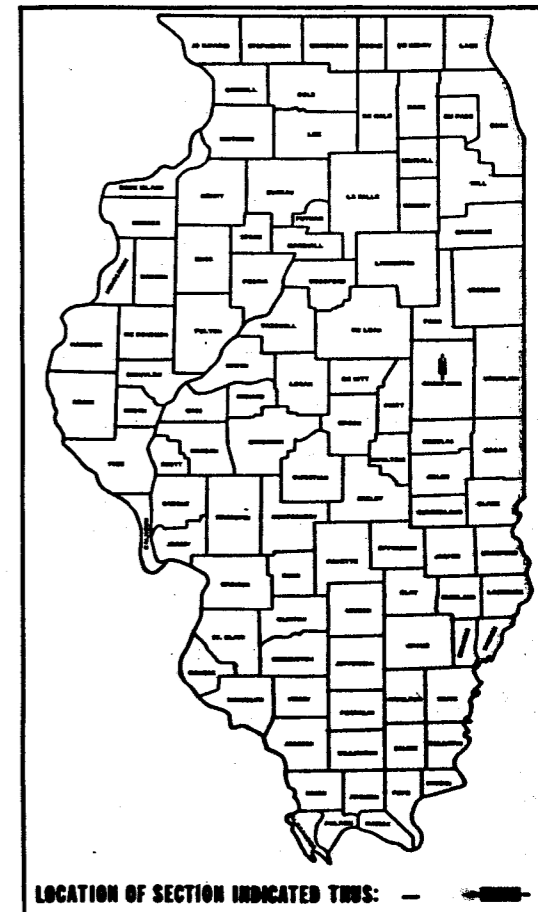
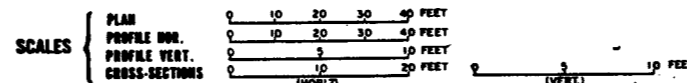


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-5-1HB)BR	CHAMPAIGN	70	1

D-95-035-86
SET 2 OF 2

FOR INDEX OF SHEETS, SEE SHEET NO. 4
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5

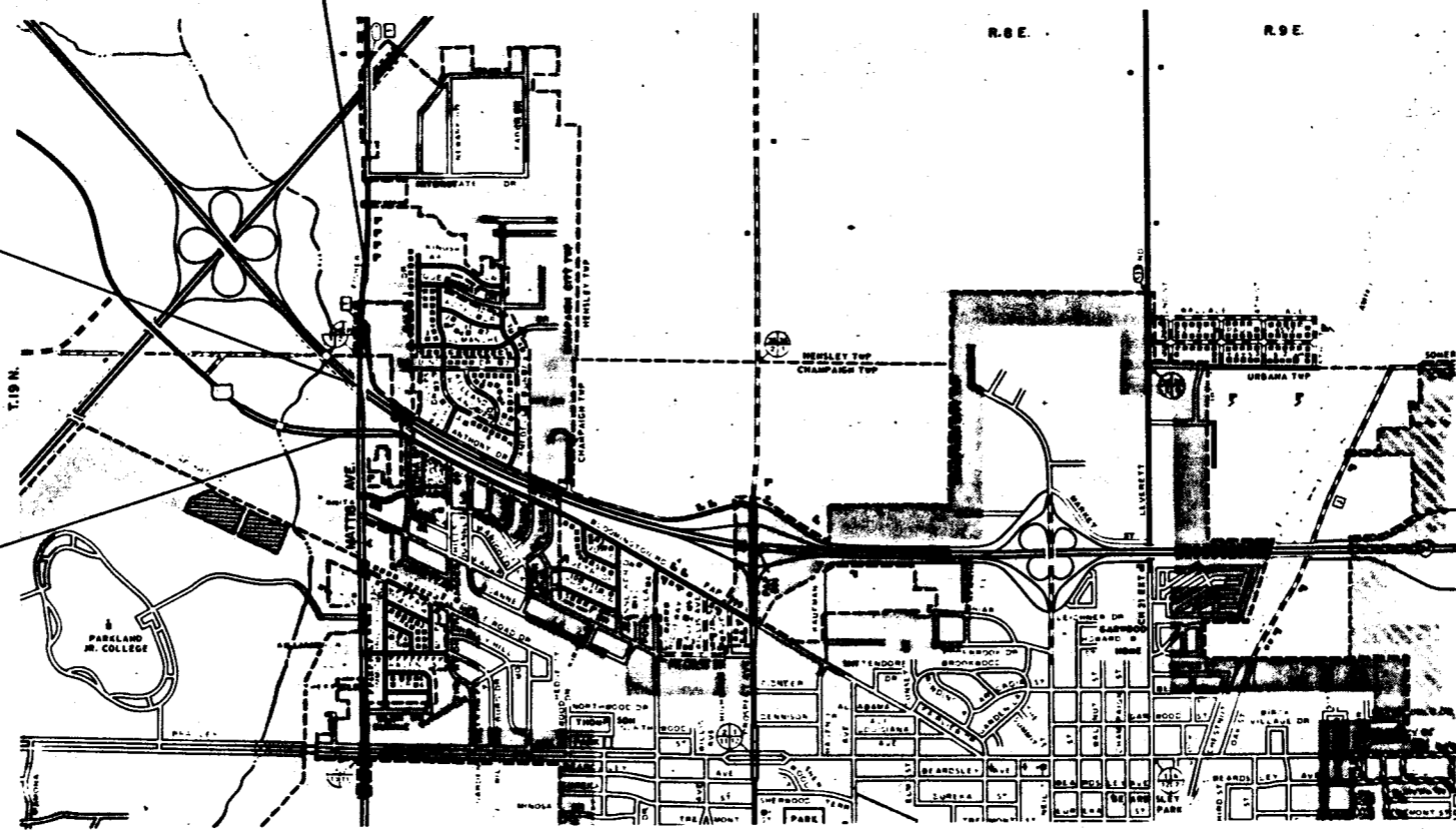


STA. 35+65
SECTION (10-5-1HB)BR ENDS

D-95-109-89
BRIDGE RECONSTRUCTION
LAYOUT SCALE: 0 600 1200 1800 2400 FEET

SECTION (10-5-1HB)BR INCLUDES:
REMOVAL OF EXISTING FOUR SPAN STRUCTURE CARRYING MATTIS AVE. OVER F.A.I. ROUTE 74 AND REPLACEMENT WITH A 2 SPAN STRUCTURE [48" PLATE GIRDER - 2 EQUAL SPANS AT 121'- 5 3/4"].

STA. 13+50
SECTION (10-5-1HB)BR BEGINS



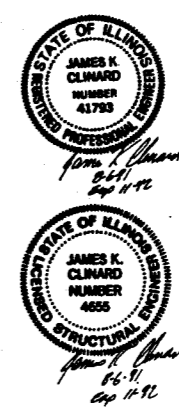
PROJECT ENGINEER: P.E. KOEHLER
PROJECT ENGINEER: T.C. ZAHN
SQUAD LEADER:

DESIGN DESIGNATION
1950 (13) MINOR ARTERIAL 4.27 (BIT 20)

F.A.I. ROUTE 74 SECTION (10-5-1HB) BR CHAMPAIGN COUNTY

TOTAL LENGTH OF SECTION (10-5-1HB)BR = 2215.00 FEET (0.420 MILES)
NET LENGTH OF SECTION (10-5-1HB)BR = 2215.00 FEET (0.420 MILES)
TOTAL LENGTH OF PROJECT IIR 74-5()180 = 2215.00 FEET (0.420 MILES)
NET LENGTH OF PROJECT IIR 74-5()180 = 2215.00 FEET (0.420 MILES)

TOLL FREE J.U.L.I.E. TELEPHONE NO.
1-800-892-0123
HENSLEY, CHAMPAIGN AND CHAMPAIGN CITY TOWNSHIPS
PLANS PREPARED BY: HOMER L. CHASTAIN AND ASSOC.
CONSULTING ENGINEERS
DECATUR, ILLINOIS
PHONE: 217-422-8644



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

DESIGNED BY: _____ DISTRICT ENGINEER

CHECKED BY: _____ DIVISION ENGINEER

APPROVED BY: _____ DIVISION ENGINEER

DATE: _____

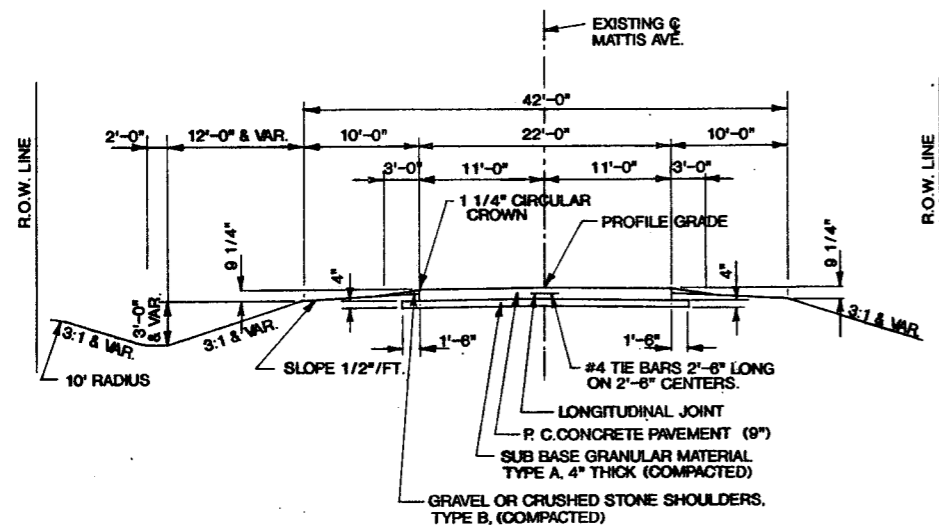
**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED _____

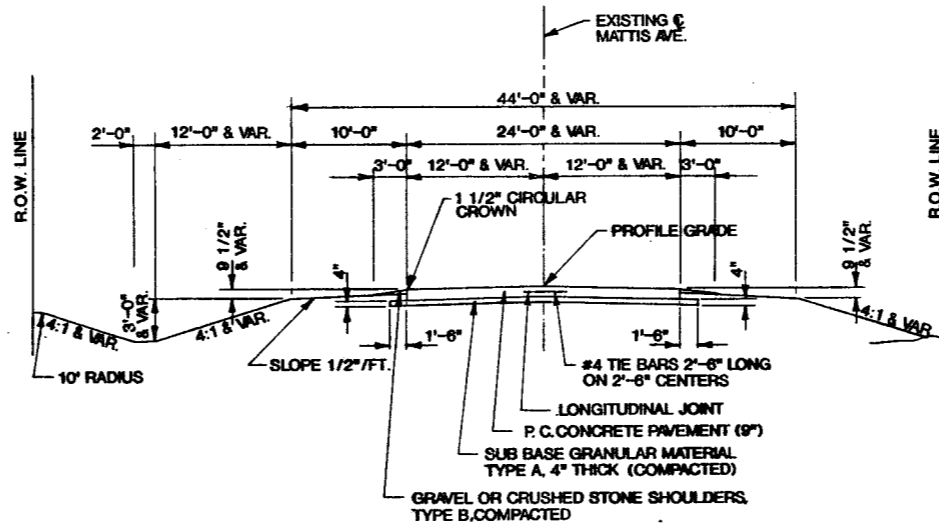
DIVISION ADMINISTRATOR DATE

CONTRACT No. ~~90125~~

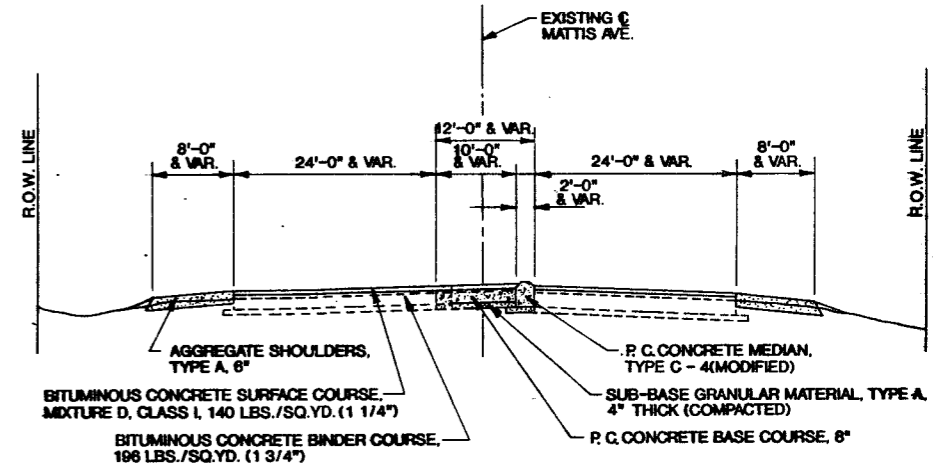
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	2
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
			*(10-5-1 HB)BR	



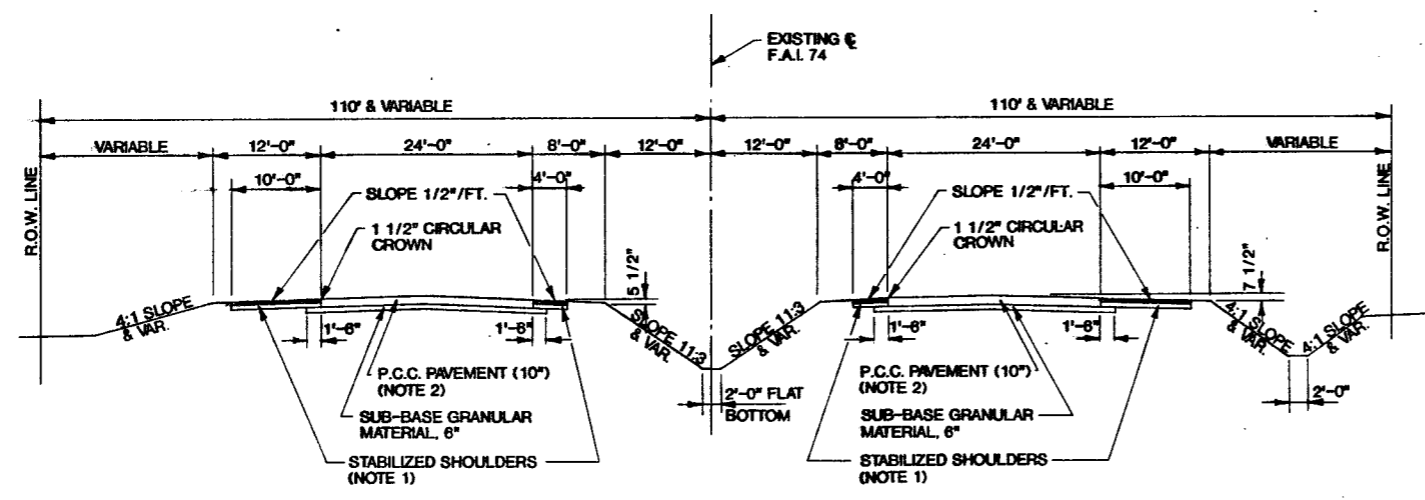
EXISTING CROSS SECTION - MATTIS AVE.
STA. 28+50 TO STA. 36+00



EXISTING CROSS SECTION - MATTIS AVE.
STA. 17+65 TO STA. 28+50



EXISTING CROSS SECTION - MATTIS AVE.
STA. 13+50 TO STA. 17+65

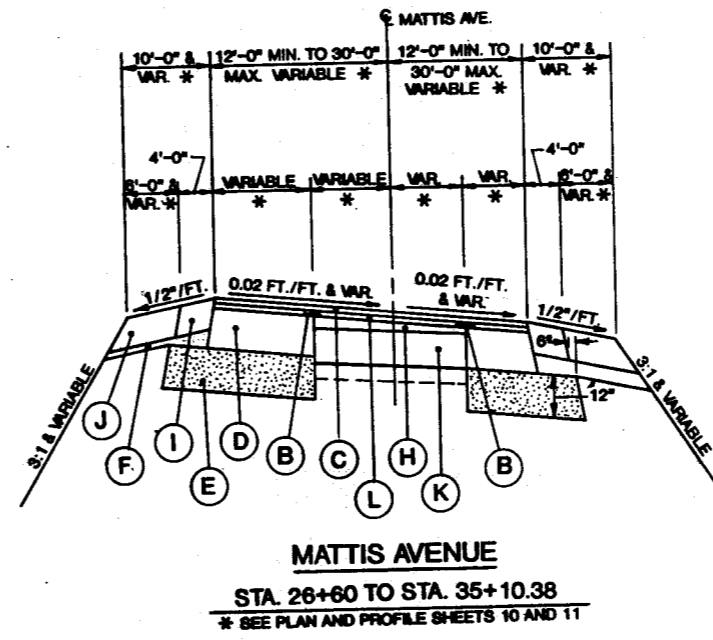
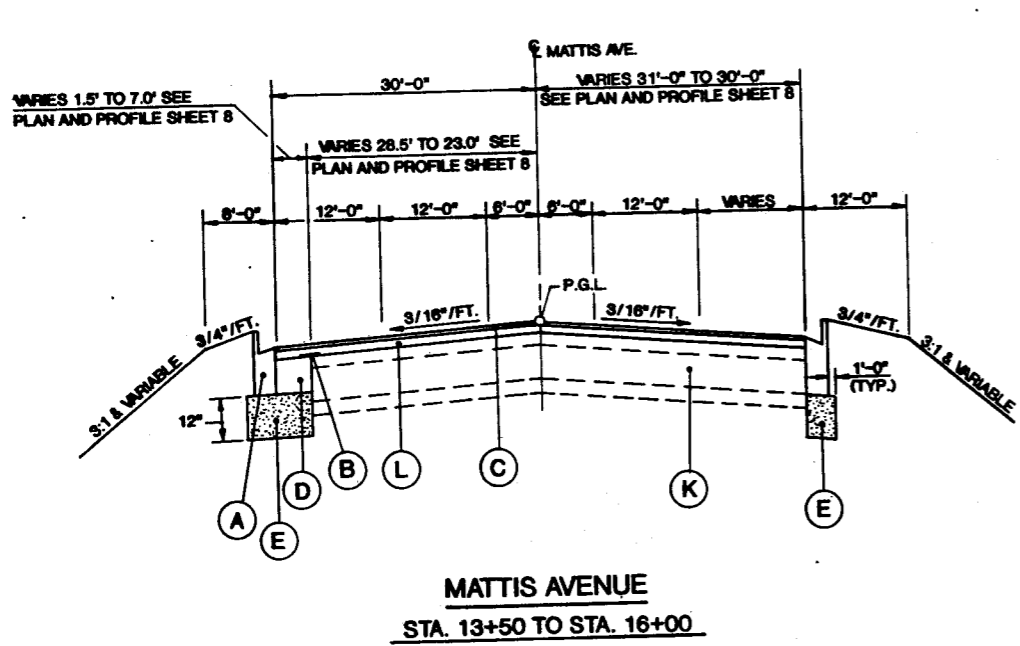


EXISTING CROSS SECTION - F.A.I. 74
STA. 1035+00 TO STA. 1110+00

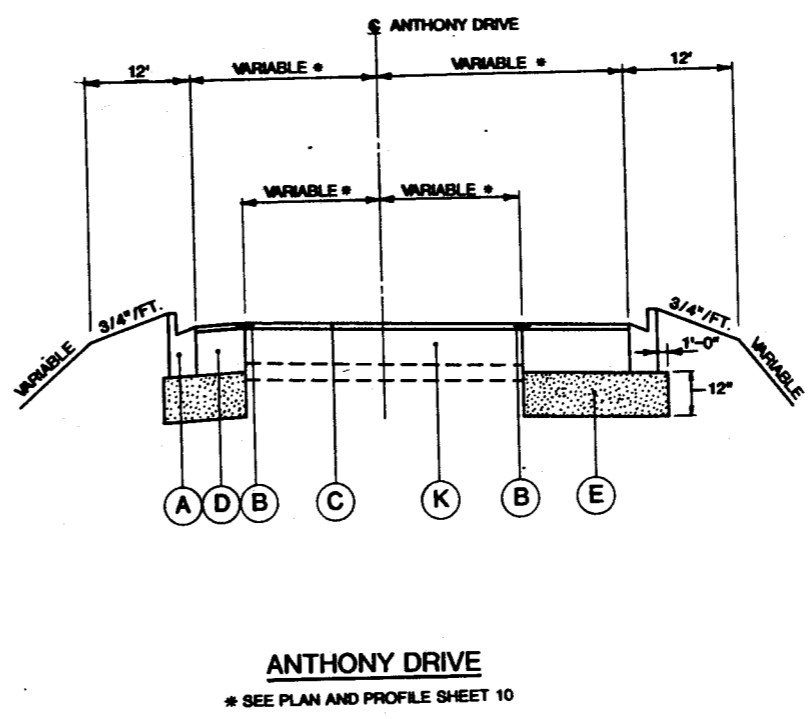
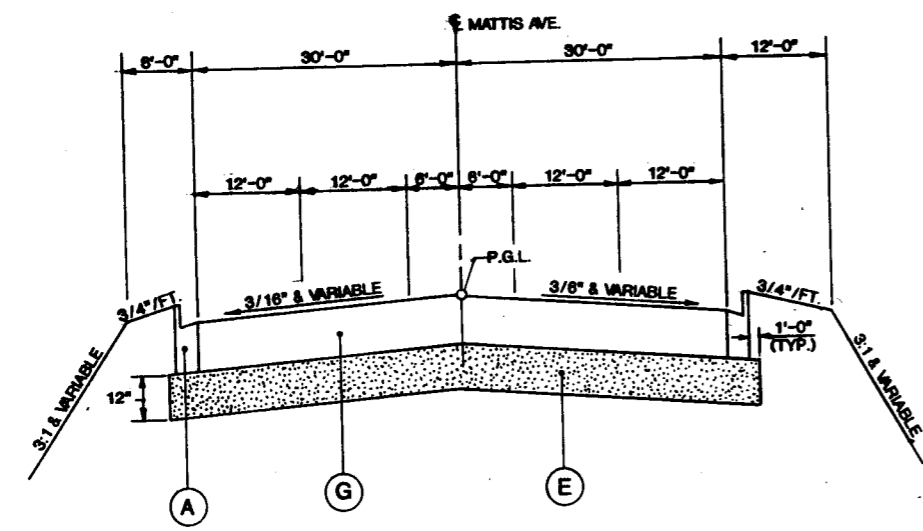
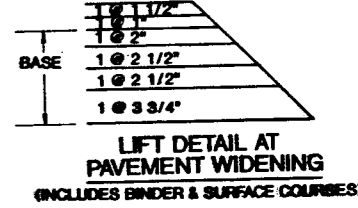
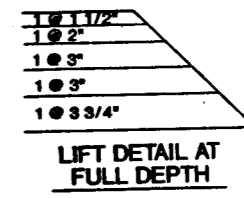
- NOTES:**
- 3" BITUMINOUS SURFACE CONSISTING OF 1 1/2" BITUMINOUS CONCRETE BINDER COURSE, AND 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, SUBCLASS 1-11, SHOULDERS ON STABILIZED AGGREGATE MIXTURE.
 - LONGITUDINAL JOINT W/ #5 TIE BARS 2'-6" LONG AT 2'-6" CENTERS. SAWED CONTRACTION JOINTS AT 100' CENTERS W/ 1 1/4"x18" DOWEL BARS AT 12" CENTERS. PAVEMENT FABRIC 2 1/2" BELOW SURFACE OF CONCRETE CONSISTS OF EITHER: #3 BARS AT 7 1/2" CENTERS LONGITUDINAL AND #3 BARS AT 25" CENTERS TRANSVERSE OR #00 WIRE AT 6" CENTERS LONGITUDINAL AND #4 WIRE AT 12" CENTERS TRANSVERSE.

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE
NO.	DATE	INITIALS		
1				
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10				

EXISTING TYPICAL CROSS SECTIONS		PROJECT NO.	3400-14
F. A. I. - 74 (10-5-1 HB)BR		COUNTY	CHAMPAIGN
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		SHEET NO.	



- (A) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- (B) STRIP REFLECTIVE CRACK CONTROL TREATMENT
- (C) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS 1, TYPE 1 (168 LB./SQ. YD.)
- (D) BITUMINOUS BASE COURSE 10 3/4"
- (E) PROCESSING LIME MODIFIED SOILS, 12"
- (F) SUB-BASE GRANULAR MATERIAL, TYPE C
- (G) BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH) 13 1/4" 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS 1, TYPE 1 AND 11 3/4" BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B, TYPE 1
- (H) LEVELING BINDER (MACHINE METHOD) MIXTURE B, TYPE 1
- (I) BITUMINOUS SHOULDERS, 8"
- (J) AGGREGATE SHOULDERS, TYPE B 8"
- (K) EXISTING PAVEMENT
- (L) LEVELING BINDER (MACHINE METHOD) MIXTURE C, TYPE 1, 1"



MATTIS AVENUE
STRUCTURAL DESIGN TRAFFIC
YEAR = 2013 PC = 16,824
SU = 412 MU = 264

CLASS 1 ROADS AND STREETS

MINIMUM SOIL SUPPORT
CBR = 3

PERCENT OF S.D.T. IN DESIGN LANE
Up = 32% Us = 45%
Um = 45%

TRAFFIC FACTOR
FLEXIBLE = 4.27
MECHANISTIC PAVEMENT DESIGN

REVISIONS		STATE OF ILLINOIS		DATE
NO.	DATE	DESCRIPTION	DEPARTMENT OF TRANSPORTATION	LAW 4-71
1			DIVISION OF HIGHWAYS <td></td>	
2			F.A.I.-74	
3			SEC. (10-5-1 HB) BR	
4			CHAMPAIGN COUNTY	
5			HOMER L. CHASTAIN & ASSOCIATES	PROJECT NO. 3400-14
6			CONSULTING ENGINEERS	SHEET NO.
7			DECATUR, ILLINOIS	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	*	CHAMPAIGN	70	4
FED. ROAD DIST. NO.	ILLINOIS PROJECT	SEC. (10-5-1 HB) BR		

INDEX OF SHEETS

1	COVER SHEET
2	EXISTING TYPICAL CROSS SECTIONS
3	PROPOSED TYPICAL CROSS SECTIONS
4	INDEX OF SHEETS AND GENERAL NOTES
5	SCHEDULE OF QUANTITIES
6 - 7	SUMMARY OF QUANTITIES
8 - 11	MATTIS AVENUE PLAN AND PROFILE SHEETS
12	FAI ROUTE 74 PLAN AND PROFILE SHEETS
13	INTERSECTION DETAILS
14 - 21	CONSTRUCTION STAGING AND TRAFFIC CONTROL PLANS - FAI RTE 74
22 - 23A	CONSTRUCTION STAGING AND TRAFFIC CONTROL PLANS - MATTIS AVE.
24 - 27A	TRAFFIC SIGNAL PLANS
28	PAVEMENT MARKING PLANS
29 - 31B	PAVEMENT PLANS
32 - 51	BRIDGE DETAILS
52 - 55	CROSS SECTIONS
56 - 68	DETAILED CROSS SECTIONS
69 - 70	MEDIAN CROSS-OVER INFORMATION

STANDARDS	
1527-	MANHOLE, TYPE A
1683-	INLET, TYPE A
1686-	SYMBOLS AND ABBREVIATIONS
2113-	NAME PLATE FOR BRIDGES
2130-10	CONCRETE CURB & COMBINATION CONCRETE CURB & GUTTERS
2135	PERMANENT SURVEY MARKERS
2168-1	CHAIN LINK FENCE
2169-7	WOVEN WIRE FENCE
2212-7	OUTLET FOR CONCRETE CURB AND GUTTER TYPE B-6.24
2213-7	FRAME AND LIDS, TYPE 1
2214-4	FRAME AND GRATES, TYPE 3
2228-4	METAL END SECTION FOR PIPE CULVERTS
2230-15	STEEL PLATE BEAM GUARDRAIL
2262-4	REINFORCED CONCRETE PIPE ELBOW AND PRECAST REINFORCED CONCRETE FLARED END SECTION
2298-P	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-1	DESIGN OF TRAFFIC CONTROL DEVICES
2300-	FLAGMAN TRAFFIC CONTROL SIGN
2311-	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, WIDENING, DAY OR NIGHT
2323-11	PAVEMENT JOINTS
2336-4	TRAFFIC BARRIER TERMINAL, TYPE 1 AND 1A
2341-3	TRAFFIC BARRIER TERMINAL, TYPE 6
2354	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
2360-4	BRIDGE APPROACH PAVEMENT (20 FT.)
2364-2	GRATING FOR CONCRETE FLARED END SECTION (24", 30" & 36" PIPE)
2368-1	DETAILS OF CONCRETE AND MORTAR HANDHOLES
2369-	DETAILS OF DOUBLE HANDHOLES AND JUNCTION BOXES
2370-1	DETAILS OF DETECTOR INSTALLATIONS
2373	DETAILS OF SERVICE INSTALLATIONS
2374-1	DETAILS OF STEEL MAST ARM ASSEMBLY AND POLE
2378-	DETAILS OF CONCRETE FOUNDATIONS
2379-1	GRATING FOR CONCRETE FLARED END SECTION (42", 48" & 54" PIPE)
2380	MAST ARM MOUNTED STREET NAME SIGNS
2383-	TEMPORARY CONCRETE BARRIER
2393	STANDARD SEQUENCE FOR TRAFFIC ACTUATED CONTROLLERS
2394	TYPICAL LAYOUT FOR DETECTOR LOOPS
2396	TYPICAL PAVEMENT MARKINGS
2419	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES MULTILANE DIVIDED AND UNDIVIDED RURAL, DAY OR NIGHT OPERATIONS
2427-	CLASS C AND D PATCHES
2430	B. A. M. SHOULDER DETAILS - ADJACENT TO FLEXIBLE PAVEMENT
1744-	R.O.W. MARKERS
2316-	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES MULTI-LANE, DIVIDED AND UNDIVIDED, RURAL OPERATION EXCEEDING ONE DAYLIGHT OPERATION
2417-	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, ONE-LANE CLOSURE ON BRIDGE DECK, DAY OF NIGHT OPERATIONS

GENERAL NOTES

- QUANTITIES FOR BITUMINOUS SHOULDERS HAVE BEEN ESTIMATED FOR THIS PROJECT IN TONS AND ARE SHOWN IN THE SCHEDULE OF QUANTITIES FOUND ON SHEET 5. THE QUANTITIES WERE ESTIMATED USING AN APPLICATION RATE OF 112 LBS/SQ. YD. /INCH. 254 TONS
- SEEDING CLASS 2A QUANTITIES HAVE BEEN ESTIMATED FOR THE PROJECT. THESE QUANTITIES WERE CALCULATED IN SURFACE AREA ACREAGE TO THE CONSTRUCTION LIMITS SHOWN IN THE PLANS PLUS 5' PER SIDE. 3.7 ACRE
- FERTILIZER AND MULCH QUANTITIES WERE ESTIMATED USING THE FOLLOWING APPLICATION RATES.

ESTIMATED QUANTITY	PAY ITEM	APP. RATE	SEEDING QUANTITY
	NITROGEN	60 LBS/ACRE	222
	PHOSPHOROUS	200 LBS/ACRE	740
	POTASSIUM	60 LBS/ACRE	222
	MULCH METHOD 11	2 TONS/ACRE	7.4
	EMULSIFIED ASPHALT	150 GAL/ACRE	555
- A QUANTITY FOR AGGREGATE SHOULDERS, TYPE B HAS BEEN ESTIMATED FOR THE PROJECT IN TONS. THE QUANTITY WAS ESTIMATED USING AN APPLICATION RATE OF 1.9 TONS/CU. YD. 255 TONS.
- QUANTITIES FOR LIME AND WATER HAVE BEEN ESTIMATED FOR THIS PROJECT AND ARE SHOWN IN THE SCHEDULE OF QUANTITIES FOUND ON SHEET 5. THE QUANTITIES WERE ESTIMATED USING AN APPLICATION OF 4 1/2% OF AN OVEN DRY WEIGHT OF 110 LBS/CU. FT. FOR LIME AND APPLICATION RATE OF 1/2 UNIT OF WATER PER TON OF LIME.

LIME	222.2 TONS
WATER	111.1 UNITS
- ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON U. S. G. S. MEAN SEA LEVEL DATUM.
- THE VERTICAL CLEARANCE SHALL NOT BE REDUCED WHEN PROTECTING TRAFFIC FROM FALLING OBJECTS AND/OR MATERIALS.
- WHERE SECTION OR SUB SECTION MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED AGENT OR LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.
- THE CONTRACTOR SHALL TAKE SPECIAL NOTICE THAT IRON PINS HAVE BEEN SET AT LOCATIONS DESIGNATED IN THE PLANS AS "SET IRON PIN." THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL OF THESE IRON PINS AS SPECIFIED IN ARTICLE 107.19 OF THE STANDARD SPECIFICATIONS.
- TREES THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. ANY TREE DUE TO ITS LOCATION AND DEEMED SUITABLE FOR SAVING BY THE ENGINEER SHALL BE PROTECTED DURING CLEARING AND SUBSEQUENT CONSTRUCTION OPERATIONS. ESTIMATED QUANTITIES

20	IN. DIA.	TREE REMOVAL	(6 TO 15 INCH DIA.)
----	----------	--------------	---------------------
- BENCHING PROCEDURES SHALL BE USED IN AREAS WHERE EXISTING EMBANKMENTS ARE WIDENED FOR THE PROPOSED PAVEMENT. STEPS SHALL BE CUT INTO THE EXISTING EMBANKMENT SLOPES AND SHALL HAVE THE FOLLOWING DIMENSIONS:

HORIZONTAL:	3'
VERTICAL:	1.5'
- THE QUANTITIES INCLUDED IN THE PLANS FOR BITUMINOUS CONCRETE RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE BITUMINOUS MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.
- BEFORE ORDERING PIPE CULVERTS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR THE EXACT LENGTHS.
- WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY. COST OF SAW CUTS SHALL BE INCLUDED IN THE TYPE WORK ENCOUNTERED.
- STRIP REFLECTIVE CRACK CONTROL TREATMENT SHALL BE PLACED WHERE THE BITUMINOUS CONCRETE BASE COURSE ABUTS THE EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY: 1988 LIN. FT. STRIP REFLECTIVE CRACK CONTROL TREATMENT
- COURSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.
- QUANTITIES FOR BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH) 13 1/4" HAVE BEEN AND ARE SHOWN IN THE SCHEDULE OF PAVING QUANTITIES FOUND ON SHEET NO. 5.
- QUANTITIES FOR BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B, TYPE 1 HAVE BEEN ESTIMATED FOR THIS PROJECT IN TONS AND ARE SHOWN IN THE SCHEDULE OF PAVING QUANTITIES FOUND ON SHEET NO. 5. THE BITUMINOUS CONCRETE BINDER COURSE WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH). SEE SPECIAL PROVISIONS. THE QUANTITIES WERE ESTIMATED USING AN APPLICATION RATE OF 112 LBS/SQ. YD. /INCH.

- QUANTITIES FOR BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS 1, TYPE 1 HAVE BEEN ESTIMATED FOR THIS PROJECT IN SQUARE YARDS AND ARE SHOWN IN THE SCHEDULE OF PAVING QUANTITIES FOUND ON SHEET NO. 5. OF THE PROJECT TOTAL 4092 TONS 399 TONS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH). SEE SPECIAL PROVISIONS. THE REMAINING 893 TONS WILL BE PAID FOR SEPARATELY AS BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS 1, TYPE 1.
- PRIOR TO PLACING BITUMINOUS CONCRETE BINDER AND SURFACE COURSES A PRIME COAT SHALL BE APPLIED. PRIME COAT QUANTITIES HAVE BEEN ESTIMATED USING AN APPLICATION RATE OF 0.1 GAL/SQ. YD. OF EXISTING PAVEMENT TO BE COVERED BY THE FIRST LIFT OF BITUMINOUS CONCRETE AND 0.04 GAL/SY FOR SUCCESSIVE LIFTS OF BITUMINOUS CONCRETE. THE ESTIMATED QUANTITIES ARE SHOWN ON THE SCHEDULE OF PAVING QUANTITIES ON SHEET NO. 5.
- AN AGGREGATE PRIME COAT QUANTITY HAS BEEN INCLUDED IN THE PLANS TO BE USED AS DIRECTED BY THE ENGINEER. THE QUANTITY WAS ESTIMATED USING AN APPLICATION RATE OF 2 LBS/SY OF BITUMINOUS CONCRETE SURFACE COURSE. THE ESTIMATED QUANTITIES ARE SHOWN IN THE SCHEDULE OF PAVING QUANTITIES ON SHEET NO. 5.
- A QUANTITY FOR SUB-BASE GRANULAR MATERIAL, TYPE C HAS BEEN ESTIMATED FOR PROJECT IN TONS. THE QUANTITY WAS ESTIMATED USING AN APPLICATION RATE OF 1.6 TONS/CU. YD.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT 5

DISTRICT ENGINEER OF DESIGN

DISTRICT ENGINEER OF CONST.

DISTRICT ENGINEER OF MAINT.

DISTRICT ENGINEER OF PLANNING

DISTRICT ENGINEER OF TRAFFIC

DISTRICT ENGINEER OF MATERIALS
REVIEWED BY:

DATE

EXAMINED BY:

INDEX OF SHEETS AND GENERAL NOTES

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DESIGNED BY DATE
NO.	DATE	INITIALS		11/21/74
1				
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F.A.I. 74	SEC. (10-5-1 HB) BR	PROJECT NO.	3400-14
CHAMPAIGN	COUNTY	SHEET NO.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS			

Rev

SUMMARY OF QUANTITIES				MATTIS AVENUE BRIDGE	TRAFFIC SIGNALS		HIGHWAY LIGHTING
CODE NUMBER	ITEM	UNIT	QUANTITY	1000	X73/2A	SFTY IF	SFTY IF
20100100	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	20	20			
20200100	EARTH EXCAVATION	CU YD	2643	2643			
20700100	EMBANKMENT	CU YD	24139	24139			
20900200	POROUS GRANULAR EMBANKMENT	CU YD	62		62		
21501200	AGGREGATE SHOULDERS, TYPE B	TON	255	255			
21901000	BITUMINOUS SHOULDERS	TON	254	254			
30400715	BITUMINOUS BASE COURSE, 10 3/4"	SQ YD	2880	2880			
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1772	1772			
40600300	AGGREGATE (PRIME COAT)	TON	13	13			
40600520	LEVELING BINDER (MACHINE METHOD), MIXTURE B, TYPE 1	TON	330	330			
40600530	LEVELING BINDER (MACHINE METHOD), MIXTURE C, TYPE 1	TON	19	19			
40600820	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS 1, TYPE 1	TON	693	693			
40601146	BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH) 13 1/4"	SQ YD	4743	4743			
40801140	BRIDGE APPROACH PAVEMENT (STANDARD 2360)	SQ YD	666.6	666.6			
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1		
50104400	CONCRETE HEADWALL REMOVAL	EACH	4		4		
50200100	STRUCTURE EXCAVATION	CU YD	453.7		453.7		
50300150	NEOPRENE EXPANSION JOINT 2"	LIN FT	187		187		
50300450	CLASS X CONCRETE SUPERSTRUCTURE	CU YD	520.4		520.4		
50300300	PROTECTIVE COAT	SQ YD	343		343		
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE 1	EACH	20		20		
50400300	CLASS X CONCRETE	CU YD	421.1		421.1		
50400800	CLASS X CONCRETE (OUTLETS)	CU YD	6.1		6.1		
50401000	CLASS X CONCRETE COLLAR	EACH	4		4		
50700100	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1		
50700500	STUD SHEAR CONNECTORS	EACH	4320		4320		
50800100	ALUMINUM RAILING, TYPE L	LIN FT	270		270		
51101069	PIPE CULVERTS, TYPE 2 24"	LIN FT	280		280		
51101477	PIPE CULVERTS, TYPE 2, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 12"	LIN FT	566		566		
51102131	PIPE CULVERTS, TYPE 3 RCCP 36"	LIN FT	110		110		
51102143	PIPE CULVERTS, TYPE 3 RCCP 48"	LIN FT	88		88		
51113459	END SECTIONS 24"	EACH	2		2		
51113657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	2		2		
51113681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	2		2		
51113693	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 48"	EACH	2		2		
51115547	METAL END SECTIONS 12"	EACH	11		11		
51200100	REINFORCEMENT BARS	POUND	48690		48690	2850	
51200200	REINFORCEMENT BARS, EPOXY COATED	POUND	160620		160620		
51302200	FURNISHING CONCRETE PILES	LIN FT	1968		1968		
51302800	DRIVING CONCRETE PILES	LIN FT	1968		1968		
51304200	TEST PIPE CONCRETE	EACH	2		2		
51400100	NAME PLATES	EACH	1		1		
61218000	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1		1		
61235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	12		12		
61265200	INLETS TO BE REMOVED	EACH	1		1		

SUMMARY OF QUANTITIES				MATTIS AVENUE BRIDGE	TRAFFIC SIGNALS		HIGHWAY LIGHTING
CODE NUMBER	ITEM	UNIT	QUANTITY	1000	X73/2A	SFTY IF	SFTY IF
61300100	FRAMES AND GRATES TO BE ADJUSTED	EACH	1		1		
61407940	GRATING FOR CONCRETE FLARED END SECTION 36"	EACH	2		2		
61407960	GRATING FOR CONCRETE FLARED END SECTION 48"	EACH	2		2		
61605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	LIN FT	2458		2458		
61607400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.24	LIN FT	39		39		
61608600	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.06	LIN FT	58		58		
61618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	146		146		
61700100	PAVEMENT REMOVAL	SQ YD	2153		2153		
61700200	DRIVENWAY PAVEMENT REMOVAL	SQ YD	125		125		
61700300	CURB REMOVAL	LIN FT	28		28		
61700500	COMBINATION CURB AND GUTTER REMOVAL	LIN FT	216		216		
61700700	APPROACH SLAB REMOVAL	SQ YD	422		422		
61710100	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ YD	1567		1567		
61744520	PORTLAND CEMENT CONCRETE SURFACE REMOVAL-BUTT JOINT	SQ YD	73		73		
61744800	SLOPE WALL REMOVAL	SQ YD	662		662		
61800100	SLOPE WALL 4 INCH	SQ YD	955		955		
62300200	PORTLAND CEMENT CONCRETE DRIVENWAY PAVEMENT, 6 INCH	SQ YD	50		50		
62800035	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2		2		
62800085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2		2		
62900900	CHAIN LINK FENCE, 6'	LIN FT	253		253		
63000100	WOVEN WIRE FENCE, 4'	LIN FT	266		266		
63300300	STEEL PLATE BEAM GUARD RAIL REMOVAL	LIN FT	2046		2046		
63300400	CABLE ROAD GUARD REMOVAL	LIN FT	550		550		
63900100	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	3		3		
64200210	SEEDING, CLASS 2A	ACRE	3.7		3.7		
64200400	NITROGEN FERTILIZER NUTRIENT	POUND	222		222		
64200500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	740		740		
64200600	POTASSIUM FERTILIZER NUTRIENT	POUND	222		222		
64300120	MULCH, METHOD 2	TON	7.4		7.4		
64400500	EMULSIFIED ASPHALT	GALLON	555		555		
64400400	ENGINEER'S FIELD OFFICE, TYPE A	CAL NO	9		9		
64400600	ENGINEER'S FIELD LABORATORY	CAL NO	9		9		
	TRAFFIC CONTROL COMPLETE - MATTIS AVE STAGE I	L SUM	1		1		
	TRAFFIC CONTROL COMPLETE - FAI 74	L SUM	1		1		
	TRAFFIC CONTROL COMPLETE - MATTIS AVE STAGE II	L SUM	1		1		
65000100	MOBILIZATION	L SUM	1		1		
65100200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	LIN FT	1988		1988		
65600100	TEMPORARY CONCRETE BARRIER	LIN FT	3250		3250		
65600200	RELOCATE TEMPORARY CONCRETE BARRIER	LIN FT	6500		6500		
65800600	PROCESSING LINE MODIFIED SOILS 12"	SQ YD	9975		9975		
65801400	WATER	UNIT	111.1		111.1		
65801500	LIME	TON	222.2		222.2		
66030100	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE)	LIN FT	1200		1200		
66030400	1/C NO. 12	LIN FT	1200		1200		
66060200	BARE COPPER WIRE, 1/C NO. 6	LIN FT	3005		3005		
66100300	UNIT DUCT, 2-600VXLP #6, 1" POLYETHYLENE	LIN FT	3005		3005		
66200100	TRENCH AND BACKFILL FOR ROADWAY LIGHTING	LIN FT	2709		2709		
66308500	CONDUIT PUSHED, 2" DIA., INTERMEDIATE METAL	LIN FT	296		296		

3005		REVISIONS		STATE OF ILLINOIS		DRAWN BY	DATE
3005		1		DEPARTMENT OF TRANSPORTATION		m.l.t.	8-91
2709		2		DIVISION OF HIGHWAYS		DESIGNED BY	DATE
296		3		F.A.I.-74		R.C.	8-91
		4		SEC (10-5-11B)BR		CHECKED BY	DATE
		5		CHAMPAIGN COUNTY		PROJECT NO.	3400-14
		6		HOMER L. CHASTAIN & ASSOCIATES		SHEET NO.	
		7		CONSULTING ENGINEERS			
		8		DECATUR, ILLINOIS			
		9					
		10					

REV

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	QUANTITY	TRAFFIC SIGNALS				HIGHWAY LIGHTING
				MATTIS AVENUE BRIDGE	MATTIS/BLOOMINGTON	MATTIS/ANTHONY		
6400200	CONTROL INSTALLATION, TYPE CB RCS 60-240	EACH	2					2
64500100	LIGHT POLE FOUNDATION	EACH	12					12
66701400	LIGHT POLE, ALUMINUM, 35 FT. M.H., 10 FT. DAVIT ARM	EACH	12					12
66801200	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	12					12
T2010100	SIGN PANEL - TYPE 1	SQ FT	22.2				22.2	
T4011020	SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3					3
T4011030	SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3					3
T4011120	SIGNAL HEAD, POLYCARBONATE, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1					1
T4011150	SIGNAL HEAD, POLYCARBONATE, 2-FACE, 3-SECTION BRACKET MOUNTED	EACH	1					1
T4011230	SIGNAL HEAD, POLYCARBONATE, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1					1
T4021200	PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, 1-FACE, BRACKET MOUNTED	EACH	2					2
T4031100	TRAFFIC SIGNAL BACKPLATE	EACH	4					4
T4064700	TRAFFIC SIGNAL POST, ALUMINUM 12 FT.	EACH	2					2
T4065000	TRAFFIC SIGNAL POST, ALUMINUM 15 FT.	EACH	2					2
T4065300	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1					1
T4065400	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1					1
T4110402	FULL-ACTUATED CONTROLLER, STANDARD SEQUENCE IV, 8 PHASES, IN TYPE 111 CABINET	EACH	1					1
T4140110	TIME BASE COORDINATOR	EACH	1					1
T4160200	INDUCTION LOOP DETECTOR AMPLIFIER	EACH	7					7
T4180110	DETECTOR LOOP TYPE 1	LIN FT	703		133			570
T4190100	PEDESTRIAN PUSH-BUTTON	EACH	2					2
T4200400	GALVANIZED STEEL CONDUIT IN TRENCH 1 1/2"	LIN FT	875		165			710
T4200500	GALVANIZED STEEL CONDUIT IN TRENCH 2"	LIN FT	101					101
T4200700	GALVANIZED STEEL CONDUIT IN TRENCH 3"	LIN FT	63					63
T4200900	GALVANIZED STEEL CONDUIT IN TRENCH 4"	LIN FT	14					14
T4201700	GALVANIZED STEEL CONDUIT, PUSHED 3"	LIN FT	108					108
T4212600	ELECTRIC CABLE IN CONDUIT NO. 8 2/C	LIN FT	10					10
T4214200	ELECTRIC CABLE IN CONDUIT NO. 14 2/C	LIN FT	147					147
T4214201	ELECTRIC CABLE IN CONDUIT NO. 14 3/C	LIN FT	147					147
T4214203	ELECTRIC CABLE IN CONDUIT NO. 14 5/C	LIN FT	1325					1325
T4214205	ELECTRIC CABLE IN CONDUIT NO. 14 7/C	LIN FT	160					160
T4214899	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	LIN FT	480					480
T4219010	ELECTRIC CABLE IN CONDUIT NO. 18, 3 PAIR TWISTED, SHIELDED	LIN FT	1605					1605
T4264200	SERVICE INSTALLATION, TYPE A (MODIFIED)	EACH	1					1
T4270100	CONCRETE FOUNDATION, TYPE A	LIN FT	12					12
T4270200	CONCRETE FOUNDATION, TYPE D	LIN FT	3.5					3.5
T4270100	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	LIN FT	22					22
T4280100	CONCRETE HANDHOLE	EACH	3					3
T4280400	CONCRETE DOUBLE HANDHOLE	EACH	1					1
T4290400	GULFBOX JUNCTION	EACH	.6		2			4
T4300100	TRENCH AND BACKFILL	LIN FT	1053		165			888
* T4530015	LIGHT DETECTOR	EACH	3					3
* T4530020	LIGHT DETECTOR AMPLIFIER	EACH	1					1

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	QUANTITY	TRAFFIC SIGNALS				HIGHWAY LIGHTING
				MATTIS AVENUE BRIDGE	MATTIS/BLOOMINGTON	MATTIS/ANTHONY		
T5010100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	78					78
T5010200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	LIN FT	8810					8810
T5010600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	LIN FT	1007					1007
T5020200	PAINT PAVEMENT MARKING - LINE 4"	LIN FT	1114					1114
T5020600	PAINT PAVEMENT MARKING - LINE 12"	LIN FT	196					196
X0300330	FURNISH CHANGEABLE MESSAGE SIGN	EACH	1					1
X0300331	INSTALL CHANGEABLE MESSAGE SIGN	CAL DA	30					30
X0300601	INTERMEDIATE ROLLER	HOUR	28					28
Z0007200	BRIDGE SEAT SEALER	L SUM	1					1
Z001400	COLD MILLING EXISTING MEDIAN	SQ YD	149					149
Z0013500	CONCRETE THRUST BLOCKS	EACH	10					10
Z0018000	DRAINAGE SCUPPERS (SPECIAL)	EACH	8					8
Z0038700	PERMANENT BENCH MARKS	EACH	1					1
Z0039100	PERMANENT SURVEY MARKERS	EACH	5					5
Z0070100	SURVEY MONUMENT COVER ASSEMBLY	EACH	4					4
X217280	BRIDGE DECK GROOVING	SQ YD	1746					1746
▲ 6240020	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	6078					6078

NOTE: ALL PAY ITEMS ARE 90% FEDERAL AND 10% STATE FUNDED UNLESS NOTED OTHERWISE.

* LIGHT DETECTOR AND LIGHT DETECTOR AMPLIFIER ARE 100% CITY FUNDED

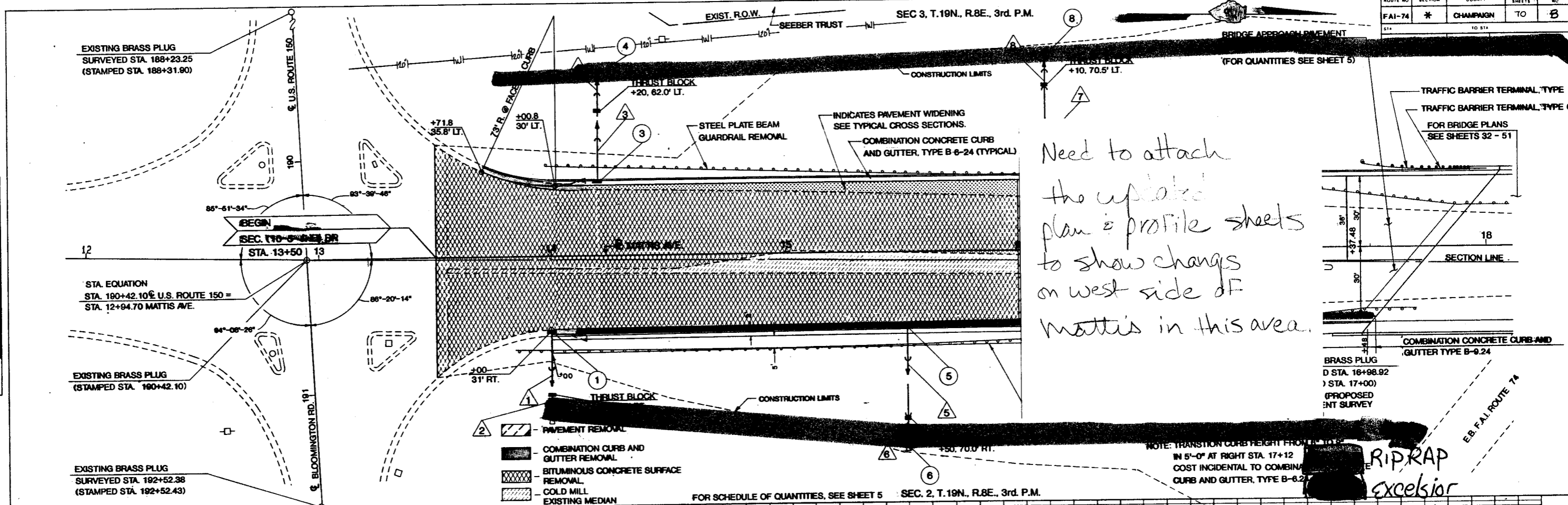
** SPECIALTY ITEMS, SEE SPECIAL PROVISIONS.

▲ PCC SIDEWALK 5" IS TO BE TO BE 100% CITY FUNDED.

SUMMARY OF QUANTITIES

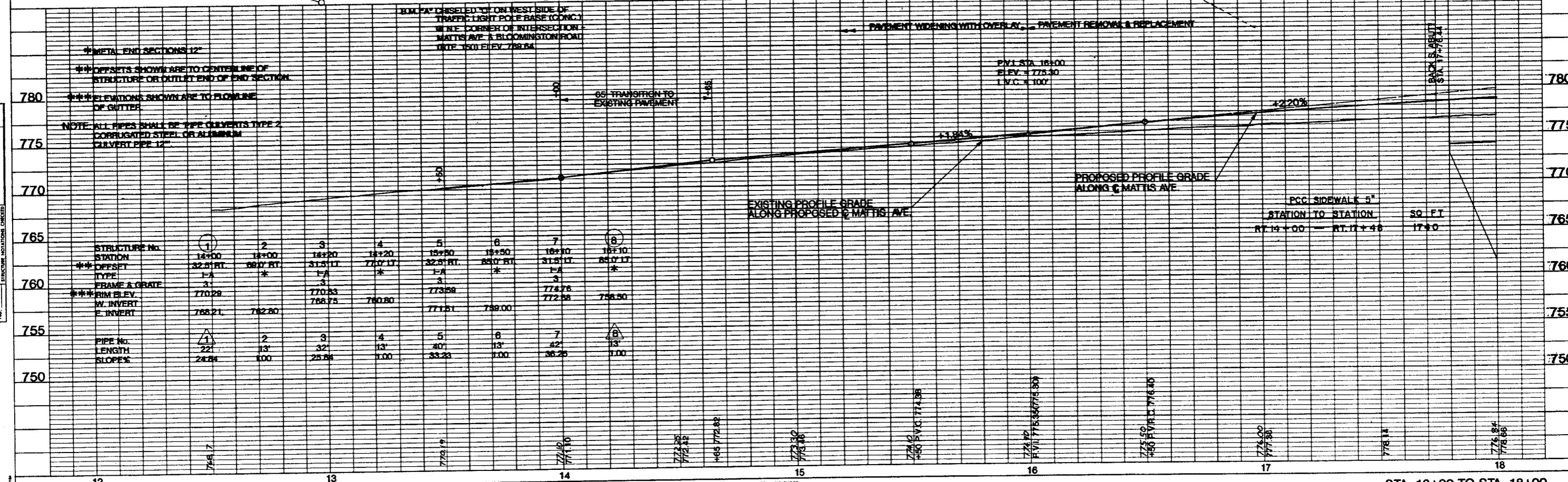
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1	DATE	INITIALS	mit 8-91	
2			CHECKED BY DATE	
3			7/2 8/91	
4			DRAWING NUMBER	
5			PROJECT NO.	
6			3400-14	
7			SHEET NO.	
8			7	
9			8	
10			9	

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NOTE BOOK NO. []
DATE []

PROFILE
SURVEYED BY: []
NOTE BOOK NO. []
DATE []

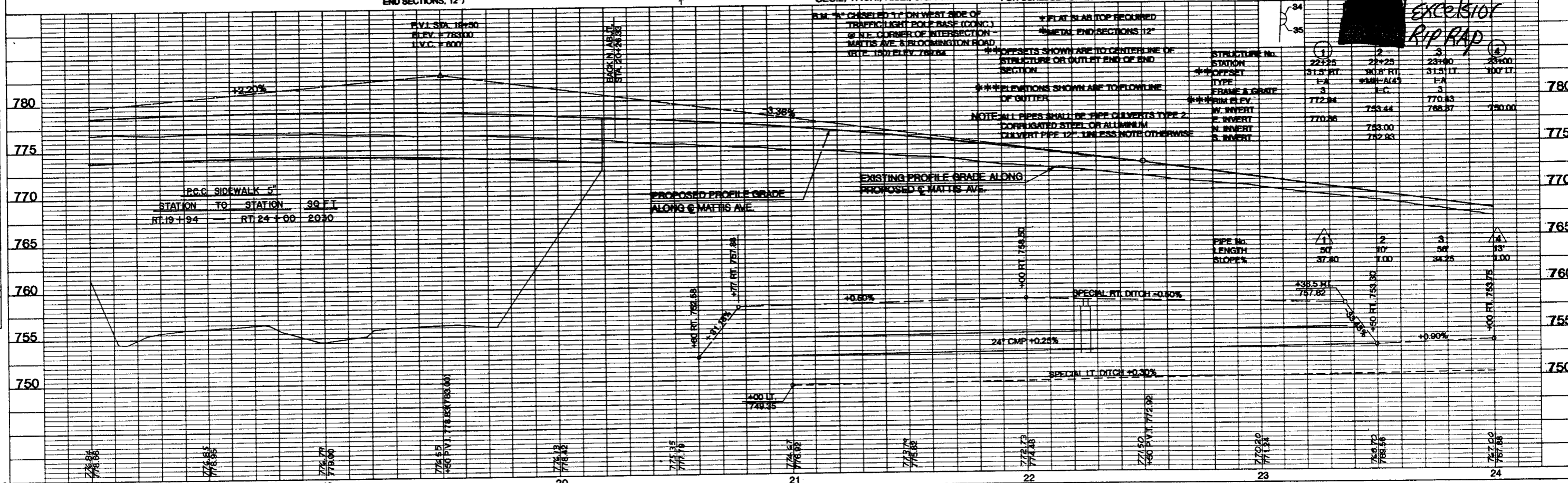
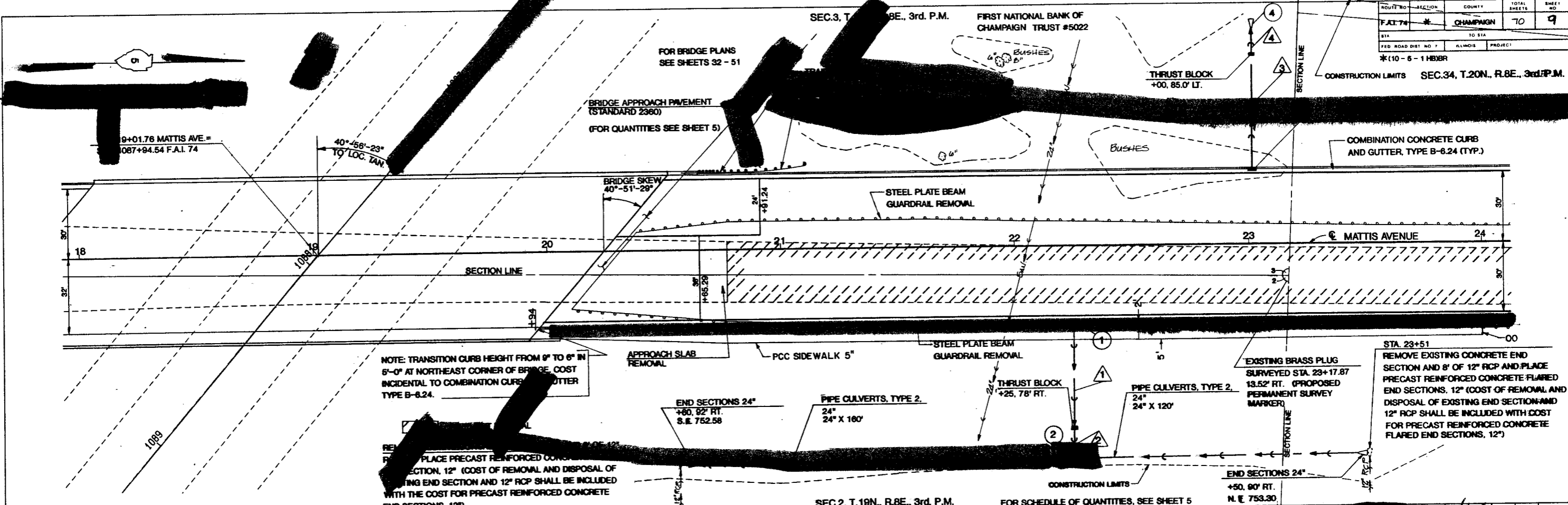


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	#	CHAMPAIGN	70	9
STA.	TO STA.	ALMOS	PROJECT	
FED. ROAD DIST. NO. 7				
*(10-5-1) HBR				

CONSTRUCTION LIMITS SEC.34, T.20N., R.8E., 3rd.P.M.

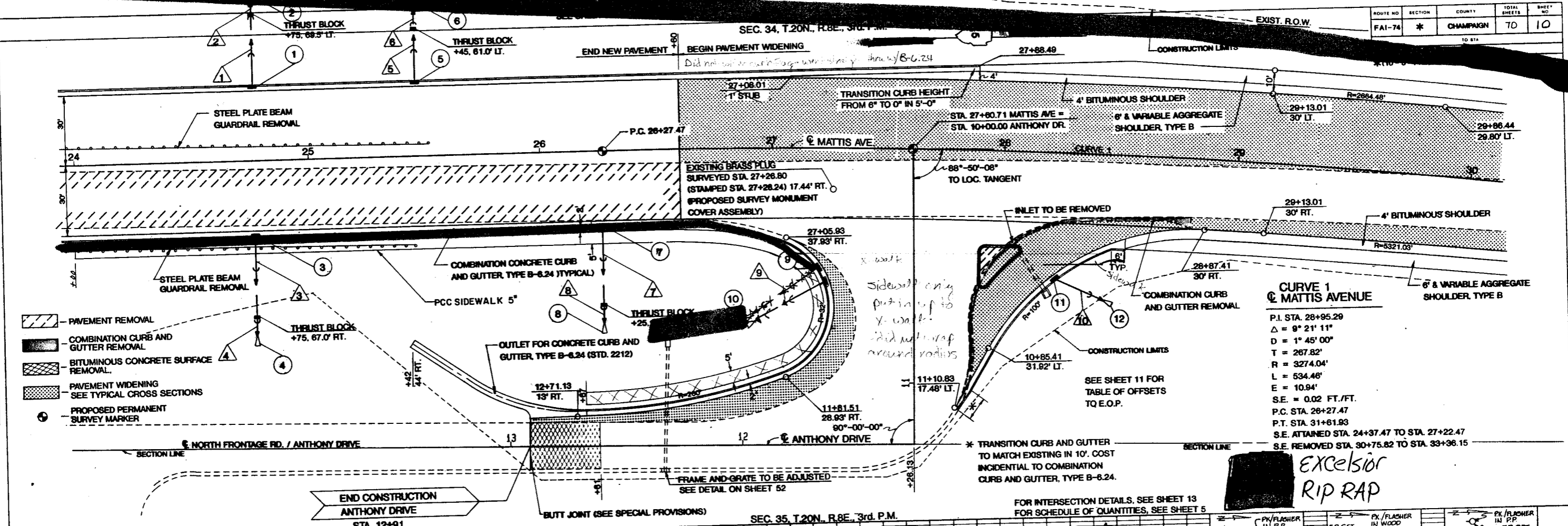
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REVISIONS	
NO.	BY
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PROFILE	DATE
REVISIONS	
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PLAN
 NOTE BOOK
 NO. _____

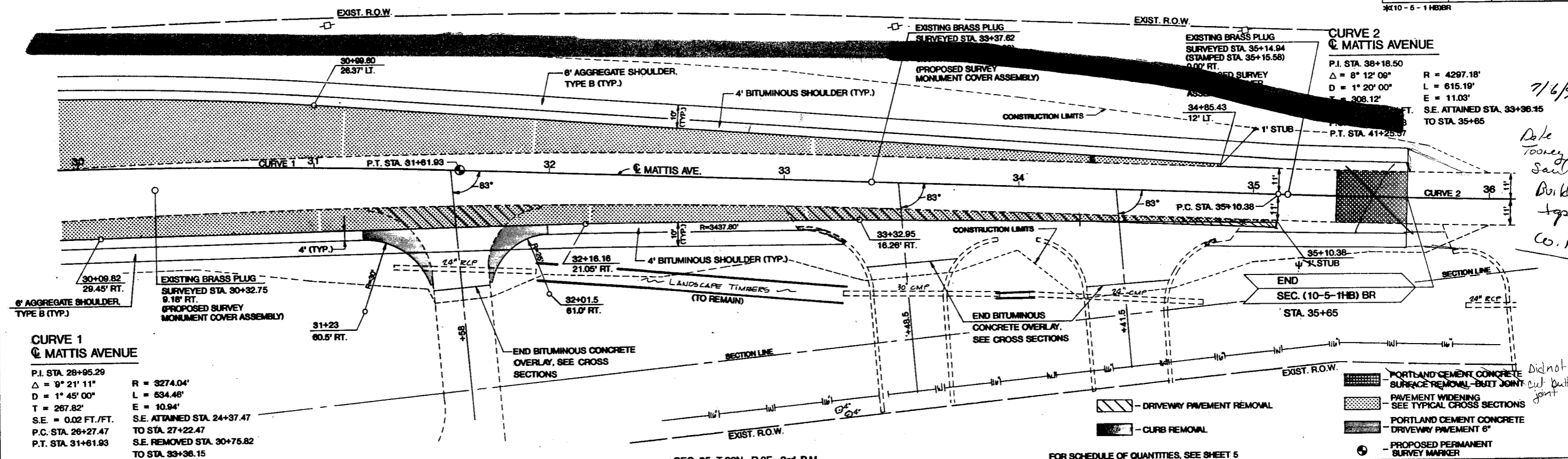
PROFILE
 NOTE BOOK
 NO. _____



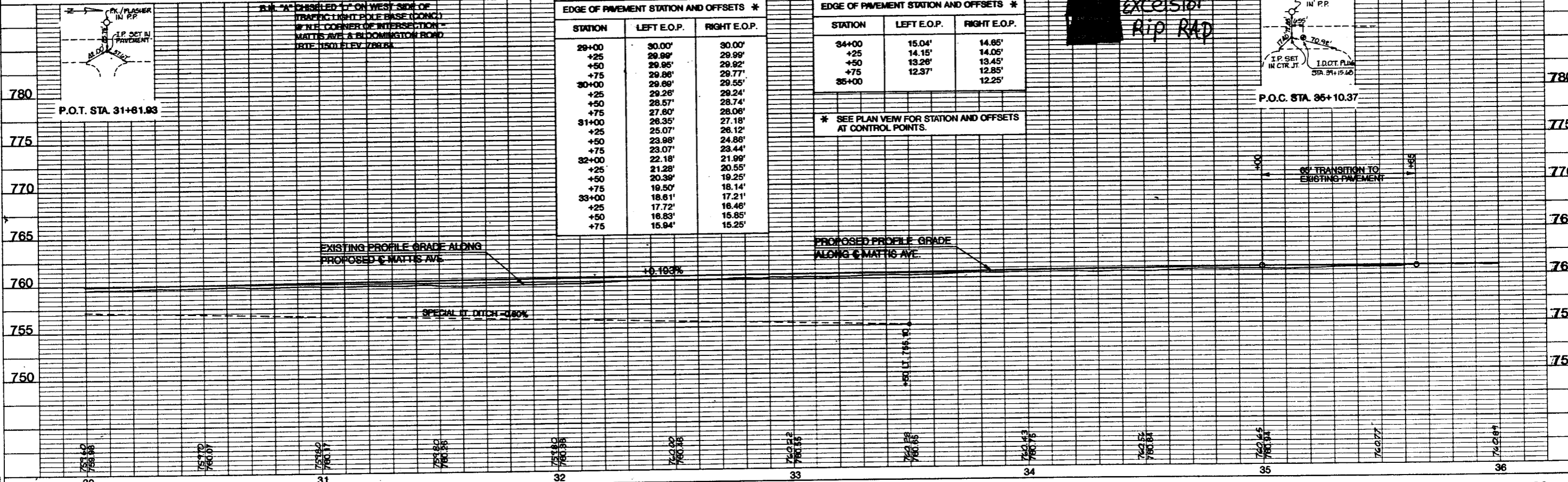
**Excelsior
RIP RAP**

STATION	1	2	3	4	5	6	7	8	9	10	11	12
STRUCTURE NO.												
STATION	24+75	24+75	24+75	24+75	24+75	24+75	24+75	24+75	24+75	24+75	24+75	24+75
** OFFSET	31.5' LT.	81.8' LT.	31.5' RT.	78.0' RT.	31.5' LT.	73.0' LT.	31.5' RT.	78.0' RT.	31.5' LT.	73.0' RT.	31.5' RT.	78.0' RT.
TYPE	F-A	*	F-A	*	F-A	*	F-A	*	F-A	*	F-A	*
*** FRAME & GRATE	3	3	3	3	3	3	3	3	3	3	3	3
*** RIM ELEV.	764.73		764.58		762.88		761.30		758.78		756.20	
N. INVERT												
S. INVERT												
E. INVERT												
W. INVERT	762.85	759.45	762.50	753.70	760.30	750.88	758.22	754.30	756.70	755.60	756.12	756.00
PIPE NO.	40	10	36	10	31	10	36	10	32	10	32	10
LENGTH	40'	10'	36'	10'	31'	10'	36'	10'	32'	10'	32'	10'
SLOPE %	31.86	1.00	24.67	1.00	34.59	1.00	14.07	1.00	3.48	0.45		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	11
STA.	TO STA.			
FED. ROAD DIST. NO. 7	KLINGBEIL	PROJECT		
*10-5-1 HBDR				



FOR SCHEDULE OF QUANTITIES, SEE SHEET 5



SEC. 34, T. 20N., R. 8E. 3rd. PM.

F.A.I. 74 MAINLINE CURVE NO. 1

P.I. STA. 1088+66.18
Δ = 18°-39'-04"
D = 00°-48'-51"
T = 1155.70'
R = 7037.78'
L = 2290.95'
E = 94.26'
S.E. = 0.020 FT./FT.
P.C. STA. 1077+10.48
P.C.C. STA. 1100+01.43

PRECAST REINFORCED CONCRETE
FLARED END SECTIONS, 48"
WITH GRATING
STA. 1085+79, 82' LT.
W. E. 749.35

SEC. 2, T. 19N., R. 8E. 3rd. P.M.
PIPE CULVERTS, TYPE 3 RCCP 48"
48" X 32'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	12

FED. ROAD DIST. NO. 7 ILLINOIS PROJECT
*(10-5-1)HB/R

PLAN

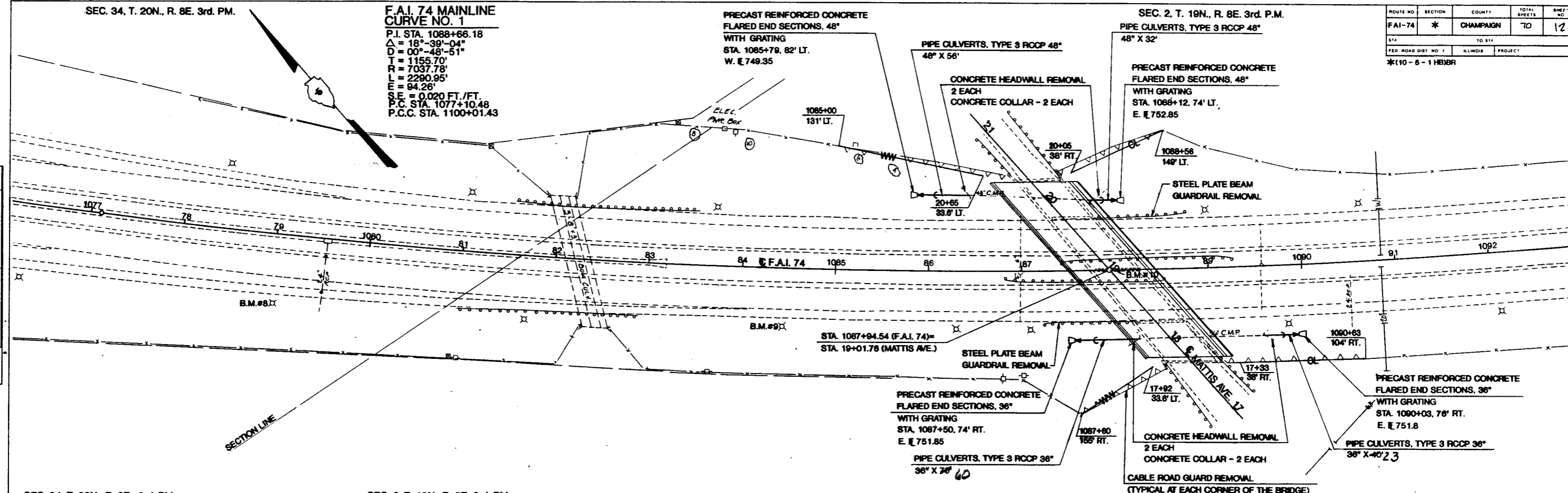
DATE: _____

BY: _____

CHECKED BY: _____

SCALE: _____

NOTE BOOK NO. _____



PROFILE

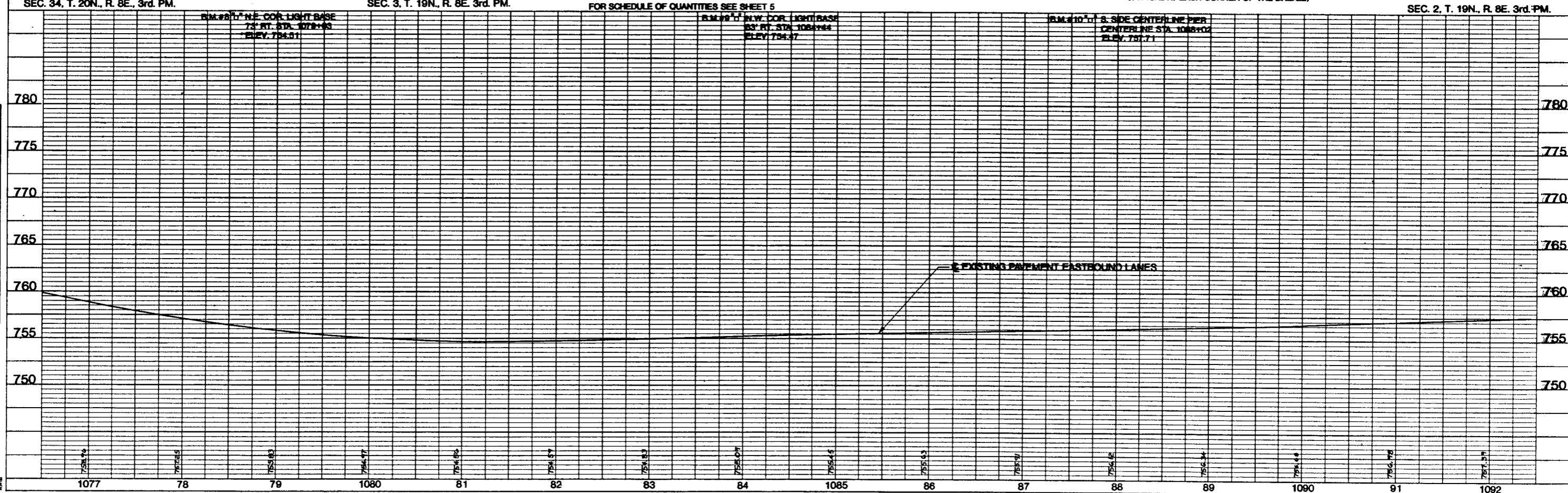
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SCALE: _____

NOTE BOOK NO. _____

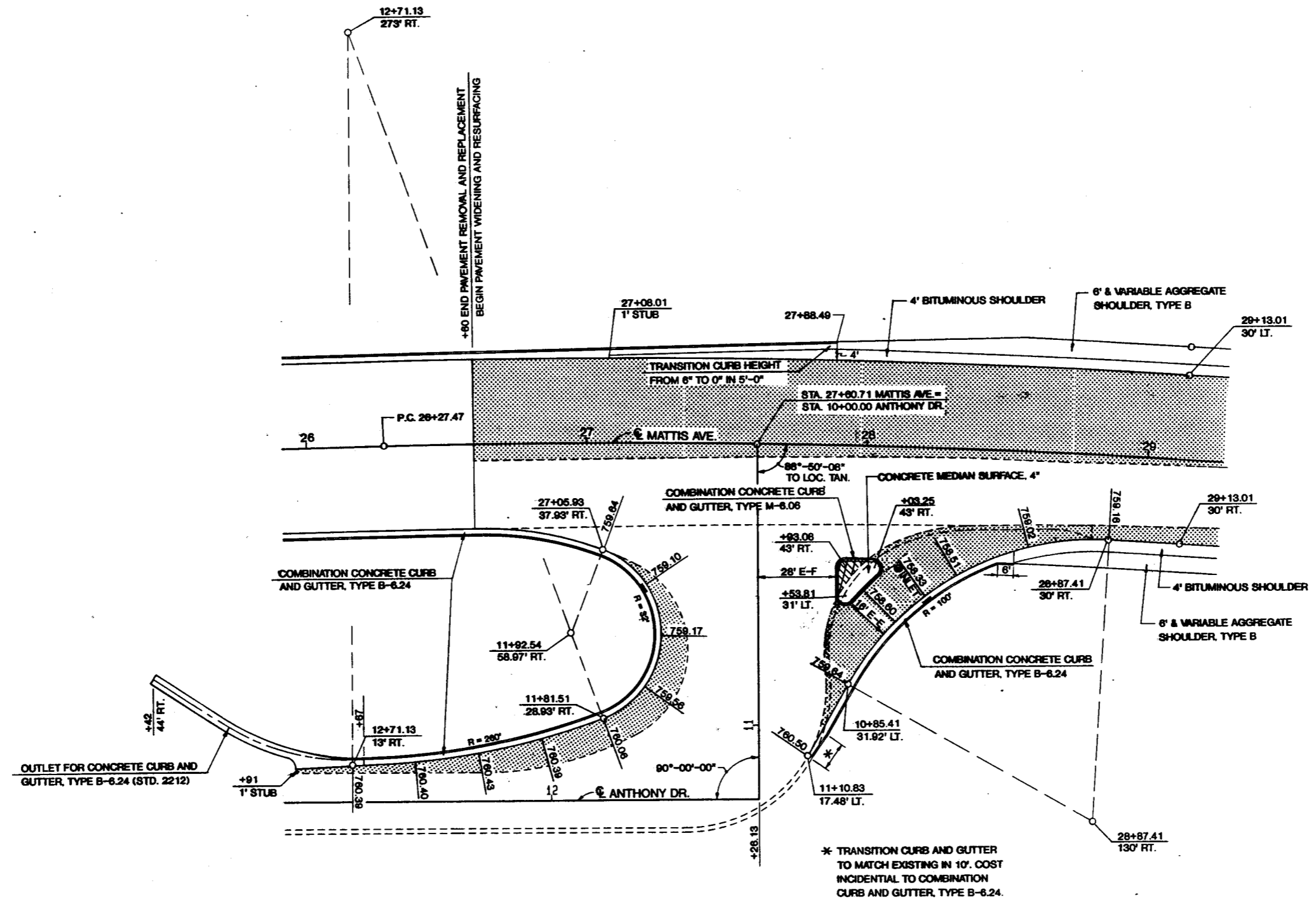


HOMER L. CHASTAIN & ASSOCIATES, CONSULTING ENGINEERS

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
PRINTED IN U.S.A.

STA. 1077+00 TO STA. 1092+00

F.A.I. 74

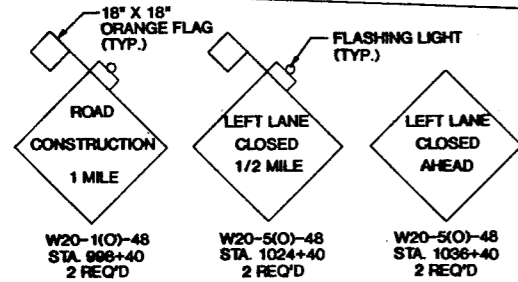
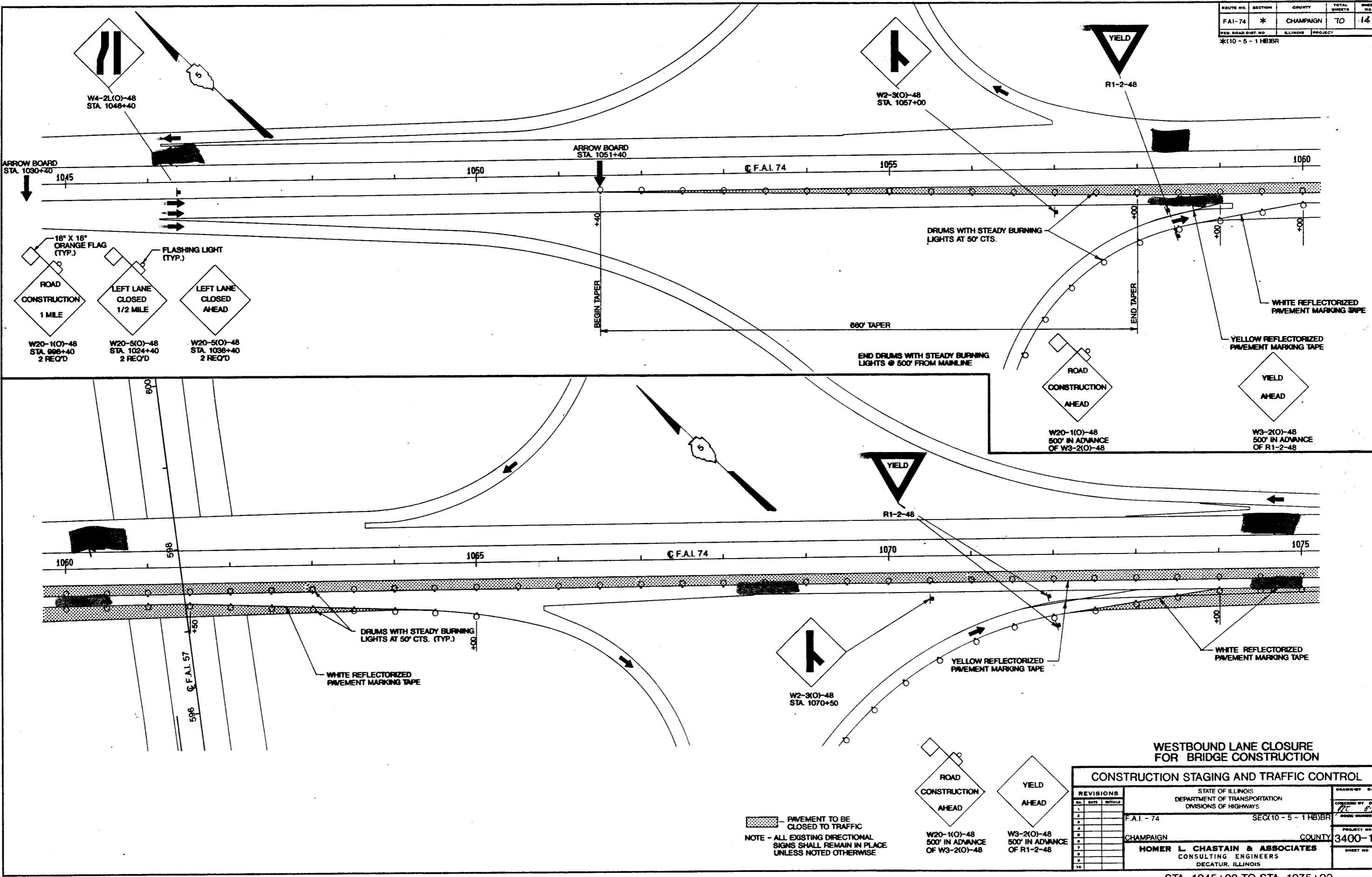


NOTE: ALL RADII SHOWN ARE TO EDGE OF PAVEMENT UNLESS NOTED OTHERWISE. RADII SHOWN AT ISLAND NOSES ARE TO FACE OF CURB. ALL RADII FOR ISLAND ARE 3' AT FACE OF CURB

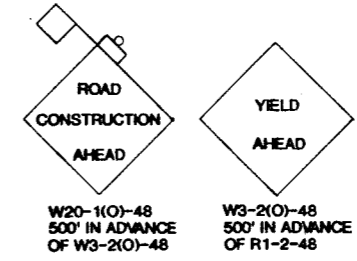
- PAVEMENT WIDENING
- PAVEMENT REMOVAL FOR CONSTRUCTION OF ISLAND
- 759.16 INDICATES PROPOSED EDGE OF PAVEMENT ELEVATION AT QUARTER POINT OF CURVE

INTERSECTION DETAILS			
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE	
F.A.I.-74		CHECKED BY DATE	
SEC. (10-5-1HB) BR		DESIGN NUMBER	
CHAMPAIGN COUNTY		PROJECT NO.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		3400-14	
SHEET NO.			

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	14
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
		* (10-5-1) HB)BR		



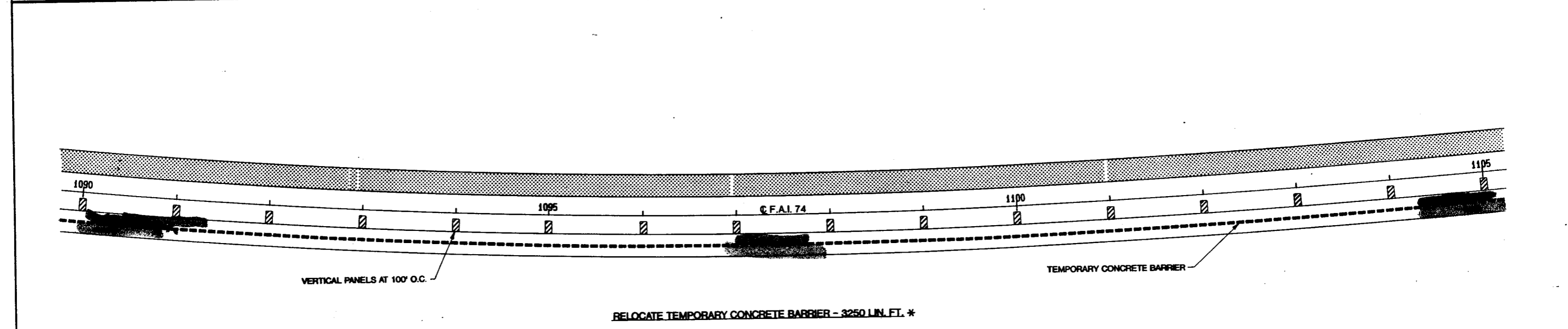
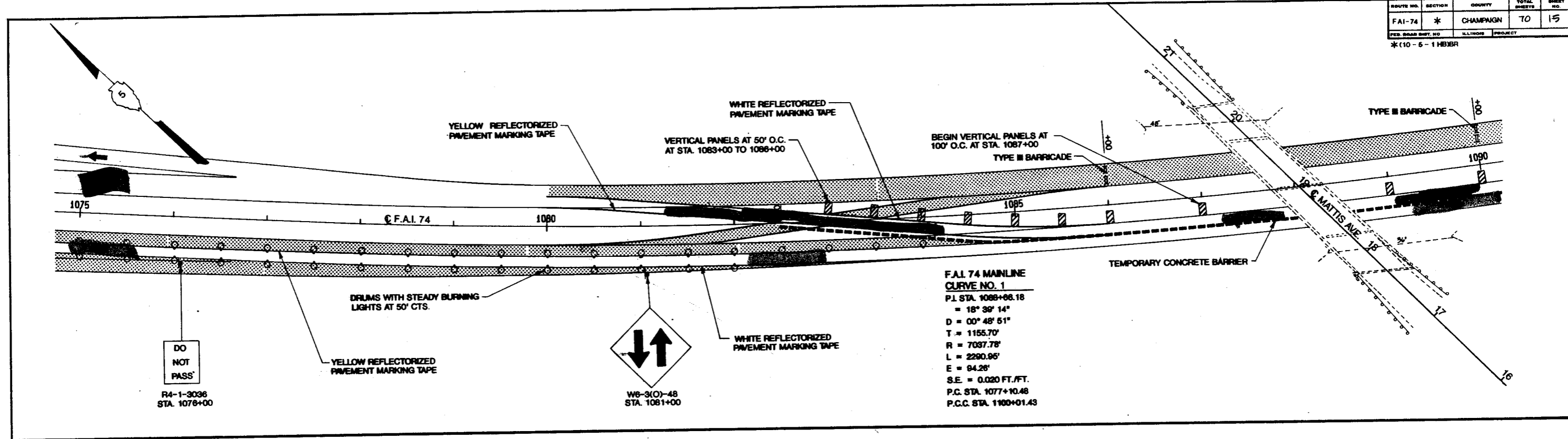
PAVEMENT TO BE CLOSED TO TRAFFIC
 NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE



REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY DATE
1			F.A.I. - 74	SEC(10-5-1) HB)BR	7/2 8/71
2			CHAMPAIGN	COUNTY	PROJECT NO. 3400-14
3			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		SHEET NO.
4					
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STA. 1045+00 TO STA. 1075+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	15
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
			*(10-5-1)HB/BR	



TEMPORARY CONCRETE BARRIER		
STATION TO	STATION	LIN. FT.
1083+50	1105+00	2265
1105+00	1114+80	985 (SEE SHEET 16)
TOTAL		3250

* THE SEQUENCE OF WORK SHALL BE SUCH THAT THE TEMPORARY CONCRETE BARRIER SHALL BE ORIGINALLY PLACED IN ACCORDANCE WITH SHEETS 15 & 16. NEXT THE TEMPORARY CONCRETE BARRIER SHALL BE RELOCATED TO BE IN ACCORDANCE WITH SHEETS 19 & 20. FINALLY THE TEMPORARY CONCRETE BARRIER SHALL BE RELOCATED TO IN ACCORDANCE WITH SHEETS 15 & 16.

PAVEMENT TO BE CLOSED TO TRAFFIC

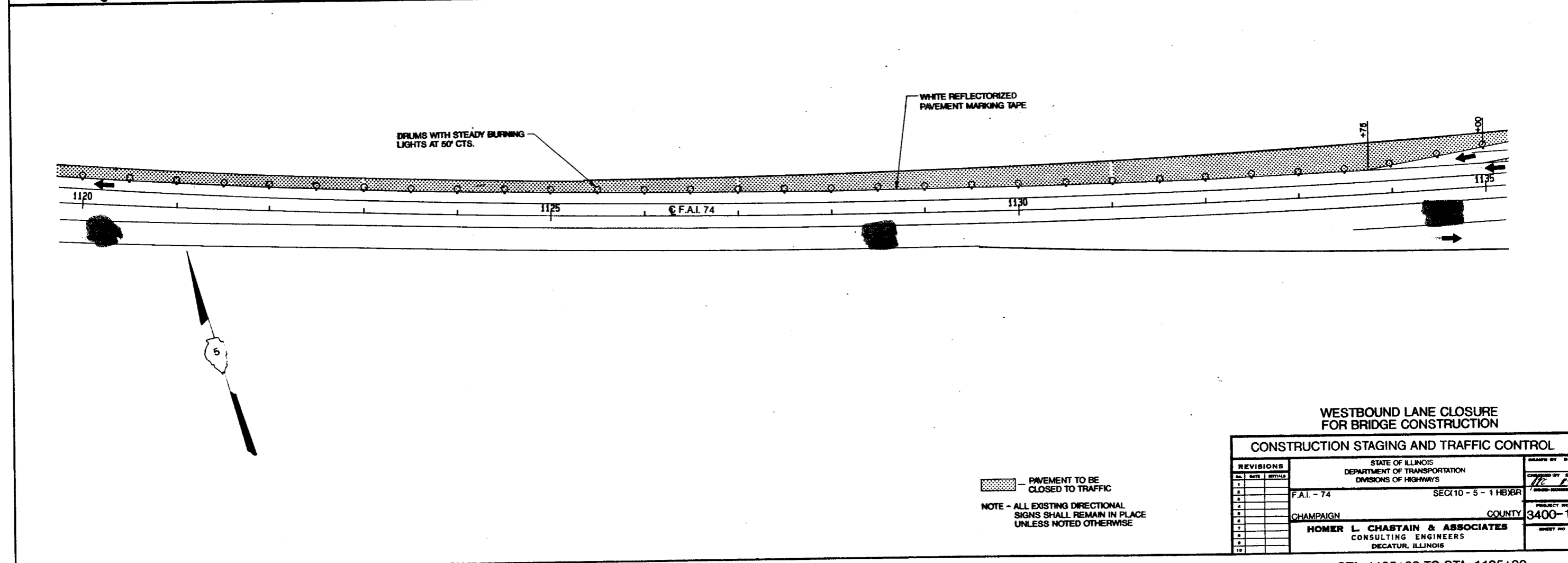
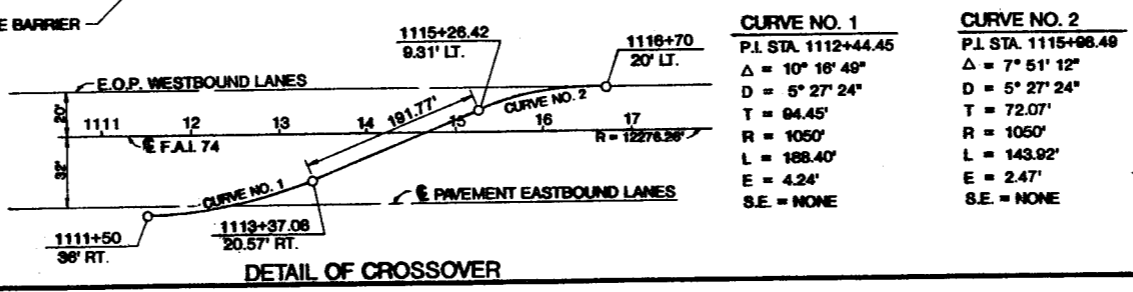
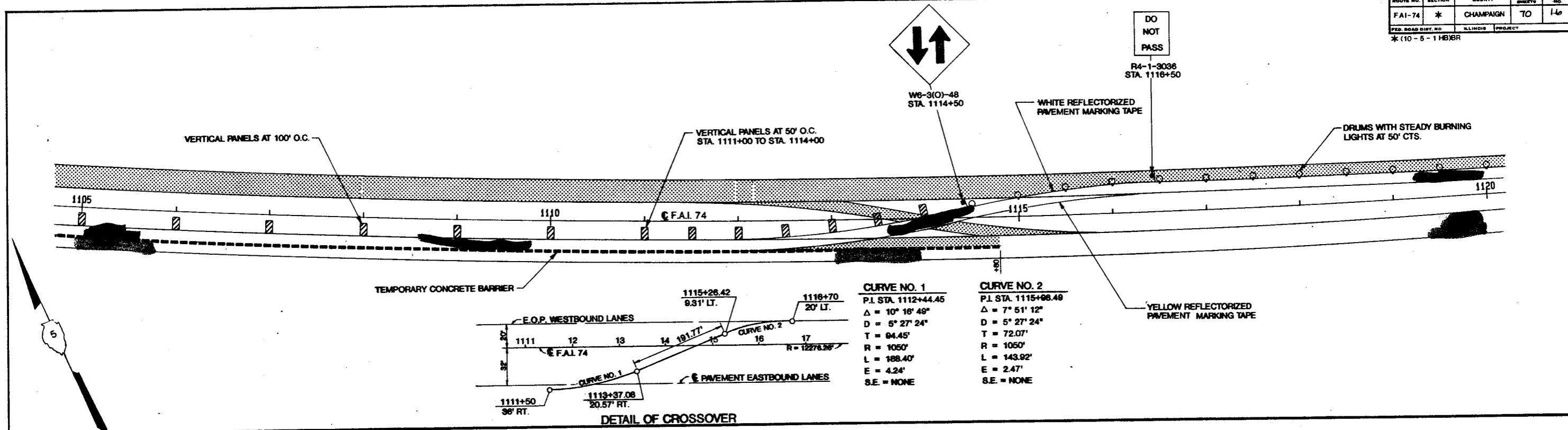
NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE

WESTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION

REVISIONS		STATE OF ILLINOIS	
NO.	DATE	DEPARTMENT OF TRANSPORTATION	DESIGNED BY DATE
1			
2			
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F.A.I. - 74		SEC 10-5-1 HB/BR	
CHAMPAIGN COUNTY		PROJECT NO. 3400-14	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS			

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	16
FED. ROAD DIST. NO.	ILLINOIS PROJECT			
		*(10-5-1)HBXR		



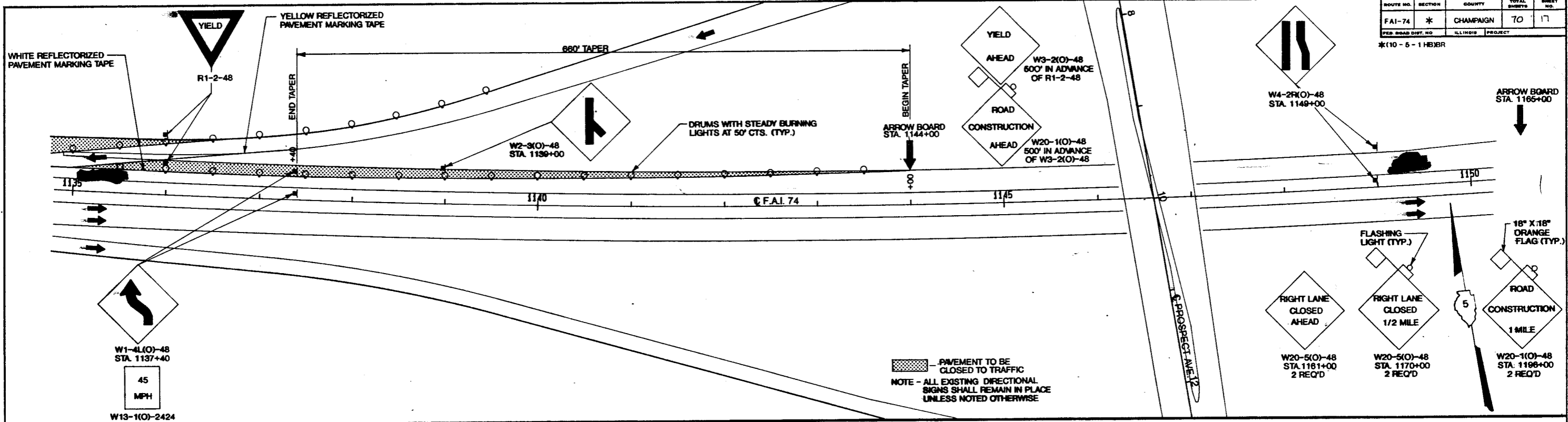
PAVEMENT TO BE CLOSED TO TRAFFIC
 NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE

WESTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION

CONSTRUCTION STAGING AND TRAFFIC CONTROL

REVISIONS NO. DATE DETAILS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY DATE [Signature] [Date]
		F.A.I. - 74 SEC10-5-1 HBXR		CHECKED BY DATE [Signature] [Date]
		CHAMPAIGN COUNTY		PROJECT NO. 3400-14
		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		SHEET NO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	17
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
*110-5-1 HB/BR				



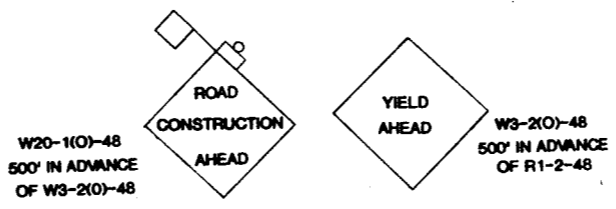
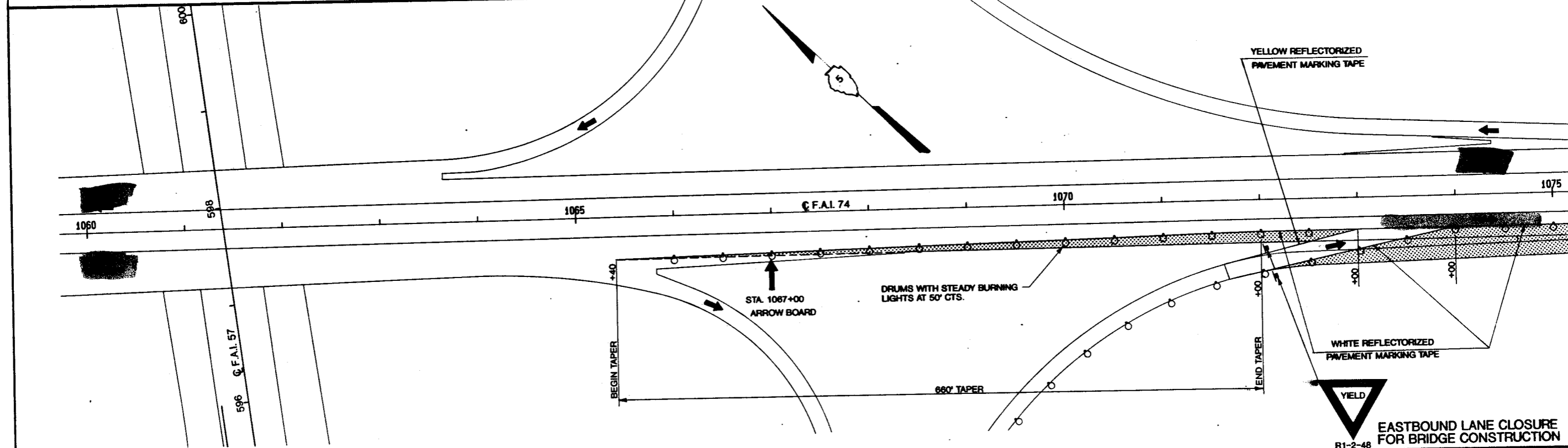
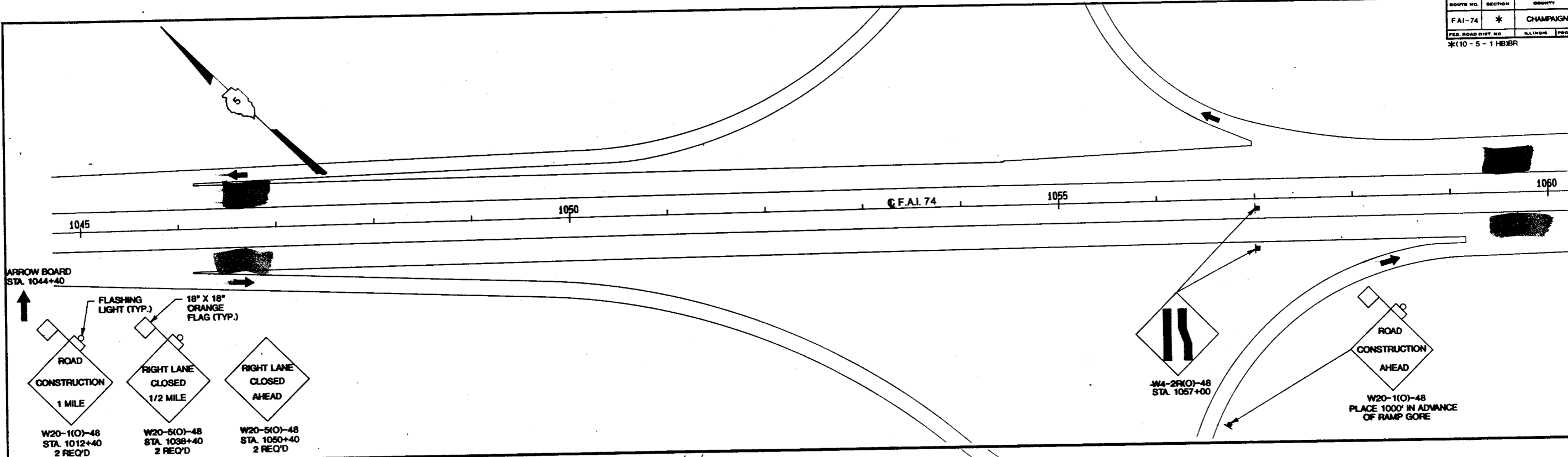
**WESTBOUND LANE CLOSURE
FOR BRIDGE CONSTRUCTION**

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DATE
NO.	DATE	INITIALS	PROJECT NO.	COUNTY	DATE
1			F.A.I. - 74	CHAMPAIGN	
2			SEC10-5-1 HB/BR		
3					
4					
5					
6					
7					
8					
9					
10					

STA. 1135+00 TO STA. 1150+00

F.A.I. 74

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	18
FED. ROAD DIST. NO.	ILLINOIS PROJECT			
	*(10-5-1 HB)BR			



NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE

PAVEMENT TO BE CLOSED TO TRAFFIC

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS	
NO.	DATE	INITIALS	PROJECT NO.	SHEET NO.
1			3400-14	
2				
3				
4				
5				
6				
7				
8				
9				
10				

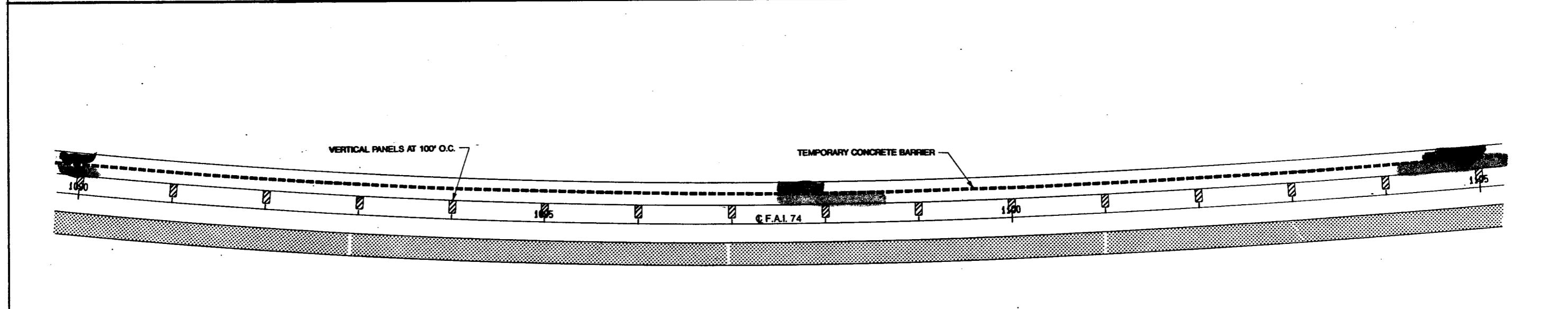
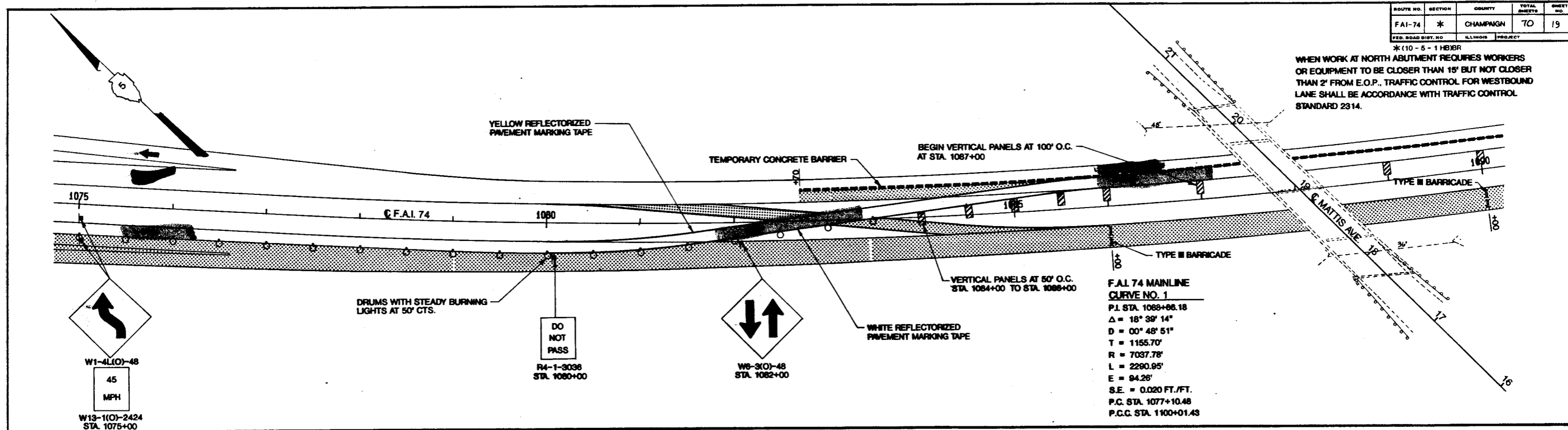
EASTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION
R1-2-48

STA. 1045+00 TO STA. 1075+00

F.A.I. 74

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	19
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

* (10 - 5 - 1 HB)BR
 WHEN WORK AT NORTH ABUTMENT REQUIRES WORKERS OR EQUIPMENT TO BE CLOSER THAN 15' BUT NOT CLOSER THAN 2' FROM E.O.P., TRAFFIC CONTROL FOR WESTBOUND LANE SHALL BE ACCORDANCE WITH TRAFFIC CONTROL STANDARD 2314.



RELOCATE TEMPORARY CONCRETE BARRIER *

STATION	TO	STATION	LIN. FT.
1082+70		1105+00	2220
1105+00	SEE NOTE	1114+00	900 (SEE SHEET 20)
			130
		TOTAL	3250

* THE SEQUENCE OF WORK SHALL BE SUCH THAT THE TEMPORARY CONCRETE BARRIER SHALL BE ORIGINALLY PLACED IN ACCORDANCE WITH SHEETS 15 & 16. NEXT THE TEMPORARY CONCRETE BARRIER SHALL BE RELOCATED TO BE IN ACCORDANCE WITH SHEETS 19 & 20. FINALLY THE TEMPORARY CONCRETE BARRIER SHALL BE RELOCATED TO IN ACCORDANCE WITH SHEETS 15 & 16.

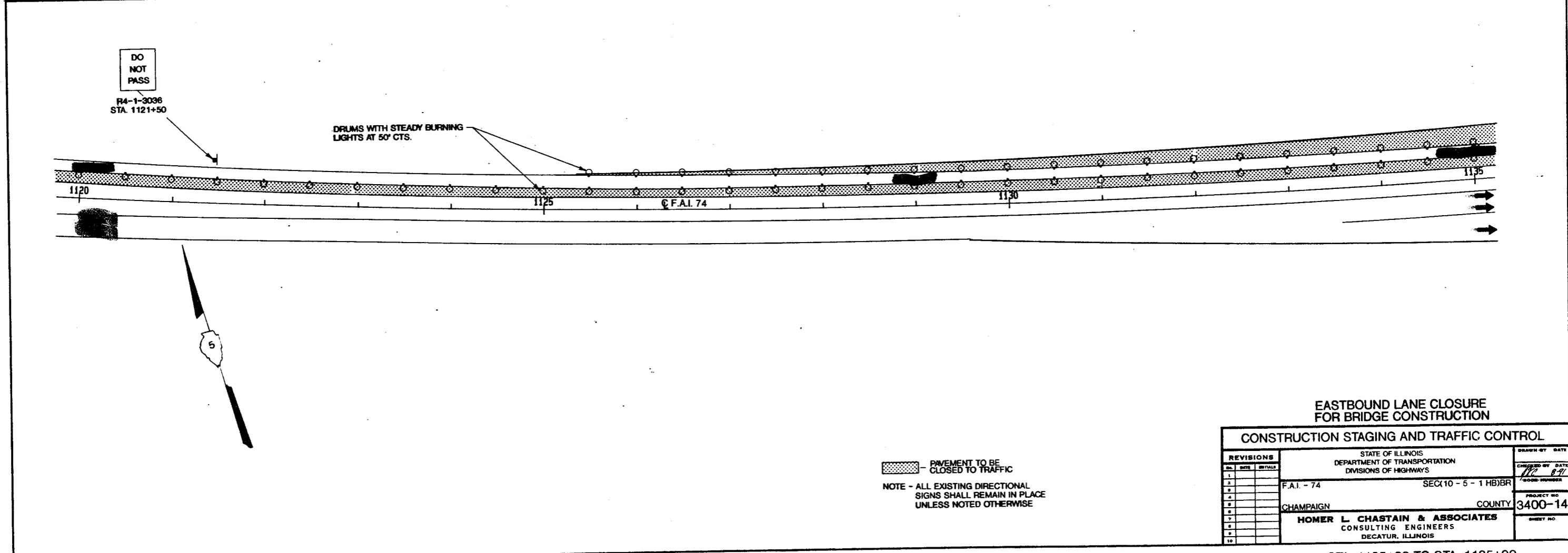
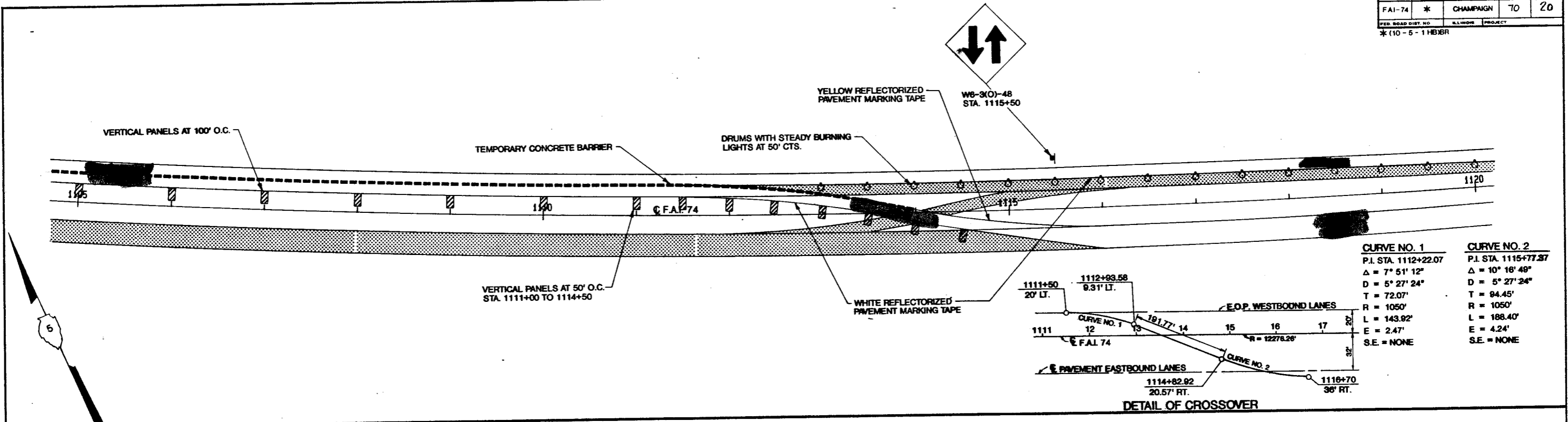
NOTE: 130 LIN. FT. OF THE TEMPORARY CONCRETE BARRIER REQUIRED BY WESTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION, SHALL BE RELOCATED AND TEMPORARILY STORED ON THE EASTBOUND PAVEMENT, AT A LOCATION APPROVED BY THE ENGINEER, DURING THE PERIOD WHEN THE EASTBOUND LANES ARE CLOSED FOR BRIDGE CONSTRUCTION.

PAVEMENT TO BE CLOSED TO TRAFFIC
 NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE

EASTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION
CONSTRUCTION STAGING AND TRAFFIC CONTROL

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY DATE
F.A.I. - 74	SEC(10 - 5 - 1 HB)BR	CHKD BY DATE
CHAMPAIGN COUNTY		POSTED NUMBER
PROJECT NO. 3400-14		SHEET NO.
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	20
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
*(10-5-1 HB)BR				



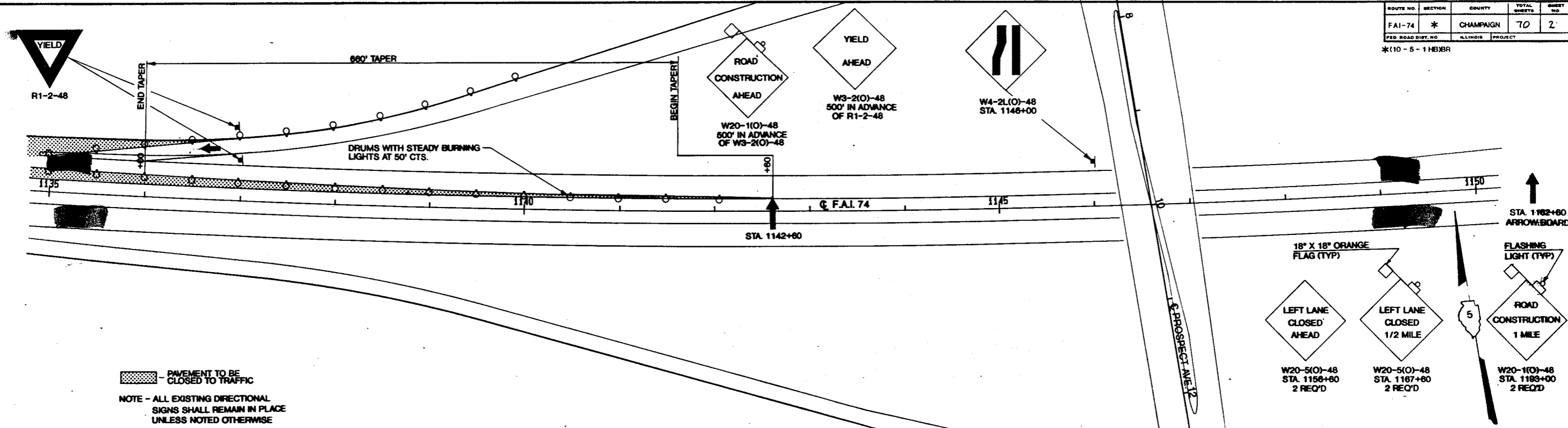
EASTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION


REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY	DATE
1		F.A.I. - 74	SEC 10-5-1 HB)BR		
2		CHAMPAIGN	COUNTY		
3		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS			
4				PROJECT NO.	3400-14
5				SHEET NO.	
6					
7					
8					
9					
10					

STA. 1105+00 TO STA. 1135+00
F.A.I. 74

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	2
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

*(10-5-1)HBXBR



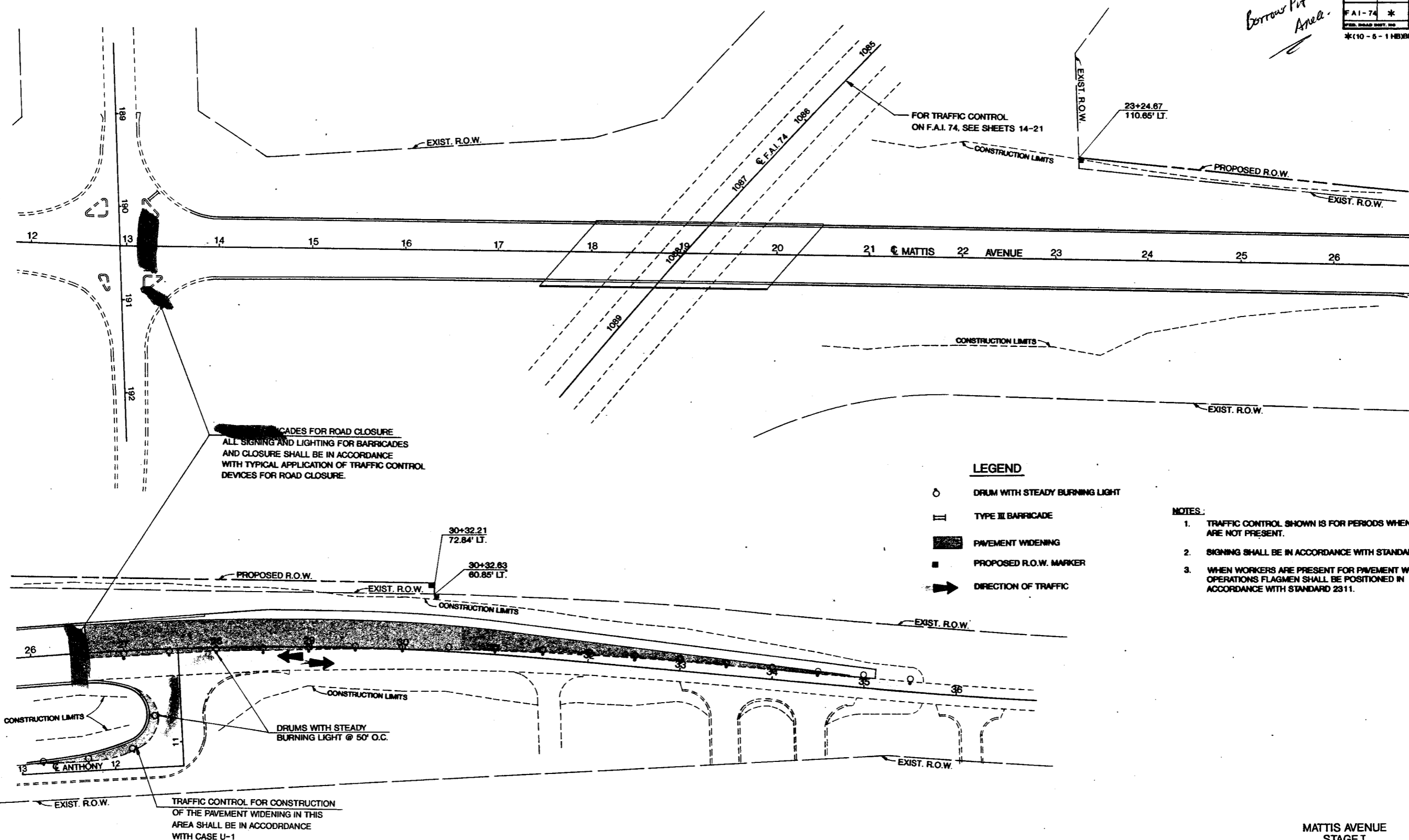
 PAVEMENT TO BE CLOSED TO TRAFFIC
 NOTE - ALL EXISTING DIRECTIONAL SIGNS SHALL REMAIN IN PLACE UNLESS NOTED OTHERWISE

EASTBOUND LANE CLOSURE FOR BRIDGE CONSTRUCTION
CONSTRUCTION STAGING AND TRAFFIC CONTROL

REVISIONS NO. DATE INITIALS 1 2 3 4 5 6 7 8 9 10		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS F.A.I. - 74 CHAMPAIGN COUNTY HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS	DRAWN BY DATE M.C. 8-71 PROJECT NO. 3400-14 SHEET NO.
--	--	--	--

*Borrow Pit
Annel.*

DRAWING NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F A I - 74 *	*	CHAMPAIGN	10	22
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
			*(10 - 5 - 1 HB)BR	



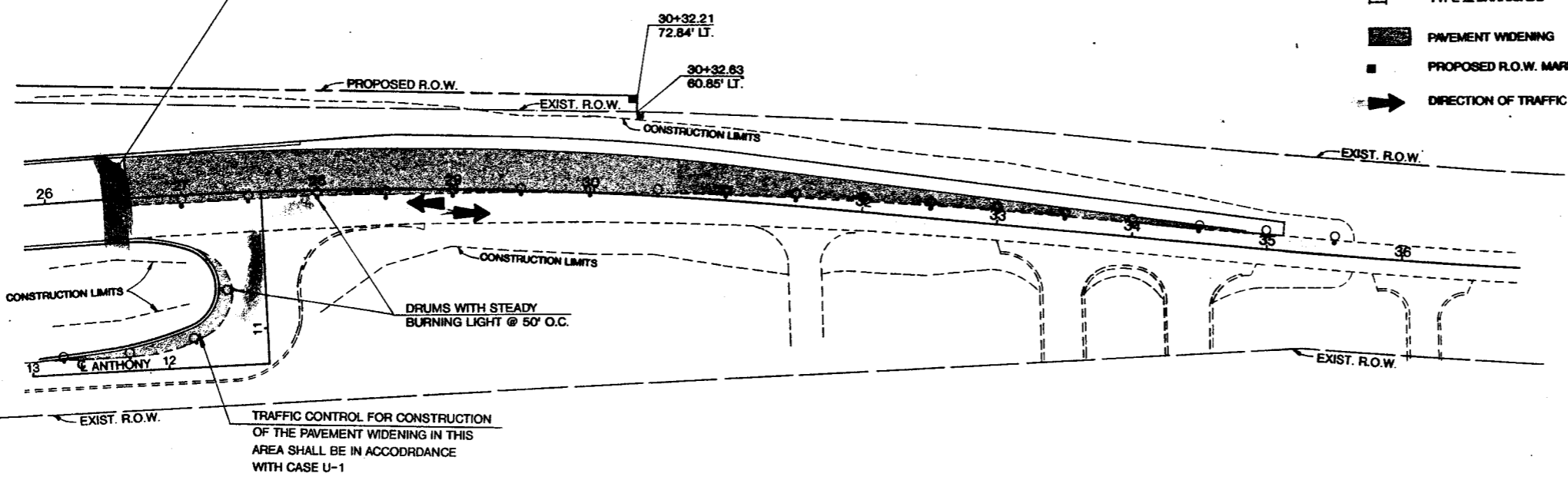
BARRICADES FOR ROAD CLOSURE
ALL SIGNING AND LIGHTING FOR BARRICADES AND CLOSURE SHALL BE IN ACCORDANCE WITH TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR ROAD CLOSURE.

LEGEND

- DRUM WITH STEADY BURNING LIGHT
- ▧ TYPE II BARRICADE
- ▨ PAVEMENT WIDENING
- PROPOSED R.O.W. MARKER
- ➔ DIRECTION OF TRAFFIC

NOTES:

1. TRAFFIC CONTROL SHOWN IS FOR PERIODS WHEN WORKERS ARE NOT PRESENT.
2. SIGNING SHALL BE IN ACCORDANCE WITH STANDARD 2311.
3. WHEN WORKERS ARE PRESENT FOR PAVEMENT WIDENING OPERATIONS FLAGMEN SHALL BE POSITIONED IN ACCORDANCE WITH STANDARD 2311.

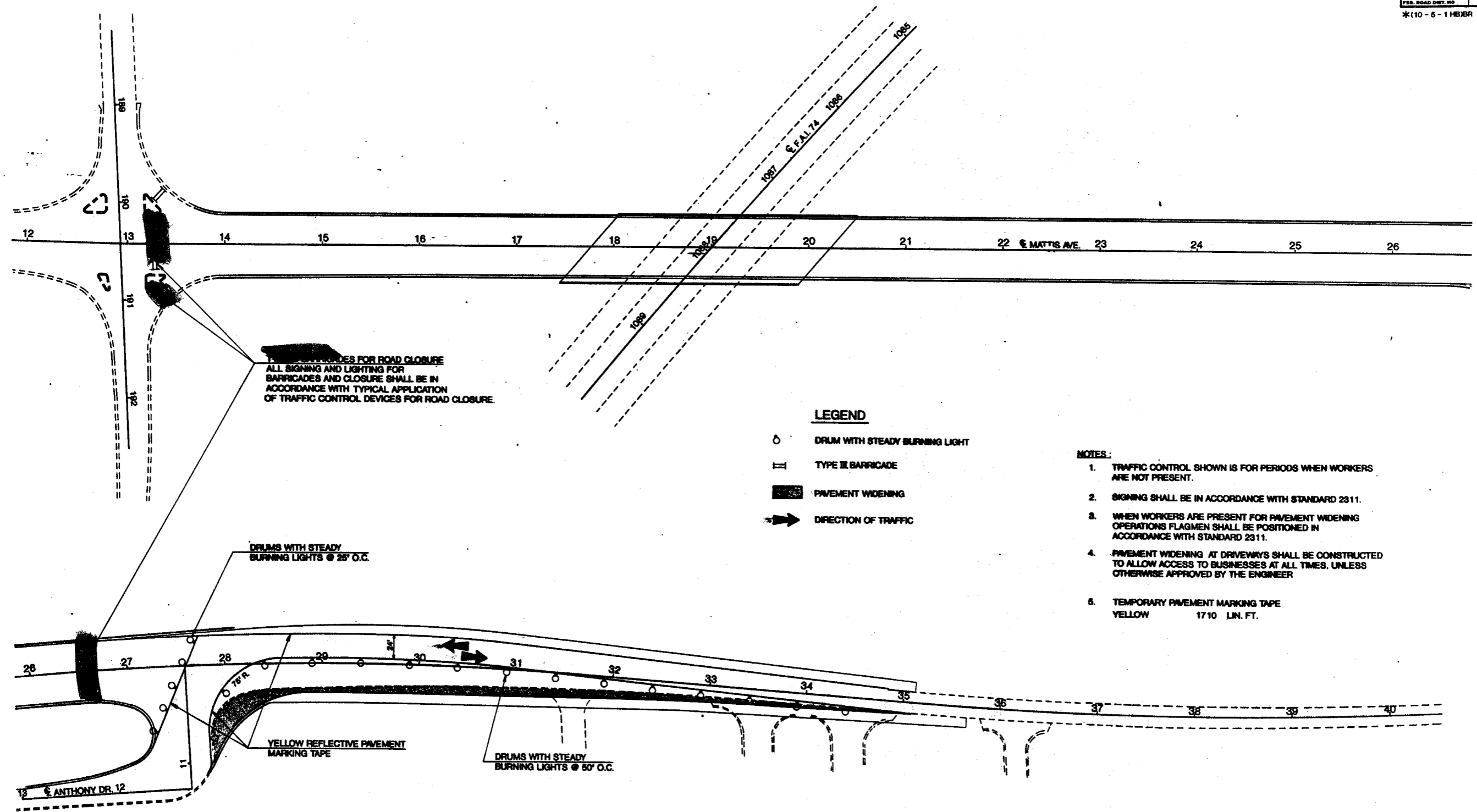


TRAFFIC CONTROL FOR CONSTRUCTION OF THE PAVEMENT WIDENING IN THIS AREA SHALL BE IN ACCORDANCE WITH CASE U-1

**MATTIS AVENUE
STAGE I**

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY MULL	DATE 2-9
1			F. A. I. - 74	SEC10 - 5 - 1 HB)BR		
2			CHAMPAIGN	COUNTY		
			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		PROJECT NO. 3400-14	SHEET NO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	29
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
			*(10-5-1)HBJBR	



LEGEND

- DRUM WITH STEADY BURNING LIGHT
- ▬ TYPE III BARRICADE
- PAVEMENT WIDENING
- ➔ DIRECTION OF TRAFFIC

NOTES:

1. TRAFFIC CONTROL SHOWN IS FOR PERIODS WHEN WORKERS ARE NOT PRESENT.
2. SIGNING SHALL BE IN ACCORDANCE WITH STANDARD 2311.
3. WHEN WORKERS ARE PRESENT FOR PAVEMENT WIDENING OPERATIONS FLAGMEN SHALL BE POSITIONED IN ACCORDANCE WITH STANDARD 2311.
4. PAVEMENT WIDENING AT DRIVEWAYS SHALL BE CONSTRUCTED TO ALLOW ACCESS TO BUSINESSES AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. TEMPORARY PAVEMENT MARKING TAPE YELLOW 1710 LIN. FT.

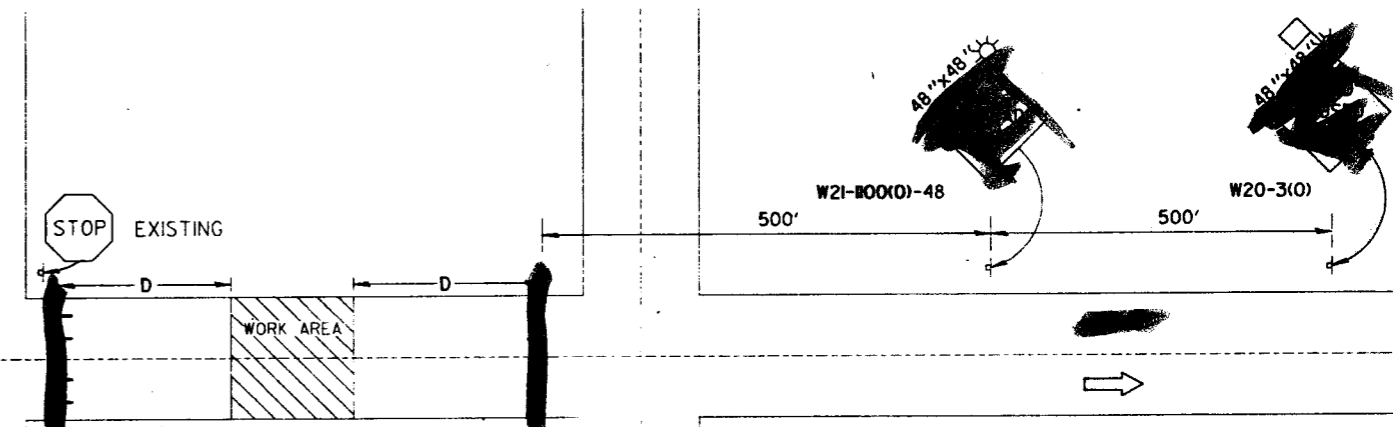
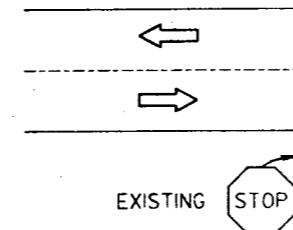
**MATTIS AVENUE
STAGE II**

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY DATE MLW 2-91
1					1/2 1/7
2					
3					
4					
5					
6					
7					
8					
9					
10					

F. A. I. - 74	SEC(10-5-1)HBJBR	PROJECT NO. 3400-14
CHAMPAIGN COUNTY	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	
		SHEET NO.

~~TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR ROAD CLOSURE~~

- SYMBOLS**
- ▬ TYPE III BARRICADE (SEE NOTE 1)
 - ◇ 18" x 18" ORANGE FLAG
 - ⊙ FLASHING AMBER LIGHT (HIGH INTENSITY)



GENERAL NOTES

1. TYPE III BARRICADES SHALL BE AS SHOWN ON STD. 2298 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD." SIGN STD. R-II-2, 3 OR 4 SHALL BE MOUNTED ON THE BARRICADE. EACH BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED AS SHOWN.
2. IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR "D" EXCEEDS 1000', ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
3. WHEN A STOP CONDITION EXISTS, AS SHOWN ABOVE, NO SIGNS ARE REQUIRED IN ADVANCE OF THE STOP SIGN WHEN THE ROAD IS CLOSED WITHIN 100' OF THE INTERSECTION.

GENERAL NOTES (CON'T)

4. STANDARD 2298 & 2299 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
5. ~~ALL SIGNS SHALL BE MOUNTED IF THE~~
6. A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ~~AS SHOWN~~ IN THE SERIES.
7. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
8. ALL WARNING SIGNS SHALL HAVE MINIMUM DIMENSIONS OF 48" BY 48" AND HAVE BLACK LEGEND AND BORDER ON AN ORANGE REFLECTORIZED BACKGROUND.
9. FORMS BT. 725 AND BT. 726 ARE REQUIRED.
10. WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.

	NAME	DATE
DESIGNED	J.J.M.	8-11-87
CHECKED	P.E.K.	8-25-87
CADD NO.	F-5.03	

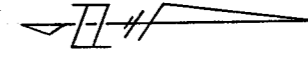
REVISIONS	
NAME	DATE

TRAFFIC SIGNAL INSTALLATION

F.A.U 7158 (MATTIS AVENUE)
With
F.A.U. 7106 (ANTHONY DRIVE)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	*	CHAMPAIGN	70	24

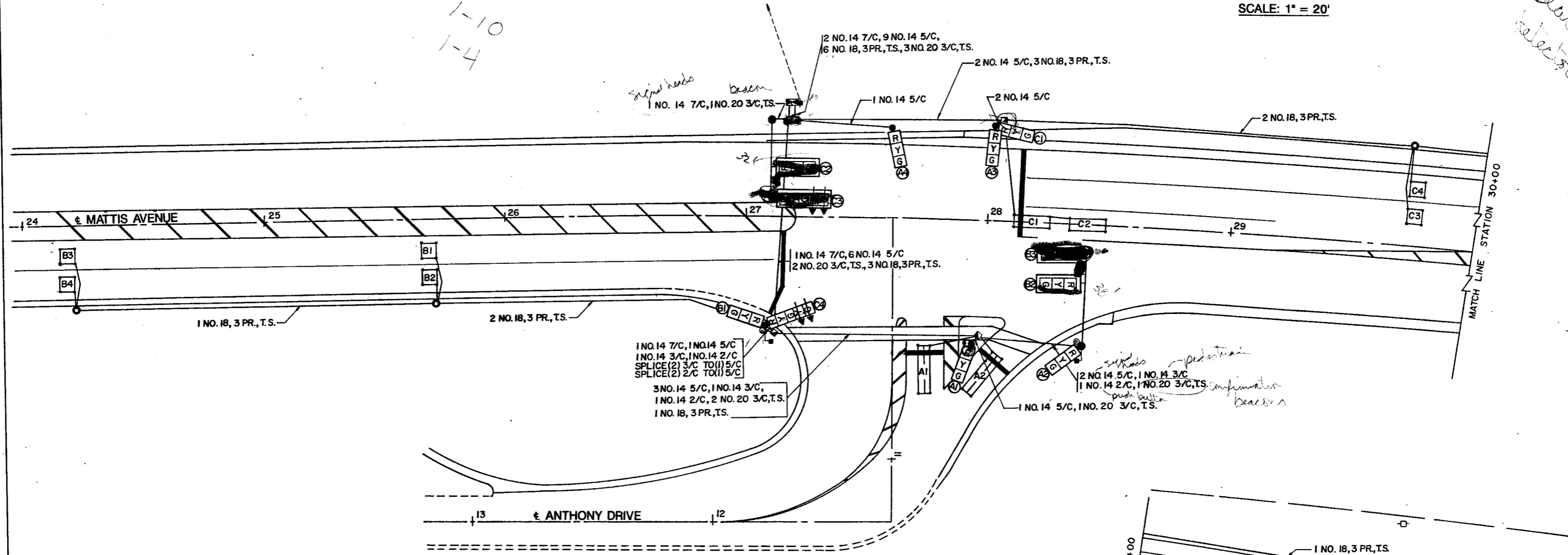
*(10-5-1H)BR



SCALE: 1" = 20'

#20 Beacon
selection

1-12
1-5
2@ 1-8
1-10
1-4



signal heads
beacon
1 NO. 14 7/C, 1 NO. 20 3/C, T.S.

2 NO. 14 7/C, 9 NO. 14 5/C,
6 NO. 18, 3 PR., T.S., 3 NO. 20 3/C, T.S.

2 NO. 14 5/C, 3 NO. 18, 3 PR., T.S.

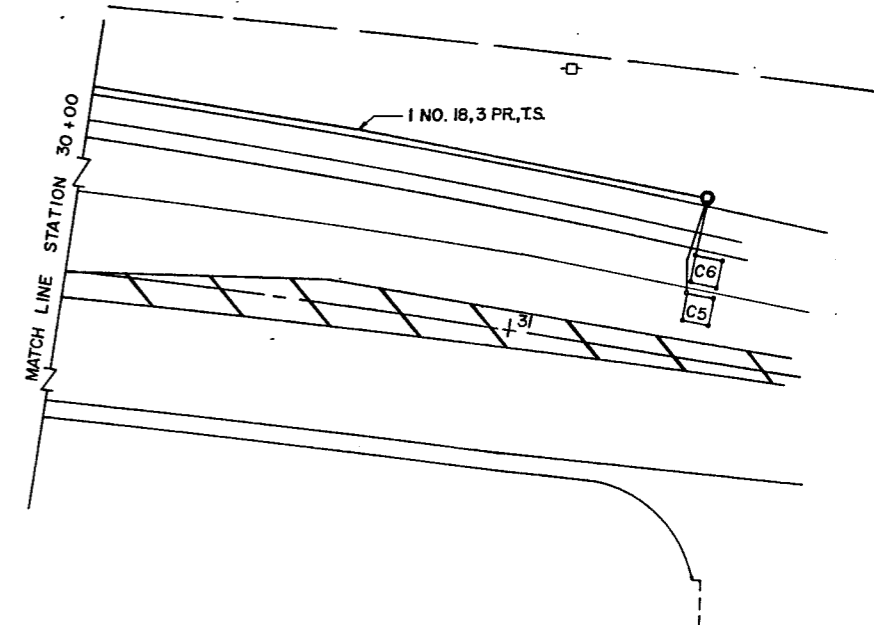
2 NO. 18, 3 PR., T.S.

1 NO. 14 7/C, 6 NO. 14 5/C
2 NO. 20 3/C, T.S., 3 NO. 18, 3 PR., T.S.

1 NO. 14 7/C, 1 NO. 14 5/C
1 NO. 14 3/C, 1 NO. 14 2/C
SPLICE (2) 3/C TO (1) 5/C
SPLICE (2) 2/C TO (1) 5/C
3 NO. 14 5/C, 1 NO. 14 3/C,
1 NO. 14 2/C, 2 NO. 20 3/C, T.S.
1 NO. 18, 3 PR., T.S.

2 NO. 14 5/C, 1 NO. 14 3/C
1 NO. 14 2/C, 1 NO. 20 3/C, T.S.
pedestrian
push button
confirmation
beacons

CABLE DIAGRAM



LEGEND

- PROPOSED MAST ARM ASSEMBLY, SIGNAL HEAD
- ◀ PROPOSED TRAFFIC POST, SIGNAL HEAD
- PROPOSED CONTROLLER & CABINET
- PROPOSED CONCRETE HANDHOLE
- ▣ PROPOSED DOUBLE CONCRETE HANDHOLE
- PROPOSED GULFBOX JUNCTION
- PROPOSED PEDESTRIAN SIGNAL HEAD
- ⊙ PROPOSED PEDESTRIAN PUSHBUTTON
- ⊛ PROPOSED SERVICE INSTALLATION
- ⊜ PROPOSED CONFIRMATION BEACON
- ⊝ PROPOSED LIGHT DETECTOR

GENERAL NOTES

- 1.) SIGNAL HEADS (B2,B3) & (C2,C3) WILL BE WIRED IN PARALLEL.
- 2.) LOOPS (B1,B2),(B3,B4),(C1,C2),(C3,C4) & (C5,C6) WILL BE WIRED IN SERIES. THE ADVANCE LOOPS WILL PROVIDE DILEMMA-ZONE PROTECTION DURING PHASE GREEN AND SERVE AS COUNTERS DURING PHASE RED.
- 3.) ALL LOOPS WILL BE INSTALLED EQUIDISTANT TO LANE LINE.
- 4.) ALL PAVEMENT MARKINGS WILL BE SHOWN ON THE STRIPING DETAIL.

SUGGESTED TIMINGS

PHASE:	1	2	6	8
MIN. GRN.	10	16	16	12
SEC. ACT.	-	3	3	-
MAX. GRN.	18	36	36	24
PASSAGE	3	2.6	2.6	3
T.B.R.	-	10	10	-
T.T.R.	-	10	10	-
MIN. GAP	-	2.8	2.8	-

	NAME	DATE
DESIGNED BY		
CHECKED BY		
DRAFTED BY		

TRAFFIC SIGNAL INSTALLATION

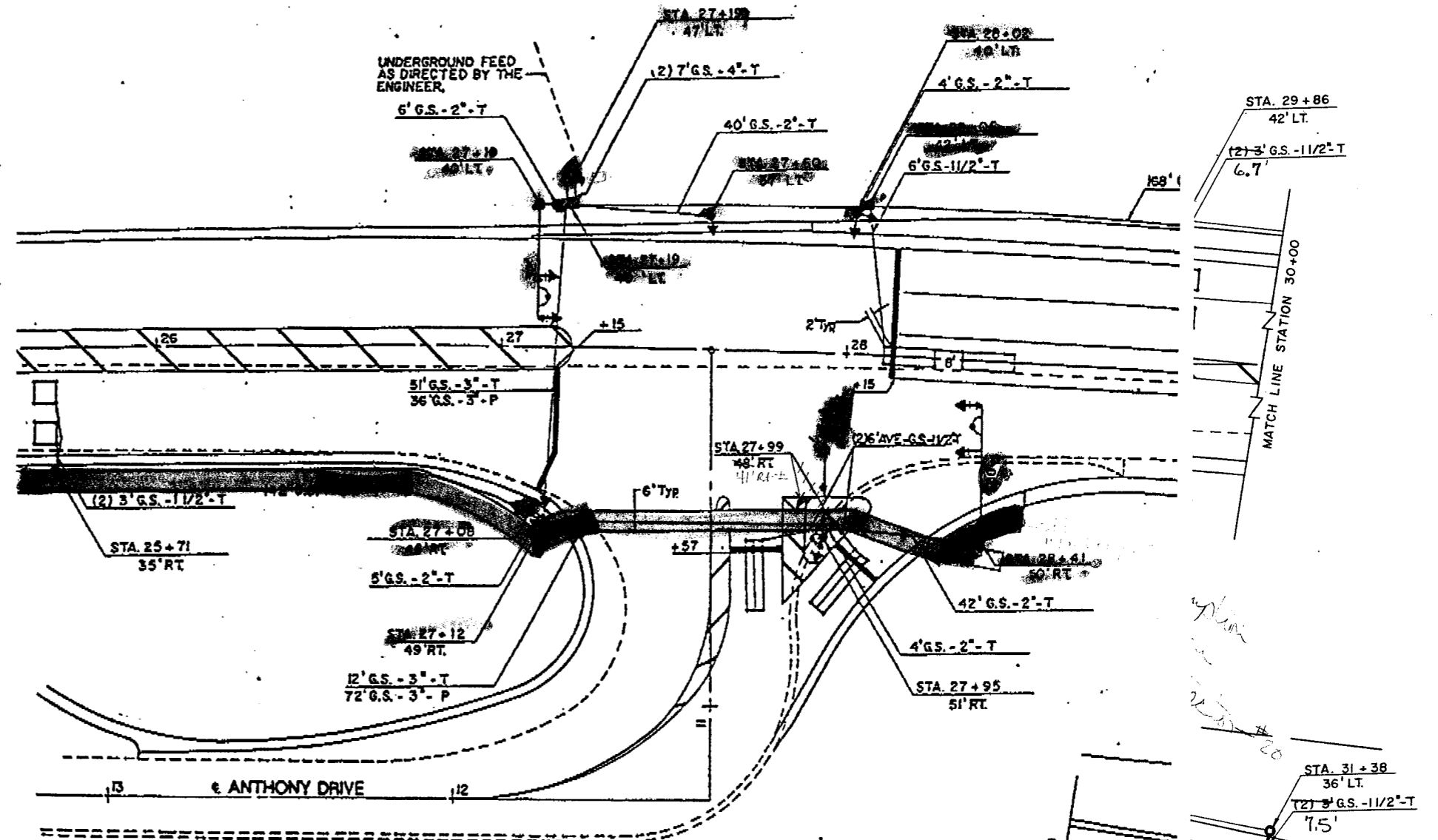
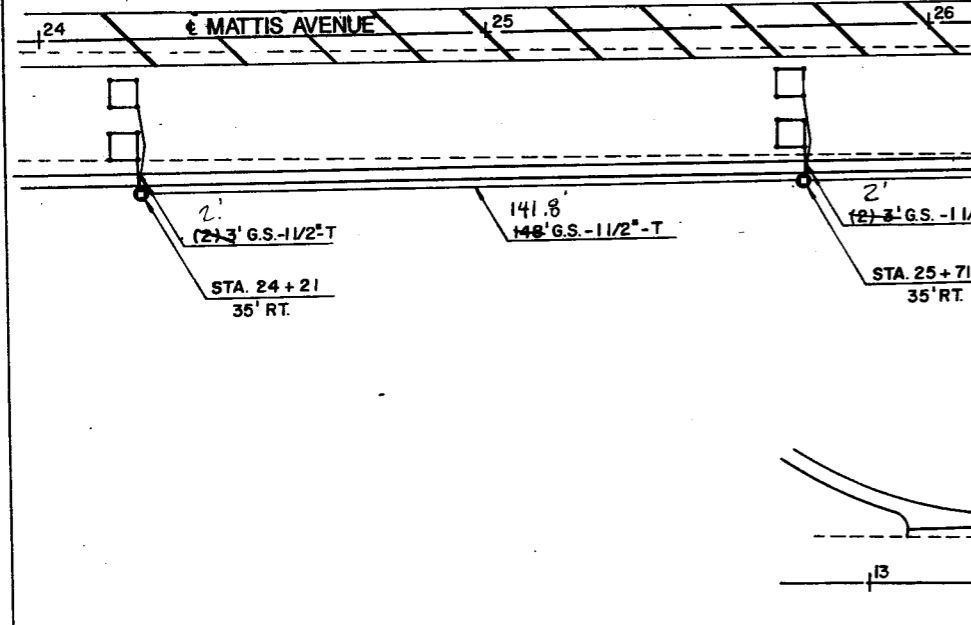
F.A.U 7158 (MATTIS AVENUE)

With

F.A.U. 7106 (ANTHONY DRIVE)

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	CHAMPAIGN	70	25

(10-5-1HB)BR



LEGEND

SEE CABLE DIAGRAM

- 1.) THE FINAL LOCATION OF ALL SIGNAL HEADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 2.) ALL POST-MOUNTED SIGNAL HEADS WILL HAVE THE TERMINAL COMPARTMENT ON TOP OF THE POST IN ACCORDANCE WITH STANDARD 2371.
- 3.) ALL ADJACENT, MAST ARM-MOUNTED SIGNALS WILL HAVE THE RED INDICATIONS INSTALLED AT A COMMON ELEVATION.
- 4.) THE CONTROLLER CABINET WILL BE INSTALLED TO PERMIT THE DOOR TO BE OPENED TOWARD MATTIS AVENUE.
- 5.) ALL INDICATIONS WILL HAVE THE RED INDICATIONS INSTALLED AT A COMMON ELEVATION.
- 6.) THE CONTROLLER WILL BE INSTALLED TO PERMIT THE DOOR TO BE OPENED TOWARD MATTIS AVENUE.

GENERAL NOTES

THE FINAL LOCATION OF ALL TRAFFIC CONTROL ITEMS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL POST-MOUNTED SIGNAL HEADS WILL HAVE THE TERMINAL COMPARTMENT ON TOP OF THE POST IN ACCORDANCE WITH STANDARD 2371.

ALL ADJACENT, MAST ARM-MOUNTED SIGNALS WILL HAVE THE RED INDICATIONS INSTALLED AT A COMMON ELEVATION.

THE CONTROLLER CABINET WILL BE INSTALLED TO PERMIT THE DOOR TO BE OPENED TOWARD MATTIS AVENUE.

LAYOUT SHEET

SIDEWALK DETAIL

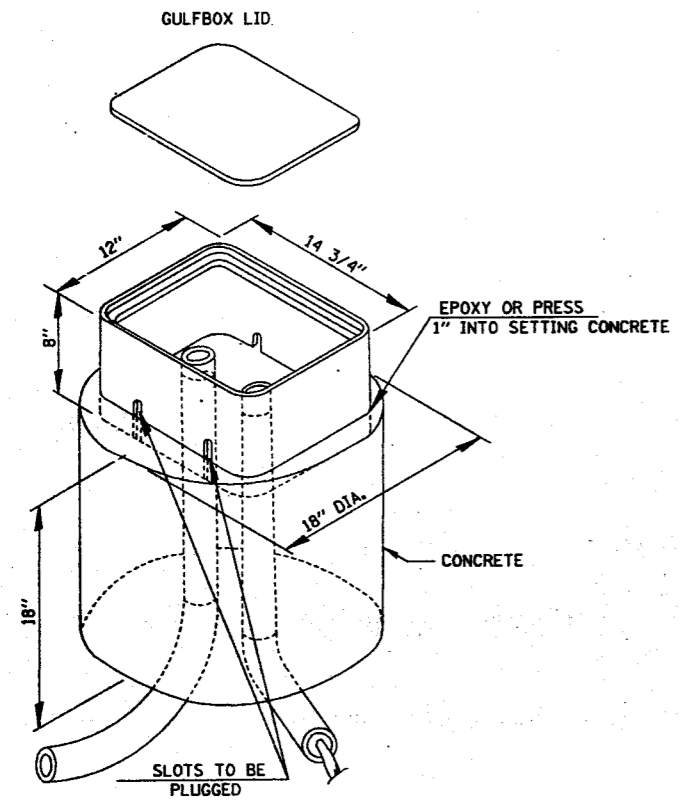
	NAME	DATE
DESIGNED BY		
CHECKED BY		
DRAFTED BY		

BILL OF MATERIALS
MATTIS AVENUE AND ANTHONY DRIVE

ITEM	UNIT	QUANTITY
SIGN PANEL - TYPE I	SQ FT	22.2
SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3.0
SIGNAL HEAD, POLYCARBONATE, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3.0
SIGNAL HEAD, POLYCARBONATE, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1.0
SIGNAL HEAD, POLYCARBONATE, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1.0
SIGNAL HEAD, POLYCARBONATE, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1.0
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, 1-FACE, BRACKET MOUNTED	EACH	2.0
TRAFFIC SIGNAL BACKPLATE	EACH	4.0
TRAFFIC SIGNAL POST, ALUMINUM 12 FT.	EACH	2.0
TRAFFIC SIGNAL POST, ALUMINUM 15 FT.	EACH	2.0
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1.0
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1.0
FULL-ACTUATED CONTROLLER, STANDARD SEQUENCE IV, 8 PHASES, IN TYPE III CABINET	EACH	1.0
TIME BASE COORDINATOR	EACH	1.0
INDUCTION LOOP DETECTOR AMPLIFIER	EACH	7.0
DETECTOR LOOP, TYPE I	LIN FT	570.0 663
PEDESTRIAN PUSHBUTTON	EACH	2.0
GALVANIZED STEEL CONDUIT IN TRENCH 1 1/2"	LIN FT	710.0 742.0 887.7
GALVANIZED STEEL CONDUIT IN TRENCH 2"	LIN FT	101.0 104.4
GALVANIZED STEEL CONDUIT IN TRENCH 3"	LIN FT	63.0 64.7
GALVANIZED STEEL CONDUIT IN TRENCH 4"	LIN FT	14.0 7.0
GALVANIZED STEEL CONDUIT, PUSHED 3"	LIN FT	100.0 99.0
ELECTRIC CABLE IN CONDUIT NO. 8 2/C	LIN FT	70.0 0.0
ELECTRIC CABLE IN CONDUIT NO. 14 2/C - push button	LIN FT	147.0 150.2
ELECTRIC CABLE IN CONDUIT NO. 14 3/C - pedestrian	LIN FT	147.0 150.2
ELECTRIC CABLE IN CONDUIT NO. 14 5/C - signal post	LIN FT	1325.0 1343.9
ELECTRIC CABLE IN CONDUIT NO. 14 7/C - signal heads - mast arms 5 light	LIN FT	160.0 172.5
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	LIN FT	480.0 548.2
ELECTRIC CABLE IN CONDUIT NO. 18, 3 PAIR TWISTED, SHIELDED - from controller to gulf boxes	LIN FT	1605.0 1593.2
SERVICE INSTALLATION, TYPE A (MODIFIED)	EACH	1.0
CONCRETE FOUNDATION, TYPE A	LIN FT	12.0
CONCRETE FOUNDATION, TYPE D	LIN FT	3.5
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	LIN FT	22.0
CONCRETE HANDHOLE	EACH	3.0
CONCRETE DOUBLE HANDHOLE	EACH	1.0
GULFBOX JUNCTION	EACH	4.0 6
TRENCH AND BACKFILL	LIN FT	888.0 1064.3
LIGHT DETECTOR	EACH	3.0
LIGHT DETECTOR AMPLIFIER	EACH	1.0

GENERAL NOTES

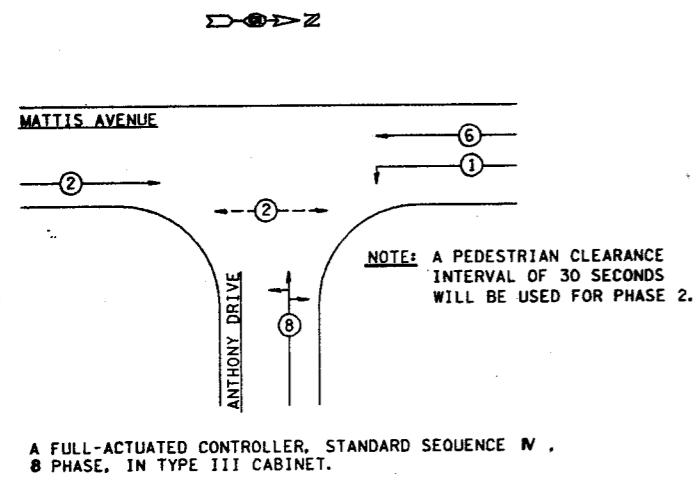
1. THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 2 FEET OF THE FACE OF CURB.
3. ALL MAST ARM POLES SHALL BE A MINIMUM OF 6 FEET FROM THE CENTER OF THE POLE TO THE FACE OF CURB (ON THE MAST ARM SIDE) OR AS SHOWN ON THE PLANS.
4. SIGNAL FACES FOR THE NORTH APPROACH ARE NOTED AS "C"; "B" FOR THE SOUTH APPROACH, AND "A" FOR THE THE EAST APPROACH.
5. A NEW CONTROLLER SHALL BE INSTALLED AT THIS INTERSECTION.
6. ALL THERMOPLASTIC QUANTITIES WILL BE INCLUDED IN THE DESIGN PLANS.
7. PEDESTRIAN PUSHBUTTON SIGNAL SIGNS SHALL BE MOUNTED ABOVE THE APPROPRIATE PEDESTRIAN PUSHBUTTON.
8. STREET SIGN LEGENDS ARE SHOWN ON THE BILL OF MATERIALS SHEET.



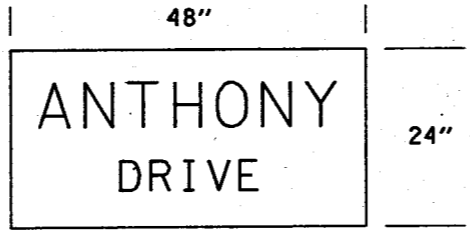
NOTE-SEE TRAFFIC SIGNAL LAYOUT FOR CONDUIT SIZE

DETAIL OF GULFBOX JUNCTION

PHASE DESIGNATION DIAGRAM



SIGN PANELS, TYPE I
(SEE STANDARD 2380)



SIGNS TO BE MOUNTED ON MAST POLE

SEE STANDARD 2393

CONTROLLER SEQUENCE IV

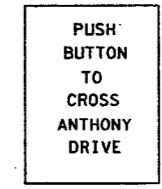
PHASE	PROPOSED OPERATION								
	0	1	2	3	4	5	6	7	8
MOVEMENT	1	2	3	4	5	6	7	8	9
CONCURRENT MOVEMENT PERMITTED	5 or 6	5 or 6	6	*	not used	1 or 2	or 2	*	8 or 4

* NOT USED IN INITIAL OPERATION

NOTES

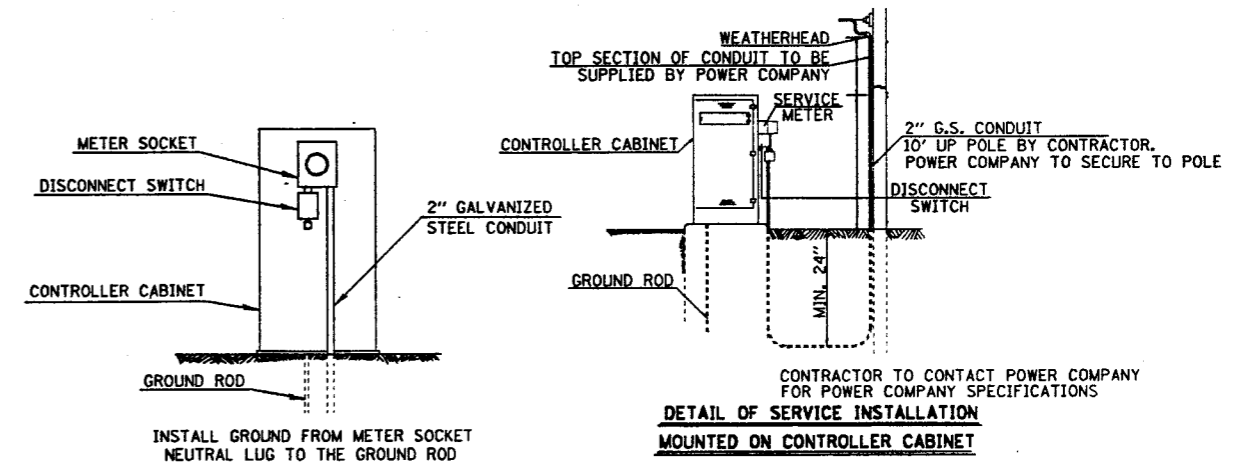
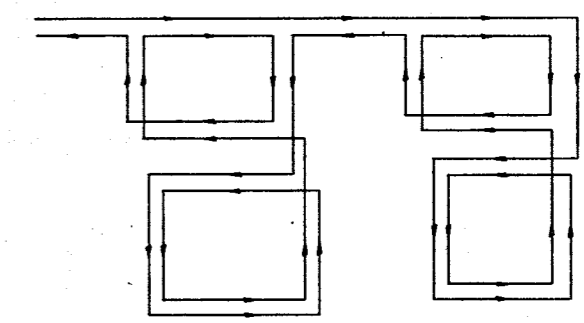
1. Pedestrian phases used will be designated in the Phase Designation Diagram.
2. Phases 1-5 shall be displayed together with a circular red.
3. Termination of phases 1-5 shall be with a yellow arrow displayed together with a circular red.
Termination of phase 1 or 5 alone in phases 1-6 or 2-5 shall be with a yellow arrow displayed together with a circular green.
Termination of all other phases shall be with a circular yellow.
4. Phases 2-6 shall not clear to phases 1-5, 1-6, or 2-5.
5. In flashing mode, all vehicular signal faces shall flash red and all pedestrian signal faces shall be dark.

PEDESTRIAN PUSH-BUTTON SIGNS



NOTE: PEDESTRIAN PUSH-BUTTON SIGNAL SIGNS SHALL BE MOUNTED ABOVE THE PEDESTRIAN PUSH-BUTTON. THE SIGNS WILL BE BOLTED TO THE POSTS. THE SIGNS WILL BE INCIDENTAL TO THE PUSH-BUTTON IN ACCORDANCE WITH SECTION T-419 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.

DETAIL FOR QUADRAPOLE LOOPS



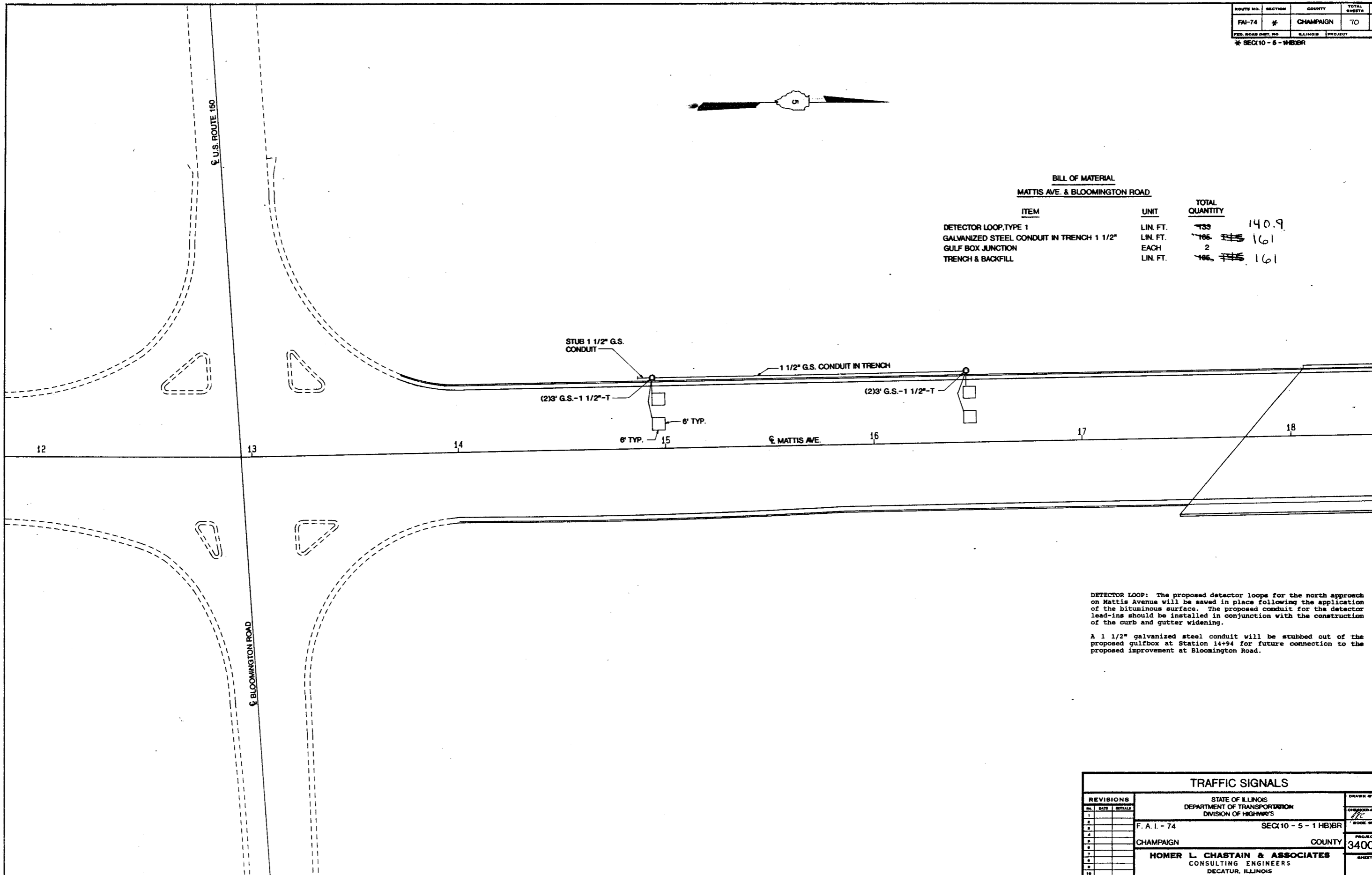
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	27A
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

* SEC 10 - 5 - HB/BR



BILL OF MATERIAL
MATTIS AVE. & BLOOMINGTON ROAD

ITEM	UNIT	TOTAL QUANTITY
DETECTOR LOOP, TYPE 1	LIN. FT.	133 140.9
GALVANIZED STEEL CONDUIT IN TRENCH 1 1/2"	LIN. FT.	166 161
GULF BOX JUNCTION	EACH	2
TRENCH & BACKFILL	LIN. FT.	166 161

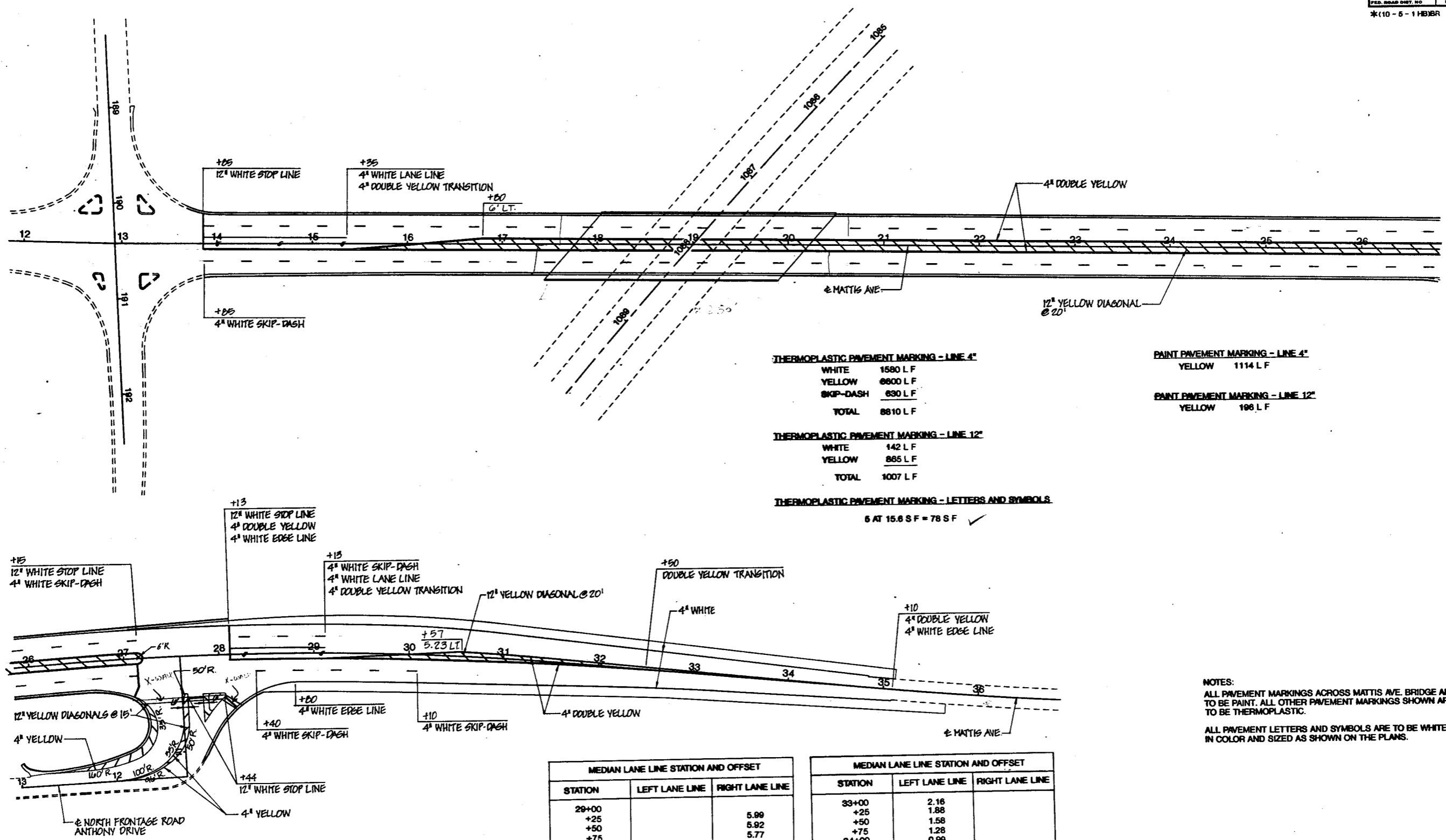


DETECTOR LOOP: The proposed detector loops for the north approach on Mattis Avenue will be sawed in place following the application of the bituminous surface. The proposed conduit for the detector lead-ins should be installed in conjunction with the construction of the curb and gutter widening.

A 1 1/2" galvanized steel conduit will be stubbed out of the proposed gulfbox at Station 14+94 for future connection to the proposed improvement at Bloomington Road.

REVISIONS		TRAFFIC SIGNALS	
NO.	DATE	INITIALS	DATE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY K.C. 87
F. A. I. - 74	SEC 10 - 5 - 1 HB/BR	DATE
CHAMPAIGN	COUNTY	PROJECT NO. 3400-14
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		SHEET NO.



THERMOPLASTIC PAVEMENT MARKING - LINE 4"

WHITE	1580 L F
YELLOW	8800 L F
SKIP-DASH	630 L F
TOTAL	8810 L F

PAINT PAVEMENT MARKING - LINE 4"

YELLOW	1114 L F
--------	----------

PAINT PAVEMENT MARKING - LINE 12"

YELLOW	198 L F
--------	---------

THERMOPLASTIC PAVEMENT MARKING - LINE 12"

WHITE	142 L F
YELLOW	885 L F
TOTAL	1007 L F

THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS

6 AT 15.6 SF = 78 SF ✓

NOTES:
 ALL PAVEMENT MARKINGS ACROSS MATTIS AVE. BRIDGE ARE TO BE PAINT. ALL OTHER PAVEMENT MARKINGS SHOWN ARE TO BE THERMOPLASTIC.
 ALL PAVEMENT LETTERS AND SYMBOLS ARE TO BE WHITE IN COLOR AND SIZED AS SHOWN ON THE PLANS.

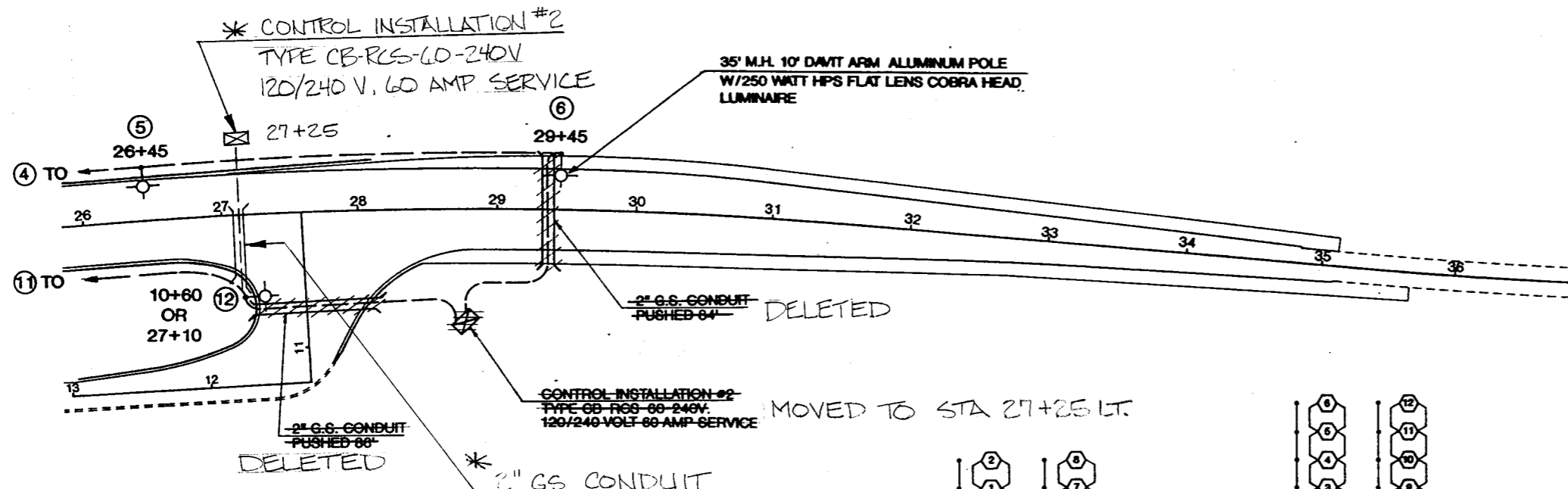
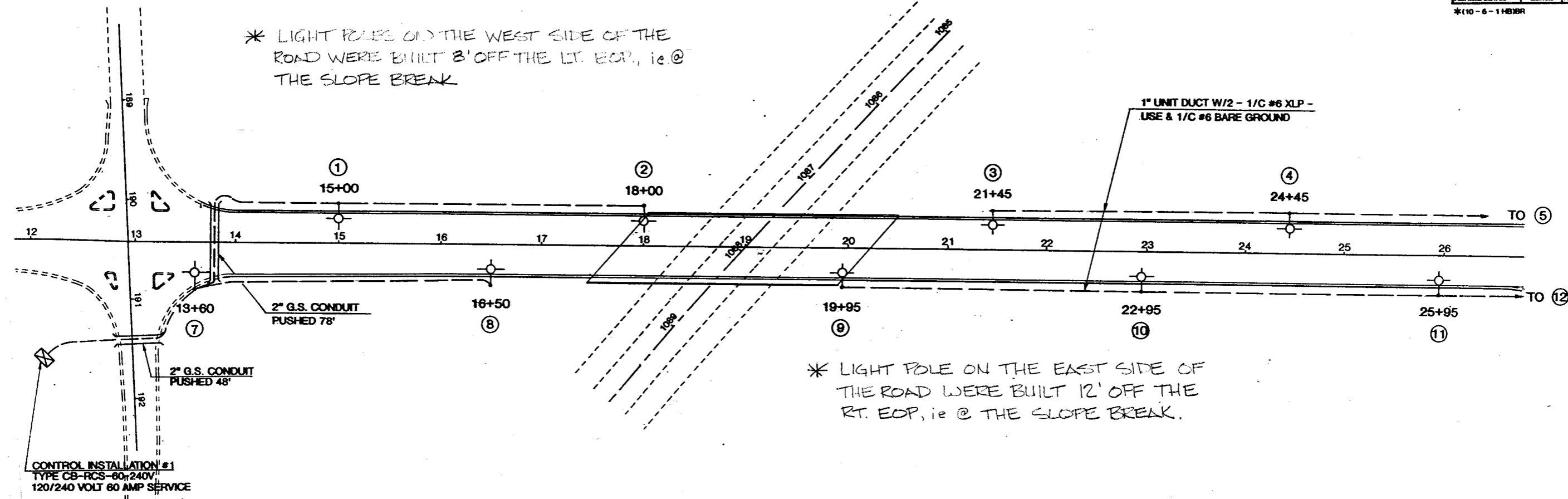
MEDIAN LANE LINE STATION AND OFFSET

STATION	LEFT LANE LINE	RIGHT LANE LINE
29+00		
+25		5.99
+50		5.92
+75		5.77
30+00		5.55
+25		5.26
+50		4.89
+75	5.03	4.45
31+00	4.70	3.93
+25	4.34	3.34
+50	3.93	2.87
+75	3.61	1.98
32+00	3.32	1.34
+25	3.03	0.84
+50	2.74	0.45
+75	2.45	

MEDIAN LANE LINE STATION AND OFFSET

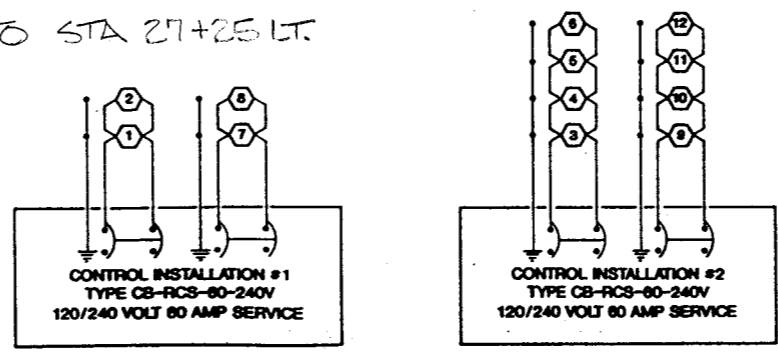
STATION	LEFT LANE LINE	RIGHT LANE LINE
33+00	2.16	
+25	1.88	
+50	1.58	
+75	1.28	
34+00	0.99	
+25	0.70	
+50		
+75		
35+00		

REVISIONS			PAVEMENT MARKING PLANS	
NO.	DATE	INITIALS	STATE OF ILLINOIS	DRAWN BY
1			DEPARTMENT OF TRANSPORTATION	DATE
2			DIVISION OF HIGHWAYS	BOOK NUMBER
3			F. A. I. - 74	PROJECT NO.
4			SEC(10-5-1)HB/BR	3400-14
5			CHAMPAIGN COUNTY	SHEET NO.
6			HOMER L. CHASTAIN & ASSOCIATES	
7			CONSULTING ENGINEERS	
8				
9				
10				



BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY TOTALS
UNIT DUCT, 2-800 V. XLP #6, 1" POLYETHYLENE	LIN. FT.	3606 2938
BARE COPPER WIRE, 1/C #6	LIN. FT.	3606 2938
TRENCH & BACKFILL FOR ROADWAY LIGHTING	LIN. FT.	2760 2713
ELECTRIC CABLE IN CONDUIT, 800 V. DLP TYPE USE) 1/C #12	LIN. FT.	1200
CONDUIT PUSHED, 2" DIA. INTERMEDIATE METAL	LIN. FT.	296 216
LIGHT POLE FOUNDATION	EACH	12
LIGHT POLE ALUMINUM 35' M.H. 10' DAVIT ARM	EACH	12
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT 250 WATT	EACH	12
CONTROL INSTALLATION TYPE CB-RCS-60-240V	EACH	2



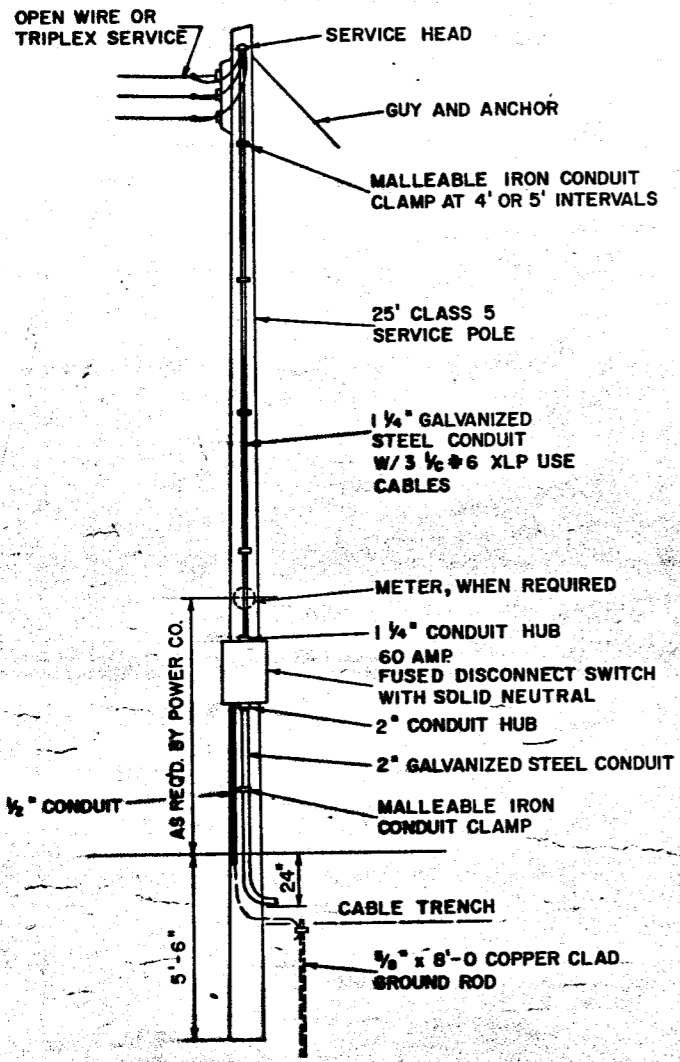
LIGHTING PLANS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DESIGNED BY DATE M. L. CHASTAIN 1/25/93
F. A. I. - 74	SEC 10 - 5 - 1 HB3R	PROJECT NO. 3400-14
CHAMPAIGN COUNTY	ENGINEER HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	

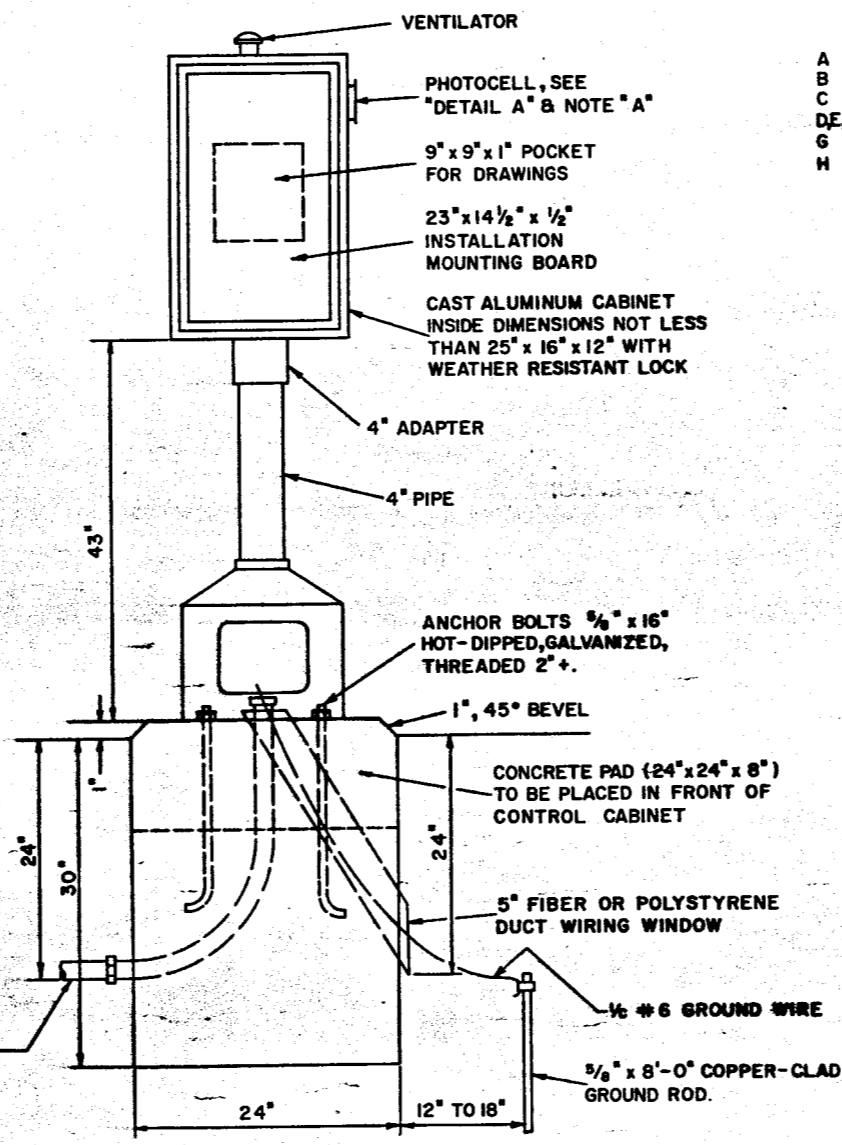
REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
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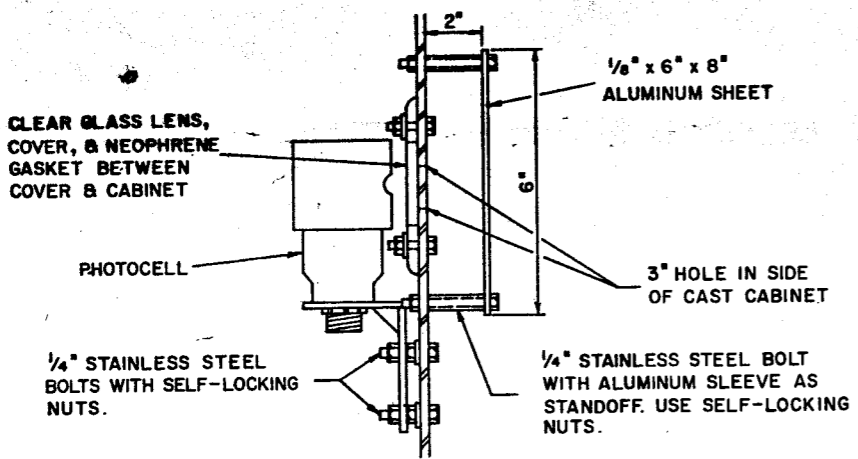
DAM 1-25-93



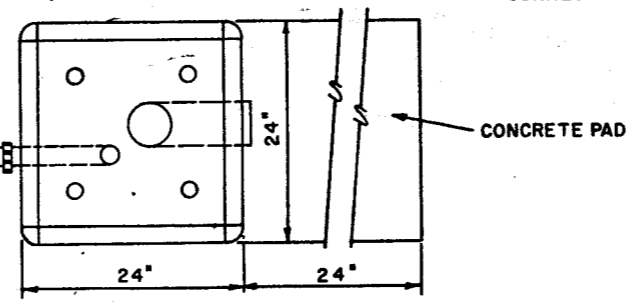
SERVICE POLE (BY CONTRACTOR)
LOCATE ADJACENT TO R.O.W. LINE



CONTROL INSTALLATION

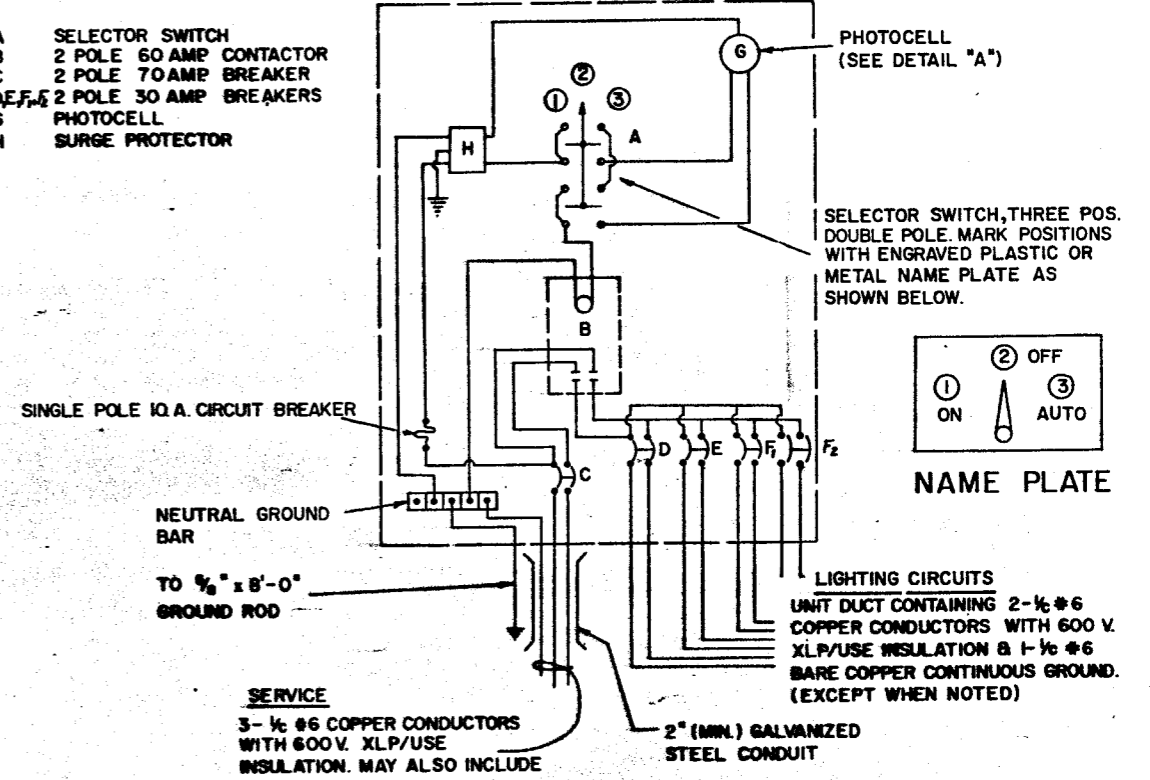


DETAIL "A"



TOP OF FOUNDATION

- A SELECTOR SWITCH
- B 2 POLE 60 AMP CONTACTOR
- C 2 POLE 70 AMP BREAKER
- D, E, F, G 2 POLE 30 AMP BREAKERS
- H PHOTOCELL



WIRING DIAGRAM

NOTE:
WIRING SHALL BE PANEL BOARD FASHION. ALL BENDS SHALL BE RIGHT ANGLES. ALL RUNS SHALL BE VERTICAL OR PARALLEL TO PANEL BOARD. WIRES SHALL BE GROUPED OR LACED.

NOTE "A"
WHERE UNMETERED SERVICE IS PROVIDED BY THE POWER COMPANY, THE PHOTOCELL, RECEPT, & WINDOW COVER MAY BE OMITTED. THE CONTRACTOR SHALL FURNISH AND INSTALL 2- 1/2" #12 AND AERIAL WIRE IF REQUIRED FROM THE CONTROL INSTALLATION TO THE POWER COMPANY'S PHOTOCELL CONTROL AND CONNECT PER WIRING DIAGRAM.

NOTE "B"
THE UNDERGROUND SERVICE SHALL BE 150' MAXIMUM. TOTAL AERIAL & UNDERGROUND SERVICE BETWEEN THE CONTROL INSTALLATION AND PRIMARY TRANSFORMER SHALL BE 250'.

- 240 V. SERVICE
- 480 V. SERVICE

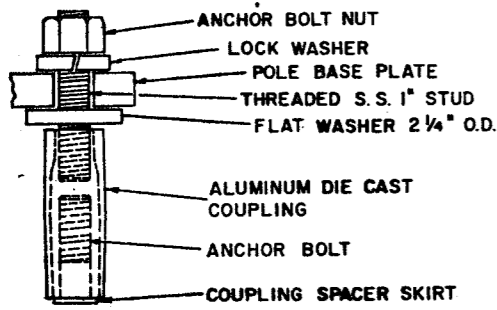
DRAWN FEB. 15, 1985 BY J.L. PUTNAM	
J.L.P.	6-22-83
REV. BY J.L.P.	6-8-84
REV. BY J.L.P.	10-23-85
REV. BY J.L.P.	10-6-86
REV. BY J.L.P.	2-4-87
Rev.	2-8-88
Rev.	7-25-91

CONTROL INSTALLATION
TYPE CB-RCS-60

ROUTE	SECTION	COUNTY	TOT. SHTS.	SHEET #
F.A.L. 74	*	CHAMBERLAIN	70	31

*(10-5-1 HB) BR

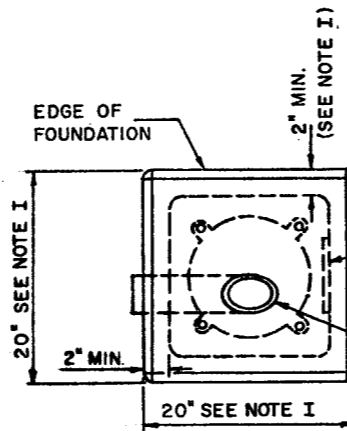
35 or below - 5'
A bolts w/ pipe plates
Talk B design
make up pl



TYP. COUPLING

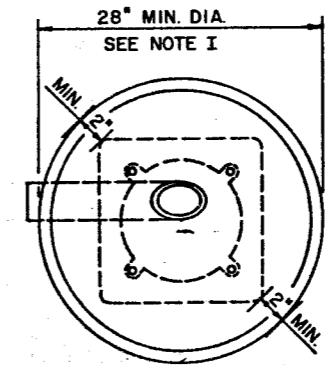
LOW MOUNT DESIGN TABLE

MOUNTING FOUNDATION HEIGHT	DEPTH	BOLT CIRCLE
30' OR LESS	5'-0"	11 1/2"
31' - 35'	6'-0"	11 1/2"
36' - 40'	7'-0"	15"
41' - 45'	7'-6"	15"
46' - 50'	8'-0"	15"

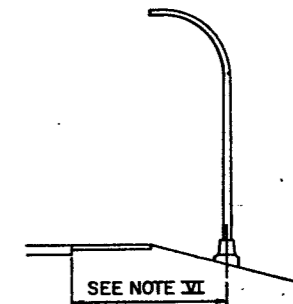


PLACE DOOR ON WIREWAY SIDE. WIREWAY MAY BE ON FRONT, BACK, OR SIDE OF FOUNDATION AS REQ'D. BY THE TRENCHING WHICH SHOULD PERMIT UNIT DUCT TO HAVE AS FEW BENDS AS ARE PRACTICAL.

TOP OF FIBER DUCT SHALL BE FLUSH WITH THE TOP OF FOUNDATION FOR DRAINAGE. 5" I.D. TYPE I FIBER OR POLYSTYRENE-DUCT WIRING WINDOW.



ALTERNATE FOUNDATION



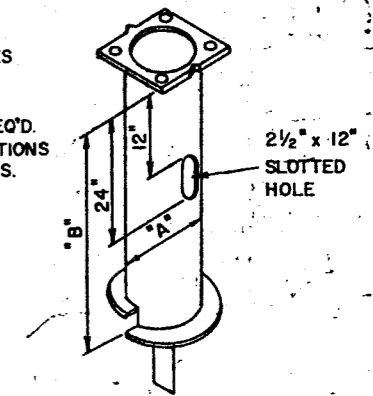
NOTE VI:
 LOW MOUNT POLE FOUNDATION SETBACK:
 FOR HORIZONTAL MOUNTED LUMINAIRES, SETBACK SHALL BE A MINIMUM OF 20' FROM EDGE OF PAVEMENT.
 FOR VERTICAL MOUNT LUMINAIRES, SETBACK SHALL BE A MINIMUM OF 30' FROM EDGE PVMT. POLES SHALL BE LOCATED 5'-0" BEHIND GUARDRAIL OR OTHER PROTECTIVE BARRIERS, OR AS DIRECTED BY THE ENGINEER.

DESIGN DATA, STEEL FOUNDATION†

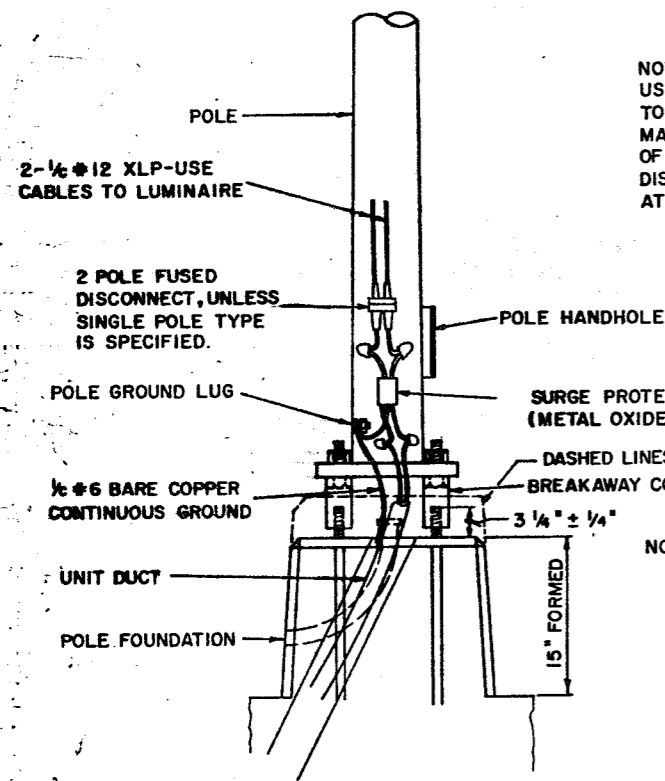
BOLT CIRCLE	"A"	"B"	MOUNTING HEIGHT
15"	10"	72"	45' or 50'
15"	8"	72"	45'
11 1/2"	8"	72"	40' or less

* FOR USE ON POLES
 # / TWIN TENON

† MINIMUM TORQUE REQ'D. TO INSTALL FOUNDATIONS SHALL BE 5,000 LBS.



POLE FOUNDATION STEEL



POLE BASE MOUNTING & WIRING

NOTE:
 USE DIRT REMOVED FROM FOUNDATION TO FILL AROUND FOUNDATION TOP. MAKE TOP OF DIRT LEVEL WITH TOP OF CONCRETE. ANY EXCESS DIRT WILL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

NOTE: A.
 ON POLES WITH TWO LUMINAIRES, EACH LUMINAIRE SHALL HAVE A SEPARATE FUSED DISCONNECT.
 B. INSTALLATION INSTRUCTIONS: SCREW COUPLINGS ON TO ANCHOR BOLTS TO END OF THREADS, LEVEL COUPLINGS, VERY IMPORTANT, AS COUPLINGS WILL BECOME OVERSTRESSED AND EITHER CRACK OR STRIP THREADS INSIDE COUPLING.

ANCHOR BOLT SHALL EXTEND THROUGH NUT 3/8" TO 1". USE SELF-LOCKING NUT AND FLAT WASHER. DO NOT USE LOCK-WASHER. LENGTH ABOVE FOUNDATION SHALL BE ADJUSTED WHEN BREAKAWAY DEVICES ARE USED.

1" # STEEL ANCHOR BOLTS THREADED 4"± AND HOT DIP GALVANIZED 9"± 1". 4"± 1" HOOK ON THE OTHER END. SEE NOTE III.

NOTE:
 AFTER POURING CONCRETE, THE FORM SHALL REMAIN UNDISTURBED OVERNIGHT.

THE TOP 15" ONLY SHALL BE FORMED. CONCRETE BOUNDED BY UNDISTURBED EARTH ONLY SHALL FILL THE REMAINDER OF THE HOLE.

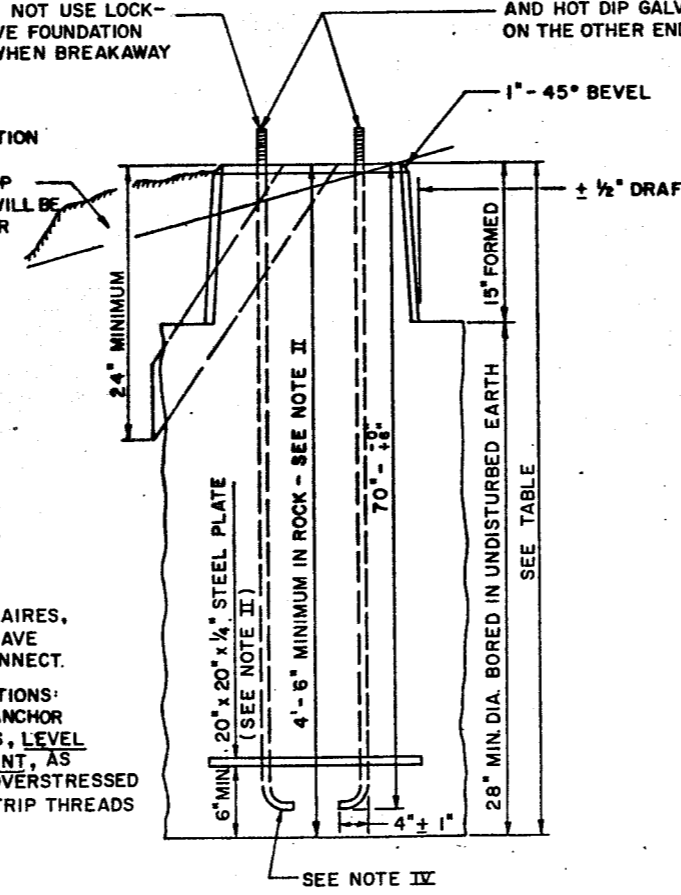
NOTE I:
 MINIMUM CLEARANCE FROM THE OUTSIDE EDGE OF FOUNDATION TO ANY PART OF THE POLE BASEPLATE SHALL BE 2".

NOTE II:
 THE DEPTH OF THE FOUNDATION MAY BE REDUCED 6" FOR EVERY FOOT OF ROCK ENCOUNTERED WITH A MINIMUM DEPTH OF 4'-6". WHEN THE DEPTH OF THE FOUNDATION IS DECREASED TO LESS THAN 6'-0" THE ANCHOR BOLTS SHALL BE CUT, THREADED, AND A STEEL PLATE 20"x20"x 1/4" SHALL BE INSTALLED ON THE ANCHOR BOLTS 6" ABOVE THE BOTTOM OF THE EXCAVATION. THE COST SHALL BE INCIDENTAL TO THE FOUNDATION.

NOTE III:
 ON PARAPET WALLS USE 1/4" # ANCHOR BOLTS. USE SELF-LOCKING NUT AND FLAT WASHER. DO NOT USE LOCKWASHER. (FOR DETAILS SEE STANDARD III/2.35 OF BRIDGE DESIGN MANUAL.

NOTE IV:
 BEND RADIUS SHALL BE FOUR TIMES BOLT DIAMETER.

NOTE V:
 CONNECT GROUND WIRES TO POLE BASE GROUND LUG, NOT ANCHOR BOLTS OR TRANSFORMER BASE.



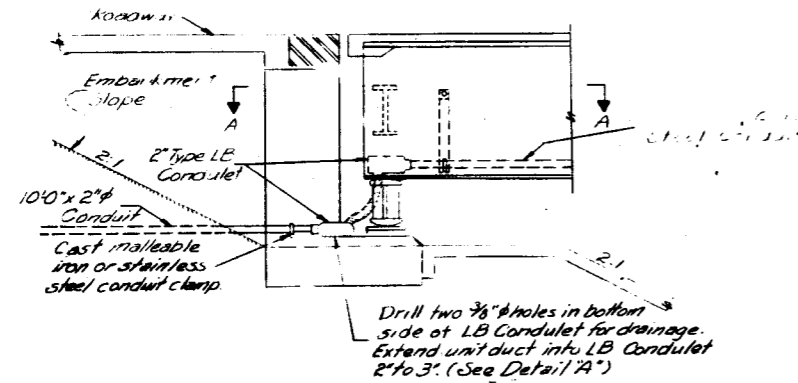
DRAWN	FEB. 27, 1984
BY:	J. L. PUTNAM
REV. BY	J.L.P. 8-3-84
REV. BY	J.L.P. 8-29-84
REV. BY	J.L.P. 1-21-85
REV. BY	J.L.P. 10-28-85
REV. BY	J.L.P. 1-21-86

REV. J.L.P. 8-28-86
 REV. J.L.P. 3-29-88
 REV. J.L.P. 4-18-88

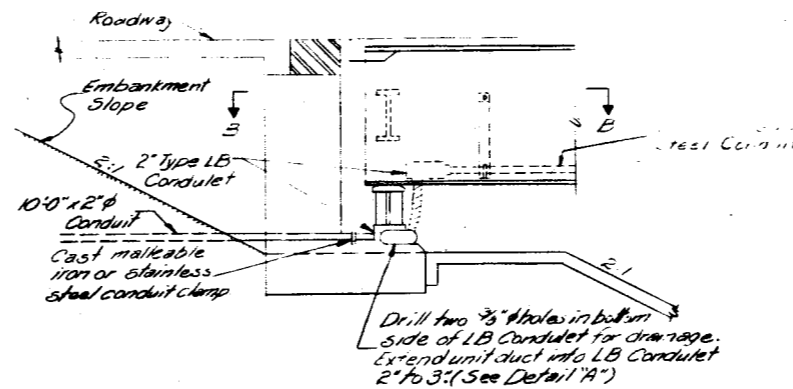
LIGHT POLE FOUNDATION

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

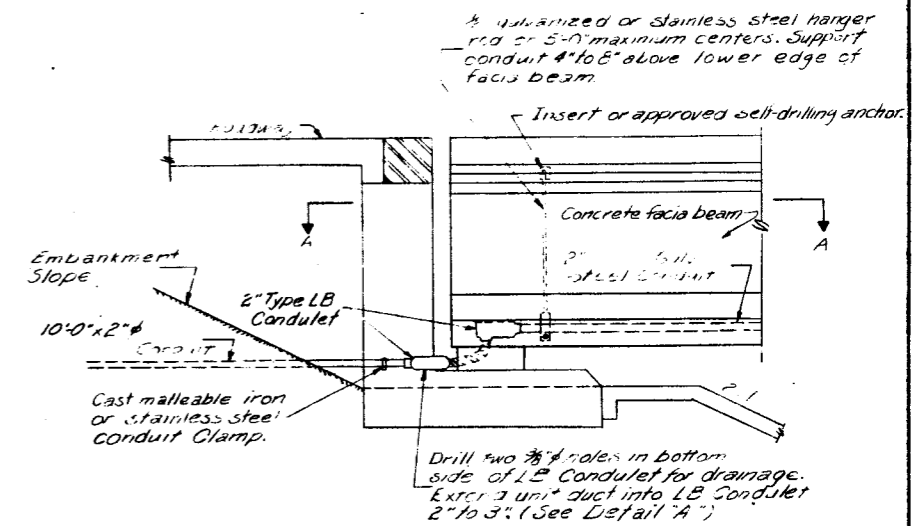
PLATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAL 74	*	CHAMPAIGN	70	31A	SHEETS
* (10-6-1) HBR					



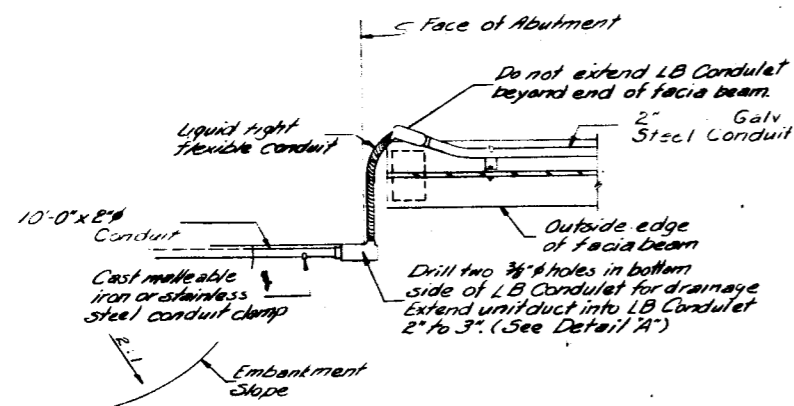
ELEVATION PLAN



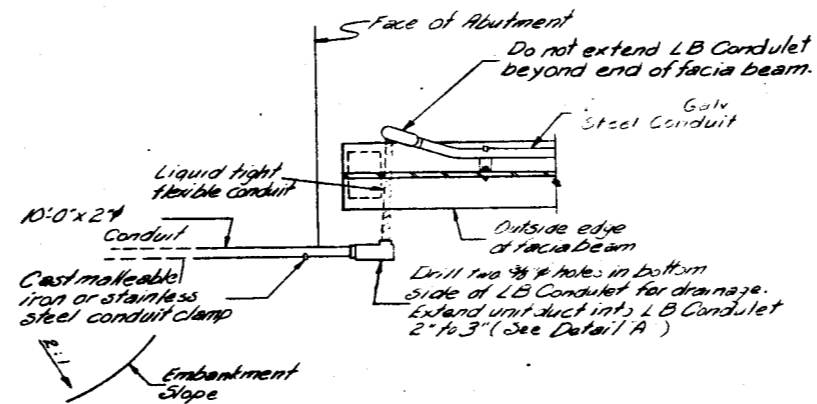
ELEVATION PLAN



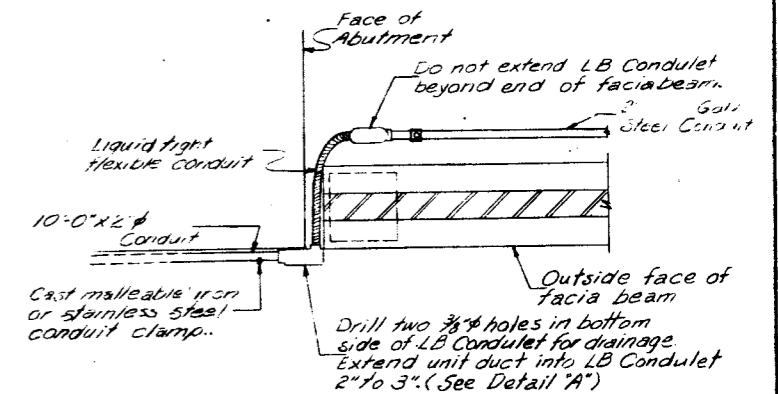
ELEVATION PLAN



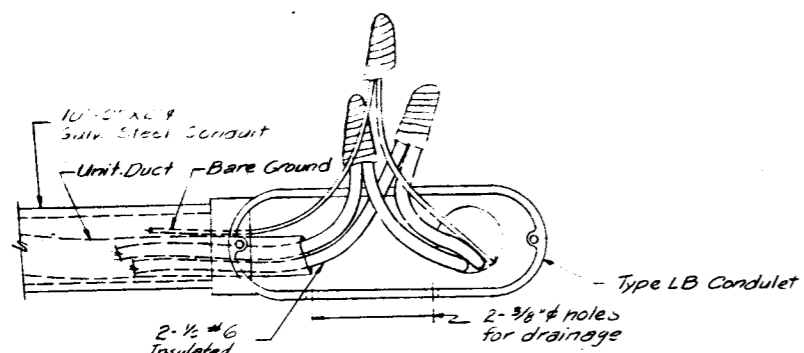
SECTION A-A



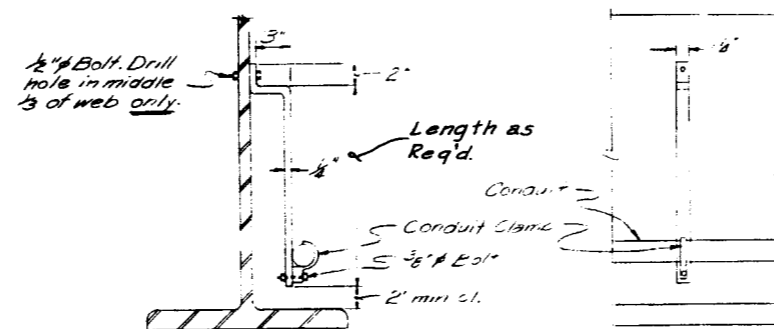
SECTION B-B



SECTION AT ABUTMENTS

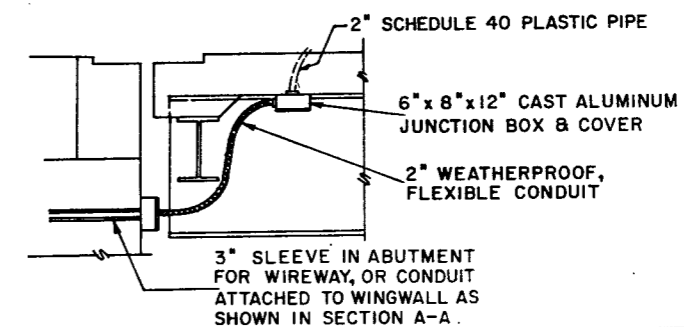


DETAIL "A"



CONDUIT SUPPORT BRACKET

Conduit clamps shall be malleable iron locknuts, bolts, and washers shall be stainless steel. A steel bracket shall be hot-dipped galvanized after fabrication locate on 6"-0" centers.

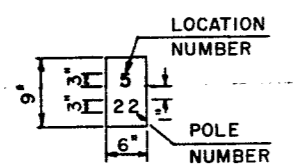


DRAWN BY J.L. PUTNAM	
REV. BY JLP	8-1-85
REV. BY JLP	5-8-91

CONDUIT DETAILS

"INSTALL AND ORIENT ARM BRACKET OVER POLE TENON AND FIRMLY HAND TIGHTEN THE TWO SET SCREWS. USE THIRD HOLE IN ARM BRACKET AS A GUIDE TO DRILL A 2 1/4" DIAMETER HOLE THROUGH TENON. INSTALL AND TIGHTEN SELF-TAPPING SCREW. TIGHTEN SET SCREWS AN ADDITIONAL 1/4 TO 3/8 TURN WITH HEX KEY (NOT PROVIDED). INSTALL LOCKNUTS ON SET SCREWS IF THREADED PROJECTION ALLOWS."

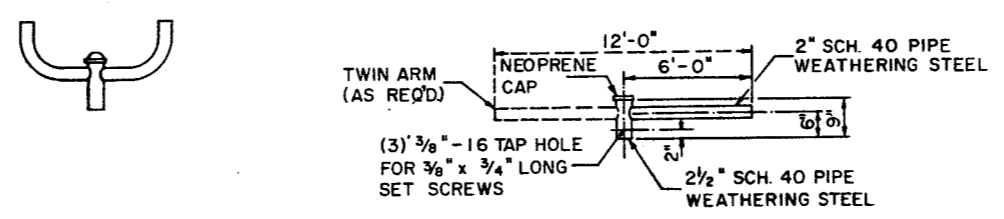
POLE SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR 80 M.P.H. WIND LOADING AND 90 LB. 4.0 SQ FT. E.P.A. LUMINAIRE.



THE CONTRACTOR SHALL FURNISH AND INSTALL A LIGHT POLE IDENTIFICATION OF EACH NEW LIGHT POLE, AS SHOWN ABOVE, INCIDENTAL TO THE RESPECTIVE LIGHT POLE PAY ITEM. THE NUMERALS SHALL BE 3" SERIES "D", BLACK, SCREENED ON SILVER-WHITE TYPE B PRESSURE SENSITIVE REFLECTIVE SHEETING CONFORMING TO THE REQUIREMENTS OF SECTION T602.01 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. THE NUMERALS SHALL CONFORM TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS".

THE LIGHT POLE IDENTIFICATION SHALL BE APPLIED TO SIGN BASE MATERIAL AS SPECIFIED IN SECTION 719.11 OF THE STANDARD SPECIFICATIONS, APPROXIMATELY 7' ABOVE THE ADJACENT PAVEMENT GRADE VISIBLE TO APPROACHING TRAFFIC IN ACCORDANCE WITH HIGHWAY STANDARD 2319.

NOTE: SINGLE OR TWIN ARM ASSEMBLY SHALL BE TILTED 3° ABOVE HORIZONTAL.

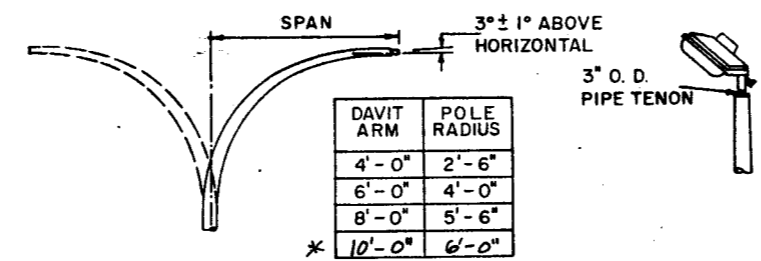


- ① LUMINAIRE
- ② WOOD POLE, CLASS 3 OR BETTER
- ③ 2 1/2" GALV. STEEL CONDUIT
- ④ SINGLE OFFSET POLE BAND
- ⑤ CONDUIT BUSHING
- ⑥ CABLE CLAMPS ON 2'-0" CENTERS
- ⑦ 3/8" # 12 TYPE USE CABLE
- ⑧ 1" GALV. STEEL CONDUIT 10'-0" IN LENGTH

- * (10-6-1 HB) BR
- ⑨ 3/8" φ HOT DIPPED GALVANIZED BOLT WITH FLAT WASHER & LOCKNUT (3 REQ'D.)
- ⑩ CONDUIT CLAMPS ON 3'-0" CENTERS
- ⑪ UNIT DUCT
- ⑫ THREADED REDUCER
- ⑬ "C" CONDULET, THREADED
- ⑭ 1 1/2" GALV. STEEL CONDUIT FOR 1 UNIT DUCT OR 3" GALV. STEEL CONDUIT FOR 2 OR 3 UNIT DUCTS.

TWIN-TENON

TENON MOUNT BRACKET ARM



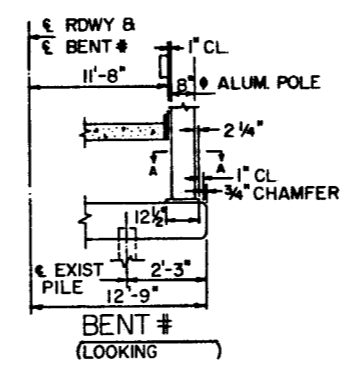
- DAVIT ARM (AND/OR)
- DAVIT ARM - TWIN

TENON

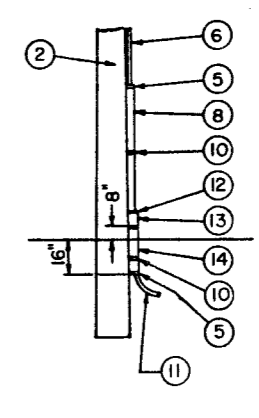
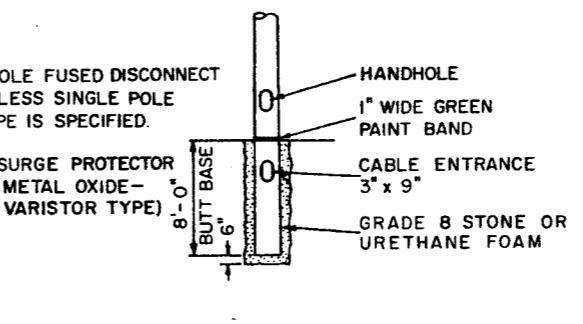
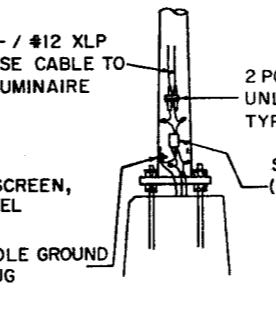
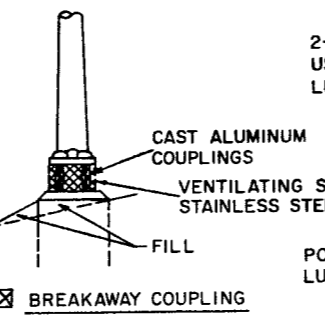
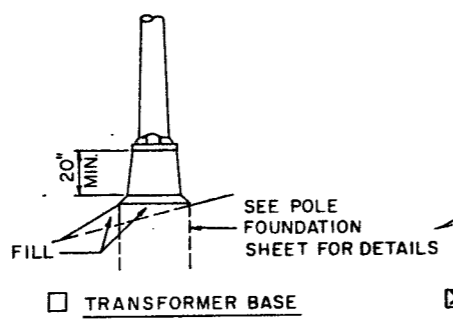
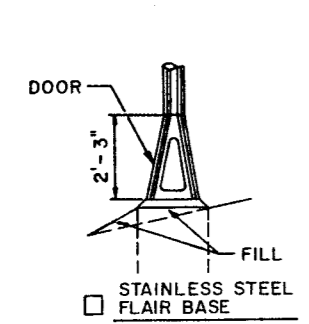
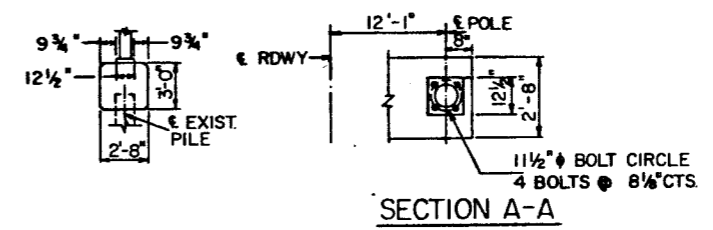
SHORT BRACKET

MAST ARM

TENON



BRIDGE PIER MOUNT



POLE LENGTH	DEPTH IN GROUND
65'	12'
60'	10'
55'	9'
50'	8'
45'	7'
40'	6.5'
35'	6'
30'	5.5'

POLE, WOOD

FRANGIBLE

ANCHOR

BUTT BASE

METAL

OR

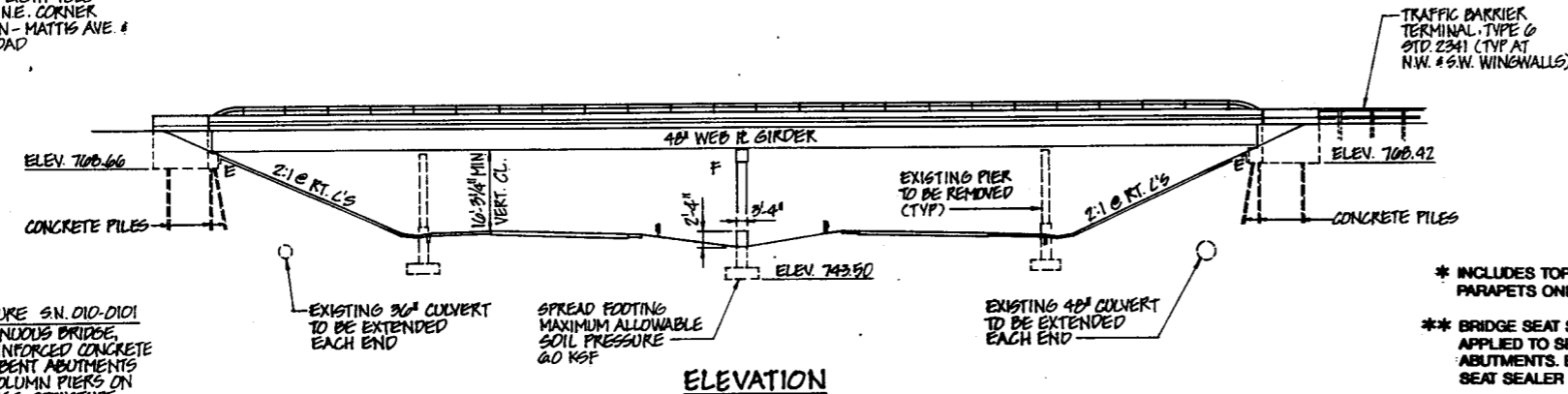
CONCRETE

DRAWN SEPT. 1, 1989	BY J. L. PUTNAM
REV. BY J.L.P.	1-22-91
REV. BY J.L.P.	3-12-91

POLE STANDARDS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	*	CHAMPAIGN	70	72
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
* SEC (10-5-1 HB) BR				

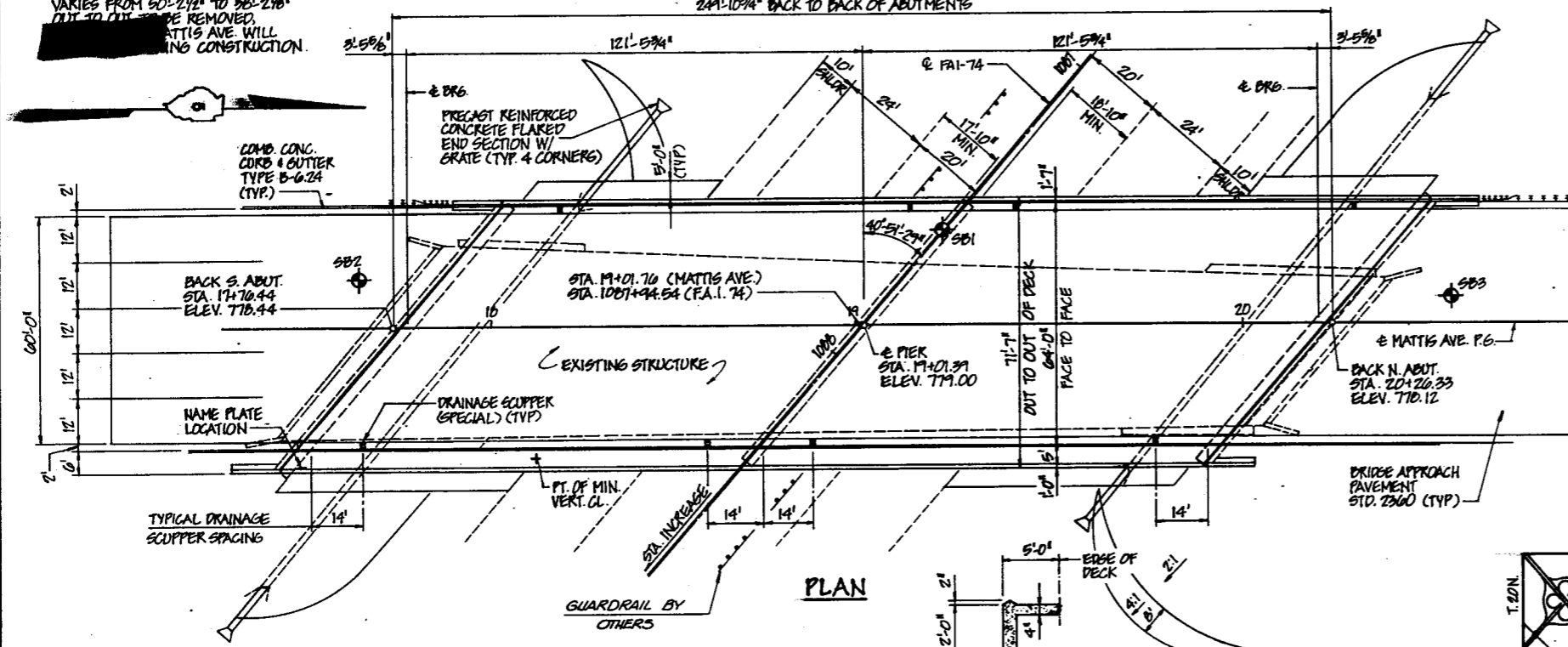
BENCH MARK:
B.M. 'A' - CHISELED 'A' ON WEST SIDE OF TRAFFIC LIGHT POLE BASE (CONC.) AT N.E. CORNER OF INTERSECTION - MATTIS AVE & BLOOMINGTON ROAD
ELEV. 769.64



EXISTING STRUCTURE SN. 010-0101
FOUR-SPAN CONTINUOUS BRIDGE, WBS BEAMS & REINFORCED CONCRETE DECK, TWO PILE BENT ABUTMENTS AND THREE B-COLUMN PIERS ON SPREAD FOOTINGS. STRUCTURE LENGTH 234'-0\"/>

ELEVATION

* INCLUDES TOP AND INSIDE FACES OF PARAPETS ONLY.
** BRIDGE SEAT SEALER SHALL BE APPLIED TO SEAT AREA OF THE ABUTMENTS. EST. AREA OF BRIDGE SEAT SEALER 513 SQ. FT.



PLAN

CURVE DATA - F.A.I. 74
P.I. STA. 1088+66.18
 $\Delta = 102^\circ 34' 04''$
 $D = 002' 48'' 51''$
 $T = 1155.70'$
 $R = 7097.70'$
 $L = 2290.95'$
 $E = 99.26'$
 $SE = 0.020$ FT./FT.
P.C. STA. 1077+10.48
P.C.C. STA. 1100+01.43
S.E. ATTAINED STA. 1076+00.45 TO STA. 1078+10.48
S.E. TRANSITION FROM 0.02' / FT. TO 0.0156' / FT. FROM STA. 1099+51.43 TO STA. 1100+51.43

STATION 19+01.76
BUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (10-5-1 HB) BR
F.A. PROJ. FIR-74-5 (129)
LOADING HS20 & ALT.
STR. NO. 010 - 0270

NAME PLATE
(STD. 2113)

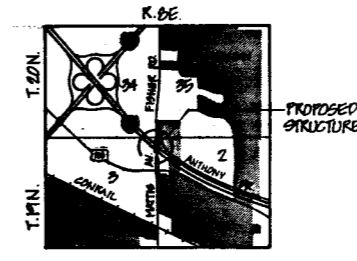
TYPICAL SECTION THRU SLOPEWALL

SET SLOPE WALL ELEV. 0.06' HIGHER THAN EXISTING E.O.P. ELEV. TO PROVIDE FOR 5% OVERLAY BY CONTRACTOR FOR SECTION (10-5-1) RS.

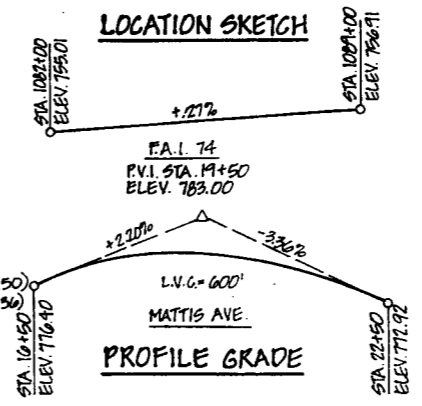
DESIGN SPECIFICATIONS
1984 AASHTO & 1990 INTERIM SPECIFICATIONS & 1983 SEISMIC GUIDE SPECIFICATIONS
LOADING HS 20-44
(ALLOW 25 LB./SQ. FT. FOR FUTURE WEARING SURFACE)

DESIGN STRESSES
 $f_c = 3500$ PSI
 $f_y = 60,000$ PSI (REINF)
 $f_y = 50,000$ PSI (STRUCTURAL STEEL) (M223, GR. 50)
 $f_y = 36,000$ PSI (STRUCTURAL STEEL) (M183, GR. 50)
MAXIMUM ALLOWABLE SOIL PRESSURE 100 KSF
MAXIMUM SOIL PRESSURE = 0.0 KSF

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures



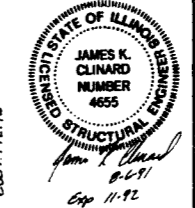
LOCATION SKETCH



PROFILE GRADE

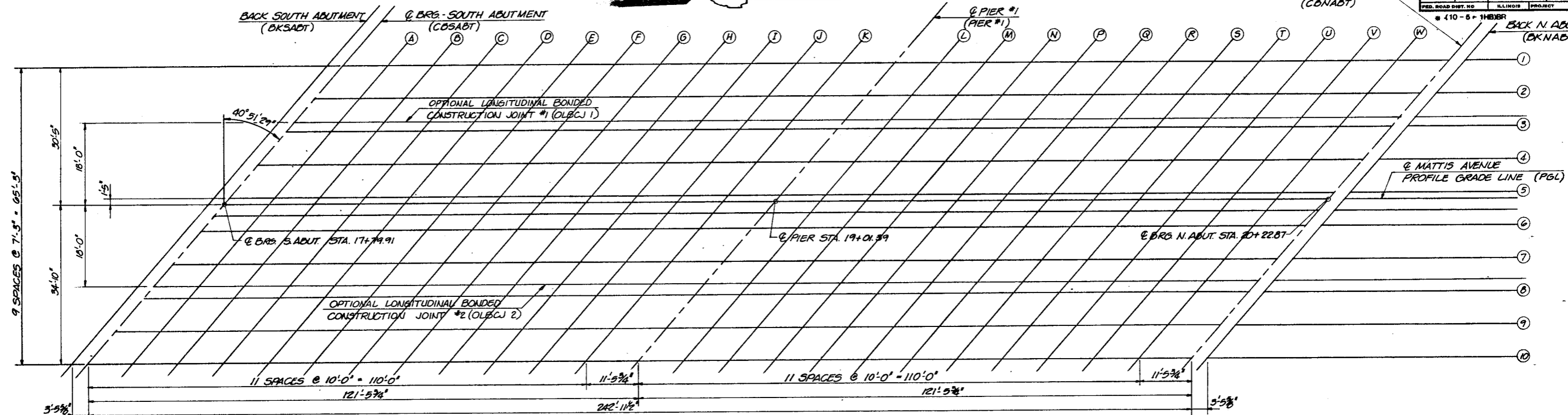
TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
POROUS GRANULAR EMBANKMENT	CU YD		62	62
REMOVAL OF EXISTING STRUCTURES	EACH		1	1
STRUCTURE EXCAVATION	CU YD		453.7	453.7
NEOPRENE EXPANSION JOINT 2"	LIN FT	187		187
CLASS X CONCRETE SUPERSTRUCTURES	CU YD	520.1		520.1
PROTECTIVE COAT	SQ YD	343		343
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	20		20
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
STUD SHEAR CONNECTORS	EACH	4320		4320
ALUMINUM RAILING, TYPE L	LIN FT	270		270
REINFORCEMENT BARS	POUND		2850	2850
REINFORCEMENT BARS, EPOXY COATED	POUND	121080	39,540	160,620
FURNISHING CONCRETE PILES	LIN FT		1968	1968
DRIVING CONCRETE PILES	LIN FT		1968	1968
TEST PILE CONCRETE	EACH		2	2
NAME PLATES	EACH	1		1
SLOPE WALL REMOVAL	SQ YD		682	682
SLOPE WALL 4 INCH	SQ YD		955	955
BRIDGE SEAT SEALER	L SUM		1	1
DRAINAGE SCUPPERS (SPECIAL)	EACH	8		8
CLASS X CONCRETE	CU. YD.		421.1	421.1
BRIDGE DECK GROOVING	SQ. YD.	1746		1746

- NOTES:**
- THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL EXCEPT FILL PLATES.
 - FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" ϕ , OPEN HOLES 15/16" ϕ , UNLESS OTHERWISE NOTED.
 - CALCULATED WEIGHT OF STRUCTURAL STEEL = 56890 POUND M183
= 480990 POUND M223
 - THE ZINC-SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR OF THE VINYL FINISH COAT SHALL BE MUNSELL NO. 10Y 7/1 LIGHT GREY EXCEPT THE EXTERIOR FACE OF THE EXTERIOR BEAMS SHALL BE MUNSELL NO. 7.5G 4/B INTERSTATE GREEN.
 - FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
 - ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.
 - REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
 - SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" x 6" -W4.0 x W4.0, WEIGHING 58 LBS. PER 100 SQ. FT..
 - THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.
 - BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8". ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED.
 - THE CONTRACTOR SHALL DRIVE 1 CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

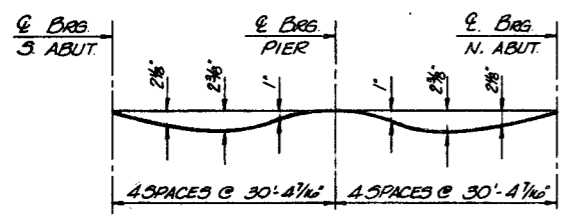


REVISIONS			GENERAL PLAN AND ELEVATION	
NO.	DATE	DESCRIPTION		
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY: R. King 11-90
F.A.I. 74	SEC. (10-5-1 HB) BR	PROJECT NO. 3400-1
CHAMPAIGN	SN 010-0270	COUNTY
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		SHEET NO.



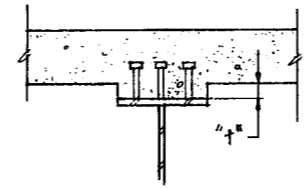
SCREED INFORMATION FOR GIRDER = 1				SCREED INFORMATION FOR GIRDER = 2				SCREED INFORMATION FOR GIRDER = 3				SCREED INFORMATION FOR GIRDER = 4			
LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION	
BKSABT	1802.749	30.417	778.139	778.139	BKSABT	1796.478	23.167	778.240	778.240	BKSABT	1790.207	15.917	778.325	778.325	
CBSABT	1806.218	30.417	778.166	778.166	CBSABT	1799.947	23.167	778.268	778.268	CBSABT	1793.676	15.917	778.356	778.356	
A	1816.218	30.417	778.237	778.307	A	1809.947	23.167	778.345	778.415	A	1803.676	15.917	778.438	778.508	
B	1826.218	30.417	778.298	778.428	B	1819.947	23.167	778.412	778.542	B	1813.676	15.917	778.511	778.641	
C	1836.218	30.417	778.350	778.524	C	1829.947	23.167	778.470	778.644	C	1823.676	15.917	778.575	778.749	
D	1846.218	30.417	778.393	778.594	D	1839.947	23.167	778.518	778.720	D	1833.676	15.917	778.629	778.831	
E	1856.218	30.417	778.426	778.637	E	1849.947	23.167	778.558	778.768	E	1843.676	15.917	778.674	778.885	
F	1866.218	30.417	778.451	778.650	F	1859.947	23.167	778.588	778.787	F	1853.676	15.917	778.710	778.910	
G	1876.218	30.417	778.466	778.636	G	1869.947	23.167	778.609	778.779	G	1863.676	15.917	778.737	778.907	
H	1886.218	30.417	778.471	778.602	H	1879.947	23.167	778.620	778.751	H	1873.676	15.917	778.754	778.885	
I	1896.218	30.417	778.468	778.553	I	1889.947	23.167	778.622	778.708	I	1883.676	15.917	778.762	778.848	
J	1906.218	30.417	778.455	778.498	J	1899.947	23.167	778.615	778.658	J	1893.676	15.917	778.761	778.804	
K	1916.218	30.417	778.433	778.444	K	1899.947	23.167	778.599	778.610	K	1903.676	15.917	778.751	778.762	
PIER#1	1927.697	30.417	778.396	778.396	PIER#1	1921.426	23.167	778.569	778.569	PIER#1	1915.155	15.917	778.727	778.727	
L	1937.697	30.417	778.354	778.370	L	1931.426	23.167	778.533	778.548	L	1925.155	15.917	778.697	778.712	
M	1947.697	30.417	778.303	778.349	M	1941.426	23.167	778.488	778.534	M	1935.155	15.917	778.657	778.703	
N	1957.697	30.417	778.243	778.330	N	1951.426	23.167	778.433	778.520	N	1945.155	15.917	778.609	778.696	
P	1967.697	30.417	778.173	778.305	P	1961.426	23.167	778.369	778.501	P	1955.155	15.917	778.550	778.683	
Q	1977.697	30.417	778.094	778.267	Q	1971.426	23.167	778.296	778.469	Q	1965.155	15.917	778.483	778.656	
R	1987.697	30.417	778.006	778.208	R	1981.426	23.167	778.213	778.416	R	1975.155	15.917	778.406	778.609	
S	1997.697	30.417	777.908	778.121	S	1991.426	23.167	778.121	778.334	S	1985.155	15.917	778.320	778.533	
T	2007.697	30.417	777.801	778.007	T	2001.426	23.167	778.020	778.226	T	1995.155	15.917	778.225	778.431	
U	2017.697	30.417	777.685	777.865	U	2011.426	23.167	777.910	778.090	U	2005.155	15.917	778.121	778.301	
V	2027.697	30.417	777.560	777.697	V	2021.426	23.167	777.791	777.928	V	2015.155	15.917	778.007	778.145	
W	2037.697	30.417	777.425	777.505	W	2031.426	23.167	777.662	777.742	W	2025.155	15.917	777.884	777.964	
CBNABT	2049.176	30.417	777.259	777.259	CBNABT	2042.905	23.167	777.502	777.502	CBNABT	2036.634	15.917	777.731	777.731	
BKNABT	2052.645	30.417	777.207	777.207	BKNABT	2046.374	23.167	777.452	777.452	BKNABT	2040.103	15.917	777.683	777.683	



DEAD LOAD DEFLECTION DIAGRAM

NOTE: THE DEFLECTIONS SHOWN ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN ON DWG NO. 2 & 3.

(INCLUDES WEIGHT OF CONCRETE ONLY)

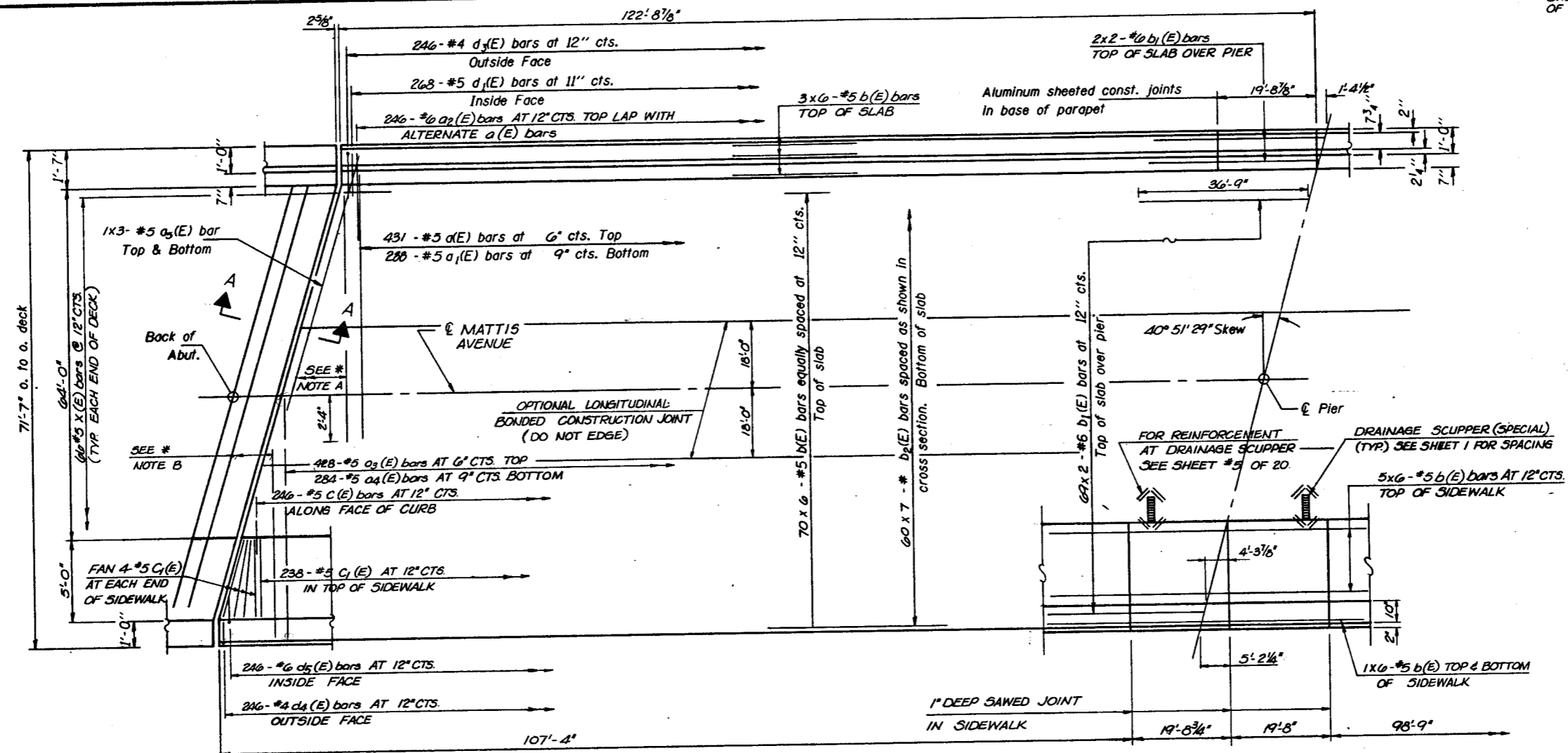


TO DETERMINE #1 ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN ON DECK ELEVATIONS PLAN SHOWN ABOVE. THESE ELEVATIONS SUBTRACTED FROM "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN MINUS SLAB THICKNESS EQUALS FILLET HEIGHTS #1 ABOVE TOP FLANGES OF GIRDERS

WORK THIS SHEET WITH SHEET NO. 3

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE
NO.	DATE	INITIALS	FAI-74	SEC(10-5-1HB)-BR	WORKSHEET
1			CHAMPAIGN	SN 010-0270	PROJECT NO.
2			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		3400-14
3			COUNTY SHEET NO.		
4			MATTIS AVENUE		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	35
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
				* (10-5-1) HEYER

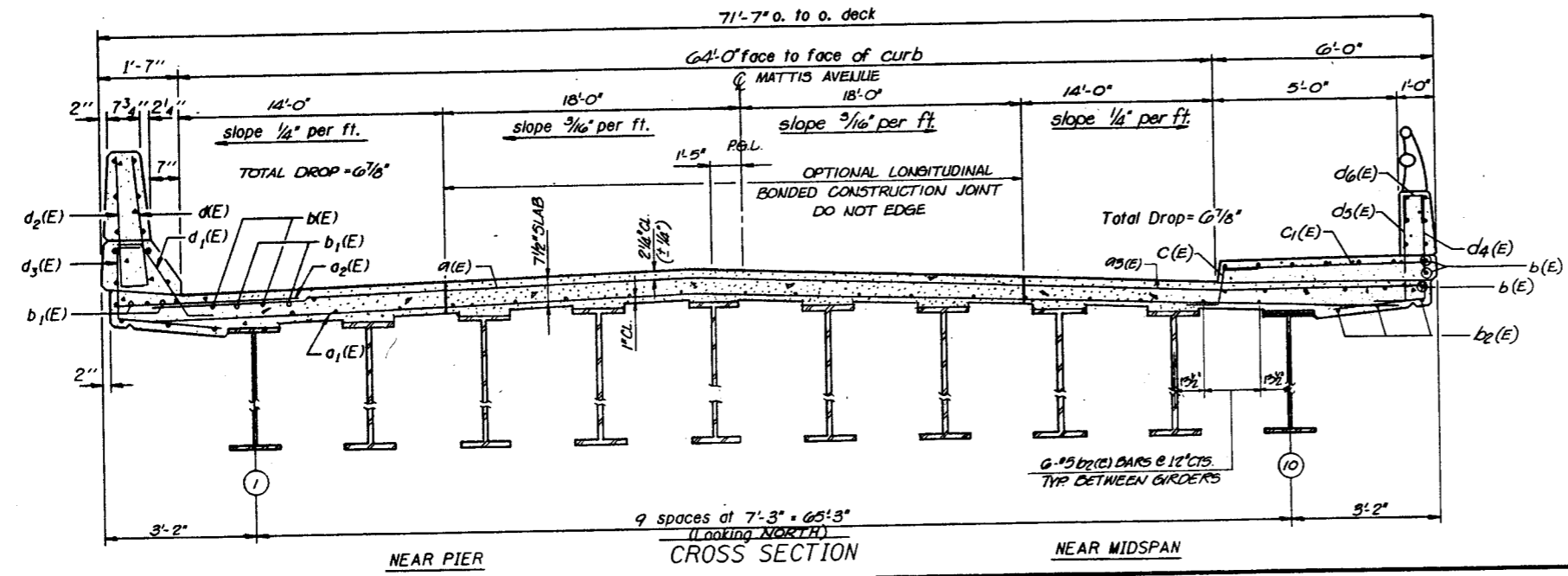


NOTE A: 60-#5 a₂(E) bars AT 6" CTS. TOP
39-#5 a₁(E) bars AT 9" CTS. BOTTOM

NOTE B: 63-#5 a₃(E) bars AT 6" CTS. TOP
43-#5 a₄(E) bars AT 9" CTS. BOTTOM

* Order a₁(E), a₂(E), a₃(E) & a₄(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

HALF PLAN
SYMMETRICAL ABOUT @ PIER BY ROTATION EXCEPT AS NOTED



MIN. LAPS

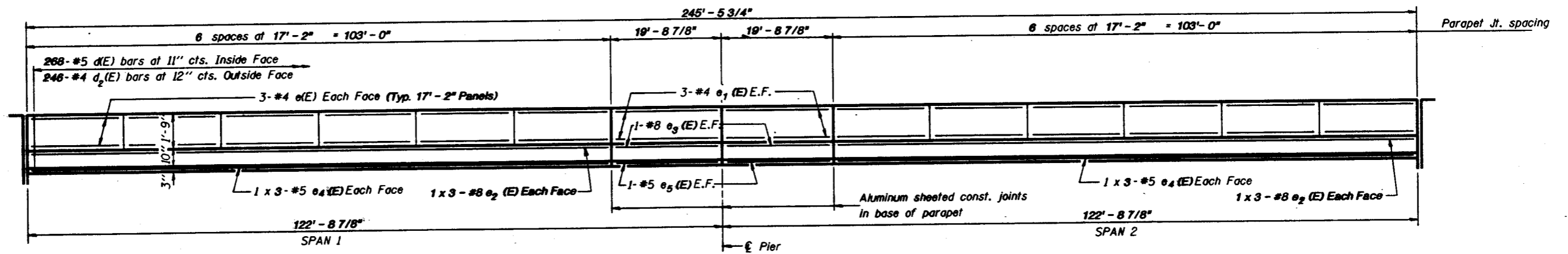
#5	2'-2"
#6	2'-7"

Notes: See Sheet # 5 of 20 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet # 6 of 20 for parapet reinforcement.
See Sheet # 5 of 20 for SECTION A-A.

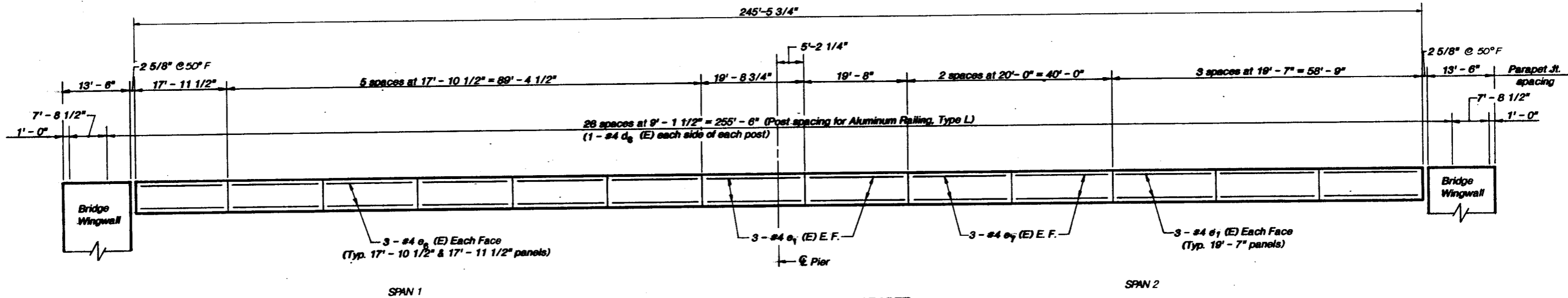
SUPERSTRUCTURE DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS	DESIGNED BY MIT 3-9 CHECKED BY ML 4-11 DATE REVISION
1	FAI-74	SECTION 10-5-1 HEYER
2	CHAMPAIGN	SN 010-0270
3	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	COUNTY 3400-1
4		SHEET NO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	10	57
RELATING DETAIL		ILLINOIS	PROJECT	
*(10-5-1 HB)BR				



INSIDE ELEVATION OF WEST PARAPET



OUTSIDE ELEVATION OF EAST PARAPET

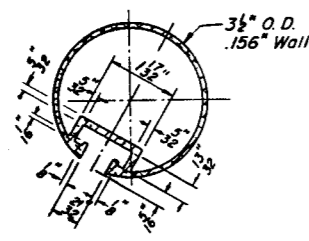
MIN. LAPS
#5 = 2'-2"
#8 = 4'-6"

For Parapet Joint Details, See Sheet 5 of 20 Sheets.
For Aluminum Railing, Type L Details, See Sheet 7 of 20 Sheets.
Reinforcement Bars Designated (E) shall be Epoxy Coated Bars indicated thus 1 x 3 - #8 etc. indicates 1 line of bars with 3 lengths per line.
See Sheet # 5 of 20 for Bill of Material

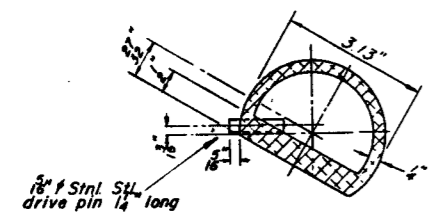
REVISIONS		SUPERSTRUCTURE DETAILS		DATE BY
1		STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION	DIVISIONS OF HIGHWAYS
2		FAI-74	SEC 10-5-1 HB)BR	PROJECT NO. 3400-14
3		CHAMPAIGN	SN 010-0270	COUNTY
4		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	36
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

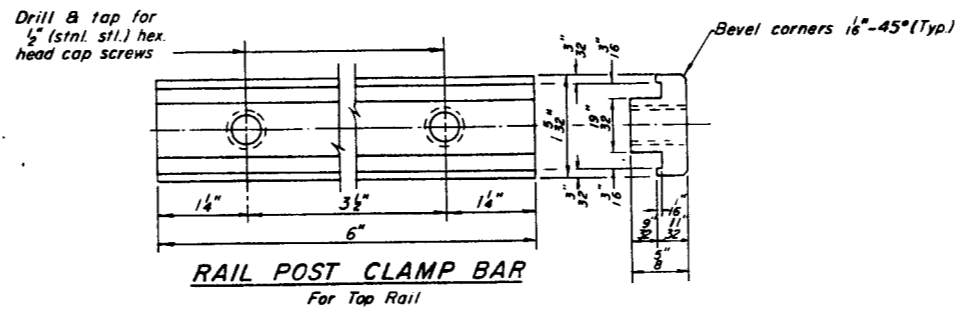
* (10-5-1) HB18R



SECTION THRU TOP RAIL

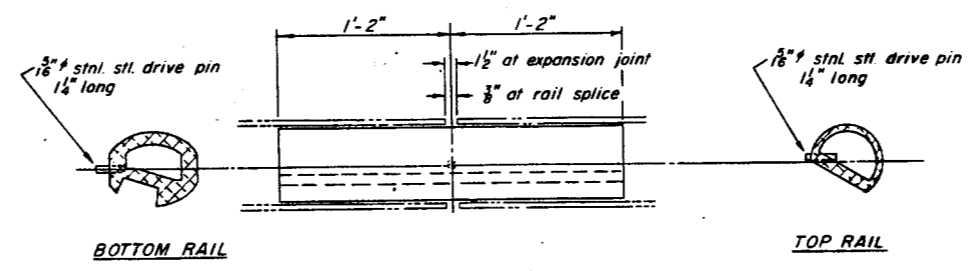


SECTION THRU SPLICE
TOP RAIL

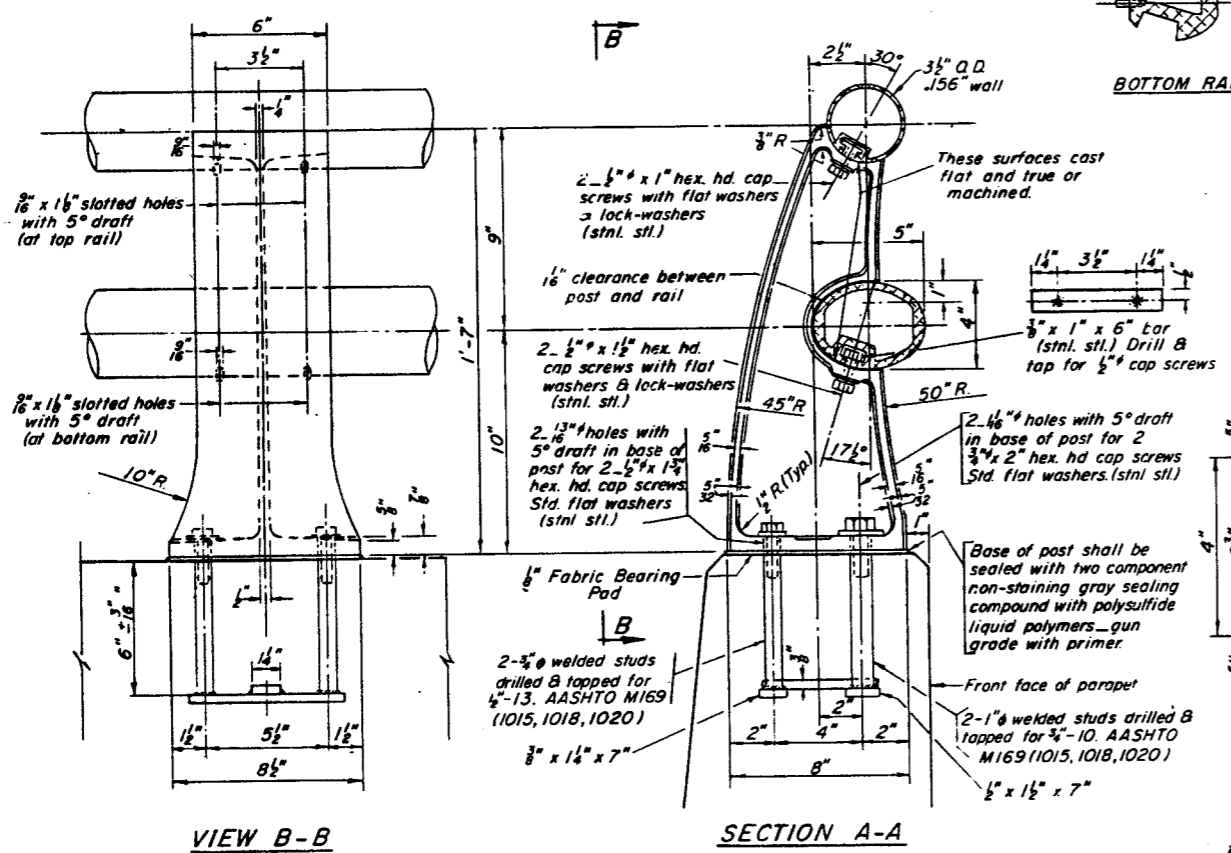


RAIL POST CLAMP BAR
For Top Rail

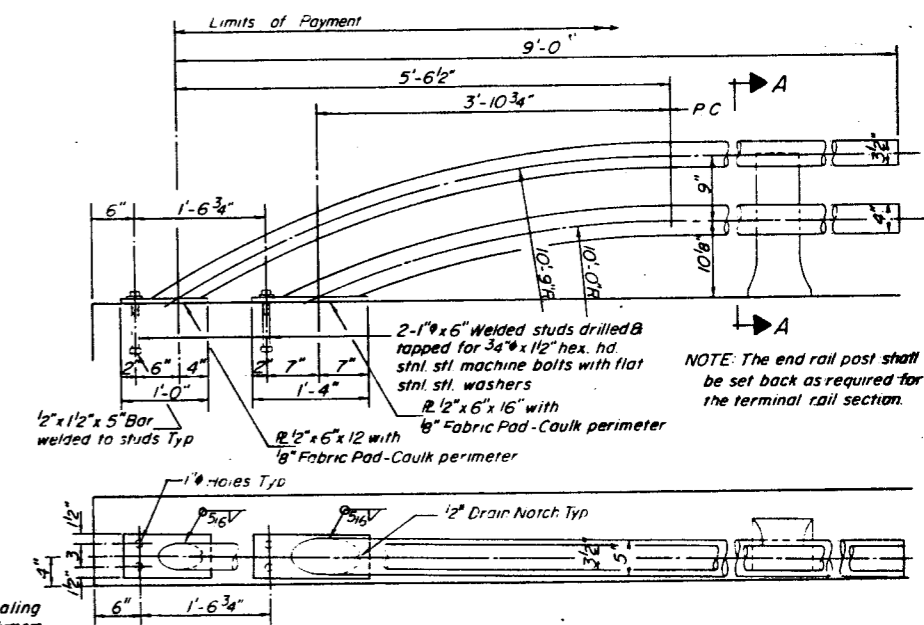
NOTES:
All Posts shall be normal to parapet. All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
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.
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per lineal foot for ALUMINUM RAILING, TYPE L.
Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, and elongation of 10% in 2 inches.



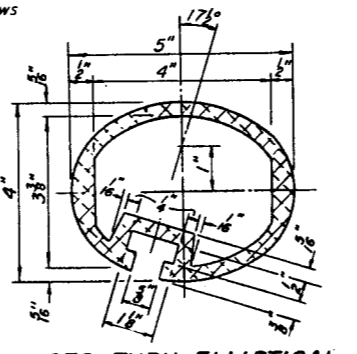
RAIL SPLICE



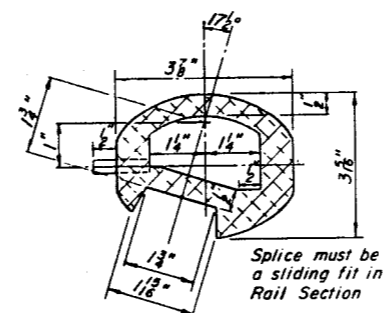
RAIL POST DETAILS



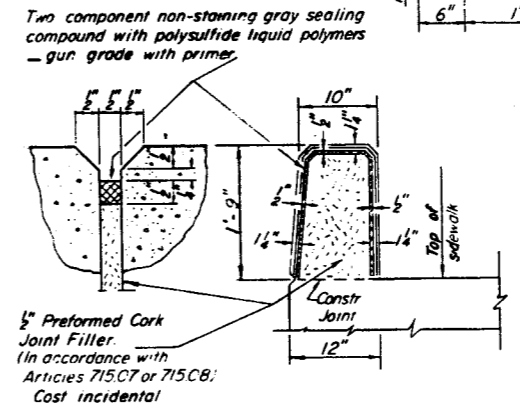
RAIL TERMINAL SECTION



SEC. THRU ELLIPTICAL
RAIL SECTION



SEC. THRU SPLICE



PARAPET JOINT DETAIL

BILL of MATERIAL

Item	Unit	Quantity
ALUMINUM RAILING, TYPE L	Lin. Ft.	270

FOR RAIL POST SPACING SEE SHEET NO. 6

ALUMINUM RAILING, TYPE L

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DRAWN BY: DATE M.E. 4-8
FAI-74	SECTION 10-5-1 HB18R	PROJECT NO. 3400-14
CHAMPAIGN	COUNTY	SHEET NO.
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		

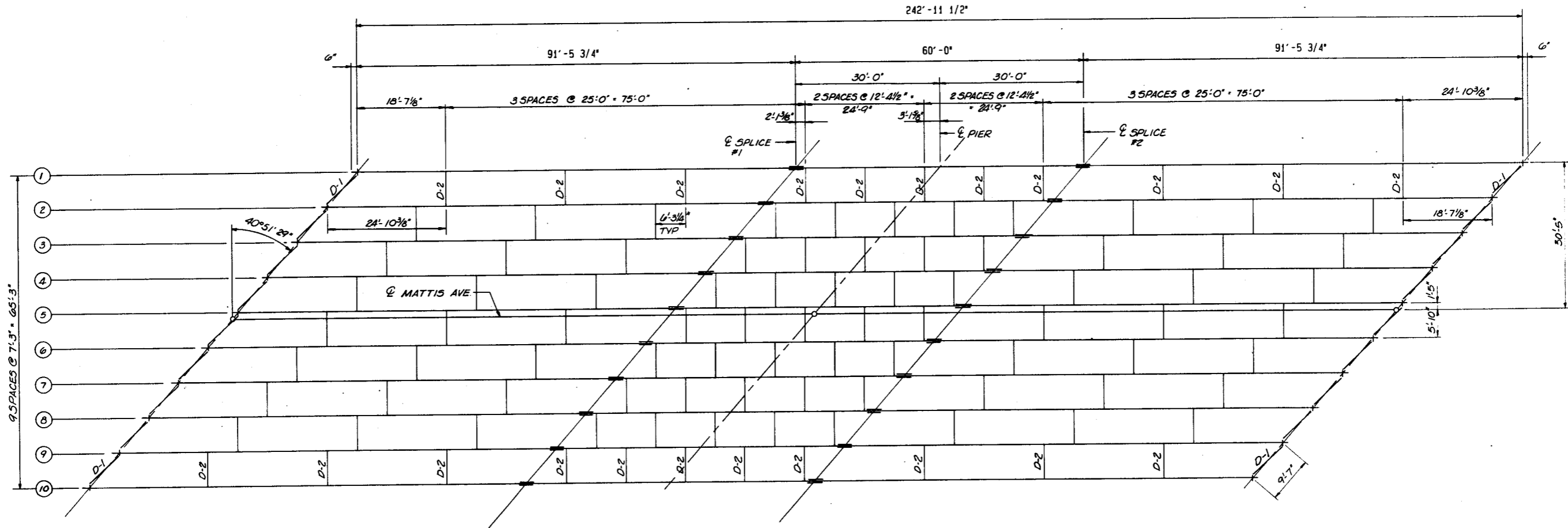
DESIGNED
CHECKED
DRAWN
CHECKED

R-20 12-31-87

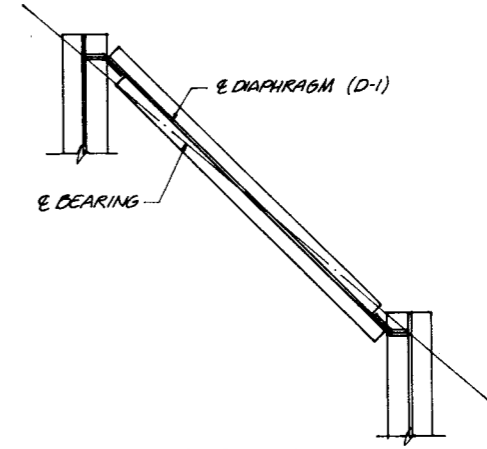
**TYPE L
ALUMINUM RAILING**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	39
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

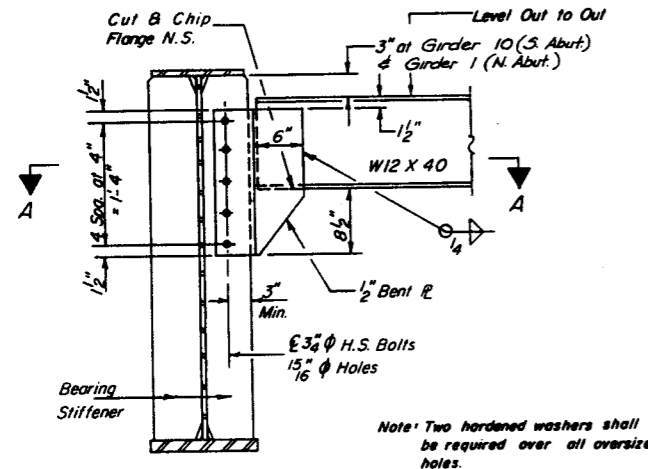
* (10-5-11B)



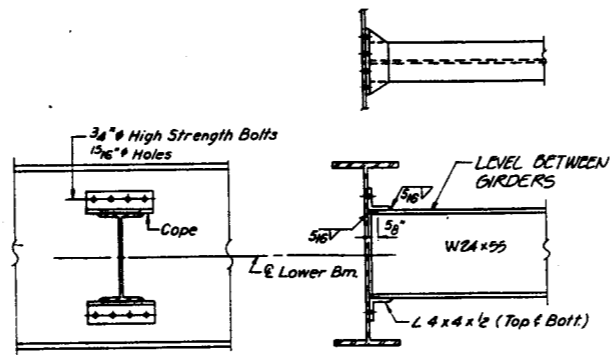
FRAMING PLAN



SECTION A-A



END DIAPHRAGM (D-1)
(18 REQUIRED)



INTERIOR DIAPHRAGM (D-2)
(99 REQUIRED)

WORK THIS SHEET WITH SHEET NO. 9 OF 20 SHEETS
FOR MOMENT AND REACTION TABLE SEE SHEET NO. 10 OF 20.

STRUCTURAL STEEL DETAILS

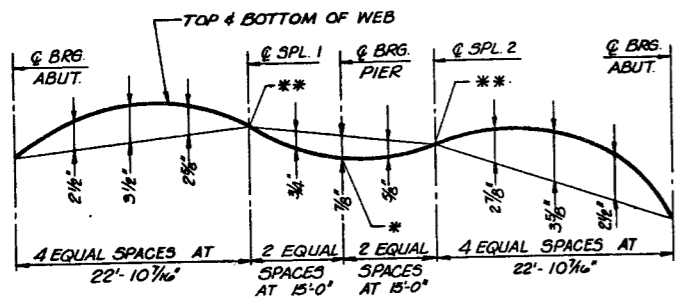
REVISIONS	DATE	INITIALS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE <i>mit 3-91</i>
1				CHECKED BY DATE <i>RC 4-91</i>
2				BOOK NUMBER
3				
4				
5				
6				
7				
8				
9				
10				

FAI-74 SEC (10-5-11B) BR
 CHAMPAIGN SN 010-0270 COUNTY
HOMER L. CHASTAIN & ASSOCIATES
 CONSULTING ENGINEERS
 DECATUR, ILLINOIS

PROJECT NO. **3400-14**
SHEET NO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	40

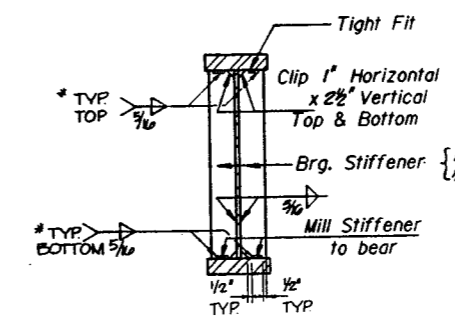
* (10-5-1) HBYBR



CAMBER DIAGRAM

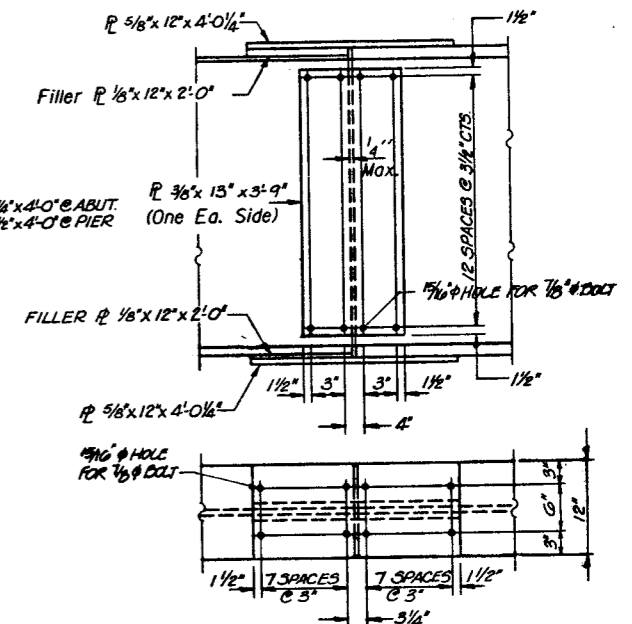
BEAM	BRG. S. ABUT.	SPL. #1	BRG. PIER #	SPL. #2	BRG. N. ABUT.
1	777.41	777.74	777.56	777.52	776.50
2	777.51	777.90	777.74	777.71	776.74
3	777.60	778.04	777.89	777.89	776.97
4	777.65	778.15	778.02	778.05	777.17
5	777.71	778.26	778.15	778.17	777.36
6	777.57	778.18	778.08	778.13	777.37
7	777.39	778.05	777.97	778.04	777.33
8	777.20	777.91	777.85	777.93	777.28
9	776.97	777.73	777.69	777.79	777.19
10	776.74	777.56	777.53	777.63	777.10

FOR FABRICATION ONLY

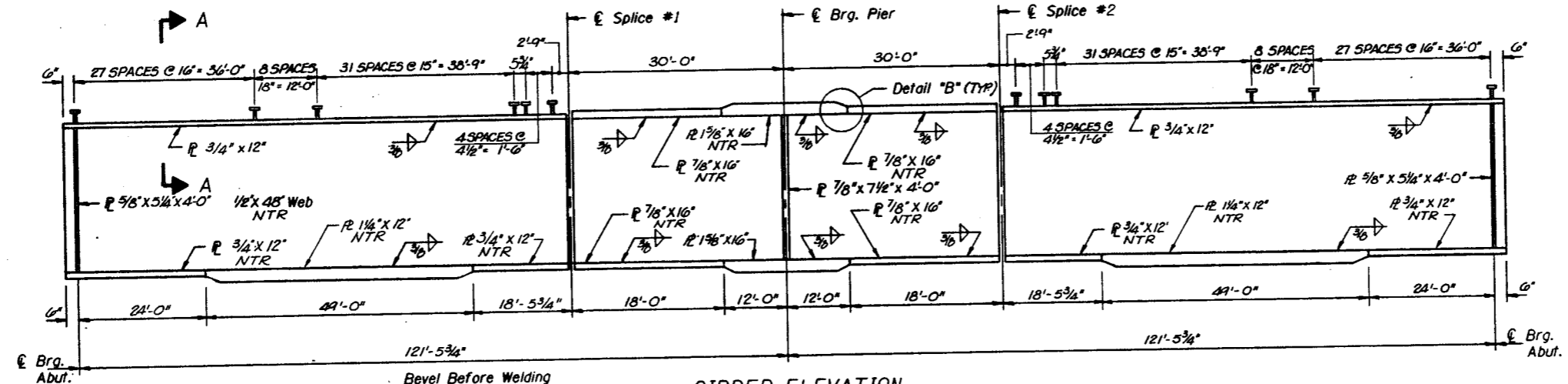


SECTION

* Weld @ Abutments only



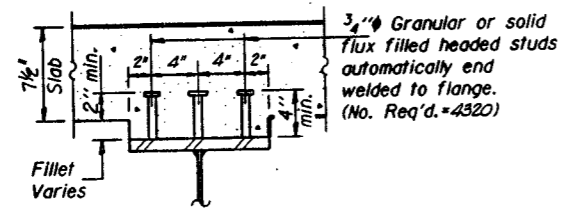
TYPICAL FLANGE SPLICE
FIELD SPLICE DETAIL



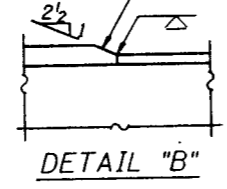
GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

ALL STRUCTURAL STEEL - AASHTO M223, GRADE 50



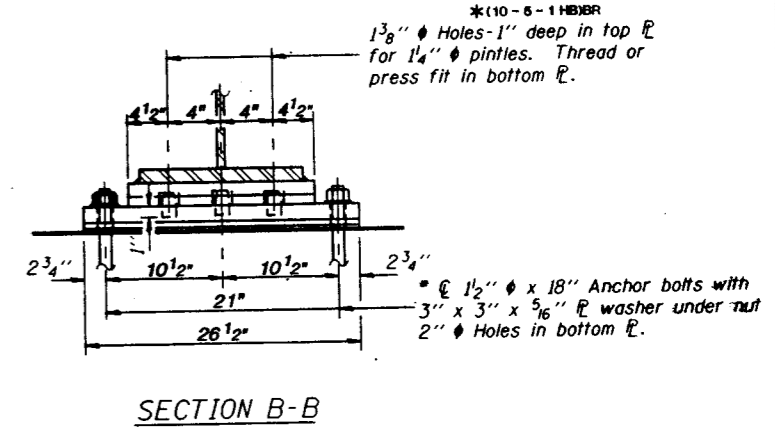
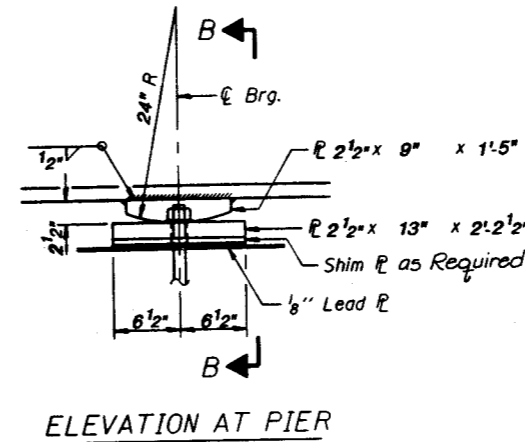
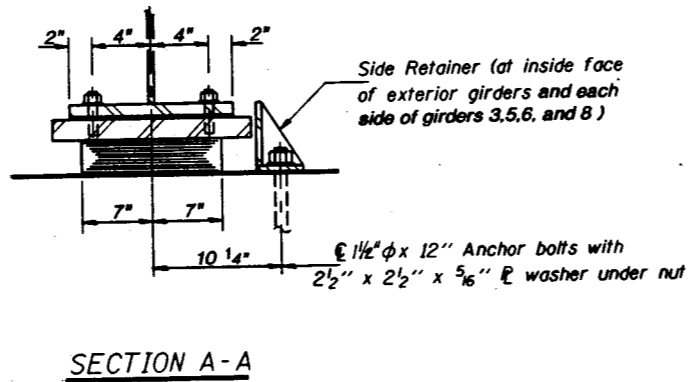
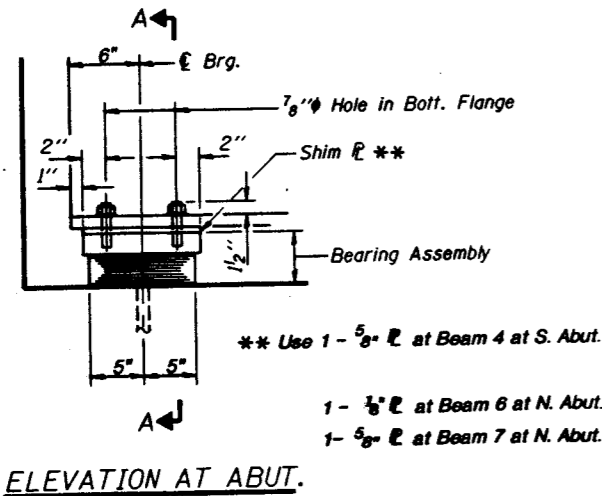
SECTION A-A



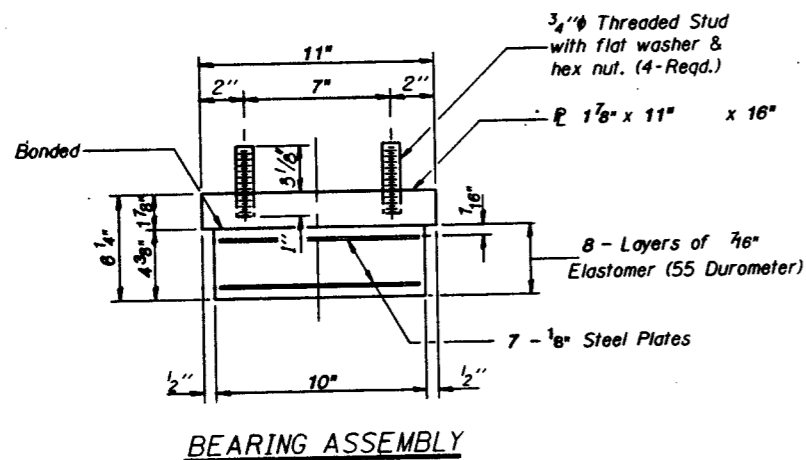
WORK THIS SHEET WITH SHEET NO. 8 OF 20 SHEETS

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DATE
1		FAI-74	SEC(10-5-1)HBYBR	MIT 3-91
2		CHAMPAIGN	SN 010-0270	10-91
3		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		PROJECT NO. 3400-14
4				SHEET NO.

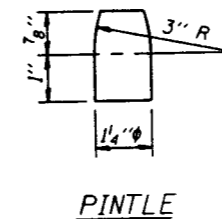
DATE	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	41
PROJECT NO.	ILLINOIS	PROJECT		



TYPE I ELASTOMERIC EXP. BRG.
(20 Req'd.)



* Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet #16 of 20 for Anchor Bolt installation.



	0.4 Sp.	Pier
Is (in ⁴)	18,585	36,634
Ic (in ⁴)	47,808	—
Ss (in ³)	840	1430
Sc (in ³)	1182	—
φ (K/ft.)	0.877	1.32
M _P (K)	806	2449
s _P (K/ft.)	0.33	—
M _{sP} (K)	361	—
M _L (K)	1017	910
M (Imp) (K)	254	228
S ₃ (M _L +I) (K)	2118	1896
M _o (K)	4271	5849
fs _P non-comp (k.s.i.)	11.5	20.6
fs _P (comp) (k.s.i.)	4.1	—
fs _{S₃} (k.s.i.)	21.9	15.9
fs (Overload) (k.s.i.)	37.5	38.48
fs (Total) (k.s.i.)	48.7	47.4
VR (K)	58.3	—

	Abut	Pier
R _P (K)	52.8	188.7
R _L (K)	48.0	83.7
Imp. (K)	9.7	17.0
R (Total) (K)	110.5	289.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum live Load + Impact shear range in span.

M_o (Applied Moment) = $1.3[M_P + M_{sP} + 5/8 M_L + I]$

fs (Overload) is the sum of the stresses due to $M_P + M_{sP} + 5/8 M_L + I$.
fs (Total) is the sum of the stresses due to $1.3[M_P + M_{sP} + 5/8 M_L + I]$.

STRUCTURAL STEEL FOR BEARING PLATES SHALL BE AASHTO M183.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	20

BEARING DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS	DATE BY	INITIALS
1	F.A.I. - 74	SEC(10 - 5 - 1 HB)BR	mit 4/91
2	CHAMPAIGN	SN 010-0270	4/91
3	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	COUNTY	PROJECT NO. 3400-14
4			SHEET NO.

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

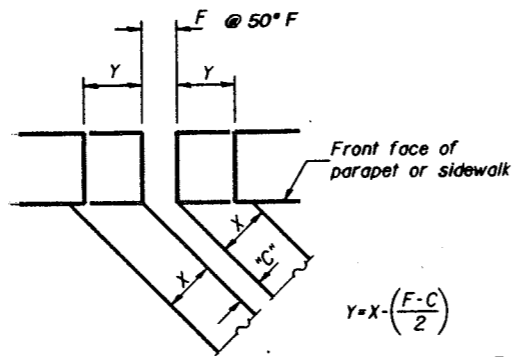
INSTALLATION NOTES

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

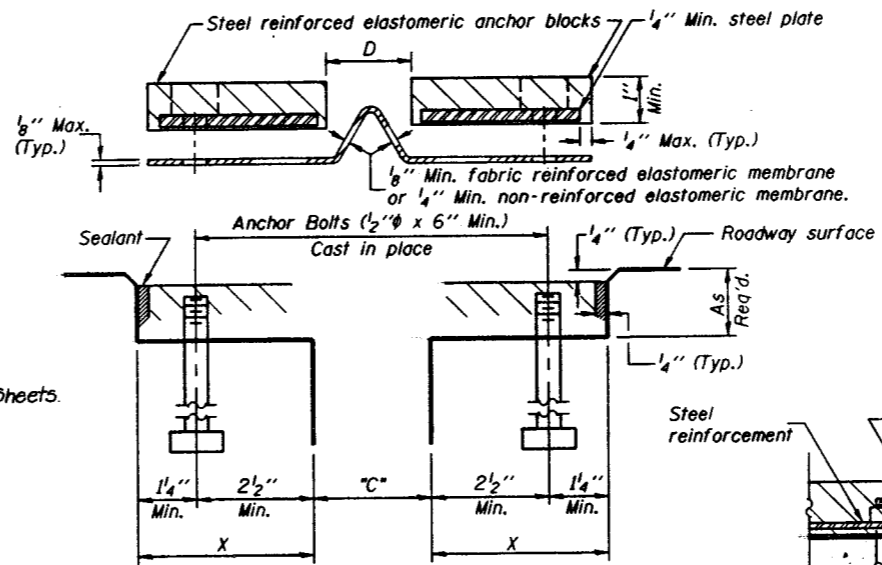
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH



CROSS SECTION

ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES * (10-5-1 HB)BR

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

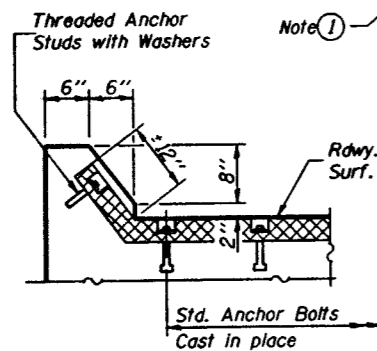
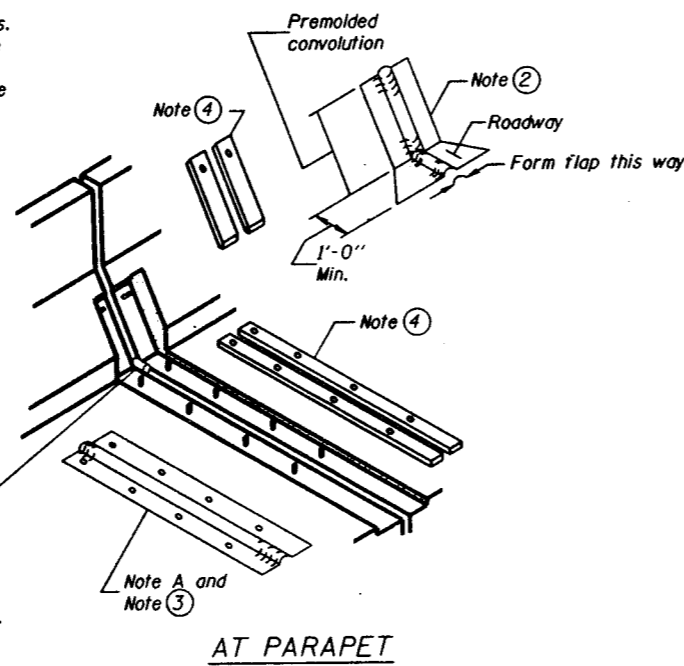
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

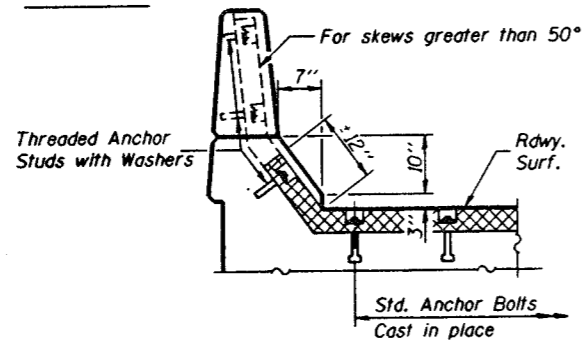
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

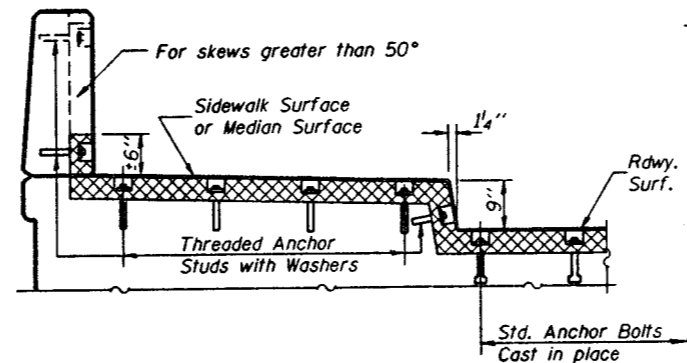
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



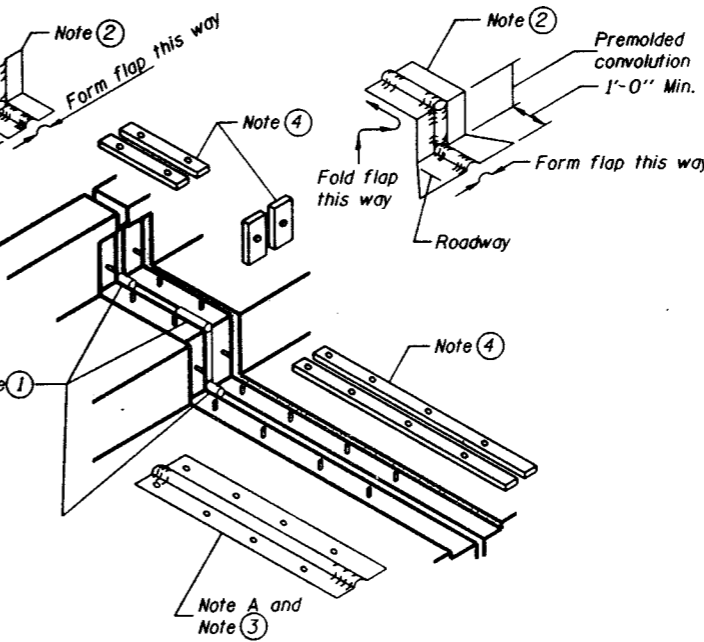
AT CURB



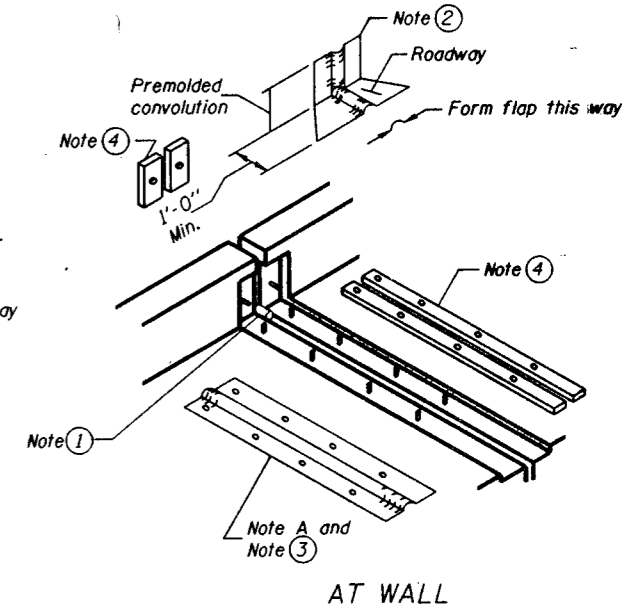
AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT SIDEWALK OR MEDIAN

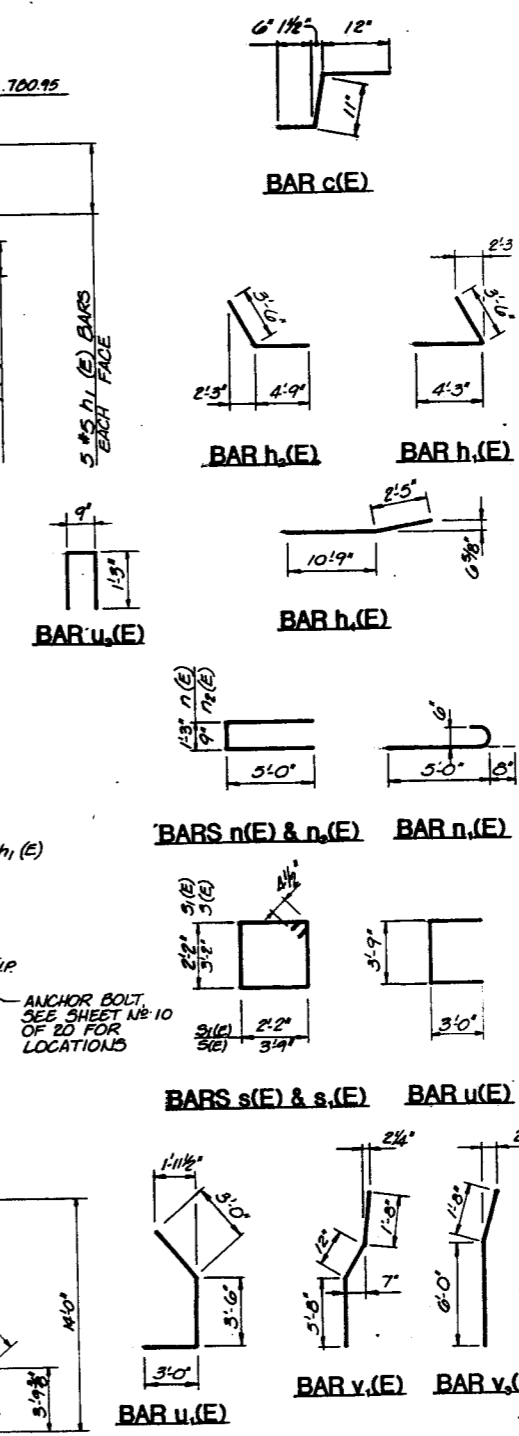
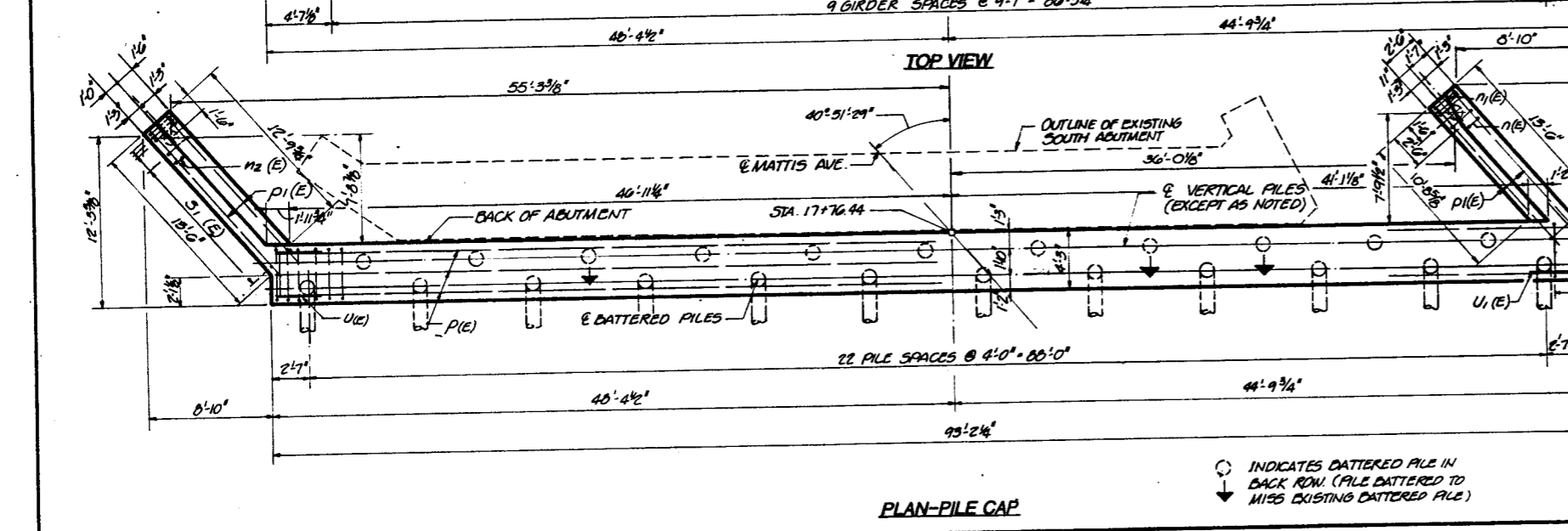
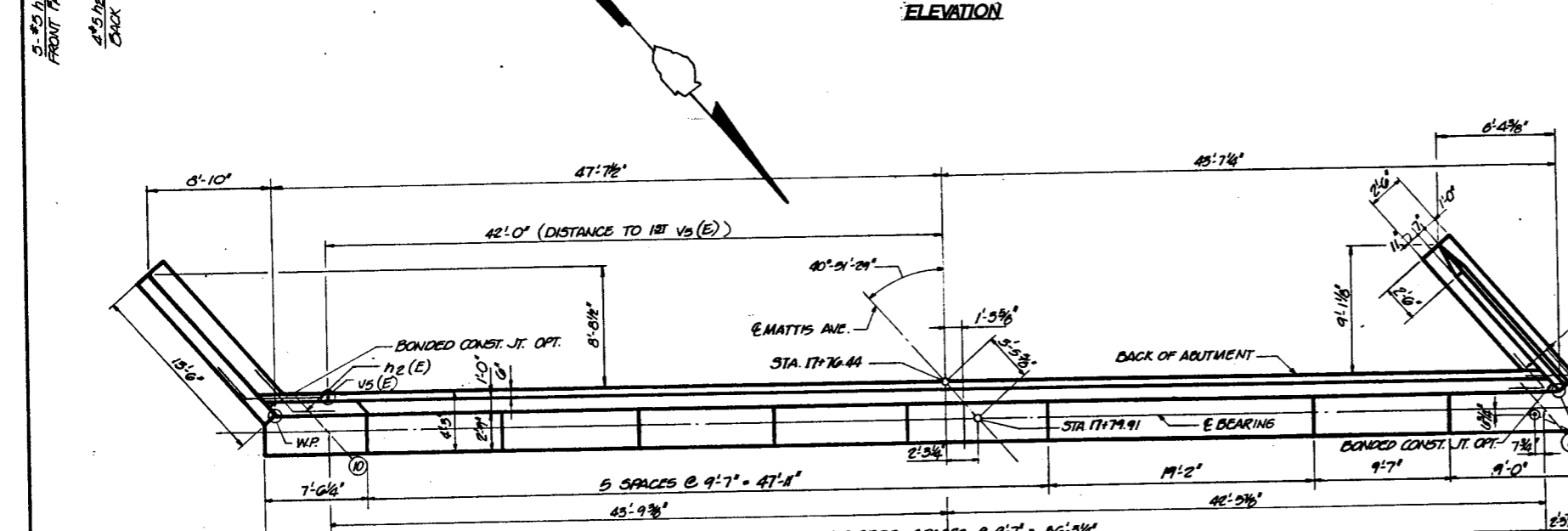
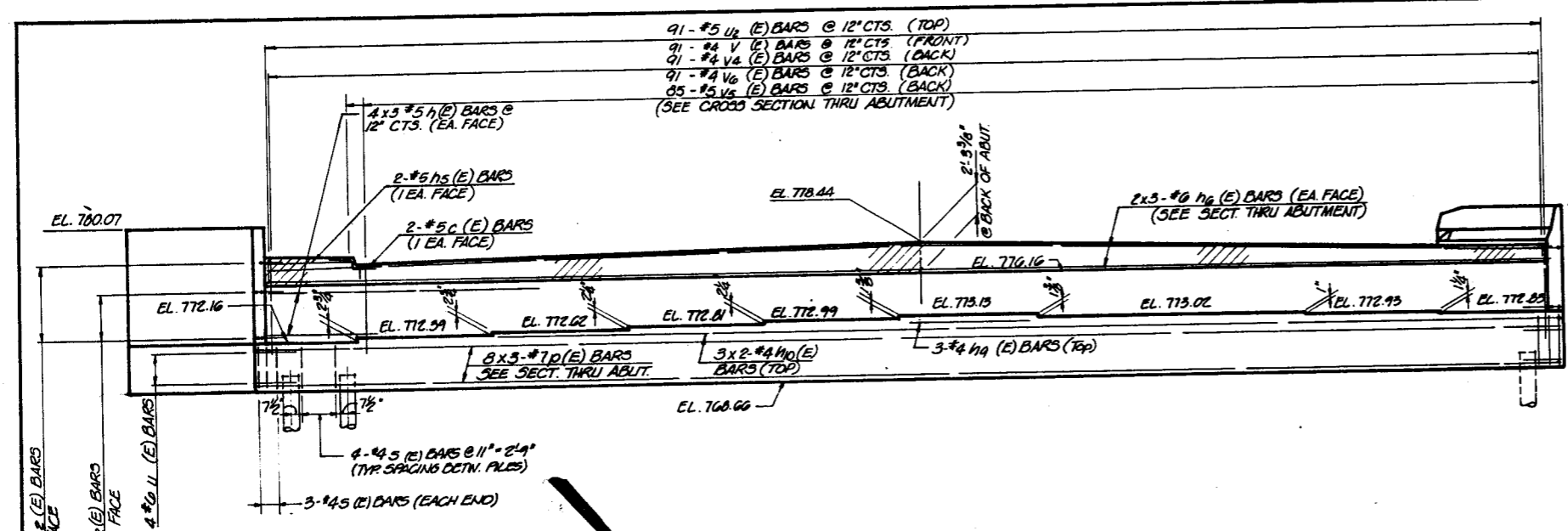


AT WALL

Item	Unit	Total
Neoprene Expansion Joint 2"	Lin Ft	187

REVISIONS			CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS	
NO.	DATE	INITIALS	STATE OF ILLINOIS	DESIGNED BY: <i>PC</i>
1			DEPARTMENT OF TRANSPORTATION	CHECKED BY: <i>LR</i>
2			DIVISIONS OF HIGHWAYS	DATE PLOTTED:
3			F.A.I. - 74	PROJECT NO. 3400-14
4			SN 010-0270	COUNTY CHAMPAIGN
5			HOMER L. CHASTAIN & ASSOCIATES	SHEET NO.
6			CONSULTING ENGINEERS	

Notes: Space reinforcement in cap to miss anchor bolts. All exposed edges shall have standard 3/4" chamfer except as noted. Pour steps monolithically with cap.



MIN. BAR LAPS

#4	= 1'-0"
#5	= 2'-2"
#6	= 2'-7"
#7	= 3'-5"

Bars indicated thus: 3x2 #6 etc. indicates 3 lines of bars with 2 lengths per line.

BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
h(E)	24	#5	31'-9"	—
h1(E)	10	#5	7'-9"	—
h2(E)	9	#5	6'-5"	—
h3(E)	30	#4	13'-2"	—
h4(E)	8	#4	13'-2"	—
h5(E)	2	#5	6'-2"	—
h6(E)	12	#6	32'-2"	—
h7(E)	3	#4	9'-3"	—
h8(E)	6	#4	35'-9"	—
c(E)	2	#5	2'-5"	—
n(E)	11	#6	11'-3"	—
n1(E)	6	#6	5'-8"	—
n2(E)	14	#6	10'-9"	—
p(E)	24	#7	33'-3"	—
p1(E)	12	#7	15'-2"	—
s(E)	94	#4	14'-7"	—
s1(E)	30	#4	9'-5"	—
u(E)	4	#6	9'-9"	—
u1(E)	4	#6	9'-6"	—
u2(E)	91	#5	3'-3"	—
v(E)	91	#4	7'-0"	—
v1(E)	11	#6	6'-4"	—
v2(E)	14	#6	8'-0"	—
v3(E)	5	#6	7'-8"	—
v4(E)	91	#4	5'-5"	—
v5(E)	85	#5	3'-0"	—
v6(E)	91	#4	5'-8"	—
v7(E)	28	#6	7'-9"	—

STRUCTURE EXCAV.	CU. YD.	90.8
CLASS X CONCRETE	CU. YD.	94.5
REINFORCEMENT BARS, EPOXY COATED	POUND.	8030
POROUS GRANULAR EMBANKMENT	CU. YD.	35
CONCRETE PILES	LN. FT.	960
TEST PILE CONCRETE	EACH	1

Reinforcement bars designated (E) shall be epoxy coated.

PILE DATA
 TYPE : CONCRETE
 CAPACITY : 40 TON
 EST. LENGTH : 40 FEET
 NO REQUIRED : 24 PLUS 1 TEST PILE

FOR WINGWALL DETAILS & SECTION THRU ABUTMENT SEE SHEET NO. 14 OF 20.

REVISIONS		SOUTH ABUTMENT	
NO.	DATE	STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
1		CHAMPAIGN	SN 010-0270
2		SEC (10-5-11) BR	
3		COUNTY	
4		PROJECT NO. 3400-14	
5		SHEET NO.	
6		HOMER L. CHASTAIN & ASSOCIATES	
7		CONSULTING ENGINEERS	
8		DRAWN BY DATE JUN 4/91	
9		CHECKED BY DATE JLC 4/91	
10		GOOD NUMBER	

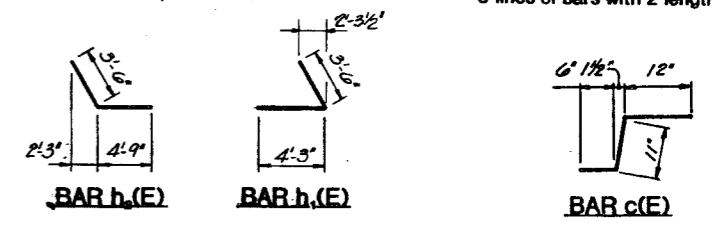
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-74	*	CHAMPAIGN	20	13
FED. ROAD DIST. NO.	BLINDS	PROJECT		

*(10-5-1HB) BR

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.

All exposed edges shall have standard 3/4" chamfer except as noted.

Bars indicated thus: 3x2 #6 etc. indicates 3 lines of bars with 2 lengths per line.



BILL OF MATERIAL

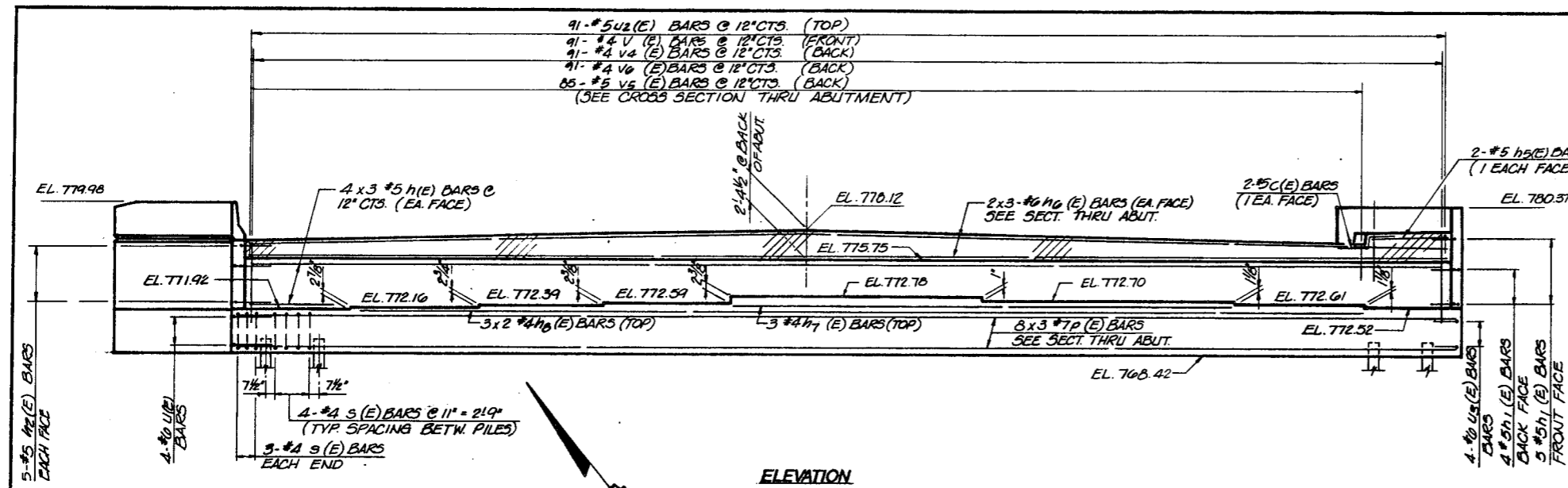
BAR	NR	SIZE	LENGTH	SHAPE
h1(E)	24	#5	31.9"	
h1(E)	9	#5	7.9"	
h2(E)	10	#5	5.3"	
h3(E)	32	#4	15.2"	
h4(E)	8	#4	15.2"	
h5(E)	2	#5	6.2"	
h6(E)	12	#6	32.2"	
h7(E)	5	#4	20.0"	
h8(E)	6	#4	31.2"	
C(C)	2	#5	21.5"	
n(E)	11	#6	11.3"	
n1(E)	6	#6	5.8"	
n2(E)	14	#6	10.9"	
p(E)	24	#7	33.3"	
p1(E)	12	#7	15.2"	
s(E)	94	#4	14.7"	
s1(E)	30	#4	9.5"	
u(E)	4	#6	9.9"	
u2(E)	91	#5	3.3"	
u3(E)	4	#6	9.3"	
v(E)	91	#4	7.0"	
v4(E)	91	#4	5.3"	
v5(E)	85	#5	3.0"	
v6(E)	91	#4	5.8"	
v8(E)	11	#6	8.4"	
v2(E)	14	#6	7.10"	
v3(E)	3	#6	8.5"	
v7(E)	20	#6	7.8"	

MIN. BAR LAPS
#4 = 1'-5"
#5 = 2'-2"
#6 = 2'-7"
#7 = 3'-5"

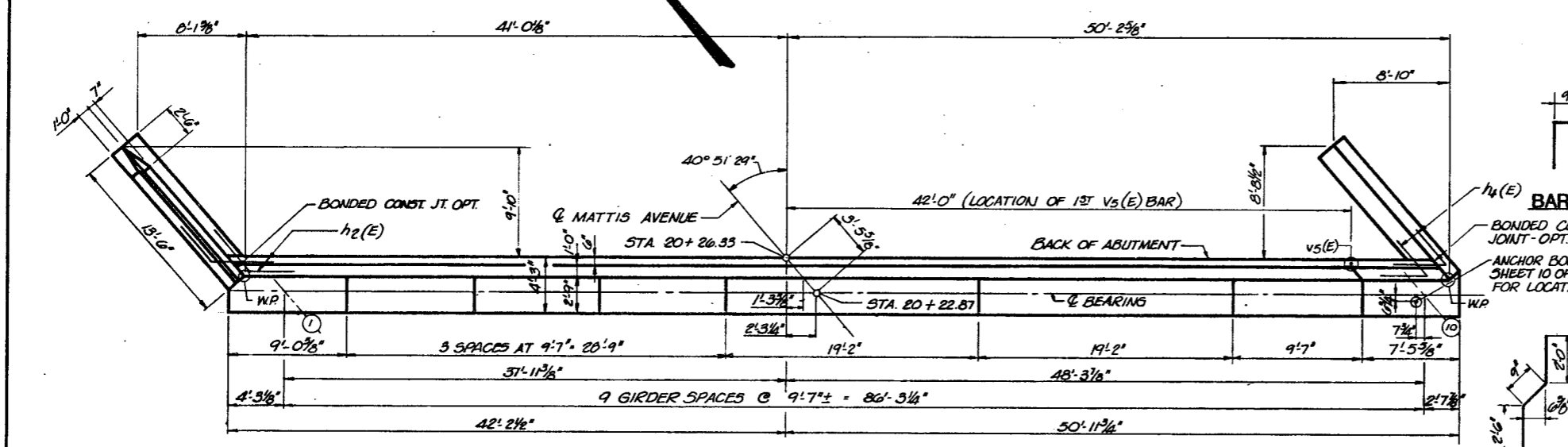
PILE DATA
TYPE : CONCRETE
CAPACITY : 40 TON
EST. LENGTH : 42 FEET
NR REQUIRED : 24 PLUS 1 TEST PILE

REVISIONS		NORTH ABUTMENT	
NO.	DATE	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DATE m.t. 4/91 DRAWN BY R.C. 4/91 CHECKED BY DATE NO. NUMBER
1		FAI-74	SEC (10-5-1HB)BR
2		CHAMPAIGN	SN 010-0270
3			COUNTY
4		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	
5		PROJECT NO. 3400-14	
6		SHEET NO.	

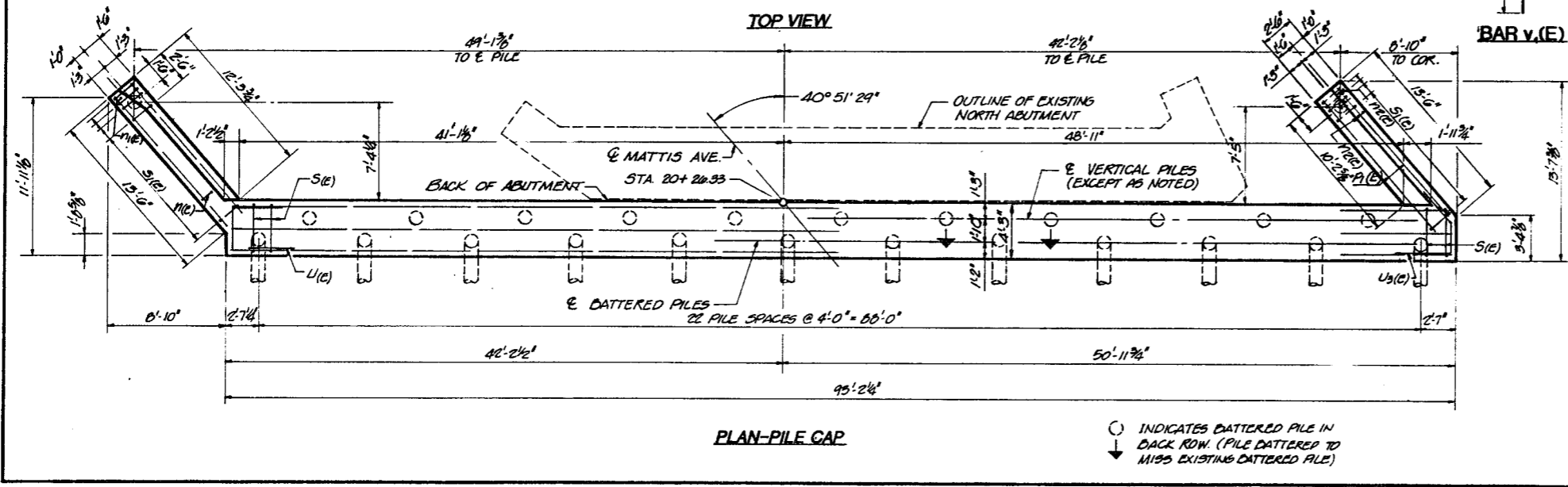
FOR WINGWALL DETAILS & SECTION THRU ABUTMENT SEE SHEET NO. 14 OF 20



ELEVATION



TOP VIEW

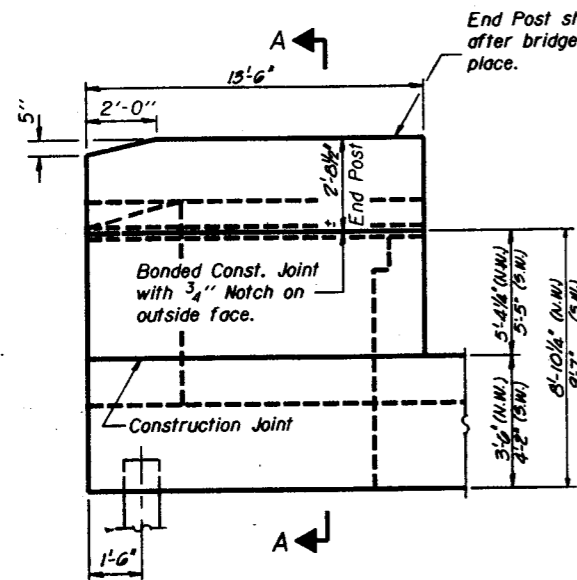


PLAN-PILE CAP

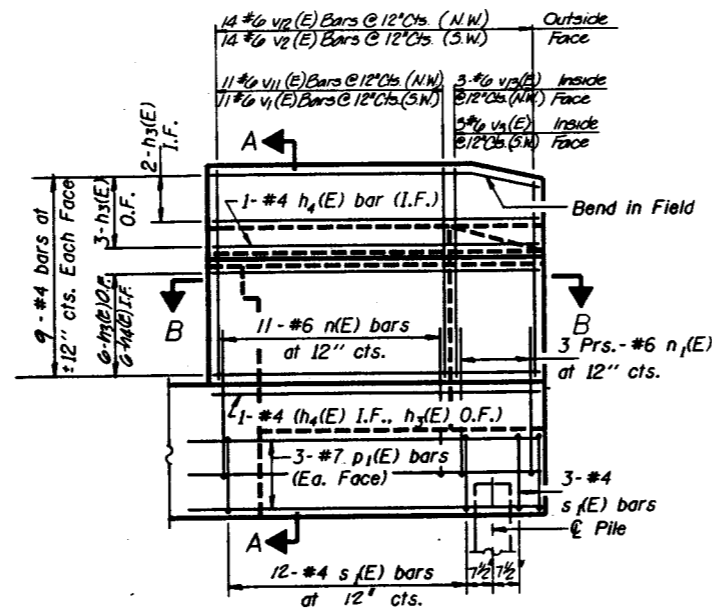
INDICATES DATTERED PILE IN BACK ROW. (PILE DATTERED TO MISS EXISTING DATTERED PILE)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	45

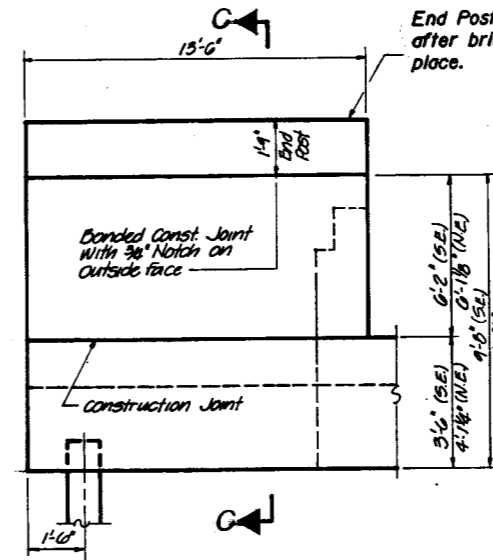
* (10 - 5 - 1 HB18R)



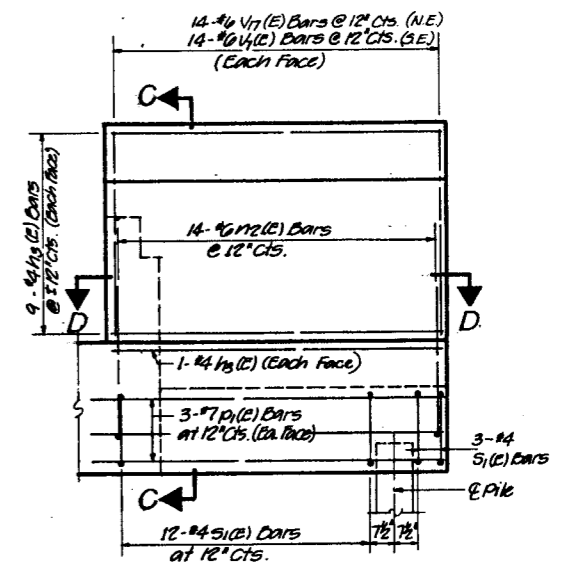
NORTHWEST WINGWALL
(SOUTHWEST SIMILAR EXCEPT AS NOTED)



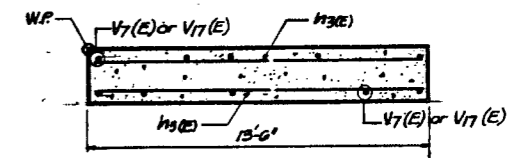
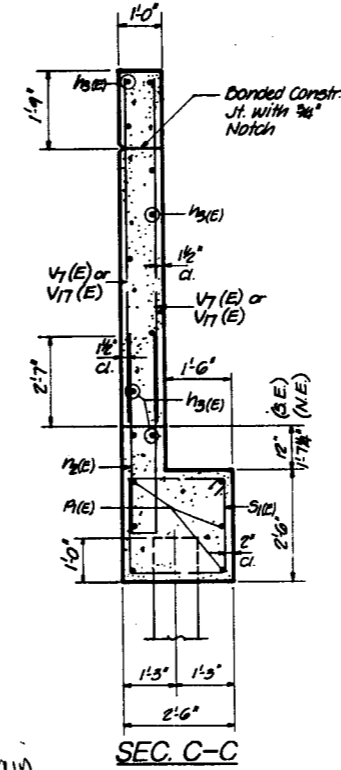
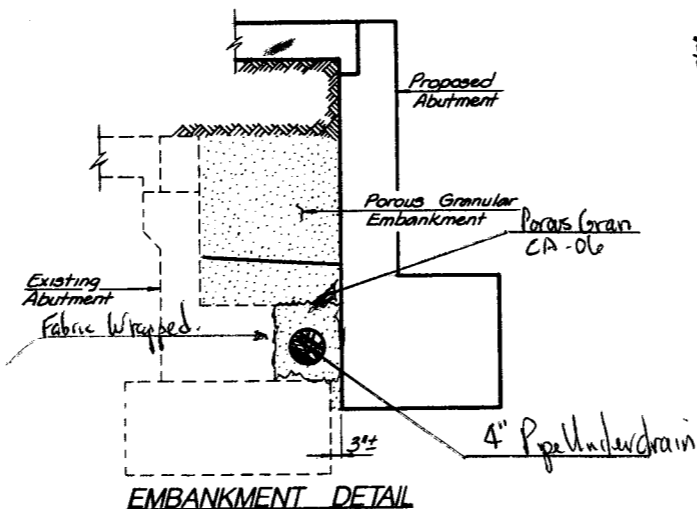
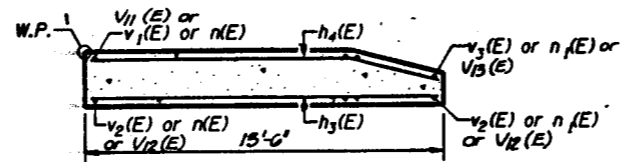
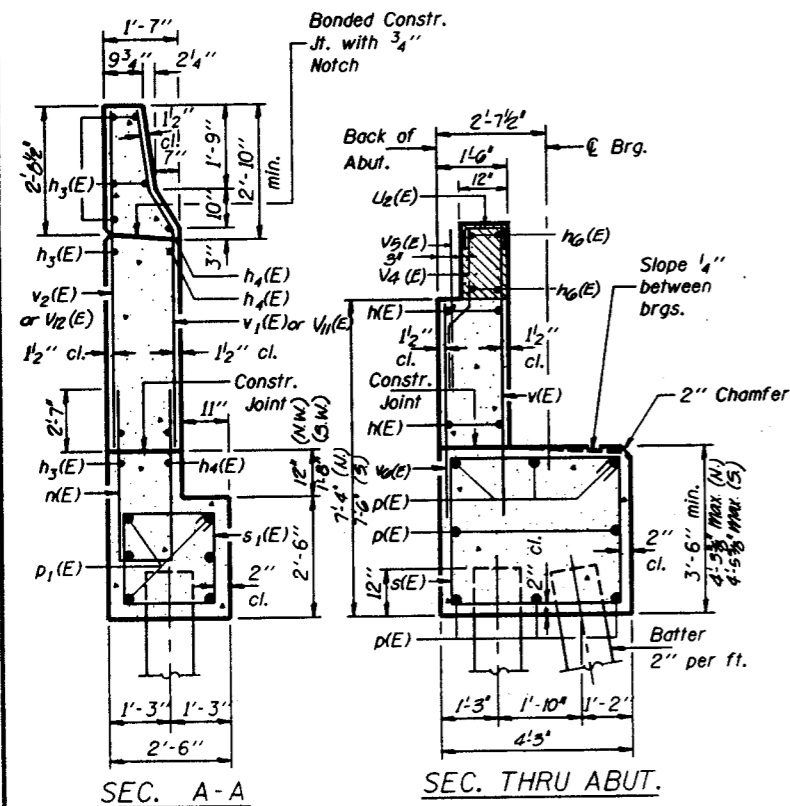
SOUTHWEST WINGWALL
(NORTHWEST SIMILAR EXCEPT AS NOTED)



SOUTHEAST WINGWALL
(NORTHEAST SIMILAR EXCEPT AS NOTED)



NORTHEAST WINGWALL
(SOUTHEAST SIMILAR EXCEPT AS NOTED)



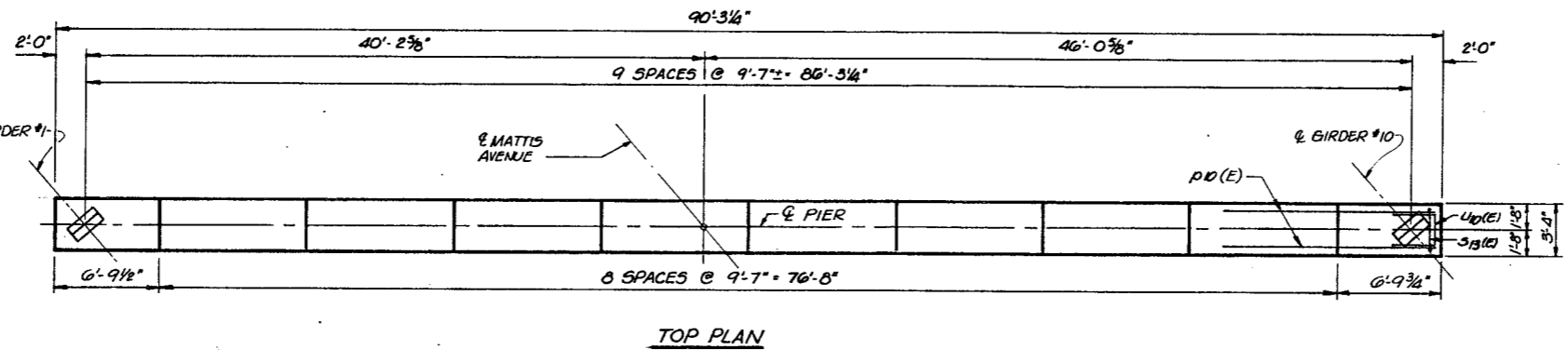
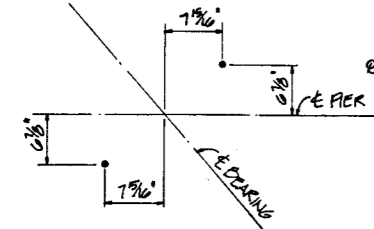
Work This Sheet With Sheets 12 & 13. Of 20

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DESIGNED BY J.H. 4/91
1		FAI-74	SEC10-5-1 HB18R	CHECKED BY DATE M.C. 4/91
2		CHAMPAIGN	SN 010-0270	PROJECT NO. 3400-14
3		HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		SHEET NO.

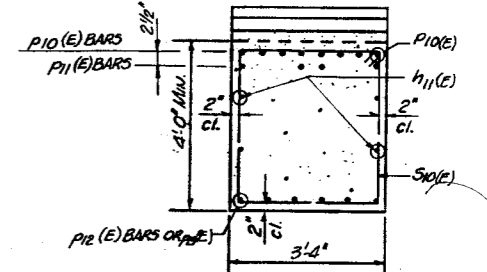
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	15
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

* (10 - 5 - 1HB)BR

ANCHOR BOLT LAYOUT
(10 REQUIRED)



TOP PLAN



SECTION A-A

MIN. LAPS
#5 BARS 2'-2"
#4 BARS 1'-8"
#9 BARS 5'-9"

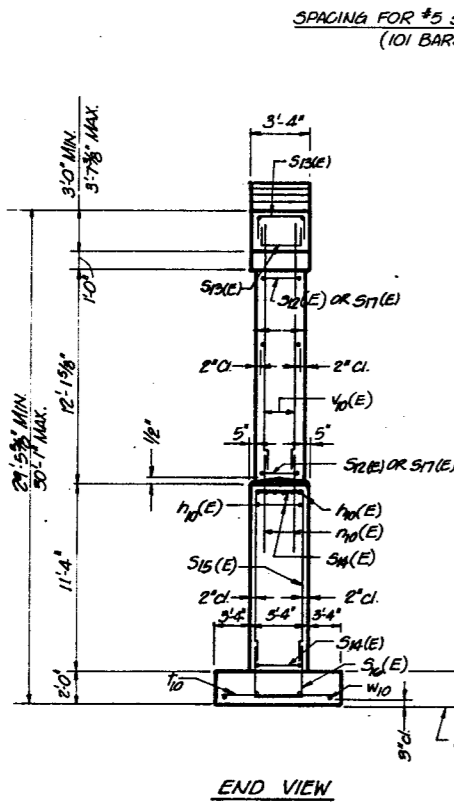
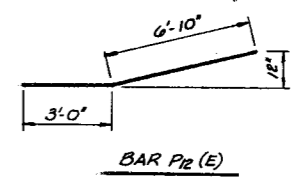
* Add 10 bars.

* CUT S15(E) TO FIT IN FIELD

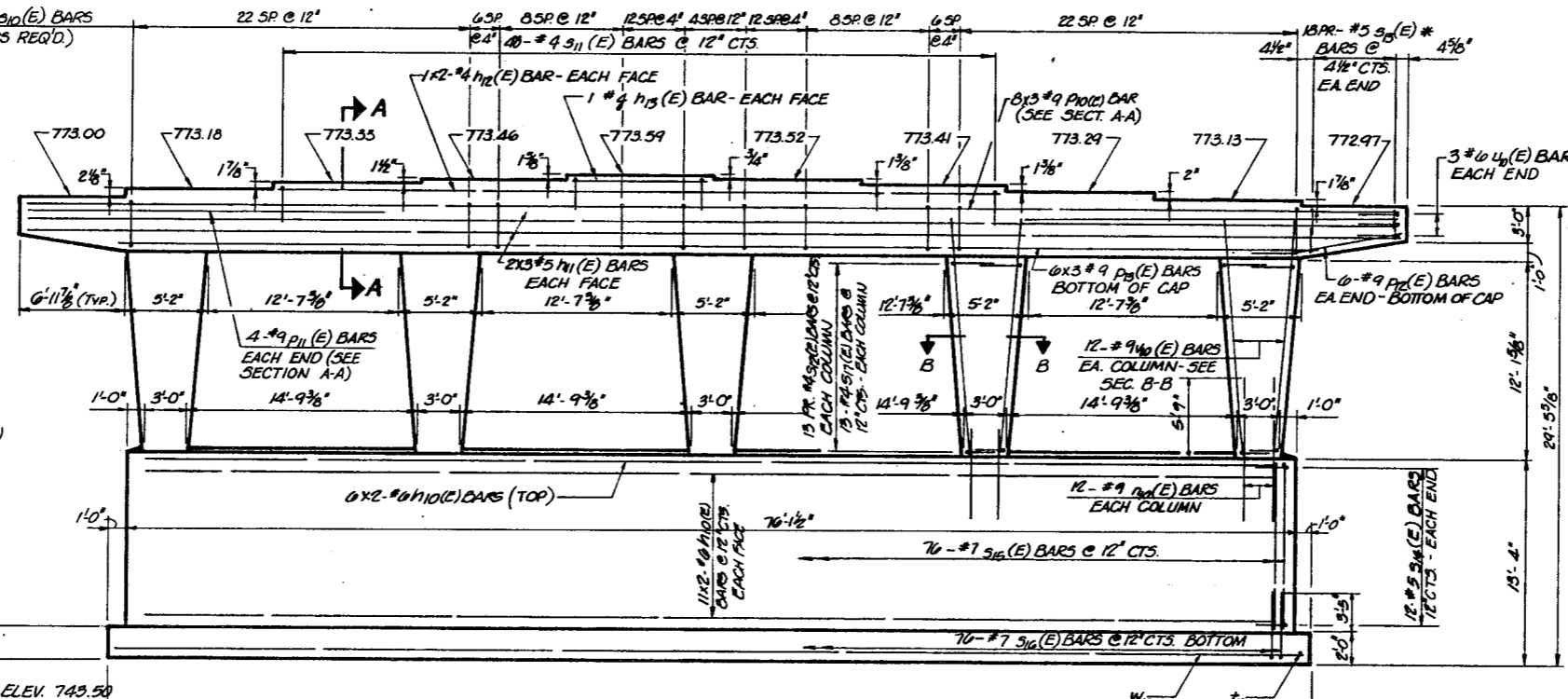
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10(E)	50	#10	39'-0"	—
h11(E)	12	#5	31'-0"	—
h12(E)	4	#4	24'-9"	—
h13(E)	2	#4	9'-4"	—
n10(E)	60	#9	11'-6"	—
p10(E)	24	#9	33'-11"	—
p11(E)	3	#9	17'-0"	—
p12(E)	12	#9	9'-10"	—
p13(E)	1	#9	29'-3"	—
s10(E)	101	#5	14'-1"	□
s11(E)	48	#4	5'-0"	□
s12(E)	130	#4	7'-0"	□
s13(E)	72	#5	9'-8"	□
s14(E)	24	#5	7'-4"	□
s15(E)	76	#7	23'-0"	□
s16(E)	76	#7	13'-4"	□
s17(E)	65	#4	10'-5"	□
t10	70	#8	9'-0"	—
u10(E)	6	#6	9'-0"	—
v10(E)	60	#9	15'-9"	—
w10	20	#5	40'-0"	—

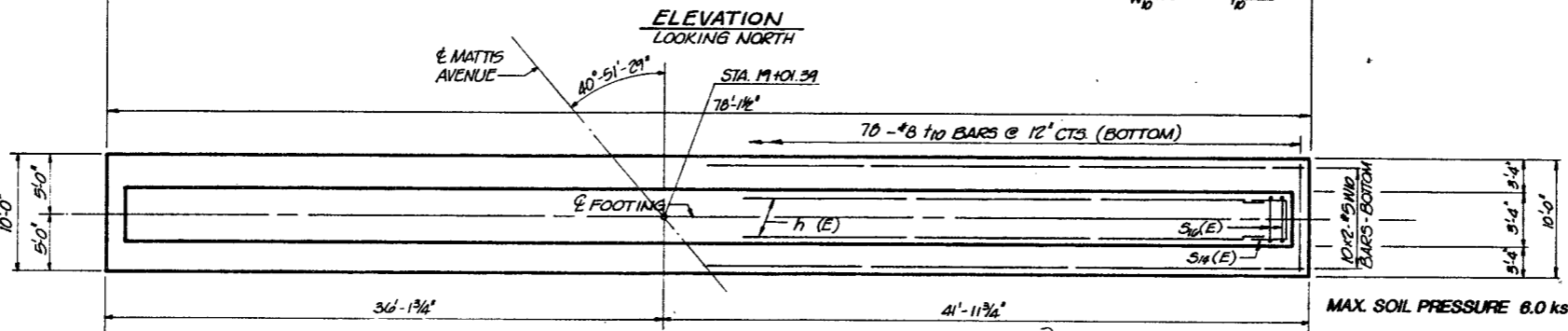
NOTE:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All exposed edges shall have standard 3/4" chamfer except as noted.



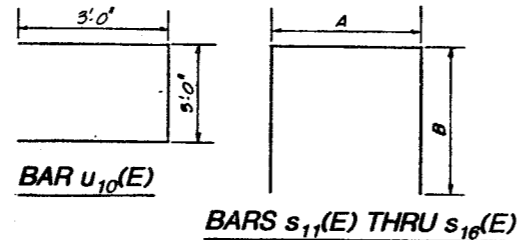
END VIEW



ELEVATION
LOOKING NORTH

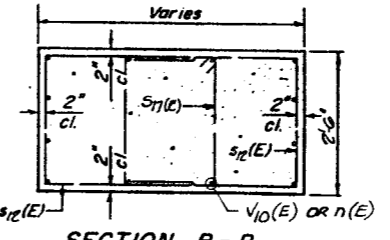


FOOTING PLAN



A & B DIMENSIONS

Bar	A	B
s11(E)	3'-0"	11'-0"
s12(E)	2'-2"	2'-6"
s13(E)	3'-0"	3'-4"
s14(E)	3'-0"	2'-2"
s15(E)	3'-0"	11'-0"
s16(E)	3'-0"	5'-2"



SECTION B-B

PIER DETAILS

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE mjt 3-91
1	DATE	DETAILS	FAI-74	SEC (10 - 5 - 1HB) BR
2			CHAMPAIGN	SN 010-0270
3			COUNTY	3400-14
4			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	

NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			
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* (10 - 5 - 1 HB)BR

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

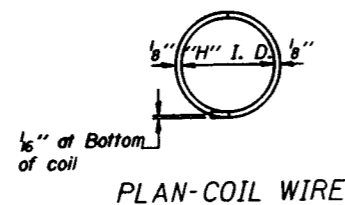
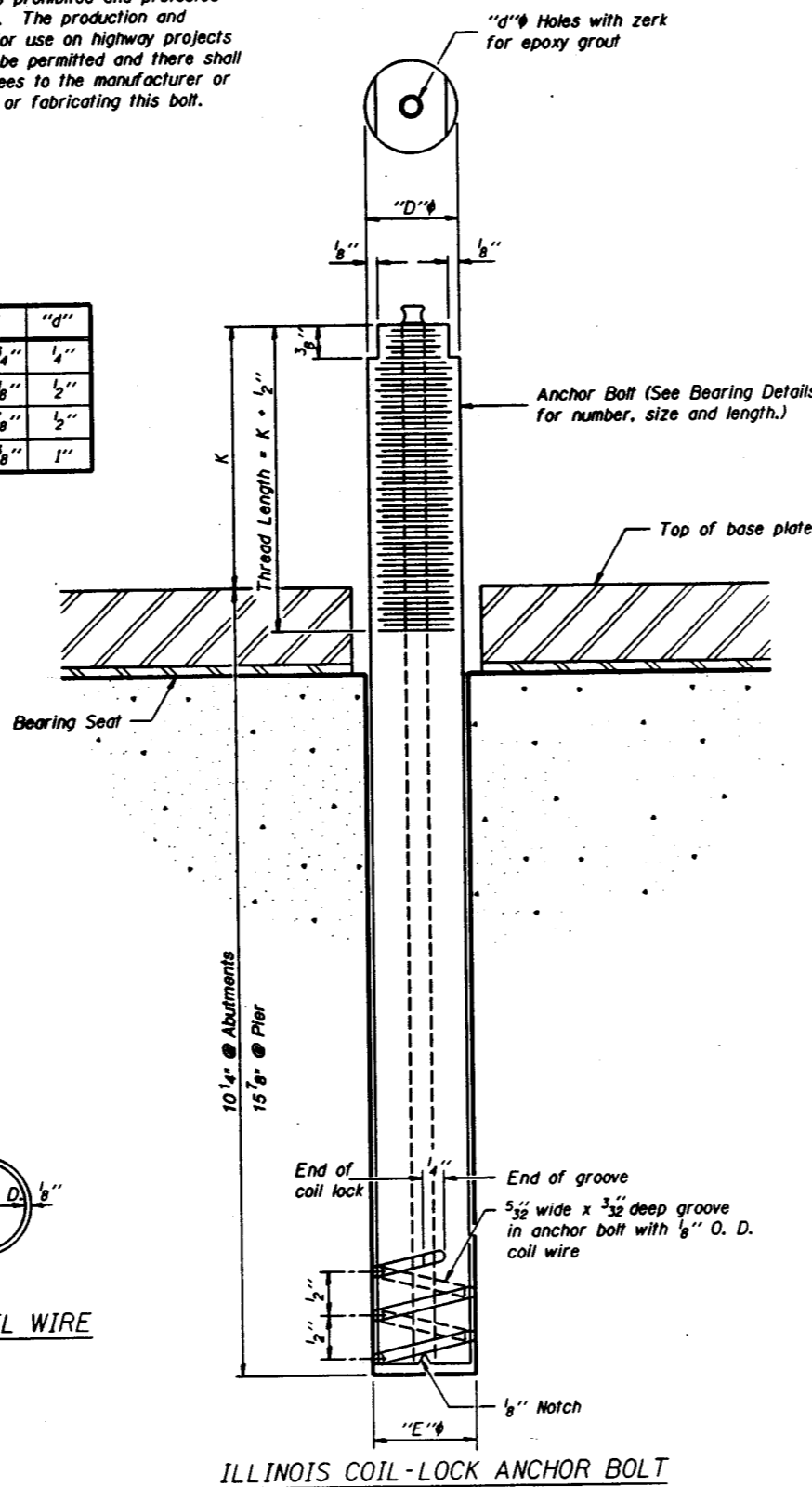
- With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
- Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

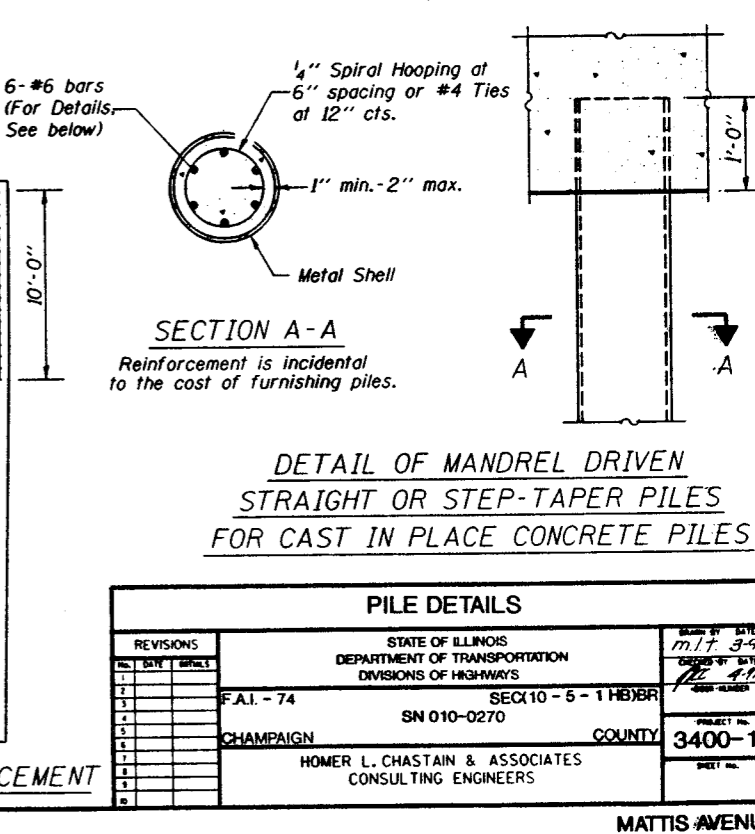
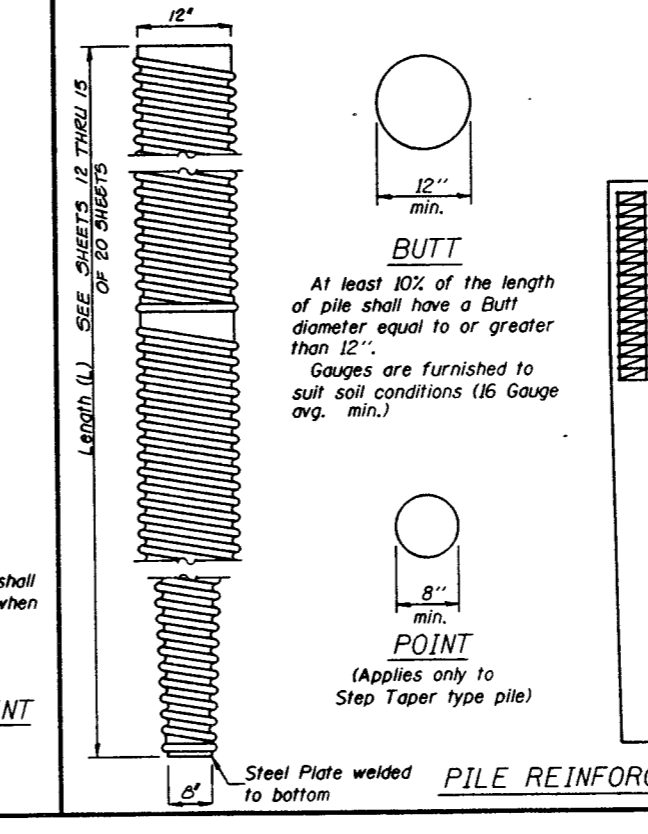
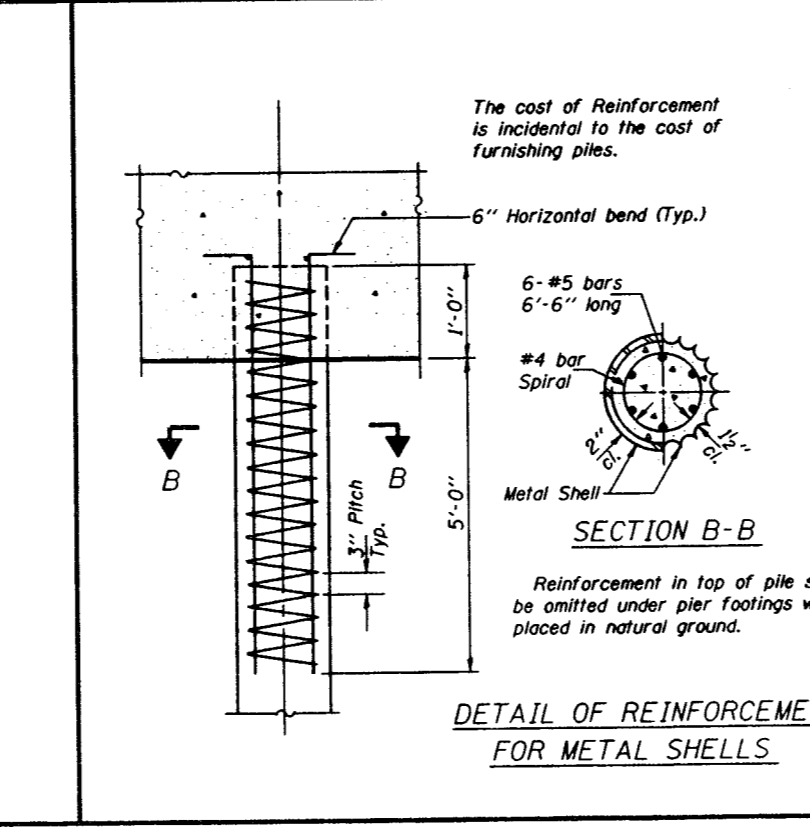
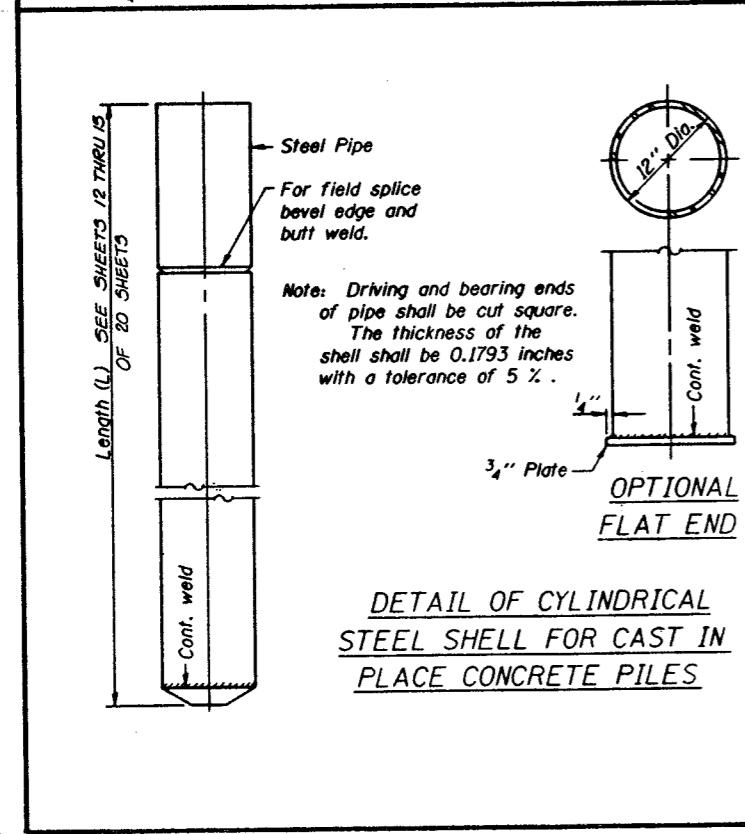
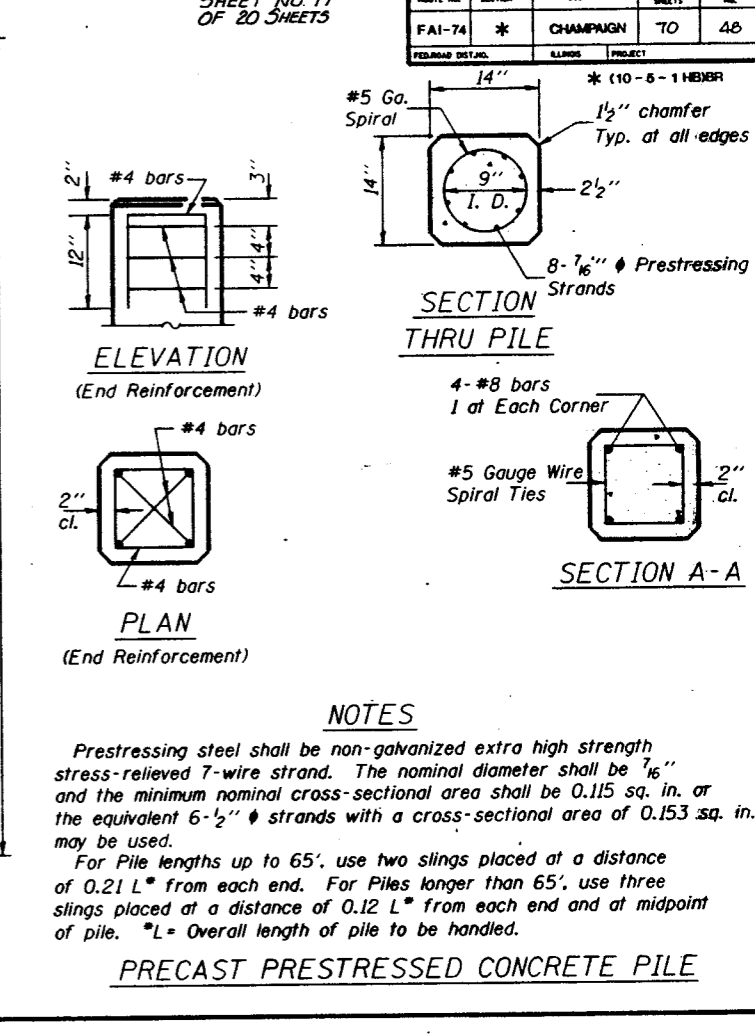
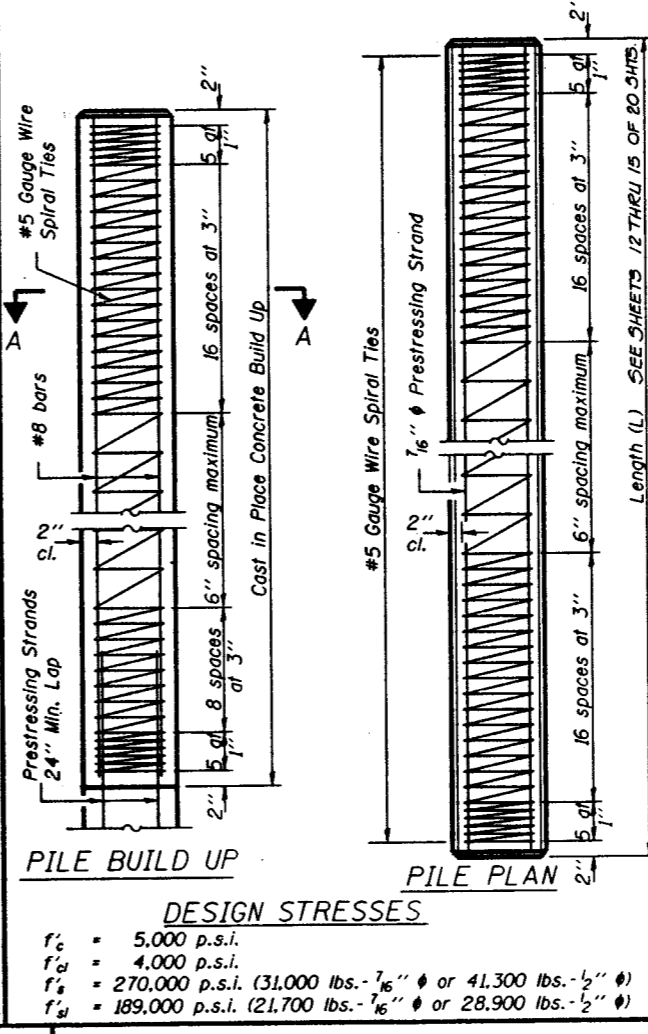
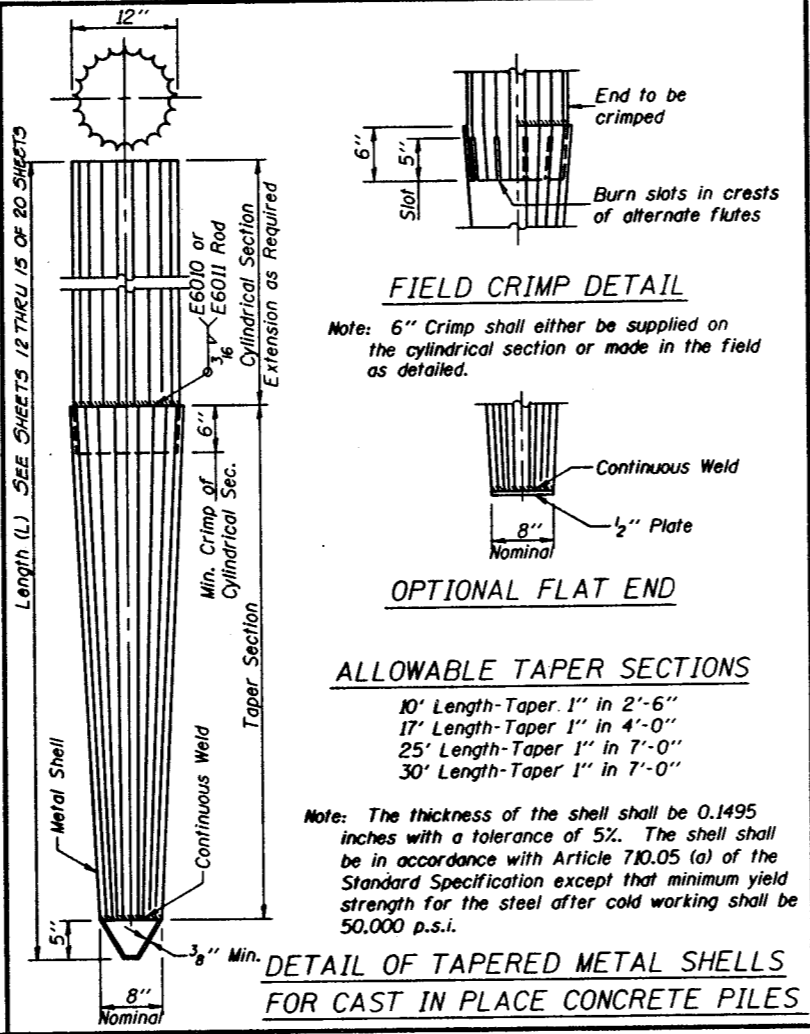
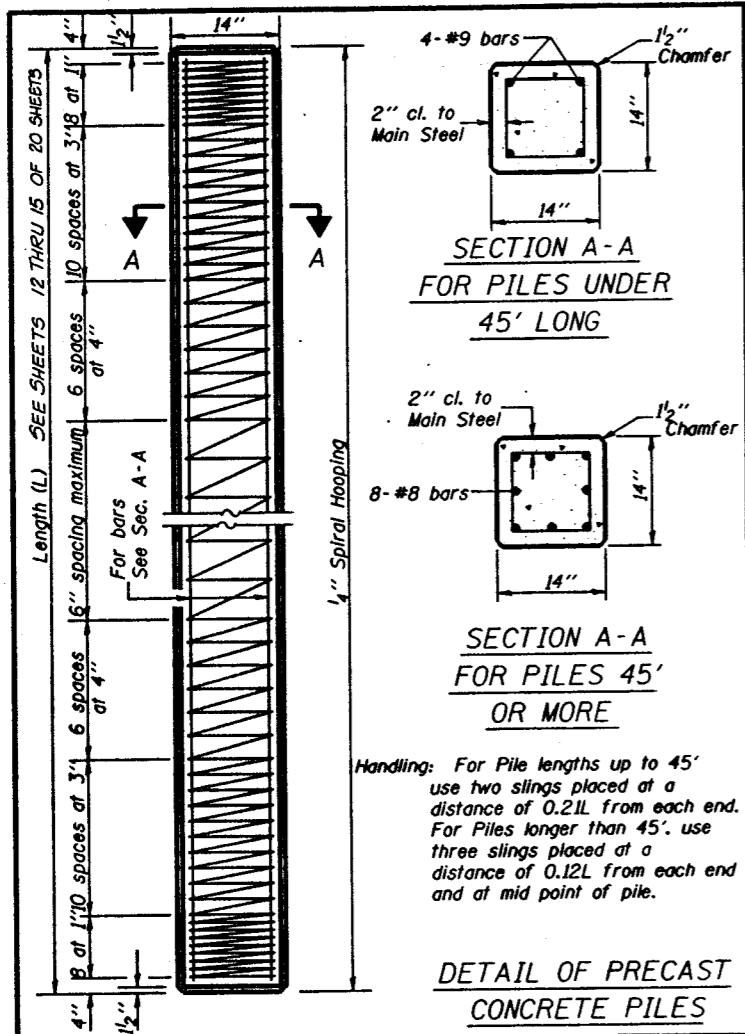
D	E	H	K	"d"
1"	1 1/8"	3 1/8"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

ANCHOR BOLT DETAILS FOR BEARINGS			
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS			
F.A.I. - 74		SEC(10 - 5 - 1 HB)BR	
CHAMPAIGN COUNTY		PROJECT NO. 3400-14	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS			

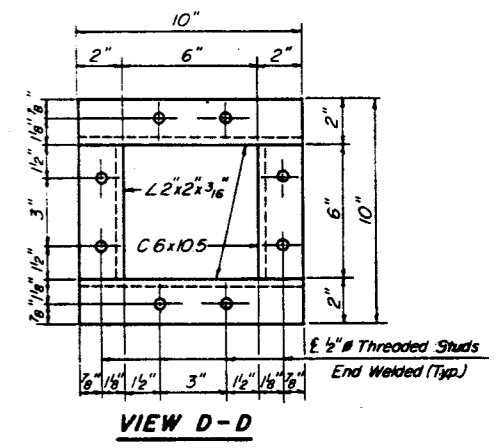
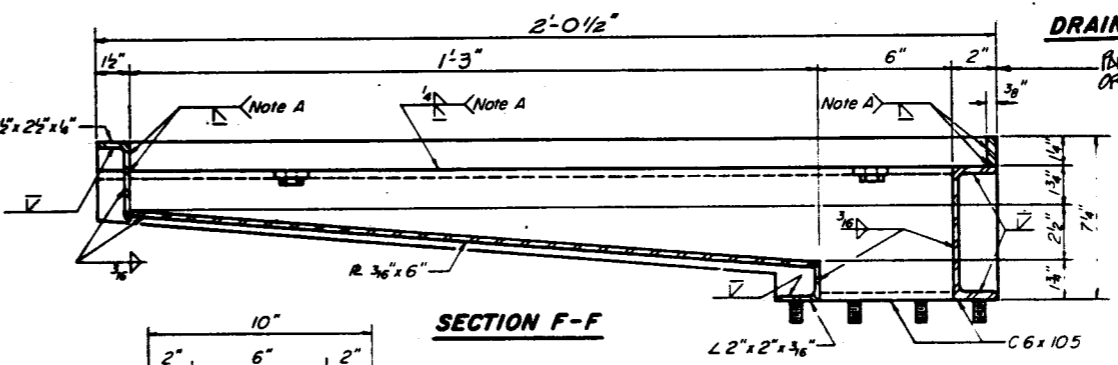
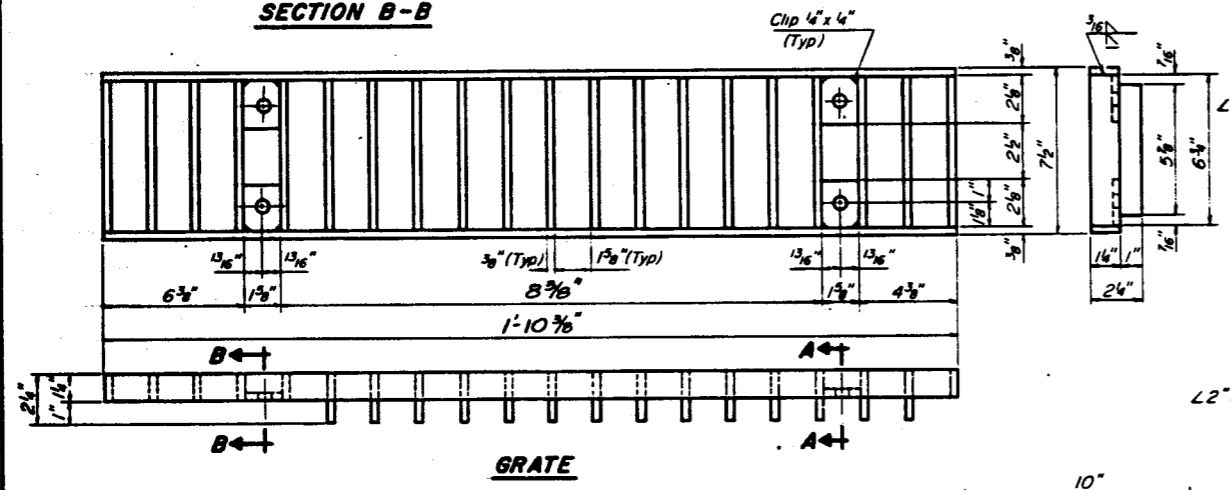
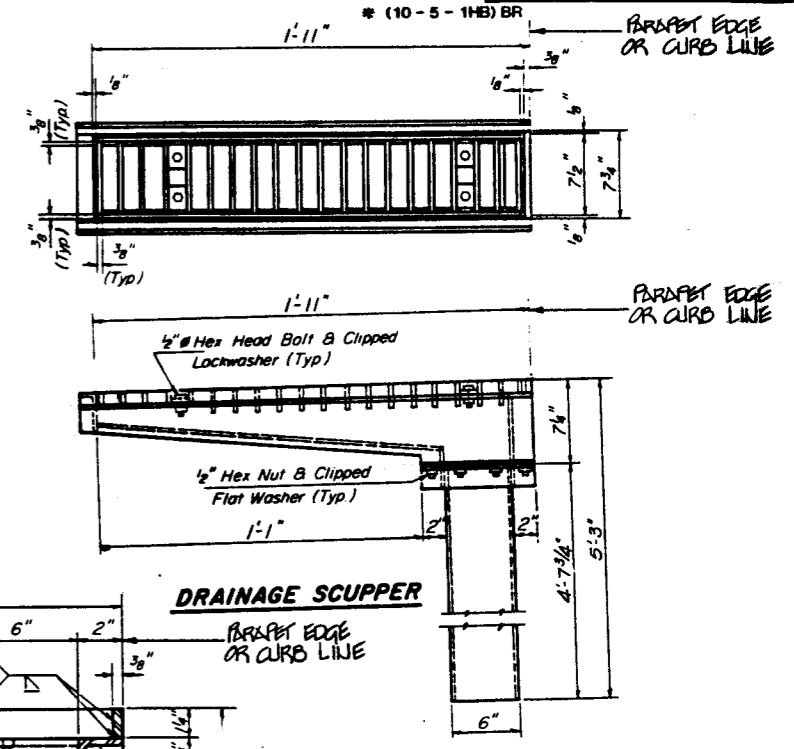
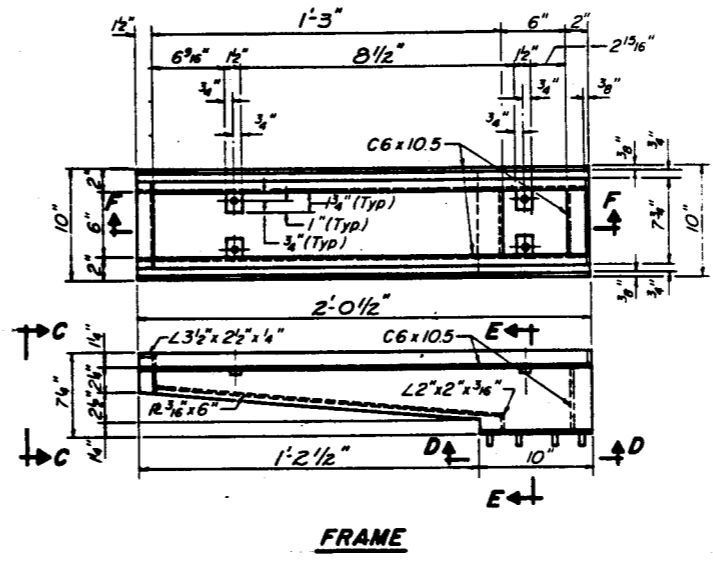
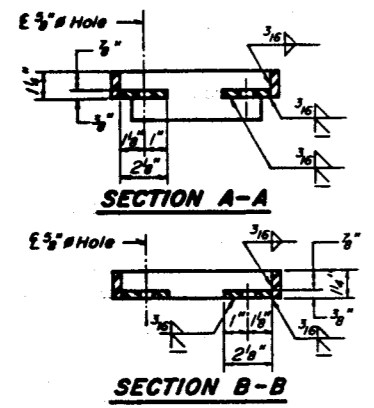
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	48
FEDERAL DIST.	ILLINOIS	PROJECT		



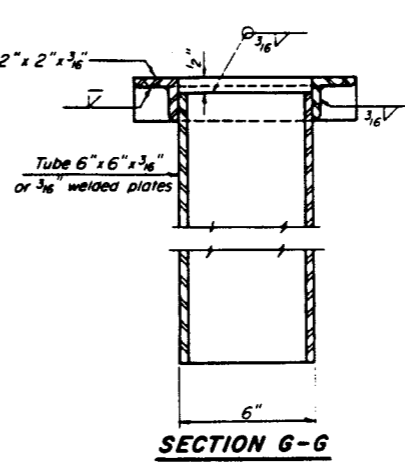
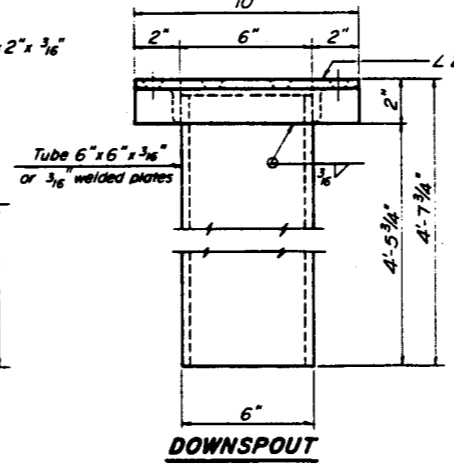
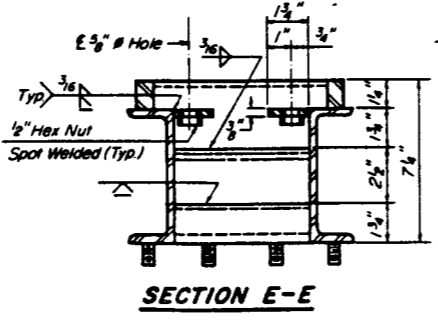
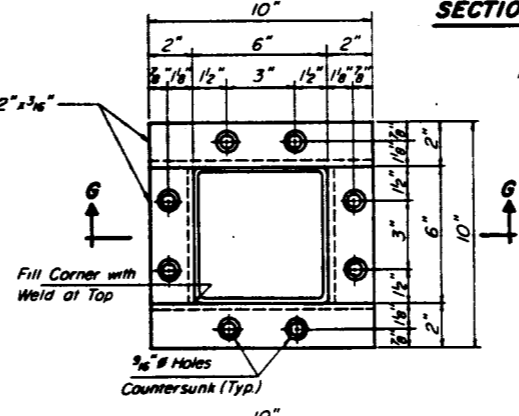
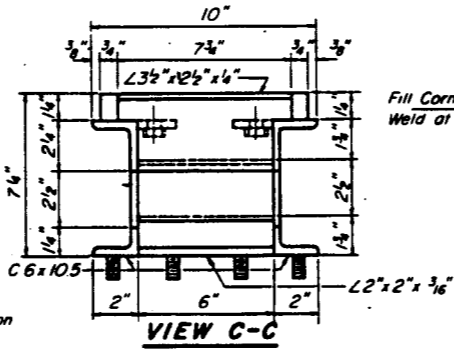
REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS		DATE	BY
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PROJECT NO.	3400-14
COUNTY	CHAMPAIGN
SECTION	SEC10-5-1 HB/BR
SN	010-0270
ENGINEER	HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 2	*	CHAMPAIGN	70	49
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



Notes:
Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B, or A-501 Structural Steel Tubing
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. M 183.
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A-307
The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 & ASTM A-385
All bolts, washers and nuts shall be galvanized in accordance with AASHTO M 232
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS SPECIAL".



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper (SPECIAL)	Each	8

(Sheet 1 of 2)

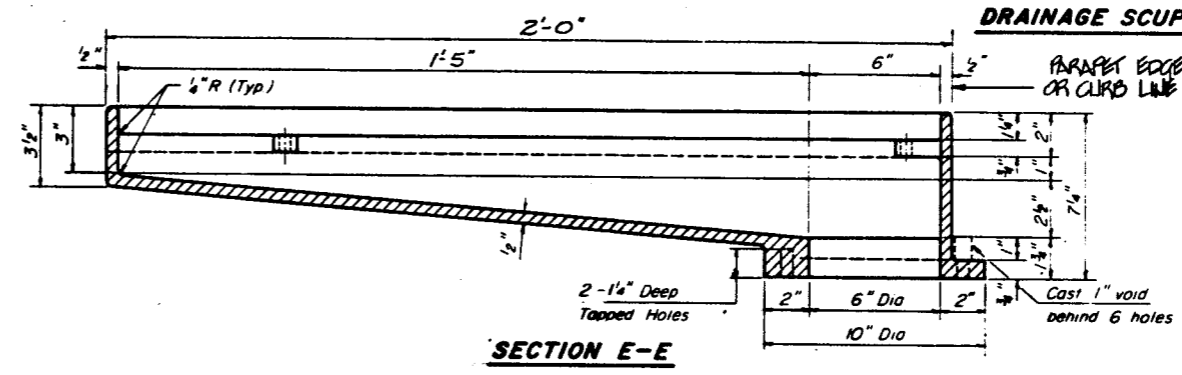
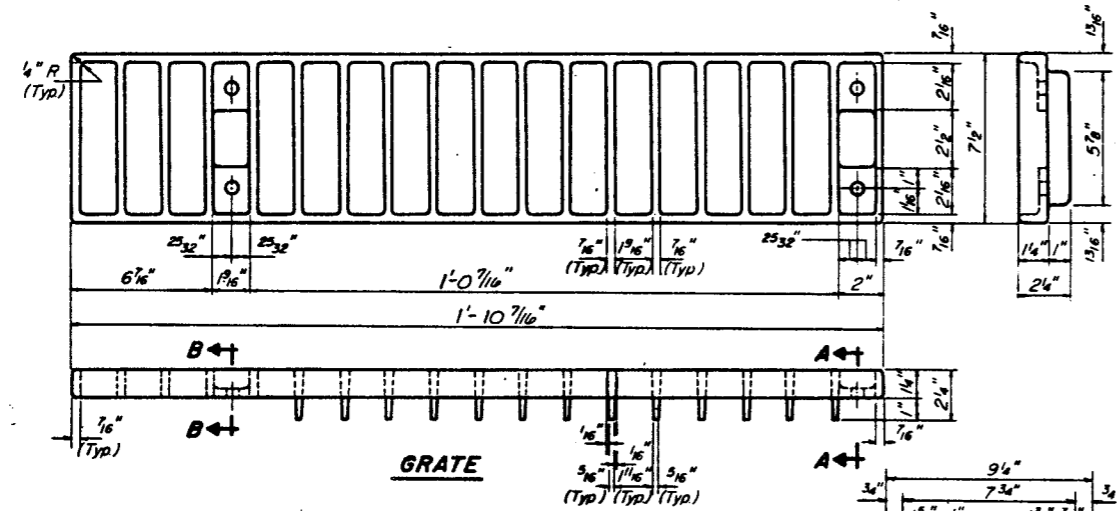
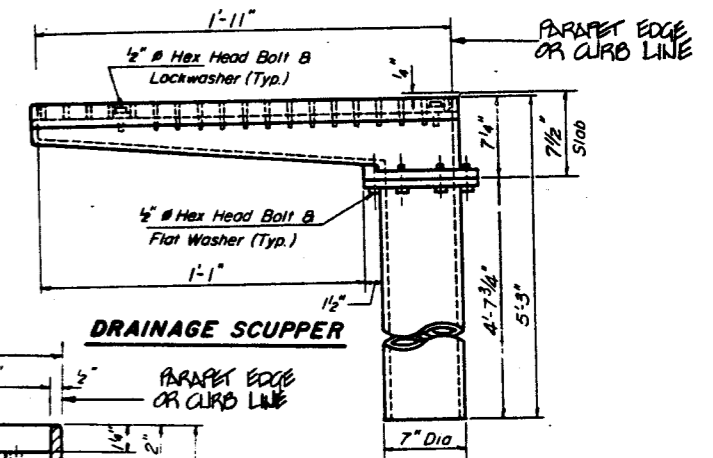
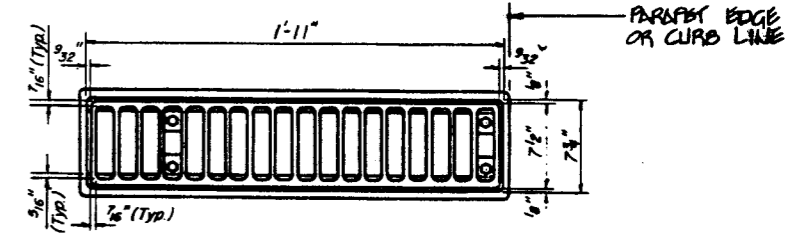
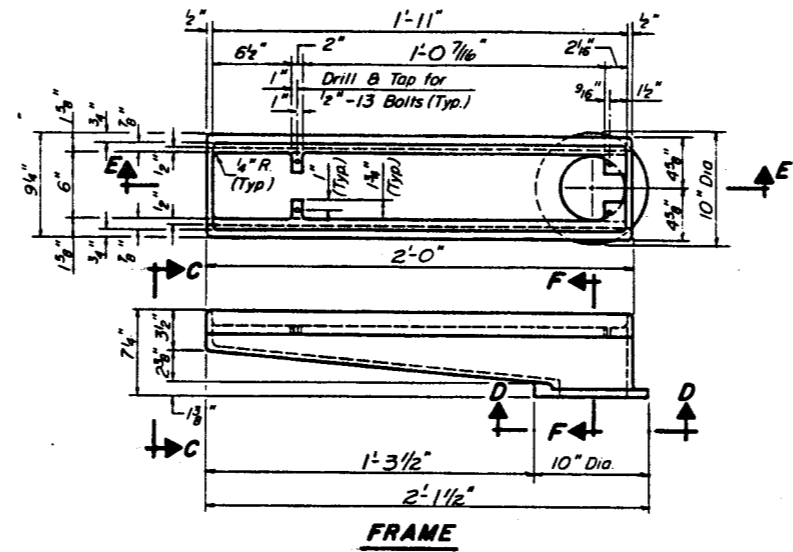
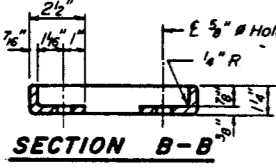
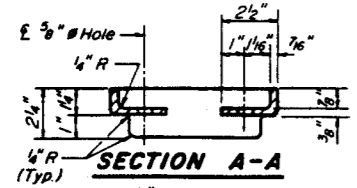
STEEL DRAINAGE SCUPPER

REVISIONS		DRAWN BY DATE	
No.	DATE	INITIALS	
1			
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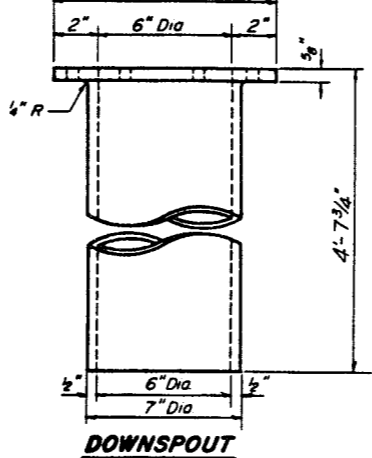
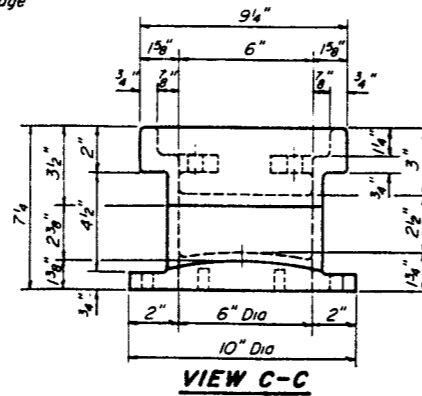
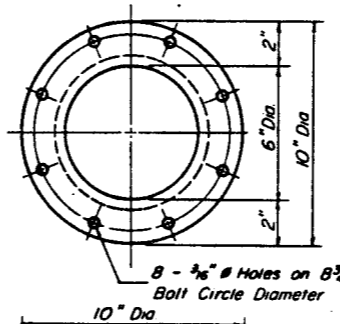
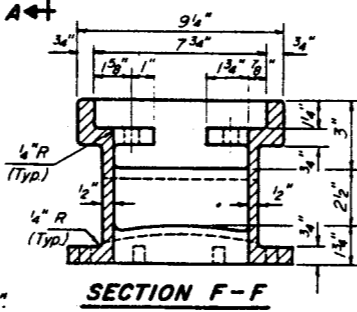
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DESIGNED BY DATE K.C.A. 8/1
F.A.I. 74	SEC (10-5-1HB) BR	PROJECT NO. 3400-14
CHAMPAIGN	SN 010-0270	COUNTY
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		SHEET NO.

NO.	DATE	BY	REVISION
1			
2			
3			
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PROJECT: ILLINOIS PROJECT



Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO: M-105, Class 30.
 Bolts and washers shall conform to the requirements of A.S.T.M.: A-307.
 All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O.: M-232.
 As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M.: A-193, Type 304.
 Cast of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS SPECIAL".
 The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

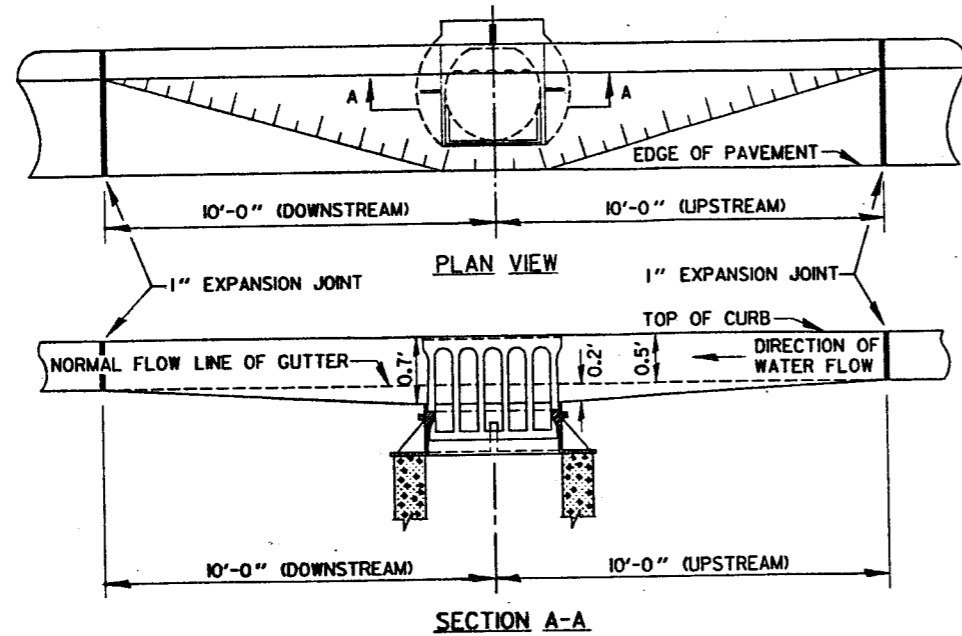


(Sheet 2 of 2)
**ALTERNATE - CAST IRON
 DRAINAGE SCUPPER**

REVISIONS				DRAWING NO. DATE	
NO.	DATE	BY	REVISION	3400-14	
1					
2					
3					
4					
5					
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8					
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10					

DRAINAGE SCUPPER		STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION		DIVISION OF HIGHWAYS
F.A.I. 74	SEC (10 - 5 - 1HB) BR	CHAMPAIGN COUNTY
SN 010-0270		3400-14
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS		

DETAIL OF DEPRESSING GUTTER GRADE AT INLETS, CATCH BASINS AND MANHOLES



SECTION A-A

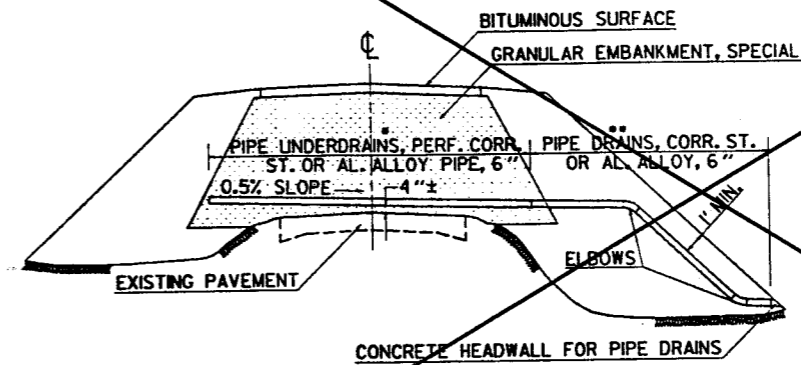
GENERAL NOTES

- THE TWO EXPANSION JOINTS AS MENTIONED IN THE DRAINAGE OPENING PARAGRAPH ON STD. 2130 SHALL BE PLACED AS SHOWN ABOVE.
- THE GUTTER GRADE SHALL BE DEPRESSED AT ALL INLETS, CATCH BASINS AND MANHOLES UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE VARIOUS PAY ITEMS OF WORK INVOLVED.

DESIGNED	J.M.H.	8/87
CHECKED	F.M.S.	8/87
CADD NO.	A-L30	

REVISIONS	
NAME	DATE
J.M.H.	7/88

DETAIL OF DRAINAGE OF GRANULAR EMBANKMENT, SPECIAL



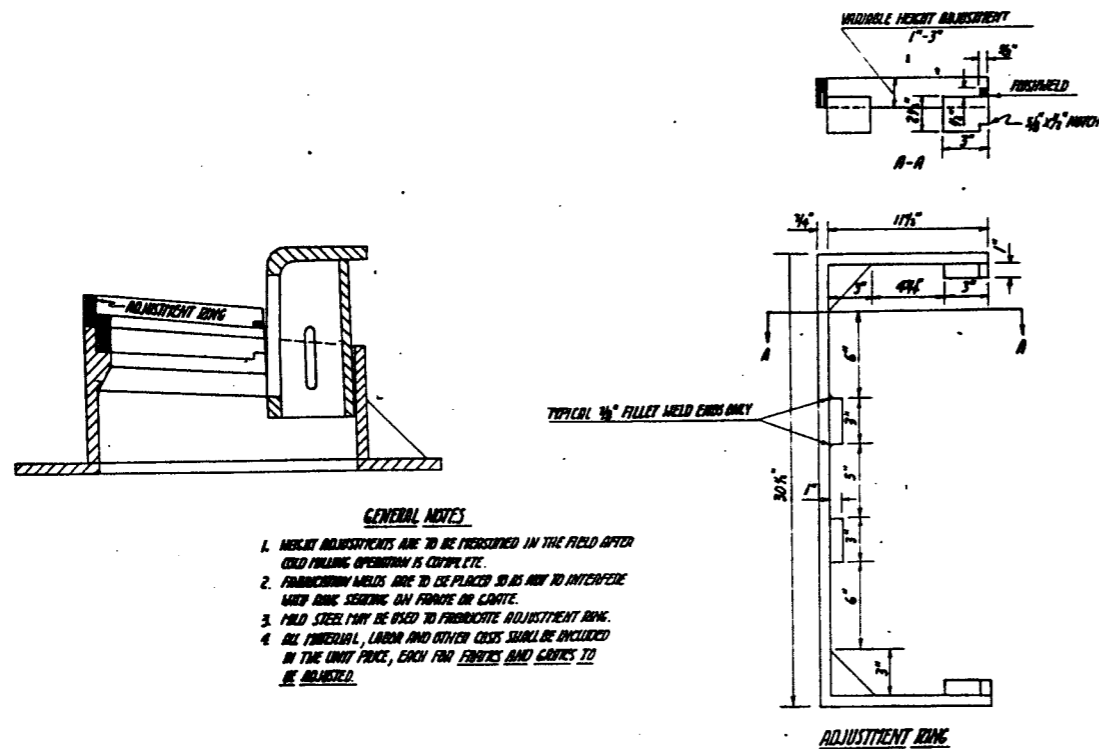
- *PERFORATED POLY (VINYL CHLORIDE) (PVC) PIPE WILL ALSO BE ALLOWED.
- **POLY (VINYL CHLORIDE) (PVC) PIPE WILL ALSO BE ALLOWED.

DESIGNED	J.M.H.	9-8-87
CHECKED	F.M.S.	9-8-87
CADD NO.	A-15.03	

REVISIONS	
NAME	DATE

SCHEDULE			
STATION	OUTLET	UNDERDRAINS	DRAINS
TOTALS			

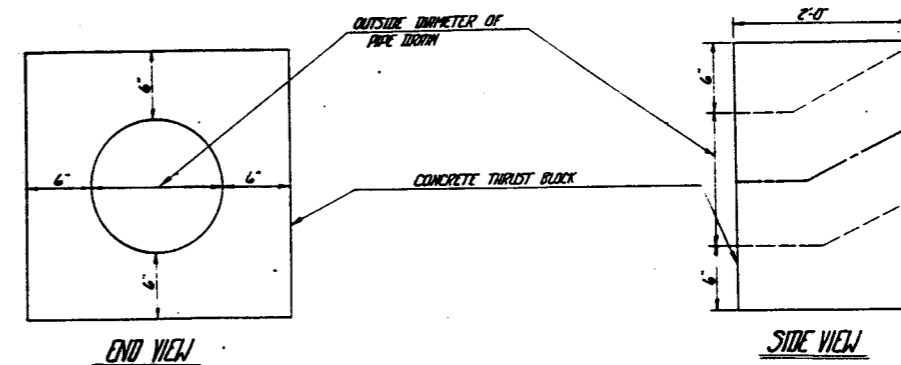
ADJUSTMENT RINGS FOR C-11 FRAMES AND GRATES



GENERAL NOTES

- HEIGHT ADJUSTMENTS ARE TO BE PERFORMED IN THE FIELD AFTER COLD TRAFFIC OPERATIONS IS COMPLETE.
- FABRICATION WELDS ARE TO BE PLACED SO AS NOT TO INTERFERE WITH RING SEALS OR FRAMES OR CURBS.
- MILD STEEL MAY BE USED TO FABRICATE ADJUSTMENT RING.
- ALL FABRICATION, LABOR AND OTHER COSTS SHALL BE INCLUDED IN THE UNIT PRICE, EACH FOR FRAMES AND GRATES TO BE ADJUSTED.

DETAIL OF CONCRETE THRUST BLOCKS



END VIEW

SIDE VIEW

FOR INFORMATION ONLY	
INSIDE DIAMETER OF PIPE	ESTIMATED QUANTITY CLASS 'Y' CONCRETE
18"	0.55
18"	0.60
24"	0.70

GENERAL NOTES

- CLASS 'Y' CONCRETE SHALL BE USED THROUGHOUT.
- CONCRETE THRUST BLOCKS SHALL BE USED AS SHOWN ON STANDARD 2524.
- CONCRETE THRUST BLOCKS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, EACH COMPLETE IN PLACE FOR CONCRETE THRUST BLOCKS.

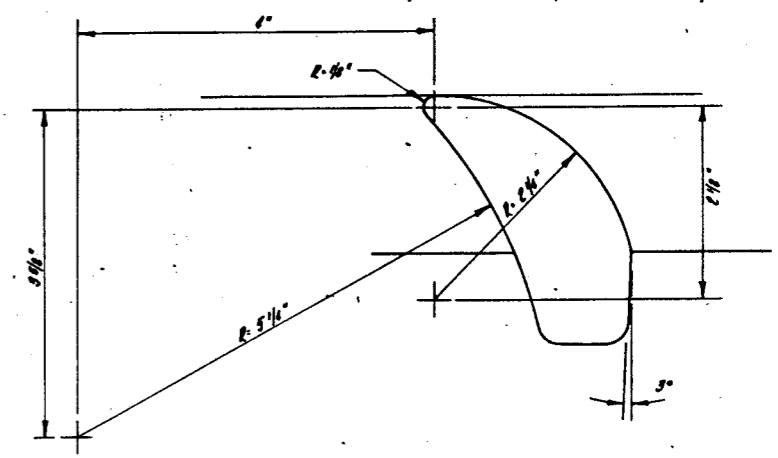
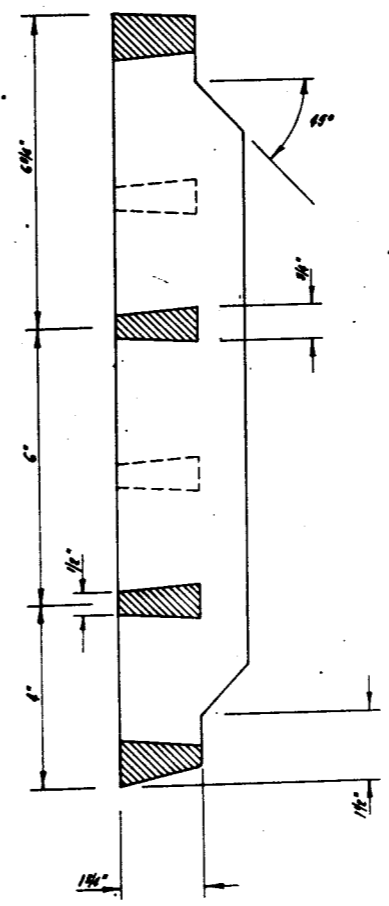
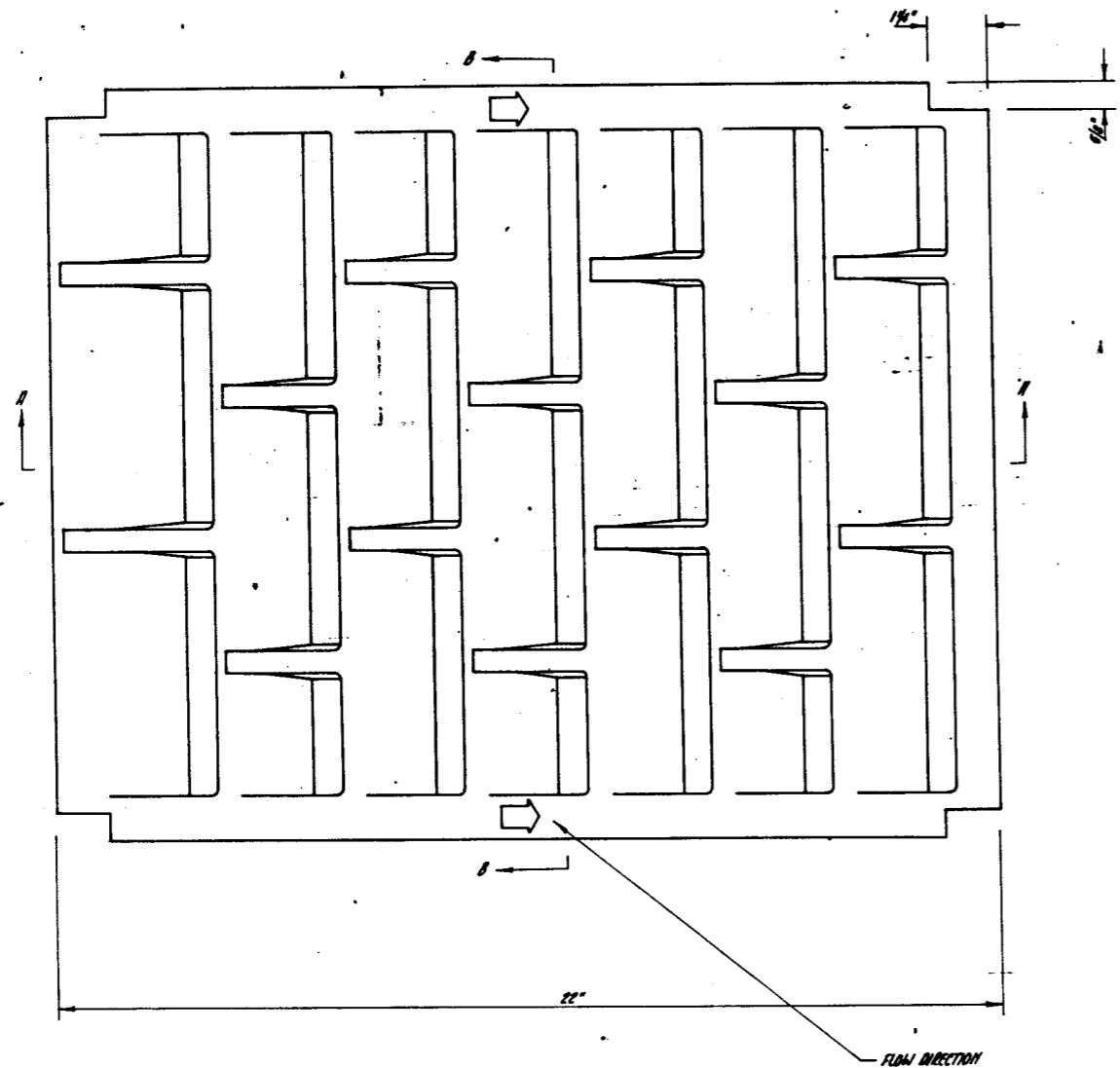
DETAILS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	PROJECT NO. 3400-14
FA1-74 (10-5-1) HBXR	COUNTY CHAMPAIGN
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	

DETAIL OF WINE TYPE GATES FOR TYPE 3 FRAMES

NO.	SECTION	QUANTITY	WEIGHT	NO.
FA1-74	*	CHAMPION	70	53

*10-6-14E1BR

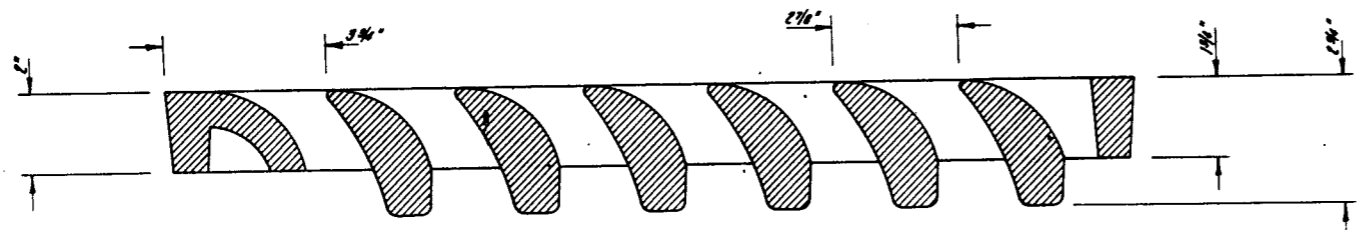


WINE DETAIL

SECTION B-B

GENERAL NOTES

1. ALL THE APPLICABLE GENERAL NOTES FOR STANDARD C214 SHALL APPLY, EXCEPT THAT STEEL GATES WILL NOT BE BLANKED.
2. EACH TYPE 3 FRAME SHALL BE SUPPLIED WITH ONE OF THESE WINE TYPE GATES RATHER THAN EITHER GATE SHOWN ON STANDARD C214.
3. APPROXIMATE WEIGHT - 43 POUNDS.
4. THIS GATE, INCLUDING ANY MODIFICATIONS OR DELAYS, SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE FURNISH PRICE ITEMS INCLUDING TYPE 3 FRAME AND GATES AND AN INQUIRY FOR COMPENSATION WILL BE BLANKED.

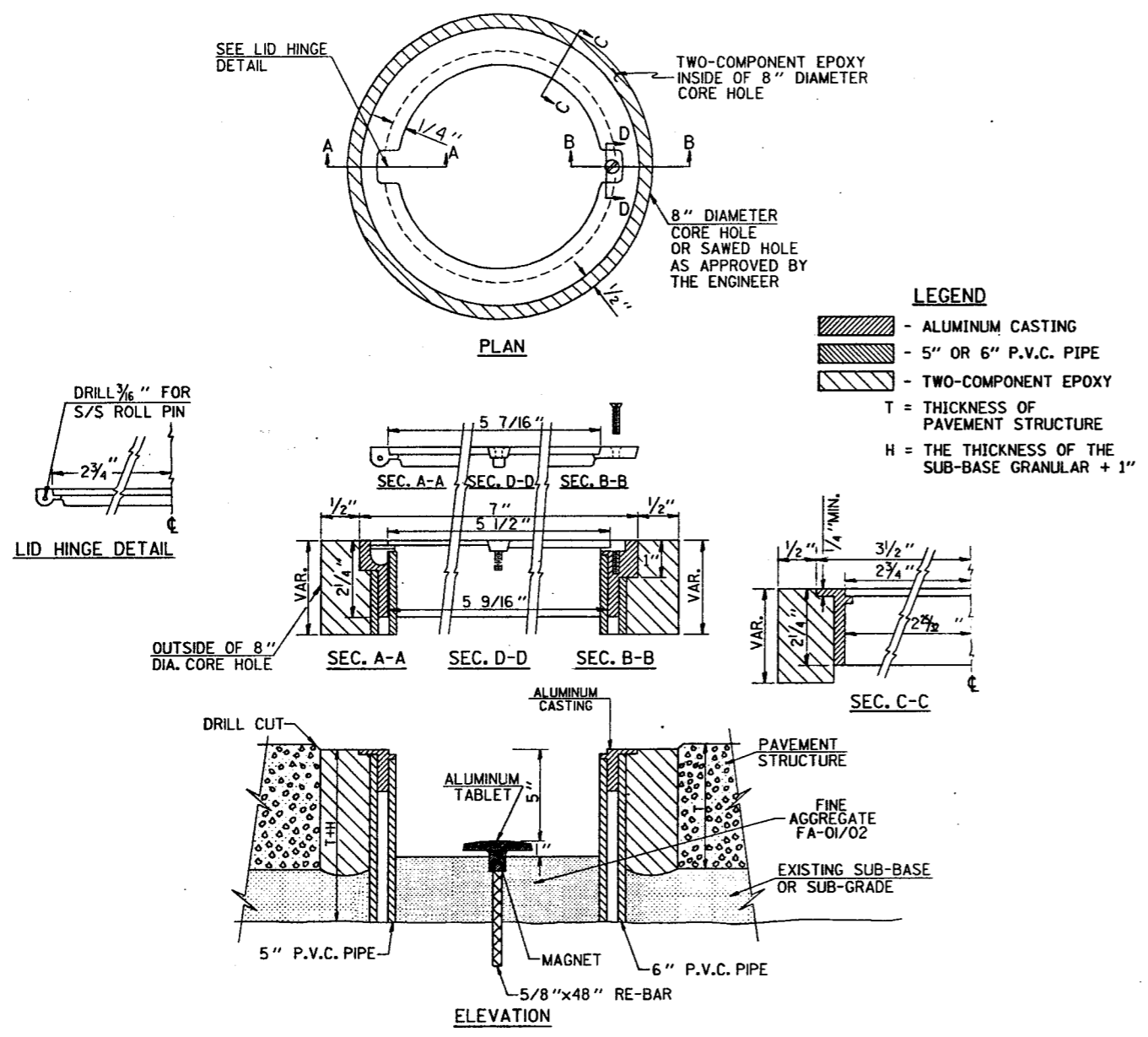


SECTION A-A

DESIGNED BY	NAME	DATE
CHECKED BY	JMK	6-87
DRAFTED BY	ERM	6-87

* SEC (10-5-1 HB) BR

DETAIL OF PERMANENT SURVEY MARKERS



GENERAL NOTES

- ALUMINUM CASTING SHALL BE EITHER PLACED OVER A 5" P.V.C. PIPE OR INSIDE OF A 6" P.V.C. PIPE.
- BACKFILL WITH SELECT MATERIAL AS DIRECTED BY THE ENGINEER.
- TO PREVENT DAMAGE TO THE TOP OF THE 5/8" Ø RE-BAR, AN APPROVED RE-BAR DRIVER SHALL BE USED.
- THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT SURVEY MARKERS WHICH PRICE SHALL INCLUDE ALL LABOR AND MATERIAL AS SPECIFIED INCLUDING CORING, EPOXY AND BACKFILL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- EPOXY SHALL CONFORM TO APPLICABLE PORTIONS OF ARTICLE 718.08 OF THE STANDARD SPECIFICATIONS.
- ALL ALUMINUM CASTING SHALL BE PLACED 1/4" (±) BELOW THE FINAL SURFACE.

BILL OF MATERIAL

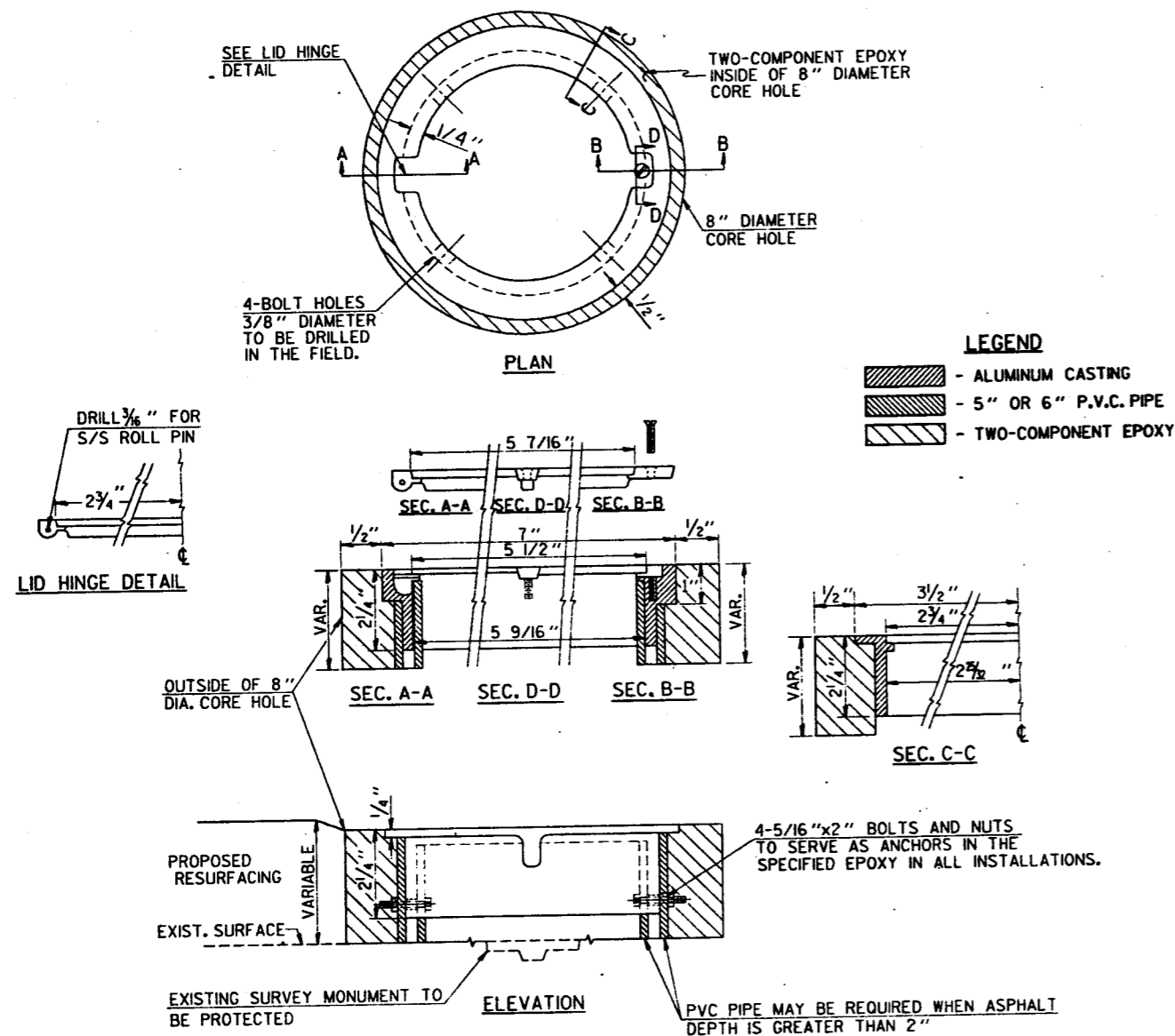
ALUMINUM CASTING OF THE DIMENSIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS.
 5" OR 6" Ø P.V.C. PIPE, SCHEDULE 40, ALUMINUM TABLET,
 STAMPED IN ACCORDANCE WITH STANDARD 2135.
 5/8" Ø x 48" RE-BAR, EPOXY, BACKFILL.

		REVISIONS	
DESIGNED	NAME	DATE	
	A.W.H.	2-28-91	
CHECKED	J.H.M.	2-28-91	
CADD NO.	D-103		

REVISIONS		DETAILS	
No.	DATE	DESCRIPTION	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE
F.A.I. 74	SEC. (10-5-1 HB) BR	CHECKED BY DATE
CHAMPAIGN	COUNTY	BOOK NUMBER
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		PROJECT NO. 3400-14
		SHEET NO.

DETAIL OF SURVEY MONUMENT COVER ASSEMBLY



GENERAL NOTES

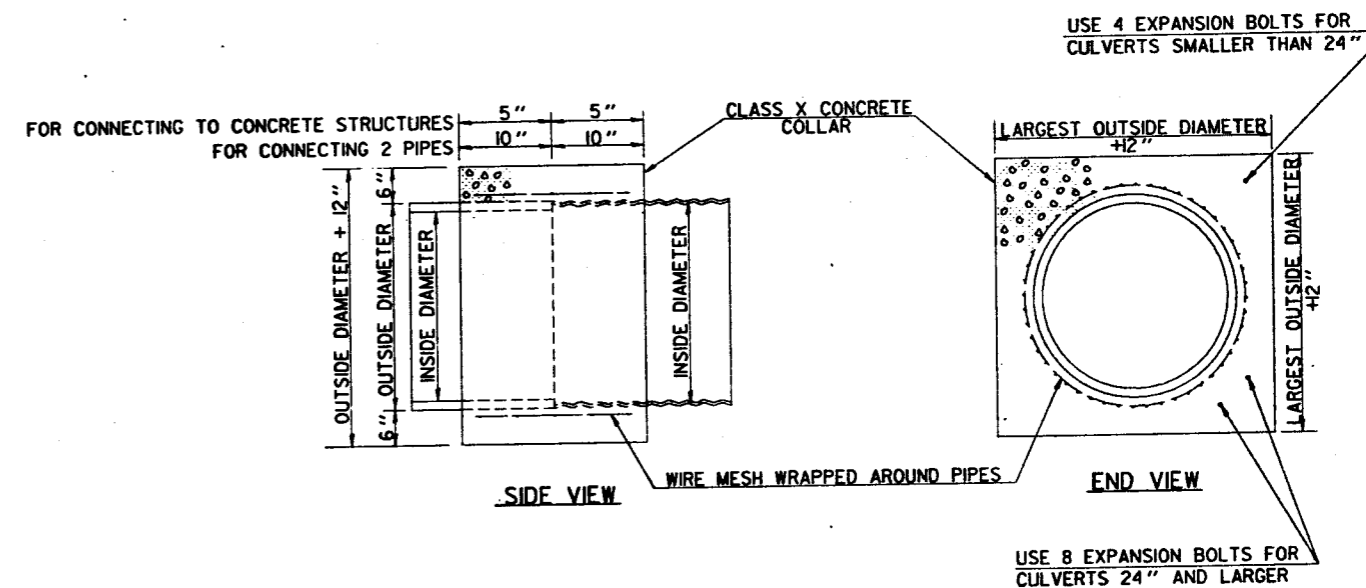
- WORK SHALL NOT START ON THIS ITEM UNTIL THE FINAL LIFT OF CLASS I HAS BEEN COMPLETED.
- THE SURVEY MONUMENT COVER ASSEMBLY SHALL BE CENTERED ABOVE THE SURVEY MONUMENT TO BE PROTECTED.
- MODIFICATION OF THE ALUMINUM CASTING SHALL BE DONE BY GRINDING OR SAWING WHEN HEIGHT REDUCTION IS REQUIRED.
- ALL SURVEY MONUMENT COVER ASSEMBLIES SHALL BE PLACED 1/4" (±) BELOW THE FINAL SURFACE.
- ALUMINUM CASTING SHALL BE PLACED OVER A 5" P.V.C. PIPE OR INSIDE OF A 6" P.V.C. PIPE WHEN AN INCREASE IN HEIGHT IS REQUIRED.
- THE CASTING SHALL BE ANCHORED IN THE 8" DIAMETER CORE HOLE WITH TWO-COMPONENT EPOXY CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 718.08 OF THE STANDARD SPECIFICATIONS.
- THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR SURVEY MONUMENT COVER ASSEMBLY WHICH PRICE SHALL INCLUDE ALL LABOR AND MATERIAL AS SPECIFIED INCLUDING CORING THE NEWLY LAID SURFACE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE 8" DIAMETER CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

BILL OF MATERIAL

ALUMINUM CASTING OF THE DIMENSIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS, 4 EACH - 5/16"x2" BOLTS WITH NUTS, EPOXY, 5" OR 6" Ø P.V.C. PIPE, SCHEDULE 40 (WHEN REQUIRED).

		REVISIONS	
DESIGNED	NAME	DATE	
DESIGNED	A.W.H.	2-28-91	
CHECKED	J.H.M.	2-28-91	
CADD NO.	D-104		

DETAIL OF CLASS X CONCRETE COLLARS



FOR INFORMATION ONLY

INSIDE DIAMETER OF PIPE	ESTIMATED CLASS X CONCRETE REQUIRED (20" WIDTH)
4"	0.10 CU. YDS.
6"	0.12 CU. YDS.
8"	0.15 CU. YDS.
12"	0.20 CU. YDS.
18"	0.28 CU. YDS.
24"	0.36 CU. YDS.
42"	1.00 CU. YDS.
60"	1.24 CU. YDS.

GENERAL NOTES

- CLASS X CONCRETE SHALL BE USED THROUGHOUT.
- WHEN CLASS X CONCRETE COLLARS ARE USED TO CONNECT PIPES OF DIFFERENT OUTSIDE DIAMETERS, THE CLASS X CONCRETE COLLAR SHALL BE FORMED USING THE LARGEST OUTSIDE DIAMETER (SEE END VIEW).
- THE WIRE MESH SHALL WEIGH NOT LESS THAN 54 POUNDS PER 100 SQ. FT.
- WHEN CLASS X CONCRETE COLLARS ARE CONSTRUCTED ADJACENT TO AN EXISTING CONCRETE STRUCTURE (HEADWALLS, ETC.) EXPANSION BOLTS SHALL BE USED AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE, EACH, FOR EXPANSION BOLTS OF THE SIZE SPECIFIED IN THE PLANS.
- CLASS X CONCRETE COLLARS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE, EACH, FOR CLASS X CONCRETE COLLARS INCLUDING ALL MATERIAL AND LABOR SPECIFIED TO COMPLETE THE WORK IN PLACE.

		REVISIONS	
DESIGNED	NAME	DATE	
DESIGNED	J.M.H.	4-80	
CHECKED	P.E.K.	4-80	
CADD NO.	J-5.45		

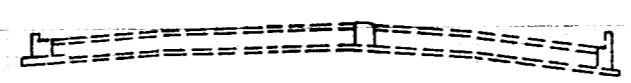
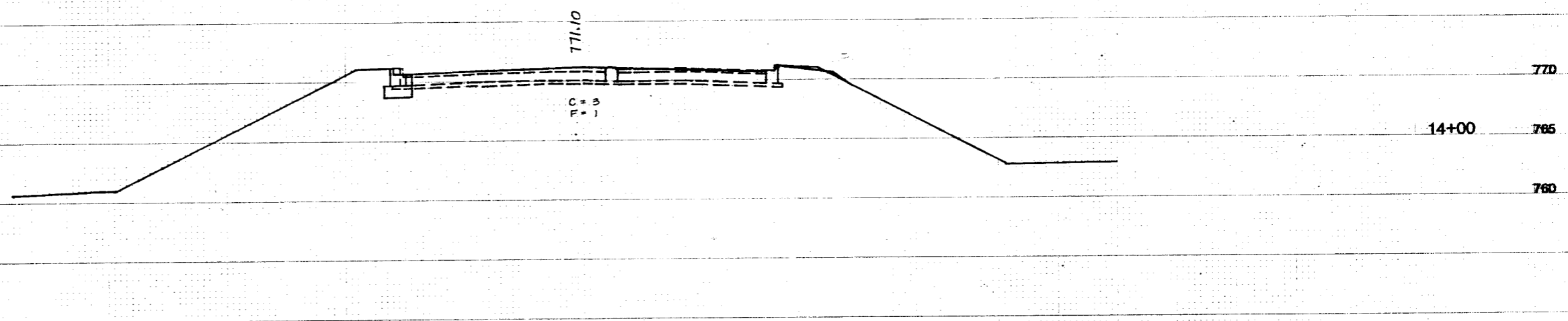
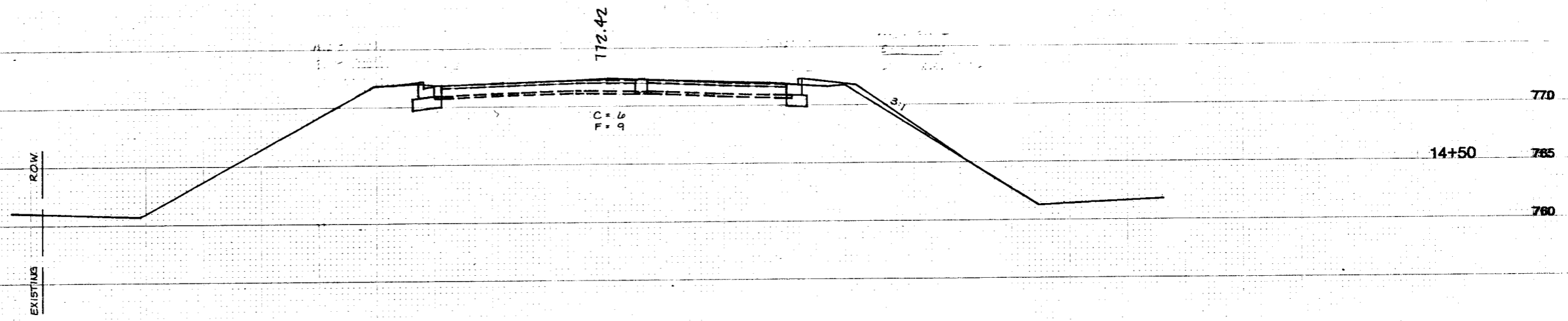
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	56
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
130	140	150	160	

* (110-6-1) HBXBR

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

FINAL SURVEY	DATE
NO.	
BY	
PLANNED	
PLATTED	
TEMPLE	
NOTE BOOK	
NO.	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
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BY	
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TEMPLE	
NOTE BOOK	
NO.	
AREAS CHECKED	



160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F A I - 74	*	CHAMPAGNE	70	57
FED. RD. DIST. NO.		ILLINOIS	PROJ.	
130	140	150	160	

* (10-6-1) HB/BR

FINAL SURVEY	DATE
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ORIGINAL SURVEY	DATE
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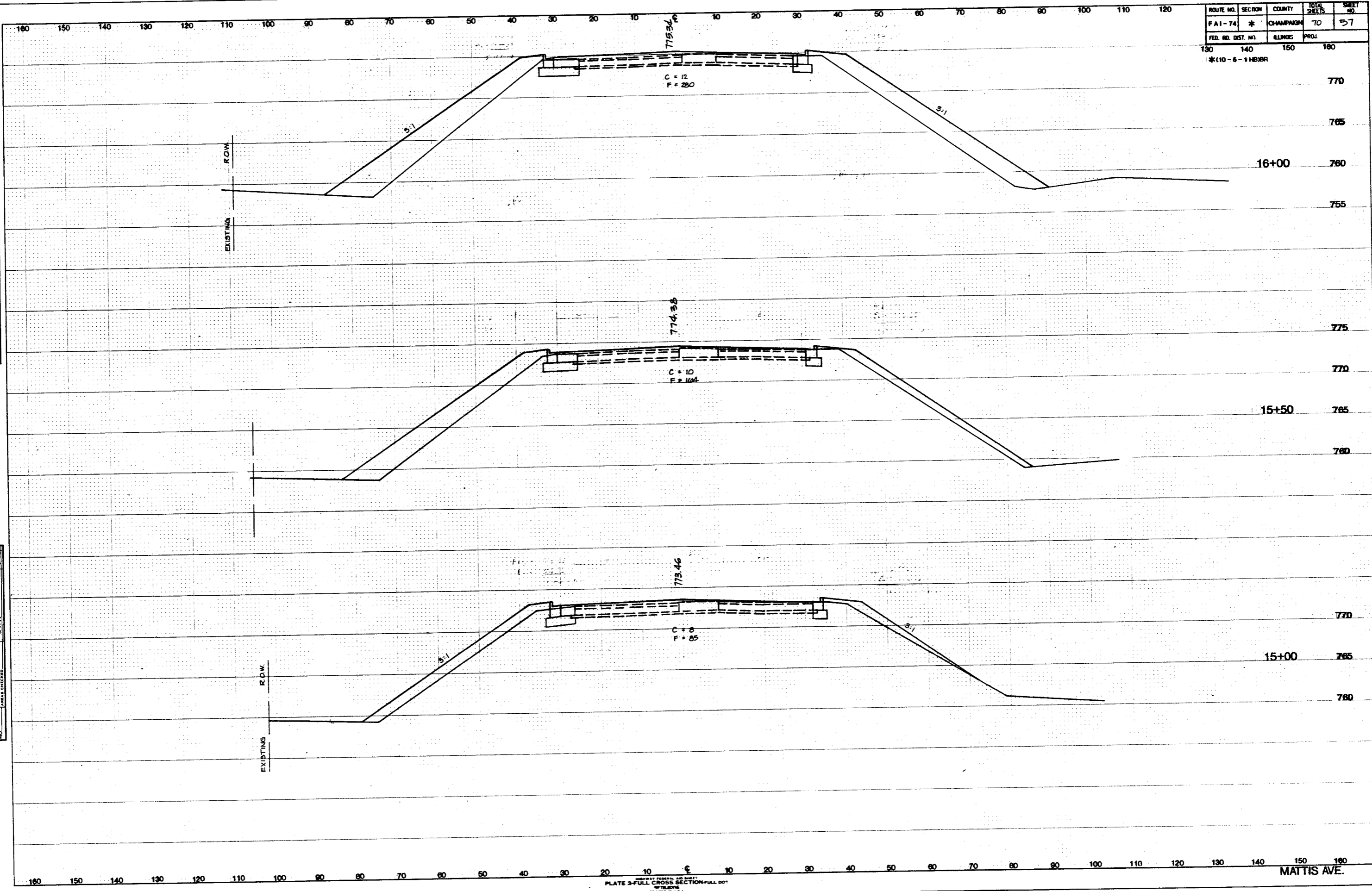


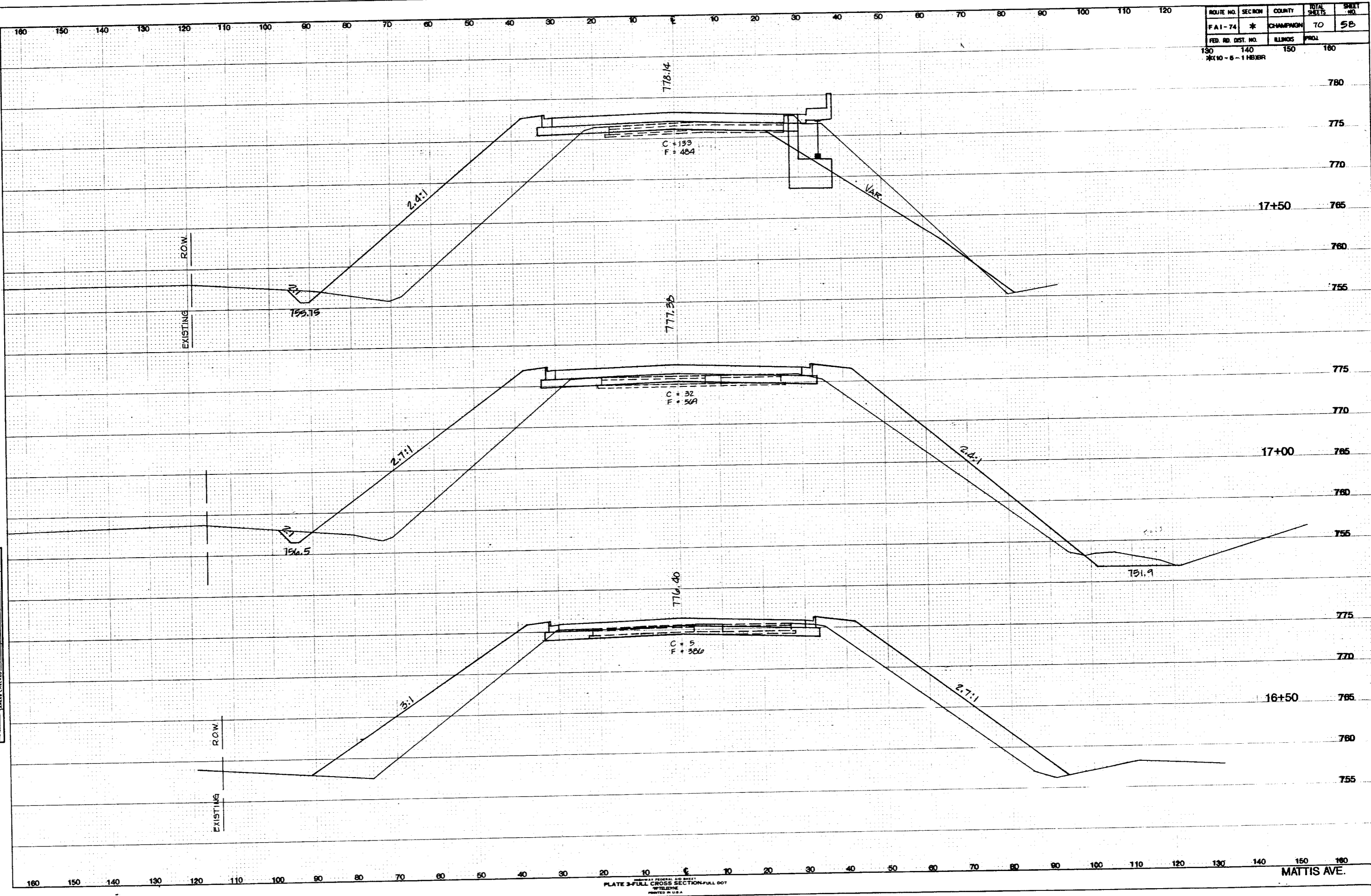
PLATE 3-FULL CROSS SECTION-FULL DOT
 PRINTED IN U.S.A.

MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAGN	70	5B
FED. RD. DIST. NO.		ILLINOIS	PROJ.	
130	140	150	160	
*10-6-1 HB/BR				

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
TEMPERATURE	
NOTE BOOK NO.	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	2-71
PLOTTED	2-71
TEMPERATURE	3-71
NOTE BOOK NO.	
AREAS CHECKED	JFA



ROADWAY FEDERAL AID SHEET
 PLATE 3-FULL CROSS SECTION-FULL DOT
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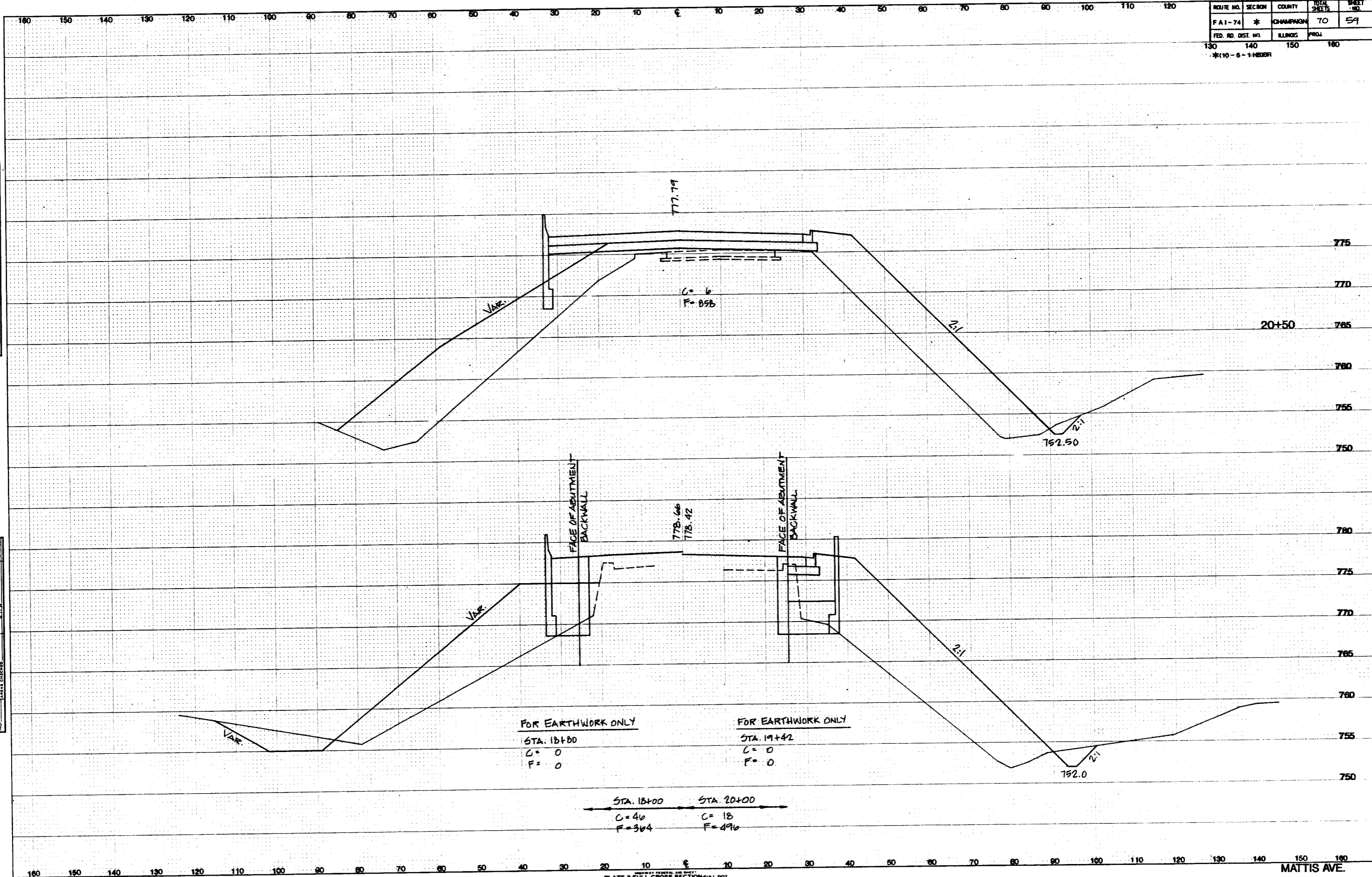
MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	59
FED. RD. DIST. NO.	ILLINOIS	PROJ.	130	140
			150	180

* (10-5-1) HEBER

DATE	
BY	
DESIGNED	
PLOTTED	
FINAL SURVEY	
NOTE BOOK	
NO.	
AREA CHECKED	

DATE	
BY	
DESIGNED	
PLOTTED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREA CHECKED	



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	60
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
130	140	150	160	

* (10-6-118) BR

DATE	BY
DATE	BY
DATE	BY
DATE	BY

FINAL SURVEY
NOTE BOOK NO. _____
AREA CHECKED _____

DATE	BY
DATE	BY
DATE	BY
DATE	BY

ORIGINAL SURVEY
NOTE BOOK NO. _____
AREA CHECKED _____

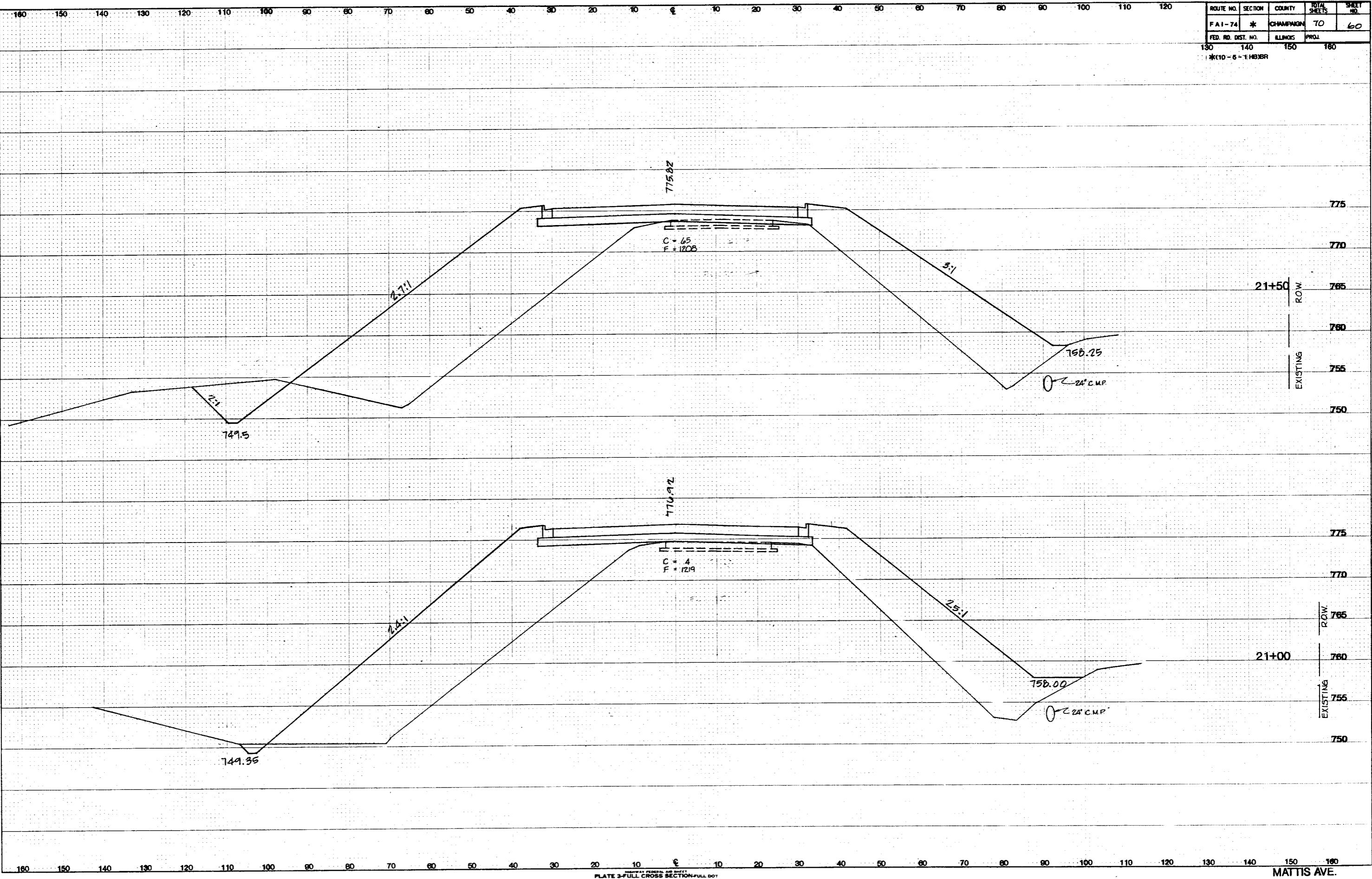


PLATE 3-FULL CROSS SECTION-FULL DOT
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MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	61
FED. RD. DIST. NO.		ILLINOIS	PROJ.	
130	140	150	160	

*K10-5-1#BIBR

DATE	BY
FINAL SURVEY	ADJUSTED
NOTE BOOK NO.	AREAS CHECKED

DATE	BY
3-91	
ORIGINAL SURVEY	ADJUSTED
NOTE BOOK NO.	AREAS CHECKED

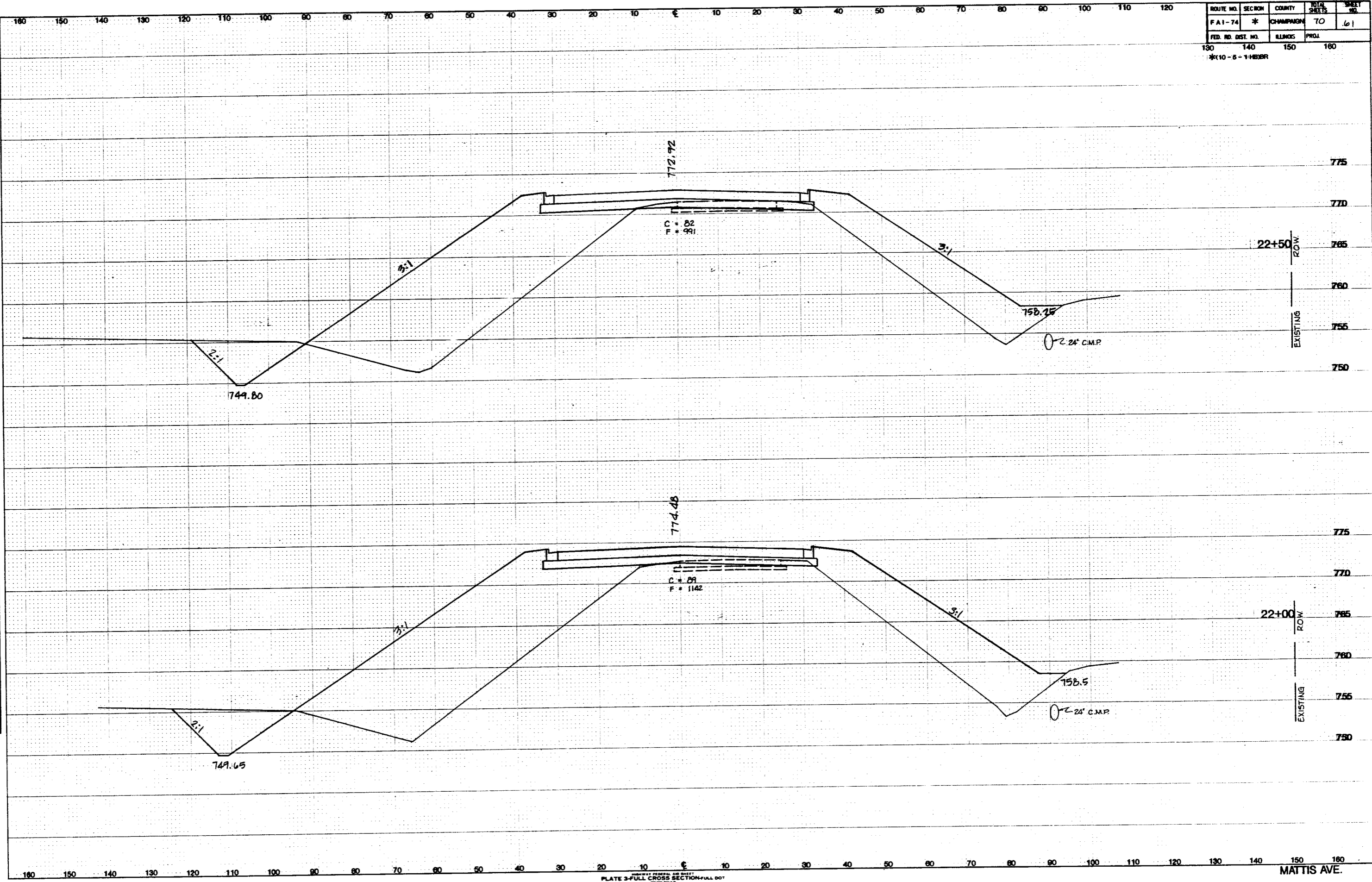
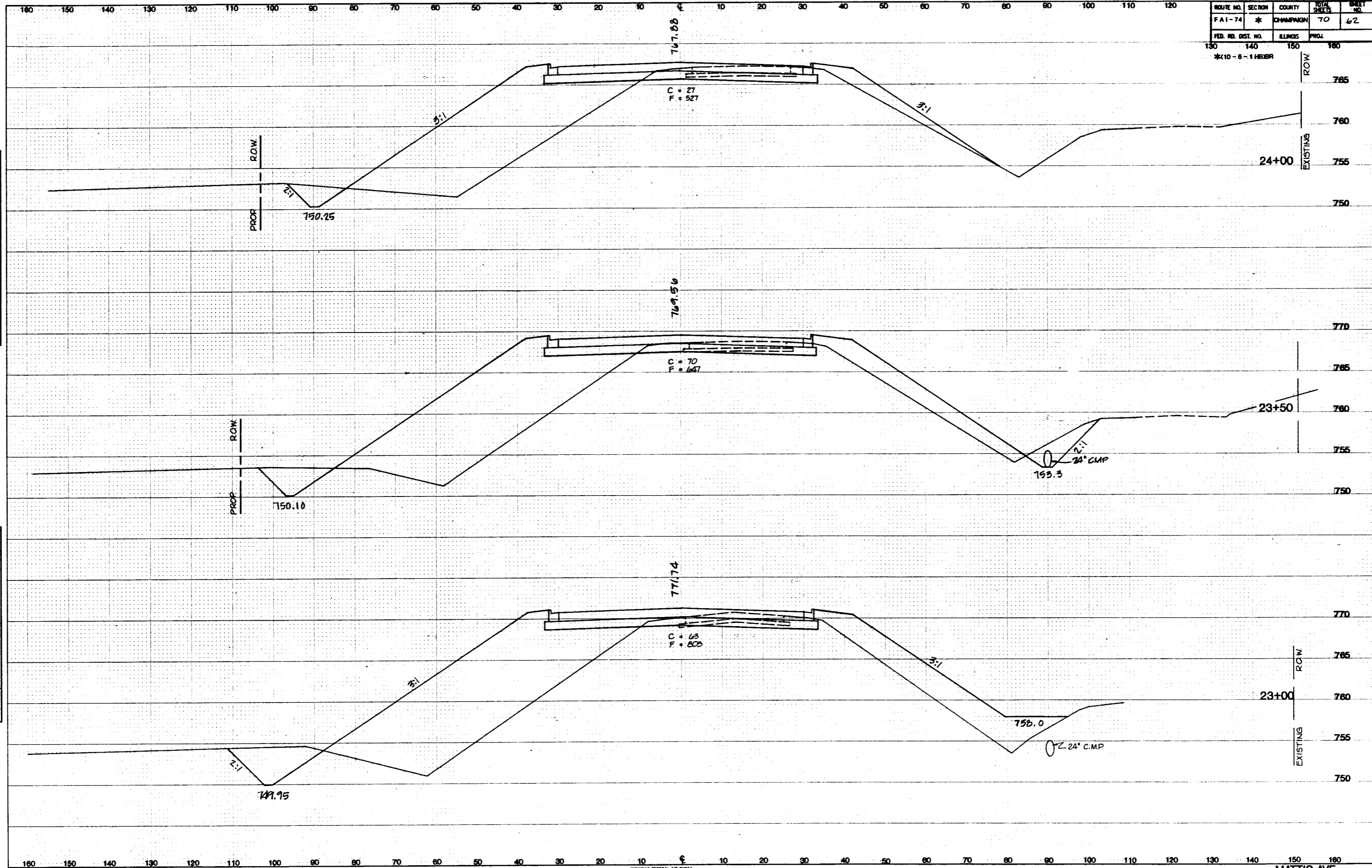


PLATE 3-FULL CROSS SECTION-FULL DOT
PRINTED IN U.S.A.

MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	62
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
130-140				

* (10 - 6 - 1 HB) BR



FINAL SURVEY	DATE
BY	
REVISION	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
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NO. 7	
NO. 8	
NO. 9	
NO. 10	

ORIGINAL SURVEY	DATE
BY	
REVISION	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	

HIGHWAY FEDERAL AID SHEET
 PLATE 3-FULL CROSS SECTION-FULL DOT
 TELETYPE
 PRINTED IN U.S.A.

MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	63
FED. RD. DIST. NO.	ILLINOIS	PROJ.	150	160
*(10-5-1)HBR				

DATE	BY
APPROVED	
SURVEY	
NOTE BOOK	
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AREA CHECKED	

DATE	BY
APPROVED	
SURVEY	
NOTE BOOK	
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AREA CHECKED	

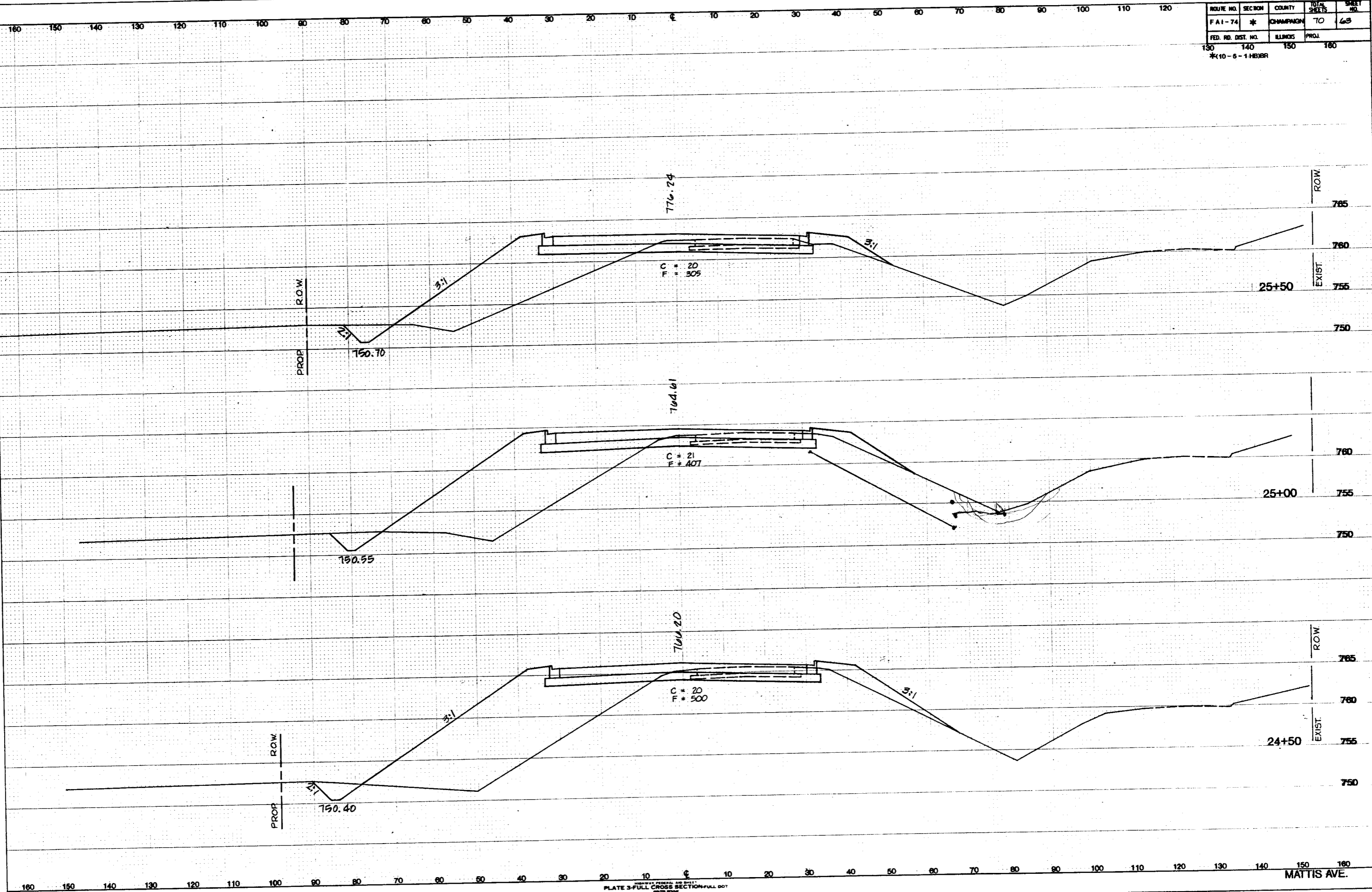
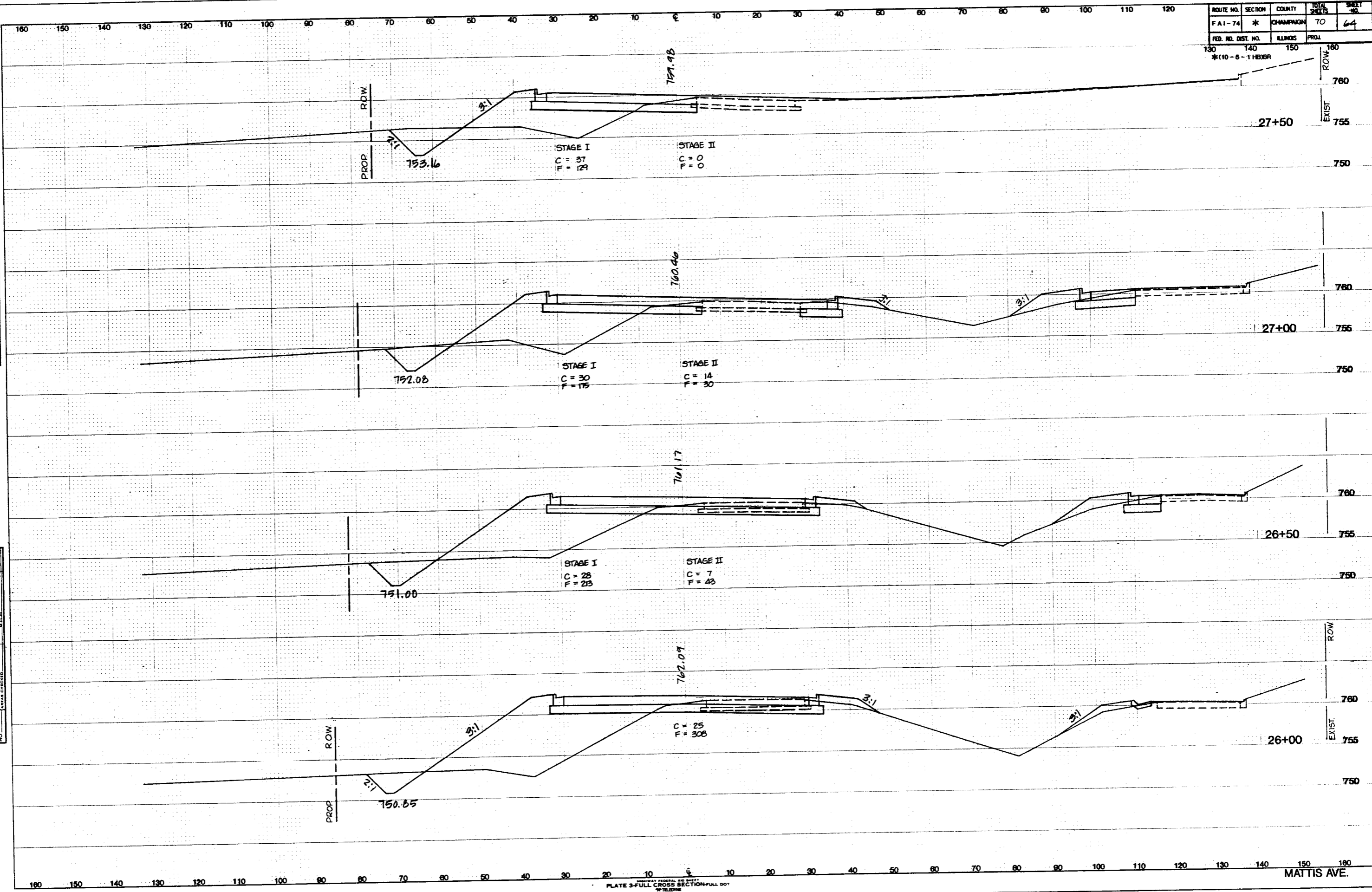


PLATE 3-FULL CROSS SECTION-FULL DOT
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MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	CHAMPAIGN	70	64
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
140				
*(10-6-1)HB/BR				



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FINAL SURVEY	
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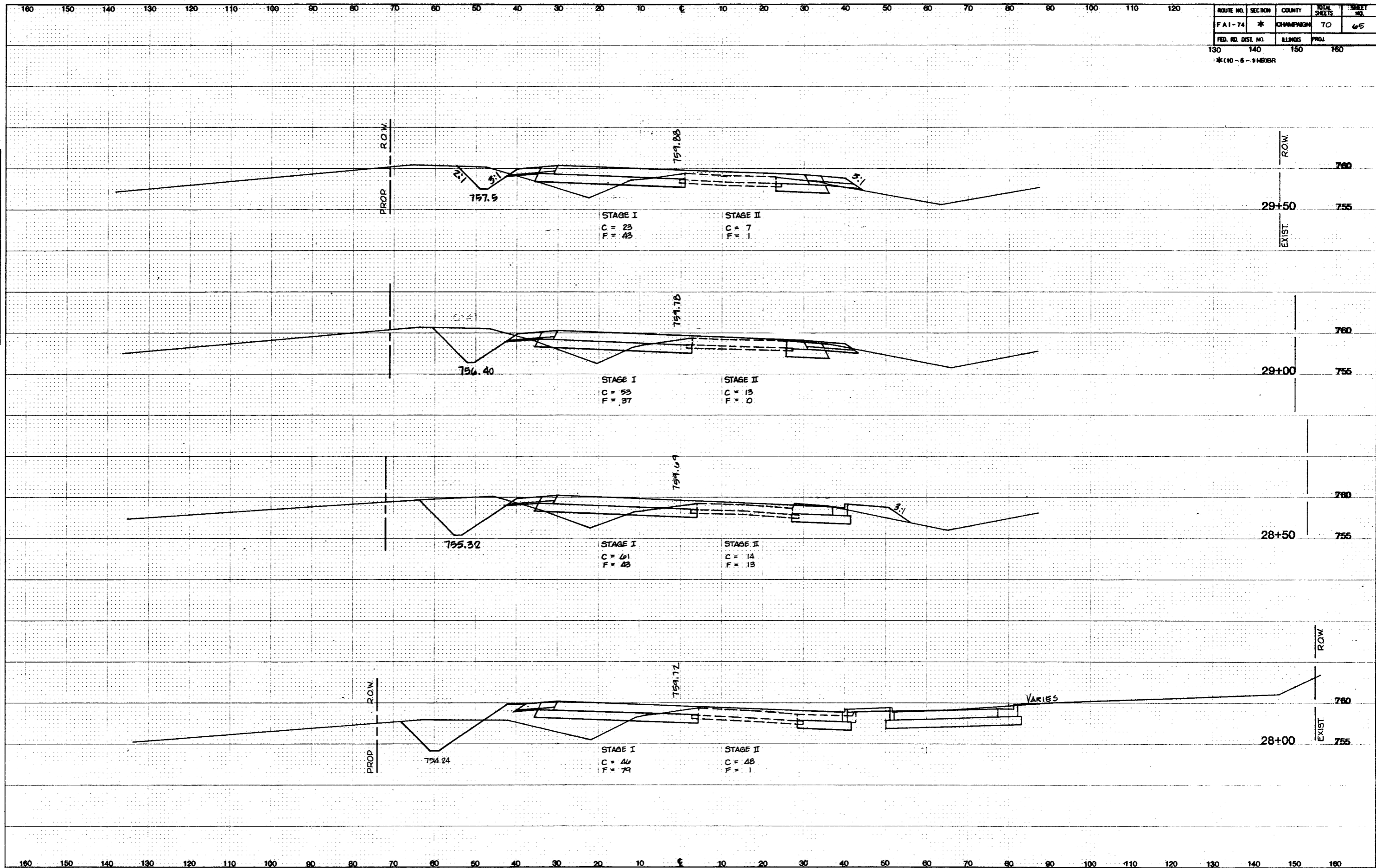
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FINAL SURVEY	
PLANNED	
NOTED	
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AREAS CHECKED	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	65
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
130	140	150	160	

* (10-5-3)MBYBR

DATE	BY
REVIEWED	DATE
SURVEY	
NOTE BOOK	
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AREA	
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DATE	BY
6-11	
REVIEWED	DATE
SURVEY	
NOTE BOOK	
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AREA	
CHECKED	

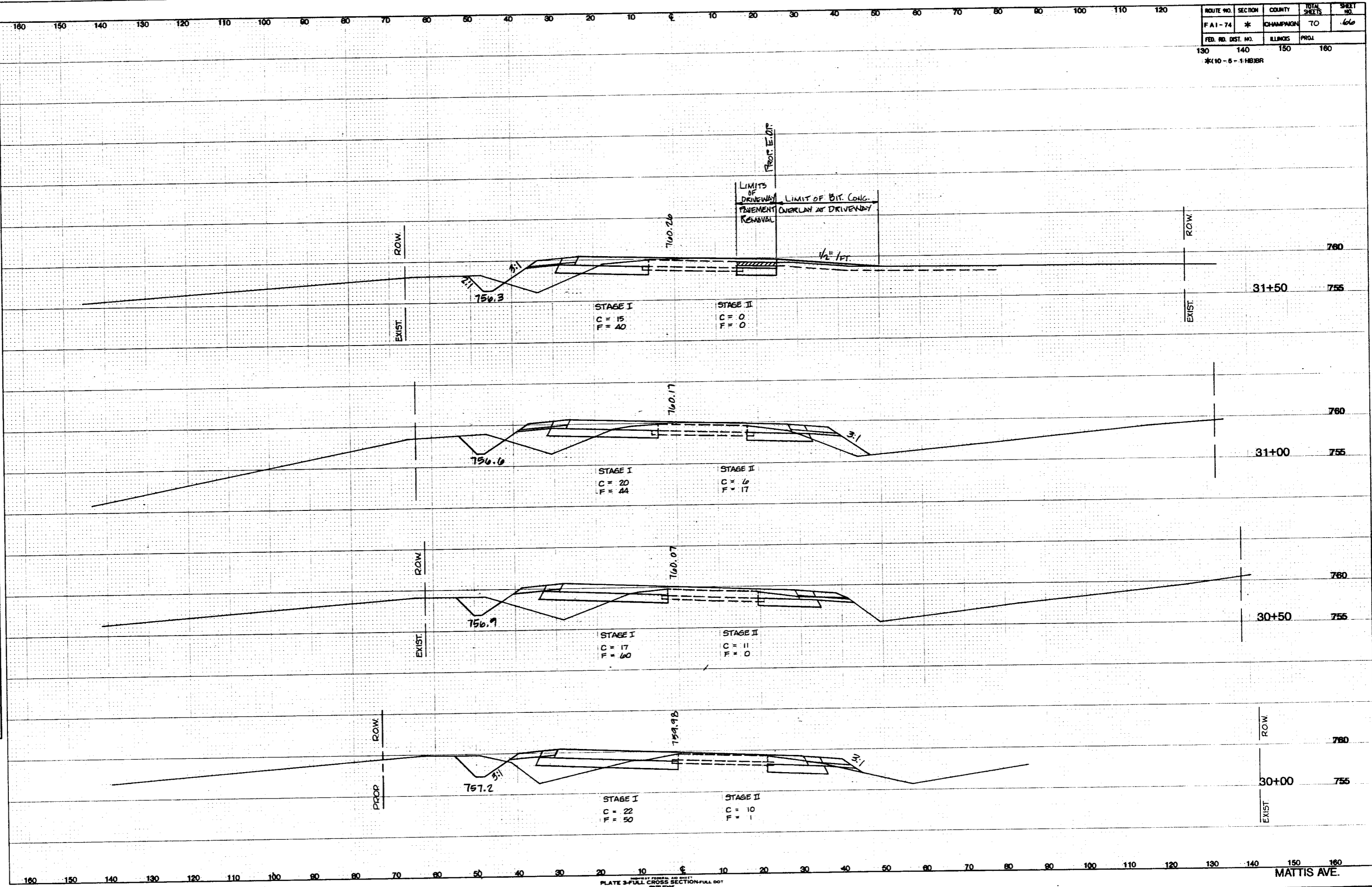


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA1-74	*	CHAMPAIGN	70	66
FED. RD. DIST. NO.	ILLINOIS	PROJ.		
130	140	150	160	

*10-5-1 HB/BR

DATE	BY
APPROVED	
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DATE	BY
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NO. BOOK	
AREA CHECKED	



INSTRUMENT FEDERAL AND STATE
 PLATE 3-FULL CROSS SECTION-FULL DOT
 CHICAGO
 PRINTED IN U.S.A.

MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	67
FED. RD. DIST. NO.	ILLINOIS PROJ.			
130	140	150	160	

*(10-5-1)H)BR

DATE	BY
REVISIONS	
SURVEY	
FINAL	
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AREA CHECKED	
DATE	
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REVISIONS	
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DATE	BY
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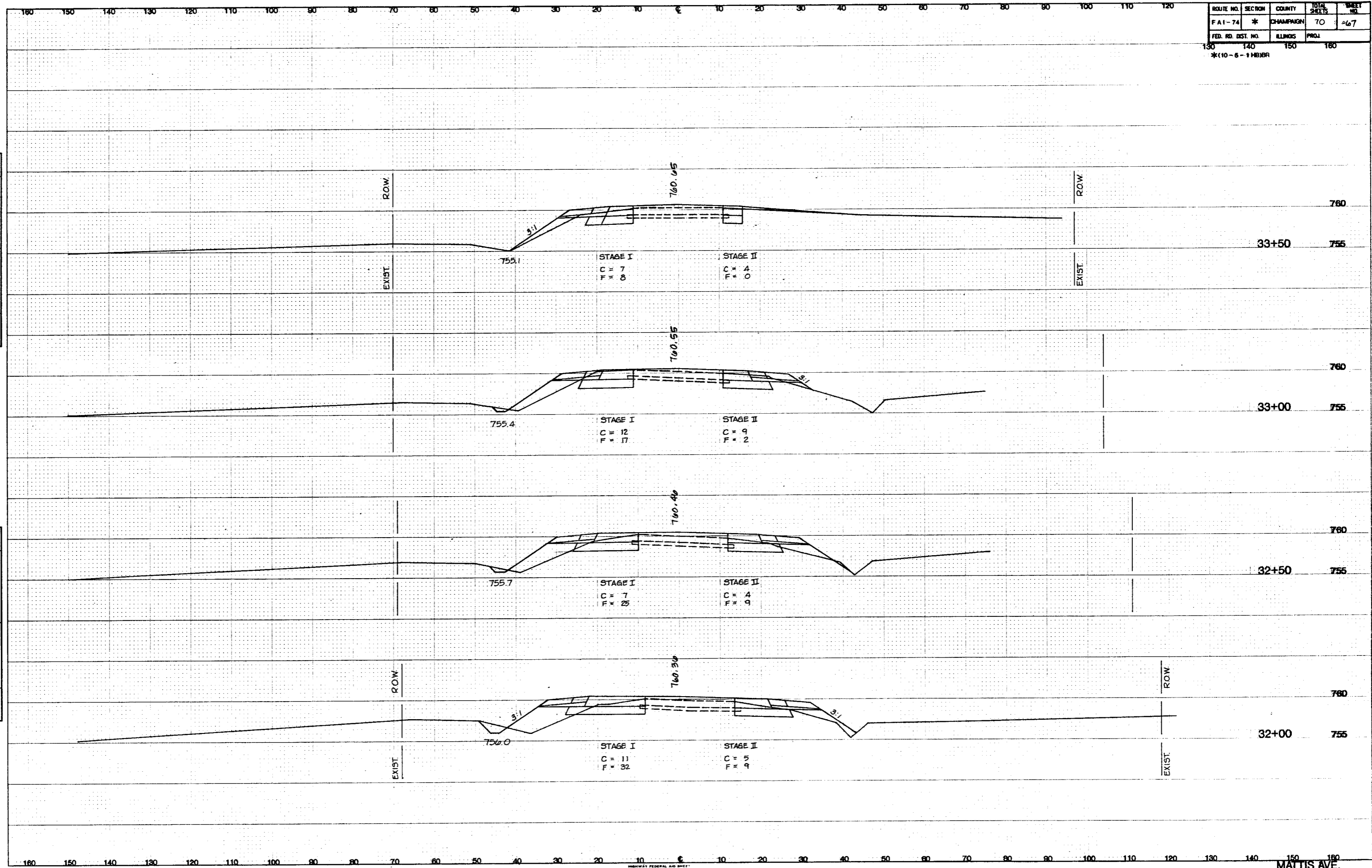
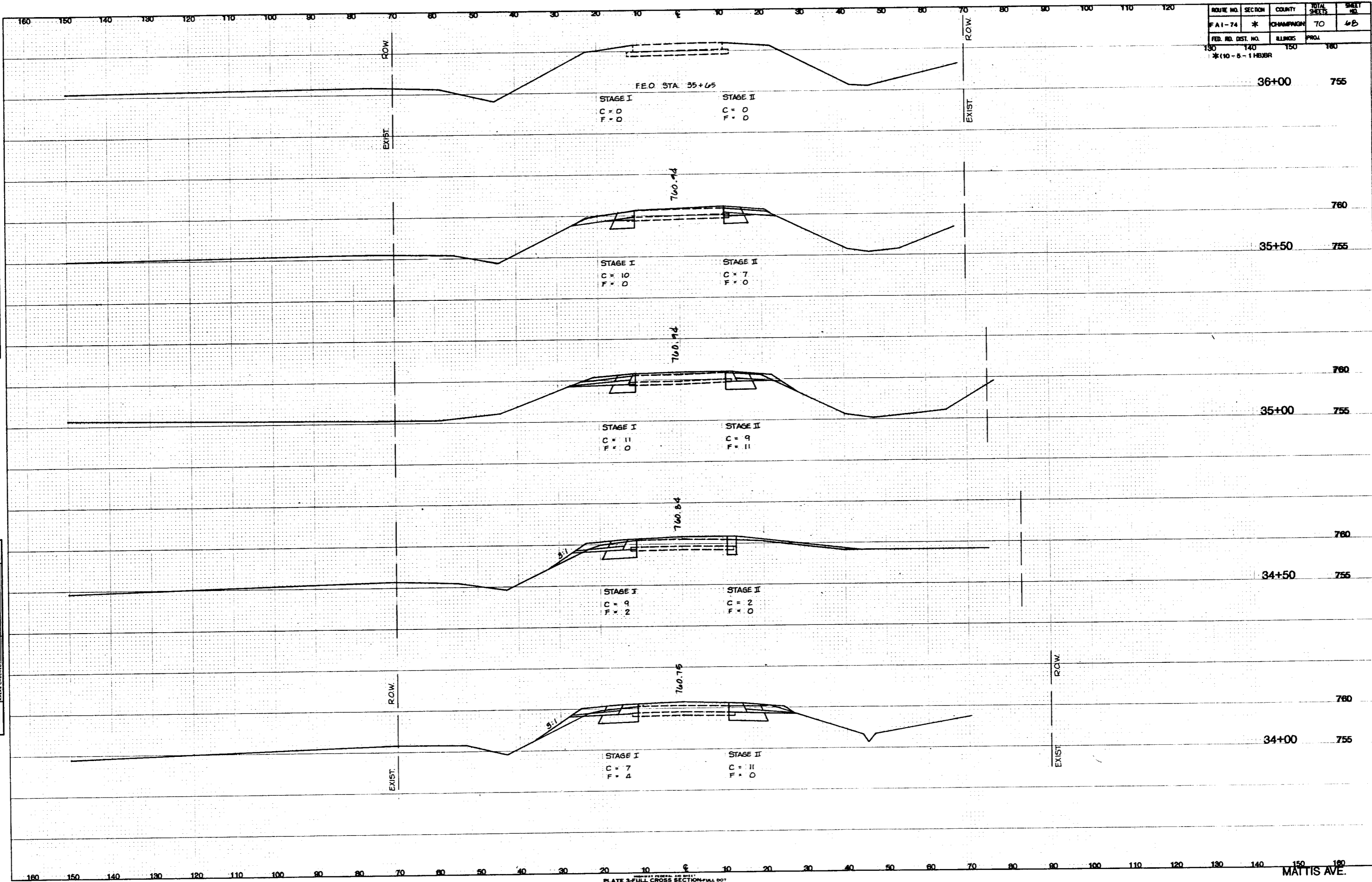


PLATE 3-FULL CROSS SECTION-FULL DOT
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MATTIS AVE.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 1-74	*	CHAMPAIGN	70	4B
FED. RD. DIST. NO.	ILLINOIS PROJ.			
130	140	150	160	
* (10-5-1) HUBER				



DATE	BY

FINAL SURVEY	REVIEWED
NO. _____	DATE _____
NO. _____	DATE _____
NO. _____	DATE _____
NO. _____	DATE _____

DATE	BY
2-11	
2-11	

FINAL SURVEY	REVIEWED
NO. _____	DATE _____
NO. _____	DATE _____

PLATE 3-FULL CROSS SECTION-FULL DOT
PRINTED IN U.S.A.

MATTIS AVE.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAI-74	*	CHAMPAIGN	70	69
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
* SEC. (10-5-1)RS				

SEC. 34, T.20N., R.8E., 3rd. P.M.

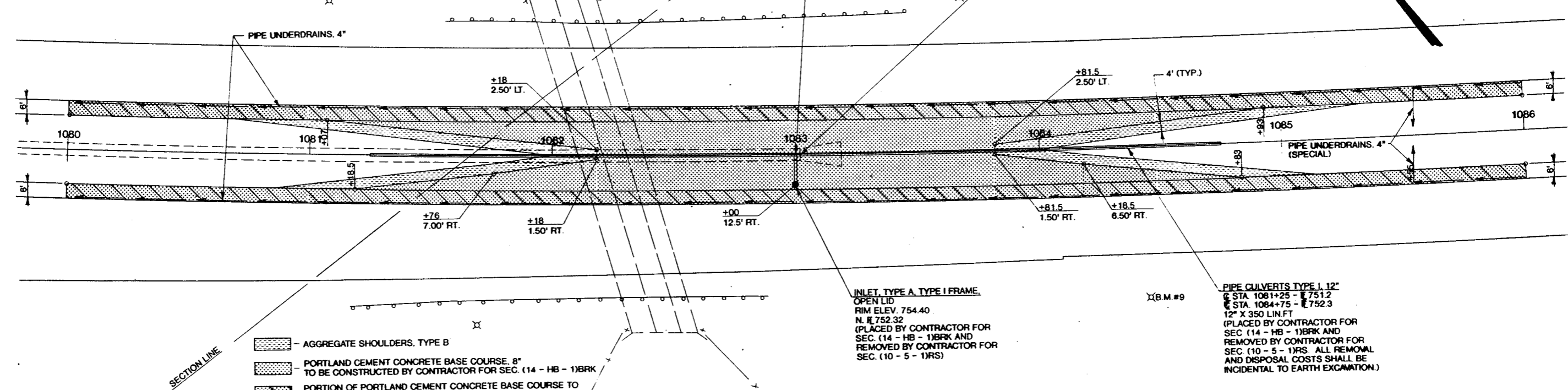
E A I 74
CURVE DATA
 P.I. STA. 1088+66.18
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 $D = 00^{\circ}-48'-51''$
 $T = 1155.70'$
 $R = 7037.78'$
 $L = 2290.95'$
 $E = 94.28'$
 $S.E. = 0.20 \text{ FT./FT.}$

NOTE: THE CONTRACTOR FOR SECTION (14 - HB - 1)BRK SHALL CAP ENDS OF PIPE UNDERDRAINS, 4" FOR FUTURE EXTENSION BY CONTRACTOR FOR SECTION (10 - 5 - 1)RS (COST INCIDENTAL TO PIPE UNDERDRAINS, 4")

SEC. 3, T.19N., R.8E., 3rd. P.M.

PIPE CULVERTS TYPE I, 12" 12 LIN. FT. (PLACED BY CONTRACTOR FOR SECTION (14 - HB - 1)BRK AND REMOVED BY CONTRACTOR FOR SECTION (10 - 5 - 1)RS. ALL REMOVAL AND DISPOSAL COSTS SHALL BE INCIDENTAL TO EARTH EXCAVATION)

12" TEE WITH 12" RISER (COST INCIDENTAL TO PIPE CULVERTS, TYPE I, 12")



- AGGREGATE SHOULDERS, TYPE B
- PORTLAND CEMENT CONCRETE BASE COURSE, 8" TO BE CONSTRUCTED BY CONTRACTOR FOR SEC. (14 - HB - 1)BRK
- PORTION OF PORTLAND CEMENT CONCRETE BASE COURSE TO REMAIN AFTER REMOVAL OF TEMPORARY MEDIAN CROSSOVER BY CONTRACTOR FOR SEC. (10 - 5 - 1)RS

INLET, TYPE A, TYPE I FRAME, OPEN LID RIM ELEV. 754.40 N. I. 752.32 (PLACED BY CONTRACTOR FOR SEC. (14 - HB - 1)BRK AND REMOVED BY CONTRACTOR FOR SEC. (10 - 5 - 1)RS)

PIPE CULVERTS TYPE I, 12" STA. 1081+25 - 751.2 STA. 1084+75 - 752.3 12" X 350 LIN. FT. (PLACED BY CONTRACTOR FOR SEC. (14 - HB - 1)BRK AND REMOVED BY CONTRACTOR FOR SEC. (10 - 5 - 1)RS. ALL REMOVAL AND DISPOSAL COSTS SHALL BE INCIDENTAL TO EARTH EXCAVATION.)

SEC. 34, T.20N., R.8E., 3rd. P.M.

SEC. 3, T.19N., R.8E., 3rd. P.M.

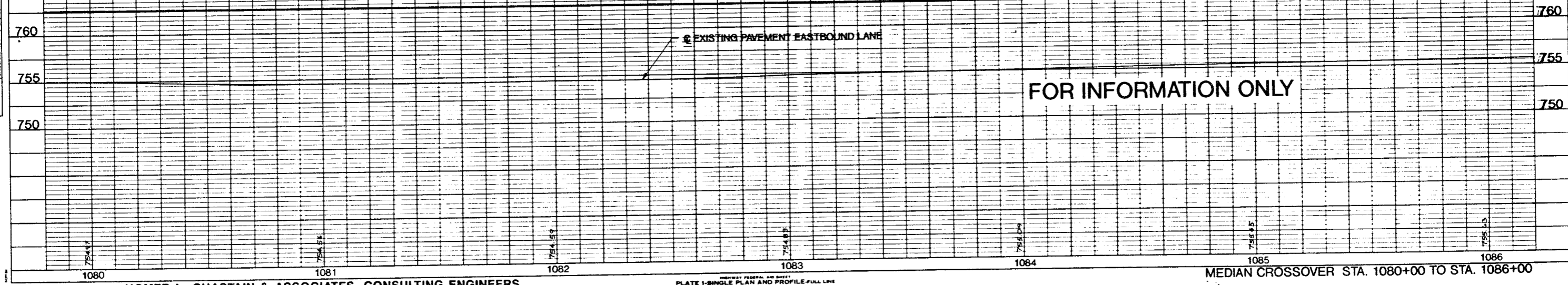
QUANTITIES FOR CONSTRUCTION OF TEMPORARY MEDIAN CROSSOVER
 (BY CONTRACTOR FOR SECTION (14 - HB - 1)BRK)

STABILIZED SHOULDER REMOVAL				EARTH EXCAVATION			PIPE UNDERDRAINS, 4"		PIPE CULVERTS TYPE I, 12" - 362 LIN. FT.		
STATION	TO	STATION	SQ. YD.	STATION	TO	STATION	CU. YD.	STATION	TO	STATION	INLET
MED. 1080+00		1086+00	800	MED. 1080+00		1086+00	174	MED. 1080+00		1086+00	1200
AGGREGATE SHOULDERS, TYPE B				EMBANKMENT			PIPE UNDERDRAINS, 4" (SPECIAL)		CONCRETE HEADWALL FOR PIPE DRAINS		
STATION	TO	STATION	TON	STATION	TO	STATION	CU. YD.	STATION	TO	STATION	INLET
MED. 1080+00		1086+00	51	MED. 1080+00		1086+00	174	LT. & RT. MED. 1084+55			22
PORTLAND CEMENT CONCRETE BASE COURSE, 8"							CONCRETE HEADWALL FOR PIPE DRAINS				
STATION	TO	STATION	SQ. YD.				STATION	TO	STATION	EACH	
MED. 1080+00		1086+00	1588				LT. & RT. MED. 1084+55			2	

QUANTITIES FOR REMOVAL OF TEMPORARY MEDIAN CROSSOVER
 (BY CONTRACTOR FOR SECTION (10 - 5 - 1)RS)

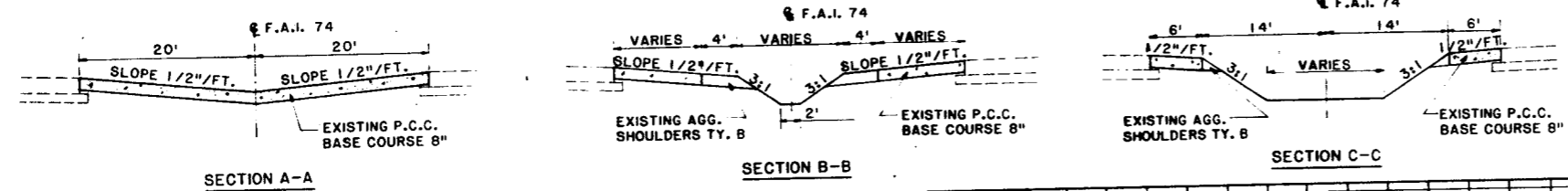
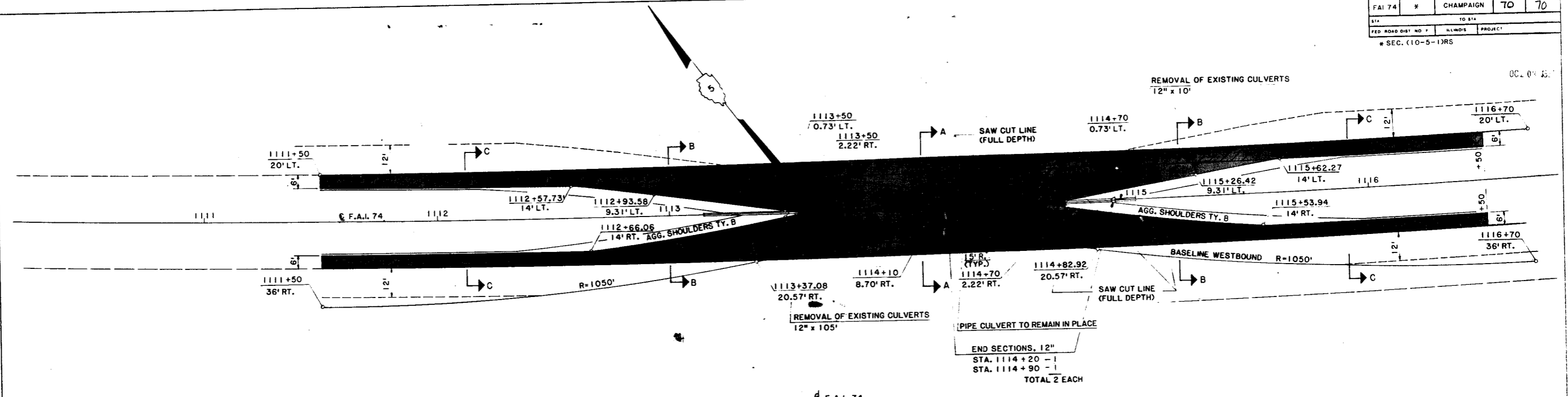
PAVEMENT REMOVAL				EARTH EXCAVATION			INLETS TO BE REMOVED				
STATION	TO	STATION	SQ. YD.	STATION	TO	STATION	CU. YD.	STATION	TO	STATION	EACH
MED. 1081+07		1084+98	788	MED. 1080+00		1086+00		1083+00			1

COSTS FOR REMOVAL OF AGGREGATE SHOULDERS TYPE B SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION



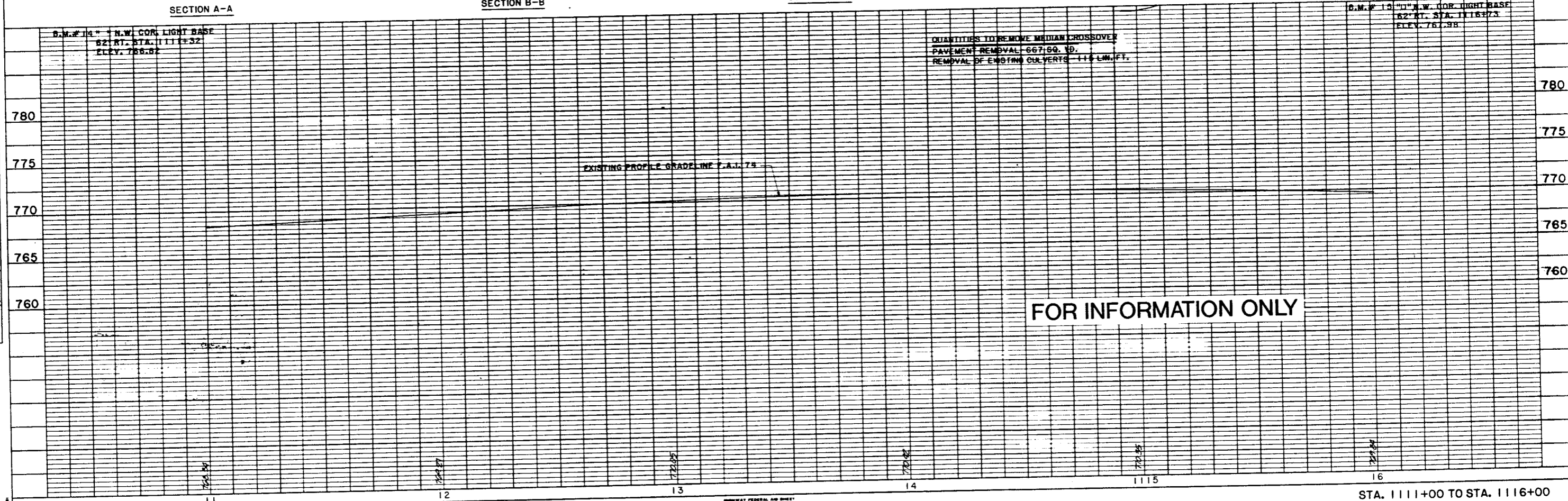
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	X	CHAMPAIGN	70	70
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
* SEC. (10-5-1)RS				

OC. 07 55



EXISTING CROSSOVER PAVEMENT
 EXISTING CROSSOVER PAVEMENT TO REMAIN IN PLACE

QUANTITIES TO REMOVE MEDIAN CROSSOVER
 PAVEMENT REMOVAL 667 SQ. YD.
 REMOVAL OF EXISTING CULVERTS 114 LIN. FT.



PLAN
 SURVEYED BY
 DRAWN BY
 CHECKED BY
 IN CHARGE

PROFILE
 SURVEYED BY
 DRAWN BY
 CHECKED BY
 IN CHARGE