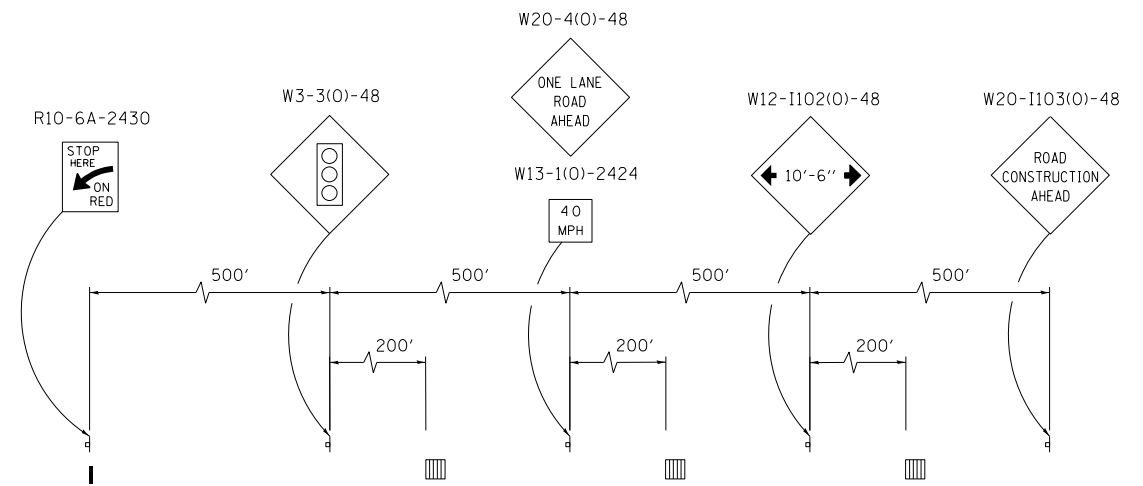
NOTES CONT.:

4. THE ADVANCE DETECTOR LOOPS FOR BOTH MAINLINE APPROACHES SHALL BE LOCATED 100FT. FROM THE STOP BAR.
5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLAN SHEETS OR AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.
7. ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE TEMPORARY BRIDGE SIGNAL INSTALLATION. THERE WILL BE NO ADDITIONAL COMPENSATION.

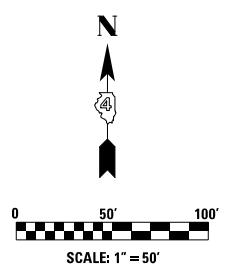
TRAFFIC SIGNAL SEQUENCE



DETAIL B



DETAIL C



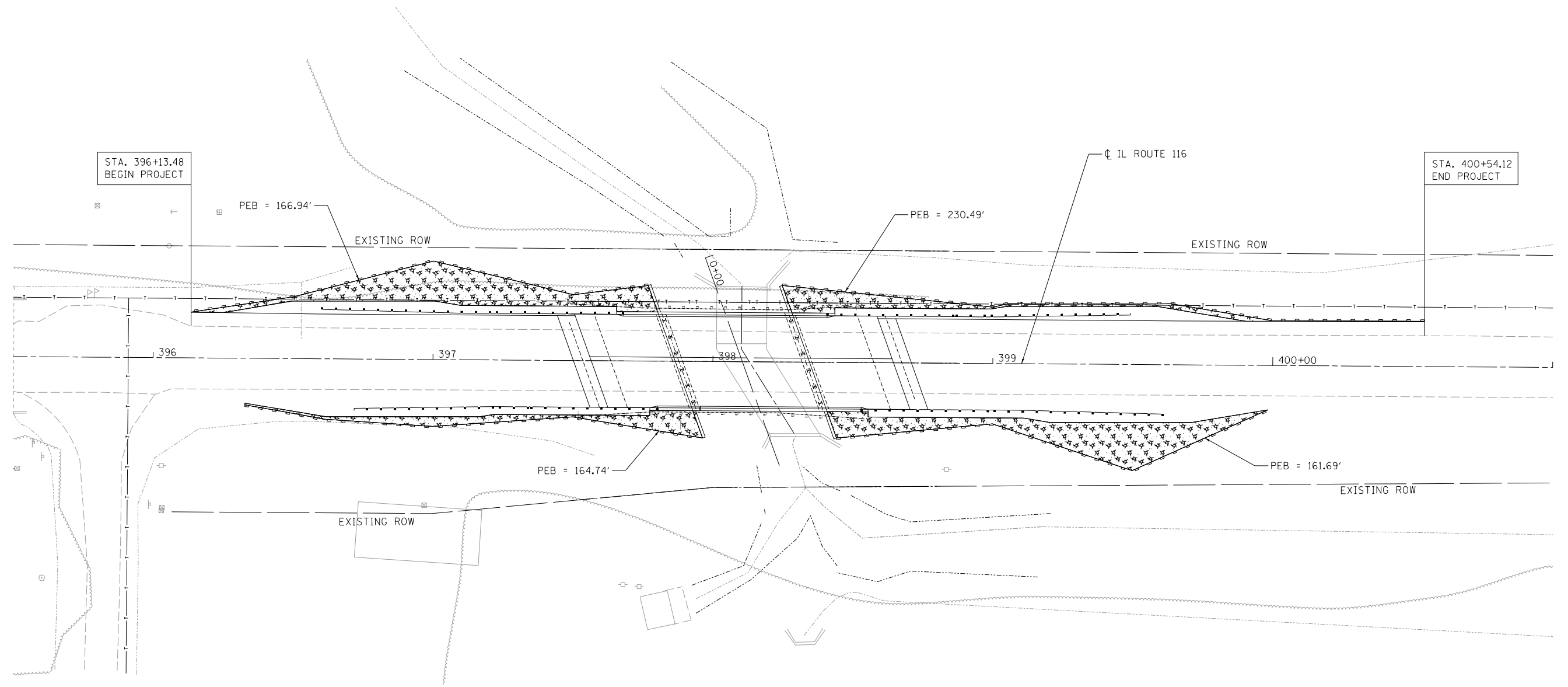
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PLOT SCALE = *SCALE*	DRAWN - RWK	REVISED -
PLOT DATE = *DATE*	CHECKED - ST	REVISED -
	DATE - 11/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION




MAINTENANCE OF TRAFFIC - STAGE 2
IL ROUTE 116

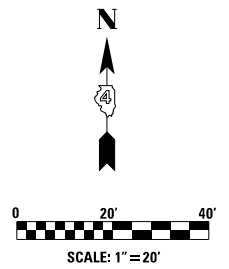
SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 392+19.74 TO STA. 403+63.74

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	16
			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				



LEGEND

-  SEEDING, CLASS 2A
-  MULCH, METHOD 2
-  PERIMETER EROSION BARRIER (PEB)



USER NAME = *USER*	DESIGNED - RWK	REVISED -
	DRAWN - RWK	REVISED -
PLOT SCALE = *SCALE*	CHECKED - ST	REVISED -
PLOT DATE = *DATE*	DATE - 11/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL PLAN
IL ROUTE 116**

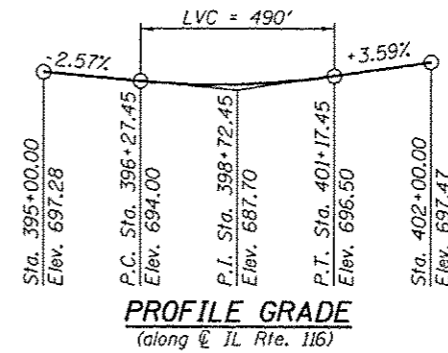
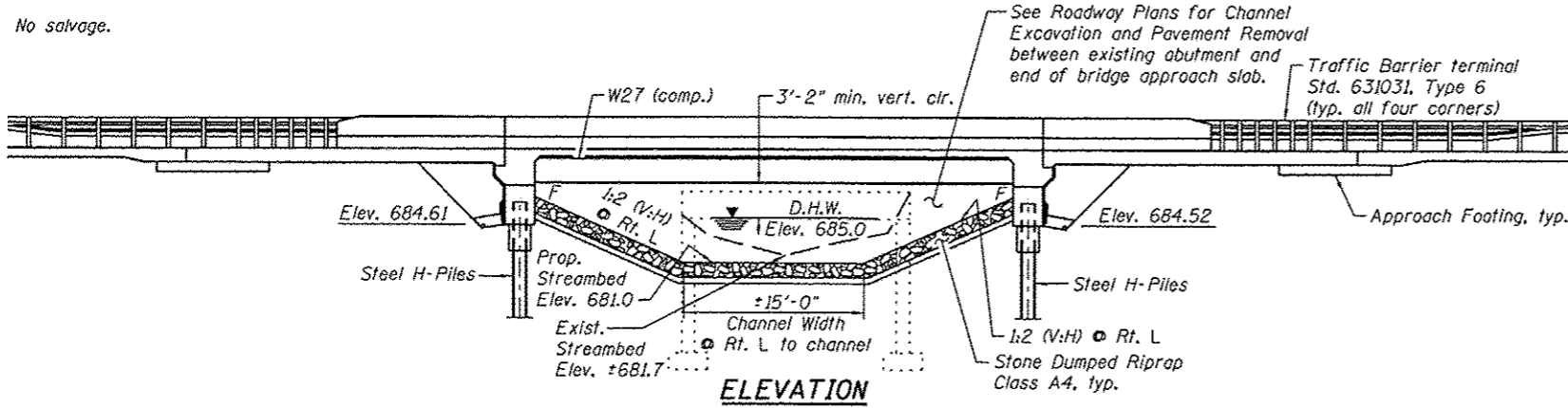
SCALE: 1"=20' SHEET NO. 1 OF 1 SHEETS STA. 395+50.00 TO STA. 401+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	17
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68778	

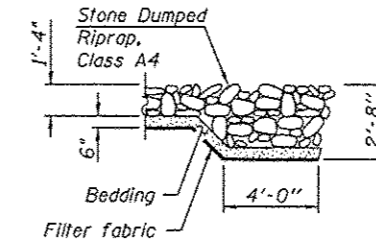
Bench Mark: BM DASI set chiseled "□" on southwest wingwall of existing bridge over unnamed drainage ditch, Sta. 398+20, 27.9' Rt. Elev. 687.42 (assumed).

Existing Structure: S.N. 029-0041 original construction year unknown, reconstructed in 1932 as SBI-97, Section 144-B at Sta. 398+10. Structure consists of 18'-0" (FF-FF Abutments) single span concrete slab bridge with originally 0 deg skew. During reconstruction bridge was widened from 20'-0" to 53'-4" (Out-Out Deck). Widened portion was built on 30 deg ahead right skew to accommodate channel layout. The structure is to be removed and replaced utilizing stage construction while maintaining one lane of traffic.

No salvage.



PROFILE GRADE
(along @ IL Rte. 116)



SECTION A-A

- ### INDEX OF SHEETS
1. General Plan and Elevation
 2. General Data
 3. Stage Construction Details
 4. Temporary Concrete Barrier for Stage Construction
 5. Top of Slab Elevations
 6. Top of Approach Slab Elevations
 7. Superstructure
 8. Superstructure Details
 9. Concrete End Diaphragms
 - 10-11. Bridge Approach Slab Details
 12. Framing Plan & Steel Details
 13. West Abutment
 14. East Abutment
 15. Bar Splicer Assembly and Mechanical Splicer Details
 16. HP Pile Details
 17. Drainage Scupper, DS-11
 18. Cantilever Forming Brackets
 19. Boring Logs

DESIGN STRESSES

FIELD UNITS

- $f'_c = 3,500$ psi
- $f_y = 60,000$ psi (Reinforcement)
- $f_y = 50,000$ psi (M270 Grade 50)
- $f_y = 36,000$ psi (M270 Grade 36)

LOADING HL-93

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

SEISMIC DATA

- Seismic Performance Zone (SPZ) = 1
- Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.077g
- Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.125g
- Soil Site Class = C

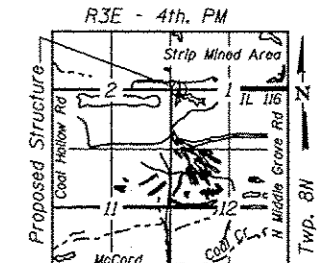
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	684.6	684.5

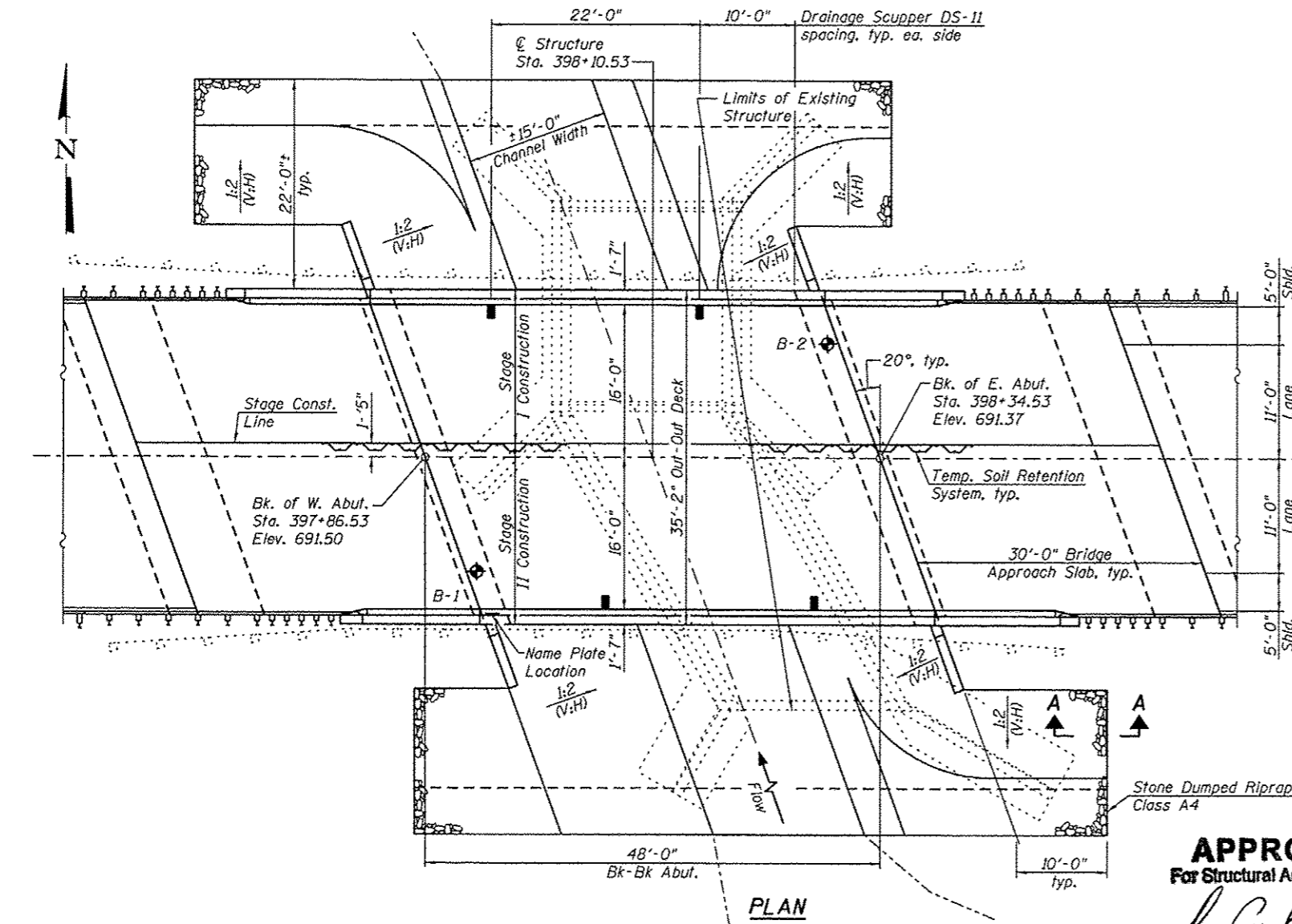
WATERWAY INFORMATION

Drainage Area = 0.58 Sq Mi Low Grade Elev. 691.37 @ Sta. 398+32

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	196	39	52	684.4	0.7	0.0	685.1	684.4
Base	50	312	49	68	685.0	1.0	0.3	686.0	685.3
Overtopping	100	365	49	76	685.3	1.4	0.4	686.7	685.7
Max. Calc	500	491	49	94	685.9	2.3	0.5	688.2	686.4



LOCATION SKETCH



PLAN

APPROVED
For Structural Adequacy Only
Michael T. Haley
Engineer of Bridges & Structures



Michael T. Haley 1-18-13
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2012

GENERAL PLAN AND ELEVATION
IL ROUTE 116 OVER
UNNAMED DRAINAGE DITCH
F.A.P. RTE. 665 - SEC. 144-B-1 BR
FULTON COUNTY
STATION 398+10.53
STRUCTURE NO. 029-0075

	USER NAME *	DESIGNED - TBP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 19 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME *	CHECKED - ADB	REVISED -			665	144-B-1 BR	FULTON	48	18
	PLOT SCALE *	DRAWN - A.J.F.	REVISED -			CONTRACT NO. 68778				
	PLOT DATE *	CHECKED - MTH	REVISED -			ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts.
Bolts 7/8 in. φ, holes 5/16 in. φ, unless otherwise noted.

Calculated weight of Structural Steel = 23,360 lbs. (M270 Grade 50)
= 1,550 lbs. (M270 Grade 36)

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

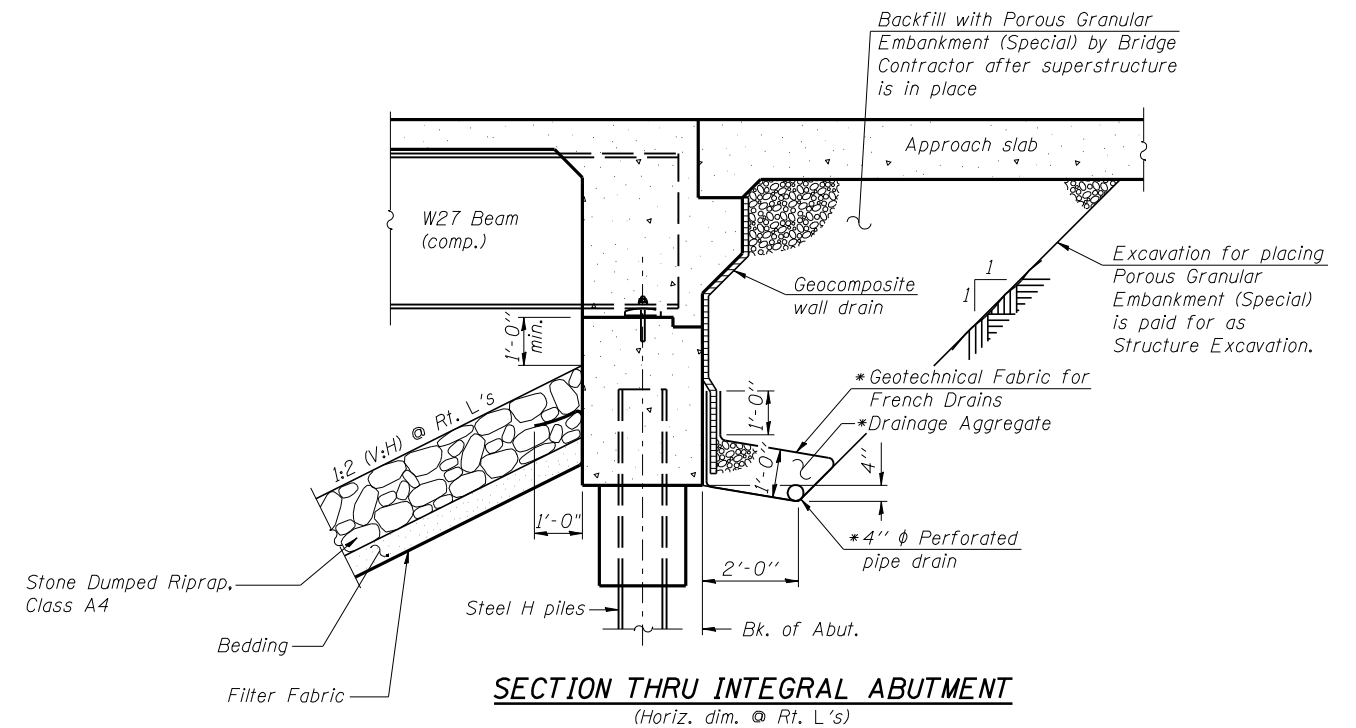
Reinforcement bars designated (E) shall be epoxy coated.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No 2.5YR 3/4.

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

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

Slip forming of the parapet is not allowed.



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

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

Note:

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

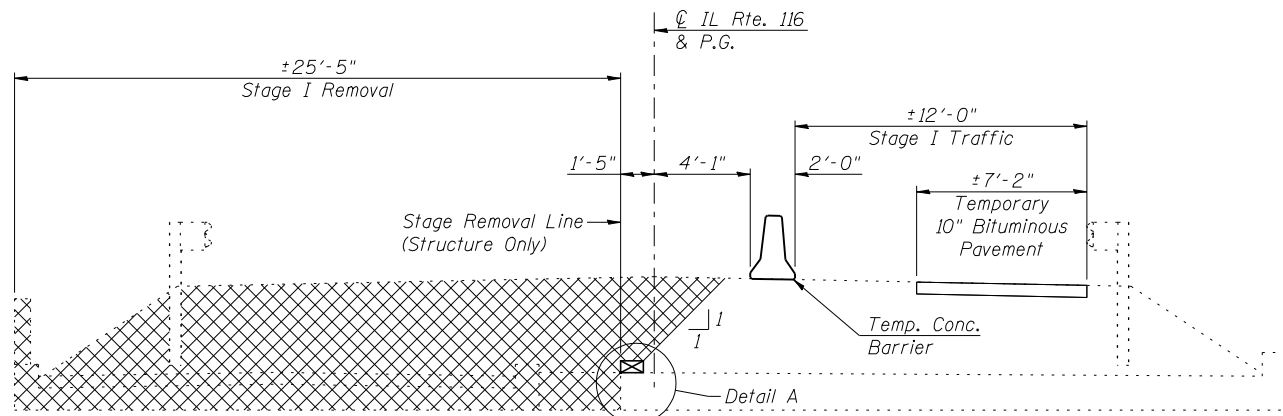
STATION 398+10.53
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 665 SEC 144-B-1 BR
LOADING HL-93
STRUCTURE NO. 029-0075

NAME PLATE
See Std. 515001

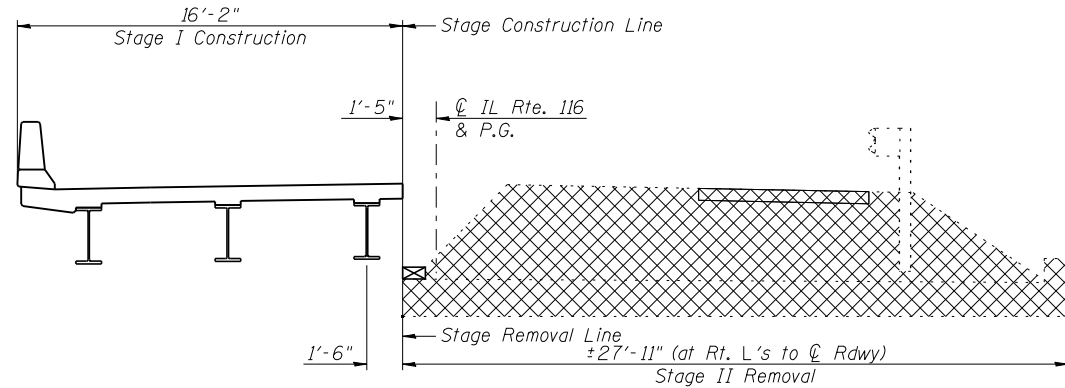
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
** Stone Dumped Riprap, Class A4	Sq. Yd.	-	515	515
Filter Fabric	Sq. Yd.	-	515	515
Protective Coat	Sq. Yd.	457	-	457
Removal of Existing Structures	Each	-	-	1
Structure Excavation	Cu. Yd.	-	165	165
Concrete Structures	Cu. Yd.	-	53.3	53.3
Concrete Superstructure	Cu. Yd.	179.4	-	179.4
Bridge Deck Grooving	Sq. Yd.	360	-	360
Concrete Encasement	Cu. Yd.	-	4.2	4.2
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Stud Shear Connectors	Each	1080	-	1080
Reinforcement Bars, Epoxy Coated	Pound	42290	5640	47930
Bar Splicers	Each	459	24	483
Furnishing Steel Piles HP10x42	Foot	-	150	150
Driving Piles	Foot	-	150	150
Test Pile Steel HP10x42	Each	-	2	2
Pile Shoes	Each	-	12	12
Name Plates	Each	1	-	1
Anchor Bolts, 1"	Each	24	-	24
Geocomposite Wall Drain	Sq. Yd.	-	64	64
Porous Granular Embankment, Special	Cu. Yd.	-	101	101
Drainage Scuppers, DS-11	Each	4	-	4
Temporary Soil Retention System	Sq. Ft.	-	336	336
Pipe Underdrains for Structures 4"	Foot	-	138	138

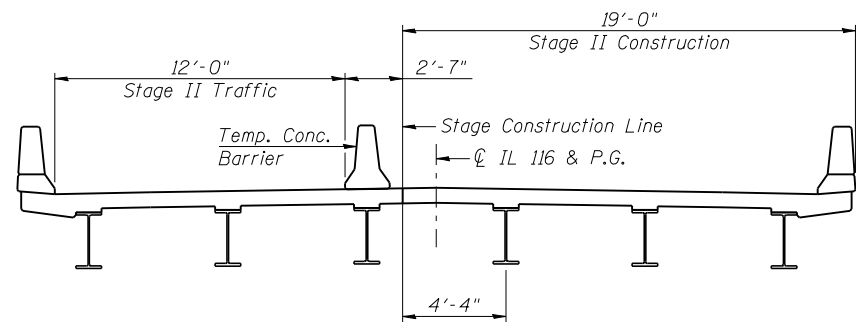
**Pay item includes bedding material.



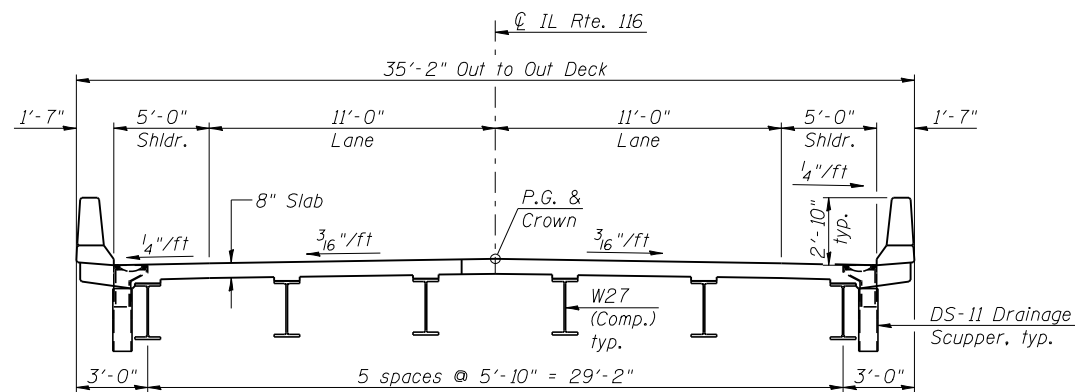
STAGE I REMOVAL & TRAFFIC
(Looking East)



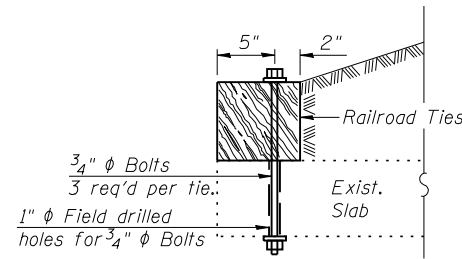
STAGE I CONSTRUCTION & STAGE II REMOVAL
(Looking East)



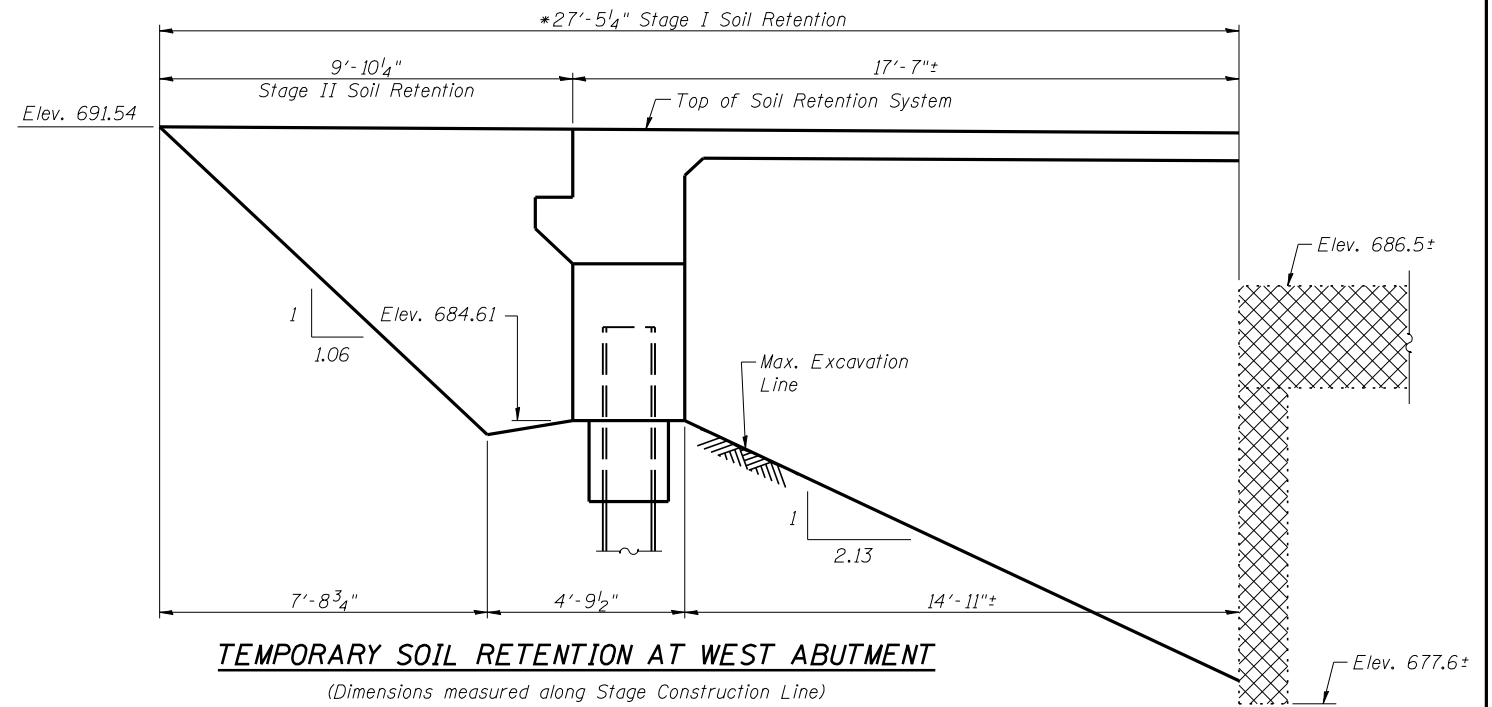
STAGE II CONSTRUCTION & TRAFFIC
(Looking East)



PROPOSED CROSS SECTION
(Looking East)

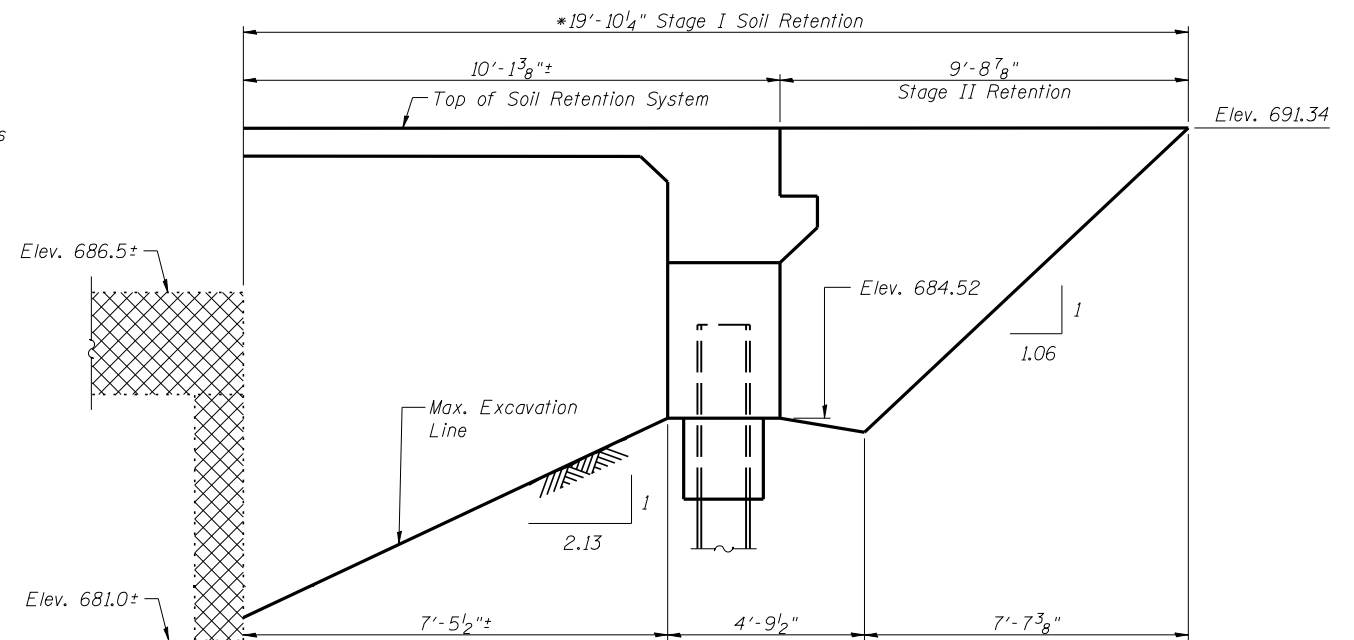


DETAIL A
Cost included with Removal of Existing Structures.



TEMPORARY SOIL RETENTION AT WEST ABUTMENT
(Dimensions measured along Stage Construction Line)

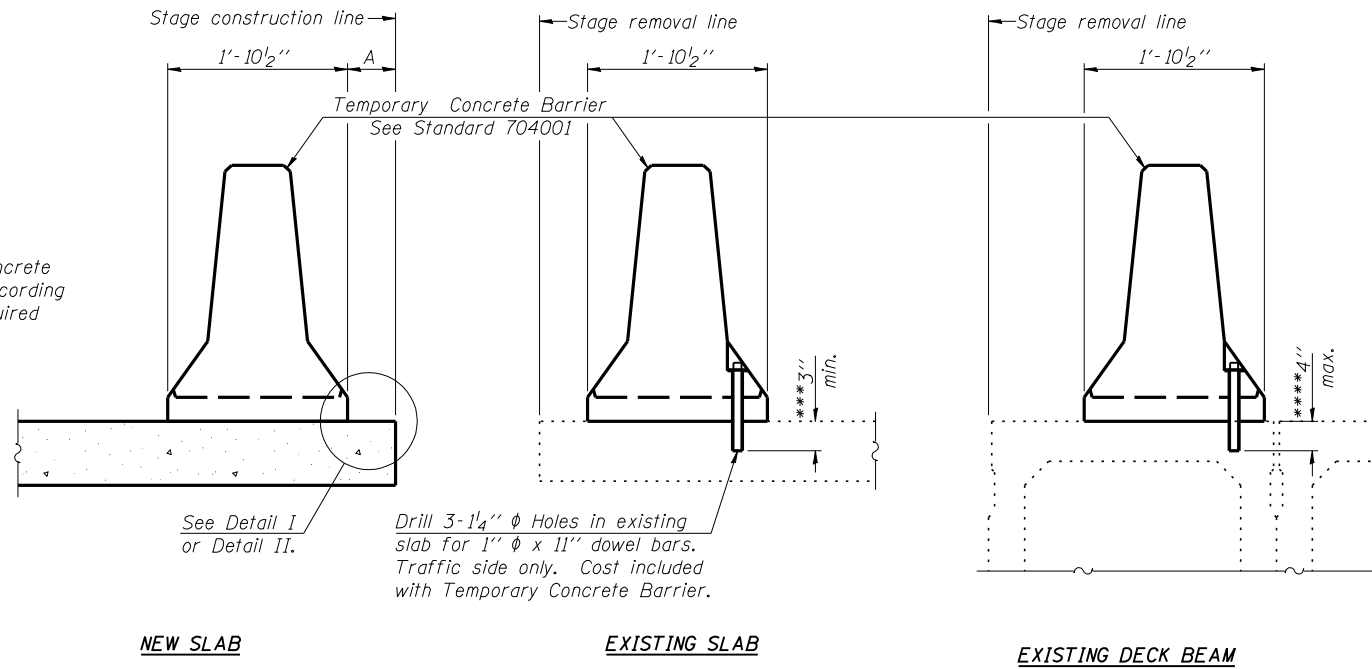
* Retention system shall be placed to avoid original wingwalls buried below roadway.



TEMPORARY SOIL RETENTION AT EAST ABUTMENT
(Dimensions measured along Stage Construction Line)

Notes:
Cross-hatched areas indicate Removal of Existing Structures.
Stage Removal line applies to entire structure. See Roadway plans for removal line for roadway.
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
See roadway plans for quantity of Temporary Concrete Barrier.
See Sheet 4 of 19 for details of Temporary Concrete Barrier.
Removal of soil over existing structure included in Removal of Existing Structures.

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



SECTIONS THRU SLAB OR DECK BEAM

NOTES

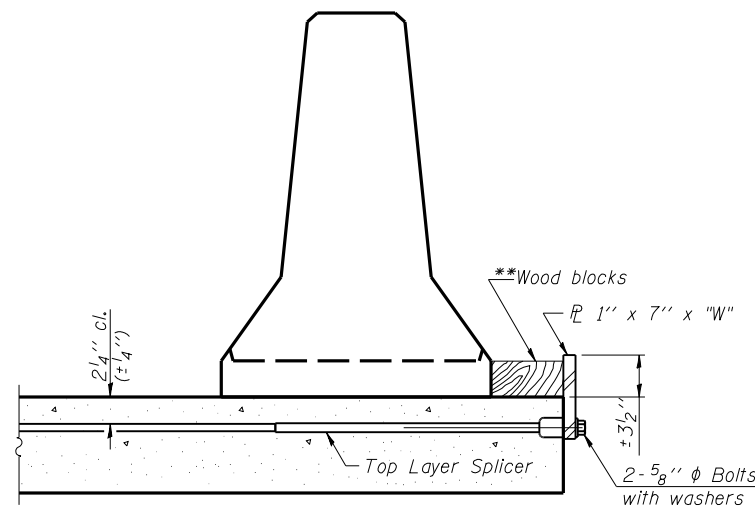
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" phi bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" phi Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

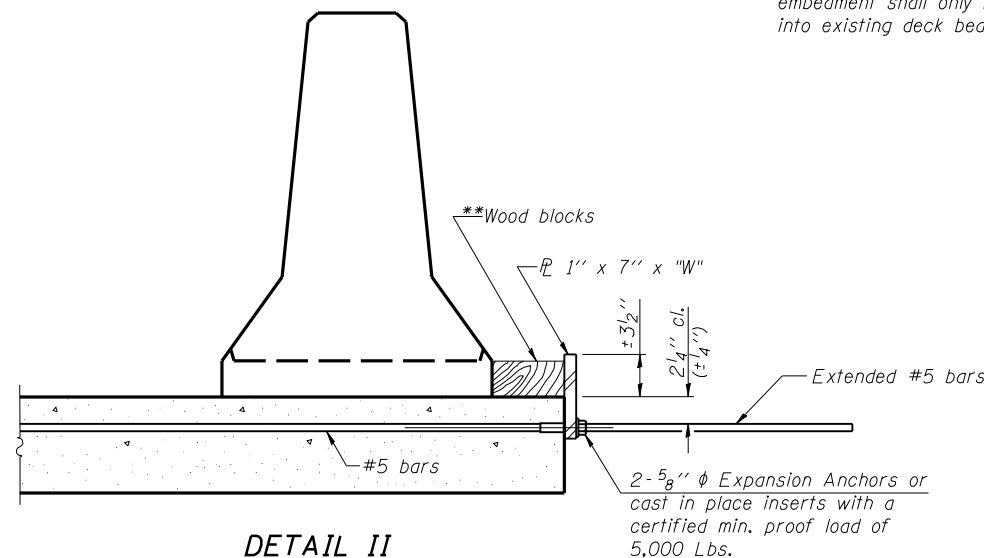
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.



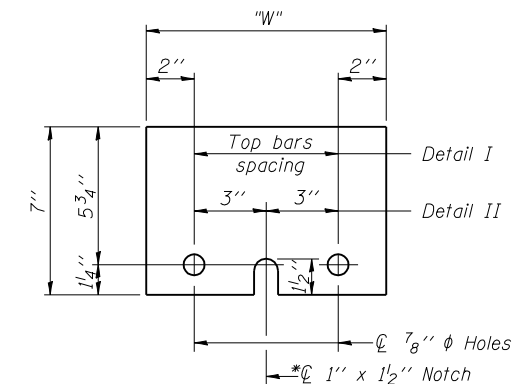
DETAIL I



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 PL 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10



USER NAME =	DESIGNED - TBP	REVISED -
FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

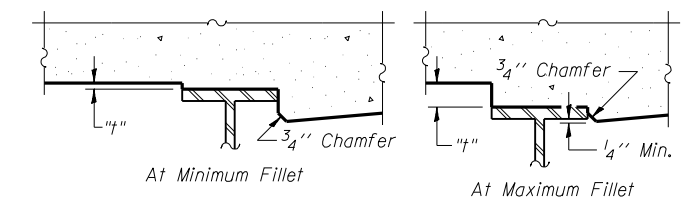
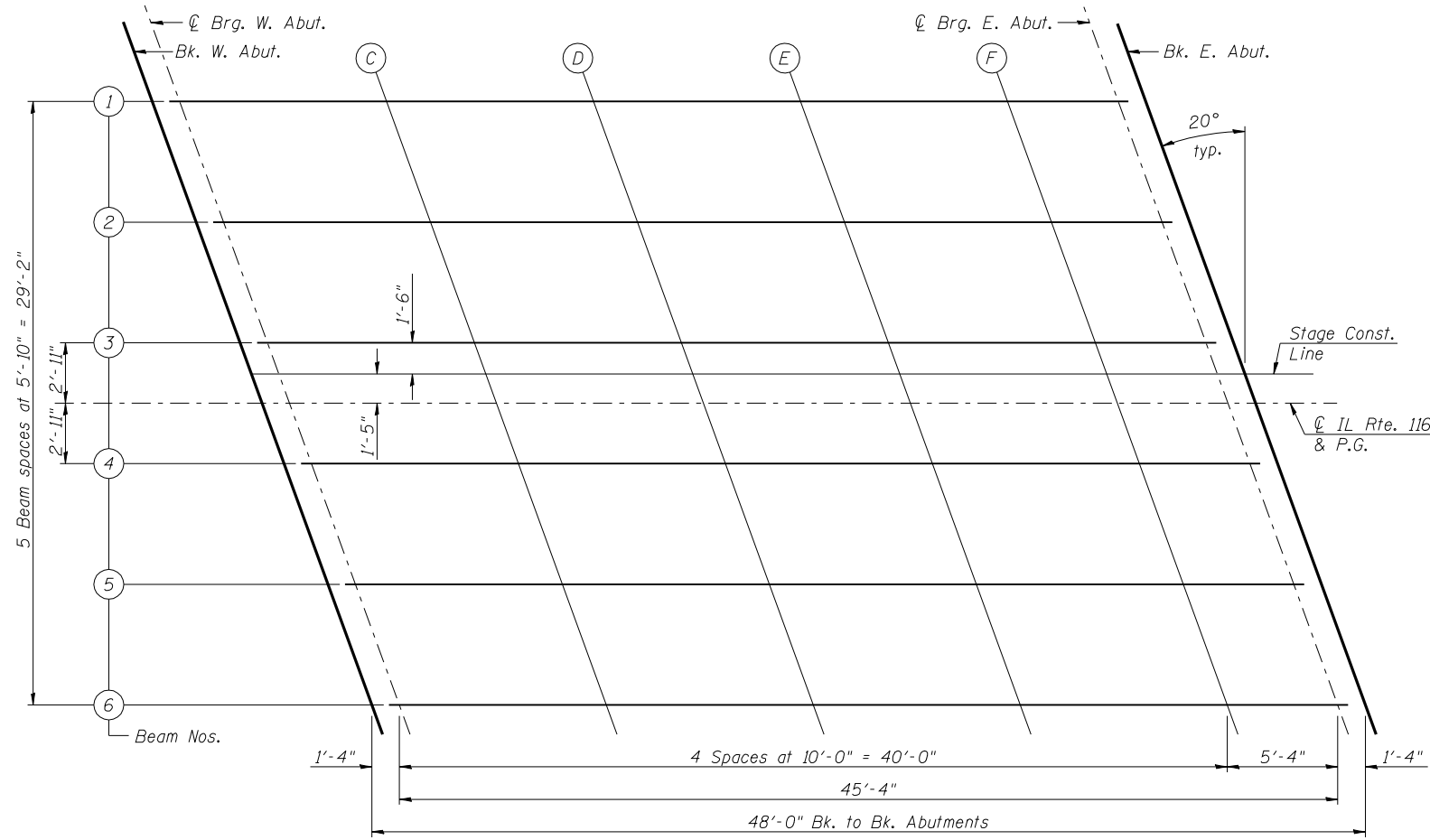
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 029-0075**

SHEET NO. 4 OF 19 SHEETS

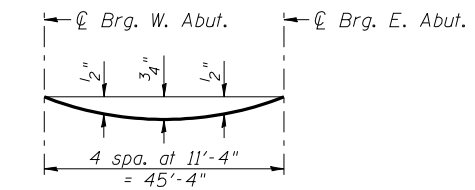
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	21
			CONTRACT NO. 68778	

ILLINOIS FED. AID PROJECT



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

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

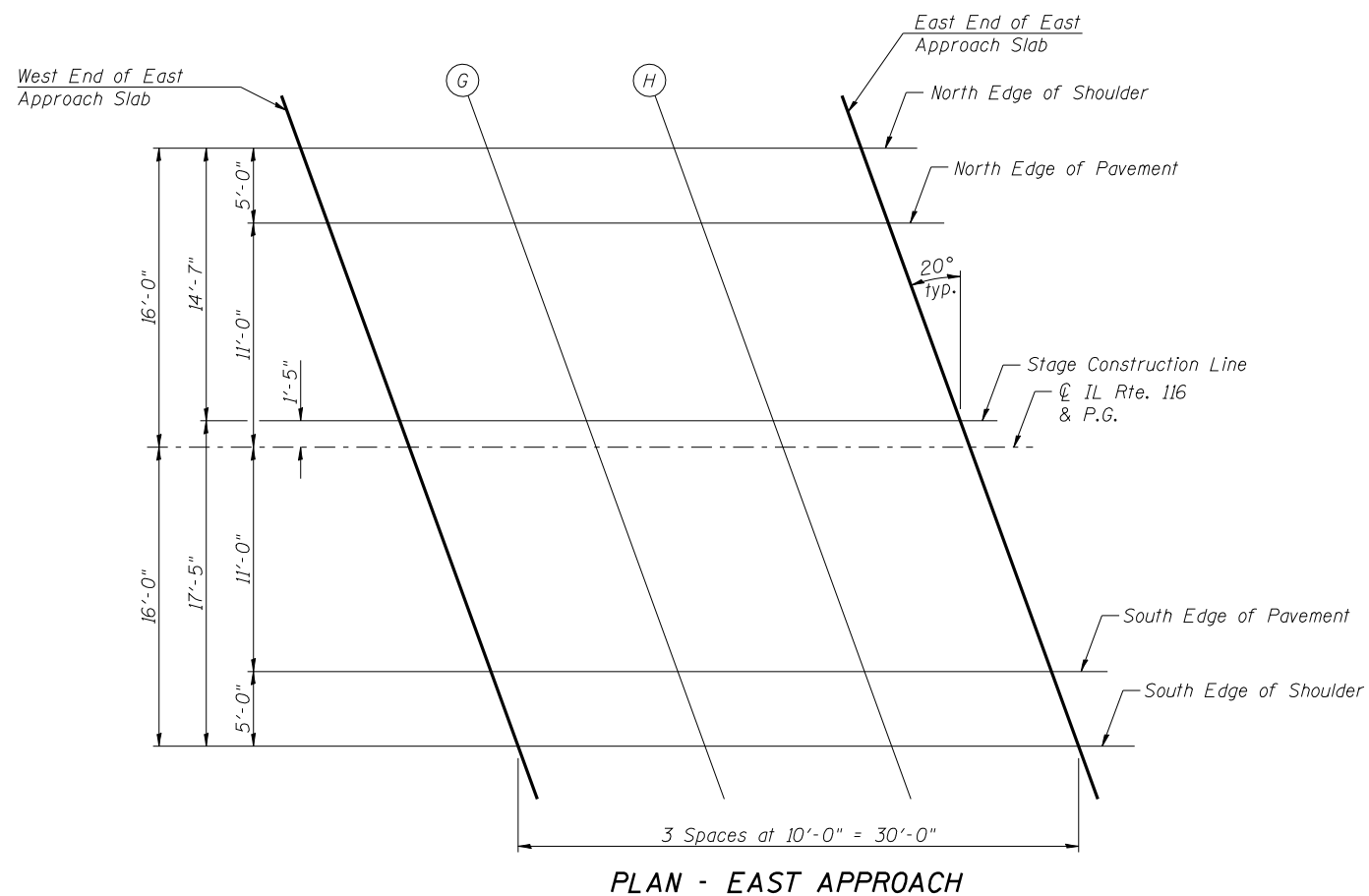
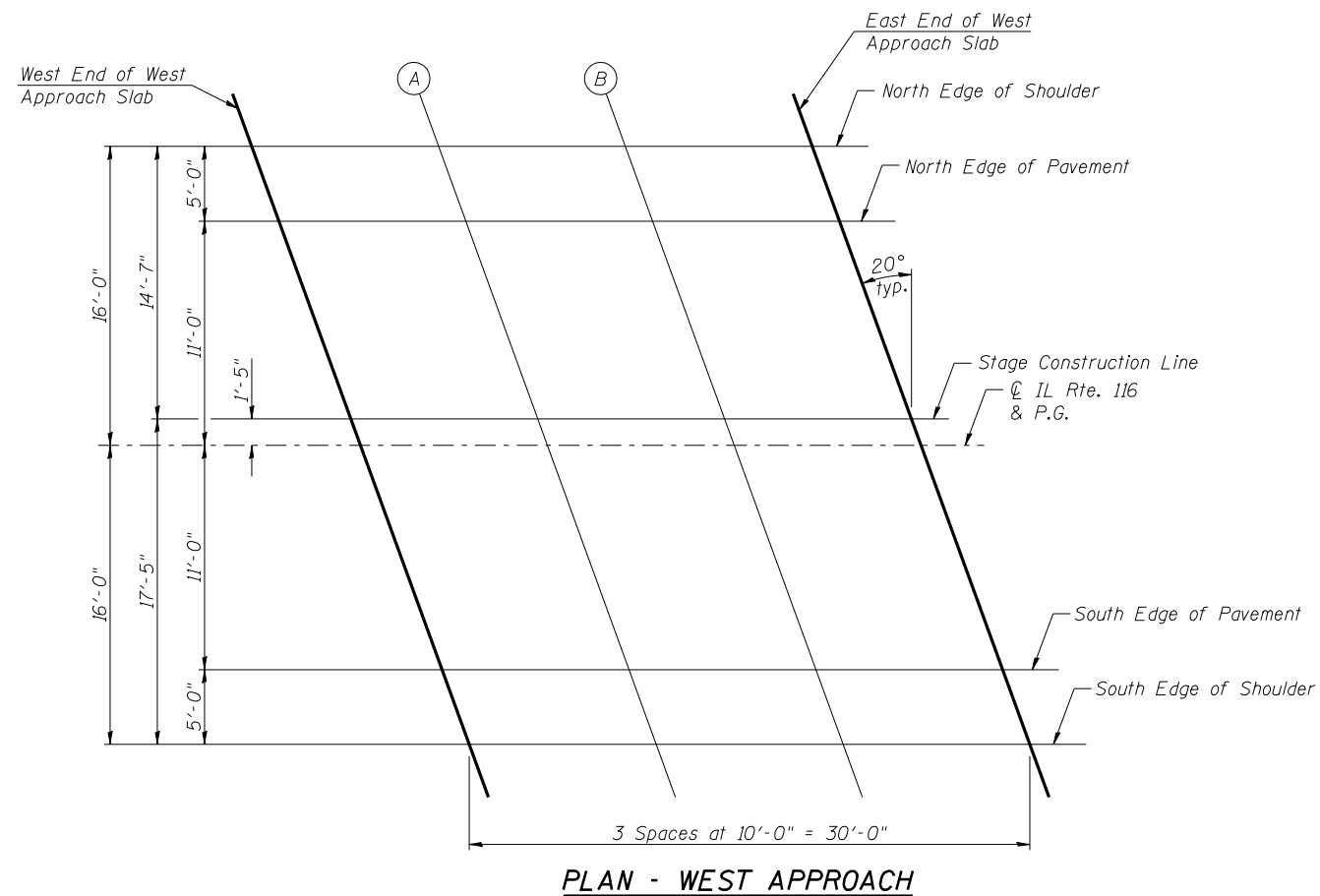
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

PLAN

BEAM 1					BEAM 2					BEAM 3					STAGE CONSTRUCTION LINE				
Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	397+81.22	-14.58	691.29	691.29	Bk. W. Abut.	397+83.35	-8.75	691.38	691.38	Bk. W. Abut.	397+85.47	-2.92	691.46	691.46	Bk. W. Abut.	397+86.01	-1.42	691.48	691.48
∅ Brg. W. Abut.	397+82.55	-14.58	691.28	691.28	∅ Brg. W. Abut.	397+84.68	-8.75	691.38	691.38	∅ Brg. W. Abut.	397+86.80	-2.92	691.46	691.46	∅ Brg. W. Abut.	397+87.34	-1.42	691.48	691.48
C	397+92.55	-14.58	691.22	691.26	C	397+94.68	-8.75	691.32	691.36	C	397+96.80	-2.92	691.40	691.45	C	397+97.34	-1.42	691.43	691.47
D	398+02.55	-14.58	691.18	691.24	D	398+04.68	-8.75	691.28	691.34	D	398+06.80	-2.92	691.37	691.43	D	398+07.34	-1.42	691.39	691.45
E	398+12.55	-14.58	691.15	691.21	E	398+14.68	-8.75	691.25	691.31	E	398+16.80	-2.92	691.34	691.40	E	398+17.34	-1.42	691.36	691.42
F	398+22.55	-14.58	691.13	691.16	F	398+24.68	-8.75	691.24	691.26	F	398+26.80	-2.92	691.33	691.35	F	398+27.34	-1.42	691.35	691.38
∅ Brg. E. Abut.	398+27.89	-14.58	691.13	691.13	∅ Brg. E. Abut.	398+30.02	-8.75	691.24	691.24	∅ Brg. E. Abut.	398+32.14	-2.92	691.33	691.33	∅ Brg. E. Abut.	398+32.68	-1.42	691.35	691.35
Bk. E. Abut.	398+29.22	-14.58	691.13	691.13	Bk. E. Abut.	398+31.35	-8.75	691.24	691.24	Bk. E. Abut.	398+33.47	-2.92	691.33	691.33	Bk. E. Abut.	398+34.01	-1.42	691.35	691.35

∅ IL. RTE. 116 & P.G.					BEAM 4					BEAM 5					BEAM 6				
Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection	Location	Station	Offset (ft)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	397+86.53	0.00	691.50	691.50	Bk. W. Abut.	397+87.59	2.92	691.45	691.45	Bk. W. Abut.	397+89.71	8.75	691.35	691.35	Bk. W. Abut.	397+91.84	14.58	691.23	691.23
∅ Brg. W. Abut.	397+87.86	0.00	691.49	691.49	∅ Brg. W. Abut.	397+88.92	2.92	691.44	691.44	∅ Brg. W. Abut.	397+91.04	8.75	691.34	691.34	∅ Brg. W. Abut.	397+93.17	14.58	691.22	691.22
C	397+97.86	0.00	691.45	691.49	C	397+98.92	2.92	691.40	691.44	C	398+01.04	8.75	691.30	691.34	C	398+03.17	14.58	691.18	691.22
D	398+07.86	0.00	691.41	691.47	D	398+08.92	2.92	691.36	691.42	D	398+11.04	8.75	691.26	691.33	D	398+13.17	14.58	691.15	691.21
E	398+17.86	0.00	691.39	691.44	E	398+18.92	2.92	691.34	691.39	E	398+21.04	8.75	691.24	691.30	E	398+23.17	14.58	691.13	691.19
F	398+27.86	0.00	691.37	691.40	F	398+28.92	2.92	691.33	691.35	F	398+31.04	8.75	691.24	691.26	F	398+33.17	14.58	691.13	691.15
∅ Brg. E. Abut.	398+33.20	0.00	691.37	691.37	∅ Brg. E. Abut.	398+34.26	2.92	691.33	691.33	∅ Brg. E. Abut.	398+36.38	8.75	691.24	691.24	∅ Brg. E. Abut.	398+38.51	14.58	691.13	691.13
Bk. E. Abut.	398+34.53	0.00	691.37	691.37	Bk. E. Abut.	398+35.59	2.92	691.33	691.33	Bk. E. Abut.	398+37.71	8.75	691.24	691.24	Bk. E. Abut.	398+39.84	14.58	691.13	691.13



NORTH EDGE OF SHOULDER

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+50.71	-16.00	691.52
A	397+60.71	-16.00	691.42
B	397+70.71	-16.00	691.33
E. End W. Appr. Slab	397+80.71	-16.00	691.26
W. End E. Appr. Slab	398+28.71	-16.00	691.10
G	398+38.71	-16.00	691.10
H	398+48.71	-16.00	691.11
E. End E. Appr. Slab	398+58.71	-16.00	691.14

CL IL. RTE. 116 & P.G.

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+56.53	0.00	691.73
A	397+66.53	0.00	691.64
B	397+76.53	0.00	691.57
E. End W. Appr. Slab	397+86.53	0.00	691.50
W. End E. Appr. Slab	398+34.53	0.00	691.37
G	398+44.53	0.00	691.38
H	398+54.53	0.00	691.41
E. End E. Appr. Slab	398+64.53	0.00	691.44

NORTH EDGE OF PAVEMENT

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+52.16	-12.00	691.60
A	397+62.16	-12.00	691.50
B	397+72.16	-12.00	691.42
E. End W. Appr. Slab	397+82.16	-12.00	691.35
W. End E. Appr. Slab	398+30.16	-12.00	691.20
G	398+40.16	-12.00	691.21
H	398+50.16	-12.00	691.22
E. End E. Appr. Slab	398+60.16	-12.00	691.25

SOUTH EDGE OF PAVEMENT

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+60.90	12.00	691.52
A	397+70.90	12.00	691.44
B	397+80.90	12.00	691.37
E. End W. Appr. Slab	397+90.90	12.00	691.31
W. End E. Appr. Slab	398+38.90	12.00	691.20
G	398+48.90	12.00	691.22
H	398+58.90	12.00	691.25
E. End E. Appr. Slab	398+68.90	12.00	691.29

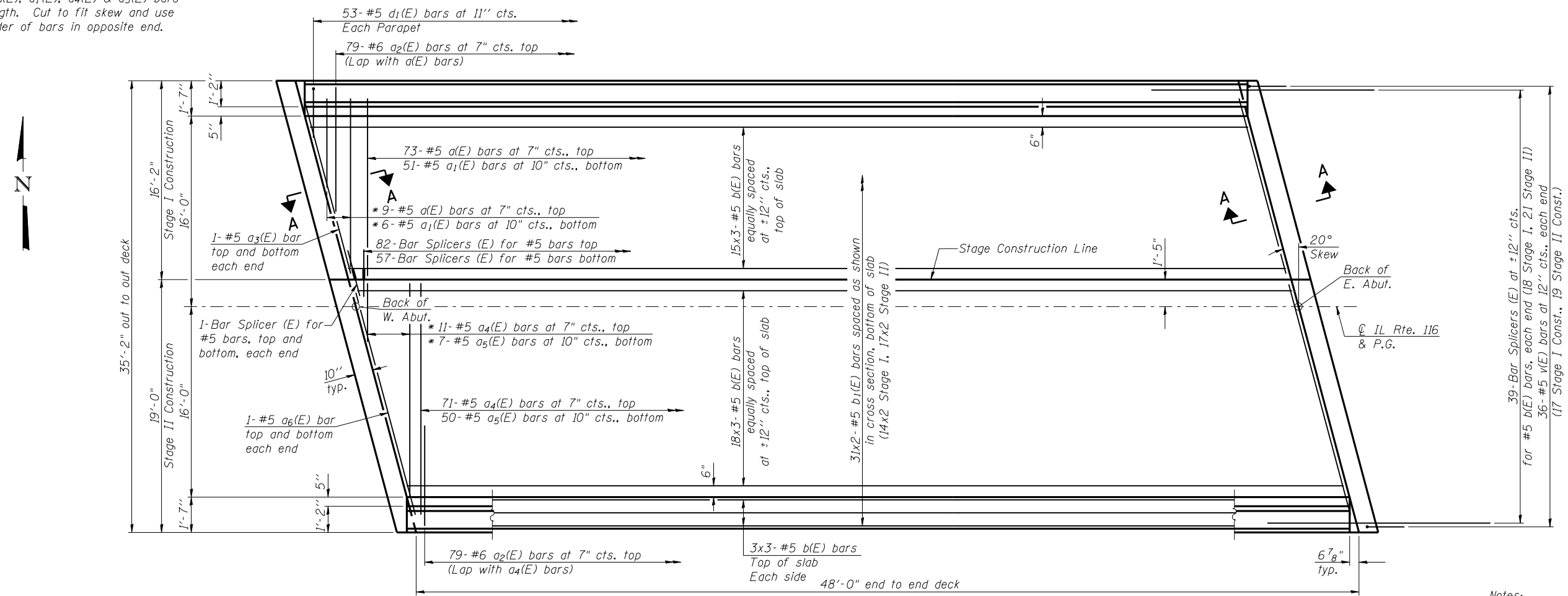
STAGE CONSTRUCTION LINE

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+56.01	-1.42	691.71
A	397+66.01	-1.42	691.62
B	397+76.01	-1.42	691.55
E. End W. Appr. Slab	397+86.01	-1.42	691.48
W. End E. Appr. Slab	398+34.01	-1.42	691.35
G	398+44.01	-1.42	691.36
H	398+54.01	-1.42	691.38
E. End E. Appr. Slab	398+64.01	-1.42	691.42

SOUTH EDGE OF SHOULDER

Location	Station	Offset (ft)	Theoretical Grade Elevations
W. End W. Appr. Slab	397+62.35	16.00	691.40
A	397+72.35	16.00	691.32
B	397+82.35	16.00	691.25
E. End W. Appr. Slab	397+92.35	16.00	691.20
W. End E. Appr. Slab	398+40.35	16.00	691.10
G	398+50.35	16.00	691.12
H	398+60.35	16.00	691.15
E. End E. Appr. Slab	398+70.35	16.00	691.19

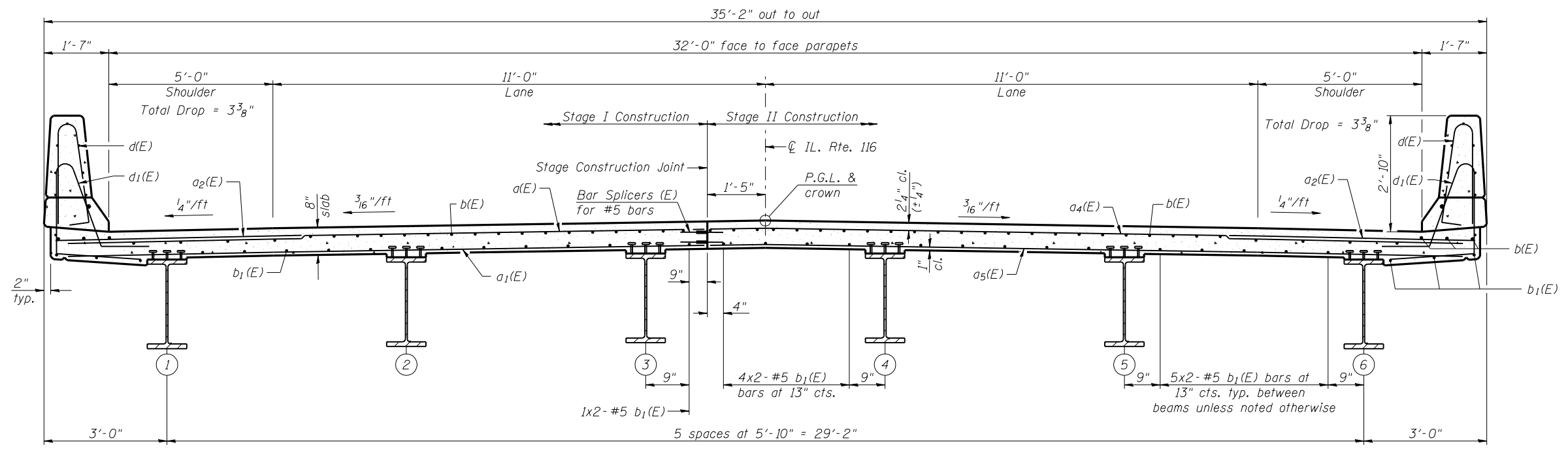
* Order a(E), a₁(E), a₄(E) & a₅(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



PLAN

MINIMUM BAR LAP
#5 bar = 2'-7"

Notes:
See Sheet 8 of 19 for superstructure details and Bill of Material.
Bars indicated thus 18 x 3-#5 etc. indicates 18 lines of bars with 3 lengths per line.
See Sheet 8 of 19 for parapet reinforcement.
See Sheet 9 of 19 for Section A-A.
See Sheet 15 of 19 for Bar Splicer details.

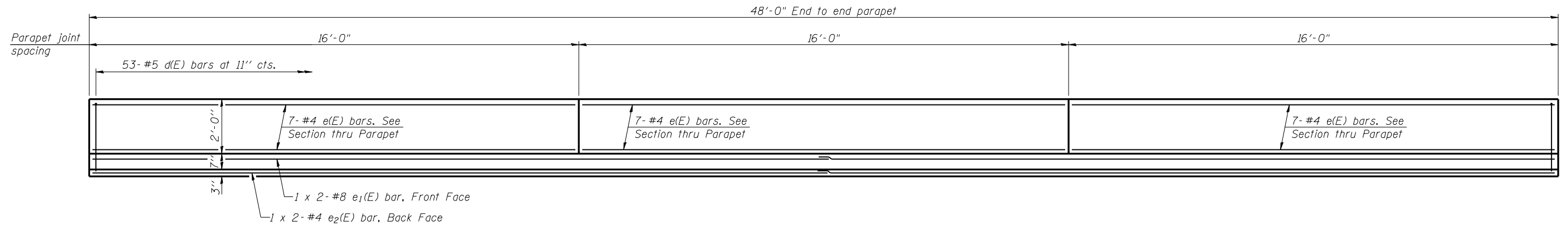


CROSS SECTION
(Looking East)

(Scuppers not shown for clarity)

SCUPPER REINFORCEMENT

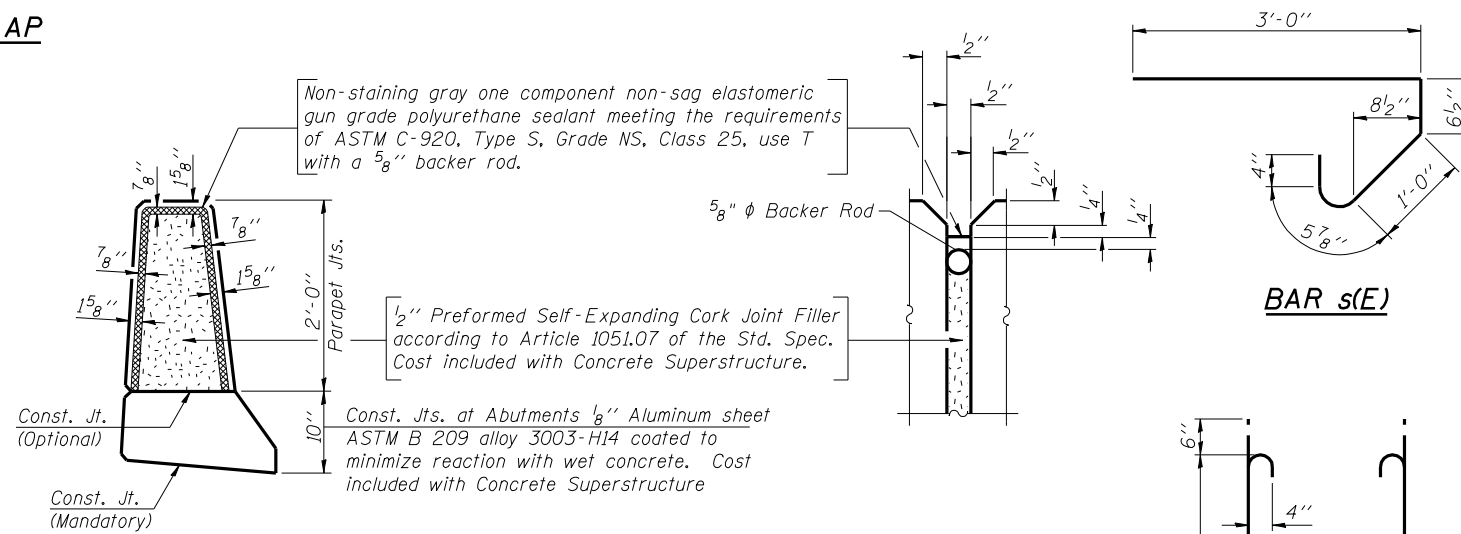
See sheet 1 of 19 for location of scuppers.
Cut longitudinal reinforcement to clear drainage scuppers.



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

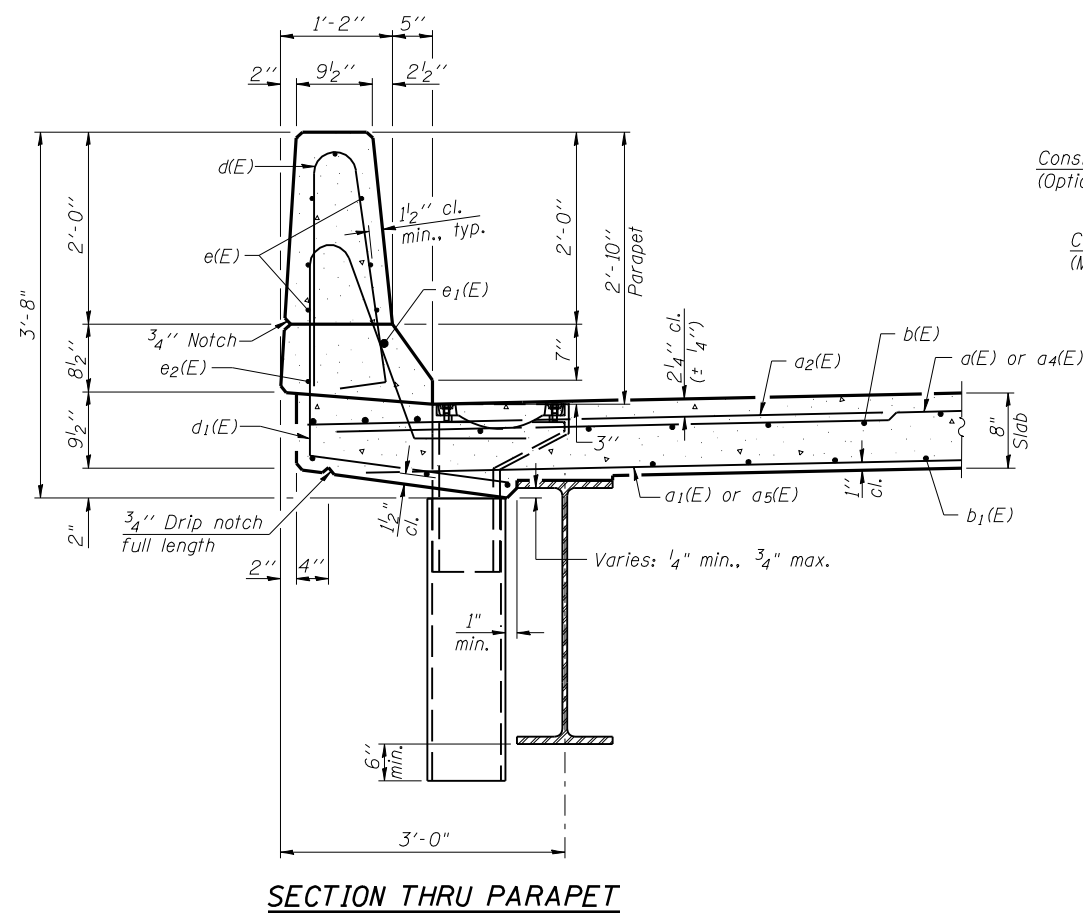
(Parapet)
 #4 bar = 2'-0"
 #8 bar = 5'-2"



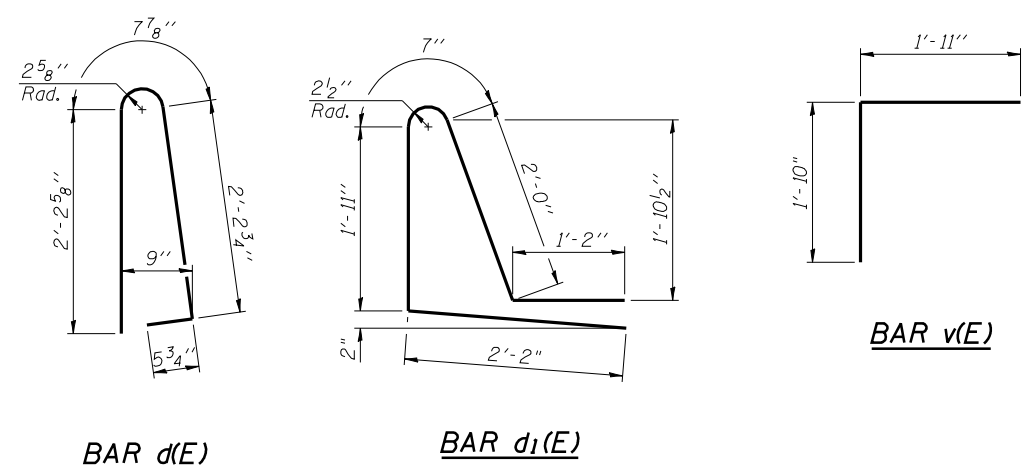
SUPERSTRUCTURE BILL OF MATERIAL

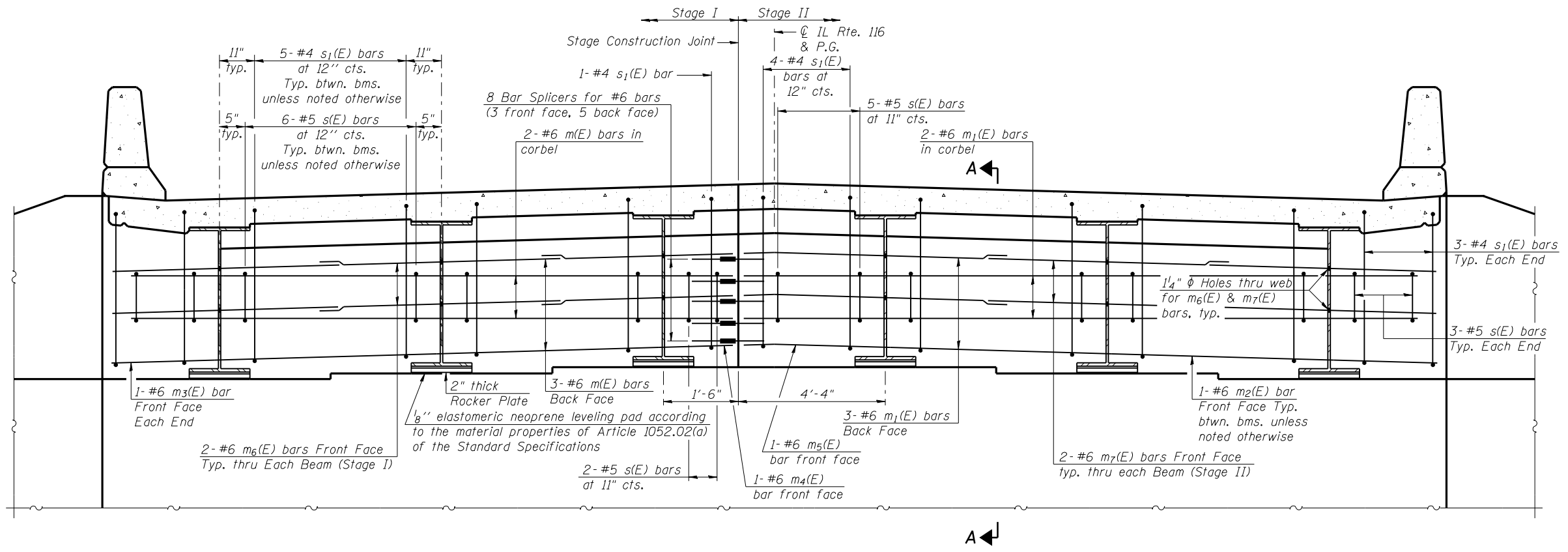
Bar	No.	Size	Length	Shape
a(E)	82	#5	15'-9"	—
a ₁ (E)	57	#5	15'-5"	—
a ₂ (E)	158	#6	6'-6"	—
a ₃ (E)	4	#5	16'-5"	—
a ₄ (E)	82	#5	18'-7"	—
a ₅ (E)	57	#5	18'-3"	—
a ₆ (E)	4	#5	19'-5"	—
a ₇ (E)	32	#5	1'-6"	—
b(E)	117	#5	17'-8"	—
b ₁ (E)	62	#5	25'-2"	—
d(E)	106	#5	5'-7"	↶
d ₁ (E)	106	#5	7'-10"	↶
e(E)	42	#4	15'-9"	—
e ₁ (E)	4	#8	26'-6"	—
e ₂ (E)	4	#4	24'-11"	—
m(E)	10	#6	16'-11"	—
m ₁ (E)	10	#6	19'-11"	—
m ₂ (E)	8	#6	5'-0"	—
m ₃ (E)	4	#6	2'-6"	—
m ₄ (E)	2	#6	11"	—
m ₅ (E)	2	#6	3'-11"	—
m ₆ (E)	12	#6	7'-9"	—
m ₇ (E)	12	#6	8'-10"	—
s(E)	74	#5	5'-5"	↷
s ₁ (E)	62	#4	8'-6"	↷
v(E)	72	#5	3'-9"	└
Reinforcement Bars, Epoxy Coated		Pound	14740	
Concrete Superstructure		Cu. Yd.	74.0	

Bars indicated thus 1x2-#4 etc. indicates 1 line of bars with 2 lengths per line.



PARAPET JOINT DETAILS



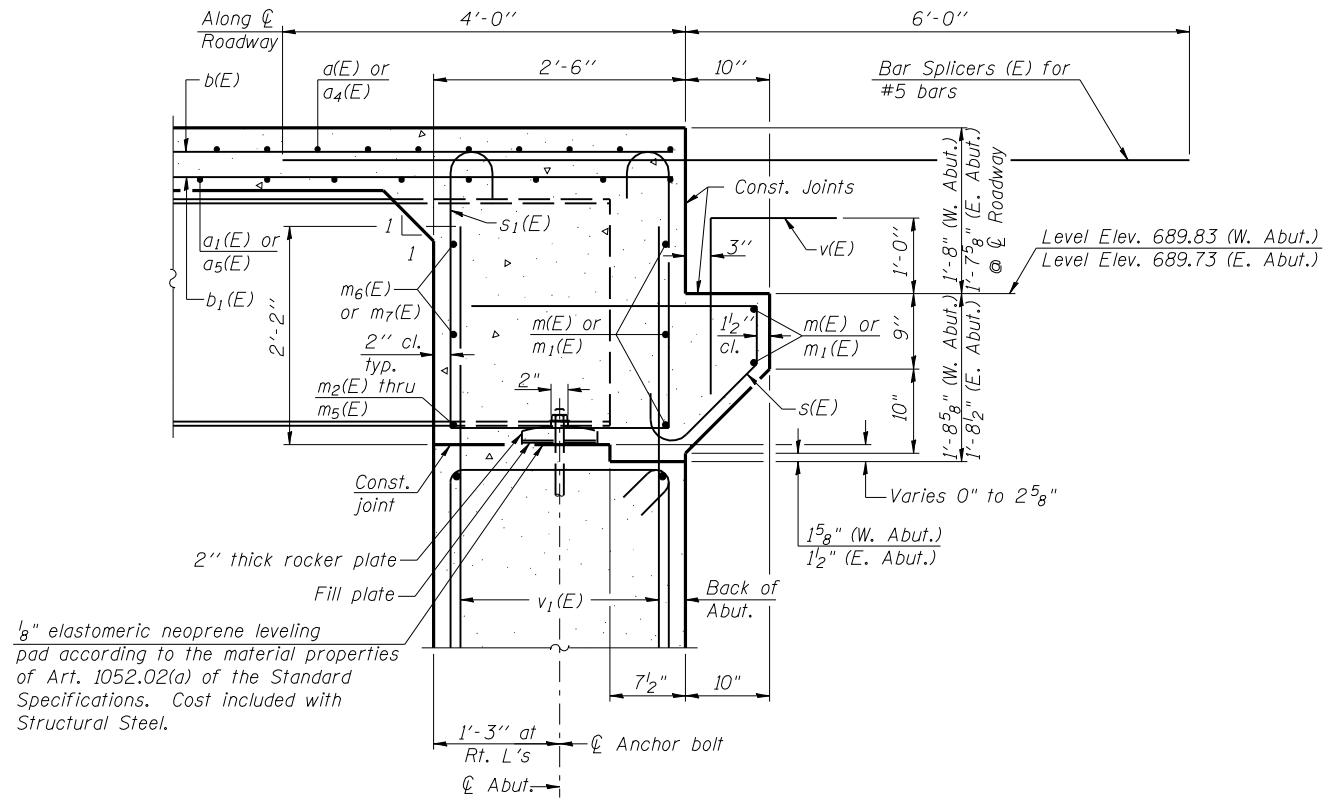


DIAPHRAGM ELEVATION AT EAST ABUTMENT

(Looking East)
 (All Horizontal dimensions at Right Angles to \perp Roadway)
 (West Abutment mirrored about \perp Roadway)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on Sheet 8 of 19.
 Concrete in diaphragm is included with Concrete Superstructure on Sheet 8 of 19.
 For details of bars s(E) & s1(E) see Sheet 8 of 19.
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 See Sheet 15 of 19 for Bar Splicer Details.
 See Sheet 12 of 19 for location of holes thru web.

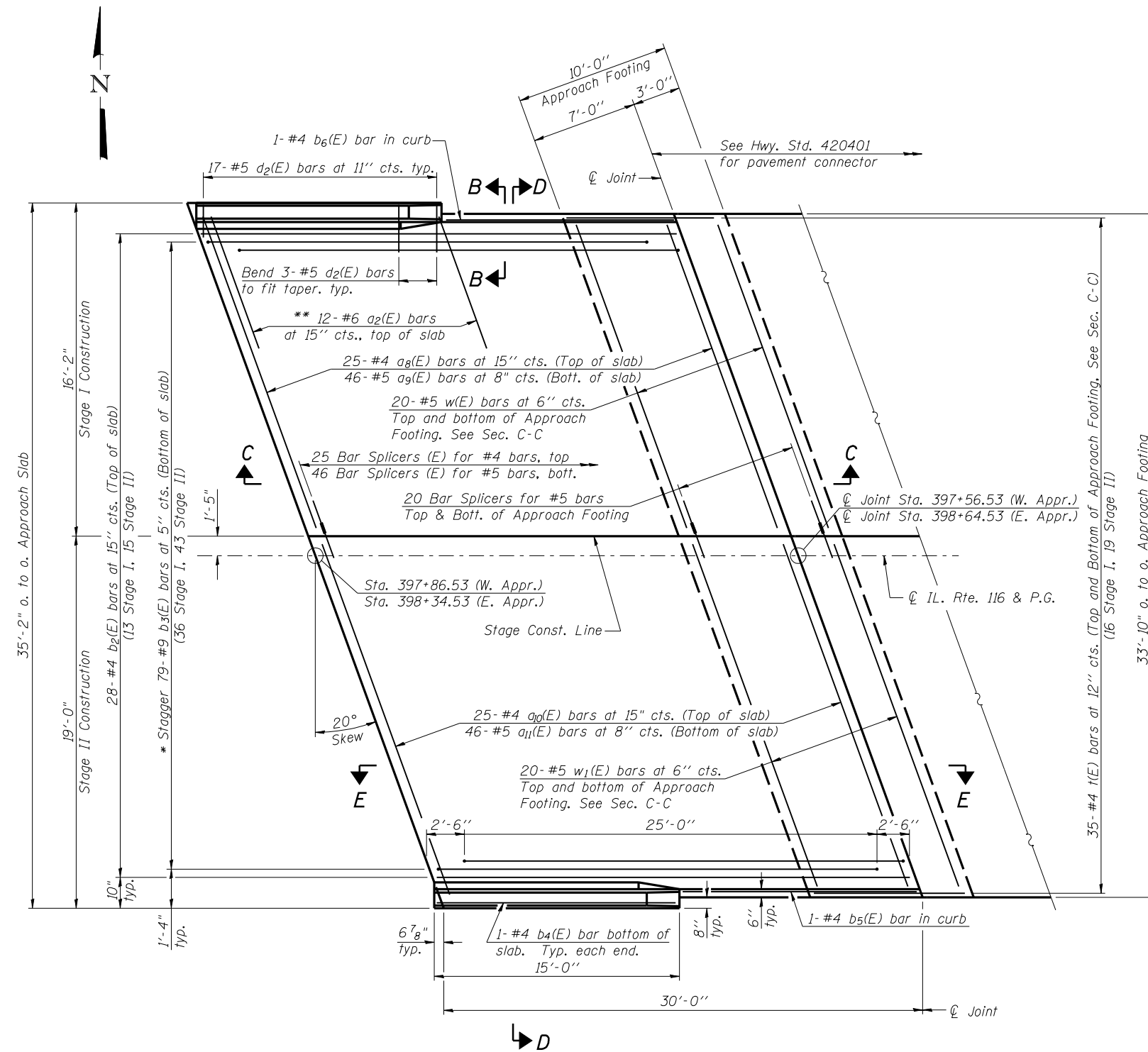
MIN. BAR LAP
 #6 bar = 3'-4"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

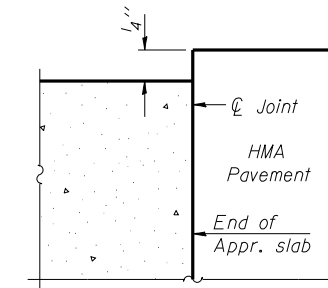
Notes:
See sheet 11 of 19 for Sections C-C & D-D and View E-E.
 $a_8(E)$, $a_9(E)$, $a_{10}(E)$, and $a_{11}(E)$ bar spacings measured along C.R.



PLAN

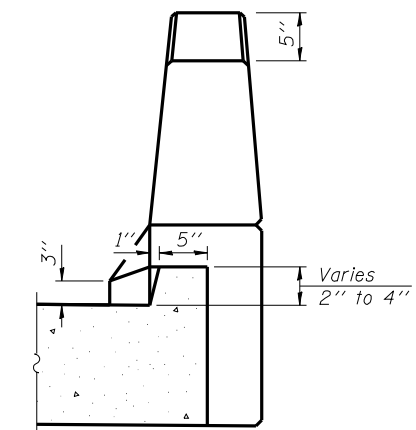
(East Approach Shown, West Approach Similar)

* Tilt #9 $b_3(E)$ bars as required to maintain clearance.
** Space between $a_8(E)$ & $a_{10}(E)$ bars, typ. each parapet.



FLEXIBLE PAVEMENT

DETAIL A



VIEW B-B

(Sheet 1 of 2)



USER NAME =	DESIGNED - TBP	REVISED -
FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 029-0075**

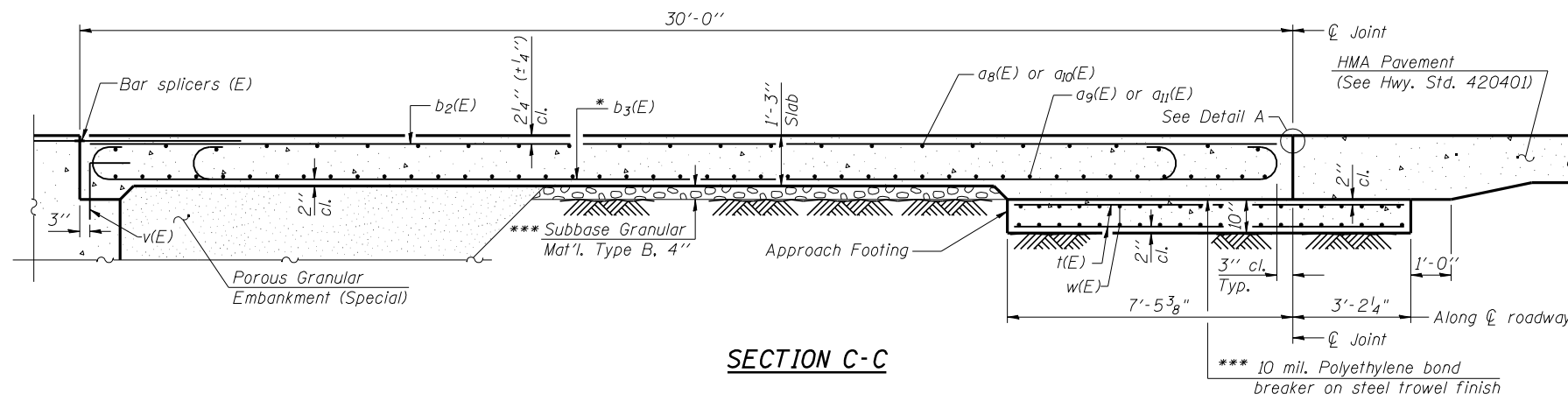
SHEET NO. 10 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	27
CONTRACT NO. 68778				

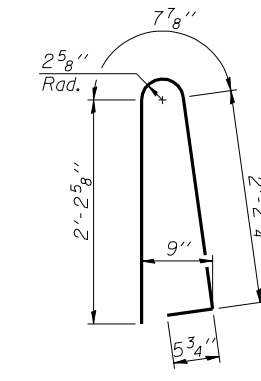
ILLINOIS FED. AID PROJECT

Notes:

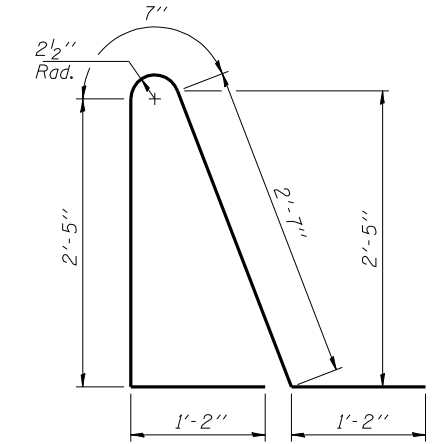
See sheet 10 of 19 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see Sheet 8 of 19.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see Sheet 15 of 19.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see Sheet 2 of 19.
 For additional parapet details, see Sheet 8 of 19.



SECTION C-C

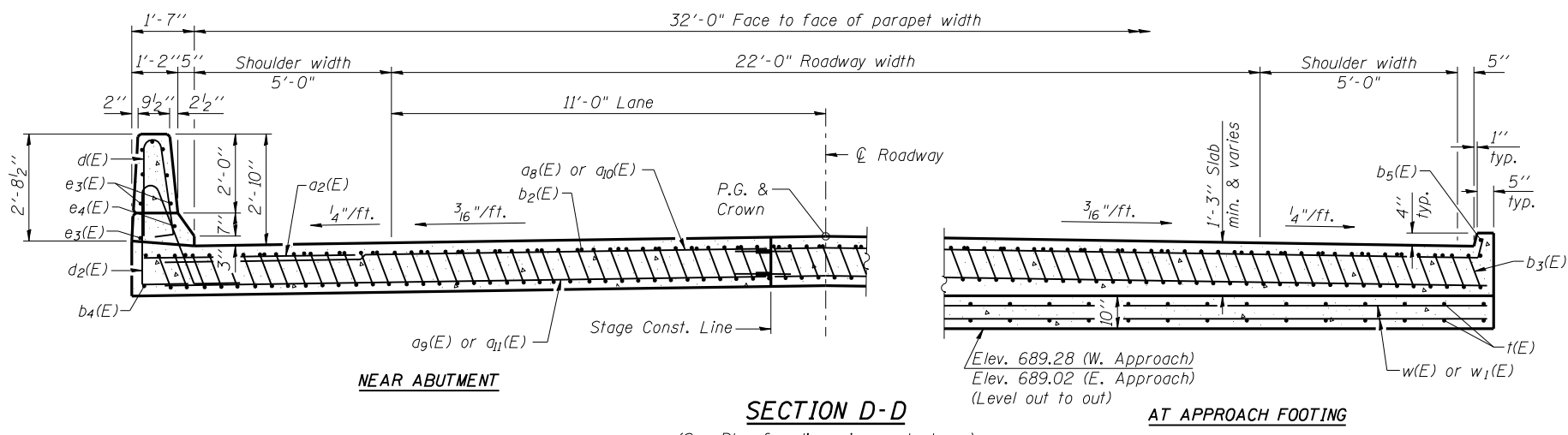


BAR d(E)



BAR d2(E)

* Tilt #9 b3(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.

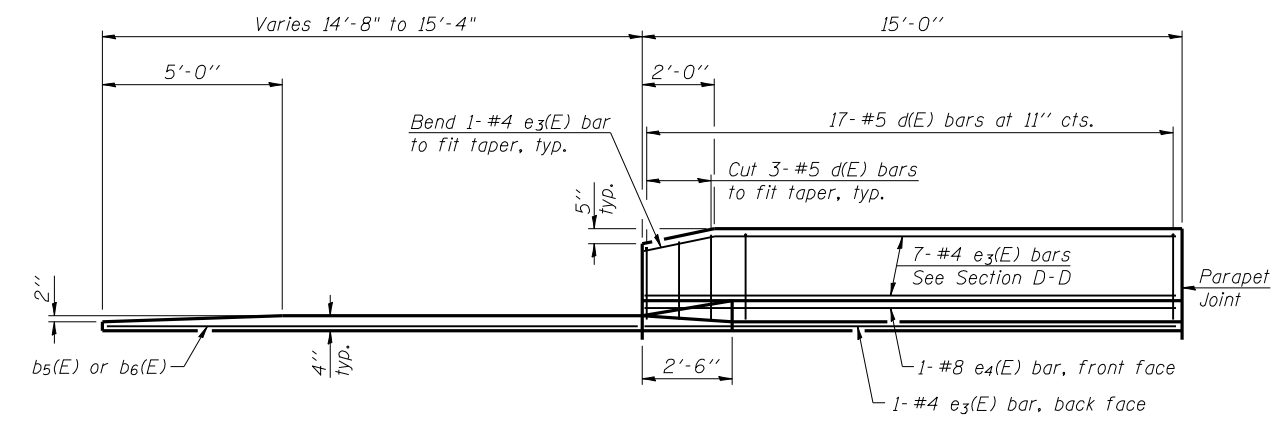


NEAR ABUTMENT

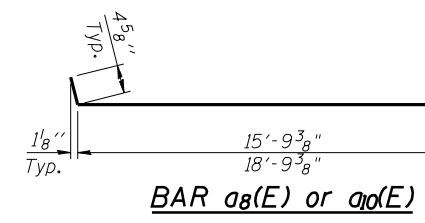
SECTION D-D

AT APPROACH FOOTING

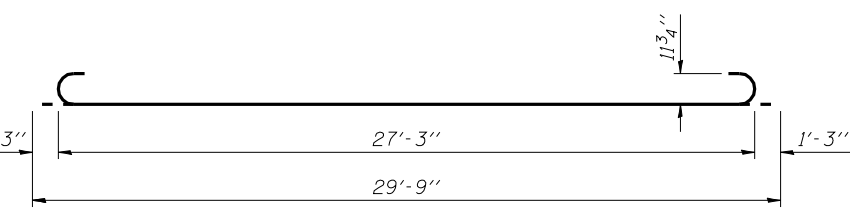
(See Plan for dimensions not shown)



VIEW E-E



BAR a8(E) or a10(E)



BAR b3(E)

TWO APPROACHES
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	—
a8(E)	50	#4	16'-2"	—
a9(E)	92	#5	16'-2"	—
a10(E)	50	#4	19'-2"	—
a11(E)	92	#5	19'-2"	—
b2(E)	56	#4	29'-8"	—
b3(E)	158	#9	29'-9"	—
b4(E)	4	#4	14'-8"	—
b5(E)	2	#4	14'-11"	—
b6(E)	2	#4	14'-5"	—
d(E)	68	#5	5'-7"	U
d2(E)	68	#5	7'-11"	U
e3(E)	32	#4	14'-8"	—
e4(E)	4	#8	14'-8"	—
t(E)	140	#4	10'-3"	—
w(E)	80	#5	16'-2"	—
w1(E)	80	#5	19'-2"	—
Concrete Superstructure			Cu. Yd.	105.4
Concrete Structures			Cu. Yd.	22.2
Reinforcement Bars, Epoxy Coated			Pound	27550

(Sheet 2 of 2)



USER NAME =
 FILE NAME =
 PLOT SCALE =
 PLOT DATE =

DESIGNED - TBP
 CHECKED - ADB
 DRAWN - AJF
 CHECKED - MTH

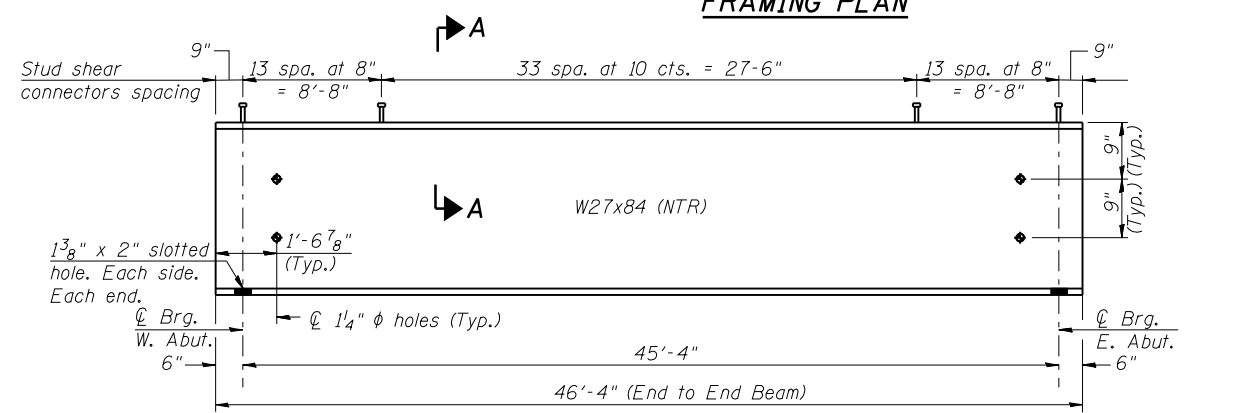
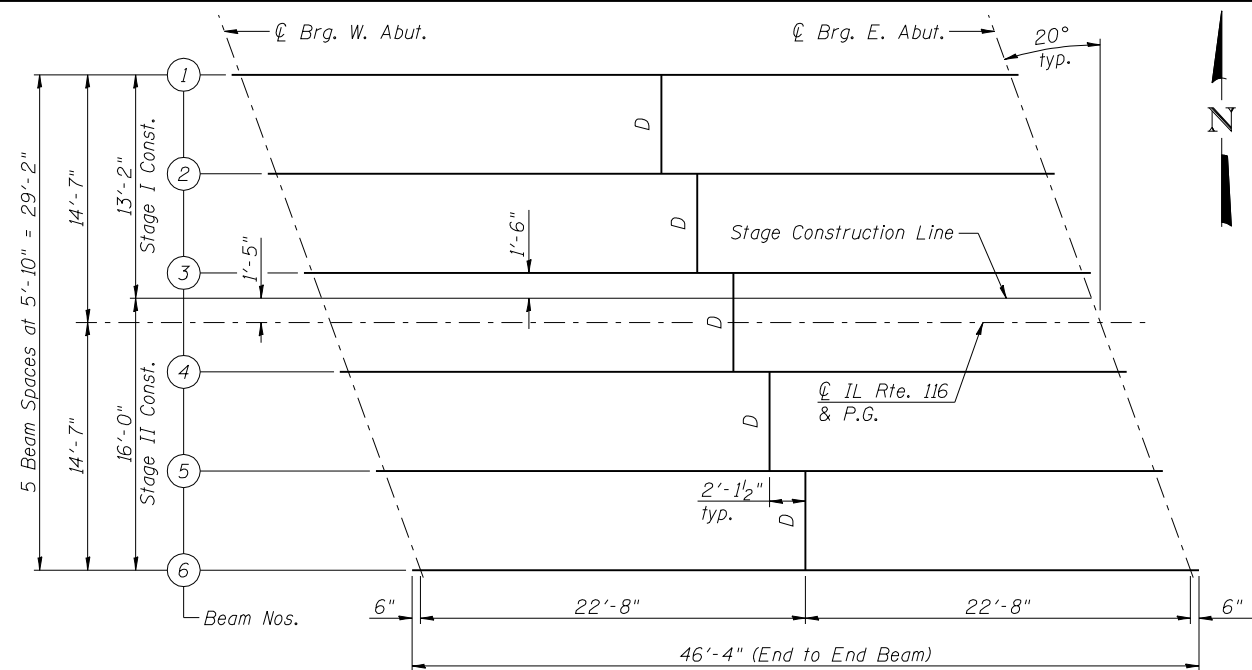
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 029-0075

SHEET NO. 11 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	28
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				



INTERIOR BEAM MOMENT TABLE

		0.5 Span
I_s	(in ⁴)	2850
$I_c(n)$	(in ⁴)	9156
$I_c(3n)$	(in ⁴)	6766
S_s	(in ³)	213
$S_c(3n)$	(in ³)	346
$S_c(n)$	(in ³)	312
DC1	(k/')	0.684
M _{DC1}	(k)	176
DC2	(k/')	0.150
M _{DC2}	(k)	39
DW	(k/')	0.267
M _{DW}	(k)	69
$M_L + IM$	(k)	509
M_u (Strength I)	(k)	1263
$\phi_r M_n$	(k)	1889
f_s DC1	(ksi)	9.92
f_s DC2	(ksi)	1.50
f_s DW	(ksi)	2.65
f_s (L+IM)	(ksi)	17.65
f_s (Service II)	(ksi)	37.02
$0.95R_h F_y f$	(ksi)	47.5
V_r	(k)	18.5

INTERIOR BEAM REACTION TABLE

	Abut.
R_{DC1}	(k) 16.2
R_{DC2}	(k) 3.4
R_{DW}	(k) 6.1
R_{L+IM}	(k) 63.9
R_{Total}	(k) 89.6

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

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.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (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_s

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

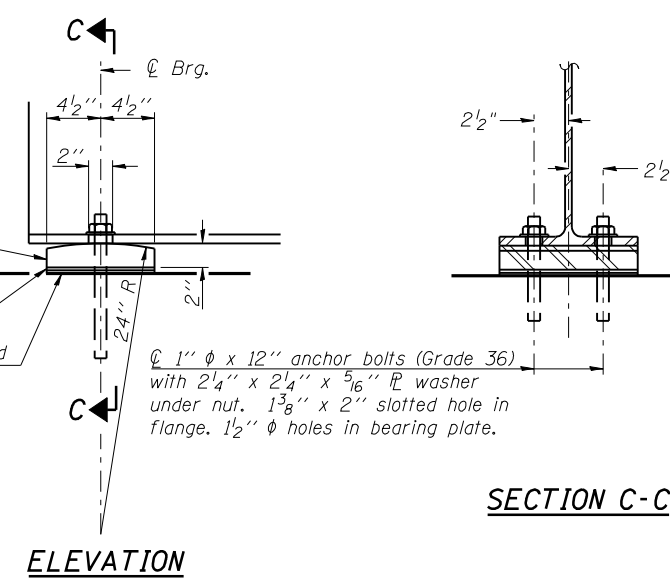
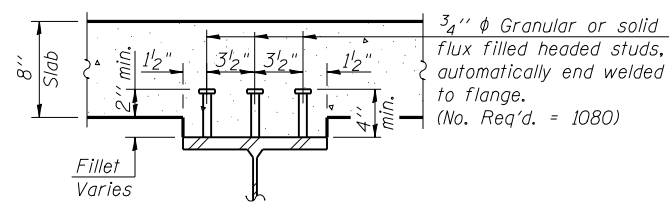
f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$

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).
 $M_L + IM / S_c(n)$

(Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (L+IM)$

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

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



NOTES:

- All beams shall be W27x84 AASHTO M270 Grade 50 (NTR).
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place.

SHIM PLATES

Location	Beam 3
W. Abut.	1/8"

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

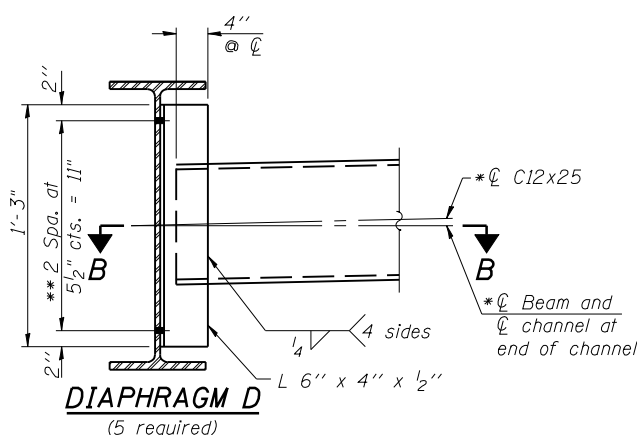
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
CL Brg. W. Abut.	690.57	690.66	690.74	690.73	690.63	690.51
CL Brg. E. Abut.	690.42	690.52	690.61	690.61	690.52	690.42

Notes:

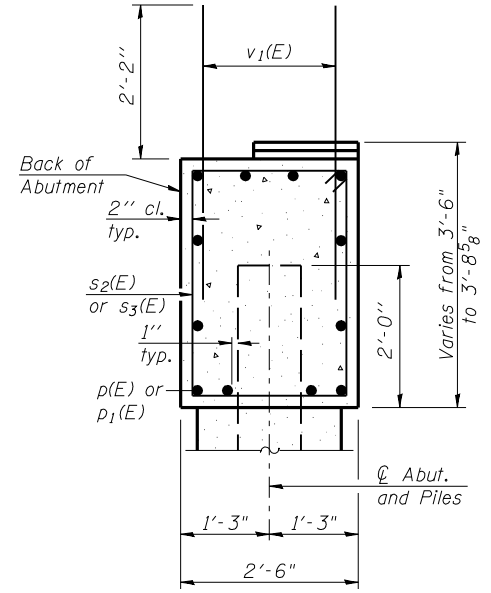
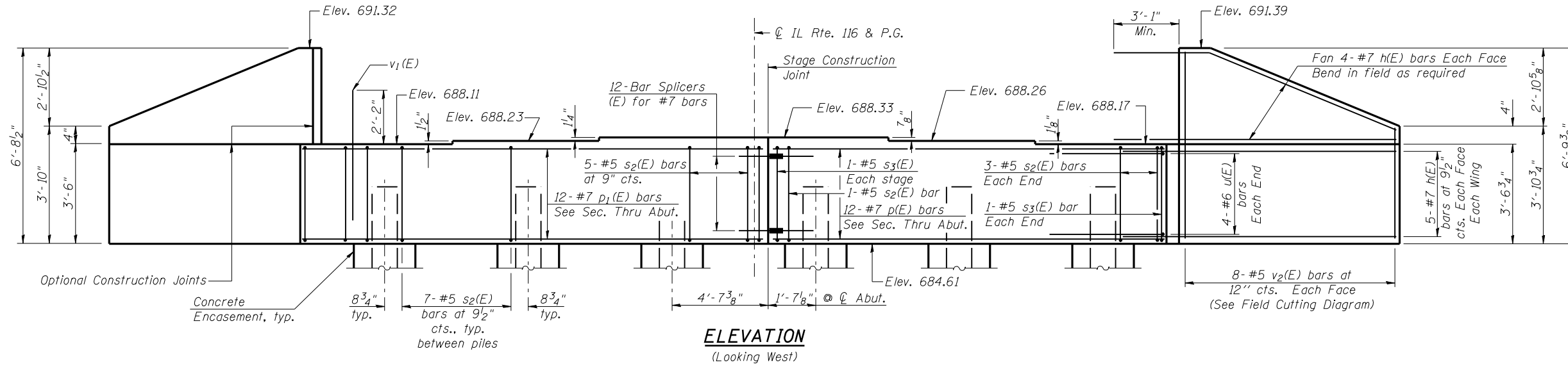
Two hardened washers required for each set of oversized holes and 5/16" plate washer over slotted holes.

*C12x30 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on C12x25. The alternate, if utilized, shall be provided at no additional cost to the Department.

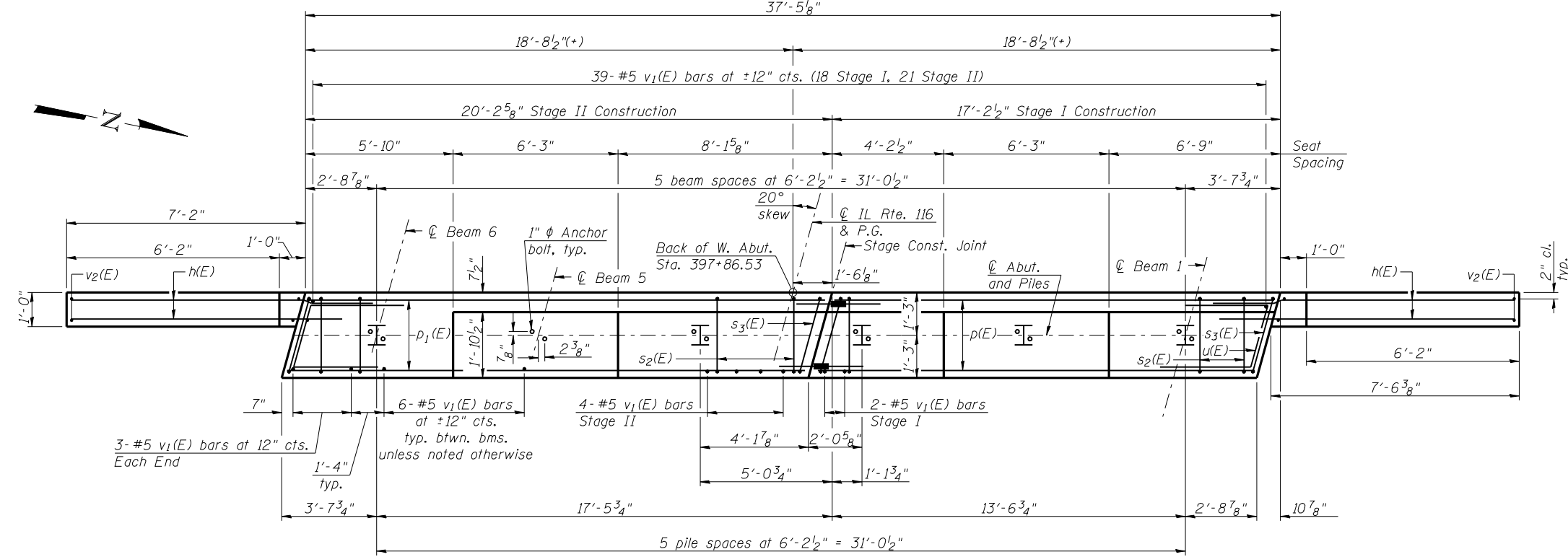
**3/4" ϕ HS bolts, 1 5/16" ϕ holes. For diaphragm at stage construction line, provide 1 3/8" x 1 7/8" vertical slotted holes on north side of Beam 4 in angle and on south side of Beam 3 provide oversized holes in angle and beam. Slots shall be positioned such that the bolts start at one end with no concrete load and finish near the opposite end after the deck pour. Bolts in slotted holes shall be finger tightened and then fully tightened after second stage deck pour.



Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss
 Anchor Bolts.



SEC. THRU ABUT.
 (Dimensions at Rt. L's)



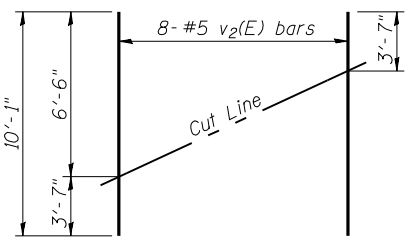
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#7	10'-6"	—
p(E)	12	#7	16'-10"	—
p1(E)	12	#7	19'-10"	—
s2(E)	40	#5	11'-7"	□
s3(E)	4	#5	11'-10"	□
u(E)	8	#6	8'-11"	∟
v1(E)	75	#5	4'-4"	—
v2(E)	16	#5	10'-1"	—
Structure Excavation			Cu. Yd.	83
Concrete Structures			Cu. Yd.	15.6
Reinforcement Bars, Epoxy Coated			Pound	2820
Furnishing Steel Piles, HP10x42			Foot	80
Driving Piles			Foot	80
Test Pile Steel HP10x42			Each	1
Pile Shoes			Each	6
Concrete Encasement			Cu. Yd.	2.1

For details of Bar Splicers, see Sheet 15 of 19.
 For details of piles and Concrete Encasement, see Sheet 16 of 19.
 For drainage details, see Sheet 2 of 19.
 For bearing details, see Sheet 12 of 19.

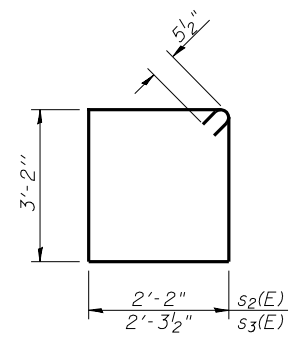
PILE DATA

Type: Steel HP10x42 with Pile Shoes
 Nominal Required Bearing: 326 kips
 Factored Resistance Available: 179 kips
 Est. Length: 16 ft.
 No. Production Piles: 5
 No. Test Piles: 1

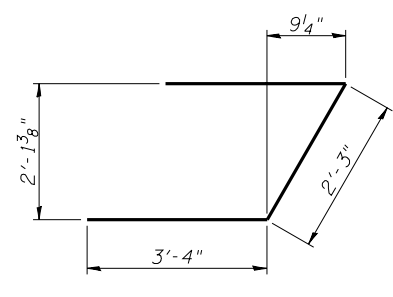


FIELD CUTTING DIAGRAM

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

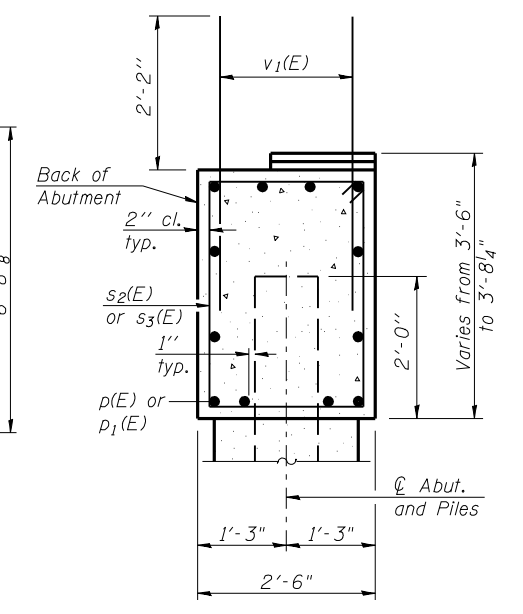
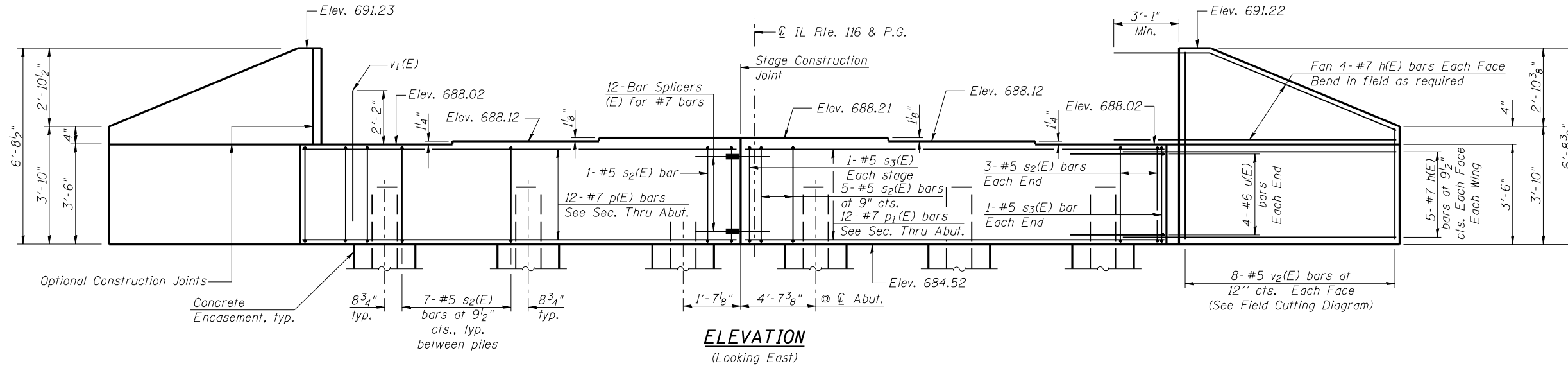


BARS s2(E) & s3(E)

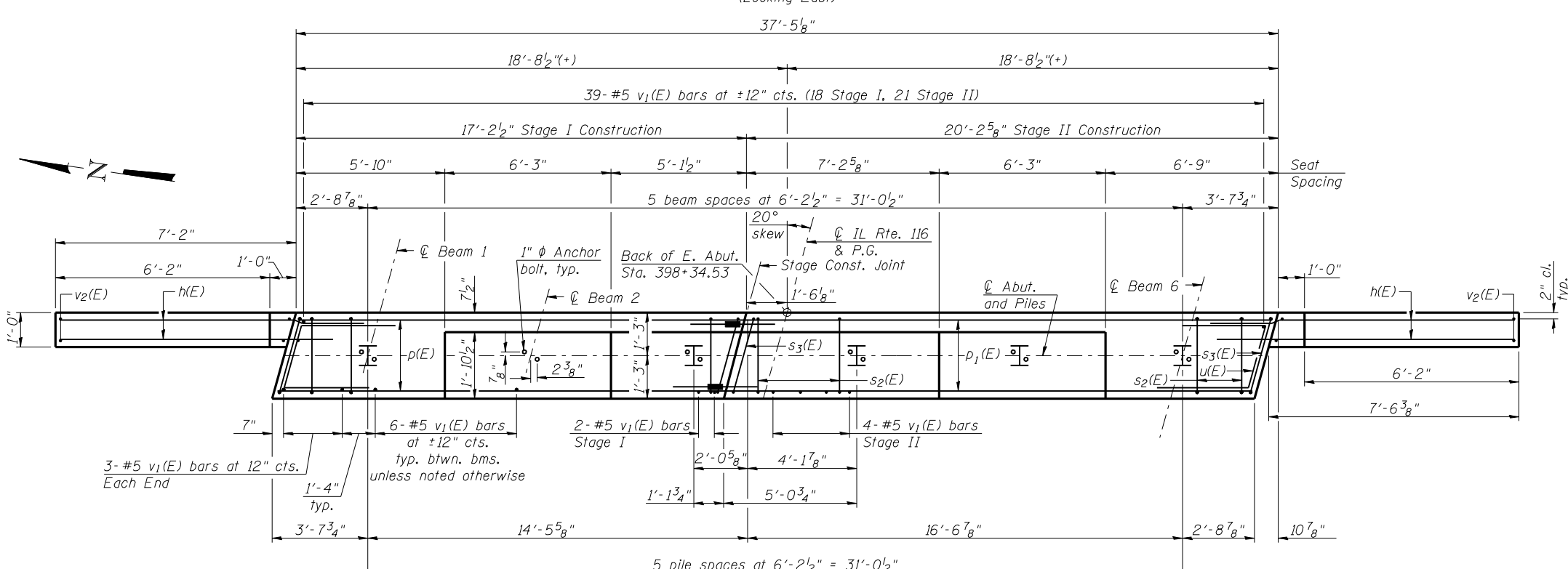


BAR u(E)

Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss
 Anchor Bolts.



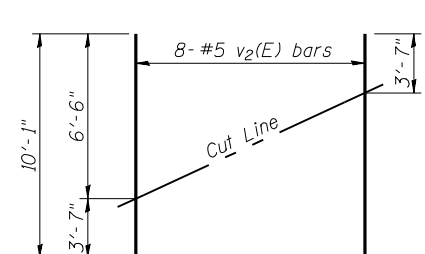
SEC. THRU ABUT.
 (Dimensions at Rt. L's)



PLAN

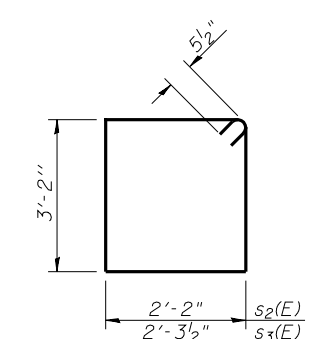
PILE DATA

Type: Steel HP10x42 with Pile Shoes
 Nominal Required Bearing: 313 kips
 Factored Resistance Available: 172 kips
 Est. Length: 14 ft.
 No. Production Piles: 5
 No. Test Piles: 1

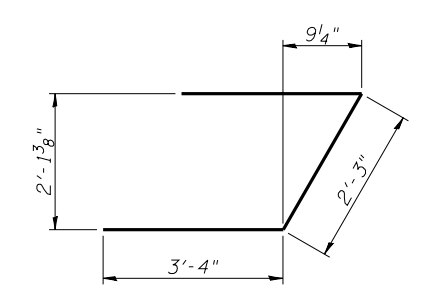


FIELD CUTTING DIAGRAM

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



BARS s2(E) & s3(E)

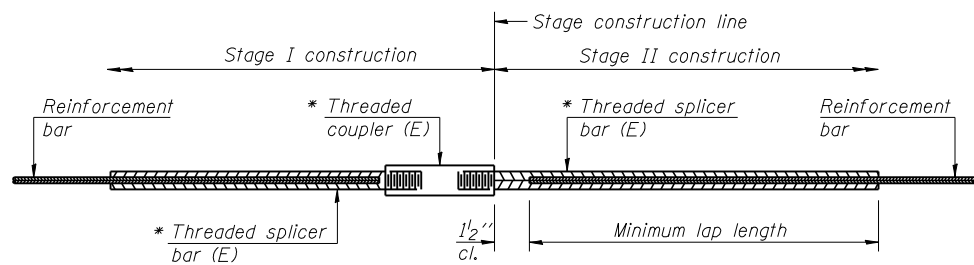


BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#7	10'-6"	—
p(E)	12	#7	16'-10"	—
p1(E)	12	#7	19'-10"	—
s2(E)	40	#5	11'-7"	□
s3(E)	4	#5	11'-10"	□
u(E)	8	#6	8'-11"	∟
v1(E)	75	#5	4'-4"	—
v2(E)	16	#5	10'-1"	—
Structure Excavation			Cu. Yd.	82
Concrete Structures			Cu. Yd.	15.5
Reinforcement Bars, Epoxy Coated			Pound	2820
Furnishing Steel Piles, HP10x42			Foot	70
Driving Piles			Foot	70
Test Pile Steel HP10x42			Each	1
Pile Shoes			Each	6
Concrete Encasement			Cu. Yd.	2.1

For details of Bar Splicers, see Sheet 15 of 19.
 For details of piles and Concrete Encasement, see Sheet 16 of 19.
 For drainage details, see Sheet 2 of 19.
 For bearing details, see Sheet 12 of 19.



STANDARD BAR SPLICER ASSEMBLY

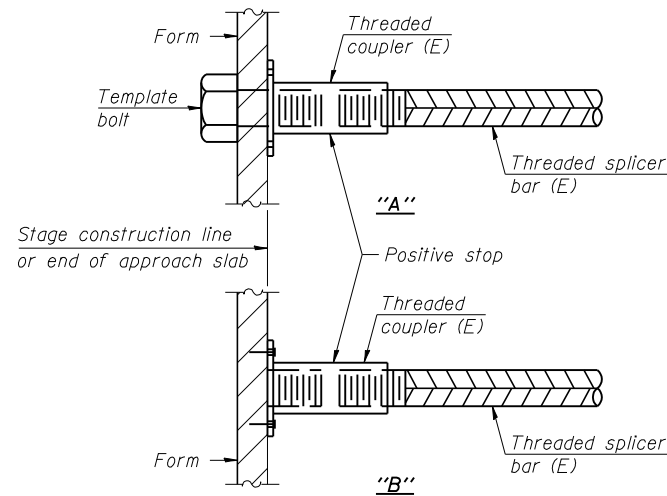
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

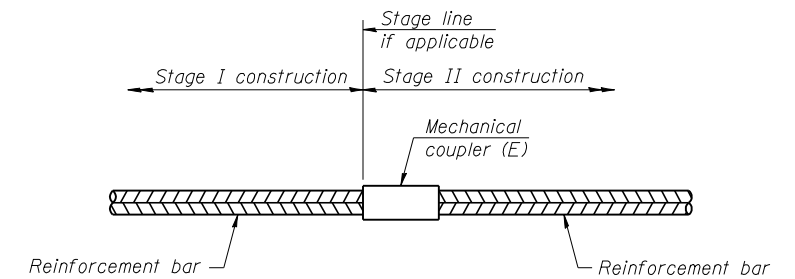
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Slab	#5	143	Table 3
Conc. End Diaph.	#6	16	Table 4
Approach Slab	#4	50	Table 4
Approach Slab	#5	172	Table 3
Abutments	#7	24	Table 4



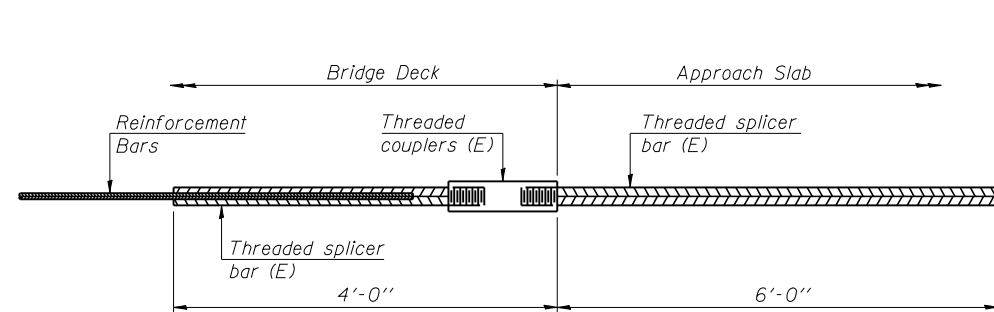
INSTALLATION AND SETTING METHODS

"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.



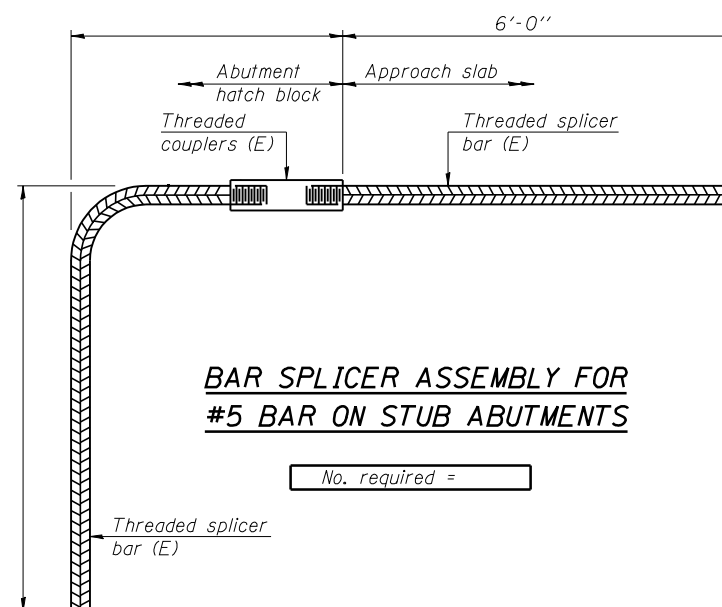
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required = 78



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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FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

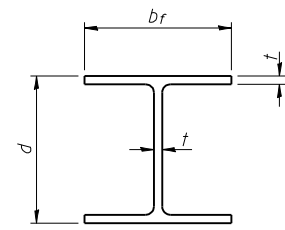
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 029-0075

SHEET NO. 15 OF 19 SHEETS

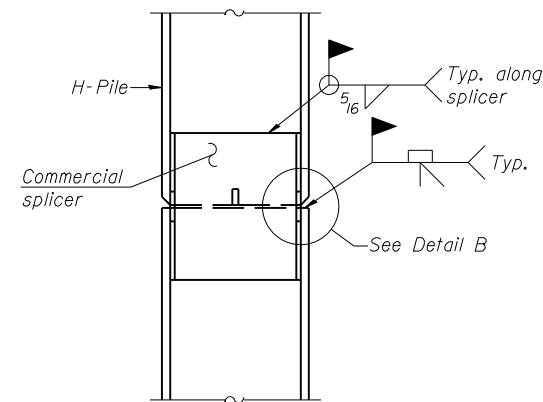
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	32
CONTRACT NO. 68778				

ILLINOIS FED. AID PROJECT

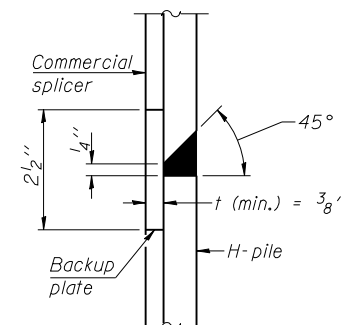


STEEL PILE TABLE

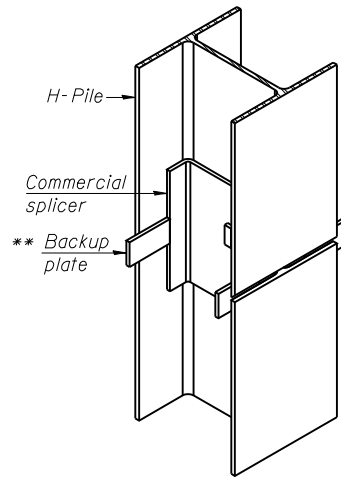
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	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

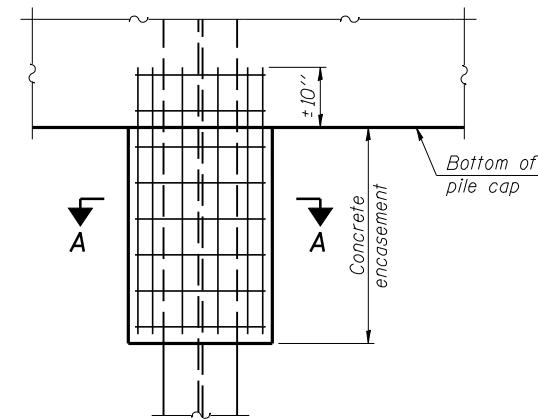


DETAIL "B"



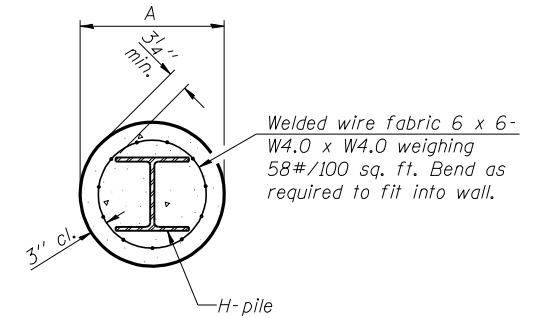
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



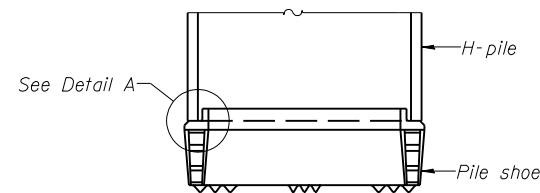
ELEVATION

PILE ENCASEMENT

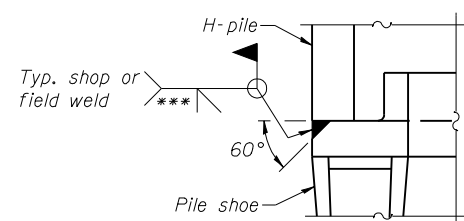


SECTION A-A

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

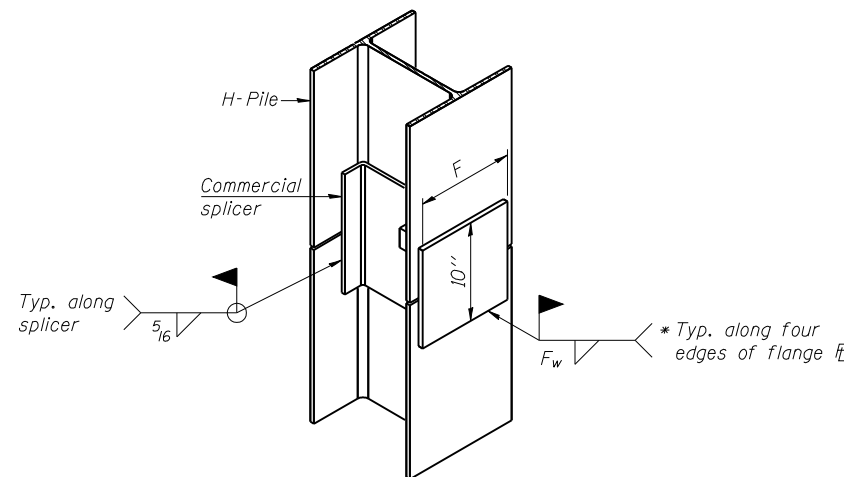


ELEVATION



DETAIL A

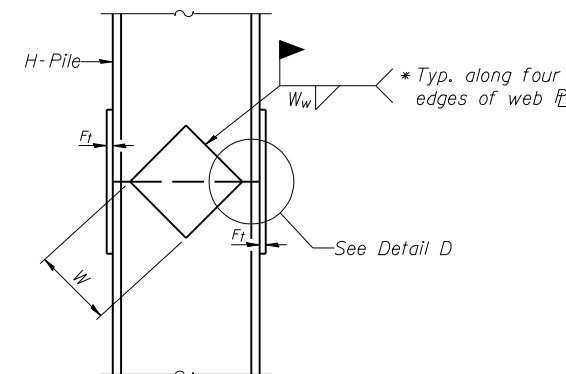
H-PILE SHOE ATTACHMENT



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

DETAIL D

WELDED PLATE FIELD SPLICE

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

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

F-HP 1-27-12



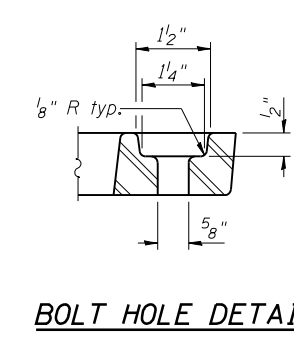
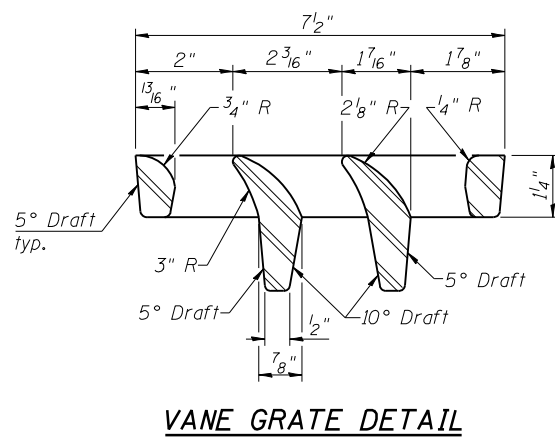
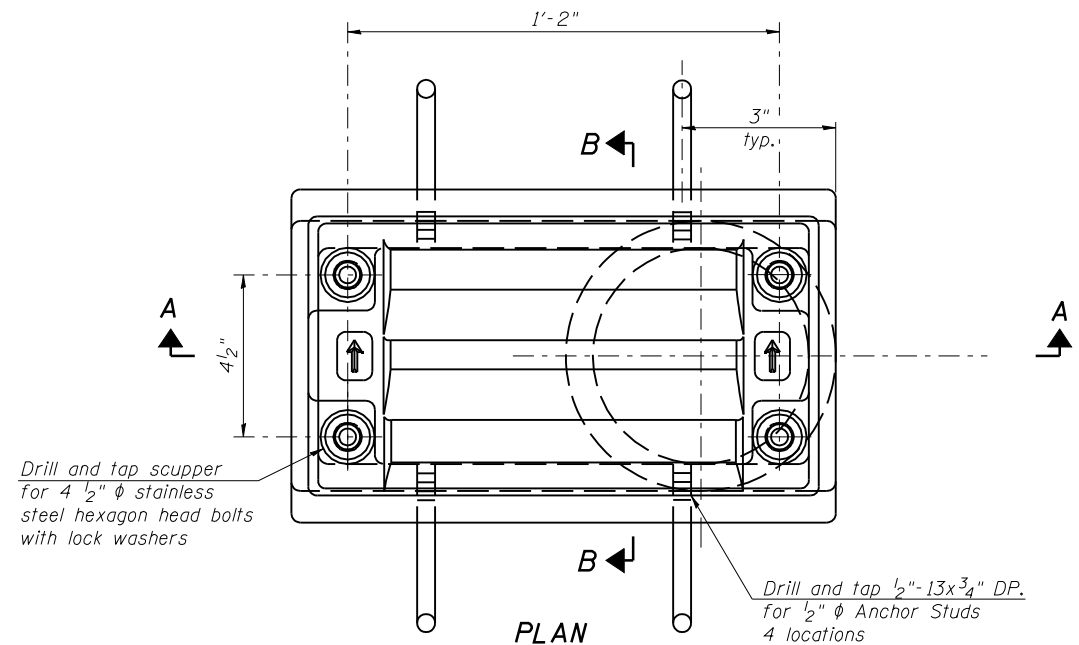
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FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 029-0075

SHEET NO. 16 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	33
CONTRACT NO. 68778				
ILLINOIS FED. AID PROJECT				



Notes:

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

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

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

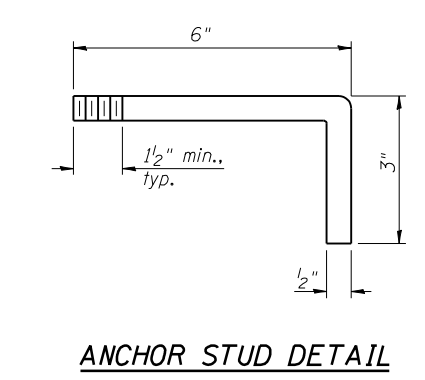
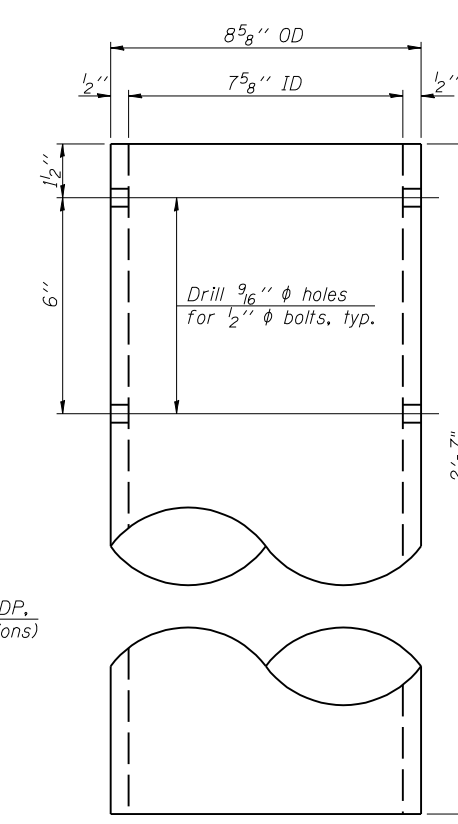
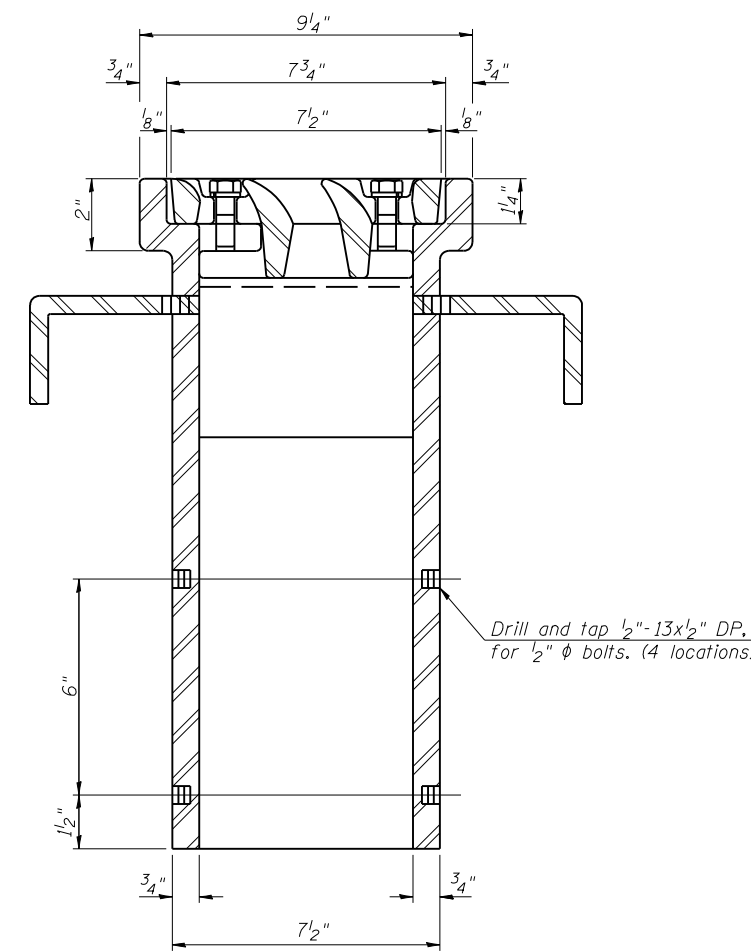
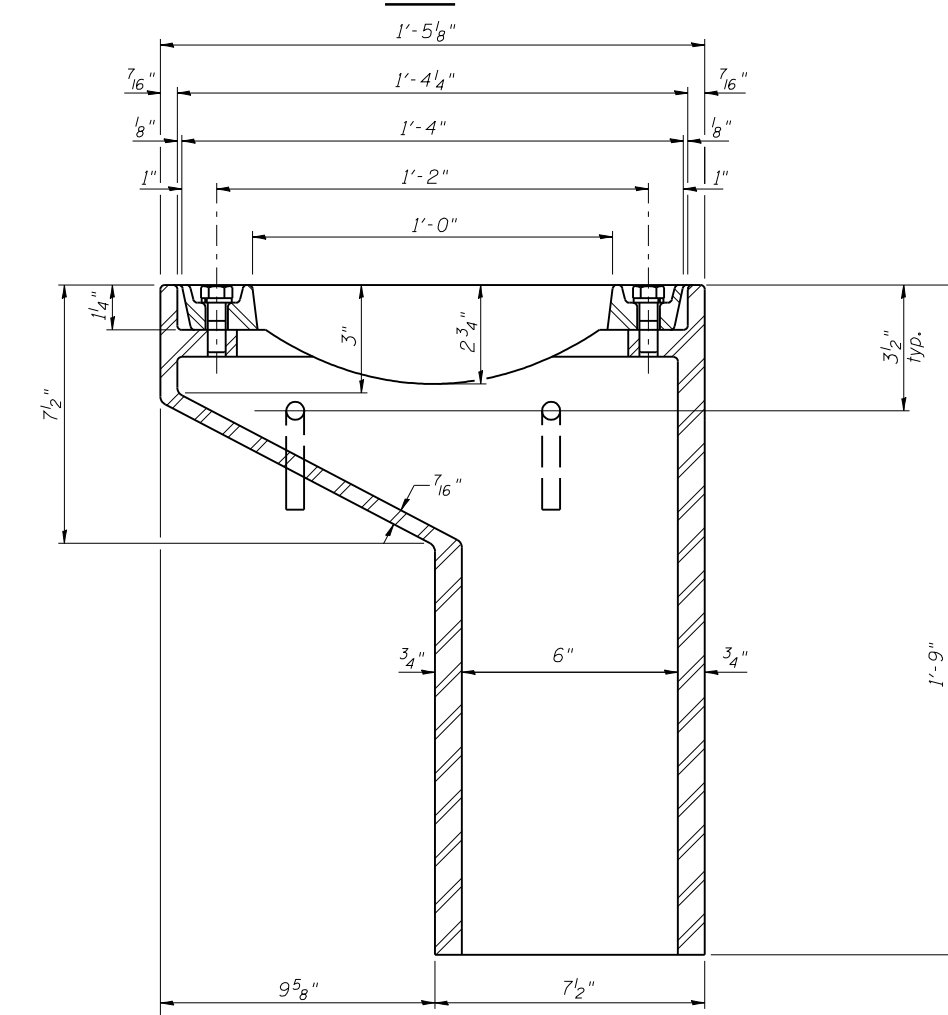
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

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

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

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, DS-11.

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



See sheet 8 of 19 for scupper location relative to parapet.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, DS-11	Each	4

DS-11

7-1-10

LE LIN ENGINEERING, LTD.
Consulting Engineers
Chatham, Illinois

USER NAME =
FILE NAME =
PLOT SCALE =
PLOT DATE =

DESIGNED - TBP
CHECKED - ADB
DRAWN - AJF
CHECKED - MTH

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 029-0075**

SHEET NO. 17 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	34

CONTRACT NO. 68778

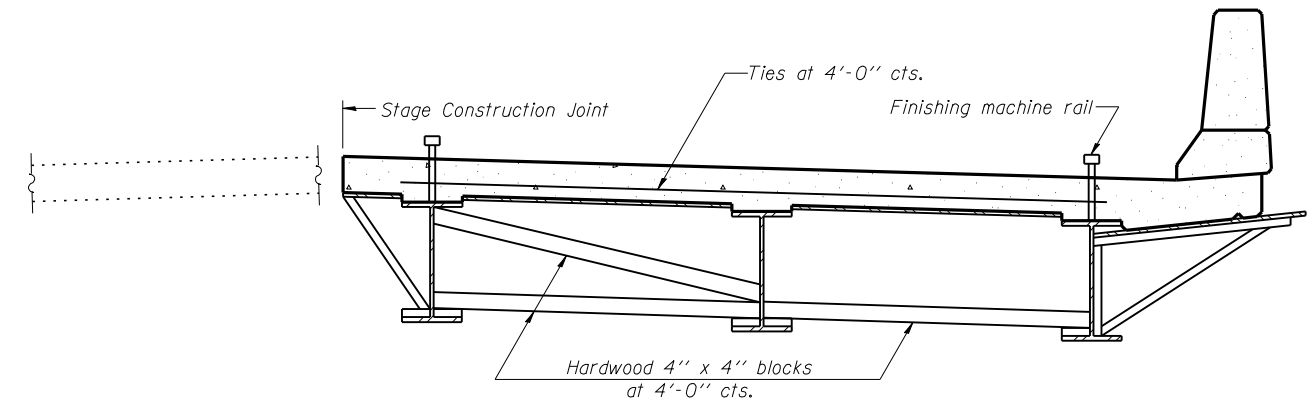
ILLINOIS FED. AID PROJECT

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.

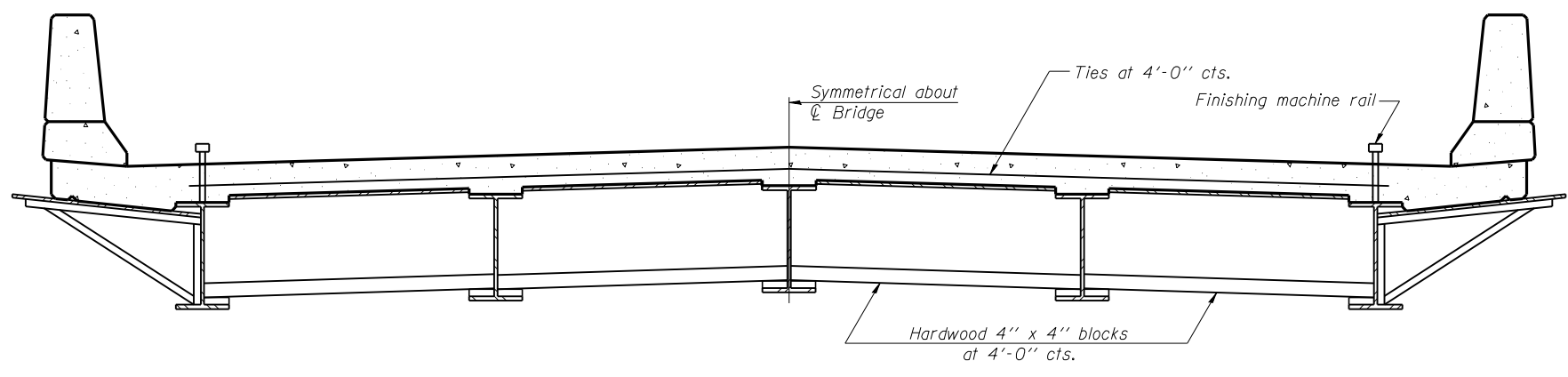
The finishing machine rails shall be placed on the top flange of the exterior beams.

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

Lin Engineering, Ltd.
Consulting Engineers
Chatham, Illinois

USER NAME =	DESIGNED - TBP	REVISED -
FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

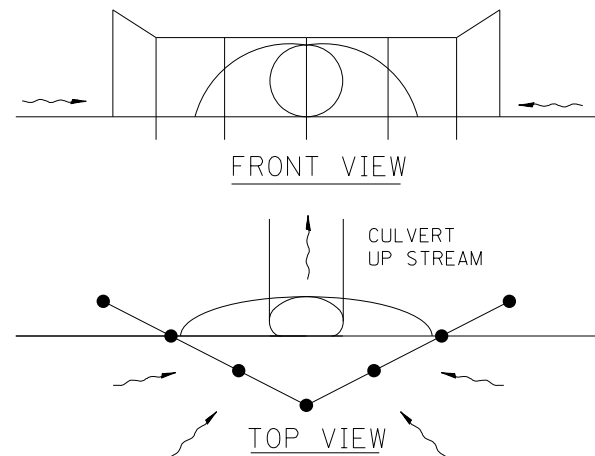
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER FORMING BRACKETS
STRUCTURE NO. 029-0075**

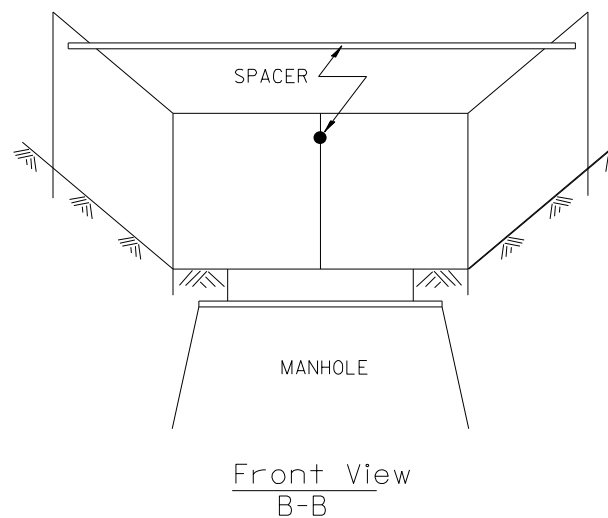
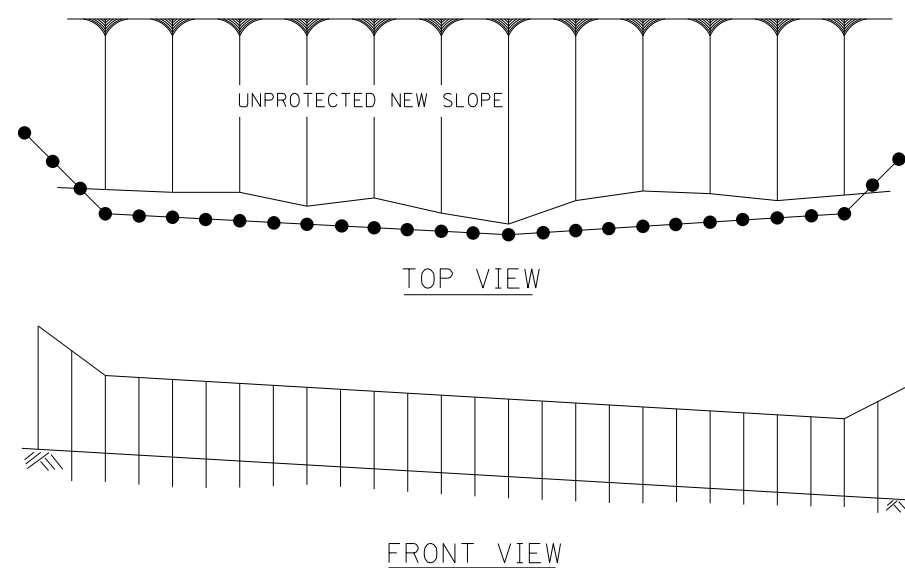
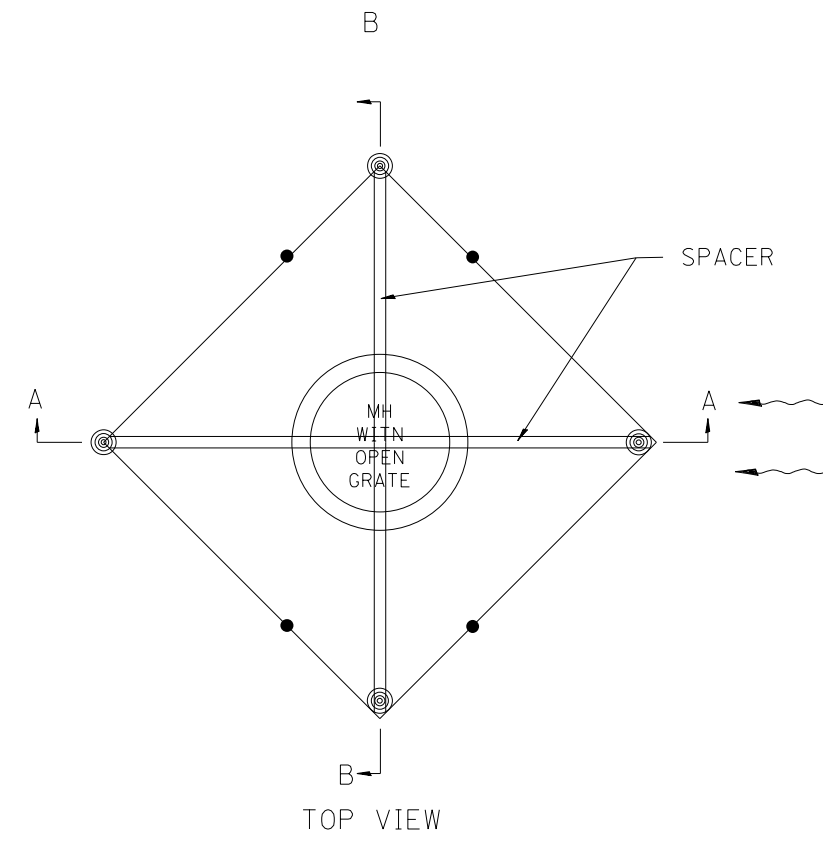
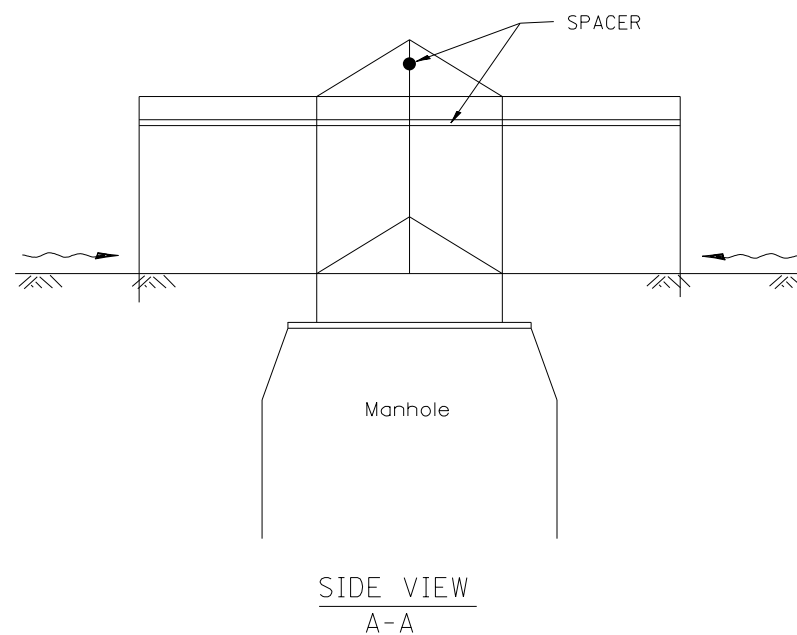
SHEET NO. 18 OF 19 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	144-B-1 BR	FULTON	48	35
				CONTRACT NO. 68778

ILLINOIS FED. AID PROJECT



UPSTREAM PIPE CULVERT EROSION CONTROL



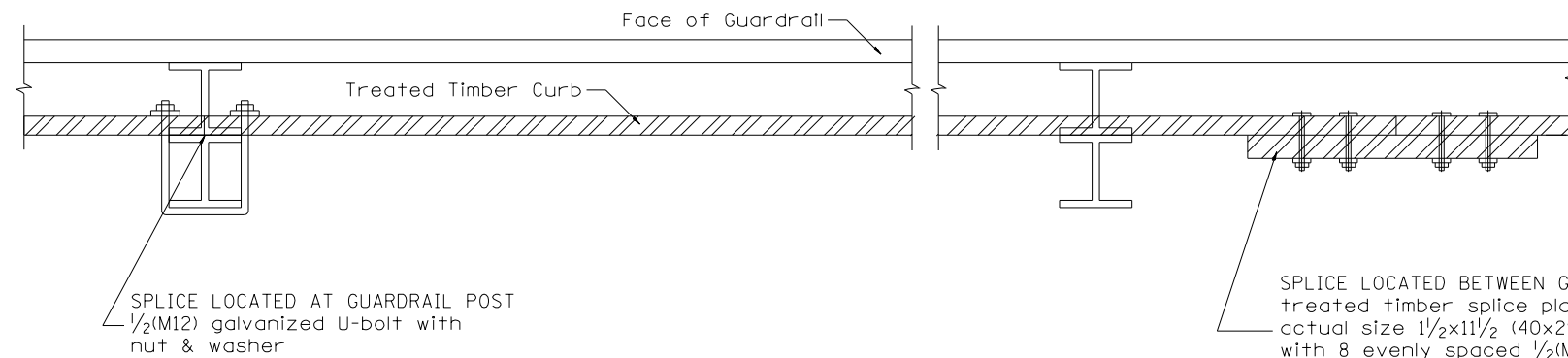
EROSION CONTROL AT OPEN GRATE MAN HOLE

GENERAL NOTES:

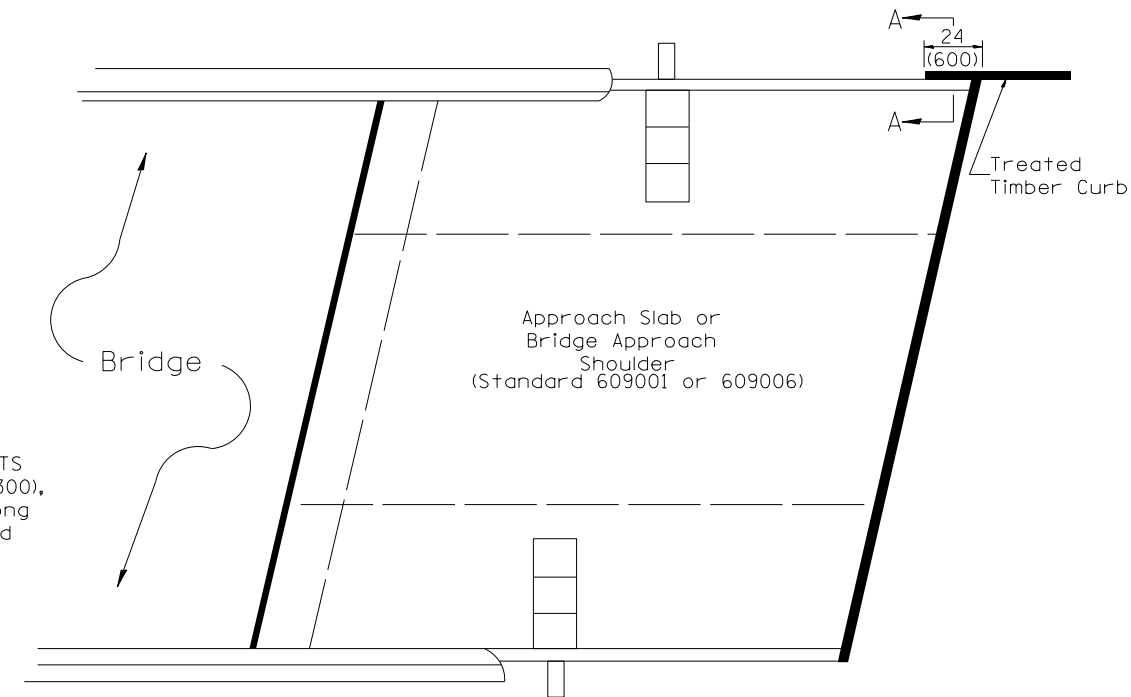
1. This work shall be performed in accordance with Sections 280 & 1081, of the Standard Specifications.
2. Additional Timber or Metal Post shall be installed, as needed.

TYPICAL APPLICATION OF SILT FILTER FENCE

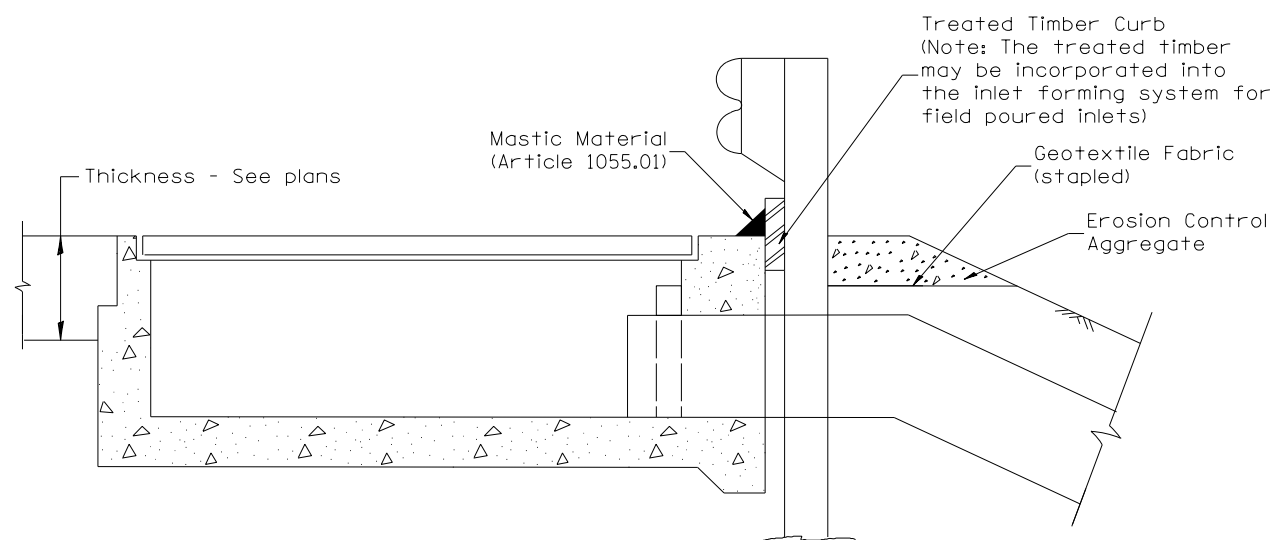
All dimensions are in inches (millimeters) unless otherwise noted.



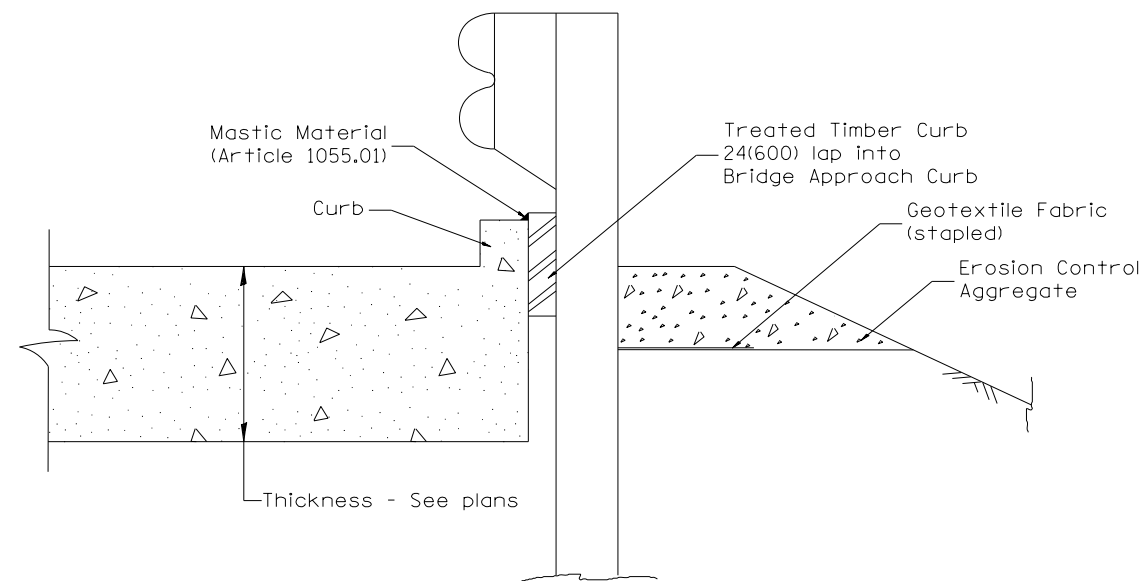
DETAIL A
(Typical Treated Timber Splices)



PLAN VIEW
APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB
AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A
TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

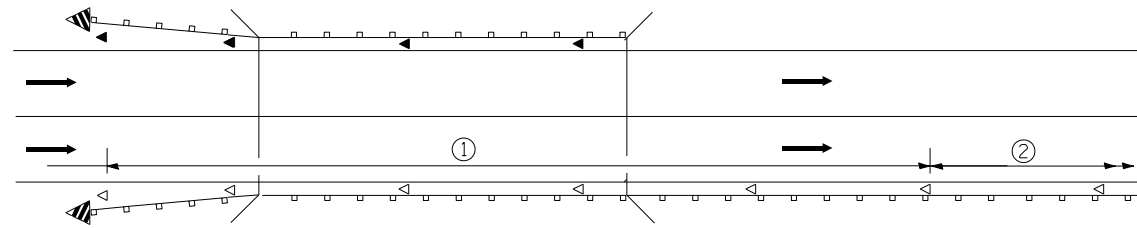
GUARDRAIL EROSION CONTROL TREATMENTS

All dimensions are in inches (millimeters) unless otherwise noted.

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE - 11/2012	REVISED -

DISTRICT 4 STANDARDS		
IL ROUTE 116		
SCALE: N.T.S.	SHEET NO. 5 OF 11 SHEETS	STA. TO STA.

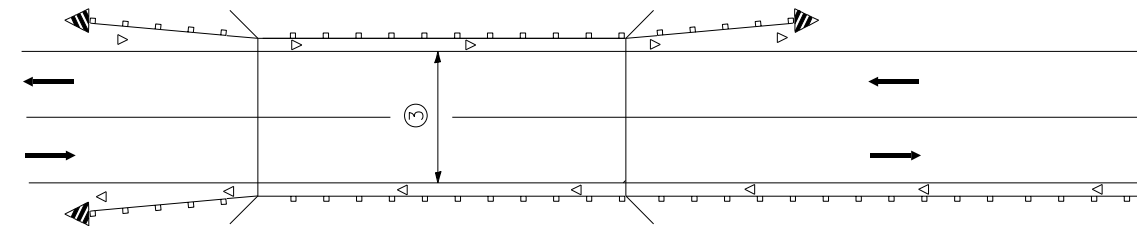
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	39
630101 PAGE 2 OF 2			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				



① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



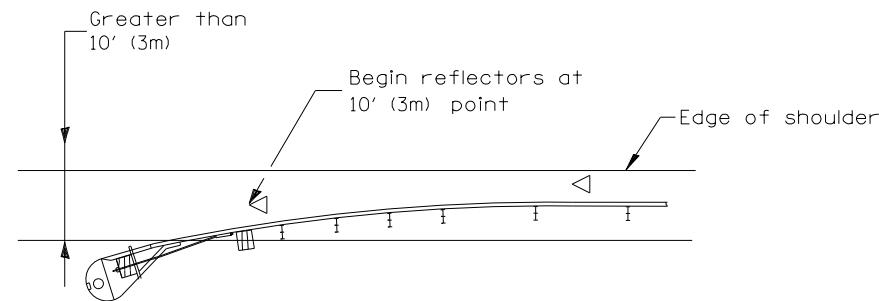
③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 24 (610) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS

LEGEND

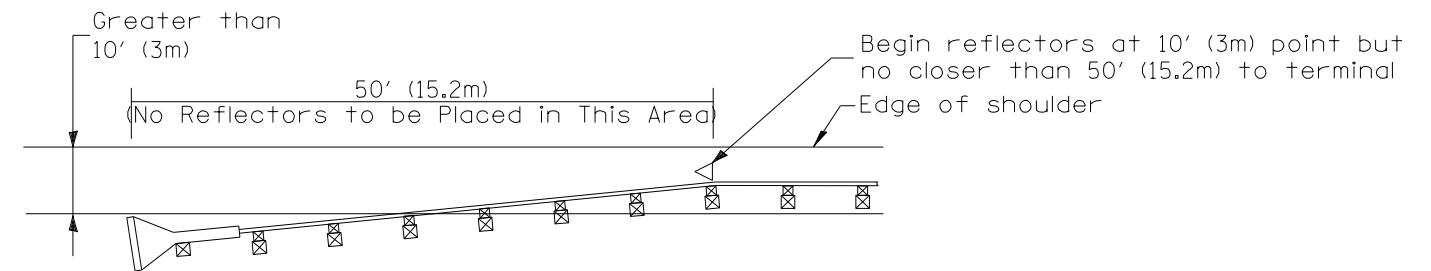
- ◁ Monodirectional silver
- ◄ Monodirectional amber
- ◄ Terminal Marker - Black/Yellow
Left or Right as appropriate



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

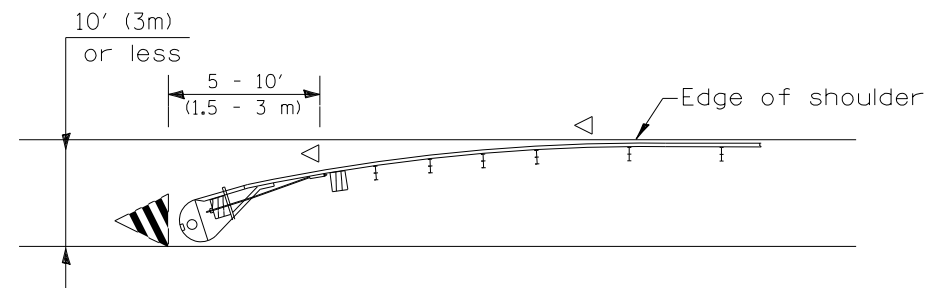
Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

[Terminal over 10' (3m) from edge of shoulder]
*See Plans for Type



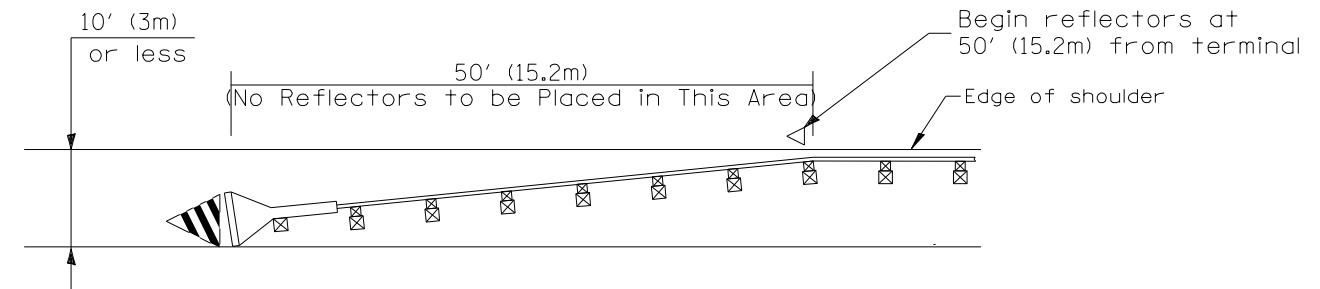
NOTE: Omit terminal marker when terminal over (10') from edge of paved shoulder or break point of unpaved shoulder.

Traffic Barrier Terminal Type 1 (Special)
[Terminal over 10' (3m) from edge of shoulder]



Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

[Terminal over 10' (3m) or less from edge of shoulder]
*See Plans for Type



Traffic Barrier Terminal Type 1(Special)
[Terminal 10' (3m) or less from edge of shoulder]

TERMINAL MARKER PLACEMENT

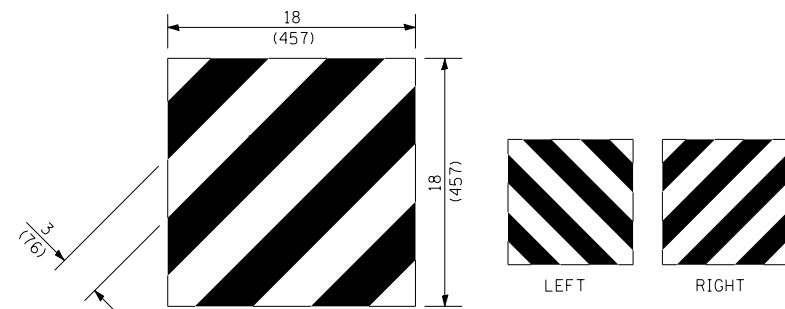
GUARDRAIL AND BARRIER WALL DELINEATION

All dimensions are in inches (millimeters) unless otherwise noted.

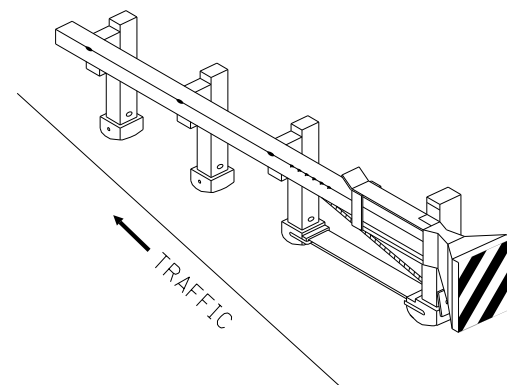
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	DRAWN -	REVISED -
PLOT SCALE = *SCALE*	CHECKED -	REVISED -
PLOT DATE = *DATE*	DATE - 11/2012	REVISED -

DISTRICT 4 STANDARDS		
IL ROUTE 116		
SCALE: N.T.S.	SHEET NO. 6 OF 11 SHEETS	STA. TO STA.

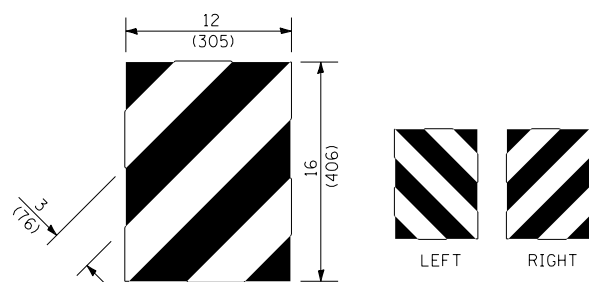
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	40
635101 PAGE 1 OF 3			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				



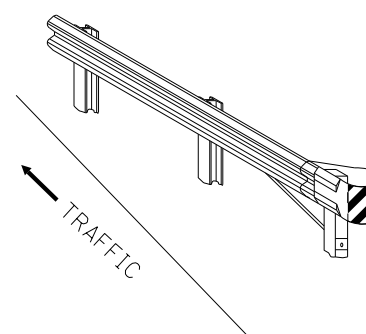
For Traffic Barrier Terminal Type 1 (Special)



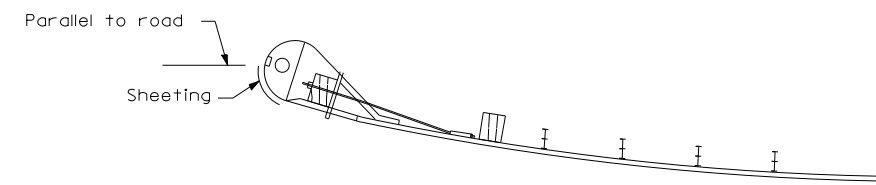
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type 1 (Special)



For Traffic Barrier Terminal Type (*)
and Post Mount
* See Plans for Type



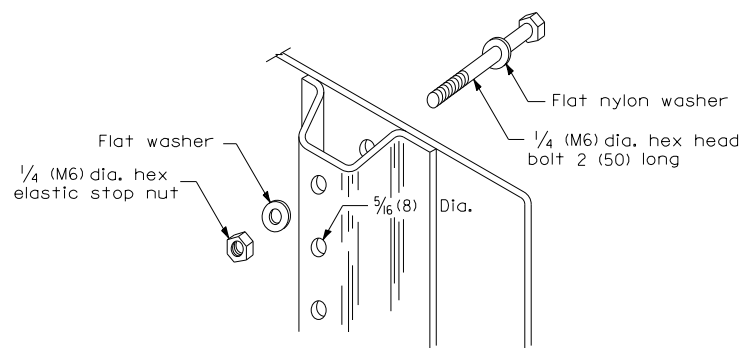
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type (*)
* See Plans for Type



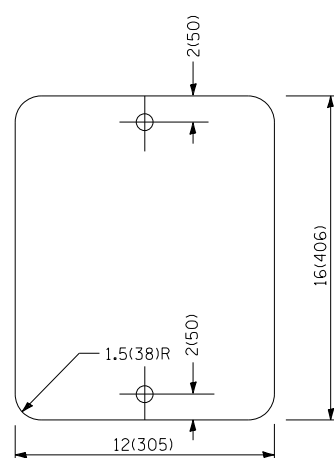
Sheeting Position for
Traffic Barrier Terminal Type (*)
* See Plans for Type

TERMINAL MARKER DETAILS

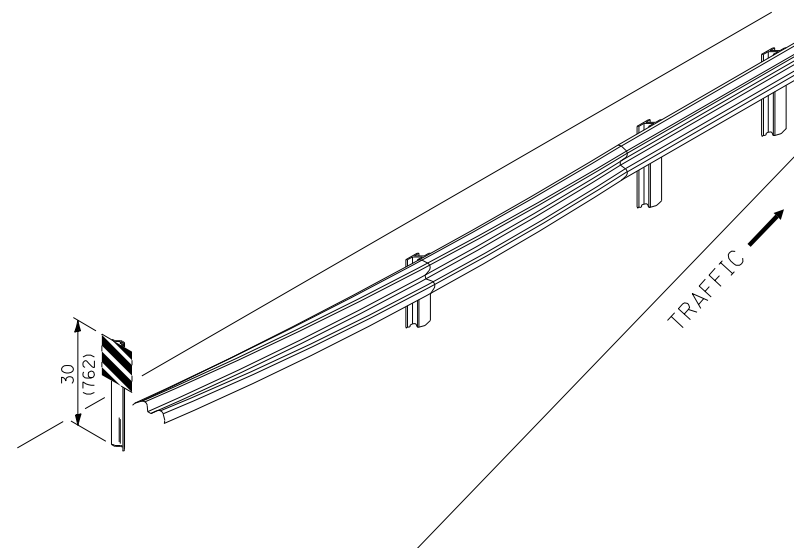
- Color: Black / Yellow reflectorized
- OM - I100 (L or R) Direct applied reflective sheeting
- OM - I200 (L or R) Post mounted



DETAIL OF MOUNTING TERMINAL MARKER TO POST



STANDARD TERMINAL MARKER



ALTERNATE TREATMENT - POST MOUNTED
(For turned-down terminal where sheeting cannot be direct applied)

POST MOUNTED TERMINAL MARKER ASSEMBLY

TERMINAL MARKER TREATMENTS

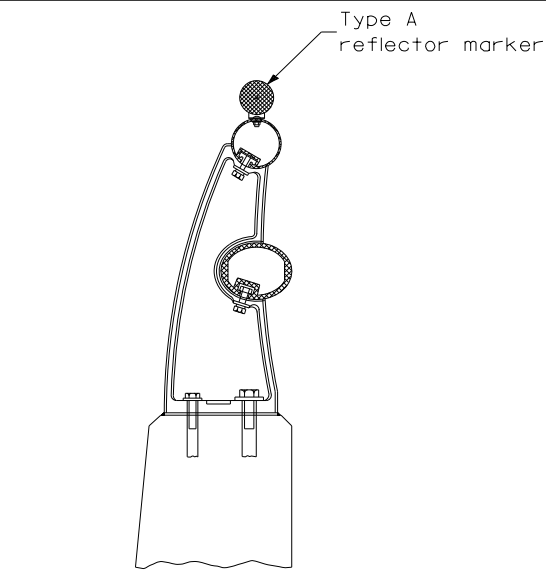
GENERAL NOTES

GUARDRAIL AND BARRIER WALL DELINEATION

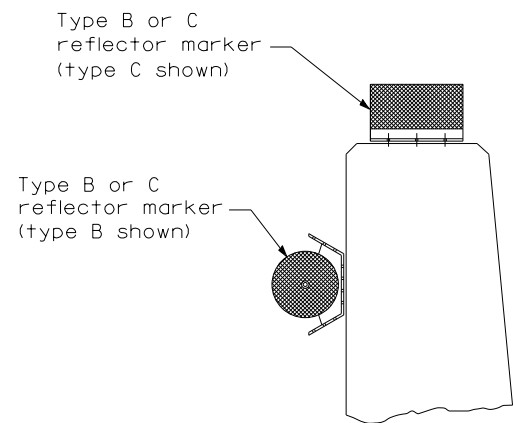
All dimensions are in inches (millimeters) unless otherwise noted.

USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE - 11/2012	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	41
635101 PAGE 2 OF 3			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				

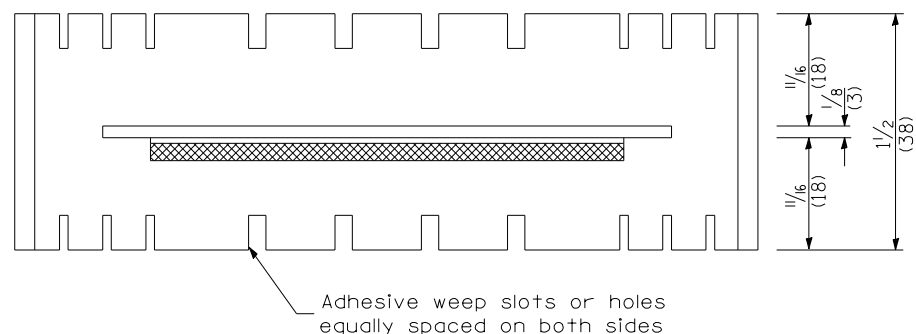


TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR

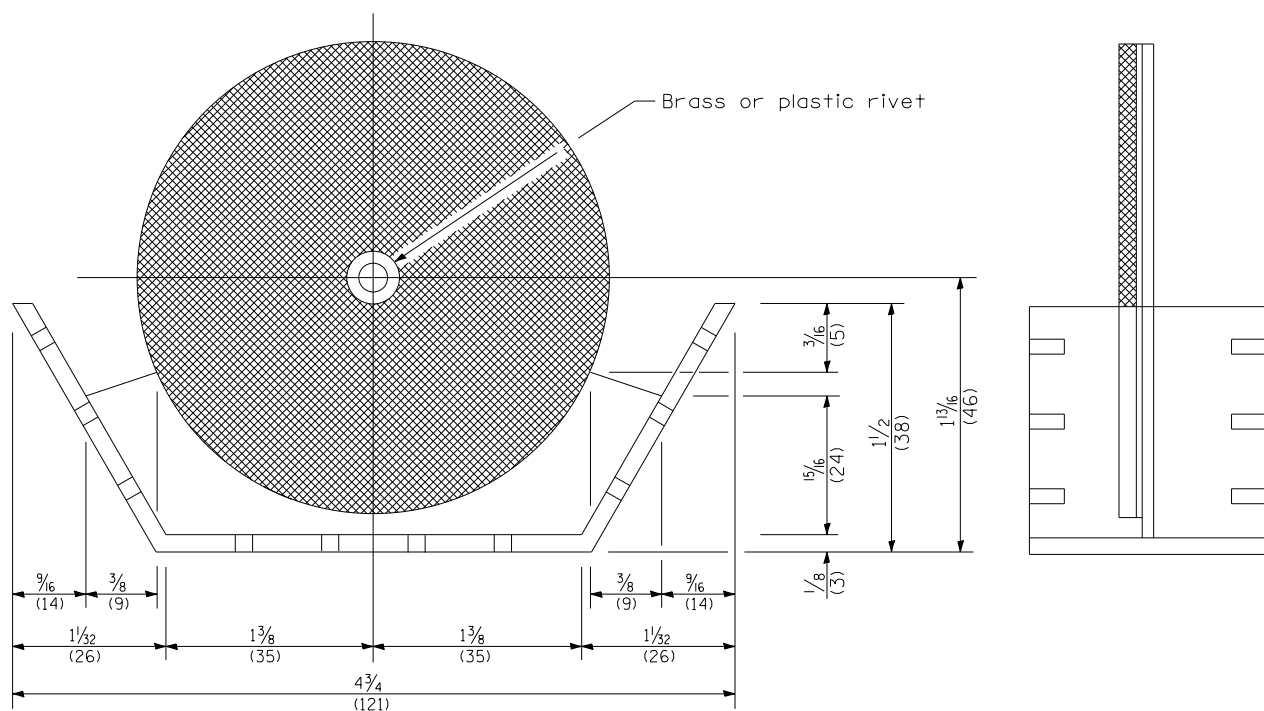


TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR

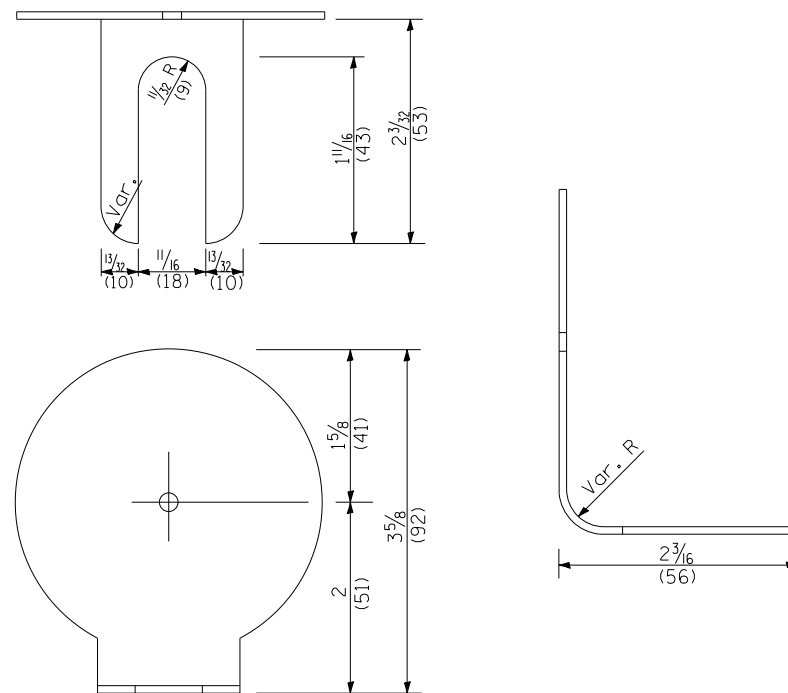
REFLECTOR MOUNTING



Adhesive weep slots or holes equally spaced on both sides

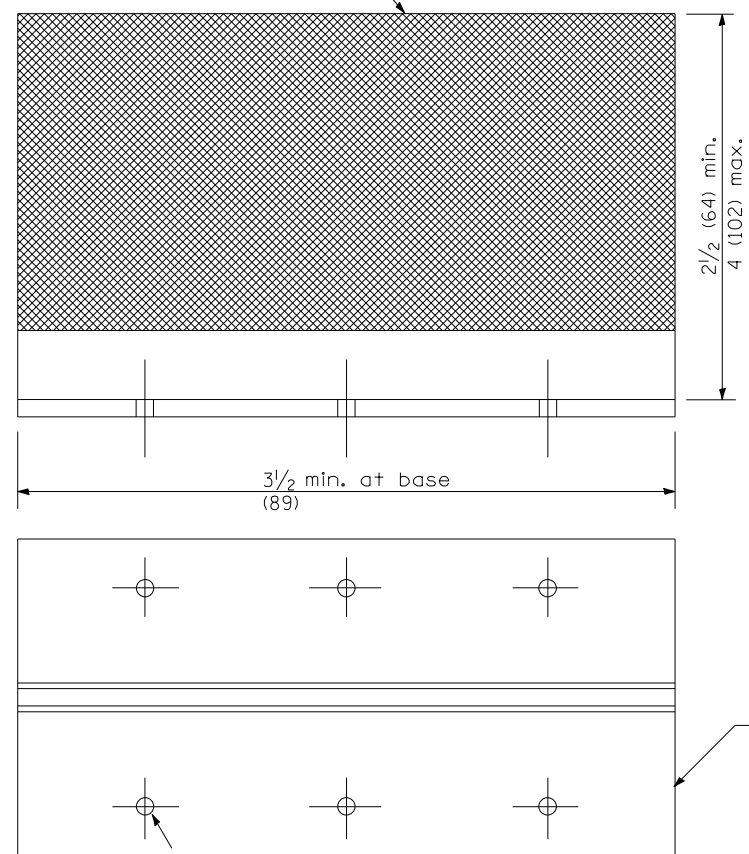


REFLECTOR MARKER TYPE B



REFLECTOR MARKER TYPE A

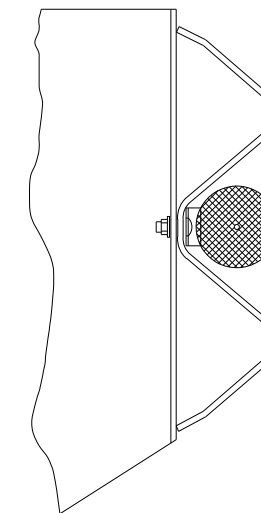
Min. reflective area 6 1/2 sq. in. (4,194 mm²) each side. May be rectangular or slight trapezoid.



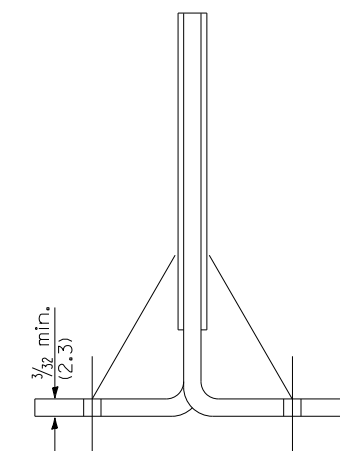
REFLECTOR MARKER TYPE C

3 min. adhesive weep holes or slots each side, variable spacing.

GUARDRAIL AND BARRIER WALL DELINEATION



TYPICAL GUARDRAIL MOUNTING WITH REFLECTOR MARKER TYPE A



Cross section may be "T" or "L" shaped and may have side supports at ends.

REFLECTORS

Minimum total area of base 7.0 Sq. in. (4,516 mm²)

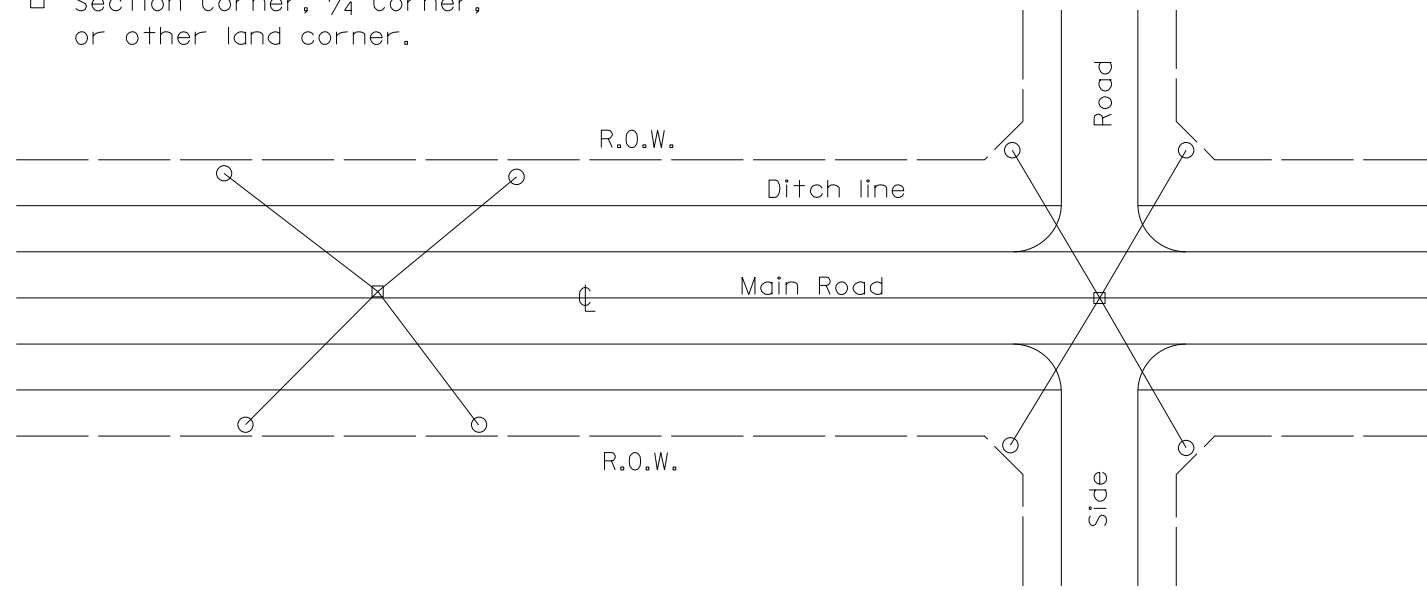
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PLOT SCALE = #SCALE#	DRAWN -	REVISED -
PLOT DATE = #DATE#	CHECKED -	REVISED -
	DATE - 11/2012	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	42
635101 PAGE 3 OF 3			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				

All dimensions are in inches (millimeters) unless otherwise noted.

PERMANENT SURVEY TIES

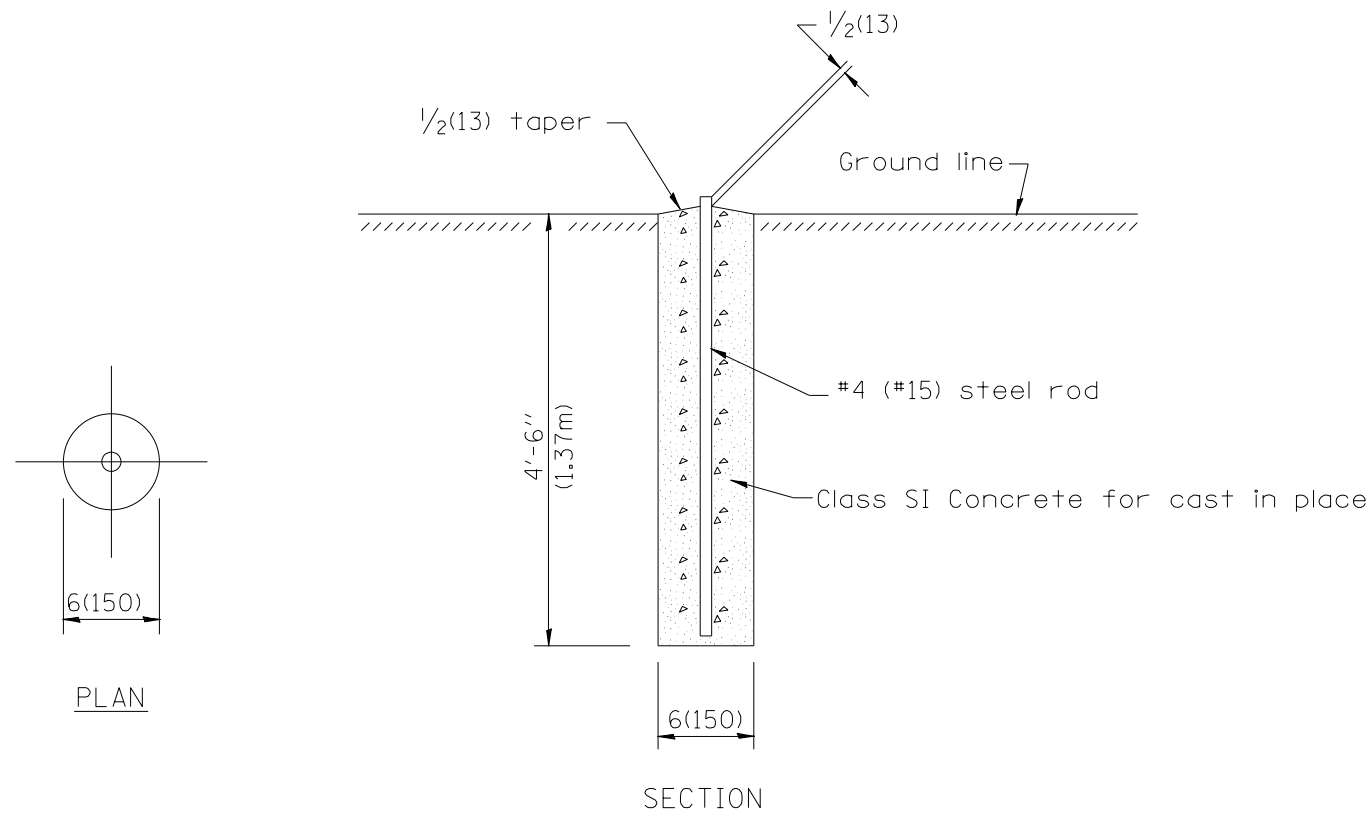
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



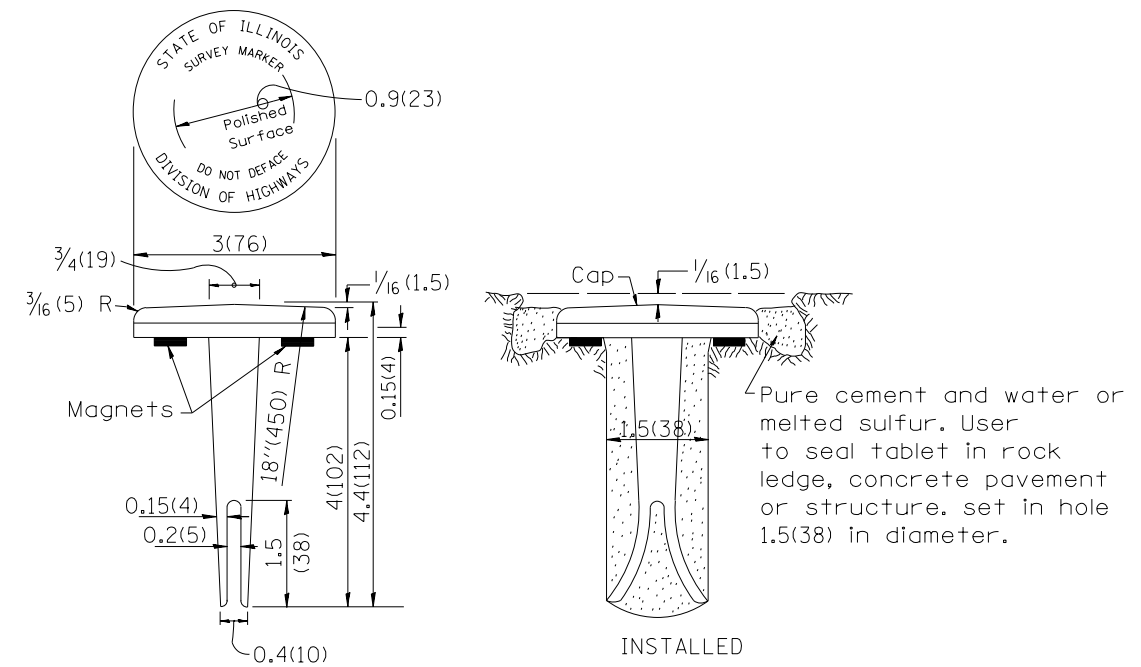
TYPICAL APPLICATION

GENERAL NOTES

1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS



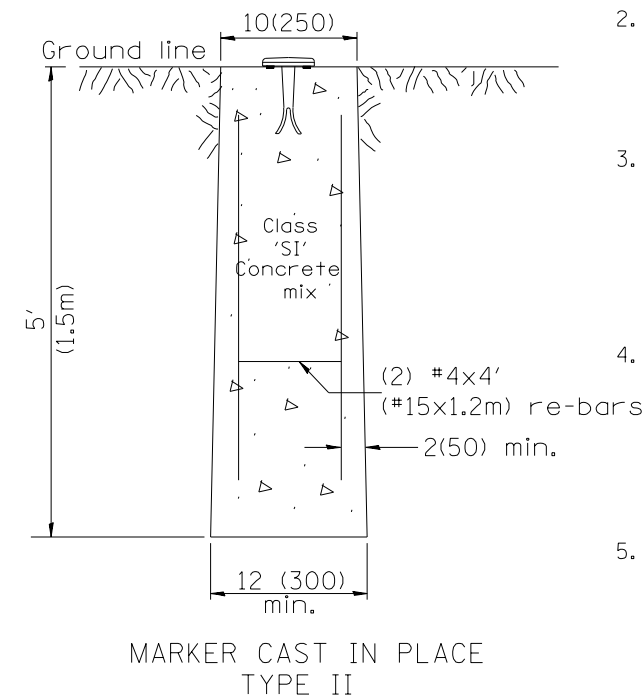
PERMANENT SURVEY MARKERS



TYPE I

GENERAL NOTES

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s located within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.

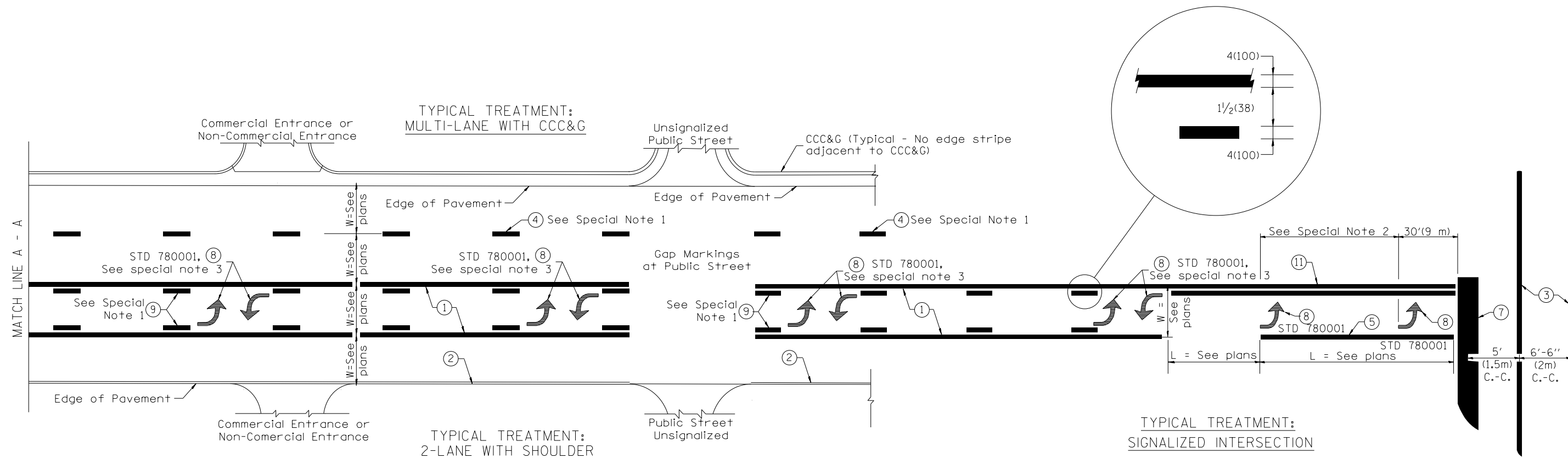


PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS TY.I-TY.II

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USER NAME = *USER*	DESIGNED -	REVISED -
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
665	(144-B-1)BR	FULTON	48	43
667101		CONTRACT NO. 68778		
ILLINOIS FED. AID PROJECT				



FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A)
- ⑪ 4(100) Double Solid (Yellow) (See Table A)

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

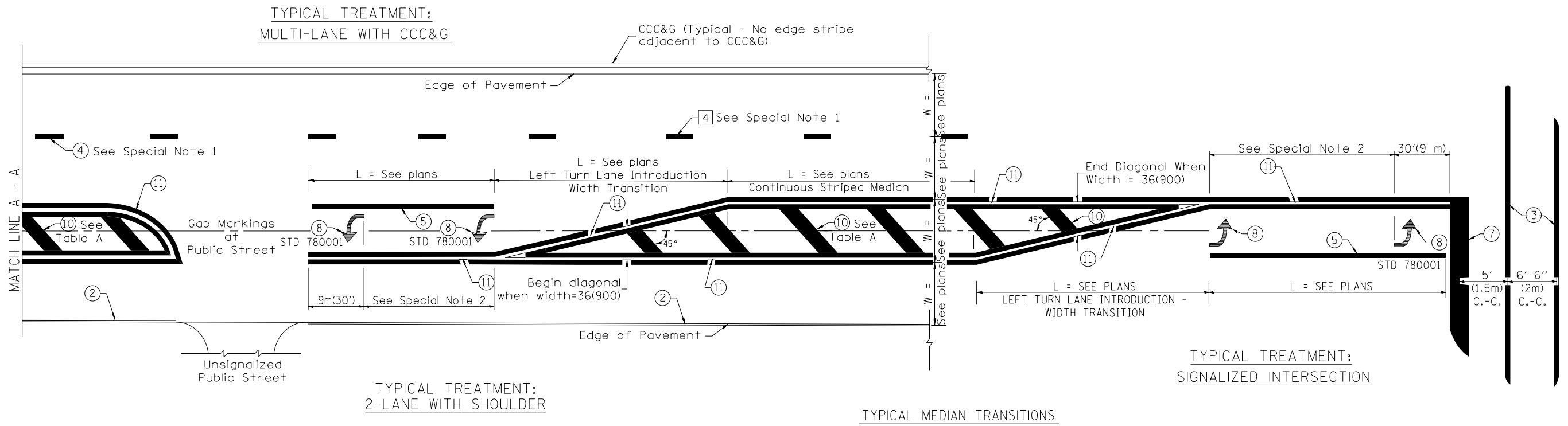
GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

TYPICAL PAVEMENT MARKINGS

USER NAME = #USER#	DESIGNED -	REVISED -
PLOT SCALE = #SCALE#	DRAWN -	REVISED -
PLOT DATE = #DATE#	CHECKED -	REVISED -
	DATE - 11/2012	REVISED -

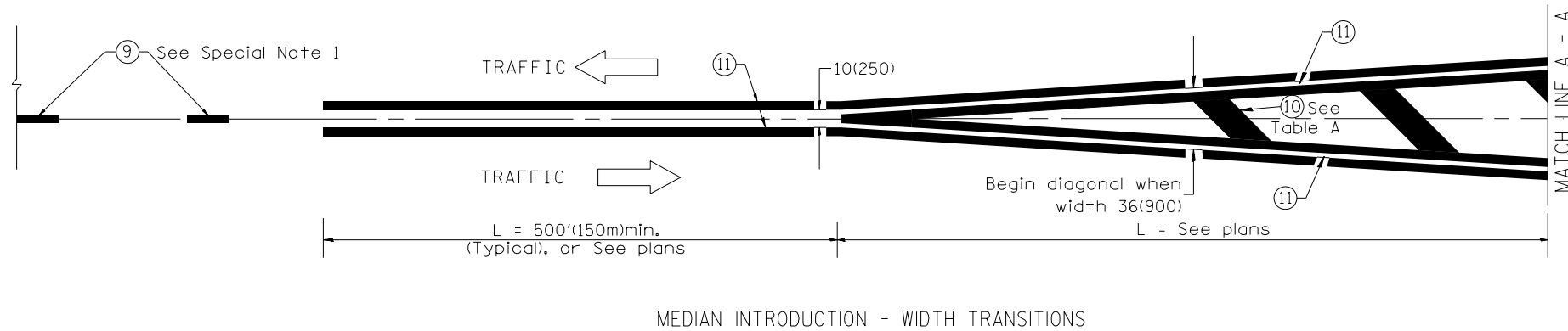
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665	(144-B-1)BR	FULTON	48	44
780001 PAGE 1 OF 2			CONTRACT NO. 68778	
ILLINOIS FED. AID PROJECT				



FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
		(Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)

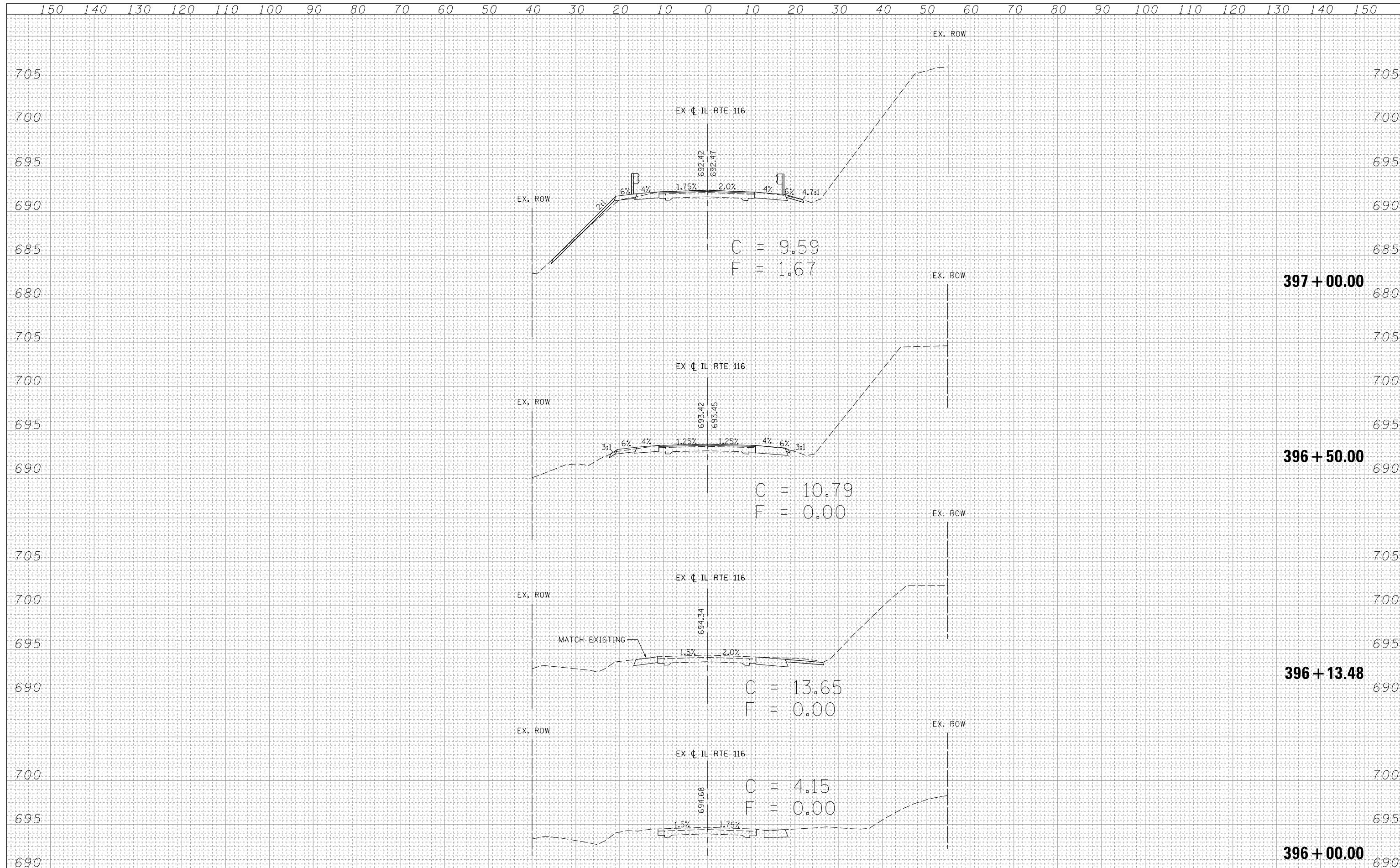


TYPICAL PAVEMENT MARKINGS

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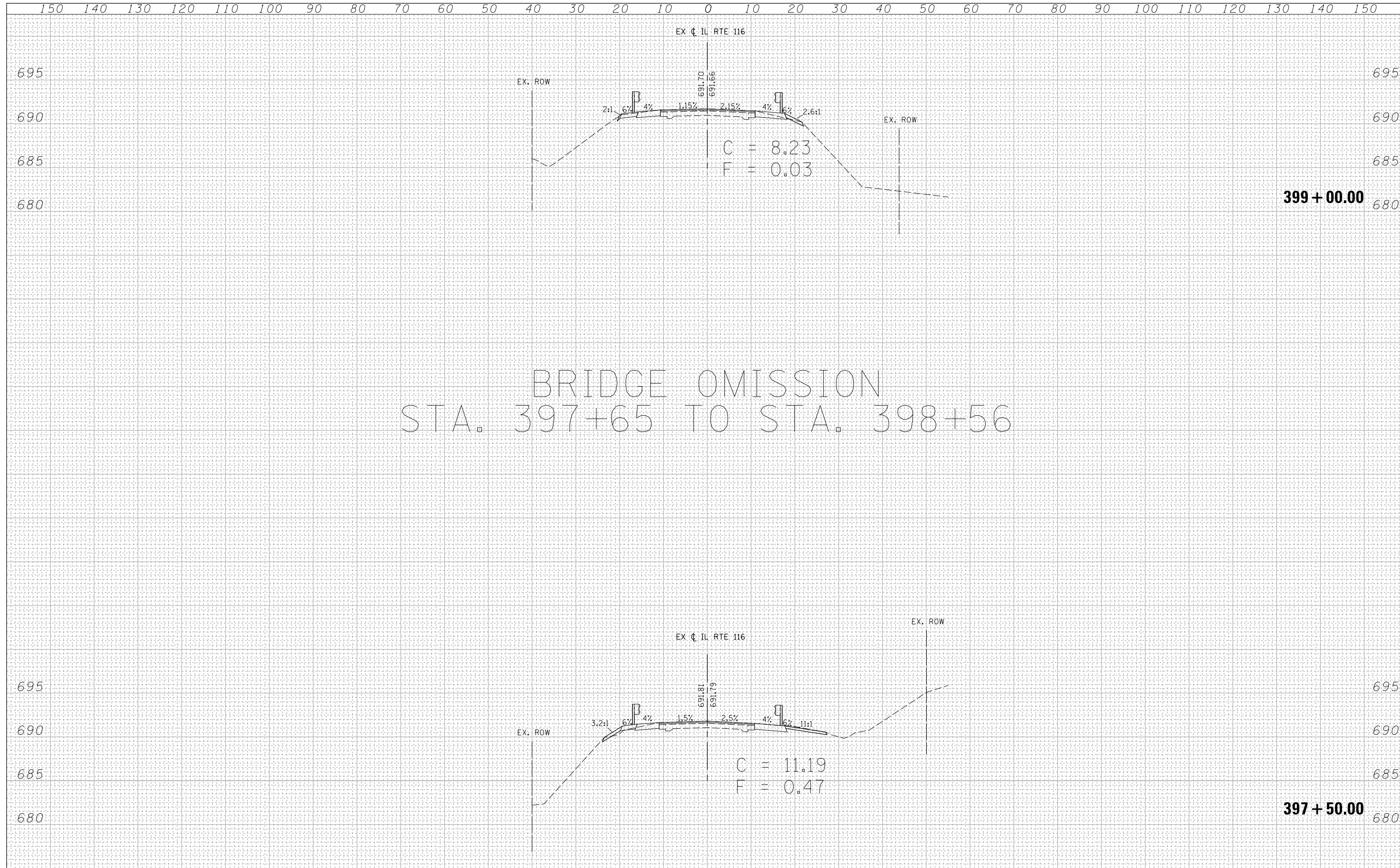
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED

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



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

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



BRIDGE OMISSION
 STA. 397+65 TO STA. 398+56

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

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

