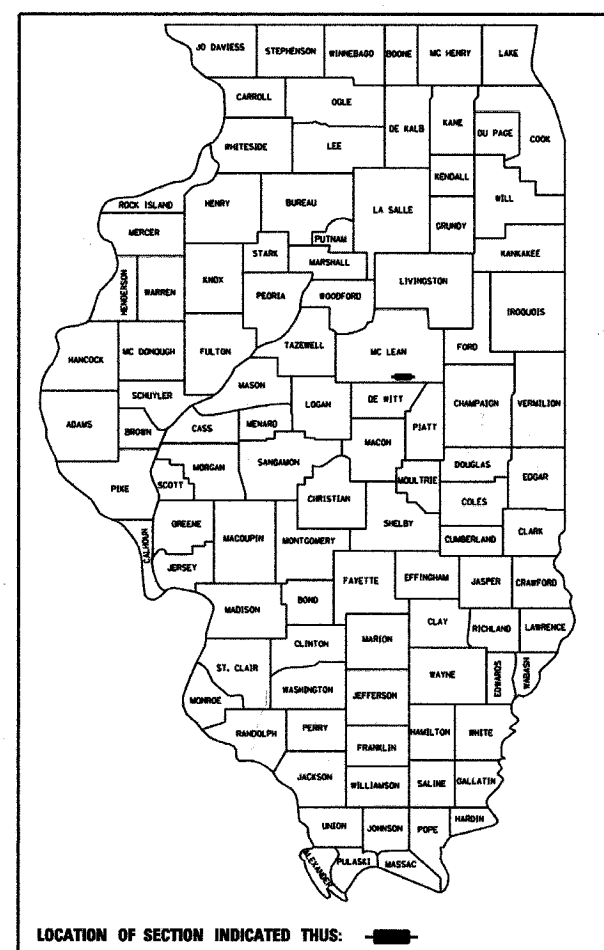


FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	1

P-93-041-02
D-93-053-05



LOCATION OF SECTION INDICATED THIS:

FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL
DESIGN SPEED: 55 mph
POSTED SPEED: 55 mph
ADT: 1550 (2006)
PV: 70.7%
SU: 8.6%
MU: 20.7%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED November 4, 2005
Gregory Monte
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

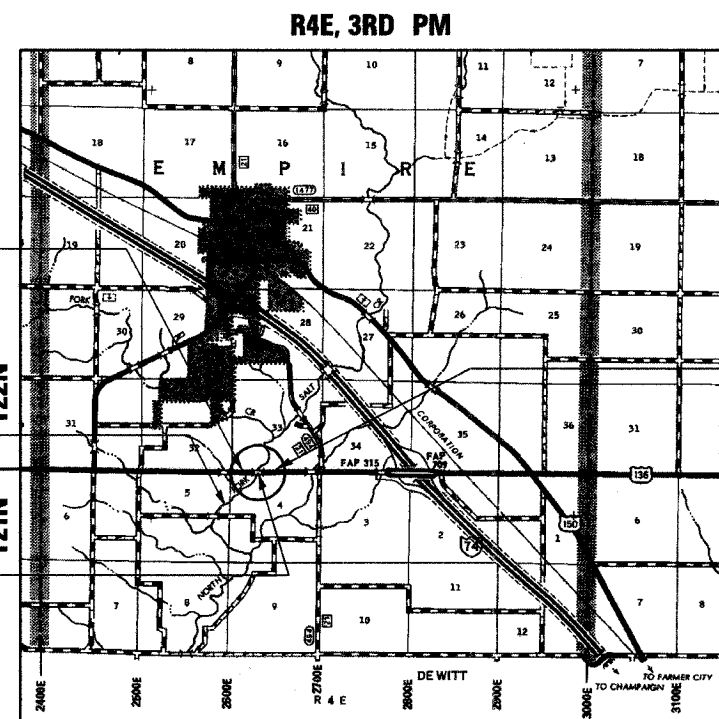
December 9, 2005
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

December 9, 2005
Eric Harnett
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

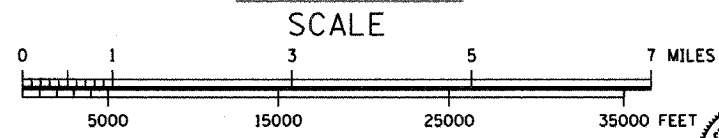
DESIGN DESIGNATION N.A.



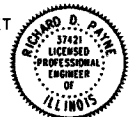
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED HIGHWAY PLANS
FAP ROUTE 315 (US 136)
SECTION 102X-BR-2
PROJECT BHF-315(042)
McLEAN COUNTY
C-93-089-05
US ROUTE 136 OVER NORTH FORK SALT CREEK
SUPERSTRUCTURE REPLACEMENT



LOCATION MAP



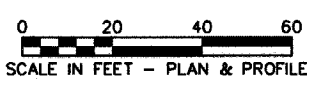
GROSS LENGTH = 632 FT. = 0.120 MI.
NET LENGTH = 632 FT. = 0.120 MI.



DATE: 10/26/2005
ILLINOIS PROFESSIONAL LICENSE NO. 37421
(EXPIRATION DATE: 11-30-05)

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
ROADWAY PLANS	
1.	COVER SHEET
2.	GENERAL NOTES AND STANDARDS
3.	SUMMARY OF QUANTITIES
4.	TYPICAL SECTIONS
5.	SCHEDULES OF QUANTITIES
6.-8.	FAP RTE 315 (US 136) PLAN AND PROFILE
9.	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR
10.	EROSION CONTROL AND DRAINAGE PLAN
11.	MISCELLANEOUS DETAILS
12.	GUARDRAIL DETAILS
STRUCTURE PLANS	
13.	GENERAL PLAN
14.	GENERAL DATA
15.	SUPERSTRUCTURE DETAILS
16.-18.	SUPERSTRUCTURE DETAILS
19.	TYPE SM STEEL BRIDGE RAIL
20.	STRIP SEAL EXPANSION JOINT
21.	ANCHOR BOLT DETAILS
22.	WEST ABUTMENT
23.	EAST ABUTMENT
24.	ABUTMENT DETAILS
25.	PIER 1
26.	PIER 2
27.	PIER 3
28.	PIER DETAILS
29.	BAR SPLICER ASSEMBLY DETAILS
EXISTING STRUCTURE PLANS	
30.-37.	EXISTING STRUCTURE PLANS
CROSS SECTIONS	
38.-44.	FAP RTE 315 (US 136) CROSS SECTIONS



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: EMPIRE
CONTRACT NO.: 66584



FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	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
630001-05	STEEL PLATE BEAM GUARDRAIL
630201-03	PCC/BITUMINOUS STABILIZATION AT 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

- 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.
- THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
- EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PAY ITEMS INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- 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.
- 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 IS PLACED.
- 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.
- 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
TEMPORARY DITCH CHECKS	9 BALES
- 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.
- 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 SEEDING WILL BE DETERMINED BY THE ENGINEER.
- 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.
- EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
- ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
- SKIP-DASH LINES AND NO PASS LINES FOR PAINT PAVEMENT MARKING SHALL BE 6" WIDE.
- EXCELSIOR BLANKET SHALL BE USED AT ALL EROSION CONTROL BLANKET LOCATIONS.
- THE CURBS SHOWN ON STANDARD 420401 ARE NOT REQUIRED AND SHALL NOT BE CONSTRUCTED.
- 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: Steve B. Andrews
DISTRICT STUDIES & PLANS ENGINEER (ACTING)

DATE: NOVEMBER 4, 2005

EXAMINED BY: Herbert K. Jung
DISTRICT CONSTRUCTION ENGINEER

James A. Haskin
DISTRICT OPERATIONS ENGINEER

Harold E. Day
DISTRICT MATERIALS ENGINEER

**GENERAL NOTES
AND STANDARDS
FAP RTE 315 (US 136)
SECTION 102X-BR-2
McLEAN COUNTY**

ESCA
CONSULTANTS, INC.

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

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FEDERAL CONSTRUCTION TYPE CODE 20% STATE X080-2A
20200100	EARTH EXCAVATION	CU YD	60
20400800	FURNISHED EXCAVATION	CU YD	50
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	115
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	170
25000210	SEEDING, CLASS 2A	ACRE	0.26
25000350	SEEDING, CLASS 7	ACRE	0.26
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	24
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	24
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	24
25100630	EROSION CONTROL BLANKET	SQ YD	1300
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	52
28000300	TEMPORARY DITCH CHECKS	EACH	2
28000400	PERIMETER EROSION BARRIER	FOOT	900
28000500	INLET AND PIPE PROTECTION	EACH	3
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	27
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	173
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	730
44000100	PAVEMENT REMOVAL	SQ YD	198
44004250	PAVED SHOULDER REMOVAL	SQ YD	143
48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	96
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	7.2
50300225	CONCRETE STRUCTURES	CU YD	10.6
50300260	BRIDGE DECK GROOVING	SQ YD	707
50300300	PROTECTIVE COAT	SQ YD	753
50300300	CONCRETE WEARING SURFACE, 5"	SQ YD	753
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	184.2
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3046
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	3726
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11360
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	424
51500100	NAME PLATES	EACH	1
58700200	BRIDGE SEAT SEALER	SQ FT	90
59000100	EPOXY CRACK SEALING	FOOT	405
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	375
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	80% FEDERAL CONSTRUCTION TYPE CODE 20% STATE X080-2A
63200310	GUARDRAIL REMOVAL	FOOT	440
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	128
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	43
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	2
72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	1
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1332
78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	647
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
78200410	GUARDRAIL MARKERS, TYPE A	EACH	8
78200520	BARRIER WALL MARKERS, TYPE B	EACH	4
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	81
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	48
X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1
XX005128	STRIP SEAL EXPANSION JOINT ASSEMBLY	FOOT	148
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	120
Z0002600	BAR SPLICERS	EACH	64
Z0014700	CULVERT TO BE CLEANED	EACH	3

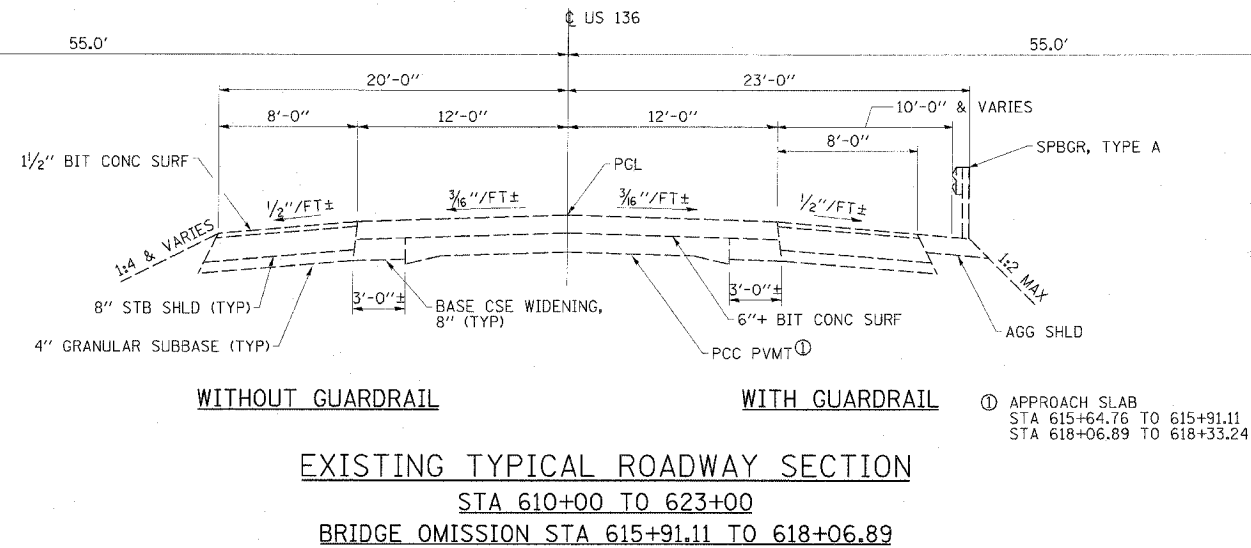
* SPECIALTY ITEM
 O NON-PARTICIPATING

ESCA
 CONSULTANTS, INC.

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

SUMMARY OF QUANTITIES
 FAP RTE 315 (US 136)
 SECTION 102X-BR-2
 McLEAN COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

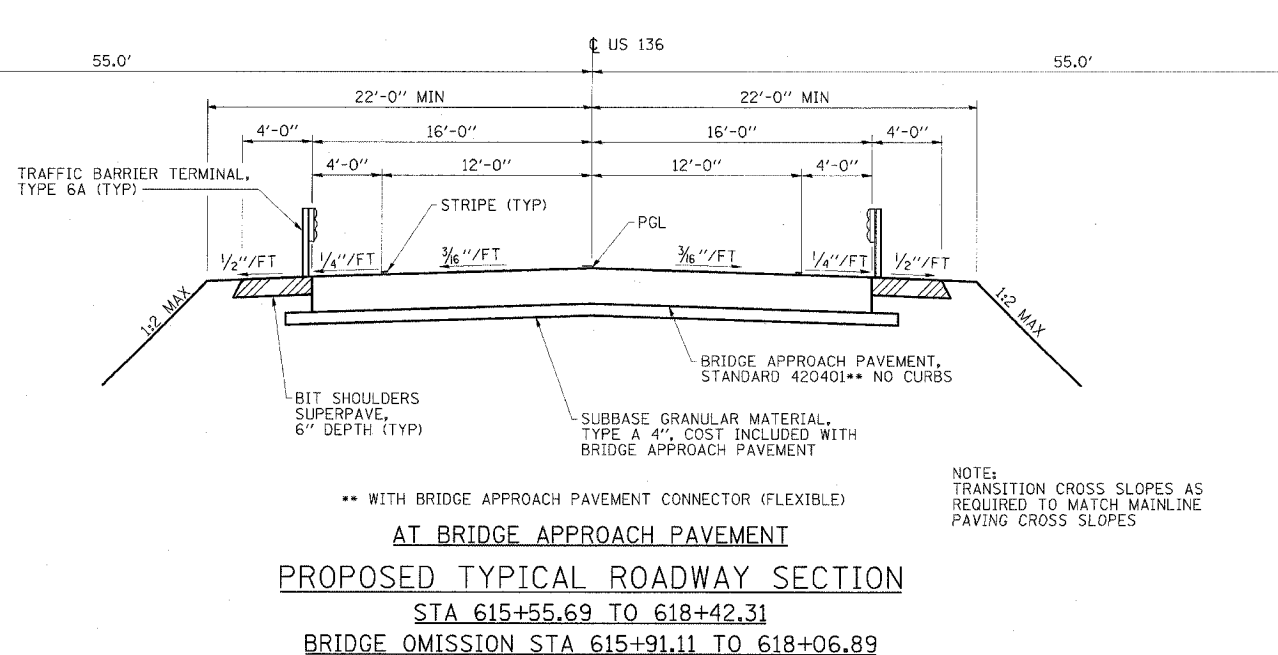
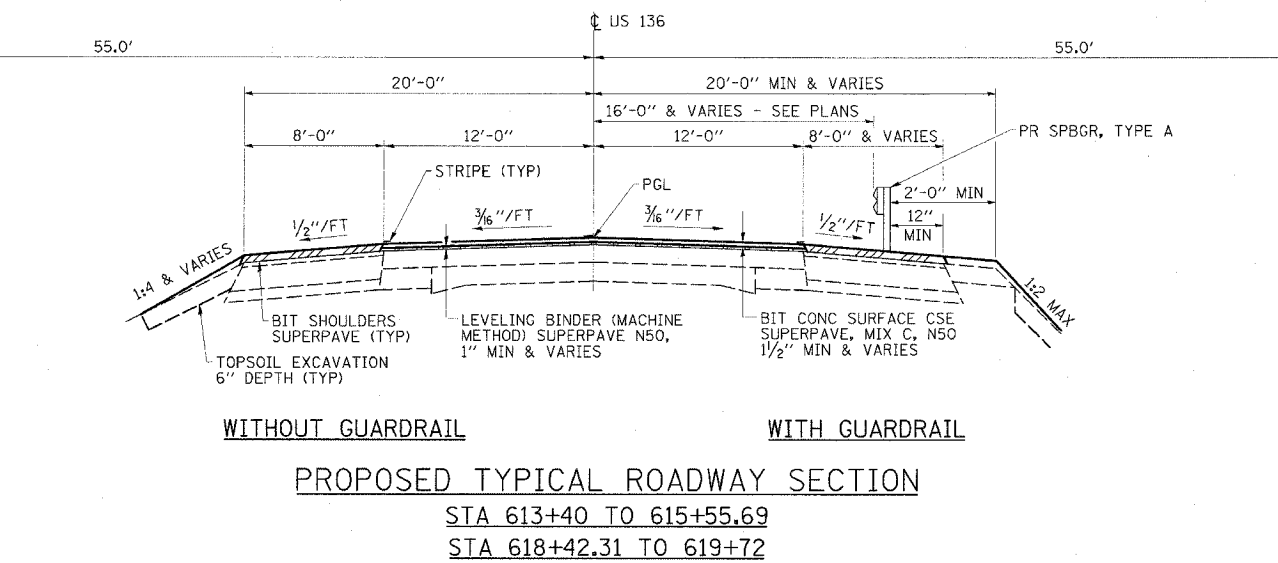


BITUMINOUS MIXTURES REQUIREMENTS

	SUPERPAVE BINDER	SUPERPAVE LEVELING BINDER	SUPERPAVE SURFACE	SUPERPAVE SHOULDERS
PG GRADE	PG64-22	PG64-22	PG64-22	PG58-22
MAX % RAP ALLOWABLE ***	25%	25%	25%	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.
FRICITION 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	7/05
DRAWN BY:	HAG/DWH	7/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	8/05

TYPICAL SECTIONS
 FAP RTE 315 (US 136)
 SECTION 102X-BR-2
 McLEAN COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	5
STA. TO STA.		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT		

LOCATION	SUITABLE EARTH EXCAVATION	SUITABLE EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	SUITABLE INCIDENTAL EXCAVATION MATERIAL	SUITABLE 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	4	3			4	-1
SW QUADRANT CUTS & FILLS	8	6			76	-70
NE QUADRANT CUTS & FILLS	10	8			16	-8
SE QUADRANT CUTS & FILLS	38	28			8	+20
CONC PAD UNDER PVMT CONNECTOR			12	9		+9
TOTALS	60	45	12	9	104	-50

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

LOCATION	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	TEMPORARY EROSION CONTROL SEEDING (2 APPLICATIONS)	INLET & PIPE PROTECTION	TEMPORARY DITCH CHECKS
	SQ YD	FOOT	POUND	EACH	EACH
NW QUADRANT	153	255	5		
SW QUADRANT	537	230	22		
NE QUADRANT	256	235	10		
SE QUADRANT	354	180	14		
STA 614+46, 53' LT					
STA 619+00, 34' RT					
STA 619+30, 28' LT					
STA 615+50, DITCH RT					
STA 615+90, DITCH LT					
TOTALS	1300	900	52	3	2

LOCATION	SEEDING, CLASS 2A	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
	ACRE	ACRE	POUND	POUND	POUND
STA 613+25 TO BRIDGE, RT	0.11	0.11	10	10	10
STA 613+35 TO BRIDGE, LT	0.03	0.03	3	3	3
BRIDGE TO STA 619+30, RT	0.07	0.07	6	6	6
BRIDGE TO STA 620+75, LT	0.05	0.05	5	5	5
TOTALS	0.26	0.26	24	24	24

LOCATION	TON
STA 614+65.0, FE LT	27
TOTAL	27

LOCATION	PAVEMENT REMOVAL	PAVED SHOULDER REMOVAL
	SQ YD	SQ YD
STA 615+55.69 TO STA 615+92.84	93	72
STA 618+05.18 TO STA 618+42.31	99	71
TOTALS	198	143

LOCATION	REMOVE SIGN PANEL ASSEMBLY TYPE A	RELOCATE SIGN PANEL ASSEMBLY TYPE A
	EACH	EACH
STA 614+90, 27' LT		1
STA 615+54, 24' RT	1	
STA 618+44, 24' LT	1	
TOTALS	2	1

LOCATION	DESCRIPTION	SHORT-TERM PAVEMENT MARKING (2 APPLICATIONS)	PAINT PAVEMENT MARKING - LINE	
		FOOT	4"	6"
STA 613+40 TO STA 619+72	SKIP-DASH YELLOW CENTERLINE	128		160
STA 613+40 TO STA 619+72, RT	SOLID WHITE EDGE LINE		632	
STA 613+40 TO STA 620+40, LT	SOLID WHITE EDGE LINE		700	
STA 614+65 TO STA 619+72	SOLID YELLOW NO PASS LINE			487
TOTALS		128	1332	647

LOCATION	RRPM	RRPM (BRIDGE)	RRPM REMOVAL
	EACH	EACH	EACH
STA 613-86			1
STA 614+35			1
STA 615+13			1
STA 615+91			1
STA 616+71			1
STA 617+49			1
STA 618+27			1
STA 619+08			1
TOTALS	6	2	4

LOCATION	PAVEMENT MARKING DESCRIPTION	WORK ZONE PAVEMENT MARKING REMOVAL
		SQ FT
CENTERLINE	SHORT-TERM	43
TOTAL		43

LOCATION	BRIDGE APPROACH PAVEMENT	PROTECTIVE COAT	CONNECTOR (FLEXIBLE)
	SQ YD	SQ YD	SQ YD
STRUCTURE NO. 057-0185 - WEST APPROACH	107	107	21.5
STRUCTURE NO. 057-0185 - EAST APPROACH	107	107	21.5
TOTALS	214	214	43

LOCATION	CULVERT TO BE CLEANED
	EACH
STA 614+65.0, FE LT, 18" CMP	1
STRUCTURE NO. 057-0185 - NE CORNER, 24" CMP	1
STRUCTURE NO. 057-0185 - SE CORNER, 24" CMP	1
TOTAL	3

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	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. 057-0185 - NORTHWEST	1	37.5		1		1	
STRUCTURE NO. 057-0185 - SOUTHWEST	1	137.5		3			
STRUCTURE NO. 057-0185 - NORTHEAST	1	137.5		3			
STRUCTURE NO. 057-0185 - SOUTHEAST	1	62.5		1		1	
STRUCTURE NO. 057-0185 - BRIDGE					4		424
TOTALS	4	375.0	4	8	4	4	424

LOCATION	FOOT
STRUCTURE NO. 057-0185 - NORTHWEST	113.5
STRUCTURE NO. 057-0185 - SOUTHWEST	150.5
STRUCTURE NO. 057-0185 - NORTHEAST	100.5
STRUCTURE NO. 057-0185 - SOUTHEAST	75.5
TOTAL	440.0

LOCATION	SQ YD
STA 613+40 TO STA 614+04	285
STA 618+72 TO STA 619+72	445
TOTAL	730

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 613+40 TO STA 615+55.69	123	50.3	45.5	70
STA 618+42.31 TO STA 619+72	50	30.7	2.5	26
TOTALS	173	81.0	48.0	96

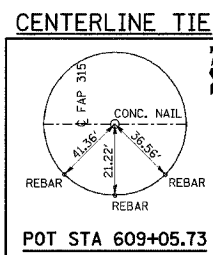
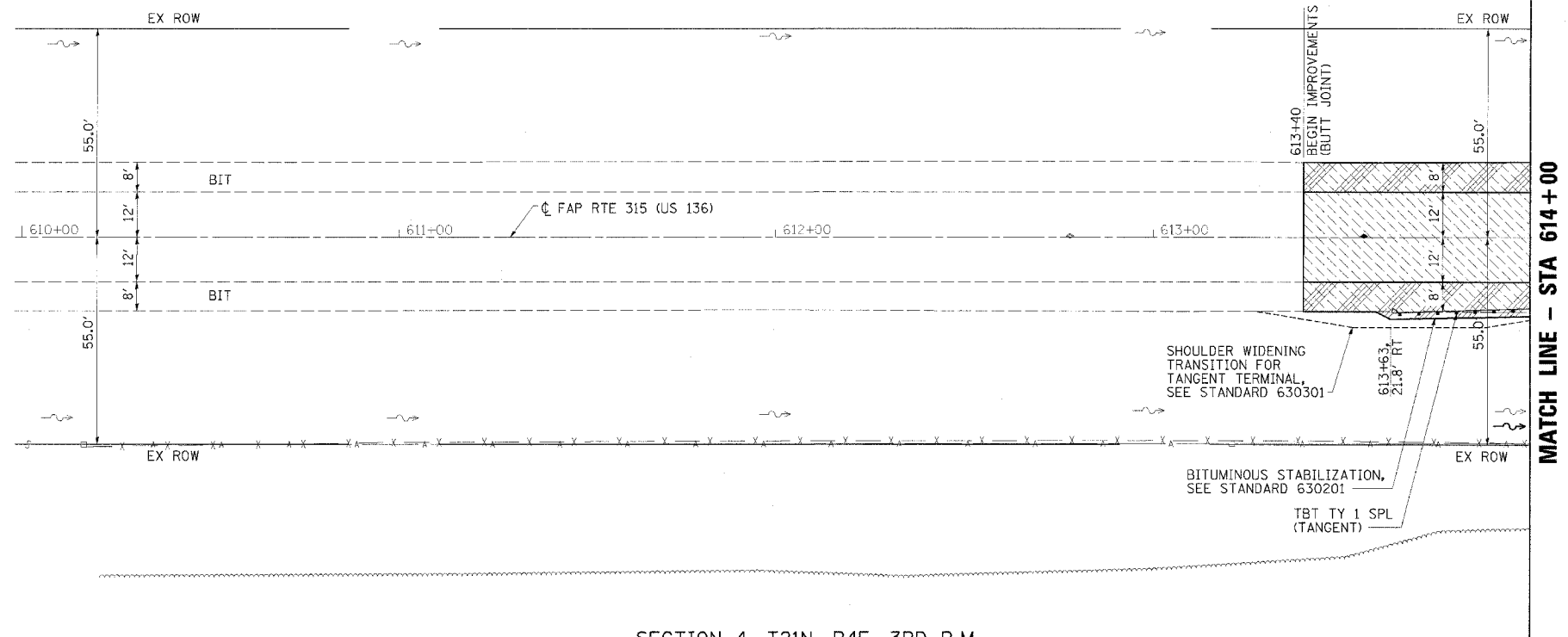
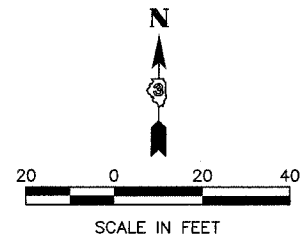
SCHEDULES OF QUANTITIES
 FAP RTE 315 (US 136)
 SECTION 102X-BR-2
 McLEAN COUNTY

ESCA
 CONSULTANTS, INC.

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

SECTION 33, T22N, R4E, 3RD P.M.

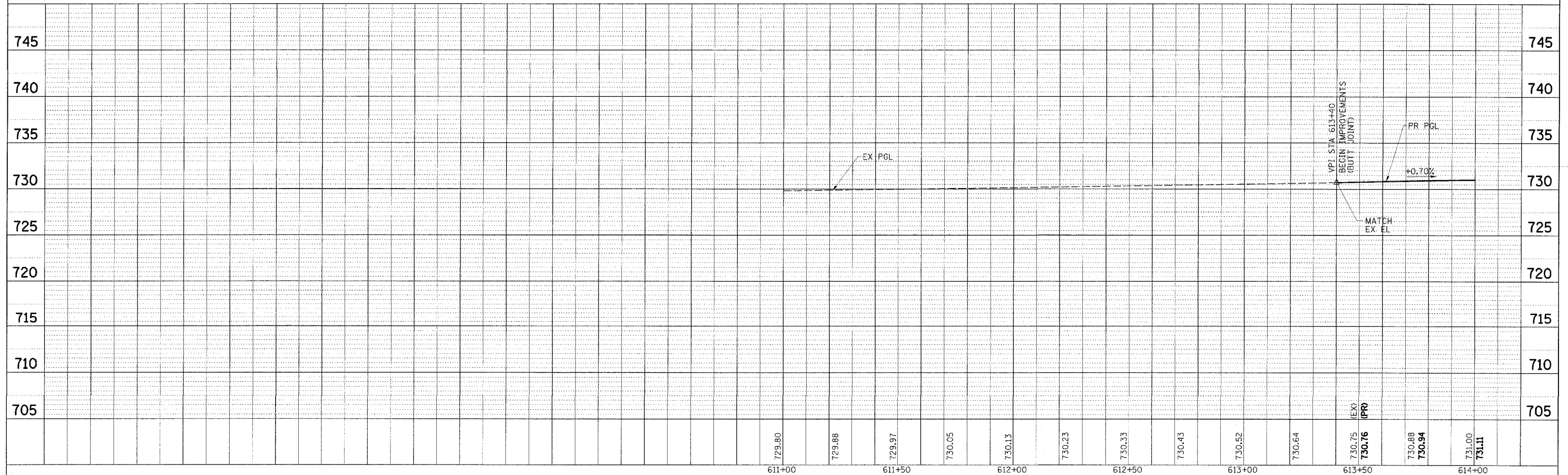
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	6
STA. 610+00		TO STA. 614+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



SECTION 4, T21N, R4E, 3RD P.M.

PLAN	SURVEYED	DATE
	PLOTTED	
	NOTED	
	BY	
	NO. CHECKED	
	CADD FILE NAME	

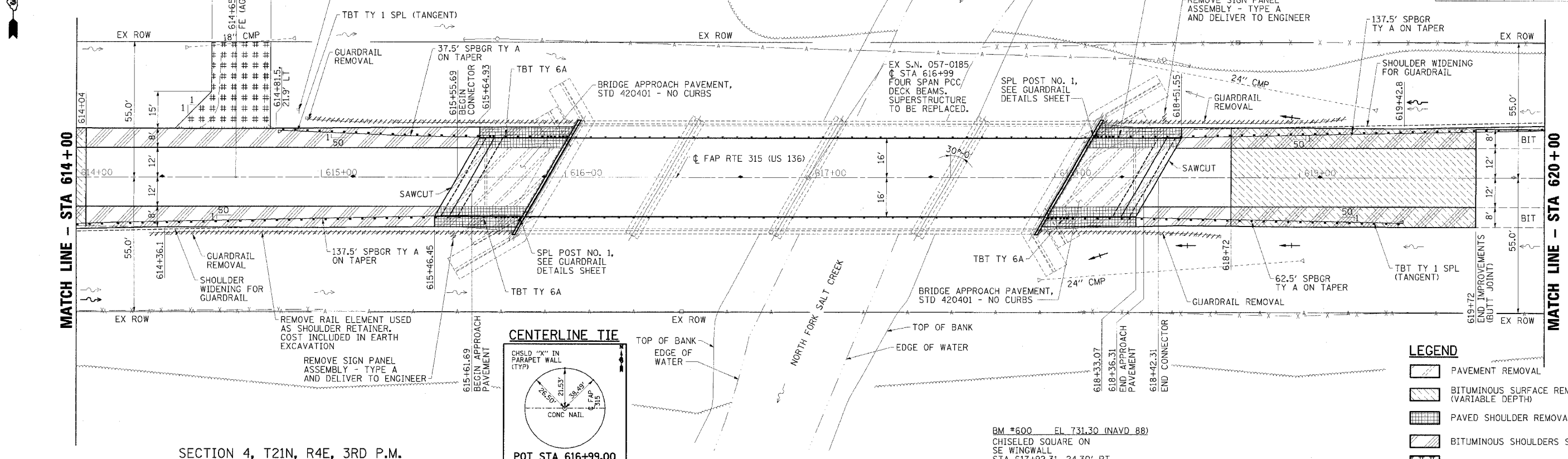
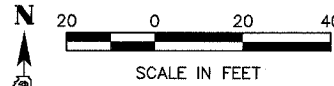
PROFILE	SURVEYED	DATE
	PLOTTED	
	NOTED	
	BY	
	NO. CHECKED	
	STRUCTURE NOTATION	



FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	7
STA. 614+00		TO STA. 620+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SECTION 33, T22N, R4E, 3RD P.M.

SECTION 4, T21N, R4E, 3RD P.M.



LEGEND

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

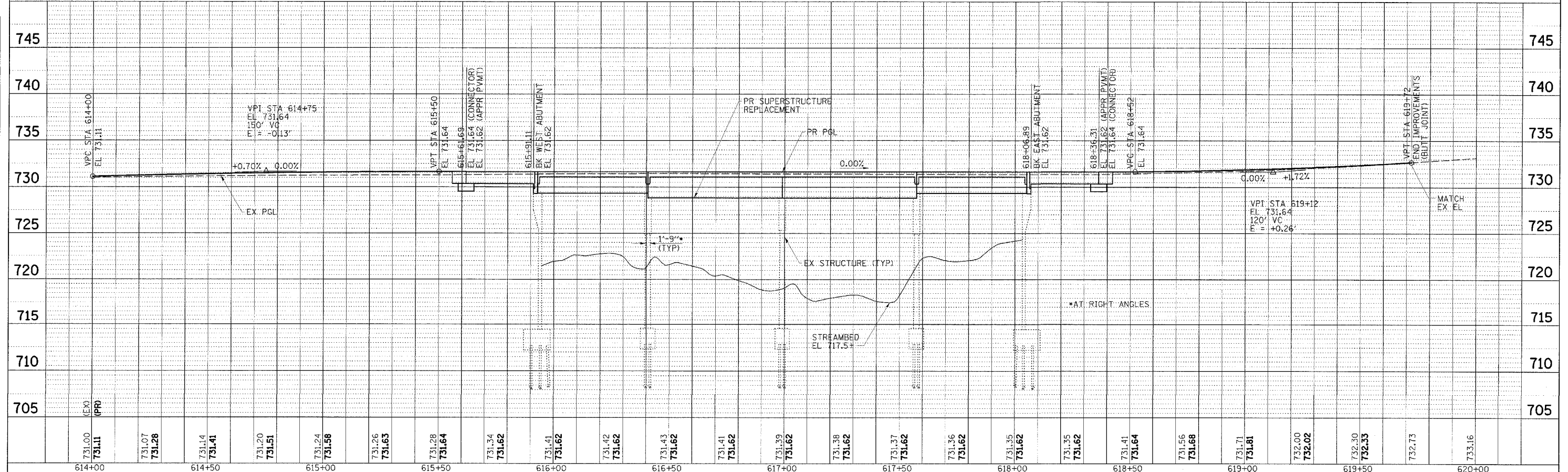
BM #600 EL 731.30 (NAVD 88)
 CHISELED SQUARE ON
 SE WINGWALL
 STA 617+92.31, 24.30' RT

PLAN

DATE	BY

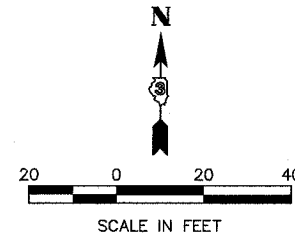
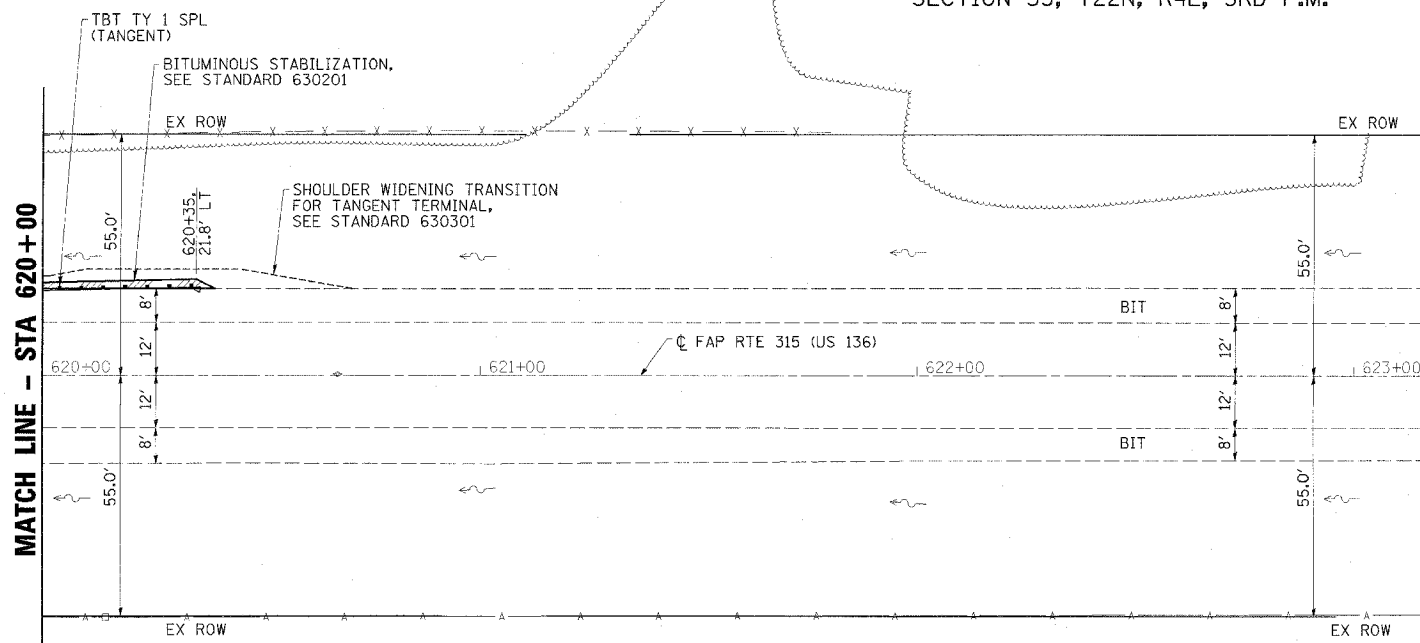
PROFILE

DATE	BY



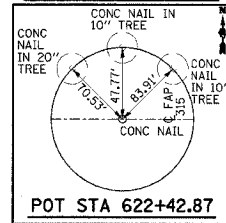
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	8
STA. 620+00		TO STA. 623+00		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT

SECTION 33, T22N, R4E, 3RD P.M.



SECTION 4, T21N, R4E, 3RD P.M.

CENTERLINE TIE



PLAN

DATE _____

BY _____

DATE _____

BY _____

DATE _____

NO. _____

NO. _____

NO. _____

NO. _____

PROFILE

DATE _____

BY _____

DATE _____

BY _____

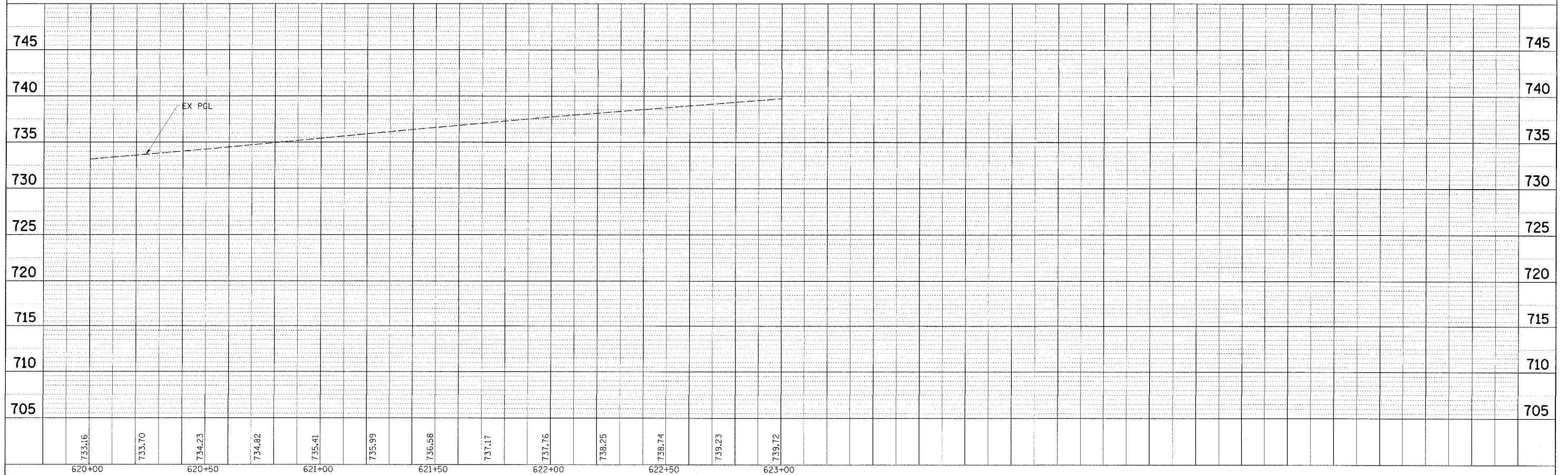
DATE _____

NO. _____

NO. _____

NO. _____

NO. _____



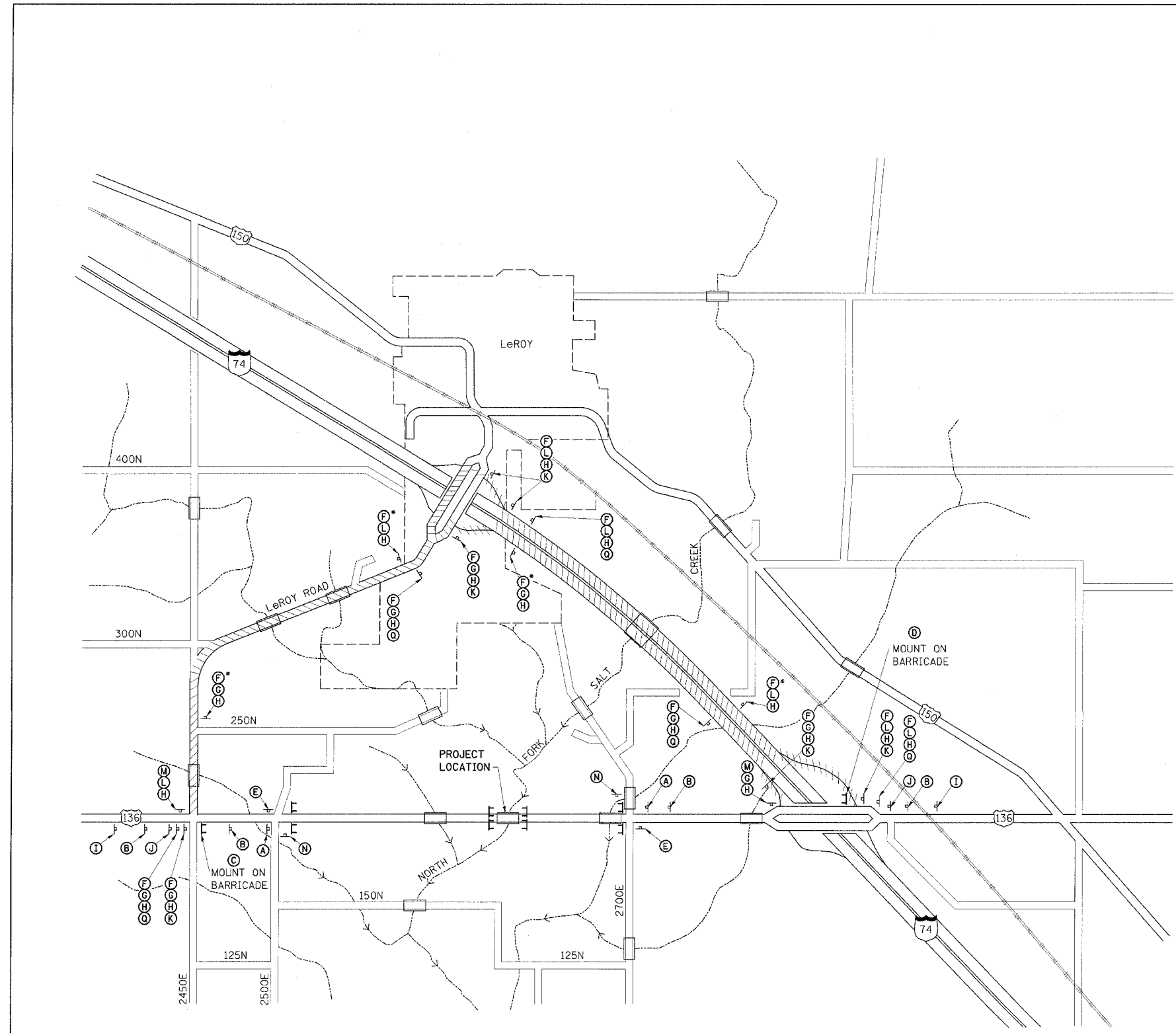
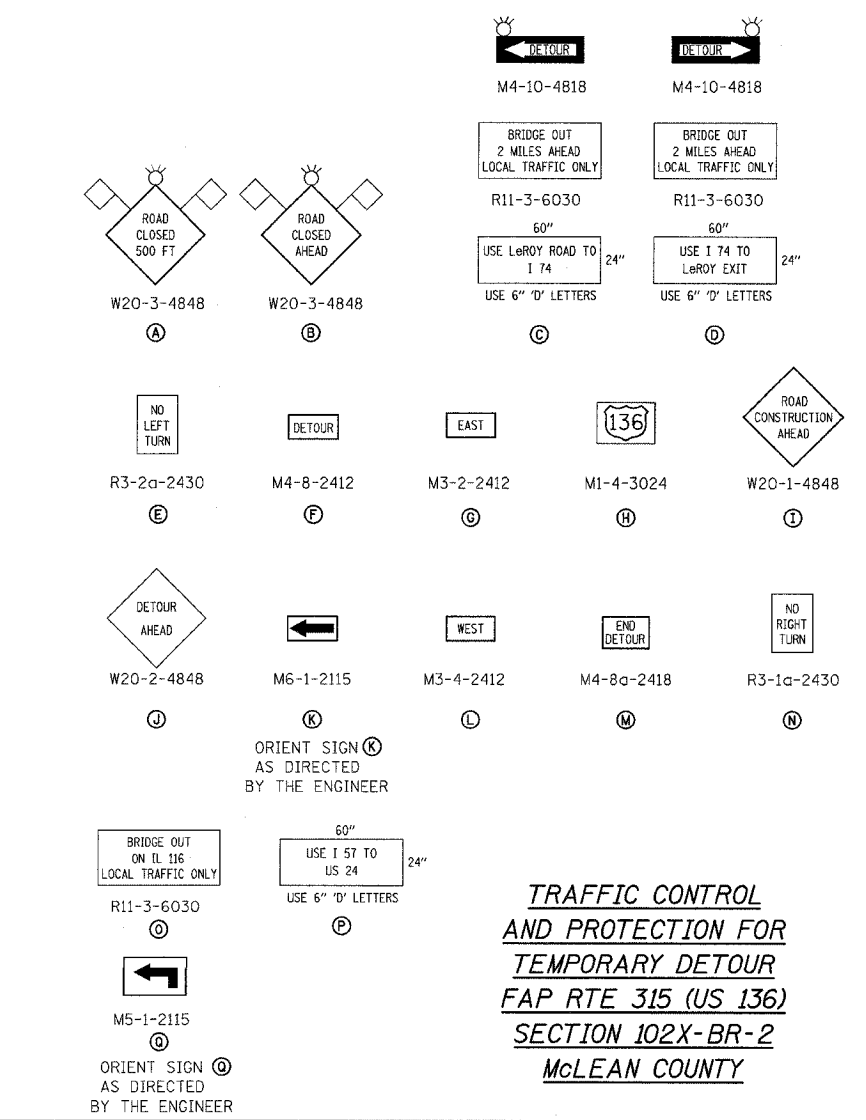
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	9
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

- 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

- GENERAL NOTES**
- ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
 - ALL SIGNS NOT ATTACHED TO BARRICADES SHALL BE POST MOUNTED.
 - LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
 - 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.

SIGN MOUNTING LOCATIONS

- ⓐ 500' IN ADVANCE OF ⓐ OR ⓑ
- ⓑ 500' IN ADVANCE OF ⓐ AND 1000' IN ADVANCE OF ⓐ
- ⓒ 1000' IN ADVANCE OF ⓑ
- ⓓ 500' IN ADVANCE OF "ROAD CLOSED TO THRU TRAFFIC"



TEMPORARY DETOUR PLAN
NO SCALE

• TO BE LOCATED AS DIRECTED BY THE ENGINEER

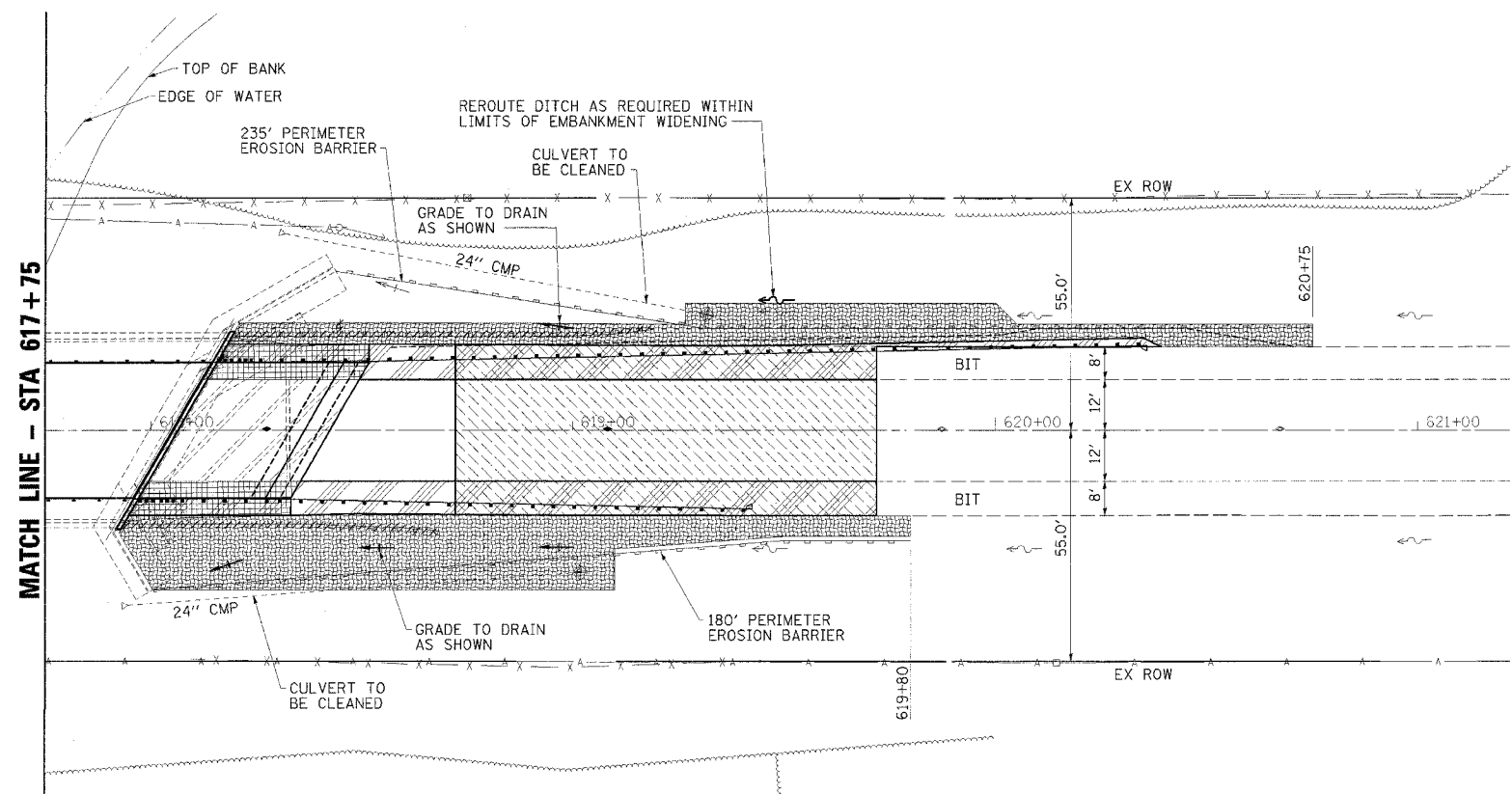
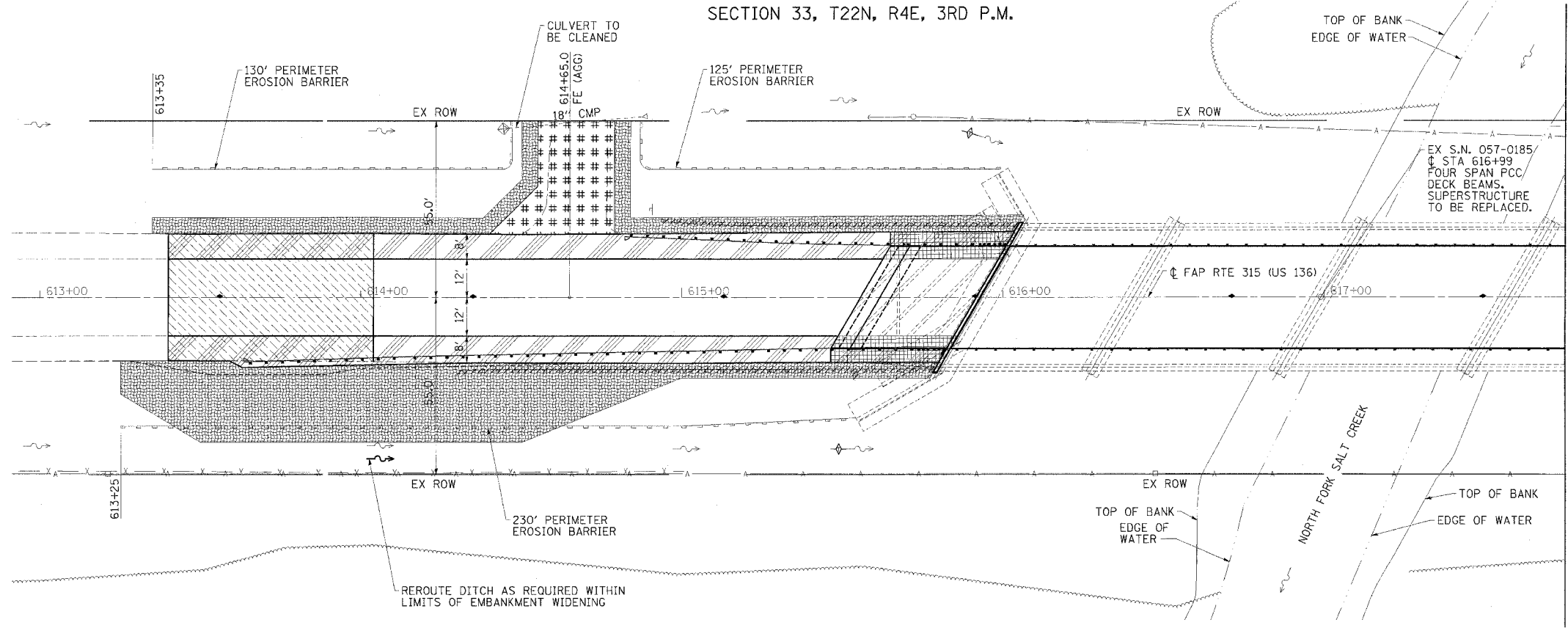
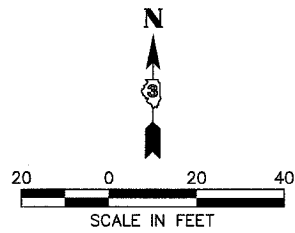
ESCA
CONSULTANTS, INC.

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

TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR
FAP RTE 315 (US 136)
SECTION 102X-BR-2
McLEAN COUNTY

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	10
STA. 613+00		TO STA. 621+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SECTION 33, T22N, R4E, 3RD P.M.



SECTION 4, T21N, R4E, 3RD P.M.

LEGEND

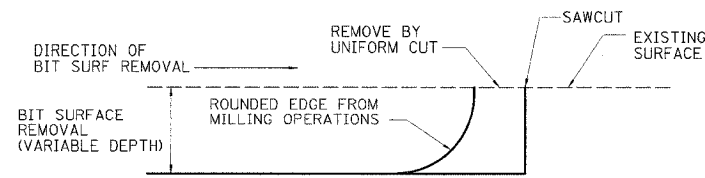
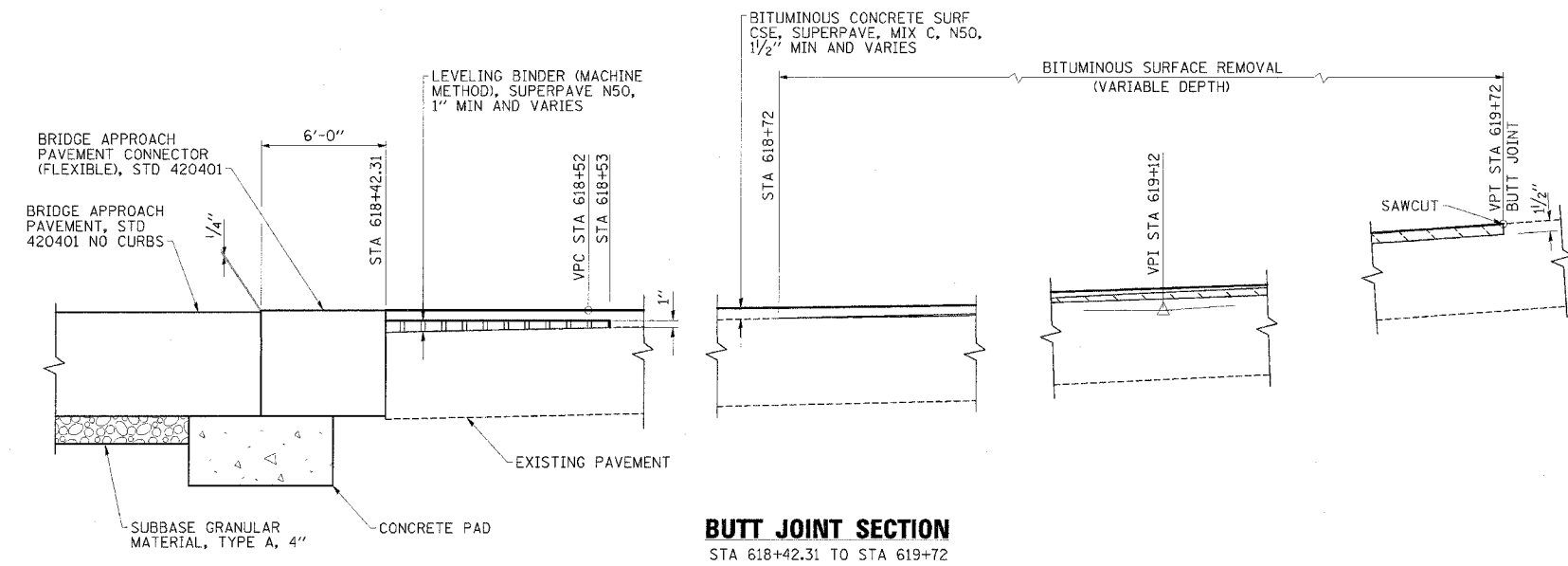
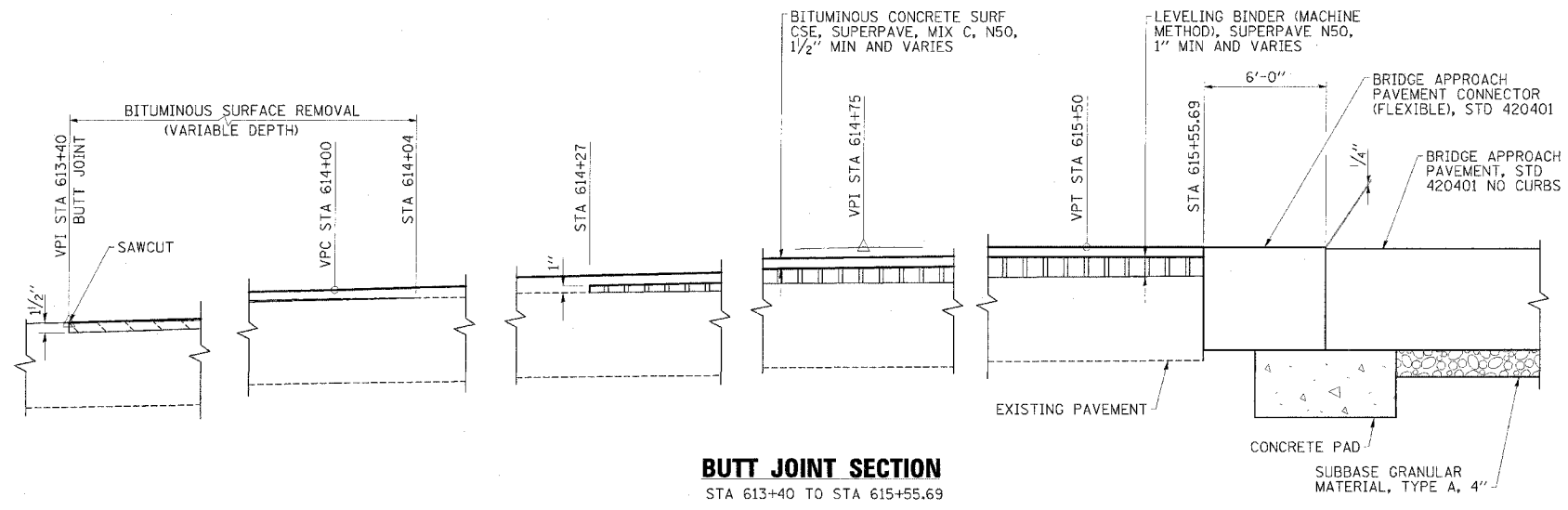
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET
- EXISTING DITCH FLOW
- PROPOSED DITCH FLOW
- INLET & PIPE PROTECTION
- EXISTING DRAINAGE SWALE
- PROPOSED DRAINAGE SWALE
- TEMPORARY DITCH CHECK

ESCA
CONSULTANTS, INC.

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

**EROSION CONTROL
AND DRAINAGE PLAN**
FAP RTE 315 (US 136)
SECTION 102X-BR-2
McLEAN COUNTY

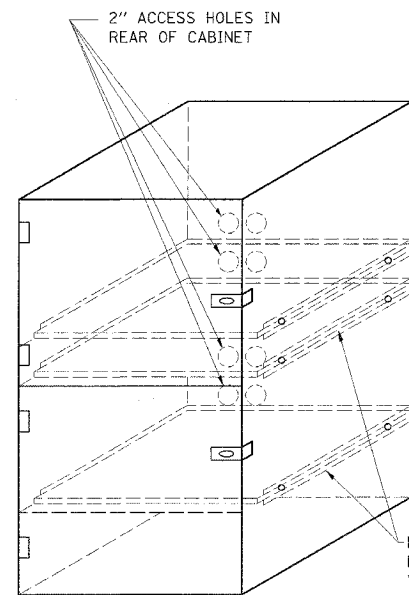
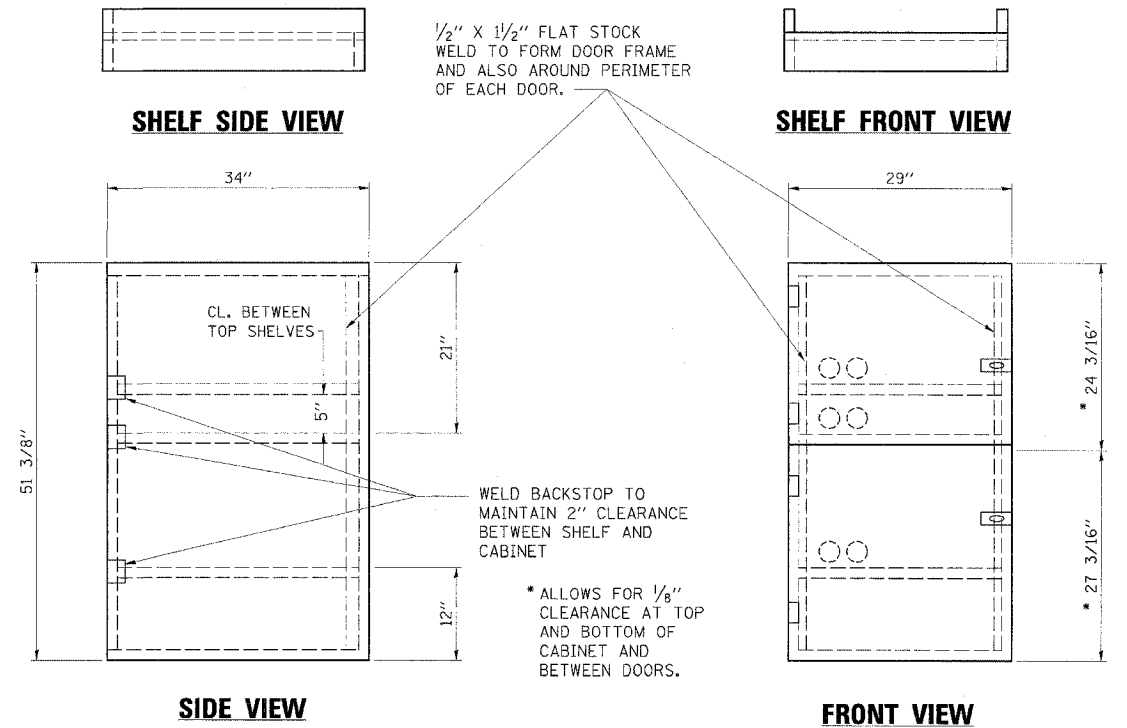
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	11
STA. 613+40		TO STA. 619+72		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



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:	HAG	7/05
CHECKED BY:	MTD	8/05
APPROVED BY:	RDP	8/05



- 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.

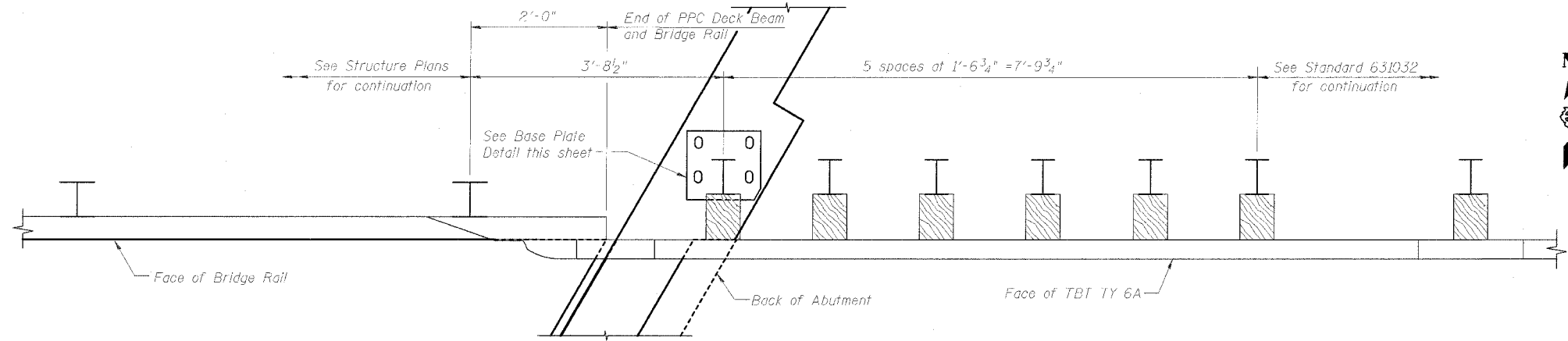
LOCKABLE COMPUTER CABINET

MISCELLANEOUS DETAILS
FAP RTE 315 (US 136)
SECTION 102X-BR-2
McLEAN COUNTY

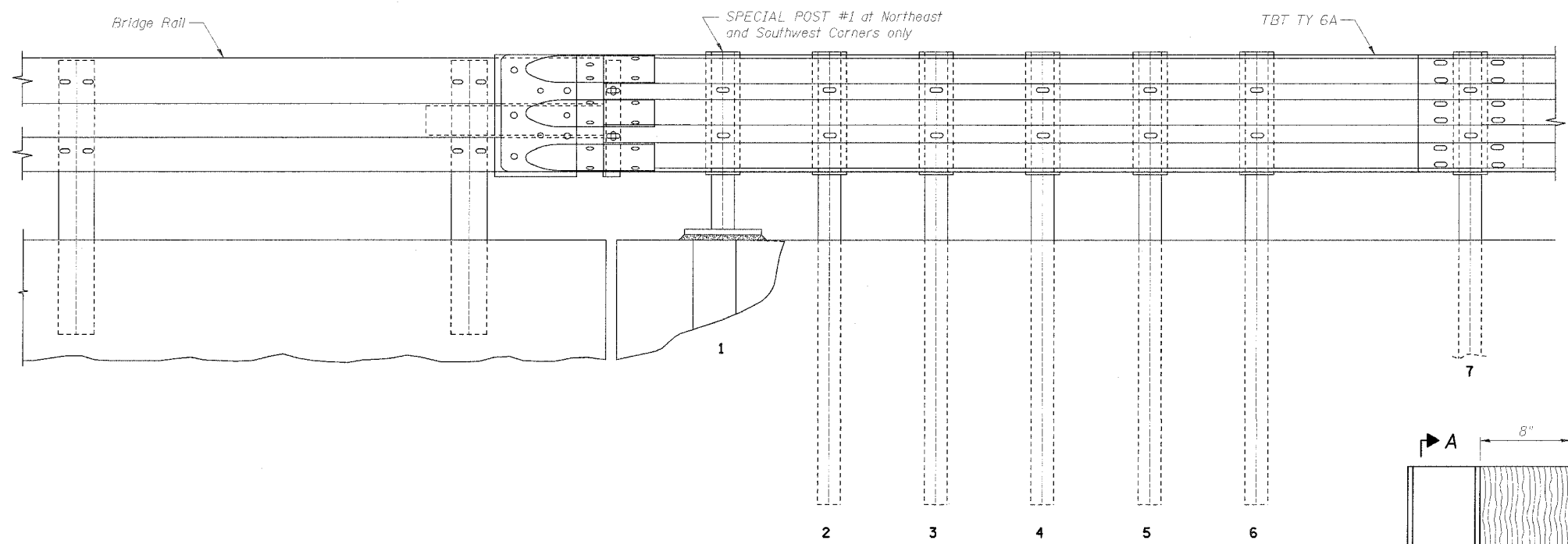
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	12
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NOTES

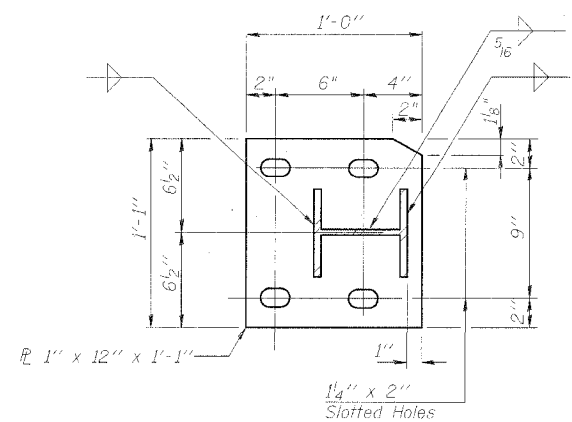
1. Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.
2. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
3. All posts, railing, rail splices 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 $\frac{1}{8}$ 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.



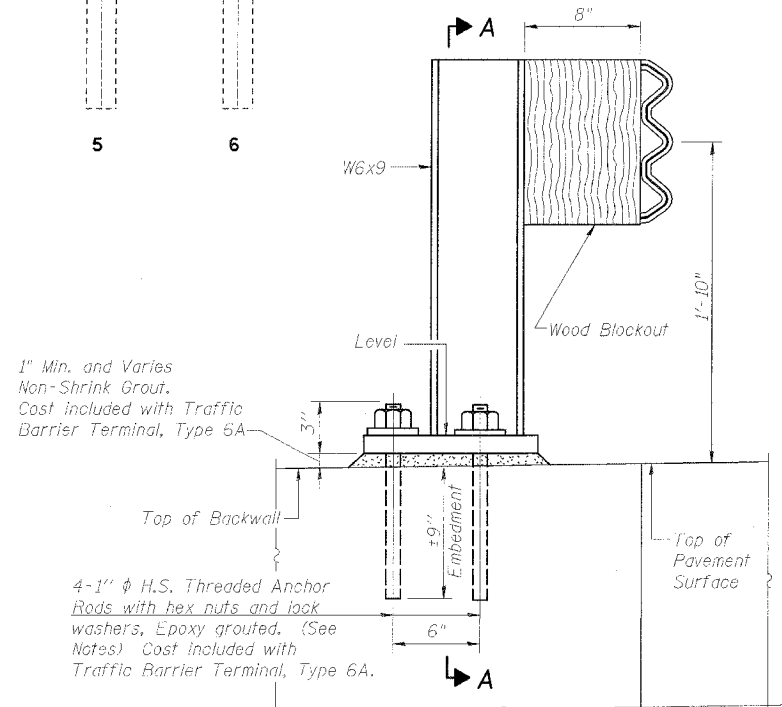
PLAN
(Northeast corner shown, Southwest corner similar)



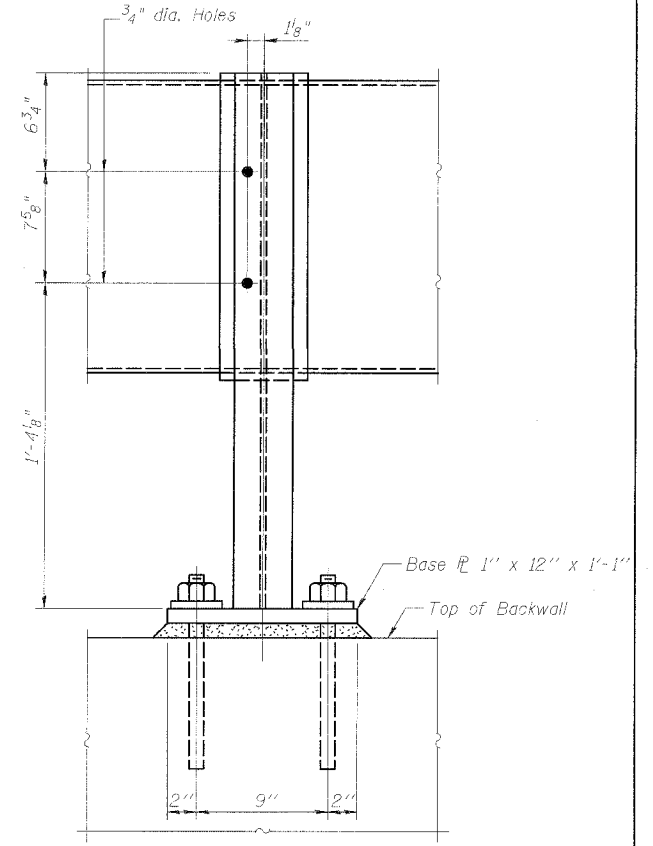
ELEVATION



BASE PLATE DETAIL



SECTION AT SPECIAL RAIL POST #1



SECTION A-A

GUARDRAIL DETAILS
FAP RTE 315 (US 136)
SECTION 102X-BR-2
McLEAN COUNTY

ESCA
CONSULTANTS, INC.

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

BENCHMARK: Chiseled "Square" on top of Southeast Wingwall, SN 057-0185
Elev. 731.30

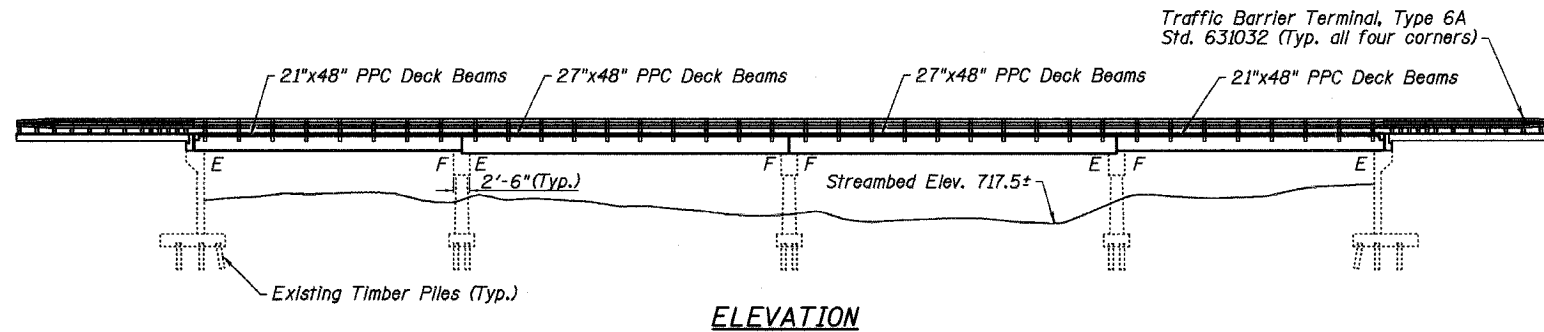
EXISTING STRUCTURE: SN 057-0185 was originally built in 1936 as SBI Rte. 119, Section 102-X. Superstructure replacement and substructure widening occurred in 1972. The superstructure consists of 4 simple spans-two with 21" PPC deck beams and two with 27" PPC deck beams. The substructure consists of reinforced concrete solid shaft piers and closed abutments on timber piles. The back-to-back abutments dimension measures 215'-9 1/2" 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 315		MCLEAN	44	13
STA.		TO STA.		
FED. ROAD DIST. NO.		SLAB NO.	FED. AID PROJECT-	
*102X-BR-2		DWG. NO.	1 OF 17	

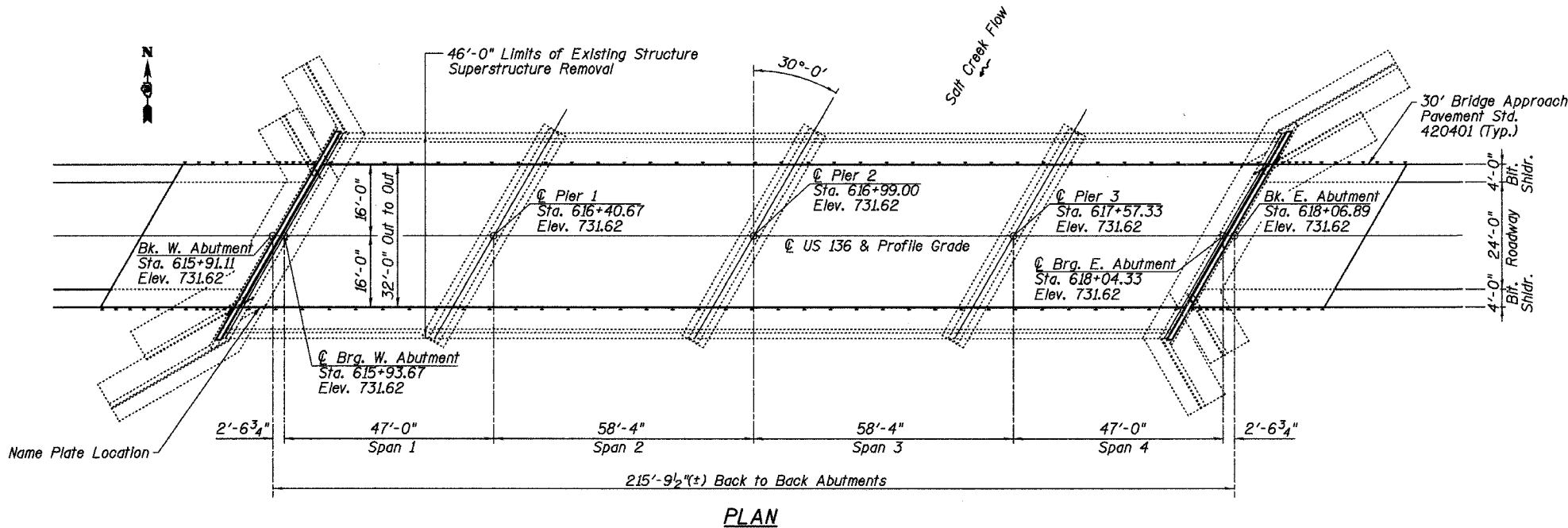
CONTRACT NO. 66584



ELEVATION

STRUCTURE INDEX OF SHEETS

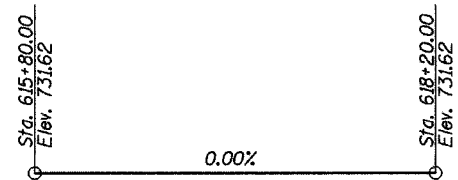
General Plan	Dwg. No. 1 of 17
General Data	Dwg. No. 2 of 17
Superstructure	Dwg. No. 3 of 17
Superstructure Details	Dwg. No. 4-6 of 17
Type SM Steel Bridge Rail	Dwg. No. 7 of 17
Strip Seal Expansion Joint	Dwg. No. 8 of 17
Anchor Bolt Details	Dwg. No. 9 of 17
West Abutment	Dwg. No. 10 of 17
East Abutment	Dwg. No. 11 of 17
Abutment Details	Dwg. No. 12 of 17
Pier 1	Dwg. No. 13 of 17
Pier 2	Dwg. No. 14 of 17
Pier 3	Dwg. No. 15 of 17
Pier Details	Dwg. No. 16 of 17
Bar Splice Assembly Details	Dwg. No. 17 of 17



PLAN

SCOPE OF WORK

1. Remove existing surfacing, concrete parapets, aluminum railing 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 four-span PPCD beam superstructure with concrete wearing surface and Steel Bridge Rail Type SM, and new bridge approach pavements.



PROFILE GRADE
(Along \bar{C} Roadway)

STATION 616+99
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 315 SEC. 102X-BR-2
LOADING HS20
STR. NO. 057-0185

NAME PLATE

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



EXPIRES 11-30-06
SIGNATURE
10/26/05
DATE

DESIGN SPECIFICATION

2002 AASHTO

LOADING HS20-44

Allow 50 psf future wearing surface

DESIGN STRESSES

FIELD UNITS

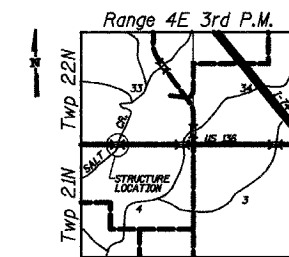
$f'_c = 5,000$ psi (Concrete Wearing Surface)
 $f'_c = 3,500$ psi (All concrete except CWS)
 $f_y = 60,000$ psi (reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" low lax strands)
 $f'_{sl} = 201,960$ psi (2" low lax strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.046g
Site Coefficient (S) = 1.2



LOCATION SKETCH

GENERAL PLAN
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
MCLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

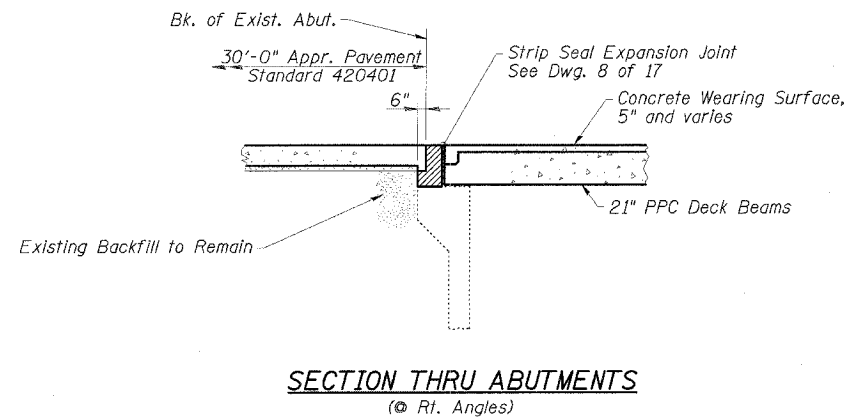
ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	JDK	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 315	*	McLEAN	44	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2		DWG. NO. 2 OF 17		

CONTRACT NO. 66584

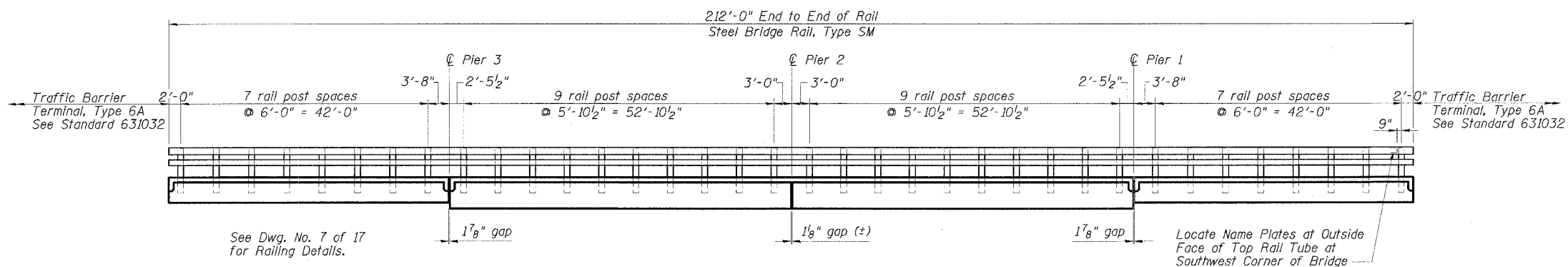


GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
- 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.
- All construction joints shall be bonded.
- Bridge Seat Sealer shall be applied to abutment bearing seats where formed concrete repairs are performed.
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
- Side retainers shall be AASHTO M270 Grade 36 minimum.
- No work will be allowed in the stream.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 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.
- 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. 12 of 17 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.
- 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.
- 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.
- The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
- 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.		7.2	7.2
Concrete Structures	Cu. Yd.		10.6	10.6
Bridge Deck Grooving	Sq. Yd.	707		707
Concrete Wearing Surface, 5"	Sq. Yd.	753		753
Bridge Seat Sealer	Sq. Ft.		90	90
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.		184.2	184.2
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3046		3046
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	3726		3726
Reinforcement Bars, Epoxy Coated	Pound	9960	1400	11360
Steel Bridge Rail, Type SM	Foot	424		424
Name Plates	Each	1		1
Epoxy Crack Sealing	Foot		405	405
Strip Seal Expansion Joint Assembly	Foot	148		148
Asbestos Bearing Pad Removal	Each		120	120
Bar Splicers	Each		64	64
Protective Coat	Sq. Yd.	753		753



RAIL ELEVATION

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

ESCA
CONSULTANTS, INC.

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

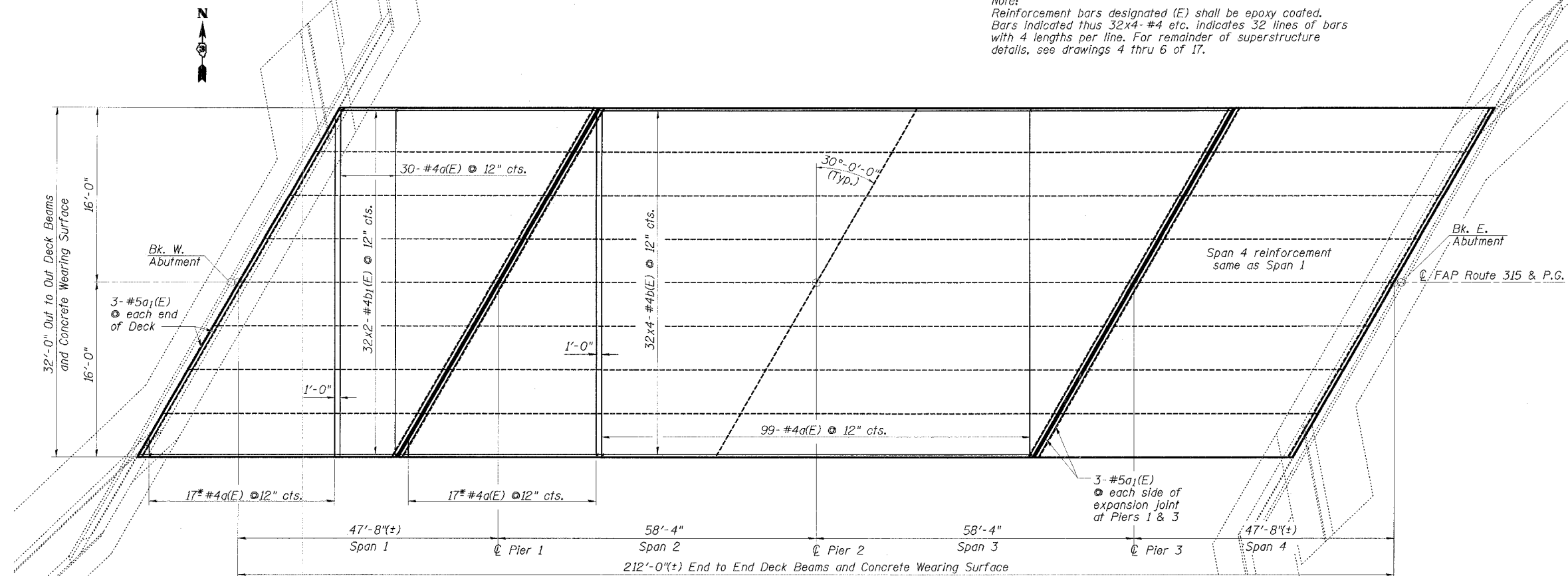
GENERAL DATA
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 32x4- #4 etc. indicates 32 lines of bars with 4 lengths per line. For remainder of superstructure details, see drawings 4 thru 6 of 17.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	*	McLEAN	44	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2	DWG. NO.	3 OF 17		

CONTRACT NO. 66584



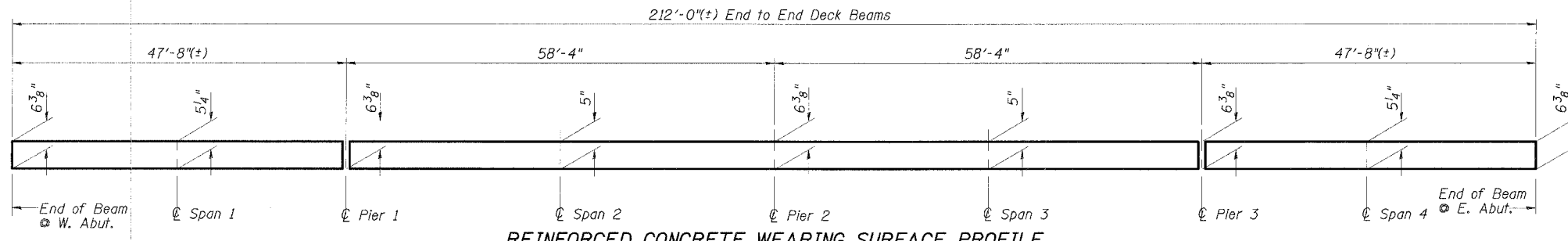
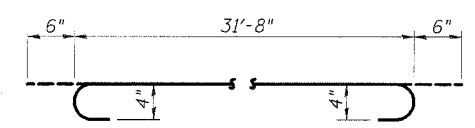
PLAN

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

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

CONCRETE WEARING SURFACE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	210	#4	32'-8"	U	
a1(E)	18	#5	36'-6"	—	
b(E)	128	#4	30'-4"	—	
b1(E)	128	#4	24'-6"	—	
Reinforcement Bars, Epoxy Coated				Pound	9960
Concrete Wearing Surface, 5"				Sq. Yd.	753
Bridge Deck Grooving				Sq. Yd.	707
Protective Coat				Sq. Yd.	753



REINFORCED CONCRETE WEARING SURFACE PROFILE
(At centerline of roadway)

Note:
Greater thickness is required at edges of superstructure to conform to cross slopes shown on Dwg. 4 and 5 of 17

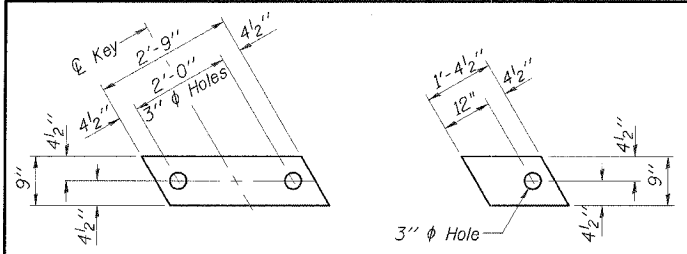
ESCA
CONSULTANTS, INC.

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

SUPERSTRUCTURE
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

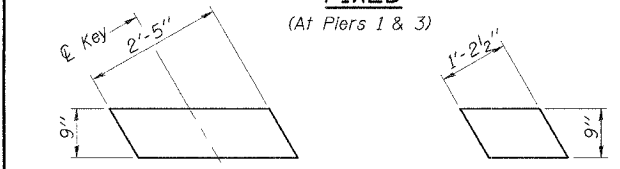
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	*	McLEAN	44	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2	DWG. NO.	4 OF 17	CONTRACT NO. 66584	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



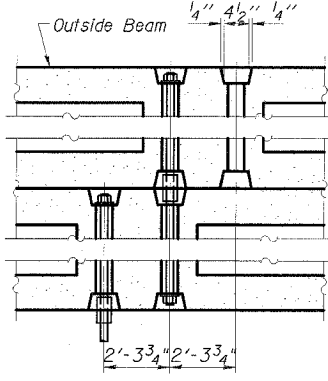
FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

FIXED
(At Piers 1 & 3)

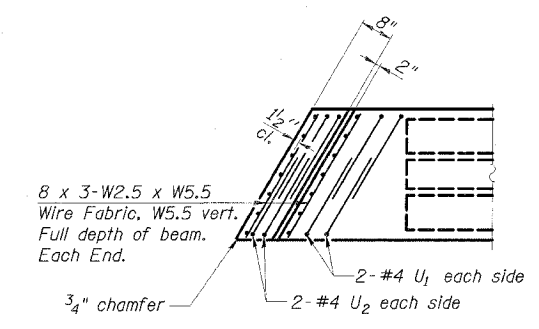


FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

EXPANSION
(At Abutments)

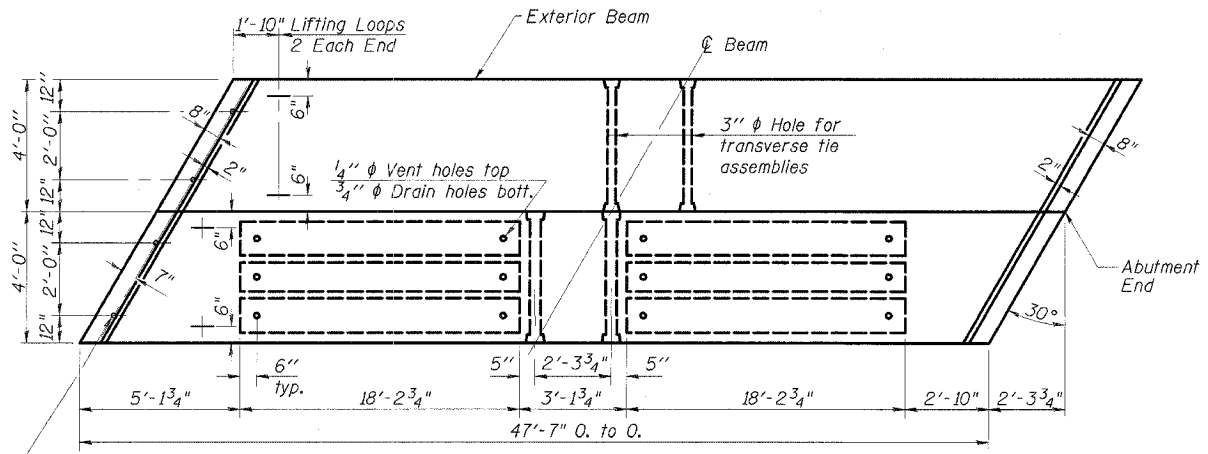


TYPICAL TRANSVERSE TIE ASSEMBLY

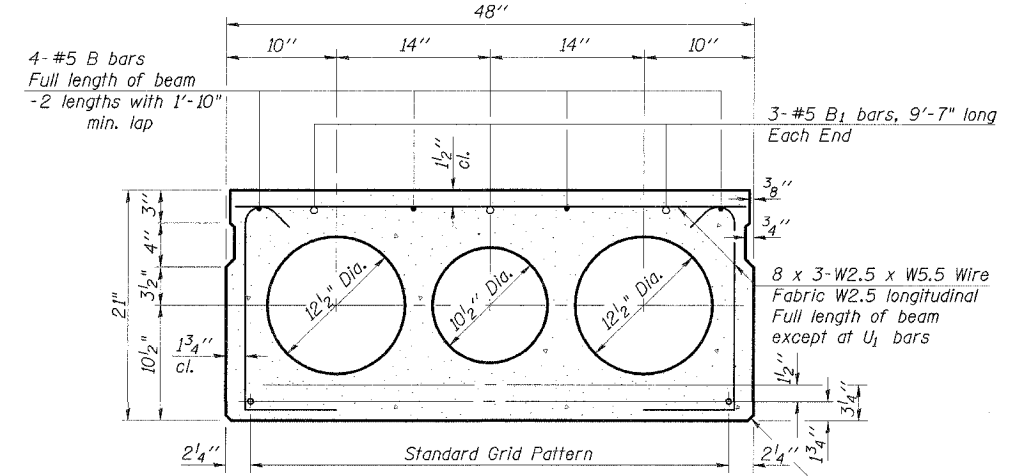


END PLAN

See End of 21" Beam detail on Dwg. 6 of 17 for additional information.



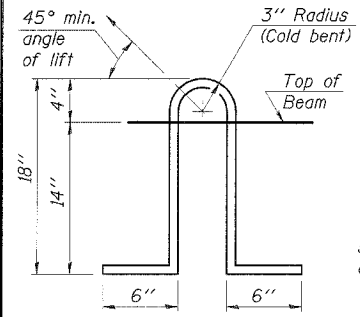
PLAN



TYPICAL SECTION-INTERIOR BEAMS

18-1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up, 10-Strands 3 3/4" up, 2-Strands 6" up

- Notes:
1. Place strands symmetrically about ϕ of beam.
 2. See Dwg. 6 of 17 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 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2" 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 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

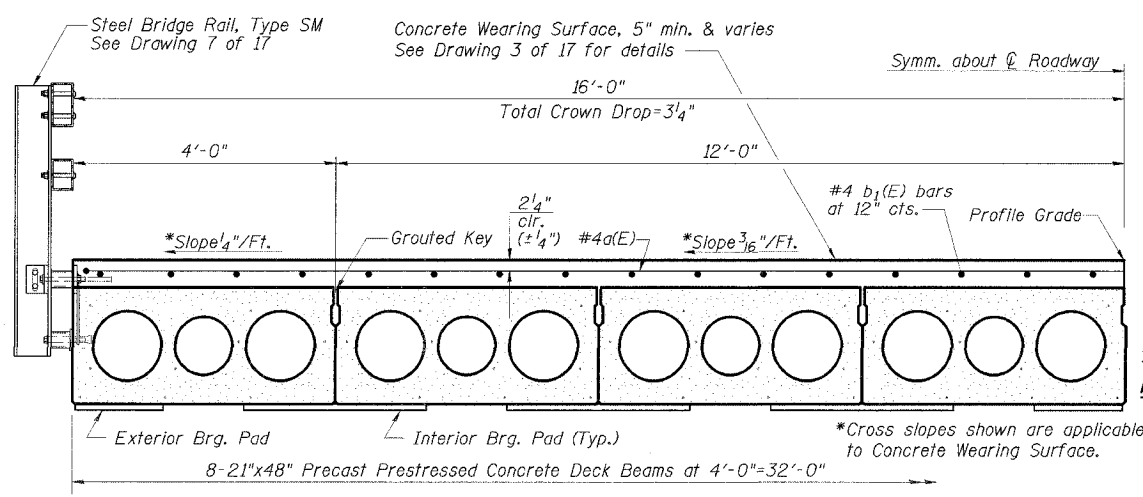
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, 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 17 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.



HALF CROSS SECTION

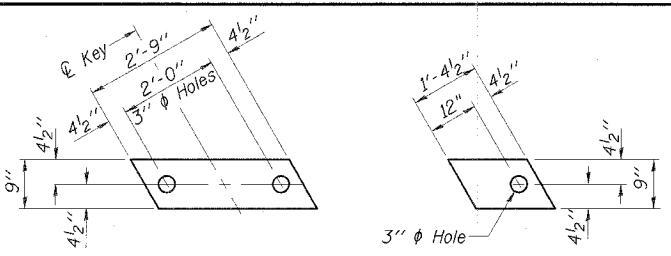
ESCA
CONSULTANTS, INC.

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

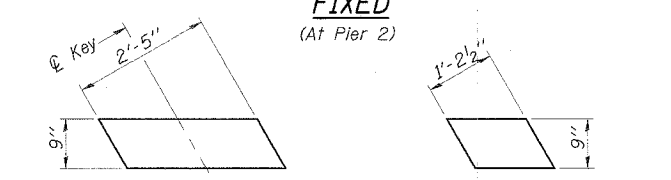
SPANS 1 & 4
SUPERSTRUCTURE DETAILS
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	*	MCLEAN	44	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2			DWG. NO. 5 OF 17	
CONTRACT NO. 66584				

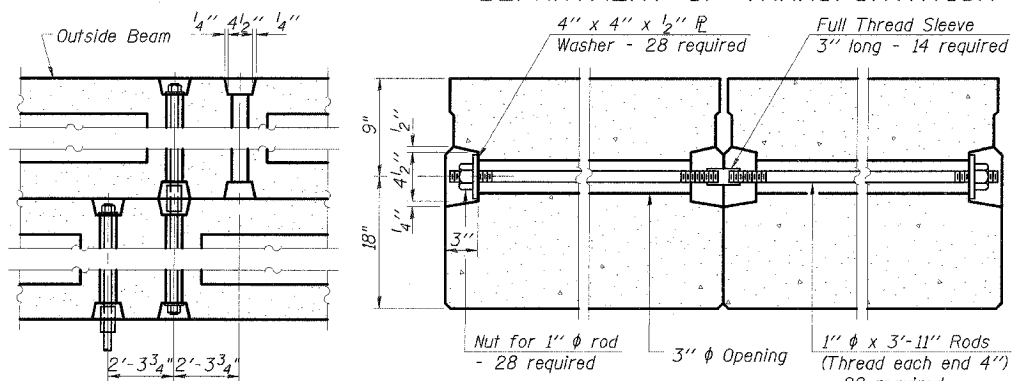


FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

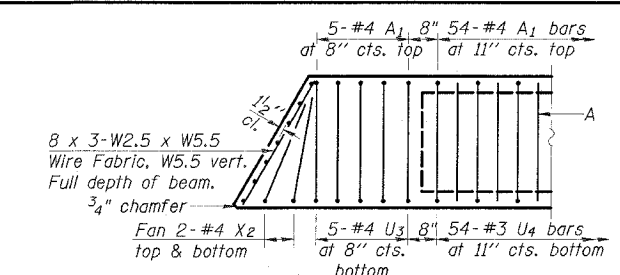


FABRIC BEARING PAD
(Interior) **FABRIC BEARING PAD**
(Exterior)

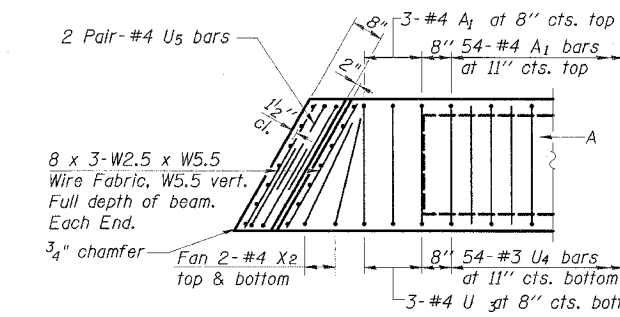
EXPANSION
(At Piers 1 & 3)



TYPICAL TRANSVERSE TIE ASSEMBLY

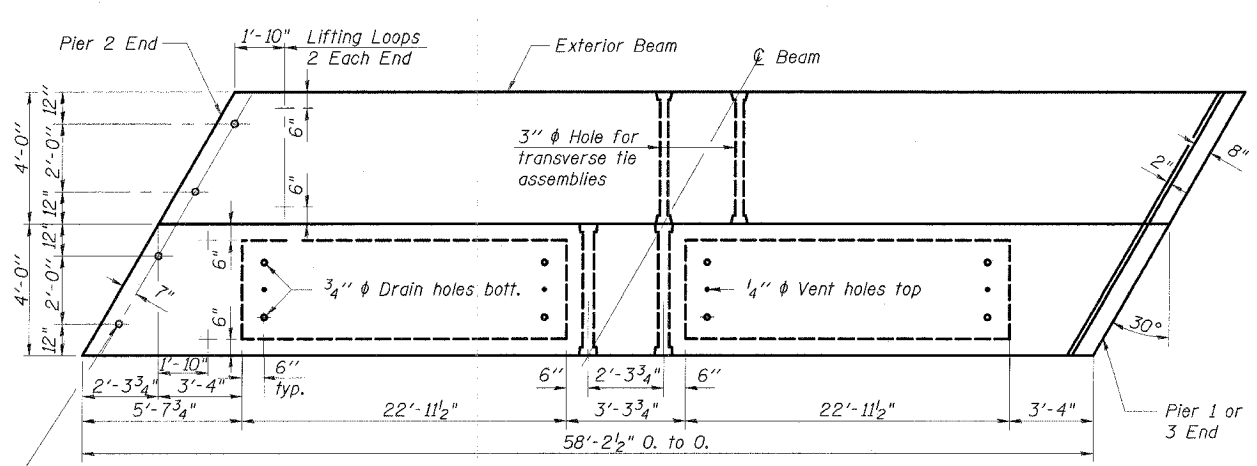


AT PIER 2

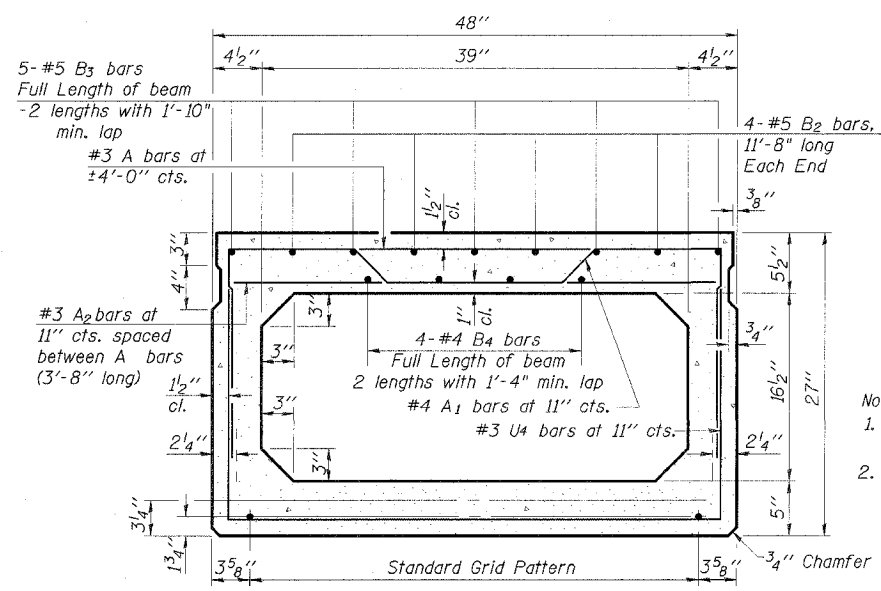


AT PIERS 1 & 3

END PLANS



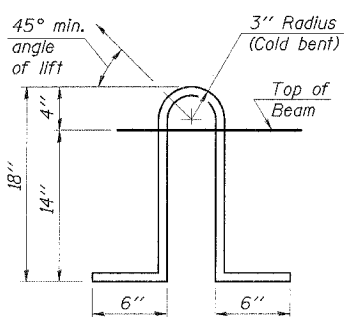
PLAN



TYPICAL SECTION-INTERIOR BEAMS

17-1/2 inch diameter Strands, Each Strand Stressed to 30,900 Lbs.
13-Strands 1 3/4 inch up, 4-Strands 3 1/4 inch up

- Notes:
1. Place strands symmetrically about centerline of beam.
 2. See Dwg. 6 of 17 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 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2 inch diameter #270 ksi strands, as shown. The 1 inch diameter 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.

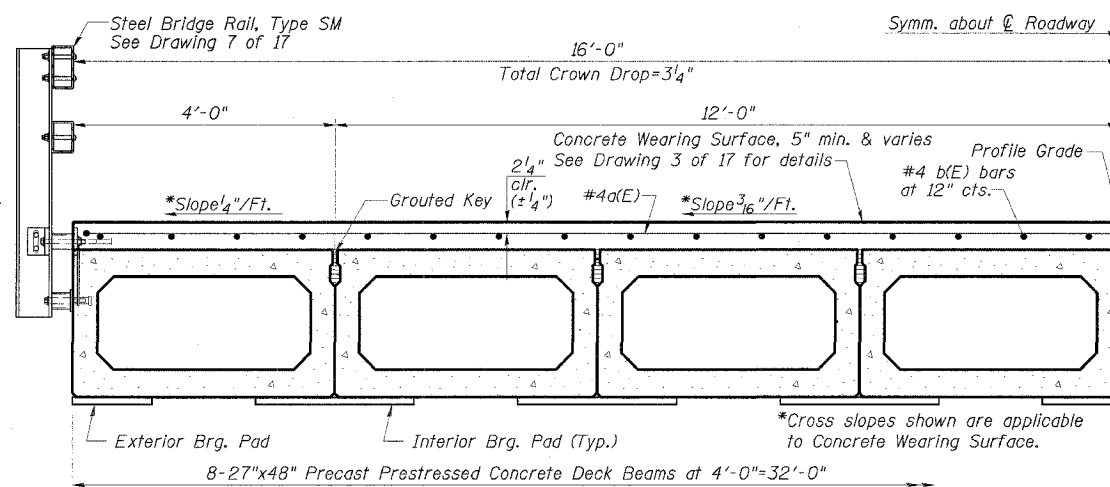
Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8 inch fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

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 17 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.



HALF CROSS SECTION

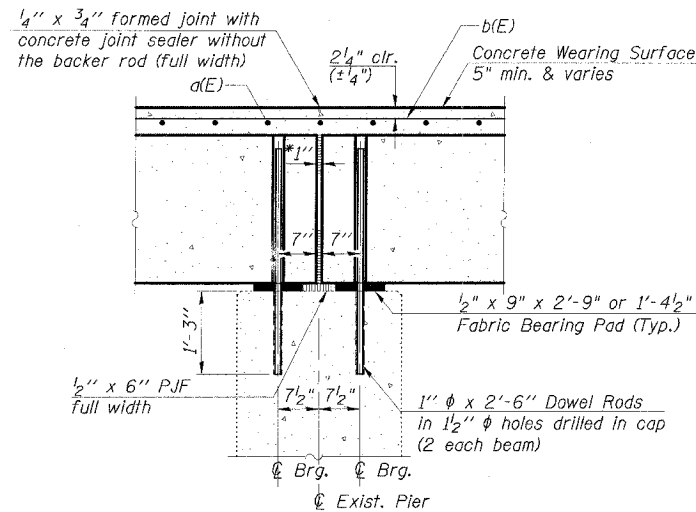
SPANS 2 & 3
SUPERSTRUCTURE DETAILS
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
MCLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

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 315	#	McLEAN	44	18
STA.	TO STA.			
FED. ROAD DIST. NO.	ALLIANCE	FED. AID PROJECT		
			102X-BR-2	
			DWG. NO.	6 OF 17
CONTRACT NO. 66584				

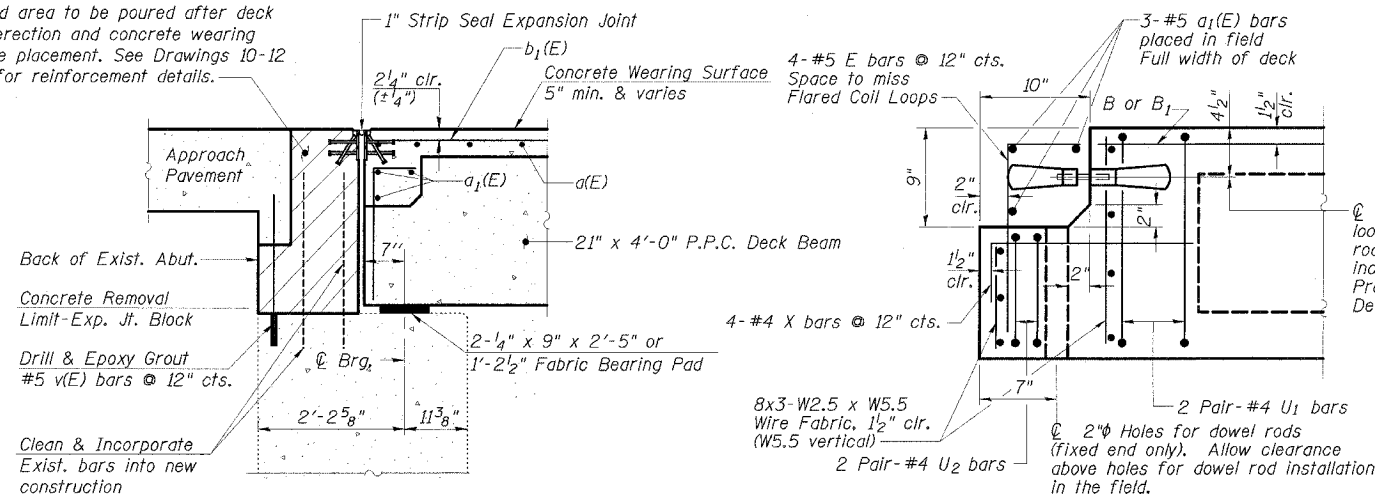


SECTION THRU PIER 2

(Horizontal dimensions are at right angles to beam ends)

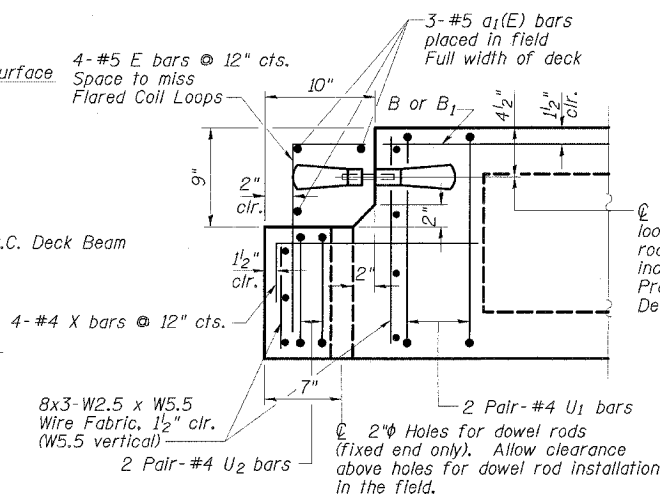
* 1" jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

Hatched area to be poured after deck beam erection and concrete wearing surface placement. See Drawings 10-12 of 17 for reinforcement details.



SECTION THRU ABUTMENT

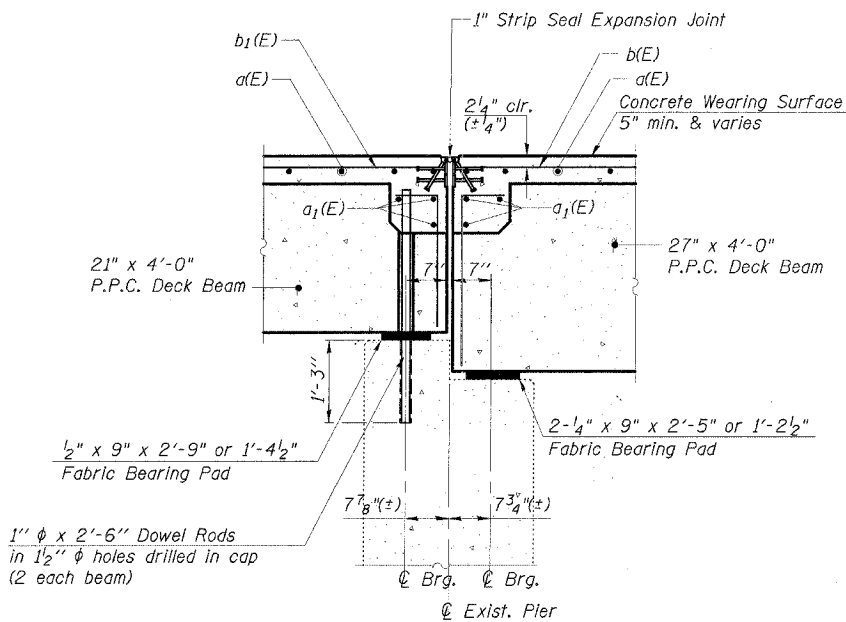
(Dimensions at right angles)



END OF 21" BEAM

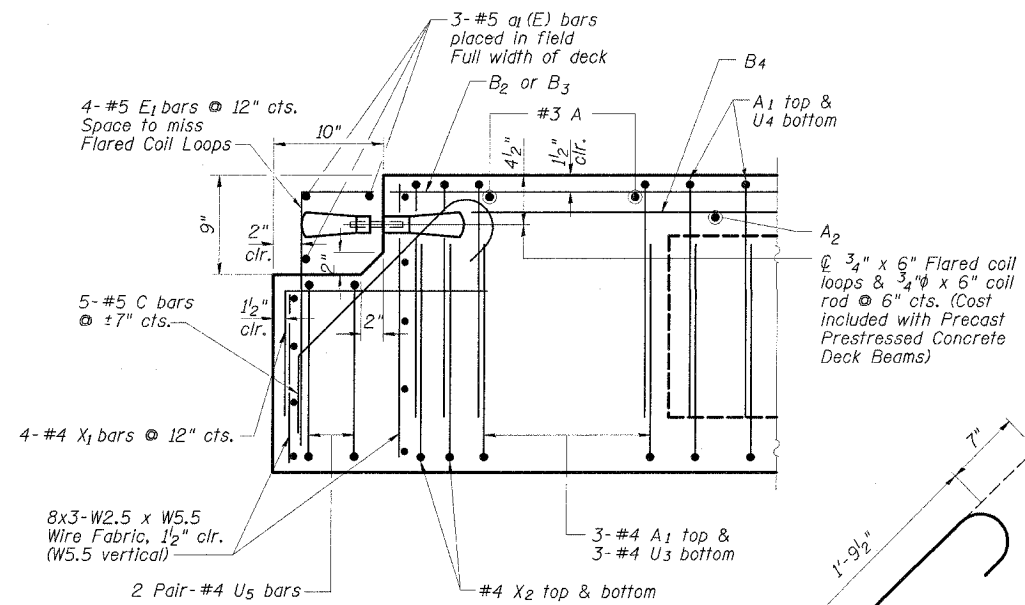
(Dimensions at right angles)

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.



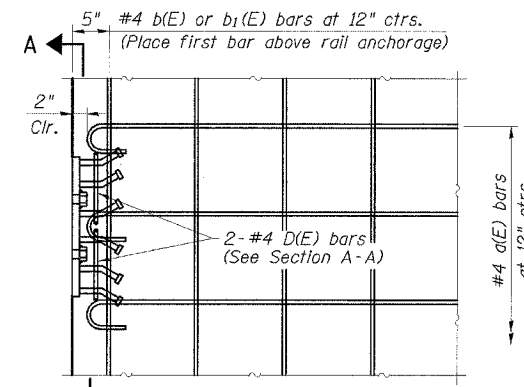
SECTION THRU PIERS 1 & 3

(Horizontal dimensions are at right angles to beam ends)

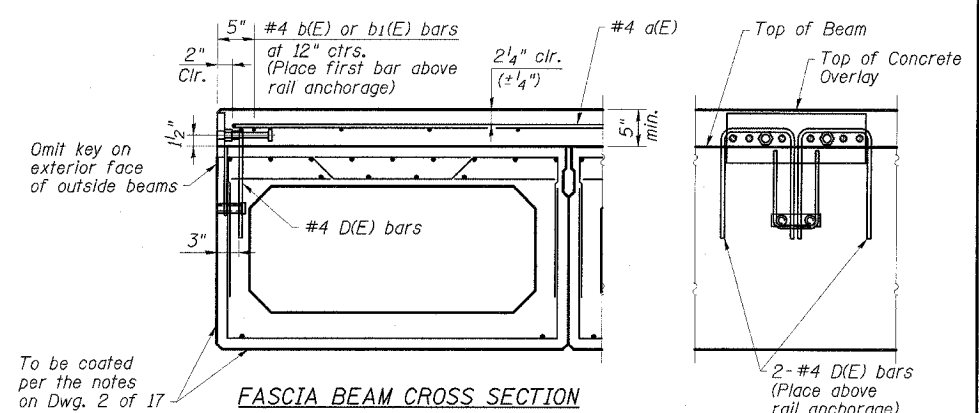


EXPANSION END OF 27" BEAM

(Dimensions at right angles)



PLAN VIEW

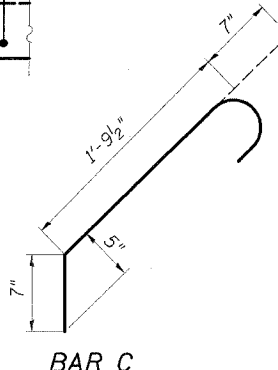


FASCIA BEAM CROSS SECTION

See Section Thru Interior Beams on Dwg. 4 & 5 of 17 for strand pattern, dimensions and bar call outs.

SECTION A-A

CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE
(27" Deck Beam shown; 21" Deck Beam similar)



BAR C

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.

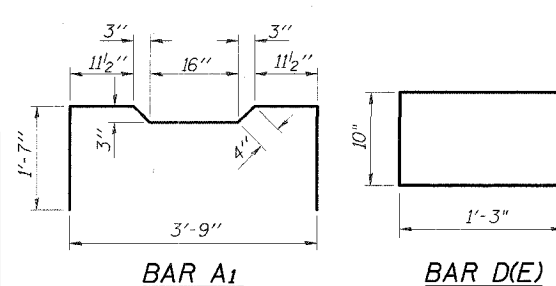
Concrete wearing surface to be poured after grouting the shear keys.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams.

SUPERSTRUCTURE DETAILS
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

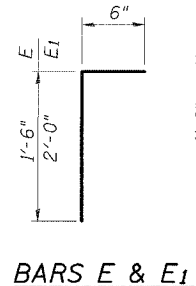
ESCA
CONSULTANTS, INC.

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

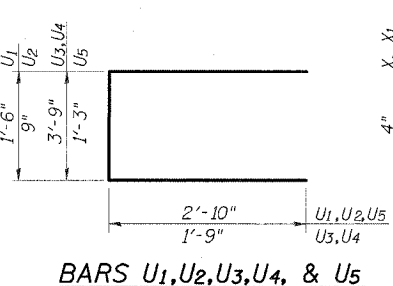


BAR A1

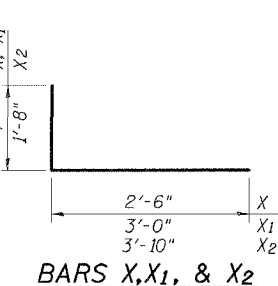
BAR D(E)



BARS E & E1



BARS U1, U2, U3, U4, & U5

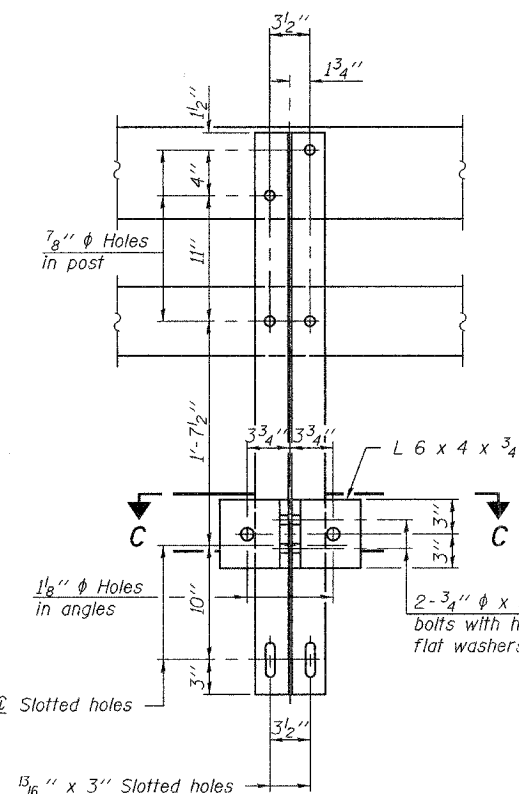
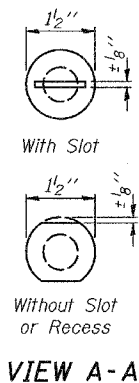
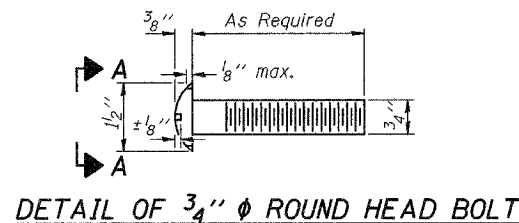


BARS X, X1, & X2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

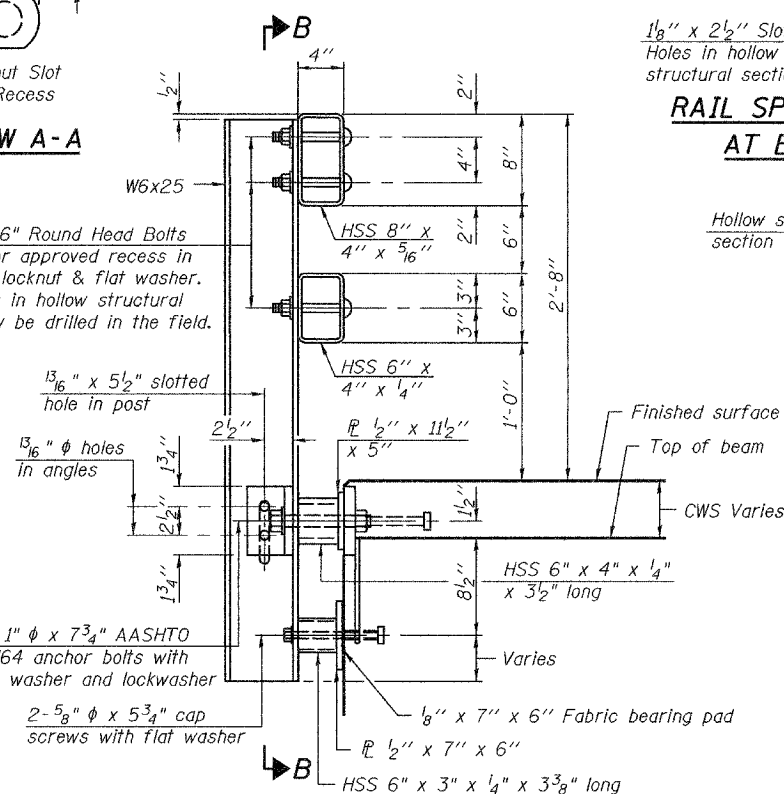
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315		McLEAN	44	19
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
102X-BR-2		DWG. NO. 7 OF 17		

CONTRACT NO. 66584

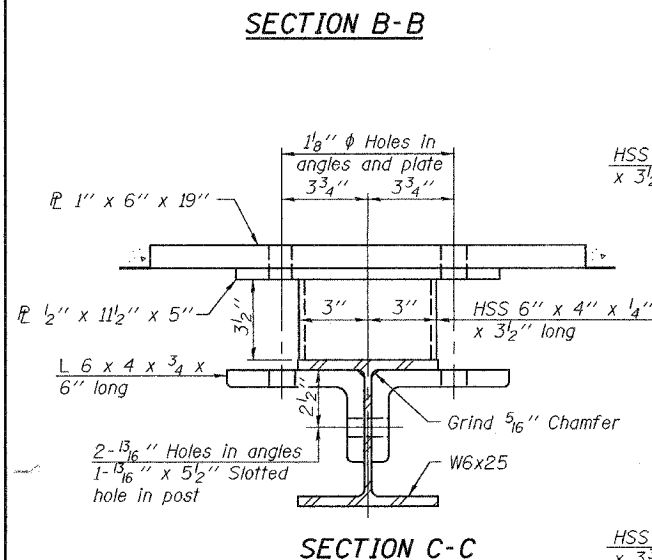


SECTION B-B

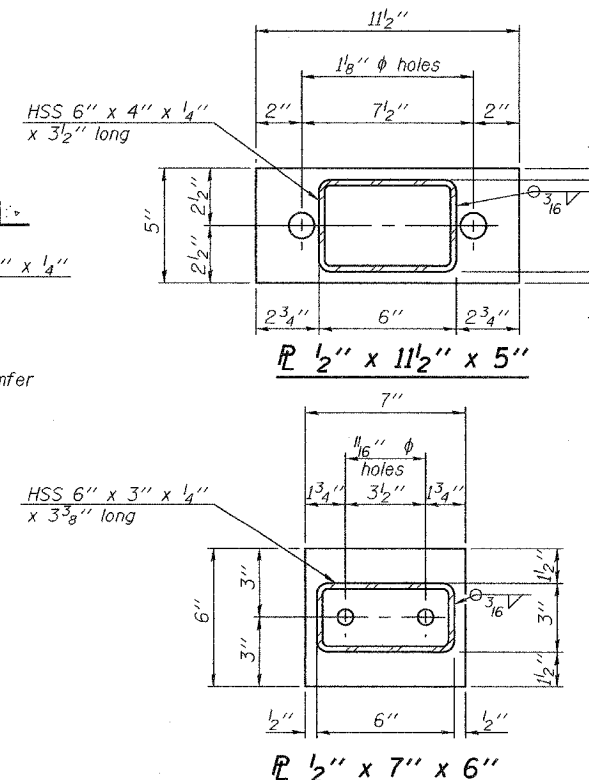
4-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.



SECTION AT RAIL POST

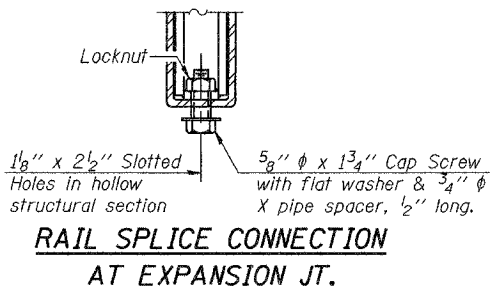


SECTION C-C

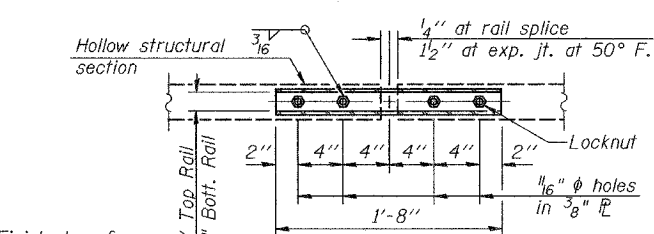


ANCHOR DEVICE

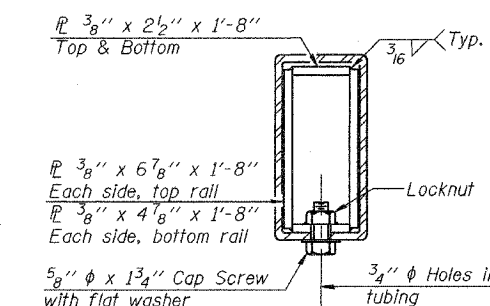
* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



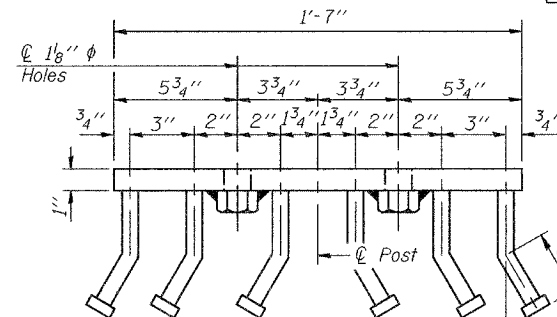
RAIL SPLICE CONNECTION AT EXPANSION JT.



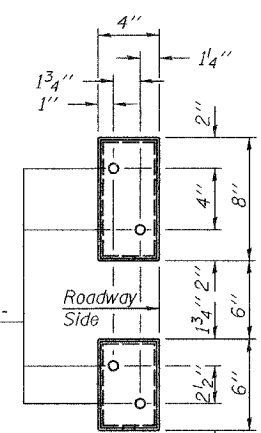
PLAN-BOTT. SPLICE P TYPICAL



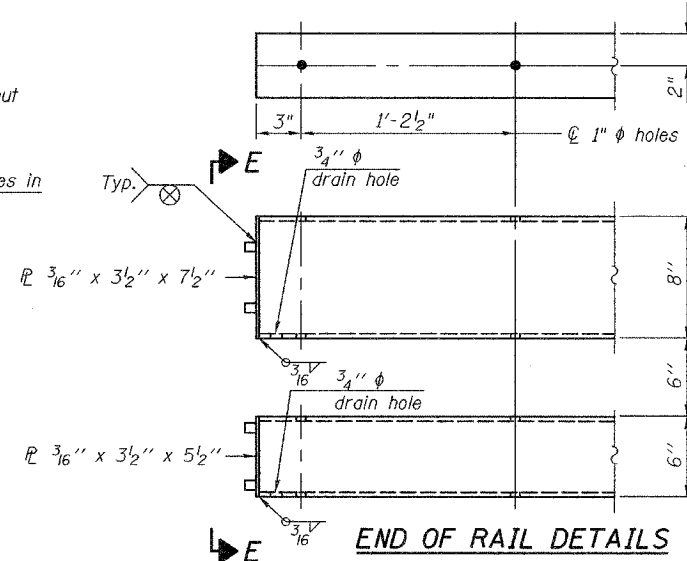
SECTION AT RAIL SPLICE



VIEW D-D



VIEW E-E



END OF RAIL DETAILS

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(FX2) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	424

TYPE SM
STEEL BRIDGE RAIL
US 136 OVER BRANCH OF SALT FORK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

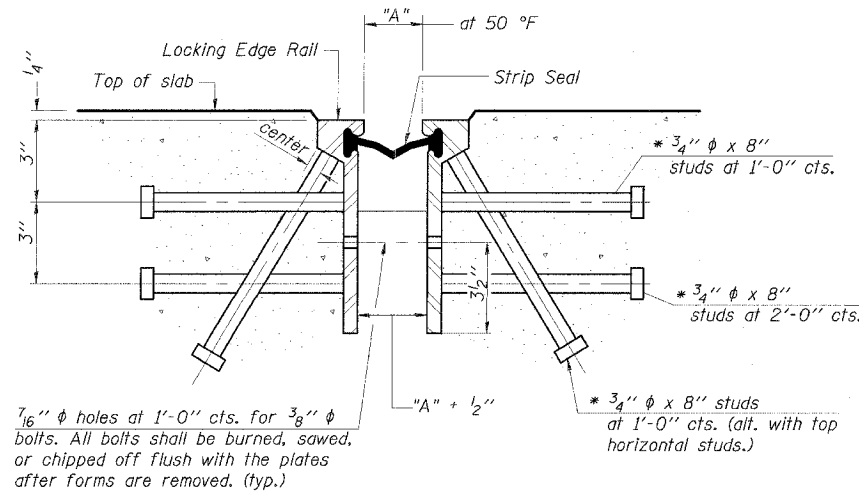
ESCA
CONSULTANTS, INC.

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

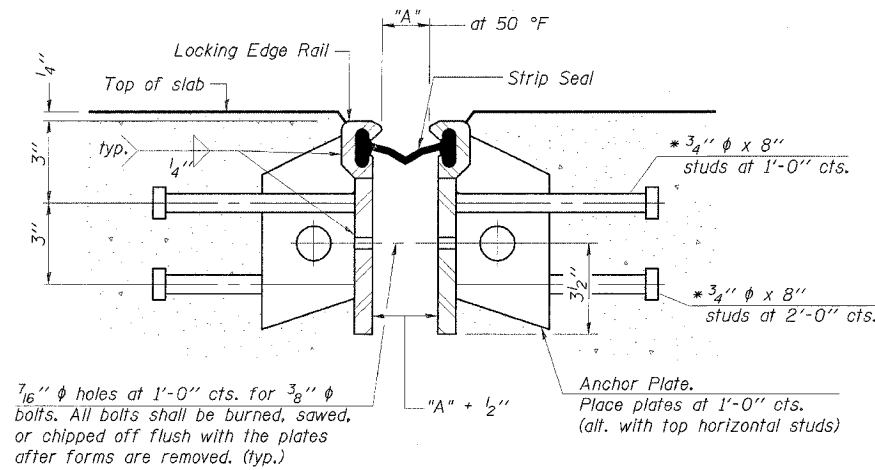
(6'-3" Maximum Post Spacing) (5" minimum to 7/8" maximum CWS thickness)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	#	MCLEAN	44	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*102X-BR-2	DWG. NO. 8 OF 17		CONTRACT NO. 66584	



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



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.

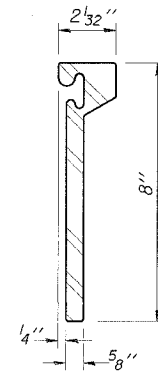
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

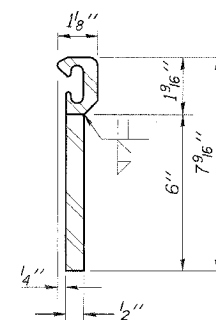
SECTION THRU ROLLED RAIL EXP. JOINT
(178 Studs Required at Each Joint)

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

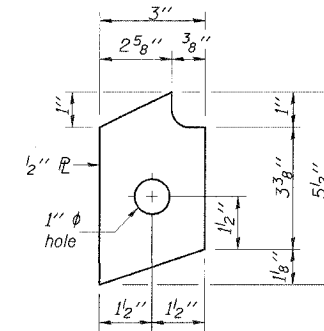
SECTION THRU WELDED RAIL AT EACH EXPANSION JOINT
(108 Studs Required at Each Joint)
(70 Anchor Plates Required at Each Joint)



ROLLED (EXTRUDED) RAIL

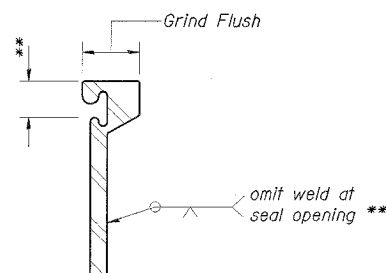


WELDED RAIL



ANCHOR PL
(for welded rail)

LOCKING EDGE RAILS



LOCKING EDGE RAIL SPLICE

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

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CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

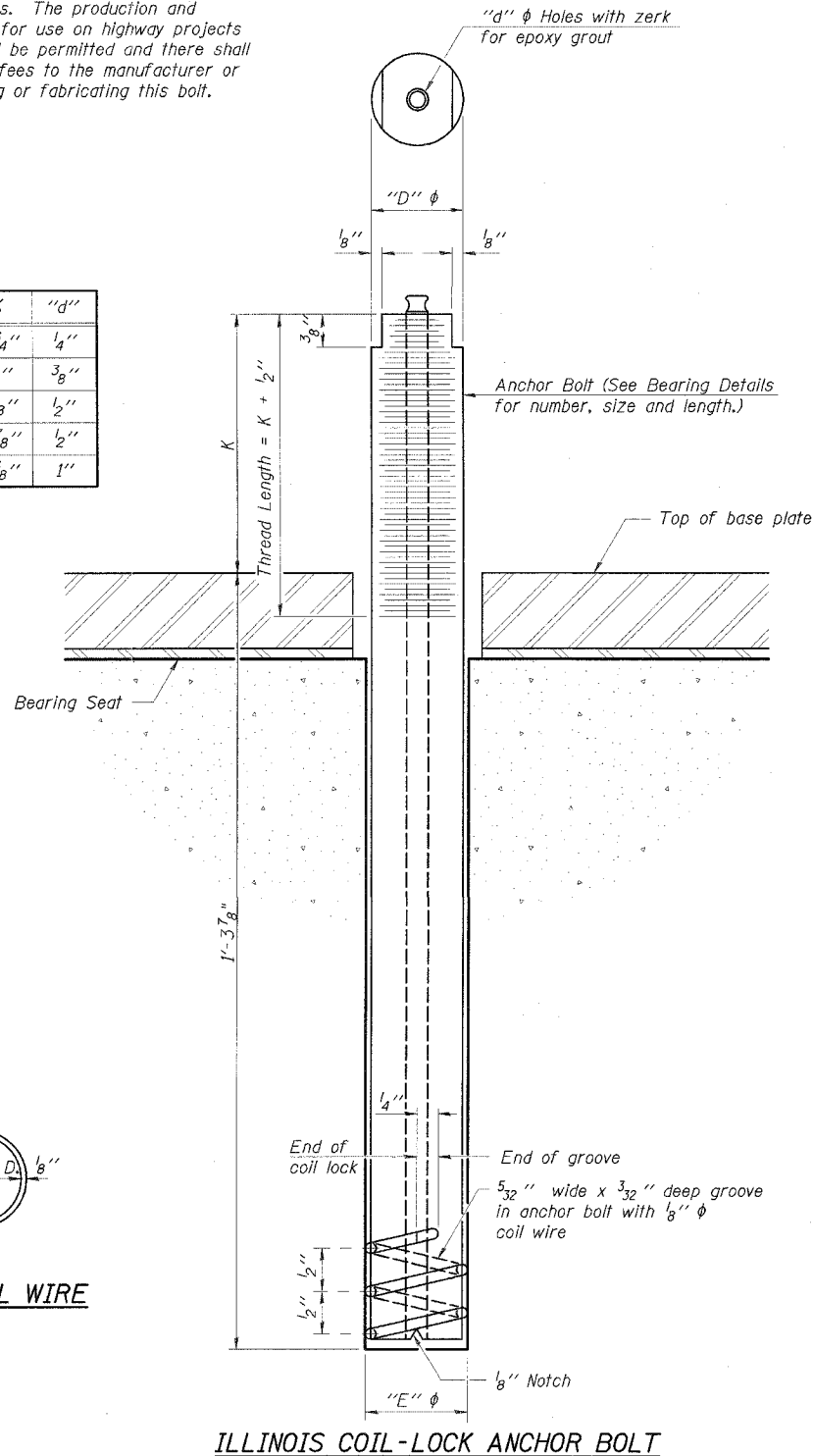
STRIP SEAL EXPANSION JOINT
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
MCLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	#	McLEAN	44	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2		DWG. NO. 9 OF 17		
CONTRACT NO. 66584				

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



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)
Pier 1	A-307 (Side Retainers)
Pier 3	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.

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CONSULTANTS, INC.

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

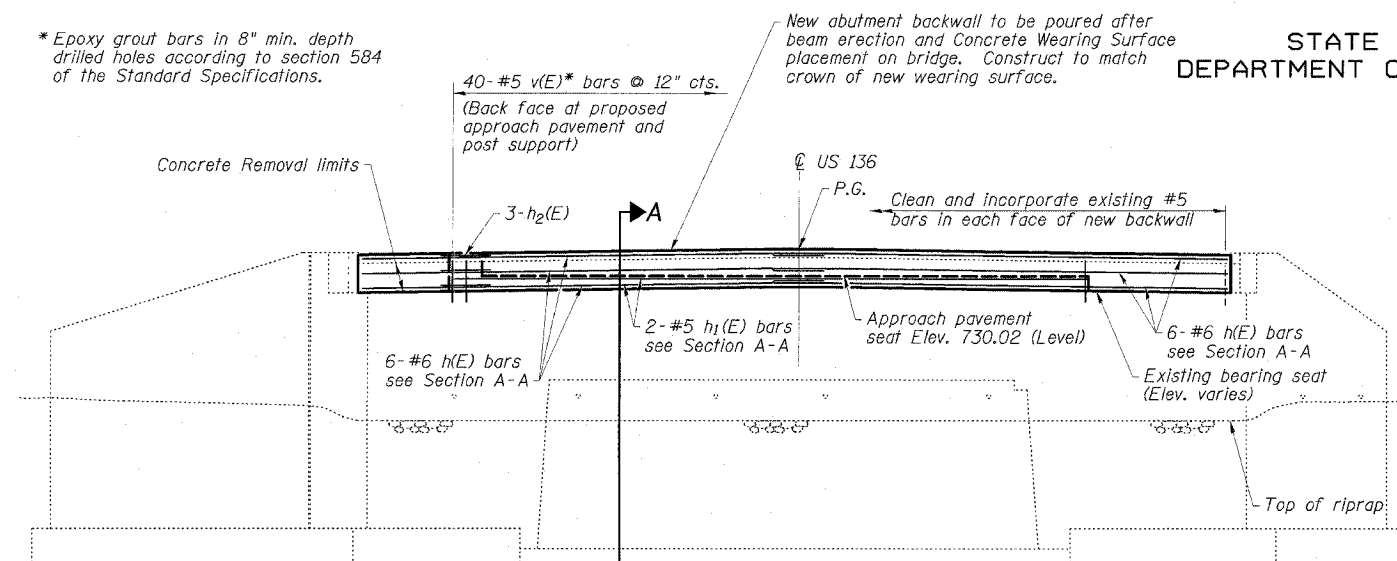
ANCHOR BOLT DETAILS
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

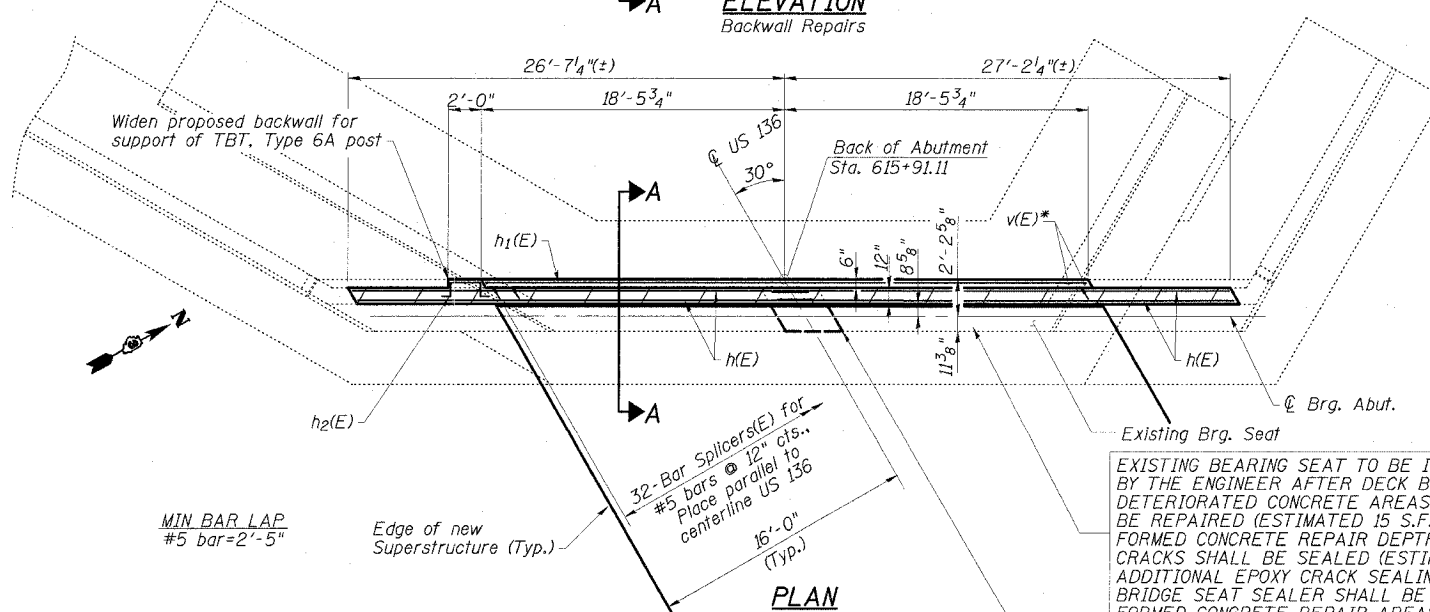
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315		McLEAN	44	22
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2		DWG. NO. 10 OF 17		

CONTRACT NO. 66584

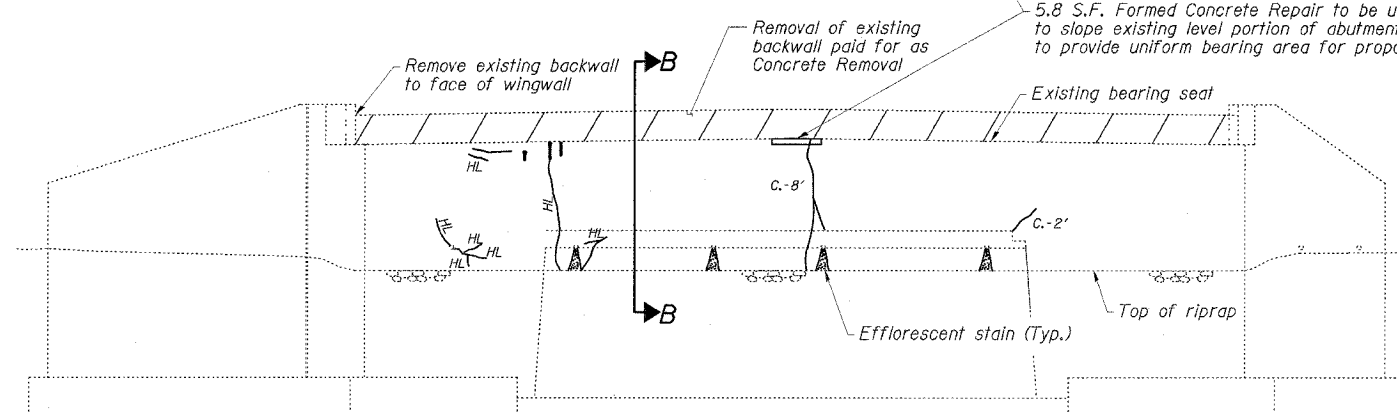
*Epoxy grout bars in 8" min. depth drilled holes according to section 584 of the Standard Specifications.



ELEVATION
Backwall Repairs

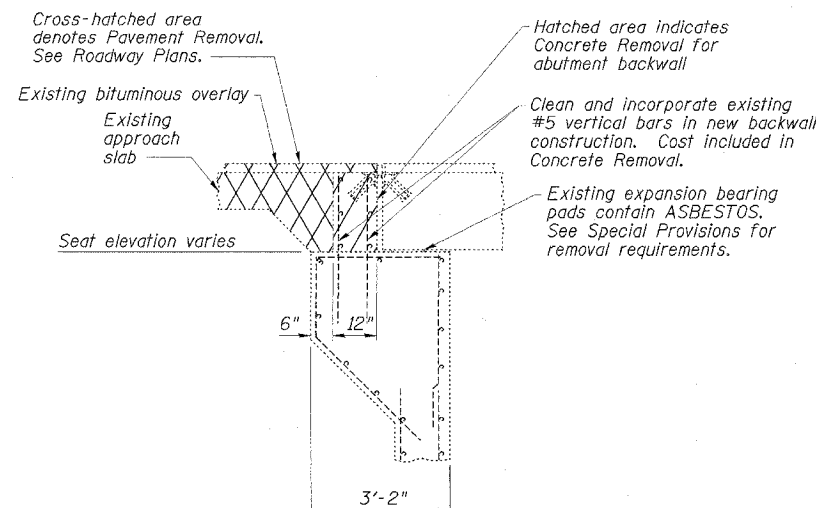


PLAN

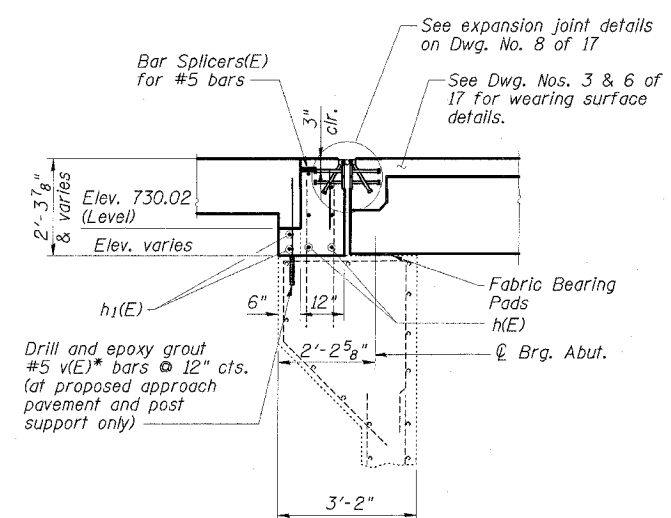


ELEVATION
Abutment and Wingwall Repairs

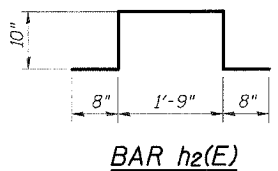
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 11-15-01 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.



SECTION B-B
EXISTING



SECTION A-A
PROPOSED



BAR h2(E)

WEST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	12	#6	27'-11"	—
h1(E)	2	#5	36'-6"	—
h2(E)	3	#5	4'-9"	┌┐
v (E)	40	#5	2'-6"	—
Concrete Removal			Cu. Yd.	3.6
Concrete Structures			Cu. Yd.	5.3
Reinforcement Bars, Epoxy Coated			Pound	700
Asbestos Bearing Pad Removal			Each	30
Bridge Seat Sealer			Sq. Ft.	21
Epoxy Crack Sealing			Foot	30
Formed Concrete Repair (Depth Equal to or Less Than 5")			Sq. Ft.	20.8
Bar Splicers			Each	32

REPAIR LEGEND

- Inspection Date: 11-15-01
- ▮ 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)
 - s.f. (diagonal lines) Delaminated Area — FORMED CONG. REPAIR
 - s.f. (cross-hatched) Spalled Area (Depth ≤ 5")

WEST ABUTMENT
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

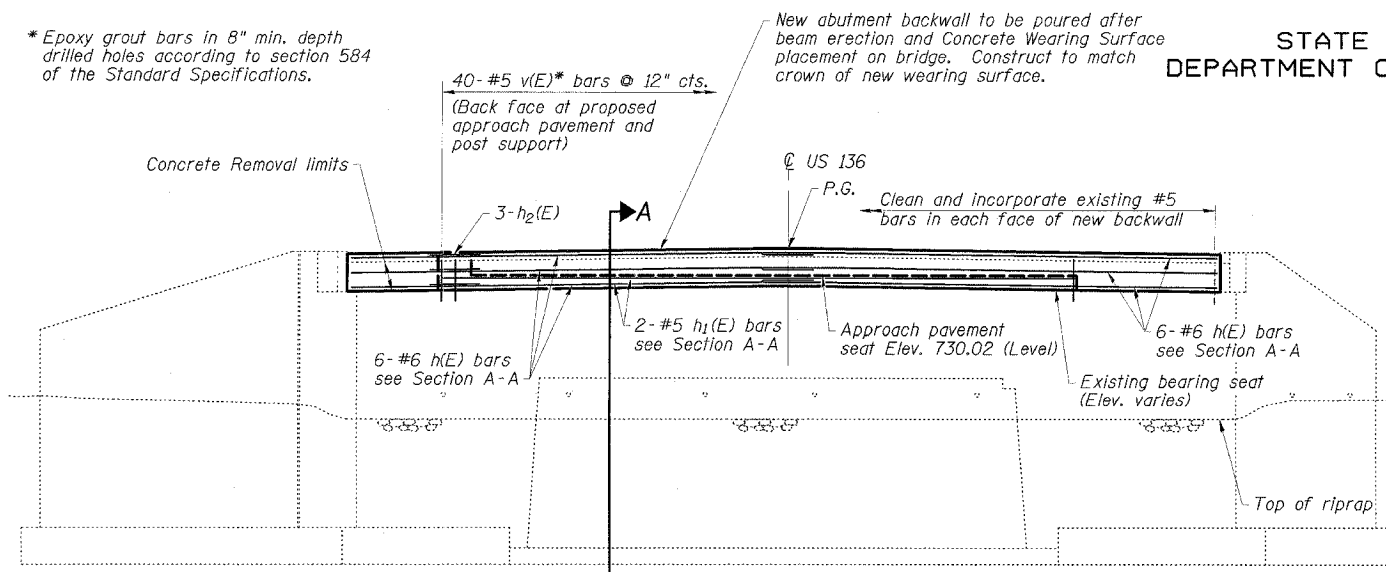
ESCA
CONSULTANTS, INC.

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

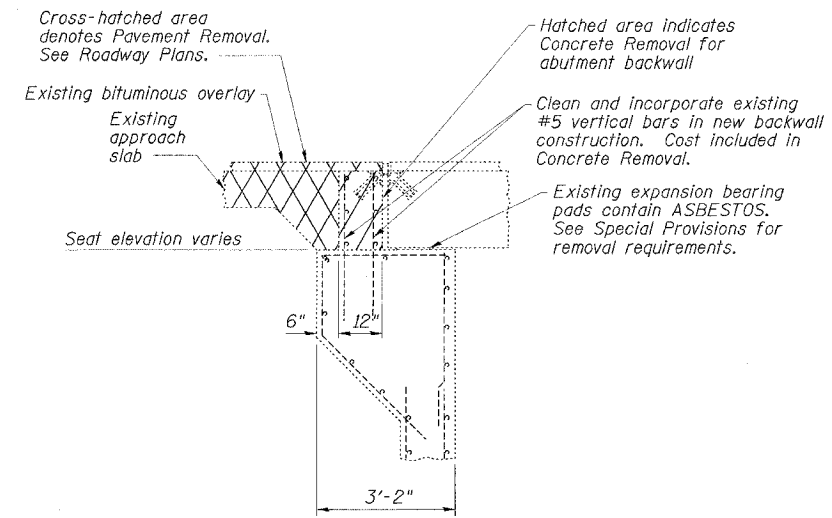
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315		McLEAN	44	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2		DWG. NO.	11	OF 17
CONTRACT NO. 66584				

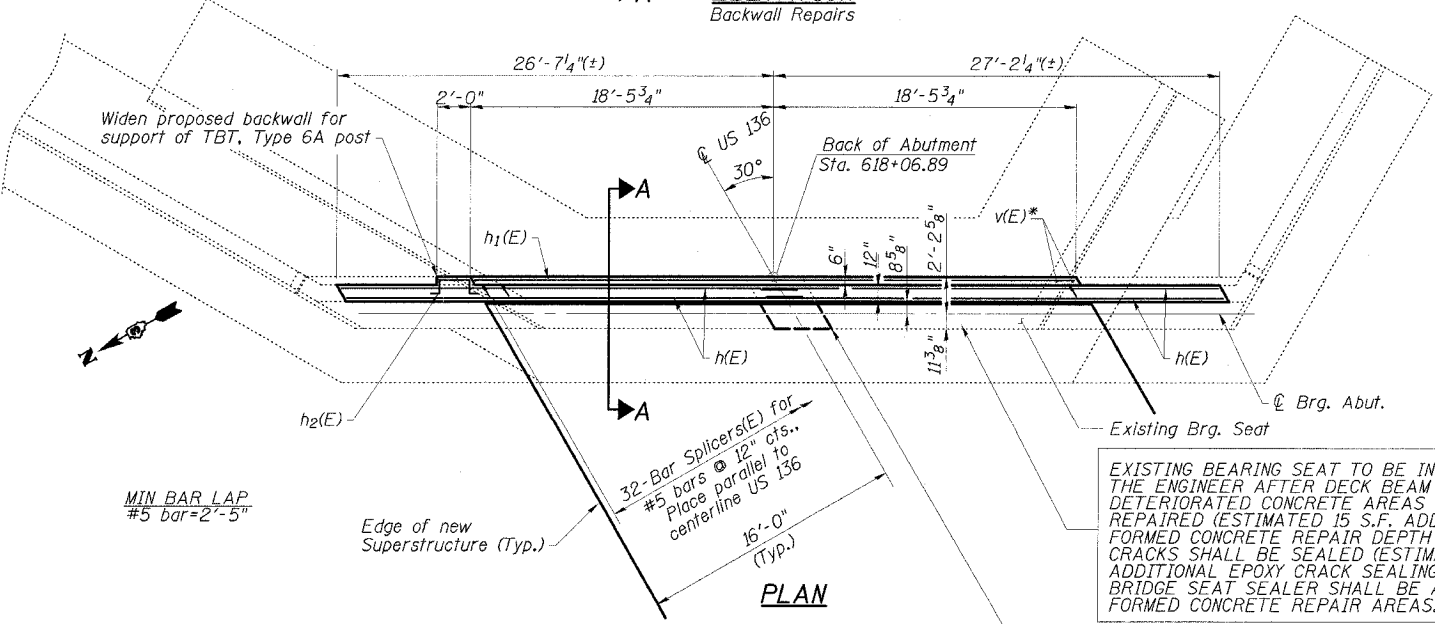
*Epoxy grout bars in 8" min. depth drilled holes according to section 584 of the Standard Specifications.



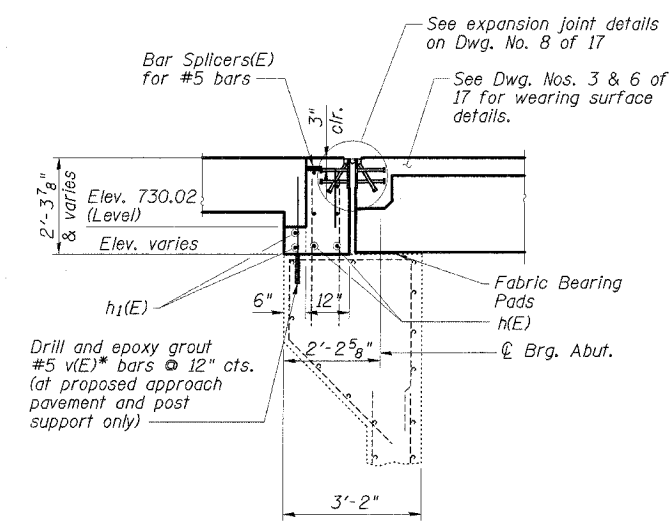
ELEVATION
Backwall Repairs



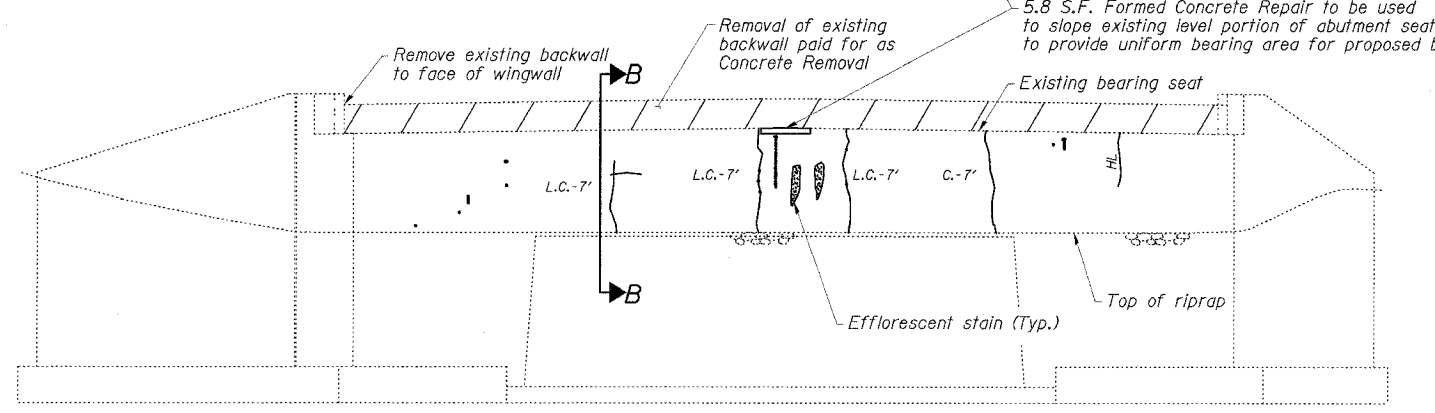
SECTION B-B
EXISTING



PLAN



SECTION A-A
PROPOSED



ELEVATION
Abutment and Wingwall Repairs

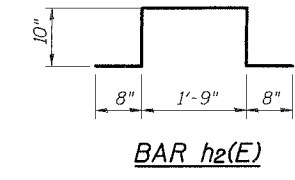
NOTE: ABUTMENT CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 11-15-01 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

EAST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h (E)	12	#6	27'-11"	—
h1(E)	2	#5	36'-6"	—
h2(E)	3	#5	4'-9"	┌
v (E)	40	#5	2'-6"	—
Concrete Removal			Cu. Yd.	3.6
Concrete Structures			Cu. Yd.	5.3
Reinforcement Bars, Epoxy Coated			Pound	700
Asbestos Bearing Pad Removal			Each	30
Bridge Seat Sealer			Sq. Ft.	21
Epoxy Crack Sealing			Foot	48
Formed Concrete Repair (Depth Equal to or Less Than 5")			Sq. Ft.	20.8
Bar Splicers			Each	32

REPAIR LEGEND

- Inspection Date: 11-15-01
- ▮ 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



BAR h2(E)

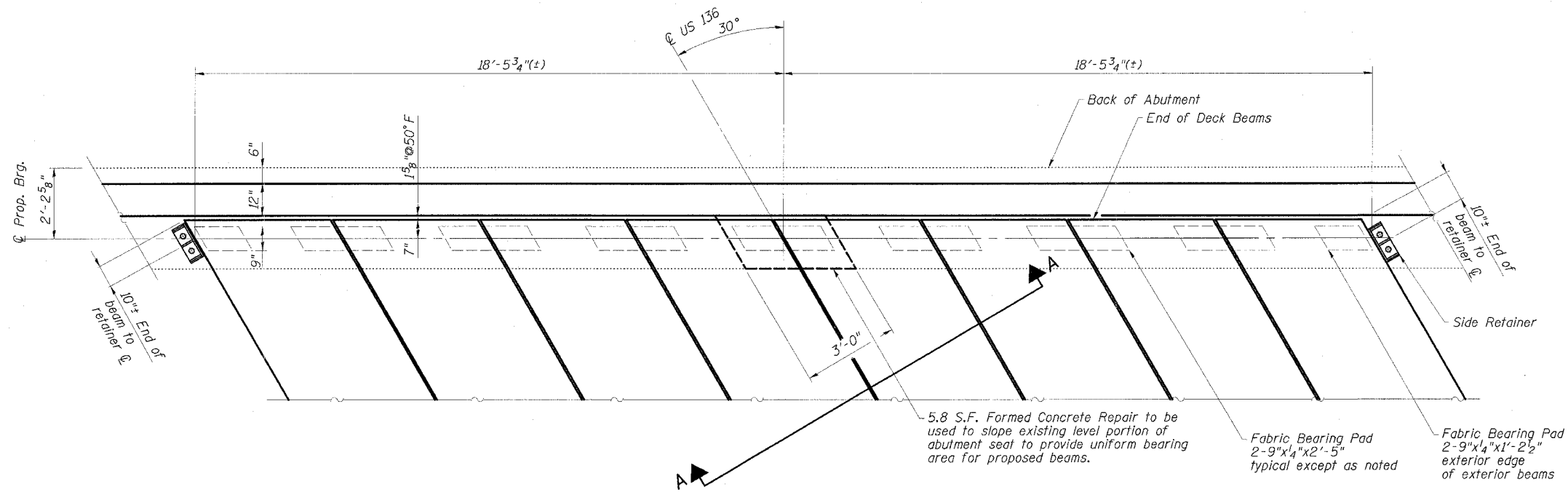
EAST ABUTMENT
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

ESCA
CONSULTANTS, INC.

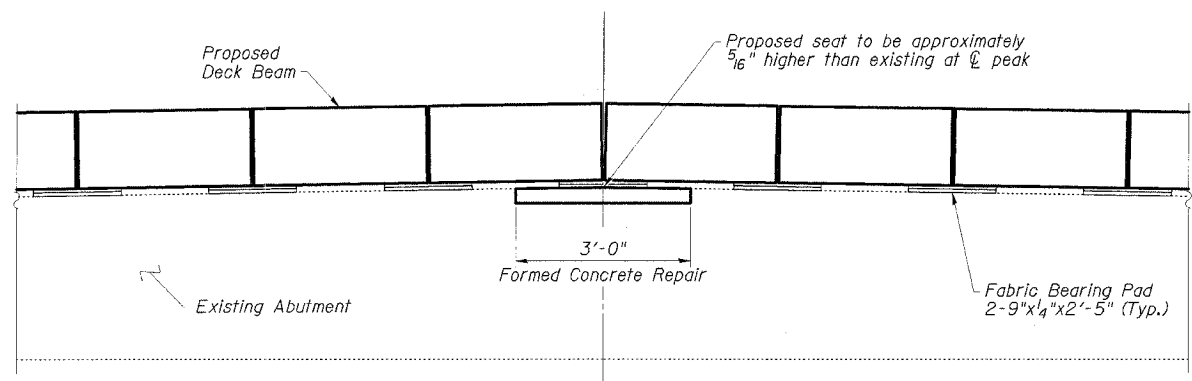
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	10/05
APPROVED BY:	RDP	10/05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

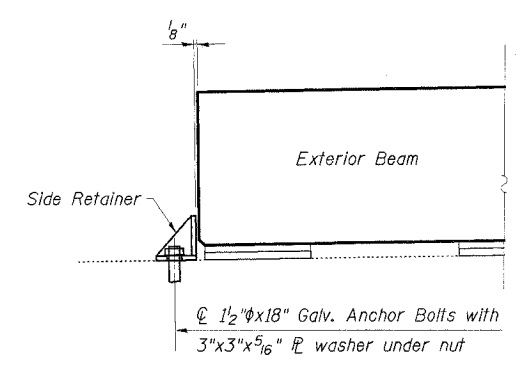
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	•	McLEAN	44	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT-	
*102X-BR-2	DWG. NO. 12		OF 17	
CONTRACT NO. 66584				



ABUTMENT BEARING SEAT PLAN
(Concrete wearing surface, expansion joint, backwall widening, and approach pavement not shown)

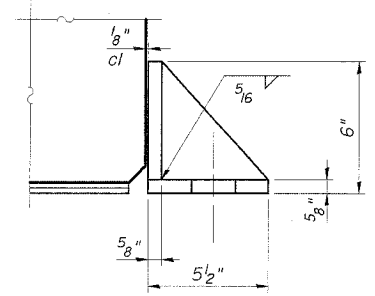
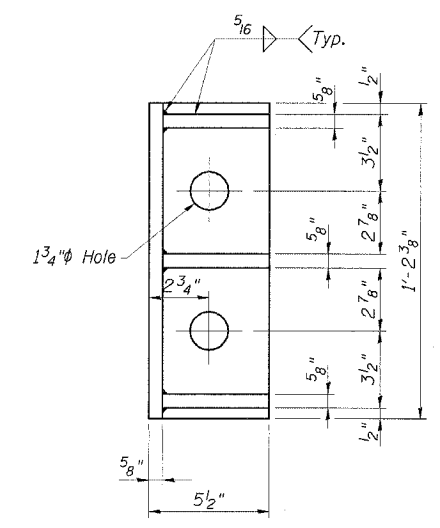


SECTION A-A
(Concrete wearing surface not shown)



EXTERIOR BEAM RETAINER DETAILS
(8 Required)

Cost of Retainer Angles, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams.
Fill 1/8" gap with shim R 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
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

ESCA
CONSULTANTS, INC.

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

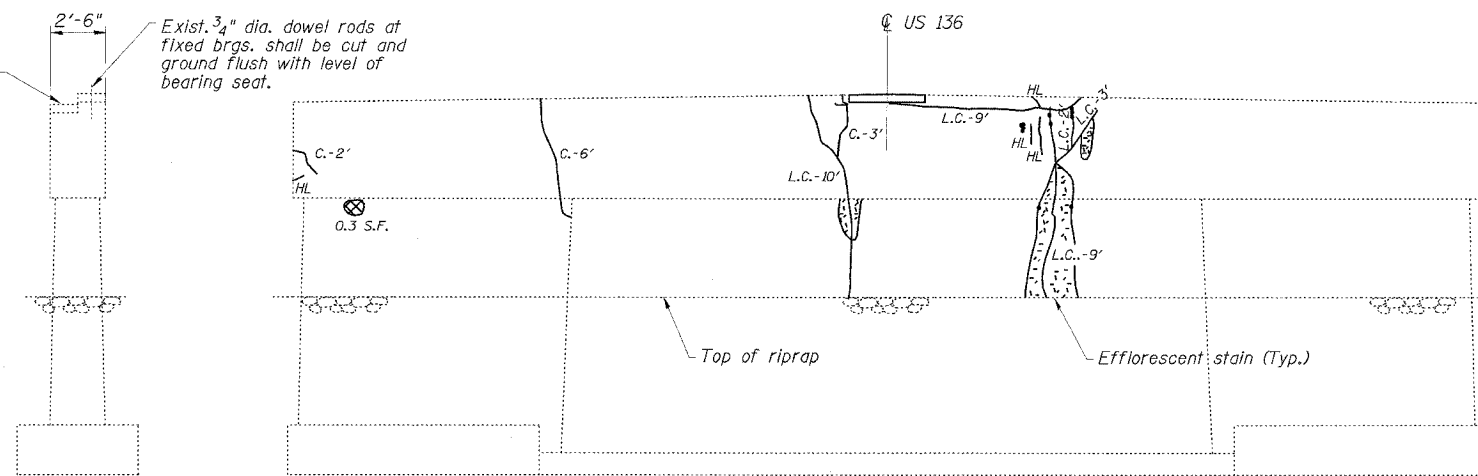
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	#	McLEAN	44	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*102X-BR-2		DWG. NO. 13 OF 17		

CONTRACT NO. 66584

Exist. expansion bearing pads contain ASBESTOS. See Special Provisions for removal requirements.

Exist. 3/4" dia. dowel rods at fixed brgs. shall be cut and ground flush with level of bearing seat.



NORTH END

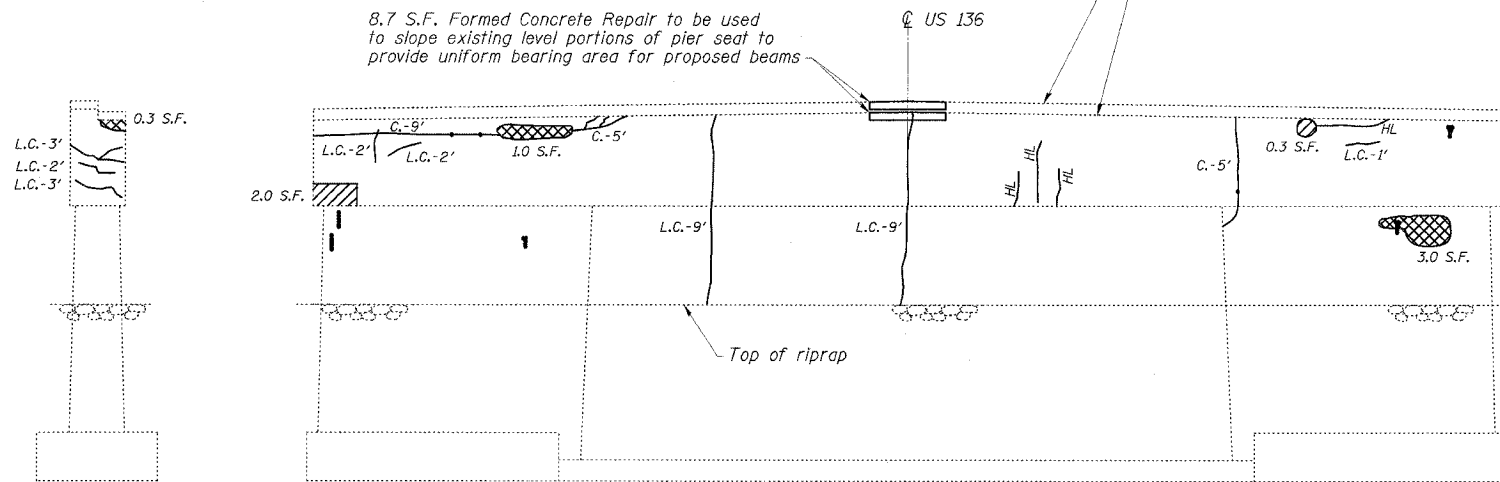
WEST ELEVATION

PIER 1
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Asbestos Bearing Pad Removal	Each	30
Bridge Seat Sealer	Sq. Ft.	24
Epoxy Crack Sealing	Foot	114
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	30.6

EXISTING BEARING SEATS 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. BRIDGE SEAT SEALER SHALL BE APPLIED TO FORMED CONCRETE REPAIR AREAS

8.7 S.F. Formed Concrete Repair to be used to slope existing level portions of pier seat to provide uniform bearing area for proposed beams



SOUTH END

EAST ELEVATION

REPAIR LEGEND

Inspection Date: 11-15-01

- † 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. (Diagonal Hatching) Delaminated Area — FORMED CONC. REPAIR
- S.F. (Cross-hatching) Spalled Area (Depth ≤ 5") — FORMED CONC. REPAIR

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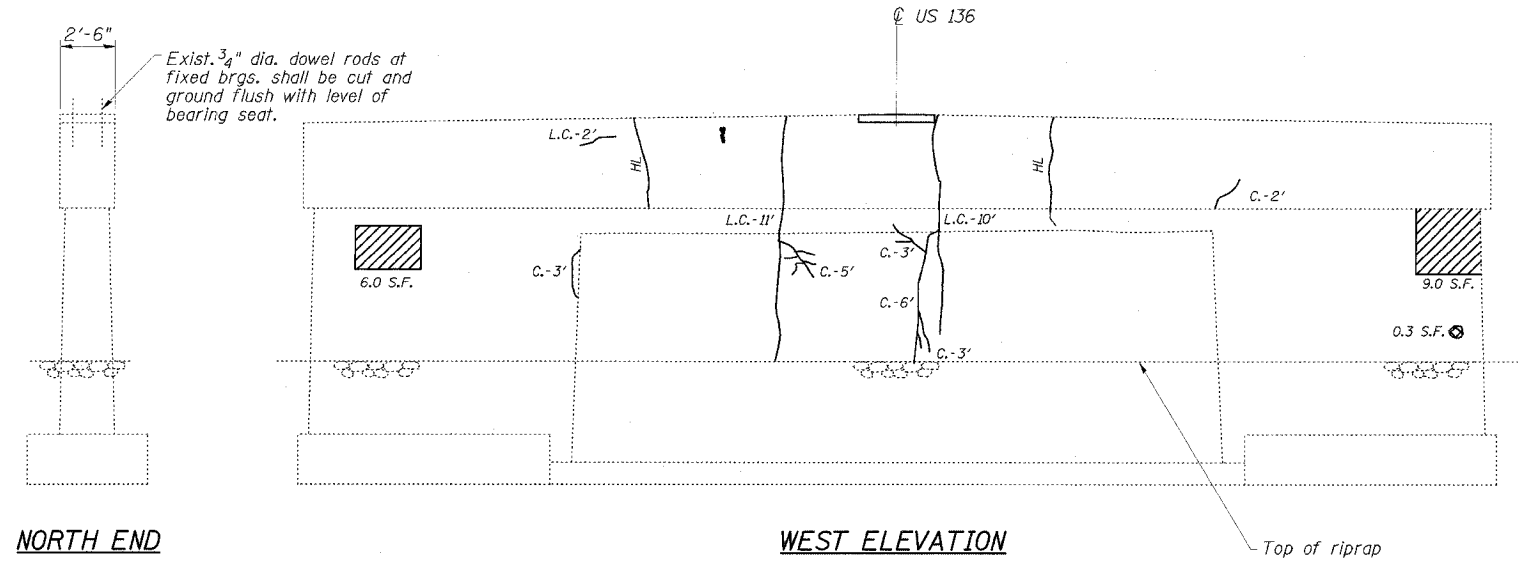
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 11-15-01 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

PIER 1
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	*	McLEAN	44	26
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2	DWG. NO. 14 OF 17			
CONTRACT NO. 66584				



NORTH END

WEST ELEVATION

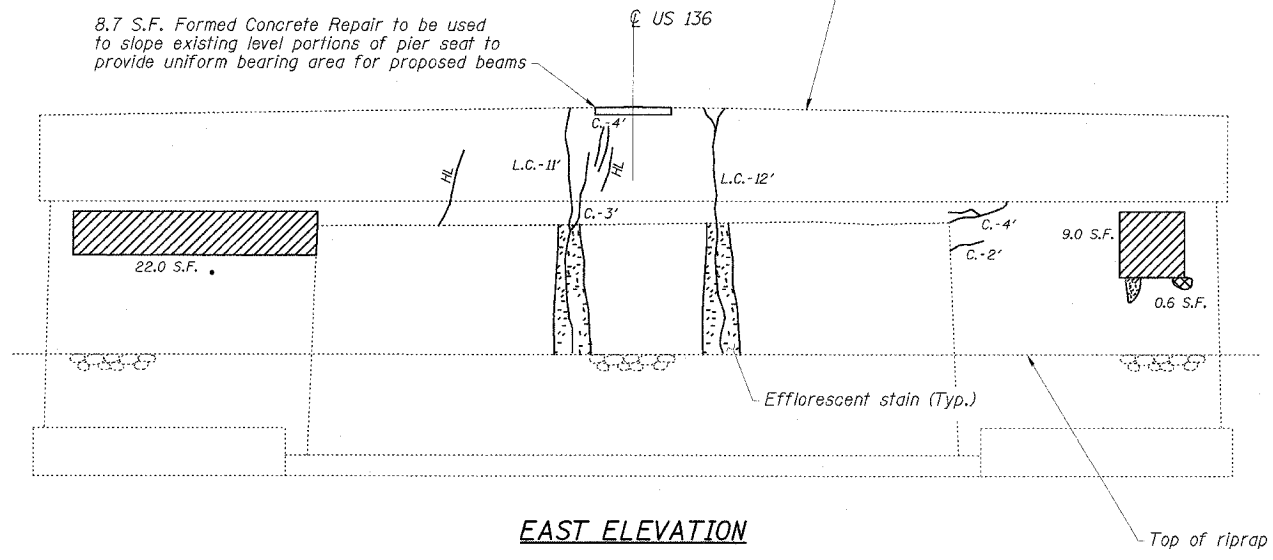
Top of riprap

PIER 2
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Epoxy Crack Sealing	Foot	106
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	70.6

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.

8.7 S.F. Formed Concrete Repair to be used to slope existing level portions of pier seat to provide uniform bearing area for proposed beams



SOUTH END

EAST ELEVATION

Top of riprap

REPAIR LEGEND

Inspection Date: 11-15-01

- Rust Stained Area
- Moisture Stained or Leached Area
- Hairline Crack - Not to be Sealed
- Crack (> 1/16" Width) EPOXY CRACK SEALING
- Leached Crack (> 1/16" Width) EPOXY CRACK SEALING
- Delaminated Area FORMED CONC. REPAIR
- 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 11-15-01 SURVEY WORK. ACTUAL LOCATIONS AND QUANTITIES OF REPAIRS SHALL BE SHOWN BY THE ENGINEER ON THE AS-BUILT PLANS FOR THIS SECTION.

PIER 2
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	*	McLEAN	44	27
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2	DWG. NO.	15	OF 17	

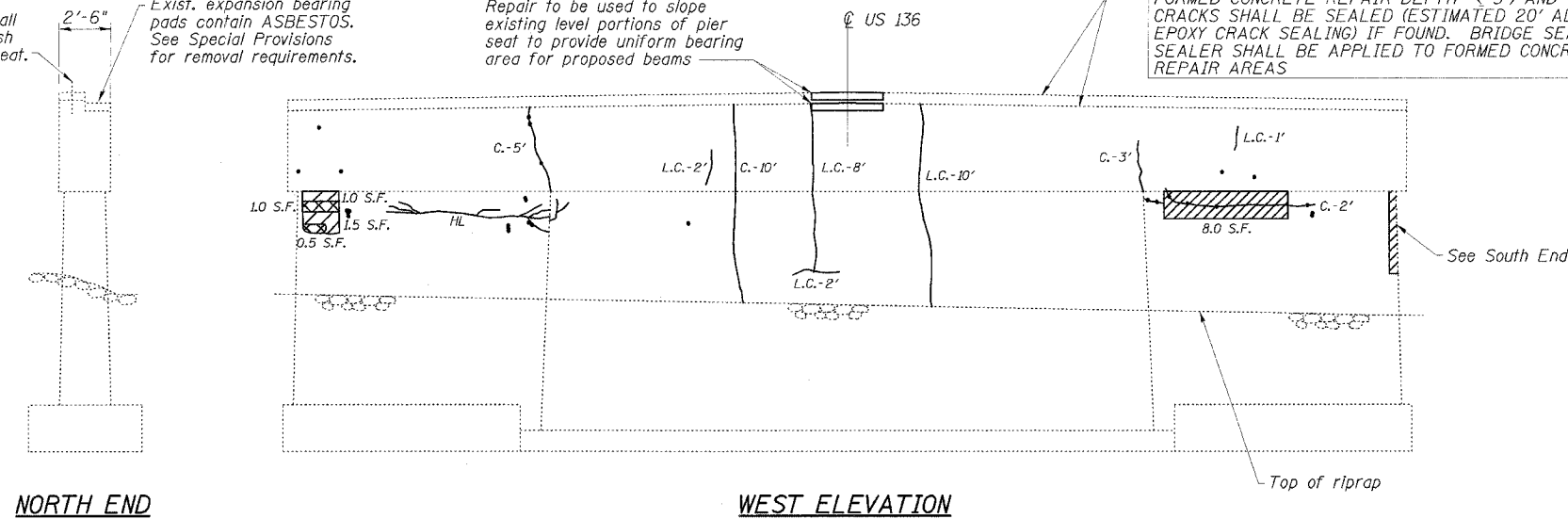
CONTRACT NO. 66584

Exist. 3/4" dia. dowel rods at fixed brgs. shall be cut and ground flush with level of bearing seat.

Exist. expansion bearing pads contain ASBESTOS. See Special Provisions for removal requirements.

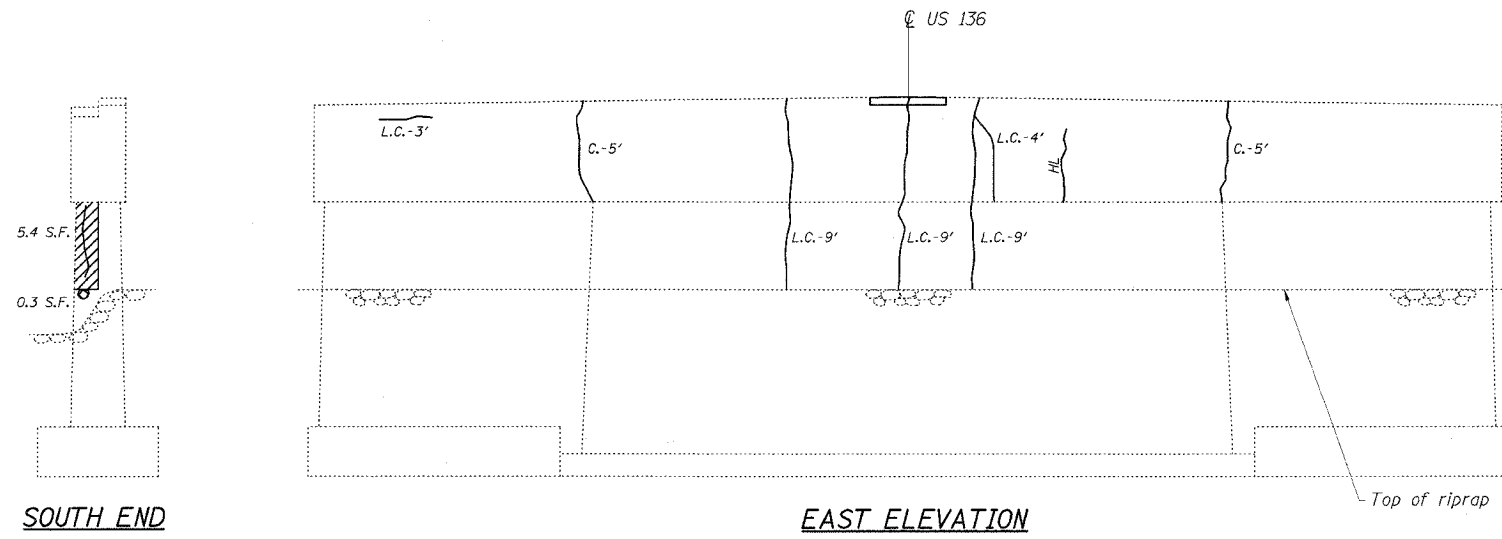
8.7 S.F. Formed Concrete Repair to be used to slope existing level portions of pier seat to provide uniform bearing area for proposed beams

EXISTING BEARING SEATS 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. BRIDGE SEAT SEALER SHALL BE APPLIED TO FORMED CONCRETE REPAIR AREAS



NORTH END

WEST ELEVATION



SOUTH END

EAST ELEVATION

PIER 3
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Asbestos Bearing Pad Removal	Each	30
Bridge Seat Sealer	Sq. Ft.	24
Epoxy Crack Sealing	Foot	107
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq. Ft.	41.4

REPAIR LEGEND

Inspection Date: 11-15-01

- ▮ 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. (Diagonal Hatching) Delaminated Area FORMED CONG. REPAIR
- S.F. (Cross-hatching) Spalled Area (Depth ≤ 5") FORMED CONG. REPAIR

NOTE: PIER CRACK REPAIR LENGTHS AND FORMED CONCRETE REPAIR AREAS ARE ESTIMATED FROM 11-15-01 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.

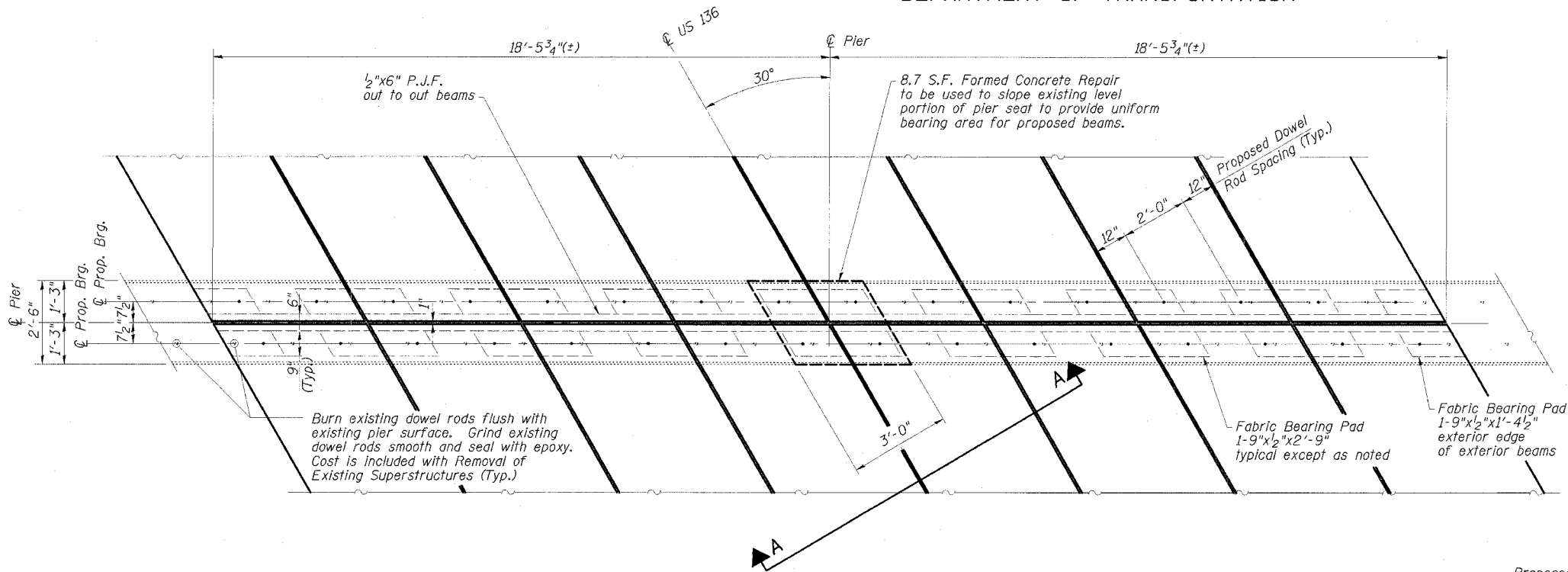
DESIGNED BY:	ELH	6/05
DRAWN BY:	DWH	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

PIER 3
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

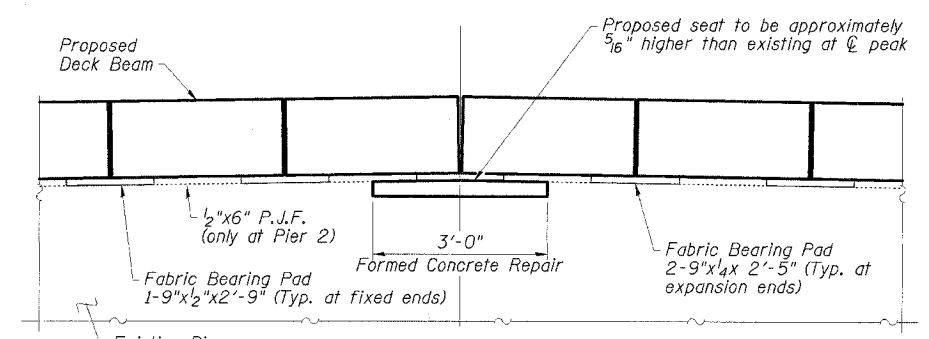
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315		McLEAN	44	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2	DWG. NO.	16	OF 17	

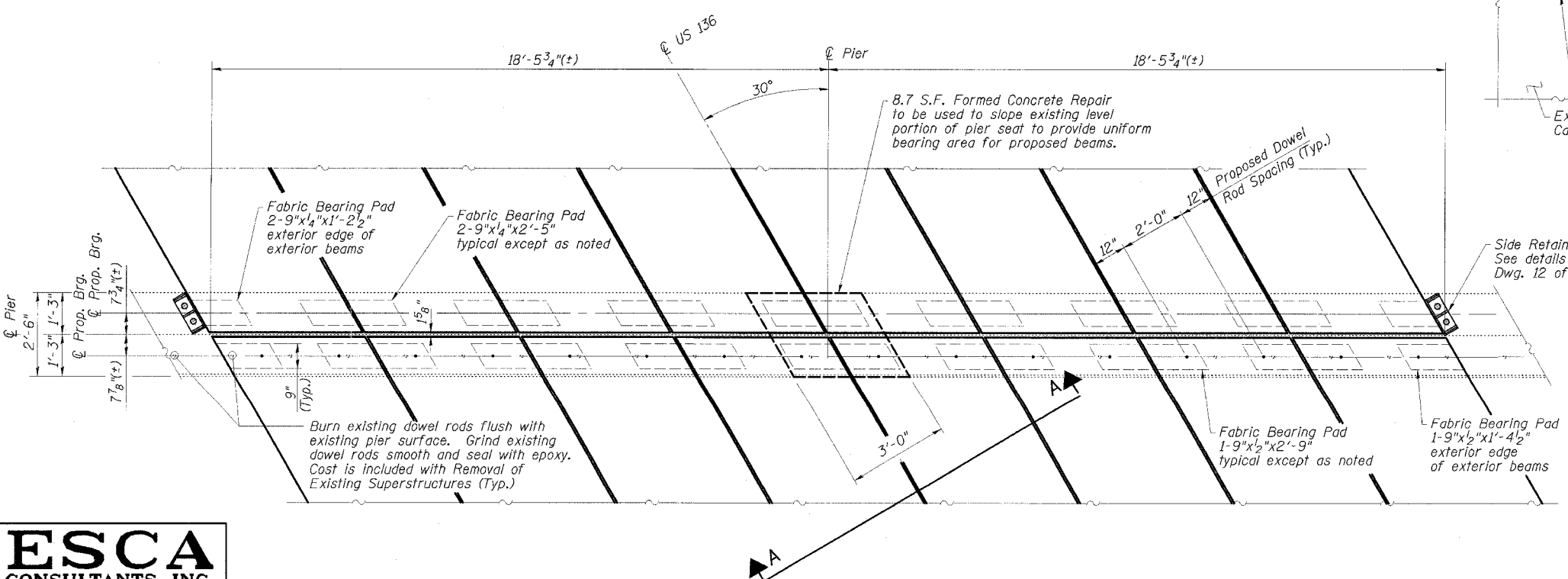
CONTRACT NO. 66584



PIER 2 BEARING SEAT PLAN
(Concrete wearing surface not shown)



SECTION A-A
(Concrete wearing surface and dowel rods not shown)



PIERS 1 AND 3 BEARING SEAT PLAN
(Concrete wearing surface 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
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2
McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	102X	McLEAN	44	29
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
*102X-BR-2			DWG. NO. 17 OF 17	

CONTRACT NO. 66584

NOTES

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

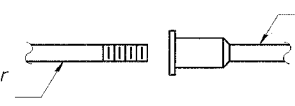
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

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

Bar 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."

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

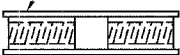


ROLLED THREAD DOWEL BAR



** ONE PIECE

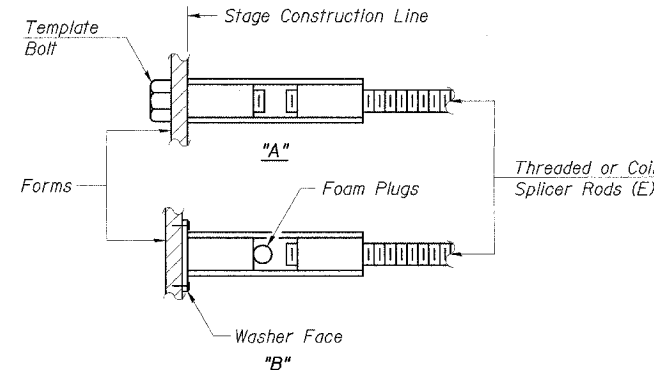
Wire Connector



WELDED SECTIONS

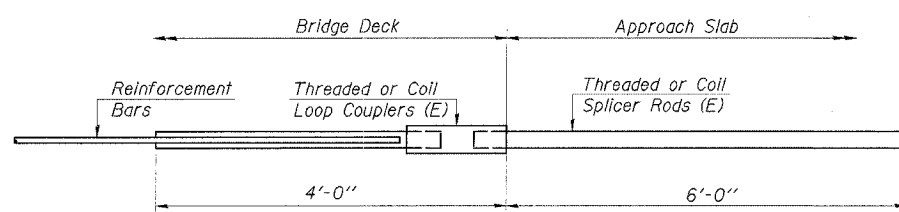
BAR SPLICER ASSEMBLY ALTERNATIVES

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



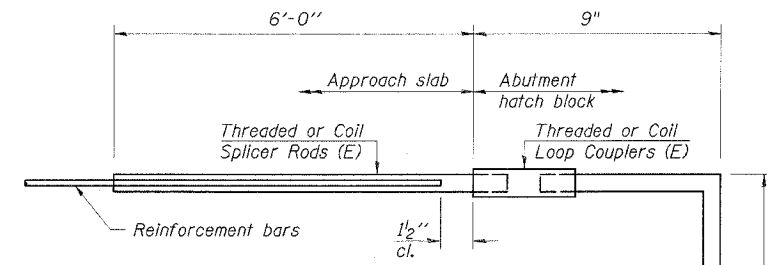
INSTALLATION AND SETTING METHODS

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



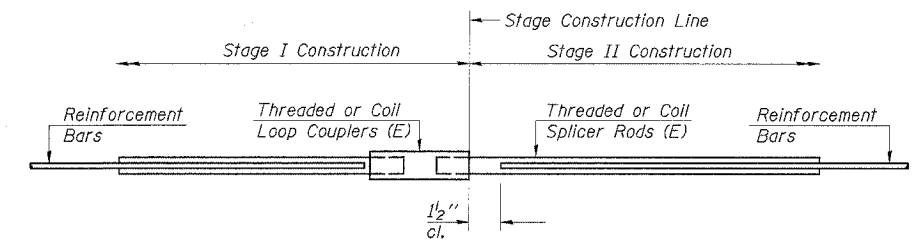
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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
US 136 OVER BRANCH OF SALT CREEK
FAP ROUTE 315 - SECTION 102X-BR-2

McLEAN COUNTY
STATION 616+99.00
STRUCTURE NO. 057-0185

ESCA
CONSULTANTS, INC.

DESIGNED BY:	ELH	6/05
DRAWN BY:	CJG	6/05
CHECKED BY:	ELH	9/05
APPROVED BY:	RDP	9/05

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	30
STA. TO STA.				
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

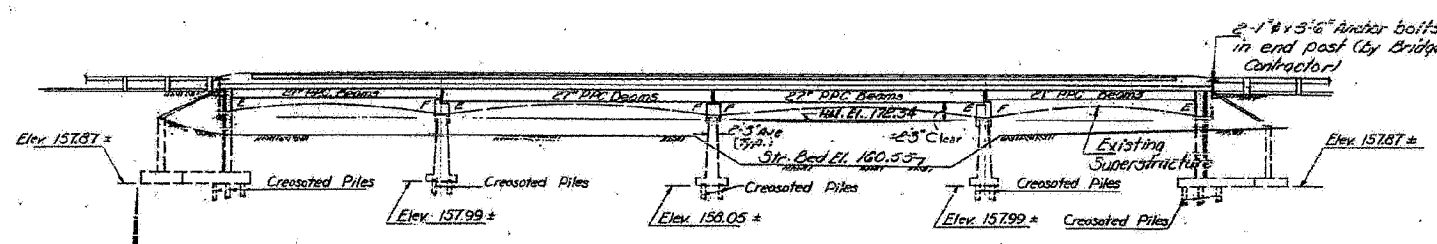
05.20

B.M.: #100 'D' on S.E. Kingwall of Bridge 15, Rt. Sta. 61300 (proposed)
 Elev. 177.27
 Existing Structure
 Sta. 617+15; Built as SBI Rt. 119, Sec 102 X-B-NPH, in 1936
 Existing R.C. Deck Girder Bridge 27 1/2' width to be removed and replaced with P.R.C. Bms.

DATE	BY	NO.	REV.	SHEET NO. /
11-9	McLEAN	153	39	9 SHEETS

TOTAL BILL OF MATERIAL

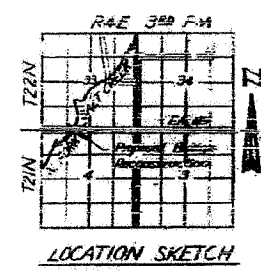
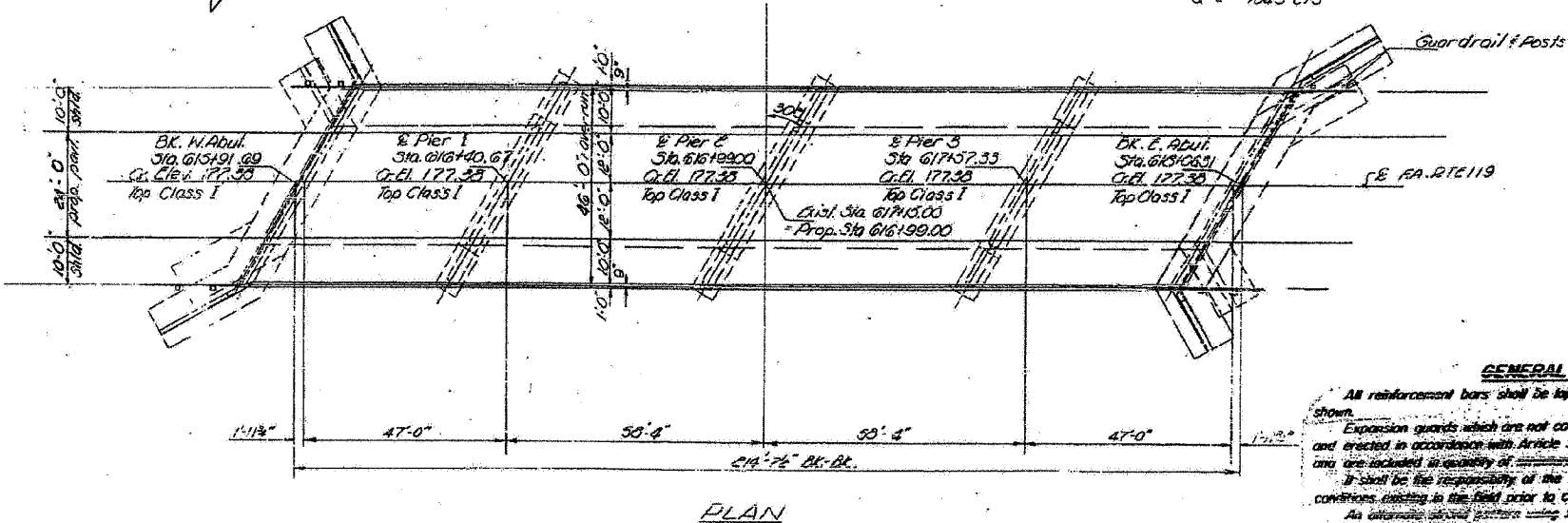
ITEM	UNIT	SUPER	SUB	TOTAL	ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Ea.			1	P.R.C. Bridge Deck (27')	Sq. Ft.	5239		5239
Concrete Removal	Cu Yds.		39	39	Aluminum Railing	Lin. Ft.	583		583
Bit Conc. Sur. Cse. Class I	Tons	110		110	Reinforcement Bars	Lbs.	4970	27700	32670
Cool Tar Interlayer Protective Coat	Sq. Yds.	1000		1000	Crested Piles (up to 20')	Lin. Ft.	1408		1408
Expansion Bolts (3/4")	Ea.		336	336	Test Piles (Timber)	Ea.		2	2
Expansion Bolts (1/2")	Ea.		40	40	Name Plates	Ea.	1		1
Structure Excavation	Cu Yds.		1040	1040	Preformed Joint Sealer	Lin. Ft.	212		212
Protective Coat	Sq. Yds.	155		155	Channel Excavation	Cu Yds.			255
Class A Concrete	Cu Yds.		153.4	153.4					
Class X Concrete	Cu Yds.		476	476					
Structural Steel	Lbs.		2720	2720					
P.R.C. Bridge Deck (27')	Sq. Ft.		4204	4204					



STATION 616+99
 REBUILT BY
 STATE OF ILLINOIS
 F.A. RTE 119 SEC. 102X-BR
 PROJ. F-219(1)
 LOADING HS20
NAME PLATE
 See Sta. 213-1

WATERWAY INFORMATION

Drainage Area	61.05	Sq. Mi.
Required Opening (50 yr. flood)	158.5	Sq. Ft.
Present Opening	127.5	Sq. Ft.
Proposed Opening	158.5	Sq. Ft.
Ordinary Water Elev.	169.2	
Low Water Elev.		
Q =	704.3	CFS



GENERAL NOTES

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

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503.07 (c) of the Standard Specifications and are included in quantity of _____ steel.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

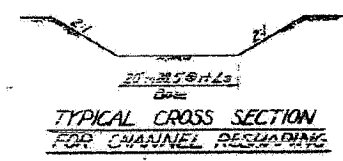
An alternate strand pattern using _____ High Strength Prestranding strand (270 ksi) is permitted.

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

The concrete rail section above the top of the P.R.C. Deck Beams shall be constructed of class X concrete, except the aggregates shall conform to the requirements of Handrail concrete.

The contractor shall drive two test piles in the permanent locations, one at E. Abut. and one at pier 2 as directed by the engineer before ordering the remainder of piles.

The basic lead Silica Chromate paint system shall be used for shop painting of Structural Steel.



DESIGN STRESSES

FIELD UNITS PRESTR. PRECAST UNITS

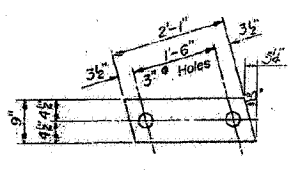
$f_c = 1400$ psi (Curb, Parapet) $f_c = 5000$ psi
 $f_c = 1000$ psi (Sub.) $f_t = 4000$ psi
 $f_c = 75$ psi Footing $f_s = 245,000$ psi (Strands 1/2")
 $f_s = 20,000$ psi Reinf. $f_s = 175,800$ psi (Strands 3/8")
 $n = 10$
 $f_s = 29,000$ psi Structural
 Loading HS 20-44

DESIGNED: *W. H. H.*
 CHECKED: *R. D. B.*
 DRAWN: *H. D. M.*
 EXAMINED: *W. H. H.*
 PASSED: *W. H. H.*
 DATE: SEPTEMBER 1, 1970

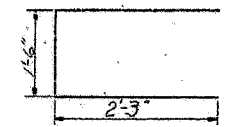
PROJ. F-219(1)
 F.A. RTE. 119 OVER NORTH FORK SALT CREEK
 SEC. 102X-BR
 McLEAN COUNTY
 STATION 617+15.00 EXISTING
 STATION 616+99.00 PROPOSED

FAP RITE	SECTION	COUNTY	TOTAL SHEETS NO.
315	102X-BR-2	McLEAN	44
STA. TO STA.		31	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	

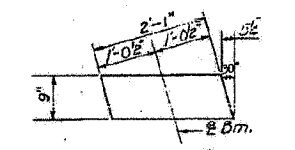
PROJECT NO.	SECTION	DATE	SCALE	SHEET NO.
119	McLEAN	153	60	9
SHEETS				



FABRIC BEARING PAD



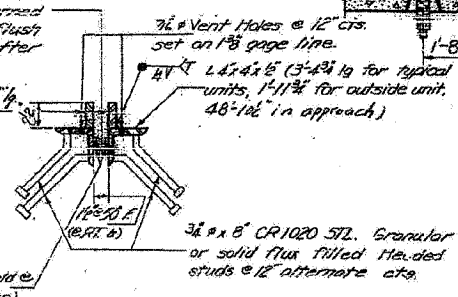
U2 BAR



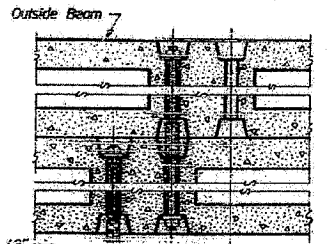
GRAPHITED ASBESTOS BEARING PAD

3/4" Holes @ 12" cts. for 3/8 bolts set on 2 1/8 gage line. All bolts shall be turned sawed or clipped off flush with back of angles after forms are removed.

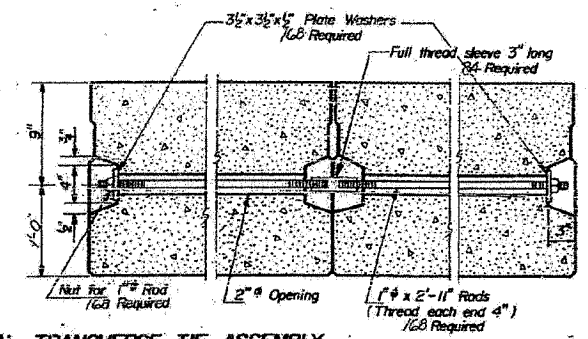
3/4" x 2 1/2" bars 48'-10 1/2" (Fabricated to fit down after bms are in place)



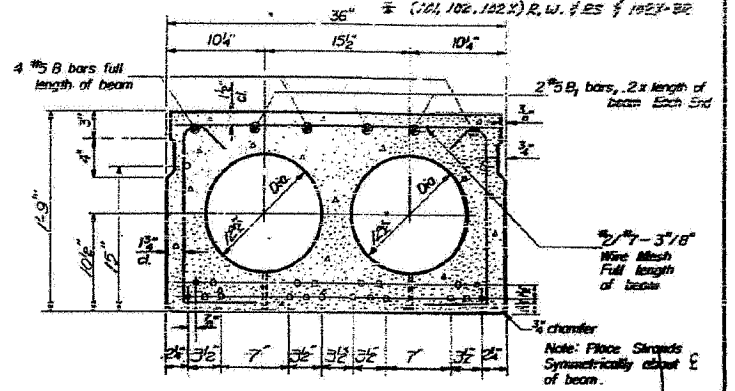
DETAIL A (For Preformed Joint Sealer See sheet 4)



Outside Beam

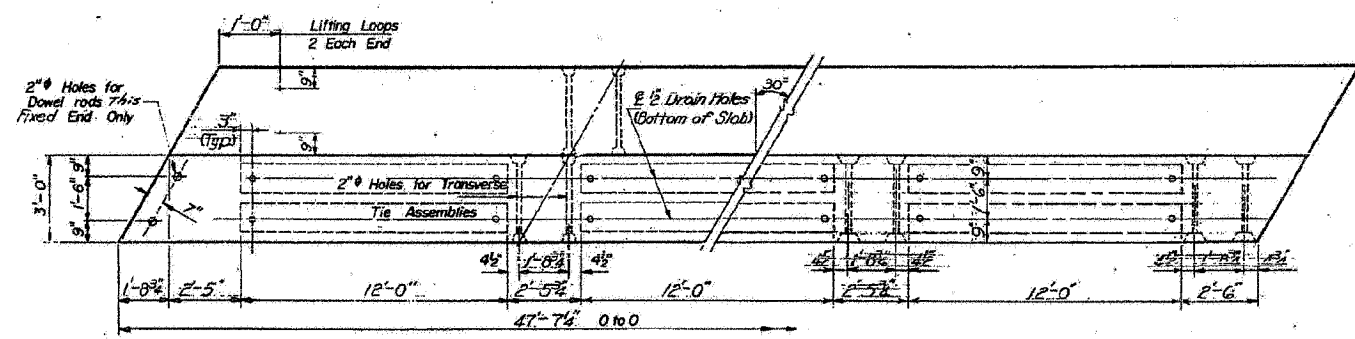


TYPICAL TRANSVERSE TIE ASSEMBLY

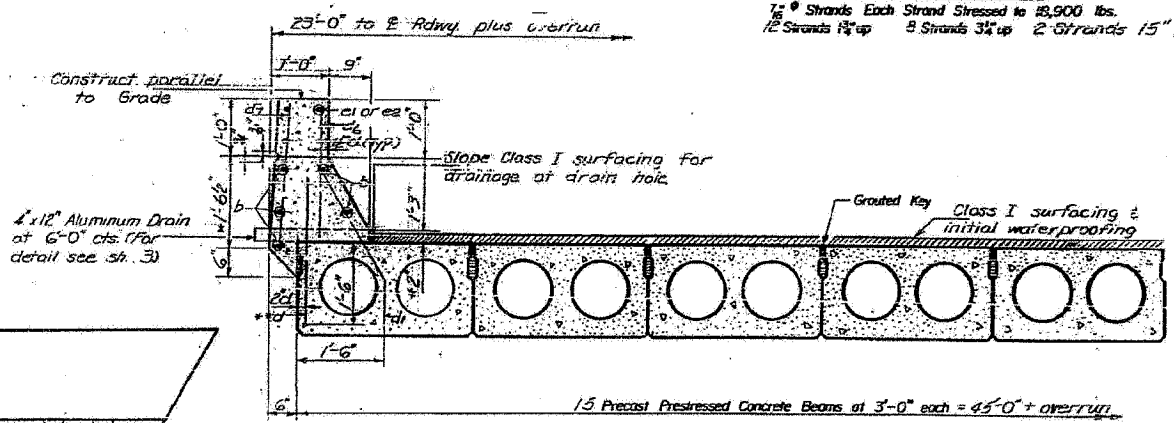


TYPICAL SECTION

1/2" Strands Each Strand Stressed to 8,900 lbs. 12 Strands 1 1/2" up 8 Strands 3/4" up 2 Strands 15" up



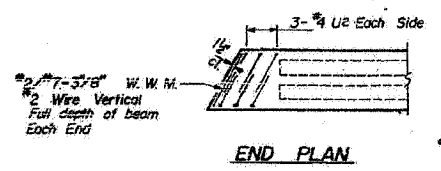
PLAN



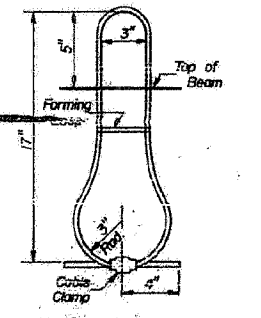
PARTIAL CROSS SECTION

For Complete Cross-Section See sheet 4.

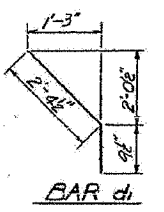
* At E Spans. Varies to allow for camber in beams.
** d bars shall be 2'-9" long.



END PLAN



LIFTING LOOP DETAIL



BAR d1

DESIGNED <i>W.C. Hoising</i>	EXAMINED <i>[Signature]</i>
CHECKED <i>[Signature]</i>	PASSED <i>[Signature]</i>
DRAWN <i>[Signature]</i>	
CHECKED <i>[Signature]</i>	

SEPT. 1 1970

[Signatures]

PD-1-L 11-19-65 Rev. 5-20-68

GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/8" and the nominal cross-sectional area shall be 0.109 sq. in. Lifting loops shall be 1/2" diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 21,000 lbs. The 1/2" 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 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 and P.C. mortar. After beams have been erected, holes for the shear keys shall be drilled into the sub-structure and the anchor dowels shall be grouted in place. Steel for dowel rods shall be A.S.T.M. A-306 or A.S.T.M. A-615. After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A-153. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams." Transverse tie rods shall be A.S.T.M. A-306, Grade 70-Br. Armor Angles shall be A.S.T.M. A-36. For Reinforcement Bars in Curb & Parapet Wall, See sheet 5. Bars of f & d shall be cast into outside units for spacing. See sheet 5.

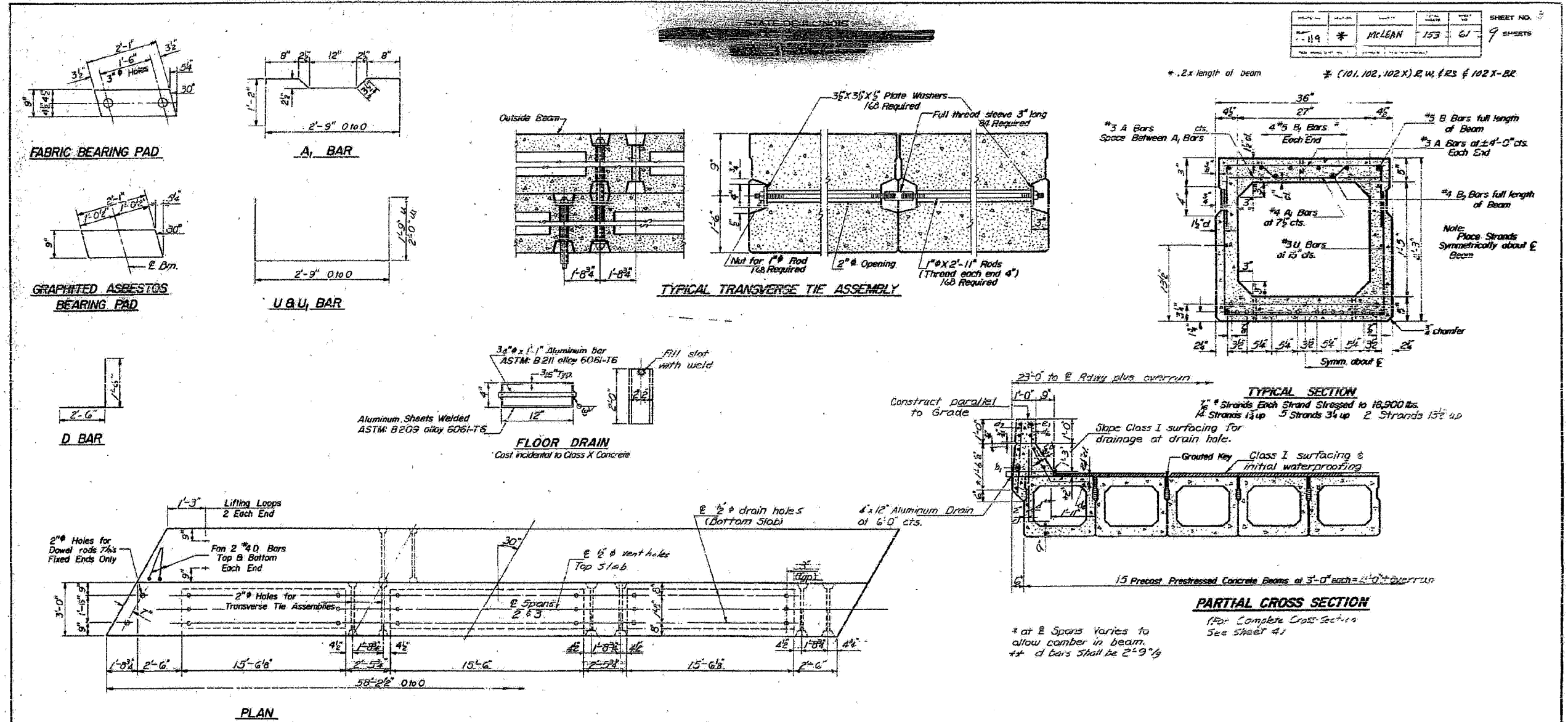
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Concrete Deck Beams (27)		Sq. Ft.	4294	

SPANS 1 & 4
BEAM DETAIL
FA 87-118 SEC JACK-BR
McLEAN COUNTY
STA. 616+89

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	32
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DATE	BY	SCALE	SHEET NO.
11-9	McLEAN	1/32"	9



GENERAL NOTES

Pressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/8" and the nominal cross-sectional area shall be 0.109 sq. in. Lifting loops shall be 5/8" diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs.

The 1" 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 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 and P.C. mortar. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place.

Steel for dowel rods shall be A.S.T.M. A-306 or A.S.T.M. A-615.

After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation A153.

Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beam."

Transverse tie rod shall be A.S.T.M. A-306, Grade 70-80.

Armor Angles shall be A.S.T.M. A-36.

For Reinforcement bars in Curb & Parapet Wall, See sheet #15.

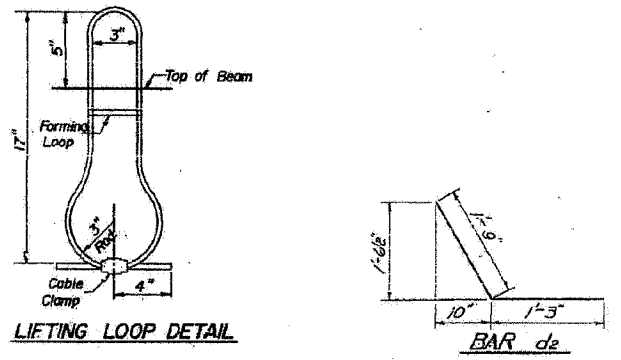
Bars d & de shall be cast into outside units for spacing, See sheet #5.

BILL OF MATERIAL

Bar	No.	Size	Length	Spans
Precast Prestressed Concrete Beam (127)			Sq. Ft.	5239

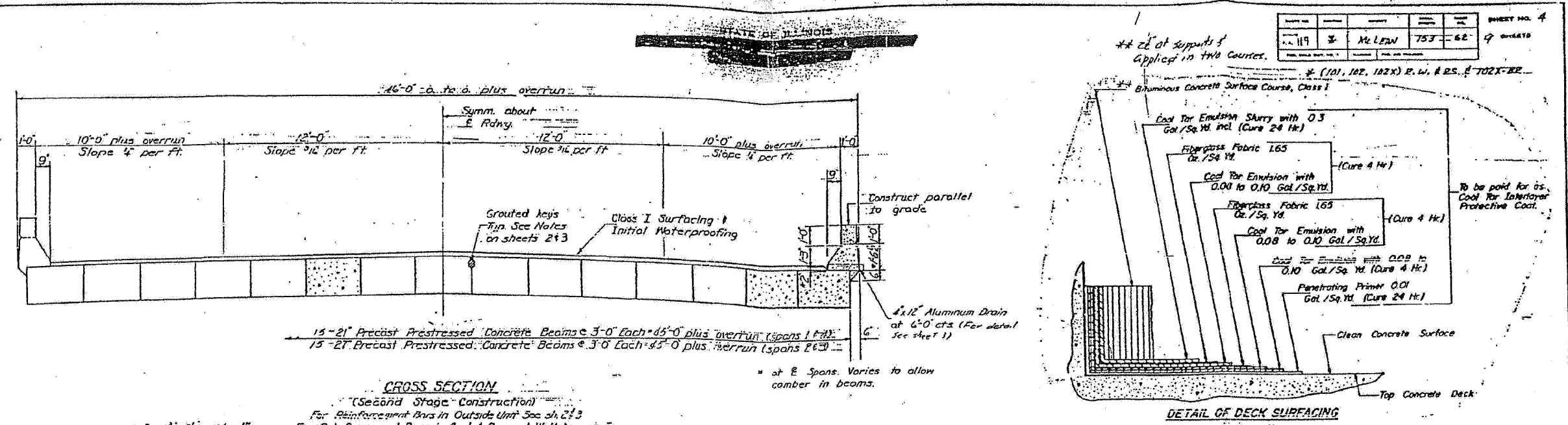
DESIGNED *W. Harding*
 CHECKED *W. Harding*
 DRAWN *JAMES R. CARLSON*
 CHECKED *LBM*

EXAMINED *W. B. Baumann*
 PASSED *W. B. Baumann*
 DATE *SEPT. 1 1970*



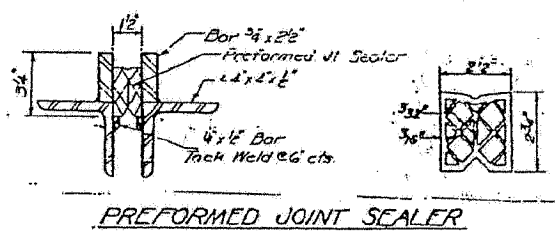
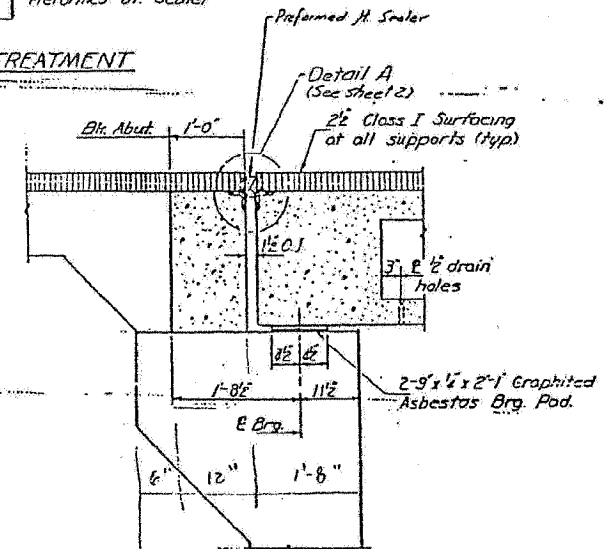
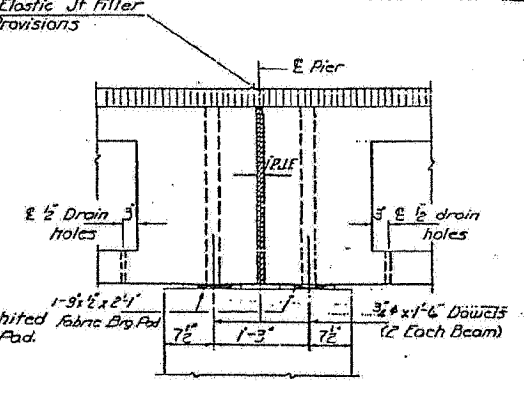
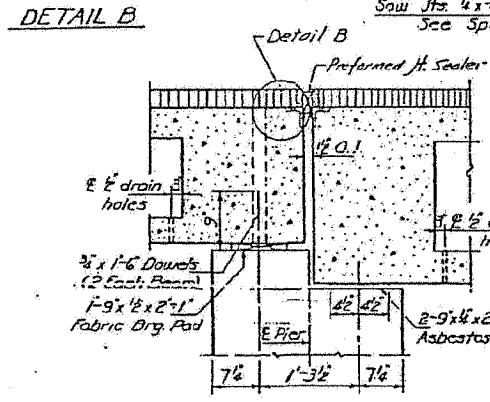
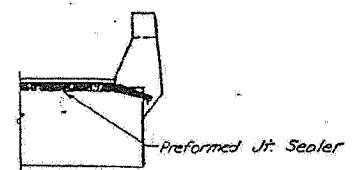
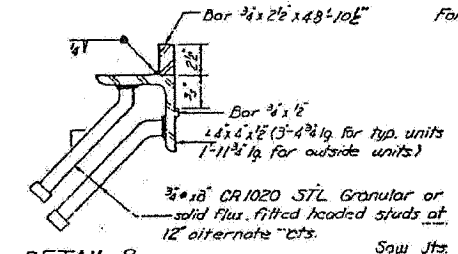
SPANS 2 & 3 BEAM DETAIL
 FA. RT. 119 SEC. 102X-BR
 McLEAN COUNTY
 STA. 616+99

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	33
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



CROSS SECTION
(Second Stage Construction)

For Reinforcement Bars in Outside Unit See sh. 2 & 3
For Reinforcement Bars in Curb & Parapet Wall See sh. 5

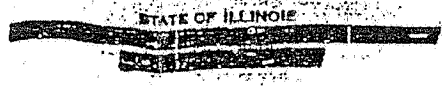


DESIGNED <i>W. H. Hays</i>	EXAMINED <i>[Signature]</i>
CHECKED <i>[Signature]</i>	PASSED <i>[Signature]</i>
DRAWN <i>C. E. Wilkins</i>	
CHECKED <i>[Signature]</i>	

SEPT. 1 1970

SUPERSTRUCTURE DETAILS
FA. RT. 119 SEC. 102X-BR
McLEAN COUNTY
STA. 616+99

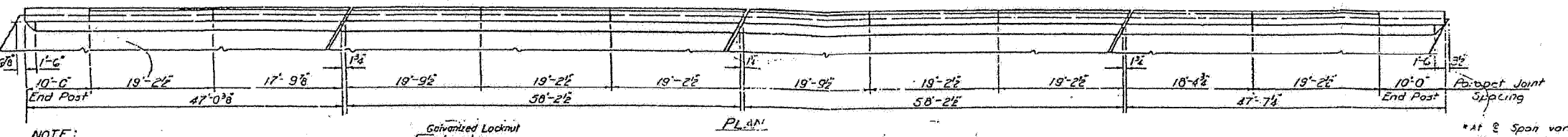
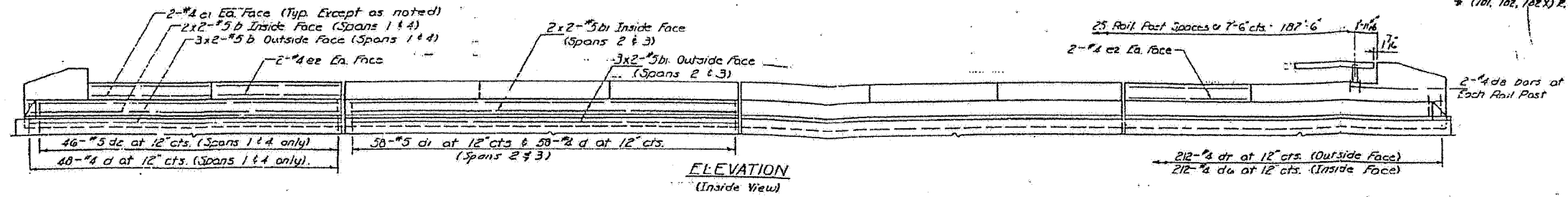
FAP RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	34
STA. TO STA.		ILLINOIS FED. AID PROJECT		



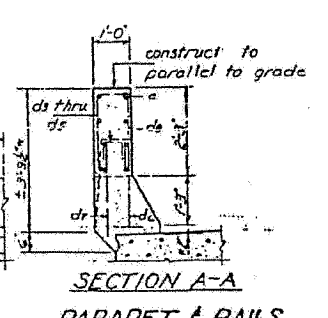
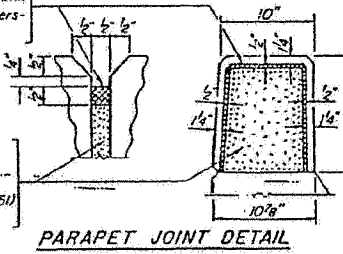
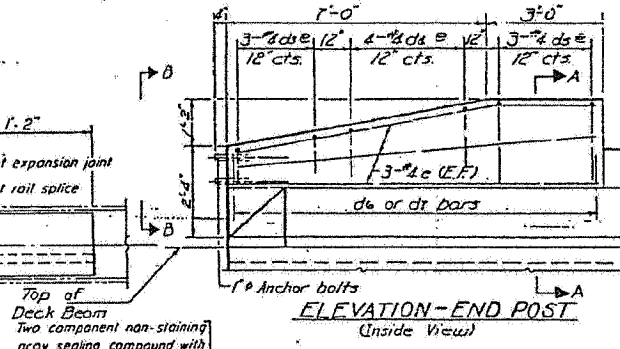
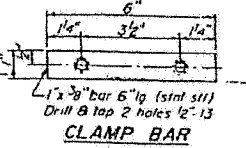
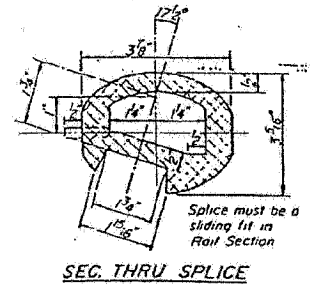
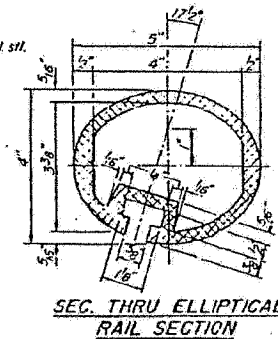
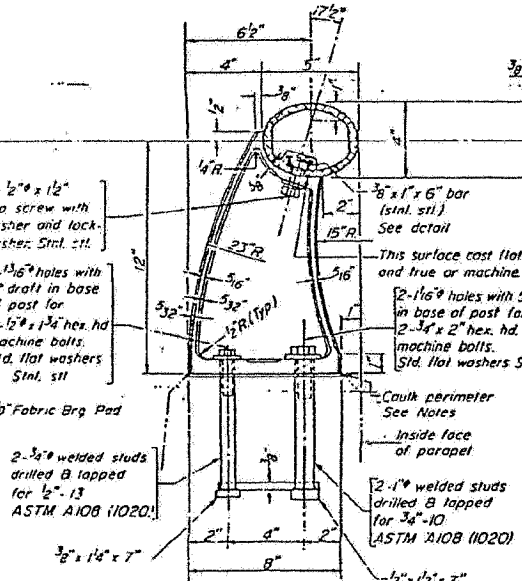
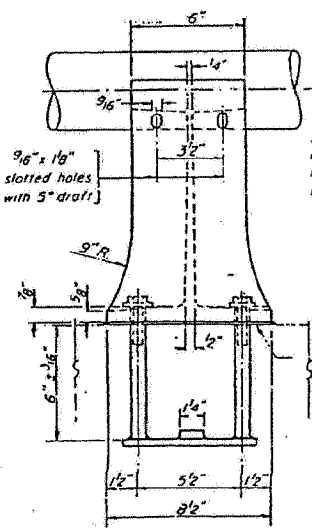
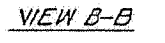
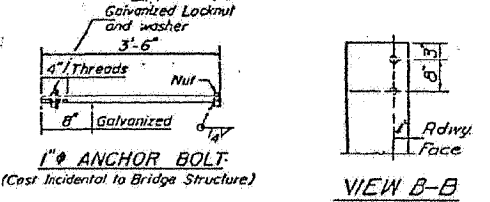
SHEET NO. 5
OF 9 SHEETS

119 * McLEAN 153 63

8 (101, 102, 103X) R.W. & R.S. # 102X-82



NOTE:
Bars d thru de shall be cast into R.P.C. Deck bins. For Bars b & b1 See sheets 1 & 3.



Bar	No.	Size	Length	Shape
b	40	#5	24'-3"	—
b1	40	#5	29'-9"	—
ds	12	#4	2'-7"	□
de	16	#4	3'-7"	□
de	12	#4	4'-9"	□
de	42	#4	2'-2"	□
de	42	#4	2'-4"	□
de	104	#4	2'-1"	□
e	24	#4	9'-9"	—
er	64	#4	19'-0"	—
es	16	#4	17'-0"	—

Reinforcement Bars Lbs. 4970
Class X Concrete Cu. Yds. 47.6
Aluminum Railing Lin. Ft. 383

NOTES:
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or at parapet joint where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
All joints in rail shall be spliced per detail.
Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade - high spots shall be ground and low spots shimmed.
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric-Bearing Pad shall have same dimensions as base of post.
Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min yield 35 ksi, min tensile 38 ksi, and elongation of 10% in 2 inches.

DESIGNED *W.H. Hinkle*
CHECKED *H.H. Miller*
DRAWN *C.E. Wilkins*
CHECKED *H.W.M.*

EXAMINED *R. H. Hinkle*
PASSED *R. H. Hinkle*
DATE *10/20*
Richard H. Hinkle

Bar	Quantity	Size
ds	12	#4
de	16	#4
de	12	#4
de	42	#4
de	42	#4
de	104	#4

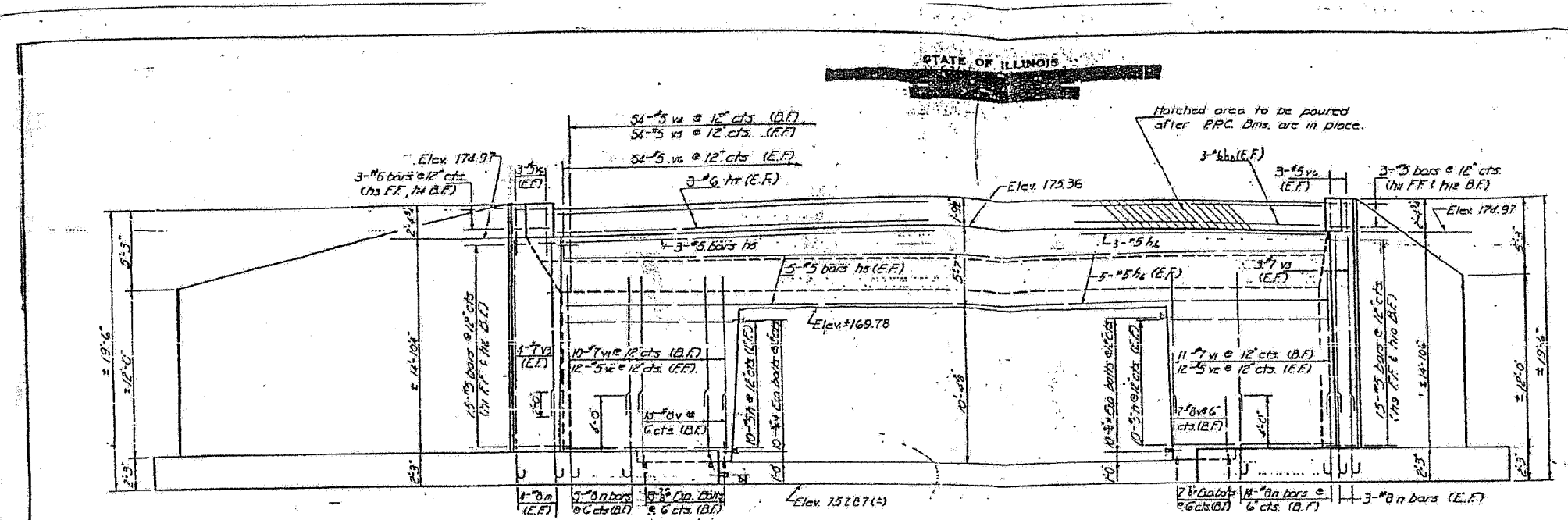
R-17 4-22-68 9-18-69

ALUMINUM RAILING
FA RT. 119 SEC 102X-BR
-McLEAN COUNTY
STA. 616 + 99

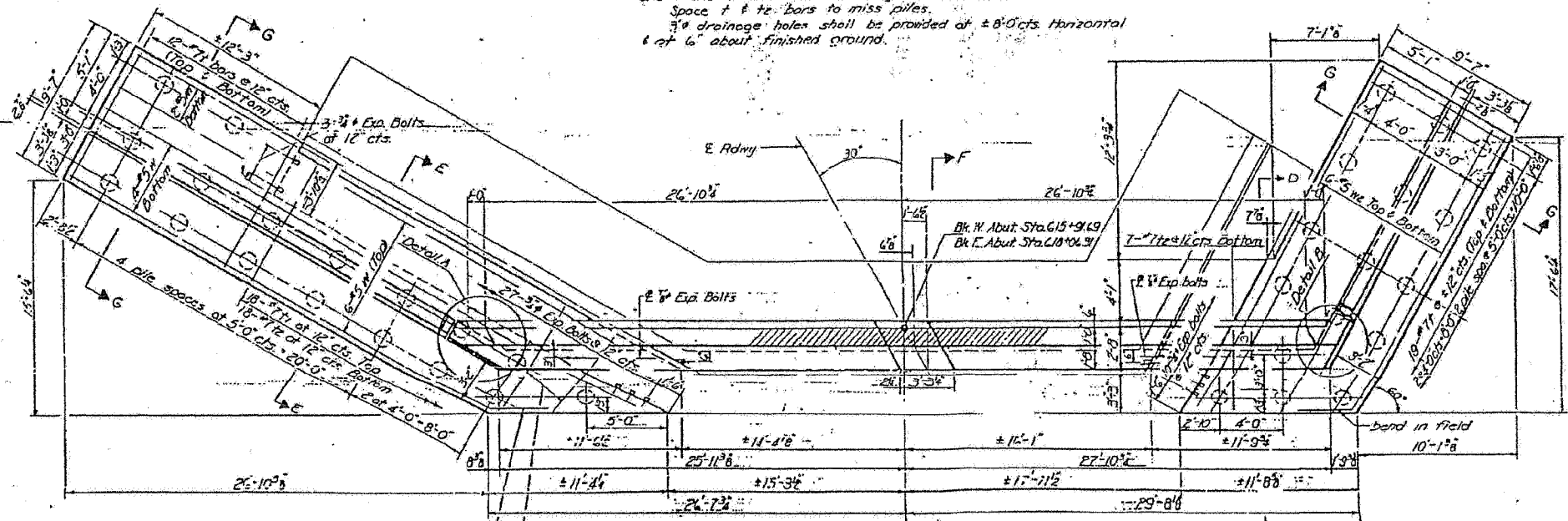
FAP RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	35
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

119	McLEAN	153	64	9
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SHEET NO. 6



ELEVATION
 Remove Existing Concrete to Elev. 169.78 where there is new concrete on top. Clean & leave existing vertical reinforcement in place. Remove some part of Wing Wall to ±1'-0" below finished grade. Expansion bolts shall consist of self-drilling expansion anchors and 3/4" x 12" hooked bolts or 1/2" x 20" hooked bolts. Space 1' & 1/2" bars to miss piles. 3/8" drainage holes shall be provided at ±8'-0" cts. Horizontal & at 6" about finished ground.



DESIGNED *Wes. H. H. H.*
 CHECKED *H. H. H.*
 DRAWN *C. E. N. H. H.*
 CHECKED *H. H. H.*

EXAMINED *H. H. H.*
 PASSED *H. H. H.*
 APPROVED *H. H. H.*

PILE DATA
 Type - Crossed
 Est. Length 12'-0"
 No. Reg'd - 65 plus 1 test pile at E. Abutment

Bar	A	B	C	D
hi	3'-10"	1'-2"		
hc	3'-9"	1'-3"		
hs	10'	1'-11"		
ha	11'	10'		
hs			1'-11"	3'-4"
ha			1'-3"	2'-6"
hi			1'-0"	1'-3"
hc			1'-0"	1'-7"

**TWO ABUTMENTS
 BILL OF MATERIAL**

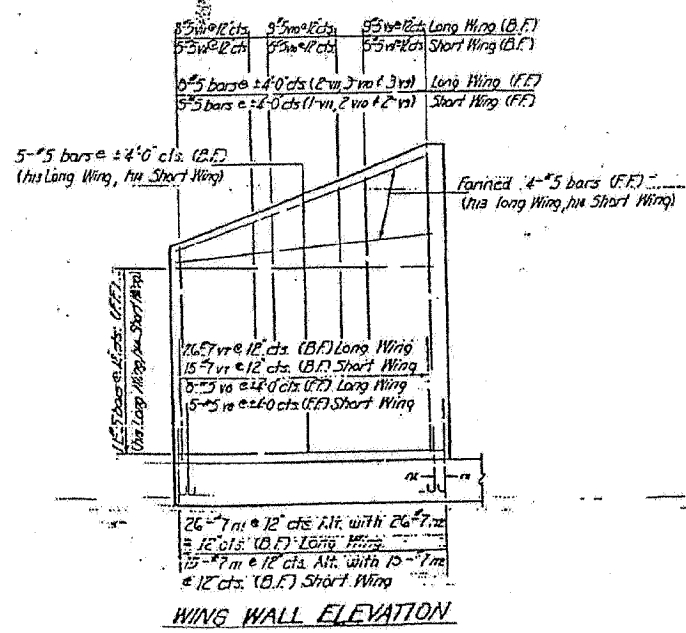
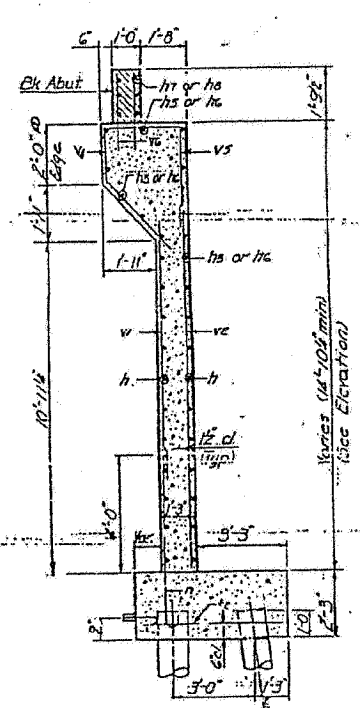
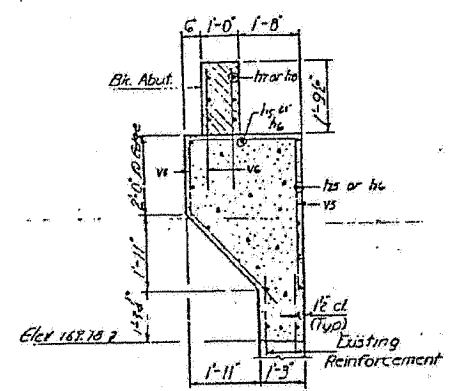
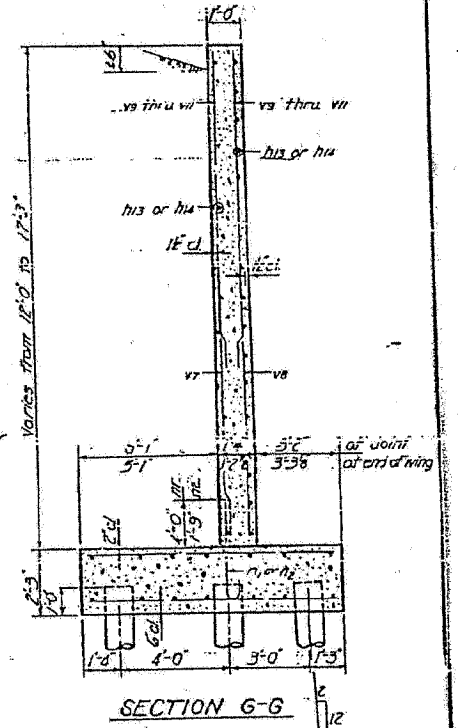
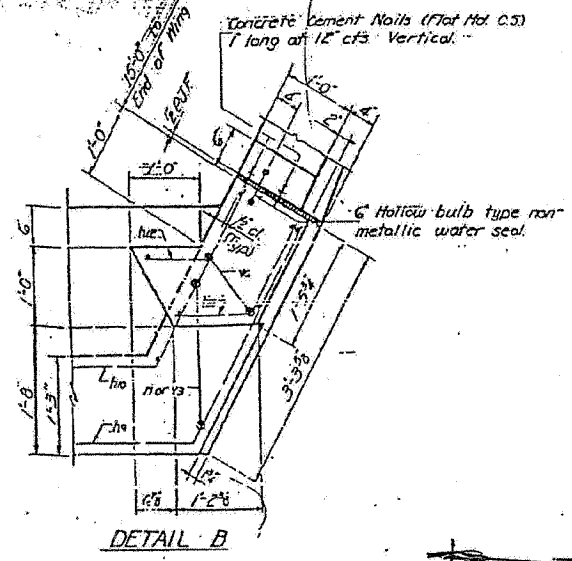
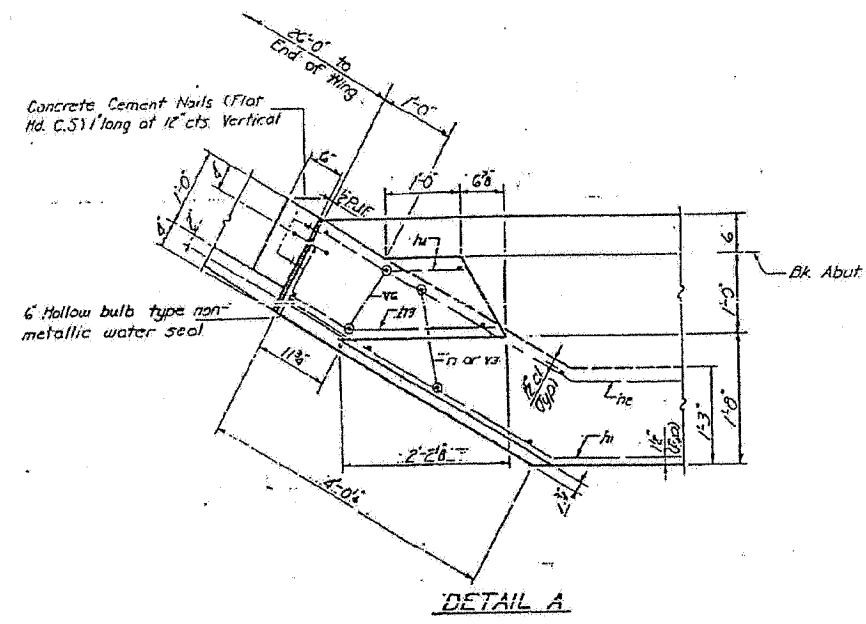
Bar	No.	Size	Length	Shape
h	00	#5	11'-3"	
hi	30	#5	5'-3"	
hc	30	#5	5'-0"	
hs	6	#5	2'-9"	
ha	6	#5	7'-9"	
hs	26	#5	20'-6"	
hc	26	#5	34'-3"	
hi	12	#6	20'-6"	
hc	12	#6	34'-3"	
ha	30	#5	5'-0"	
hb	30	#5	3'-9"	
hi	6	#5	2'-3"	
hc	6	#5	1'-9"	
hs	40	#5	15'-9"	
ha	40	#5	14'-9"	
n	66	#8	6'-0"	
ni	82	#7	6'-7"	
nc	82	#7	4'-4"	
f	124	#7	9'-2"	
fi	44	#7	8'-8"	
fc	28	#7	5'-5"	
v	80	#8	2'-9"	
vi	42	#7	10'-0"	
vii	48	#5	11'-0"	
viii	28	#7	12'-9"	
viiii	108	#5	7'-3"	
vix	108	#5	3'-3"	
vxi	240	#5	3'-3"	
vxii	82	#7	6'-6"	
vxiii	26	#5	6'-6"	
vxiv	38	#5	11'-9"	
vxi	38	#5	10'-0"	
vxvi	32	#5	8'-3"	
x	20	#5	39'-0"	
xi	4	#5	12'-3"	
xii	24	#5	25'-0"	
Unas. X. Concrete	Cu. Yds.	224.6		
Reinforcement Bars	Lbs.	21,300		
Crossed Piles	Ln. Ft.	780		
Test Piles (Timber)	Each	1		
Concrete Removal	Cu. Yds.	25.5		
Expansion bolts (HP)	Ea.	120		
Expansion bolts (CV)	Ea.	40		

**ABUTMENTS
 FA. RT. 119 SEC. 102X-BR
 McLEAN COUNTY
 STA. 616+99**

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	36
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	

McLEAN 102X BR 2 65 9 SHEETS

STATE OF ILLINOIS



DESIGNED: *Wesley Higgins*

CHECKED: *Richard H. Williams*

DRAWN: *C.E. Williams*

CHECKED: *Richard H. Williams*

EXAMINED: *Richard H. Williams*

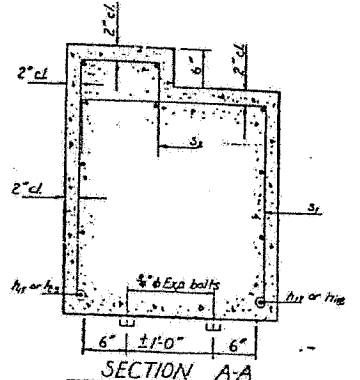
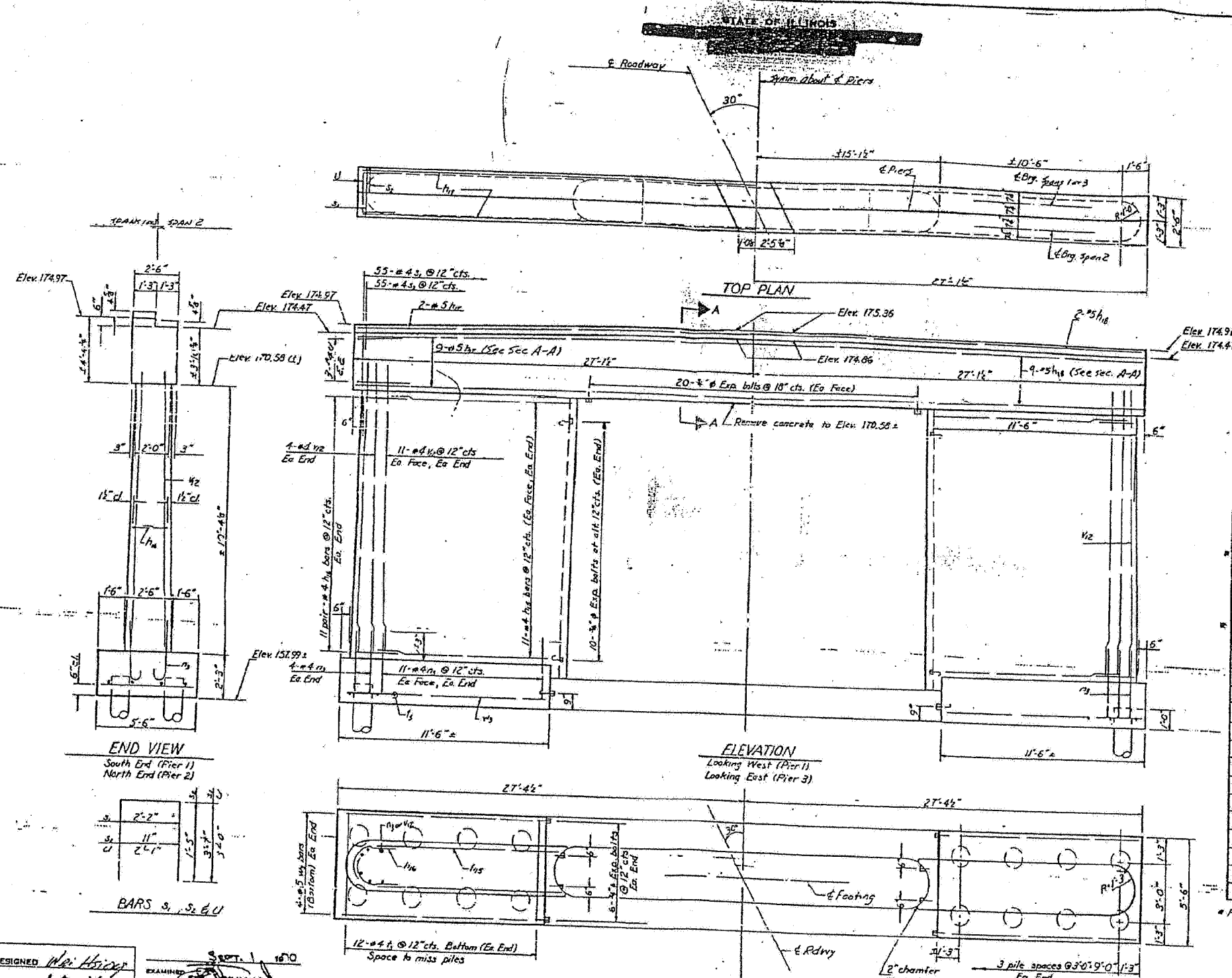
PASSED: *Richard H. Williams*

DATE: *Sept. 14, 1970*

ABUTMENT DETAILS
 FA. RT. 119 SEC. 102X BR
 McLEAN COUNTY
 STA. 616+98.2

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

NO. 119	*	McLEAN	153	66	9 SHEETS
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2 PIERS
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
h_1	88	#4	9'-6"	—
h_2	88	#4	4'-0"	—
h_3	22	#5	20'-3"	—
h_4	22	#5	35'-0"	—
h_5	104	#4	3'-7"	—
h_6	110	#4	9'-4"	—
h_7	110	#4	3'-9"	—
h_8	48	#4	5'-3"	—
h_9	12	#4	8'-1"	—
h_{10}	104	#4	11'-9"	—
h_{11}	16	#5	11'-3"	—
Class A Concrete		Cu. Yds.	1075.22	
Reinforcement Bars		Lbs.	45200	
Creosoted Piles (up to 20')		Lin. Ft.	3334	
Expansion Bolts (1/2" #)		Each	1444	
Concrete Removal		Cu. Yds.	99	

DESIGNED *W.H. Hoyer*
 CHECKED *R.D. BAFFORD*
 DRAWN *L.B.M.*
 EXAMINED *Richard H. Galt*
 PARAPED *Richard H. Galt*

PILE DATA:
 Type, Creosoted
 Est length, 12'-0"
 No. req'd, 32

Expansion bolts shall consist of self drilling expansion anchors and 1/2" #4 hot rolled bolts.

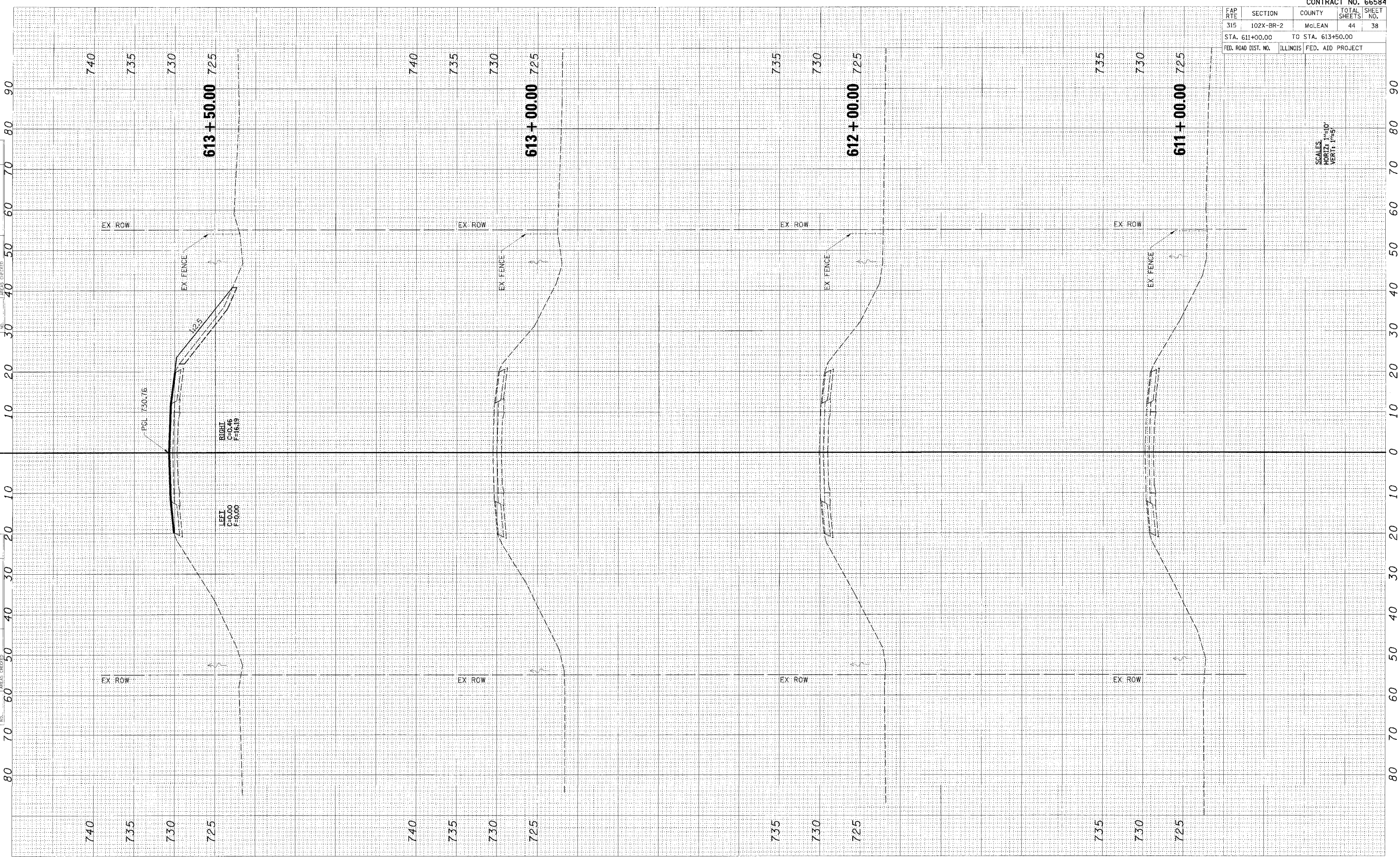
PIERS 1 & 3
 FA RT. 119, SEC. 102 X-B
 McLEAN COUNTY
 STA: 616+99

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	38
STA. 611+00.00		TO STA. 613+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

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

CL FAP RTE 315 (US 136)



SCALES
HORIZ: 1"=40'
VERT: 1"=5'

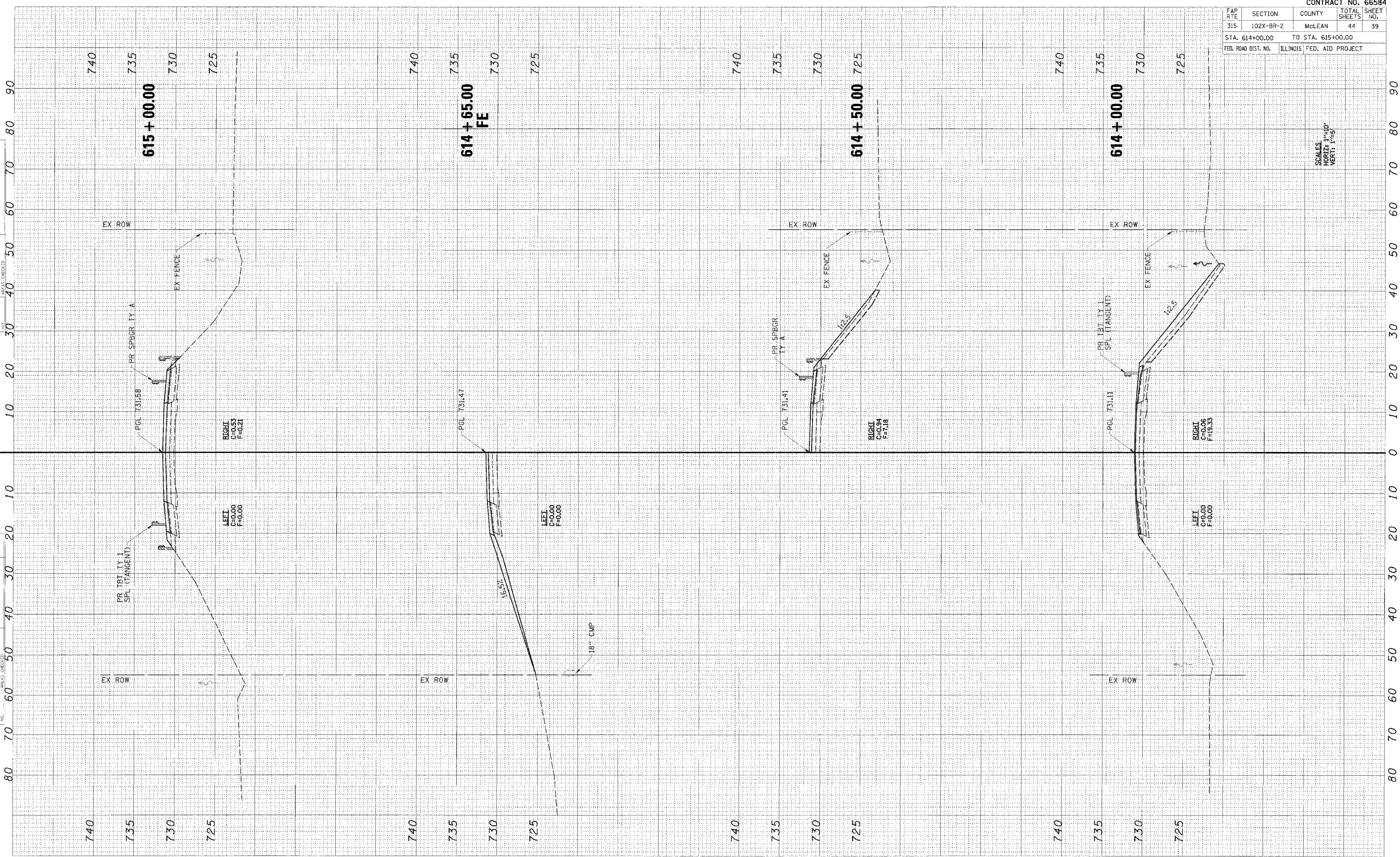
FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	39
STA. 614+00.00		TO STA. 615+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
NO. _____	_____
BY _____	
REVISIONS	
NO.	DESCRIPTION

ORIGINAL SURVEY	DATE
NO. _____	_____
BY _____	
REVISIONS	
NO.	DESCRIPTION

CL FAP RTE 315 (US 136)

SCALES
HORIZ: 1"=100'
VERT: 1"=5'

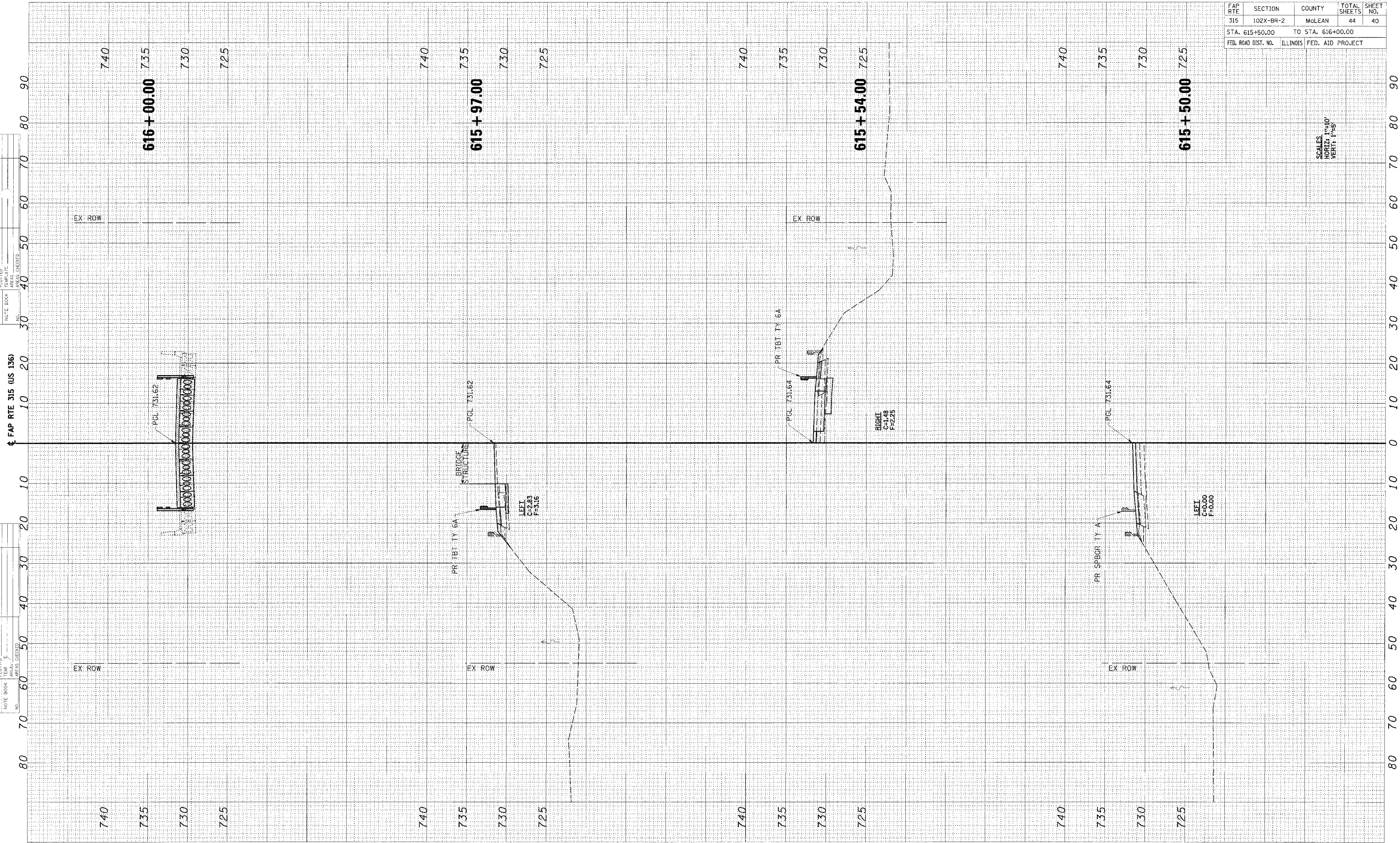


FAP RTE 315 (US 136) CROSS SECTIONS
STA 614+00.00 TO STA 615+00.00

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	40
STA. 615+50.00 TO STA. 616+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
NO. _____	_____
REVISIONS	BY
PLOTTED	_____
TEMP. AREAS	_____
CREATED	_____

ORIGINAL SURVEY	DATE
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REVISIONS	BY
PLOTTED	_____
TEMP. AREAS	_____
CREATED	_____

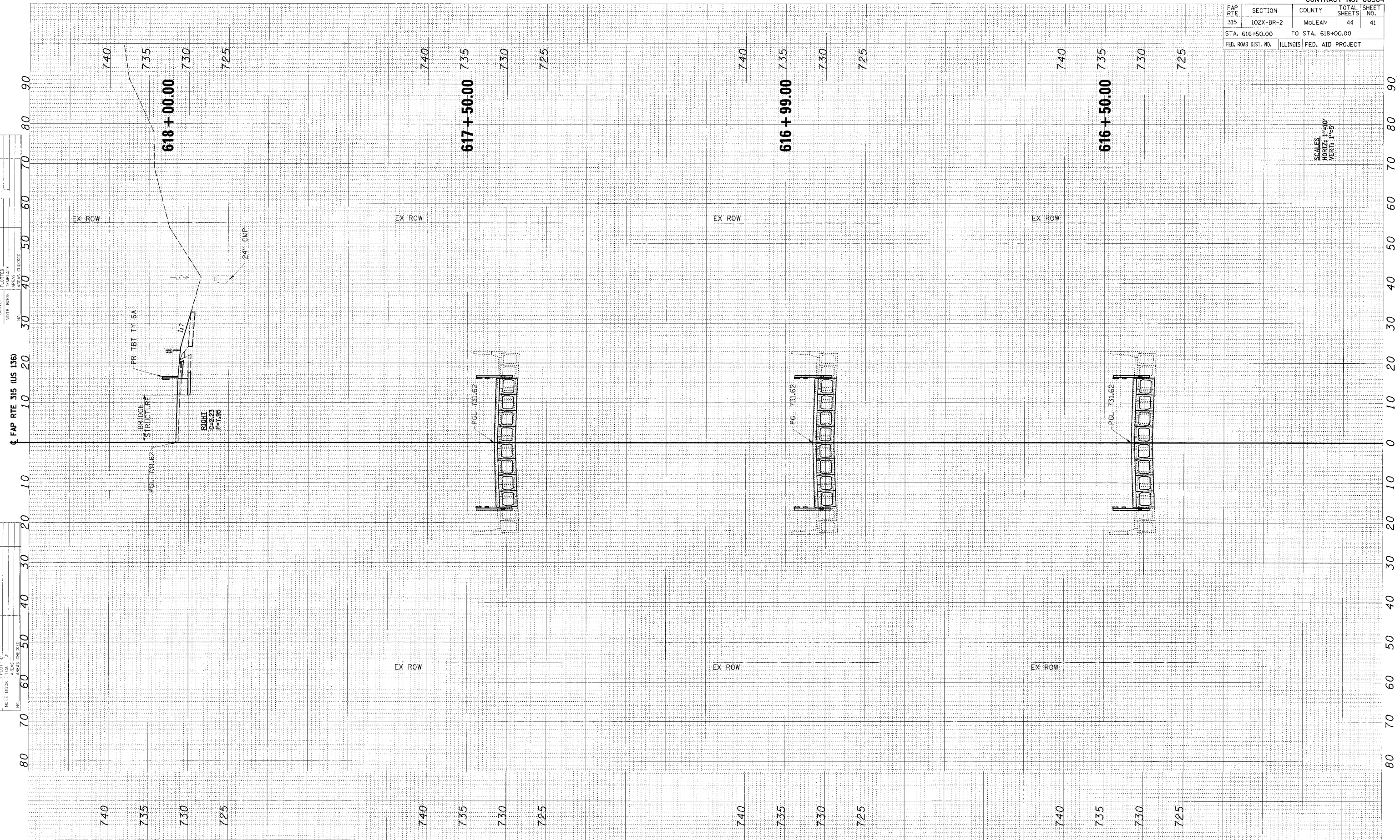


SCALES
HORIZ: 1"=10'
VERT: 1"=5'

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	41
STA. 616+50.00		TO STA. 618+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREA	
DATE	

ORIGINAL SURVEY	DATE
CONVERTED	BY
PLOTTED	
NOTE BOOK	
AREA	
DATE	



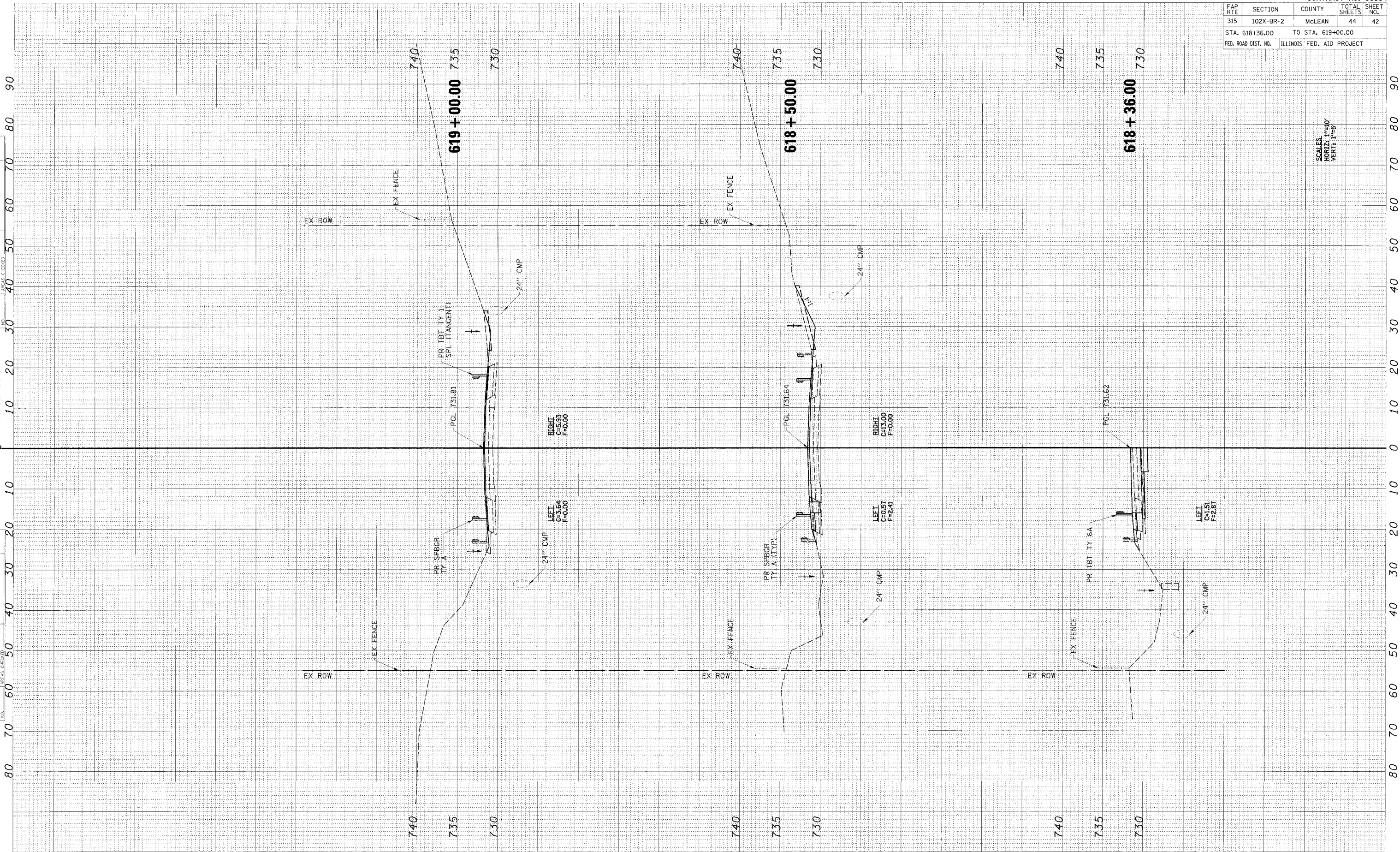
SCALES:
HORIZ: 1"=30'
VERT: 1"=5'

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	42
STA. 618+36.00 TO STA. 619+00.00				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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ORIGINAL SURVEY	DATE
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CL FAP RTE 315 (US 136)



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

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	43
STA. 619+50.00 TO STA. 620+50.00		ILLINOIS FED. AID PROJECT		

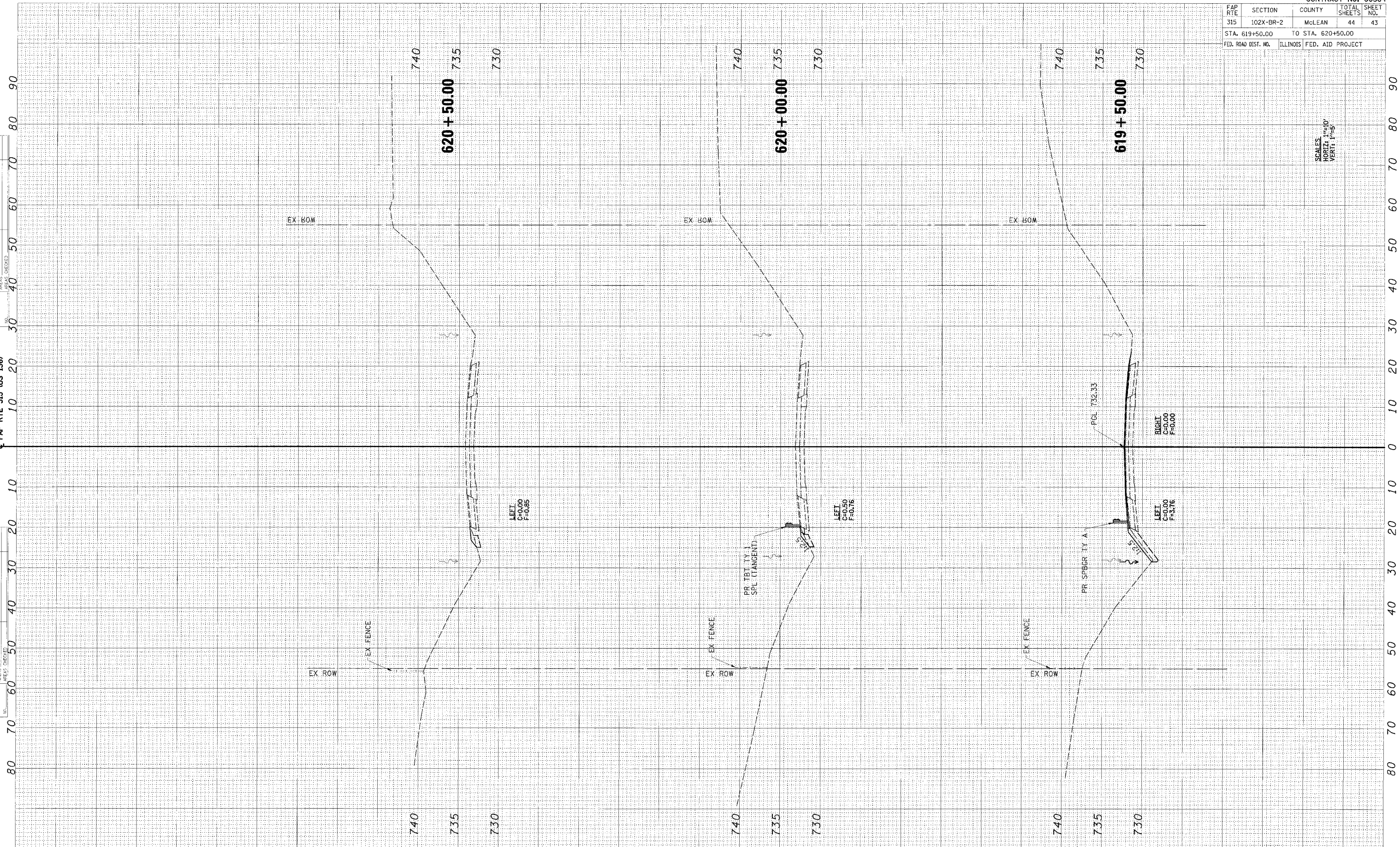
DATE	BY

DATE	BY

DATE	BY

DATE	BY

FAP RTE 315 (US 136)



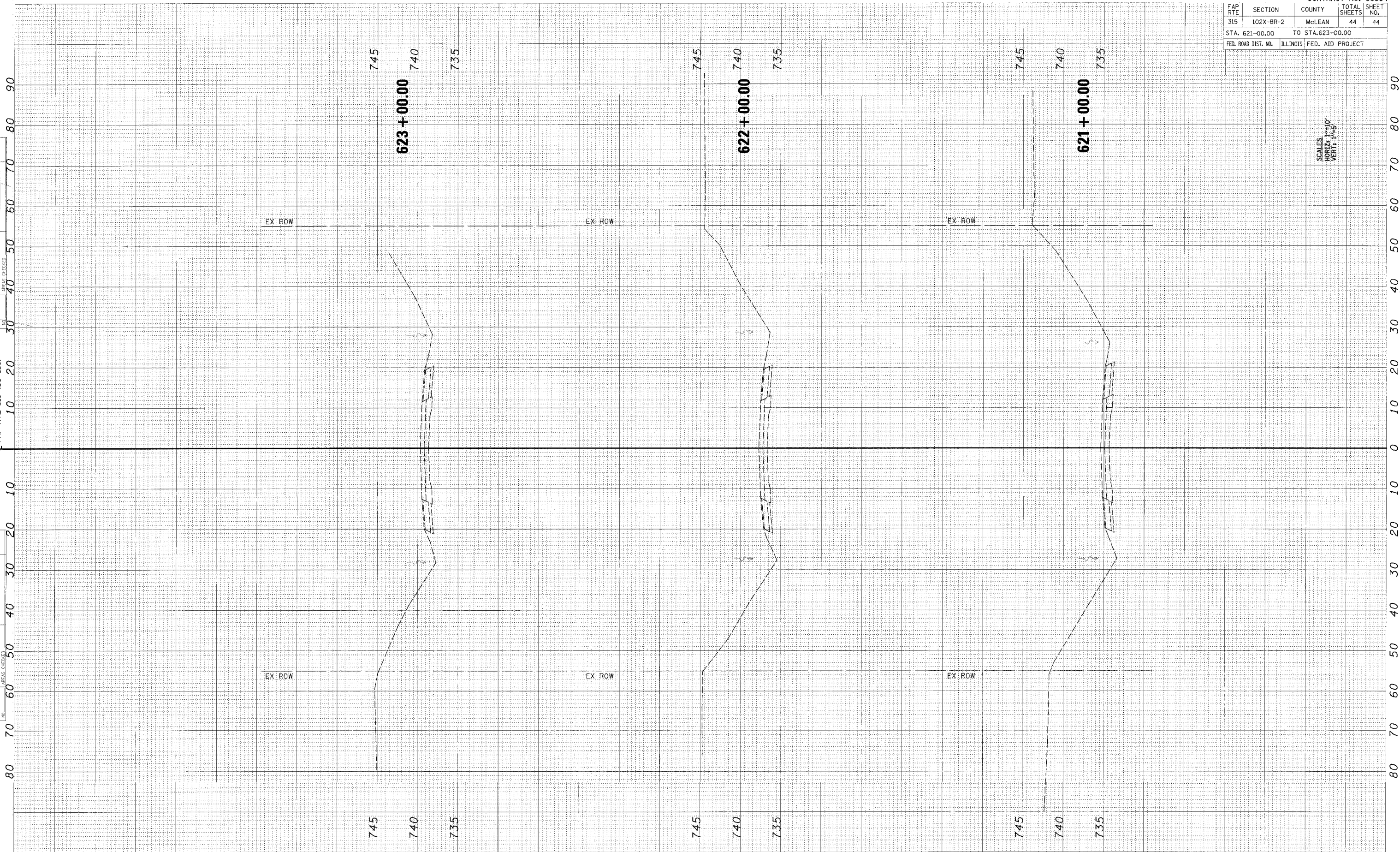
SCALES
HORIZ: 1"=40'
VERT: 1"=5'

FAP RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	102X-BR-2	McLEAN	44	44
STA. 621+00.00 TO STA. 623+00.00				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
AREA'S CHECKED		
NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
AREA'S CHECKED		
NO.		

± FAP RTE 315 (US 136)



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