

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
 FEDERAL AID HIGHWAY**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	1
CONTRACT NO. 70519			+1	
D-95-039-06			35	

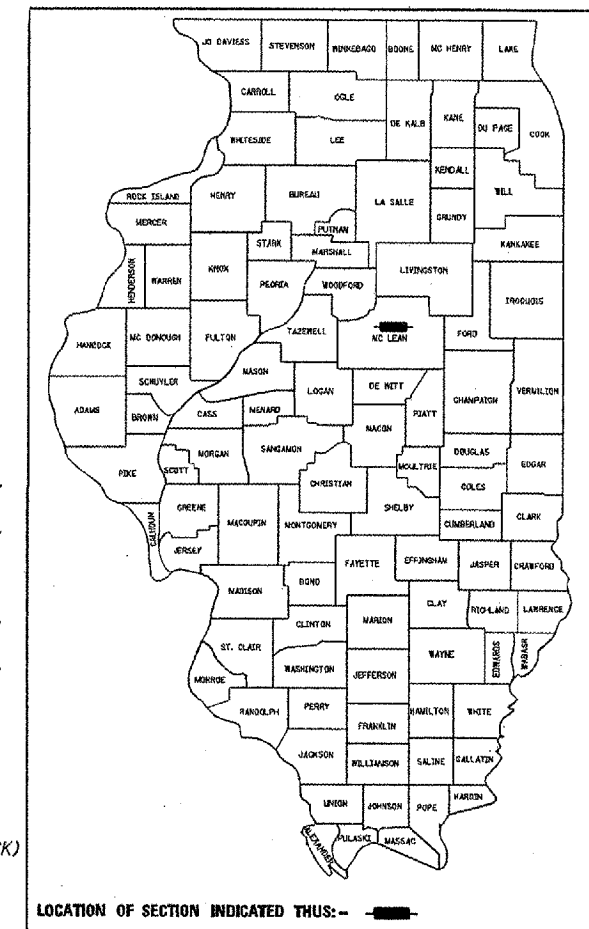
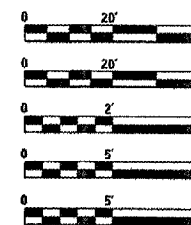
**INDEX OF SHEETS**

SEE SHEET NO. 2 FOR INDEX OF SHEETS  
 SEE SHEET NO. 2 FOR LIST OF ILLINOIS D.O.T. HIGHWAY STANDARDS

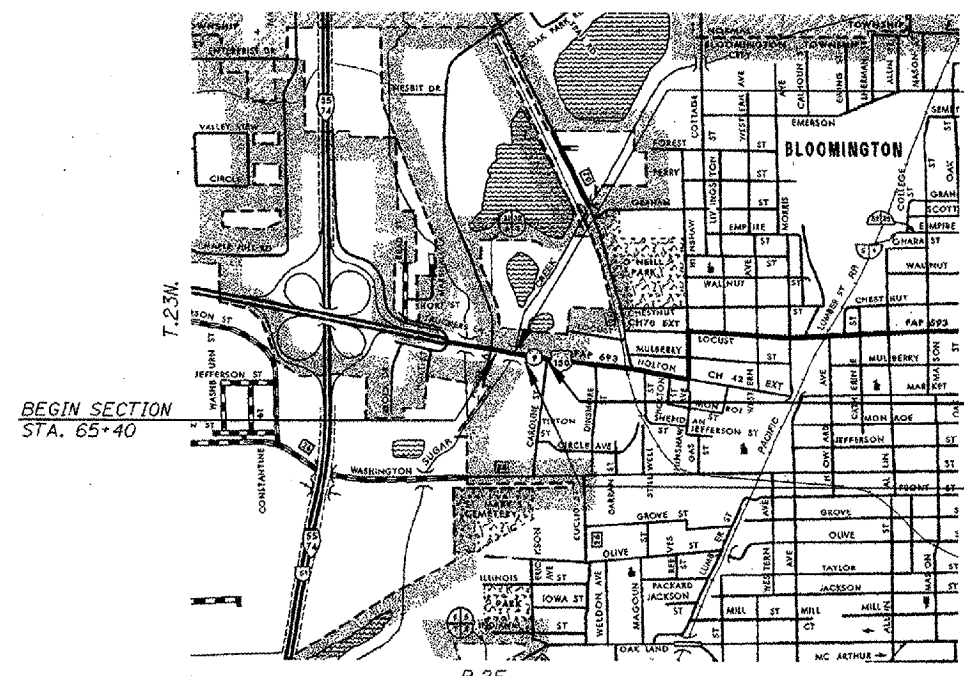
FAP ROUTE 693 (IL 9)  
 SECTION 129 B-2  
 PROJECT ACBHF-0693 (059)  
 MCLEAN COUNTY  
 C-95-040-06

BRIDGE SUPERSTRUCTURE REPLACEMENT  
 OVER SUGAR CREEK IN BLOOMINGTON

PLAN  
 PROFILE HORIZONTAL  
 PROFILE VERTICAL  
 CROSS SECTION HORIZ.  
 CROSS SECTION VERT.



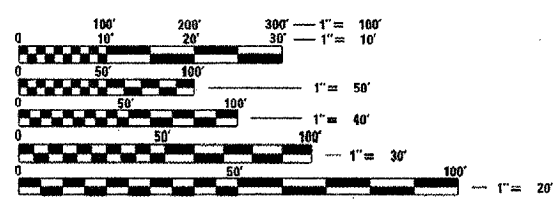
LOCATION OF SECTION INDICATED THUS: —



SECTION 129 B-2 INCLUDES  
 REHABILITATION OF SN 057-0190  
 3-SPAN P.P.C. DECK BEAM BRIDGE  
 (89'-4 1/2" BK. TO BK., 75'-0" O. TO O. DECK)  
 CARRYING FAP 693 (IL 9) OVER  
 SUGAR CREEK

END SECTION  
 STA. 71+80

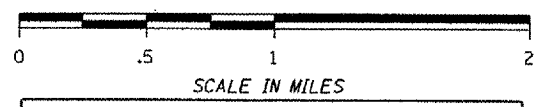
STA. EQUATION  
 STA. 68+61.44 BK=  
 STA. 68+60.72 AH



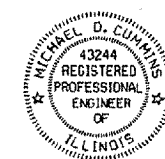
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
 ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
 CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
 ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CURRENT ADT = 16,900 (2006)

LENGTH OF SECTION: 640.72 FEET = 0.121 MILES



CUMMINS ENGINEERING CORPORATION  
 SPRINGFIELD, ILLINOIS



Michael D. Cummins 12/19/2006  
 ILLINOIS PROFESSIONAL NO. 43244  
 (Expires 11/30/07)

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 SUBMITTED 12/20/06  
 Joseph E. Crowe  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER  
 February 20, 07  
 Eric E. Abrahams  
 ENGINEER OF DESIGN AND ENVIRONMENT  
 February 20, 07  
 Milton R. Sees, P.E.  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
 OF THE STATE OF ILLINOIS

PROJECT ENGINEER: KENSIL GARNETT (217) 465-4181  
 CONSULTANT LIAISON: NANCY FASIG (217) 465-4181

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

DESIGN DESIGNATION  
 N.A.

CONTRACT NO. 70519

**GENERAL NOTES**

G.N.-100  
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.07B  
EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL SECURE AN APPROVED LOCATING FIRM TO LOCATE STATE-OWNED UTILITIES PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES IN ACCORDANCE TO SECTION 803 OF THE STANDARD SPECIFICATIONS. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.) THE APPROXIMATE LOCATIONS OF THESE LINES ARE ALSO SHOWN ON THE PLANS ALONG WITH THE NAME OF THE MAINTAINING AGENCY. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-105.09A  
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.31  
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123.

G.N.-406  
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N.-440B  
THE EXISTING TIE BARS BETWEEN THE EXISTING PAVEMENT AND EXISTING MEDIANS, GUTTERS AND/OR COMBINATION CURB AND GUTTERS THAT ARE FOUND SUITABLE FOR REUSE SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY EXISTING TIE BARS THAT ARE FOUND UNSUITABLE TO BE INCORPORATED INTO THE PROPOSED CONSTRUCTION DUE TO EXCESSIVE RUSTING OR DISTRESS SHALL BE REMOVED FLUSH WITH THE FACE OF THE EXISTING CONCRETE AND DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS REMOVAL PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N.-703A  
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.-781  
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-406H  
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

Location(s):	STA 67+48.87 TO 67+49.95 STA 68+38.33 TO 68+39.41	STA 66+62 TO 67+49.95 STA 68+38.33 TO 69+33
Mixture Use(s):	HMA BINDER CSE	HMA SURFACE CSE
AC/PG:	PG 64-22	PG 64-22
RAP % (Max)	10%	10%
Design Air Voids:	4.0% @ Ndes=90	4.0% @ Ndes=90
Mixture Composition (Gradation Mixture):	IL 19.0	IL 9.5
Friction Aggregate:	N/A	Mix D

**COMMITMENTS**

THE CONTRACTOR'S EQUIPMENT, VEHICLES, MATERIALS, ETC. ARE NOT PERMITTED TO BE PLACED OR PARKED OUTSIDE THE STATE RIGHT OF WAY WITHOUT THE EXPRESS WRITTEN CONSENT OF THE PROPERTY OWNER. PARKING AND USE OF THE DAYS INN PROPERTY WILL NOT BE PERMITTED.

**LIST OF ILLINOIS DOT HIGHWAY STANDARDS**

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
515001-02	NAME PLATE FOR BRIDGE
606001-03	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-07	STEEL PLATE BEAM GUARDRAIL
631011-03	TRAFFIC BARRIER TERMINAL TYPE 2
631031-06	TRAFFIC BARRIER TERMINAL TYPE 6
631032-03	TRAFFIC BARRIER TERMINAL TYPE 6A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701426-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION
701602-02	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

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**GENERAL NOTES  
HIGHWAY STANDARDS  
INDEX OF SHEETS**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
FILE: 2114.5GENNOTES  
DATE: 12/14/06

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	3
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 70519

SUMMARY OF QUANTITIES			S.N. 057-0190 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X080-2A
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	135
40600300	AGGREGATE (PRIME COAT)	TON	3
40600990	TEMPORARY RAMP	SO YD	144
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	6
40603345	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	112
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SO FT	533
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1,315
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	177
44000600	SIDEWALK REMOVAL	SO FT	508
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	0.3
50300100	FLOOR DRAINS	EACH	3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	24.8
50300260	BRIDGE DECK GROOVING	SO YD	661
50300300	PROTECTIVE COAT	SO YD	746
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SO FT	6,453
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	10,200
50800515	BAR SPLICERS	EACH	172
50900105	ALUMINUM RAILING, TYPE L	FOOT	75
50901050	STEEL RAILING, TYPE SM	FOOT	87
51500100	NAME PLATES	EACH	1
60605400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (SPECIAL)	FOOT	177
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	12.5
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	1
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	1
* 63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	50
67100100	MOBILIZATION	L SUM	1
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	344

SUMMARY OF QUANTITIES			S.N. 057-0190 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE X080-2A
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	91
70400100	TEMPORARY CONCRETE BARRIER	FOOT	230
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	220
* 78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS & SYMBOLS	SO FT	109
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	2,912
* 78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	90
* 78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	245
* 78008270	POLYUREA PAVEMENT MARKING TYPE I - LINE 24"	FOOT	81
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	16
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	6
* 78100300	REPLACEMENT REFLECTOR	EACH	67
* 78200405	GUARDRAIL MARKERS	EACH	8
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1
78300100	PAVEMENT MARKING REMOVAL	SO FT	1,503
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	16
81012300	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	26
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	136
81021550	CONDUIT, AUGERED 2" DIA., PVC	FOOT	38
81030100	CONDUIT SPLICE	EACH	1
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	136
* 87301515	ELECTRIC CABLE IN CONDUIT LEAD-IN, NO. 18, 3 PAIR	FOOT	300
* 87900200	DRILL EXISTING HANDHOLE	EACH	3
* 88600100	DETECTOR LOOP, TYPE 1	FOOT	215
X0322256	TEMPORARY INFORMATION SIGNING	SO FT	75
X0323710	REMOVE CONDUIT ATTACHED TO STRUCTURE	FOOT	180
X0325491	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC (SCHEDULE 80)	FOOT	180
X5030305	CONCRETE WEARING SURFACE 5"	SO YD	671
* XX002094	REMOVE AND REINSTALL FIBER OPTIC CABLE IN CONDUIT	L SUM	1
△ 20030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2
△ 20030340	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2
X0325674	REMOVAL OF TEMPORARY CURB, SALVAGE	FOOT	125

△ SFTY-3N  
\* SPECIALTY ITEM

SUMMARY OF QUANTITIES

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
FILE: 21140TY.DGN  
DATE: 12/18/06

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	4

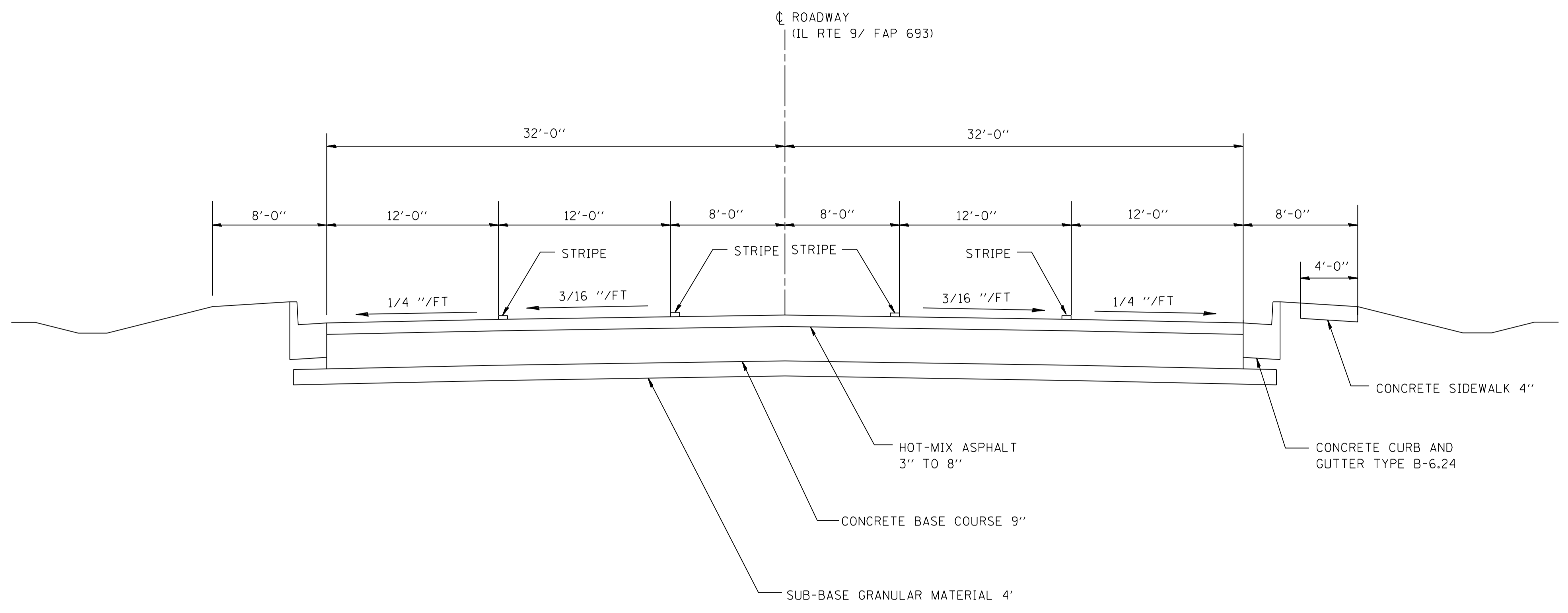
STA. TO STA.

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

**CONTRACT NO. 70519**

① **EXISTING TYPICAL CROSS SECTION**

STATION TO STATION  
 65+40 TO 66+62 ②  
 ②69+33 TO 71+80



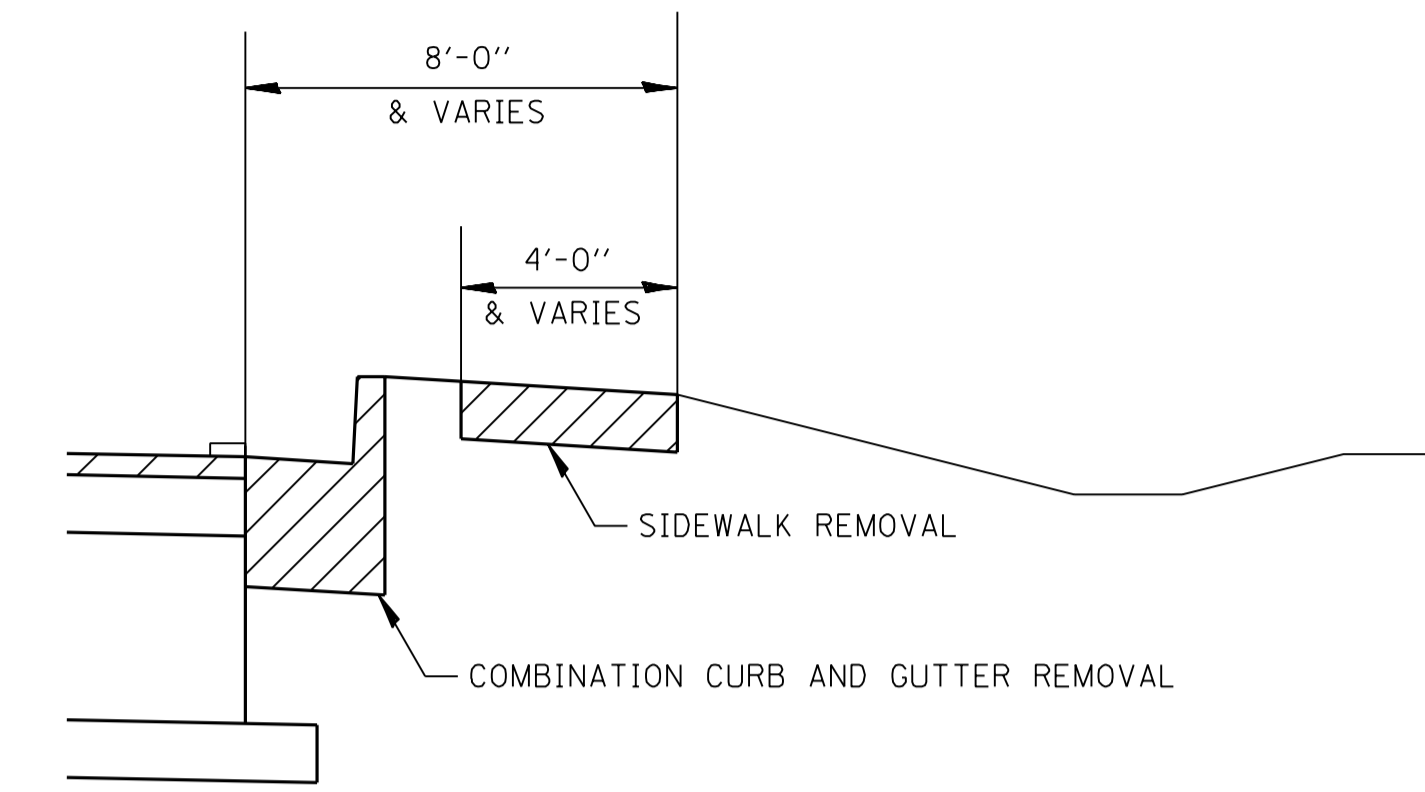
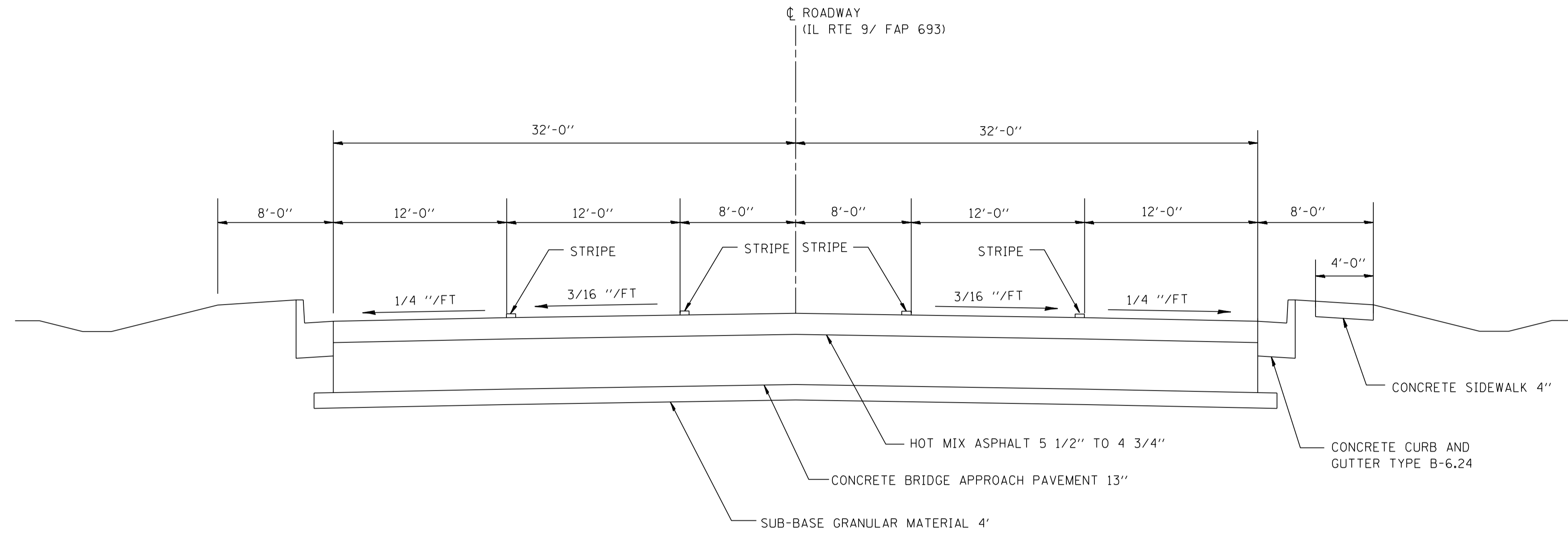
**TYPICAL CROSS SECTIONS**  
 FAP ROUTE 693 (IL 9)  
 SECTION 129 B-2  
 MCLEAN COUNTY

<b>CUMMINS ENGINEERING CORPORATION</b>	JOB #: 2114.5
	FILE: 2114.STYP
	DATE: 12/18/06

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				

**② EXISTING TYPICAL CROSS SECTION**

① STATION 66+62 TO STATION 67+49.95 ③  
 ③ 68+38.33 ① 69+33

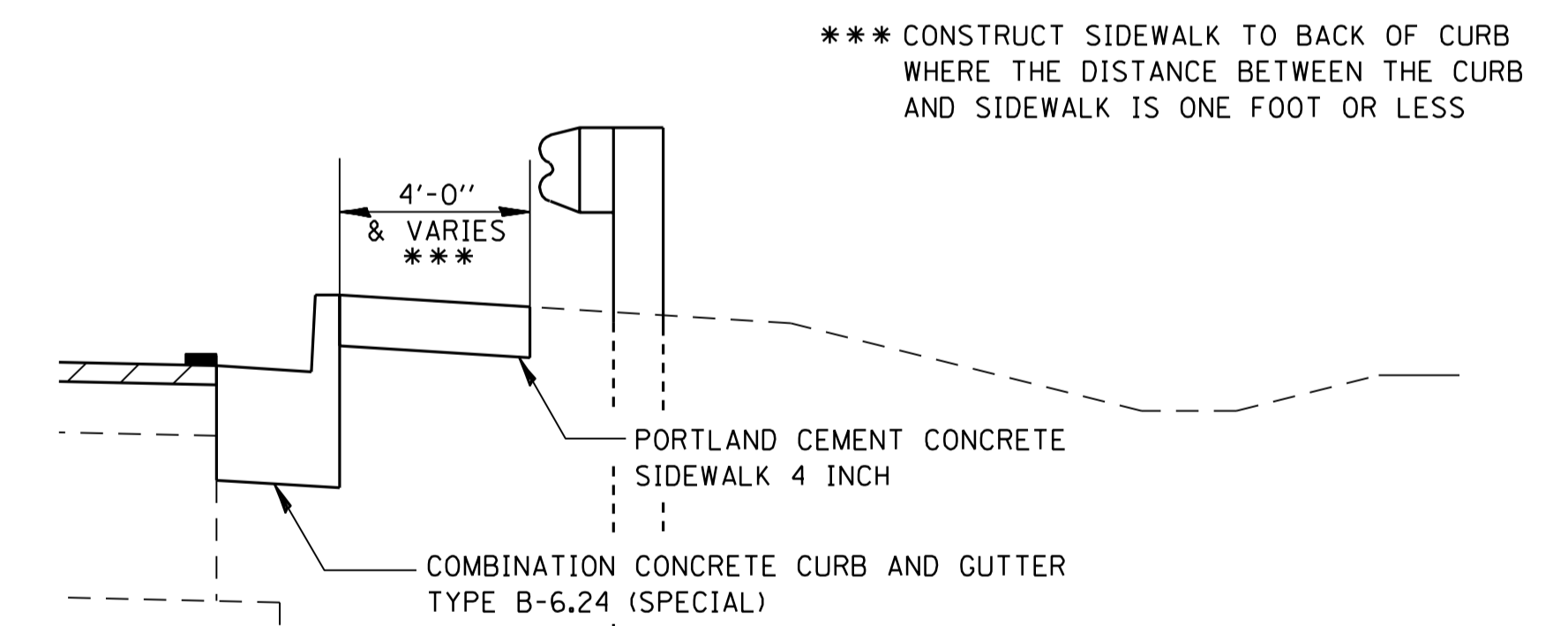
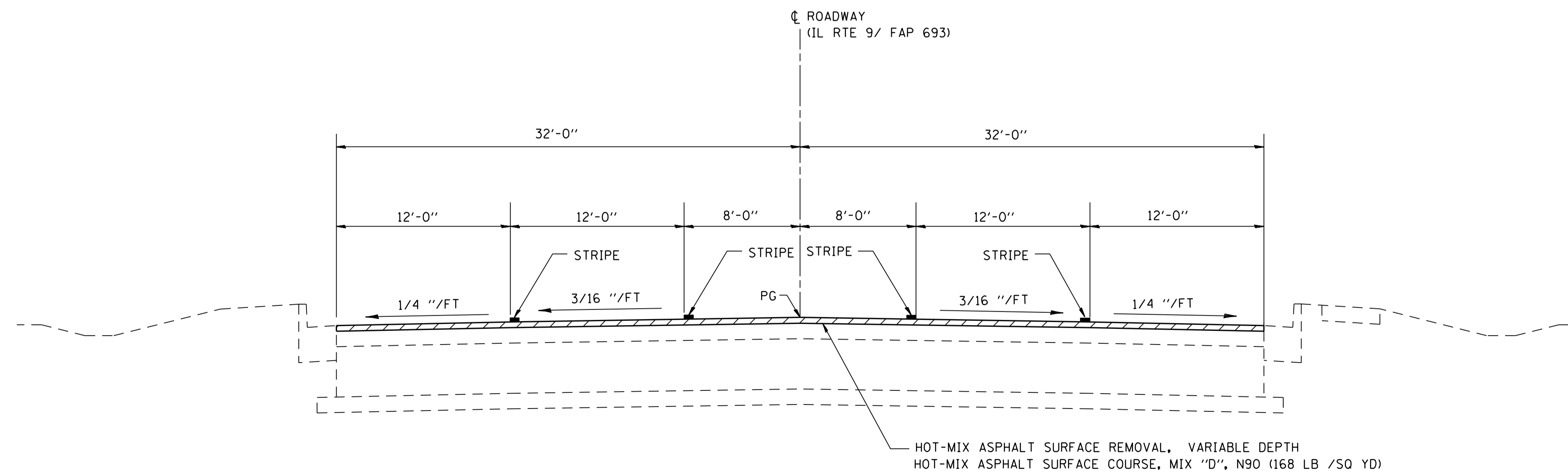


**DETAIL A**  
 RT STA 66+68 TO STA 67+44.2  
 RT STA 68+33.83 TO STA 69+33

**② PROPOSED TYPICAL CROSS SECTION**

OMISSIONS:  
 BRIDGE  
 STA. 67+49.95 TO STA. 68+38.33

① STATION 66+62 TO STATION 67+49.95 ③  
 ③ 68+38.33 ① 69+33



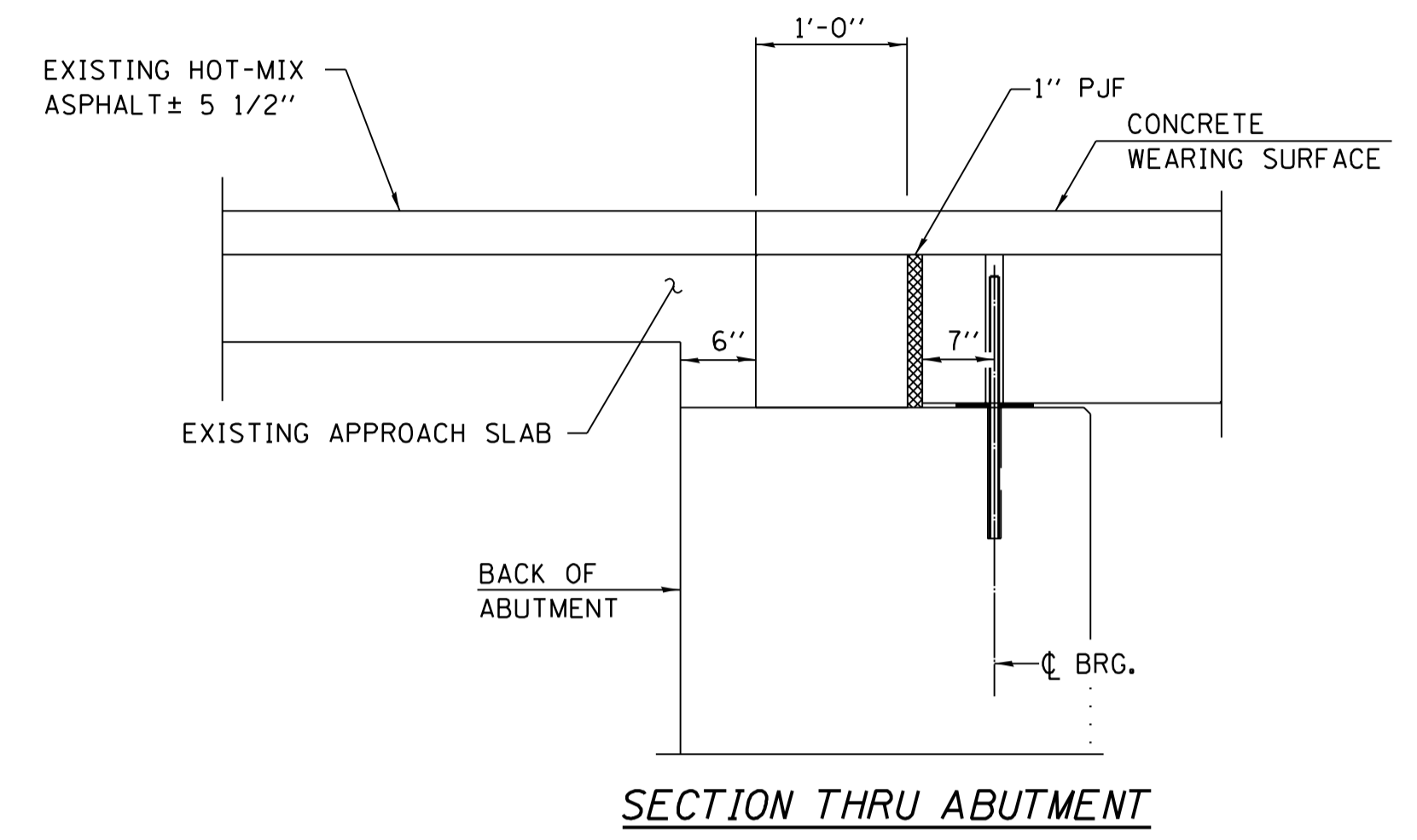
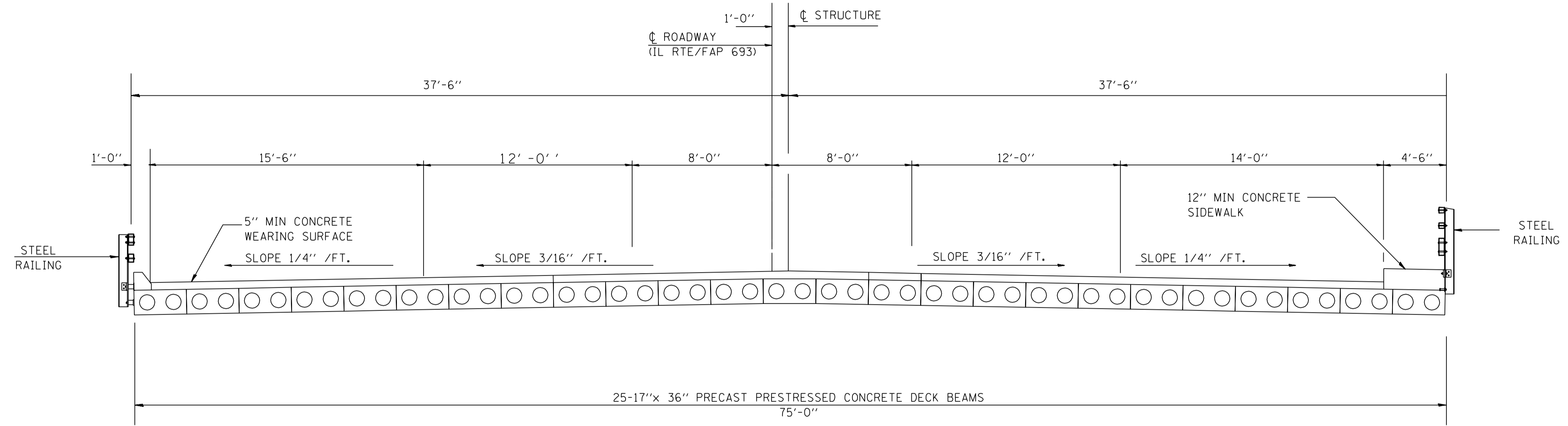
**DETAIL A**  
 RT STA 66+68 TO STA 67+44.44  
 RT STA 68+33.83 TO STA 69+33 \*\*  
 \*\* PROPOSED SIDEWALK RT STA 68+33.83 TO STA 68+61.5

**TYPICAL CROSS SECTIONS**  
 FAP ROUTE 693 (IL 9)  
 SECTION 129 B-2  
 MCLEAN COUNTY

F.A.P. RTE. 693	SECTION 129 B-2	COUNTY MCLEAN	TOTAL SHEETS 34	SHEET NO. 6
STA. 67+49.95		TO STA. 68+38.33		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				

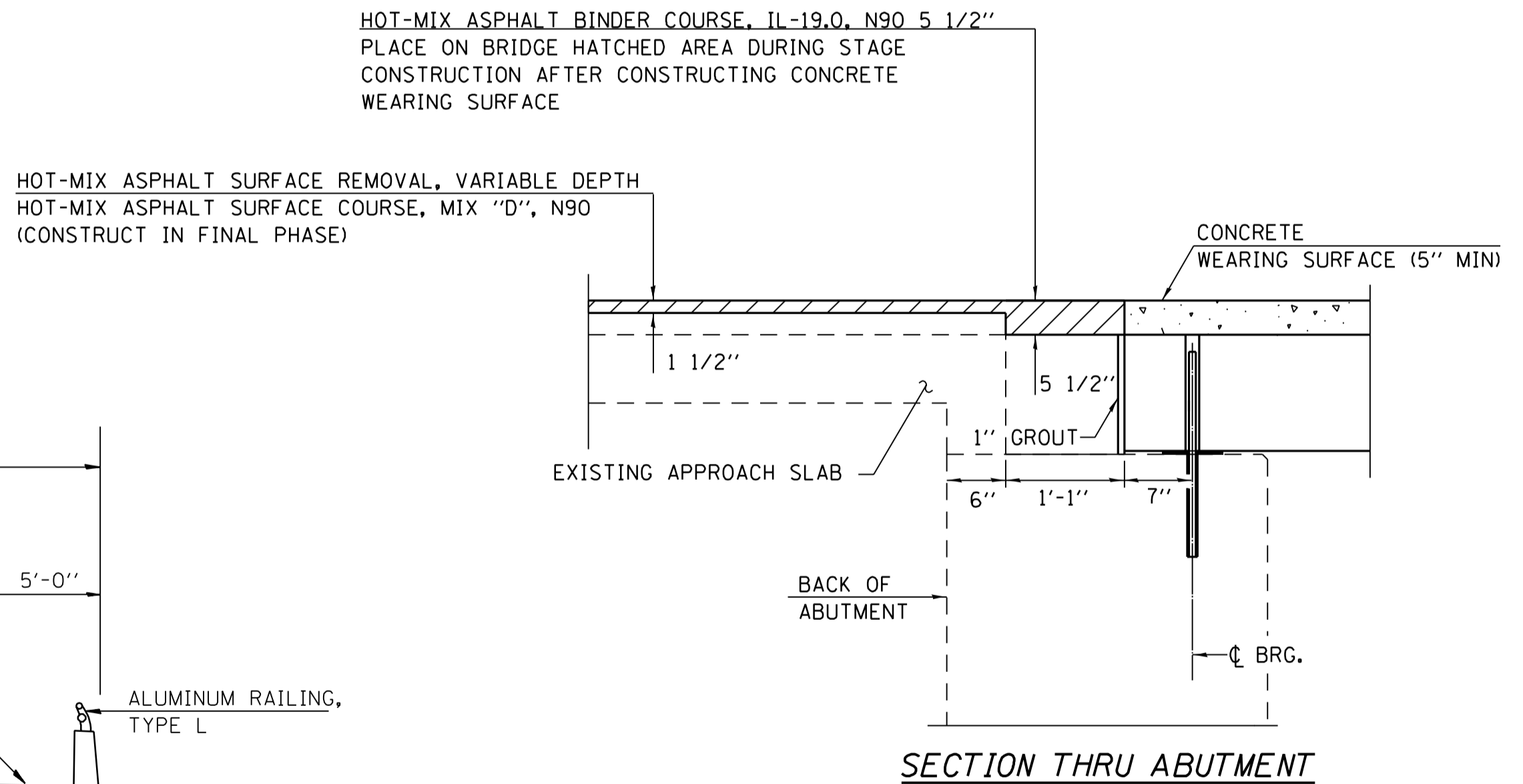
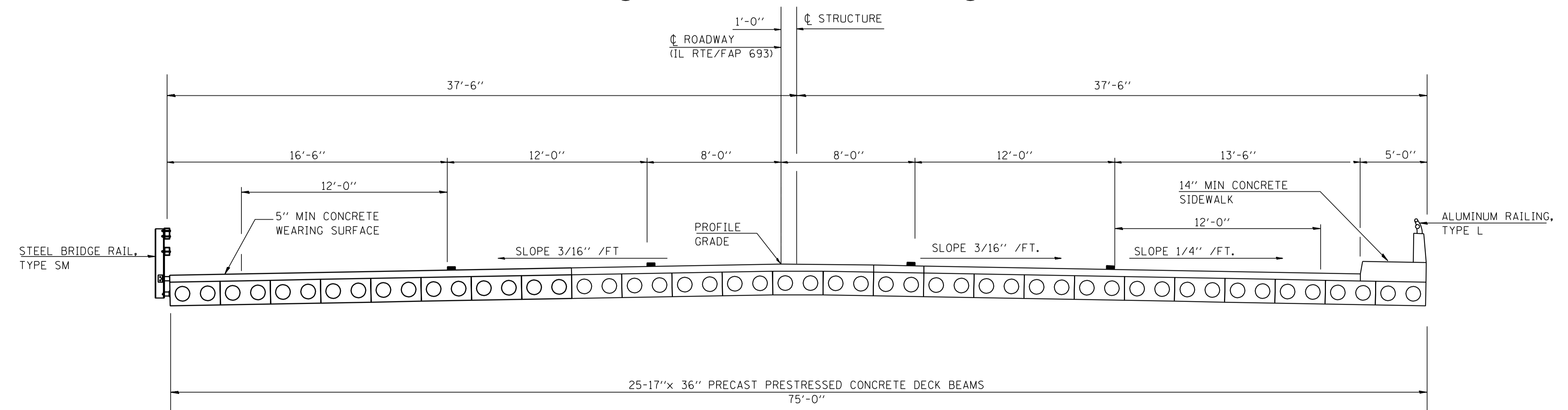
### ③ EXISTING TYPICAL CROSS SECTION

SN 057-0190  
 ② STATION 67+49.95 TO STATION 68+38.33 ②



### ③ PROPOSED TYPICAL CROSS SECTION

SN 057-0190  
 ② STATION 67+49.95 TO STATION 68+38.33 ②



**TYPICAL CROSS SECTIONS**

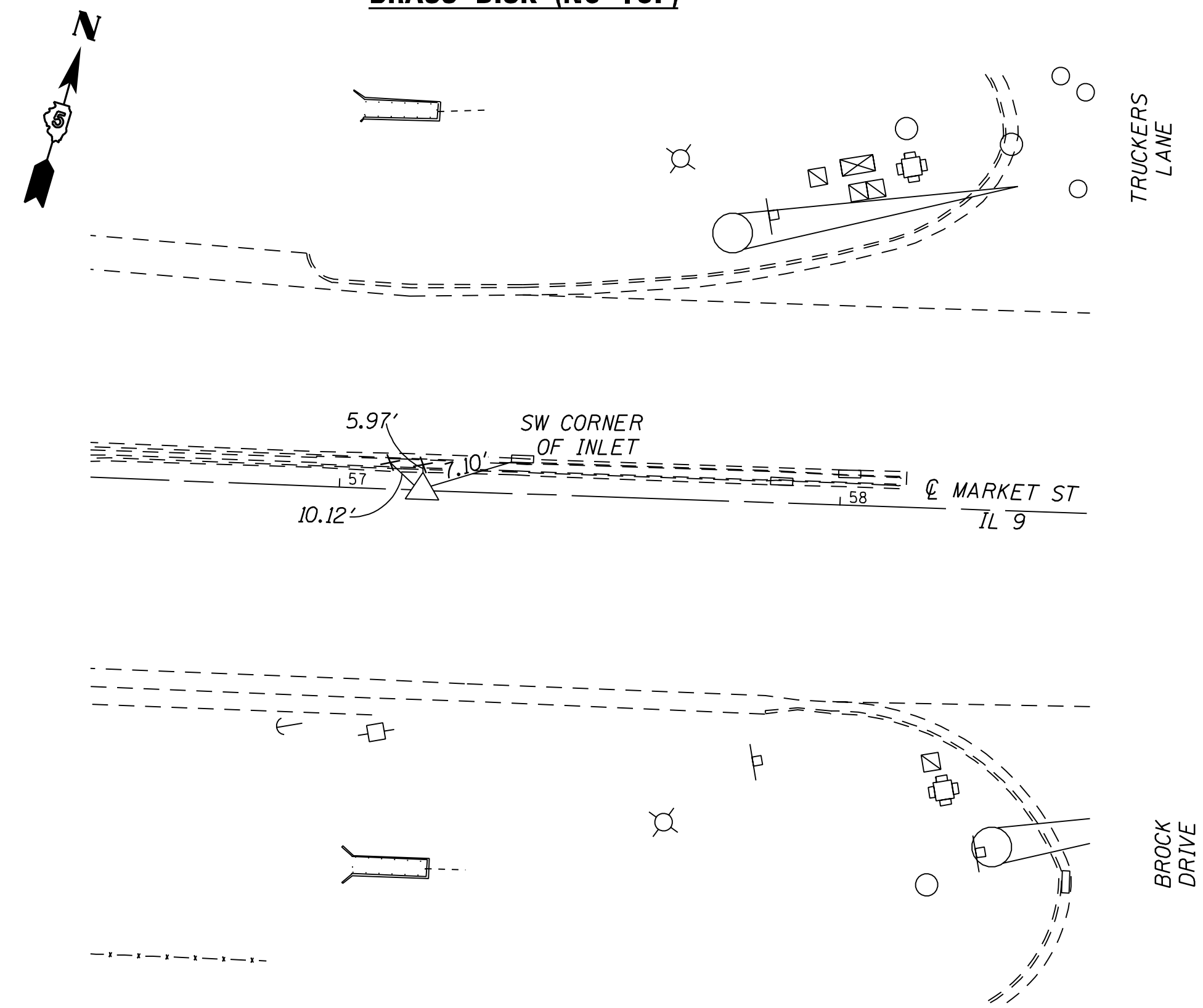
FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 2114TYP
	DATE: 11/28/06

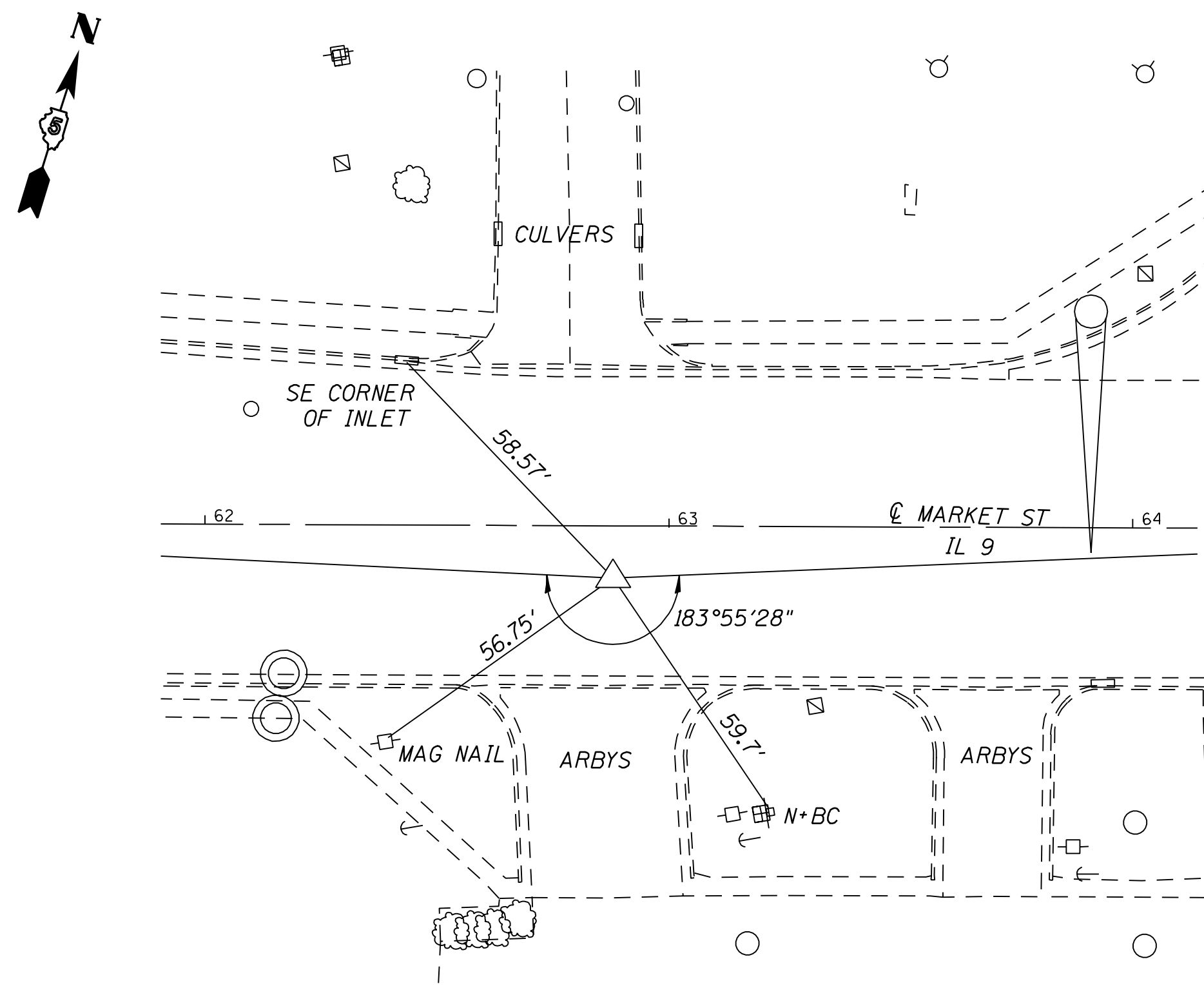
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	7
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 70519

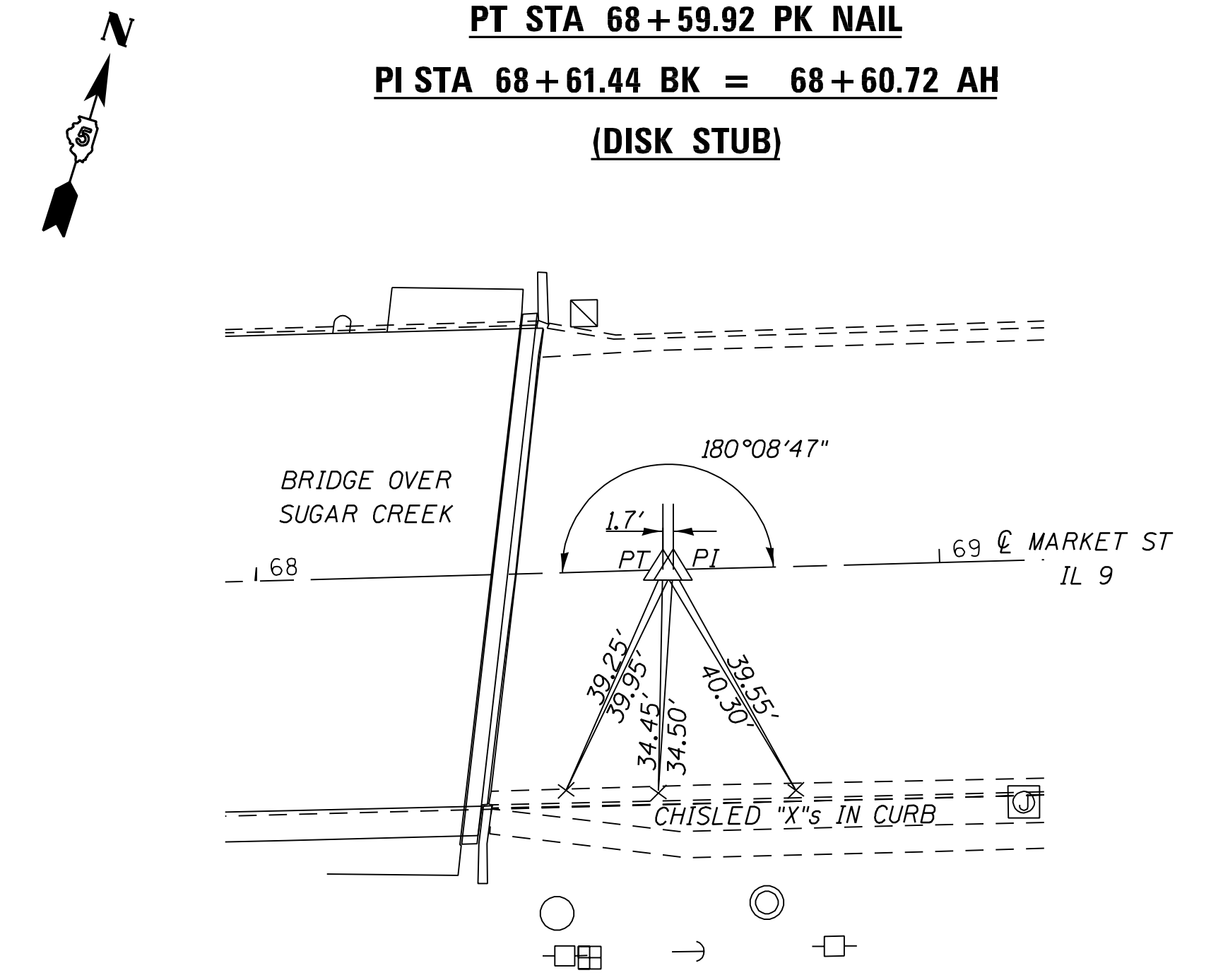
PC STA. 57+18.76 BK = 57+05.81 AH  
BRASS DISK (NO TOP)



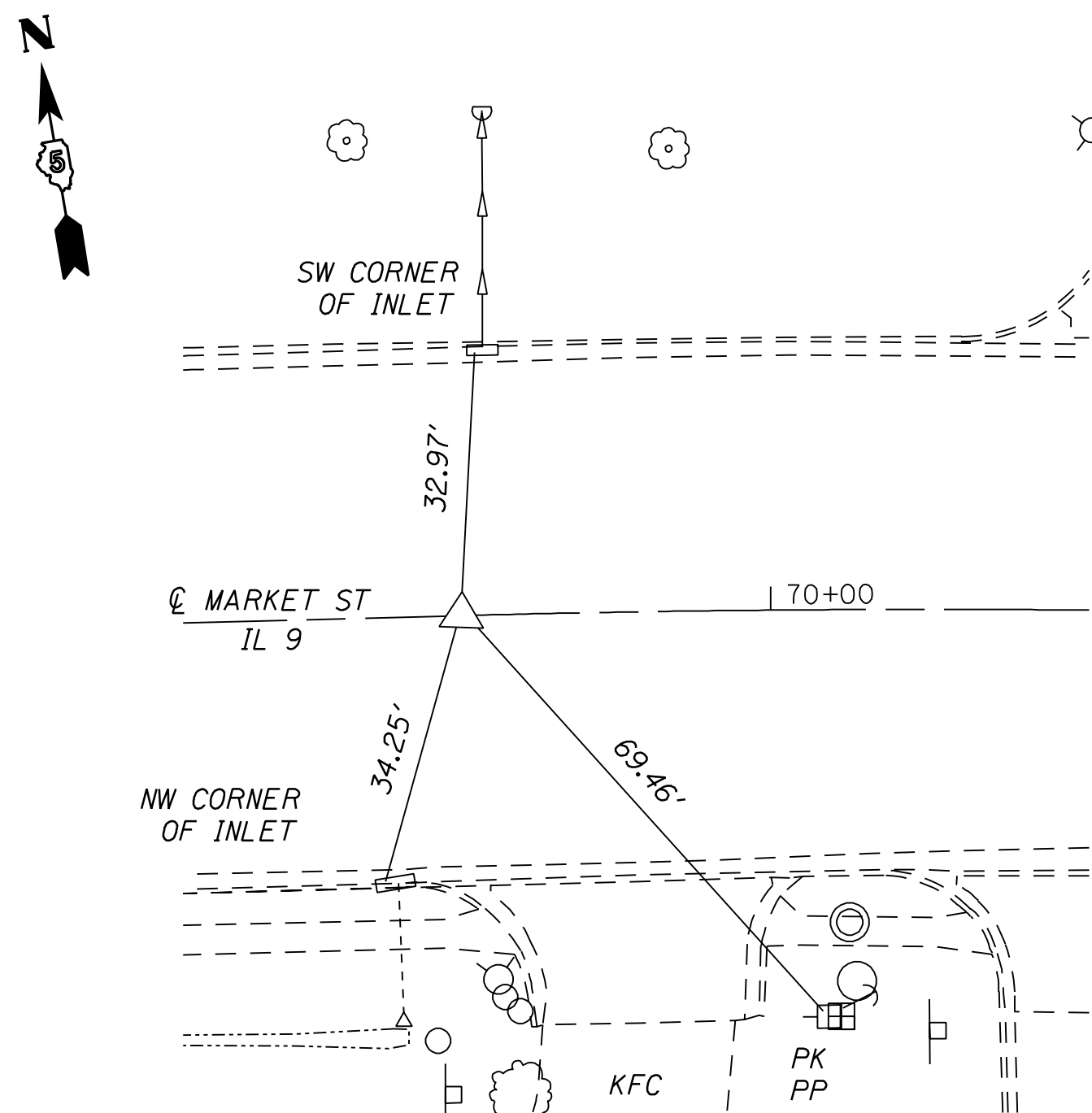
PI STA. 62+88.09  
ALUMINUM DISK



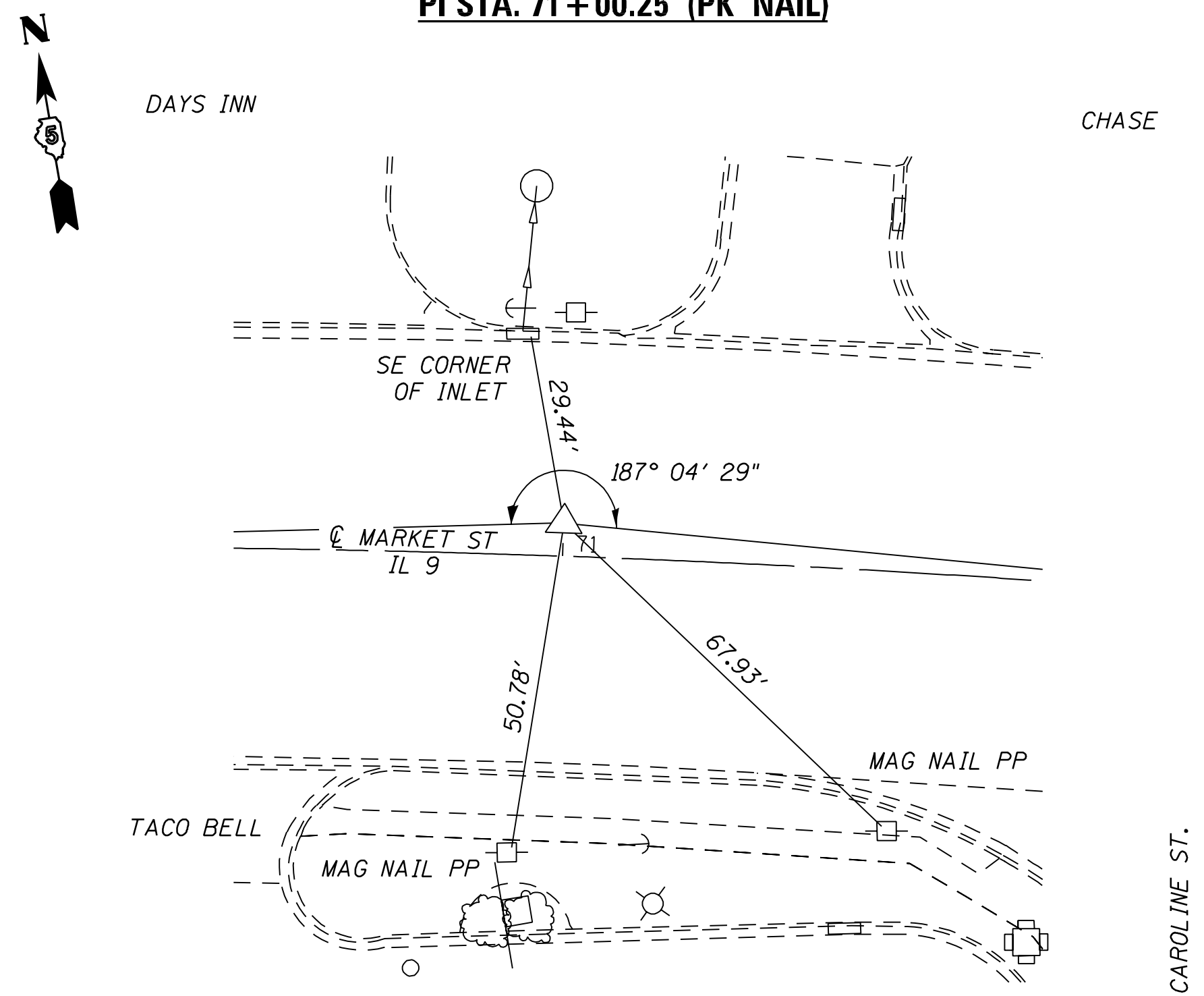
PT STA 68+59.92 PK NAIL  
PI STA 68+61.44 BK = 68+60.72 AH  
(DISK STUB)



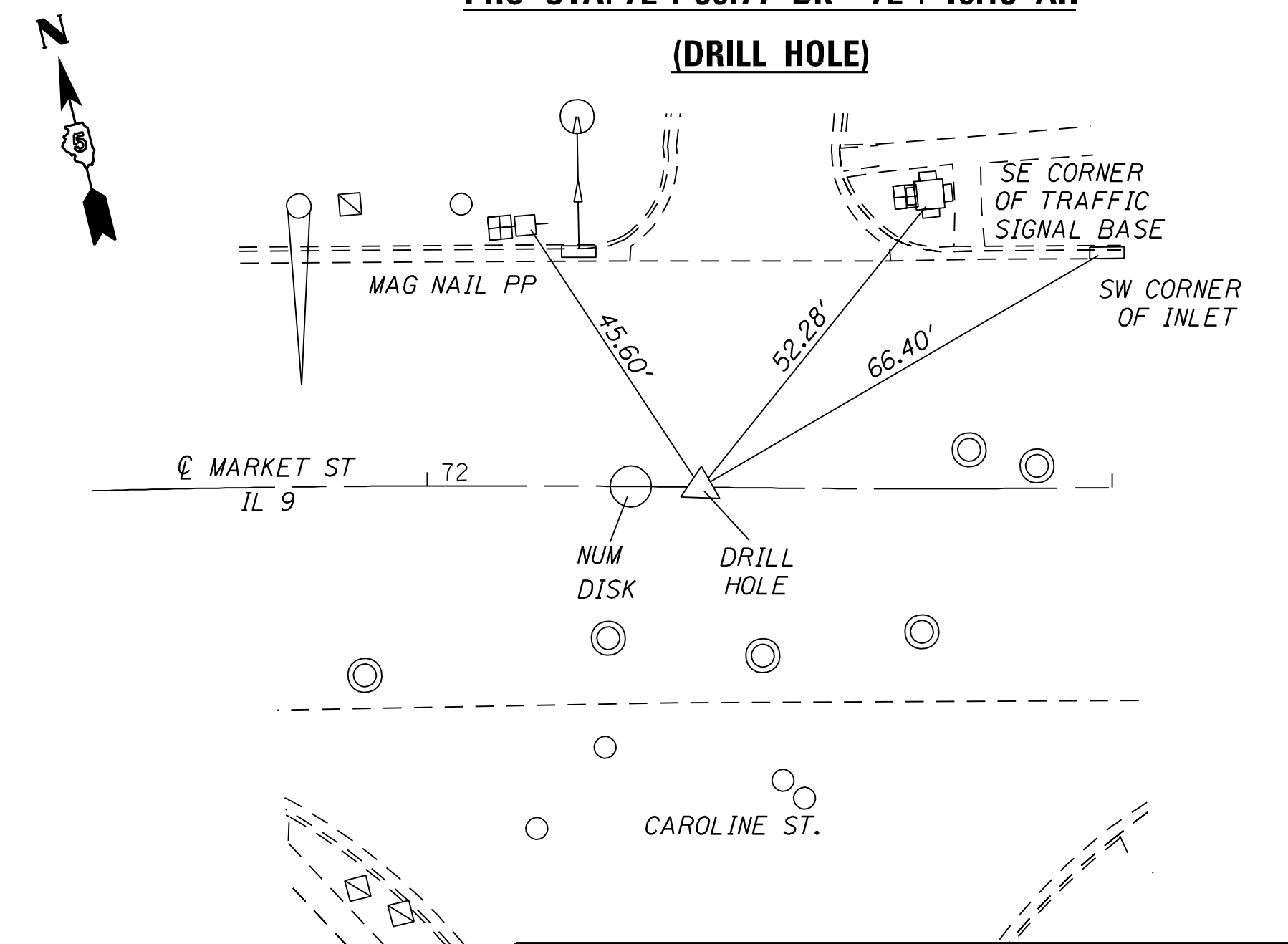
PC STA. 69+60.38 (PK NAIL)



PI STA. 71+00.25 (PK NAIL)



PRC STA. 72+39.77 BK = 72+40.13 AH  
(DRILL HOLE)



**CROSS TIES**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
FILE: 2114XTIES.DGN  
DATE: 9/25/06

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	8

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

**CONTRACT NO. 70519**

**70400100 TEMPORARY CONCRETE BARRIER**

LOCATION	TYPE	FOOT
STAGE 1		
STA 66+85.0 TO STA 67+44.5	8:1 TAPER	60
STA 67+44.5 TO STA 68+44.5	TANGENT	100
STA 68+44.5 TO STA 69+04.0	8:1 TAPER	60
STAGE 2		
STA 66+97.1 TO STA 67+07.1	8:1 TAPER	10
TOTAL		230

**70400200 RELOCATE TEMPORARY CONCRETE BARRIER**

LOCATION	TYPE	FOOT
STAGE 2		
STA 67+07.1 TO STA 67+46.5	8:1 TAPER	40
STA 67+46.5 TO STA 68+65.8	TANGENT	120
STA 68+65.8 TO STA 69+25.6	8:1 TAPER	60
TOTAL		220

**Z0030240 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE),**

TEST LEVEL 2	LOCATION	EACH
STAGE 1		
	STA 66+84.1	1
	STA 69+03.7	1
TOTAL		2

**Z0030340 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE),**

TEST LEVEL 2	LOCATION	EACH
STAGE 2		
	STA 66+97.1	1
	STA 69+25.6	1
TOTAL		2

**40603090 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90**

LOCATION	TON
STAGE 1	
WEST ABUTMENT	1
EAST ABUTMENT	1
STAGE 2	
WEST ABUTMENT	2
EAST ABUTMENT	2
TOTAL	6

**44000500 COMBINATION CURB AND GUTTER REMOVAL**

LOCATION	FOOT
STAGE 1	
RT STA 66+68 TO STA 67+44	77
RT STA 68+33.83 TO STA 69+33	100
TOTAL	177

**60605400 COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24 (SPECIAL)**

LOCATION	FOOT
STAGE 1	
RT STA 66+63 TO STA 67+44	77
RT STA 68+33.83 TO STA 69+33	100
TOTAL	177

**44000600 SIDEWALK REMOVAL**

LOCATION	SO FT
STAGE 1	
RT STA 66+63 TO STA 67+44.44	398
RT STA 68+33.83 TO STA 68+62	110
TOTAL	508

**42400100 PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH**

LOCATION	SO FT
STAGE 1	
RT STA 66+63 TO STA 67+44.44	412
RT STA 68+33.83 TO STA 68+62	121
TOTAL	533

**44000198 HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH**

LOCATION	SO YD
FINAL PHASE	
STA 66+62 TO STA 67+51.03	634
STA 68+37.24 TO STA 69+33	681
TOTAL	1,315

**40600990 TEMPORARY RAMP**

LOCATION	SO YD
FINAL PHASE	
STA 66+62 TO STA 66+67	36
STA 67+46.03 TO STA 67+51.03	36
STA 68+37.24 TO STA 68+42.24	36
STA 69+28 TO STA 69+33	36
TOTAL	144

**40600100 BITUMINOUS MATERIALS (PRIME COAT)**

LOCATION	GALLON
STAGE 1-2	
STA 67+49.95 TO STA 67+51.03	1
STA 68+37.25 TO STA 68+38.33	1
FINAL PHASE	
STA 66+62 TO STA 67+51.03	64
STA 68+37.25 TO STA 69+33	69
TOTAL	135

**40600300 AGGREGATE (PRIME COAT)**

LOCATION	TON
FINAL PHASE	
STA 66+62.00 TO STA 67+51.03	1.5
STA 68+37.25 TO STA 68+62.11	1.5
TOTAL	3

**40603345 HOT-MIX ASPHALT SURFACE COURSE, MIX'D", N90**

LOCATION	TON
FINAL PHASE	
STA 66+62.00 TO STA 67+51.03	54
STA 68+37.24 TO STA 69+33.00	58
TOTAL	112

**X0323710 REMOVE CONDUIT ATTACHED TO STRUCTURE**

LOCATION	FOOT
STAGE 1	
RT STA 67+44.0 TO STA 68+32.9	90
STAGE 2	
LT STA 67+54.6 TO STA 68+44.0	90
TOTAL	180

**XX002094 REMOVE AND REINSTALL FIBER OPTIC CABLE IN CONDUIT**

LOCATION	L SUM
STAGE 1	
RT STA 65+80.0 TO STA 73+29.0	1
TOTAL	1

APPROXIMATE LENGTH OF FIBER OPTIC CABLE= 775 FOOT

**X0322256 TEMPORARY INFORMATION SIGNING**

STAGE 1	SIGN NO.	SIZE	SO FT
	TIS-1	48x30	10.00
	TIS-2	36x12	3.00
	TIS-3	42x24	7.00
	TIS-4	36x12	3.00
	TIS-5	36x12	3.00
	TIS-6	36x12	3.00
	TIS-7	36x12	3.00
	TIS-8	42x24	7.00
	TIS-9	36x12	3.00
	TIS-10	42x18	5.25
	TIS-11	36x12	3.00

STAGE 2	SIGN NO.	SIZE	SO FT
	TIS-1	48x30	**
	TIS-2	36x12	**
	TIS-3	42x24	.
	TIS-4	36x12	.
	TIS-6	36x12	.
	TIS-7	36x12	.
	TIS-8	42x24	**
	TIS-9	36x12	**
	TIS-12	36x12	3.00
	TIS-13	42x18	5.25
	TIS-14	36x12	3.00
	TIS-15	36x12	3.00
	TIS-16	48x30	10.00
TOTAL			75

\*RELOCATE SIGN FROM STAGE 1 LOCATION  
\*\*SIGN ERECTED IN STAGE 1

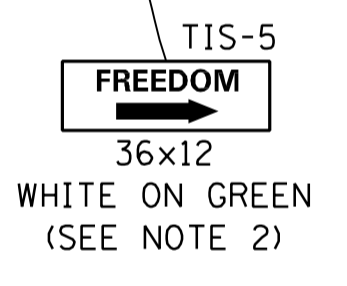
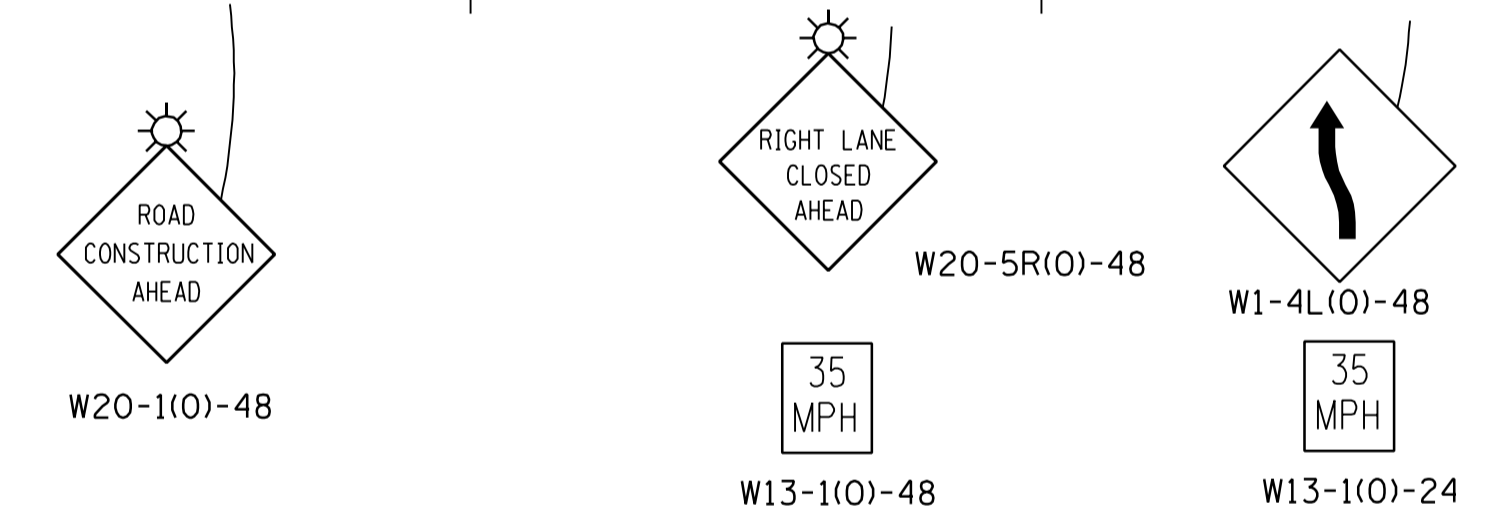
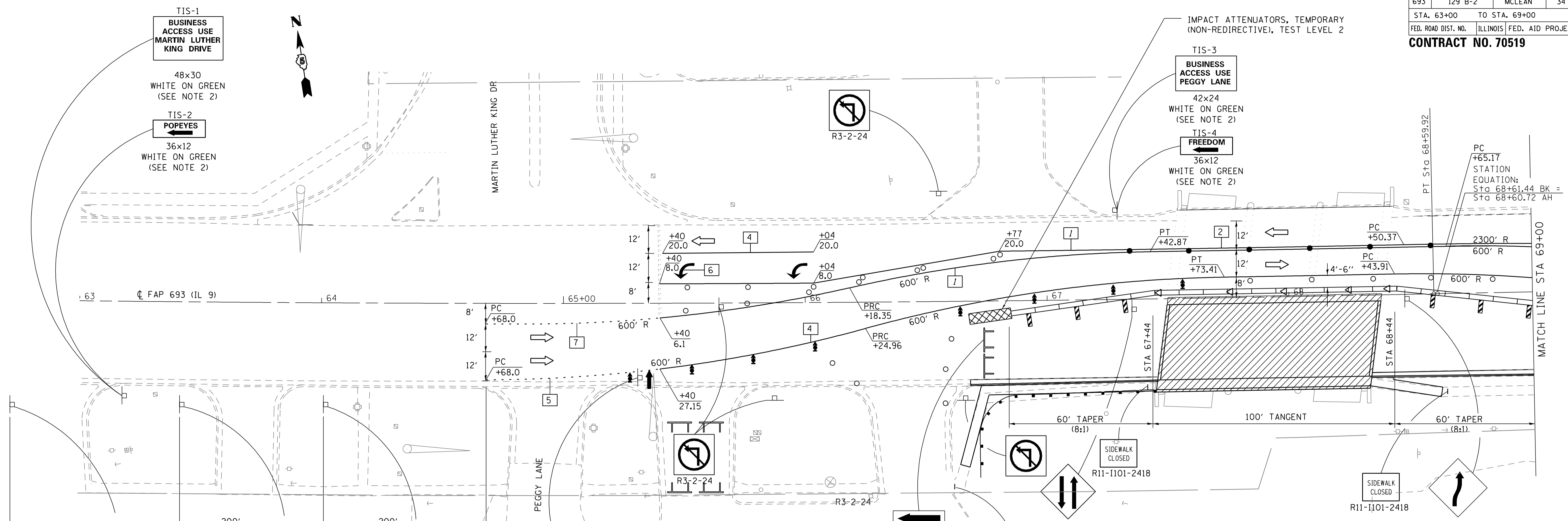
**SCHEDULE OF QUANTITIES**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
FILE: 2114SUM.DGN  
DATE: 12/07/06





TEMPORARY PAVEMENT MARKING LAYOUT

WESTBOUND LANES			EASTBOUND LANES		
STATION	OUTSIDE EDGE OF PAVEMENT	MEDIAN EDGE OF PAVEMENT	STATION	MEDIAN EDGE OF PAVEMENT	OUTSIDE EDGE OF PAVEMENT
65+40	EXISTING	-8.00	PC +68.0	8.00	32.00
66+04	EXISTING	-8.00	65+00	7.83	31.13
66+25	EXISTING	-11.54	65+25	6.71	29.25
66+50	EXISTING	-15.61	65+50	4.59	26.34
66+75	EXISTING	-19.65	65+75	1.44	22.40
66+77	EXISTING	-20.00	66+00	-2.74	17.40
			PRC +18.35	-6.49	-
PC +50.37	EXISTING	-20.00	PRC +24.96	-	11.33
68+75	EXISTING	-19.88	66+25	-7.91	11.32
69+00	EXISTING	-19.52	66+50	-12.52	5.29
			66+75	-16.02	0.41
			67+00	-18.42	-3.33
			67+25	-19.72	-5.98
			PT +42.87	-20.00	-
			67+50	-20.00	-7.53
			PT +73.41	-	-8.00
			PC +43.91	-	-8.00
			68+50	-20.00	-7.97
			PC +65.17	-20.00	-
			68+75	-19.96	-7.17
			69+00	-19.10	-5.36

- SEQUENCE OF OPERATIONS
- STAGE 1:
- INSTALL TEMPORARY CONCRETE BARRIER AND TRAFFIC CONTROL DEVICES
  - REMOVE REFLECTORS FROM RAISED REFLECTIVE PAVEMENT MARKERS
  - REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKINGS
  - REMOVE AND SALVAGE TEMPORARY CURB
  - REMOVE FIBER OPTIC CABLE AND CONDUIT ATTACHED TO STRUCTURE
  - REMOVE SIDEWALK AND COMBINATION CURB AND GUTTER
  - RECONSTRUCT STAGE 1 PORTION OF SUPERSTRUCTURE WITH EMBEDDED CONDUIT
  - CONSTRUCT SIDEWALK AND COMBINATION CURB AND GUTTER
  - INSTALL GUARDRAILS AND TERMINALS
  - PLACE HOT-MIX ASPHALT BINDER COURSE ON ABUTMENT FLUSH WITH TOP OF CONCRETE WEARING SURFACE AND EXISTING HOT-MIX ASPHALT
  - REINSTALL FIBER OPTIC CABLE
  - BRIDGE DECK GROOVING AND PROTECTIVE COAT

- NOTES:
- ALL SIGNING, UNLESS OTHERWISE NOTED, SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)
  - SIGNING FOR BUSINESS ACCESS SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING. LETTERS SHALL BE TYPE B AND 4 INCHES IN HEIGHT.
  - ALL EXISTING SIGNING, EXCEPT LOAD POSTING SIGNS THAT IS NOT APPLICABLE WITH THE STAGE 1 TRAFFIC CONTROL SHALL BE COMPLETELY COVERED BY THE CONTRACTOR. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)
  - VERTICAL BARRICADES SHALL BE EQUIPPED WITH MONO-DIRECTIONAL OR BIDIRECTIONAL STEADY BURN LIGHTS AND SHALL BE PLACED AT 25 FOOT INTERVALS ALONG THE WORK ZONE. BARRICADES SHALL BE OMITTED AS DIRECTED BY THE ENGINEER TO ALLOW ACCESS TO COMMERCIAL ENTRANCES.

TRAFFIC CONTROL LEGEND	TEMPORARY PAVEMENT MARKING LEGEND
TYPE III BARRICADE WITH TWO FLASHING LIGHTS	4" SOLID (YELLOW)
POST MOUNTED SIGN	4" DOUBLE YELLOW (NARROW)
VERTICAL BARRICADES WITH STEADY BURN MONODIRECTIONAL OR BIDIRECTIONAL LIGHT AT 25 FOOT CENTERS	4" SKIP DASH (WHITE)
DIRECTION INDICATOR BARRICADES	4" SOLID (WHITE)
FLASHING LIGHT	4" LANE EXTENSION (WHITE)
WORK ZONE	4" LANE EXTENSION (YELLOW)
VERTICAL PANEL WITH STEADY BURNING LIGHT AT 20 FOOT CENTERS ON TAPER	
CRYSTAL MONODIRECTIONAL REFLECTORS AT 20 FOOT CENTERS	
TEMPORARY CONCRETE BARRIER	
FLEXIBLE DELINEATORS AT 25 FOOT CENTERS	
TYPE B ARROW BOARD	

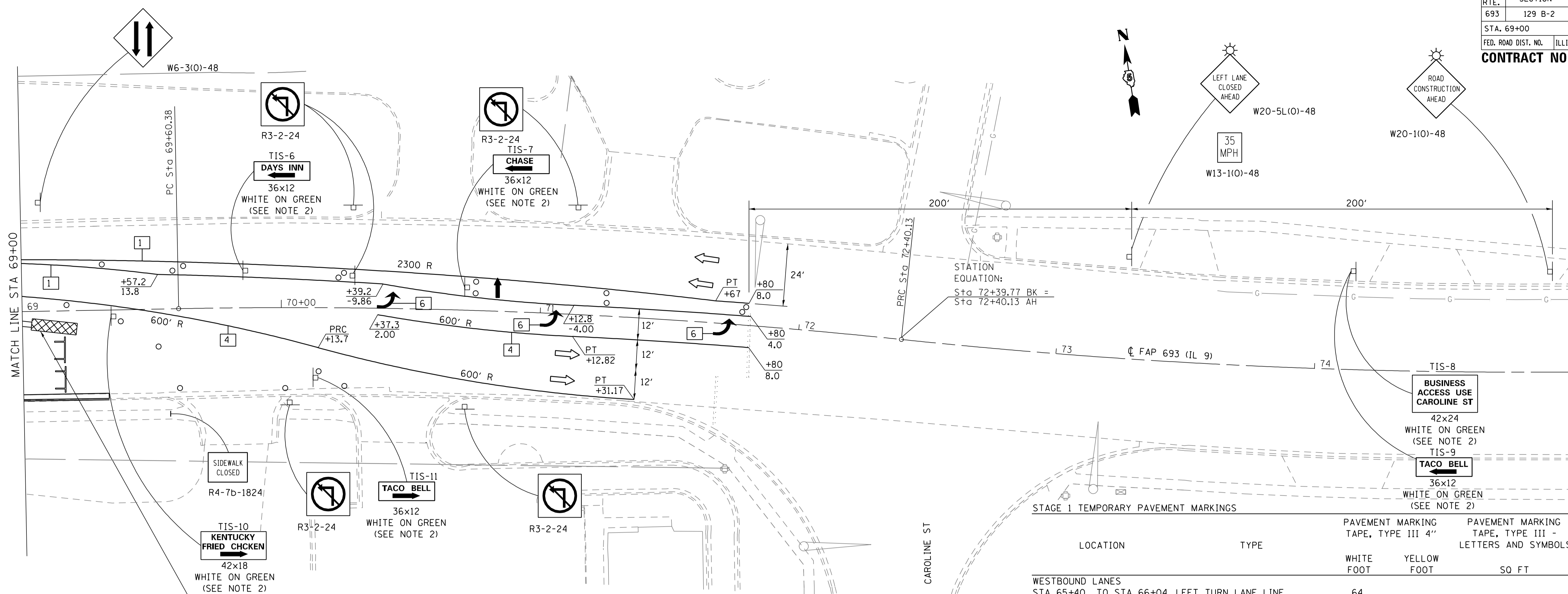
SHEET 1 OF 2

**TRAFFIC CONTROL AND PROTECTION  
STAGE 1**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

JOB #: 2114.5  
FILE: 2114.5STAGE1REV  
DATE: 12/07/06

CUMMINS ENGINEERING CORPORATION



LOCATION	TYPE	PAVEMENT MARKING TAPE, TYPE III 4"		PAVEMENT MARKING TAPE, TYPE III - LETTERS AND SYMBOLS	WORKZONE PAVEMENT MARKING REMOVAL
		WHITE FOOT	YELLOW FOOT		
<b>WESTBOUND LANES</b>					
STA 65+40 TO STA 66+04	LEFT TURN LANE LINE	64			22
STA 65+58	LEFT TURN ARROW			15.6	16
STA 66+04	LEFT TURN ARROW			15.6	16
STA 65+40 TO STA 71+80	MEDIAN EDGE LINE		640		214
<b>EASTBOUND LANES</b>					
STA 64+68 TO STA 65+40	LANE EXTENSION		26		9
STA 65+40 TO STA 71+80	MEDIAN EDGE LINE		640		214
STA 70+37 TO STA 71+80	LEFT TURN LANE LINE	143			48
STA 70+73	LEFT TURN ARROW			15.6	16
STA 71+00	LEFT TURN ARROW			15.6	16
STA 71+62	LEFT TURN ARROW			15.6	16
STA 64+68 TO STA 65+40	LANE EXTENSION LINE	26			9
STA 65+40 TO STA 71+31	OUTSIDE EDGE LINE	591			197
<b>TOTAL</b>		<b>824</b>	<b>1,306</b>	<b>78</b>	<b>793</b>

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING MAINTAINING AND REMOVING THESE ITEMS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL).

TRAFFIC CONTROL LEGEND		TEMPORARY PAVEMENT MARKING LEGEND	
	TYPE III BARRICADE WITH TWO FLASHING LIGHTS		4" SOLID (YELLOW)
	POST MOUNTED SIGN		4" DOUBLE YELLOW (NARROW)
	VERTICAL BARRICADES WITH STEADY BURN MONODIRECTIONAL OR BIDIRECTIONAL LIGHT AT 25 FOOT CENTERS		4" SKIP DASH (WHITE)
	FLASHING LIGHT		4" SOLID (WHITE)
	WORK ZONE		4" LANE EXTENSION (WHITE)
	VERTICAL PANEL WITH STEADY BURNING LIGHT AT 20 FOOT CENTERS ON TAPER		LEFT TURN ARROW (WHITE)
	CRYSTAL MONODIRECTIONAL REFLECTORS AT 20 FOOT CENTERS		
	TEMPORARY CONCRETE BARRIER		
	FLEXIBLE DELINEATORS AT 25 FOOT CENTERS		
	TYPE B ARROW BOARD		

TEMPORARY PAVEMENT MARKING LAYOUT					
WESTBOUND LANES			EASTBOUND LANES		
STATION	OUTSIDE EDGE OF PAVEMENT	MEDIAN EDGE OF PAVEMENT	STATION	MEDIAN EDGE OF PAVEMENT	OUTSIDE EDGE OF PAVEMENT
69+00	EXISTING	-19.52	69+00	-19.10	-5.36
69+25	EXISTING	-18.89	69+25	-17.20	-2.49
69+50	EXISTING	-17.98	69+50	-14.24	1.45
69+75	EXISTING	-16.85	69+75	-10.24	6.42
70+00	EXISTING	-15.68	70+00	-5.40	12.23
70+25	EXISTING	-14.53	PRC +09.67	-3.31	-
70+50	EXISTING	-13.37	PRC +13.7	-	15.76
70+75	EXISTING	-12.22	70+25	-0.16	18.62
71+00	EXISTING	-11.07	70+50	3.84	23.94
71+25	EXISTING	-9.93	70+75	6.50	27.88
71+50	EXISTING	-8.84	71+00	7.83	30.50
PT +67	EXISTING	-8.00	PT +12.82	8.00	-
71+80	EXISTING	-8.00	71+25	8.00	31.82
			PT +31.17	-	32.00
			71+50	8.00	
			71+75	8.00	
			71+80	8.00	

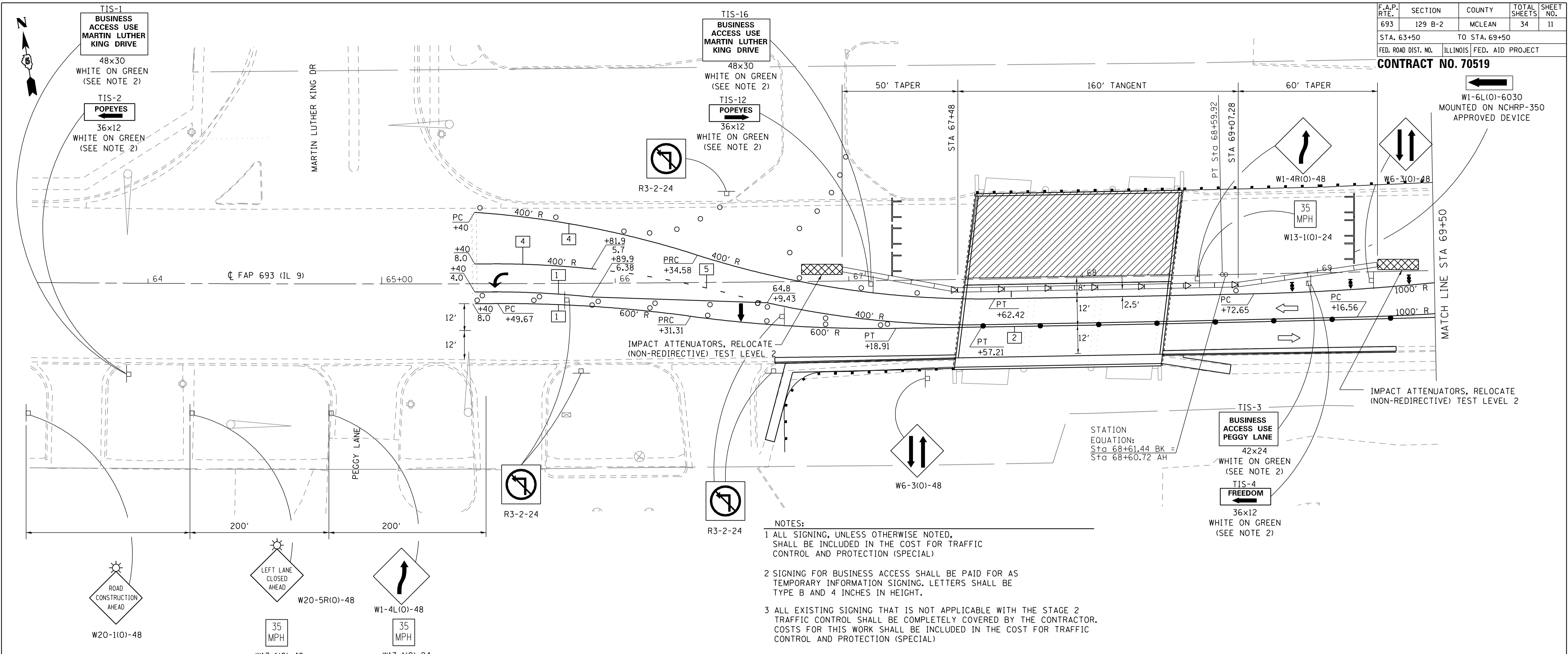
SHEET 2 OF 2

**TRAFFIC CONTROL AND PROTECTION  
STAGE 1**

*FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY*

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5 FILE: 2114.5STAGE1REV DATE: 12/07/06
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**CONTRACT NO. 70519**



- NOTES:**
- ALL SIGNING, UNLESS OTHERWISE NOTED, SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)
  - SIGNING FOR BUSINESS ACCESS SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING. LETTERS SHALL BE TYPE B AND 4 INCHES IN HEIGHT.
  - ALL EXISTING SIGNING THAT IS NOT APPLICABLE WITH THE STAGE 2 TRAFFIC CONTROL SHALL BE COMPLETELY COVERED BY THE CONTRACTOR. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL)
  - VERTICAL BARRICADES SHALL BE EQUIPPED WITH MONO-DIRECTIONAL OR BIDIRECTIONAL STEADY BURN LIGHTS AND SHALL BE PLACED AT 25 FOOT INTERVALS ALONG THE WORK ZONE. BARRICADES SHALL BE OMITTED AS DIRECTED BY THE ENGINEER TO ALLOW ACCESS TO COMMERCIAL ENTRANCES.

- SEQUENCE OF OPERATIONS**
- STAGE 2:
- RELOCATE TEMPORARY CONCRETE BARRIER AND TRAFFIC CONTROL DEVICES TO CLOSE NORTH SIDE OF BRIDGE
  - REMOVE STAGE 1 TEMPORARY PAVEMENT MARKINGS AND INSTALL STAGE 2 TEMPORARY PAVEMENT MARKINGS
  - RECONSTRUCT STAGE 2 PORTION OF STRUCTURE
  - INSTALL GUARDRAIL AND TERMINALS
  - PLACE HOT-MIX ASPHALT BINDER COURSE ON ABUTMENT FLUSH WITH TOP OF CONCRETE WEARING SURFACE AND EXISTING HOT-MIX ASPHALT
  - BRIDGE DECK GROOVING AND PROTECTIVE COAT

SHEET 1 OF 2

**TRAFFIC CONTROL AND PROTECTION  
STAGE 2**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

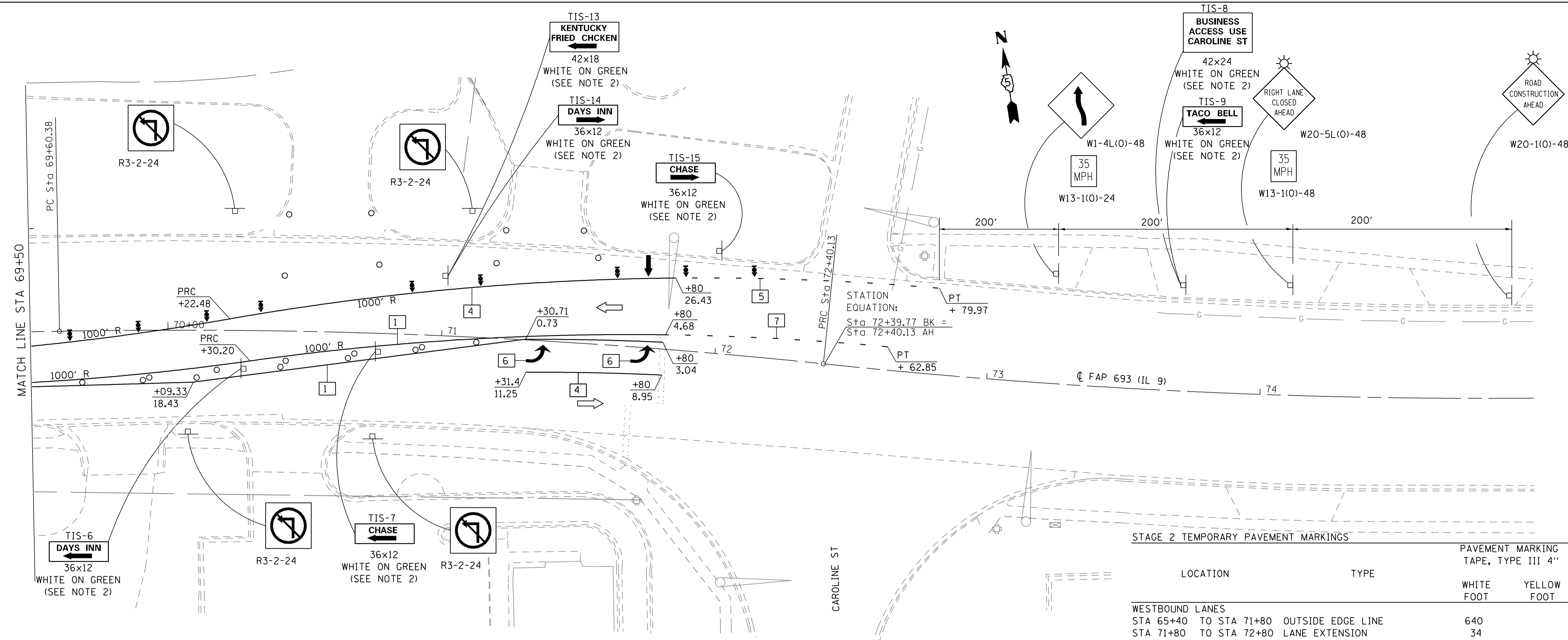
CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
FILE: 2114.5STAGE2  
DATE: 12/07/06

TRAFFIC CONTROL LEGEND		TEMPORARY PAVEMENT MARKING LEGEND	
	TYPE III BARRICADE WITH TWO FLASHING LIGHTS		4" SOLID (YELLOW)
	POST MOUNTED SIGN		4" DOUBLE YELLOW (NARROW)
	VERTICAL BARRICADES WITH STEADY BURN MONODIRECTIONAL OR BIDIRECTIONAL LIGHT AT 25 FOOT CENTERS		4" SKIP DASH (WHITE)
	DIRECTION INDICATOR BARRICADES		4" SOLID (WHITE)
	FLASHING LIGHT		4" LANE EXTENSION (WHITE)
	WORK ZONE		LEFT TURN ARROW (WHITE)
	VERTICAL PANEL WITH STEADY BURNING LIGHT AT 20 FOOT CENTERS ON TAPER		
	CRYSTAL MONODIRECTIONAL REFLECTORS AT 20 FOOT CENTERS		
	TEMPORARY CONCRETE BARRIER		
	FLEXIBLE DELINEATORS AT 25 FOOT CENTERS		
	TYPE B ARROW BOARD		

**TEMPORARY PAVEMENT MARKING LAYOUT**

WESTBOUND LANES			EASTBOUND LANES		
STATION	OUTSIDE EDGE OF PAVEMENT	MEDIAN EDGE OF PAVEMENT	STATION	MEDIAN EDGE OF PAVEMENT	OUTSIDE EDGE OF PAVEMENT
PC +40	-31.03	-8.00	65+40	8.00	EXISTING
65+50	-29.69	-7.98	PC +49.67	8.00	EXISTING
65+75	-26.96	-7.02	65+50	8.00	EXISTING
66+00	-22.07	-4.44	65+75	8.56	EXISTING
66+25	-15.46	-0.22	66+00	10.20	EXISTING
PRC +34.58	-12.46	-	66+25	12.93	EXISTING
PRC +49.92	-	5.67	PRC +31.31	13.79	EXISTING
66+50	-7.74	5.70	66+50	16.16	EXISTING
66+75	-1.45	11.64	66+75	18.44	EXISTING
67+00	3.21	15.97	67+00	19.70	EXISTING
67+25	6.28	18.72	PT +18.91	20.00	EXISTING
67+50	7.80	19.93			EXISTING
PT +57.21	-	20.00	69+00	19.85	EXISTING
PT +62.42	8.00	-	69+25	19.70	EXISTING
			69+50	19.52	EXISTING
PC +72.65	8.00	-			
68+75	7.95	-			
69+00	7.50	-			
PC +16.56	-	20.00			
69+25	6.41	19.70			
69+50	4.70	19.00			



STAGE 2 TEMPORARY PAVEMENT MARKINGS

LOCATION	TYPE	PAVEMENT MARKING TAPE, TYPE III 4"		PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	WORKZONE PAVEMENT MARKING REMOVAL SQ FT
		WHITE FOOT	YELLOW FOOT			
<b>WESTBOUND LANES</b>						
STA 65+40 TO STA 71+80	OUTSIDE EDGE LINE	640				214
STA 71+80 TO STA 72+80	LANE EXTENSION	34				12
STA 65+58	LEFT TURN ARROW			15.6		15.6
STA 65+40 TO STA 65+82	LEFT TURN LANE LINE	42				14
STA 65+82 TO STA 66+65	LANE EXTENSION LINE	28				10
STA 66+65 TO STA 71+80	MEDIAN EDGE LINE		515			172
STA 71+80 TO STA 72+63	LANE EXTENSION		28			10
<b>EASTBOUND LANES</b>						
STA 65+40 TO STA 71+80	MEDIAN EDGE LINE		640			214
STA 71+31 TO STA 71+80	LEFT TURN LANE LINE	49				17
STA 71+31	LEFT TURN ARROW			15.6		15.6
STA 71+62	LEFT TURN ARROW			15.6		15.6
<b>TOTAL</b>		<b>793</b>	<b>1,184</b>	<b>47</b>		<b>710</b>

QUANTITIES FOR PLACEMENT AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS ARE INCLUDED FOR INFORMATION ONLY. PLACING MAINTAINING AND REMOVING THESE ITEMS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION (SPECIAL).

FINAL PHASE CONSTRUCTION SHALL CONSIST OF THE FOLLOWING:

1. REMOVE TEMPORARY CONCRETE BARRIER, TEMPORARY PAVEMENT MARKINGS AND ALL TRAFFIC CONTROL DEVICES; PLACE SHORT TERM PAVEMENT MARKINGS AND PLACE TRAFFIC IN THE PERMANENT MARKERS.
2. MILL AND RESURFACE THE APPROACH ROADWAY.
3. INSTALL PAVEMENT MARKINGS AND REFLECTORS.

SHEET 2 OF 2

**TRAFFIC CONTROL AND PROTECTION  
STAGE 2**

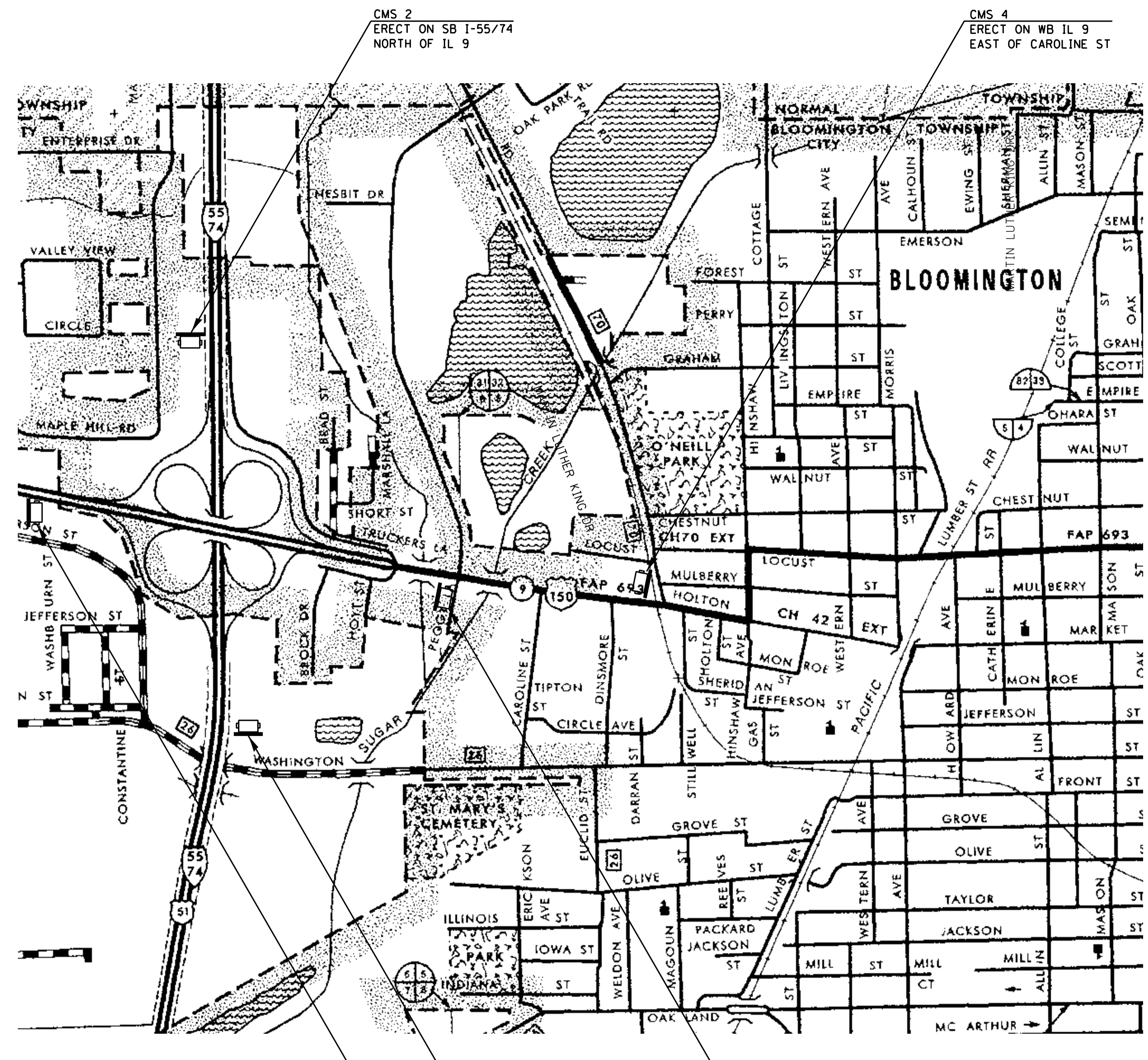
FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

TRAFFIC CONTROL LEGEND		TEMPORARY PAVEMENT MARKING LEGEND	
	TYPE III BARRICADE WITH TWO FLASHING LIGHTS		4" SOLID (YELLOW)
	POST MOUNTED SIGN		4" DOUBLE YELLOW (NARROW)
	VERTICAL BARRICADES WITH STEADY BURN MONODIRECTIONAL OR BIDIRECTIONAL LIGHT AT 25 FOOT CENTERS		4" SKIP DASH (WHITE)
	DIRECTION INDICATOR BARRICADES		4" SOLID (WHITE)
	FLASHING LIGHT		4" LANE EXTENSION (WHITE)
	WORK ZONE		LEFT TURN ARROW (WHITE)
	VERTICAL PANEL WITH STEADY BURNING LIGHT AT 20 FOOT CENTERS ON TAPER		4" LANE EXTENSION (YELLOW)
	CRYSTAL MONODIRECTIONAL REFLECTORS AT 20 FOOT CENTERS		
	TEMPORARY CONCRETE BARRIER		
	FLEXIBLE DELINEATORS AT 25 FOOT CENTERS		
	TYPE B ARROW BOARD		

TEMPORARY PAVEMENT MARKING LAYOUT

WESTBOUND LANES			EASTBOUND LANES		
STATION	OUTSIDE EDGE OF PAVEMENT	MEDIAN EDGE OF PAVEMENT	STATION	MEDIAN EDGE OF PAVEMENT	OUTSIDE EDGE OF PAVEMENT
69+50	4.70	19.00	69+50	19.52	EXISTING
69+75	2.36	17.66	69+75	19.26	EXISTING
70+00	-0.62	15.45	70+00	18.71	EXISTING
PRC +22.48	-4.70	-	70+09.33	18.43	EXISTING
70+25	-5.16	12.36	70+25	16.33	EXISTING
PRC +30.20	-	11.57	70+50	12.76	EXISTING
70+50	-9.54	8.70	70+75	8.91	EXISTING
70+75	-13.55	5.38	71+00	4.76	EXISTING
71+00	-17.19	2.43	71+25	0.32	EXISTING
71+25	-20.47	-0.17	71+30.71	-0.73	EXISTING
71+50	-23.39	-2.43	71+50	-1.78	EXISTING
71+75	-25.95	-4.33	71+75	-2.85	EXISTING
72+00	-28.15	-5.89	71+80	-3.04	EXISTING
72+25	-29.98	-7.08			EXISTING
72+50	-31.36	-7.87			EXISTING
PT +62.85	-	-8.00			EXISTING
72+75	-31.97	-			EXISTING
PT +79.97	-32.00	-			EXISTING

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				



CMS 2  
ERECT ON SB I-55/74  
NORTH OF IL 9

CMS 4  
ERECT ON WB IL 9  
EAST OF CAROLINE ST

CMS 1  
ERECT ON NB I-55/74 SOUTH  
OF IL 9

CMS 3  
ERECT ON EB IL 9  
WEST OF MARTIN LUTHER KING DR

CMS 5  
ERECT ON EB IL 9 WEST  
OF I-55/74

 INDICATES LOCATION OF  
CHANGEABLE MESSAGES SIGN

NOTES  
CHANGEABLE MESSAGE SIGNS SHALL BE ERECTED  
TWO WEEKS PRIOR TO THE START OF WORK AND  
SHALL REMAIN IN PLACE UNTIL THE PROJECT IS  
COMPLETE.  
  
EXACT LOCATIONS FOR CHANGEABLE MESSAGE  
SIGNS WILL BE DETERMINED BY THE ENGINEER.

**CHANGEABLE MESSAGE SIGNS**

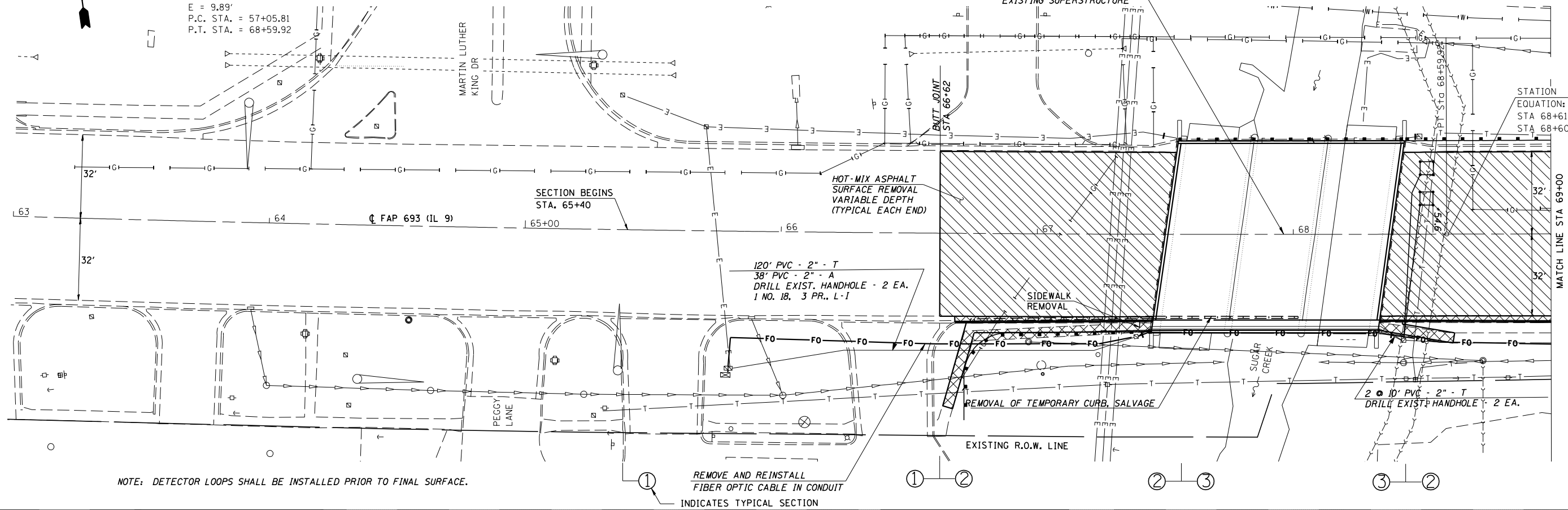
FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

EXIST. CURVE 11  
 PI STA. = 62+83.09  
 $\Delta = 3^\circ 55' 27''$  (LT)  
 $D = 0^\circ 20' 24''$   
 $R = 16,850.36'$   
 $T = 577.28'$   
 $L = 1,154.11'$   
 $E = 9.89'$   
 P.C. STA. = 57+05.81  
 P.T. STA. = 68+59.92

SEC 5, T23N, R2E, 3rd PM

SEE SHEET 16 FOR CURB, SIDEWALK,  
 AND GUARDRAIL DETAILS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	14
STA. 63+00		TO STA. 69+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				



NOTE: DETECTOR LOOPS SHALL BE INSTALLED PRIOR TO FINAL SURFACE.

REMOVE AND REINSTALL  
 FIBER OPTIC CABLE IN CONDUIT  
 INDICATES TYPICAL SECTION

B.M. 4751-3 CHISLED SQUARE ON  
 TOP OF NE WINGWALL OF TRIPLE  
 BOX CULVERT OVER SUGAR CREEK  
 STA 61+80.57 54.28' LT ELEV. 745.52

B.M. 4751-2 CHISLED SQUARE ON  
 TOP OF SE WINGWALL OF BRIDGE  
 OVER SUGAR CREEK  
 STA 68+32.44 39.24' RT ELEV. 745.37

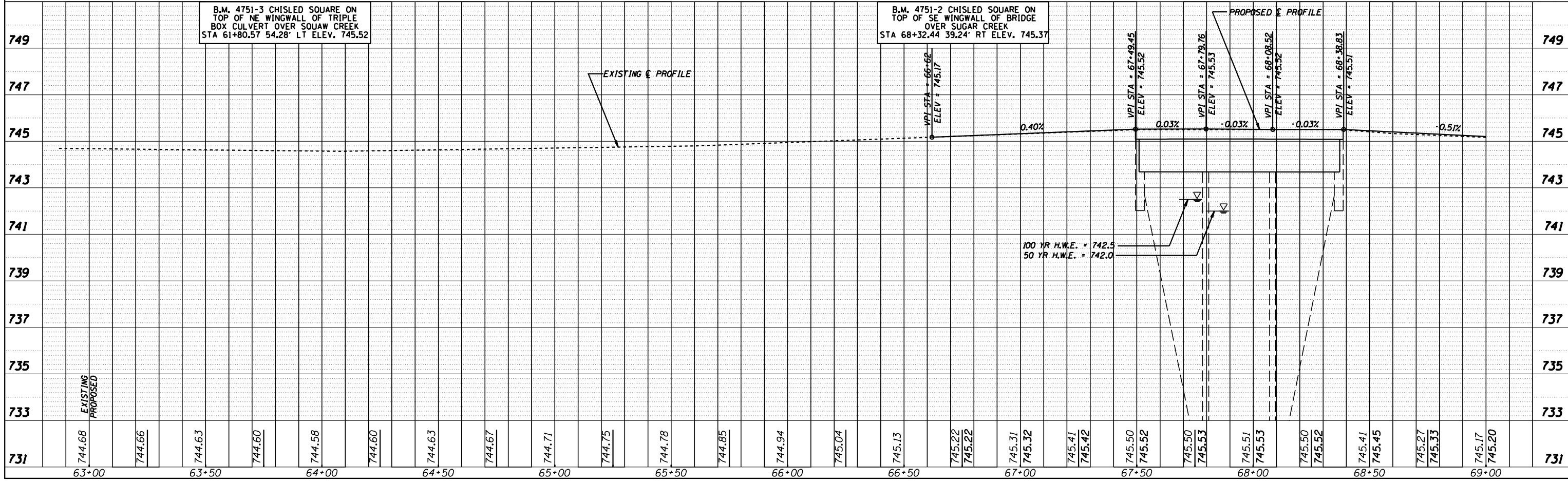
EXISTING & PROFILE

PROPOSED & PROFILE

100 YR H.W.E. = 742.5  
 50 YR H.W.E. = 742.0

PLAN	DATE
BY	
NO.	
NO.	
NO.	
NO.	

PROFILE	DATE
BY	
NO.	
NO.	
NO.	
NO.	



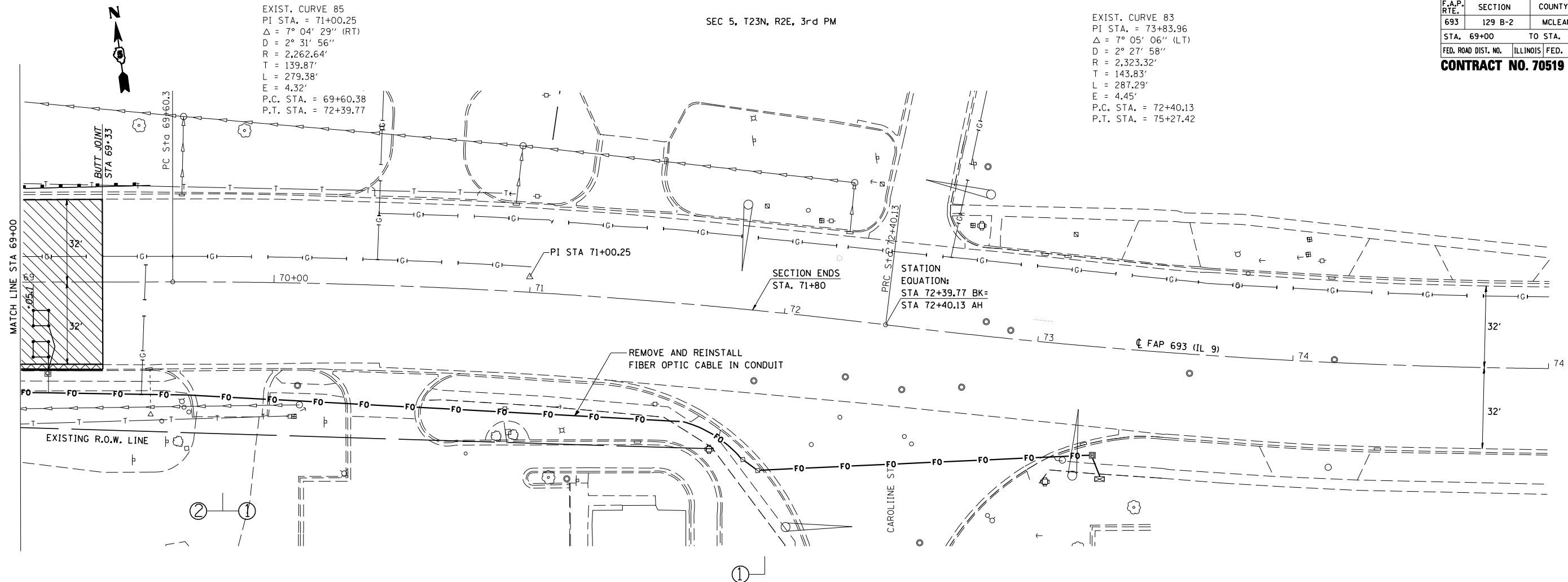
12/21/2006  
 DATE: TIME:  
 c:\projects\693\693\12.19.2006 submittal\214.5p&p.dgn  
 -REF-  
 -REV-

EXIST. CURVE 85  
 PI STA. = 71+00.25  
 $\Delta = 7^{\circ} 04' 29''$  (RT)  
 $D = 2^{\circ} 31' 56''$   
 $R = 2,262.64'$   
 $T = 139.87'$   
 $L = 279.38'$   
 $E = 4.32'$   
 P.C. STA. = 69+60.38  
 P.T. STA. = 72+39.77

SEC 5, T23N, R2E, 3rd PM

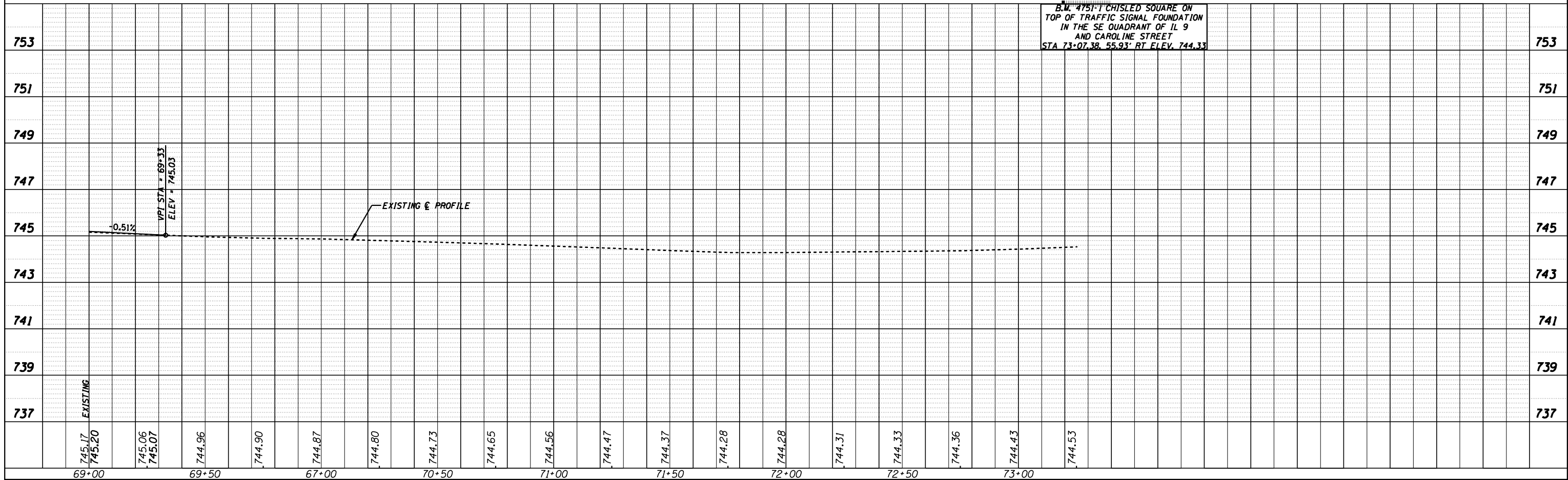
EXIST. CURVE 83  
 PI STA. = 73+83.96  
 $\Delta = 7^{\circ} 05' 06''$  (LT)  
 $D = 2^{\circ} 27' 58''$   
 $R = 2,323.32'$   
 $T = 143.83'$   
 $L = 287.29'$   
 $E = 4.45'$   
 P.C. STA. = 72+40.13  
 P.T. STA. = 75+27.42

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	15
STA. 69+00		TO STA. 75+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				

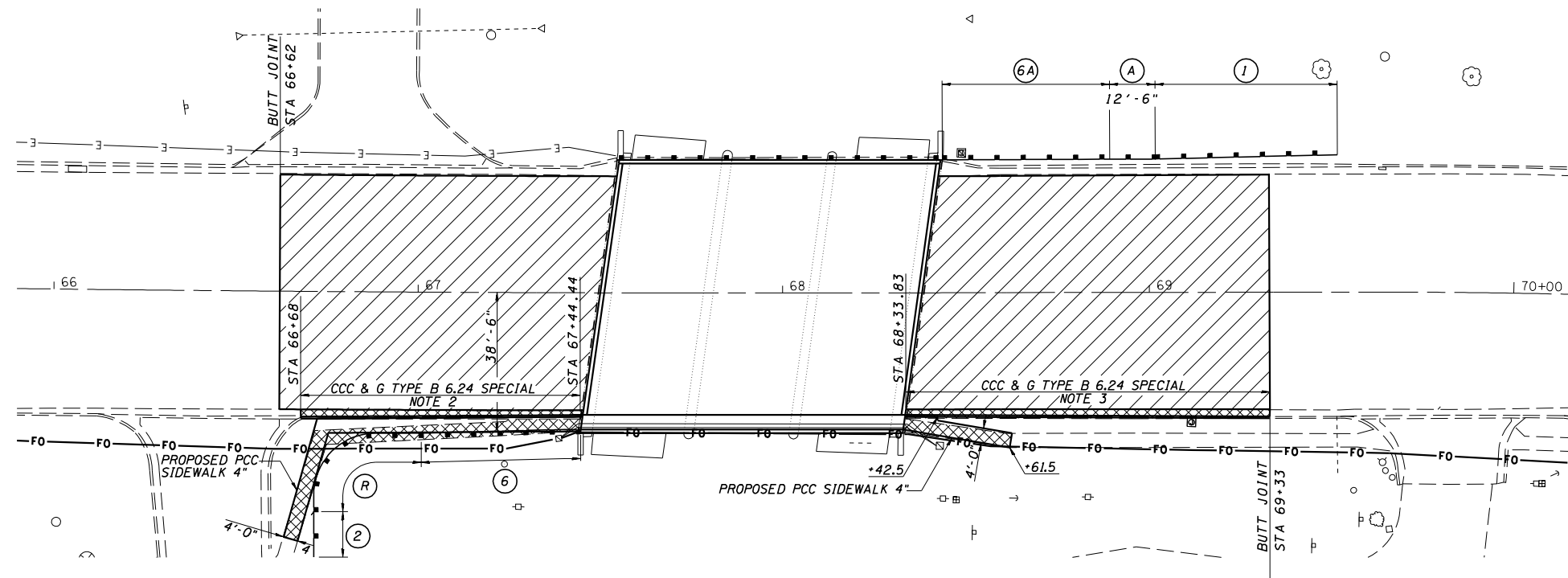


PLAN	DATE
BY	
DATE	
BY	
DATE	
BY	
DATE	
BY	
DATE	

PROFILE	DATE
BY	
DATE	
BY	
DATE	
BY	
DATE	
BY	
DATE	



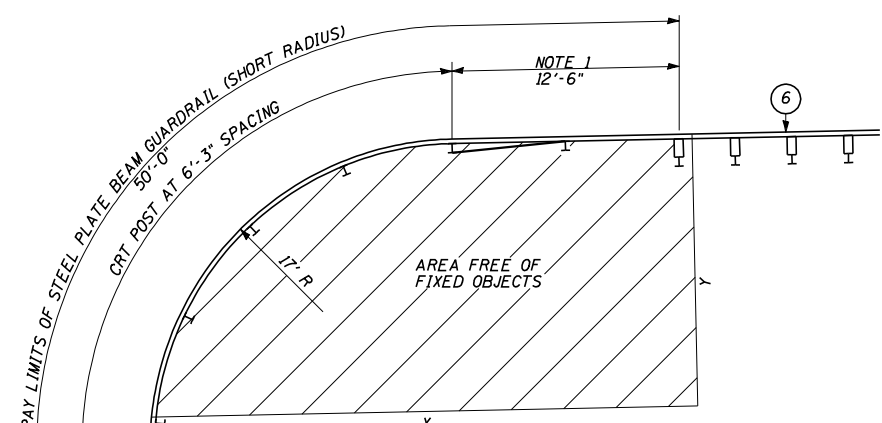
12/21/2006  
 DATE-TIME  
 c:\projects\693\693.dwg  
 REF-  
 FILE-



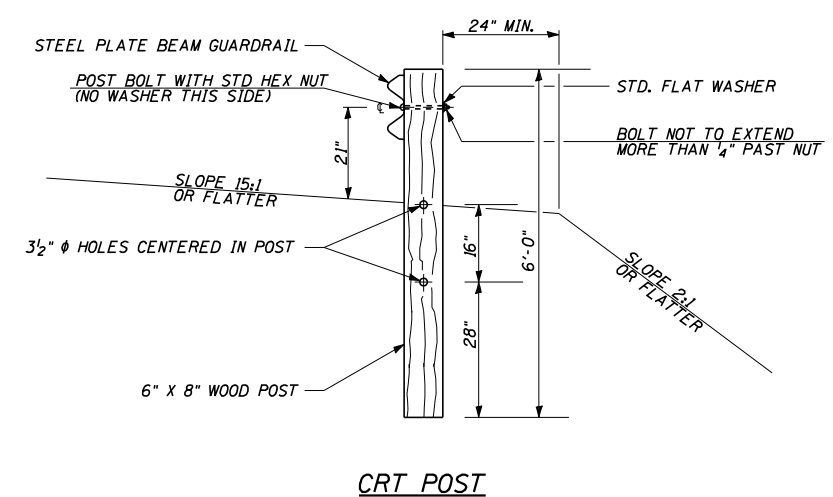
- LEGEND**
- ① TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)
  - ② TRAFFIC BARRIER TERMINAL TYPE 2
  - ⑥ TRAFFIC BARRIER TERMINAL TYPE 6
  - ⑥A TRAFFIC BARRIER TERMINAL 6A
  - Ⓐ STEEL PLATE BEAM GUARDRAIL TYPE A
  - Ⓡ STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)
  - HOT-MIX ASPHALT SURFACE REMOVAL - VARIABLE DEPTH
  - COMBINATION CURB AND GUTTER REMOVAL SIDEWALK REMOVAL

R	NO. OF WOOD POST	X	Y
(8'-6")	5	(25')	(15')
(17'-0")	6	(30')	(15')
(25'-6")	8	(40')	(20')
(35'-0")	11	(50')	(20')

**PLAN NOTE:**  
 EXISTING SIDEWALKS SHALL BE REMOVED AT THE LOCATIONS SHOWN IN THE PLANS AND NEW SIDEWALK CONSTRUCTED TO MATCH THE TOP SURFACE OF THE BRIDGE SIDEWALK. THIS WORK SHALL INCLUDE FURNISHING AND PLACING EMBANKMENT REQUIRED TO PREPARE THE SUBGRADE AND EMBANKMENT REQUIRED TO BACKFILL THE NEWLY CONSTRUCTED SIDEWALK. DISTURBED AREAS SHALL BE FERTILIZED AND SEEDING WITH CLASS 1 SEEDING AS SPECIFIED IN SECTION 250 OF THE STANDARD SPECIFICATIONS. EMBANKMENT, FERTILIZER NUTRIENTS, AND SEEDING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR PORTLAND CEMENT CONCRETE SIDEWALK, 4 INCH.



- NOTES:**
- CONSTRUCT ACCORDING TO 631011 FOR TRAFFIC BARRIER TERMINAL TYPE 2, EXCEPT DELETE END SECTION AND SPLICE INTO RADIUS GUARDRAIL
  - TRANSITION GUTTER FLAG FROM 2' WIDE AT STA 66+68 TO 1'-6" WIDE AT STA 67+44.44  
TRANSITION CURB HEIGHT FROM 6" AT STA 67+35 TO 9" AT STA 67+44.44
  - TRANSITION GUTTER WIDTH FROM 1'-6" AT STA 68+33.83 TO 2'-0" AT STA 69+33  
TRANSITION CURB HEIGHT FROM 9" AT STA 68+33.83 TO 6" AT STA 68+43
  - HOT-MIX ASPHALT REMOVAL SHALL INCLUDE CONSTRUCTION OF BUTT JOINTS

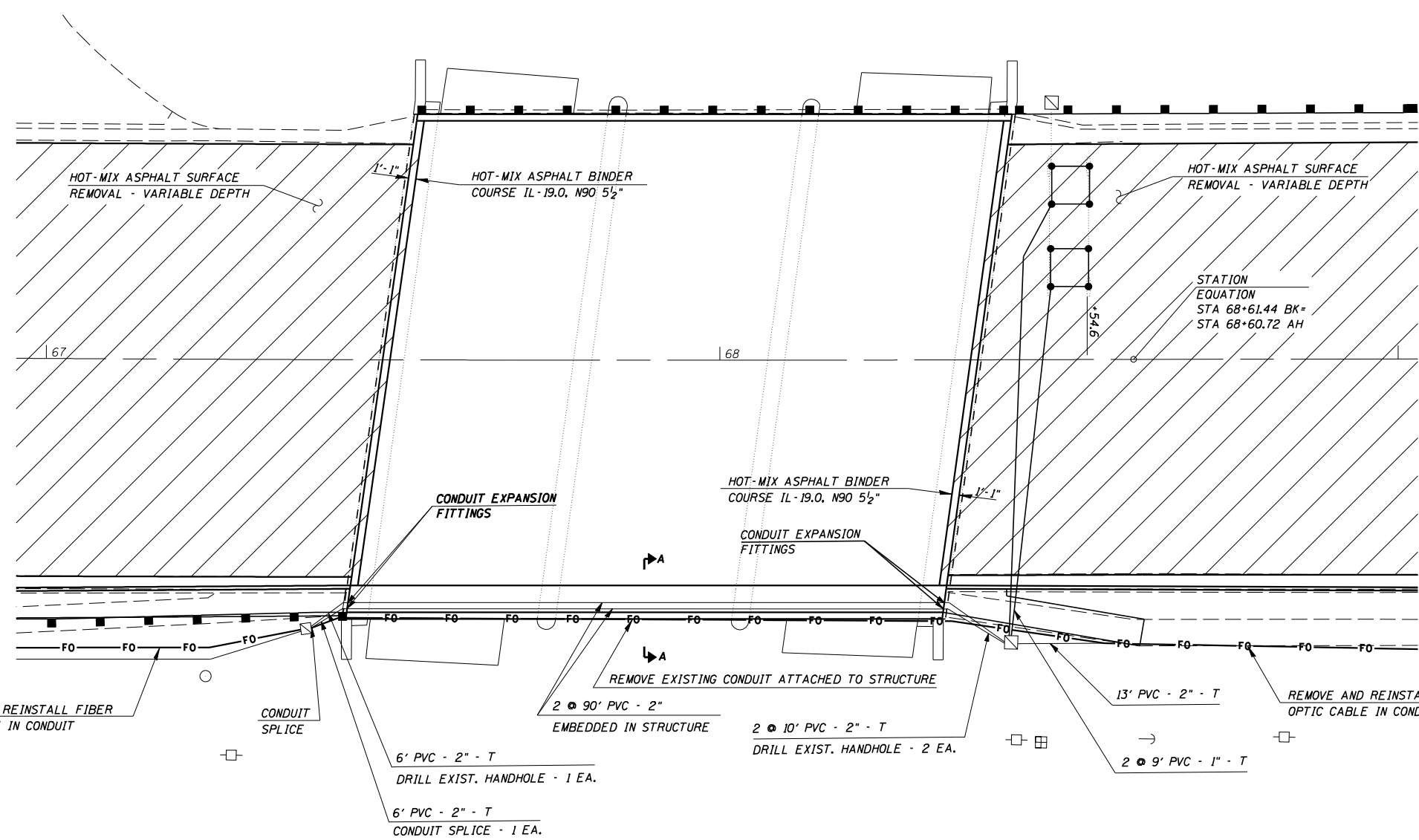


**CURB & GUTTER, SIDEWALK,  
 GUARD RAIL & RESURFCAING DETAILS**  
 FAP ROUTE 693 (IL 9)  
 SECTION 129 B-2  
 MCLEAN COUNTY

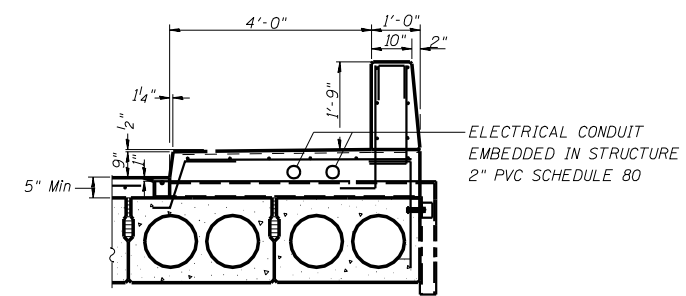
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 2114elec
	DATE: 12/14/06



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	MCLEAN	34	17
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				

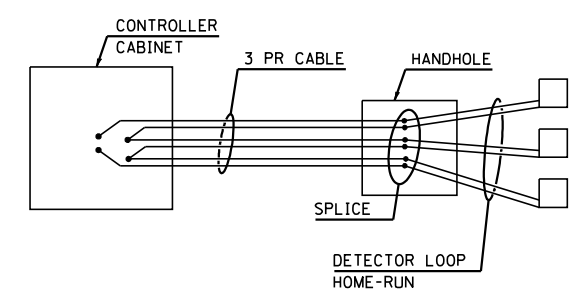


**PLAN**



**SECTION A - A**

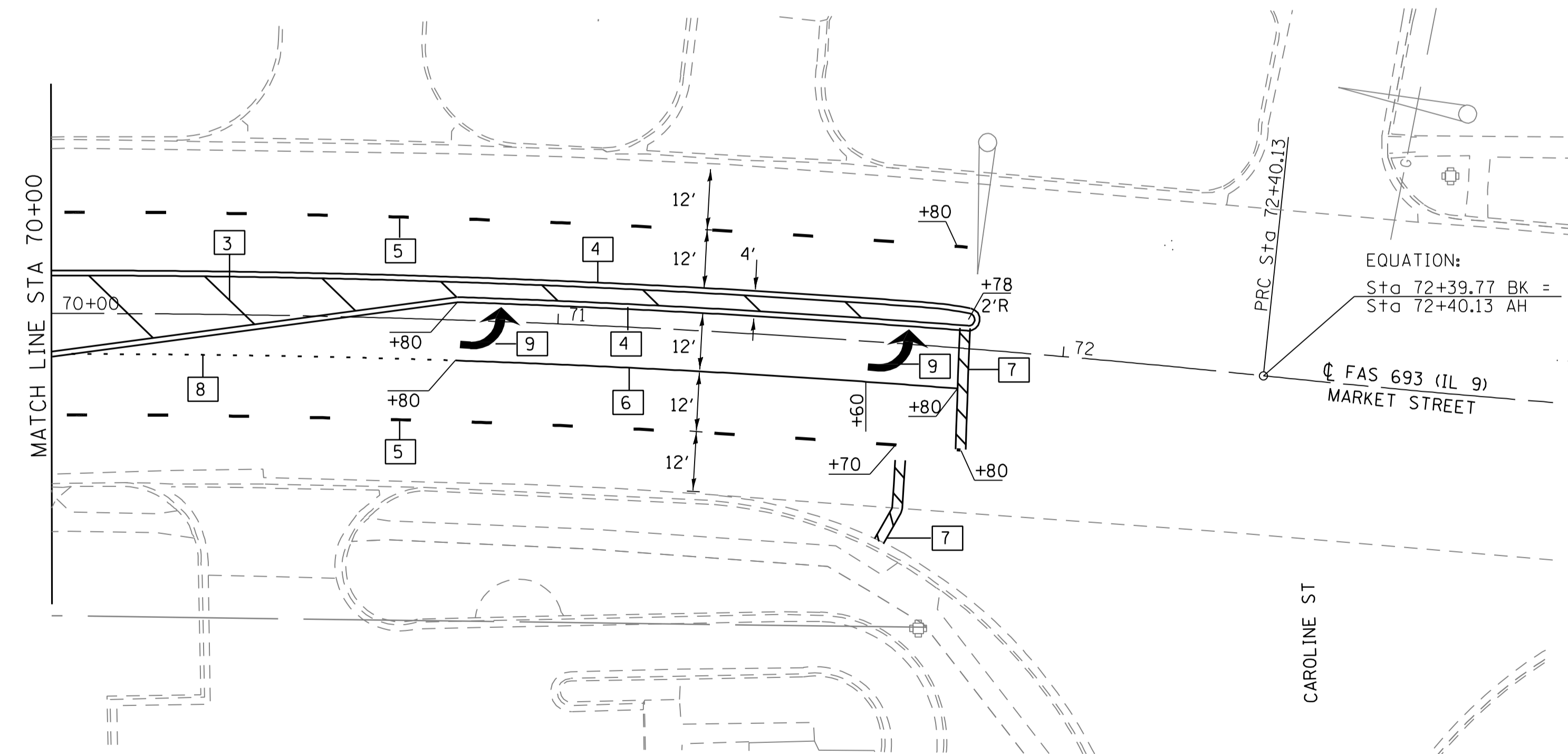
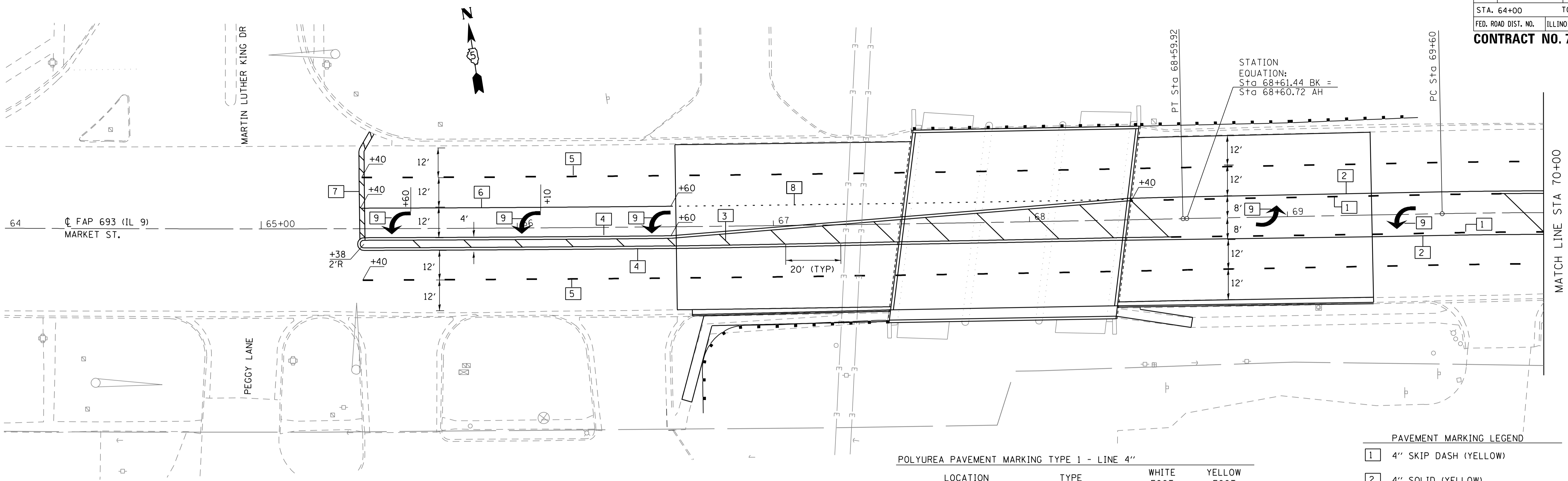
**DETAIL OF DETECTOR LOOP WIRING**  
WIRED IN SERIES WITH MULTI-PAIR CABLE



**NOTES:**  
**CONDUIT EMBEDDED IN STRUCTURE:** CONDUIT SHALL BE EMBEDDED IN THE BRIDGE SIDEWALK AS SHOWN ON THE PLANS AND AS SPECIFIED IN SECTION 812 OF THE STANDARD SPECIFICATIONS. THE CONDUIT SHALL BE CONNECTED TO EXISTING UNDERGROUND CONDUITS VIA EXPANSION FITTINGS ON EACH END OF THE STRUCTURE IN A MANNER APPROVED BY THE ENGINEER.  
 DETECTOR LOOPS SHALL BE INSTALLED PRIOR TO FINAL SURFACE.

**CONDUIT DETAILS**  
**FAP ROUTE 693 (IL 9)**  
**SECTION 129 B-2**  
**MCLEAN COUNTY**

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE#: 2114elec
	DATE: 12/18/06



**POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4"**

LOCATION	TYPE	WHITE FOOT	YELLOW FOOT
<b>WESTBOUND LANES</b>			
STA 65+40 TO STA 71+80	SKIP DASH	170	
STA 65+40 TO STA 66+60	SOLID LANE LINE	120	
STA 65+40 TO STA 68+40	DOUBLE YELLOW		600
STA 68+40 TO STA 69+84	SOLID EDGE LINE		144
STA 68+40 TO STA 69+84	SKIP DASH		40
STA 69+84 TO STA 71+80	DOUBLE YELLOW		392
<b>EASTBOUND LANES</b>			
STA 65+40 TO STA 68+56	DOUBLE YELLOW		632
STA 68+56 TO STA 70+00	SOLID EDGE LINE		144
STA 68+56 TO STA 70+00	SKIP DASH		40
STA 70+00 TO STA 71+80	DOUBLE YELLOW		360
STA 70+80 TO STA 71+80	SOLID LANE LINE	100	
STA 65+40 TO STA 71+80	SKIP DASH	170	
<b>TOTAL</b>		<b>560</b>	<b>2,352</b>

**POLYUREA PAVEMENT MARKING TYPE 1 - LINE 6"**

LOCATION	TYPE	WHITE FOOT
<b>WESTBOUND LANES</b>		
STA 66+60 TO STA 68+40	LANE EXTENSION LINE	62
<b>EASTBOUND LANES</b>		
STA 70+00 TO STA 70+80	LANE EXTENSION LINE	28
<b>TOTAL</b>		<b>90</b>

**POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12"**

LOCATION	TYPE	YELLOW FOOT
<b>MEDIAN</b>		
STA 65+40 TO STA 68+40	DIAGONALS	150
STA 70+00 TO STA 71+80	DIAGONALS	95
<b>TOTAL</b>		<b>245</b>

**POLYUREA PAVEMENT MARKING TYPE 1 - LINE 24"**

LOCATION	TYPE	WHITE FOOT
<b>WESTBOUND LANES</b>		
STA 65+40	STOP BAR	36
<b>EASTBOUND LANES</b>		
STA 71+70	STOP BAR	21
STA 71+80	STOP BAR	24
<b>TOTAL</b>		<b>81</b>

- PAVEMENT MARKING LEGEND**
- 1 4" SKIP DASH (YELLOW)
  - 2 4" SOLID (YELLOW)
  - 3 12" DIAGONAL (YELLOW)
  - 4 4" DOUBLE YELLOW (NARROW)
  - 5 4" SKIP DASH (WHITE)
  - 6 4" SOLID (WHITE)
  - 7 24" STOP BAR (WHITE)
  - 8 6" LANE LINE EXTENSIONS (WHITE)  
2 FOOT LINE, 4 FOOT SKIP
  - 9 LEFT TURN ARROW (WHITE)

**POLYUREA PAVEMENT MARKING - LETTERS AND SYMBOLS**

LOCATION	TYPE	WHITE SQ FT
<b>WESTBOUND LANES</b>		
STA 65+60	LEFT TURN ARROW	15.6
STA 66+10	LEFT TURN ARROW	15.6
STA 66+60	LEFT TURN ARROW	15.6
<b>BIDIRECTIONAL TURN LANES</b>		
STA 68+81	LEFT TURN ARROW	15.6
STA 69+50	LEFT TURN ARROW	15.6
<b>EASTBOUND LANES</b>		
STA 70+80	LEFT TURN ARROW	15.6
STA 71+60	LEFT TURN ARROW	15.6
<b>TOTAL</b>		<b>109</b>

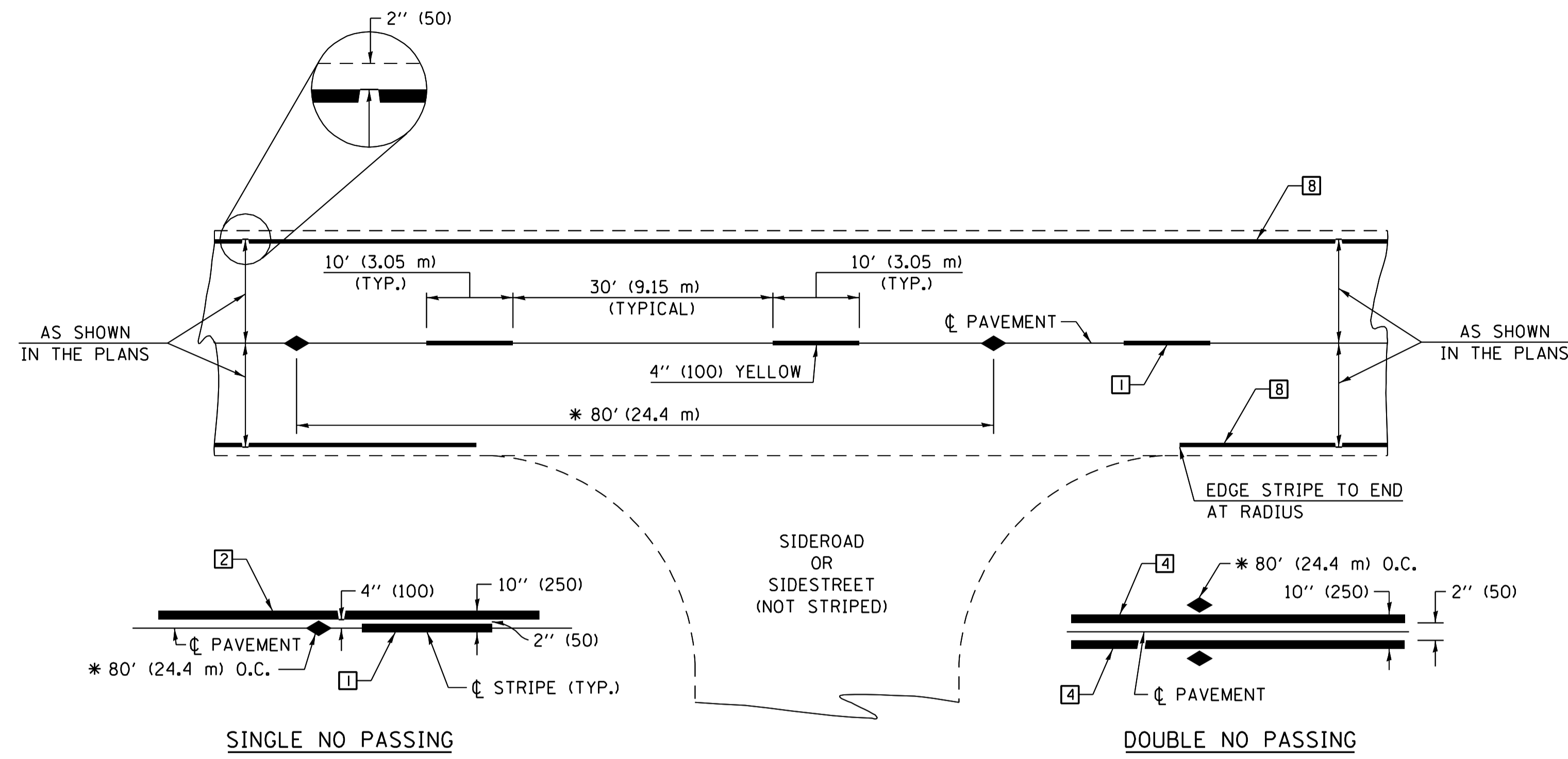
**PAVEMENT MARKING & DETAILS**

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 2114.5PVTMK
	DATE: 12/14/06

# PAVEMENT MARKING AND MARKERS (RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	192 B-2	McLean	34	19
STA. 64+00		TO STA. 73+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				



\* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

### TWO LANE/TWO WAY

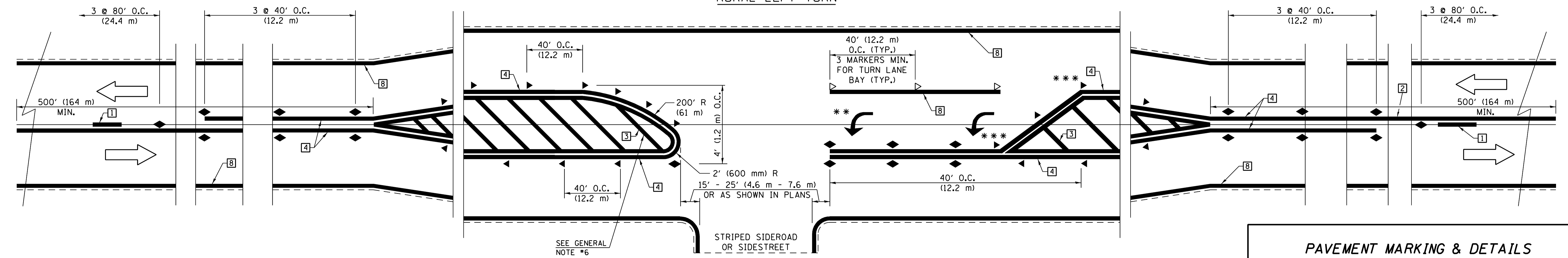
### TYPICAL PAVEMENT MARKING LEGEND

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1 4" (100) SKIP-DASH (YELLOW)</li> <li>2 4" (100) SOLID (YELLOW)</li> <li>3 12" (300) DIAGONAL (YELLOW)</li> <li>4 4" (100) DOUBLE YELLOW (NARROW)</li> <li>5 RESERVED</li> <li>6 RESERVED</li> <li>7 4" (100) SKIP-DASH (WHITE)</li> <li>8 4" (100) SOLID (WHITE)</li> <li>9 12" (300) DIAGONAL (WHITE)</li> <li>10 6" (150) SOLID (WHITE)</li> <li>11 24" (600) STOP BAR (WHITE)</li> <li>12 8" (200) SOLID (WHITE)</li> <li>13 6" (100) LANE LINE EXTENSIONS (WHITE)</li> <li>14 4" (100) PARKING WHITE</li> </ul> |  |
|--|--|

### TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

### RURAL LEFT TURN



SEE GENERAL NOTE #6

STRIPED SIDEWALK OR SIDEWALK

\*\*\* REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.  
\*\* TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

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

### PAVEMENT MARKING & DETAILS

FAP ROUTE 693 (IL 9)  
SECTION 129 B-2  
MCLEAN COUNTY

### SHEET 1 OF 3

	NAME		DATE		REVISIONS		REVISIONS	
	DESIGNED	J.M.H.	5/85	6/88	NAME	DATE	NAME	DATE
CHECKED	FMS	C.T.D.	6/85	6/88	GEOMETRICS/K.A.G.	07/02	GEOMETRICS/K.A.G.	08/06
CADD NO.	7800XXXX K.A.G. 09/05							

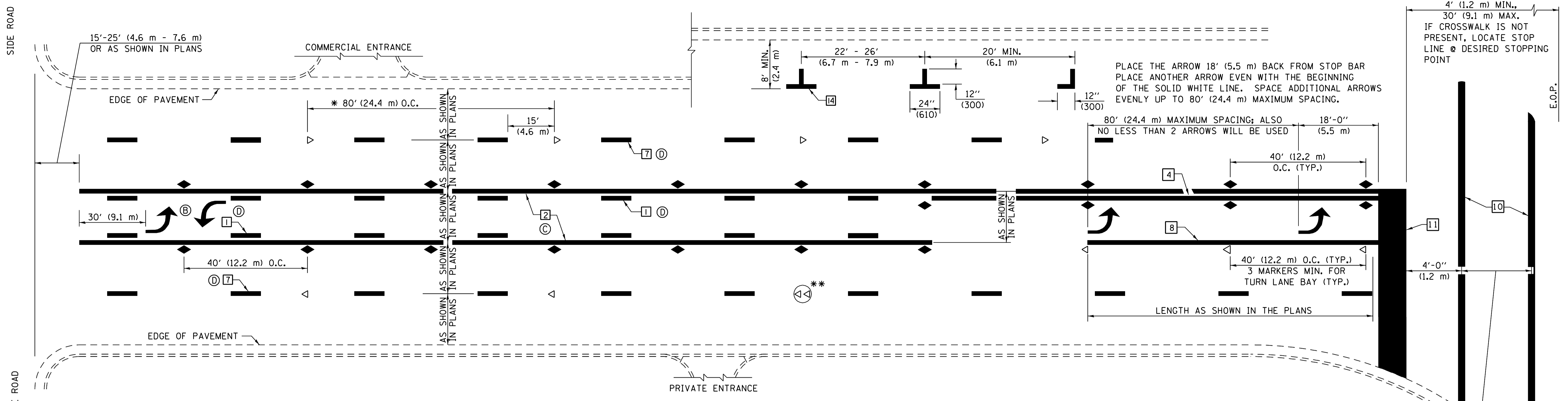
CUMMINS ENGINEERING CORPORATION  
JOB #: 2114.5  
FILE: 2114.5pv1.mtk  
DATE: 12/07/06

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 FILE NAME = \$FILEL\$  
 PLOT SCALE = \$SCALE\$  
 USER NAME = \$USER\$

# PAVEMENT MARKING AND MARKERS

## (RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	192 B-2	McLean	34	20
STA. 64+00		TO STA. 73+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				

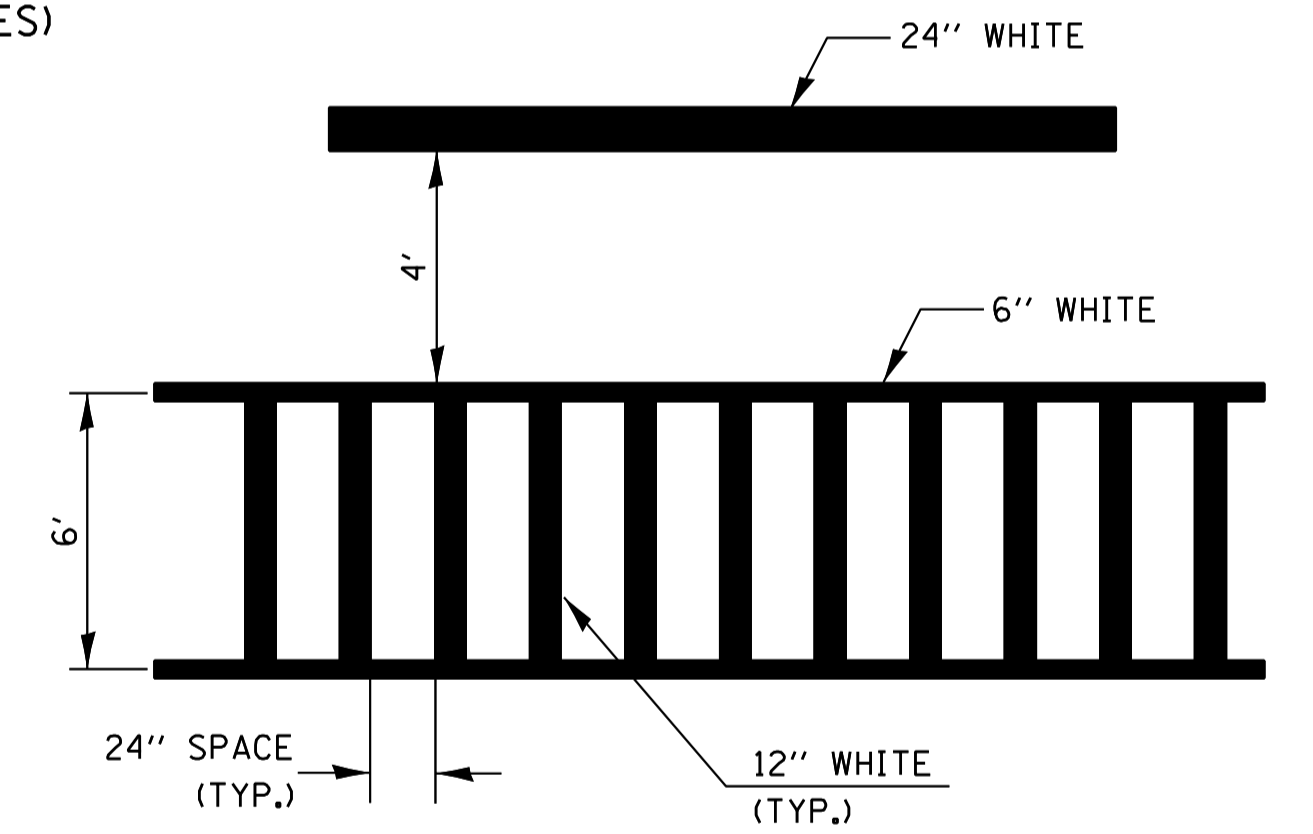


\* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

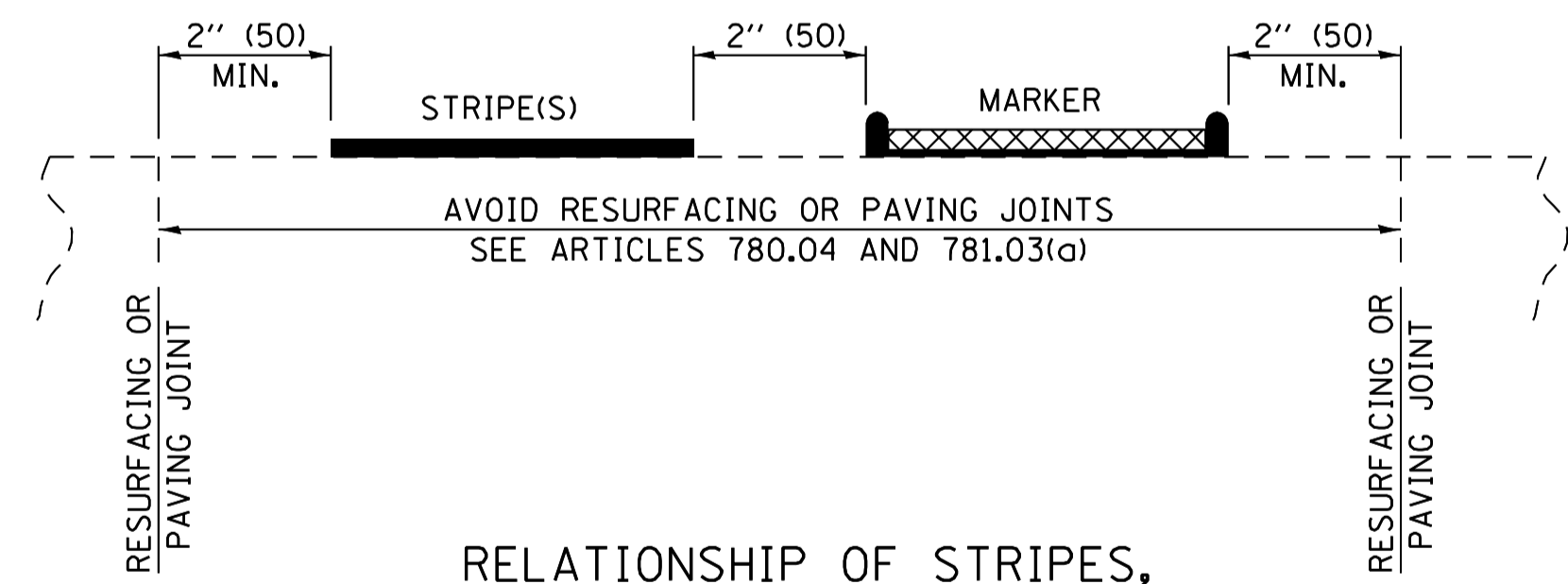
\*\* DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

(2 LANES TO 3 LANES OR  
4 LANES TO 5 LANES)

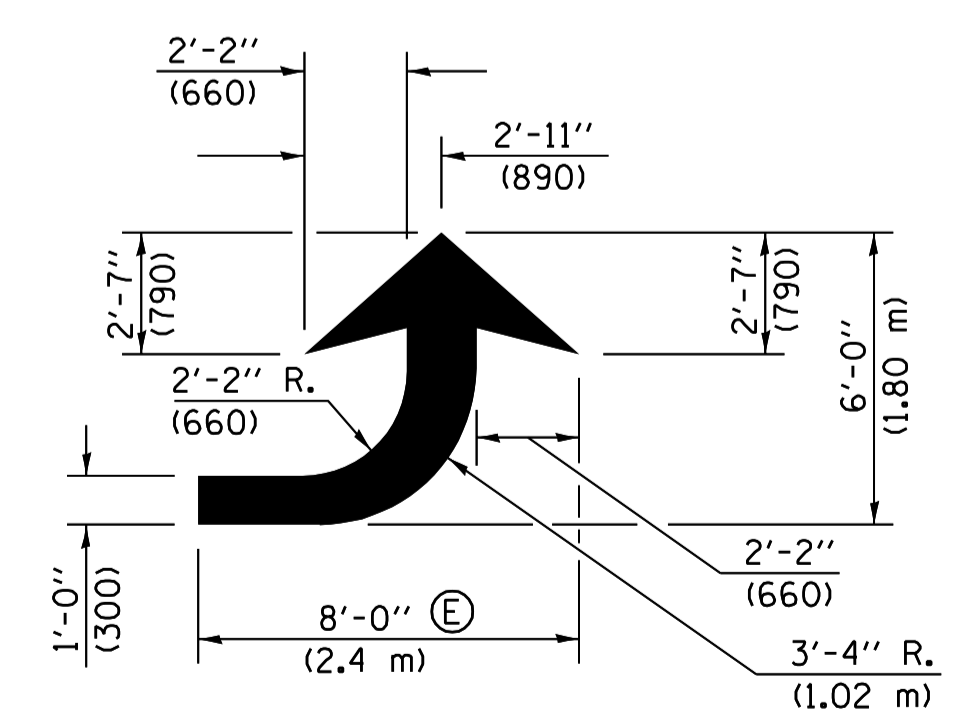
### URBAN LEFT TURN



TYPICAL SPACING FOR  
CROSSWALKS & STOP BARS

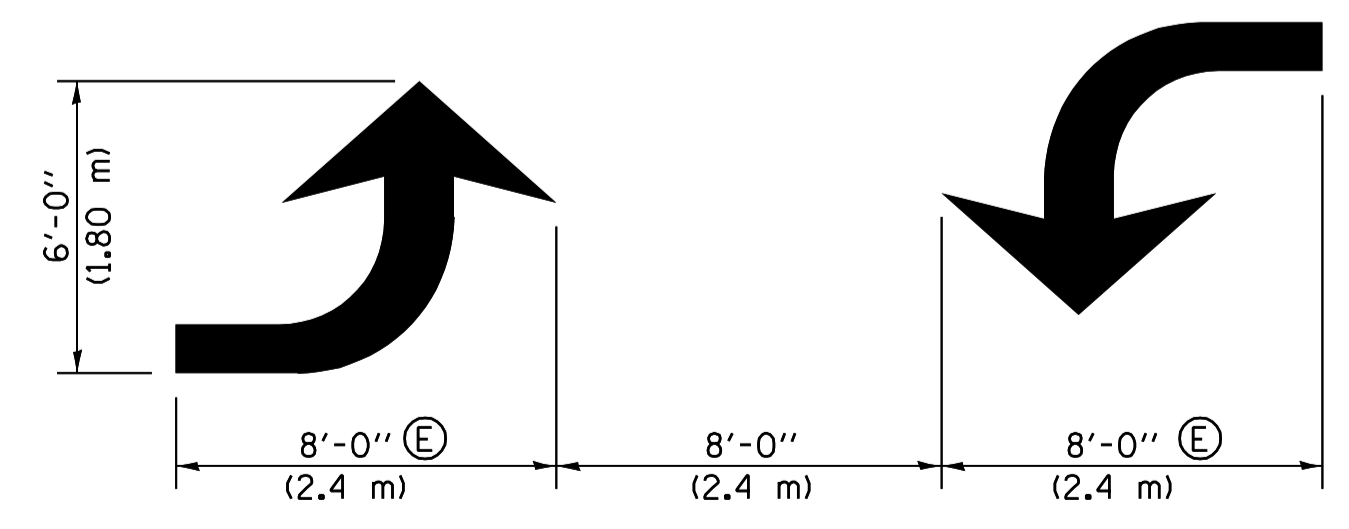


RELATIONSHIP OF STRIPES,  
MARKERS AND JOINTS

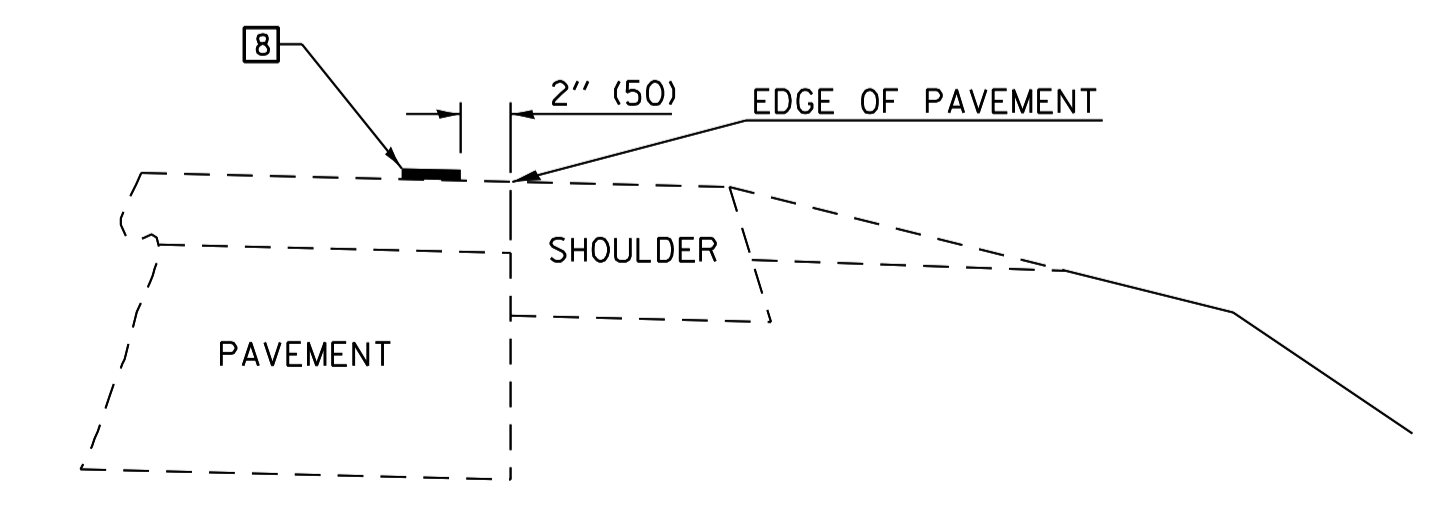


LEFT ARROW

REVERSE FOR RIGHT ARROW  
AREA = 15.6 SQ. FT. (1.47 m<sup>2</sup>)  
(WHITE)



TYPICAL DOUBLE  
TURN ARROWS (WHITE)



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT

(SAFETY SHOULDER OR PAVED SURFACE)  
SEE ARTICLE 780.04

**NOTES:**

- Ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
- Ⓒ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- Ⓓ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
- Ⓔ TURN ARROW SIZE DEPENDS ON THE LOCATION. RURAL LOCATION - LARGE ARROW SIZE URBAN LOCATION - SMALL ARROW SIZE

**SHEET 2 OF 3**

	NAME	DATE	REVISIONS	REVISIONS
DESIGNED	J.M.H.	5/85	6/88	
CHECKED	FMS	6/85	6/88	GEOMETRICS/K.A.G. 07/02
CADD NO.	7800XXXX			K.A.G. 09/05

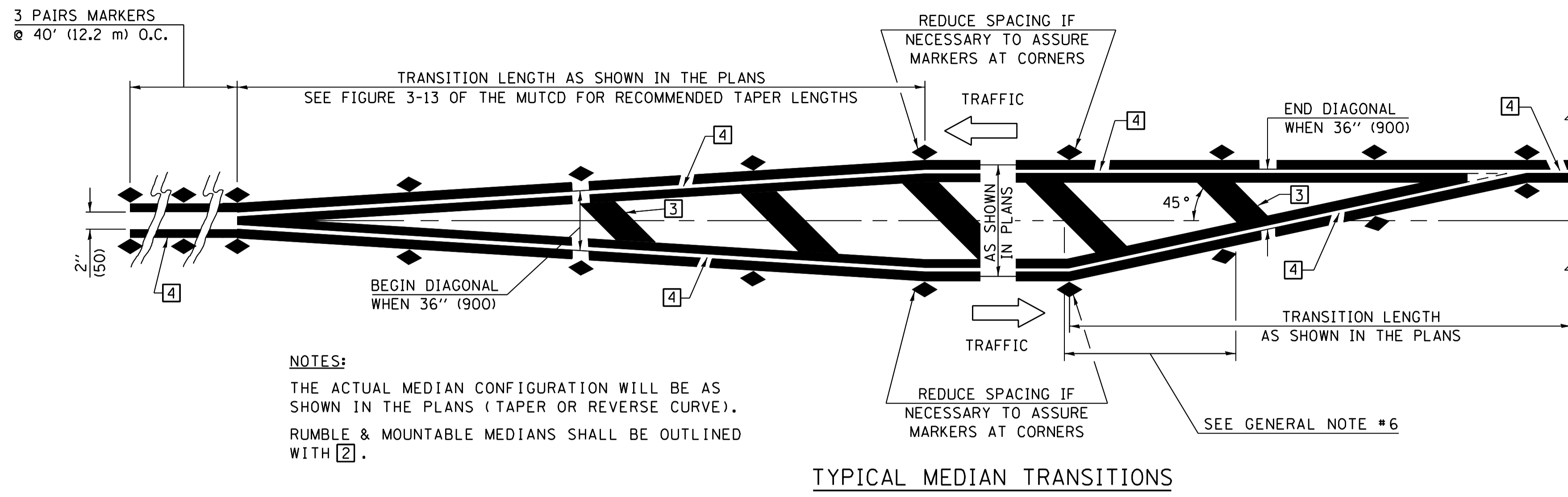
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)  
UNLESS OTHERWISE SHOWN.

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 PLOT SCALE = \$SCALE\$  
 USER NAME = \$USER\$

# PAVEMENT MARKING AND MARKERS

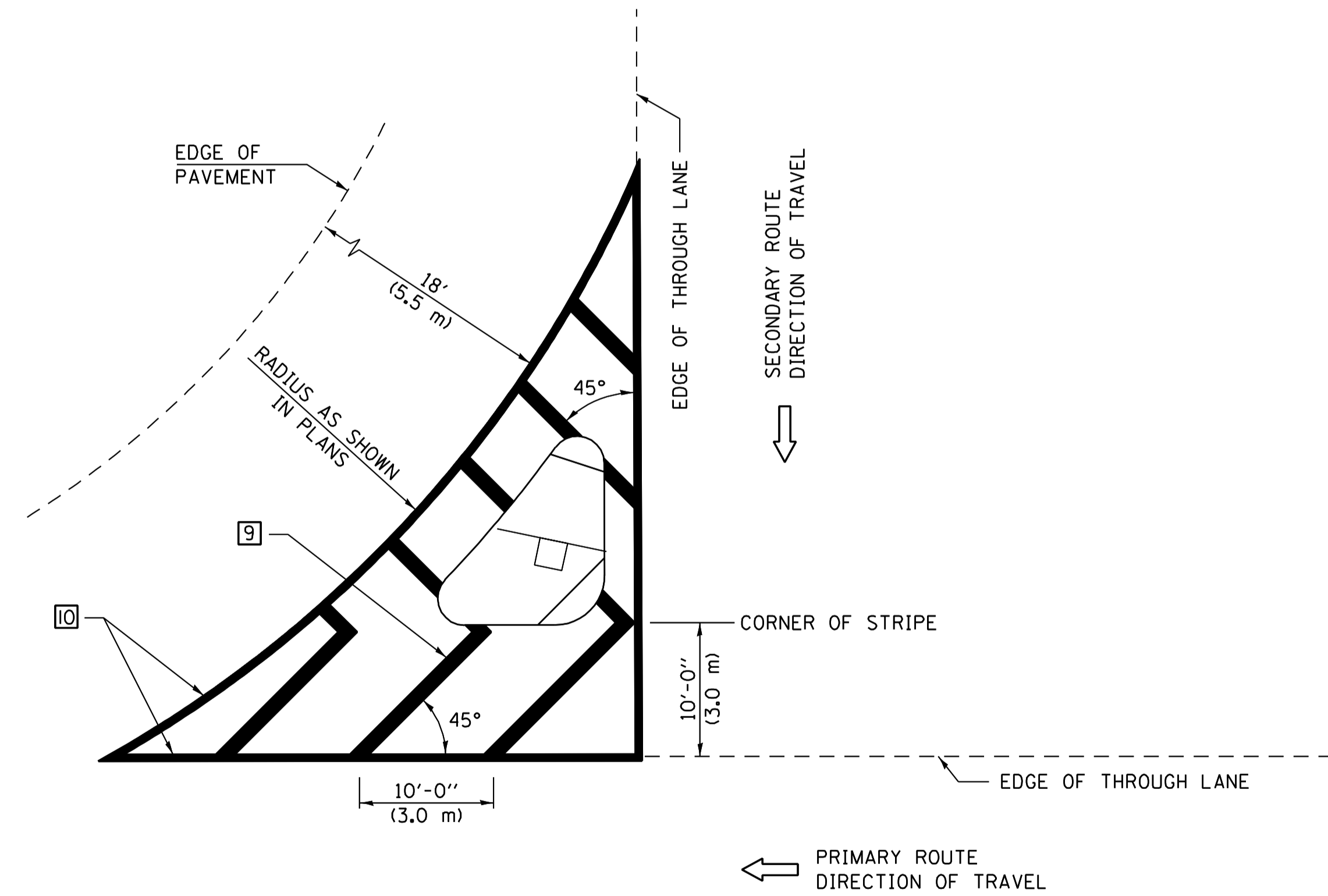
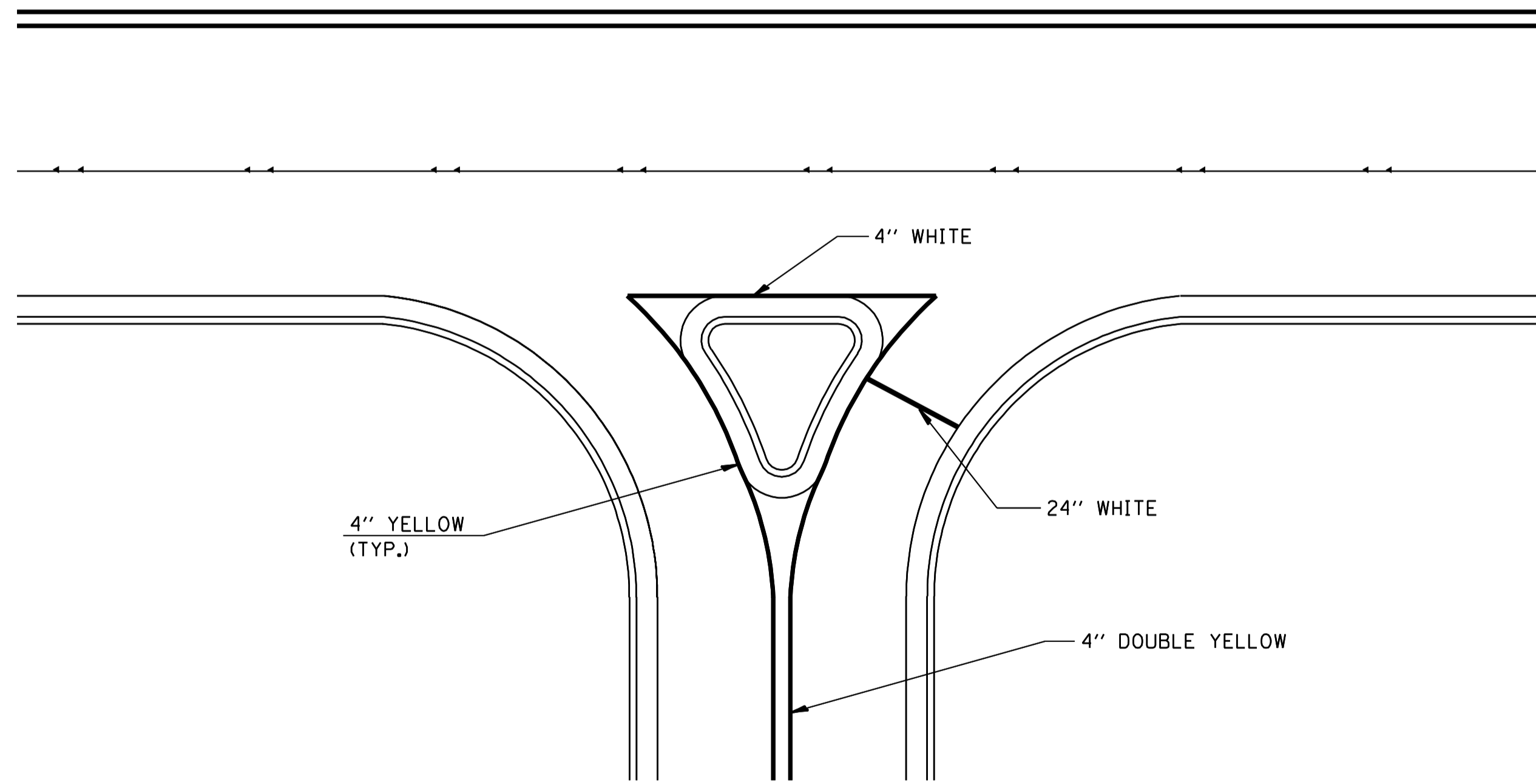
## (RURAL AND URBAN APPLICATIONS)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	192 B-2	McLean	34	21
STA. 64+00		TO STA. 73+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
<b>CONTRACT NO. 70519</b>				



### GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
  - < 30 MPH USE 15' (< 50 km/h USE 4.5 m)
  - 30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
  - > 45 MPH USE 30' (> 75 km/h USE 9.0 m)



PLOT DATE = \$DATE\$  
 FILE NAME = \$FILEL\$  
 PLOT SCALE = \$SCALE\$  
 USER NAME = \$USER\$

SHEET 3 OF 3

	NAME	DATE	REVISIONS	REVISIONS
DESIGNED	J.M.H.	5/85		
CHECKED	FMS	6/85	GEOMETRICS/K.A.G.	07/02
CADD NO.	7800XXXX		K.A.G.	09/05

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

### PAVEMENT MARKING & DETAILS

FAP ROUTE 693 (IL 9)  
 SECTION 129 B-2  
 MCLEAN COUNTY

CUMMINS ENGINEERING CORPORATION

JOB #: 2114.5  
 FILE: 2114.505pv+mk  
 DATE: 12/07/06

**APPROVED**  
For Structural Adequacy Only

*Ralph E. Anderson*  
Engineer of Bridges & Structures

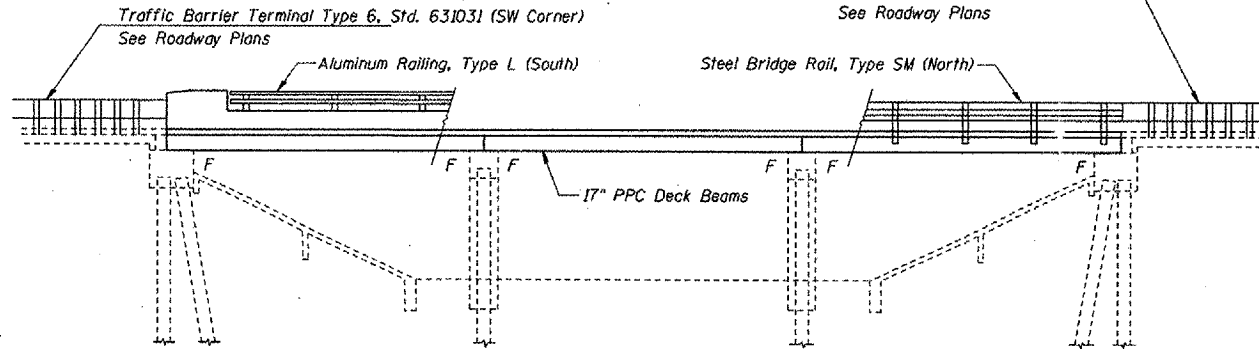
Bench Mark: B.M. 4751-2 Chiseled square on top of SE wingwall SN 057-0190, 39.24' RI, Sta. 68+32.44, Elev. 745.37

Existing Structure: The existing structure, SN 057-0190, is a 3-span precast prestressed deck beam bridge on pile bent abutments and piers. Out-to-out bridge width is 75'-0" and back-to-back abutment length is 89'-4 1/2". It was originally constructed in 1980 as FA RTE 693, Sec. 129B-1 at Sta. 67+94. The bituminous wearing surface was replaced in 1997 with a concrete wearing surface. The existing superstructure is to be removed and replaced as noted.

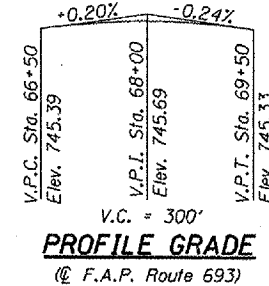
Traffic to be maintained at all times utilizing stage construction.

No Salvage

Traffic Barrier Terminal Type 6A, Std. 631032 (NE Corner)  
See Roadway Plans



**ELEVATION**



STATION 67+94  
REBUILT 200 BY  
STATE OF ILLINOIS  
F.A.P. RT. 693  
SEC. 129 B-2  
LOADING HS20  
STR. NO. 057-0190

**NAME PLATE**

See Std. 515001  
Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plates.

**GENERAL NOTES**

No instream work will be allowed on this project. Reinforcement Bars designated (E) shall be epoxy coated. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.

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

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

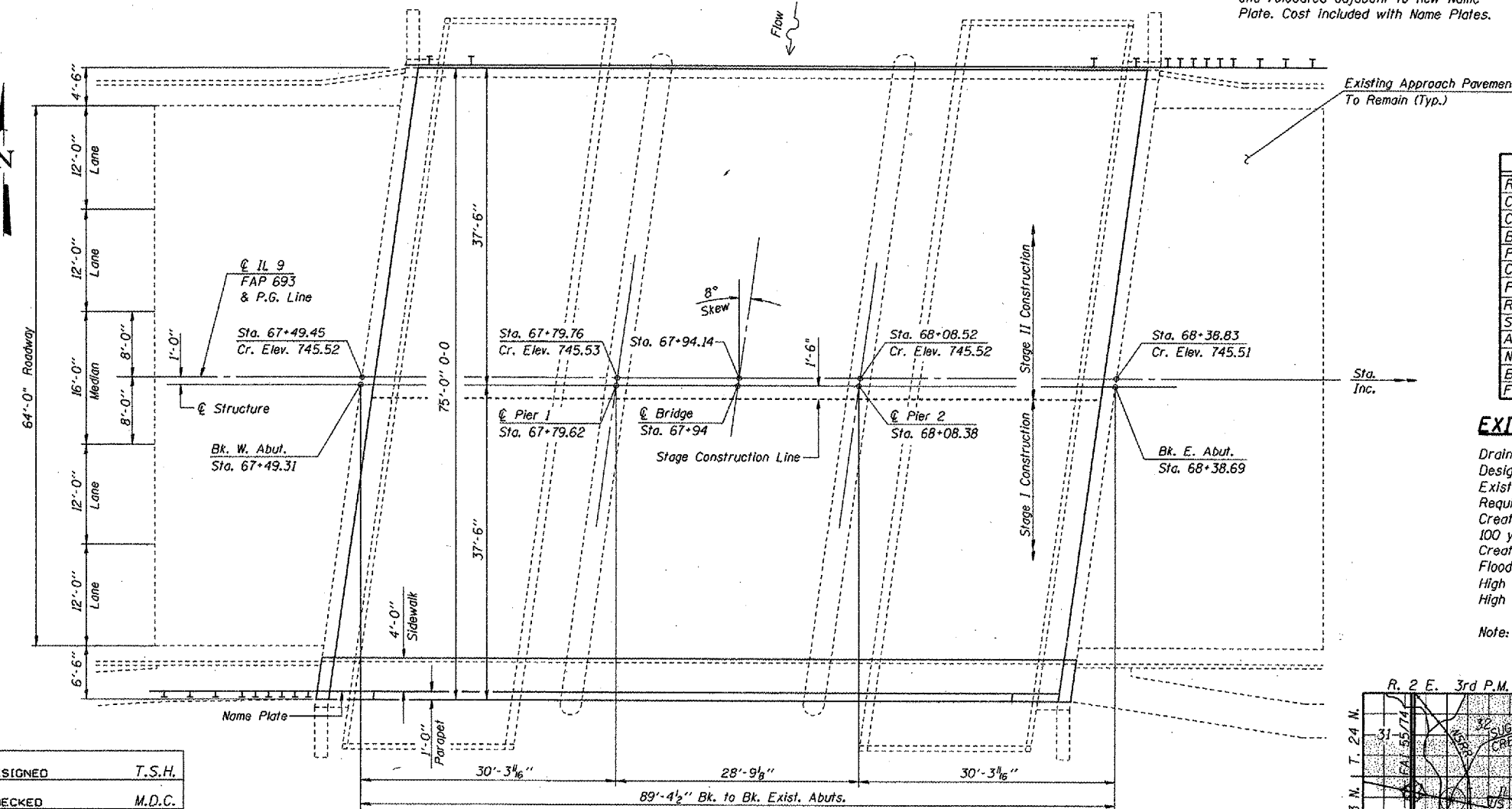
The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of beams when developing construction procedures for removal and replacement of the superstructure.

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	22
FED. ROAD DIST. NO. 5 ILLINOIS PROJECT			CONTRACT #70519	
Sheet 1 of 13				

**INDEX OF SHEETS**

- General Plan & Elevation
3. Stage Construction Details
- 4-9. Superstructure
10. Type SM Steel Bridge Rail
11. Type L Aluminum Railing
12. Bar Splicer Assembly Details
13. Temporary Concrete Barrier for Stage Construction



**PLAN**

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.M.
CHECKED	M.D.C.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.3	0.3
Concrete Superstructure	Cu. Yd.	24.8		24.8
Bridge Deck Grooving	Sq. Yd.	661		661
Protective Coat	Sq. Yd.	746		746
Concrete Wearing Surface, 5"	Sq. Yd.	671		671
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	6453		6453
Reinforcement Bars, Epoxy Coated	Pound	10200		10200
Steel Railing, Type SM	Foot	87		87
Aluminum Railing, Type L	Foot	75		75
Name Plates	Each	1		1
Bar Splicers	Each	172		172
Floor Drains	Each	3		3

**EXISTING WATERWAY INFORMATION**

Drainage Area	27.0 sq. mi.
Design Discharge (50 year)	3833 c.f.s.
Existing Opening (below 50 year H.W.E.)	600 sq. ft.
Required Opening (below 50 year H.W.E.)	600 sq. ft.
Created Head for Design Flood	0.0'
100 year Discharge	4675 c.f.s.
Created Head for 100 year Flood	0.0'
Flood of Record	742.1
High Water Elevation (50 year)	742.0
High Water Elevation (100 year)	742.5

Note: Information per original 1980 construction plans.

**DESIGN STRESSES (NEW)**

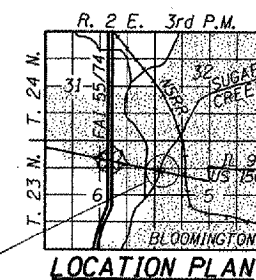
<b>FIELD UNITS</b>
$f'_c = 5,000$ p.s.i. (Concrete Wearing Surface)
$f'_c = 3,500$ p.s.i.
$f_y = 60,000$ p.s.i. (Reinf. Bars)
<b>PRECAST PRESTRESSED UNITS</b>
$f'_c = 5,000$ p.s.i.
$f'_{ci} = 4,000$ p.s.i.
$f'_s = 270,000$ p.s.i. (1/2" $\phi$ low relax strands)
$f'_{si} = 201,960$ p.s.i. (1/2" $\phi$ low relax strands)

**DESIGN SPECIFICATIONS**

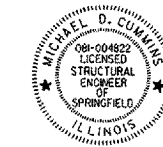
2002 AASHTO

**LOADING HS20-44**

Allow 25#/Sq. Ft. for future wearing surface.



**LOCATION PLAN**



*M.D.C.* 12/19/06  
(Expires 11/30/2008)

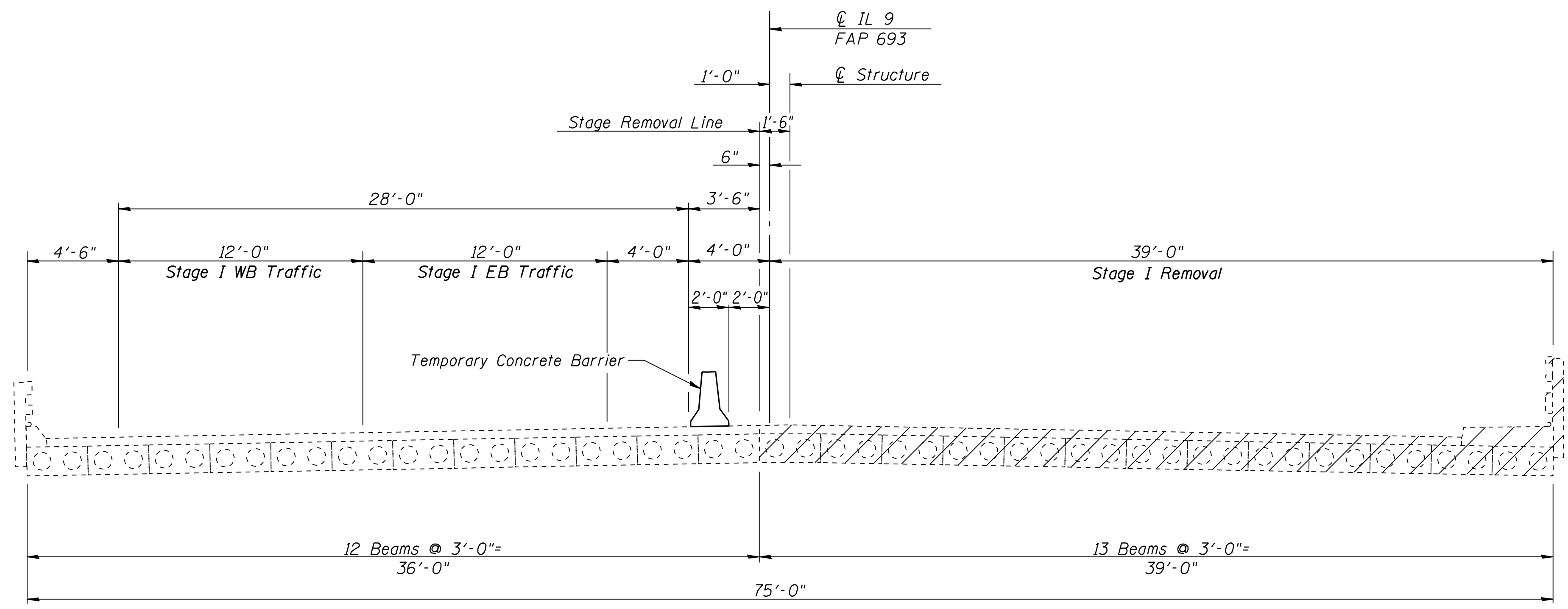
**GENERAL PLAN & ELEVATION**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

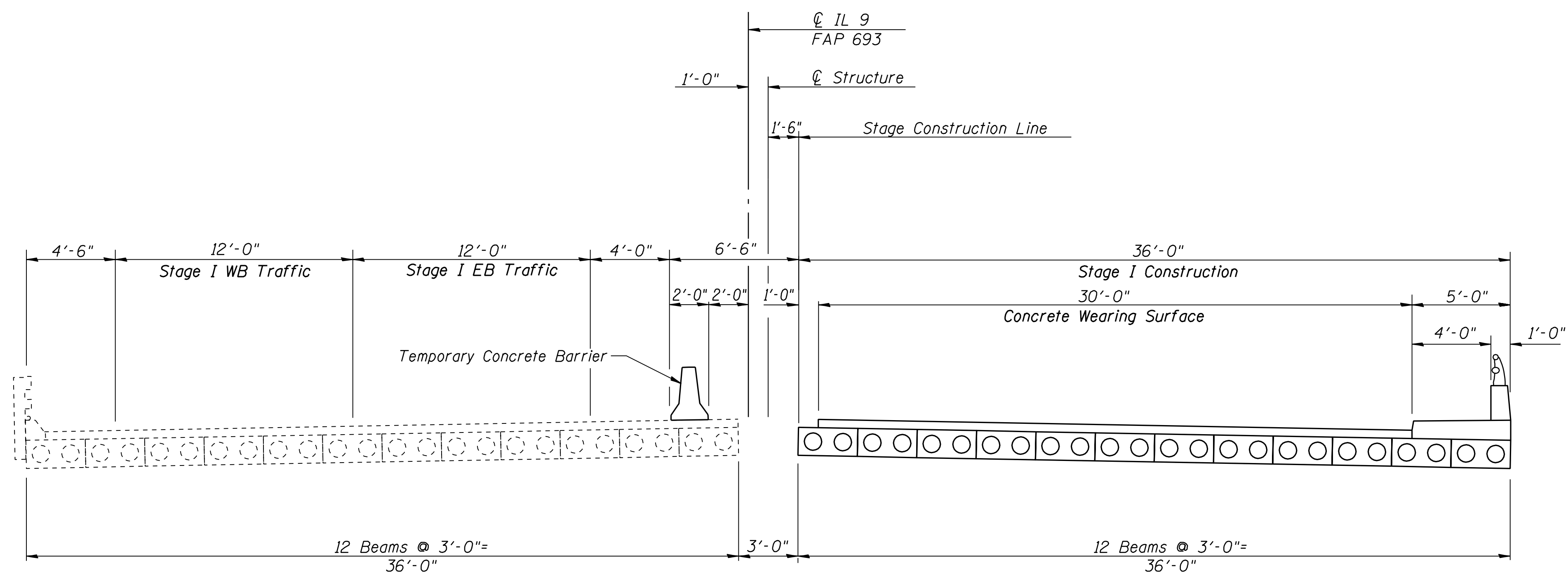
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145gde
	DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	23

FED. ROAD DIST. NO. 5 ILLINOIS PROJECT  
 Sheet 2 of 13 CONTRACT #70519



**STAGE I REMOVAL**  
 (Looking East)



**STAGE I CONSTRUCTION**  
 (Looking East)

Note: Hatched areas indicate Removal of Existing Superstructures.

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

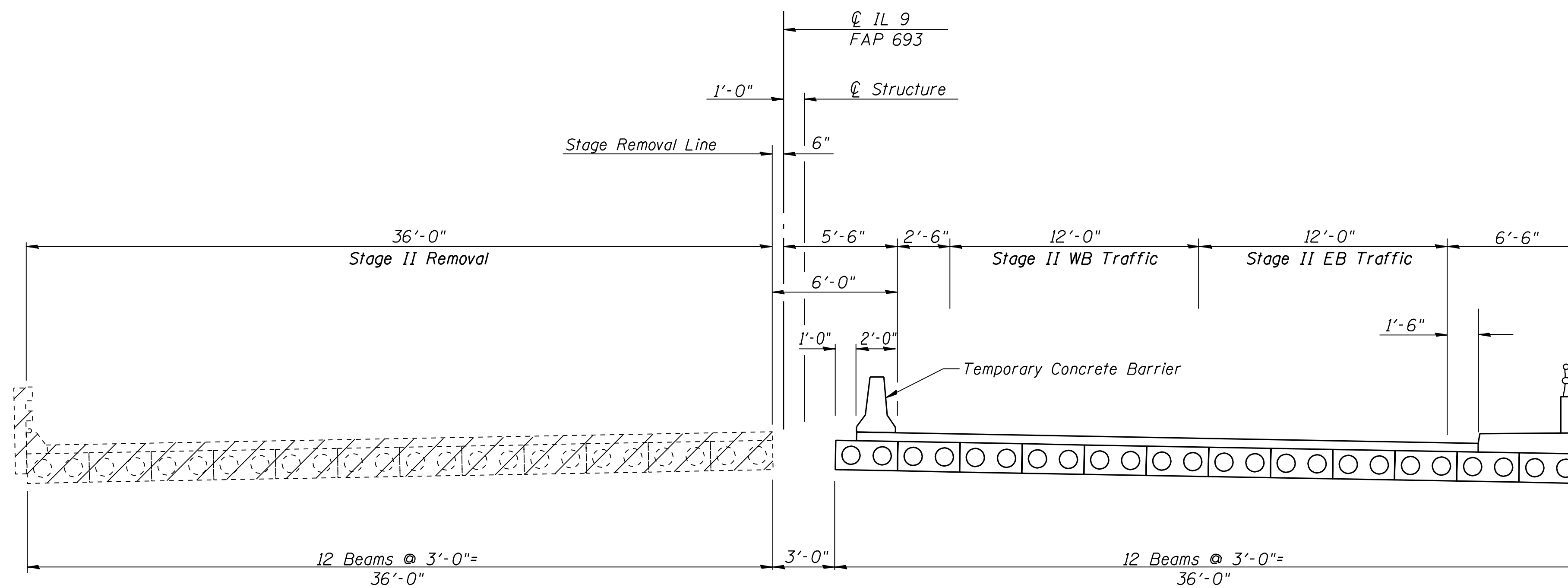
**STAGE I CONSTRUCTION**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
 F.A.P. ROUTE 693 - SEC. 129 B-2  
 MCLEAN COUNTY  
 STATION 67+94  
 STRUCTURE NO. 057-0190

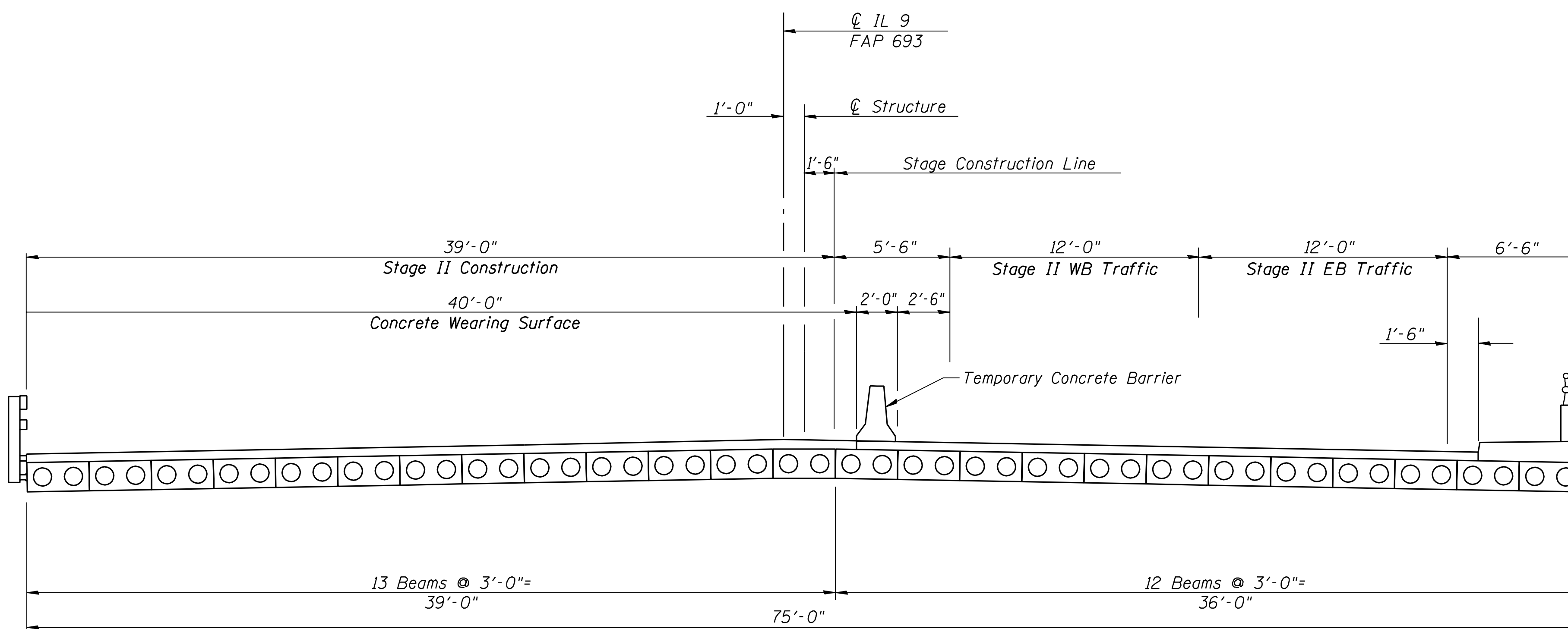
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145stage
	DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	24

FED. ROAD DIST. NO. 5 ILLINOIS PROJECT  
 Sheet 3 of 13 CONTRACT #70519



**STAGE II REMOVAL**  
 (Looking East)



**STAGE II CONSTRUCTION**  
 (Looking East)

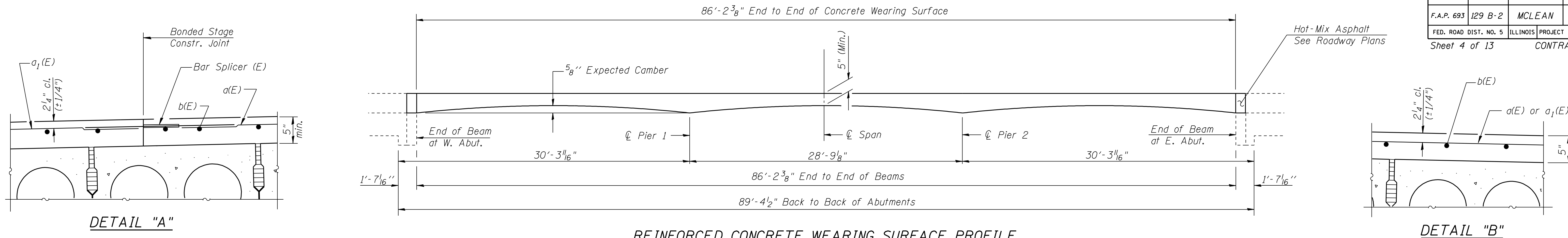
Note:  
 Hatched areas indicate Removal of Existing Superstructures.

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

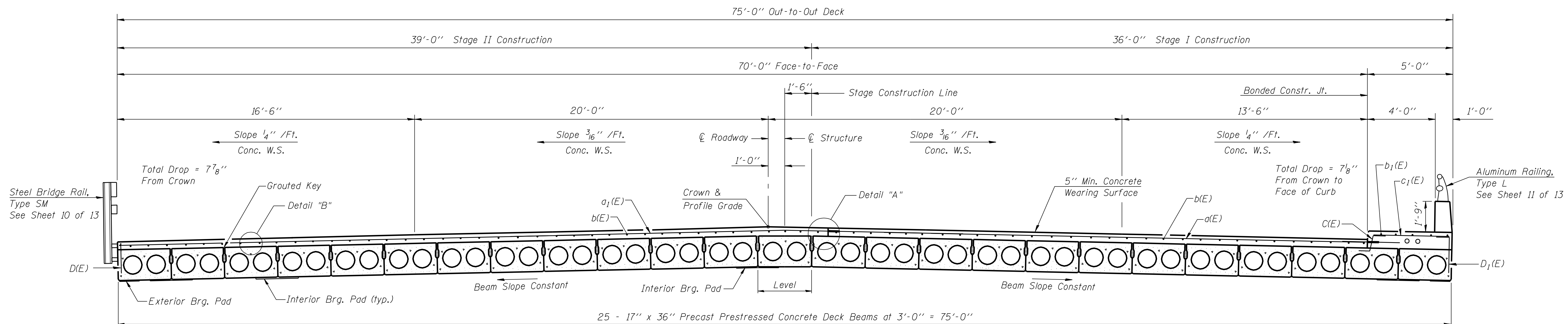
<b>STAGE II CONSTRUCTION</b>	
ILLINOIS ROUTE 9 OVER SUGAR CREEK F.A.P. ROUTE 693 - SEC. 129 B-2 MCLEAN COUNTY STATION 67+94 STRUCTURE NO. 057-0190	
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5 FILE: 21145stage DATE: 12/18/06



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	25
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT		
Sheet 4 of 13			CONTRACT #70519	

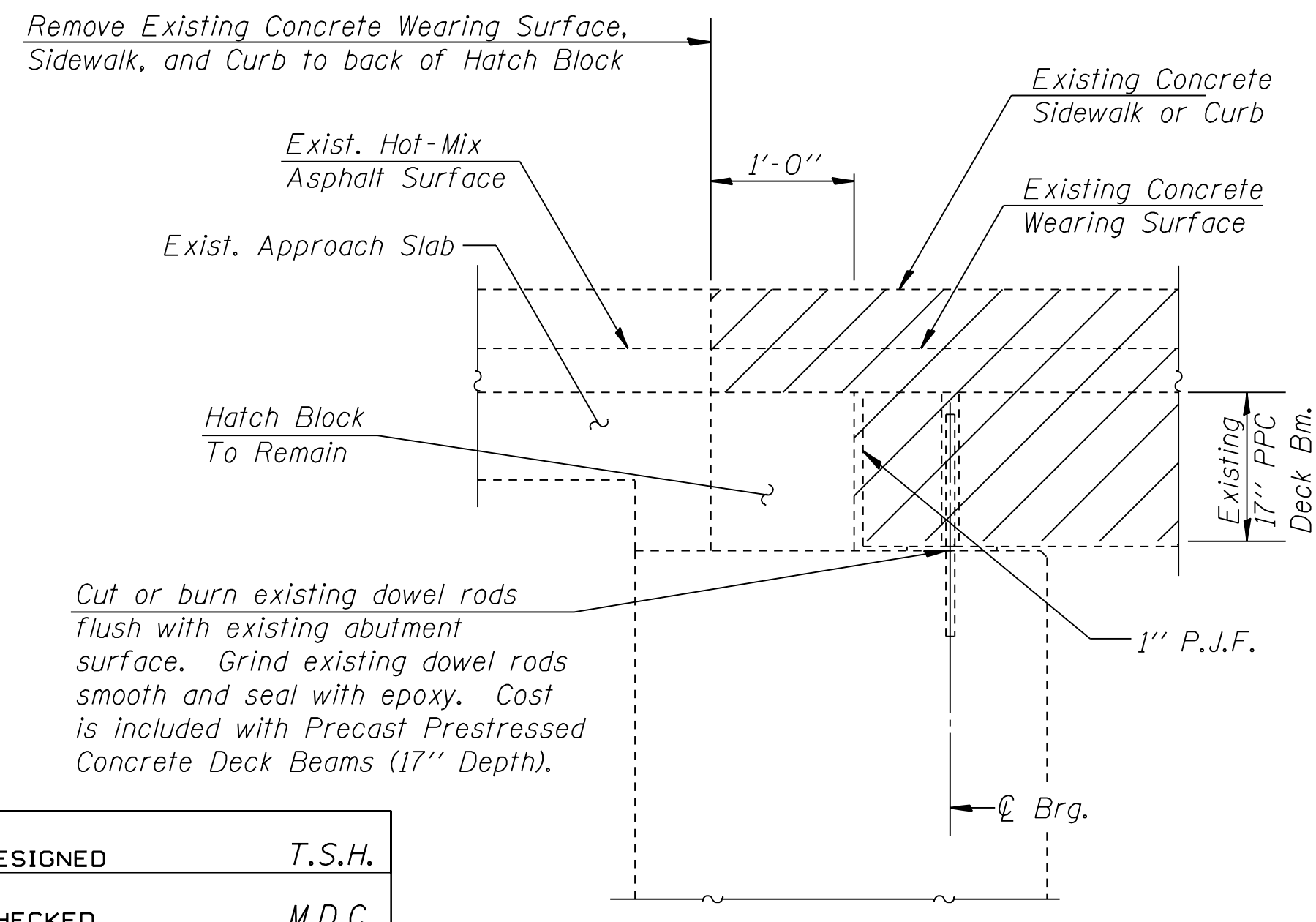


REINFORCED CONCRETE WEARING SURFACE PROFILE



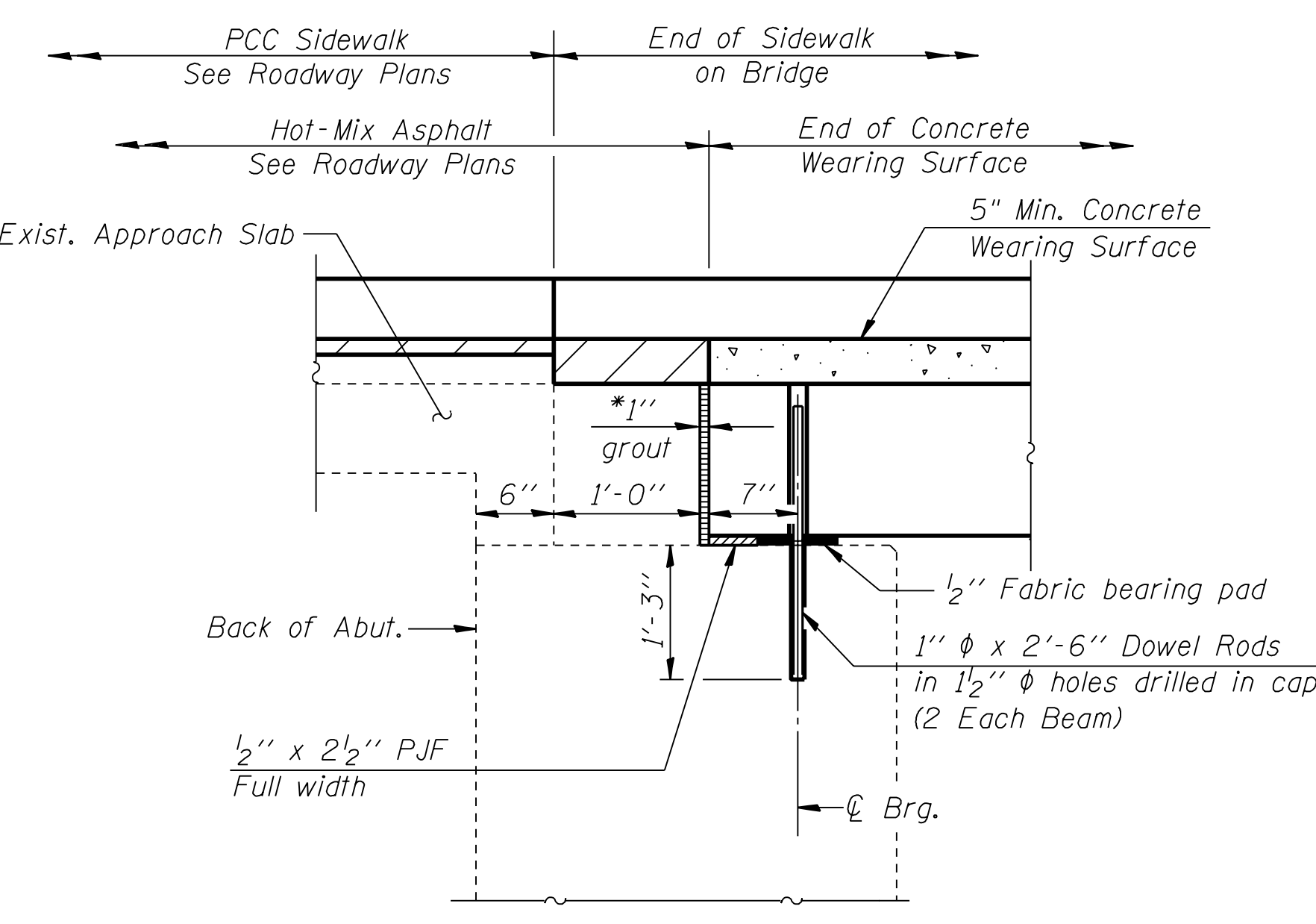
CROSS SECTION

(Looking East - Dimensions at Rt. L's)



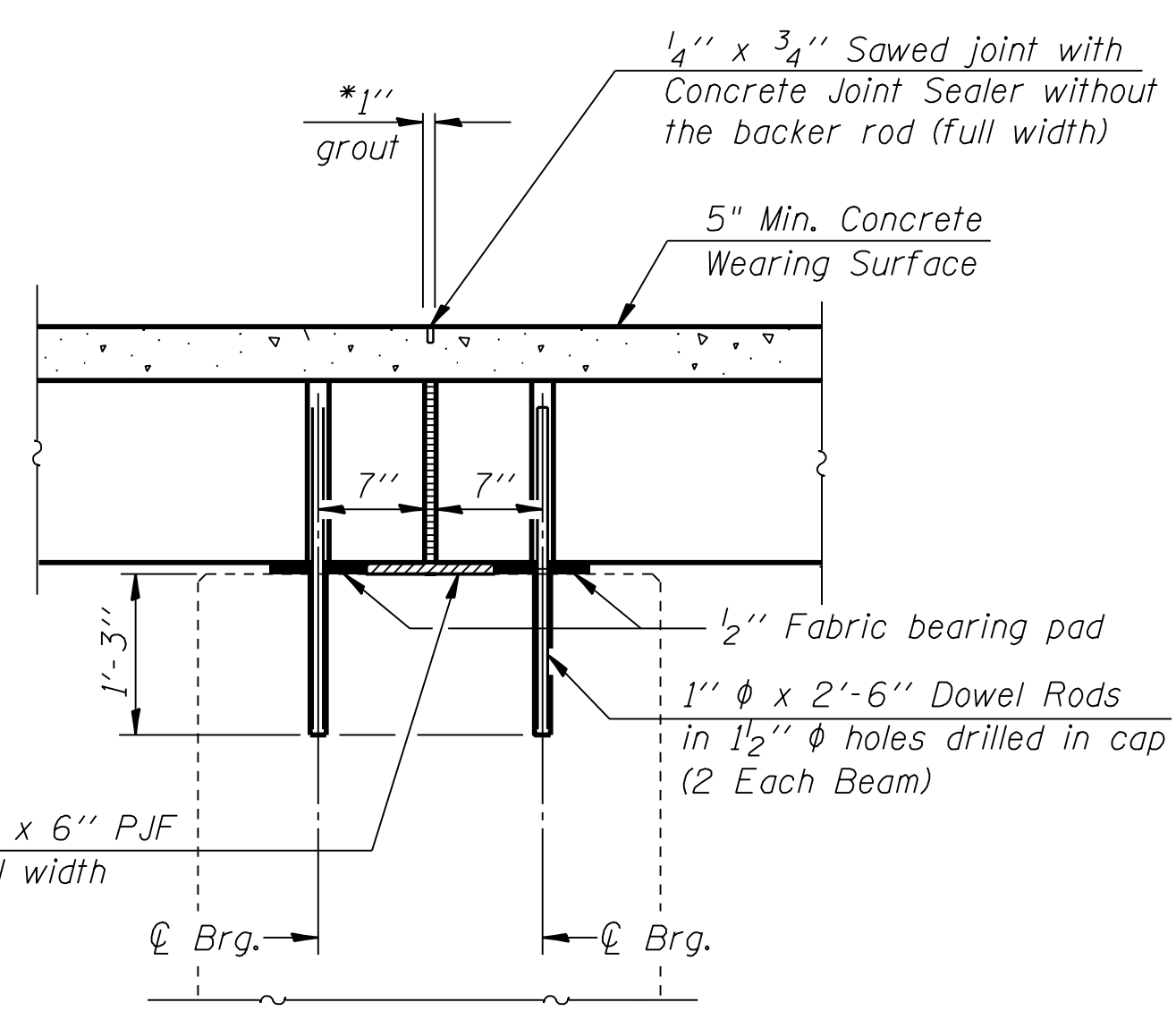
EXISTING SECTION THRU ABUTMENT

Dimensions at Rt. L's



PROPOSED SECTION THRU ABUTMENT

Dimensions at Rt. L's



SECTION THRU PIER

Dimensions at Rt. L's

Notes:  
 After beams have been erected, holes for dowel rods shall be drilled into the Abuts. & Piers and dowel rods placed. Dowel holes shall be filled with non-shrink grout to the top of beam and allowed to cure a minimum of 24 hrs. prior to grouting the shear keys.  
 Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (17" Depth).  
 Concrete wearing surface to be poured after grouting the shear keys.  
 See sheet 9 of 13 for bearing pad details.  
 See sheet 5 of 13 for Bill of Material.  
 Hatched areas indicate Removal of Existing Superstructures.

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

**SUPERSTRUCTURE**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
 F.A.P. ROUTE 693 - SEC. 129 B-2  
 MCLEAN COUNTY  
 STATION 67+94  
 STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION

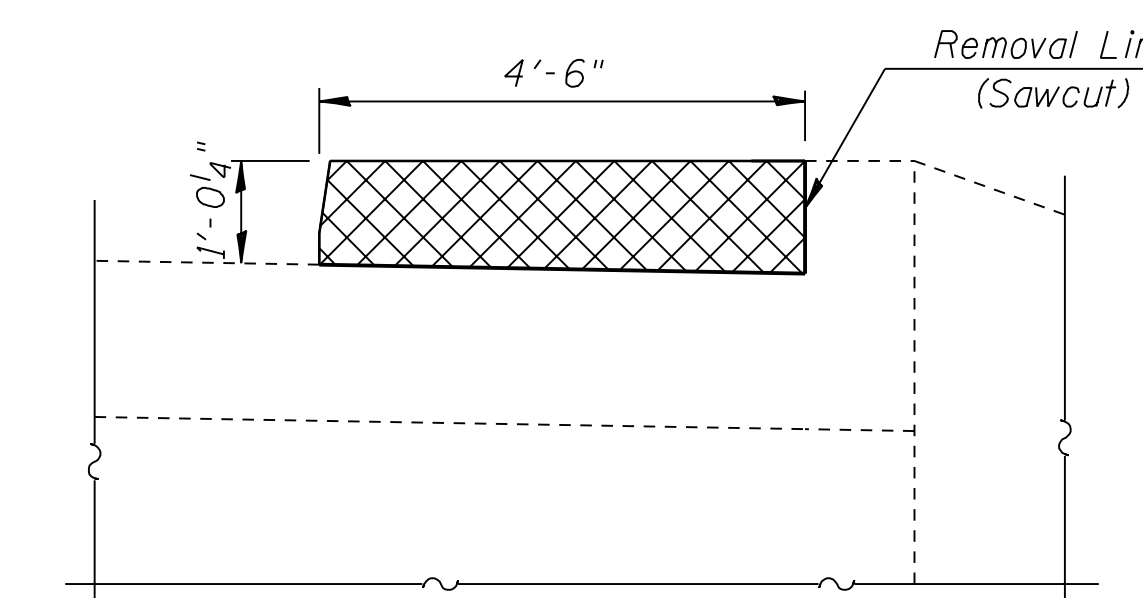
JOB #: 2114.5
FILE: 21145super
DATE: 12/18/06

\* Dimension may vary to accommodate tolerance in beam lengths.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	26
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT	CONTRACT #70519	
Sheet 5 of 13				

MIN. BAR LAP

#4 BAR = 1'-8"



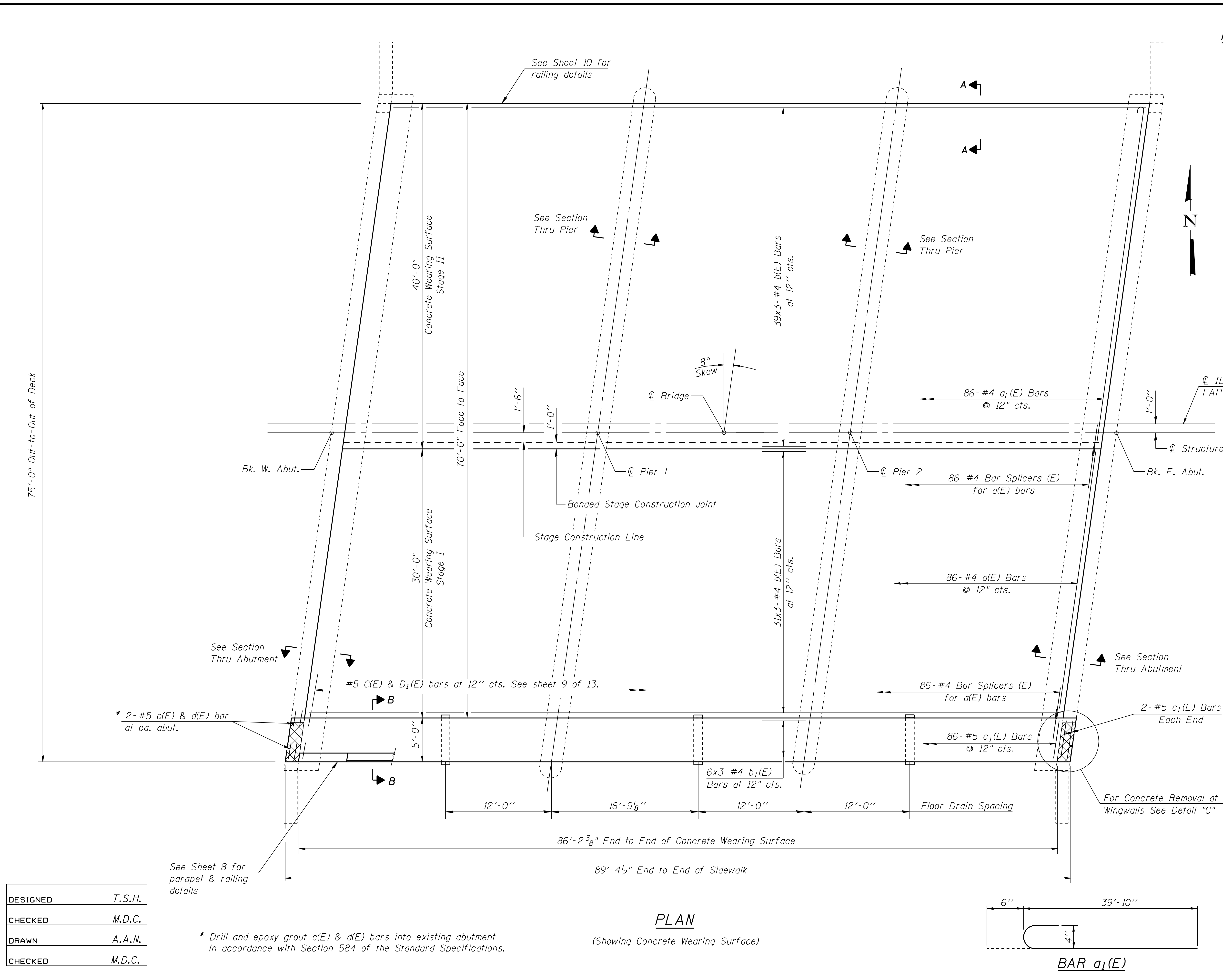
DETAIL "C"

Concrete Removal at South Wingwalls

SUPERSTRUCTURE  
BILL OF MATERIAL

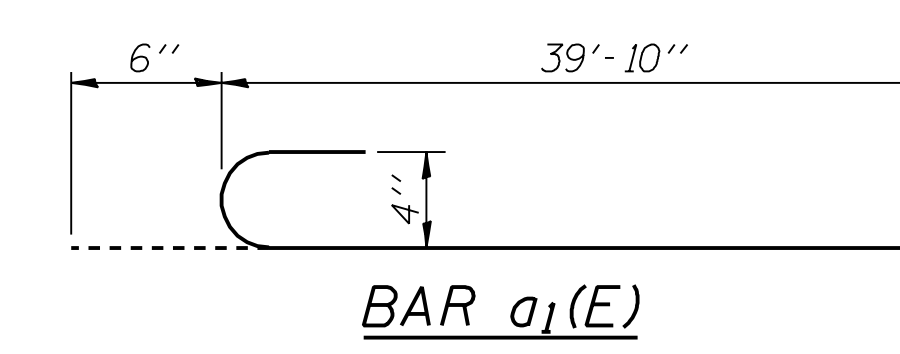
Bar	No.	Size	Length	Shape	
a(E)	86	#4	29'-9"	—	
a <sub>1</sub> (E)	86	#4	40'-4"	⌋	
b(E)	210	#4	29'-8"	—	
b <sub>1</sub> (E)	18	#4	30'-9"	—	
c(E)	4	#5	2'-10"	┌	
c <sub>1</sub> (E)	90	#5	4'-6"	—	
d(E)	4	#5	2'-9"	└	
d <sub>1</sub> (E)	86	#4	3'-0"	┌	
d <sub>2</sub> (E)	86	#6	3'-7"	┌	
d <sub>3</sub> (E)	76	#4	2'-0"	┐	
d <sub>4</sub> (E)	12	#5	6'-3"	┐	
e(E)	36	#4	14'-0"	—	
e <sub>1</sub> (E)	12	#4	5'-2"	—	
Reinforcement Bars, Epoxy Coated				Pound	10200
Concrete Wearing Surface, 5"				Sq. Yd.	671
Concrete Superstructure				Cu. Yd.	24.8
Floor Drains				Each	3
Bar Splicers				Each	172
Concrete Removal				Cu. Yd.	0.3

Notes:  
See sheet 7 of 13 for Sections A-A and B-B.  
See sheet 4 of 13 for Sections thru Pier & Abut.  
Bars indicated thus 25x3-#4 etc. indicates 25 lines of bars with 3 lengths per line.  
Cross-hatched areas indicate Concrete Removal.



PLAN

(Showing Concrete Wearing Surface)



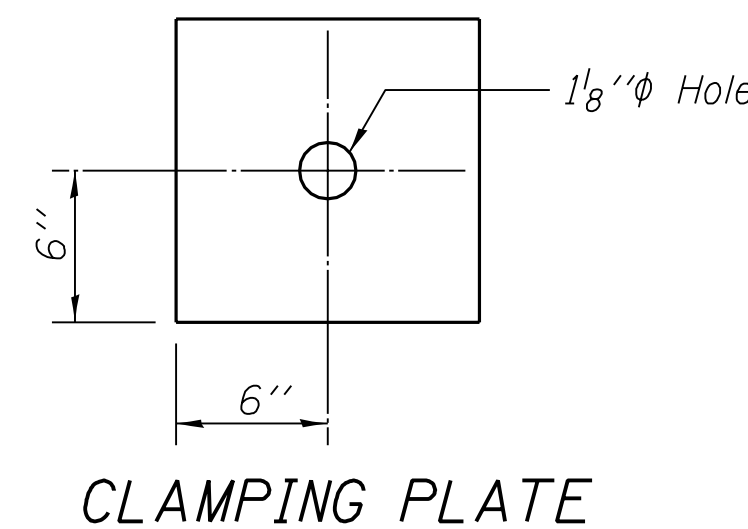
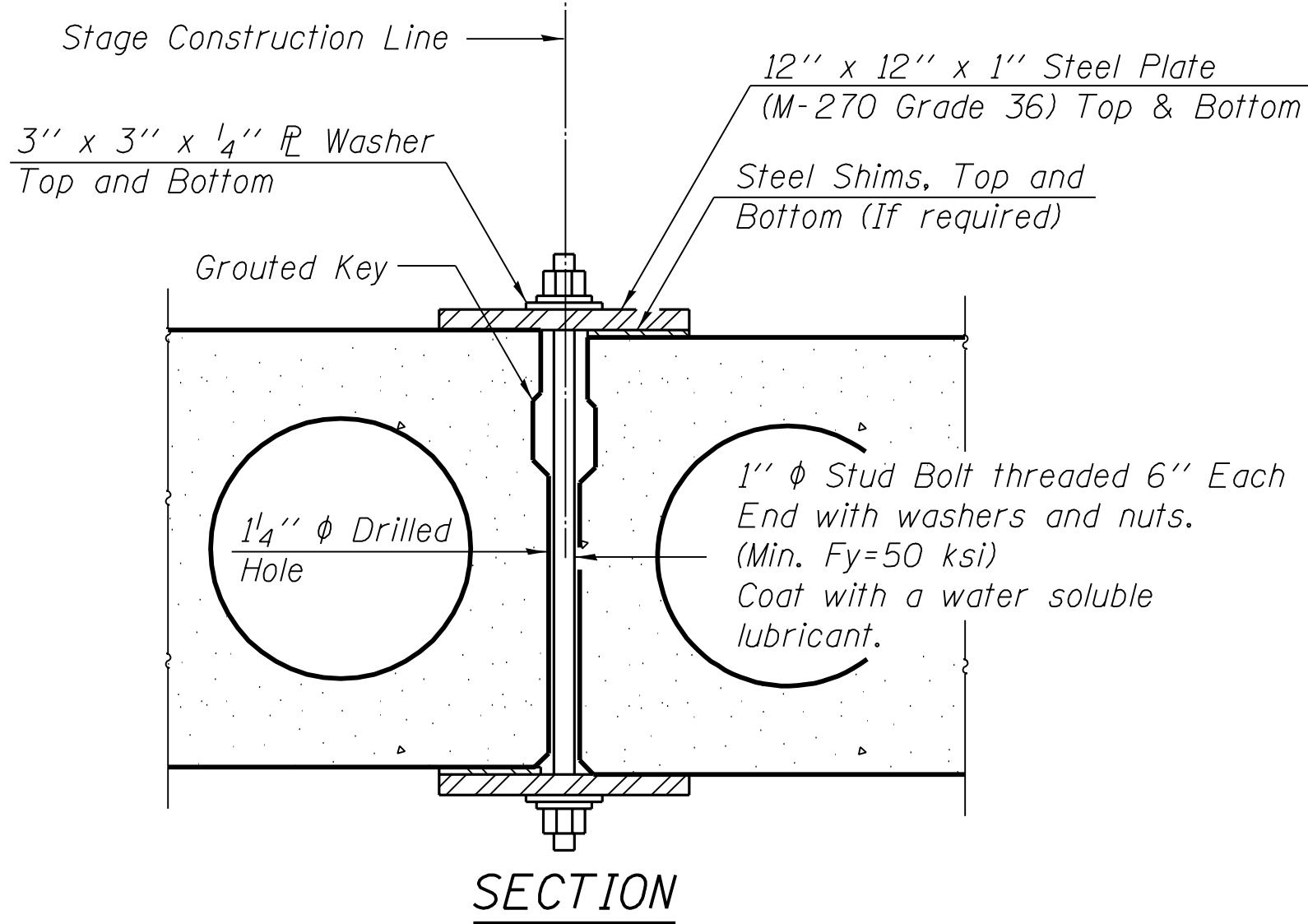
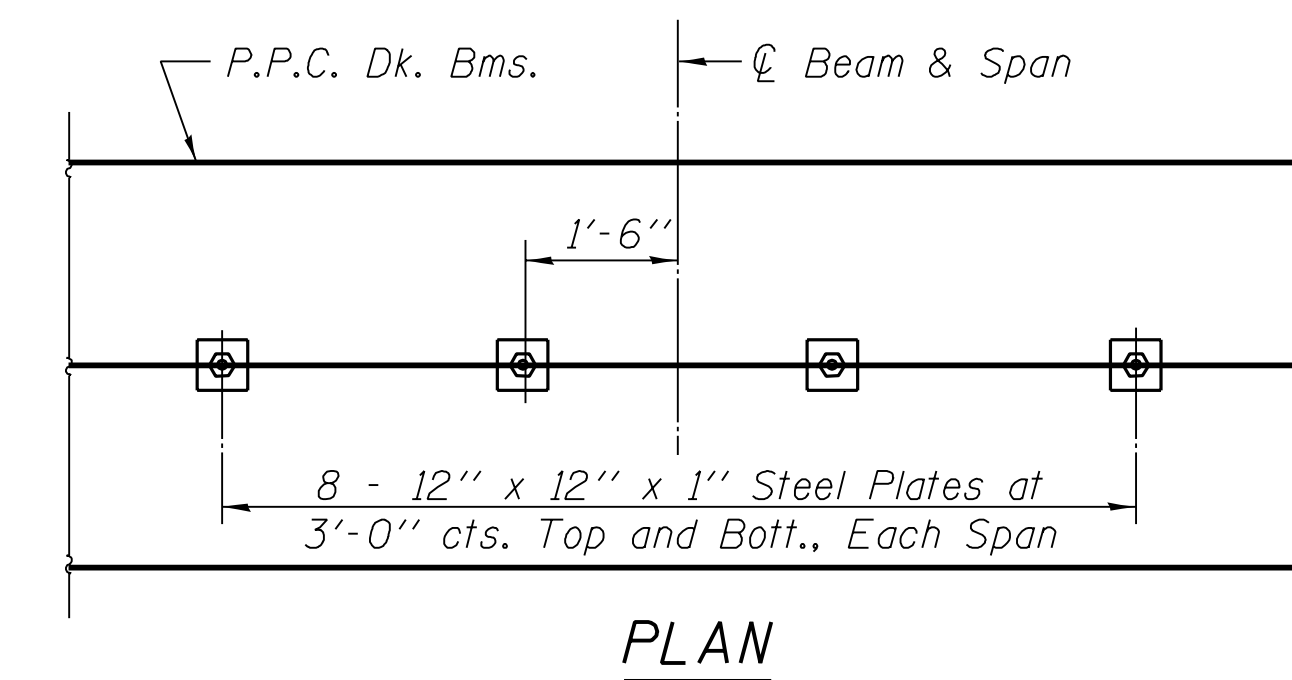
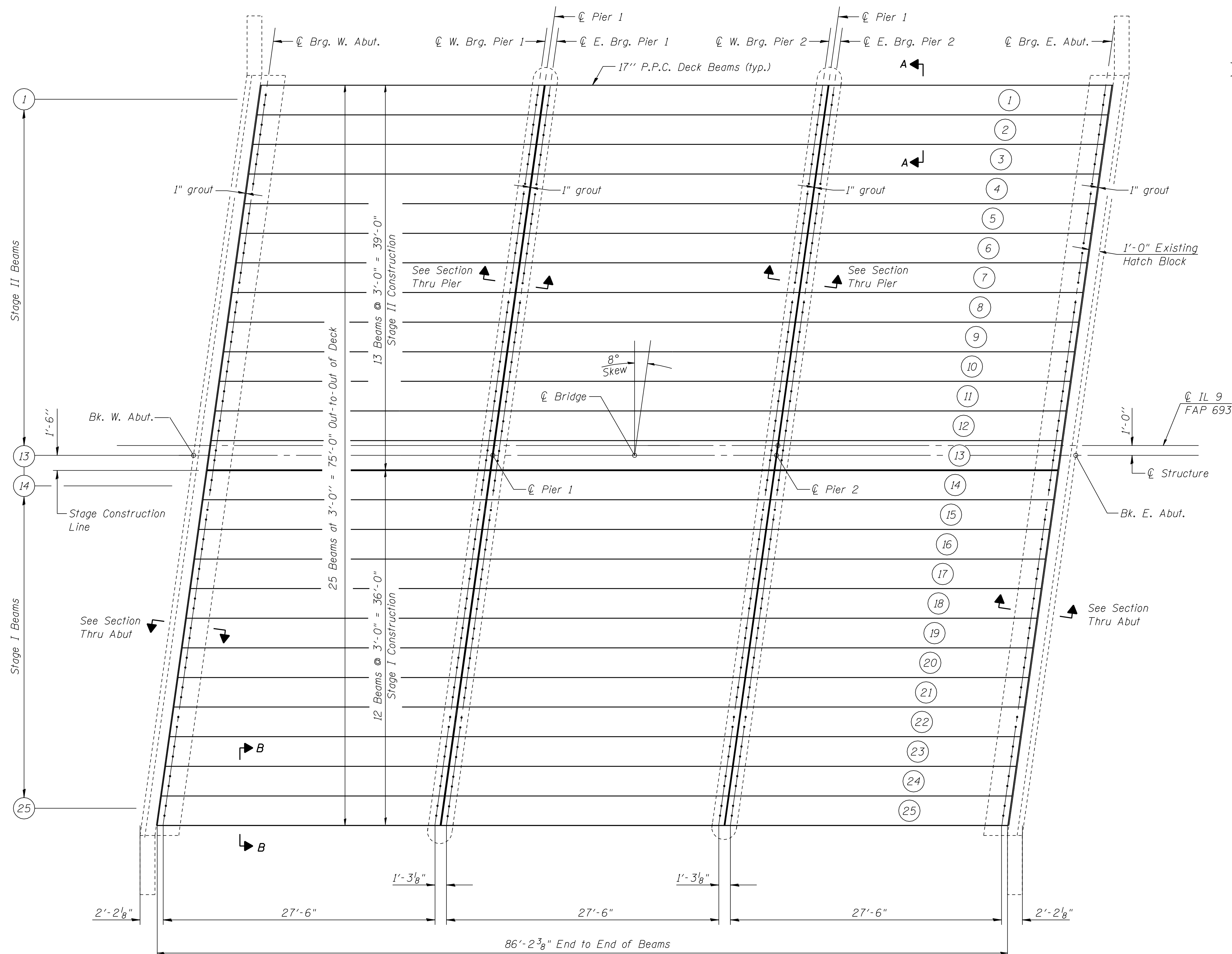
DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

\* Drill and epoxy grout c(E) & d(E) bars into existing abutment in accordance with Section 584 of the Standard Specifications.

**SUPERSTRUCTURE**  
ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE#: 21145super
	DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	27
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT		
Sheet 6 of 13		CONTRACT #70519		



**SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.**

Cost included with "Precast Prestressed Concrete Deck Beams, 17" Depth"  
See Stage Construction Details for traffic lanes.

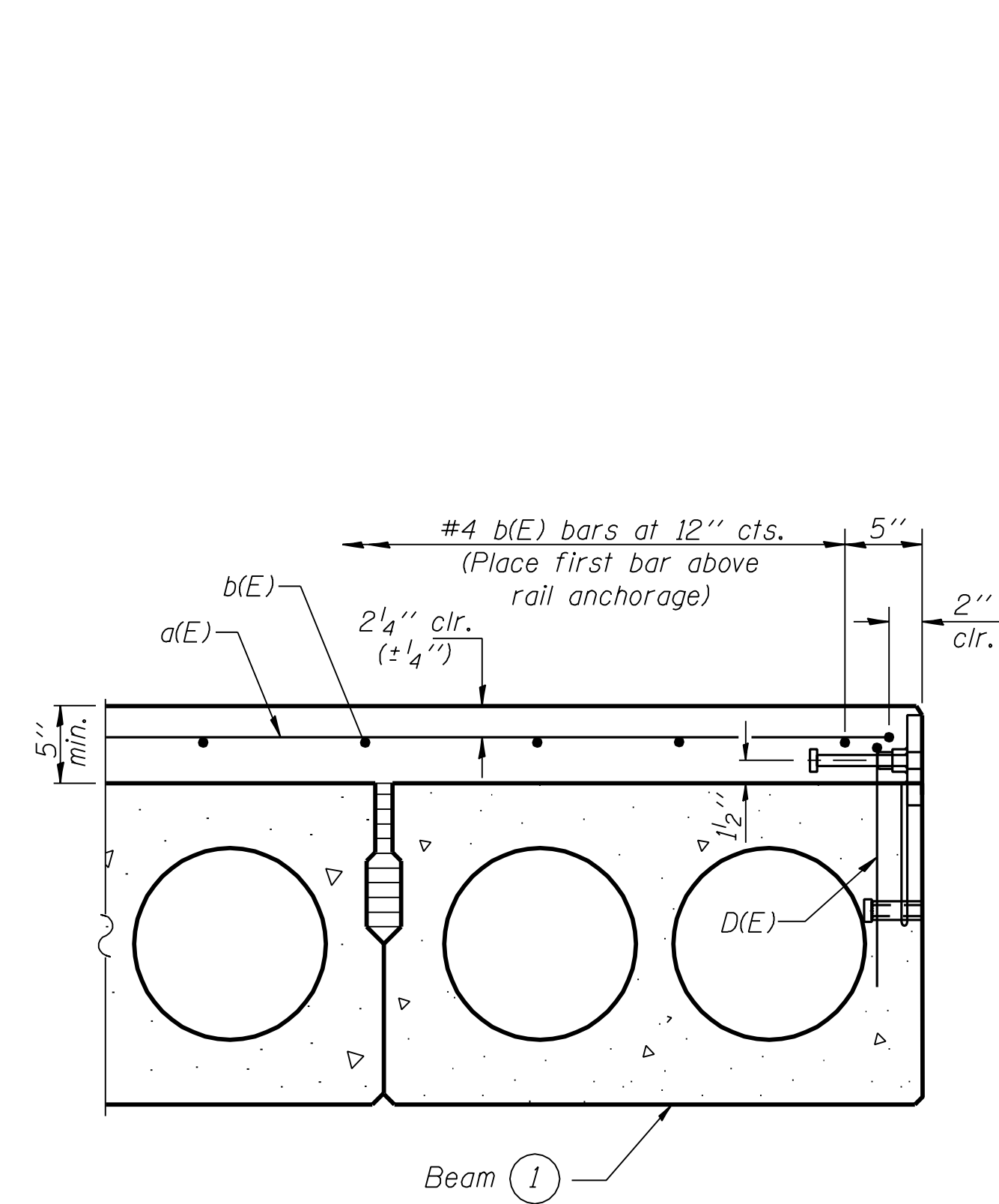
DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

**PLAN**  
(Showing Concrete Deck Beams)

Notes:  
See Sheet 7 of 13 for Sections A-A and B-B.  
See Sheet 4 of 13 for Sections thru Pier & Abut.

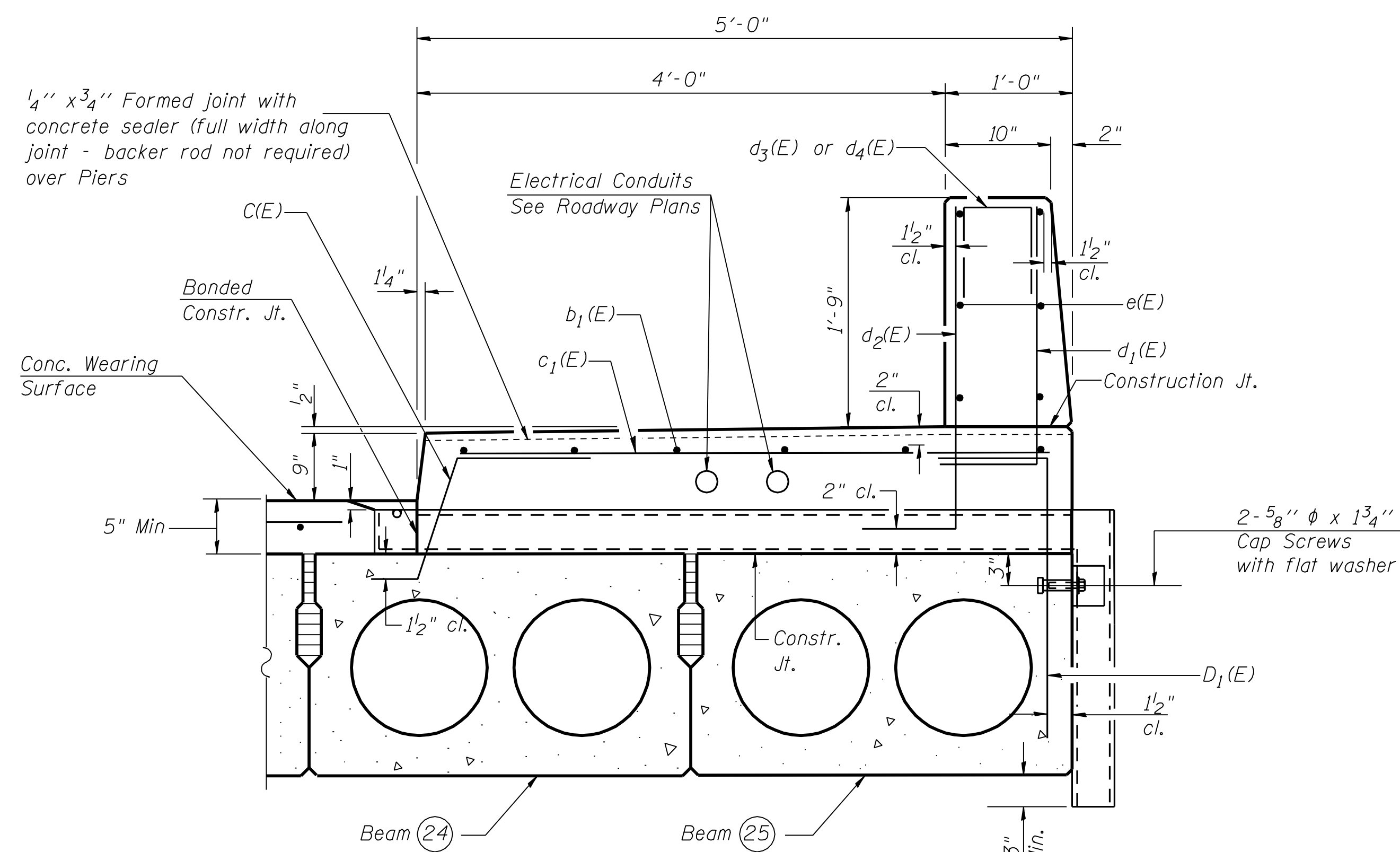
<b>SUPERSTRUCTURE</b>	
ILLINOIS ROUTE 9 OVER SUGAR CREEK F.A.P. ROUTE 693 - SEC. 129 B-2 MCLEAN COUNTY STATION 67+94 STRUCTURE NO. 057-0190	
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5 FILE: 21145super DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	28
FED. ROAD DIST. NO. 5	ILLINOIS PROJECT	Sheet 7 of 13 CONTRACT #70519		

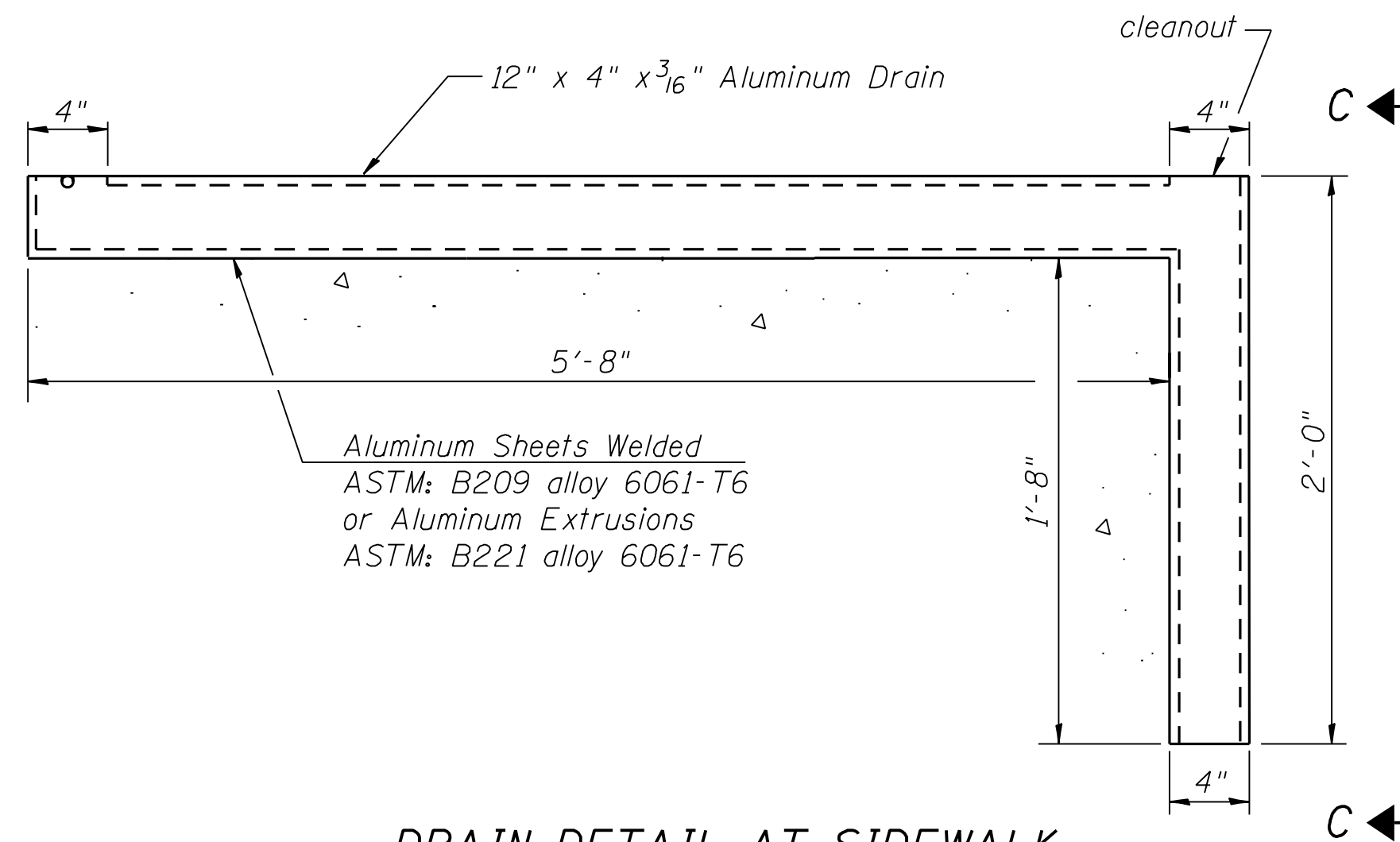


SECTION A-A

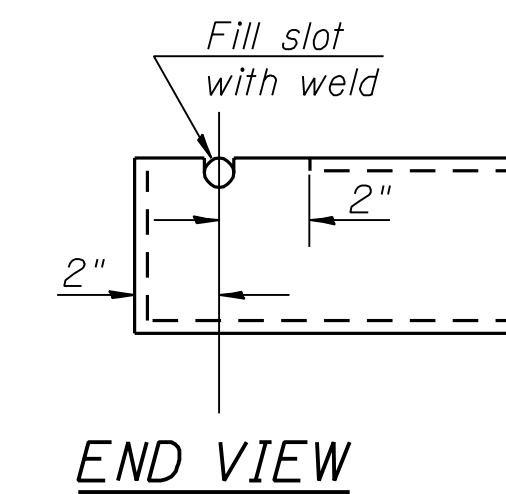
For bars C, D, & D<sub>1</sub>(E) see sheet 9 of 13.  
Cost included with Precast Prestressed Concrete Deck Beams (17" Depth)



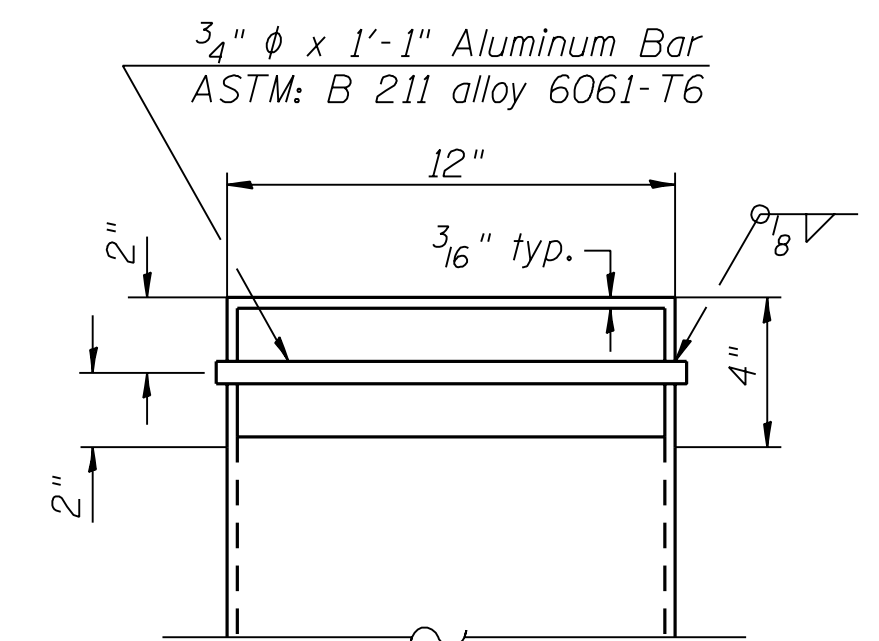
SECTION B-B



DRAIN DETAIL AT SIDEWALK

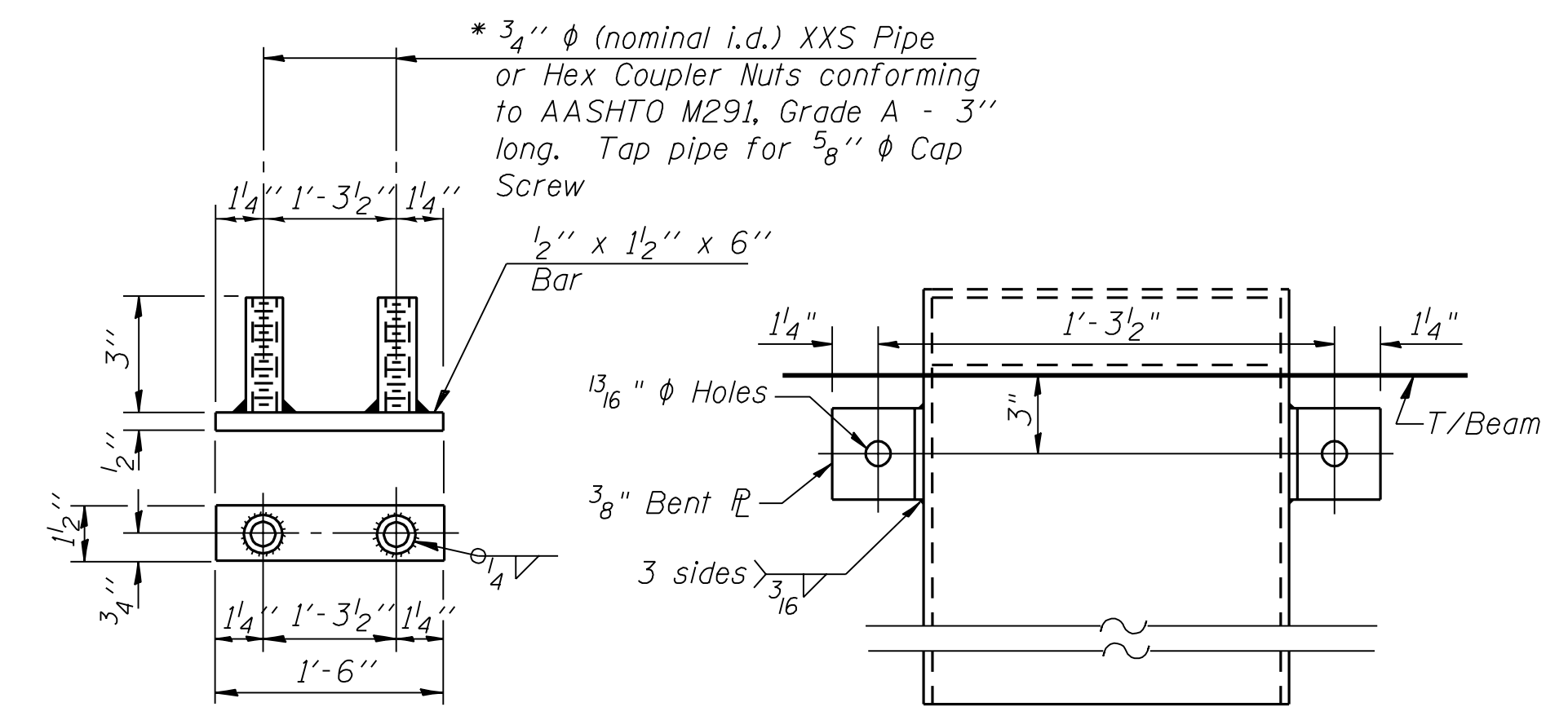


END VIEW



TOP PLAN

FLOOR DRAIN INLET DETAILS



ANCHOR DEVICE

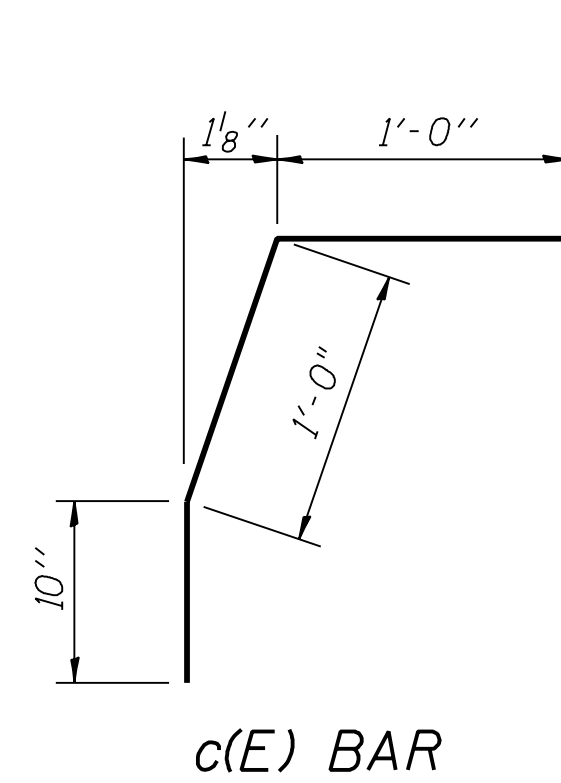
\* Threaded areas shall be plugged or blocked off during casting of beam.

SECTION C-C

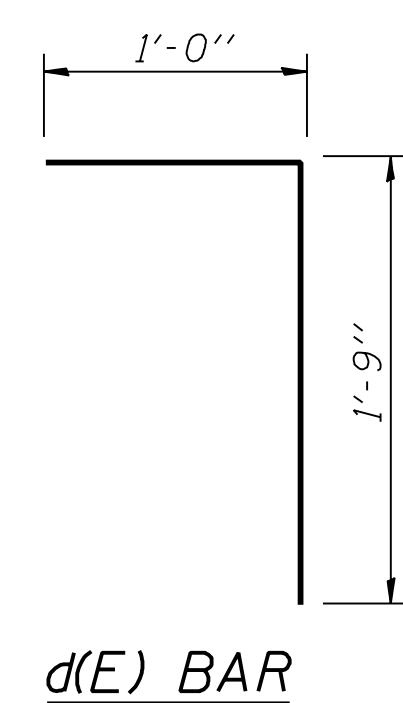
FLOOR DRAIN ANCHOR DETAILS

Notes:  
The exterior surfaces of the floor drains shall be coated by the manufacturer with a color that matches the concrete.  
All cap screws and washers shall be galvanized according to AASHTO M 232.  
Anchor devices shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385.

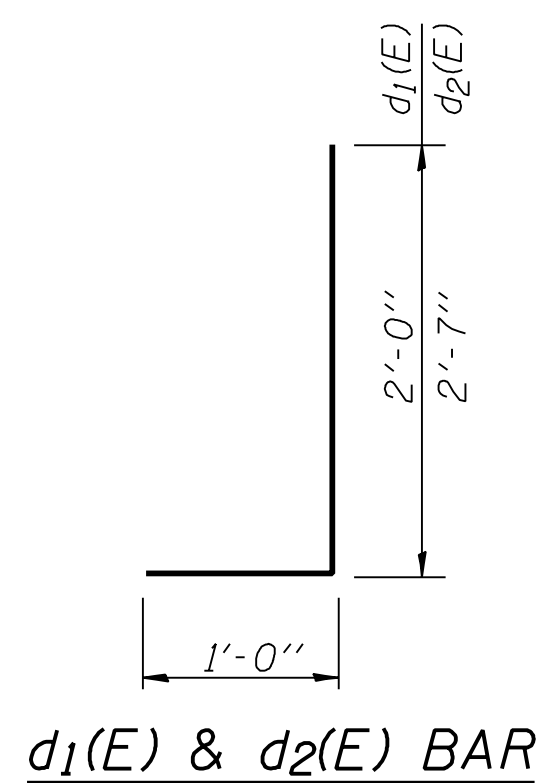
DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.



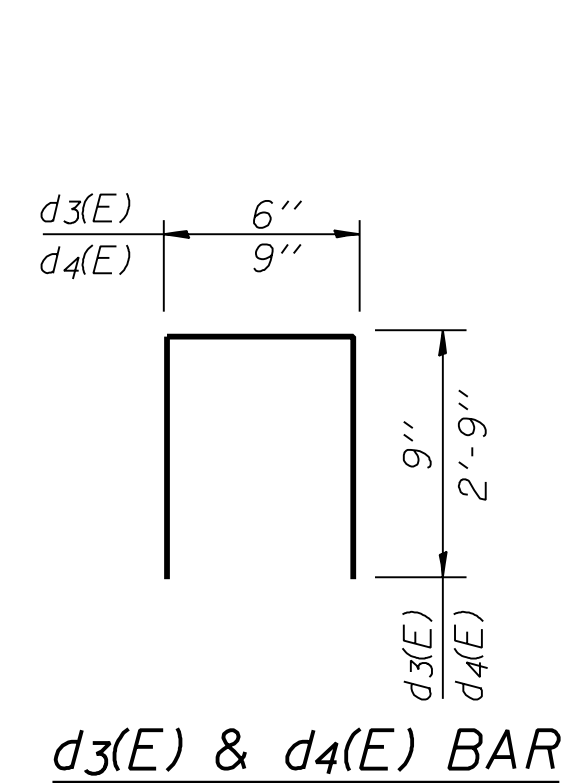
c(E) BAR



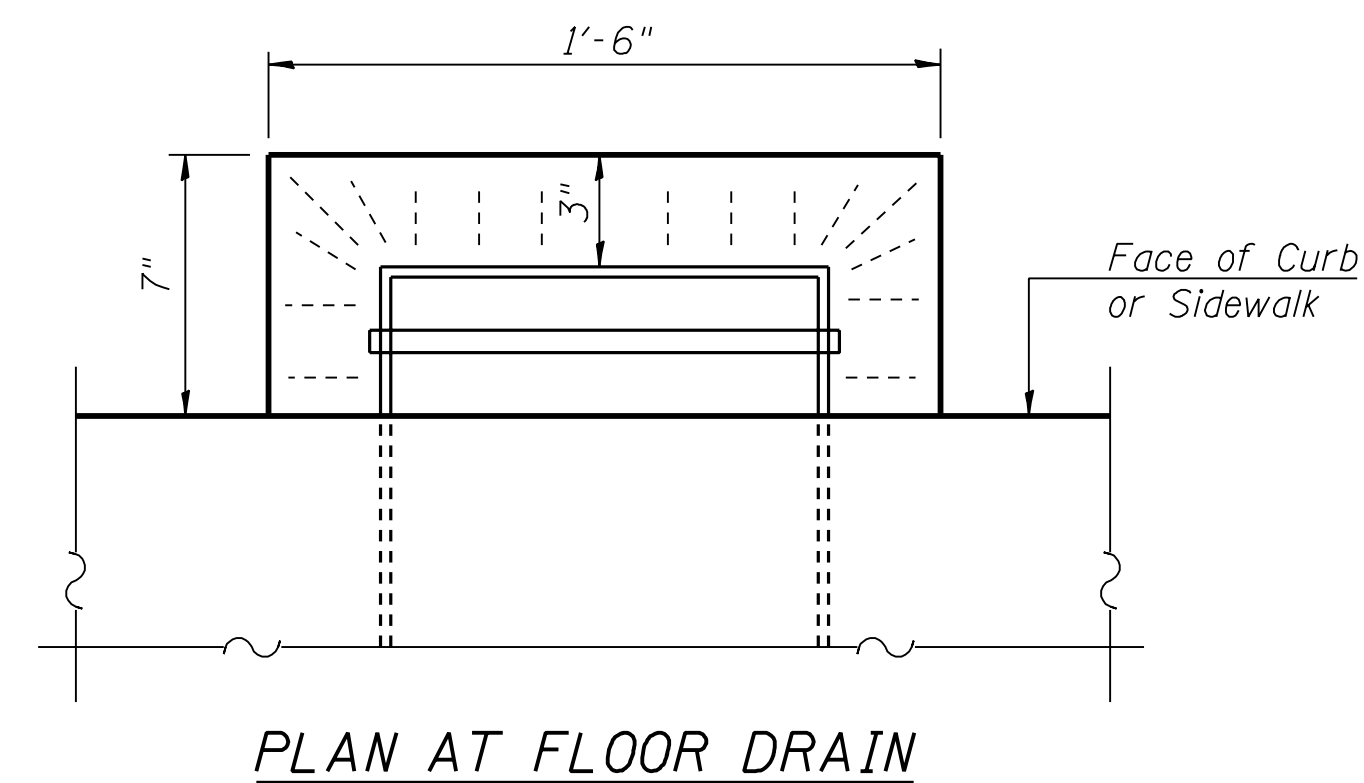
d(E) BAR



d<sub>1</sub>(E) & d<sub>2</sub>(E) BAR



d<sub>3</sub>(E) & d<sub>4</sub>(E) BAR



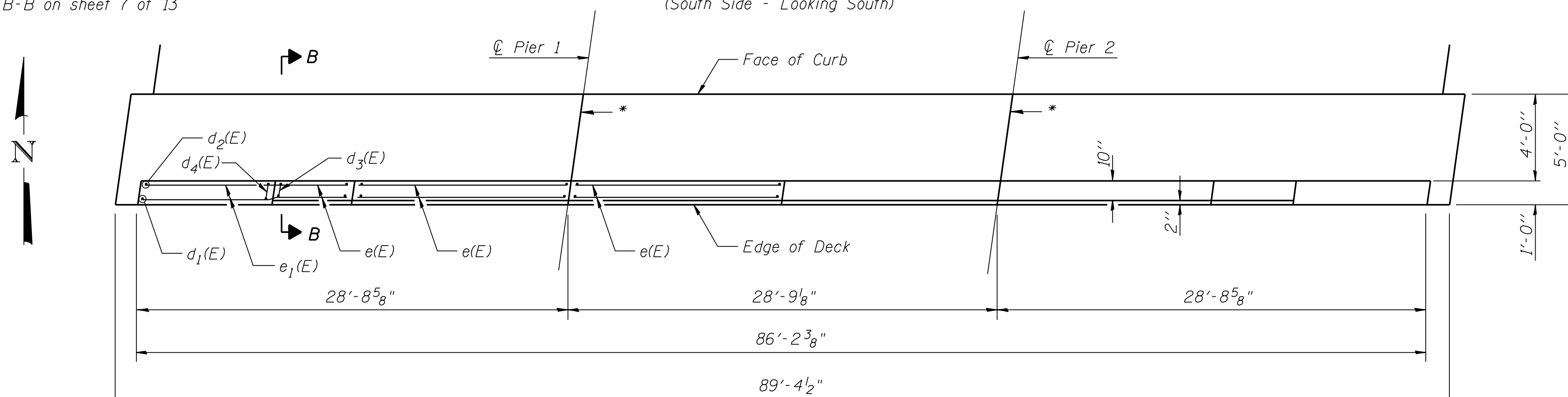
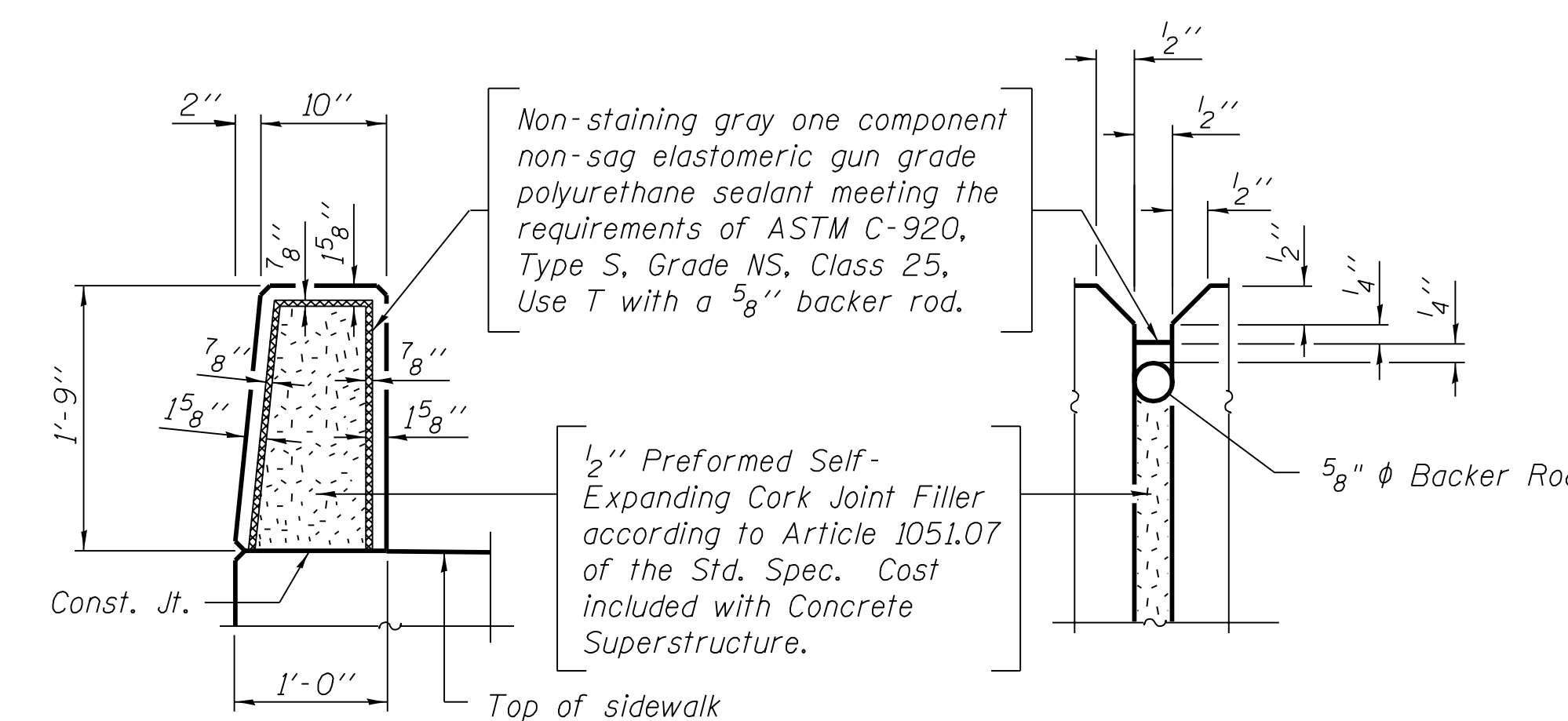
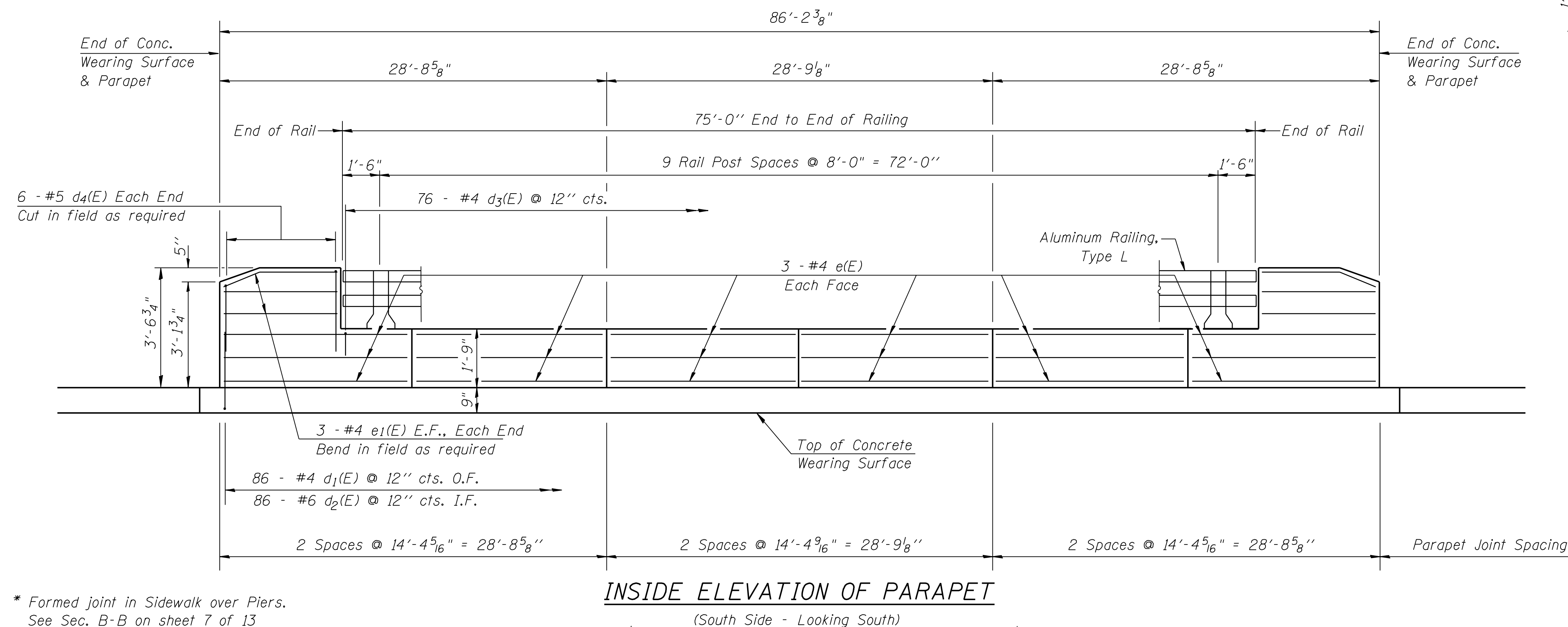
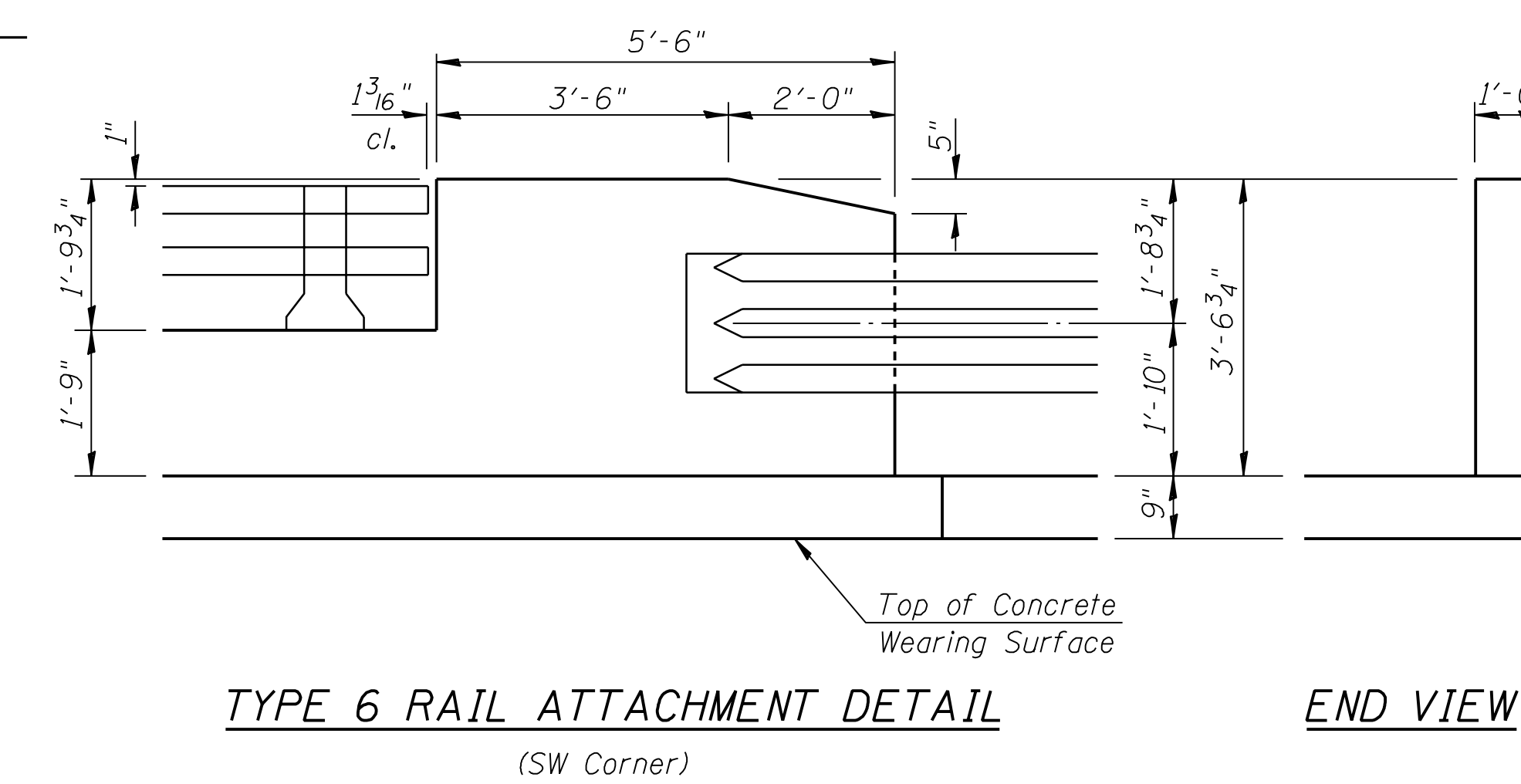
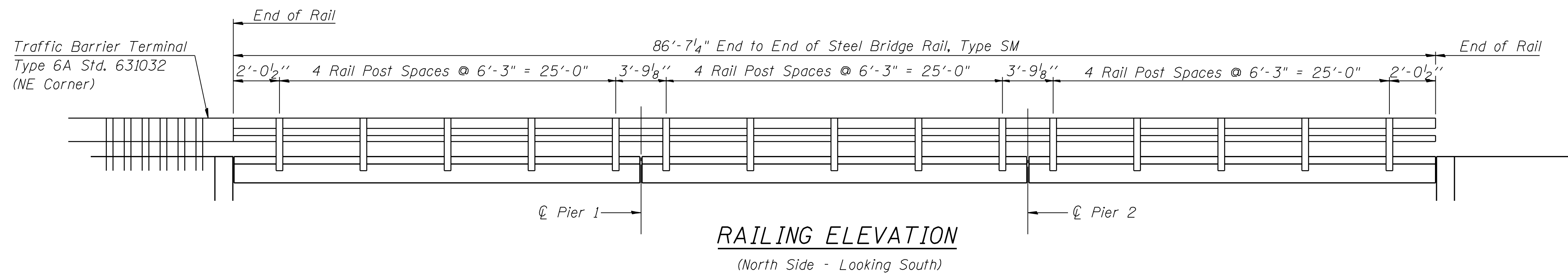
PLAN AT FLOOR DRAIN

**SUPERSTRUCTURE DETAILS**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145super
	DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	29
FED. ROAD DIST. NO. 5		ILLINOIS PROJECT		
Sheet 8 of 13		CONTRACT #70519		



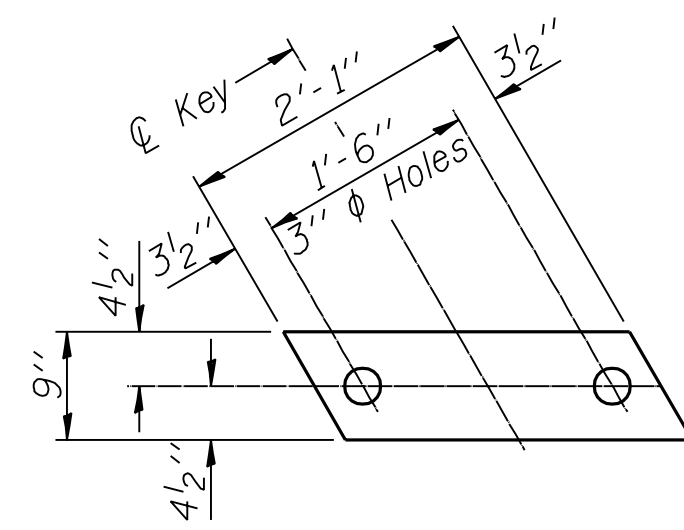
DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

O.F. - Outside Face  
I.F. - Inside Face

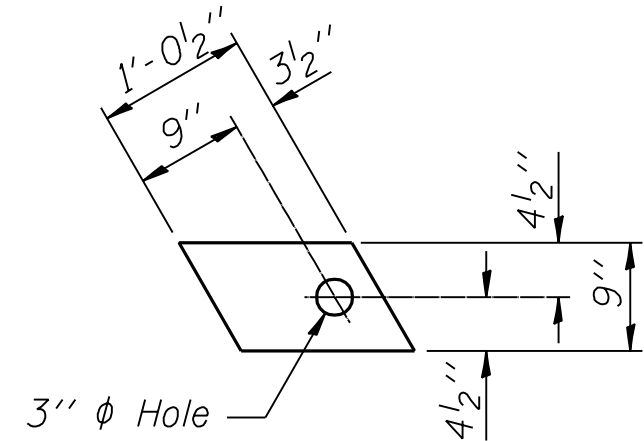
Notes:  
See sheet 7 of 13 for Section B-B.  
See sheet 10 and 11 of 13 for bridge railing and rail post anchor device details.  
For Reinforcement Bar details see sheet 7 of 13.  
For Bill of Material see sheet 5 of 13.

SUPERSTRUCTURE DETAILS	
ILLINOIS ROUTE 9 OVER SUGAR CREEK	
F.A.P. ROUTE 693 - SEC. 129 B-2	
MCLEAN COUNTY	
STATION 67+94	
STRUCTURE NO. 057-0190	
CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145super
	DATE: 12/18/06

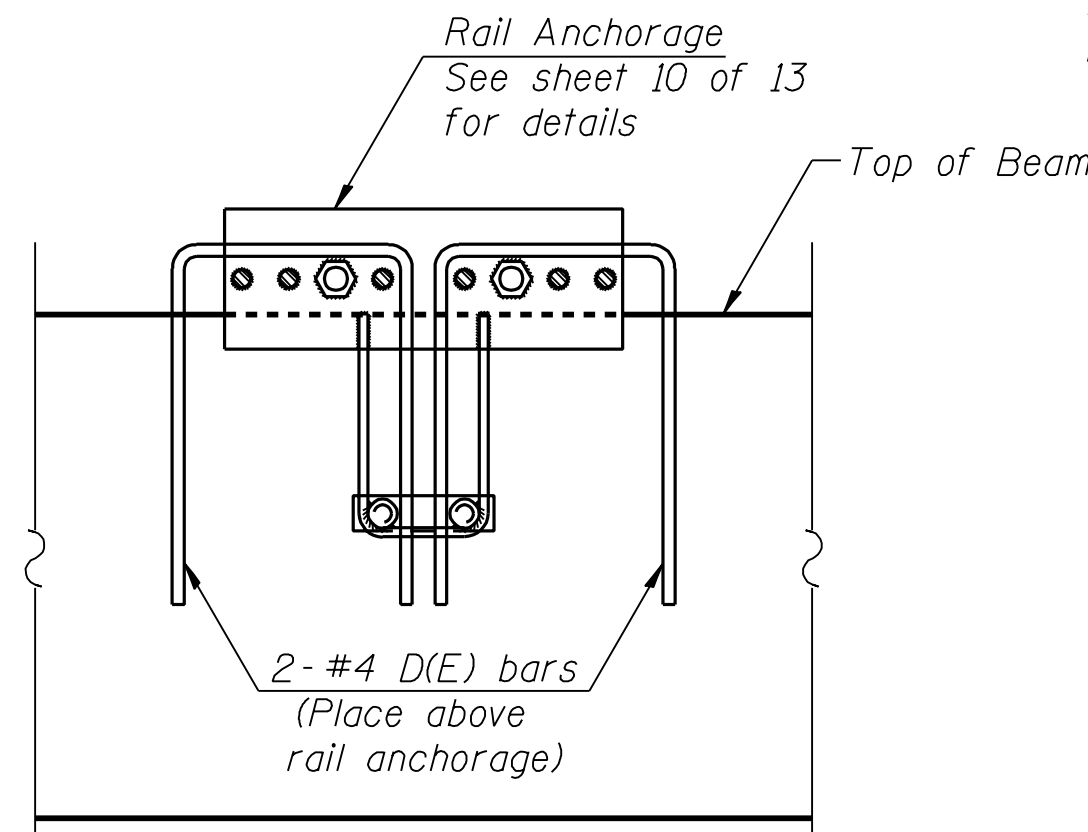
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	30
FED. ROAD DIST. NO. 5	ILLINOIS PROJECT	Sheet 9 of 13 CONTRACT #70519		



**FABRIC BEARING PAD**  
(Interior)  
(144 Required)



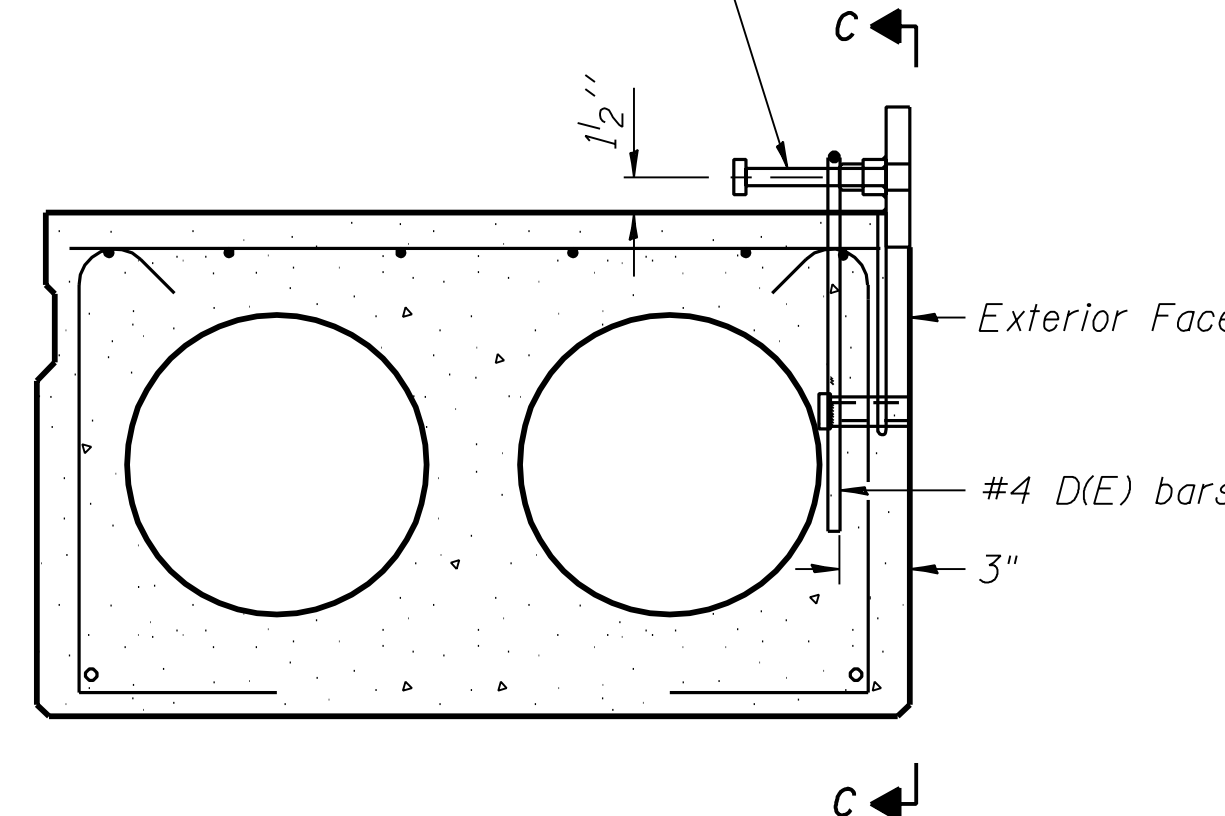
**FABRIC BEARING PAD**  
(Exterior)  
**FIXED**  
(12 Required)



**SECTION C-C**

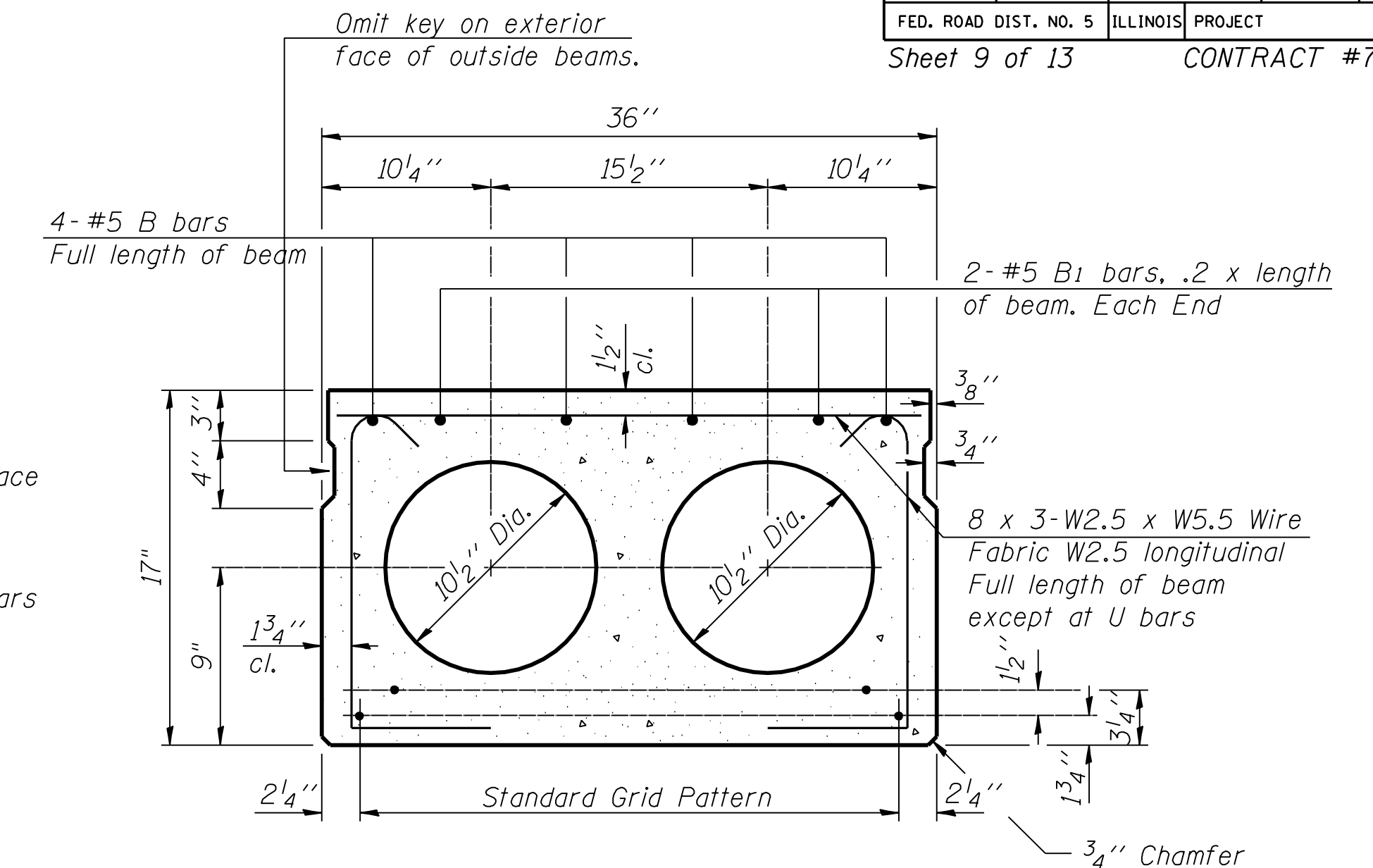
The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage. Inserts and/or additional inserts cast into beam. Drilling into the beam will not be permitted.

The Contractor shall ensure that neither the Rail Anchorage Device nor the Deck Beam is damaged during transportation.



**SECTION THRU EXTERIOR BEAM (1)**

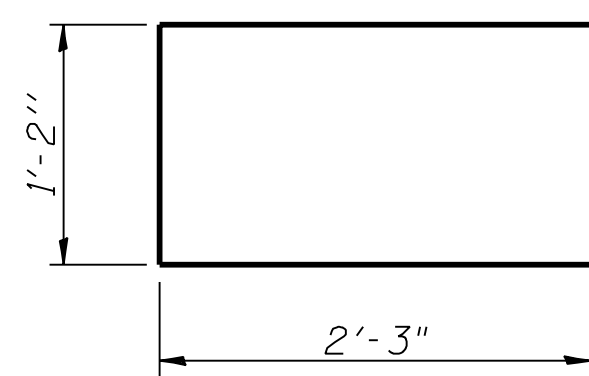
See Typical Section for strand pattern, dimensions and bar locations.



**TYPICAL SECTION**

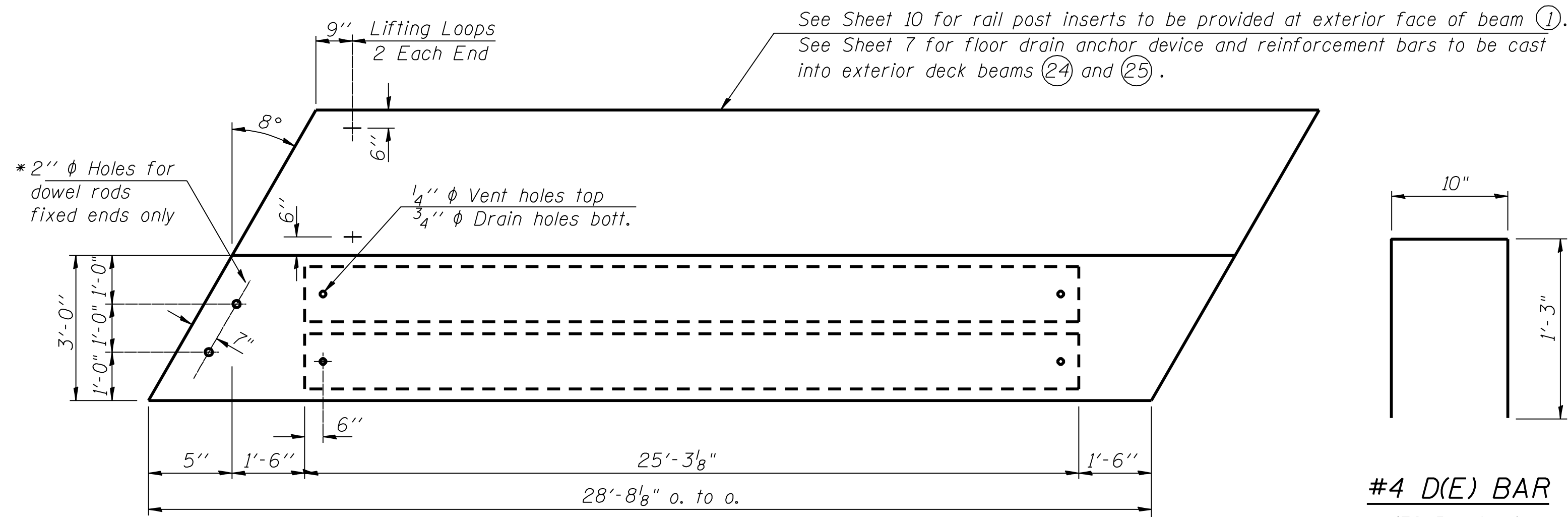
10-1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
6-Strands 1 3/4" up, 4-Strands 3/4" up.

Note:  
Place strands symmetrically about  $\phi$  of beam.



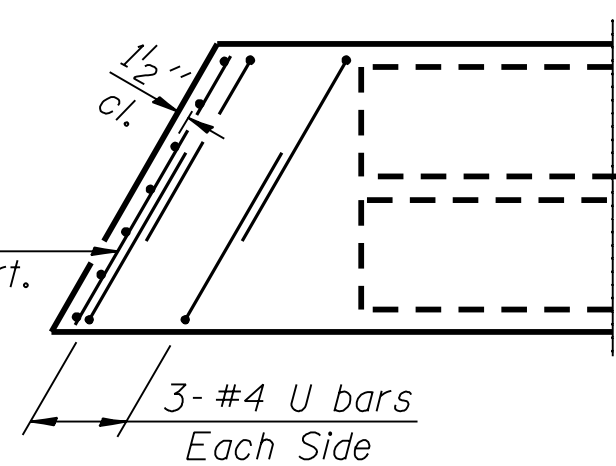
**BAR U**

\* Contractor to verify that old dowel rods do not interfere with the placement of the new dowel rods.

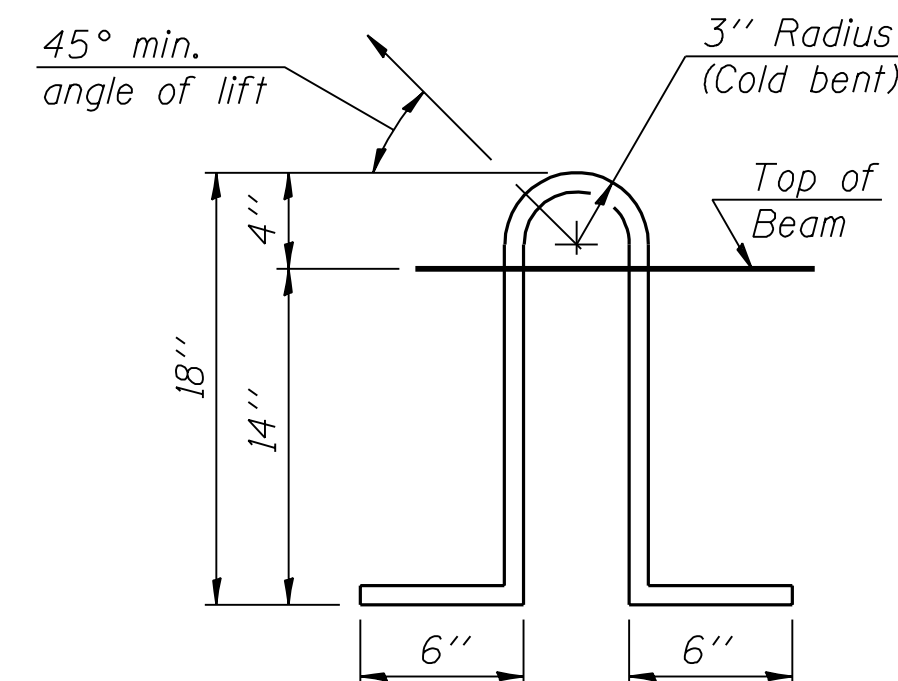


**PLAN**

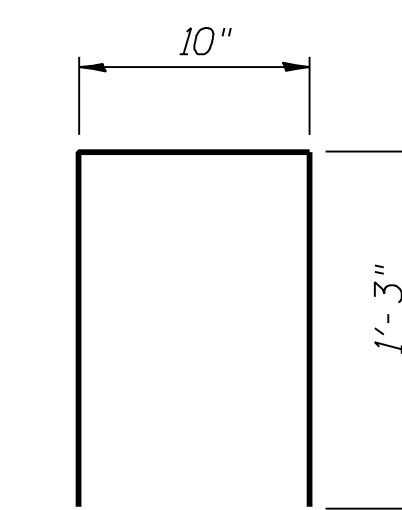
8 x 3-W2.5 x W5.5 Wire Fabric, W5.5 vert. Full depth of beam. Each End.



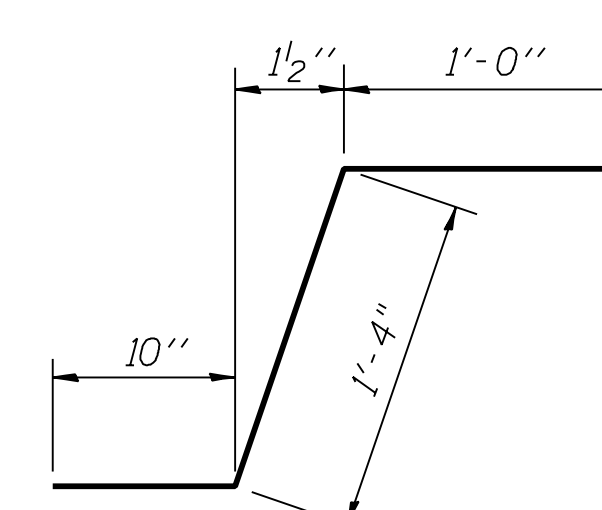
**END PLAN**



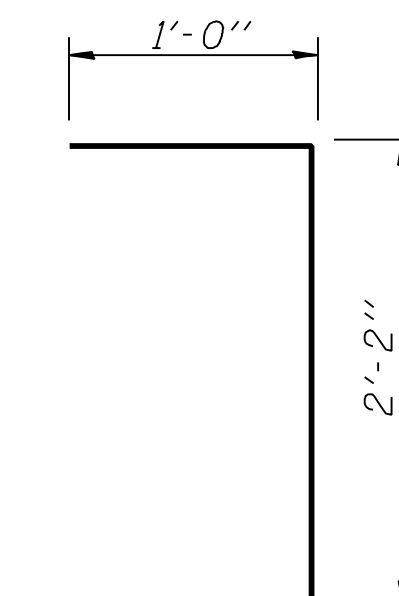
**LIFTING LOOP DETAIL**



**#4 D(E) BAR**  
(30 Required)

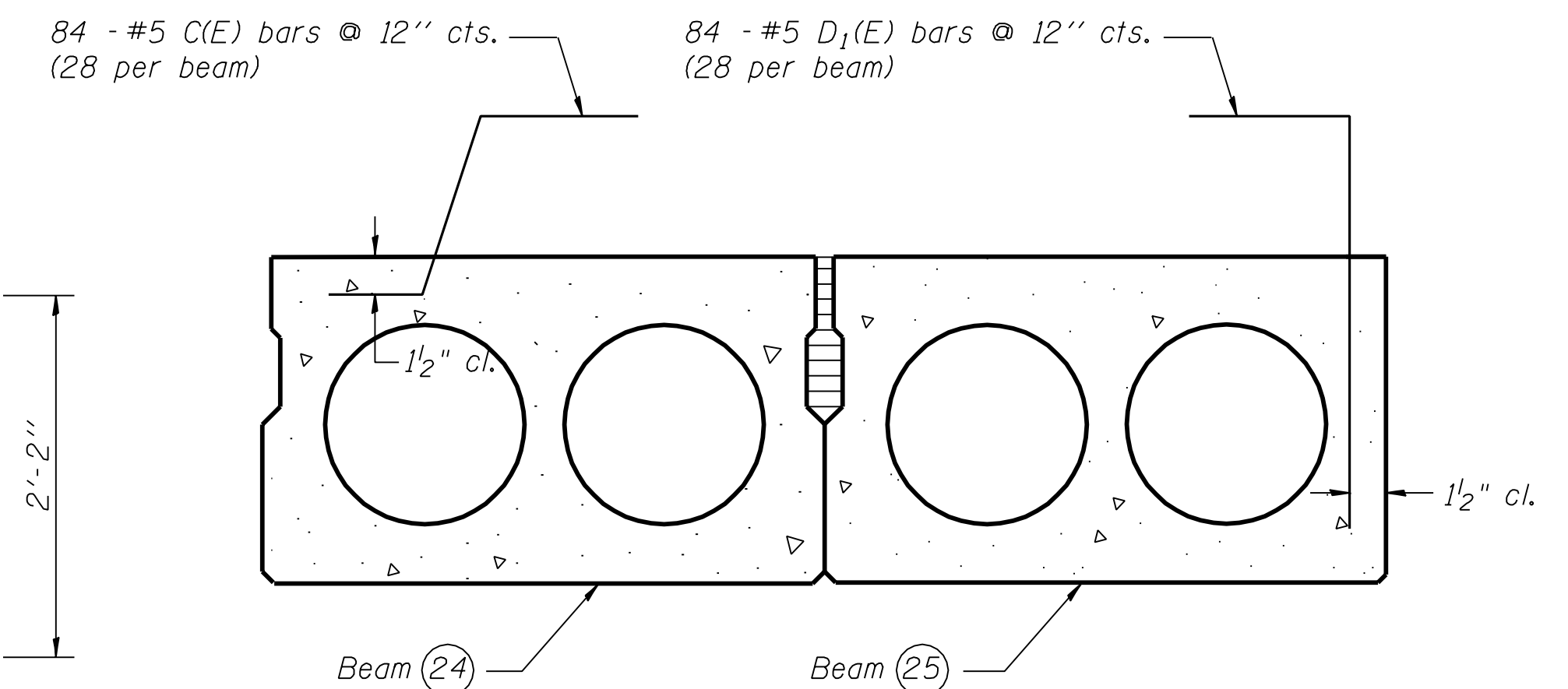


**C(E) BAR**  
(84 Required)



**D1(E) BAR**  
(84 Required)

Cost included with Precast Prestressed Concrete Deck Beams (17" Depth)



**SECTION THRU EXTERIOR BEAMS (24) & (25)**

See Typical Section for strand pattern, dimensions and bar locations.

**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2"  $\phi$ -270 ksi strands, as shown. Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.5(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i. See Sheets 7, 10 & 11 for reinforcement bars, rail post anchor devices and floor drain anchors to be cast into exterior deck beams.

**BILL OF MATERIAL**

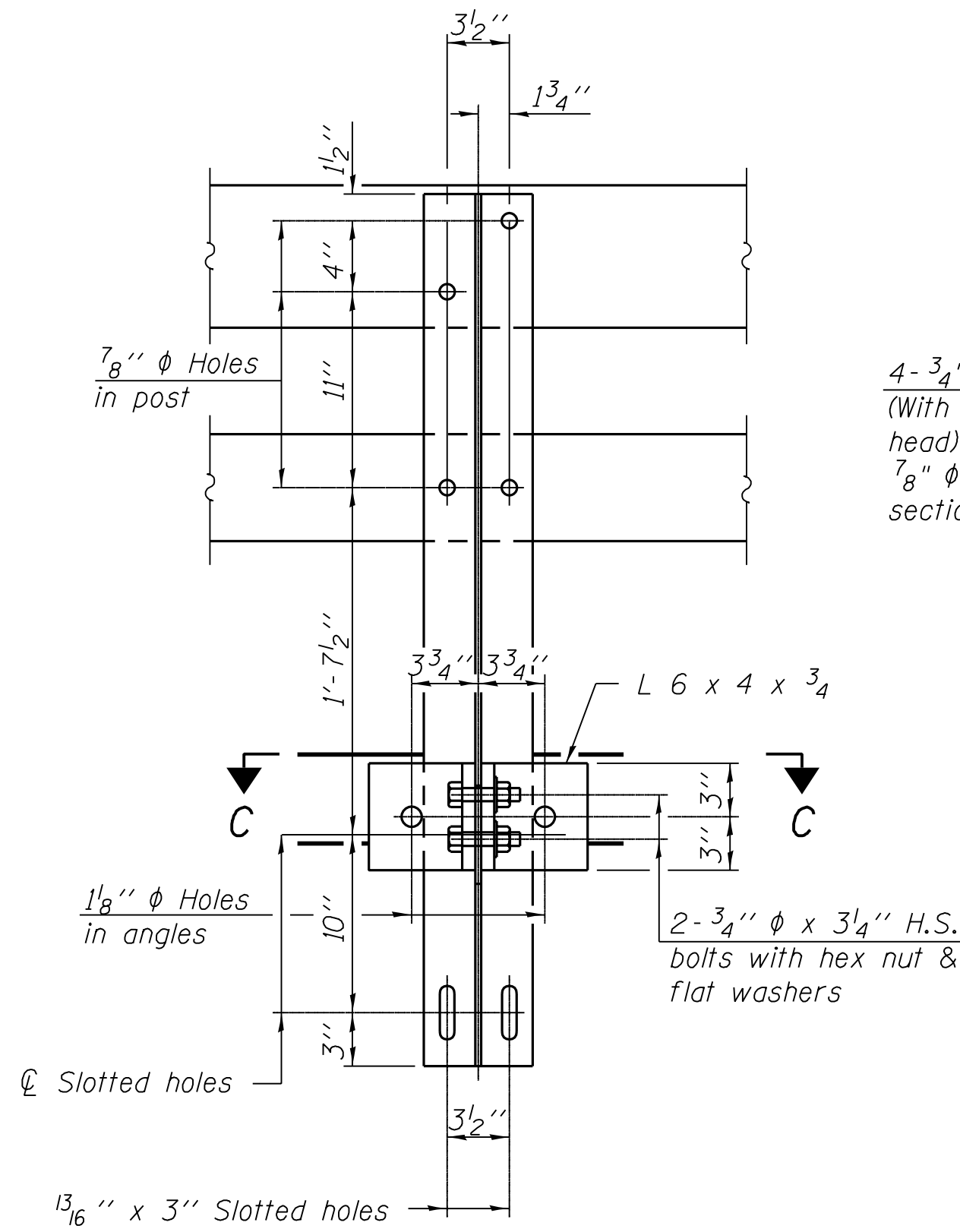
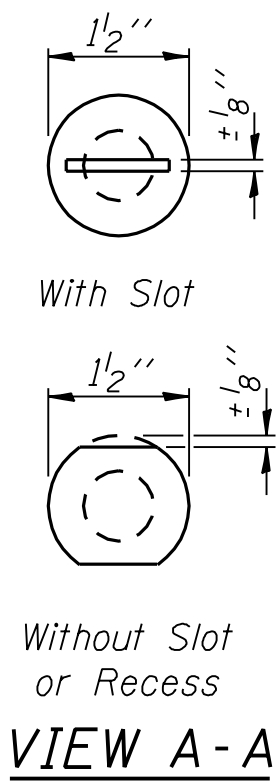
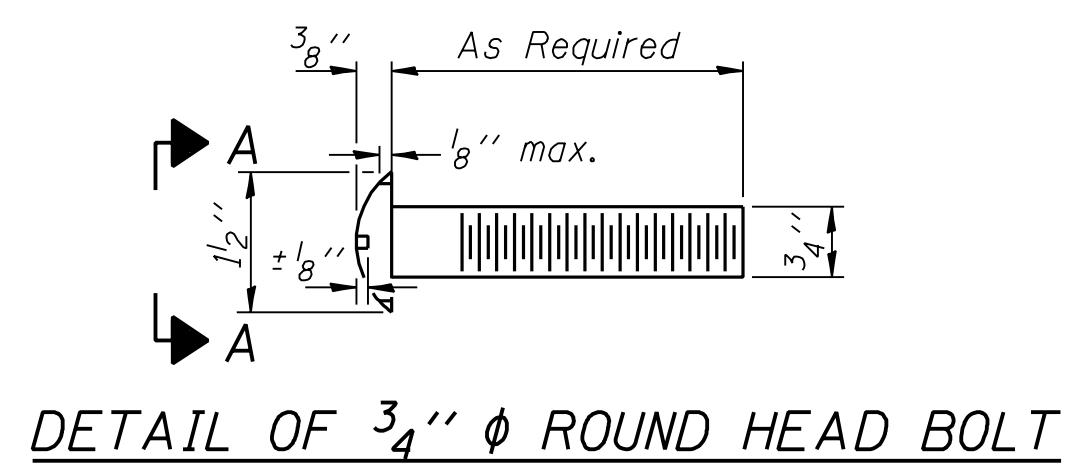
Item	Unit	Quantity
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	6,453

**SUPERSTRUCTURE**

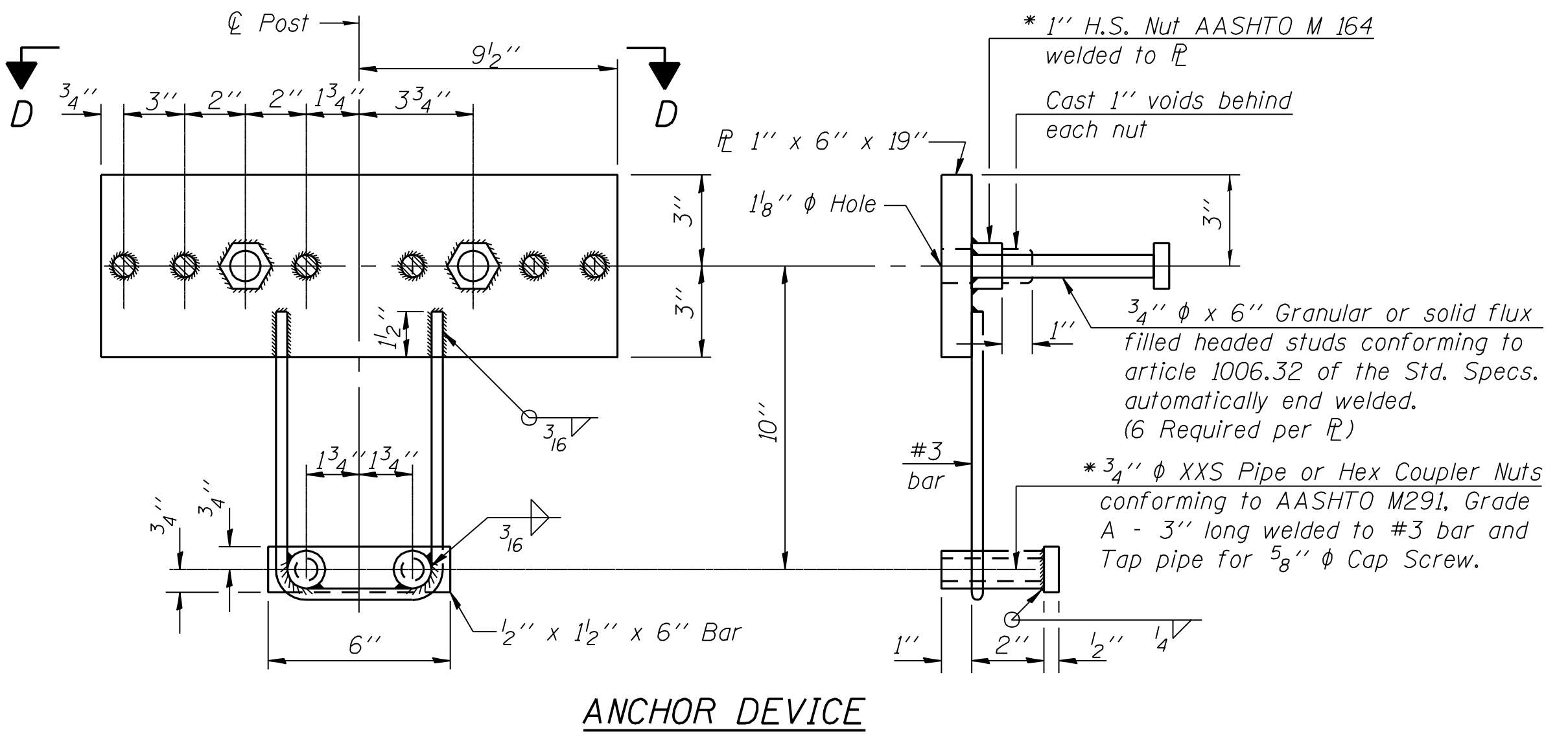
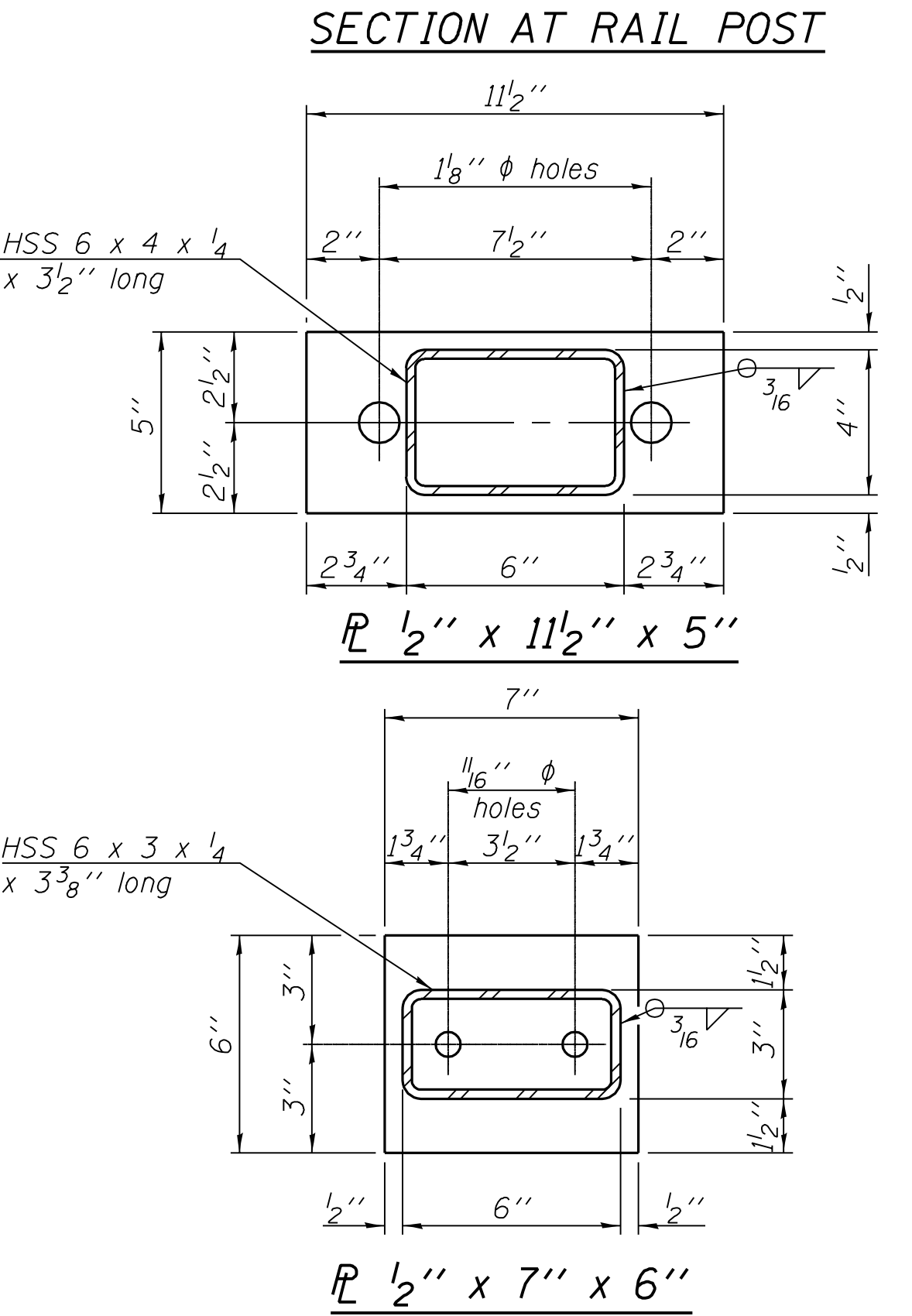
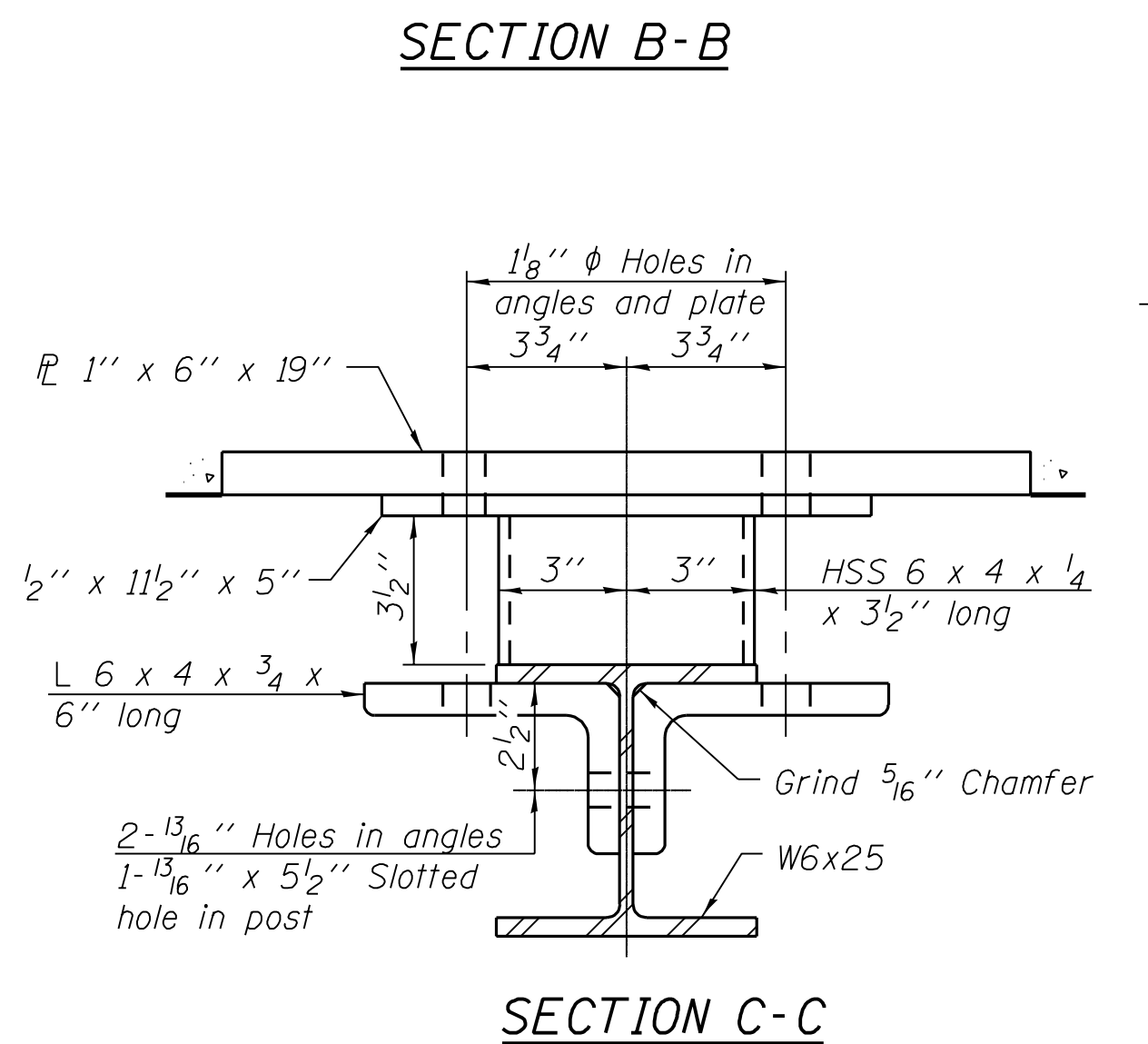
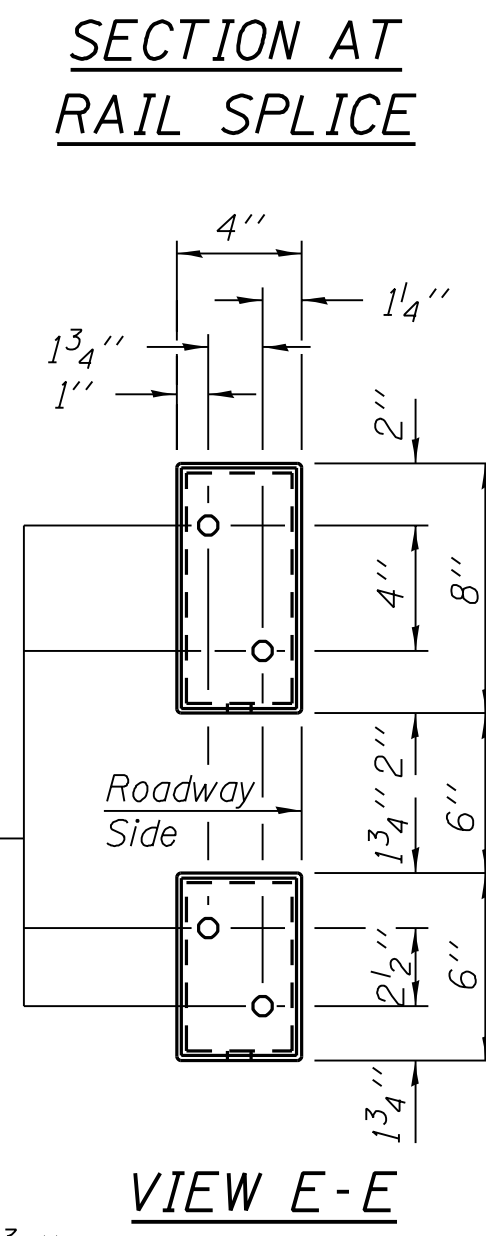
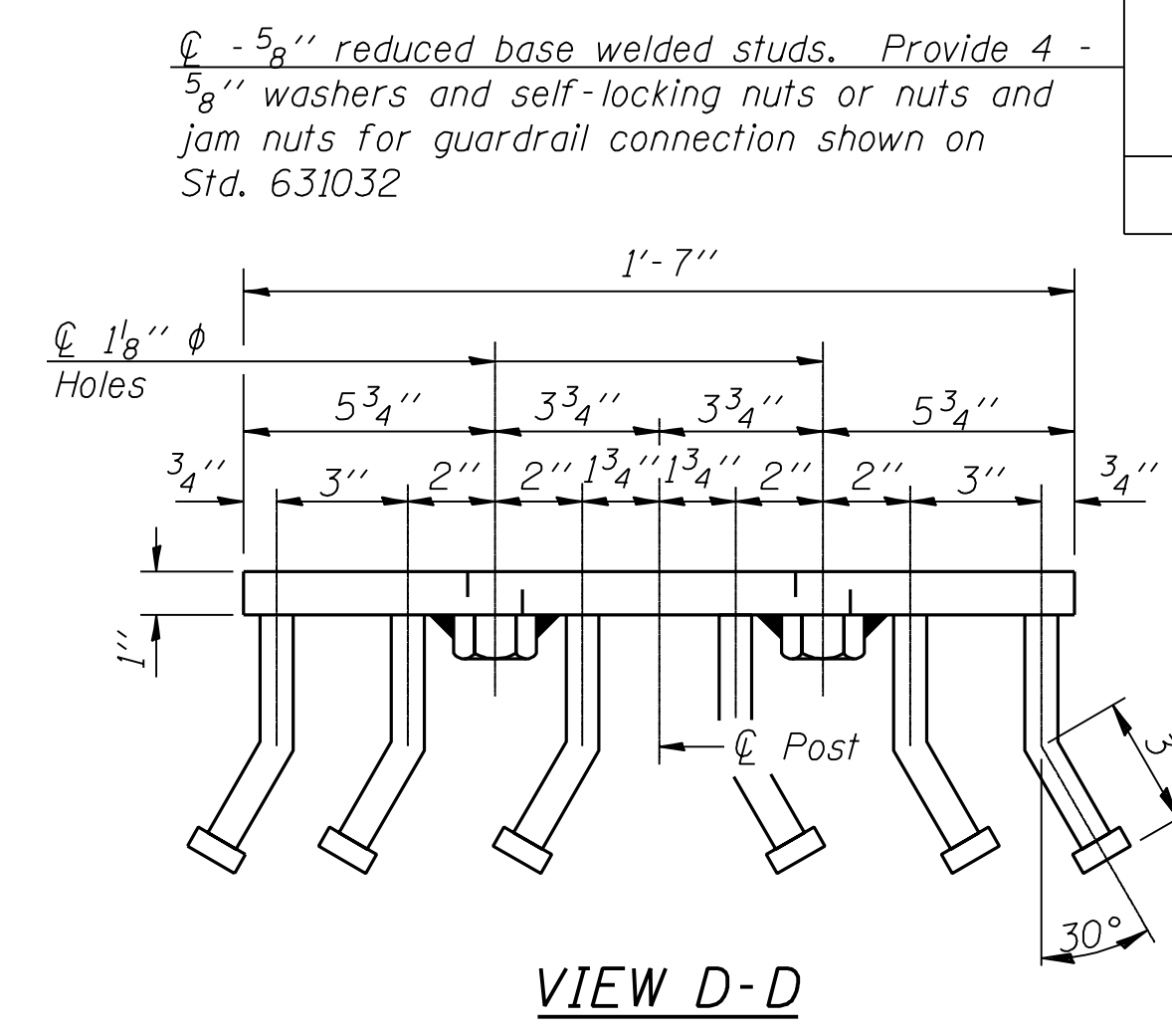
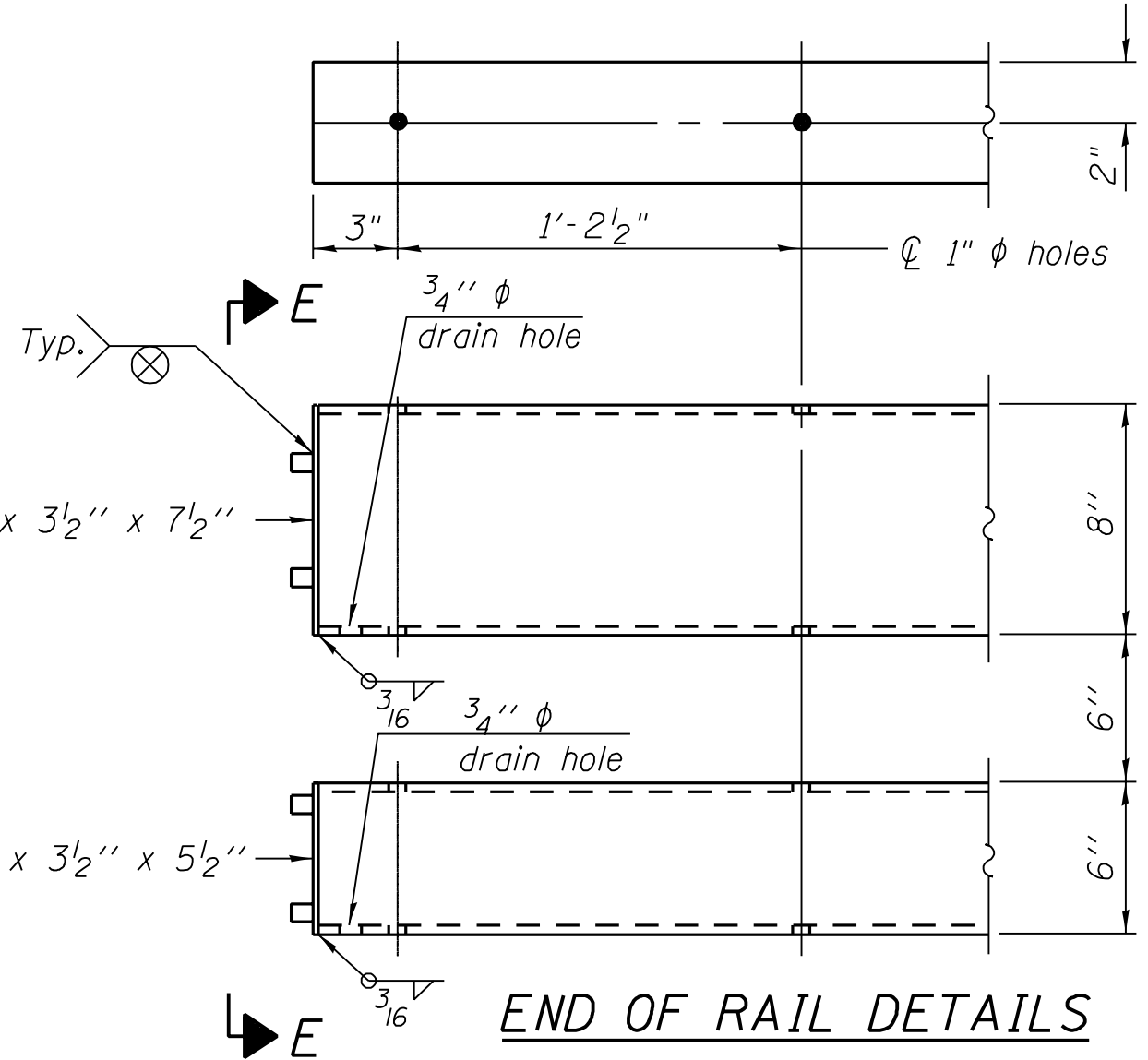
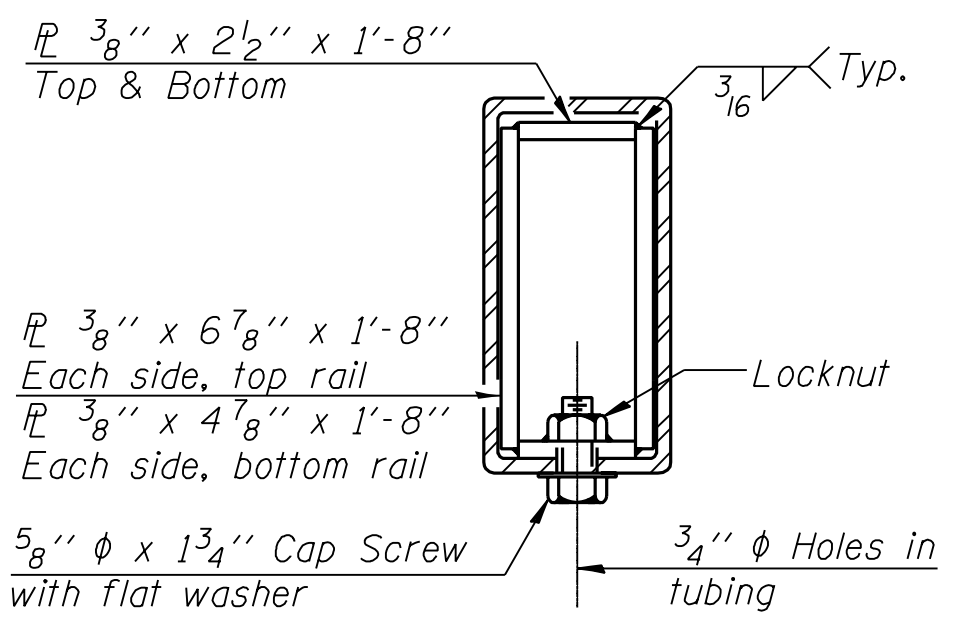
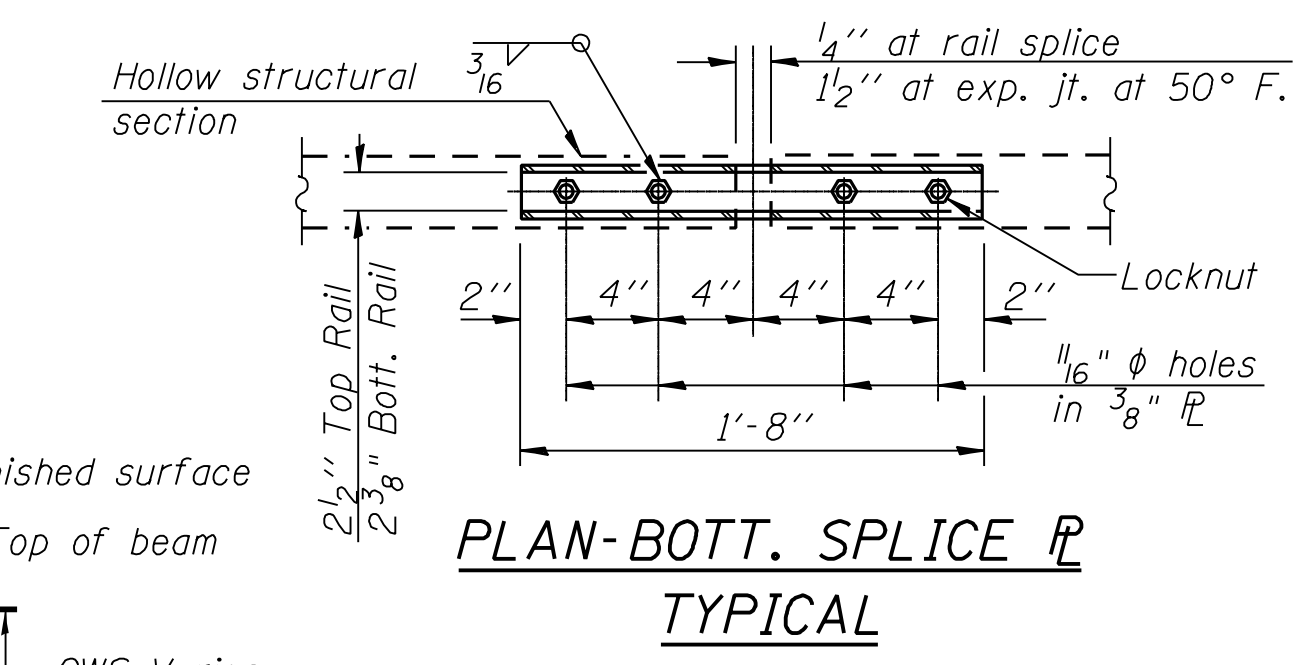
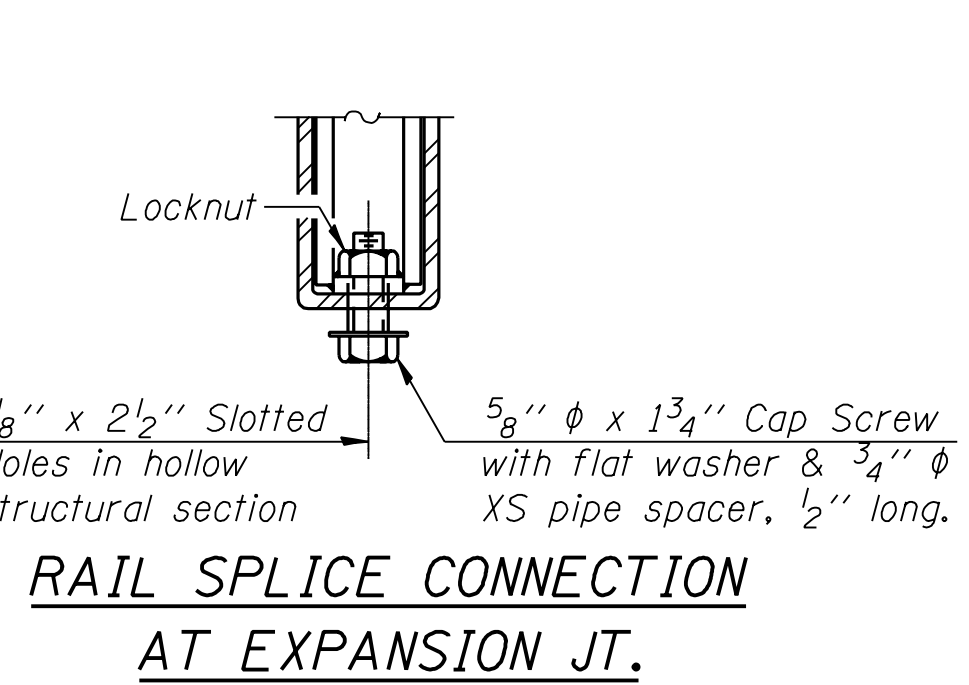
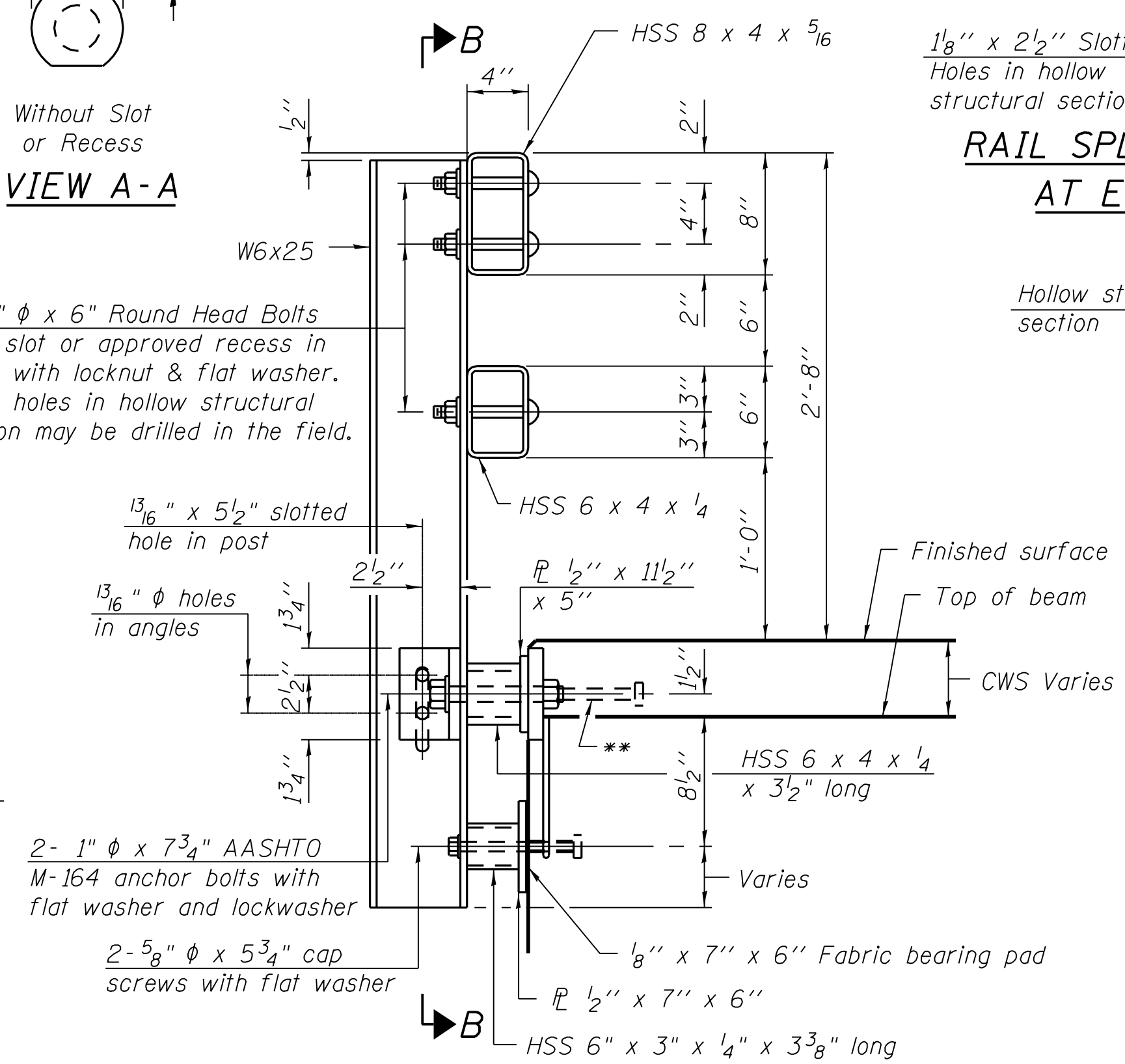
ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145beam
	DATE: 12/18/06

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.



4- 3/4"  $\phi$  x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8"  $\phi$  holes in hollow structural section may be drilled in the field.



**Notes:**  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.  
 Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.  
 \*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

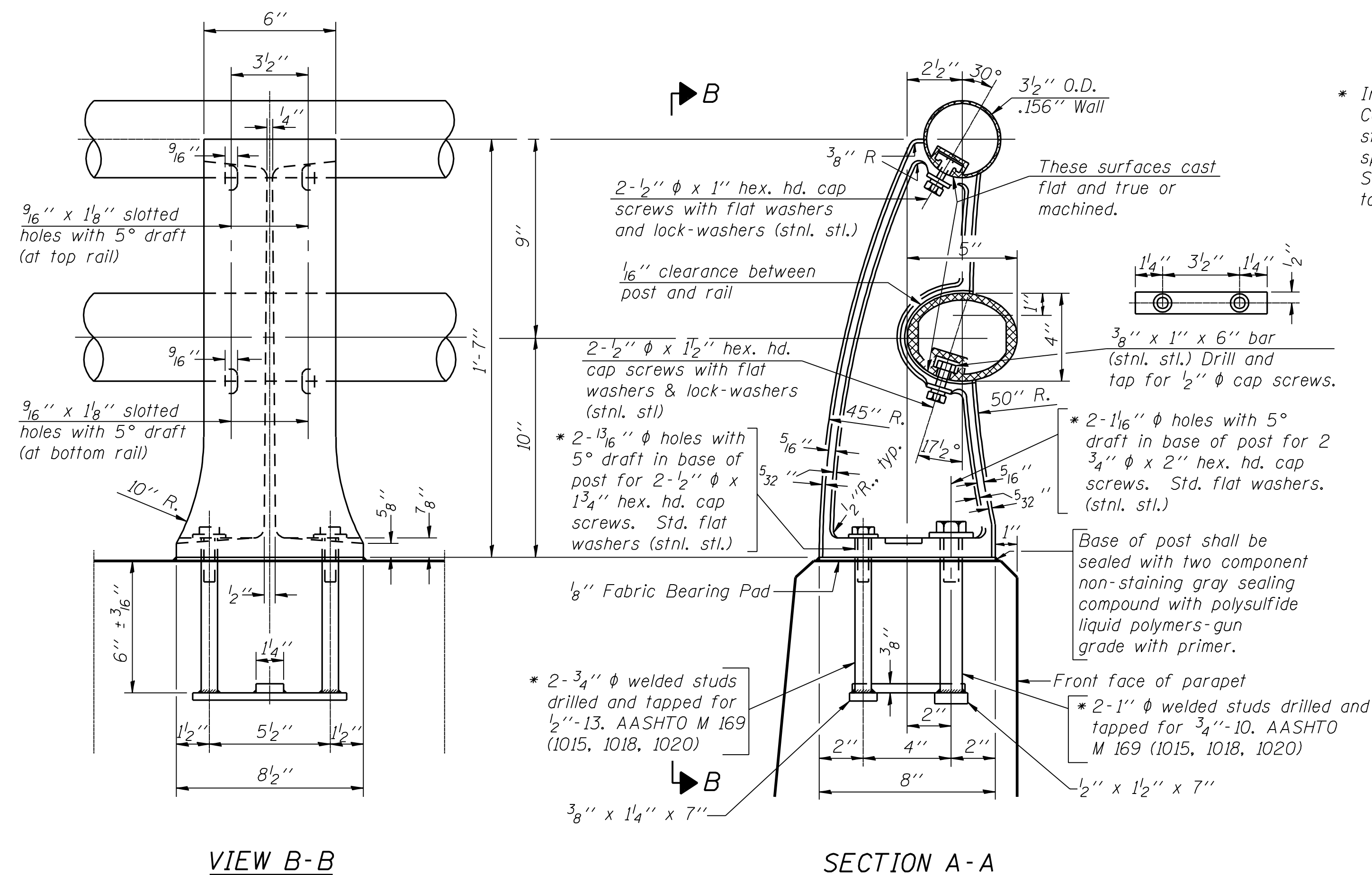
**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	87

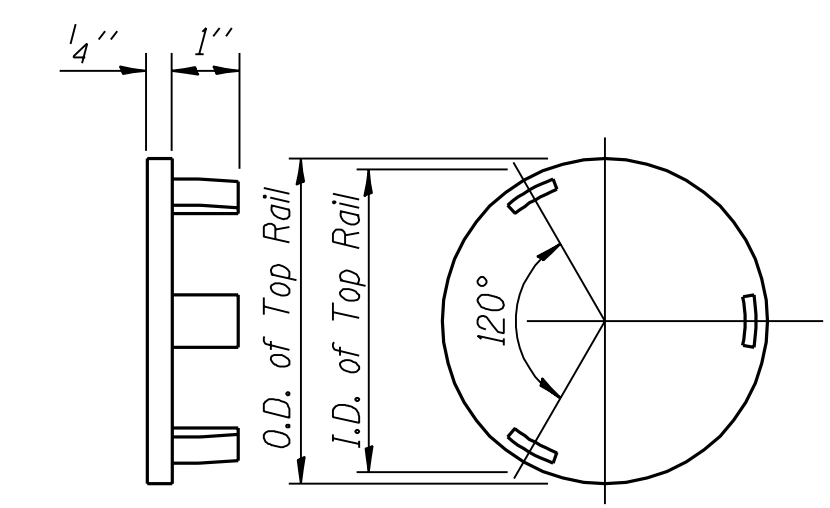
**STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE**  
 ILLINOIS ROUTE 9 OVER SUGAR CREEK  
 F.A.P. ROUTE 693 - SEC. 129 B-2  
 MCLEAN COUNTY  
 STATION 67+94  
 STRUCTURE NO. 057-0190

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

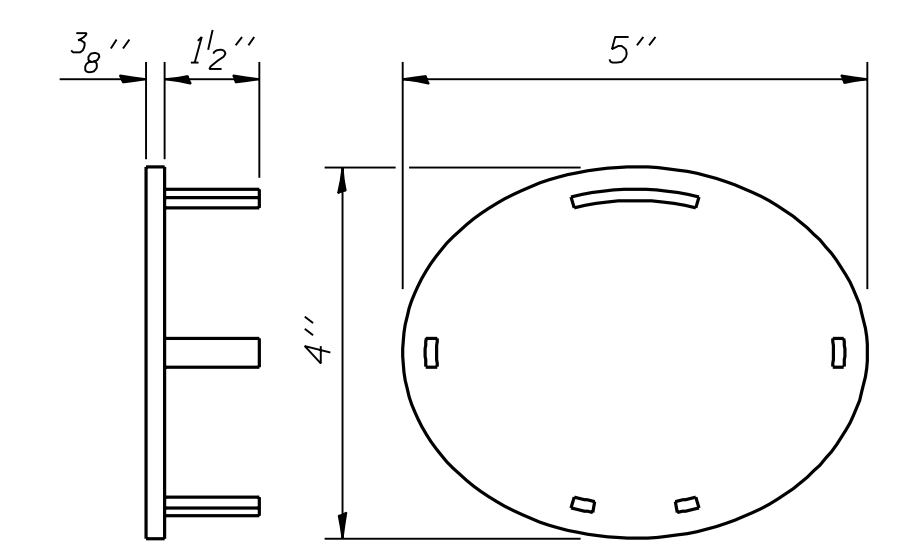
\* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



\* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

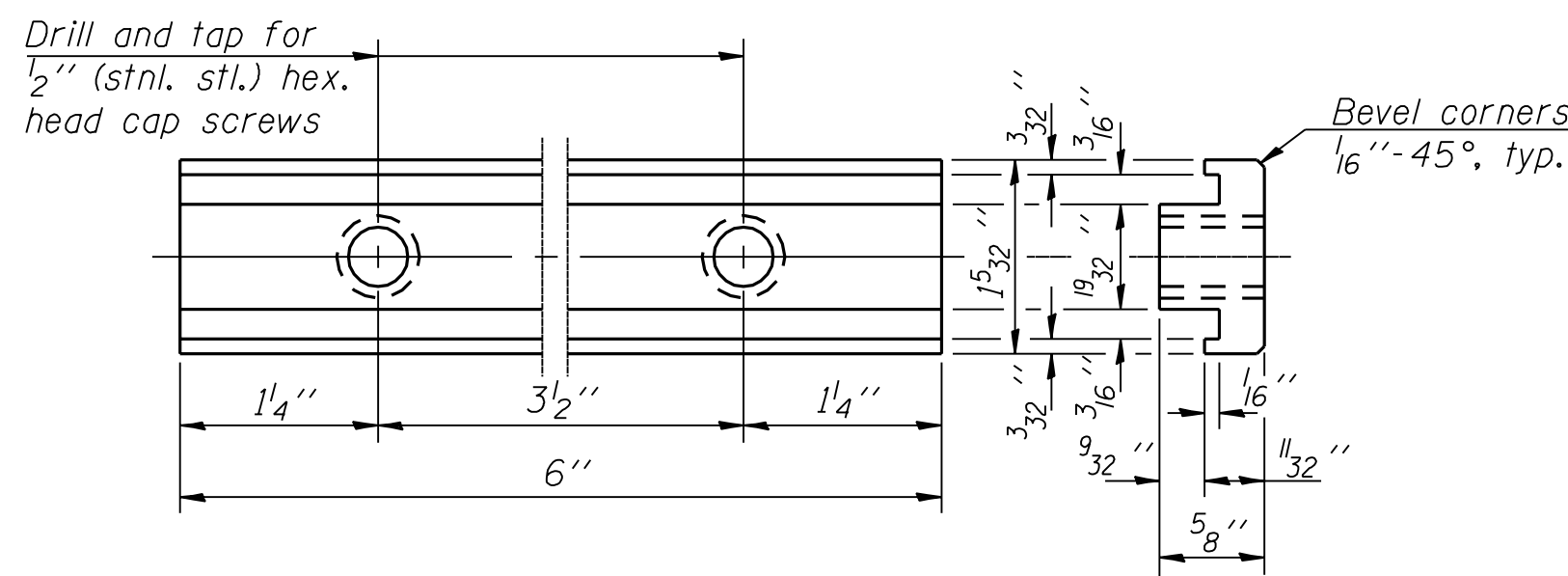


**CAST END CAP**  
For Top Rail  
(2 Required)

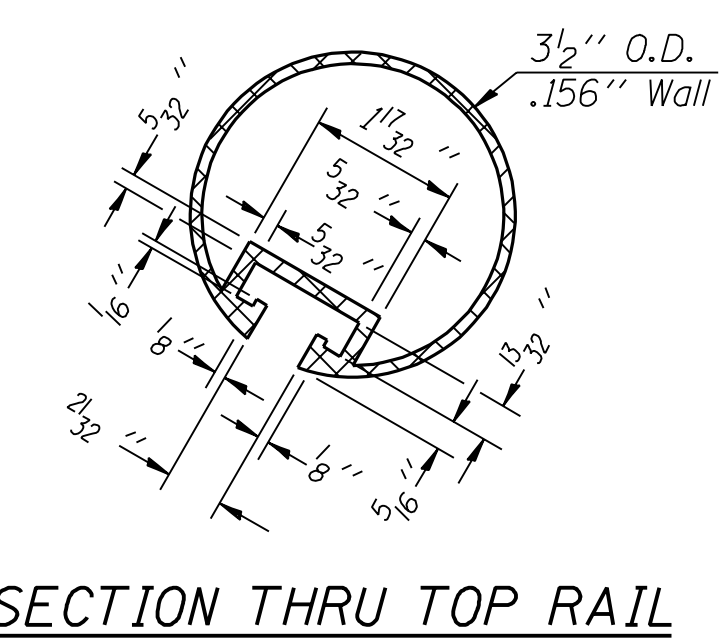


**CAST END CAP**  
For Bottom Rail  
DRIVE FIT TYPE  
(2 Required)

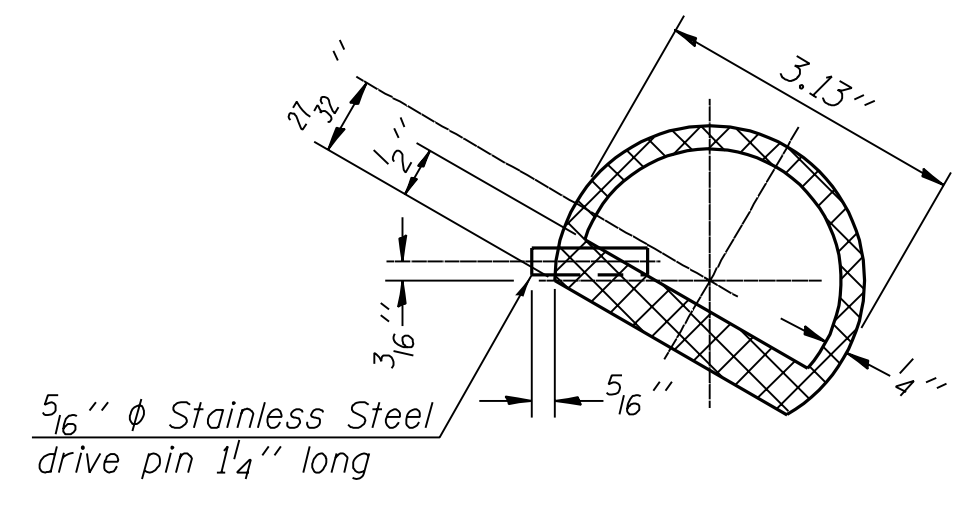
**RAIL POST DETAILS**



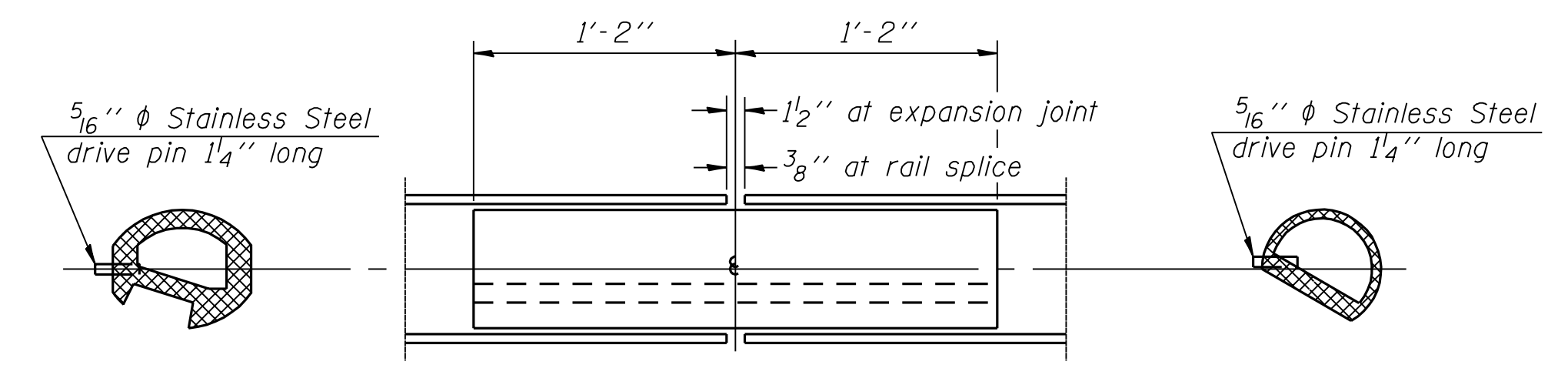
**RAIL POST CLAMP BAR**  
For Top Rail



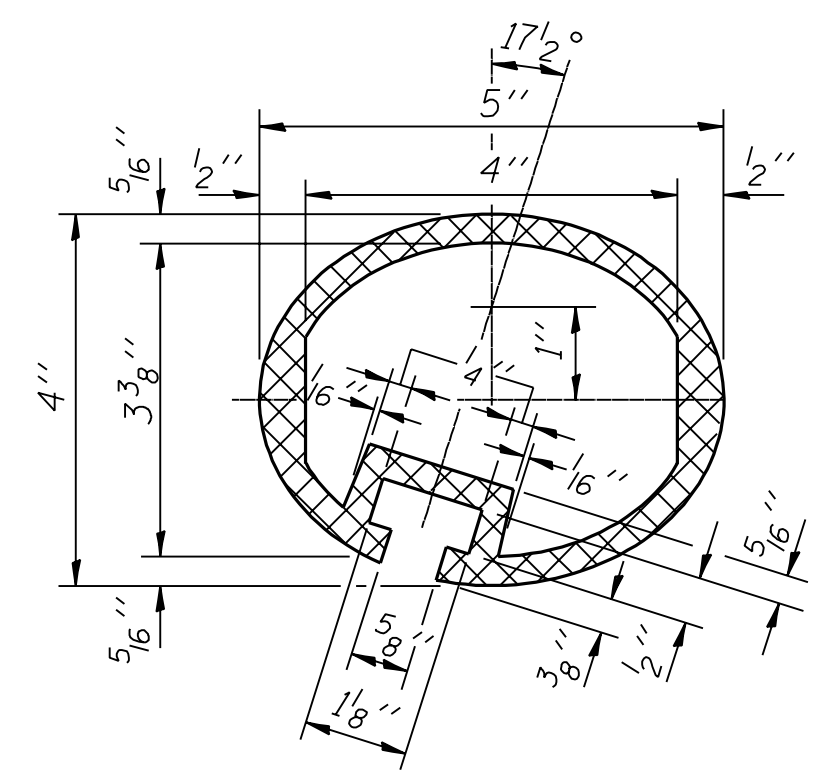
**SECTION THRU TOP RAIL**



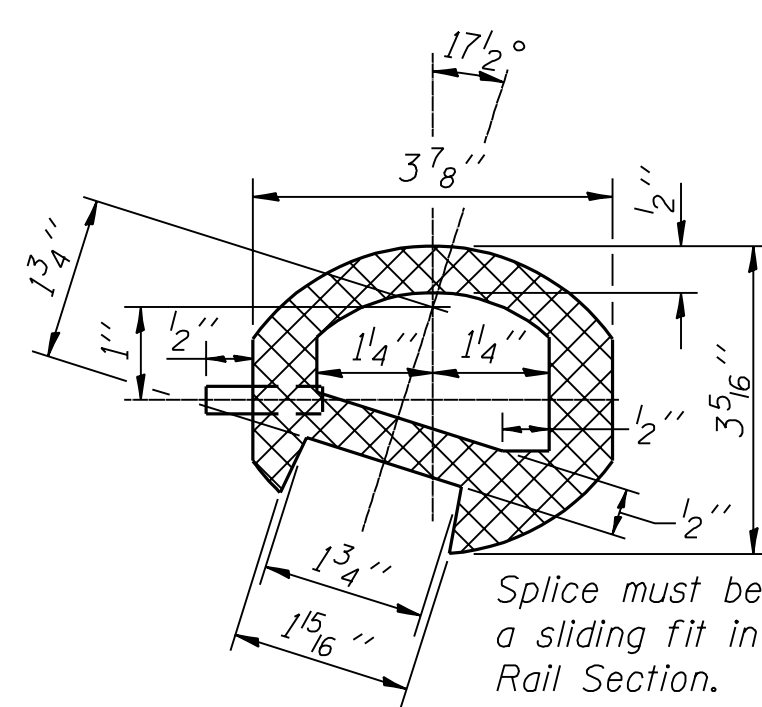
**SECTION THRU SPLICE**  
For Top Rail



**RAIL SPLICE**



**SEC. THRU ELLIPTICAL RAIL SECTION**



**SEC. THRU SPLICE**

**BOTTOM RAIL**

**TOP RAIL**

**Notes:**  
All Posts shall be normal to parapet.  
All joints in rail shall be spliced per detail.  
Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.  
Cost of end caps included with Aluminum Railing, Type L.  
See sheet 8 of 13 for rail post spacing.

**BILL OF MATERIAL**

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	75

**ALUMINUM RAILING, TYPE L**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.



**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_t$
  - ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_t$
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8

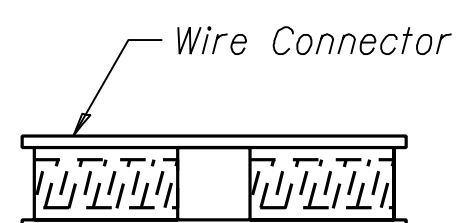
The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.

**ROLLED THREAD DOWEL BAR**



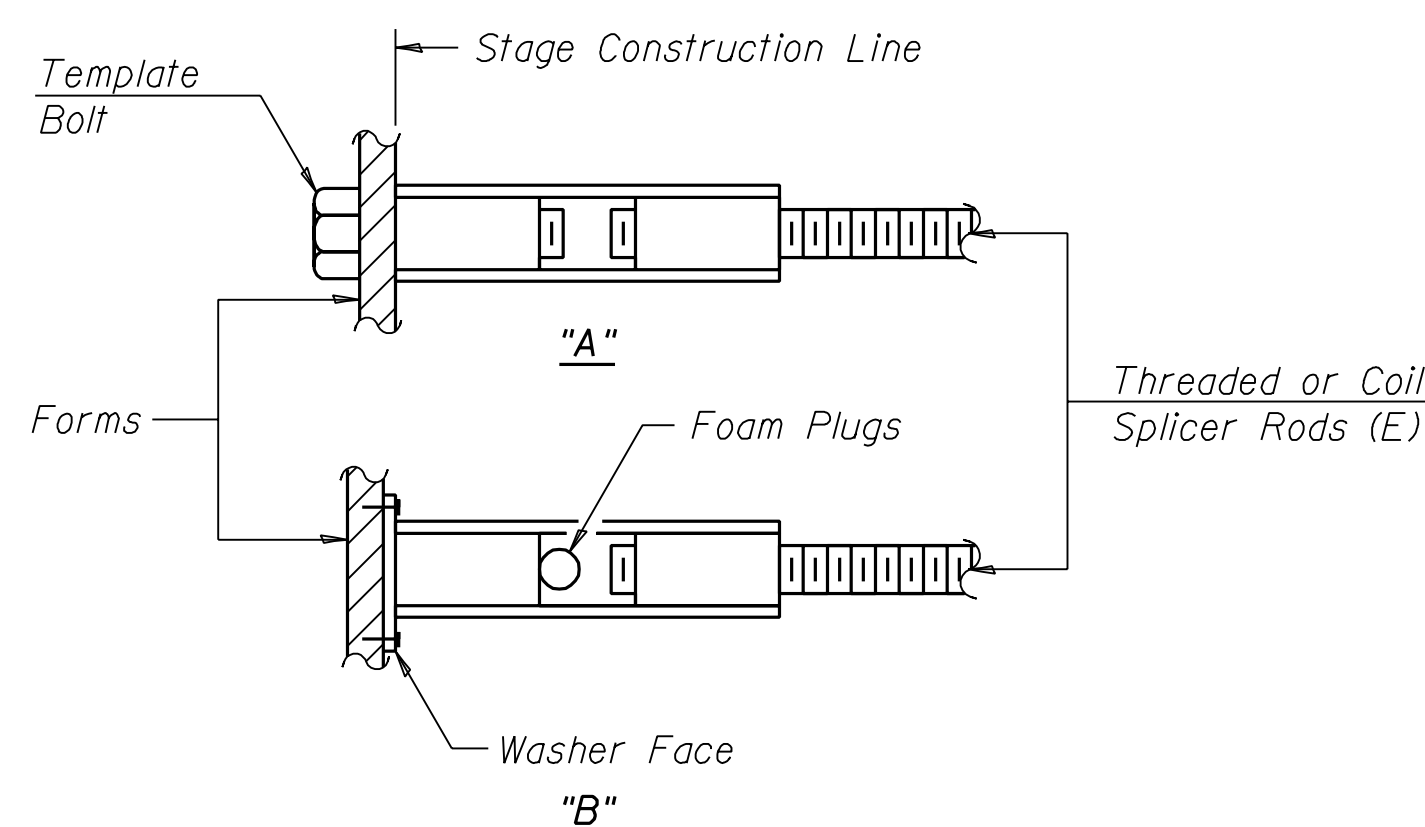
**\*\* ONE PIECE**



**WELDED SECTIONS**

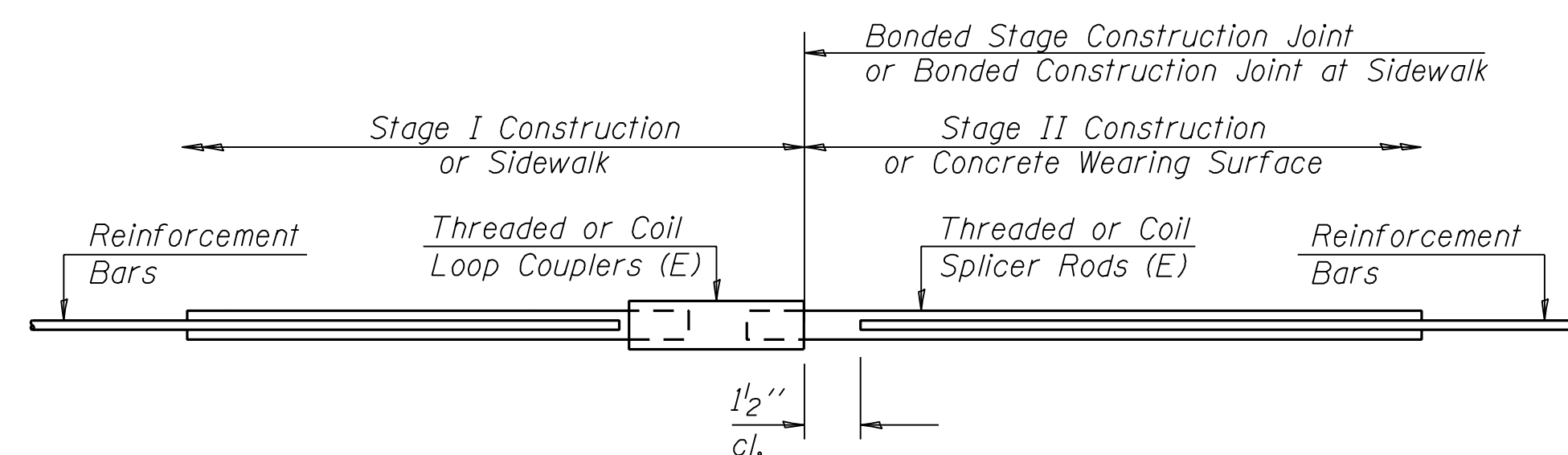
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



**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**

Bar Size	No. Assemblies Required	Location
#4	86	Conc. Wearing Surface
#4	86	Sidewalk

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

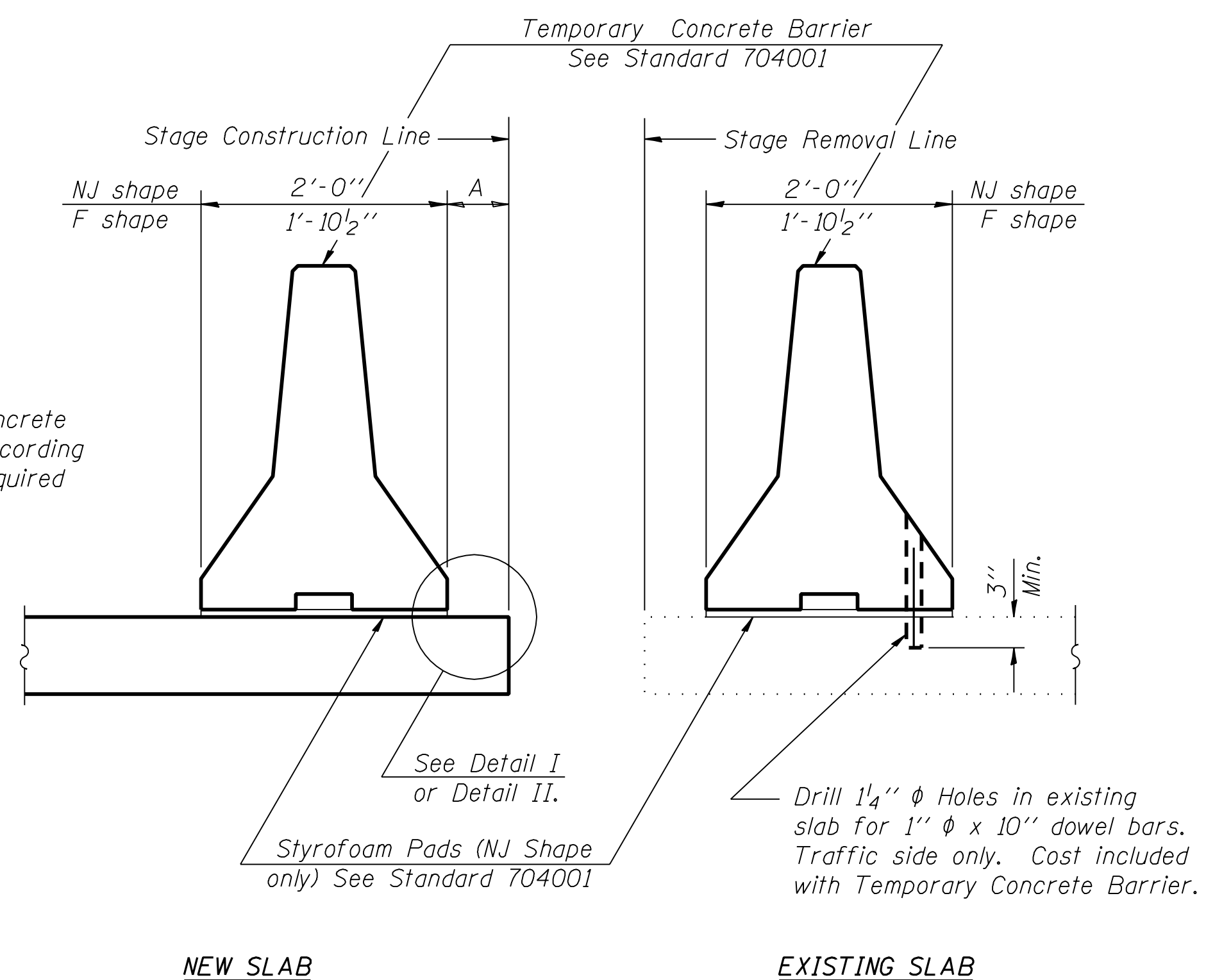
BSD-1 11-1-06

**BAR SPLICER ASSEMBLY DETAILS**

ILLINOIS ROUTE 9 OVER SUGAR CREEK  
 F.A.P. ROUTE 693 - SEC. 129 B-2  
 MCLEAN COUNTY  
 STATION 67+94  
 STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145bar.spl
	DATE: 12/18/06

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	129 B-2	MCLEAN	34	34
FED. ROAD DIST. NO. 5	ILLINOIS PROJECT			
Sheet 13 of 13			CONTRACT #70519	



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".

See Detail I or Detail II.

Styrofoam Pads (NJ Shape only) See Standard 704001

Drill 1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  x 10" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

NEW SLAB

EXISTING SLAB

SECTIONS THRU SLAB

NOTES

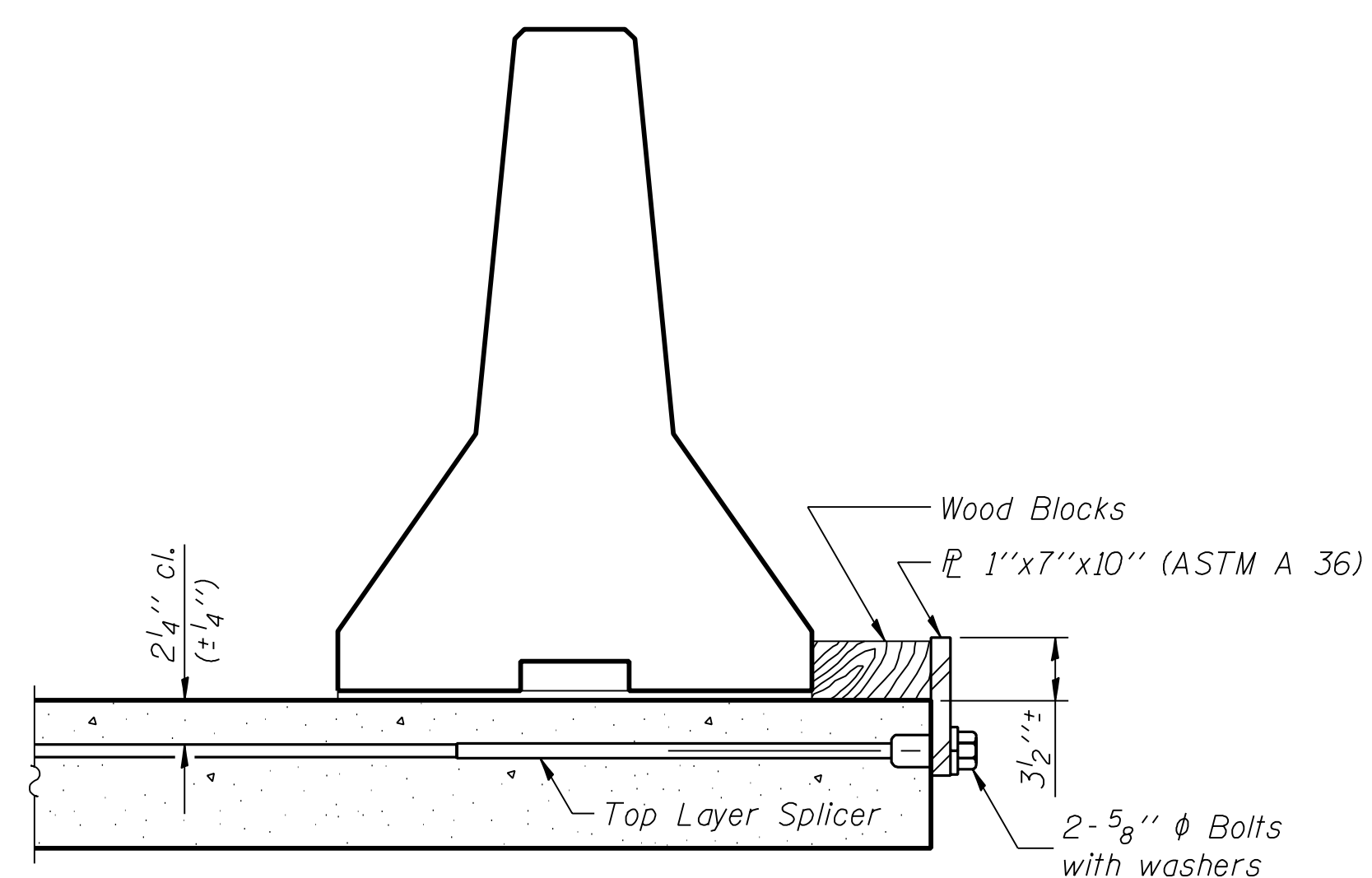
Detail I - With Bar Splicer or Couplers:

Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:

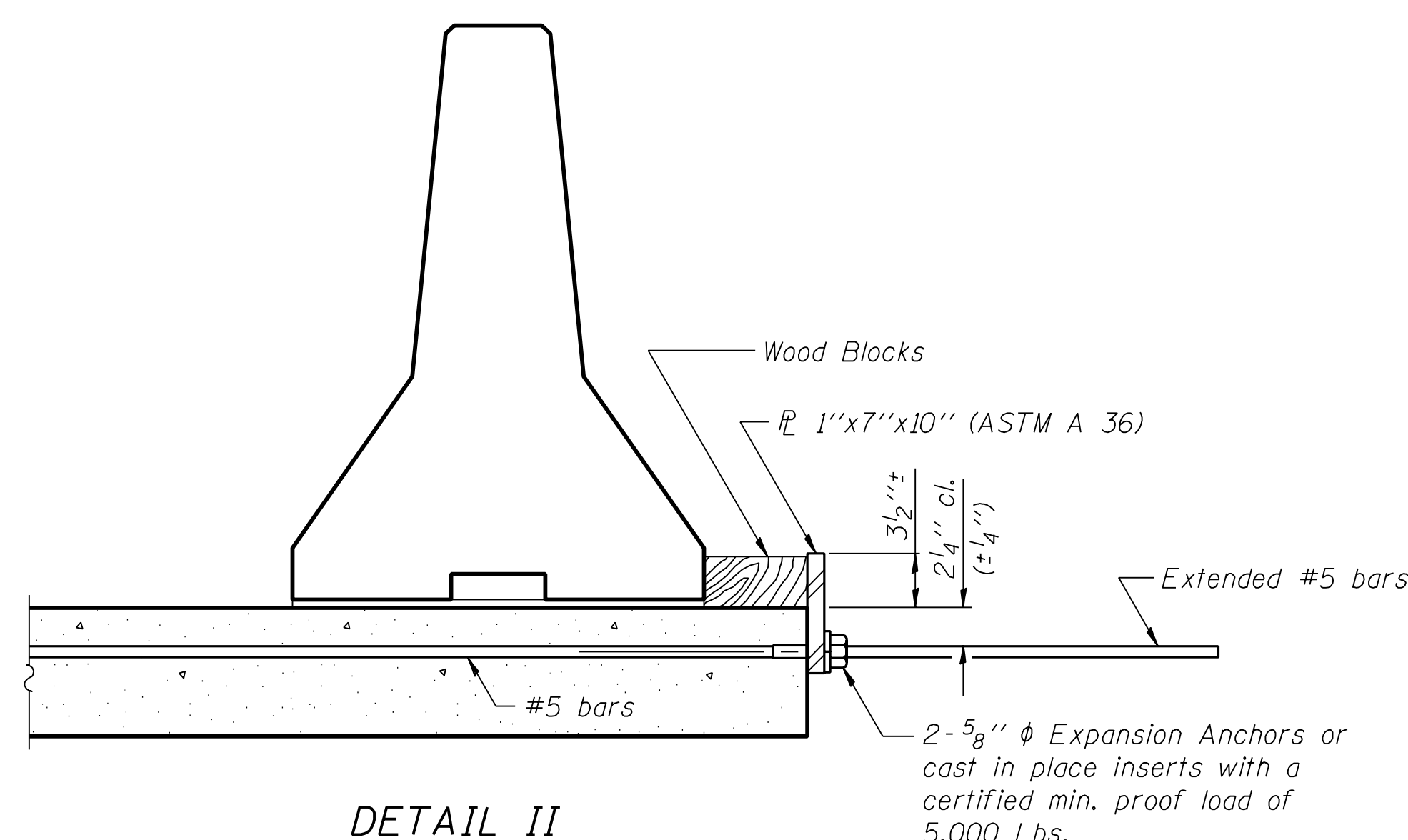
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



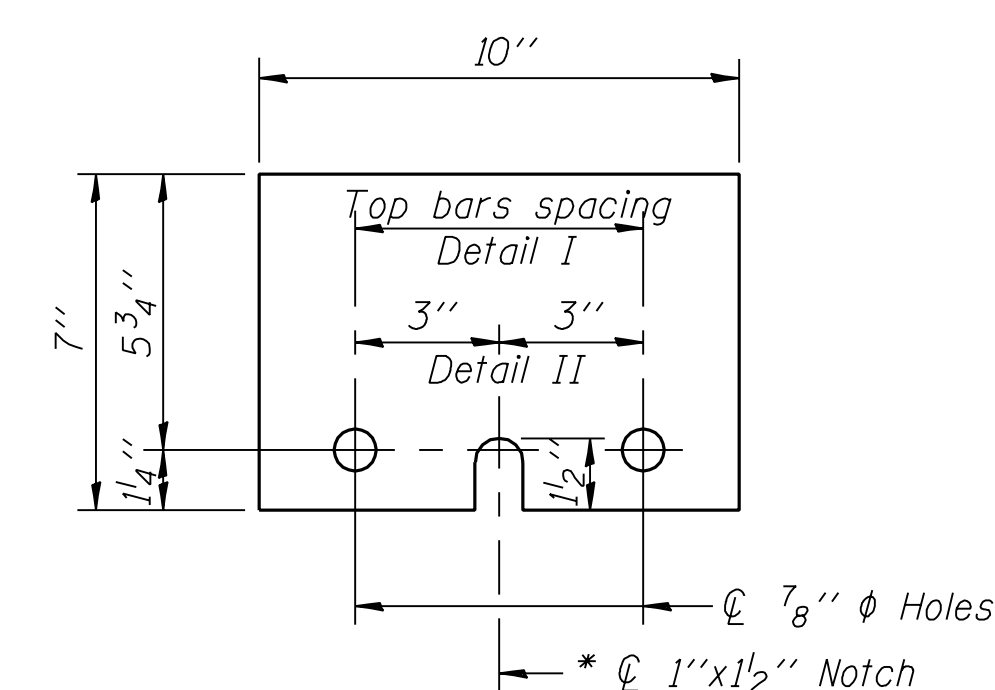
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



$\bar{P}$  1"x7"x10"

\* Required only with Detail II

DESIGNED	T.S.H.
CHECKED	M.D.C.
DRAWN	A.A.N.
CHECKED	M.D.C.

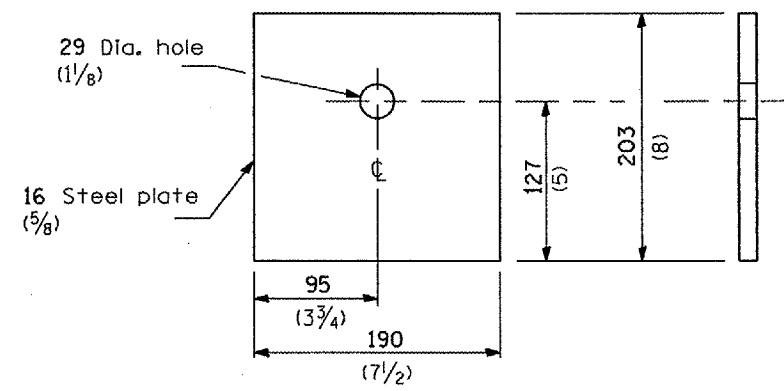
R-27 10-22-04

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION**

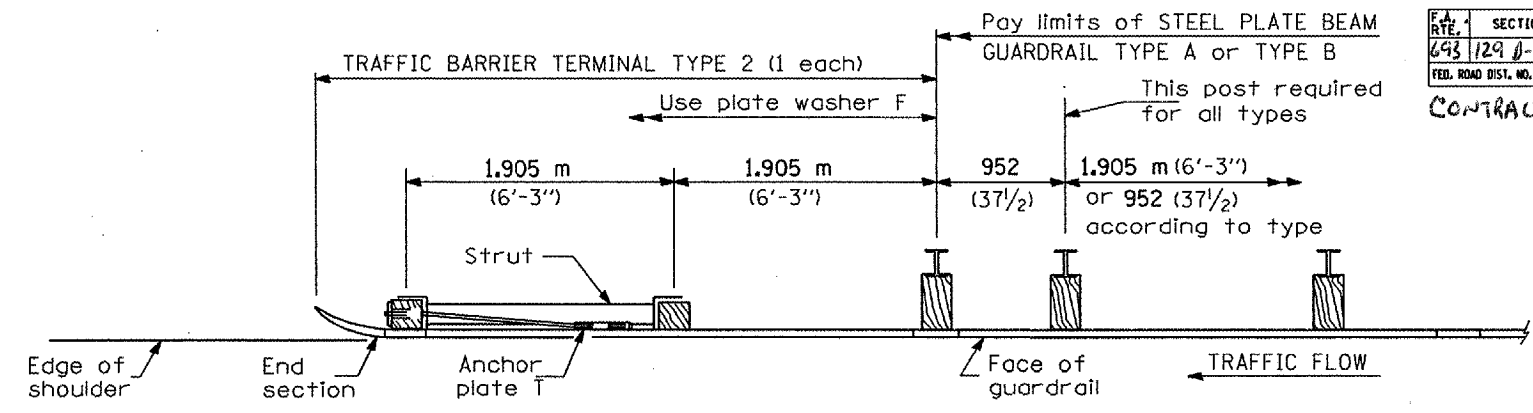
ILLINOIS ROUTE 9 OVER SUGAR CREEK  
F.A.P. ROUTE 693 - SEC. 129 B-2  
MCLEAN COUNTY  
STATION 67+94  
STRUCTURE NO. 057-0190

CUMMINS ENGINEERING CORPORATION	JOB #: 2114.5
	FILE: 21145barrier
	DATE: 12/18/06

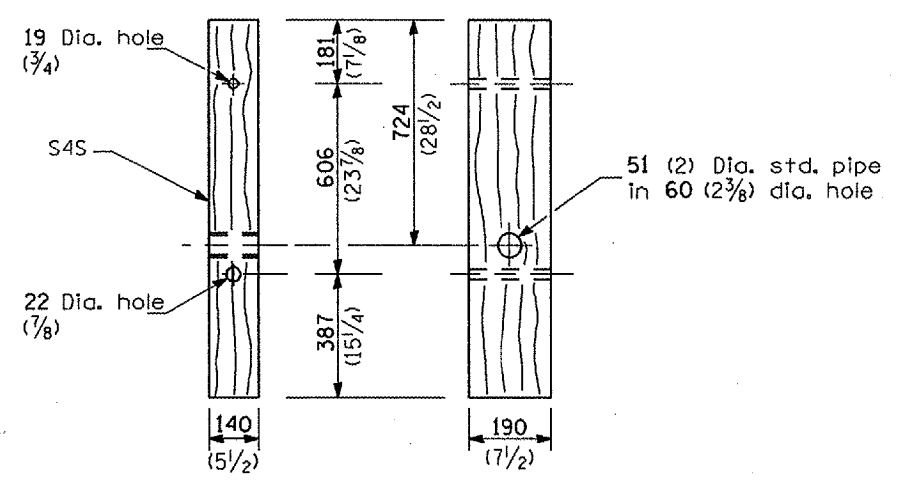
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	129 B-2	McLean		34A
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 70519				



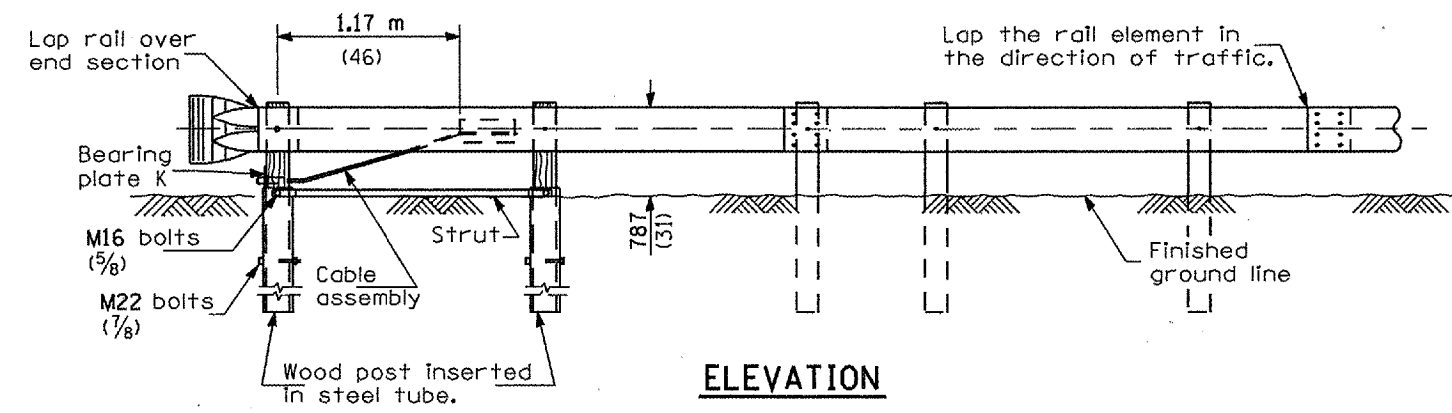
**BEARING PLATE K**



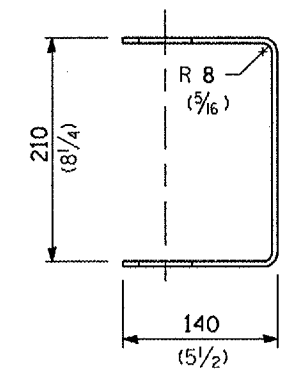
**PLAN**



**WOOD POST**

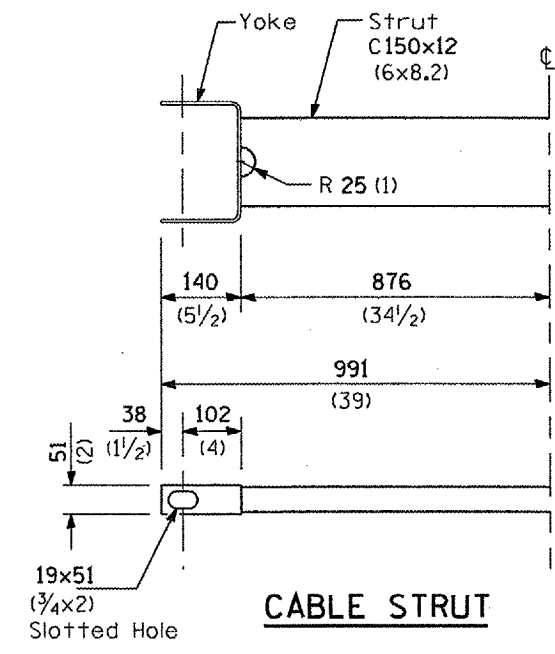


**ELEVATION**

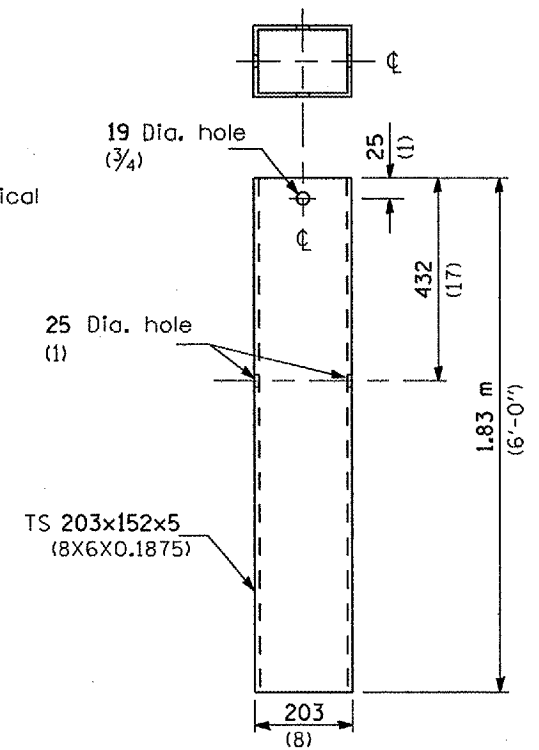


**YOKE**

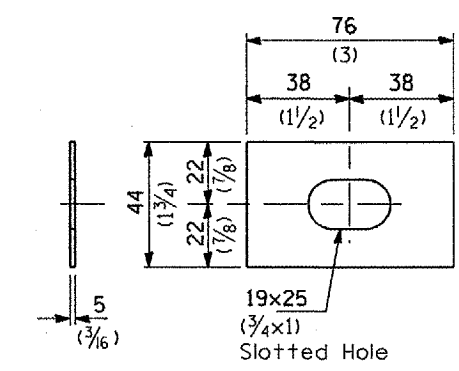
5 (3/16) thick steel



**CABLE STRUT**



**STEEL TUBE**



**PLATE WASHER F**

**GENERAL NOTES**

See Standard 630001 for details of guardrail not shown.

The bearing plate K shall be held in position by (2) two eight penny nails driven into the post and bent over the top of the plate.

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

**TRAFFIC BARRIER TERMINAL, TYPE 2**

**DETAIL**