CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	1

P-93-052-04
D-93-064-05

1-20-06 Letting, Item 19

INDEX OF SHEETS

0 20 40 60
SCALE IN FEET – PLAN & PROFILE

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

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

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: RICK POWELL
UNIT CHIEF: BRAD DUNCAN
TOWNSHIP: PATTON
CONTRACT NO.: 66604

ESCA CONSULTANTS, INC.
CIVIL & STRUCTURAL ENGINEERS
URBANA, ILLINOIS

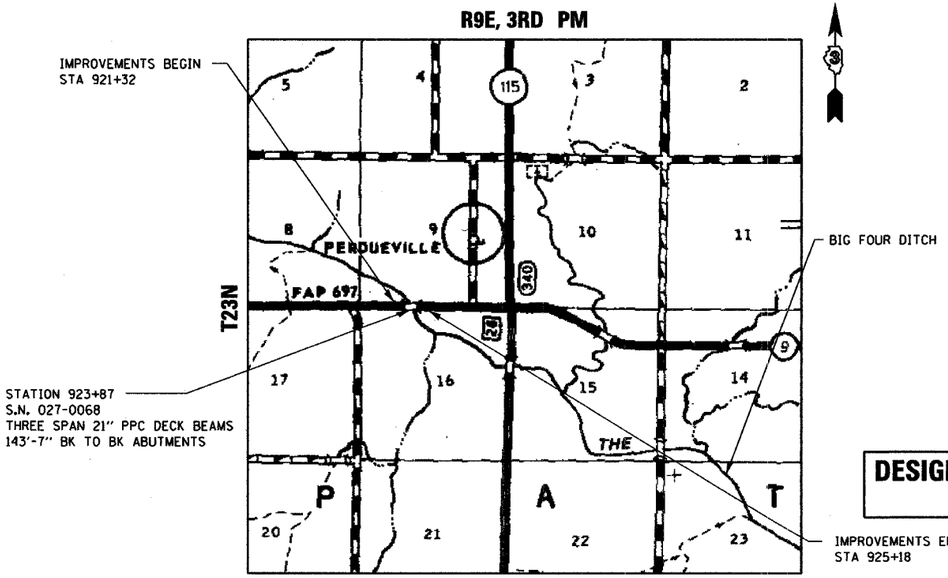
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 697 (IL 9)
SECTION 17BR
PROJECT BHF-697(026)
FORD COUNTY

C – 93 – 111 – 05

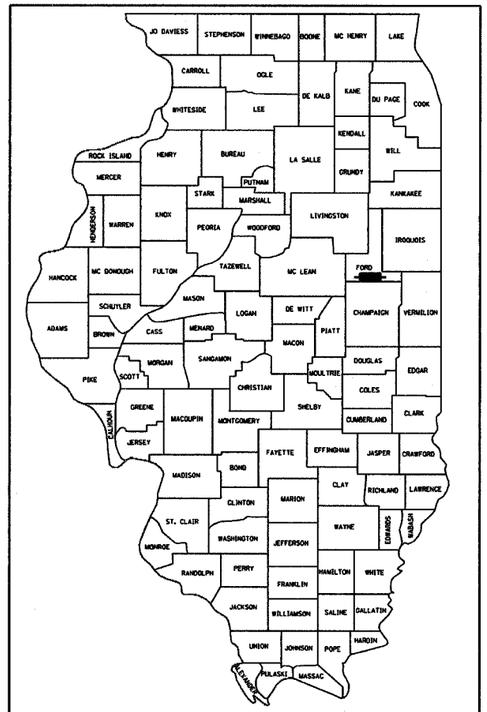
ILLINOIS ROUTE 9 OVER BIG FOUR DITCH
SUPERSTRUCTURE REPLACEMENT



LOCATION MAP

SCALE
0 2 3 MILES
0 5000 10000 15000 FEET

GROSS LENGTH = 386 FT. = 0.073 MI.
NET LENGTH = 386 FT. = 0.073 MI.



LOCATION OF SECTION INDICATED THUS: ▬

FUNCTIONAL CLASSIFICATION:	**MINOR ARTERIAL (RURAL)**
DESIGN SPEED:	**55 mph**
POSTED SPEED:	**55 mph**
ADT:	**1700 (2006)**
PV:	**85.9%**
SU:	**9.1%**
MU:	**5.0%**

DESIGN DESIGNATION
N.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED November 4 20 05
Gregory Mounts 2nd
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 9, 20 05
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
December 9, 20 05
Eric Harm
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

RICHARD D. PAYNE 37421 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
Richard D. Payne DATE: 10/26/2005
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11-30-05)

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	BAR REINFORCEMENT FOR CRC PAVEMENT
482011-01	BIT. SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
601101	CONCRETE HEADWALL FOR PIPE DRAIN
630001-05	STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-01	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF-RD OPERATION 2L, 2W, 4.5 m (15') MIN. AWAY FOR SPEEDS > 45 MPH
701006-02	OFF-RD OPERATIONS 2L, 2W 4.5 m (15') TO PAVEMENT EDGE FOR SPEEDS > 45 MPH
701011-01	OFF-RD MOVING OPERATIONS 2L, 2W DAY ONLY FOR SPEEDS > 45 MPH
701301-02	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701306-01	LANE CLOSURE 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
701311-02	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
702001-05	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE TOP 6" OF TOPSOIL SHALL BE STRIPPED FROM ALL AREAS WITHIN THE CONSTRUCTION LIMITS OUTSIDE OF THE PROPOSED ABUTMENTS. THIS MATERIAL SHALL BE STOCKPILED AT A LOCATION APPROVED BY THE ENGINEER AND REPLACED AFTER MAJOR GRADING OPERATIONS ARE COMPLETE. THIS WORK WILL BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT.
2. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
3. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
4. ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1½" UNLESS OTHERWISE NOTED.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
6. THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IN PLACED.
7. BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.
8. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
9. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05 TON/CU YD
BITUMINOUS MATERIALS PRIME COAT	0.08 GAL/SQ YD
BITUMINOUS RESURFACING	112 LBS/SQ YD/INCH
SHORT TERM PAVEMENT MARKING	10 FT/100 FT OF APPLICATION

10. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
11. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
13. EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
14. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
15. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
16. ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
17. SKIP-DASH LINES FOR PAINT PAVEMENT MARKING SHALL BE 6" WIDE.
18. EXCELSIOR BLANKET SHALL BE USED AT ALL EROSION CONTROL BLANKET LOCATIONS.
19. THE CURBS SHOWN ON STANDARD 420401 ARE NOT REQUIRED AND SHALL NOT BE CONSTRUCTED.
20. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: Steven B. Andrews
DISTRICT STUDIES & PLANS ENGINEER (ACTING)

DATE: NOVEMBER 4, 2005

EXAMINED BY: Herbert K. Humpal
DISTRICT CONSTRUCTION ENGINEER

Bruce A. Anderson
DISTRICT OPERATIONS ENGINEER

Kenneth A. Lange
DISTRICT MATERIALS ENGINEER

GENERAL NOTES
AND STANDARDS
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED CONSTRUCTION TYPE CODE 20% STATE X080-2A
20200100	EARTH EXCAVATION	CU YD	48
20700220	POROUS GRANULAR EMBANKMENT	CU YD	142
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	60
25000210	SEEDING, CLASS 2A	ACRE	0.20
25000350	SEEDING, CLASS 7	ACRE	0.20
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18
25100115	MULCH, METHOD 2	ACRE	0.18
25100630	EROSION CONTROL BLANKET	SQ YD	112
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40
28000400	PERIMETER EROSION BARRIER	FOOT	805
28000500	INLET AND PIPE PROTECTION	EACH	2
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	67
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	214
42001300	PROTECTIVE COAT	SQ YD	214
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	250
44000100	PAVEMENT REMOVAL	SQ YD	182
44004250	PAVED SHOULDER REMOVAL	SQ YD	75
48101200	AGGREGATE SHOULDERS, TYPE B	TON	76
48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	21
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	7.6
50200100	STRUCTURE EXCAVATION	CU YD	142
50300225	CONCRETE STRUCTURES	CU YD	11.2
50300260	BRIDGE DECK GROOVING	SQ YD	466
50300300	PROTECTIVE COAT	SQ YD	497
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	497
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	1152.2
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	4462
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7560
• 50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	280
51500100	NAME PLATES	EACH	1
58700200	BRIDGE SEAT SEALER	SQ FT	56
59000100	EPOXY CRACK SEALING	FOOT	212
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4
★ 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	275
★ 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FED CONSTRUCTION TYPE CODE 20% STATE X080-2A
• 63100169	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	404
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
67100100	MOBILIZATION	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	80
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	27
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	2
• 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	772
• 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	100
• 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2
• 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
78200520	BARRIER WALL MARKERS, TYPE B	EACH	2
• 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	1
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	38
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	20
X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1
XX005128	STRIP SEAL EXPANSION JOINT ASSEMBLY	FOOT	78
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	60
Z0002600	BAR SPLICERS	EACH	64

• SPECIALTY ITEM

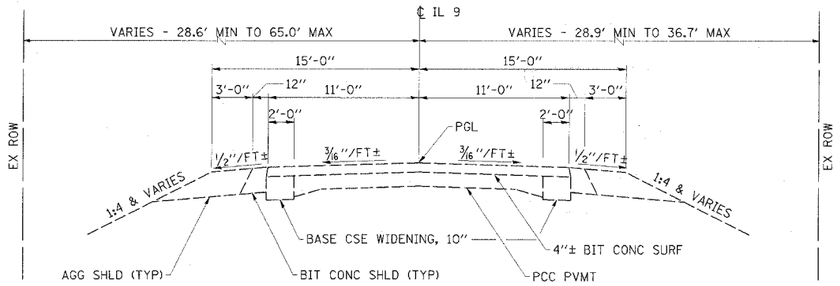
ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

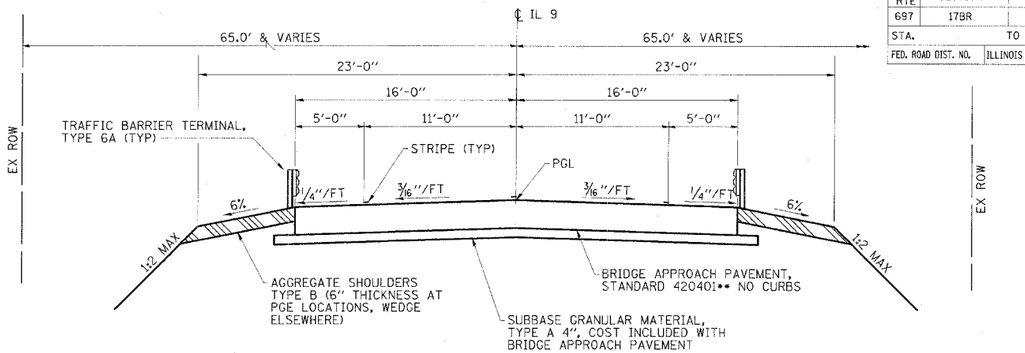
SUMMARY OF QUANTITIES
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



EXISTING TYPICAL ROADWAY SECTION
STA 915+00 TO 920+00
STA 928+00 TO 932+00

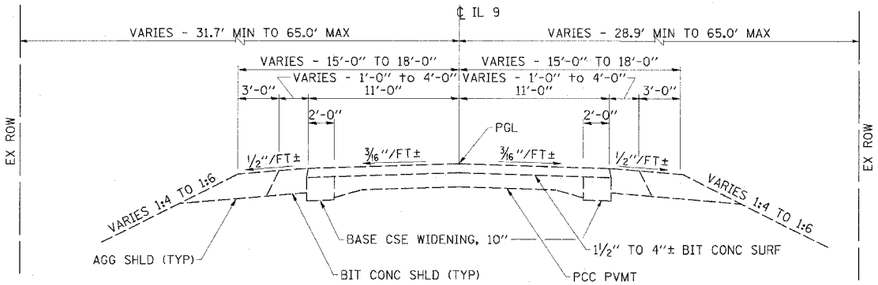


** WITH BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

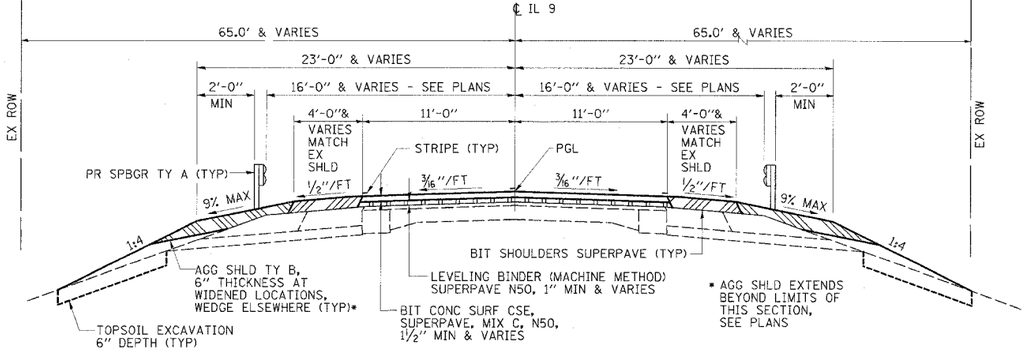
NOTE:
TRANSITION CROSS SLOPES AS REQUIRED TO MATCH MAINLINE PAVING CROSS SLOPES

AT BRIDGE APPROACH PAVEMENT

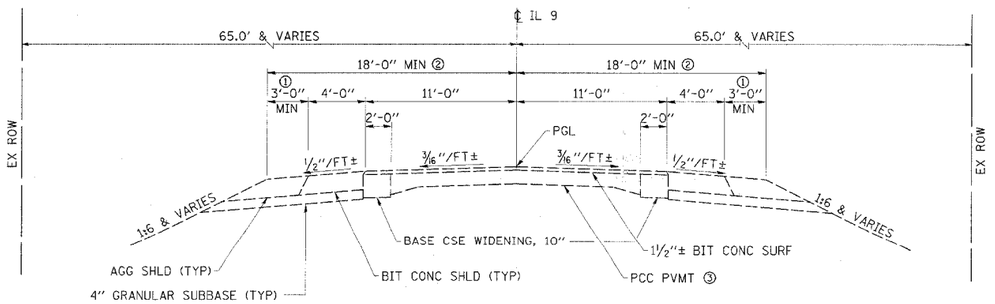
PROPOSED TYPICAL ROADWAY SECTION
STA 922+79.82 TO 924+94.18
BRIDGE OMISSION STA 923+15.21 TO 924+58.79



EXISTING TYPICAL ROADWAY SECTION
STA 920+00 TO 922+00
STA 927+00 TO 928+00



PROPOSED TYPICAL ROADWAY SECTION
STA 921+32 TO 922+79.82
STA 924+94.18 TO 925+18



EXISTING TYPICAL ROADWAY SECTION
STA 922+00 TO 927+00
BRIDGE OMISSION STA 923+15.21 TO 924+58.79

① VARIES TO 10'-0" AT SPBGR; SPBGR FROM STA 922+00 TO 925+70

② VARIES TO 25'-0" AT SPBGR

③ 10½" PCC BASE CSE APPROACH SLAB WITH 4" GRANULAR SUBBASE STA 922+87 TO 924+87

BITUMINOUS MIXTURES REQUIREMENTS

	SUPERPAVE BINDER	SUPERPAVE LEVELING BINDER	SUPERPAVE SURFACE	SUPERPAVE SHOULDERS
PG GRADE	PG64-22	PG64-22	PG64-22	PG58-22
MAX % RAP ALLOWABLE ***	25%	25%	15%	30%
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50	4.0% @ N50	2.0% @ N30
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 12.5 OR IL 9.5	B.A.M.
FRICTION AGGREGATE	N.A.	N.A.	MIXTURE C	N.A.
PLANT CONTROL LIMITS	CLASS I	CLASS I	CLASS I	NON-CLASS I
DENSITY TEST METHOD	CORES/NUCLEAR	SATISFACTION OF THE ENGINEER	CORES/NUCLEAR	+++

*** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

+++ MATERIAL SHALL BE COMPACTED TO 93-97 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT THE BOTTOM LIFT SHALL BE COMPACTED TO A MINIMUM OF 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

TYPICAL SECTIONS
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK SCHEDULE

LOCATION	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	SUITABLE INCIDENTAL EXCAVATION MATERIAL	INCIDENTAL EXC. MATERIAL ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
NW QUADRANT CUTS & FILLS	12	9			4	+5
SW QUADRANT CUTS & FILLS	12	9			5	+4
NE QUADRANT CUTS & FILLS	12	9			5	+4
SE QUADRANT CUTS & FILLS	12	9			5	+4
STRUCTURE EXCAVATION			142	106		+106
CONC PAD UNDER PVMT CONNECTOR			12	9		+9
TOTALS	48	36	154	115	19	+132

NOTES:
1. EXCAVATION USED AS EMBANKMENT = (SUITABLE EARTH EXCAVATION − SUITABLE INCIDENTAL EXCAVATION)*0.75
2. TOPSOIL EXCAVATION AND PLACEMENT NOT INCLUDED IN THE ABOVE NUMBERS

EROSION CONTROL SCHEDULE

LOCATION	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)	INLET & PIPE PROTECTION
	SQ YD	FOOT	POUND	EACH
STA 921+25 TO STA 923+35, RT		210	10	
STA 921+25 TO STA 923+05, LT		180	10	
STA 921+46.1, 48.4' LT				1
NW QUADRANT	23.5			
SW QUADRANT	32.5			
NE QUADRANT	32.5			
SE QUADRANT	23.5			
STA 924+40 TO STA 926+75, LT		235	10	
STA 924+70 TO STA 926+50, RT		180	10	
STA 925+30.8, 56.3' RT				1
TOTALS	112	805	40	2

PAVING SCHEDULE

LOCATION	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	BITUMINOUS SHOULDERS SUPERPAVE
	GALLON	TON	TON	TON
STA 921+32 TO STA 922+79.82	60	32.8	20	19.1
STA 924+94.18 TO STA 925+18	7	5.2		1.9
TOTALS	67	38.0	20	21.0

BIT SURF REMOVAL (VARIABLE DEPTH) SCHEDULE

LOCATION	SQ YD
STA 921+32 TO STA 921+80	170
EAST APPROACH CONNECTOR TO STA 925+02, LT	25
STA 925+02 TO STA 925+18	55
TOTAL	250

SEEDING SCHEDULE

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH, METHOD 2
	ACRE	ACRE	POUND	POUND	POUND	ACRE
STA 921+25 TO STA 923+35, RT	0.05	0.05	4.5	4.5	4.5	0.045
STA 921+32 TO STA 923+05, LT	0.05	0.05	4.5	4.5	4.5	0.045
STA 924+40 TO STA 926+70, LT	0.05	0.05	4.5	4.5	4.5	0.045
STA 924+70 TO STA 926+45, RT	0.05	0.05	4.5	4.5	4.5	0.045
TOTALS	0.20	0.20	18.0	18.0	18.0	0.180

AGGREGATE SHOULDERS, TYPE B SCHEDULE

LOCATION	TON
STA 921+25 TO STA 923+26.2, RIGHT	23
STA 921+32 TO STA 923+04.2, LEFT	18
STA 924+47.8 TO STA 926+69, LEFT	24
STA 924+69.8 TO STA 926+37, RIGHT	11
TOTAL	76

REMOVAL SCHEDULE

LOCATION	PAVEMENT REMOVAL	PAVED SHOULDER REMOVAL
	SQ YD	SQ YD
STA 922+79.82 TO STA 923+17.03	91	37.5
STA 924+56.97 TO STA 924+94.18	91	37.5
TOTALS	182	75.0

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

SCHEDULES OF QUANTITIES
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PAVEMENT MARKERS AND REMOVAL SCHEDULE

LOCATION	RRPM	RRPM (BRIDGE)	RRPM REMOVAL
	EACH	EACH	EACH
STA 922+00	1		1
STA 922+80	1		
STA 923+60		1	
STA 924+40		1	
TOTALS	2	2	1

PAVEMENT MARKING SCHEDULE

LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING (2 APPLICATIONS)	PAINT PAVEMENT MARKING - LINE	
			4"	6"
		FOOT	FOOT	FOOT
STA 921+32 TO STA 925+18	SOLID WHITE EDGE LINE		772	
STA 921+32 TO STA 925+18	SKIP-DASH YELLOW CENTERLINE	80		100
TOTALS		80	772	100

WORK ZONE PAVEMENT MARKING REMOVAL SCHEDULE

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL
		SQ FT
CENTERLINE	SHORT-TERM	27
	TOTAL	27

DRAINAGE SCHEDULE

LOCATION	CONCRETE HEADWALL FOR PIPE DRAINS
	EACH
STRUCTURE NO. 027-0068 - NW CORNER	1
STRUCTURE NO. 027-0068 - SW CORNER	1
STRUCTURE NO. 027-0068 - NE CORNER	1
STRUCTURE NO. 027-0068 - SE CORNER	1
TOTAL	4

BRIDGE APPROACH PAVEMENT SCHEDULE

LOCATION	BRIDGE APPROACH PAVEMENT	PROTECTIVE COAT	CONNECTOR (FLEXIBLE)
	SQ YD	SQ YD	SQ YD
STRUCTURE NO. 027-0068 - WEST APPROACH	107	107	21.5
STRUCTURE NO. 027-0068 - EAST APPROACH	107	107	21.5
TOTALS	214	214	43

GUARDRAIL SCHEDULE

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	SPBGR, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 6A	GUARDRAIL MARKERS, TYPE A	BARRIER WALL MARKERS, TYPE B	TERMINAL MARKER-DIRECT APPLIED	STEEL BRIDGE RAIL, TYPE SM
	EACH	FOOT	EACH	EACH	EACH	EACH	FOOT
STRUCTURE NO. 027-0068 - NORTHWEST	1	50.0	1	2		1	
STRUCTURE NO. 027-0068 - SOUTHWEST	1	87.5	1	2		1	
STRUCTURE NO. 027-0068 - NORTHEAST	1	87.5	1	2		1	
STRUCTURE NO. 027-0068 - SOUTHEAST	1	50.0	1	2		1	
STRUCTURE NO. 027-0068 - BRIDGE					2		280
TOTALS	4	275.0	4	8	2	4	280

SIGN REMOVAL SCHEDULE

LOCATION	REMOVE SIGN PANEL ASSEMBLY TYPE A
	EACH
STA 923+25, 28' RT	1
STA 924+49, 27' LT	1
TOTAL	2

GUARDRAIL REMOVAL SCHEDULE

LOCATION	FOOT
STA 922+00 TO BRIDGE, LEFT	101
STA 922+31 TO BRIDGE, RIGHT	101
BRIDGE TO STA 925+43, LEFT	101
BRIDGE TO STA 925+74, RIGHT	101
TOTAL	404

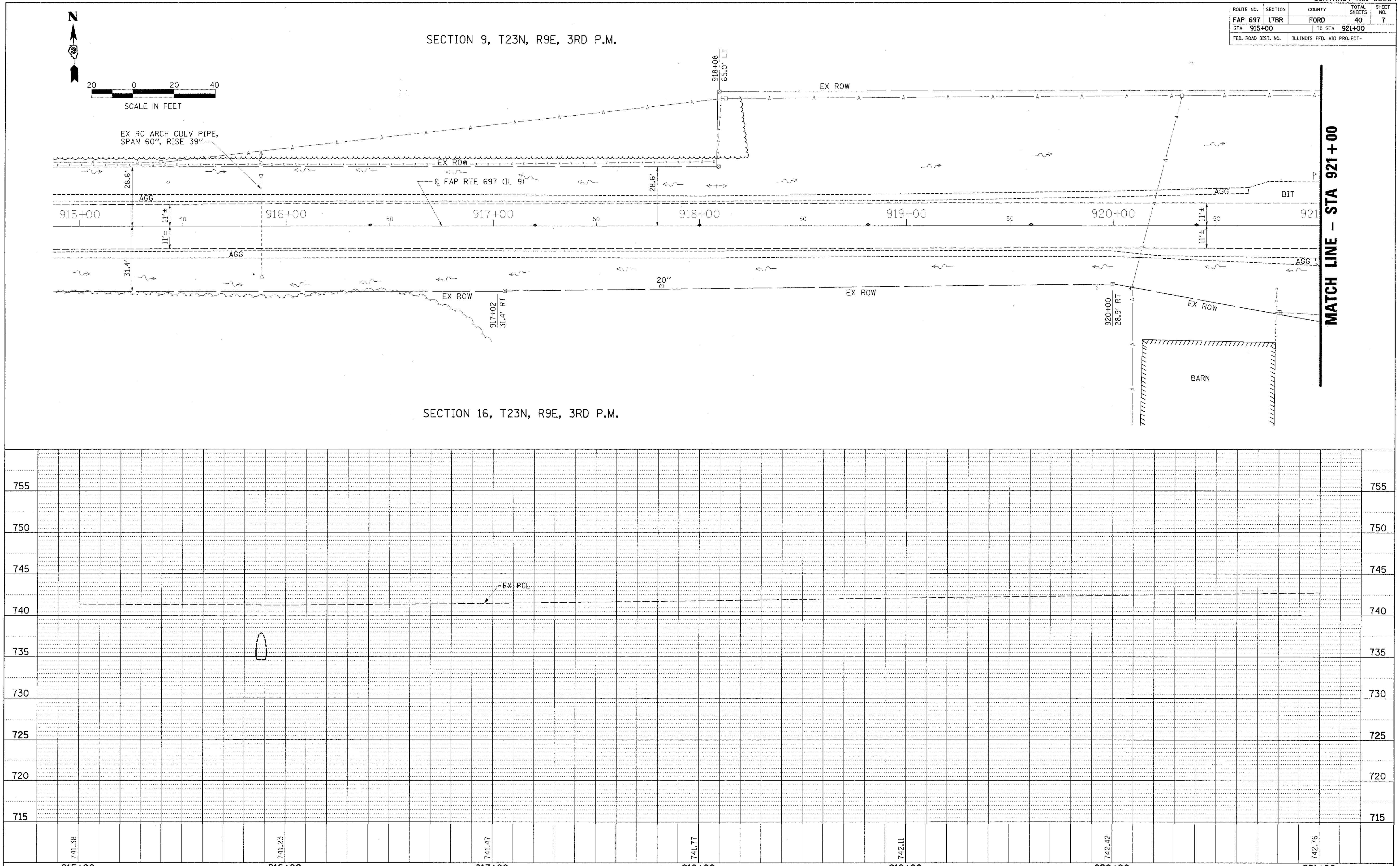
ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

SCHEDULES OF QUANTITIES
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	7
STA 915+00		TO STA 921+00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT-			



N
20 0 20 40
SCALE IN FEET
SECTION 9, T23N, R9E, 3RD P.M.
918+08
65.0' LT
EX ROW
EX RC ARCH CULV PIPE,
SPAN 60", RISE 39"
EX ROW
℄ FAP RTE 697 (IL 9)
28.6'
28.6'
AGG
AGG
BIT
915+00
916+00
917+00
918+00
919+00
920+00
921
11'±
11'±
AGG
AGG
31.4'
20"
EX ROW
EX ROW
EX ROW
917+02
31.4' RT
920+00
28.9' RT
MATCH LINE - STA 921+00
BARN
SECTION 16, T23N, R9E, 3RD P.M.
755
750
745
740
735
730
725
720
715
EX PGL
741.38
741.23
741.47
741.77
742.11
742.42
742.76
915+00
916+00
917+00
918+00
919+00
920+00
921+00

FAP RTE 697 (IL 9) PLAN & PROFILE
STA 915+00 TO STA 921+00

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	8
STA 921+00		TO STA 927+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT-		

N

SCALE IN FEET 20 0 20 40

SECTION 9, T23N, R9E, 3RD P.M.

MATCH LINE – STA 921+00

MATCH LINE – STA 927+00

EX ROW

TOP OF BANK

921+46.5, 24.0' LT

921+61.0 FE (EARTH)

921+75, 24.0' LT

921+32 BEGIN IMPROVEMENTS (BUTT JOINT)

15" CMP

10'

921+80 TBT TY 1 SPL (FLARED)

922+09, 23.0' LT

GUARDRAIL REMOVAL

℄ FAP RTE 697 (IL 9)

50.0' SPBGR TY A ON TAPER

TBT TY 6A

SPL POST NO. 1 SEE GUARDRAIL DETAILS SHEET

BIG FOUR DITCH

EX S.N. 027-0068
℄ STA 923+87
THREE SPAN 21" PPC DECK BEAMS.
SUPERSTRUCTURE TO BE REPLACED.

REMOVE SIGN PANEL ASSEMBLY - TYPE A AND DELIVER TO ENGINEER

TOP OF BANK

15" CMP

924+88.18 END APPROACH PAVEMENT

924+94.18 END CONNECTOR 925+02

925+18 END IMPROVEMENTS (BUTT JOINT)

87.5' SPBGR TY A ON TAPER

925+56, 23.0' LT

926+00 65.0' LT

926+15, 25.5' LT

926+69 MATCH EX

65.0'

BIT

ACC

922+00

923+00

924+00

925+00

926+00

927

SAWCUT

34°-30'

16'-0"

11'-0"

11'± 11'±

24

50

6 1

1:6

921+14.6 FE (CONC)

921+60, 25.5' RT

922+18, 23' RT

922+79.82 BEGIN CONNECTOR

922+85.82 BEGIN APPROACH PAVEMENT

925+70, 23.0' RT

926+00, 24.0' RT

926+37 MATCH EX

922+00 65.0' RT

18" CMP

BRIDGE APPROACH PAVEMENT STANDARD 420401-NO CURBS

REMOVE SIGN PANEL ASSEMBLY - TYPE A AND DELIVER TO ENGINEER

BM #102 EL 739.55 (NGVD 29)
RR SPIKE IN POWER POLE
STA 922+53, 60' LT

BM #101 EL 746.42 (NGVD 29)
CHSLD "X" ON NE CORNER
OF PARAPET S.N. 027-0068
STA 924+37.1, 22.3' LT

CENTERLINE TIE

NAIL & WASHER ON TOP OF FIRST GUARDRAIL POST

℄ FAP 697

44.62'

PK NAIL

69.33'

27.25'

NAIL & WASHER ON TOP OF FIRST GUARDRAIL POST

TOP CENTER OF ROW MARKER

PC STA 925+77.53

LEGEND

- PAVEMENT REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
- PAVED SHOULDER REMOVAL
- AGGREGATE SHOULDERS, TYPE B
- BITUMINOUS SHOULDERS SUPERPAVE

SECTION 16, T23N, R9E, 3RD P.M.

PLAN — SURVEYED, PLOTTED, PROOF READ, CHECKED, FINAL, NOTED, RT. OF WAY, CHECKED, DGN. FILE NAME, NOTE BOOK, NO., DATE, BY

PROFILE — SURVEYED, PLOTTED, PROOF READ, CHECKED, FINAL, NOTED, STRUCTURE, WATERWAYS CHKD, NOTE BOOK, NO., DATE, BY

755 750 745 740 735 730 725 720 715

921+32 BEGIN IMPROVEMENTS (BUTT JOINT)

EX PGL

1:240 TAPER

VPI STA 922+75
EL 743.45

922+85.82 EL 743.45 (CONNECTOR) EL 743.43 (APPR PVMT)

923+15.21 BK WEST ABUTMENT EL 743.43

PR SUPERSTRUCTURE REPLACEMENT

PR PGL 0.00%

924+58.79 BK EAST ABUTMENT EL 743.43

924+88.18 EL 743.43 (APPR PVMT) EL 743.45 (CONNECTOR)

925+18 END IMPROVEMENTS (BUTT JOINT)

2'-6" (TYP)

2•

1

EXISTING STRUCTURE (TYP)

LIMITS OF POROUS GRANULAR EMBANKMENT (TYP), SEE STRUCTURE PLANS.

EX SLOPE WALL (TYP)

STREAMBED EL 721.1±

• AT RIGHT ANGLES

742.76 | 742.89 (EX) 742.93 (PR) | 742.95 743.14 | 743.04 743.35 | 743.12 743.43 | 743.19 743.43 | 743.24 743.43 | 743.20 743.43 | 743.31 743.45 | 743.68 | 744.04 | 744.82 | 745.60

921+00 +50 922+00 +50 923+00 +50 924+00 +50 925+00 +50 926+00 +50 927+00

FAP RTE 697 (IL 9) PLAN & PROFILE
STA 921+00 TO STA 927+00

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	9
STA 927+00		TO STA 932+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT-		

SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

N

20 0 20 40
SCALE IN FEET

SECTION 9, T23N, R9E, 3RD P.M.

MATCH LINE – STA 927+00

928+10

EX ROW

30.3'

BIT

BIT

AGG

℄ FAP RTE 697 (IL 9)

928+00

929+00

930+00

931+00

932+00

50

11'±

BIT

AGG

BIT

18" CMP

36.7'

EX ROW

927+81.2
PE (AGG)

PI STA 928+00.00
1.42' LT

928+10

928+89.9
PE (AGG)

PT STA 930+22.44

931+21.7
PE (AGG)

15" CMP

HORIZONTAL CURVE DATA
PI STA 928+00.00
Δ = 01°-27'-50.96"
R = 17410.49'
T = 222.47'
L = 444.91'
E = 1.42'
e = NORMAL CROWN
PC STA 925+77.53
PT STA 930+22.44

SECTION 16, T23N, R9E, 3RD P.M.

PI TIE

1' UP FROM GROUND ON MAILBOX POST

℄ FAP 697

38.29'

30.30'

PK NAIL

38.62'

TOP CENTER OF ROW MARKER (TYP 2)

PI STA 928+00.00

CENTERLINE TIE

NAIL & WASHER IN POWER POLE

1' UP FROM GROUND ON MAILBOX POST

℄ FAP 697

90.90'

111.39'

PK NAIL

61.24'

NAIL & WASHER IN TREE

PT STA 930+22.44

PROFILE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
R.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

755
750
745
740
735
730
725
720
715

EX PGL

745.60
746.90
747.64
748.13
748.54
748.91

927+00 928+00 929+00 930+00 931+00 932+00

FAP RTE 697 (IL 9) PLAN & PROFILE
STA 927+00 TO STA 932+00

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND

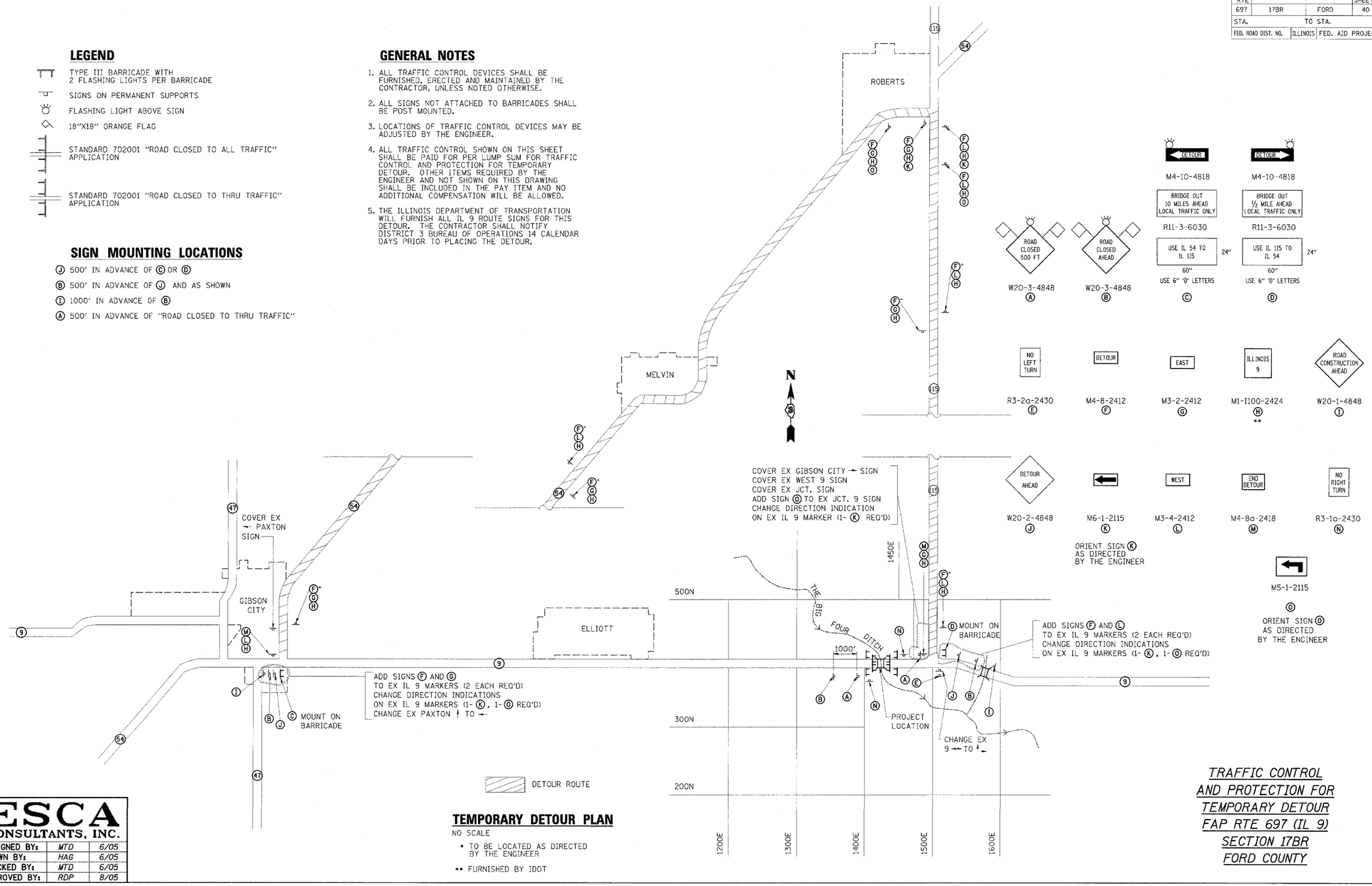
- TYPE III BARRICADE WITH 2 FLASHING LIGHTS PER BARRICADE
- SIGNS ON PERMANENT SUPPORTS
- FLASHING LIGHT ABOVE SIGN
- 18"X18" ORANGE FLAG
- STANDARD 702001 "ROAD CLOSED TO ALL TRAFFIC" APPLICATION
- STANDARD 702001 "ROAD CLOSED TO THRU TRAFFIC" APPLICATION

SIGN MOUNTING LOCATIONS

- (J) 500' IN ADVANCE OF (C) OR (D)
- (B) 500' IN ADVANCE OF (J) AND AS SHOWN
- (I) 1000' IN ADVANCE OF (B)
- (A) 500' IN ADVANCE OF "ROAD CLOSED TO THRU TRAFFIC"

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
2. ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR PER LUMP SUM FOR TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR. OTHER ITEMS REQUIRED BY THE ENGINEER AND NOT SHOWN ON THIS DRAWING SHALL BE INCLUDED IN THE PAY ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
5. THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL FURNISH ALL IL 9 ROUTE SIGNS FOR THIS DETOUR. THE CONTRACTOR SHALL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO PLACING THE DETOUR.



TEMPORARY DETOUR PLAN

NO SCALE

- * TO BE LOCATED AS DIRECTED BY THE ENGINEER
- ** FURNISHED BY IDOT

TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR FAP RTE 697 (IL 9) SECTION 17BR FORD COUNTY

ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

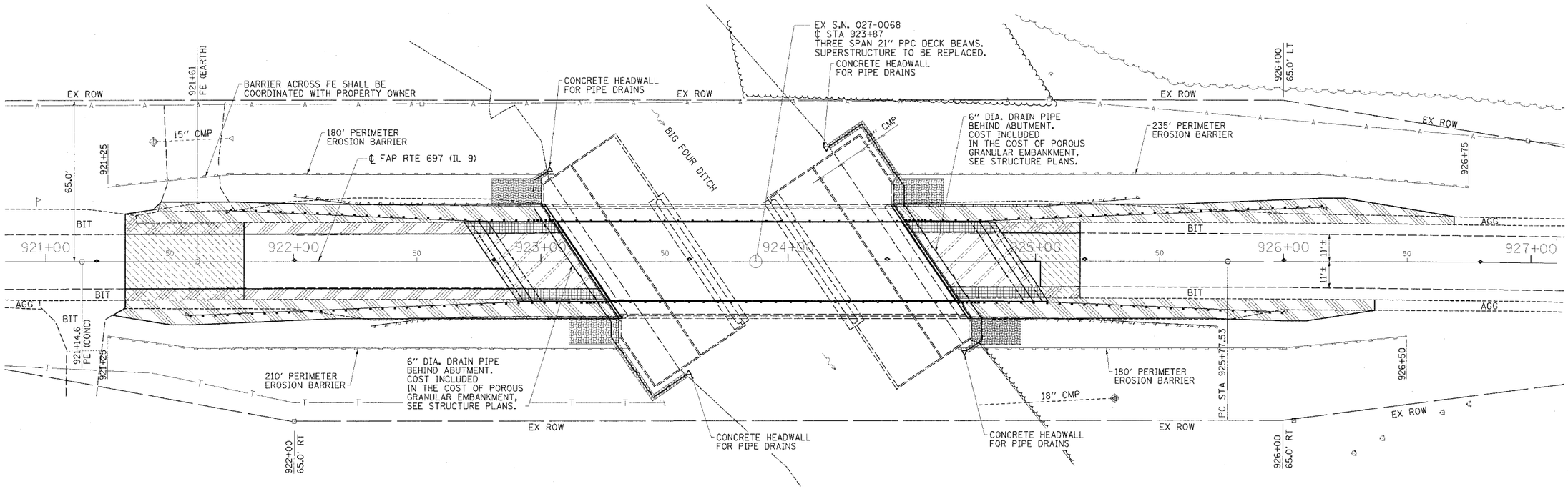
N

20 0 20 40

SCALE IN FEET

LEGEND

- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET
- EXISTING DITCH FLOW
- INLET & PIPE PROTECTION



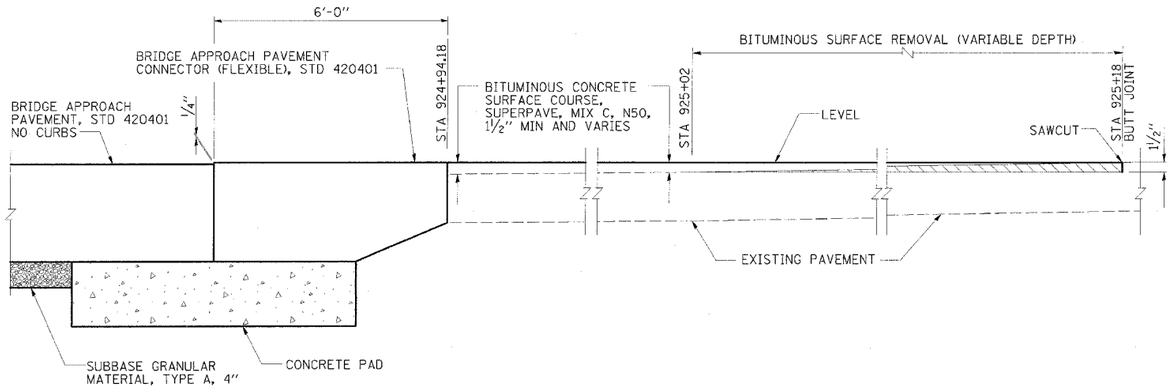
ESCA
CONSULTANTS, INC.

DESIGNED BY:	MTD	6/05
DRAWN BY:	HAG/DWH	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

EROSION CONTROL AND DRAINAGE PLAN
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

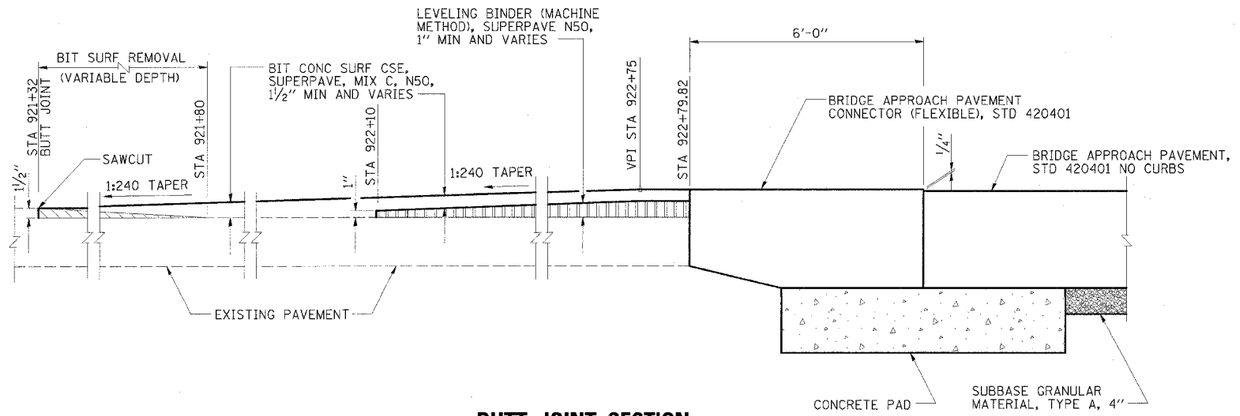
CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



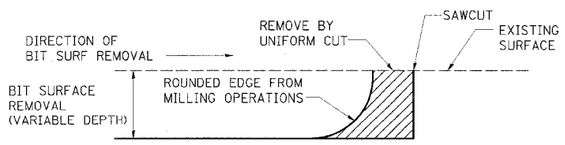
BUTT JOINT SECTION

STA 924+94.18 TO STA 925+18



BUTT JOINT SECTION

STA 921+32 TO STA 922+79.82

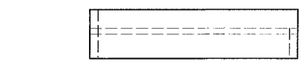


DETAIL AT BUTT JOINT

NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAWCUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE COST OF ALL WORK SHOWN IN THE DETAIL IS INCLUDED IN BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH). THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL.

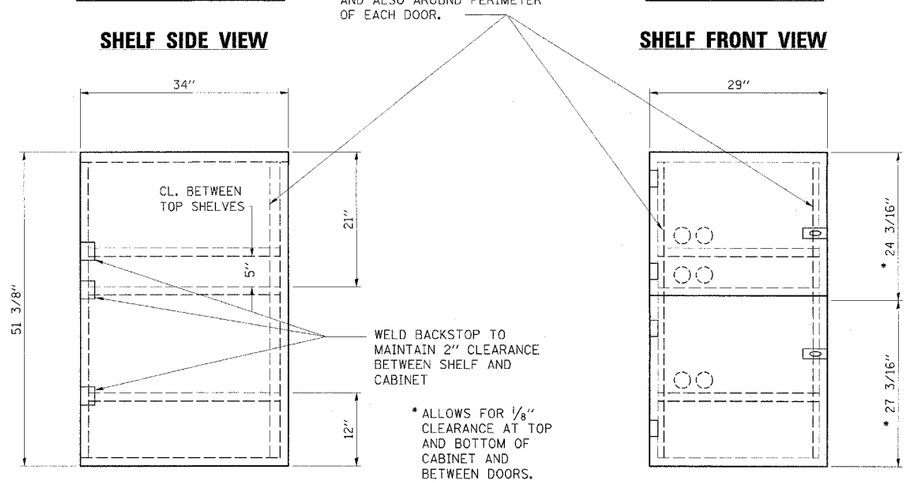
ESCA CONSULTANTS, INC.

DESIGNED BY:	MTD	7/05
DRAWN BY:	CJG/HAG	7/05
CHECKED BY:	MTD	7/05
APPROVED BY:	RDP	8/05



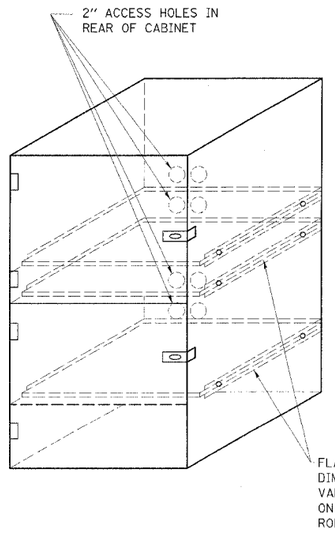
SHELF SIDE VIEW

SHELF FRONT VIEW



SIDE VIEW

FRONT VIEW



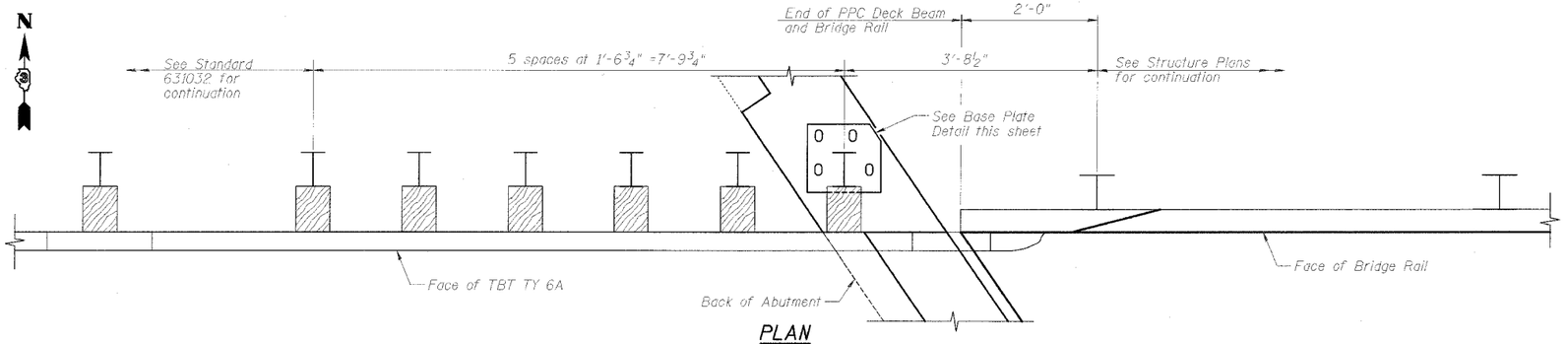
NOTES:
1. USE 16 GAUGE STEEL FOR CABINET.
2. THE TOP SHELF SHALL SLIDE IN OR OUT WITH THE TOP DOOR OPEN.
3. ALL HINGES AND HASPS WILL BE WELDED TO THE CABINET.
4. ALL EDGES SHALL BE GROUND SMOOTH.
5. TWO (2" DIA.) ACCESS HOLES WILL BE REQUIRED FOR EACH SHELF.
6. CABINET SHALL BE PAINTED WITH TWO COATS OF FLAT PAINT.
7. 2 EACH MATCHING KEY PADLOCKS, WITH 3 KEYS PROVIDED, MASTER MODEL 3 T OR EQUIVALENT.
8. 4 EACH PLAIN STEEL, NON-REMOVABLE PIN, NO HOLE 4"X4" SQUARE CORNER HINGES TO BE WELDED ON.
9. 2 EACH EXTRA HEAVY, PLAIN STEEL, FIXED STAPLE, NO HOLE, 7 1/4 " HASPS TO BE WELDED ON.

LOCKABLE COMPUTER CABINET

MISCELLANEOUS DETAILS
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

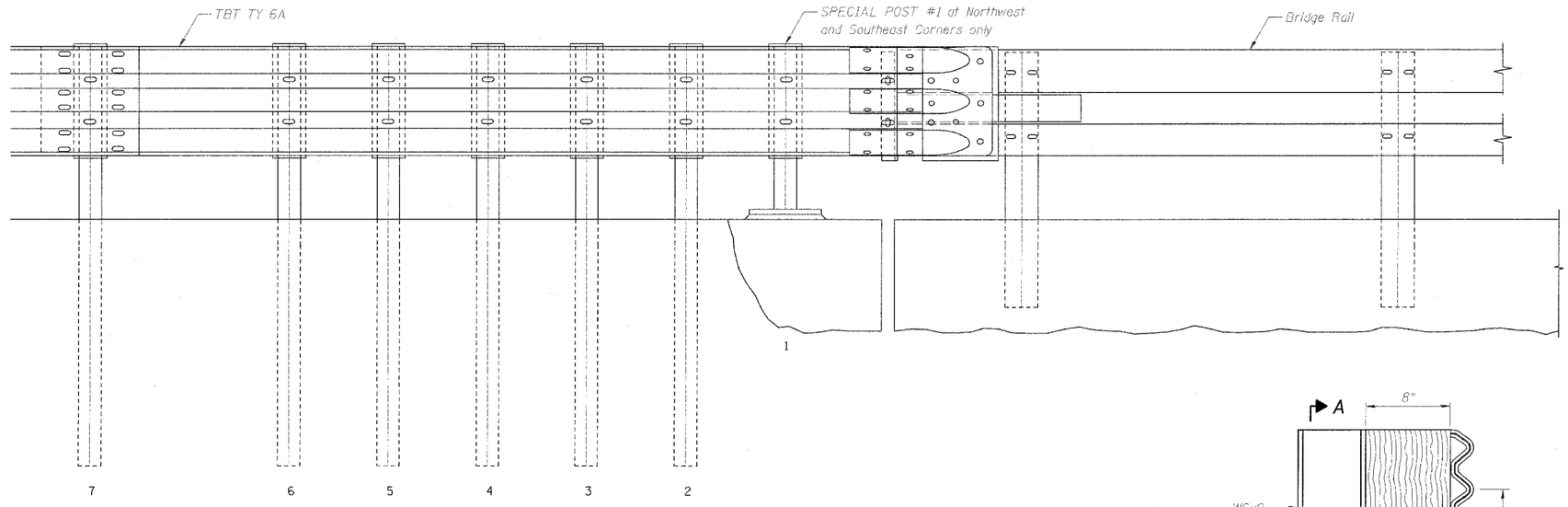
CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

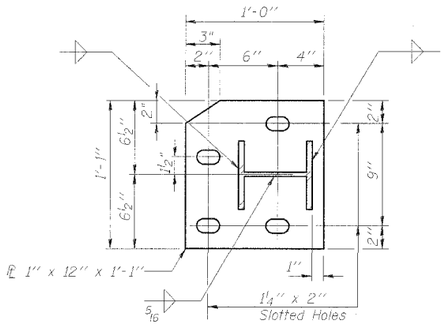


PLAN

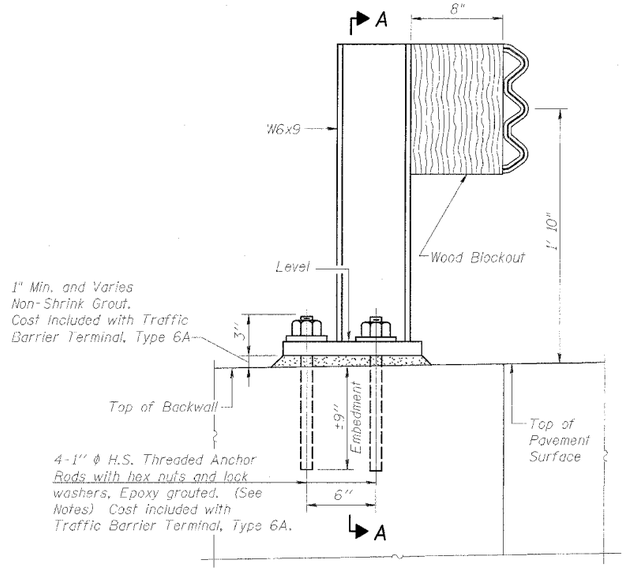
(Northwest corner shown, Southeast corner similar)



ELEVATION



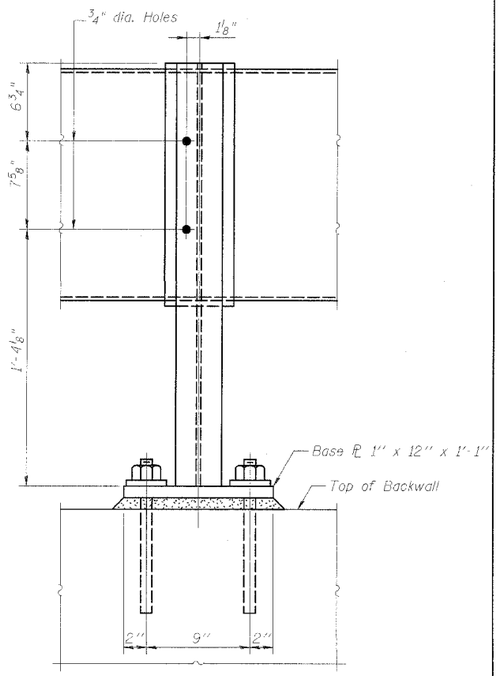
BASE PLATE DETAIL



SECTION AT SPECIAL RAIL POST #1

NOTES

1. Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.
2. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
3. All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
4. The Contractor shall use 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 according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.
5. Nuts for 1" ϕ threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional 1/8 turn.
6. See Standard 631032 for details of Traffic Barrier Terminal, Type 6A not shown. All material and work associated with the fabrication and installation of the special rail post shall be included with the cost of Traffic Barrier Terminal, Type 6A.



SECTION A-A

ESCA CONSULTANTS, INC.		
DESIGNED BY:	MTD	6/05
DRAWN BY:	JDK	6/05
CHECKED BY:	MTD	6/05
APPROVED BY:	RDP	8/05

GUARDRAIL DETAILS
FAP RTE 697 (IL 9)
SECTION 17BR
FORD COUNTY

BENCHMARK: Chiseled "Square" on top of Northeast Corner of Parapet, SN 027-0068
Elev. 746.42

EXISTING STRUCTURE: SN 027-0068 was originally built in 1971. The superstructure consists of 3 simple spans of 21" PPC deck beams on pile bent abutments and solid wall reinforced concrete piers on piles. The back-to-back abutments dimension measures 143'-7" while the out-to-out width measures 46'-0". The existing superstructure shall be removed and replaced. Road closure shall be used during construction.

No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

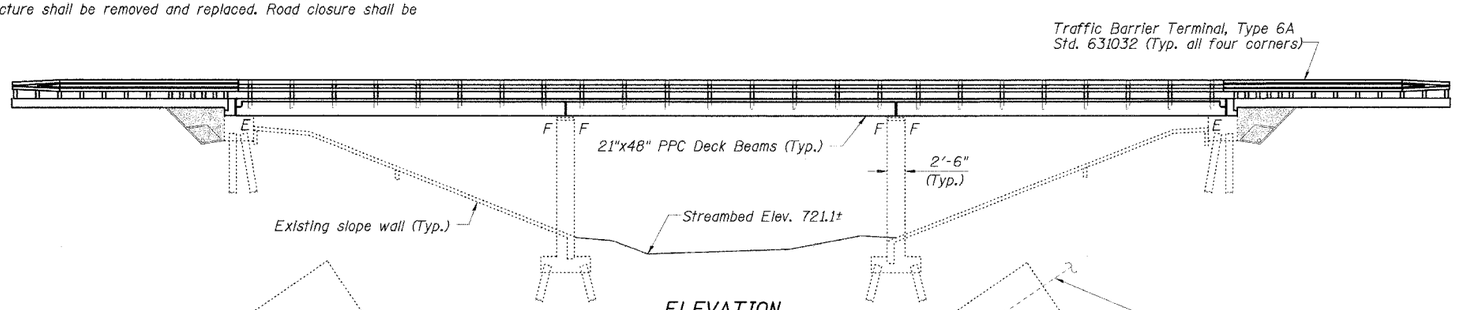
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	14
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 1 OF 15		

CONTRACT NO. 66604

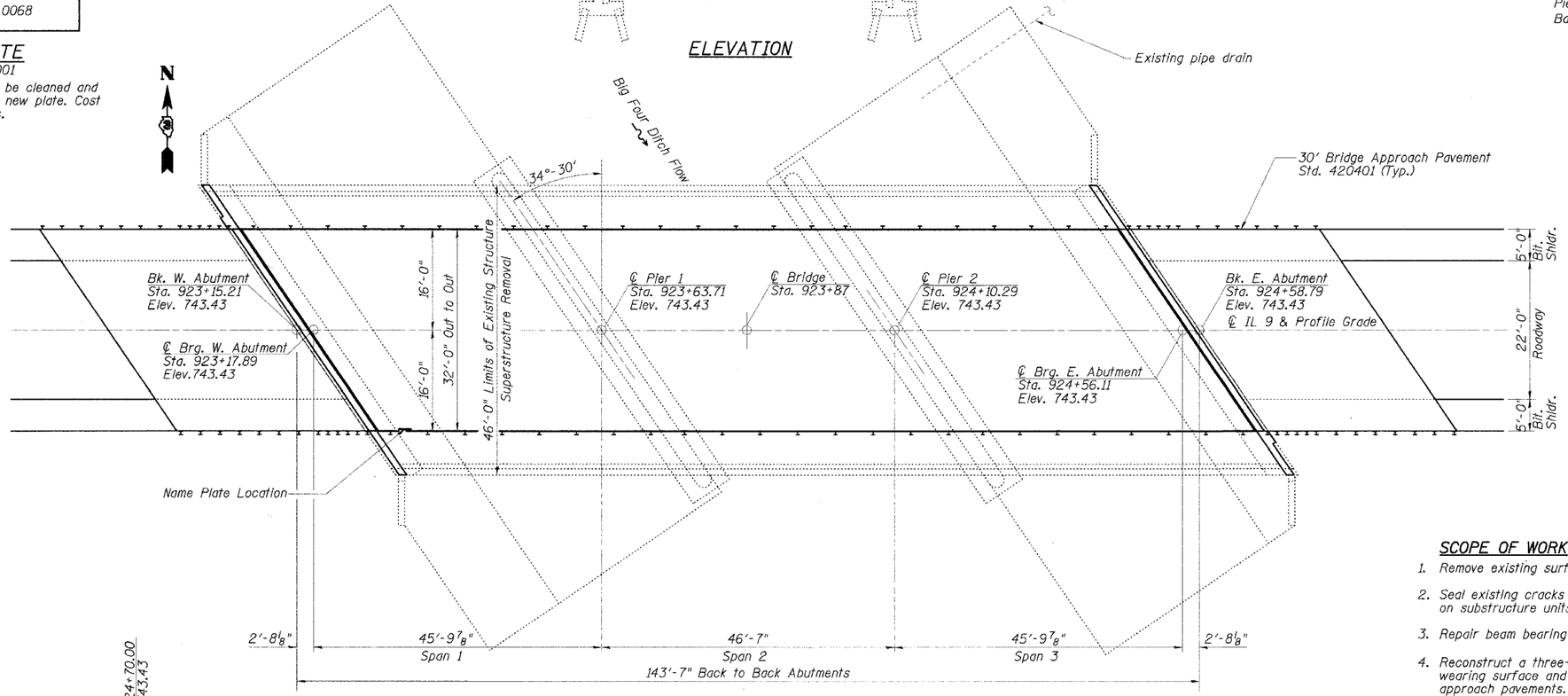
STATION 923+87
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 697 SEC. 17BR
LOADING HS20
STR. NO. 027-0068

NAME PLATE
See Std. 515001

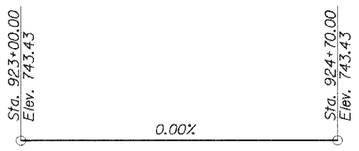
Note:
Existing Name Plate shall be cleaned and relocated adjacent to the new plate. Cost included with Name Plates.



ELEVATION



PLAN



PROFILE GRADE
(Along ℄ Roadway)

STRUCTURE INDEX OF SHEETS

SCOPE OF WORK

1. Remove existing surfacing, concrete parapets, and deck beams.
2. Seal existing cracks and repair delaminated/spalled concrete areas on substructure units.
3. Repair beam bearing seats at abutments and piers as required.
4. Reconstruct a three-span PPCD beam superstructure with concrete wearing surface and Steel Bridge Rail Type SM, and new bridge approach pavements.

DESIGN SPECIFICATION
2002 AASHTO

LOADING HS20-44
Allow 50 psf future wearing surface

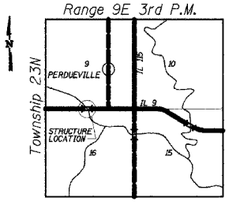
DESIGN STRESSES

FIELD UNITS
f'c = 5,000 psi (Concrete Wearing Surface)
f'c = 3,500 psi (All concrete except CWS)
fy = 60,000 psi (reinf.)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½"ϕ low lax strands)
fsi = 201,960 psi (½"ϕ low lax strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045g
Site Coefficient (S) = 1.2

STATE OF ILLINOIS
RICHARD D. PAYNE
No. 4647
REGISTERED STRUCTURAL ENGINEER
EXPIRES 11-30-06
Richard D. Payne
SIGNATURE
10/26/05
DATE



LOCATION SKETCH

GENERAL PLAN
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	15
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 2 OF 15		

CONTRACT NO. 66604

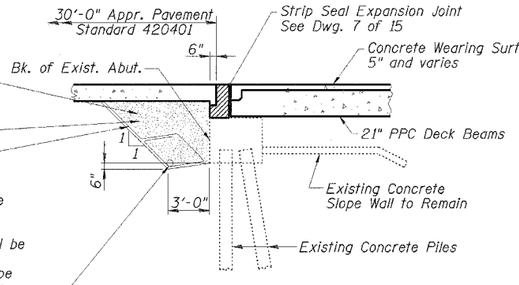
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Backfill with uncompacted Porous Granular Embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place. Limits shall be 12" from the end of each wingwall.

Excavation for placing Porous Granular Embankment is paid for as Structure Excavation

Geotechnical fabric for french drains*

A 6" ϕ perforated drain pipe shall be situated at the bottom of an approx. 2' x 2' area of Porous Granular Embankment. The 2' x 2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslope.* Pipes shall drain onto concrete headwalls (Article 601.05 of the Std. Specification and Highway Standard 601101).



SECTION THRU ABUTMENTS

(℄ Rt. Angles)

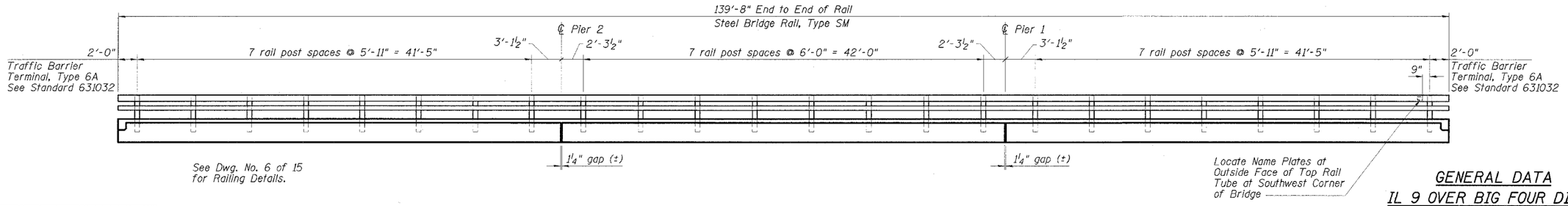
* Cost of drain pipe and fabric included in the cost of Porous Granular Embankment, Concrete Headwalls paid for separately, see Roadway Plans.

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
3. All construction joints shall be bonded.
4. Bridge Seat Sealer shall be applied to abutment bearing seats where formed concrete repairs are performed.
5. All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
6. Side retainers shall be AASHTO M270 Grade 36 minimum.
7. No work will be allowed in the stream.
8. The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
9. If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams. The side retainers shown in the drawing no. 11 of 15 shall be installed once the beams are in their final locations. These side retainers may also be used to provide the temporary lateral restraint required during construction. This work shall be considered included in the cost of Precast Prestressed Concrete Deck Beams.
10. Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
11. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
12. The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
13. Repair of the substructure shall be completed prior to placement of the new deck beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		7.6	7.6
Structure Excavation	Cu. Yd.		142	142
Concrete Structures	Cu. Yd.		11.2	11.2
Bridge Deck Grooving	Sq. Yd.	466		466
Concrete Wearing Surface, 5"	Sq. Yd.	497		497
Bridge Seat Sealer	Sq. Ft.		56	56
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.		1152.2	1152.2
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4462		4462
Reinforcement Bars, Epoxy Coated	Pound	6400	1160	7560
Steel Bridge Rail, Type SM	Foot	280		280
Name Plates	Each	1		1
Porous Granular Embankment	Cu. Yd.		142	142
Epoxy Crack Sealing	Foot		212	212
Strip Seal Expansion Joint Assembly	Foot	78		78
Asbestos Bearing Pad Removal	Each		60	60
Bar Splicers	Each		64	64
Protective Coat	Sq. Yd.	497		497



RAIL ELEVATION

(Showing Inside Face of South Railing; North Railing Similar)

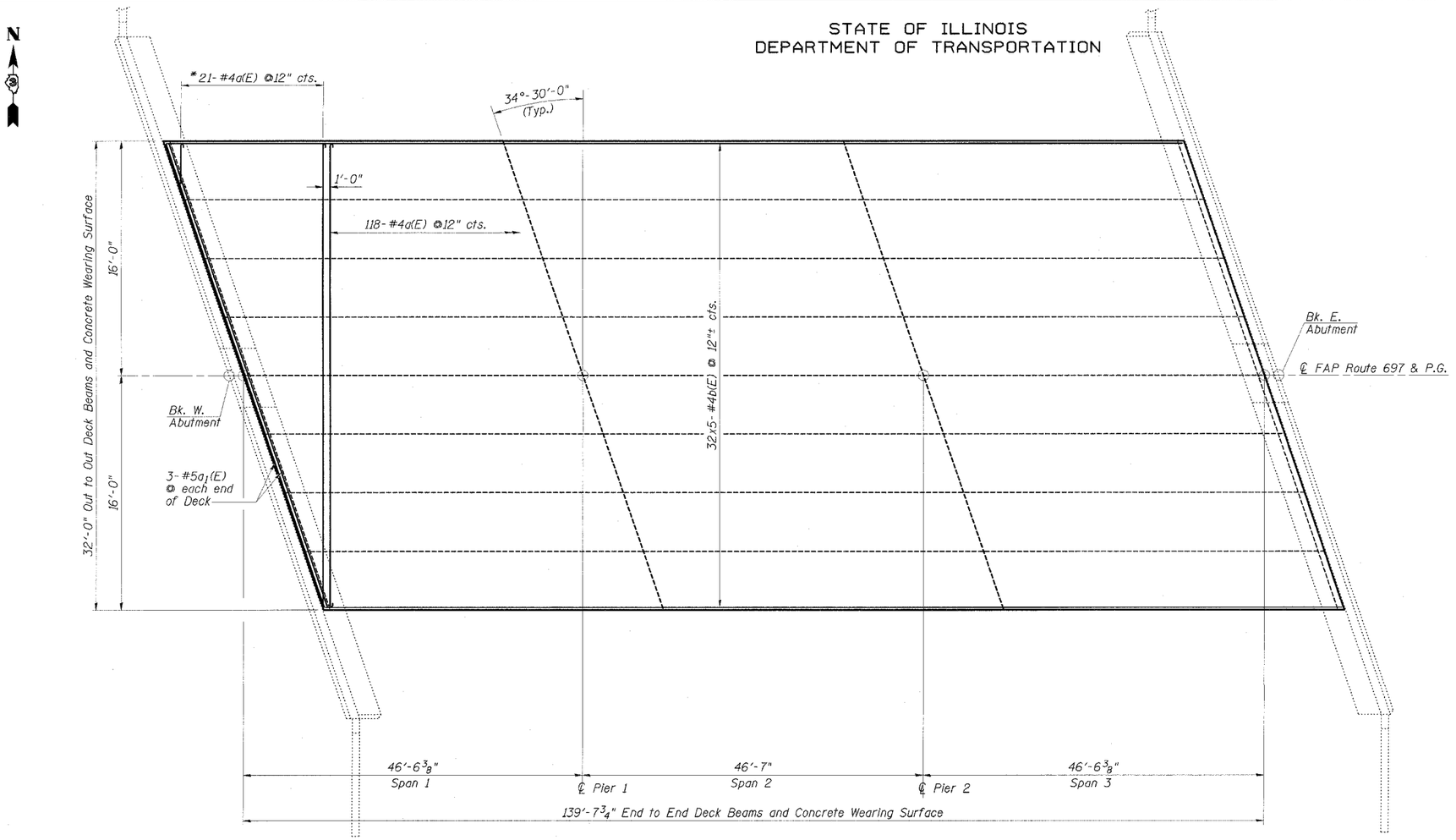
GENERAL DATA
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	15
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 3 OF 15		

CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

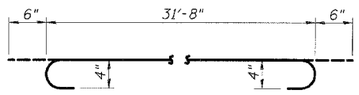
MIN. BAR LAP
#4 bar = 1'-8"

Note:
Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 32x5-#4 etc. indicates 32 lines of bars with 5 lengths per line. For remainder of superstructure details, see drawings 4 and 5 of 15.

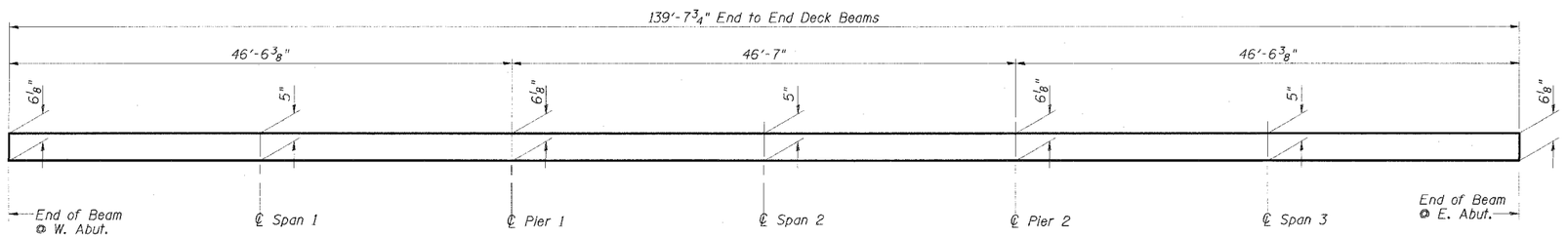
PLAN

CONCRETE WEARING SURFACE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	139	#4	32'-8"	⊂⊃
a_1(E)	6	#5	38'-5"	——
b(E)	160	#4	29'-2"	——
Reinforcement Bars, Epoxy Coated		Pound	6400	
Concrete Wearing Surface, 5"		Sq. Yd.	497	
Bridge Deck Grooving		Sq. Yd.	466	
Protective Coat		Sq. Yd.	497	



BAR a(E)



REINFORCED CONCRETE WEARING SURFACE PROFILE
(At centerline of roadway)

Note:
Greater thickness is required at edges of superstructure to conform to cross section slopes shown on Dwg. 4 of 15.

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

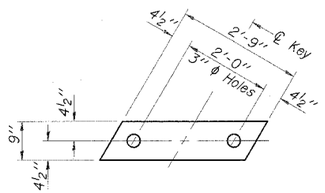
SUPERSTRUCTURE
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	17
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

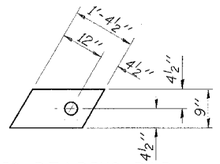
DWG. NO. 4 OF 15

CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

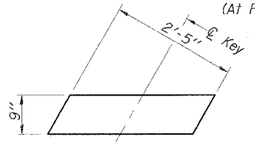


FABRIC BEARING PAD
Interior

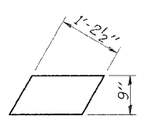


FABRIC BEARING PAD
Exterior

FIXED
(At Piers)

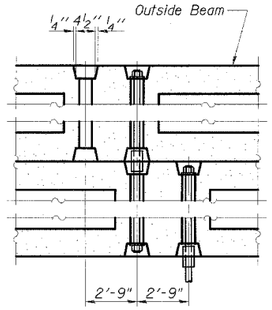


FABRIC BEARING PAD
Interior

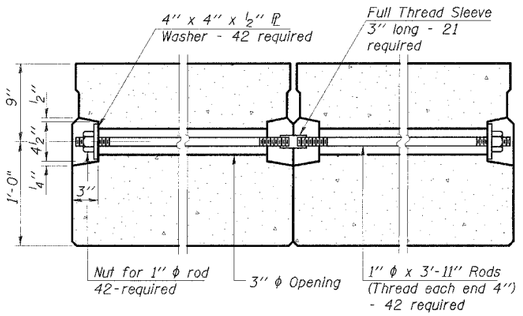


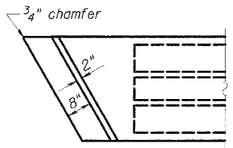
FABRIC BEARING PAD
Exterior

EXPANSION
(At Abutments)

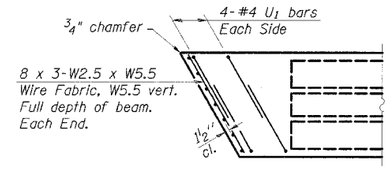


TYPICAL TRANSVERSE TIE ASSEMBLY



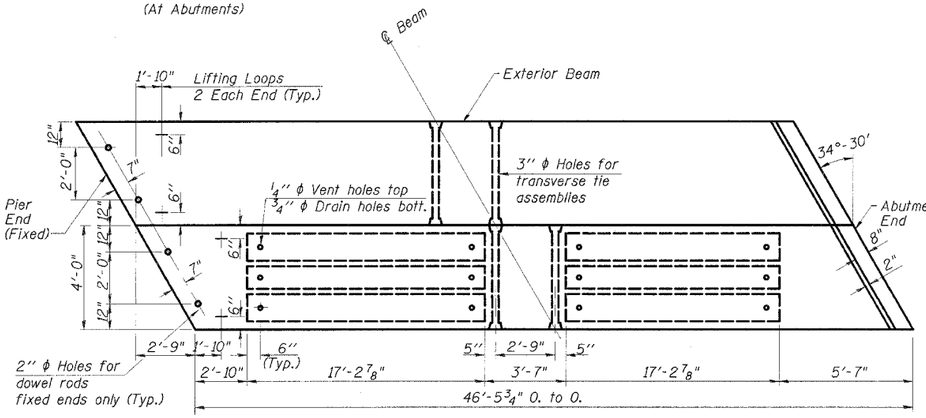


AT EXPANSION END
(See End of Beam detail on Dwg. 5 of 15 for reinforcement)

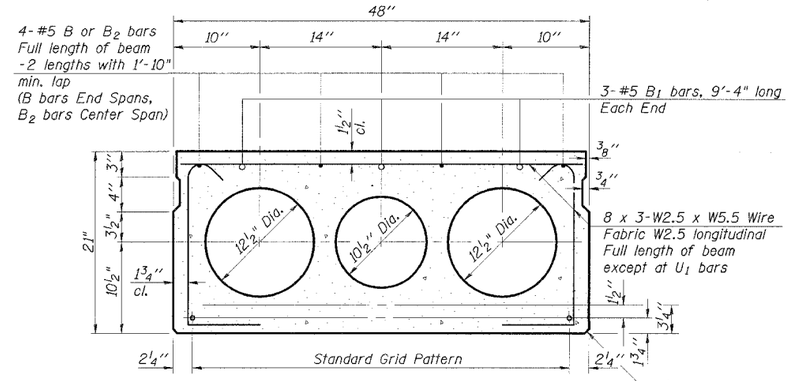


AT FIXED END

END PLANS

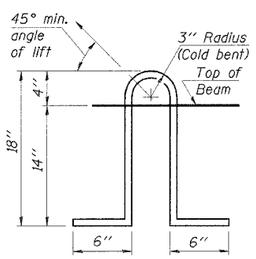


PLAN



TYPICAL SECTION-INTERIOR BEAMS
17-½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
8-Strands 1¾" up, 7-Strands 3¼" up,
2-Strands 6" up

Notes:
1. Place strands symmetrically about ℄ of beam.
2. See Dwg. 5 of 15 for fascia beam details.



LIFTING LOOP DETAIL

NOTES

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

Lifting loops shall be 3 - ½" ϕ-270 ksi strands, as shown.

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

Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60.

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

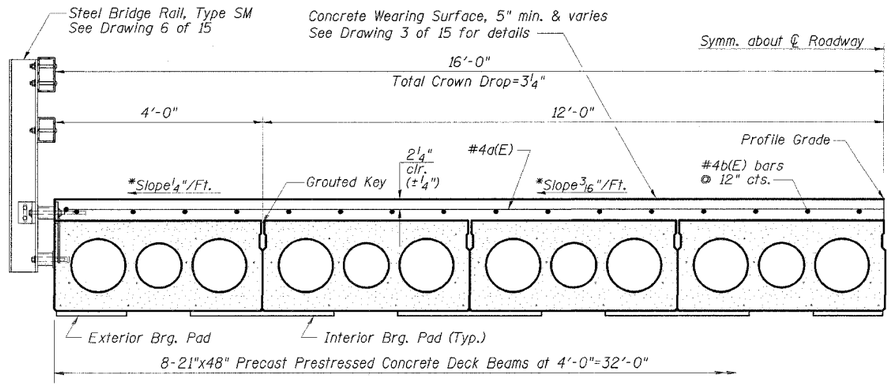
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

See Drawing 2 of 15 for location of rail anchors and additional notes.

Bridge rail inserts shall be cast in precast beams, and the cost shall be included with Precast Prestressed Concrete Deck Beams.



*Cross slopes shown are applicable to Concrete Wearing Surface.

HALF CROSS SECTION

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

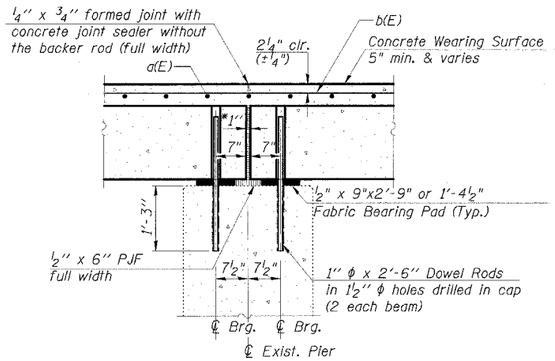
SUPERSTRUCTURE DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	18
STA		TO STA		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

DWG. NO. 5 OF 15

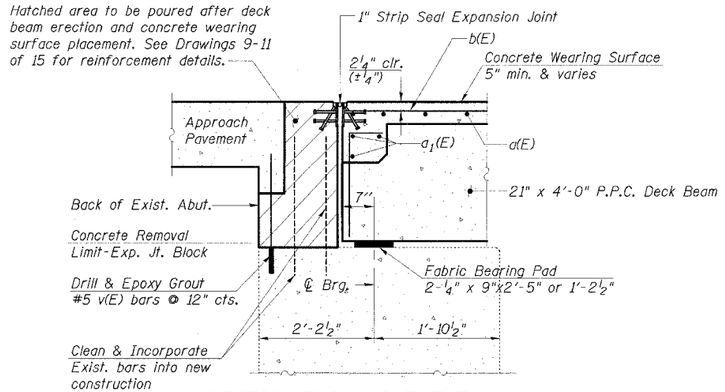
CONTRACT NO. 66604



SECTION THRU PIER

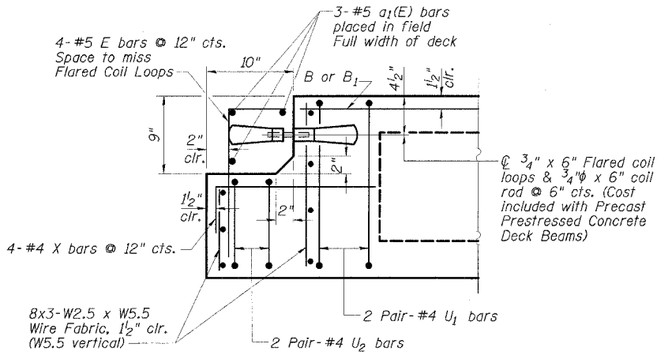
(Horizontal dimensions are at right angles to beam ends)

* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.



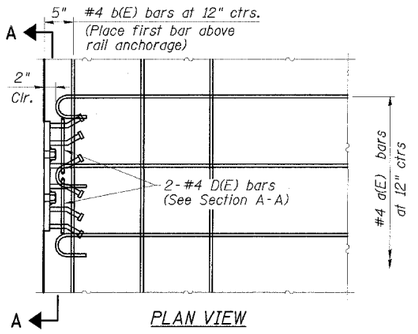
SECTION THRU ABUTMENT

(Dimensions at right angles)



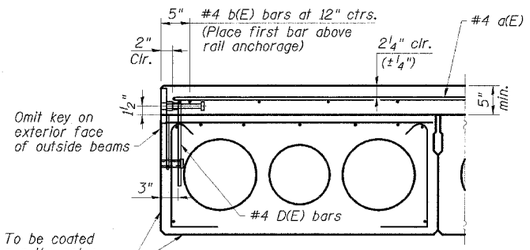
END OF BEAM (EXPANSION END)

(Dimensions at right angles)



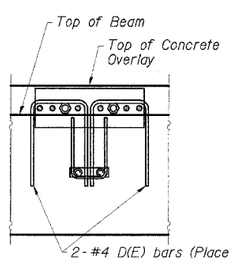
PLAN VIEW

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



FASCIA BEAM CROSS SECTION

See Section Thru Interior Beams on Dwg. 4 of 15 for strand pattern, dimensions and bar call outs.



SECTION A-A

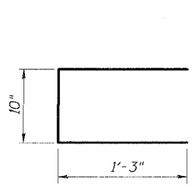
CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE

NOTES

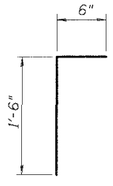
After beams have been erected, holes shall be drilled into substructure and dowels rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

Concrete wearing surface to be poured after grouting the shear keys.

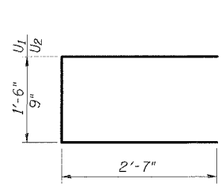
Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (21" depth).



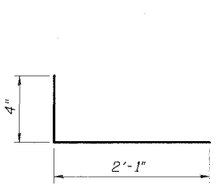
BAR D(E)



BAR E



BARS U1 & U2



BAR X

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

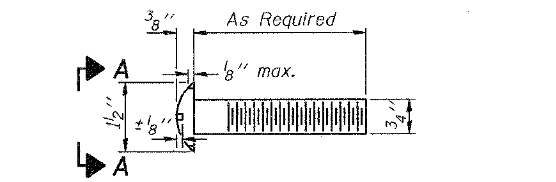
SUPERSTRUCTURE DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	19
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

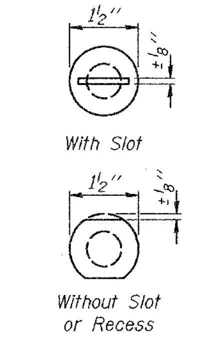
DWG. NO. 6 OF 15

CONTRACT NO. 66604

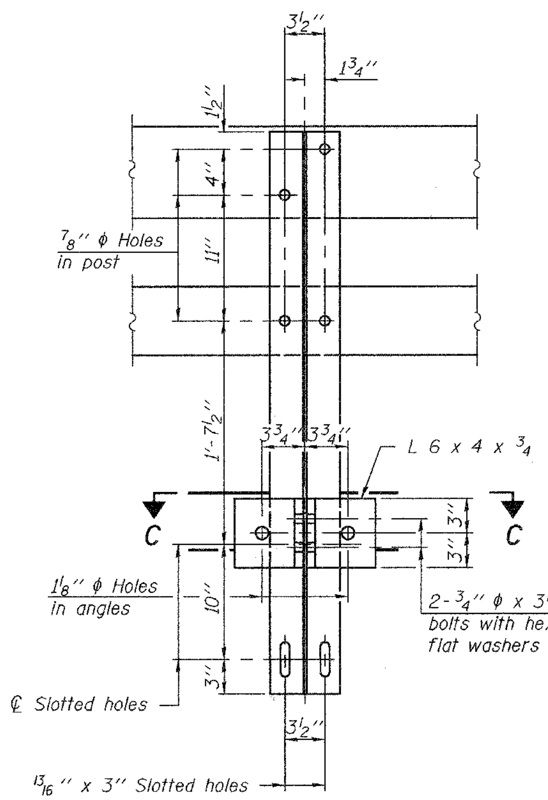
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



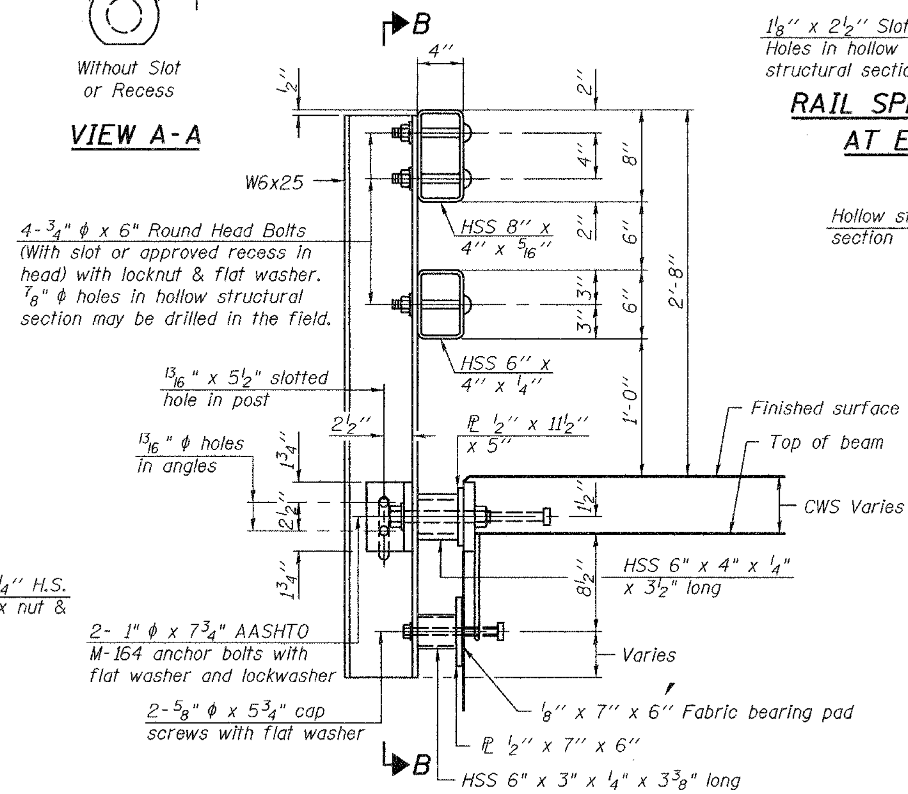
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



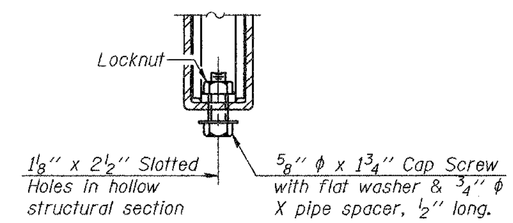
VIEW A-A



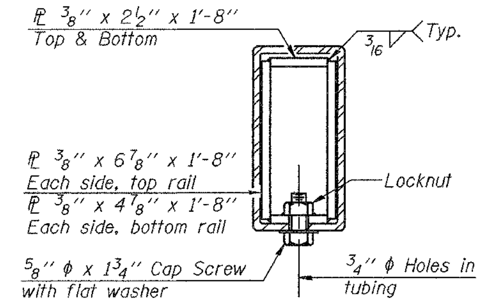
SECTION B-B



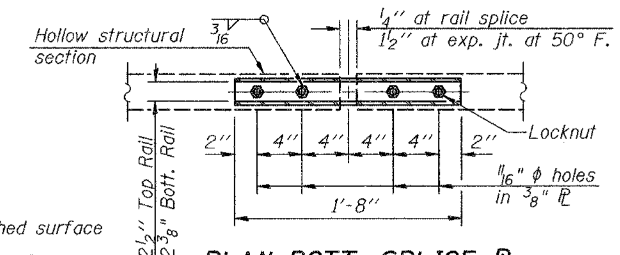
SECTION AT RAIL POST



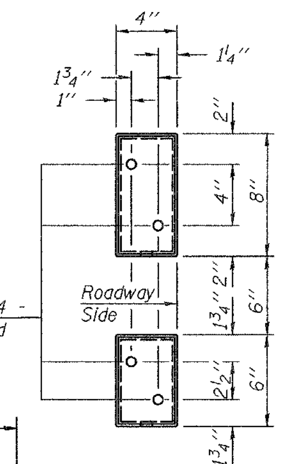
RAIL SPLICE CONNECTION AT EXPANSION JT.



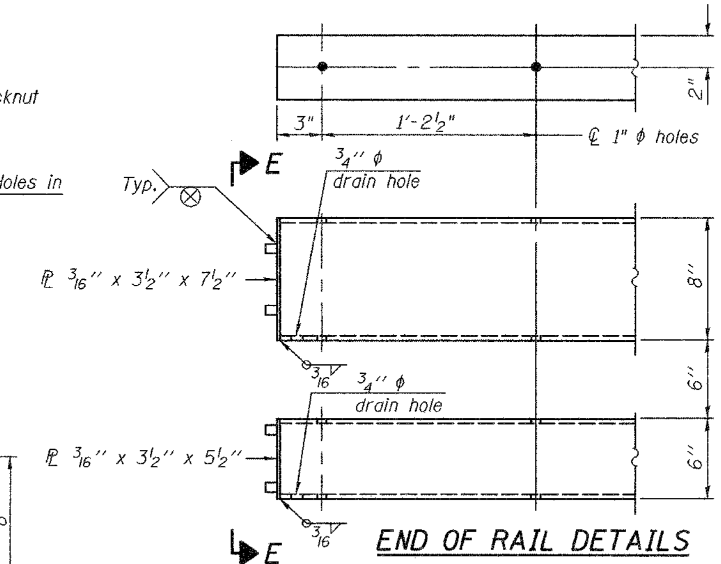
SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE ℄ TYPICAL

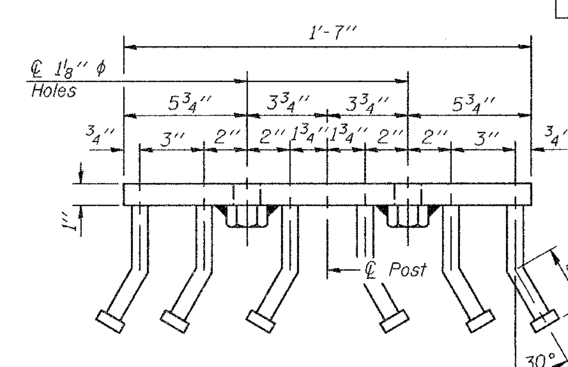


VIEW E-E



END OF RAIL DETAILS

℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



VIEW D-D

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

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

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

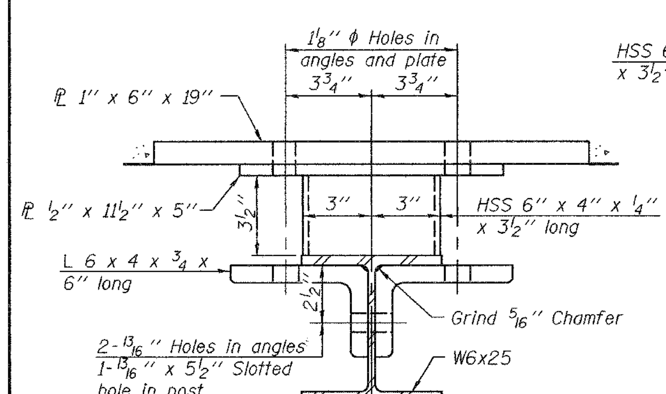
All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

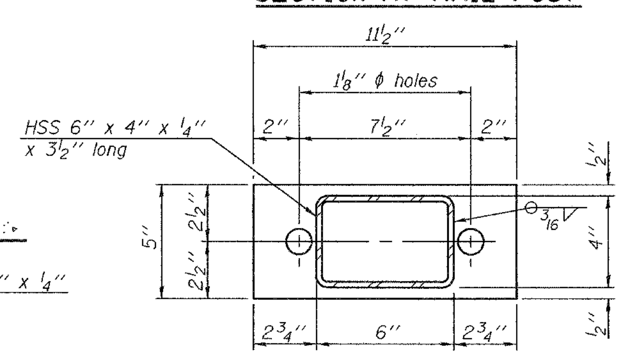
All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

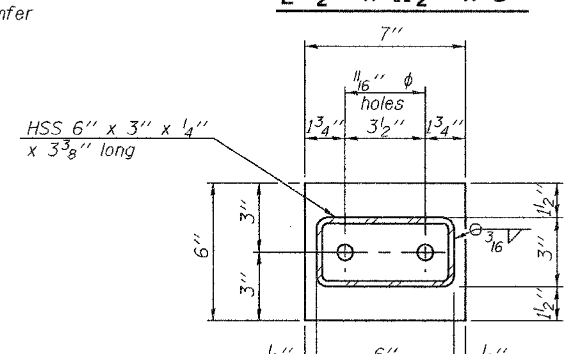
The 3/4" ϕ high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.



SECTION C-C

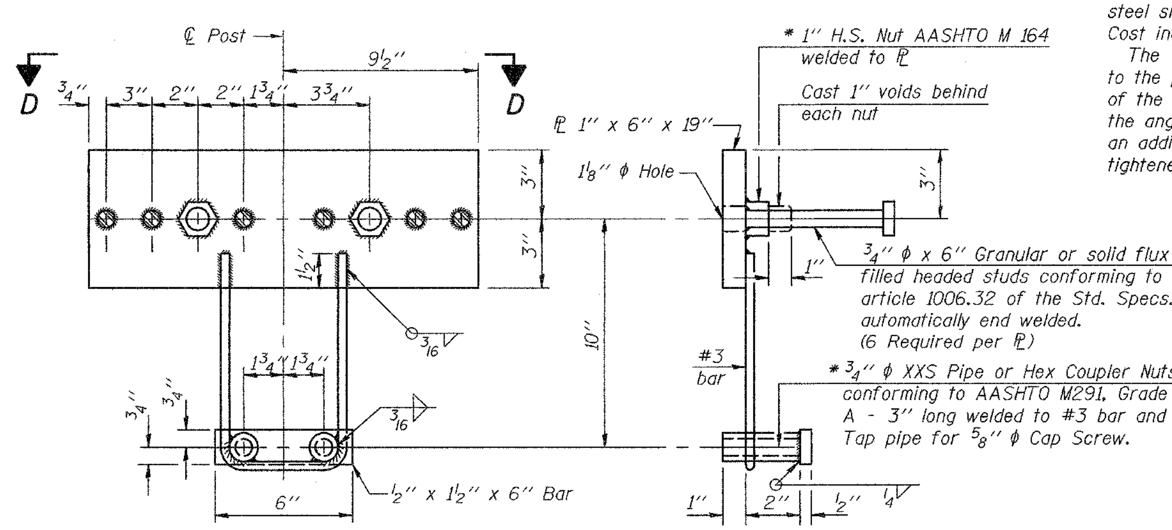


℄ 1/2" x 11 1/2" x 5"



℄ 1/2" x 7" x 6"

(6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)



ANCHOR DEVICE

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	280

TYPE SM
STEEL BRIDGE RAIL
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ESCA CONSULTANTS, INC.

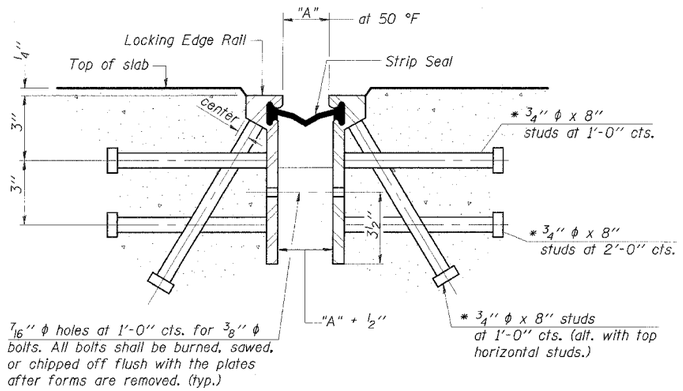
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	20
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 7 OF 15

CONTRACT NO. 66604

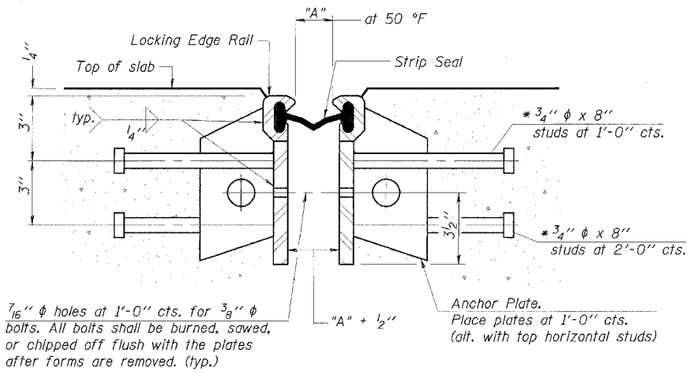
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"

SECTION THRU ROLLED RAIL EXP. JOINT

(188 Studs Required at Each Joint)



SECTION THRU WELDED RAIL AT EACH EXPANSION JOINT

(114 Studs Required at Each Joint)
(74 Anchor Plates Required at Each Joint)

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

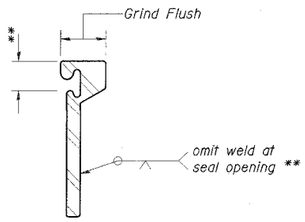
GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

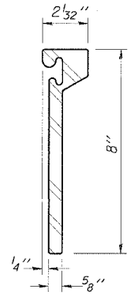
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

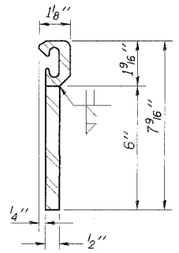


LOCKING EDGE RAIL SPLICE

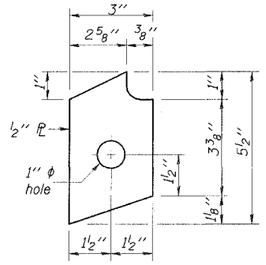
The inside of the locking edge rail groove shall be free of weld residue.



ROLLED (EXTRUDED) RAIL



WELDED RAIL



ANCHOR ℄
(for welded rail)

LOCKING EDGE RAILS

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

STRIP SEAL EXPANSION JOINT
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

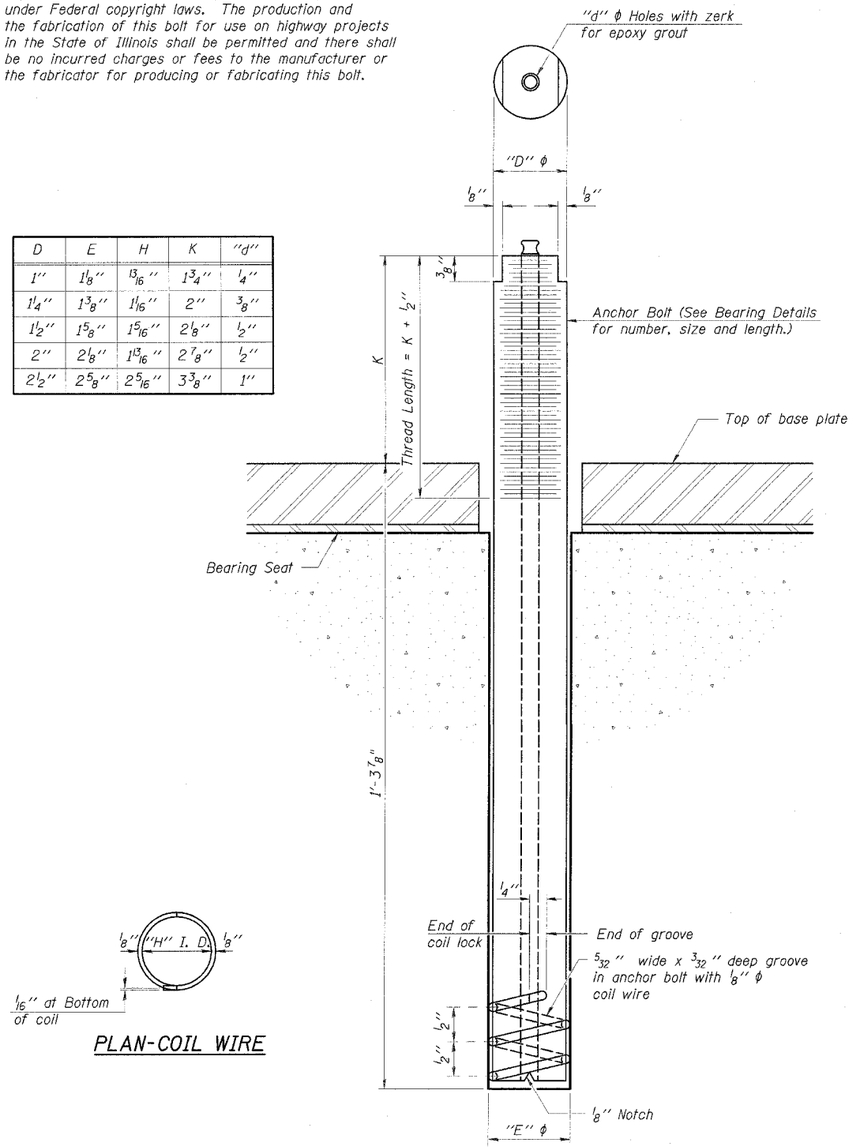
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	21
STA		TO STA		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 8 OF 15

CONTRACT NO. 66604

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

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 A 519, Grade 1026, CW 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 C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. 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.
2. 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 according to 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 of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A-307 (Side Retainers)

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to 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 Precast Prestressed Concrete Deck Beams.

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

ABB-1 10-22-04

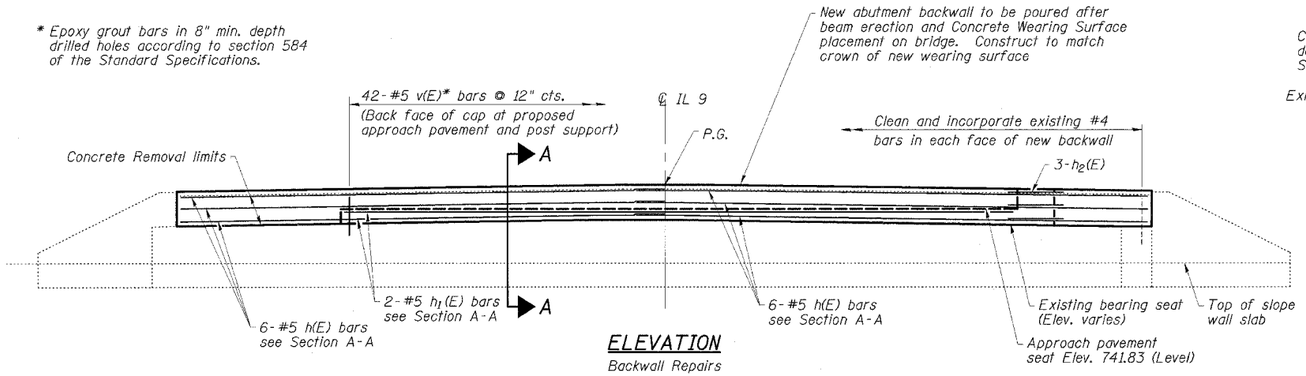
ANCHOR BOLT DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	22
STA		TO STA		
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT-		

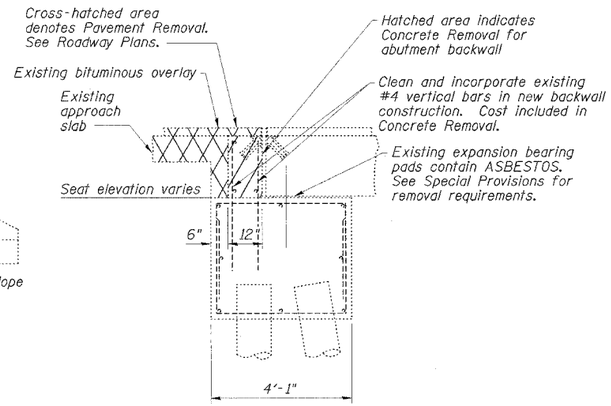
DWG. NO. 9 OF 15

CONTRACT NO. 66604

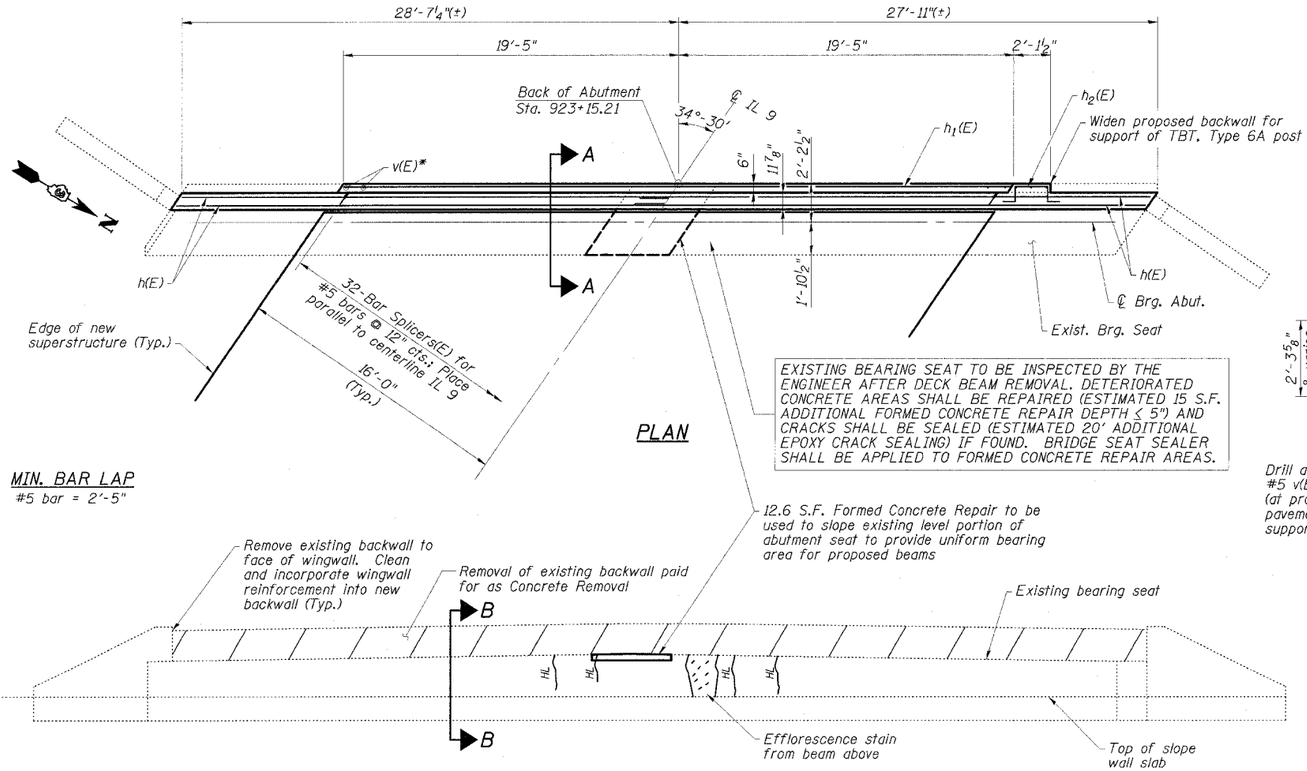
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
Backwall Repairs



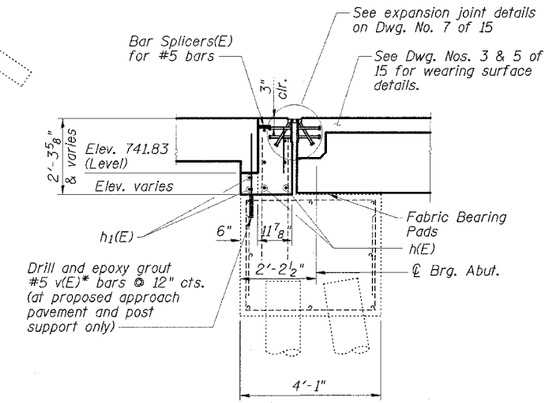
SECTION B-B EXISTING



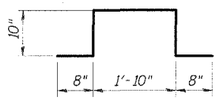
PLAN

MIN. BAR LAP
#5 bar = 2'-5"

ELEVATION
Cap and Wingwall Repairs



SECTION A-A PROPOSED



BAR h2(E)

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	12	#5	29'-3"	——
h1(E)	2	#5	38'-6"	——
h2(E)	3	#5	4'-10"	⌐¬
v (E)	42	#5	2'-6"	——
Concrete Removal			Cu. Yd.	3.8
Concrete Structures			Cu. Yd.	5.6
Reinforcement Bars, Epoxy Coated			Pound	580
Structure Excavation			Cu. Yd.	71
Asbestos Bearing Pad Removal			Each	30
Bridge Seat Sealer			Sq. Ft.	28
Epoxy Crack Sealing			Foot	20
Formed Concrete Repair (Depth Equal to or Less Than 5")			Sq. Ft.	27.6
Bar Splicers			Each	32

REPAIR LEGEND
Inspection Date: 5-24-05

- Rust Stained Area
- W/L — Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width)
- L.C.-6' — Leached Crack (> 1/16" Width)

EPOXY CRACK SEALING

- S.F. — Delaminated Area
- S.F. — Spalled Area (Depth ≤ 5")

FORMED CONC. REPAIR

NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 5-24-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

WEST ABUTMENT
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

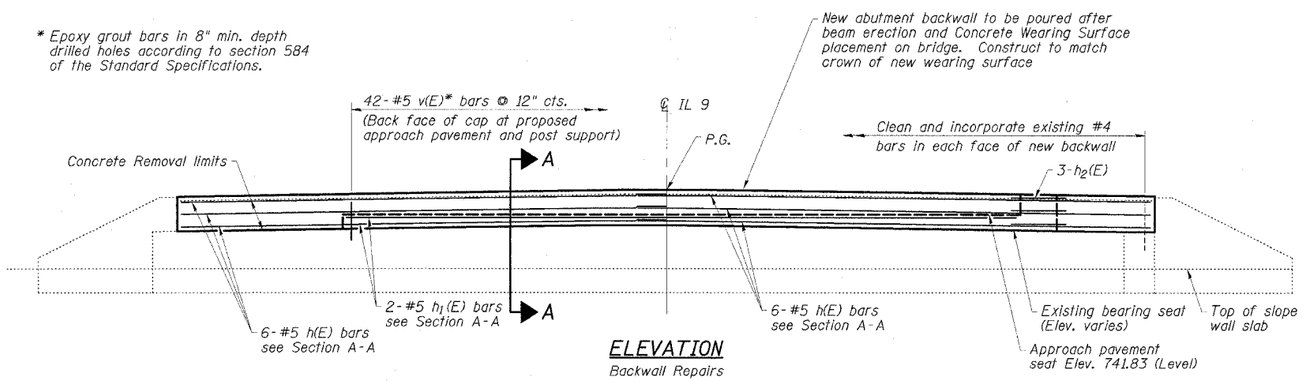
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	23
STA		TO STA		
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT-		

DWG. NO. 10 OF 15

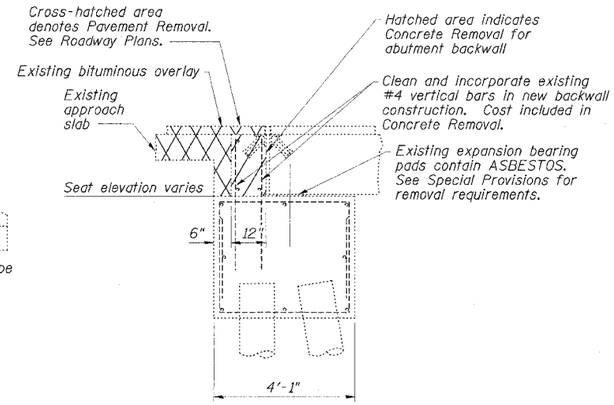
CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

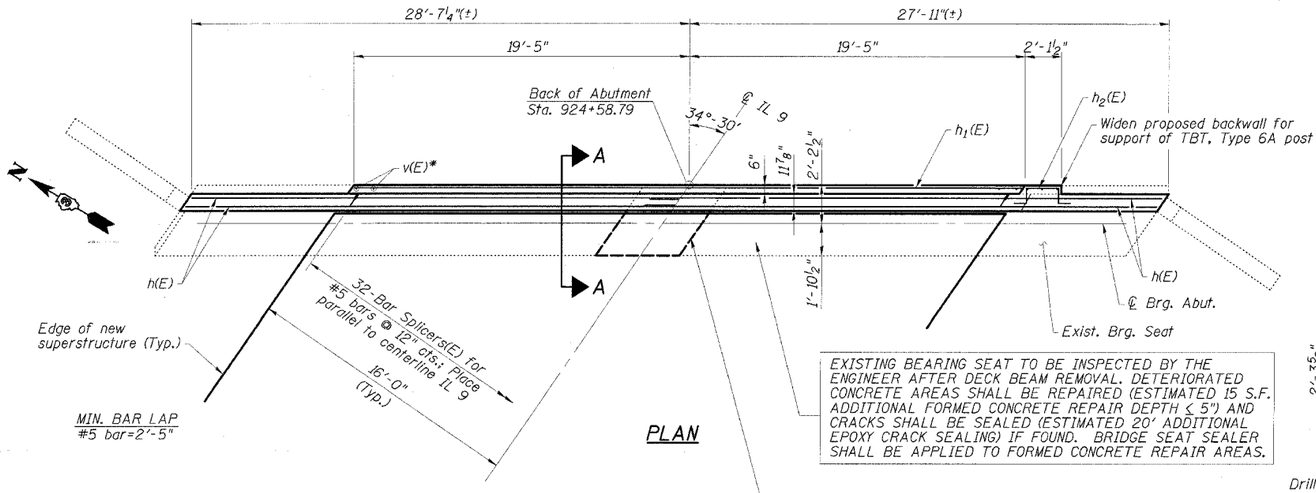
* Epoxy grout bars in 8" min. depth drilled holes according to section 584 of the Standard Specifications.



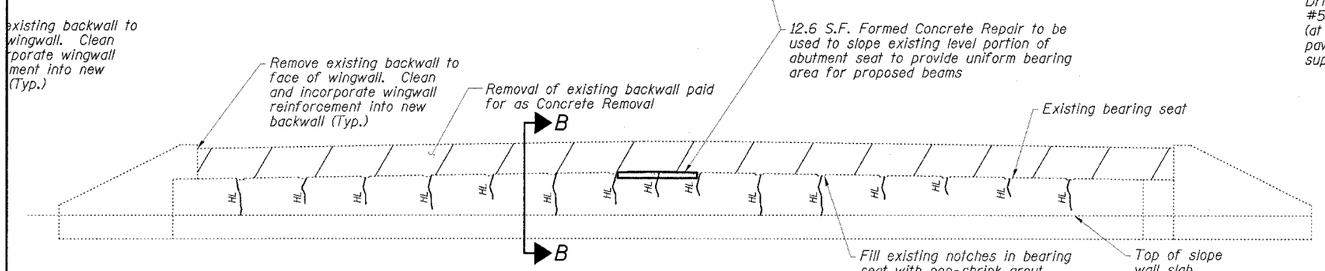
ELEVATION
Backwall Repairs



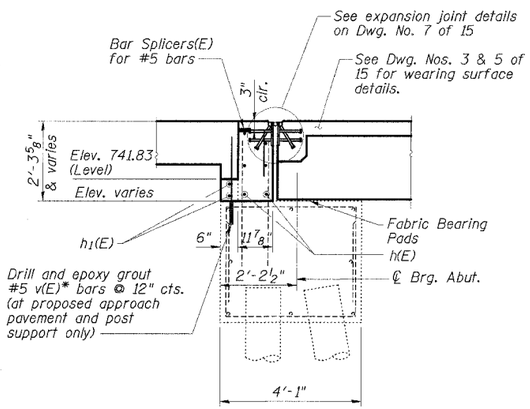
SECTION B-B
EXISTING



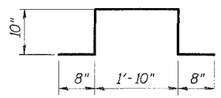
PLAN



ELEVATION
Cap and Wingwall Repairs



SECTION A-A
PROPOSED



BAR h2(E)

EAST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	12	#5	29'-3"	——
h1(E)	2	#5	38'-6"	——
h2(E)	3	#5	4'-10"	⊓
v (E)	42	#5	2'-6"	——
Concrete Removal		Cu. Yd.	3.8	
Concrete Structures		Cu. Yd.	5.6	
Reinforcement Bars, Epoxy Coated		Pound	580	
Structure Excavation		Cu. Yd.	71	
Asbestos Bearing Pad Removal		Each	30	
Bridge Seat Sealer		Sq. Ft.	28	
Epoxy Crack Sealing		Foot	20	
Formed Concrete Repair (Depth Equal to or Less Than 5")		Sq. Ft.	27.6	
Bar Splicers		Each	32	

REPAIR LEGEND
Inspection Date: 5-24-05

- Rust Stained Area
- W/L — Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width)
- L.C.-6' — Leached Crack (> 1/16" Width)

EPOXY CRACK SEALING

- S.F. — Delaminated Area
- S.F. — Spalled Area (Depth ≤ 5")

FORMED CONC. REPAIR

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

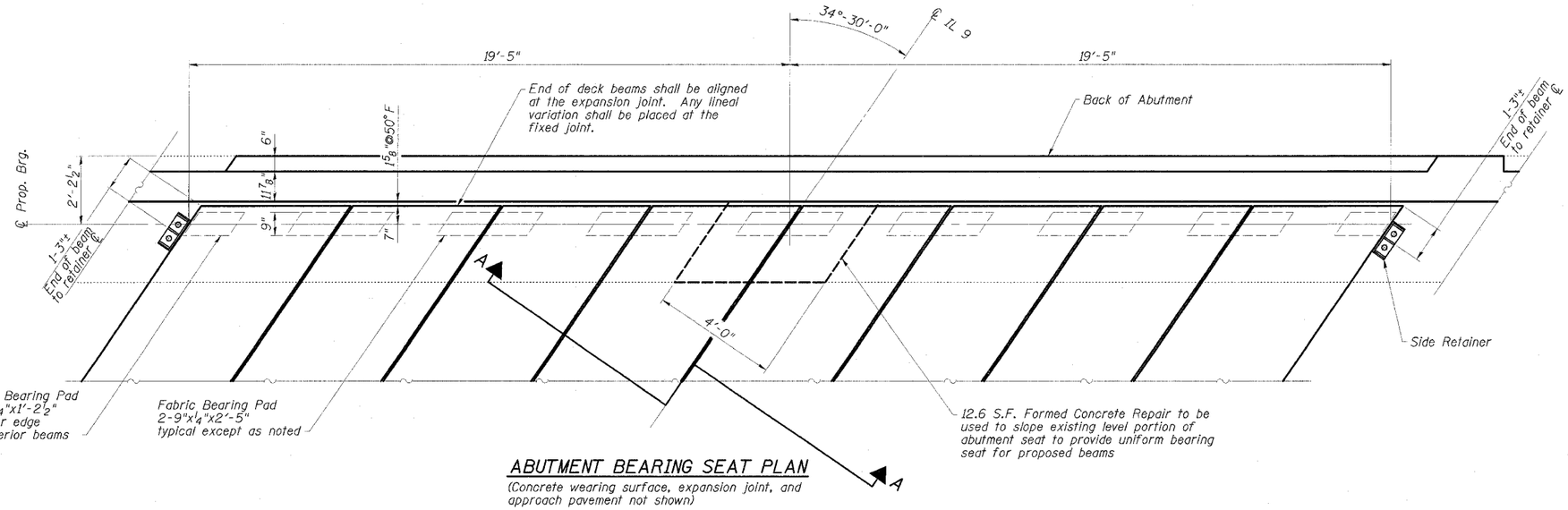
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 5-24-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

EAST ABUTMENT
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	ITBR	FORD	40	24
STA		TO STA		
FED. ROAD DIST. NO. *	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 11 OF 15		

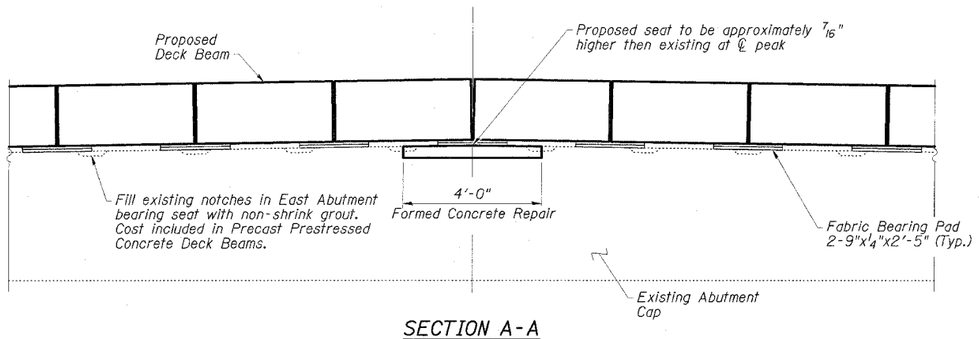
CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



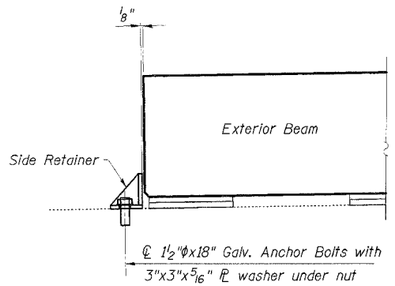
ABUTMENT BEARING SEAT PLAN

(Concrete wearing surface, expansion joint, and approach pavement not shown)



SECTION A-A

(Concrete wearing surface not shown)

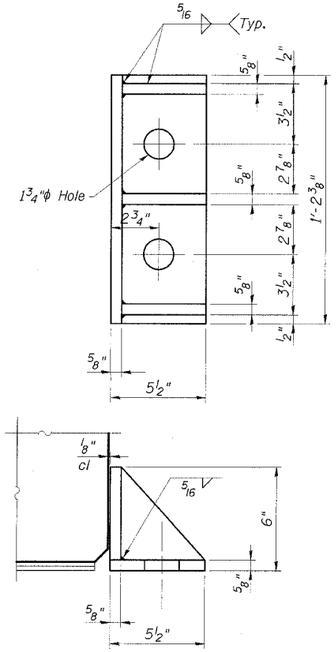


EXTERIOR BEAM RETAINER DETAILS

(4 Required)

Cost of Retainer Angles, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams.

Fill 1/8" gap with shim ℄ to provide temporary lateral support until shear keys have been grouted and concrete wearing surface has been placed.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

ABUTMENT DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

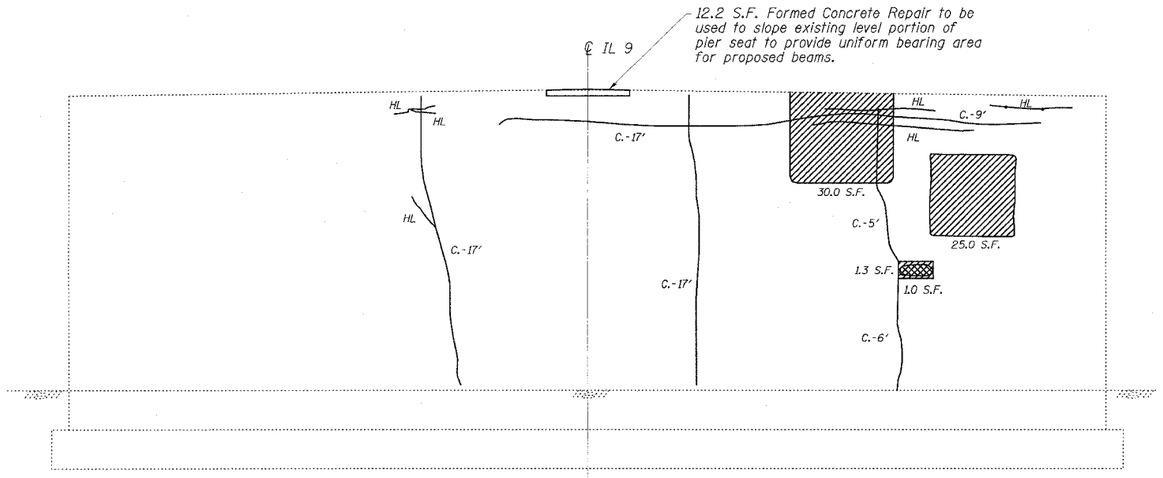
ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

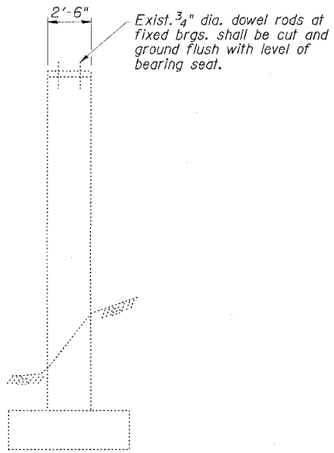
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	25
STA		TO STA		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT-		
		DWG. NO. 12 OF 15		

CONTRACT NO. 66604



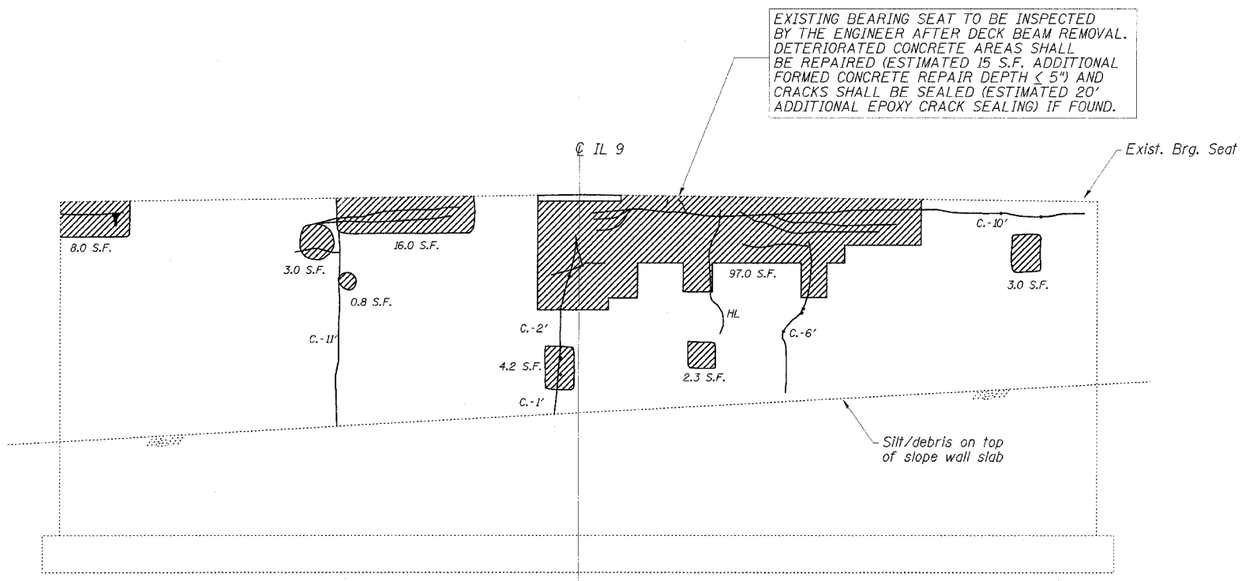
EAST ELEVATION



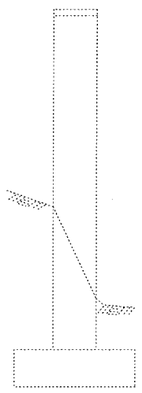
NORTH END

PIER 1
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	121
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	218.8



WEST ELEVATION



SOUTH END

REPAIR LEGEND
Inspection Date: 5-24-05

- Rust Stained Area
- W/L — Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width) — EPOXY CRACK SEALING
- L.C.-6' — Leached Crack (> 1/16" Width) — EPOXY CRACK SEALING
- S.F. — Delaminated Area — FORMED CONC. REPAIR
- S.F. — Spalled Area (Depth ≤ 5") — FORMED CONC. REPAIR

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 5-24-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

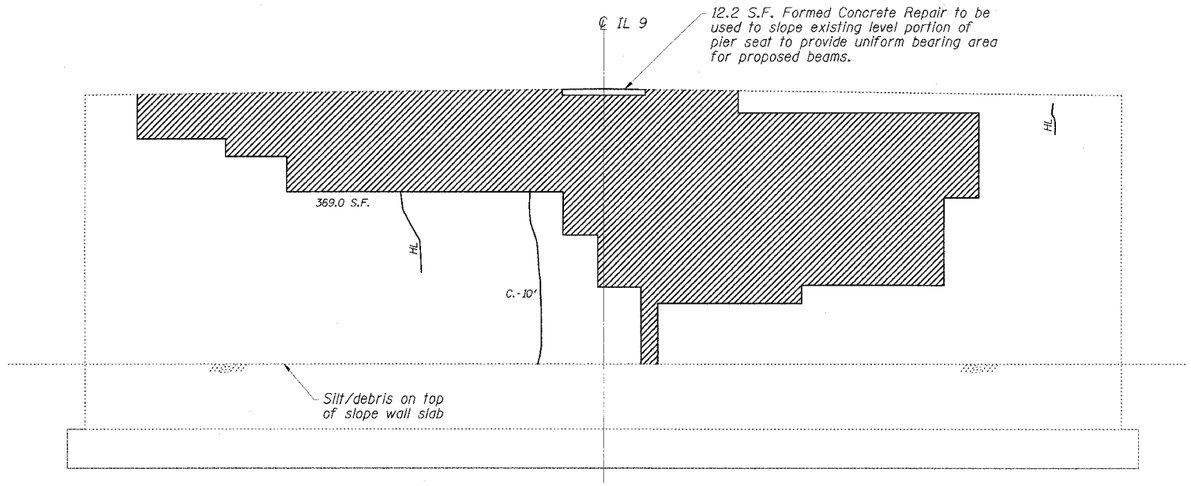
PIER 1
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	26
STA		TO STA		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

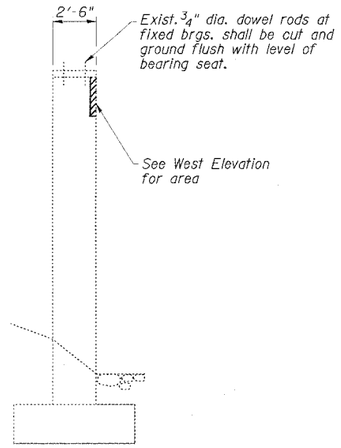
DWG. NO. 13 OF 15

CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



EAST ELEVATION

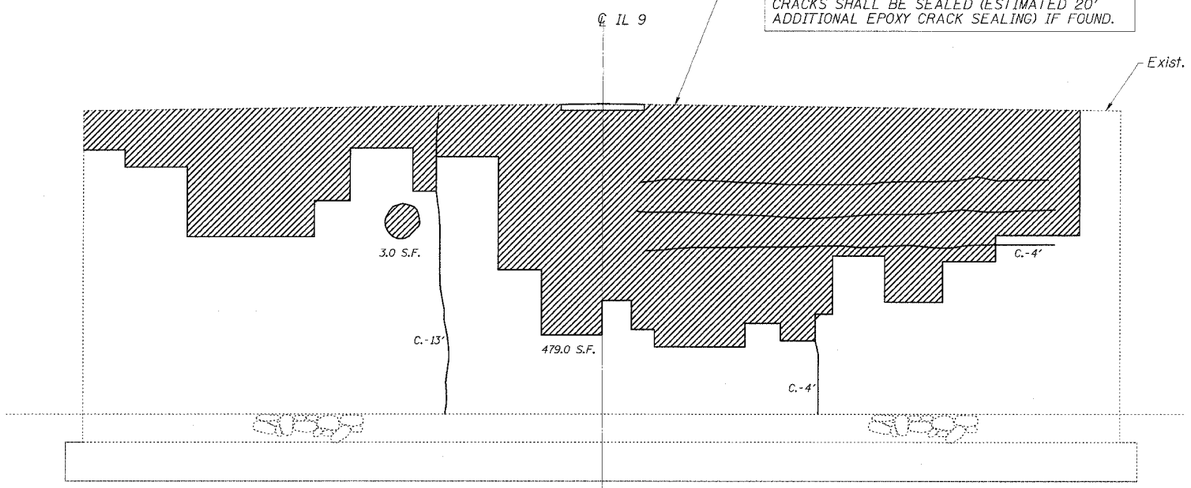


NORTH END

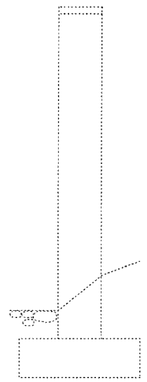
PIER 2
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	51
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	878.2

EXISTING BEARING SEAT TO BE INSPECTED BY THE ENGINEER AFTER DECK BEAM REMOVAL. DETERIORATED CONCRETE AREAS SHALL BE REPAIRED (ESTIMATED 15 S.F. ADDITIONAL FORMED CONCRETE REPAIR DEPTH ≤ 5") AND CRACKS SHALL BE SEALED (ESTIMATED 20' ADDITIONAL EPOXY CRACK SEALING) IF FOUND.



WEST ELEVATION



SOUTH END

REPAIR LEGEND
Inspection Date: 5-24-05

- Rust Stained Area
- W/L — Moisture Stained or Leached Area
- HL — Hairline Crack - Not to be Sealed
- C.-6' — Crack (> 1/16" Width)
- L.C.-6' — Leached Crack (> 1/16" Width)

EPOXY CRACK SEALING

- S.F. — Delaminated Area
- S.F. — Spalled Area (Depth ≤ 5")

FORMED CONC. REPAIR

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 5-24-05 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

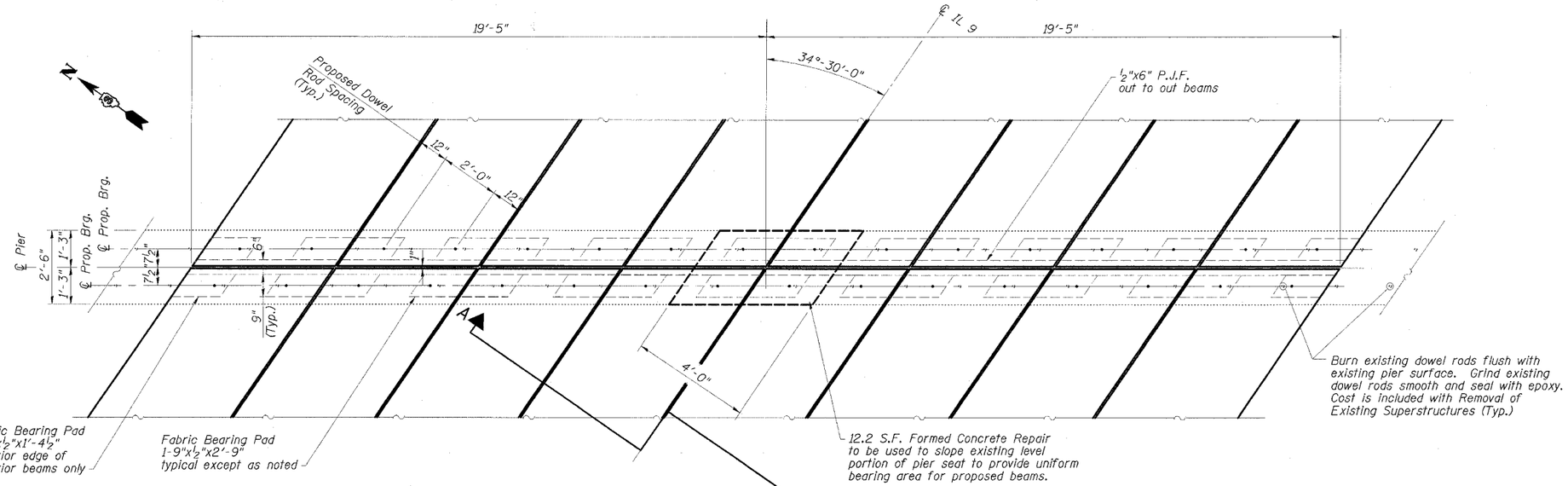
PIER 2
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	ITBR	FORD	40	27
STA		TO STA		
FED. ROAD DIST. NO. *		ILLINOIS	FED. AID PROJECT-	

DWG. NO. 14 OF 15

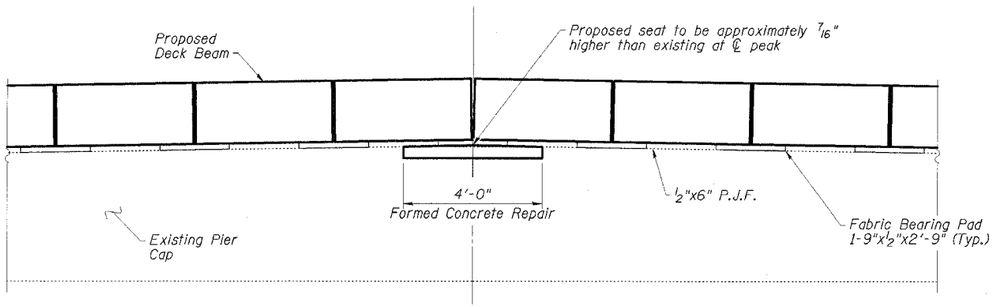
CONTRACT NO. 66604

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER BEARING SEAT PLAN

(Concrete wearing surface not shown)



SECTION A-A

(Concrete wearing surface and dowel rods not shown)

ESCA CONSULTANTS, INC.		
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

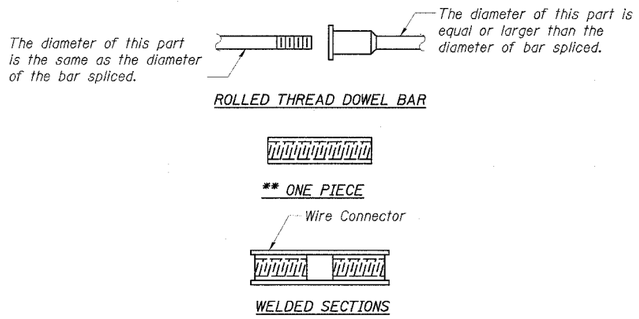
PIER DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697 - SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	28
STA		TO STA		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

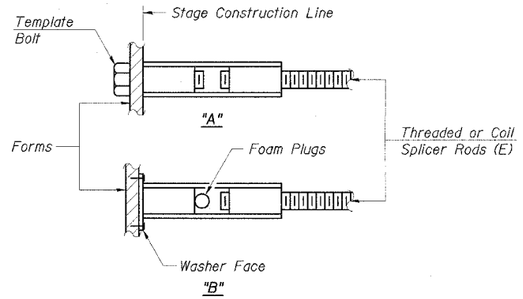
DWG. NO. 15 OF 15

CONTRACT NO. 66604



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

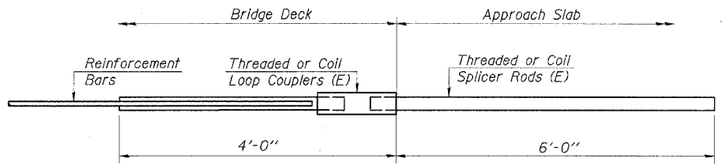
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

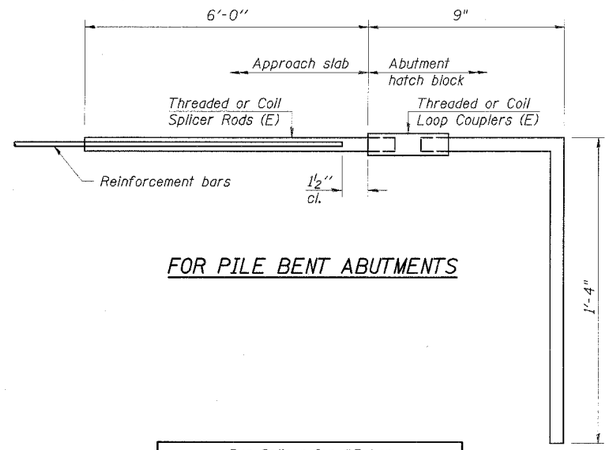
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



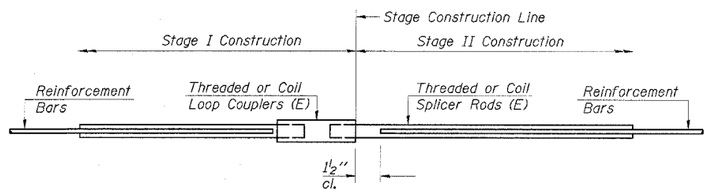
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 64



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
IL 9 OVER BIG FOUR DITCH
FAP ROUTE 697-SECTION 17BR
FORD COUNTY
STATION 923+87.00
STRUCTURE NO. 027-0068

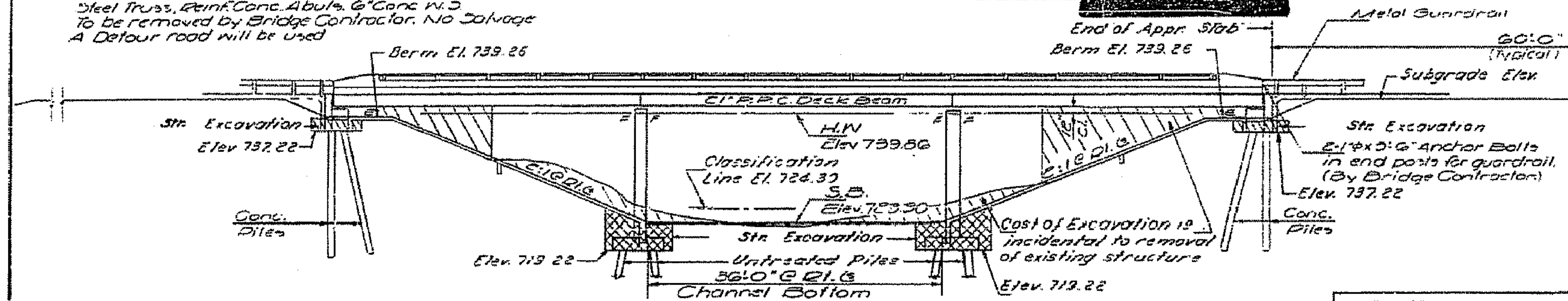
ESCA CONSULTANTS, INC.

DESIGNED BY:	ELH	5/05
DRAWN BY:	CJG	5/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

BSD-1 10-22-04

B.M. #201 ◻ Top N.E. Wingwall
15' Lt. Sta. 924+17 Elev 742.50
Existing Structure - Built 1923 as SBI Rte 9
Secs 17B & 17C Sta. 227+00 80' Long
Steel Truss, Reinf. Conc. Abuts. 6" Conc. W.S.
To be removed by Bridge Contractor. No Salvage
A Detour road will be used

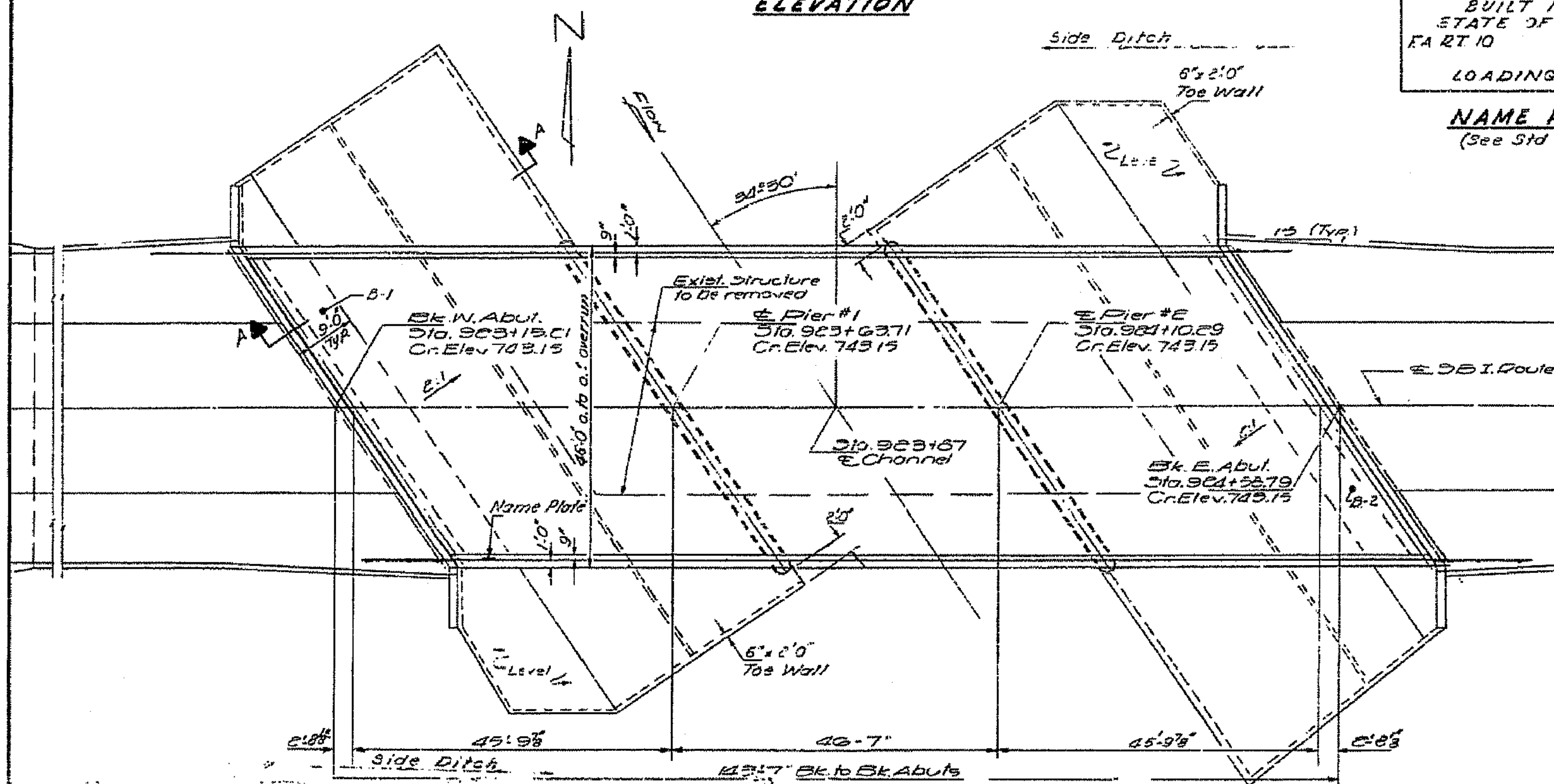
STATE OF ILLINOIS



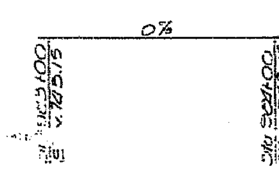
ELEVATION

STATION 923+87.00
BUILT 197 BY
STATE OF ILLINOIS
FA RT 10 SEC. 17BR
LOADING HS 20

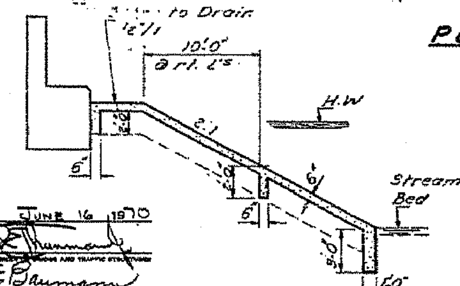
NAME PLATE (See Std 2113)



PLAN



PROPOSED PROFILE S.B.I. RT. 9 (Top of Resurfacing)



SEC. A-A

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Slope wall shall be reinforced with welded wire fabric 6" x 6 mesh, weighing 58 Lb. per 100 sq. ft.

The Contractor shall drive one concrete test pile at the West abutment and one timber test pile at Pier 2, both in a permanent location as directed by the Engineer before ordering the remainder of piles.

Class A Excavation for structures includes excavation for slope wall.

An alternate strand pattern using Extra High Strength Prestressing strand (270 K.S.I.) is permitted.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Protective Coat shall not be applied to surfaces to which Coal Tar Interlayer Protective Coat is applied.

The Concrete Curb, Parapet & End Post shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of handrail concrete.

Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engr.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bit. Conc. Surface Course Class I	Ton	85		85
Removal of Existing Structure	Ea.			1
Structure Excavation	Cu. Yds.		310	310
Protective Coat	Sq. Yds.	105		105
Class A Concrete	Cu. Yds.		236.4	236.4
Class X Concrete	Cu. Yds.	39.4	67.5	107.5
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	5415		5415
Aluminum Railing	Lin. Ft.	258		258
Reinforcement Bars	Lbs.	5780	19170	24950
Untreated Piles (Up to 30')	Lin. Ft.		1420	1420
Test Piles (Timber)	Ea.		1	1
Concrete Piles	Lin. Ft.		[illegible]	[illegible]
Test Piles (Concrete)	Ea.		1	1
Name Plates	Ea.	1		1
Slope Wall (5")	Sq. Yds.			[illegible]
*Bridge Seat Sealer	L.S.			1
Coal Tar Interlayer Protective Coat	Sq. Yds.	670		670

*At abutments only

WATERWAY INFORMATION

Drainage Area -------- 54000 Acres
Character -- level, rolling, wooded, cultivated
Present Opening -------- 776 Sq. Ft.
Required Opening - (30 Yr. Flood) 1060 Sq. Ft.
Proposed Opening -------- 1060 Sq. Ft.
Q(30) = 6500 c.f.s.
Created Head 0.1 ft.

LOADING HS20-44

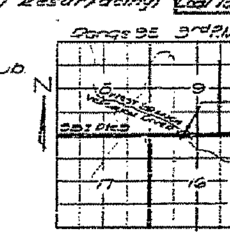
DESIGN STRESSES

Field Units

f'_c = 1400 psi -- Curb, Parapet, Sub.
f_s = 20,000 psi -- Reinf.
f_s = 20,000 psi -- Struct.
v_c = 75 psi -- Ftgs.
n = 10

PREC. PRESTR. UNITS

f'_c = 5000 psi
f'_{ci} = 4000 psi
f'_s = 248,000 psi -- Strands
f_{si} = 175,600 psi -- Strands
Future W.S. 25#/□'
Design Specifications
1969 AASHO as applicable



LOCATION SKETCH

DESIGNED	[signature]
CHECKED	Ashok Jenvega
DRAWN	JK
GM CHECKED	Ashok Jenvega

June 16 1970
EXAMINED [signature]
PASSED W. E. Baumann
APPROVED [signature]

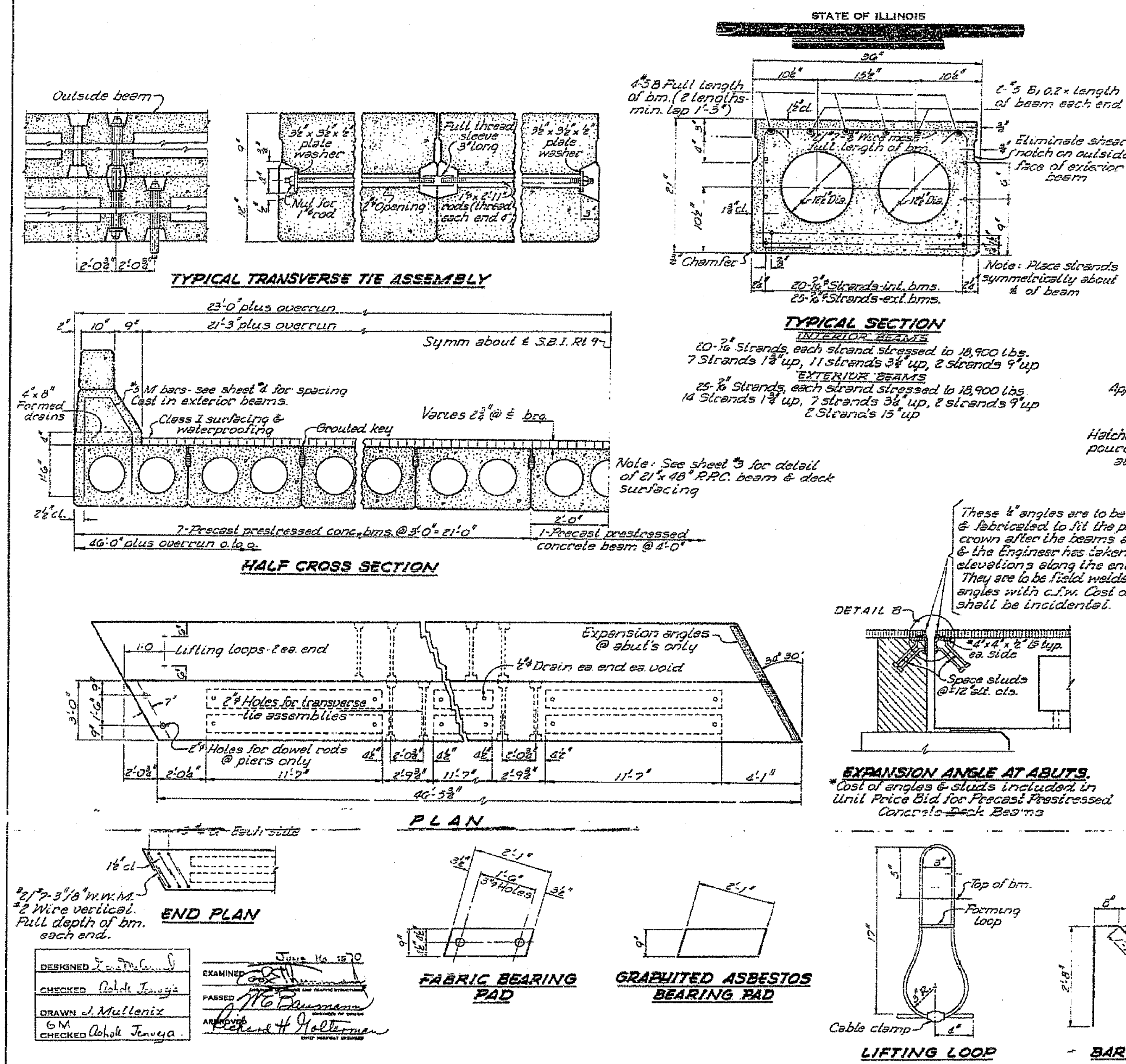
GENERAL PLAN & ELEVATION

F.A. RT. 10 (S.B.I. RT. 9) OVER WEST BRANCH VERMILION RIVER
F.A. RT. 10 SEC. 17BR
FORD COUNTY
STA. 923+87.00

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	30
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS



GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7 wire strand.

The nominal diameter shall be 7/16" & the nominal cross-sectional area shall be 0.109 sq. inches.

Lifting loops shall be ½" diameter 6 x 19 class wire rope with fiber core & shall have a minimum ultimate tensile strength of 23,000 lbs.

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

Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand & P.C. mortar.

After beams have been erected, holes for dowel anchors shall be drilled into the sub-structure & the anchor dowels shall be grouted in place.

Steel for armor angles shall be A.S.T.M. A-36.

After fabrication, the transverse tie assemblies (tie rods, nuts, washers & sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. designation: A-153.

Cost of reinforcement & accessories cast into the beam, bearing pads, armor angles & grouting longitudinal shear keys is included in the Unit Price Bid for "Precast Prestressed Concrete Deck Beams."

Dowel rods shall be A.S.T.M. A-306, or A.S.T.M. A-15.

Transverse tie rods shall be A.S.T.M. A-306, grade 70 or 80.

21" x 36" P.P.C. BM.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
S	336	#5	23'-9"	—
S1	156	#4	3'-6"	—
M	272	#3	5'-5"	⊓
U	304	#4	6'-0"	⊏
Precast Prestressed Conc. Deck Beams (21")		Sq. Ft.	3,857	

DESIGNED	
CHECKED	Ashok Jaswya
DRAWN	J. Mullenix
GM CHECKED	Ashok Jaswya

EXAMINED June 16 1970

PASSED

APPROVED

SUPERSTRUCTURE & 21" x 36" P.P.C. BEAM DETAILS

F.A.RT. 10 (S.B.I. 27-9) SEC. 17BR

FORD COUNTY

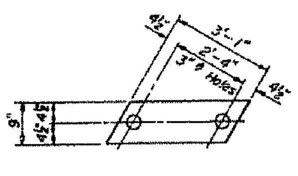
STATION 923 + 87.00

CONTRACT NO. 66604

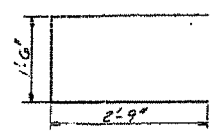
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
[redacted]

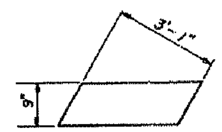
SHEET NO. 3
9 SHEETS



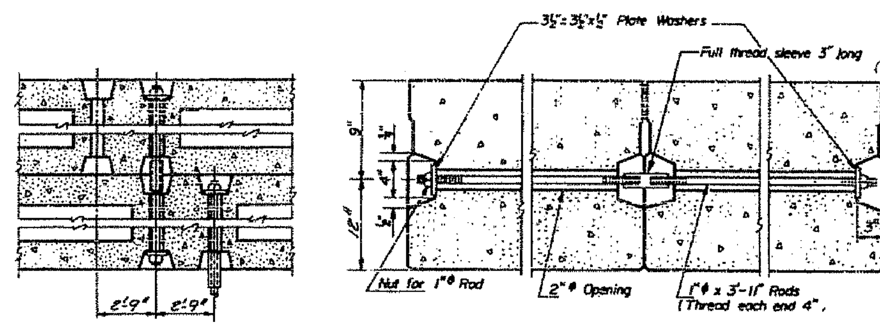
FABRIC BEARING PAD



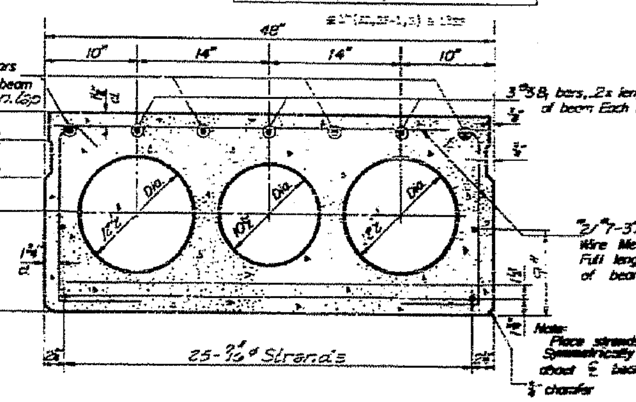
U_1 BAR



GRAPHITED ASBESTOS BEARING PAD

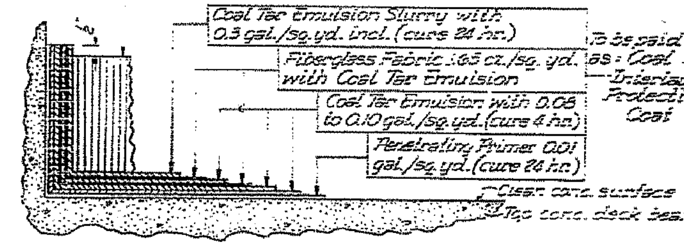


TYPICAL TRANSVERSE TIE ASSEMBLY

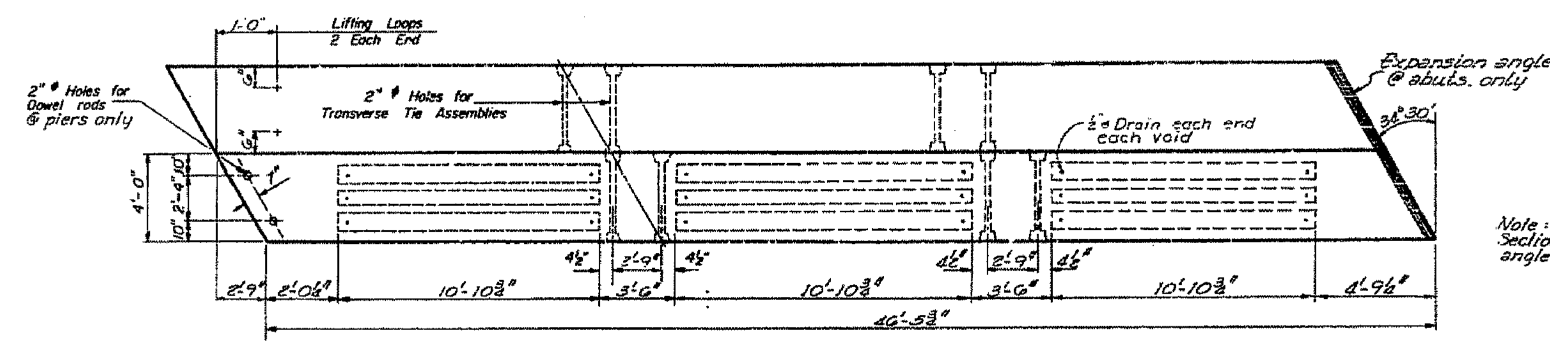


TYPICAL SECTION

25-7/16"Φ Strands, Each Strand Stressed to 18,900 lbs.
10 Strands 1½" up 13 Strands 3½" up 2 Strands 9" up

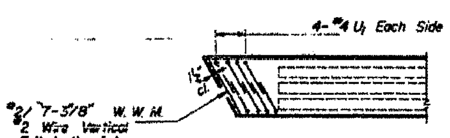


DECK SURFACING

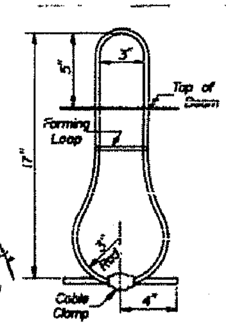


P L A N

Note: See sheet #2 for Half Cross Section, Section @ Abuts & Piers & Expansion angle detail.



END PLAN



LIFTING LOOP DETAIL

GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7 wire strand.

The nominal diameter shall be 7/16" & the nominal cross-sectional area shall be 0.109 sq. inches.

Lifting loops shall be ⅜" diameter, 6 x 19 class wire rope with fiber core & shall have a minimum ultimate tensile strength of 33,000 lbs.

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

Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand & P.C. mortar.

After beams have been erected, holes for dowel anchors shall be drilled into the sub-structure & the anchor dowels shall be grouted in place.

Steel for armor angles shall be A.S.T.M. A-36.

After fabrication, the transverse tie assemblies (tie rods, nuts, washers & sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M., designation: A-153.

Cost of reinforcement & accessories cast into the beam, bearing pads, armor angles & grouting longitudinal shear keys is included in the unit Price Bid for "Precast Prestressed Concrete Deck Beams."

Dowel rods shall be A.S.T.M., A-306, or A.S.T.M., A-615.

Transverse tie rods shall be A.S.T.M., A-306, grade 70 or 80.

21" x 48" P.P.C. BMS.
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
B	24	#5	23'-9"	——
B1	18	#5	9'-6"	——
U1	48	#4	7'-0"	⊏
Precast Prestressed Concrete Deck Beams (21")			Sq. Ft.	556

DESIGNED Tom McConnell
CHECKED Ashok K. Jenwya
DRAWN JAMES R. CARNAGI
CHECKED Ashok K. Jenwya
EXAMINED June 16 1970
PASSED
APPROVED Richard H. Golterman

PD-2-R 11-19-65 Rev. 5-20-68

SUPERSTRUCTURE & 21" x 48"
P.P.C. BEAM DETAILS
F.A. RT. 10 (S.B.I. RT. 9) SEC. 17BR
FORD COUNTY
STATION 923 + 87.00

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

CONTRACT NO. 66604

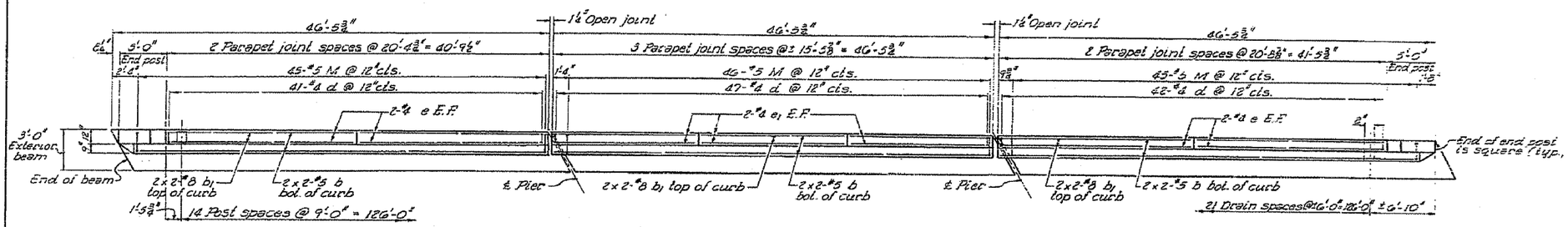
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	32
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Note: Bars indicated thus 2 x 2-#5 e/c. designates 2 lines of bars with 2 lengths per line.
Min bar laps = 24 diameters.

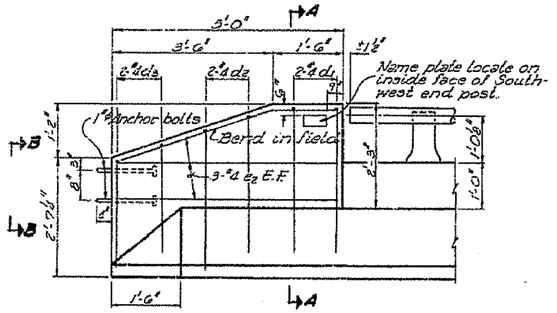
STATE OF ILLINOIS

				SHEET NO. 2
DIST. 10	#	FORD	77	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

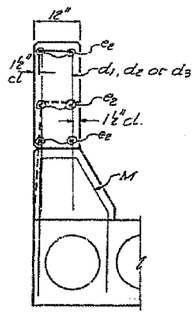
Exhibits



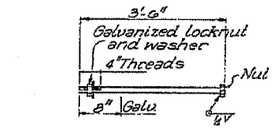
PLAN OF NORTH PARAPET & CURB
South parapet & curb similar by colation



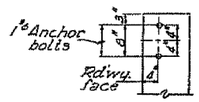
END POST DETAIL



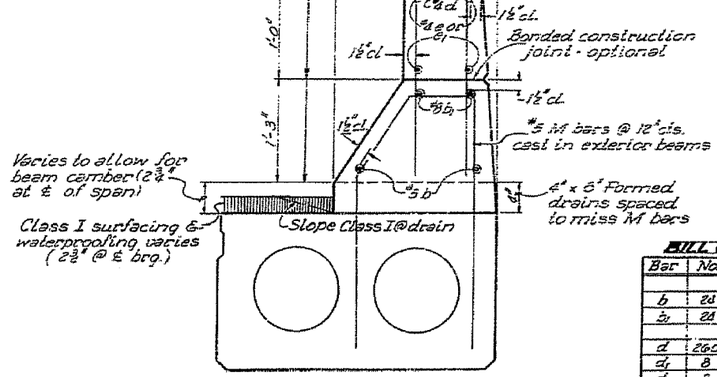
SECTION A-A



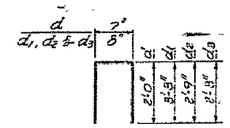
1" ANCHOR BOLT
Cost incidental to bridge structure



VIEW B-B



CURB & PARAPET SECTION
All edges shall have ¾" chamfer



BARS d-d1-d2-d3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b	28	#5	23'-9"	—
b1	28	#8	24'-0"	—
d	280	#4	4'-7"	□
d1	8	#4	7'-2"	□
d2	8	#4	6'-2"	□
d3	8	#4	5'-2"	□
e	32	#4	20'-1"	—
e1	28	#4	15'-3"	—
e2	28	#4	2'-6"	—

Reinforcement Bars	Lbs.	3,730
Class X Concrete	Cu.yds.	39.2
Aluminum Railing	Lin. ft.	258
Name Plates	Each	1

*Locate Name Plate on inside face of Southwest end post, see Std. 2113-1

For detail of Aluminum Railing, see sheet #5

DESIGNED	K. M. [illegible]
CHECKED	Ashok Taneja
DRAWN	J. Mullanix
GM CHECKED	Ashok Taneja

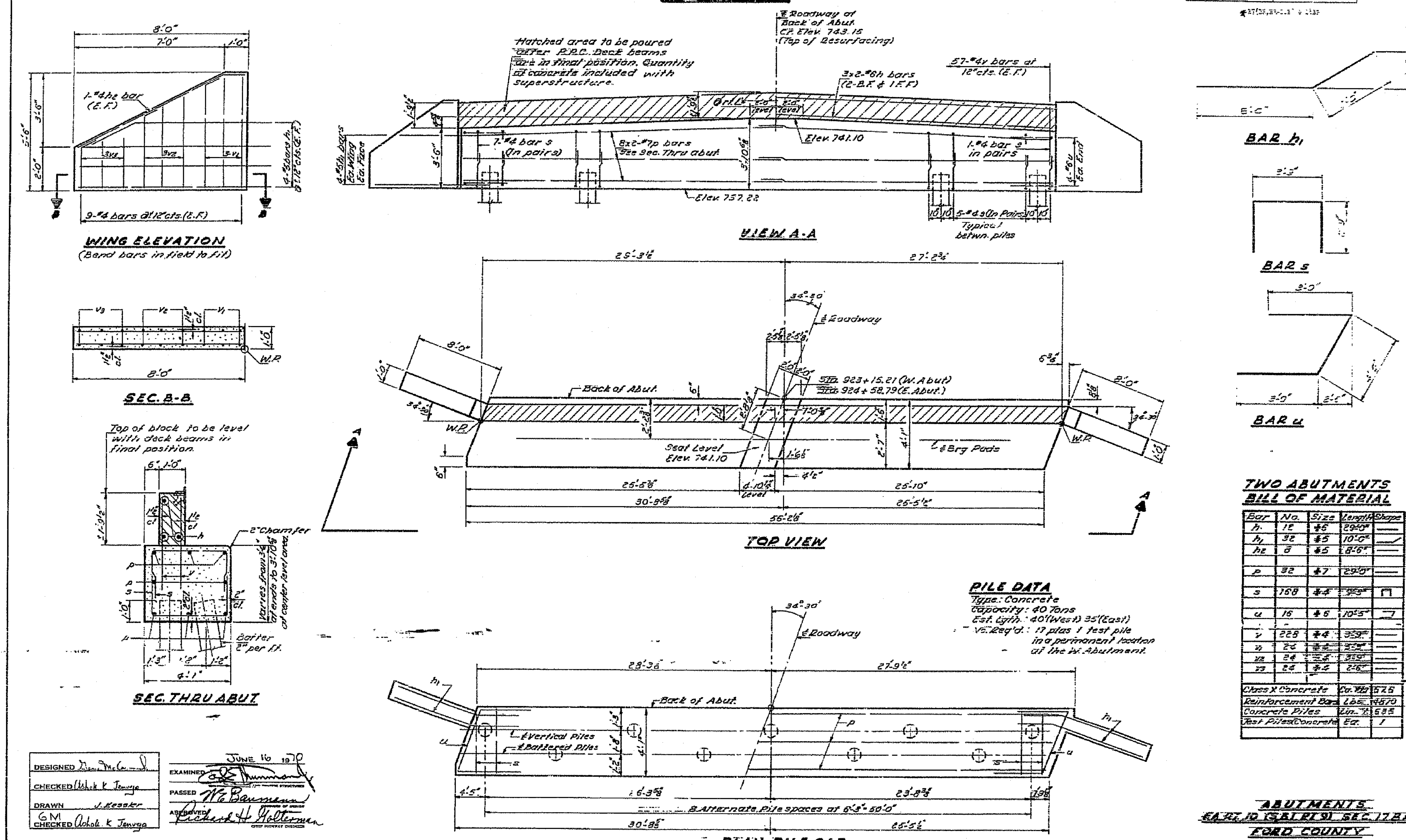
EXAMINED JUNE 16 1970
PASSED W. E. Baumann
APPROVED Edward H. Holtzman

CURB & PARAPET DETAILS
F.A. RT. 10 (SBI RT. 9) SEC. 17BR
FORD COUNTY
STATION 923 + 87.00

CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	33
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS



PILE DATA

Type: Concrete
Capacity: 40 Tons
Est. Lgth.: 40'(West) 35'(East)
No. Req'd.: 17 plus 1 test pile in a permanent location at the W. Abutment.

TWO ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	12	#6	29'0"	—
h_1	32	#5	10'0"	—
h2	8	#5	8'6"	—
p	32	#7	29'0"	—
s	168	#4	[illegible]	⊓
u	16	#6	10'5"	—
v	225	#4	[illegible]	—
v1	24	[illegible]	[illegible]	—
v2	24	[illegible]	[illegible]	—
v3	24	#4	2'6"	—
Class X Concrete		Cu. Yd.	575	
Reinforcement Bars		Lbs.	4870	
Concrete Piles		Lin. Ft.	635	
Test Piles (Concrete)		Ea.	1	

DESIGNED	[signature]
CHECKED	Ashok K. Jenvya
DRAWN	J. Kessler
GM CHECKED	Ashok K. Jenvya

June 16 1970
EXAMINED [signature]
PASSED [signature]
APPROVED Richard H. Golterman

ABUTMENTS
F.A. RT. 10 (S.B.I. RT. 9) SEC. 17 BR
FORD COUNTY
STATION 923 + 87.00

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

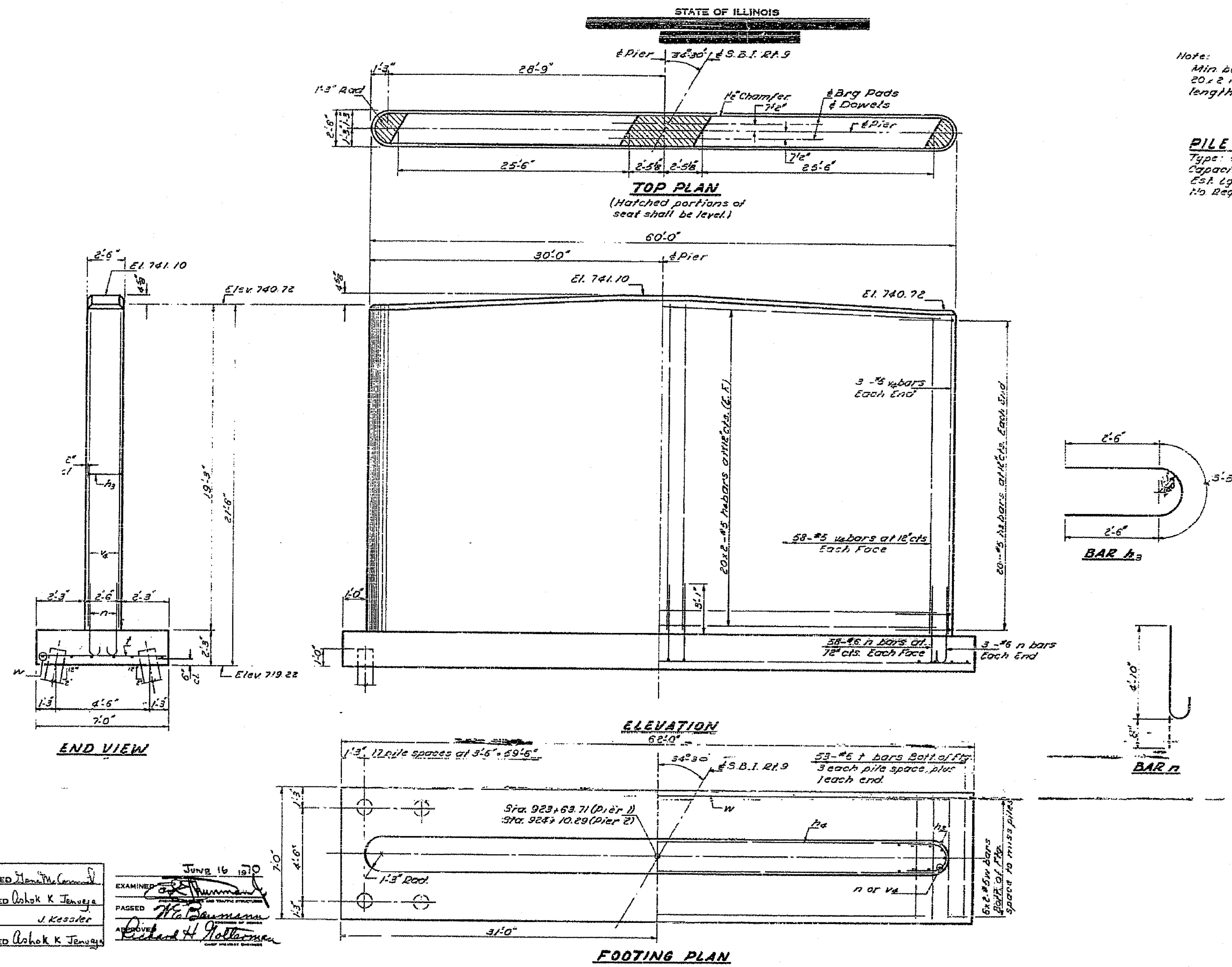
CONTRACT NO. 66604

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
697	17BR	FORD	40	34
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS

10	#	FORD	77	32

SHEET NO 7
3 SHEETS



DESIGNED Gene McConnell
CHECKED Ashok K Jenveja
DRAWN J. Kessler
GM CHECKED Ashok K Jenveja
EXAMINED
June 16 1970
PASSED W. E. Baumann
APPROVED Richard H. Hollerman

Note:
Min. bar lap = 24 dia. Bars indicated thus 20x2 indicate 20 lines of bars with 2 lengths per line

PILE DATA
Type: Untreated
Capacity: 20 Tons
Est. Lgth: 20'
No. Req'd.: 71 plus one test pile in a permanent location at pier 2.

PIERS 1 & 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_3	80	#5	8'-5"	⊏
h_4	160	#5	29'-5"	—
n	244	#5	5'-6"	⊏
t	106	#6	6'-9"	—
v_4	244	#5	19'-0"	—
w	24	#5	3'-6"	—
Class A Concrete			Cu. Yds.	288.4
Reinforcement Bars			Lbs.	14500
Untreated Piles (Lgth 20)			Lin. Ft.	1420
Test Piles (timber)			Ea.	1

PIERS 1 & 2
F.A. RT. 10 (S.A.I. RT. 9) SEC. 17BR
FORD COUNTY
STATION 923 + 87.00

FOR INFORMATION ONLY

EXISTING BRIDGE PLANS

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	35
STA 915+00		TO STA 920+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SCALES:
HORIZ. 1"=10'
VERT. 1"=5'

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

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

℄ FAP RTE 697 (IL 9)

STA 920+00
STA 919+00
STA 918+00
STA 917+00
STA 916+00
STA 915+00

EX ROW
EX FENCE

FAP RTE 697 (IL 9) CROSS SECTIONS
STA 915+00 TO STA 920+00

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	36
STA 921+00		TO STA 922+50		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT-		

SCALES
HORIZ: 1"=10'
VERT: 1"=5'

STA 921+00
STA 921+14.8 PE
STA 921+50
STA 921+61.0 FE
STA 922+00
STA 922+50

EX ROW
TELEPHONE
EX SPBGR (TYP)
PR SPBGR (TY A TYP)
PR TBT TY 1 SRL (FLARED)
15" CMP
PGL 743.35
PGL 743.14
PGL 742.98
PGL 742.93
RIGHT C= 0.00 F= 0.00
LEFT C= 0.00 F= 0.00
RIGHT C= 0.00 F= 0.63
LEFT C= 0.00 F= 0.00
LEFT C= 2.19 F= 6.00
RIGHT C= 2.31 F= 0.07
LEFT C= 2.60 F= 0.00

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

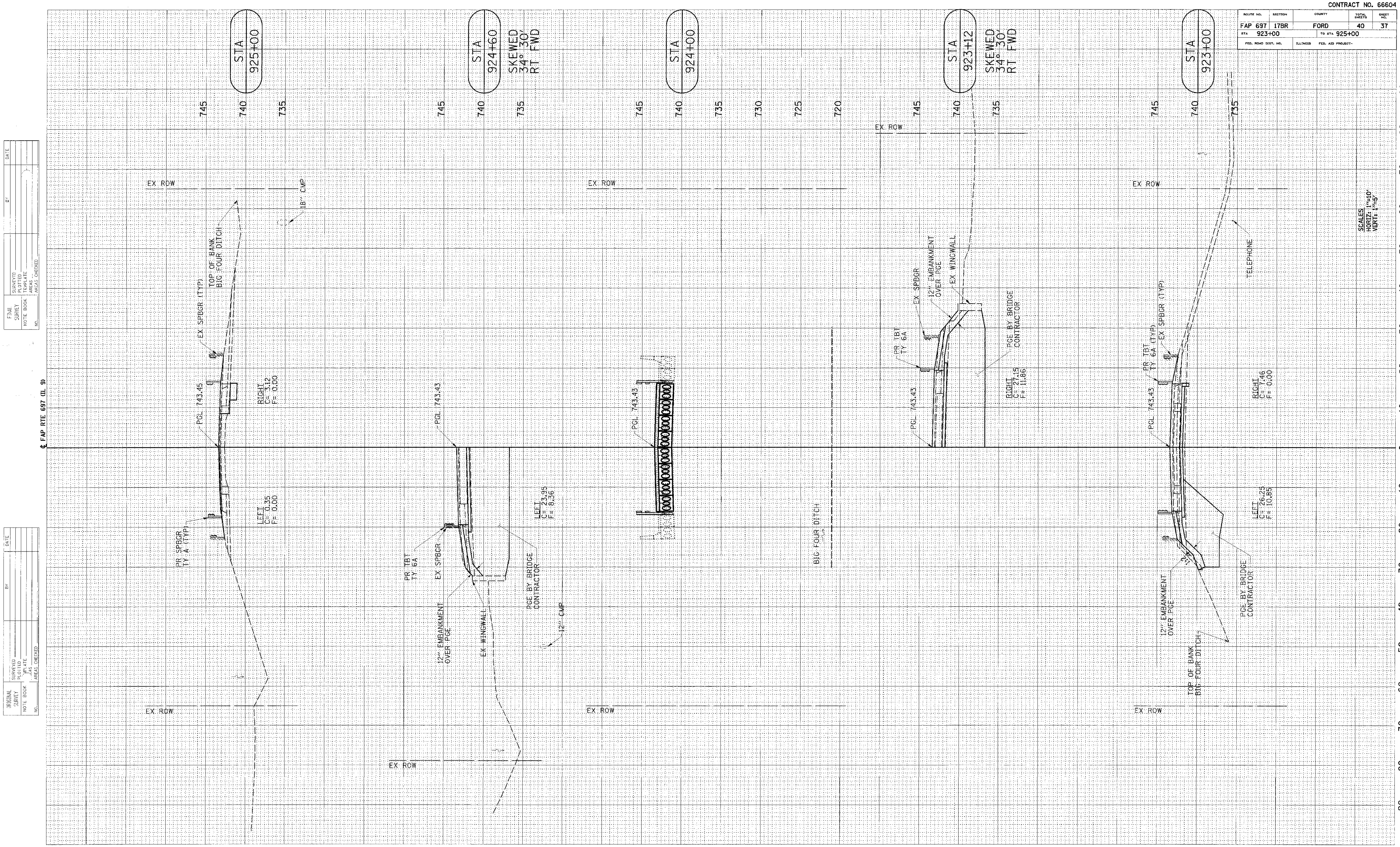
ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPED
AREAS
AREAS CHECKED
BY
DATE

℄ FAP RTE 697 (IL 9)

FAP RTE 697 (IL 9) CROSS SECTIONS
STA 921+00 TO STA 922+50

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	37
STA. 923+00		TO STA. 925+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



STA 925+00
STA 924+60
SKEWED 34° 30' RT FWD
STA 924+00
STA 923+12
SKEWED 34° 30' RT FWD
STA 923+00
EX ROW
18" CMP
12" CMP
TOP OF BANK BIG FOUR DITCH
EX SPBGR (TYP)
PGL 743.45
PGL 743.43
RIGHT C= 3.12 F= 0.00
LEFT C= 0.35 F= 0.00
PR SPBGR TY A (TYP)
PR TBT TY 6A
EX SPBGR
12" EMBANKMENT OVER PGE
EX WINGWALL
PGE BY BRIDGE CONTRACTOR
LEFT C= 23.95 F= 8.56
BIG FOUR DITCH
RIGHT C= 27.15 F= 11.86
RIGHT C= 7.46 F= 0.00
LEFT C= 26.25 F= 10.85
TELEPHONE
SCALES HORIZ: 1"=10' VERT: 1"=5'
℄ FAP RTE 697 (IL 9)

FAP RTE 697 (IL 9) CROSS SECTIONS
STA 923+00 TO STA 925+00

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	38
STA 925+50		TO STA 927+50		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

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

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

℄ FAP RTE 697 (IL 9)

STA 927+50
STA 927+00
STA 926+50
STA 926+00
STA 925+50

EX ROW
18" CMP
RIGHT C= 0.00 F= 0.00
LEFT C= 0.00 F= 0.00
PR TBT TY 1 SPL (FLARED)
EX SPBGR
PR SPBGR TY A

SCALES
HORIZ 1"=10'
VERT. 1"=5'

FAP RTE 697 (IL 9) CROSS SECTIONS
STA 925+50 TO STA 927+50

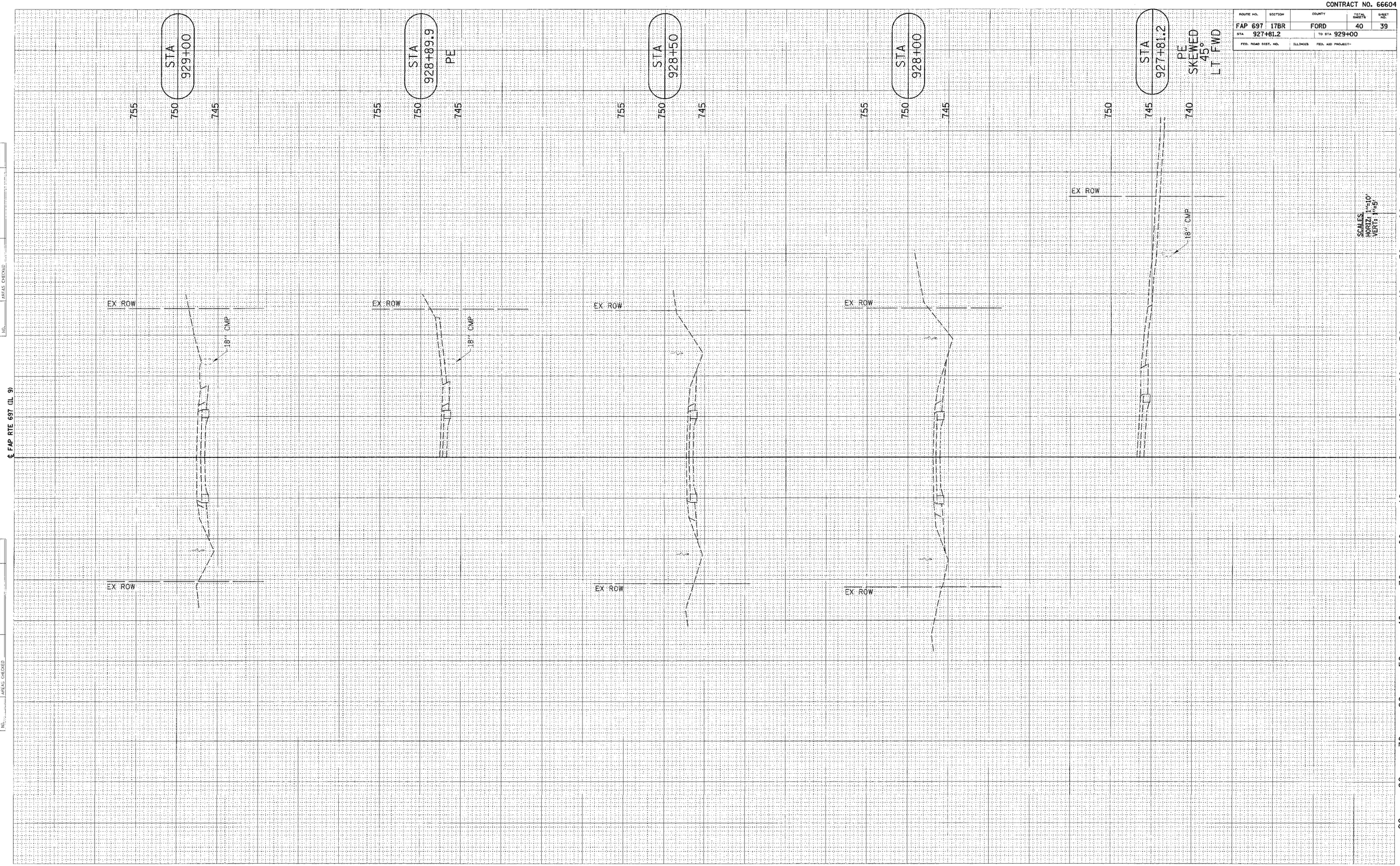
CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	39
STA 927+81.2		TO STA 929+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SCALES
HORIZ 1"=10'
VERT: 1"=5'

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

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



FAP RTE 697 (IL 9) CROSS SECTIONS
STA 927+81.2 TO STA 929+00

CONTRACT NO. 66604

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 697	17BR	FORD	40	40
STA 929+50		TO STA 932+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SCALES
HORIZ. 1"=10'
VERT. 1"=5'

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

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

STA 932+00
STA 931+21.7 PE
STA 931+00
STA 930+00
STA 929+50

℄ FAP RTE 697 (IL 9)

EX ROW

15" CMP

FAP RTE 697 (IL 9) CROSS SECTIONS
STA 929+50 TO STA 932+00