

FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	0103I-1	COOK	46	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED HIGHWAY

FAP 370 - WESTERN AVENUE

SECTION: 0103I-1

CALUMET SAG CHANNEL & RAILROAD BRIDGE

(STRUCTURE # 016-0777)

BRIDGE REHABILITATION (INCLUDING CONCRETE OVERLAY)

COOK COUNTY

C-91-430-96

FOR INDEX OF SHEETS, SEE SHEET NO. 2

IMPROVEMENT LOCATED IN
THE CITY OF BLUE ISLAND

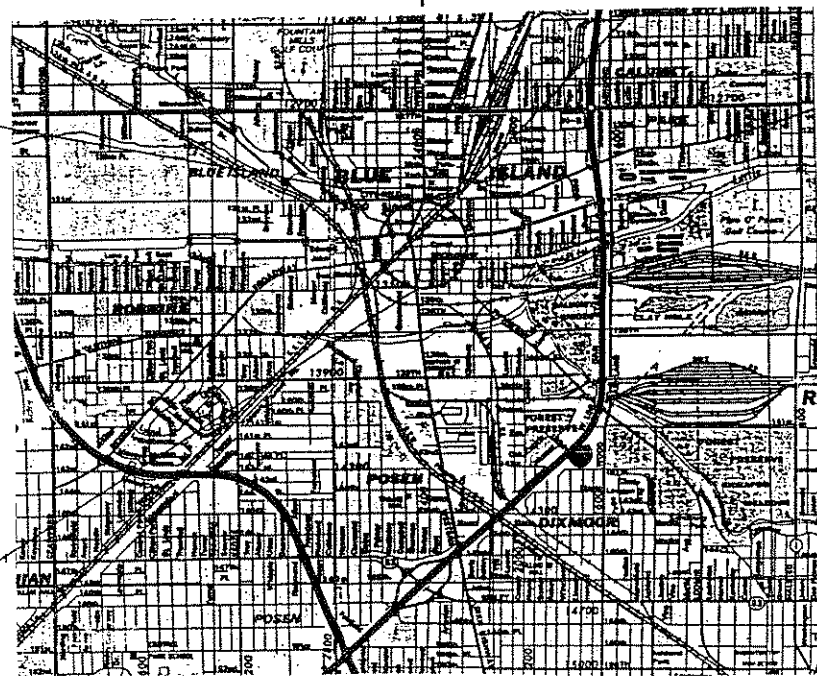


016-0777

DIST. 1 DESIGN
PLAN PREP ENGINEER - R. YOUNG / T. HAMILTON / T. SLATTERY (847) 705-4055

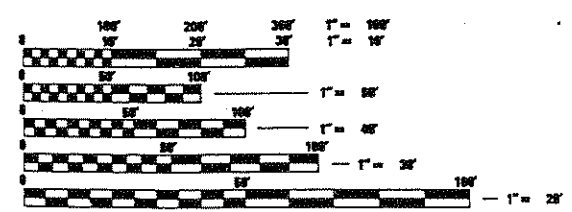
IMPROVEMENT BEGINS
STA. 18 + 60

T. 37 N.



IMPROVEMENT ENDS
STA. 36 + 70

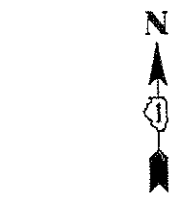
WORTH TOWNSHIP



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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
800-832-0123

CONTRACT NO. 60237



TRAFFIC DATA

WESTERN AVE.: 127TH ST. TO 139TH ST.
1994 ADT = 21100
POSTED SPEED LIMITS = 35 MPH

GROSS & NET LENGTH OF IMPROVEMENT = 1810 FT = 0.343 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 10, 1996

John L. De... DISTRICT ENGINEER

19

ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION
January 29, 1999

Bill Burke ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 1999

James P. St... DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY AUTHORITY OF THE
STATE OF ILLINOIS

FOR UTILITY INFORMATION
CALL J.U.L.I.E. 800-832-0123

REEL 0-338

F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	01031-1	COOK	46	2
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

3 METER (10 FEET) TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND LOCAL MUNICIPALITIES

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT

BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED- ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.

CONTACT THE SOUTHERN COOK COUNTY AREA TRAFFIC FIELD ENGINEER, AT 708-597-9800, TWO (2) WEEKS PRIOR TO PLACING ANY PERMANENT PAVEMENT MARKINGS.

STANDARDS

606301-02	PC CONCRETE ISLANDS AND MEDIANS
606001-01	CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER.
701201-02	URBAN LANE CLOSURE, MULTILANE, 1-W OR 2-W, WITH NON TRAVERSABLE MEDIAN.
701606-02	URBAN LANE CLOSURE, MULTILANE, 2-W, WITH MOUNTABLE MEDIAN.
701801-02	LANE CLOSURE, MULTILANE, 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE, SPEEDS < 45 MPH.
702001	TRAFFIC CONTROL DEVICES
704001	TEMPORARY CONCRETE BARRIER.

INDEX OF SHEETS

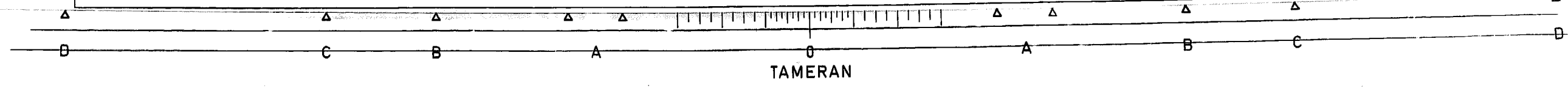
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTE
3-4	SUMMARY OF QUANTITIES
5-6	EXISTING ROADWAY
7-12	SUGGESTED STAGING AND TRAFFIC CONTROL
13-14	PAVEMENT MARKING AND LANDSCAPING
15	TRAFFIC CONTROL DETOUR
	BRIDGE PLANS
16	•PLAN, ELEVATION AND CROSS SECTIONS
17	•FINGER PLATE ADJUSTMENT AND GENERAL NOTE
18-20	•TRANSVERSE EXPANSION JOINT DETAIL AND PLANS
21	•PREFORMED JOINT SEAL DETAIL
22	•NEOPRENE JOINT DETAIL
23	•BAR SPLICER DETAIL
24	•BOX GIRDER SPAN
25	•DECK BEAM REPLACEMENT
26-27	•BRIDGE REPAIRS
28-29	•LONGITUDINAL SLAB TRUSS AND GIRDER SPANS
30	•DIAPHRAGM INSTALLATION AND/OR REPLACEMENT
31	•LIGHT POLE REINSTALLATION
32	•BEARING REPOSITION
33-34	•PARAPET INSTALLATION
35	•ALUMINUM RAILING DETAIL
36	•SHEAR KEY, AND DECK DRAIN ADJUSTMENT DETAILS
37	•DECK DRAIN DETAILS
38	•PAVEMENT EXPANSION JOINT REHABILITATION
39	•LIGHTING PLAN
40	•DISTRICT DETAILS
41	•CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
41	•TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
42	•DISTRICT ONE TYPICAL PAVEMENT MARKINGS
43	•TEMPORARY PAVEMENT MARKING-LETTERS AND SYMBOLS
44	•TEMPORARY INFORMATION SIGNING
45	•TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
46	•TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW - FLOW RESISTANT)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVE. OVER CALUMET SAG CHANNEL
GENERAL PLAN NOTES,
STATE STANDARDS,
AND INDEX OF SHEETS.

SCALE: VERT. _____
HORIZ. _____
DATE _____

DRAWN BY _____
CHECKED BY _____



LOCATION OF WORK WESTERN AVE. OVER CAL-SAG CHANNEL

FAP RYE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	01031-1	COOK	46	3
STA	TO STA		ILLINOIS	
FED ROAD DIST NO 7		ILLINOIS		FED AID PROJECT

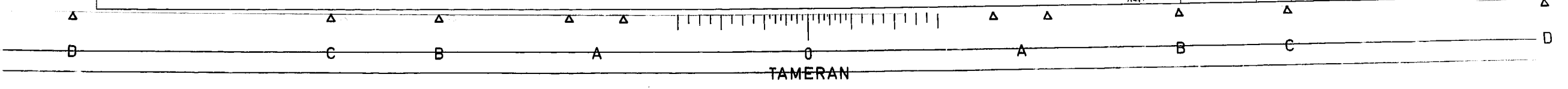
SUMMARY OF QUANTITIES					
CODE NO	ITEM	UNIT	URBAN TOTAL	1982-88	CONSTRUCTION TYPE CODE
			QUANTITIES	1000-2A	
20200100	EARTH EXCAVATION	CU YD	125		
20500150	EMBANKMENT	CU YD	125		
25200100	SODDING	SO YD	210		
28100205	STONE RIPRAP, CLASS A3	TON	15	15	
35500700	BITUMINOUS BASE COURSE 10"	SO YD	948		
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	90		
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SO FT	225		
44000006	BITUMINOUS SURFACE REMOVAL 1 1/2"	SO YD	302	302	
44000600	SIDEWALK REMOVAL	SO FT	225		225
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SO YD	3005	3005	
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	1080		1080
44002020	CONCRETE MEDIAN SURFACE REMOVAL	SO FT	1670		1670
50102400	CONCRETE REMOVAL	CU YD	232.20	232.20	
50104100	BRIDGE HANDRAIL REMOVAL	FOOT	2245	2245	
50300110	PREFORMED JOINT SEAL 1 3/4"	FOOT	436	436	
50300120	PREFORMED JOINT SEAL 2 1/2"	FOOT	137	137	
50300130	PREFORMED JOINT SEAL 4"	FOOT	75	75	
50300150	NEOPRENE EXPANSION JOINT 2"	FOOT	431	431	
50300255	CONCRETE SUPER STRUCTURES	CU YD	391.40	391.40	
50300260	BRIDGE DECK GROOVING	SO YD	5910	5910	
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SO FT	375	375	
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SO FT	630	630	

SUMMARY OF QUANTITIES					
CODE NO	ITEM	UNIT	URBAN TOTAL	1982-88	CONSTRUCTION TYPE CODE
			QUANTITIES	1000-2A	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	25170	25170	
50501005	JACK AND REPOSITION BEARINGS	EACH	10	10	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	86795	86795	
50900105	ALUMINUM RAILING, TYPE L	FOOT	2245	2245	
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SO FT	1670		1670
60623711	CONCRETE MEDIAN	SO FT	2060		2060
67030400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7	7	
X5030304	CONCRETE WEARING SURFACE 4"	SO YD	2930	2930	
X5030101	FLOOR DRAINS, TYPE I	EACH	11	11	
X5030102	FLOOR DRAINS, TYPE II	EACH	8	8	
X5050101	SHEAR CLAMPING DEVICE, TYPE I	EACH	74	74	
X5050102	SHEAR CLAMPING DEVICE, TYPE II	EACH	10	10	
Z0029305	GROUT REMOVAL AND REPLACEMENT	EACH	76	76	
X0322705	FINGER PLATE ADJUSTMENT	FOOT	53	53	
Z0001700	APPROACH SLAB REPAIR (FULL DEPTH)	SO YD	10	10	
Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SO YD	25	25	
Z0002600	BAR SPLICERS	EACH	186	186	
Z0007300	BRIDGE SIDEWALK REPAIR (FULL DEPTH)	SO FT	710	710	
Z0007400	BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH)	SO FT	320	320	
Z0012200	CONCRETE BRIDGE DECK SCARIFICATION (1/2 INCH)	SO YD	3670	3670	
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO YD	89	89	
Z0016200	DECK SLAB REPAIR (PARTIAL)	SO YD	116	116	
Z0021700	EXPANSION JOINT REHABILITATION	FOOT	112	112	
Z0032700	KEYWAY REPAIR	FOOT	2600	2600	
Z0047300	PROTECTIVE SHIELD	SO YD	350	350	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SUMMARY OF QUANTITIES
 WESTERN AVENUE OVER CALUMET-SAG CHANNEL

SCALE VERT: _____ HORIZ: _____
 DATE: _____ DRAWN BY: _____ CHECKED BY: _____



URBAN
LOCAL STATE

FAR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
370	01031-1	COOK	46	4
STA	TO STA			
FED ROAD DIST NO 1		ILLINOIS	FED AID PROJECT	

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
				X302-50	1000-2A	7030-1E
20048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		1	
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1		1	
70122550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1		1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	65		65	
* 70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	17620		17620	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	5874		5874	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1200		1200	
70400300	TEMPORARY CONCRETE BARRIER, TERMINAL SECTION	EACH	2		2	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2430		2430	
* 78002110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE A - LINE 4"	FOOT	5245		5245	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	34		34	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	365		365	
X0322185	BRIDGE DECK LATEX CONCRETE OVERLAY (2 1/4")	SQ YD	3670	3670		
X4403300	CONCRETE MEDIAN REMOVAL	SQ FT	2060		2060	
* 80100140	GROUND ROD, 5/8" DIA. X 10 FT.	EACH			1	
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	42.50		42.50	
* 01002201	JUNIPERUS HORIZONTALIS 'BLUE RUG' 01	EACH	35		35	
* X0322311	RHUS AROMATICA GRO-LOW SUMAC CONTAINER GROWN - 2 GALLON	EACH	25		25	

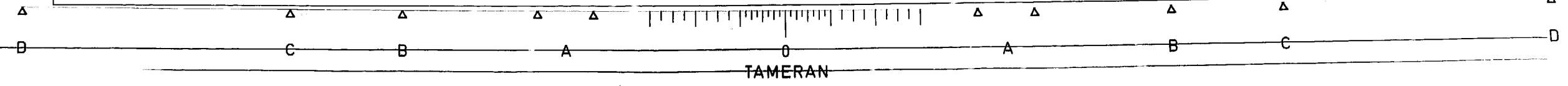
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
				X302-50	1000-2A	7030-1E
* 82200110	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 10	FOOT	2750			2750
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3650		3650	
* 21101300	FURNISHING AND PLACING TOP SOIL 4"	SQ YD	210			210
67100100	MOBILIZATION	L SUM	1			1
20010605	CLEANING DRAINAGE SYSTEM	L SUM	1	1		
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONC. DECK BEAMS	SQ FT	630		630	
* X0322011	LIGHT POLE REMOVE AND RE-ERECT	EACH	1		1	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	LB	4			4
* 25000400	NITROGEN FERTILIZER NUTRIENT	LB	4			4
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	LB	4			4

* SPECIALTY ITEM

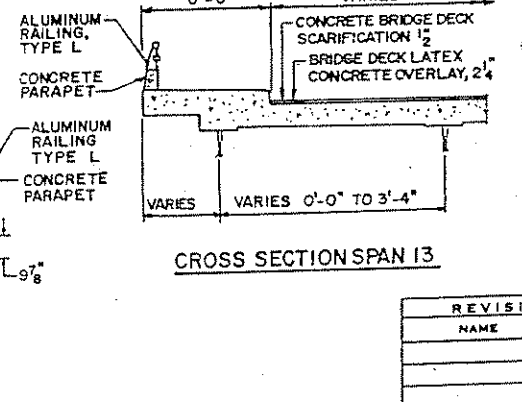
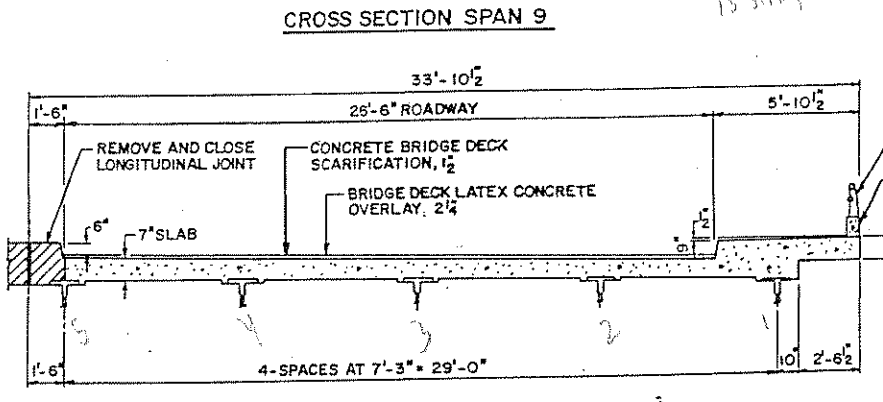
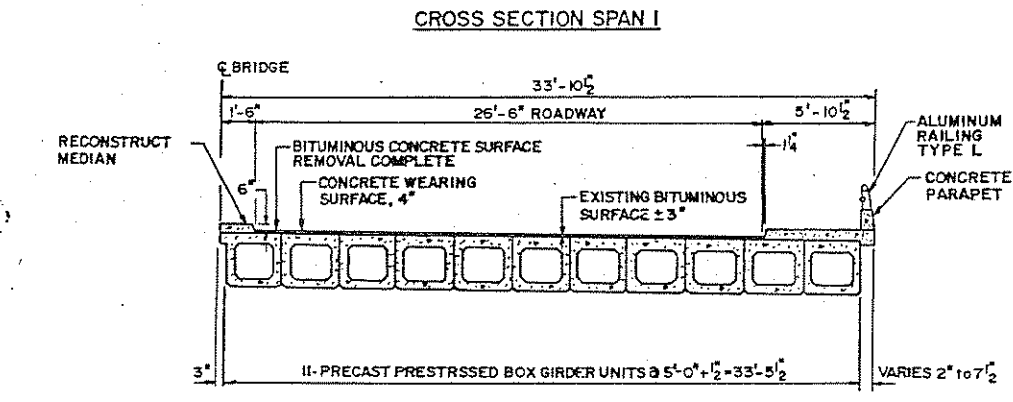
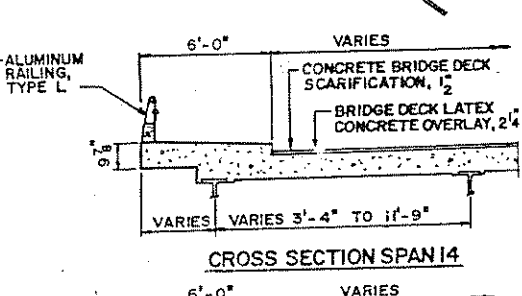
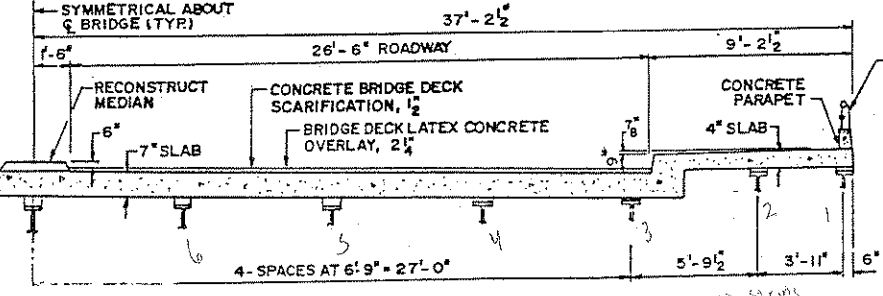
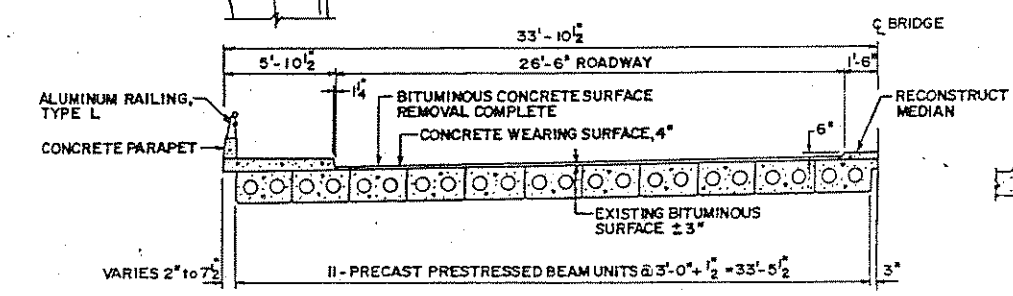
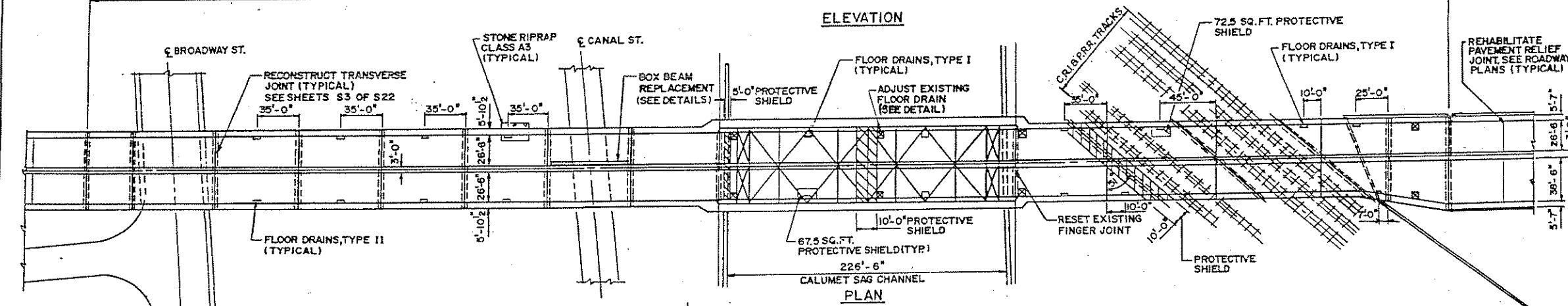
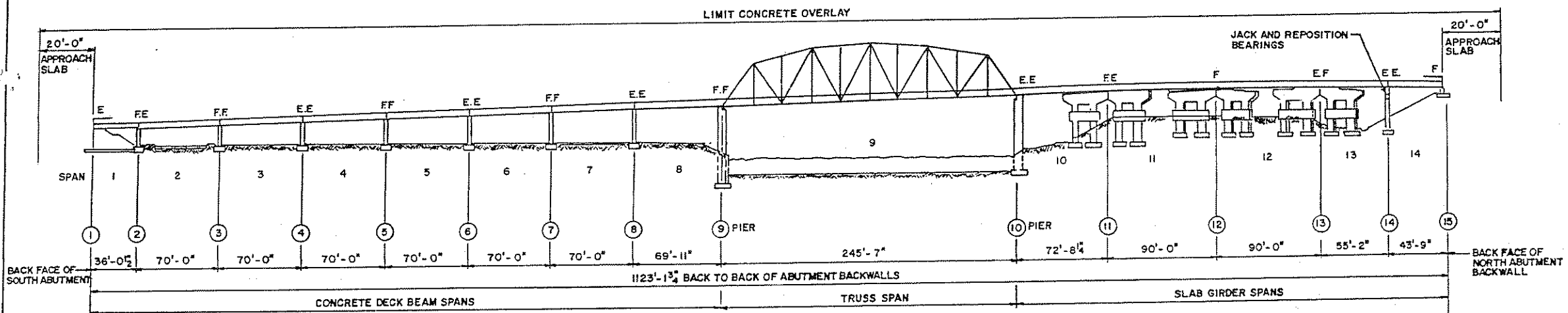
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
WESTERN AVENUE OVER CALUMET-SAG CHANNEL

REVISIONS	
NAME	DATE

SCALE VERT: _____ DATE: _____
HORIZ: _____ DRAWN BY: _____
CHECKED BY: _____



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	16
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	



TOTAL - BILL OF MATERIAL

ITEM	UNIT	QUANTITY
BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH)	SQ. FT.	320
BRIDGE SIDEWALK REPAIR (FULL DEPTH)	SQ. FT.	710
CONCRETE SUPERSTRUCTURE	CU. YD.	391.4
REINFORCEMENT BARS (EPOXY COATED)	POUND	86975
DECK SLAB REPAIR (PARTIAL DEPTH)	SQ. YD.	116
* GROUT REMOVAL AND REPLACEMENT	EACH	76
DECK SLAB REPAIR (FULL DEPTH TYPE II)	SQ. YD.	89
CONCRETE BRIDGE DECK SCARIFICATION, 1/2"	SQ. YD.	3670
BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4"	SQ. YD.	3670
PROTECTIVE SHIELD	SQ. YD.	350
CONCRETE REMOVAL	CU. YD.	232.2
BRIDGE DECK GROOVING	SQ. YD.	5910
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	25170
FLOOR DRAINS TYPE I	EACH	11
FLOOR DRAINS TYPE II	EACH	8
FORMED CONCRETE REPAIR (≤ 5")	SQ. FT.	375
PREFORMED JOINT SEAL, 1 1/2"	FOOT	436
NEOPRENE EXPANSION JOINT, 2"	FOOT	431
CONCRETE WEARING SURFACE, 4"	SQ. YD.	2930
ALUMINUM RAILING, TYPE L	FOOT	2245
SHEAR CLAMPING DEVICE, TYPE I	EACH	74
SHEAR CLAMPING DEVICE, TYPE II	EACH	10
BAR SPLICERS	EACH	186
FINGER PLATE ADJUSTMENT	FOOT	53
BRIDGE HANDRAIL REMOVAL	FOOT	2245
PREFORMED JOINT SEAL, 4"	FOOT	75
PREFORMED JOINT SEAL, 2 1/2"	FOOT	137
JACK AND REPOSITION BEARINGS	EACH	10
REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ. FT.	630
REMOVE AND REINSTALL EXISTING LIGHT POLE	EACH	1
BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ. YD.	3005
PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ. FT.	630
STONE RIPRAP, CLASS A3	TON.	15
CLEAN DRAINAGE SYSTEM	L. SUM	1
APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.	25
APPROACH SLAB REPAIR (FULL DEPTH)	SQ. YD.	10
KEYWAY REPAIR	FOOT	2600

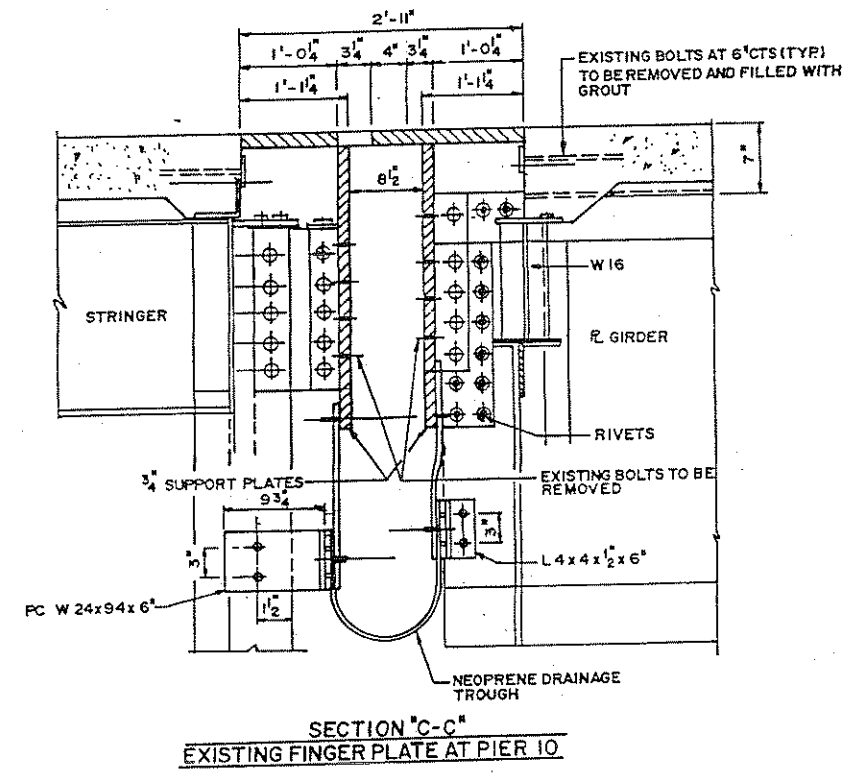
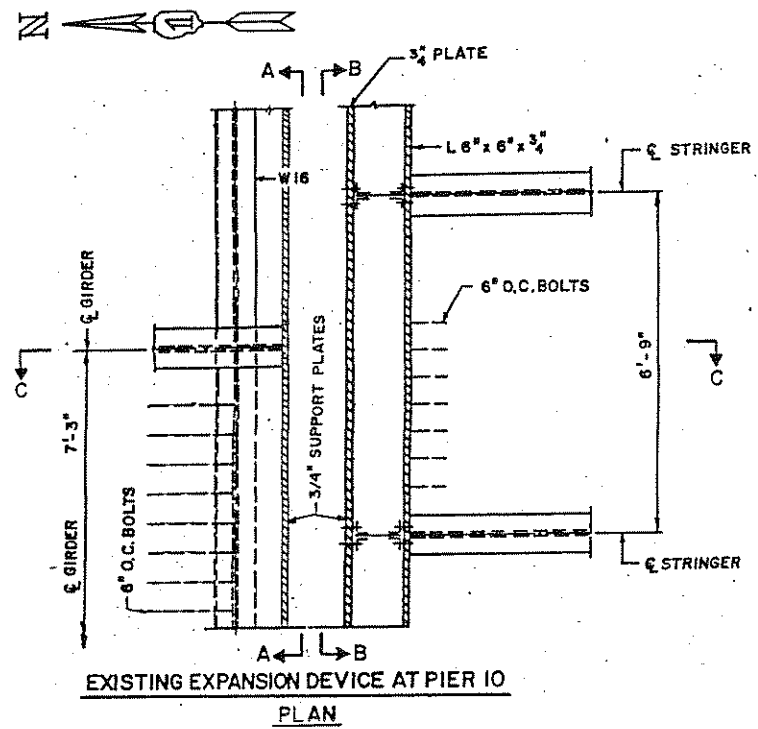
NOTES:
FOR GENERAL NOTES SEE SHEET S2.
* FOR DETAIL SEE SHEET S5 OF S22.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVENUE OVER
CALUMET SAG CHANNEL
PLAN, ELEVATION AND CROSS SECTIONS
S.N. 016-0777
SCALE: VERT. _____
HORIZ. _____
DATE DECEMBER, 1998
DRAWN BY MVT
CHECKED BY TMS

CROSS SECTION SPANS 10, 11 AND 12
HATCHED AREA INDICATES REMOVAL

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	17
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	



GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE 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 DIMENSION AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OF ORDERING OF MATERIALS. SUCH VARIATION SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT BID PRICE FOR THE WORK.

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-270, GRADE 36 UNLESS OTHERWISE SPECIFIED.

ALL NEW FASTENERS SHALL BE HIGH STRENGTH BOLTS. HOLES SHALL BE SUBPUNCHED OR SUBDRILLED 1/16" DIA. AND REAMED IN THE FIELD TO 13/16" DIA. FOR 3/4" DIA. HIGH STRENGTH BOLTS (EXCEPT AS NOTED ON THE PLANS) AFTER NEW STRUCTURAL STEEL SECTIONS ARE PROPERLY FITTED INTO POSITION.

EXISTING STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING ADJACENT AREAS OF EXISTING STEEL STRUCTURES".

THE INORGANIC ZINC RICH PRIMER / ACRYLIC / ACRYLIC PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR BY THE ACRYLIC FINISH COAT SHALL BE GRAY, MUNSSELL NO. 5B 7/1. SEE SPECIAL PROVISIONS "CLEANING AND PAINTING NEW METAL STRUCTURES".

THE ENGINEER SHALL MARK THE ACTUAL REPAIR LOCATIONS ON THE AS-BUILT PLANS.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

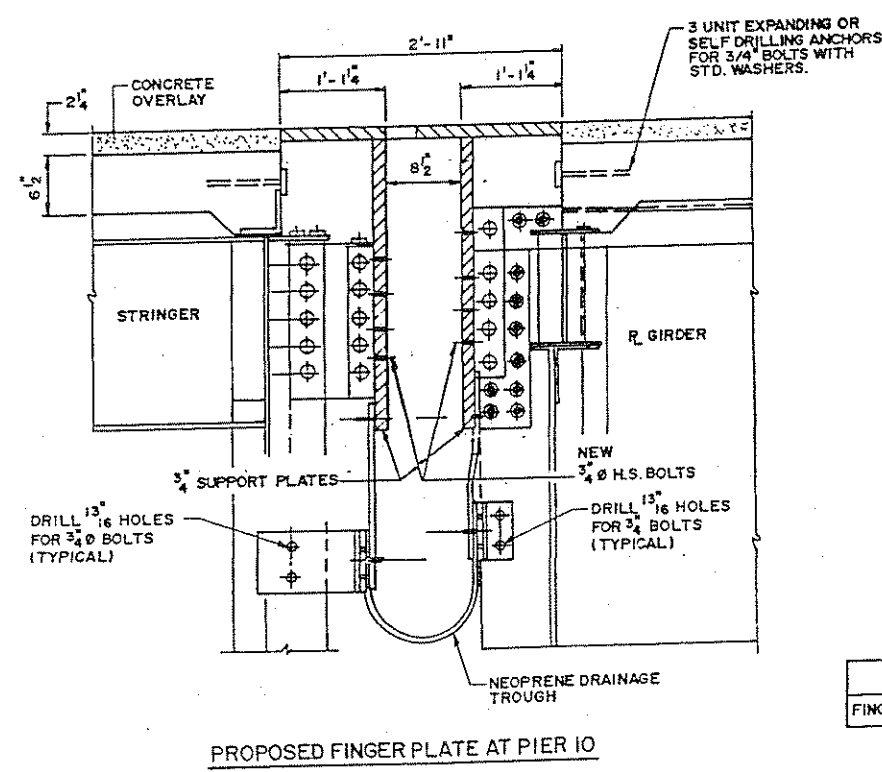
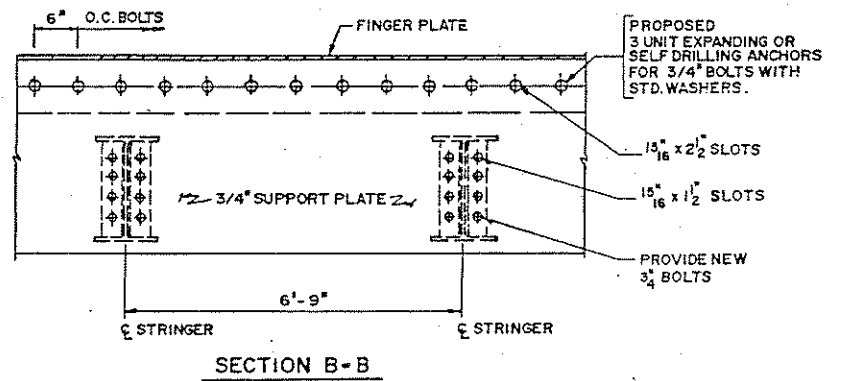
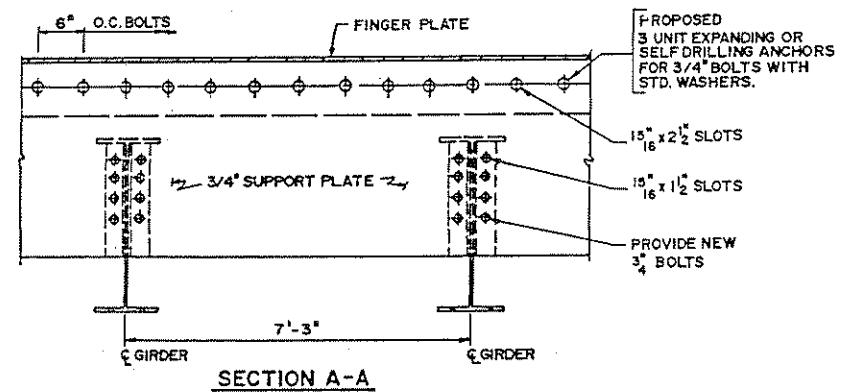
EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT.

ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM AT THE CONTRACTOR'S EXPENSE.

FOR BONDED CONSTRUCTION JOINT SEE SPECIAL PROVISIONS.

THE PROTECTIVE SHIELD QUANTITY IS ESTIMATED. IT IS TO BE USED UNDERNEATH THE TRANSVERSE AND LONGITUDINAL JOINTS AS WELL AS THE FULL DEPTH DECK PATCHING LOCATIONS AS DIRECTED BY THE ENGINEER.

REMOVAL OF EXISTING FRAMES AND GRATES IN THE FIXED JOINTS OF THE PRECAST CONCRETE GIRDERS AND THE EXISTING EXPANSION DEVICES IS INCLUDED IN THE COST OF CONCRETE REMOVAL.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
FINGER PLATE ADJUSTMENT	FOOT	53

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

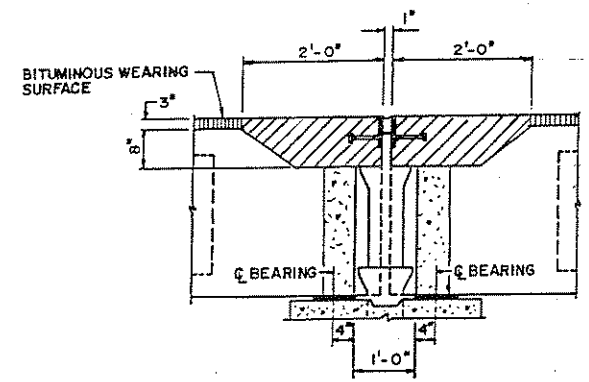
WESTERN AVENUE OVER
CALUMET SAG CHANNEL
FINGER PLATE ADJUSTMENT
AND GENERAL NOTES

SCALE: VERT. S.N.016-0777
HORIZ. DATE

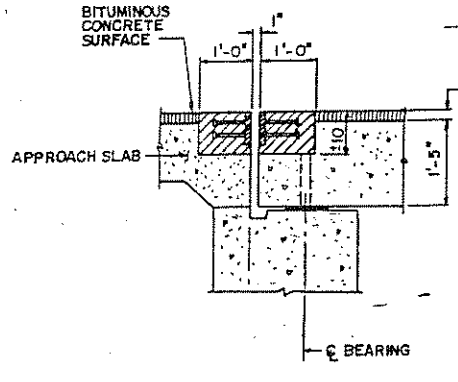
DRAWN BY MVT
CHECKED BY TMS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	18
STA. TO STA.		FED. AID PROJECT	

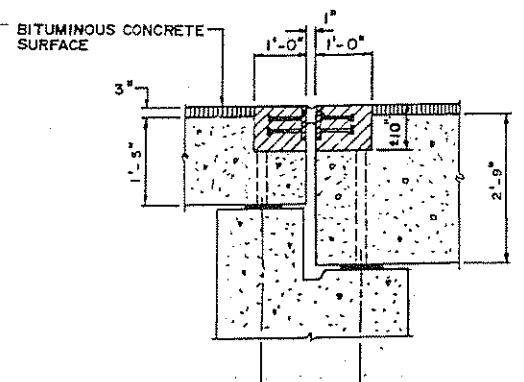
NOTE:
HATCHED AREA INDICATES REMOVAL.
WORK WITH SHEET S4 OF S22 AND S5 OF S22.



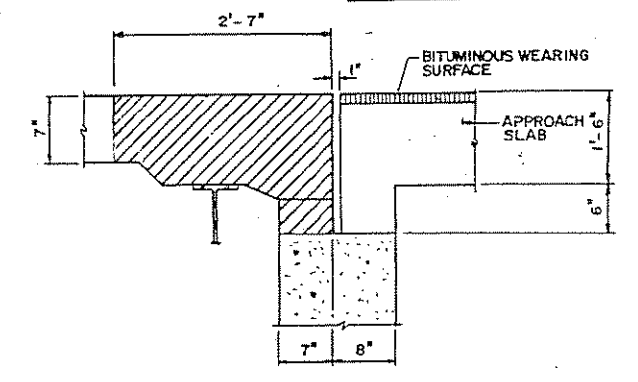
EXISTING ROADWAY DRAIN AT PIERS 3, 5 & 7



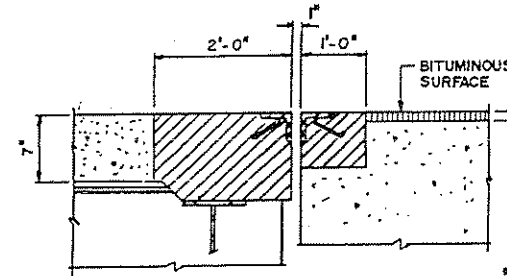
EXISTING EXPANSION JOINT AT SOUTH ABUTMENT



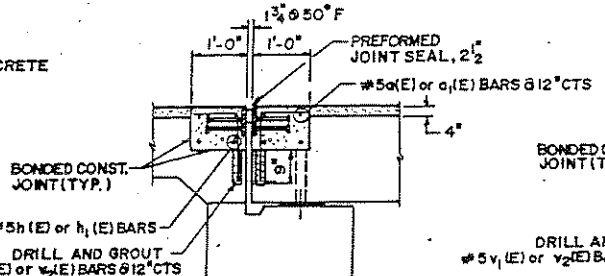
EXISTING EXPANSION JOINT AT PIER 2



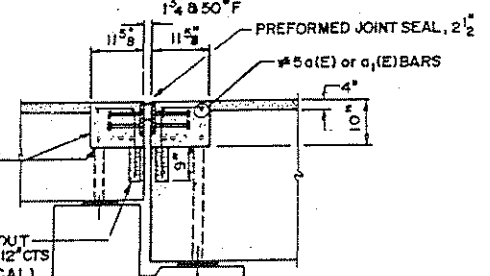
EXISTING FIXED JOINT AT NORTH ABUTMENT



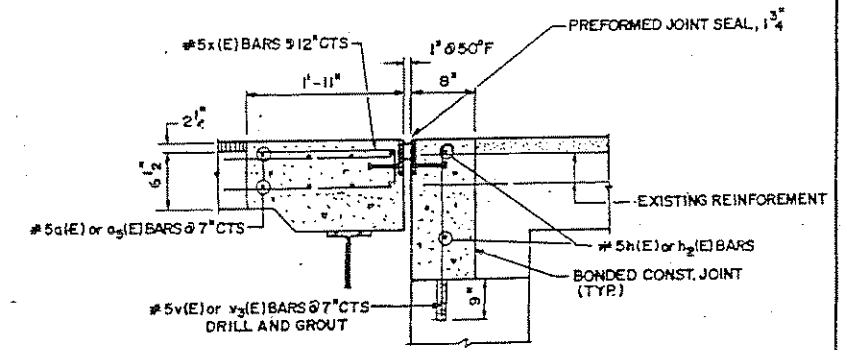
EXISTING FIXED JOINT AT PIER 9



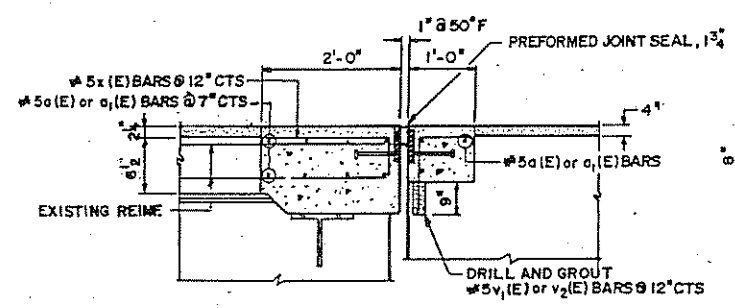
PROPOSED EXPANSION JOINT AT SOUTH ABUTMENT



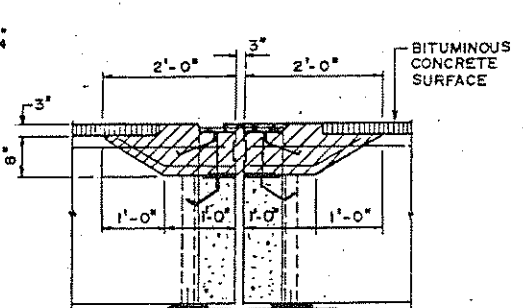
PROPOSED EXPANSION JOINT AT PIER 2



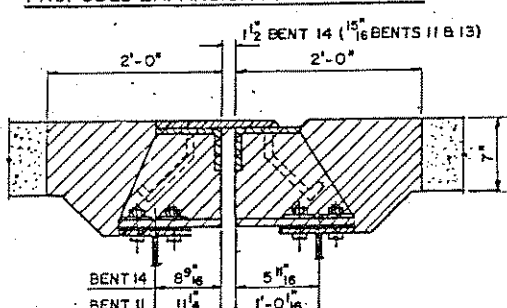
PROPOSED FIXED JOINT AT NORTH ABUTMENT



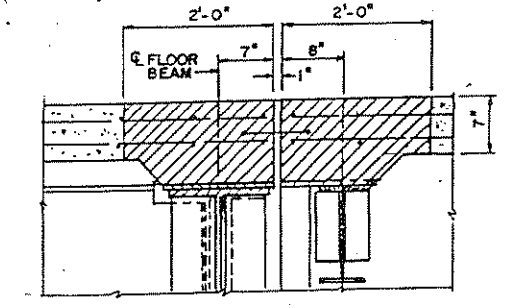
PROPOSED FIXED JOINT AT PIER 9



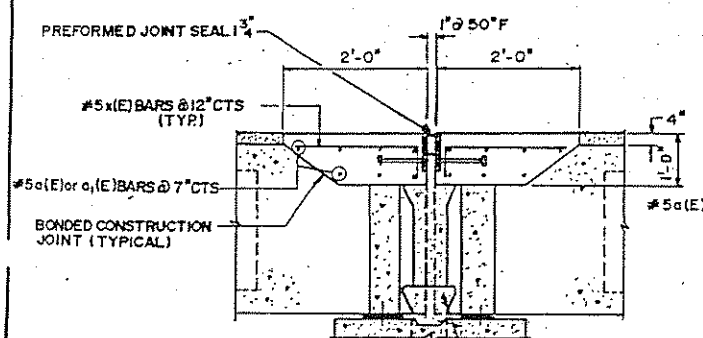
EXISTING EXPANSION JOINT AT PIERS 4, 6 & 8



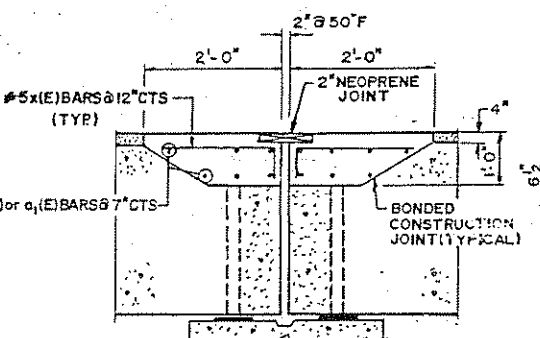
EXISTING EXPANSION JOINT AT PIERS 11, 13 & 14



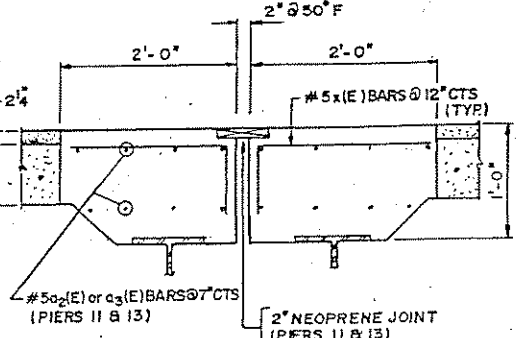
EXISTING MIDSPAN TRUSS SPAN



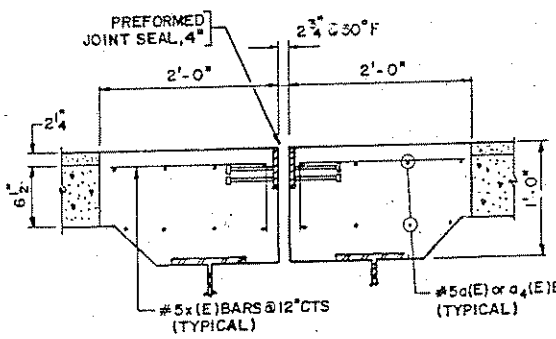
PROPOSED EXPANSION JOINT AT DRAIN, PIERS 3, 5 & 7



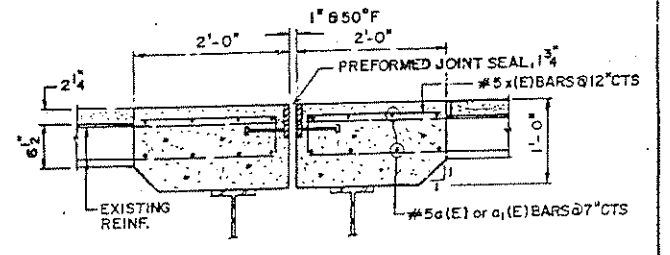
PROPOSED EXPANSION JOINT AT PIERS 4, 6 & 8



PROPOSED EXPANSION JOINT AT PIERS 11 & 13



PROPOSED EXPANSION JOINT AT PIER 14

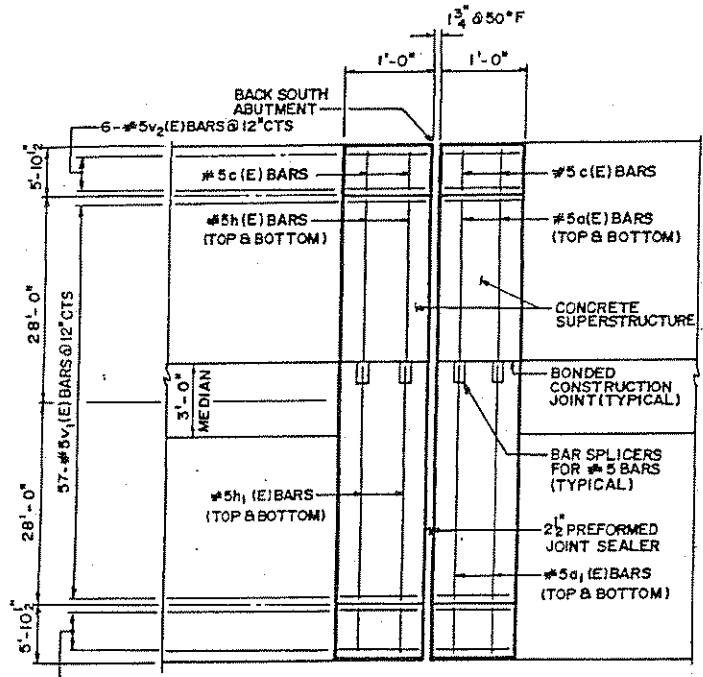


PROPOSED MIDSPAN TRUSS SPAN

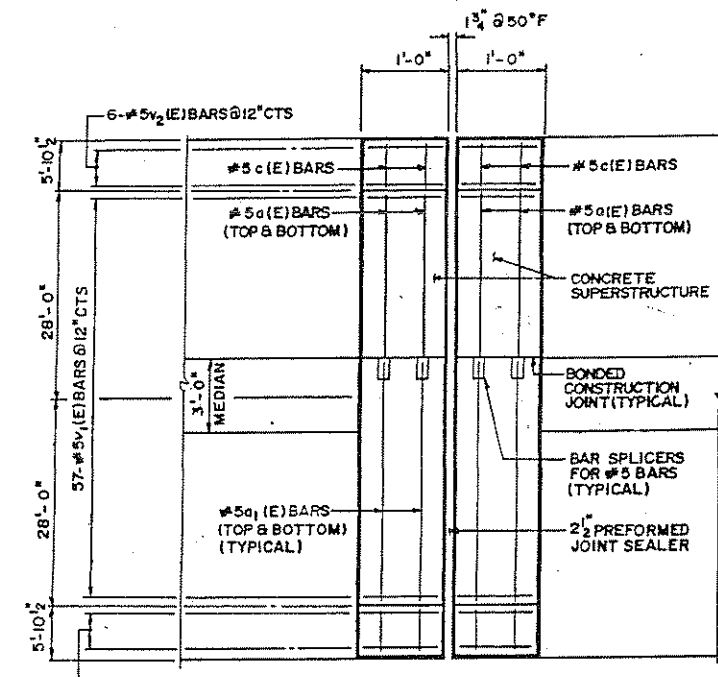
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVENUE OVER
CALUMET SAG CHANNEL
TRANSVERSE EXPANSION JOINT DETAIL
S.N. 016-0777
SCALE: VERT. 1"=4'-0"
HORIZ. 1"=10'-0"
DRAWN BY MVT
CHECKED BY TMS

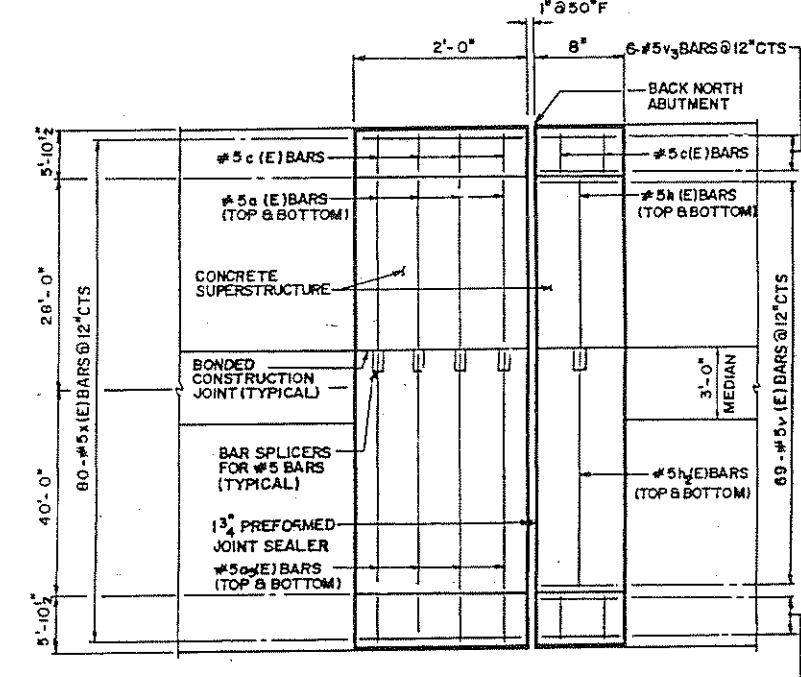
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	19
STA.	TO STA.		
ILL. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT	



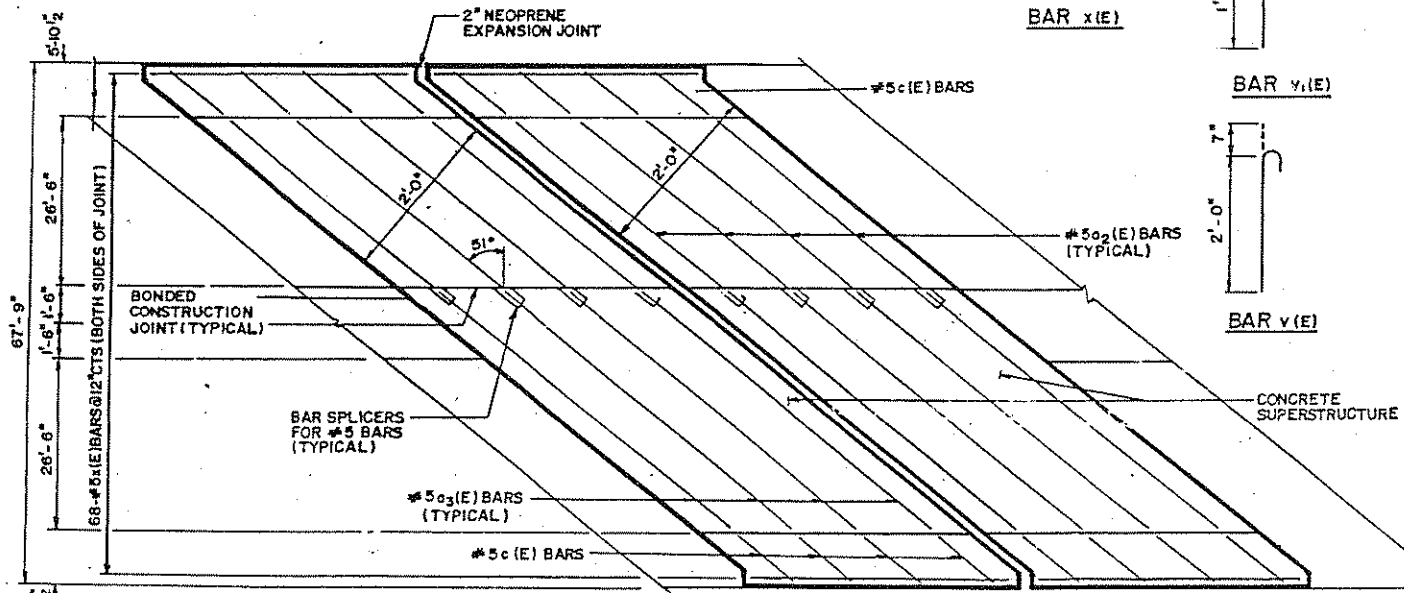
PLAN SOUTH ABUTMENT



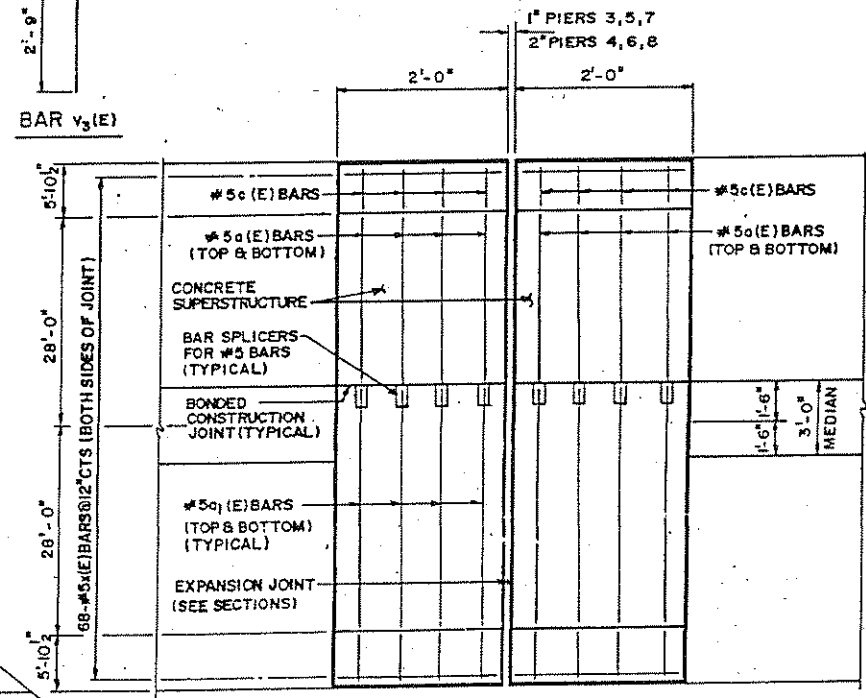
PLAN PIER 2



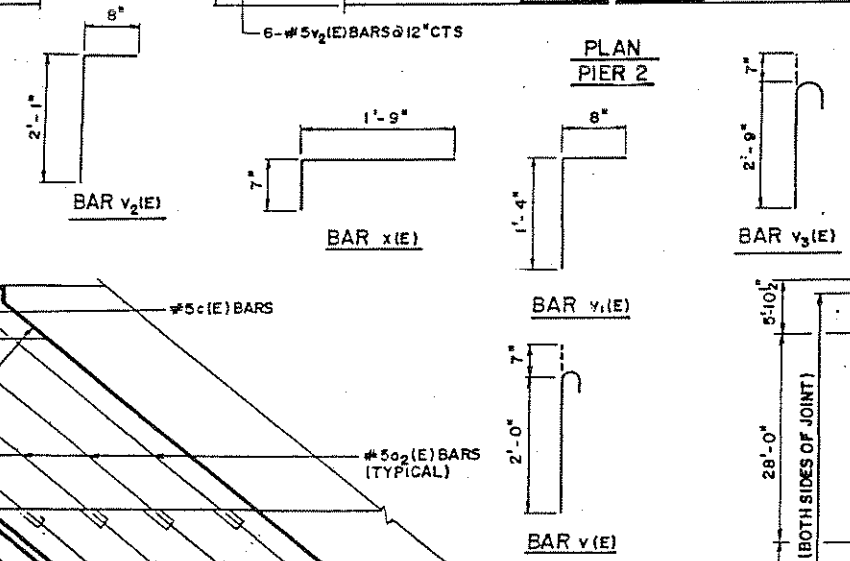
PLAN NORTH ABUTMENT



PLAN PIERS 11,13



PLAN PIERS 3 TO 8



MINIMUM BAR LAP

SIZE	LAP
#5	2'-2"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	148	#5	27'-6"	—
a ₁ (E)	124	#5	30'-6"	—
a ₂ (E)	32	#5	43'-6"	—
a ₃ (E)	32	#5	48'-0"	—
a ₄ (E)	16	#5	33'-0"	—
a ₅ (E)	8	#5	42'-6"	—
c (E)	184	#5	6'-1"	┌
c ₁ (E)	14	#5	10'-0"	┌
h (E)	6	#5	27'-6"	—
h ₁ (E)	4	#5	30'-6"	—
h ₂ (E)	2	#5	42'-6"	—
v (E)	69	#5	2'-7"	┌
v ₁ (E)	285	#5	2'-0"	┌
v ₂ (E)	66	#5	2'-9"	┌
v ₃ (E)	12	#5	3'-4"	┌
x (E)	1838	#5	2'-4"	┌
FURNISHING AND ERECTING STRUCTURAL STEEL				POUND 20480
REINFORCEMENT BARS (EPOXY COATED)				POUND 18600
CONCRETE SUPERSTRUCTURE				CU. YD. 156.1
CONCRETE REMOVAL				CU. YD. 140.3
BAR SPLICERS				EACH 186
NEOPRENE EXPANSION JOINT, 2"				FOOT 431
PREFORMED JOINT SEAL, 1 3/4"				FOOT 436
PREFORMED JOINT SEAL, 2 1/2"				FOOT 137
PREFORMED JOINT SEAL, 4"				FOOT 75

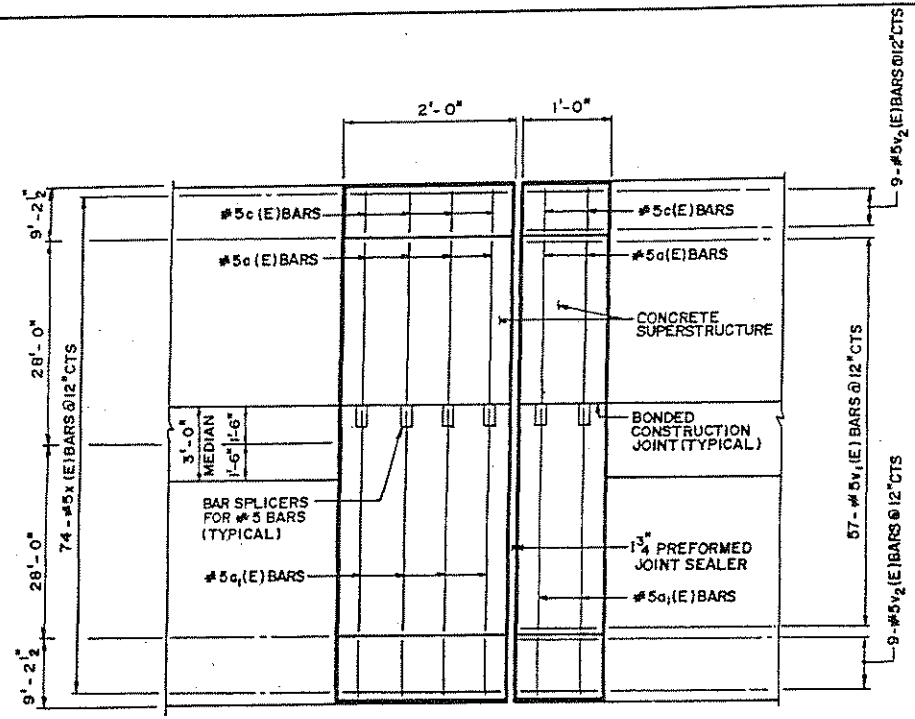
REINFORCEMENT DESIGNATED (E) SHALL BE EPOXY COATED.

REVISIONS

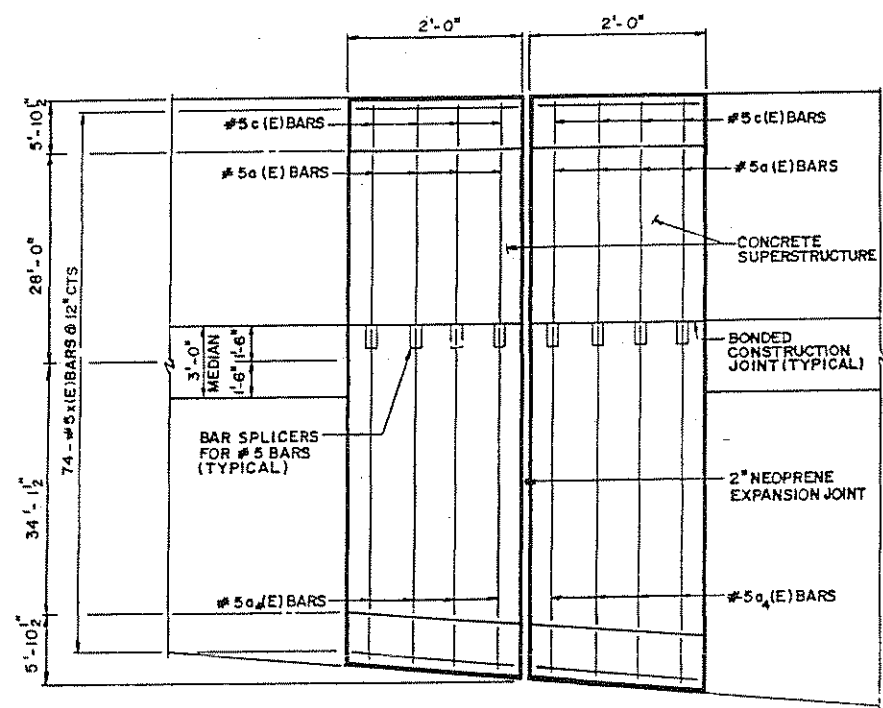
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE OVER CALUMET SAG CHANNEL
 TRANSVERSE EXPANSION JOINT PLANS
 S.N.016-0777
 SCALE: VERT. DRAWN BY MVT
 HORIZ. CHECKED BY TMS
 DATE

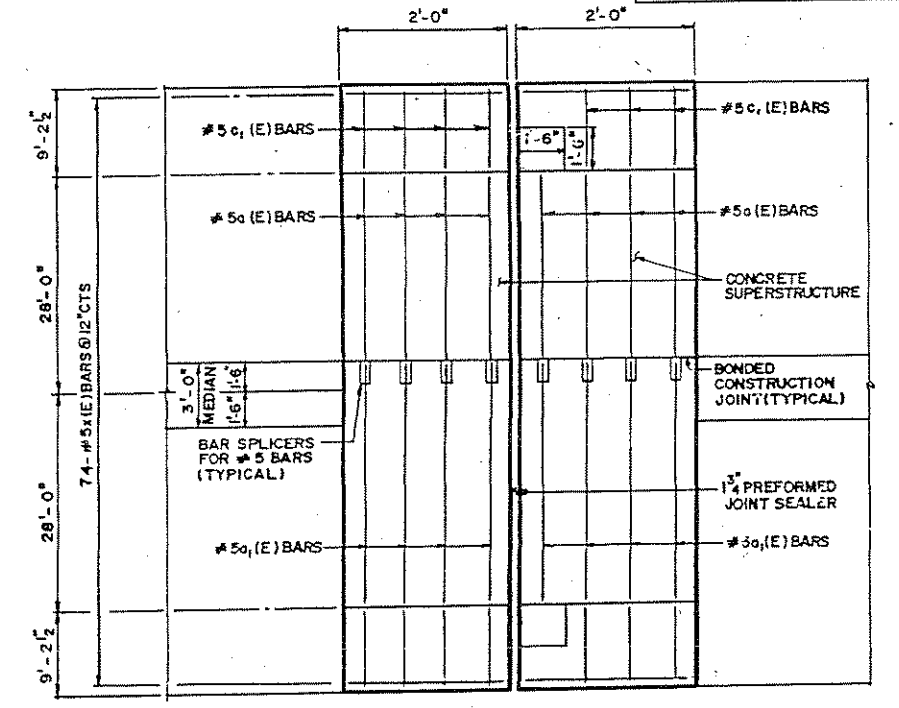
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
01031-1	COOK	46	20
STA. TO STA.		FED. AID PROJECT	



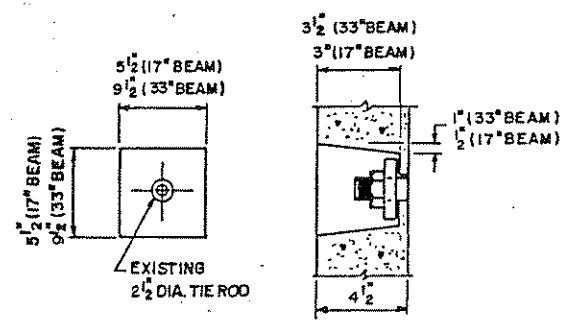
PLAN
PIER 9



PLAN
PIER 14



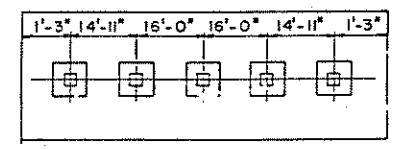
PLAN
TRUSS MIDSPAN



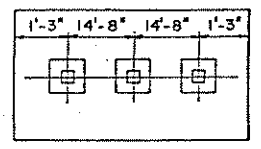
BOX GIRDER FASCIA POCKETS
DETAIL FOR GROUT REMOVAL AND
REPLACEMENT

BILL OF MATERIAL

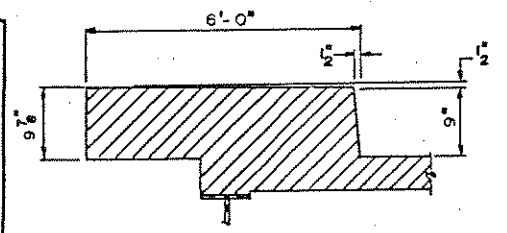
ITEM	UNIT	QTY.
GROUT REMOVAL AND REPLACEMENT	EACH	76



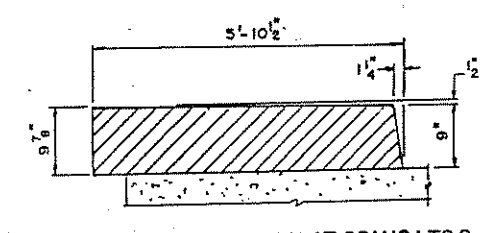
FASCIA BOX BEAM
SPAN 2 THRU 8



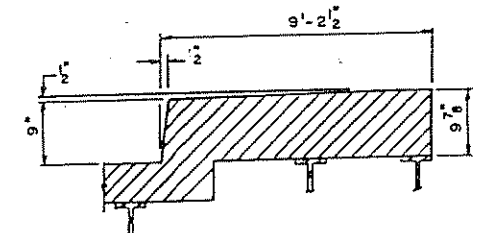
FASCIA BOX BEAM
SPAN 1



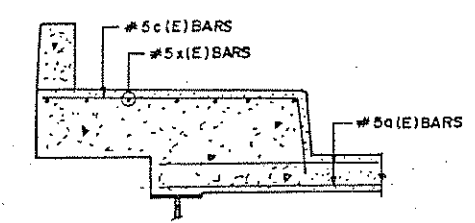
EXISTING SIDEWALK AT SPANS 13 & 14



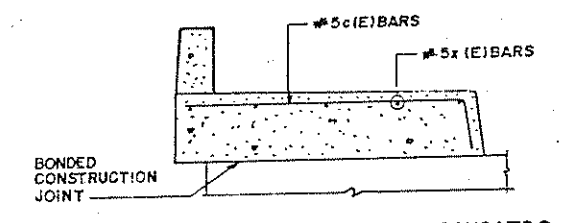
EXISTING SIDEWALK AT SPANS 1 TO 8



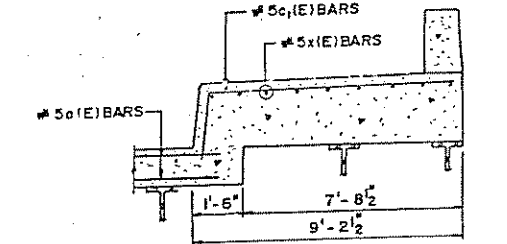
EXISTING SIDEWALK AT SPAN 9



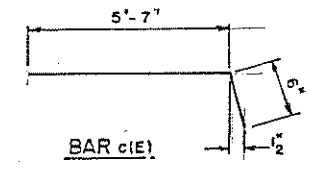
PROPOSED SIDEWALK AT SPANS 10 TO 14



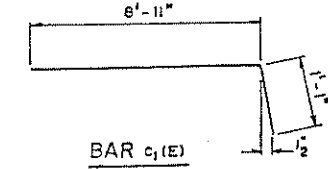
PROPOSED SIDEWALK AT SPANS 1 TO 8



PROPOSED SIDEWALK AT SPAN 9



BAR c1(E)



BAR c1(E)

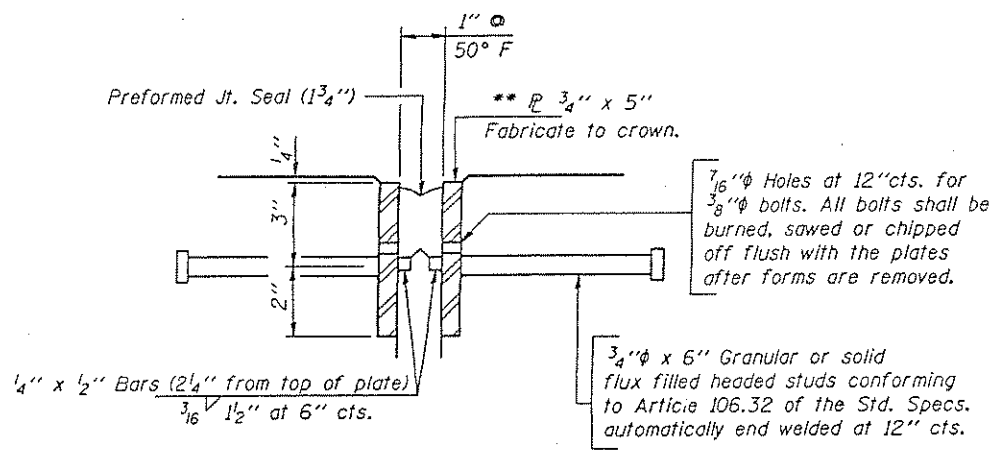
REVISIONS

NAME	DATE

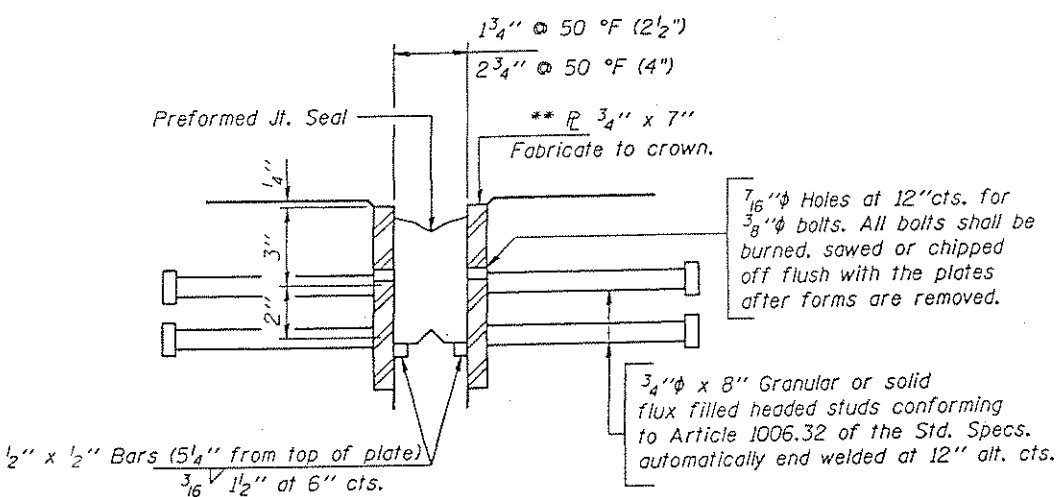
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVENUE OVER
CALUMET SAG CHANNEL
TRANSVERSE EXPANSION JOINT PLANS
S.N.016-0777
SCALE: VERT. _____
HORIZ. _____
DRAWN BY MVT
CHECKED BY TMS

P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	21
STA.		TO STA.		
P.C. ROAD DIST. IN.		ALIGNED	P.C. AIR PROJECT	

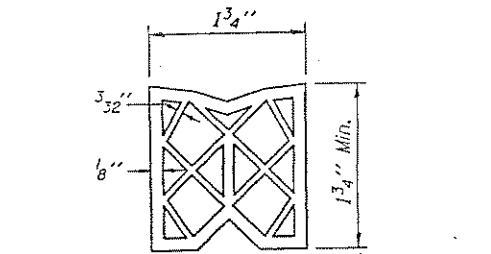
Sheet S6 of S22



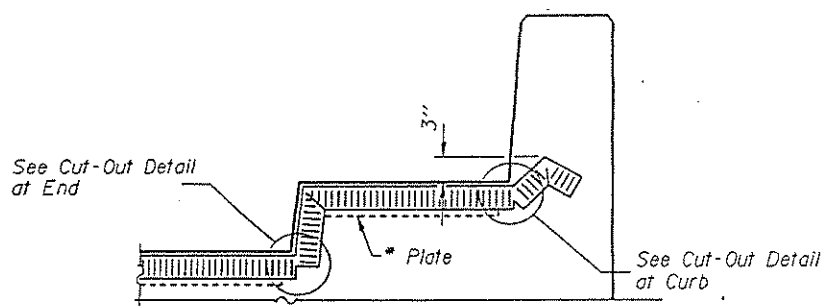
1 3/4" PREFORMED JOINT SEAL



2 1/2" and 4" PREFORMED JOINT SEAL



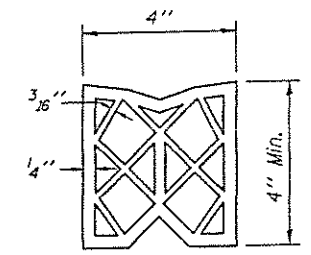
PREFORMED JOINT SEAL (1 3/4")



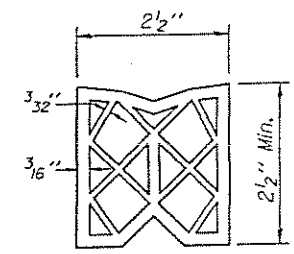
TYPICAL END OF SEAL TREATMENT

*Cut retainer bars in sidewalk 6" short of curb face

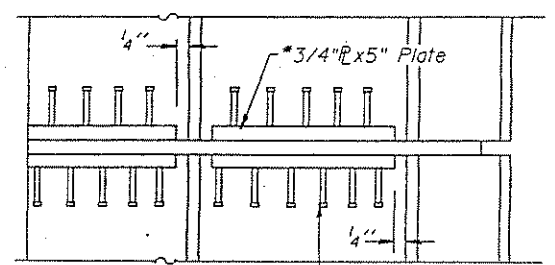
NOTES:
 ** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.
 After fabrication all surface of the steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.



PREFORMED JOINT SEAL (4")

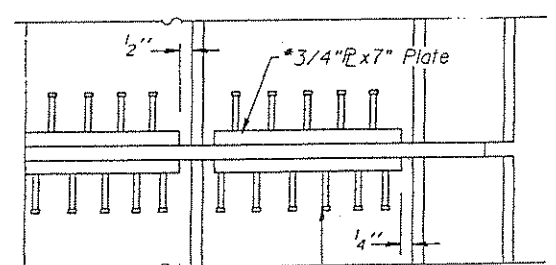


PREFORMED JOINT SEAL (2 1/2")



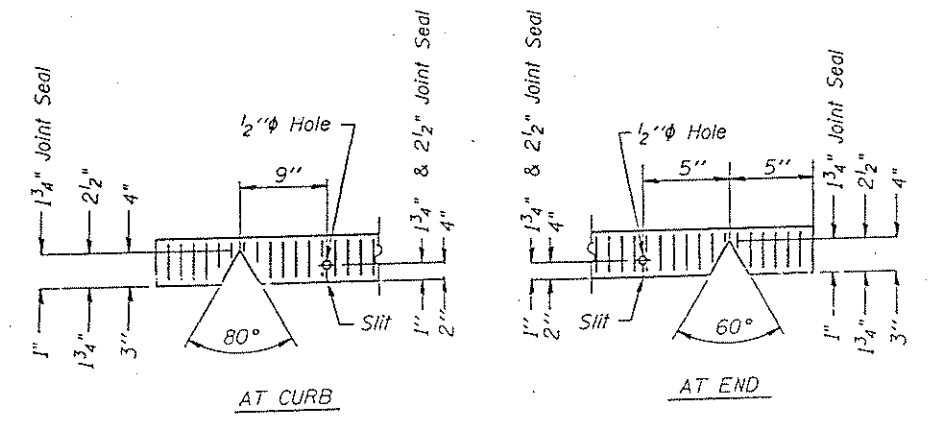
PLAN

3/4" ϕ x 6" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically end welded at 12" alt. cts.



PLAN

3/4" ϕ x 8" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically end welded at 12" alt. cts.



SEAL CUT-OUT DETAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 PREFORMED JOINT SEAL DETAIL
 SN 016-0777
 SCALE: NONE
 DATE
 DRAWN BY CADD
 CHECKED BY

Nov 10 08:52:56 1998
 Projects\struct\std\stds2.m32 LV:1-63

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
01031 - 1	COOK	46	22
STA.	TO STA.		
FEL. ROAD DIST. NO.	BLDG. NO.	FEL. NO. PROJECT	

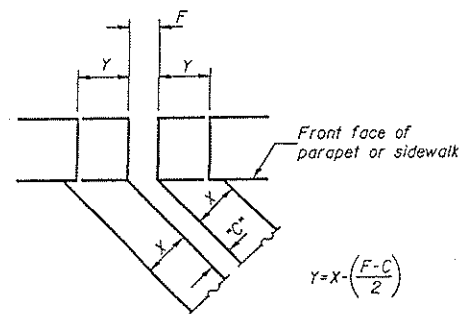
Sheet S7 of S22

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

INSTALLATION NOTES

- ① Install continuous seal in roadway, parapet, curb, and sidewalk.
- ② Install anchor blocks as indicated.

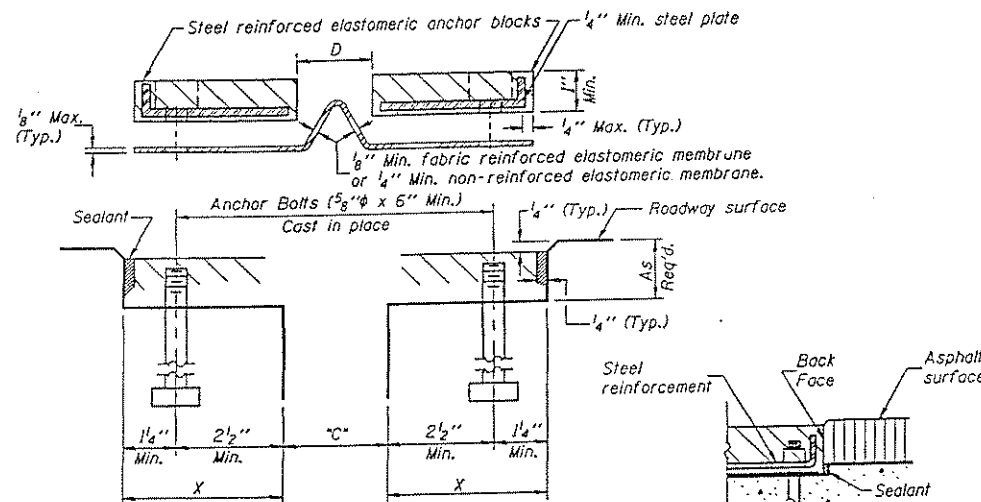
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.



$$Y = X \left(\frac{F - C}{2} \right)$$

For dimension "F" see sheets 3 and 4

FORMING BLOCKOUT SKETCH



CROSS SECTION

ANCHOR BLOCK WITH ASPHALT SURFACE

GENERAL NOTES

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

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

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

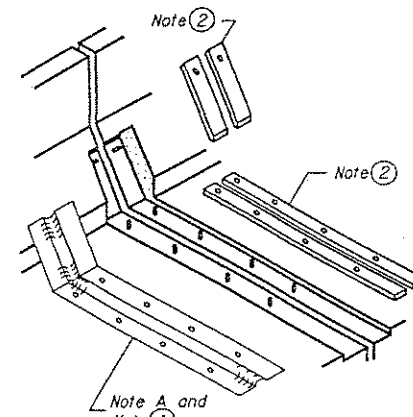
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

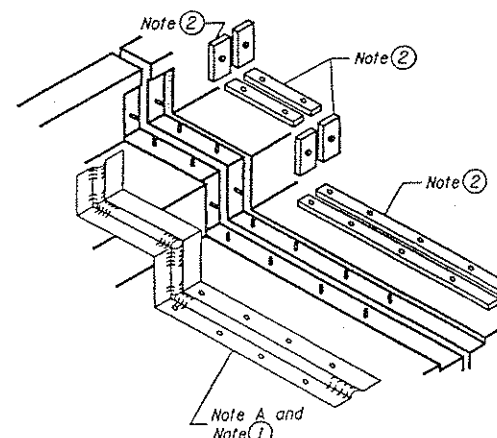
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

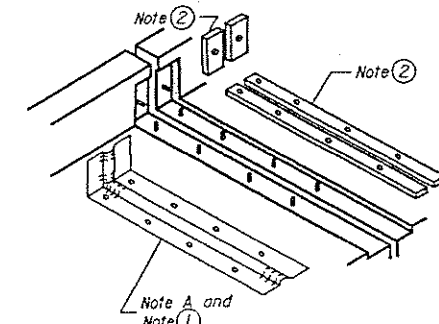
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



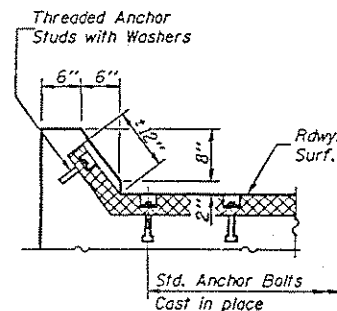
AT PARAPET



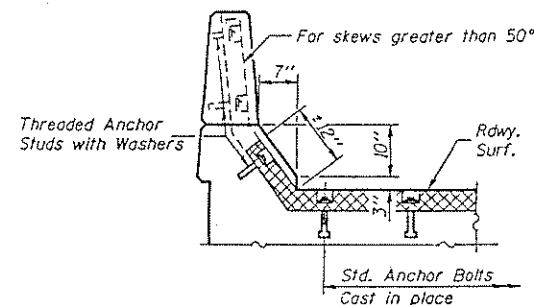
AT SIDEWALK OR MEDIAN



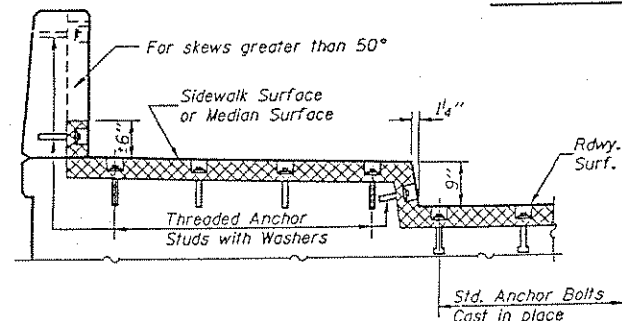
AT WALL



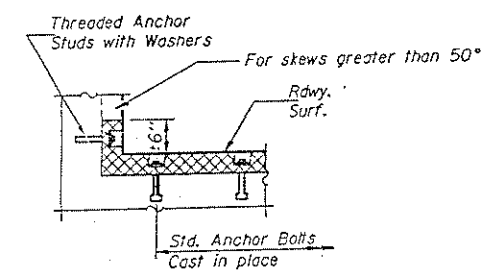
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN



AT WALL

Nov 10 08:52:52 1998
projects\struct\1\atdets2.m22 LV1-63

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

WESTERN AVENUE
OVER CALUMET SAG CHANNEL
NEOPRENE JOINT DETAIL
SN 016-0777

SCALE: NONE
DATE: 11/10/98

DRAWN BY CADD
CHECKED BY TMS

F.A.N. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	23
STA.	TO STA.			
FILE AND DET. NO.	ILLINOIS	PER. AND PROJECT		

NOTES

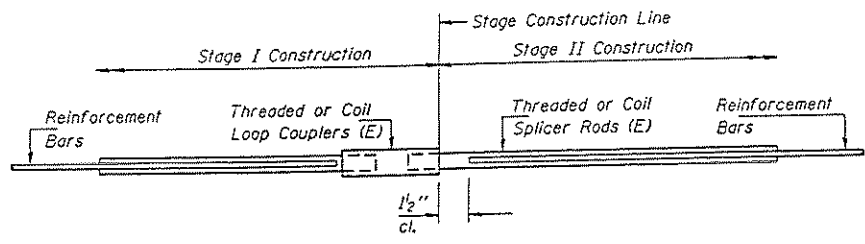
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the 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 = $1.25 \times f_y \times A_1$
 (Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_1$
 (Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_1 = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

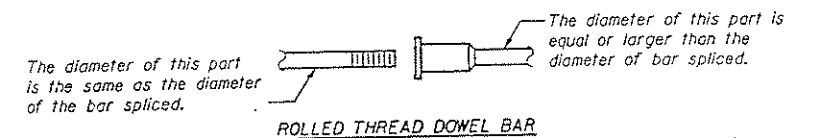
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

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."



SPLICER DETAIL

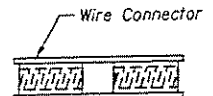
Bar Size	No. Assemblies Required	Location
#5	8	SOUTH ABUTMENT
#5	8	PIER 2
#5	14	PIER 3
#5	14	PIER 4
#5	14	PIER 5
#5	14	PIER 6
#5	14	PIER 7
#5	14	PIER 8
#5	12	PIER 9
#5	16	TRUSS MIDSPAN
#5	16	PIER 11
#5	16	PIER 13
#5	16	PIER 14
#5	10	NORTH ABUTMENT



ROLLED THREAD DOWEL BAR



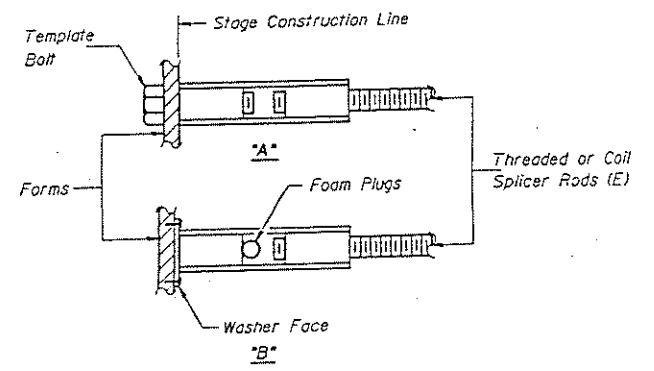
ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

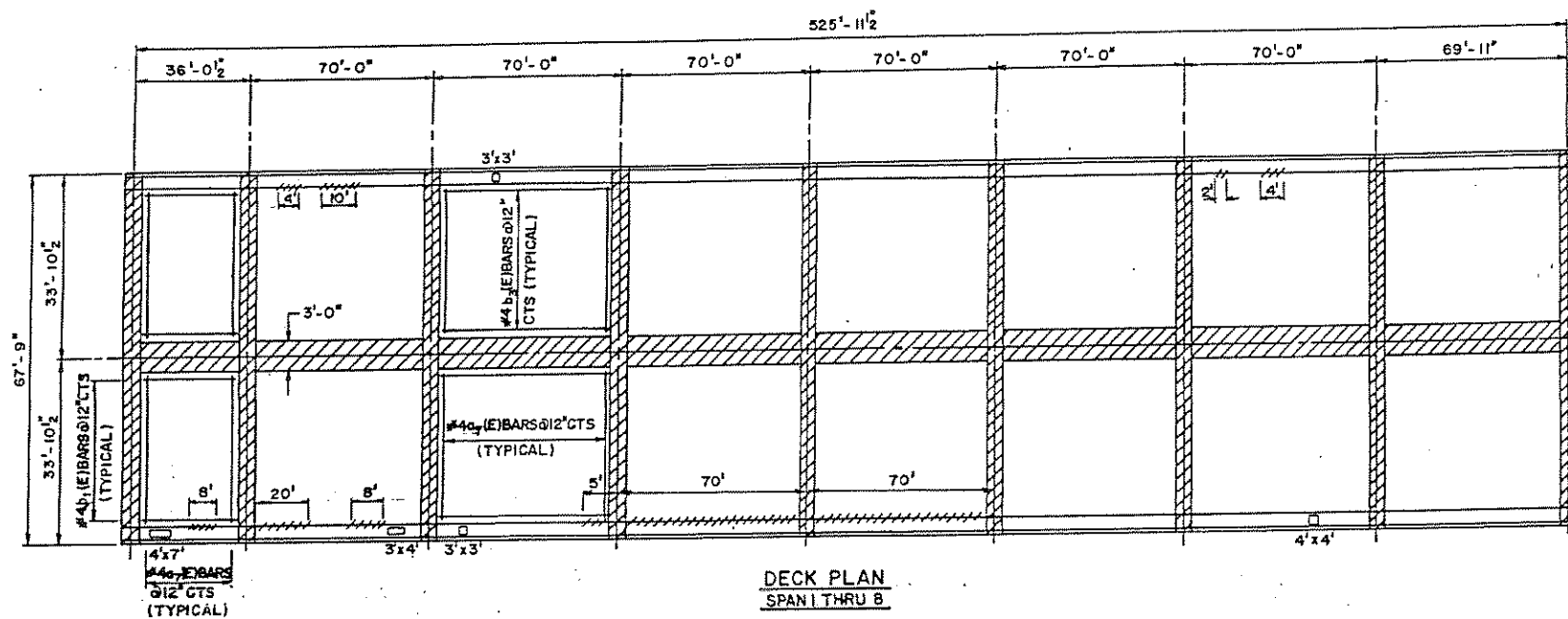
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

REVISIONS	
NAME	DATE

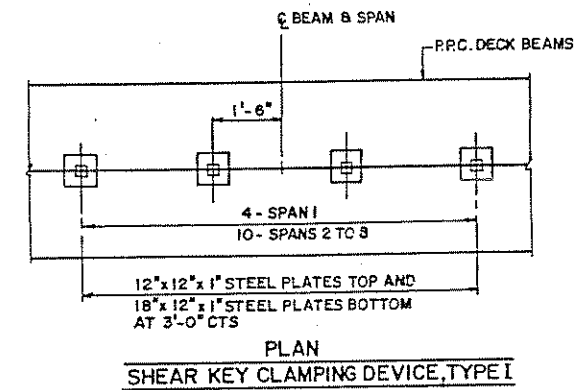
ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 BAR SPLICER DETAIL
 SN 016-0777

SCALE: NONE
 DATE: 11/10/98
 DRAWN BY: CADD
 CHECKED BY:

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	24
STA.	TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	



DECK PLAN
SPAN 1 THRU 8



PLAN
SHEAR KEY CLAMPING DEVICE, TYPE I

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a ₆ (E)	511	#4	2'-4"	
a ₇ (E)	1004	#4	26'-0"	
b ₁ (E)	4	#4	31'-6"	
b ₂ (E)	54	#4	31'-6"	
b ₃ (E)	56	#4	34'-6"	
b ₃ (E)	756	#4	34'-6"	

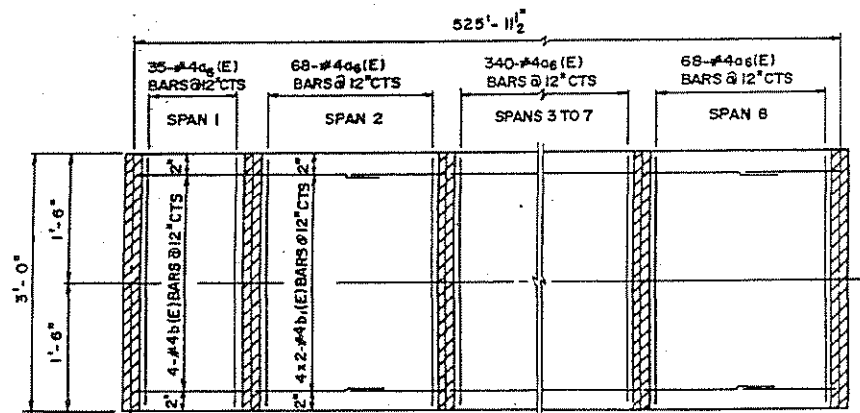
	SQ. FT.	
BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH)		75
BRIDGE SIDEWALK REPAIR (FULL DEPTH)		200
REINFORCEMENT BARS (EPOXY COATED)	POUND	38080
CONCRETE SUPERSTRUCTURE	CU. YDS	35.4
CONCRETE REMOVAL	CU. YDS	32.7
SHEAR KEY CLAMPING DEVICE TYPE I	EACH	74
CONCRETE WEARING SURFACE, 4"	SQ. YDS	2930
BRIDGE DECK GROOVING	SQ. YDS	2620
BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ. YDS	3005

REINFORCEMENT DESIGNATED (E) SHALL BE EPOXY COATED.

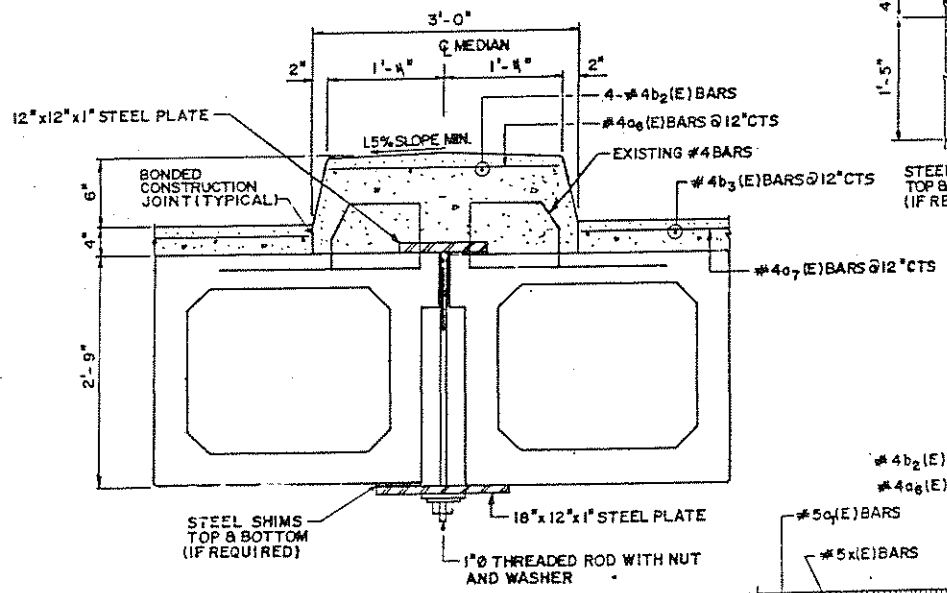
EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT.

BARS INDICATE THUS 12 x 4 - #5 ETC. INDICATES 12 LINES OF BARS WITH 4 LENGTHS PER LINE.

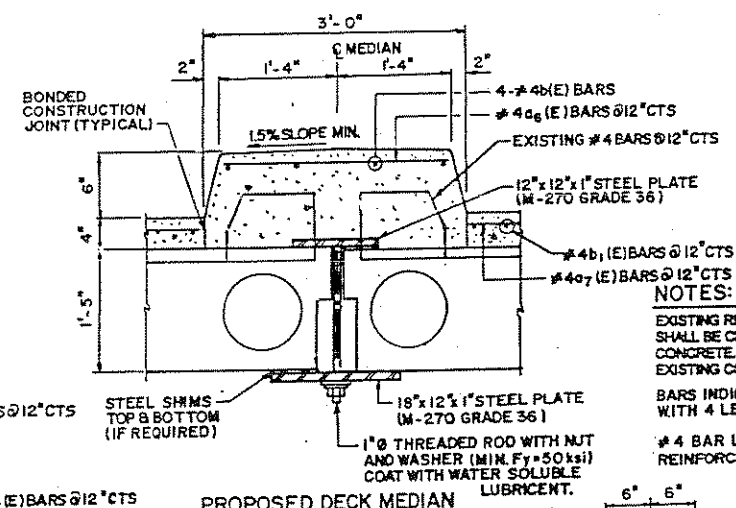
#4 BAR LAP LENGTH = 1'-8". REINFORCEMENT DESIGNATED (E) SHALL BE EPOXY COATED.



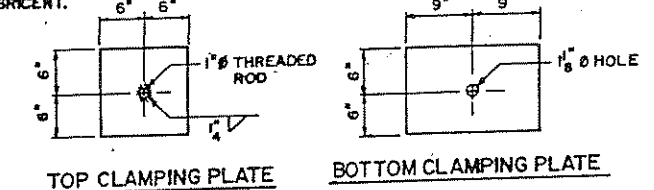
PROPOSED DECK MEDIAN
REINFORCEMENT PLAN



PROPOSED DECK MEDIAN
SPAN 2 THRU 8

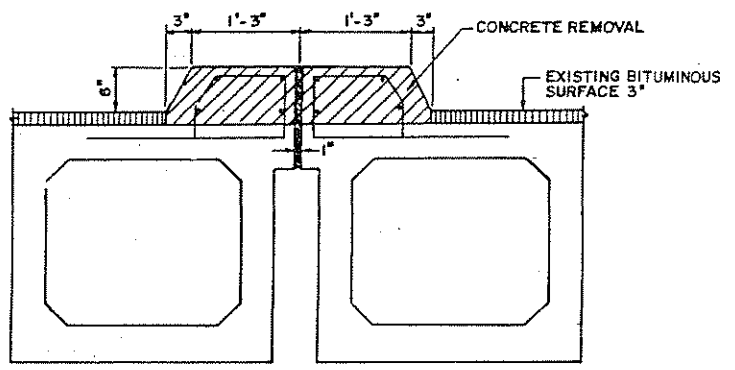


PROPOSED DECK MEDIAN
SPAN 1

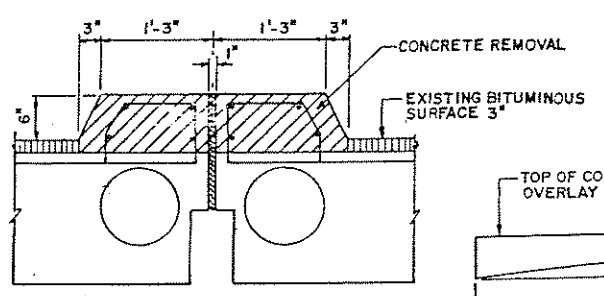


TOP CLAMPING PLATE

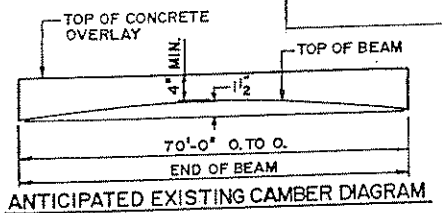
BOTTOM CLAMPING PLATE



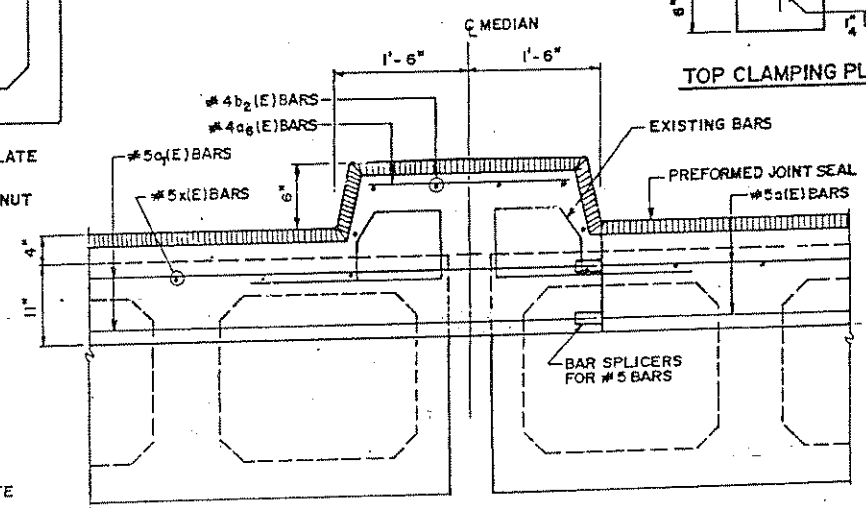
EXISTING DECK MEDIAN
SPAN 2 THRU 8



EXISTING DECK MEDIAN
SPAN 1



ANTICIPATED EXISTING CAMBER DIAGRAM



PROPOSED JOINT AT MEDIAN

LEGEND:

□ PARTIAL DEPTH SIDEWALK REPAIR

//// FULL DEPTH SIDEWALK REPAIR

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

WESTERN AVENUE OVER CALUMET SAG CHANNEL BOX GIRDER SPAN

S.N.016-0777

SCALE: VERT. HORIZ. DATE

DRAWN BY MVT CHECKED BY TMS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DATE	SHEET NO.	SHEET TOTAL
FAU 2843	0103BR	COOK	46	25
SHEET NO. S10				
522 SHEETS				

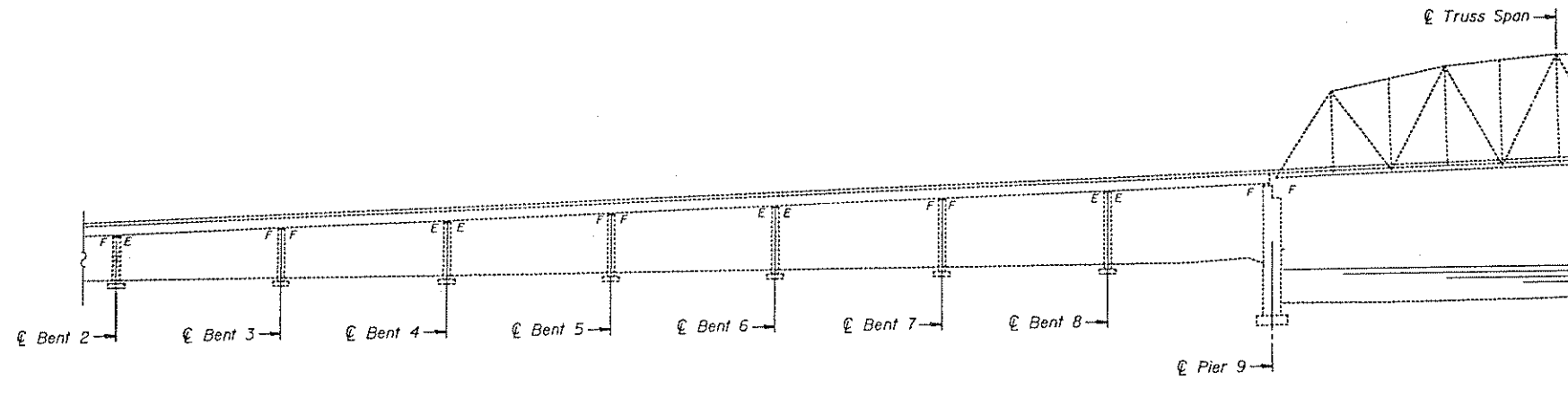
NOTES

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 bid for the work.

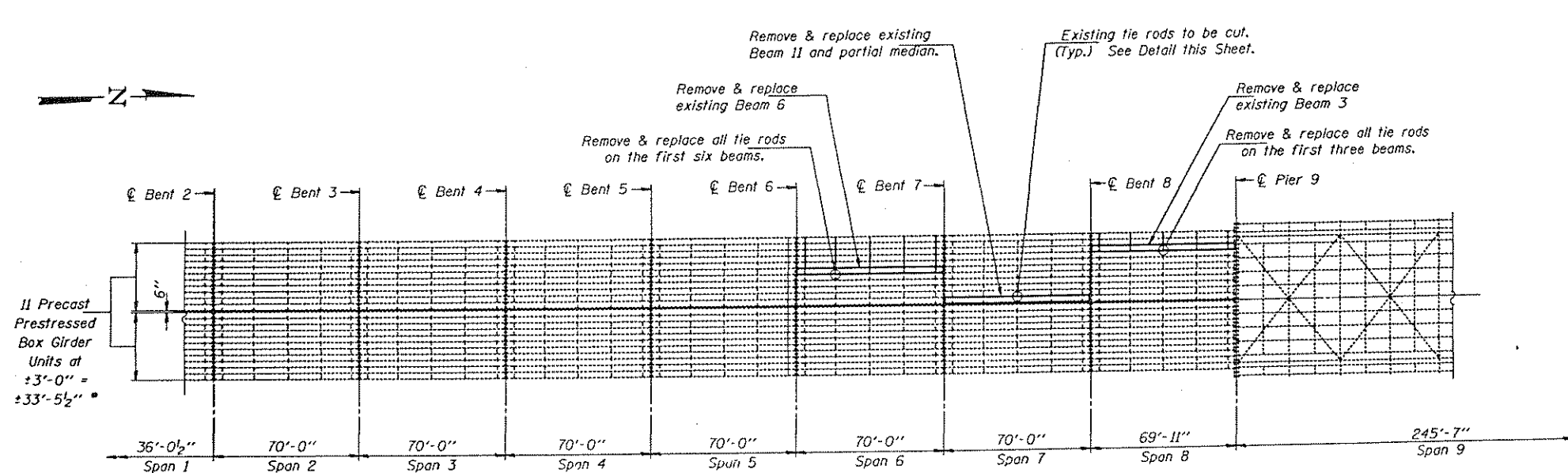
Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The cost for the Reinforcement Bars and Concrete for the Median shall be included in the cost for "Precast Prestressed Concrete Deck Beams (33" Depth)".

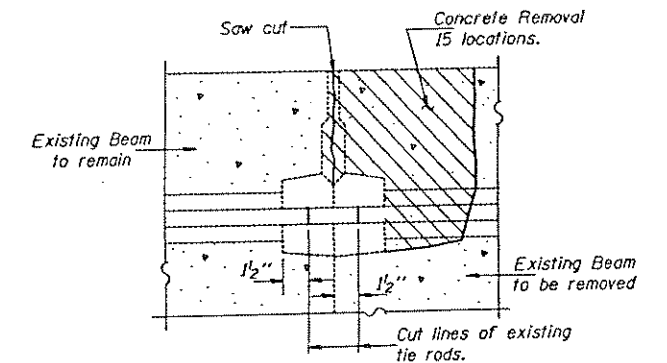


PARTIAL ELEVATION



PARTIAL FRAMING PLAN

* Allowing 1/2" per girder for girders being out of straight.



BEAM REMOVAL DETAIL
AT TRANSVERSE TIES

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	630
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	630

DESIGN STRESSES
PRESTRESS UNITS

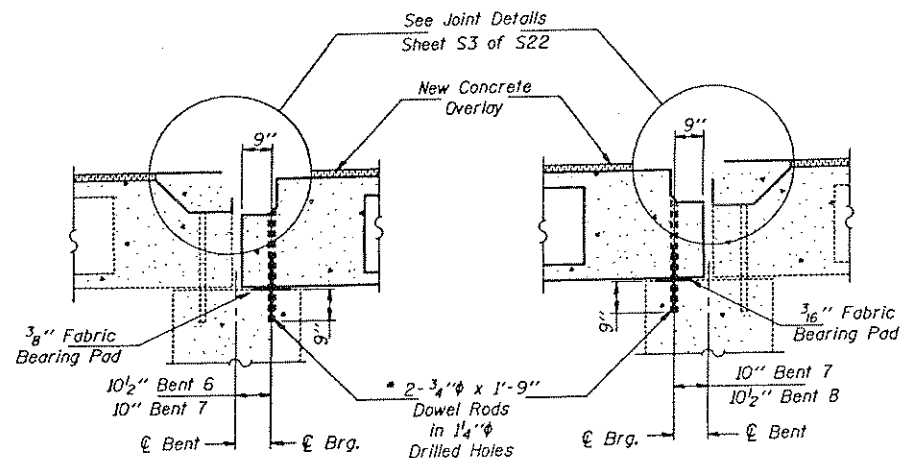
$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ Strands)
 $f'_{si} = 189,000$ psi (1/2" ϕ Strands)

PPC DECK BEAM REPLACEMENT
F.A.U. RTE 2843 (WESTERN AVE.) OVER
CAL-SAG CHANNEL SEC. 0103BR
COOK COUNTY
S.N. 016-0777

DESIGNED	C. M. Eray	JANUARY 11, 1999
CHECKED	VECTOR H. VELITZ	EXAMINED
DRAWN	D. Herbert	PASSED
CHECKED	CME VHM	ENGINEER OF STRUCTURAL SERVICES
		ENGINEER OF BRIDGES AND STRUCTURES

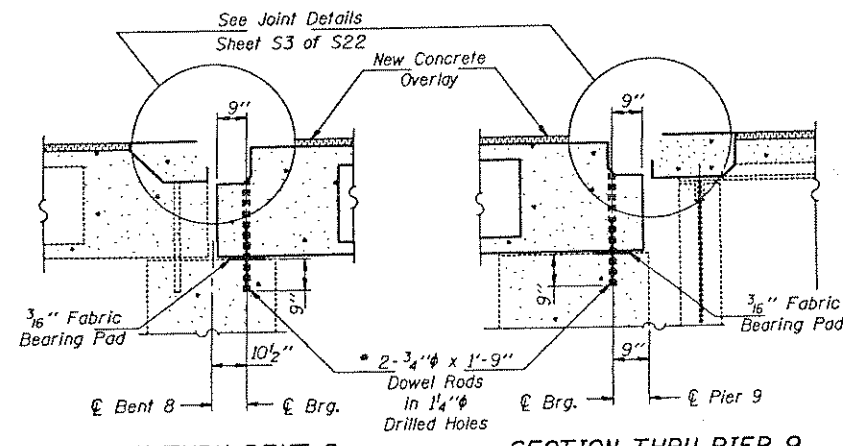
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. S11
FAU 2843	0103BR	COOK	46	26	522 SHEETS
POST. ROAD DIST. NO. 7	BLK. NO.	FED. AID PROJECT			



SECTION THRU BENT 6 OR 7
(Looking West)

SECTION THRU BENT 7 OR 8
(Looking West)



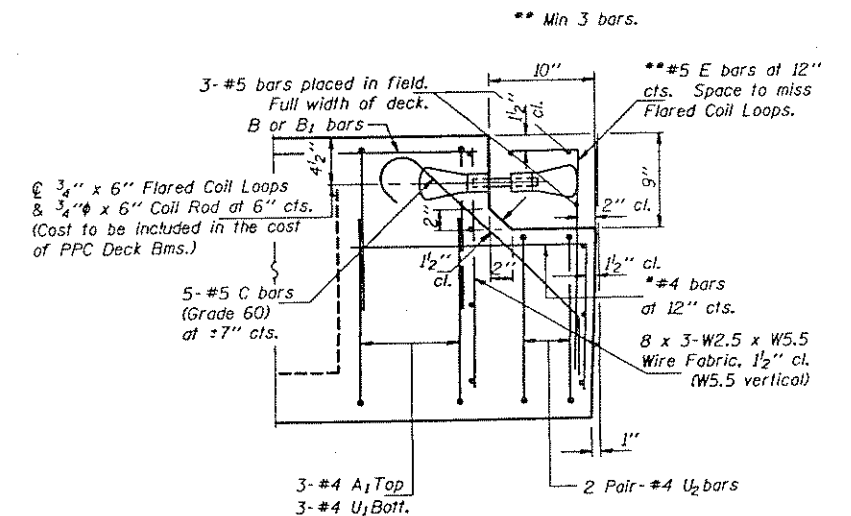
SECTION THRU BENT 8
(Looking West)

SECTION THRU PIER 9
(Looking West)

**BEAM 6, SPAN 6,
BEAM 11, SPAN 7**

BEAM 3, SPAN 8

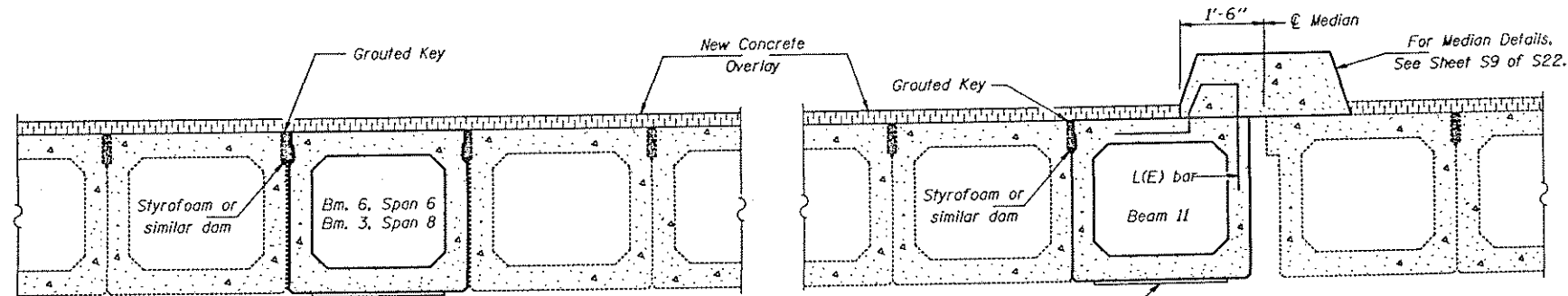
* Existing Dowel Rods shall be cut off & ground flush with the top of the existing concrete. (Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams. Proposed Dowel Rods shall be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting shear keys.



END OF BEAM DETAIL

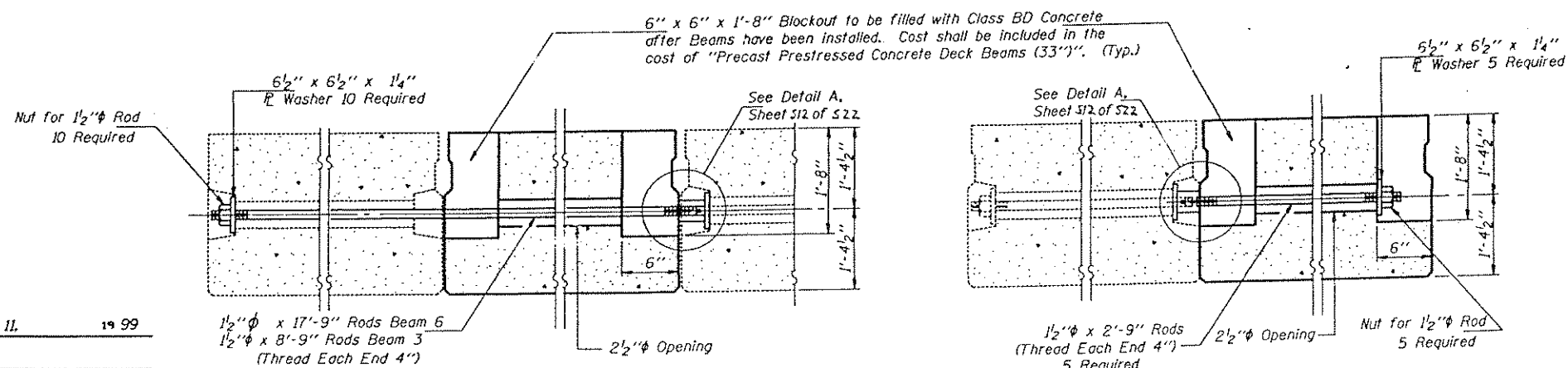
North end shown.
South end similar.

Note: See Bar Details, Sheet S12 of S22



PARTIAL CROSS SECTION SPANS 6 OR 8
(Looking North)

PARTIAL CROSS SECTION SPAN 7
(Looking North)



TYPICAL TRANSVERSE TIE ASSEMBLY SPANS 6 OR 8

TYPICAL TRANSVERSE TIE ASSEMBLY SPAN 7

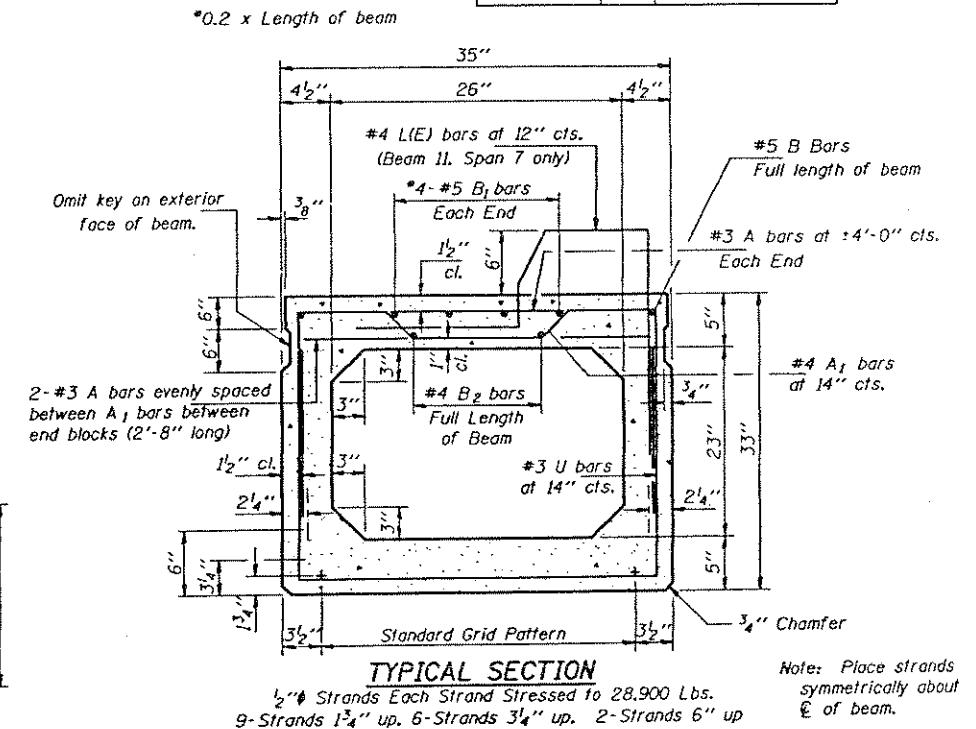
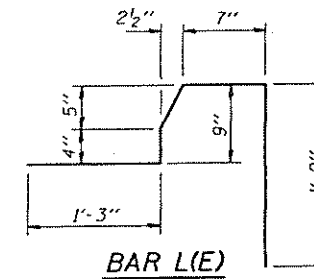
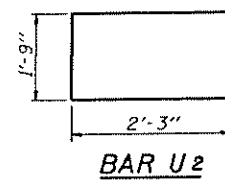
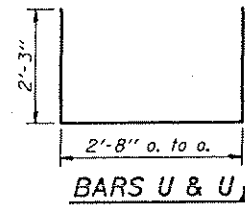
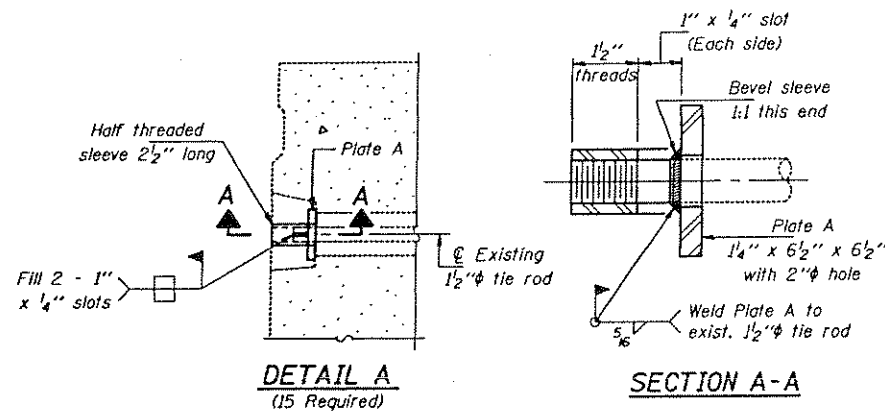
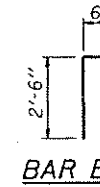
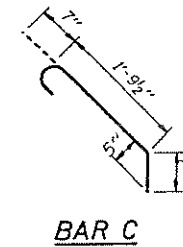
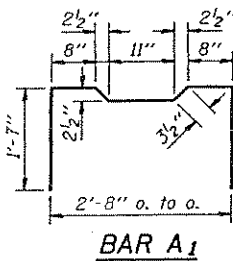
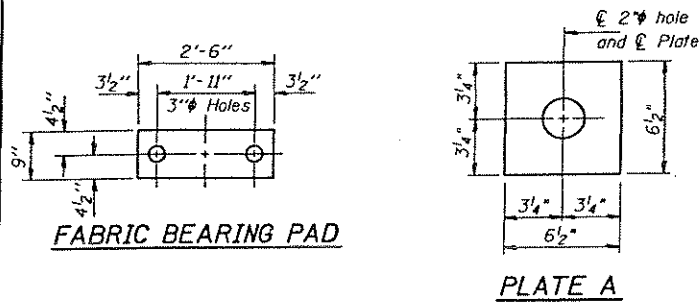
DESIGNED	CME
CHECKED	VHV
DRAWN	D-herbert
CHECKED	CME VHV

JANUARY 11, 19 99
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Nelson*
ENGINEER OF BRIDGES AND STRUCTURES

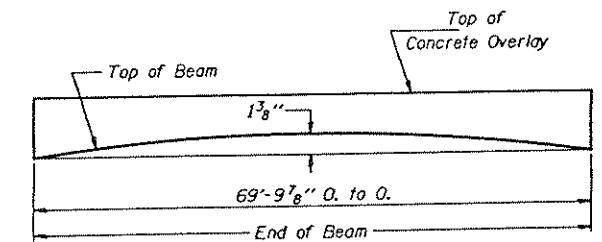
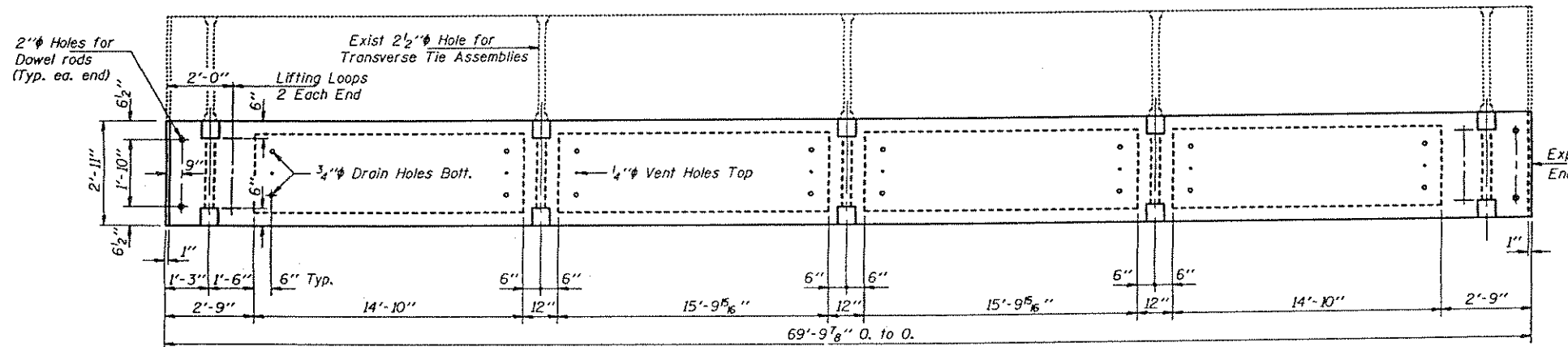
BRIDGE REPAIRS
F.A.U. RTE 2843 (WESTERN AVE.) OVER
CAL-SAG CHANNEL SEC. 0103BR
COOK COUNTY
S.N. 016-0777

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

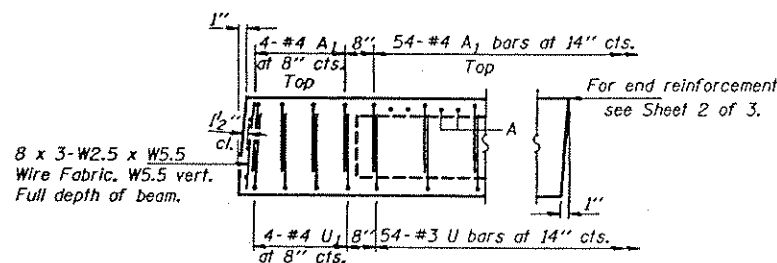
PROJECT NO.	SECTION	DATE	SHEET	SHEET NO.
FAU 2843	0103BR	COOK	46	27
				522 SHEETS



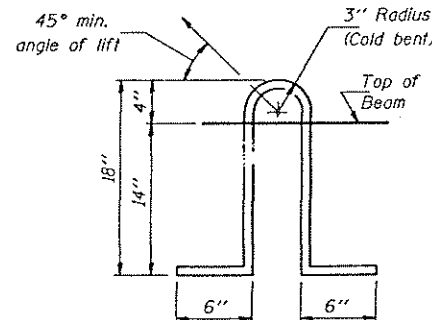
Note: Place strands symmetrically about \bar{c} of beam.
1/2" Strands Each Strand Stressed to 28,900 Lbs.
9-Strands 1 3/4" up, 6-Strands 3/4" up, 2-Strands 6" up



ANTICIPATED INITIAL CAMBER DIAGRAM



END ELEVATION



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, stress-relieved 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" #270 ksi strands, as shown. 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 shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 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. A 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. An equal substitution of the low-relaxation strands for the stress-relieved strands will be permitted.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Removal of Existing P.P.C. Deck Beams			Sq. Ft.	630
Precast Prestressed Conc. Deck Bms. (33")			Sq. Ft.	630

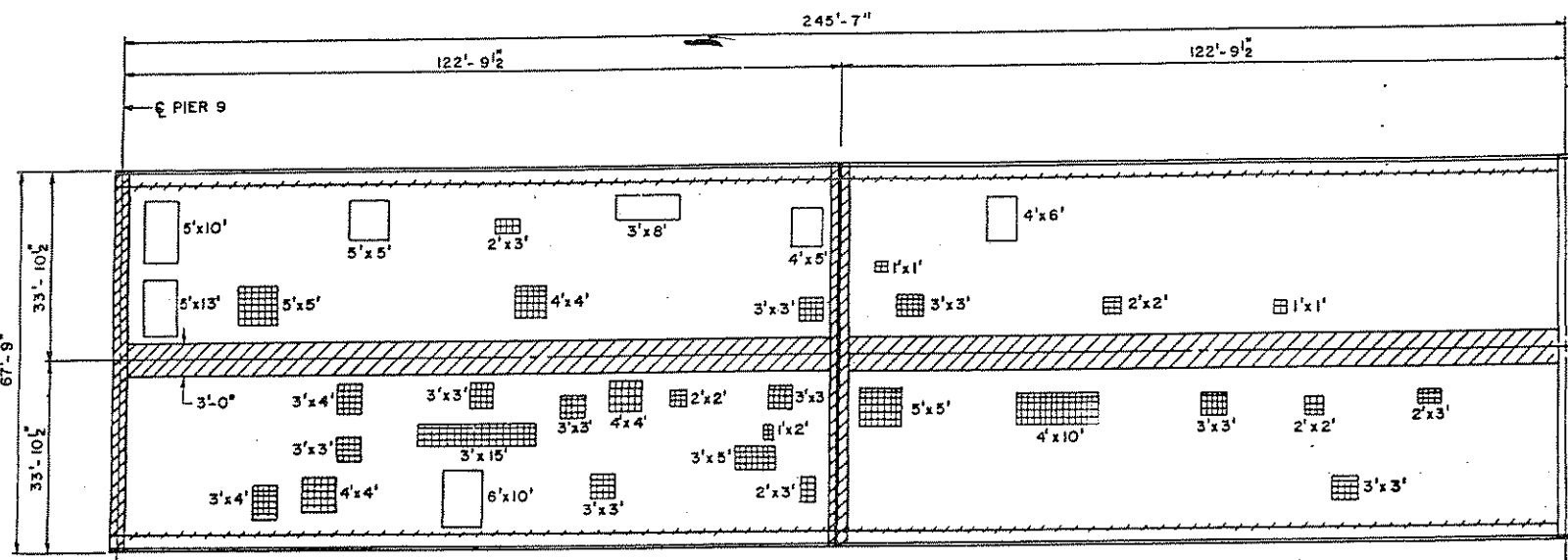
BRIDGE REPAIRS
F.A.U. RTE 2843 (WESTERN AVE.) OVER
CAL-SAG CHANNEL SEC. 0103BR
COOK COUNTY
S.N. 016-0777

DESIGNED	CME	JANUARY 11, 1999
CHECKED	VHV	EXAMINED
DRAWN	D-terbert	ENGINEER OF STRUCTURAL SERVICES
CHECKED	CME VHV	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

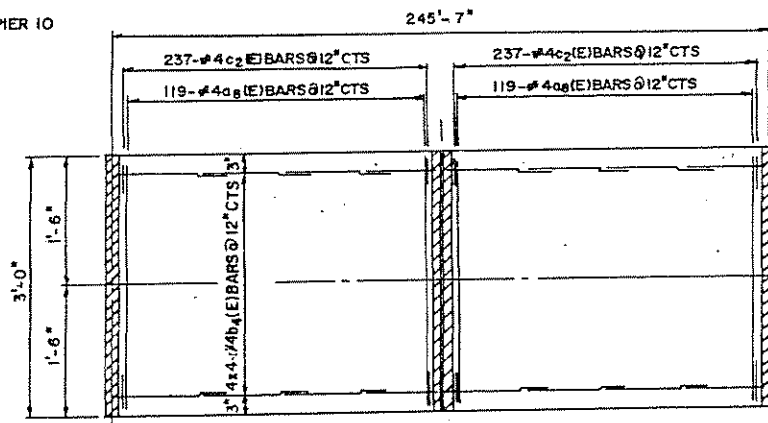
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031-1	COOK	46	28
STA.	TO STA.			
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

BILL OF MATERIAL

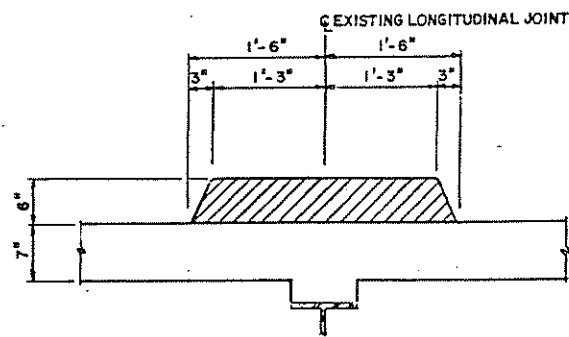
BAR	NO.	SIZE	LENGTH	SHAPE	
a ₂ (E)	238	#4	2'-4"	—	
b ₄ (E)	32	#4	31'-4"	—	
c ₂ (E)	476	#4	1'-6"	└	
REINFORCEMENT BARS (EPOXY COATED)				POUND	1610
CONCRETE SUPERSTRUCTURE				CU. YD.	16.3
CONCRETE REMOVAL				CU. YD.	12.6
DECK SLAB REPAIR (PARTIAL)				SQ. YD.	38
DECK SLAB REPAIR (FULL DEPTH) TYPE II				SQ. YD.	35
BRIDGE SIDEWALK REPAIR (FULL DEPTH)				SQ. FT.	490
BRIDGE DECK LATEX CONCRETE OVERLAY, 2"				SQ. YD.	1405
DECK SCARIFICATION, 1 1/2"				SQ. YD.	1405
BRIDGE DECK GROOVING				SQ. YD.	1280



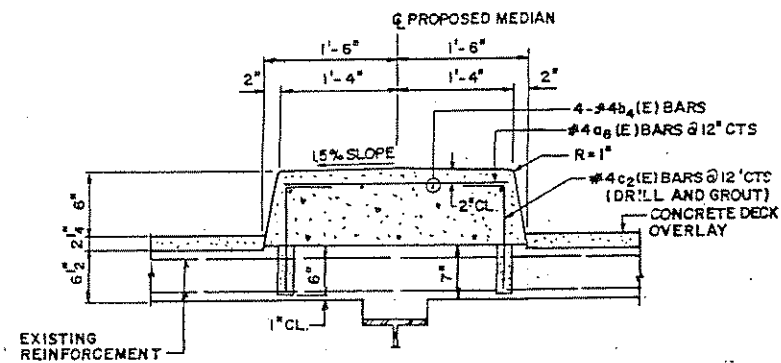
**DECK PLAN
SPAN 9**



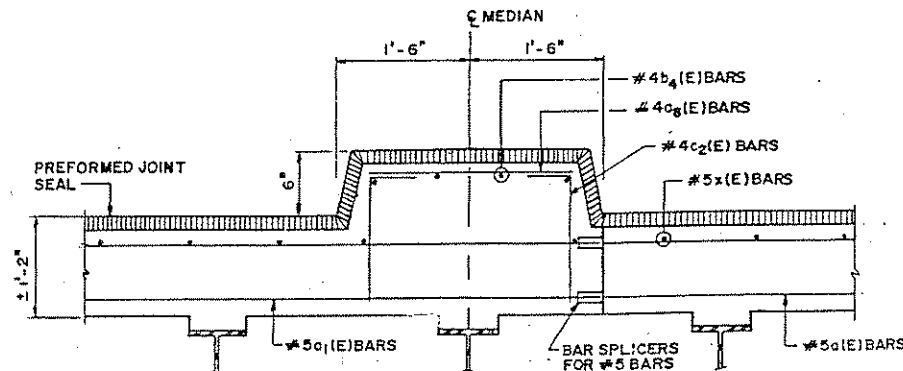
**PROPOSED DECK MEDIAN
REINFORCEMENT PLAN**



**EXISTING DECK MEDIAN
(HATCHED AREA INDICATES CONCRETE REMOVAL)**



PROPOSED DECK MEDIAN



PROPOSED JOINT AT MEDIAN

LEGEND:

- FULL DEPTH REPAIR
- PARTIAL DEPTH REPAIR
- SIDEWALK REPAIR

NOTES:

EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT.

BARS INDICATE THUS 12 x 4 - #5 ETC. INDICATES 12 LINES OF BARS WITH 4 LENGTHS PER LINE.

THE ENGINEER SHOULD MARK THE LOCATION OF THE ACTUAL DECK REPAIR WORK IN THE AS-BUILT PLANS.

EXACT PATCHING LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.

DATE OF SURVEY 10-98

REINFORCEMENT DESIGNATED (E) SHALL BE EPOXY COATED.

REVISIONS	
NAME	DATE

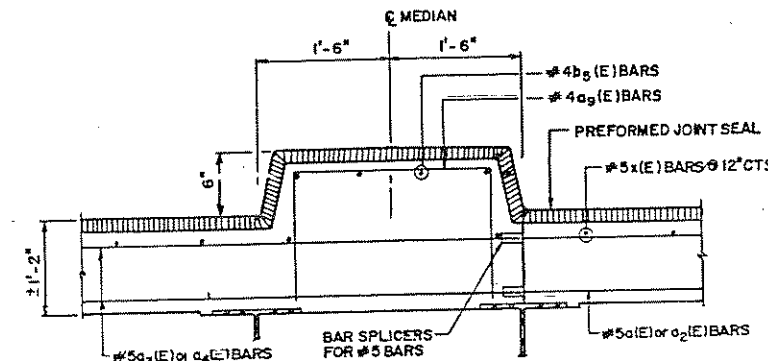
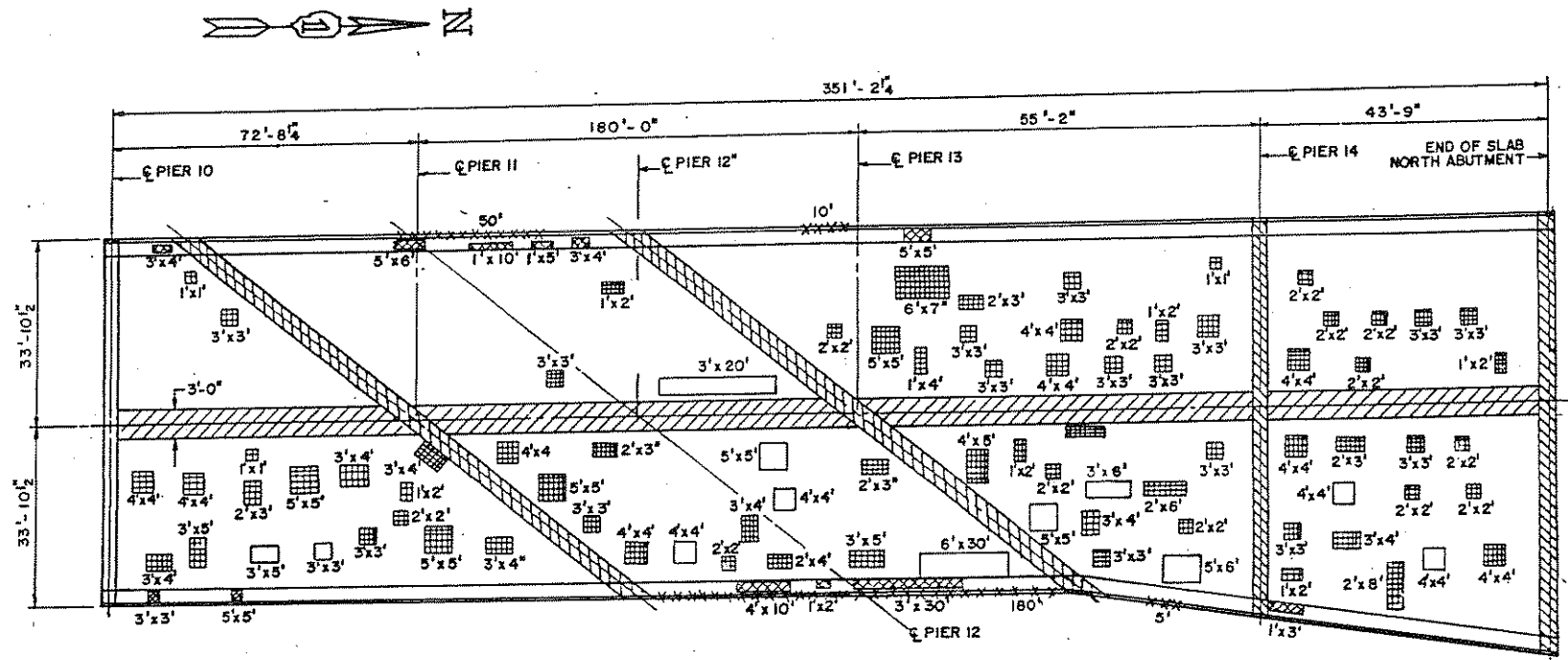
ILLINOIS DEPARTMENT OF TRANSPORTATION

WESTERN AVENUE OVER
CALUMET SAG CHANNEL
LONGITUDINAL SLAB TRUSS SPAN
S.N. 016-0777

SCALE: VERT. _____
HORIZ. _____

DATE _____ DRAWN BY MVT
CHECKED BY TMS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843 01031-1	COOK	46	29
STA.	TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

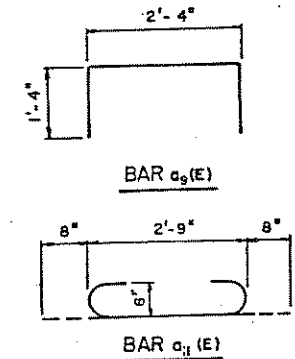
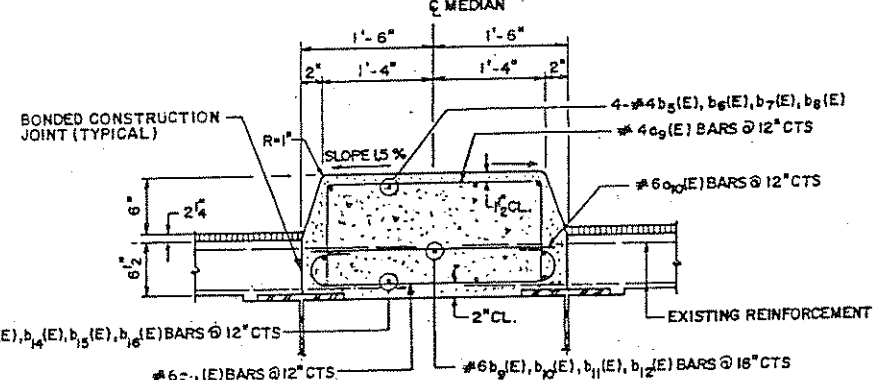
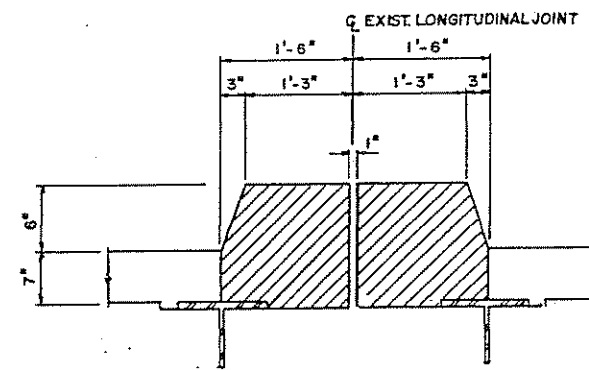


BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a ₉ (E)	336	#4	5'-0"	U
a ₁₀ (E)	336	#6	2'-9"	U
a ₁₁ (E)	336	#6	4'-1"	U
b ₅ (E)	8	#4	36'-0"	—
b ₆ (E)	24	#4	31'-0"	—
b ₇ (E)	8	#4	27'-3"	—
b ₈ (E)	8	#4	21'-6"	—
b ₉ (E)	6	#6	21'-6"	—
b ₁₀ (E)	18	#6	21'-6"	—
b ₁₁ (E)	6	#6	21'-6"	—
b ₁₂ (E)	6	#6	21'-6"	—
b ₁₃ (E)	8	#6	21'-6"	—
b ₁₄ (E)	24	#6	21'-6"	—
b ₁₅ (E)	8	#6	21'-6"	—
b ₁₆ (E)	8	#6	21'-6"	—

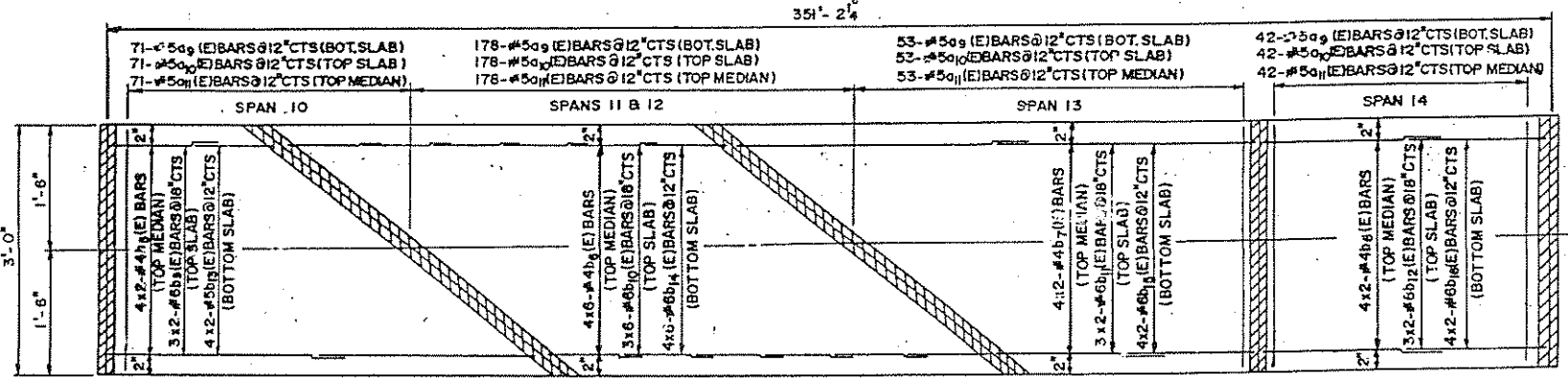
- LEGEND:**
- [Hatched Box] FULL DEPTH REPAIR
 - [Grid Pattern Box] PARTIAL DEPTH REPAIR
 - [Cross-hatch Box] SIDEWALK REPAIR
 - [*****] FORMED CONCRETE REPAIR ON WATER TABLE

BRIDGE DECK GROOVING	SQ.YDS	1790
CONCRETE BRIDGE DECK SCARIFICATION (1/2")	SQ.YDS	2000
CONCRETE DECK LATEX OVERLAY, 2 1/4"	SQ.YDS	2000
REINFORCEMENT BARS (EPOXY COATED)	POUND	8240
CONCRETE REMOVAL	CU.YDS	40.8
CONCRETE SUPERSTRUCTURE	CU.YDS	45.0
DECK SLAB REPAIR (PARTIAL)	SQ.YDS	78
DECK SLAB REPAIR (FULL DEPTH) TYPE II	SQ.YDS	54
FORMED CONCRETE REPAIR (≤ 5")	SQ.FT.	375
BRIDGE SIDEWALK REPAIR (PARTIAL)	SQ.FT.	245
BRIDGE SIDEWALK REPAIR (FULL DEPTH)	SQ.FT.	20



MINIMUM BAR LAPS

SIZE	LAP
#4	1'-8"
#5	2'-2"
#6	2'-7"



NOTES:

EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT.

BARS INDICATE THUS 12 x 4 - #5 ETC. INDICATES 12 LINES OF BARS WITH 4 LENGTHS PER LINE.

THE ENGINEER SHOULD MARK THE LOCATION OF THE ACTUAL DECK REPAIR WORK IN THE AS-BUILT PLANS.

EXACT PATCHING LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.

DATE OF SURVEY 10-80

REINFORCEMENT DESIGNATED (E) SHALL BE EPOXY COATED.

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

WESTERN AVENUE OVER CALUMET SAG CHANNEL

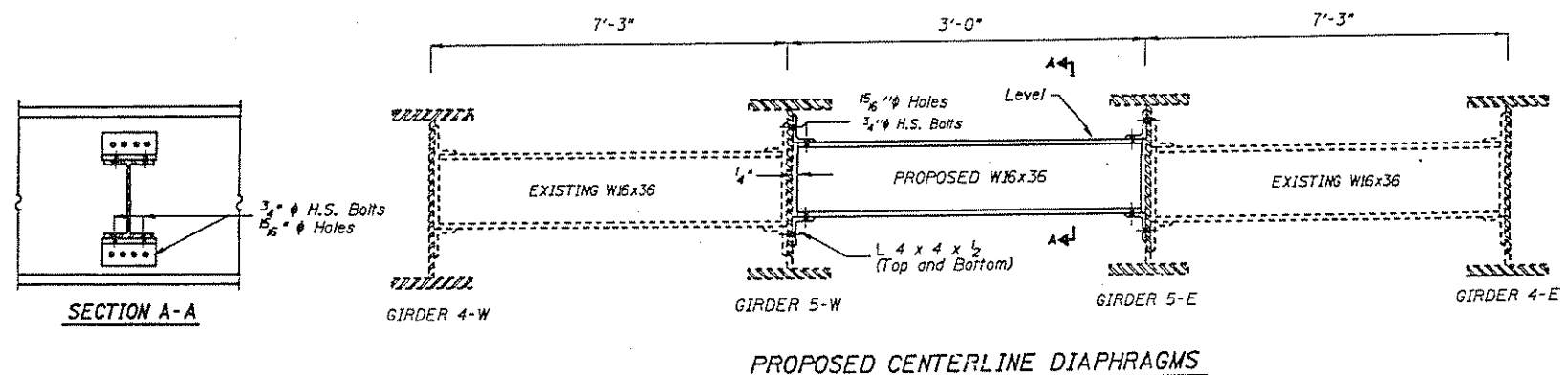
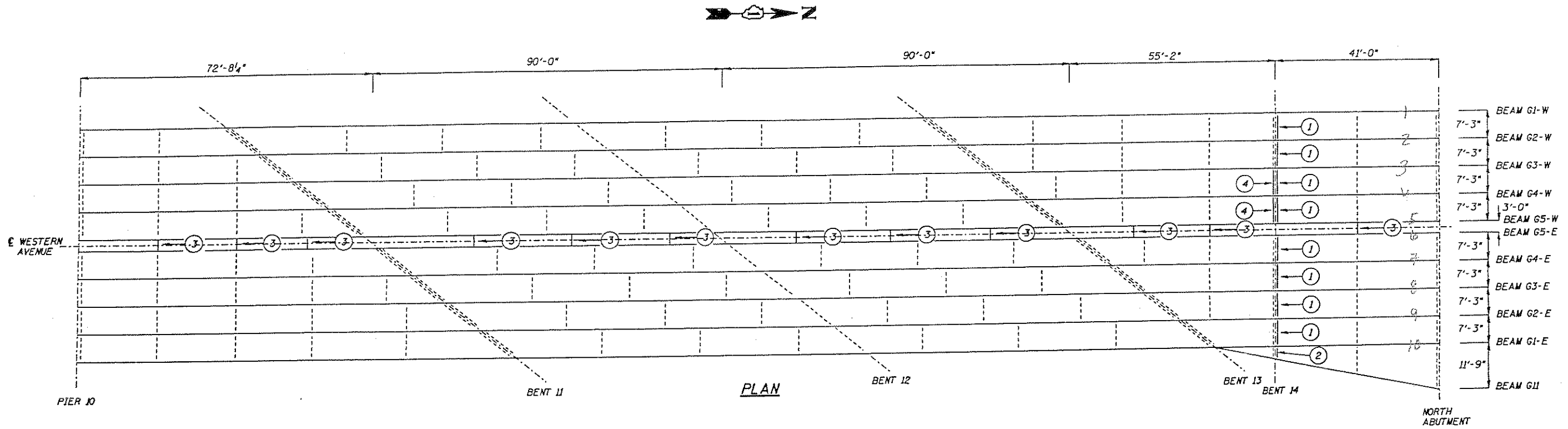
LONGITUDINAL SLAB GIRDER SPAN S.N.016-0777

SCALE: VERT. _____ DRAWN BY MVT

HORIZ. _____ CHECKED BY TMS

DATE _____

P.L. NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
2843	01031 - 1	COOK	46	30
STA.	TO STA.			
POL. NO. DIST. NO.	BLANK	POL. NO. PROJECT		



SCHEDULE

MEMBER	NUMBER REQUIRED	TYPE
1	8	W12x40 - DIAPHRAGM
2	1	W12x40 - DIAPHRAGM
3	12	W16x36 - DIAPHRAGM
4	2	CROSS FRAME

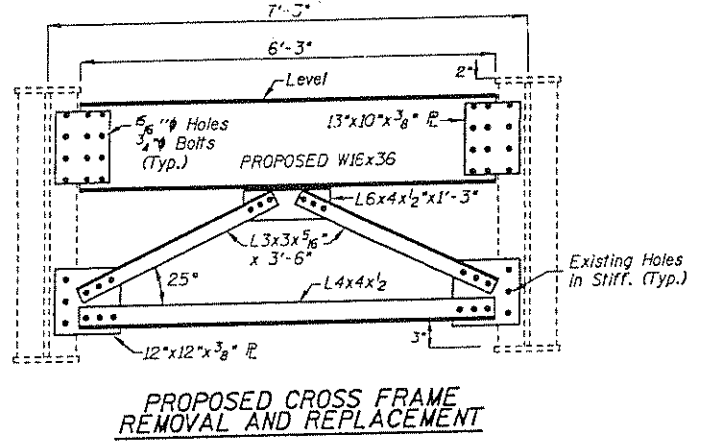
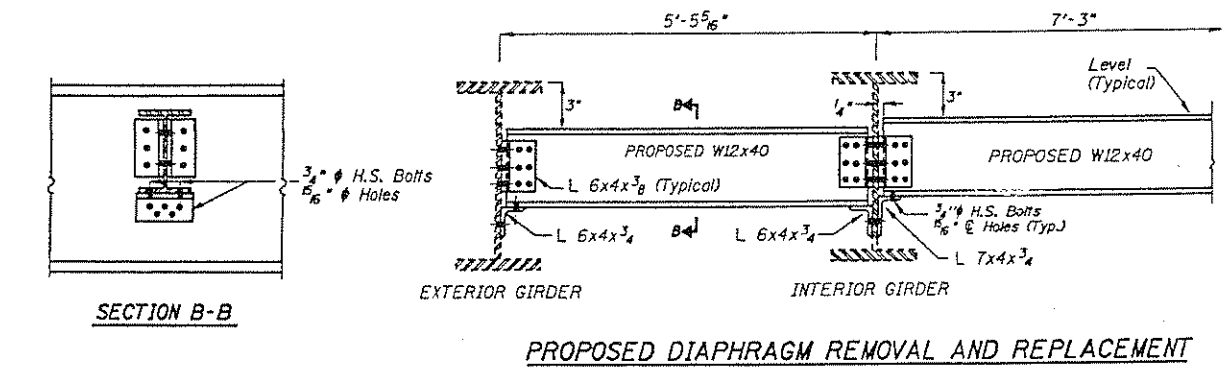
NOTES:
 Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier support. Field welding in other areas will be permitted when approved by the engineer.

Holes in vertical leg of connecting angles should be field drilled using existing hole pattern on girder webs as template.

Two hardened washers shall be required over all oversize holes for diaphragms.

PRIOR TO ORDERING DIAPHRAGMS, THE CONTRACTOR SHALL VERIFY IN THE FIELD THE PROPOSED DIAPHRAGM DIMENSIONS.

Removal and Disposal of the existing Diaphragms to be replaced is included in the cost of "FURNISHING AND ERECTING STRUCTURAL STEEL."



BILL OF MATERIAL

Item	Unit	Total
Furnishing And Erecting Structural Steel	Pound	4690

REVISIONS

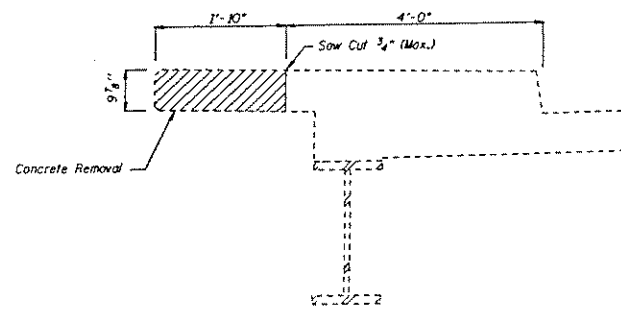
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 DIAPHRAGM AND CROSS FRAME
 INSTALLATION AND/OR REPLACEMENT
 SN 016-0777

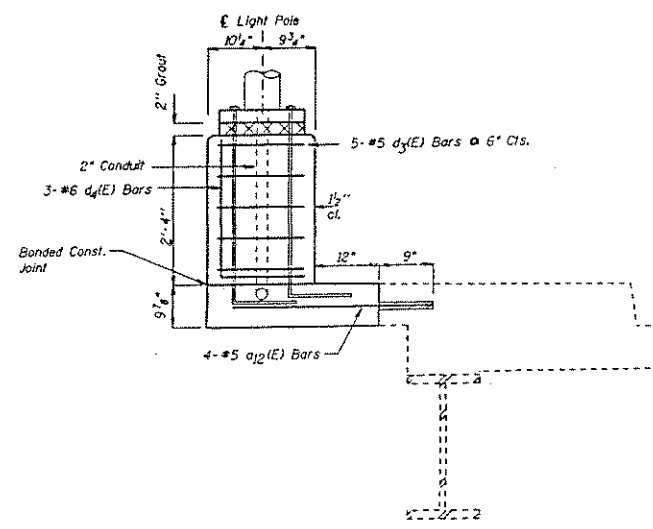
SCALE: NONE
 DATE: 12/10/98
 DRAWN BY: CAD0
 CHECKED BY: TWS

P.L.N. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	31
STA.	TO STA.			
FILE NAME: 016-0777.m32	ALPHAS	FILE: 016-0777		

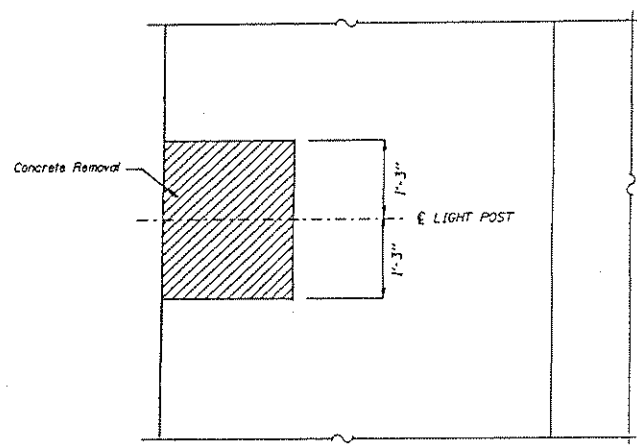
Sheet S16 of S22



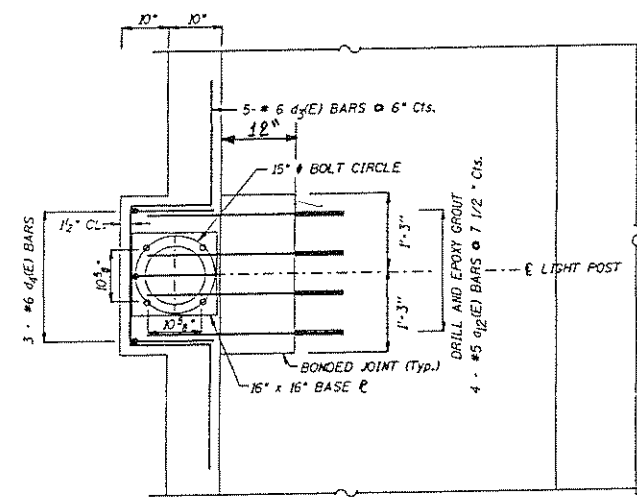
EXISTING PARAPET ELEVATION



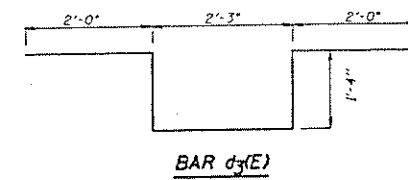
PROPOSED PARAPET ELEVATION



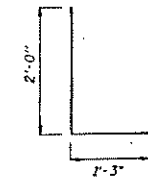
EXISTING PARAPET PLAN



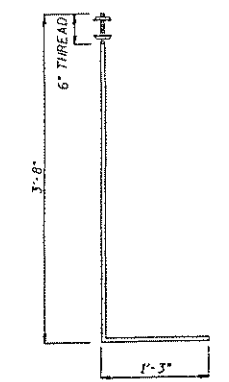
PROPOSED PARAPET PLAN



BAR d3(E)



BAR d4(E)



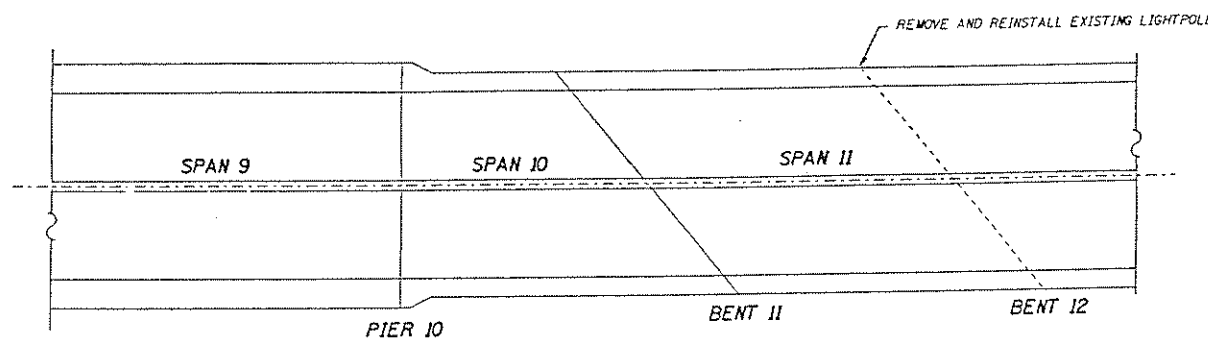
GALVANIZED 1" ANCHOR BOLT DETAIL

Notes:
ANCHOR BOLTS, BASE PLATE, BOLT CIRCLE AND ALL NECESSARY APPURATENCES REQUIRED TO REINSTALL THE LIGHT POLE ARE INCLUDED IN THE COST OF REMOVE AND REINSTALL EXISTING LIGHT POLE.*

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d12(E)	4	#5	3'-0"	—
d3(E)	5	#5	8'-11"	—
d4(E)	3	#6	3'-3"	—
Conc. Superstructures			Cu. Yd.	0.4
Reinforcement Bars (Epoxy Coated)			Pound	75
Conc. Removal			Cu. Yd.	0.14
Remove and Reinstall Existing Light Pole			Each	1

Reinforcement bars designated (E) shall be epoxy coated.



PLAN (SPANS 9, 10, 11)

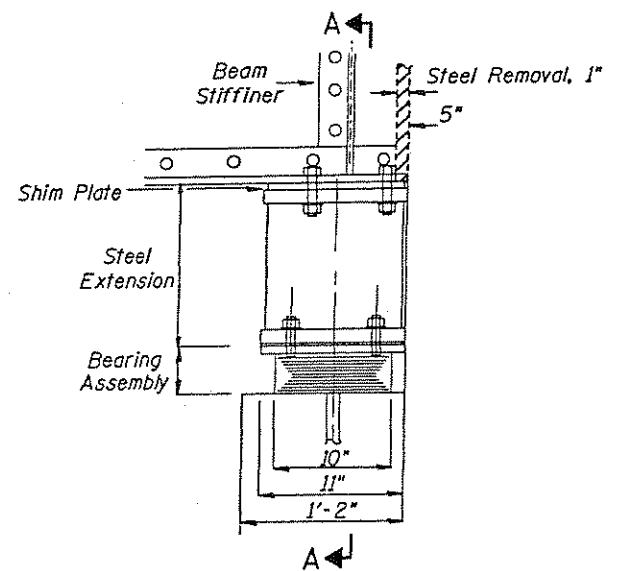


Thu Dec 10 13:02:28 1998
c:\projects\struct\016-0777.m32 LV-1-63

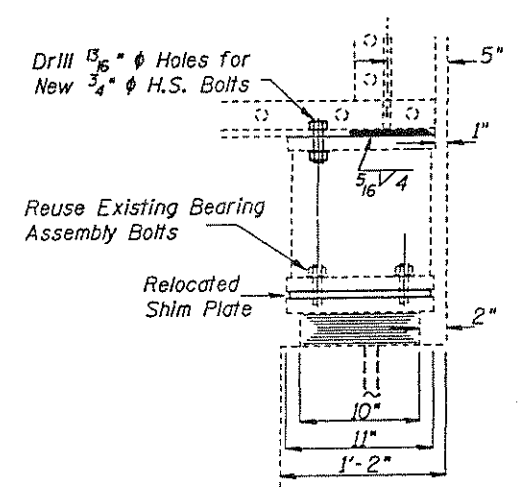
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVENUE
OVER CALUMET SAG CHANNEL
LIGHT POLE REINSTALLATION
SN 016-0777
SCALE: NONE
DATE: 12/10/98
DRAWN BY: CAD
CHECKED BY: TMS

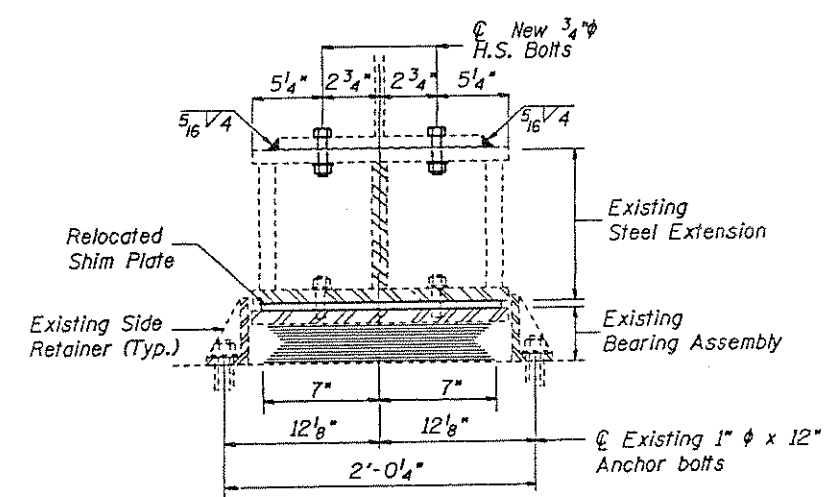
PLAN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	32
STA.	TO STA.			
FILE NO. DIST. NO.	ILLINOIS	FILE NO. PROJECT		



EXISTING ELEVATION AT BENT 14 (SOUTH)



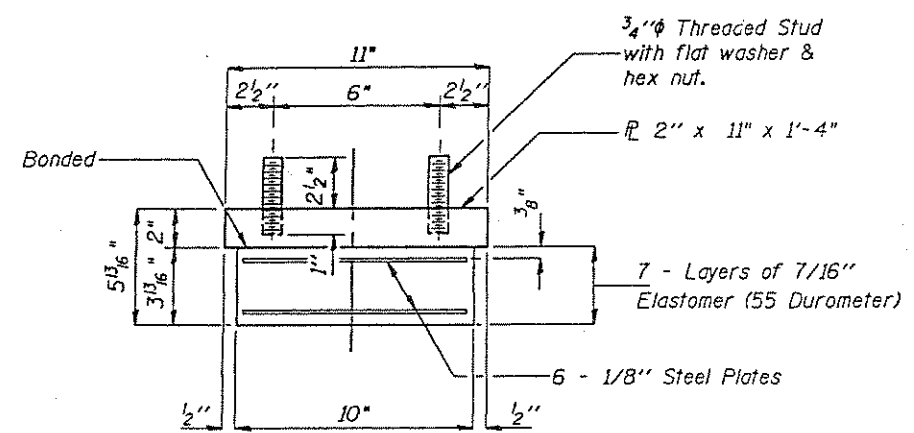
PROPOSED ELEVATION AT BENT 14 (SOUTH)



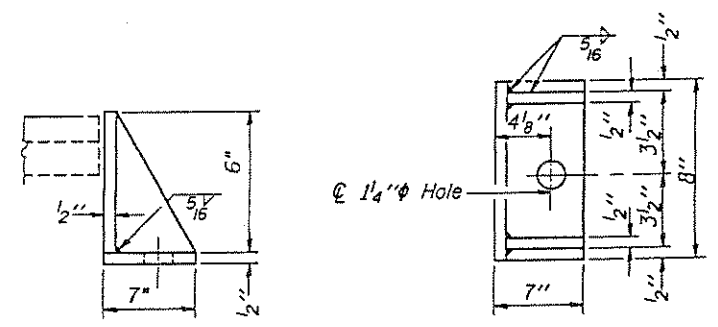
SECTION A-A

NOTES:

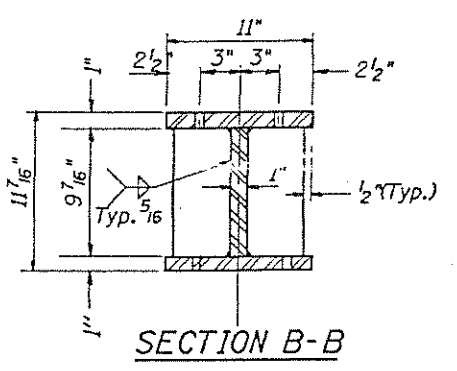
- 5/16" diameter holes are to be drilled in the field to the bottom of existing beams. Cost incidental to "Jack and Reposition Existing Bearings".
- Contractor shall submit jacking details for approval by the bridge office. Minimum Jacking Capacity = 40 Tons.
- Cross Frame removal and replacement may be required to facilitate drilling holes in the bottom flange for bearing attachment and steel removal. Cost incidental to "Jack and Reposition Existing Bearings".
- 1" Steel Beam End Removal is included in the cost of "Jack and Reposition Existing Bearings".
- The 5/16" weld is included in the cost of "Jack and Reposition Existing Bearings".
- Providing new 3/4" High Strength Bolts for the steel extension and cross frames is included in the cost of "Jack and Reposition Existing Bearings".



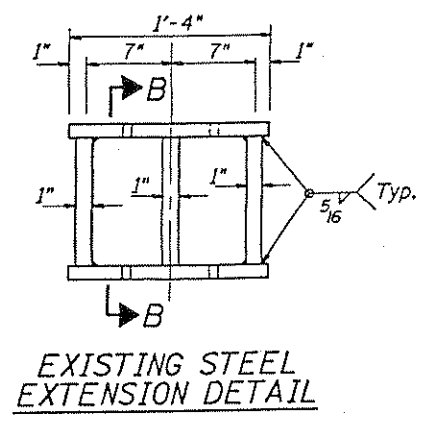
EXISTING BEARING ASSEMBLY



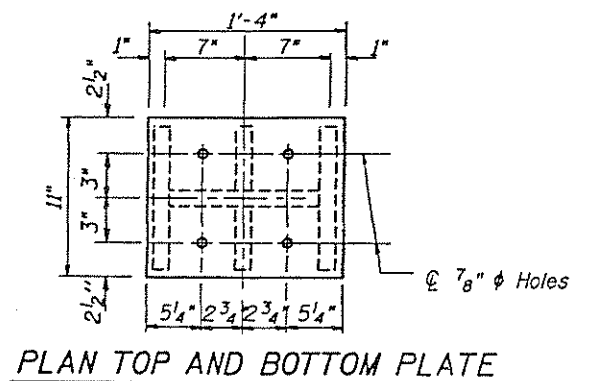
EXISTING SIDE RETAINER



SECTION B-B



EXISTING STEEL EXTENSION DETAIL



PLAN TOP AND BOTTOM PLATE

EXISTING BEARING DETAILS FOR INFORMATION ONLY

BILL OF MATERIAL

Item	Unit	Total
Jack and Reposition Existing Bearings	Each	10

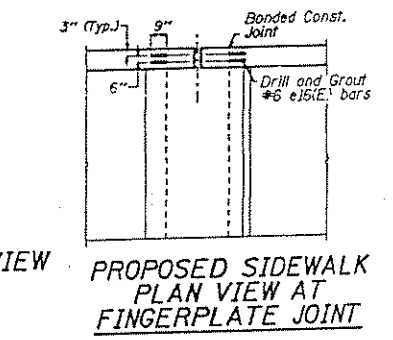
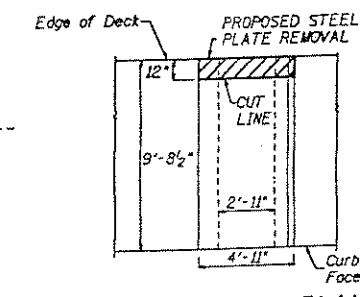
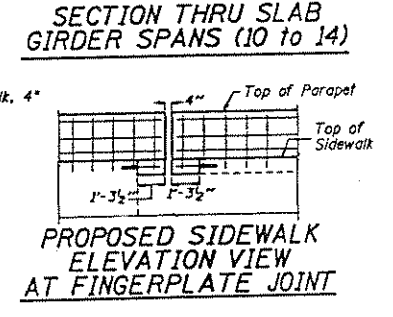
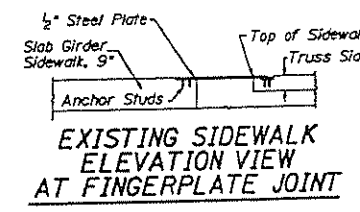
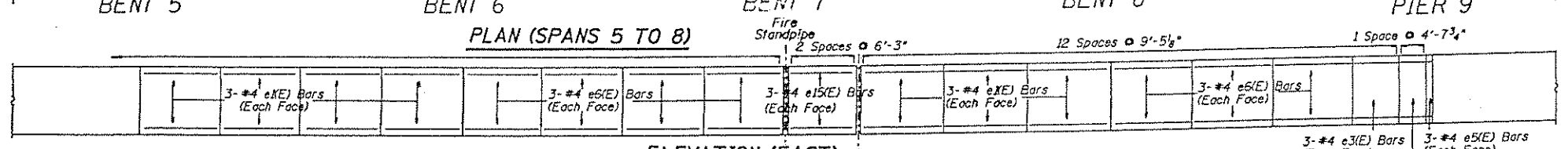
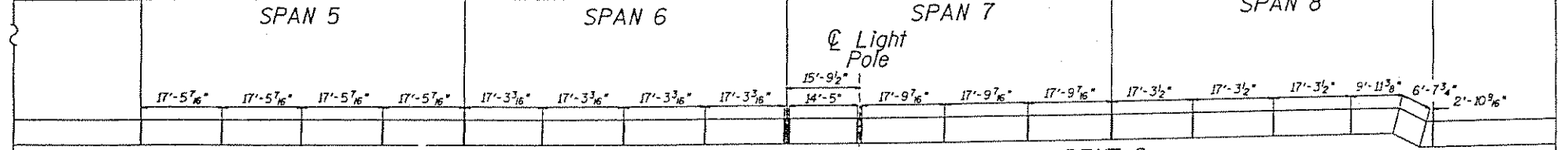
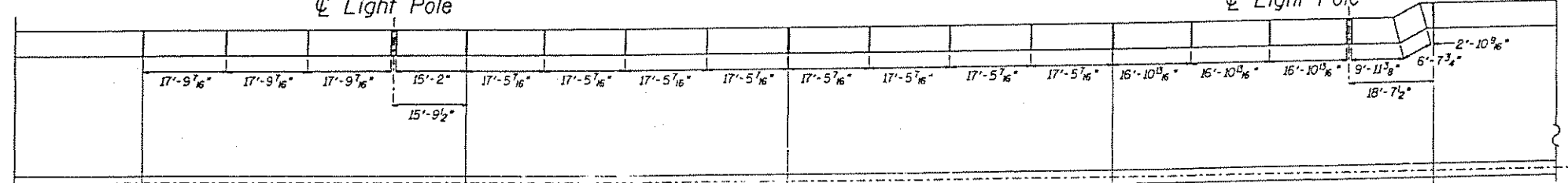
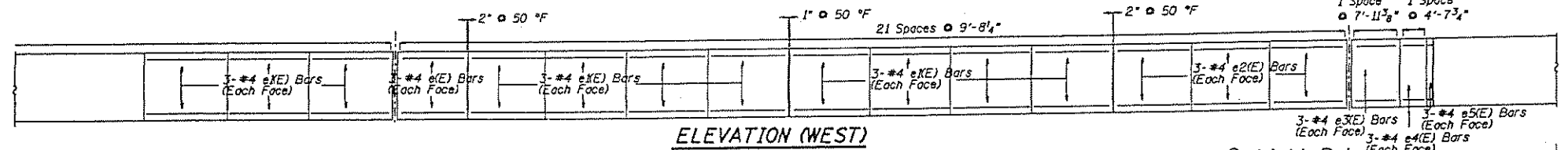
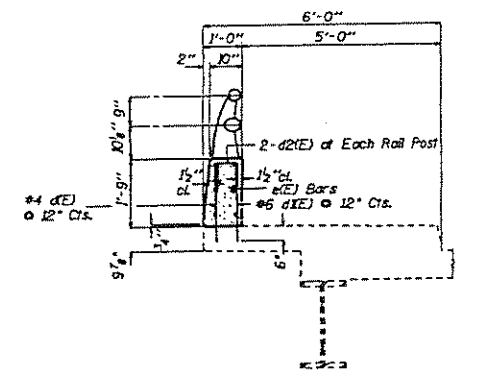
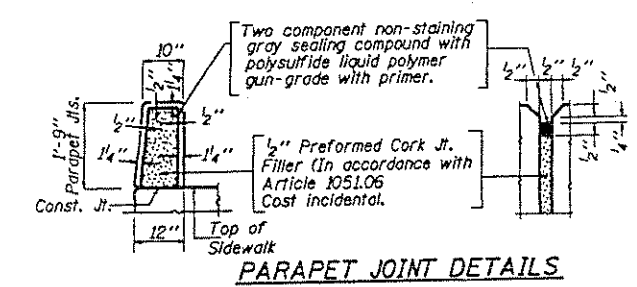
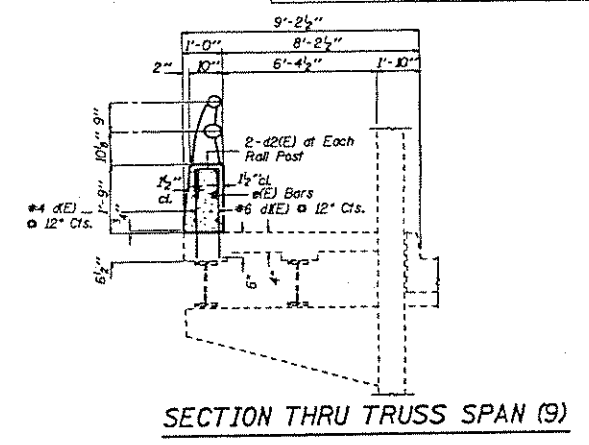
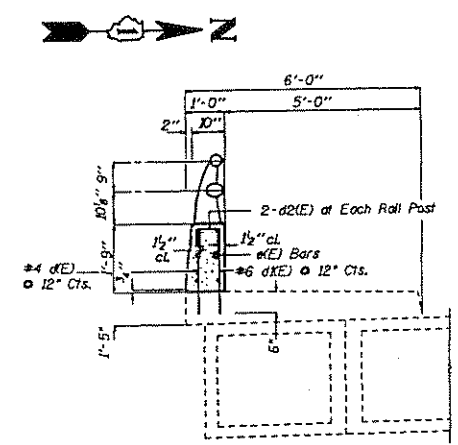
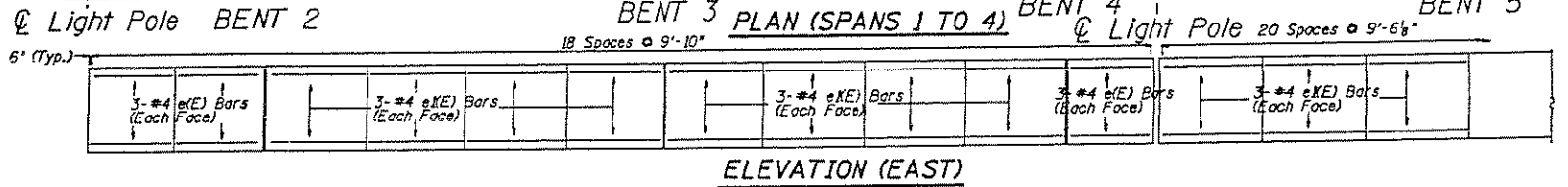
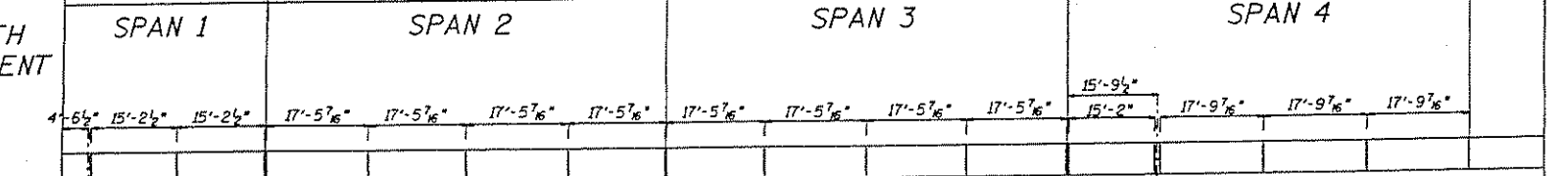
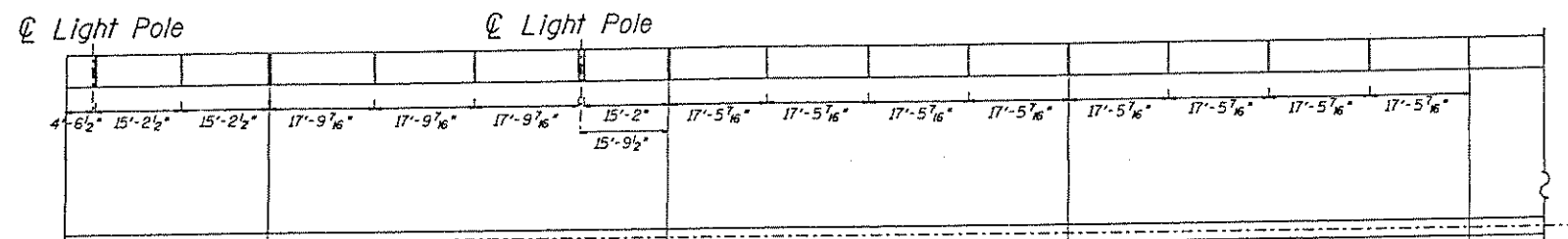
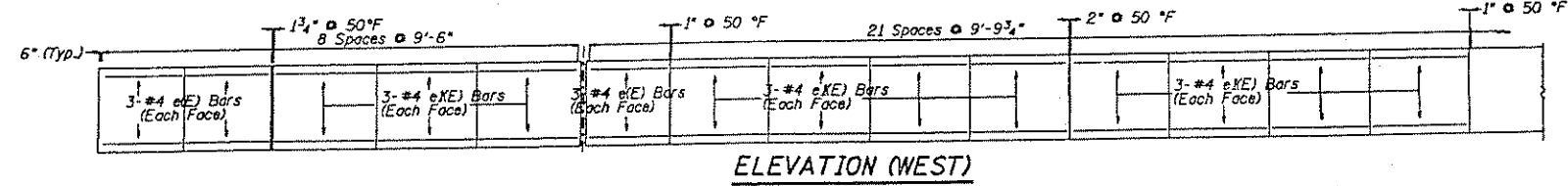
GIRDER REACTIONS

Reaction	(K)	Total
RDL	24.6	
RLL	36.9	
Imp.	11.1	
R (Total)	72.6	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 BEARING REPOSITION - BENT 14
 SN 016-0777
 SCALE: 50'=1"
 DATE: 12/10/98
 DRAWN BY: CADD
 CHECKED BY: TMS

SECTION	COUNTY	SYMBOLS	SHEET
2843	COOK	46	33
TO STA.			
FILE NO. INT. NO.	SLABS	FILE NO. PROJECT	



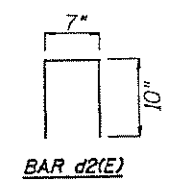
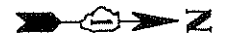
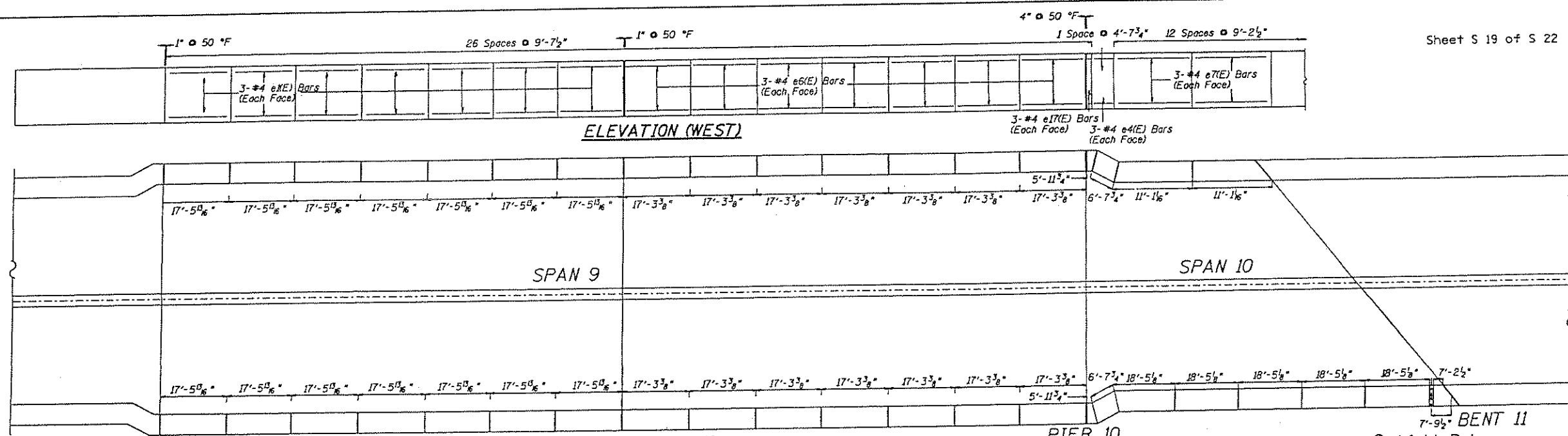
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 PARAPET INSTALLATION
 SN 016-0777
 SCALE: NONE
 DATE: 12/10/98
 DRAWN BY: CAD0
 CHECKED BY: TMS

Thu Dec 10 13:42:11 1998
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P.A.S. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	34
STA.	TO STA.			
FILE NO. DIST. NO.	SLIP NO.	FILE NO. PROJECT		

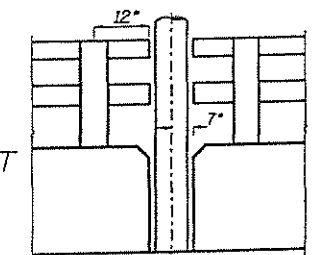
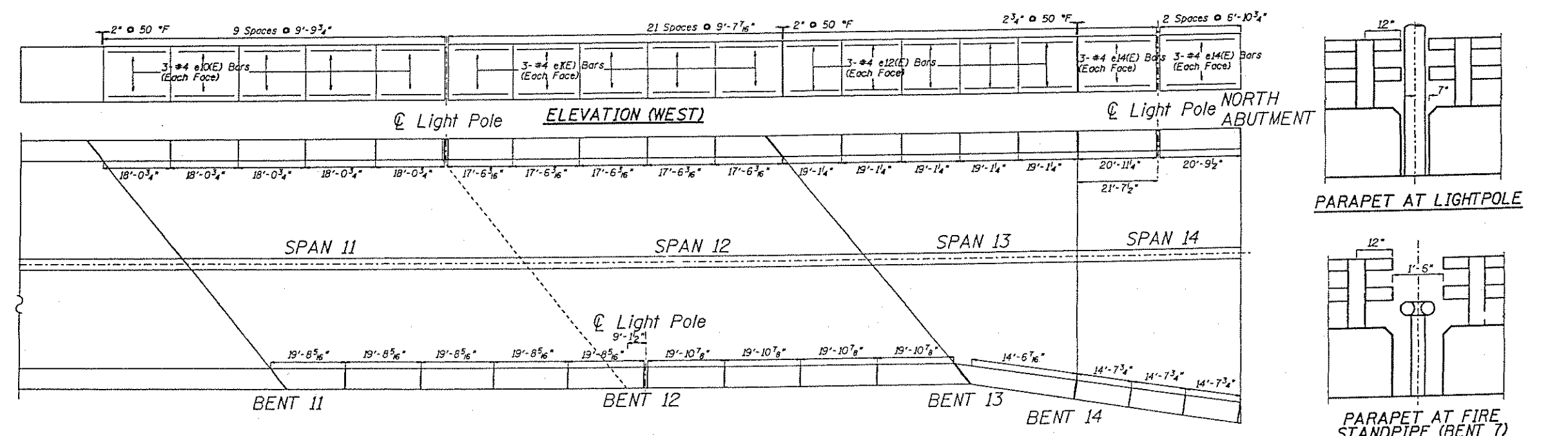
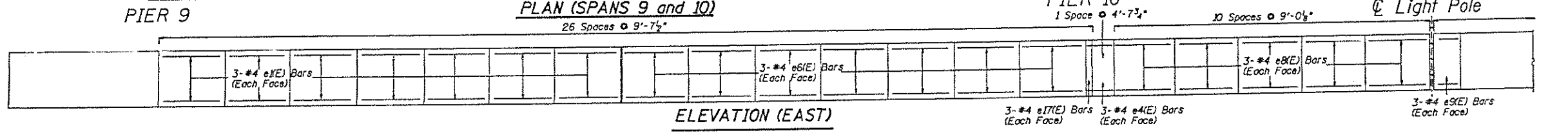
Sheet S 19 of S 22



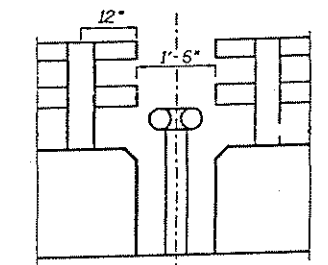
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	2245	#6	2'-1"	
d1(E)	2245	#4	2'-1"	
d2(E)	494	#4	2'-3"	
e(E)	72	#4	14'-9"	
e1(E)	324	#4	17'-3"	
e2(E)	18	#4	16'-6"	
e3(E)	12	#4	9'-6"	
e4(E)	24	#4	6'-3"	
e5(E)	12	#4	2'-6"	
e6(E)	126	#4	17'-0"	
e7(E)	24	#4	10'-9"	
e8(E)	30	#4	18'-0"	
e9(E)	6	#4	6'-9"	
e10(E)	30	#4	17'-9"	
e11(E)	54	#4	19'-6"	
e12(E)	30	#4	18'-9"	
e13(E)	24	#4	14'-3"	
e14(E)	12	#4	20'-6"	
e15(E)	6	#4	14'-0"	
e16(E)	4	#6	1'-9"	
e17(E)	12	#4	5'-6"	
Conc. Superstructures	Cu. Yd.	133.5		
Bridge Handrail Removal	Foot	2245		
Reinforcement Bars. (Epoxy Coated)	Pound	20310		

Reinforcement bars designated (E) shall be epoxy coated.



PARAPET AT LIGHTPOLE



PARAPET AT FIRE STANDPIPE (BENT 7)

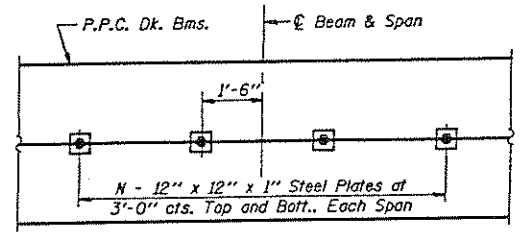
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 PARAPET INSTALLATION
 SN 016-0777**
 SCALE: NONE
 DATE: 12/10/98
 DRAWN BY: CADD
 CHECKED BY: TMS

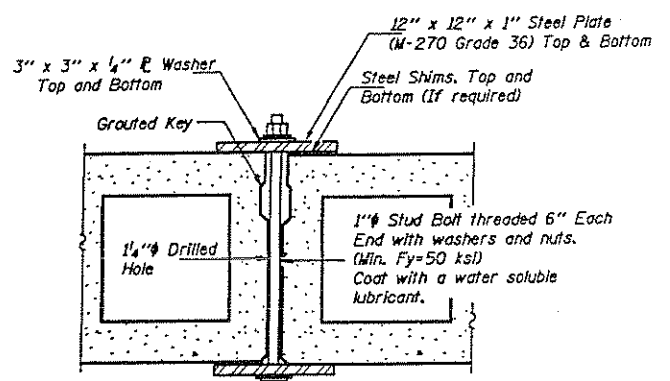
Thu Dec 10 13:42:13 1998
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P.L.E. NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
2843	01031 - 1	COOK	46	36
STA.	TO STA.			
DESIGN NO.	DATE	PROJECT		

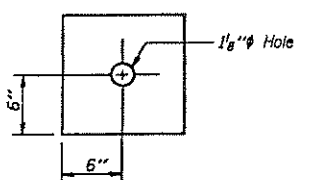
Sheet S 21 of S 22



PLAN



SECTION



CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS

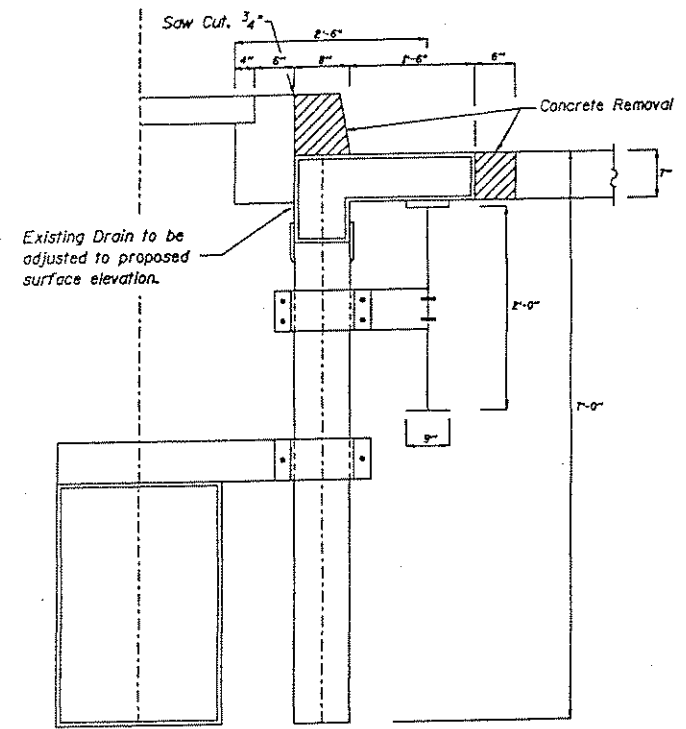
N	SPAN LENGTH
6	36'-0"
10	70'-0"

SHEAR CLAMPING DEVICE, TYPE II

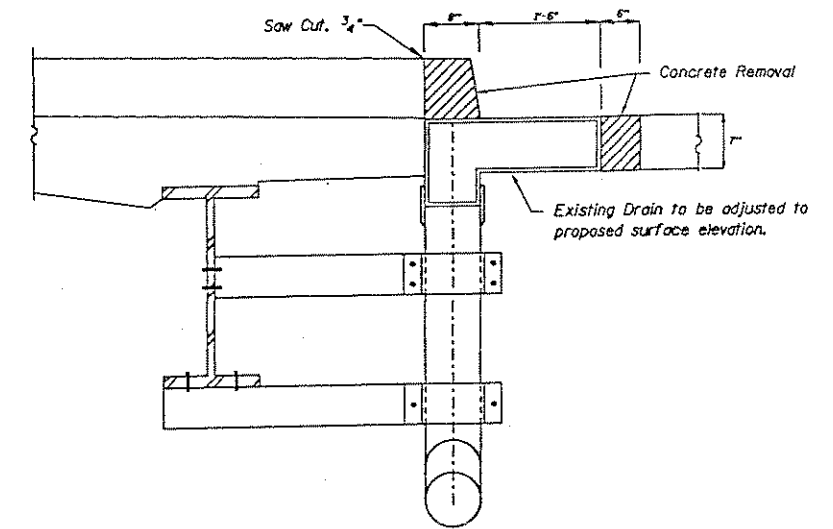
BILL OF MATERIAL

Item	Each	IO
Shear Clamping Device, Type II		

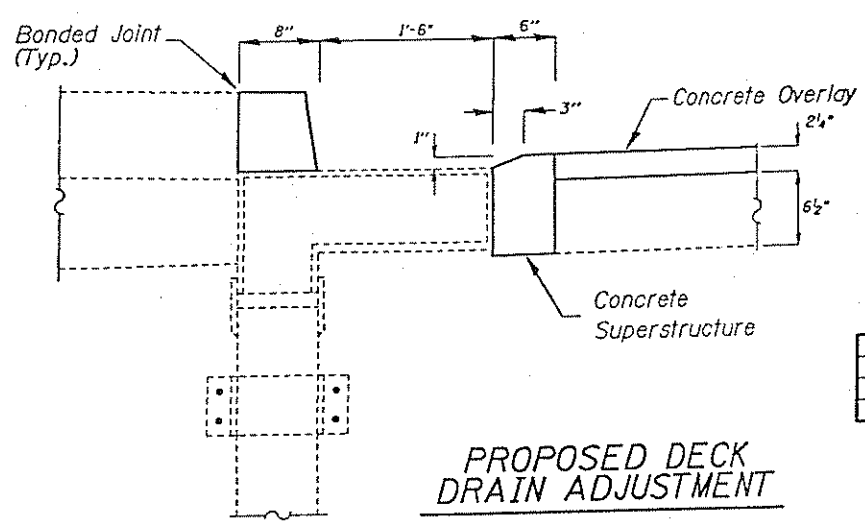
Note:
Shear Clamping Device, Type II is to be used to repair severely deteriorated joint keys between box beams after the removal of the existing bituminous surface that are not able to be repaired by regrouting. The exact number and location are to be determined by the Engineer.



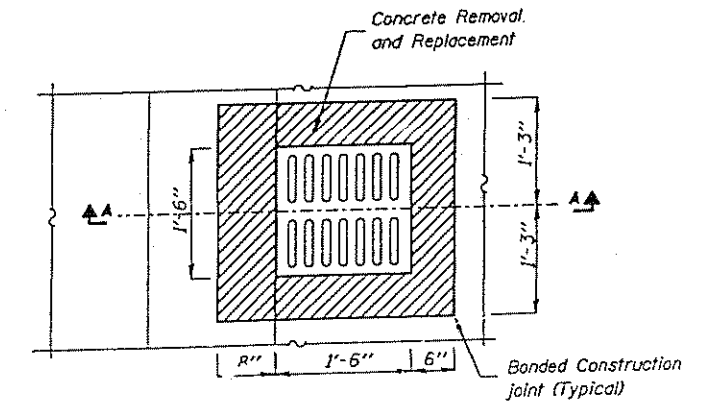
SLAB TRUSS SPAN DRAIN SECTION A-A (4 Drains)



SLAB GIRDER SPAN DRAIN SECTION A-A (4 Drains)



PROPOSED DECK DRAIN ADJUSTMENT



PLAN VIEW

BILL OF MATERIAL

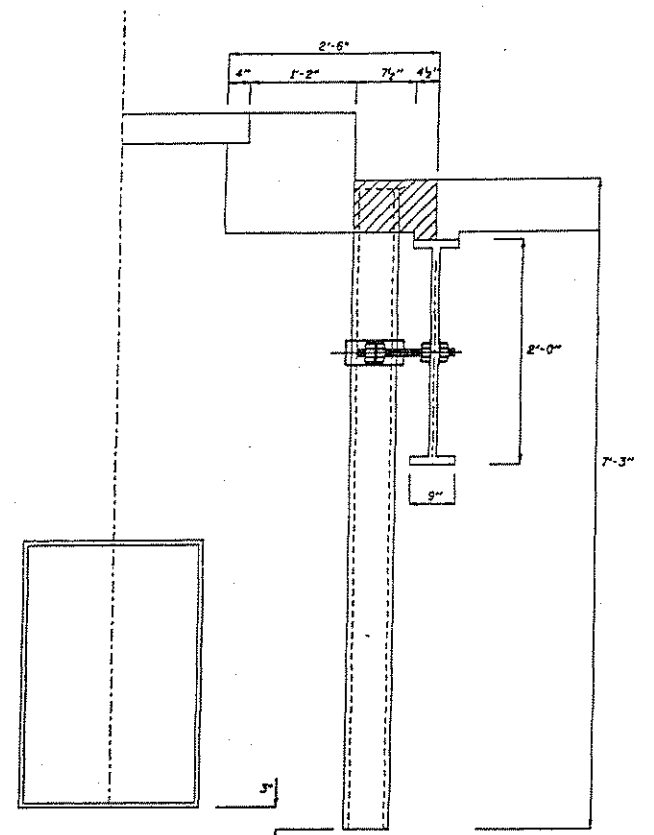
Item	Cu. Yd.	0.23
Conc. Superstructures		
Conc. Removal		0.3

REVISIONS	
NAME	DATE

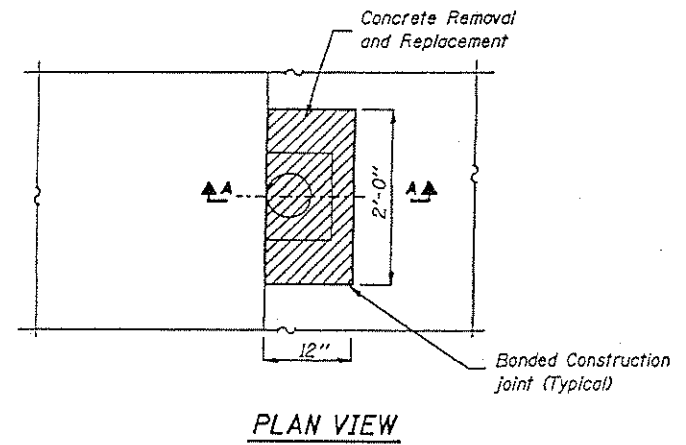
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVENUE
OVER CALUMET SAG CHANNEL
SHEAR KEY, TYPE II AND DECK
DRAIN ADJUSTMENT DETAILS
SN 016-0777
SCALE: NONE
DATE: 12/10/98
DRAWN BY: CADD
CHECKED BY:

Thu Dec 10 13:40:23 1998
c:\projects\struc1\016-0777.m32 LV=1-63

P.A.B. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01051 - 1	COOK	46	37
STA.		TO STA.		
P.L. NO. REF. TO	SLAB	P.L. NO. PROJECT		

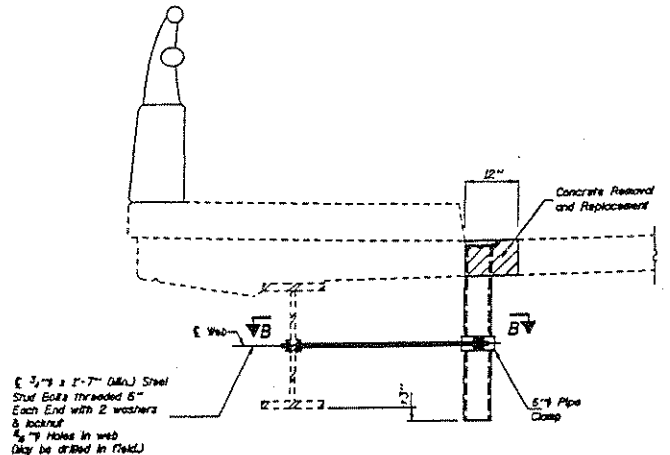


SECTION THRU SIDEWALK SLAB TRUSS SPAN (4 REQUIRED)

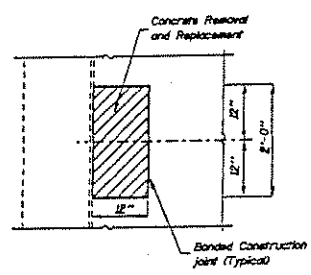


PLAN VIEW

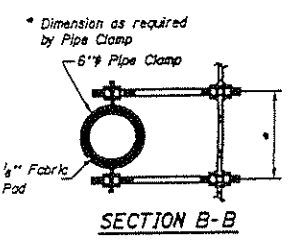
FLOOR DRAIN, TYPE I



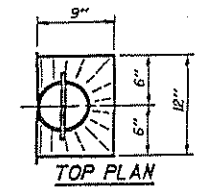
SECTION THRU SIDEWALK SLAB GIRDER SPAN (7 REQUIRED)



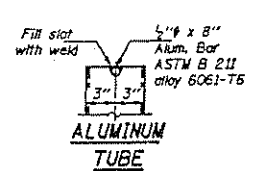
PLAN VIEW



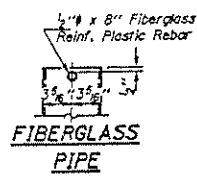
SECTION B-B



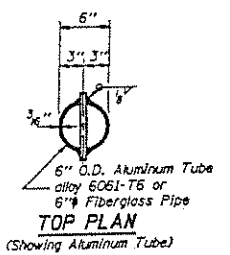
TOP PLAN



ALUMINUM TUBE



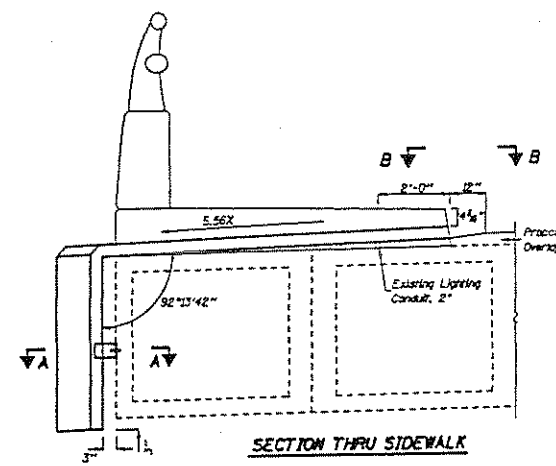
FIBERGLASS PIPE



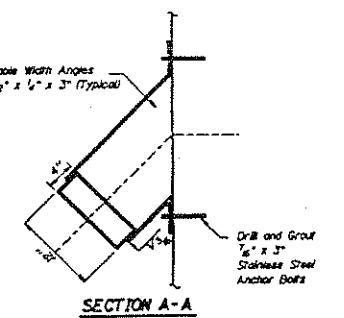
TOP PLAN (Showing Aluminum Tube)

BILL OF MATERIAL

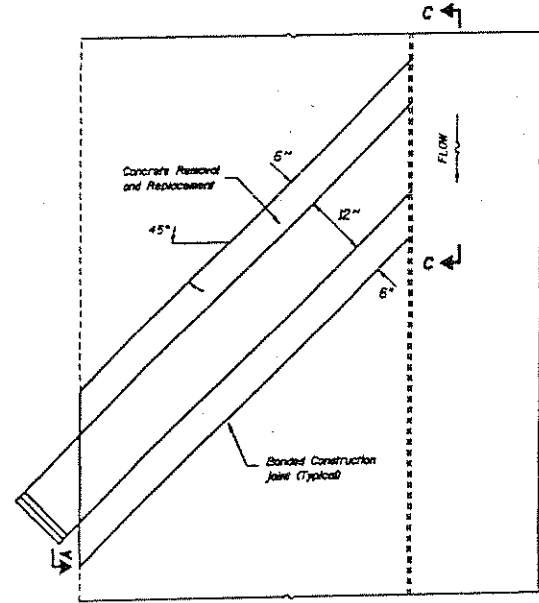
Conc. Structures	Cu. Yd.	0.23
Floor Drain, Type I	Pound	11
Conc. Removal	Cu. Yd.	0.3



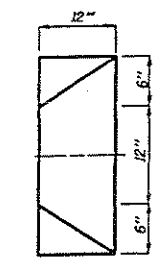
SECTION THRU SIDEWALK



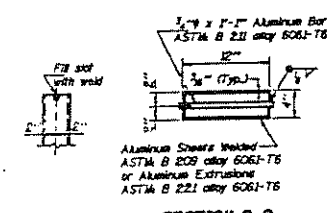
SECTION A-A



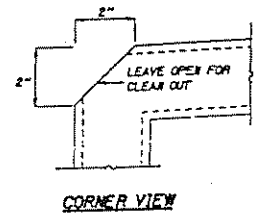
PLAN VIEW



TOP PLAN SECTION B-B



SECTION C-C



CORNER VIEW

BILL OF MATERIAL

Conc. Structures	Cu. Yd.	4.1
Floor Drain, Type II	Pound	8
Conc. Removal	Cu. Yd.	5.0

FLOOR DRAIN, TYPE II

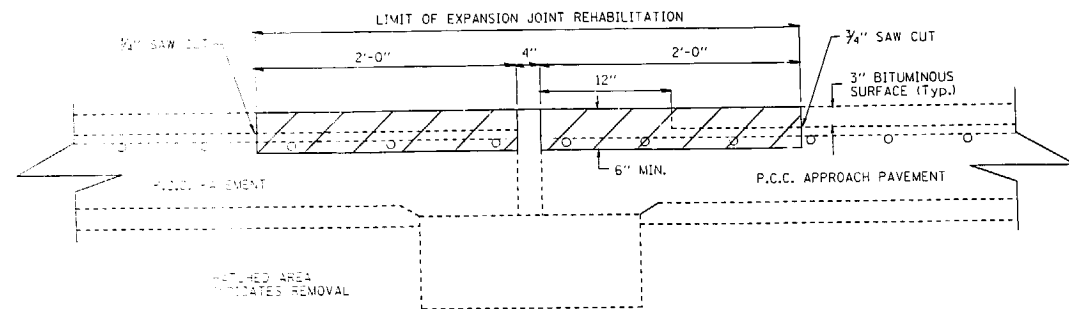
REVISIONS

NAME	DATE

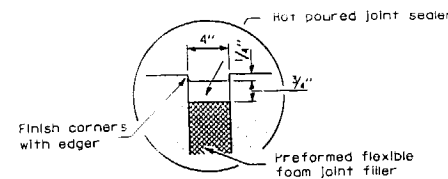
ILLINOIS DEPARTMENT OF TRANSPORTATION
**WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 DECK DRAIN DETAILS
 SN 016-0777**
 SCALE: NONE
 DATE: 11/12/98
 DRAWN BY: CADD
 CHECKED BY: TWS

P.L. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2043	01031 - 1	COOK	46	38
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

Sheet 1 of 1



EXISTING EXPANSION JOINT AT BRIDGE APPROACH SLAB



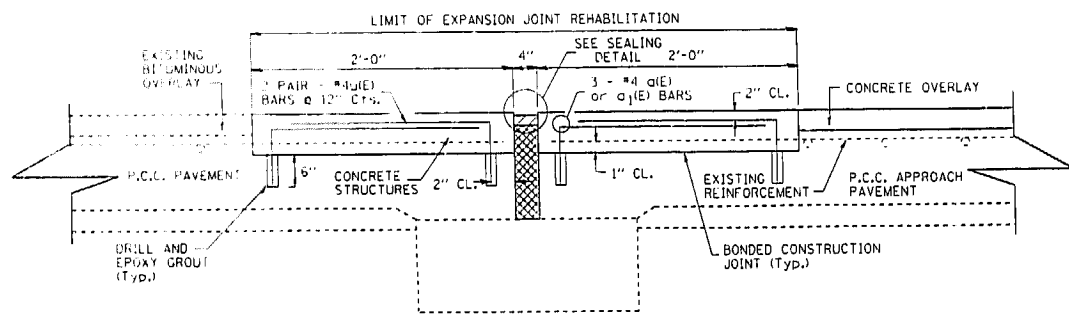
EXPANSION JOINT SEALING DETAIL

NOTES

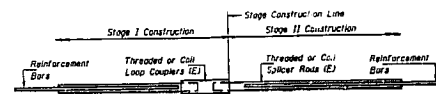
THE REMOVAL OF THE EXISTING EXPANSION JOINT SHALL BE PERFORMED IN A MANNER SO AS NOT TO DAMAGE THE EXISTING STEEL BARS OR ADJACENT CONCRETE OR CONCRETE SLAB. ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED AT HIS EXPENSE.

THIS WORK SHALL ALSO INCLUDE CLEANING AND STRAIGHTENING OF EXISTING STEEL BARS. ANY BARS IN NEED OF REPLACEMENT SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE 'STANDARD SPECIFICATIONS'.

REMOVAL OF THE EXISTING CONCRETE SHALL BE IN ACCORDANCE OF THE APPLICABLE PORTIONS OF SECTION 501. THE NEW CONCRETE, REINFORCEMENT AND PREFORMED EXPANSION JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 503 OF THE 'STANDARD SPECIFICATIONS'. THIS WORK SHALL BE PAID PER FOOT FOR 'EXPANSION JOINT REHABILITATION' MEASURED ALONG THE CENTER OF THE JOINT.



PROPOSED EXPANSION JOINT AT BRIDGE APPROACH SLAB SECTION A-A



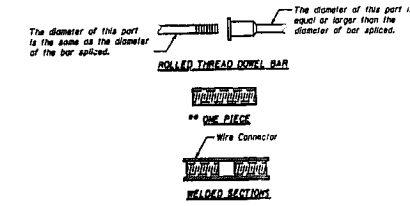
SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#4	8	NORTH PAVEMENT JOINT
#4	8	SOUTH PAVEMENT JOINT

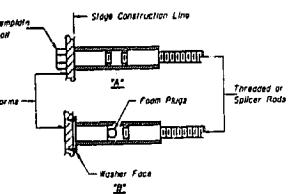
NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lappped reinforcement bars.
 Splicer rods shall be of minimum 1/2" yield strength, threaded or cold-chamber finished.
 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 splicing 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 in Tension $\geq 1.25 \times F_y \times A_s$
 2. Minimum "Pull-out" Strength in Tension $\geq 1.25 \times F_{pu} \times A_s$
 Where F_y = Yield strength of lapped reinforcement bars in ksi.
 F_{pu} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES	Strength Requirements		
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity in Tension	Min. Pull-Out Strength in Tension
#3	2'-0"	21.0	9.2
#4	2'-0"	32.1	13.3
#5	2'-6"	45.1	18.0
#6	2'-6"	58.9	23.5



BAR SPLICER ASSEMBLY ALTERNATIVES

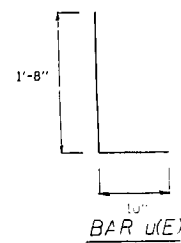


INSTALLATION AND SETTING METHODS

BILL OF MATERIAL (FOR INFORMATION ONLY)

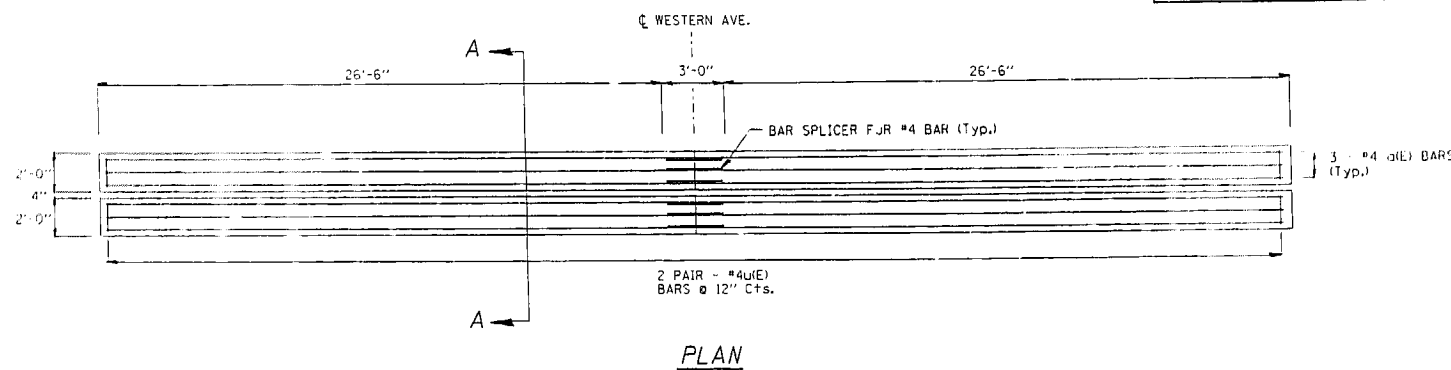
Bar	No.	Size	Length	Shape
d(E)	24	#4	27'-6"	
u(E)	232	#4	2'-6"	
Conc. Structures			Cu. Yd.	8.3
Reinforcement Bars, (Epoxy Coated)			Pound	800
Bar Splicers			Each	12

Reinforcement bars designated (E) shall be epoxy coated.



BILL OF MATERIAL

EXPANSION JOINT REHABILITATION	FOOT	112
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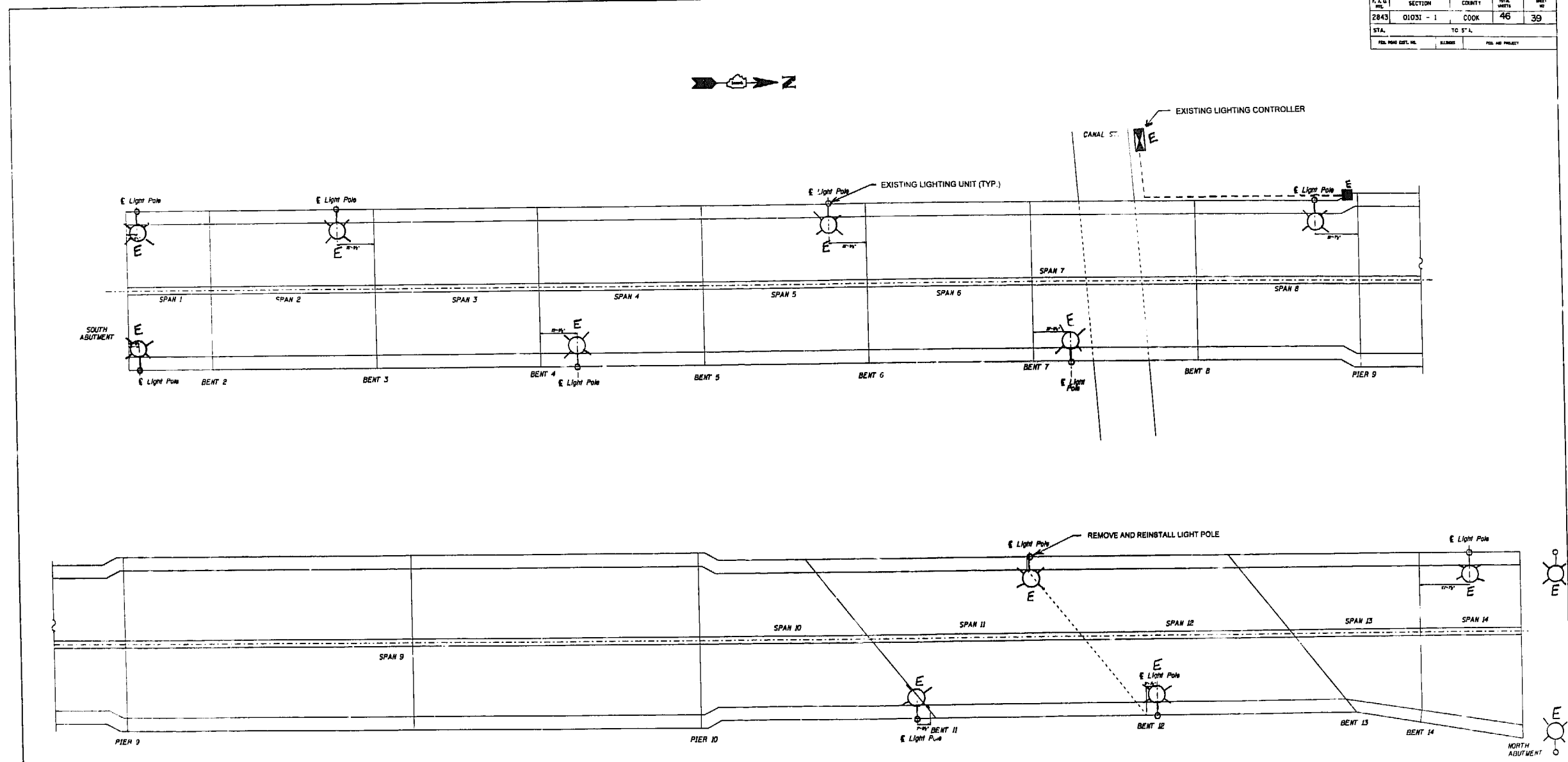
PLAN

REVISIONS	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVENUE
 OVER CALUMET SAG CHANNEL
 SN 016-0777
 PAVEMENT EXPANSION JOINT REHABILITATION
 SCALE: VERT. DATE 11/10/98
 DRAWN BY T.M. CHECKED BY

TAMERAN

PLAN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	01031 - 1	COOK	46	39
STA.	TO STA.			
FILE PLAN EDIT. NO.	ELIMIN.	FILE AND PROJECT		



NOTES

- THE LIGHTING UNITS SHOWN ON THIS PAGE ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENT IN THE FIELD.
- THE CONTRACTOR SHALL PULL A NEW 1/2" NO. 10 GROUND WIRE THROUGH THE EXISTING CONDUITS BONDING IT TO EACH LIGHT POLE AND JUNCTION BOX FROM THE LAST POLE ON EACH CIRCUIT BACK TO THE LIGHTING CONTROLLER.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A GROUND CONNECTOR AT EACH LIGHT POLE TO BOND THE EQUIPMENT GROUND WIRE TO THE POLE. THE GROUND CONNECTOR SHALL BE A COMPRESSION TYPE AND SHALL BE LISTED FOR GROUNDING AS DESCRIBED IN ARTICLE 1085.02(a) OF THE SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "ELECTRIC CABLE IN CONDUIT, 800V, (EPR-TYPE RHW) 1/2" NO. 10.
- THE CONTRACTOR SHALL INSTALL A 5/8" X 10 FT. GROUND ROD AT THE LIGHTING CONTROLLER. A #2 AWG BARE COPPER WIRE SHALL BE EXOTHERMICALLY WELDED TO THE GROUND ROD AND RUN BACK TO THE CONTROLLER AND BONDED TO A SEPARATE GROUND BUS BAR ALSO INSTALLED BY THE CONTRACTOR. THE EQUIPMENT GROUND CONDUCTORS FROM THE BRANCH CIRCUITS SHALL BE TERMINATED AT THE GROUND BUS BAR. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "GROUND ROD, 5/8" DIA. X 10 FT."
- WHEN THE LIGHTING UNIT TO BE REMOVED AND REINSTALLED ON A NEW FOUNDATION IS DISCONNECTED, A TEMPORARY CONNECTION SHALL BE MADE SO THE REMAINING LIGHTING UNITS ARE ENERGIZED AND OPERATIONAL AT NIGHT.

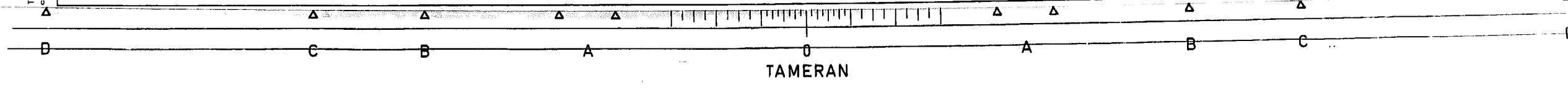
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**WESTERN AVENUE
OVER CALUMET SAG CHANNEL
LIGHTING PLAN
SN 016-0777**

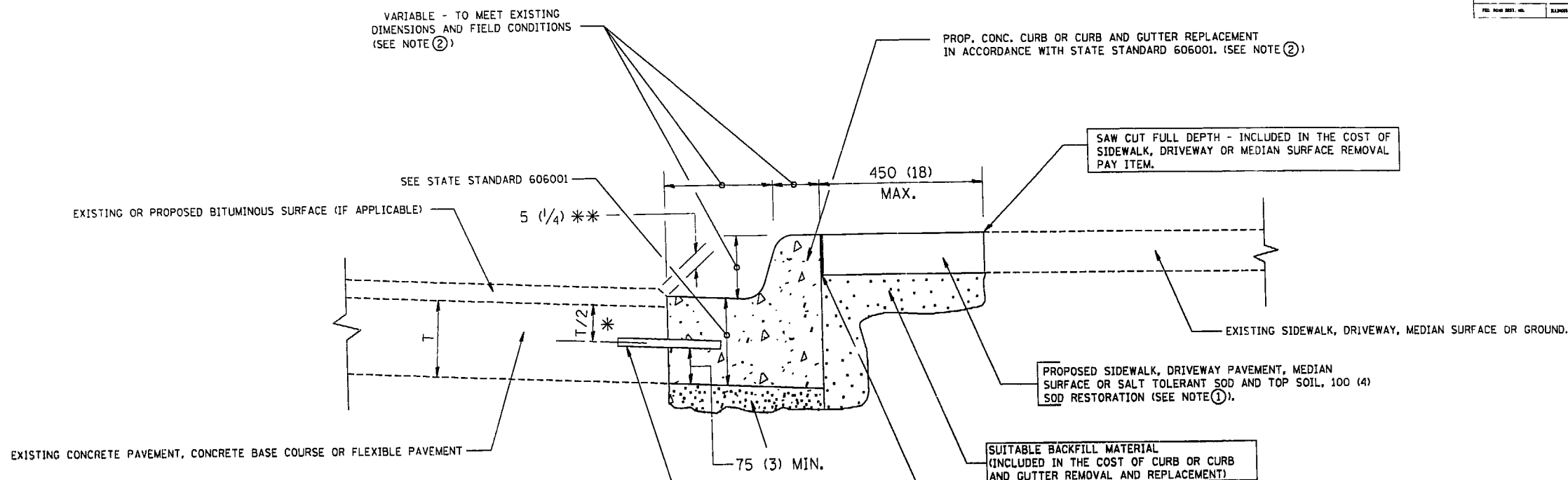
SCALE: NONE
DATE: 12/01/98

DRAWN BY: GADD
CHECKED BY: TMS

Tue Dec 1 10:23:41 1998
c:\projects\struct\016-0777.dwg L:\s1-63



T.A. NO.	SECTION	COUNTY	TYP. SHEETS	SHEET NO.
2642	0103T-1	COOK	46	40
STA.	TO STA.			
FILE NO. (SEE PLAN)	ALPHABET	FILE NO. PROJECT		



* 75 (3) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 100 (4) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑤ THE COST OF BITUMINOUS SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 100 (4) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 100 (4) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

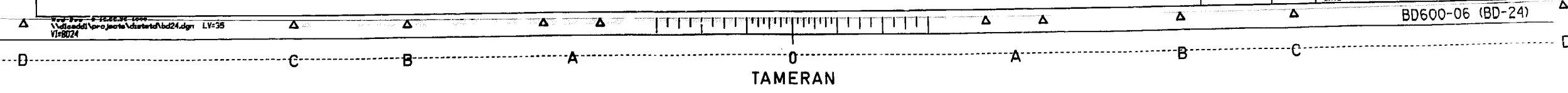
PROPOSED NO. 20 (NO. 6) EPOXY COATED TIE BARS 600 (24) LONG AT 600 (24) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

REVISIONS	
NAME	DATE
M. DE YONG	05/28/91
A. HOUSEH	03/11/94
R. SHAH	02/24/95
R. SHAH	03/02/95
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97

ILLINOIS DEPARTMENT OF TRANSPORTATION
CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT
 SCALE: NONE
 DATE 12/09/98
 DRAWN BY
 CHECKED BY



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578 & 2842	1996-122 I	COOK	22	1

D-91-334-96

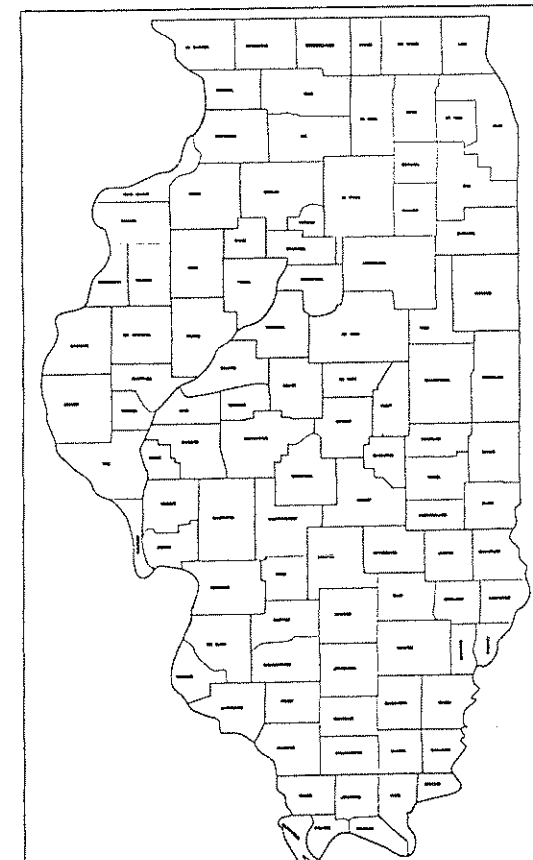
INDEX OF SHEETS

- 1. COVER SHEET
- INDEX OF SHEETS
- STATE STANDARDS
- LOCATION MAP
- 2. SUMMARY OF QUANTITIES
- *3-16 PLAN SHEETS
- 17-22 EXISTING PLAN SHEETS
FOR INFORMATION ONLY
- * INCLUDES SHEETS 4A. & 4B.

STATE STANDARDS

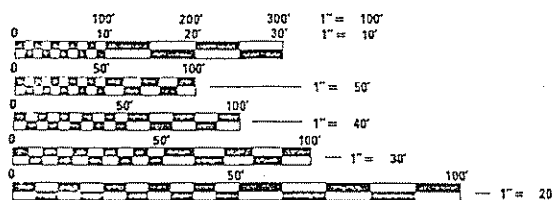
702001 701401

ROUTE: FAU 3578 2-FAU 2843
 1. IL. 7 OVER CAL-SAG
 2. WESTERN AVE. OVER CAL-SAG
 SECTION: 1996-122 I
 COUNTY: COOK
 BRIDGE REPAIR AND BRIDGE
 PAINTING AT EXPANSION JOINTS
 SN: 016-0464
 016-0777
 C-91-334-96



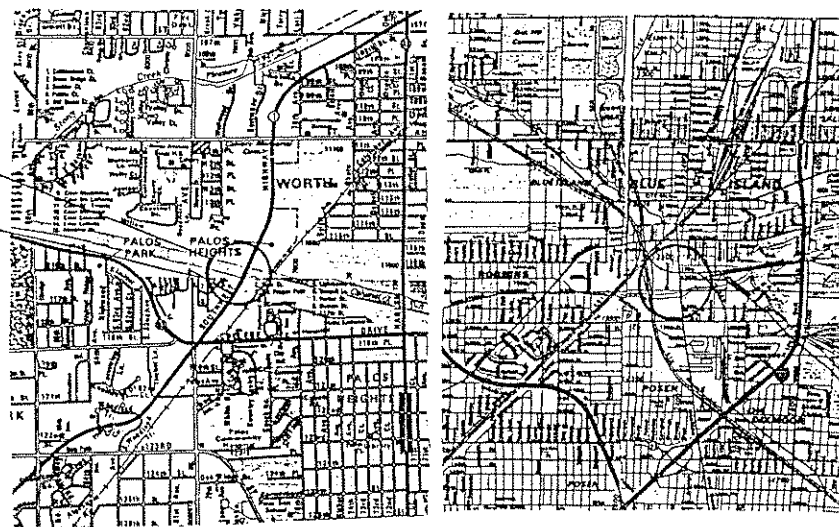
LOCATION OF SECTION INDICATED TRUE --

IMPROVEMENT IS LOCATED IN
 THE VILLAGE OF
 PALOS HEIGHTS AND BLUE ISLAND



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.

LOCATION NO. 1
 ILL. 7
 ADT 31500



SPEED LIMIT= 45 MPH

LOCATION NO. 2
 WESTERN AVE
 ADT 21000

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED May 12, 1997 *James C. Slif*
 EXAMINED _____
 PASSED JUNE 27, 1997 *Bill Purkey*
 APPROVED JUNE 27, 1997 *James C. Slif*

PRINTED BY AUTHORITY OF THE
 STATE OF ILLINOIS

REEL 0-319

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1995-122 I	COOK	22	2
STA.	TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	
3576&2843			

SUMMARY OF QUANTITIES

URBAN
100% STATE
SFTY-2A

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ILL. 7	WESTERN AVE.
50031200	JACKING AND CRIBBING	EACH	2	2	0
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	50	0	50
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.	1200	0	1200
50301250	FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")	SQ. FT.	100	0	100
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	32440	3040	29400
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	90	0	90
50500300	CLEANING AND PAINTING STEEL BRIDGE	L. SUM.	1	.3	.7
50600200	BLASTING RESIDUE CONTAINMENT AND DISPOSAL	L. SUM.	1	.3	.7
20349720	REINFORCED NEOPRENE EXPANSTON JOINT TREATMENT	FOOT	65	0	65
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L. SUM.	1	.3	.7
X0321799	FLOATING BEARINGS, GUIDED EXPANSION, 900K	EACH	2	2	0

The existing bridges, ILL 7 and Western Ave over Cal-Sag Channel, (SN: 016-0464 and 016-0777) are steel truss structures.

Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing structural steel within 5 feet of either side of the transverse expansion joints shall be cleaned by Method 4. The remaining portions of existing structural steel do not require any washing, cleaning or painting. The Lead and Chromate Free Alkyd paint system shall be used for painting of existing structural steel. The prime and intermediate coats shall be applied as specified in the special provision followed by a full final finish coat over all designated steel surfaces. The color of the final finish coat shall be Light Grey, Munsell No. 10 Y 7/1.

GENERAL NOTES

1. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
2. BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR TYPE II BARRICADE USED. (ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL).
3. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
6. THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM FIELD MAINTENANCE ENGINEERS.
7. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ADJUTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

BRIDGE NOTES

1. EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT.
2. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL OPERATIONS SHALL BE REPAIRED OR REPLACED USING AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCIDENTAL TO "CONCRETE REMOVAL".
3. 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 A CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FINISHED AT THE UNIT PRICE BID FOR THE WORK.
4. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.

ILLINOIS DEPARTMENT OF TRANSPORTATION

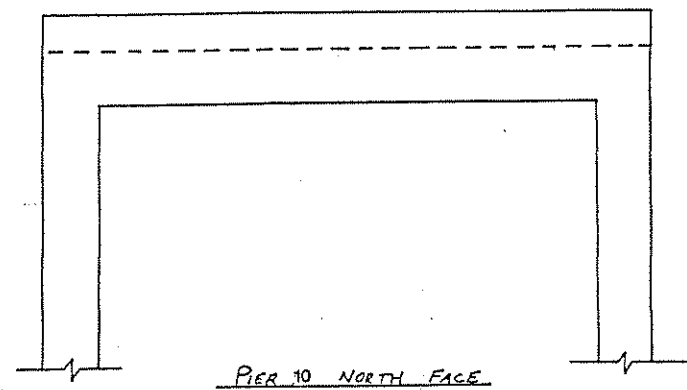
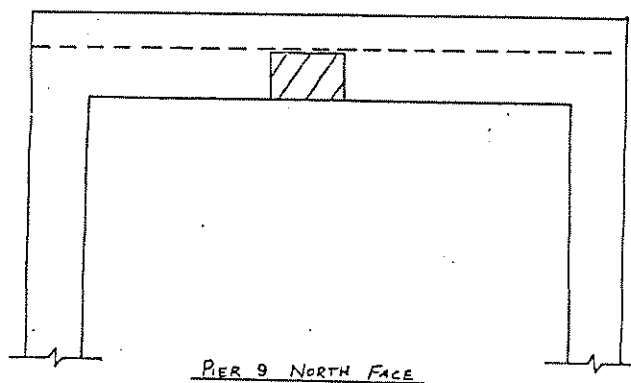
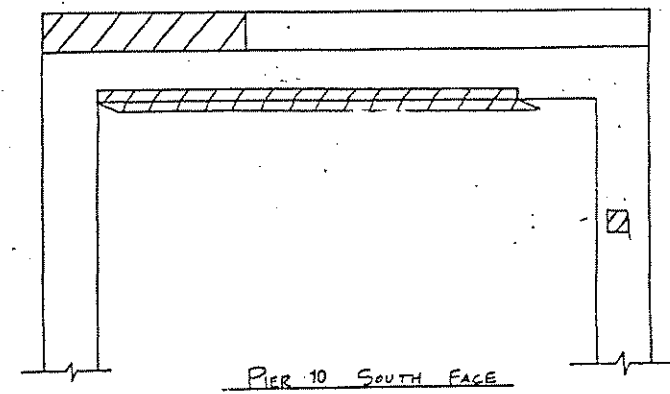
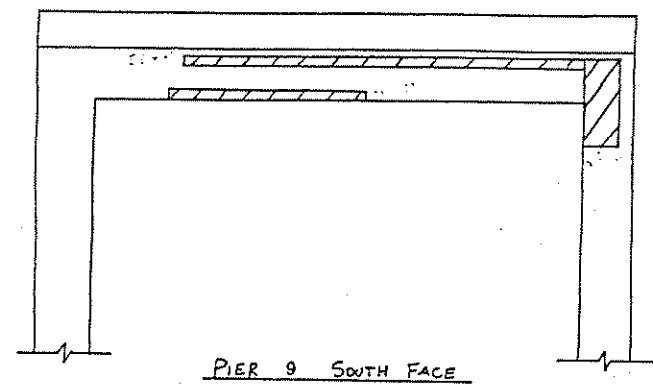
SUMMARY OF QUANTITIES AND NOTES

REVISIONS	
NAME	DATE

SCALE: VERT. HORIZ. DATE

DRAWN BY DESIGNED BY CHECKED BY

LAU. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2478 & 2443	1996-1221	COOK	22	3
JOB NO.				
FED. ROAD DIST. NO. 1				
ILL. ROAD PROJECT				



EXACT LOCATIONS OF FORMED CONCRETE REPAIR DEPTH GREATER OR LESS THAN 5" HAS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REVISIONS	
NAME	DATE

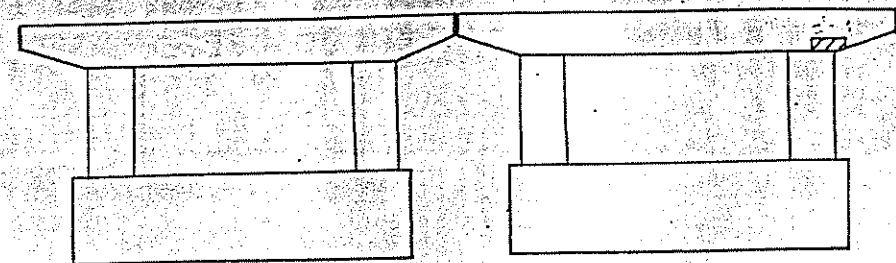
ILLINOIS DEPARTMENT OF TRANSPORTATION
 WESTERN AVE OVER
 CAL. SAG.
 SN:016-0777
 FORMED CONCRETE REPAIR

SCALE: VERT. _____
 HORIZ. _____

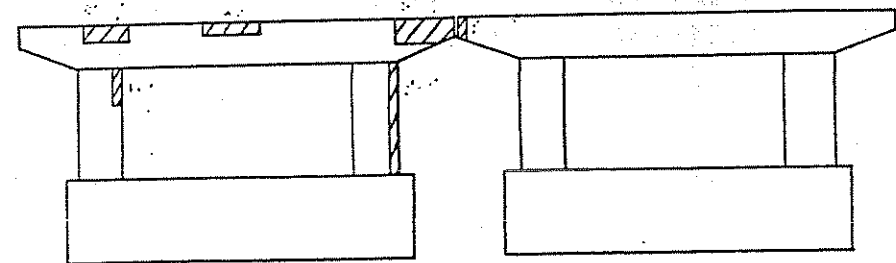
DATE _____

DRAWN BY _____
 DESIGNED BY _____
 CHECKED BY _____

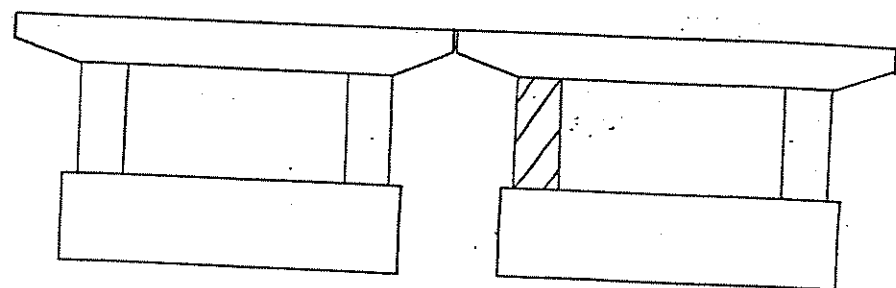
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2578 & 2817	1996-1221	COOK	22	4
DESIGNER		NAME		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



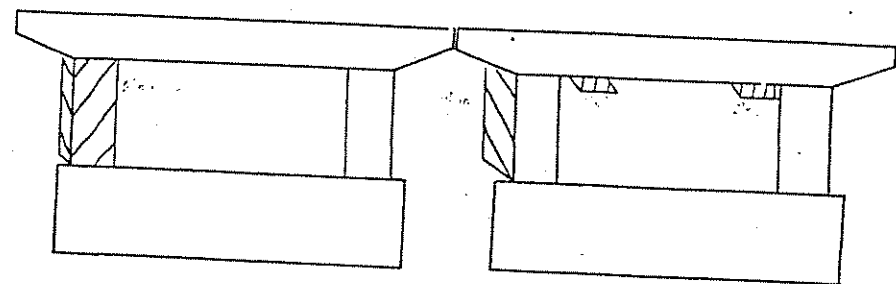
PIER 11 NORTH FACE



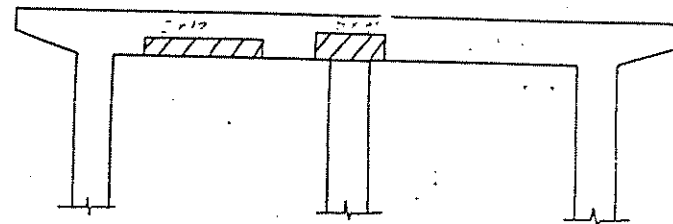
PIER 11 SOUTH FACE



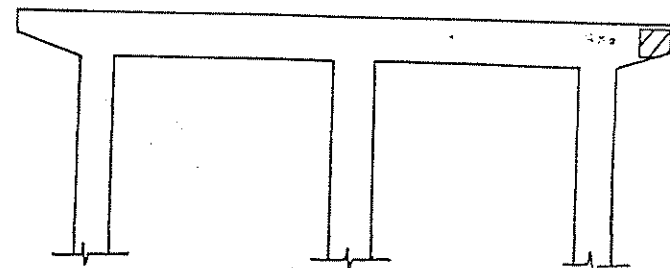
PIER 13 NORTH FACE



PIER 13 SOUTH FACE



PIER 14 NORTH FACE



PIER 14 SOUTH FACE

EXACT LOCATIONS OF FORMED CONCRETE REPAIR DEPTH GREATER OR LESS THAN 5" HAS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

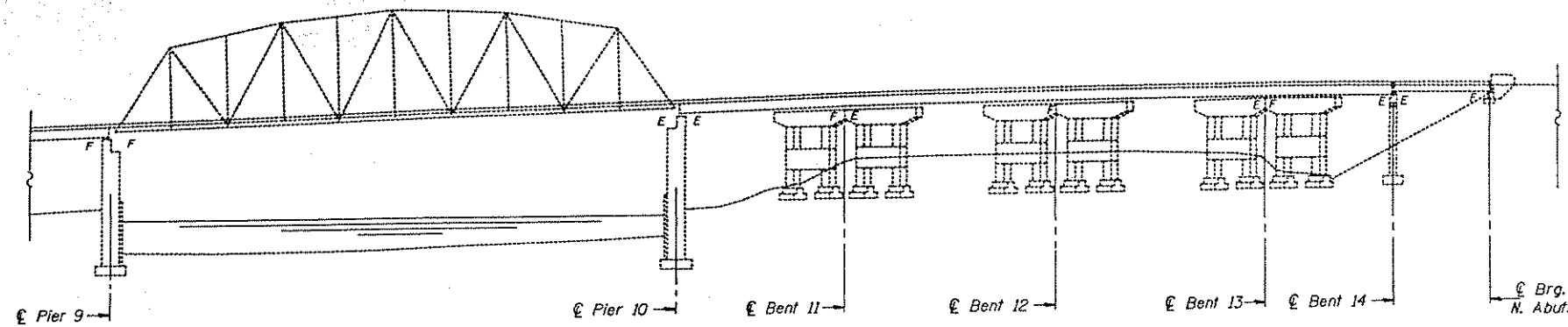
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**WESTERN AVE OVER
 CAL. SAG.
 SN:016-0777
 FORMED CONCRETE REPAIR**
 SCALE VERT. DRAWN BY
 HORIZ. DESIGNED BY
 DATE CHECKED BY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SHEET	SHEET NO.
FAU 2843	0103BR	COOK	22	7
FED. ROAD DIST. NO. 7		ILL. DIST. NO.	FED. ROAD PROJECT	

10 SHEETS



PARTIAL ELEVATION

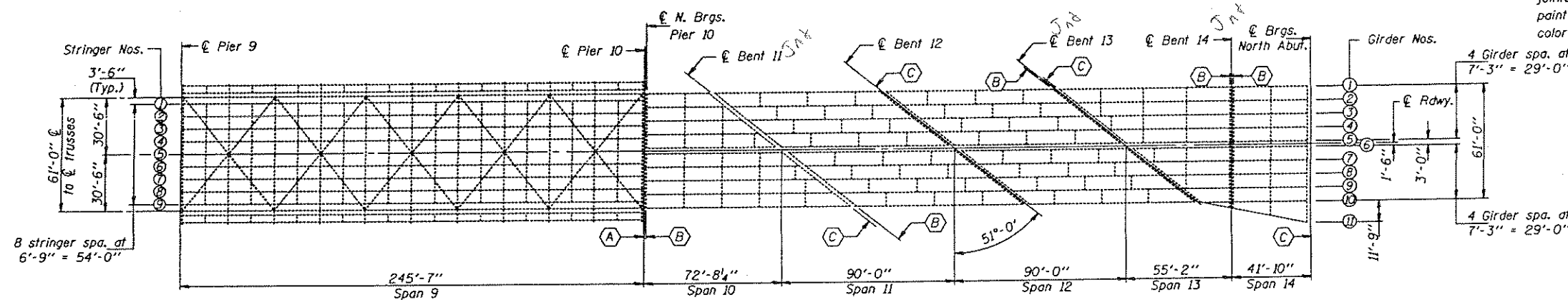
GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36. All new fasteners shall be high strength bolts. Holes shall be subpunched or subdrilled $\frac{1}{16}$ " and reamed in the field to $\frac{1}{8}$ " for $\frac{3}{4}$ " high strength bolts (except as noted on the plans) after new structural steel sections are properly fitted into position.

The Inorganic Zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Gray, Munsell No. 5B 7/1. See Special Provisions for "Cleaning and Painting New Metal Structures".

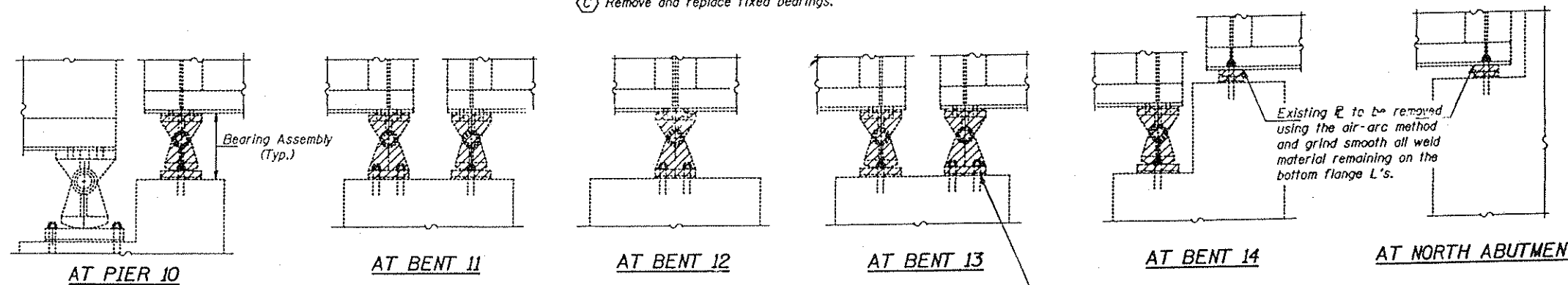
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction 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 bid for the work.

Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing structural steel within 1.5 m (5 feet) of either side of expansion joints shall be cleaned by Method I. The aluminum epoxy mastic/acrylic paint system shall be used for painting of existing structural steel. The color of the final finish coat shall be Gray, Munsell No. 5B 7/1.



PARTIAL FRAMING PLAN

- Notes:
- (A) Install new elastomeric trough and carrier P's.
 - (B) Remove existing bearings & replace with Elastomeric Bearings, Type I.
 - (C) Remove and replace fixed bearings.



EXISTING BEARING REMOVAL DETAILS

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	29,400
Jack & Remove Existing Bearings	Each	90
Elastomeric Bearing Assembly, Type I	Each	50
Reinf. Neoprene Expansion Jt. Treatment	Lin. Ft.	65
Cleaning & Painting Steel Bridge	L.S.	0.7
Blasting Residue Containment & Disposal	L.S.	0.7
Formed Concrete Repair ≤5"	Sq. Ft.	1200
Formed Concrete Repair >5"	Sq. Ft.	100

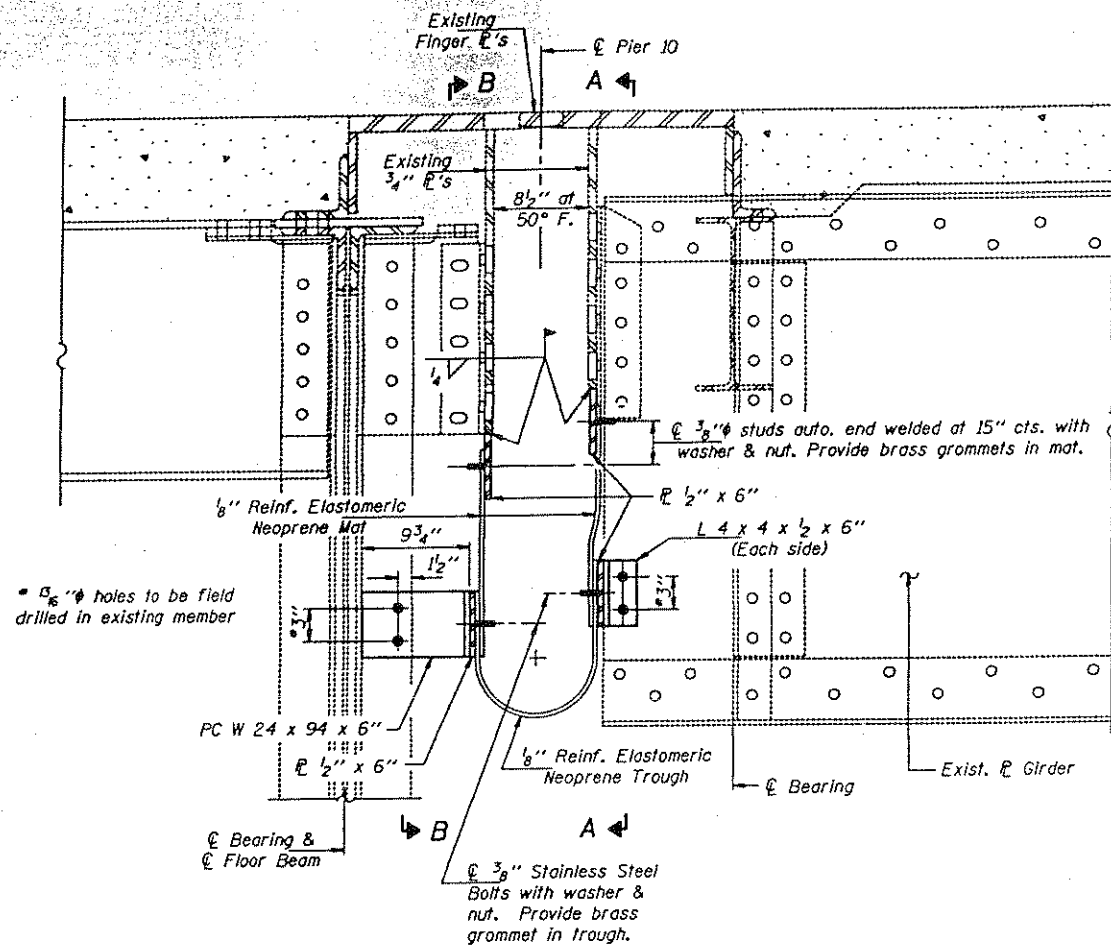
BRIDGE REPAIRS
F.A.U. RTE 2843 (WESTERN AVE.) OVER
CAL-SAG CHANNEL SEC. 0103BR
COOK COUNTY
S.N. 016-077

DESIGNED	Victor H. Velez	MAY 30	19 97
CHECKED	Victor H. Velez	EXAMINED	Joseph E. Horne
DRAWN	Dierbert	PASSED	ENGINEER OF STRUCTURAL SERVICES
CHECKED	CYTE VHV		ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

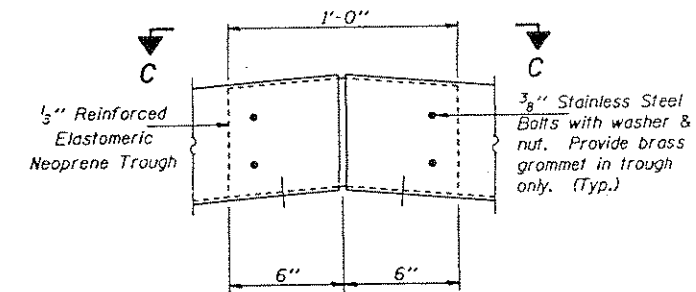
ROUTE NO.	SECTION	COUNT	SHEET	SHEET NO.
FAU 2843	0103BR	COOK	22	8
ILLINOIS FEDERAL PROJECT				

10 SHEETS

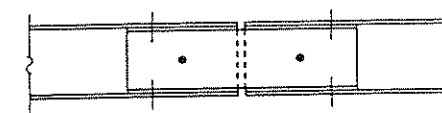


TYPICAL SECTION THRU
EXPANSION JOINT AT PIER 10

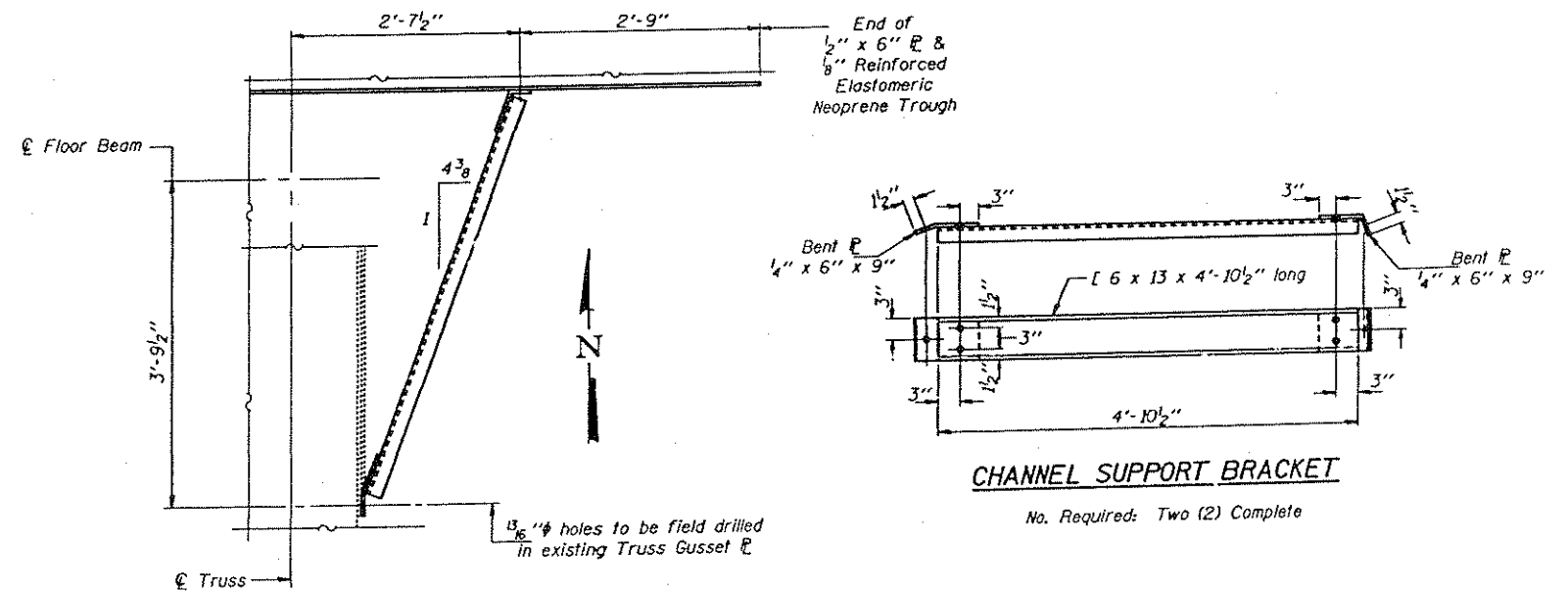
Notes: See Sheet 3 for Sec. A-A & B-B



TROUGH SPLICE DETAIL



VIEW C-C



PLAN
CHANNEL SUPPORT BRACKET

CHANNEL SUPPORT BRACKET

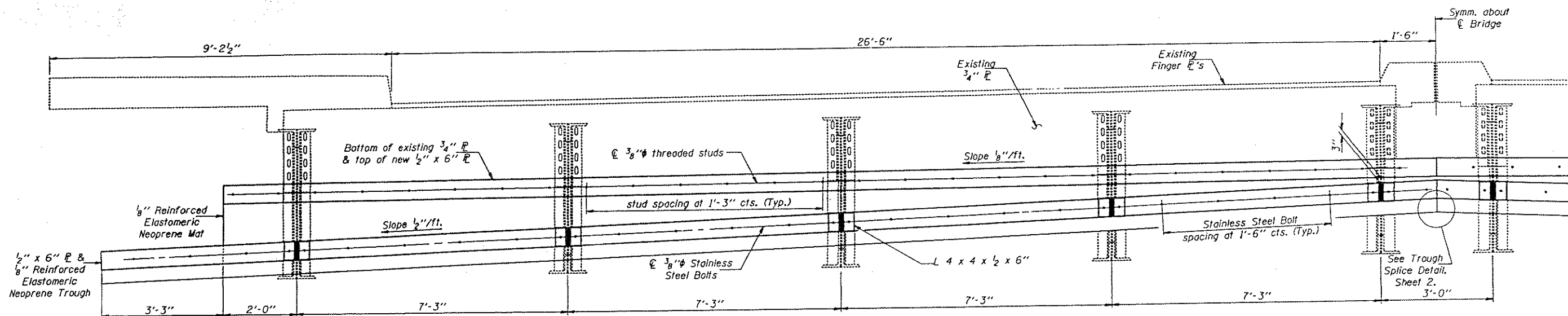
No. Required: Two (2) Complete

DESIGNED	CME	MAY 30	1997
CHECKED	VHV	EXAMINED	<i>J. E. Adams</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	Dierbert	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	CME VHV		

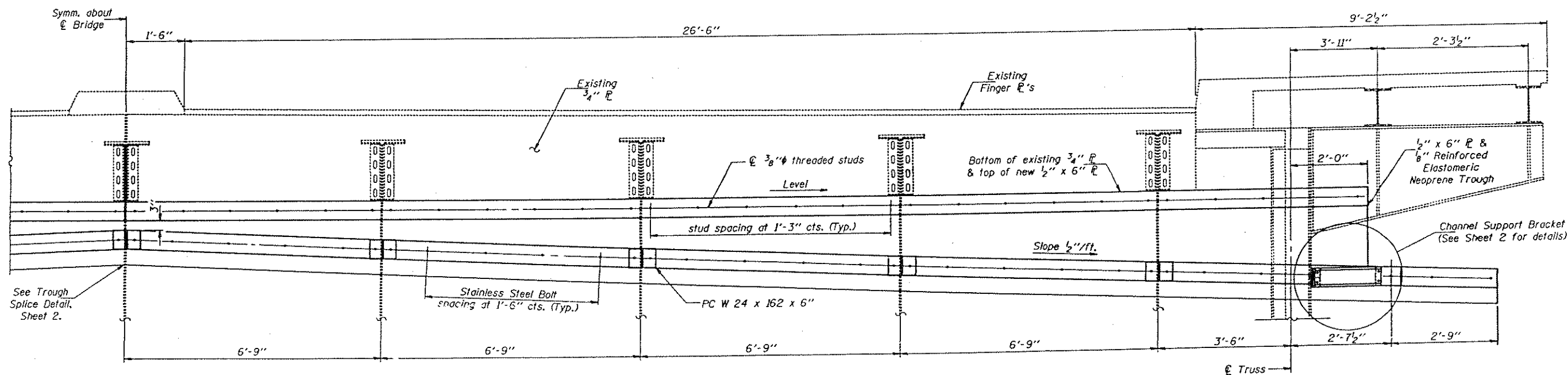
BRIDGE REPAIRS
F.A.U. RTE 2843 SEC. 0103BR
COOK COUNTY
S.N. 016-0777

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEETS	SHEET NO.
FAU 2843	0103BR	COOK	22	9
SHEET NO. 3 10 SHEETS				



SECTION A-A



SECTION B-B

DESIGNED	CME	MAY 30	1997
CHECKED	VHV	EXAMINED	<i>Lord E. Adams</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	D-herbert	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	CME VHV		

BRIDGE REPAIRS
F.A.U. RTE 2843 (WESTERN AVE.) OVER
CAL-SAG CHANNEL SEC. 0103BR
COOK COUNTY
S.N. 016-0777

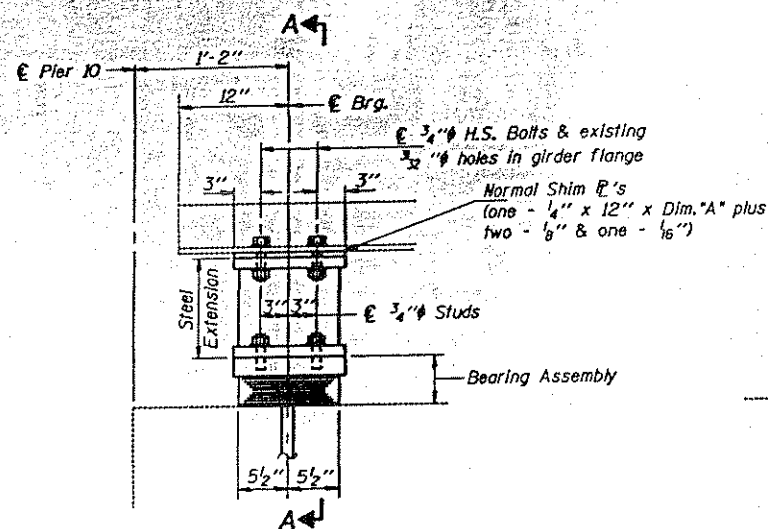
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	NO.
FAU 2843	0103BR	COOK	22	10
FED. ROAD DIST. NO. 7		B.L. NO.	FED. AID PROJECT	

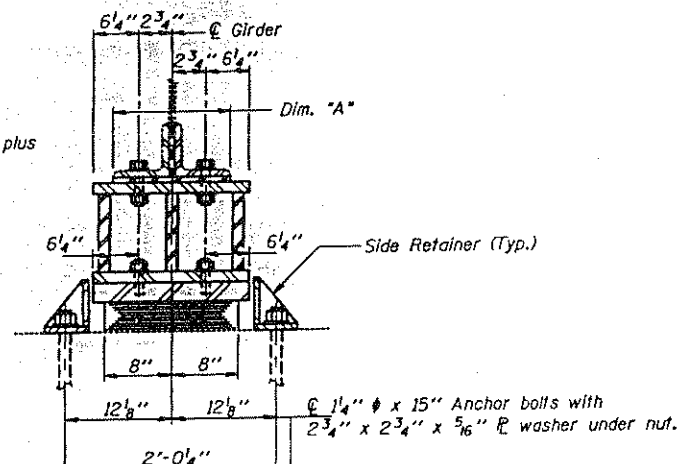
SHEET NO. 4
10 SHEETS

GIRDER REACTIONS

R _P	(K)	76.4
R _L	(K)	43.4
Imp.	(K)	9.3
R (Total)	(K)	129.1



PARTIAL ELEVATION AT PIER 10 (NORTH)



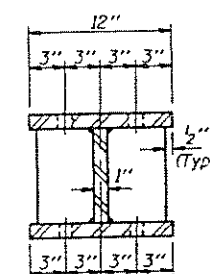
SECTION A-A

Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
New steel extensions, side retainers, shims, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel". See sheet 8 for Anchor Bolt installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Plate girder web should be stiffened at jacking location.
Min. Jack size = 80 Tons.

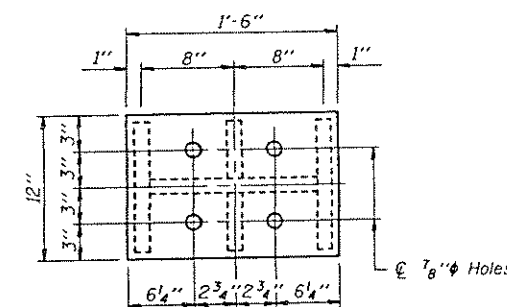
SHIM P. SCHEDULE

(Dimensions in inches)

Girder No.	Dim. "A"
1	8 3/8
2	8 3/8
3	10 3/8
4	10 3/8
5	10 3/8
6	12 3/8
7	12 3/8
8	12 3/8
9	12 3/8
10	12 3/8

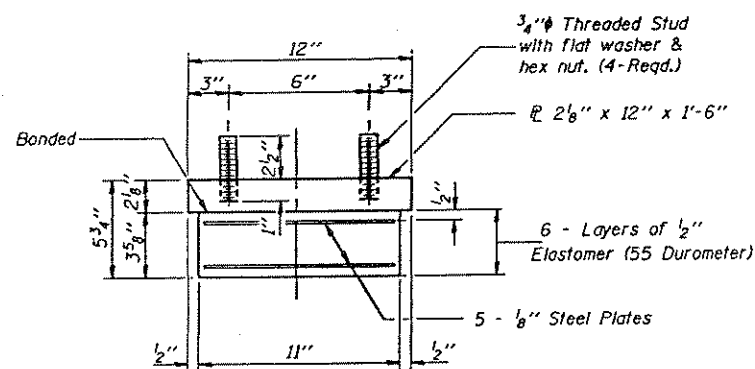


SECTION B-B



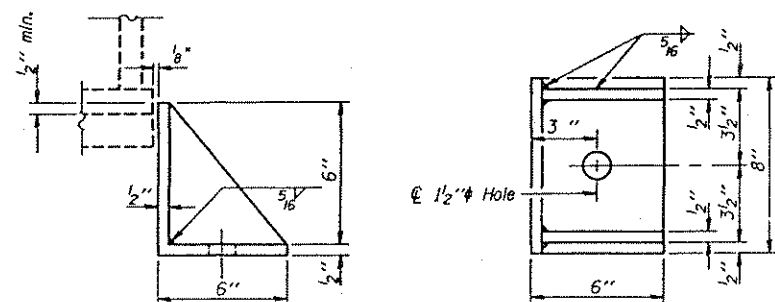
PLAN TOP & BOTTOM PLATES

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

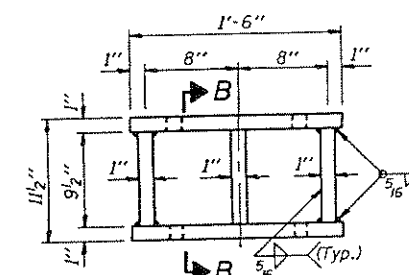
Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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

DESIGNED	CME	MAY 30 1997
CHECKED	VHV	EXAMINED <i>John E. Adams</i>
DRAWN	Dierbert	PASSED
CHECKED	CME VHV	ENGINEER OF BRIDGES AND STRUCTURES



STEEL EXTENSION DETAIL
PIER 10 (NORTH)

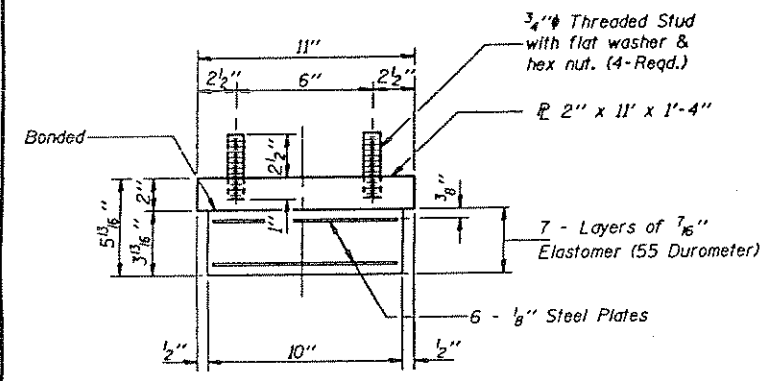
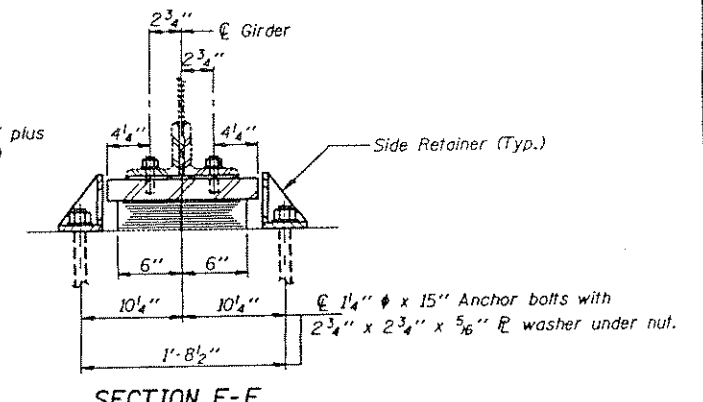
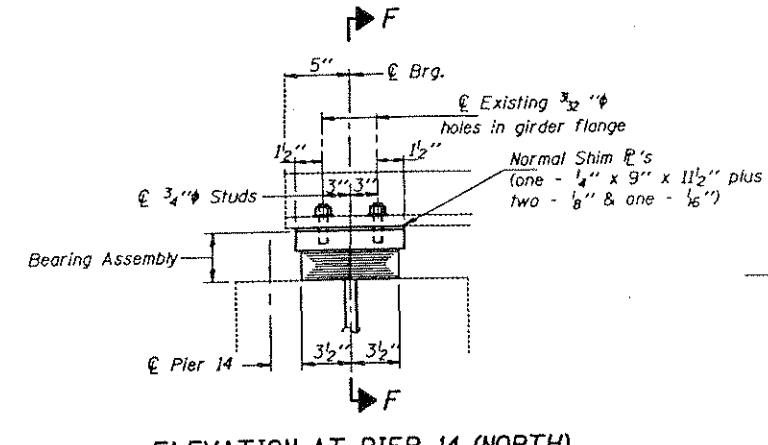
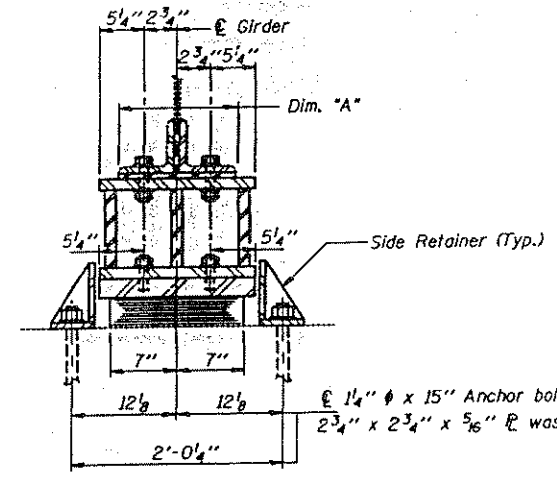
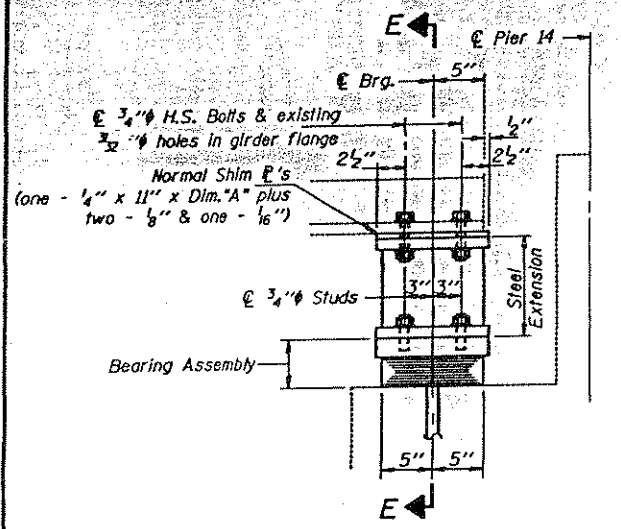
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10

BEARING REPLACEMENT DETAILS
PIER 10 (NORTH)
F.A.U. RTE 2843 SEC. 0103BR
COOK COUNTY
S.N. 016-0777

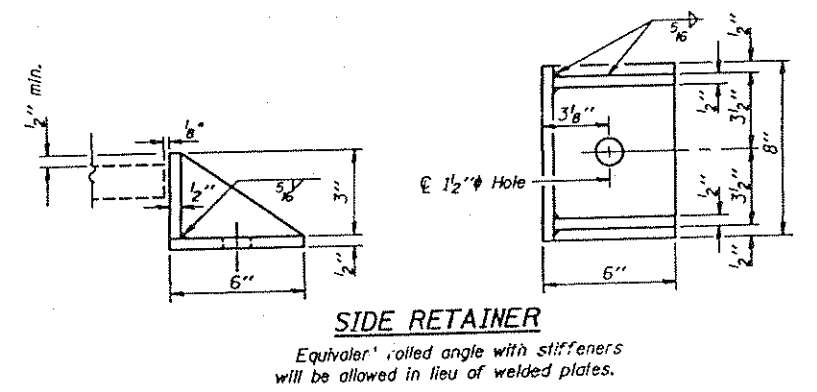
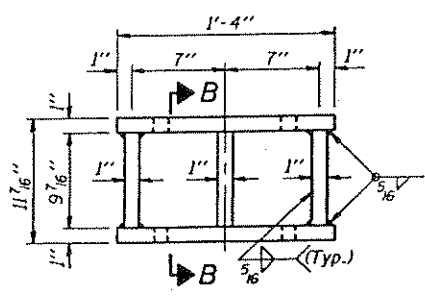
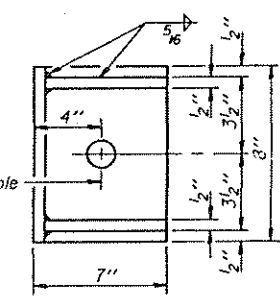
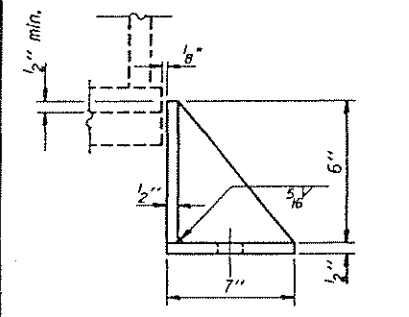
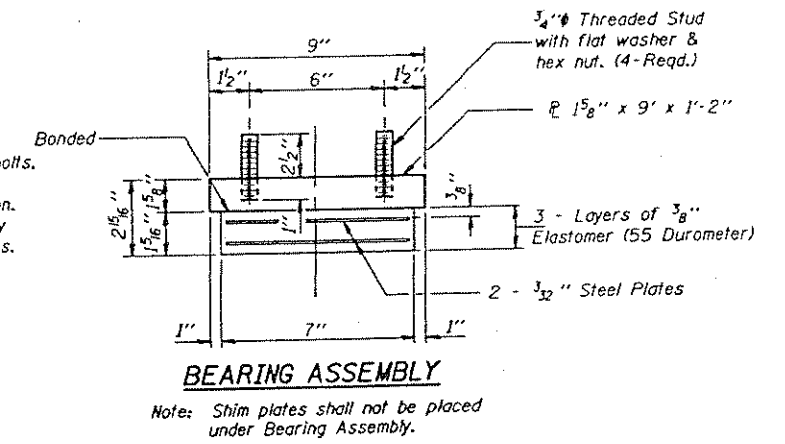
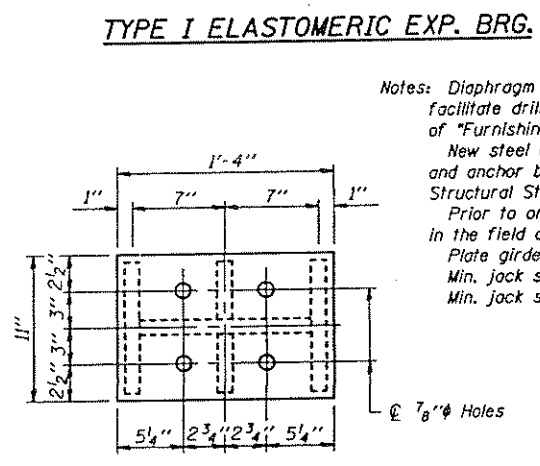
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	NO.	SHEET NO. 6
FALL 2843	0103BR	COOK	22	12	10 SHEETS
PROJECT NAME		DATE		DRAWN BY	



SHIM P. SCHEDULE
(Dimensions in inches)

Girder No.	Pier 14 (South) Dim. "A"
1	12 ³ / ₈
2	12 ³ / ₈
3	12 ³ / ₈
4	10 ³ / ₈
5	10 ³ / ₈
6	8 ³ / ₈
7	8 ³ / ₈
8	8 ³ / ₈
9	8 ³ / ₈
10	8 ³ / ₈



DESIGNED	CME	MAY 30	1997
CHECKED	VHV	EXAMINED	<i>Joseph E. Adams</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	DHerbert	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	CME VHV		

GIRDER REACTIONS

	PIER 14 (NORTH)	PIER 14 (SOUTH)
RP (K)	24.6	54.9
Rt (K)	36.9	42.6
Imp. (K)	11.1	9.9
R (Total) (K)	72.6	107.4

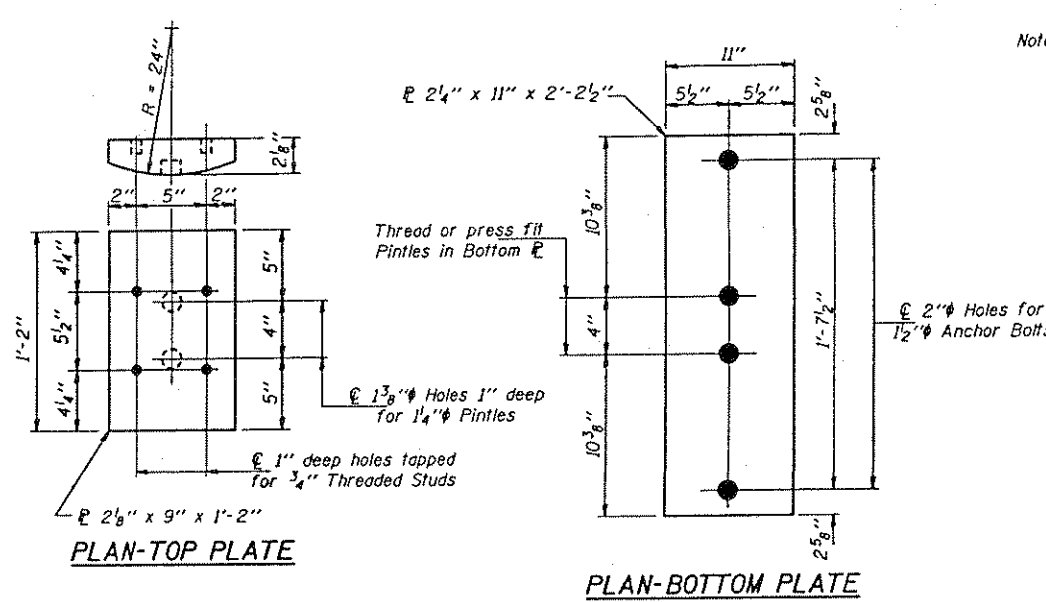
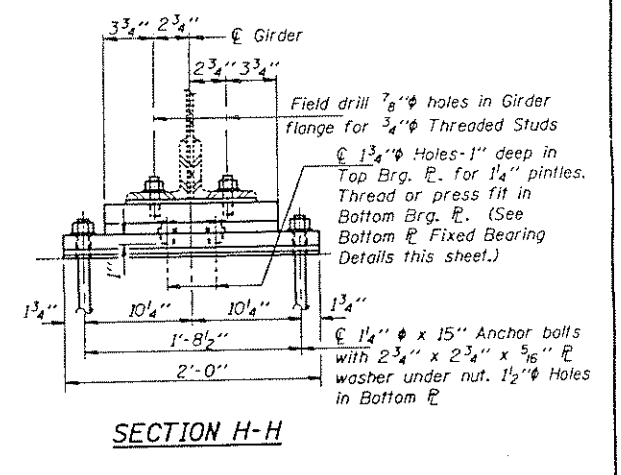
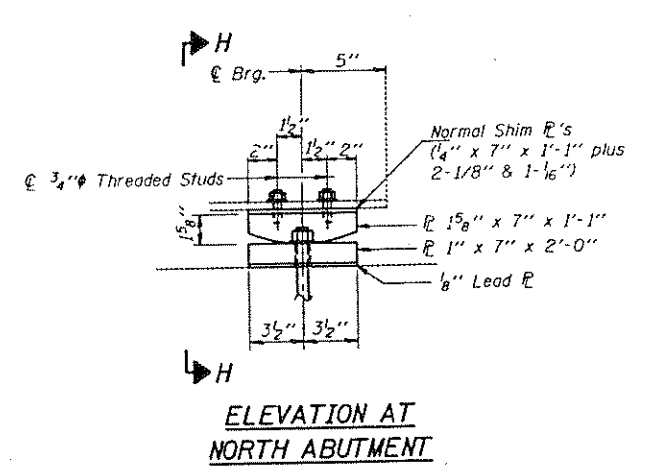
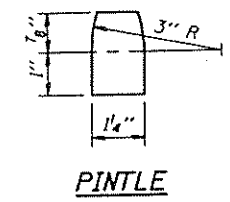
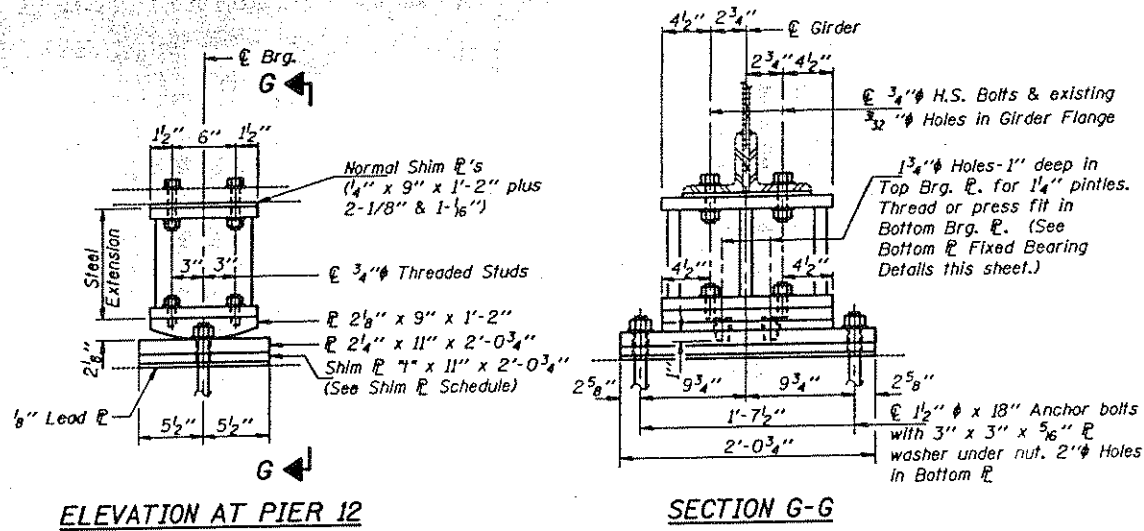
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	20

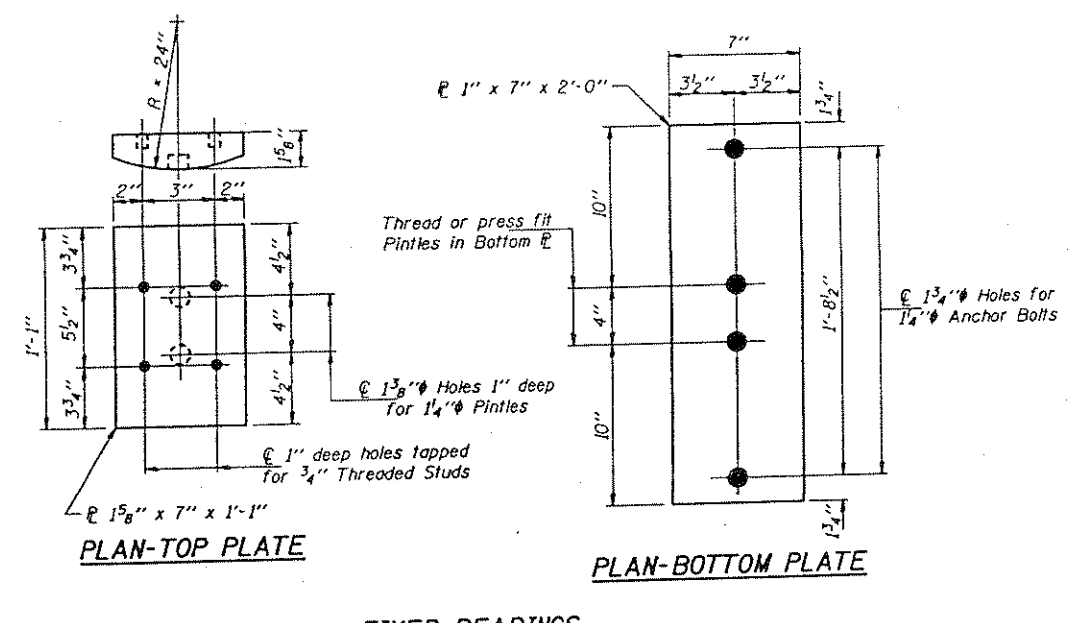
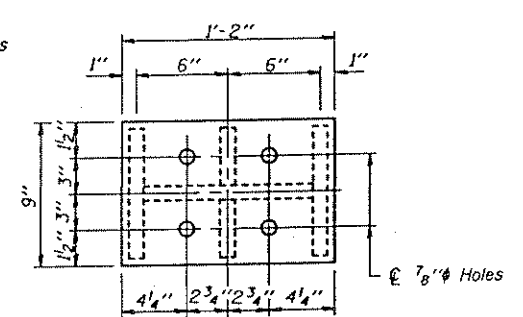
BEARING REPLACEMENT DETAILS
PIER 14
F.A.U. RTE 2843 SEC. 0103BR
COOK COUNTY
S.N. 016-0777

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	DRAWN	SHEETS	POST	SHEET NO. 7 10 SHEETS
FAU 2843	0103BR	COOK	22	13	
FILE NAME: 0103 BR 7	ALLIANCE	FEDERAL PROJECT			



Notes: Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
 New steel extensions, side retainers, shims, connection bolts, and anchor bolts are included in "Furnishing and Erecting Structural Steel". See sheet 8 for Anchor Bolt installation.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
 Plate girder web should be stiffened at jacking location.
 Min. jack size Pier 12 = 130 Tons
 Min. jack size North Abut. = 40 Tons



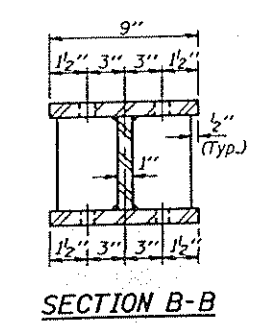
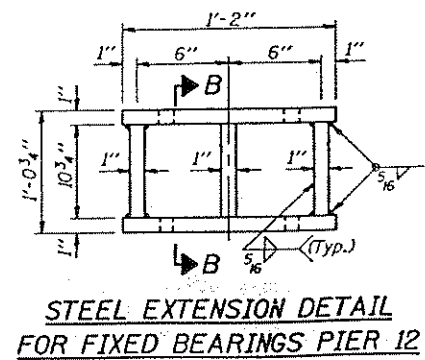
**FIXED BEARINGS
PIER 12**

**FIXED BEARINGS
NORTH ABUTMENT**

**SHIM P SCHEDULE
(P thickness in inches)**

Girder No.	Pier 12
1	0
2	0
3	0
4	0
5	3/8
6	5/8
7	0
8	3/4
9	0
10	0

DESIGNED	CME	MAY 30 1997
CHECKED	VHV	EXAMINED <i>John E. Hamm</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	DHerbert	PASSED
CHECKED	CME VHV	ENGINEER OF BRIDGES AND STRUCTURES



	PIER 12	N. ABUT.
RP (K)	135.6	24.6
Rt (K)	64.6	36.9
Imp. (K)	15.1	11.1
R (Total) (K)	215.3	72.6

GIRDER REACTIONS

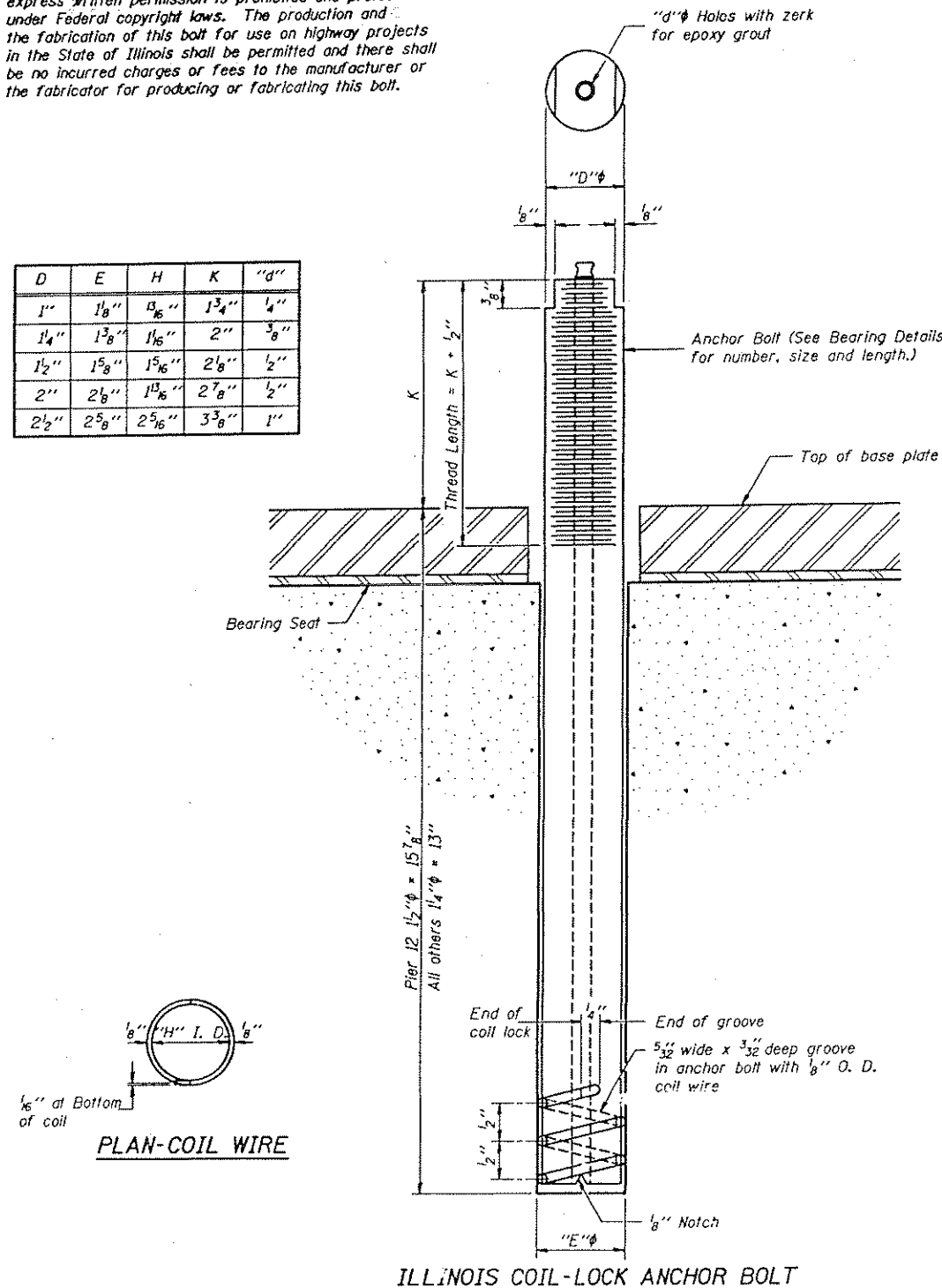
**BEARING REPLACEMENT DETAILS
PIER 12 & NORTH ABUTMENT
F.A.U. RTE 2843 SEC. 0103BR
COOK COUNTY
S.N. 016-0777**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
FAU 2843	0103BR	COOK	22	14
FILE NAME SHEET NO.		SCALE AND PROJECT		

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

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



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026, 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 C881, 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 in accordance with the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer conforming to ASTM A325.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

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

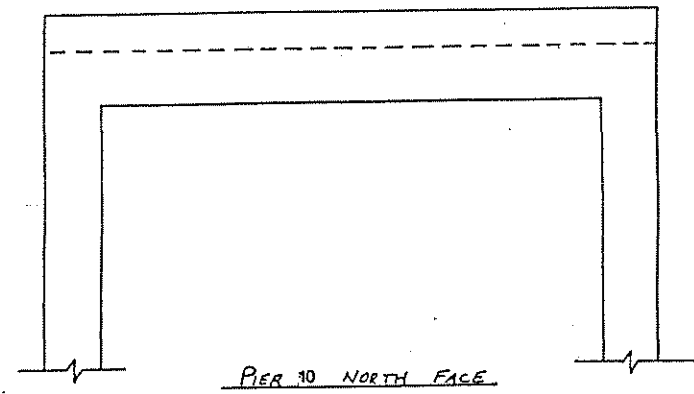
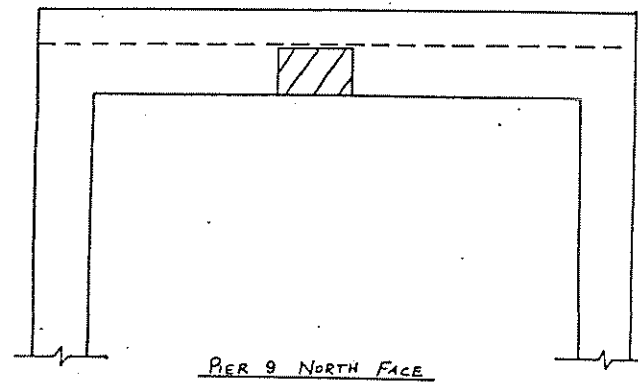
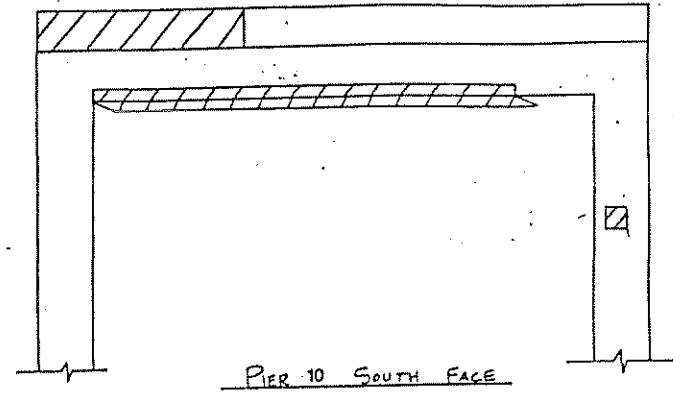
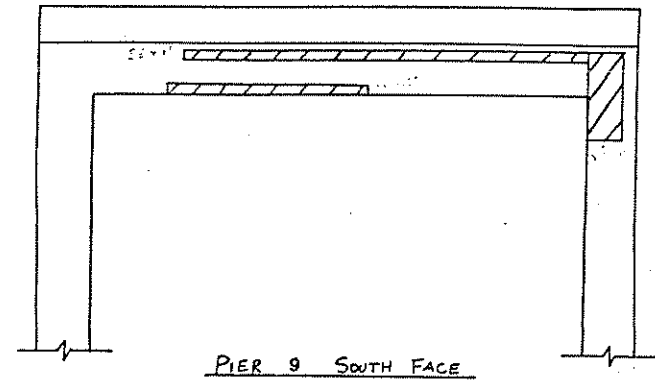
DESIGNED	CME	MAY 30	1997
CHECKED	VHV	EXAMINED	<i>Joseph E. Albrecht</i>
DRAWN	Dierbert	PASSED	ENGINEER OF STRUCTURAL SERVICES
CHECKED	CME VHV		ENGINEER OF BRIDGES AND STRUCTURES

ABB-1 7-1-91

ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.U. RTE 2843 SEC. 0103BR
COOK COUNTY
S.N. 016-0777

FAU. BTL.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3528 & 2842	1996-1227	COOK	22	15
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

Sheet No. 9
10 Sheets



EXACT LOCATIONS OF FORMED CONCRETE REPAIR DEPTH GREATER OR LESS THAN 5" HAS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REVISIONS	
NAME	DATE

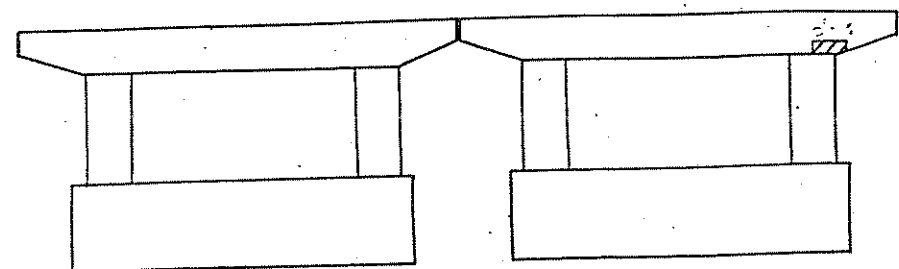
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTERN AVE OVER CAL SAG.
SN:016-0777
FORMED CONCRETE REPAIR

SCALE: VERT. _____
HORIZ. _____
DATE _____

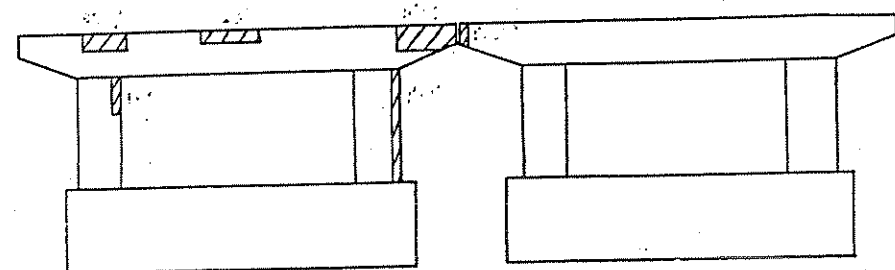
DRAWN BY _____
DESIGNED BY _____
CHECKED BY _____

F.A.M. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1578 & 2848	1995-1227	COOK	22	16
FED. ROAD DIST. NO. 7		ILLINOIS		
		FED. AID PROJECT		

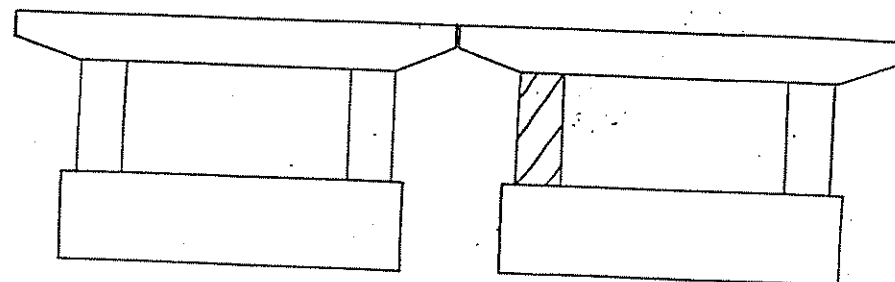
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10 sheets.



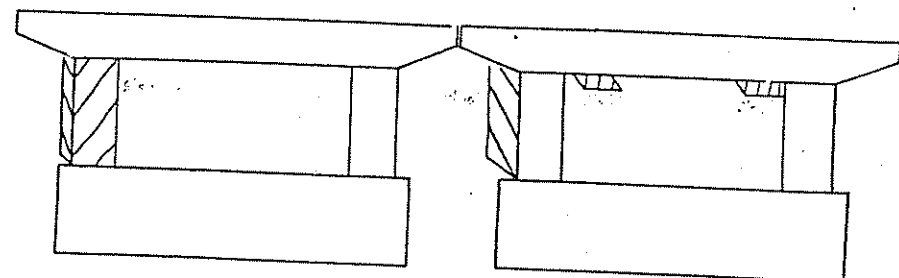
PIER 11 NORTH FACE



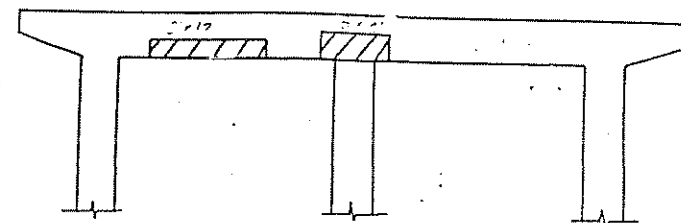
PIER 11 SOUTH FACE



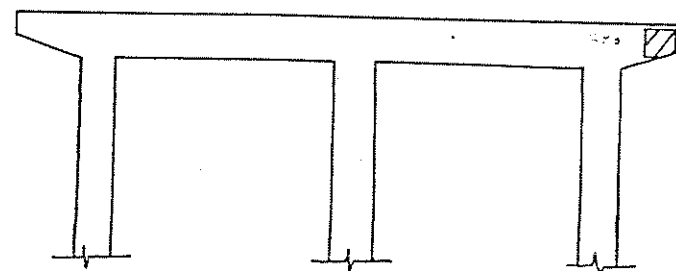
PIER 13 NORTH FACE



PIER 13 SOUTH FACE



PIER 14 NORTH FACE



PIER 14 SOUTH FACE

EXACT LOCATIONS OF FORMED CONCRETE REPAIR DEPTH GREATER OR LESS THAN 5" HAS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

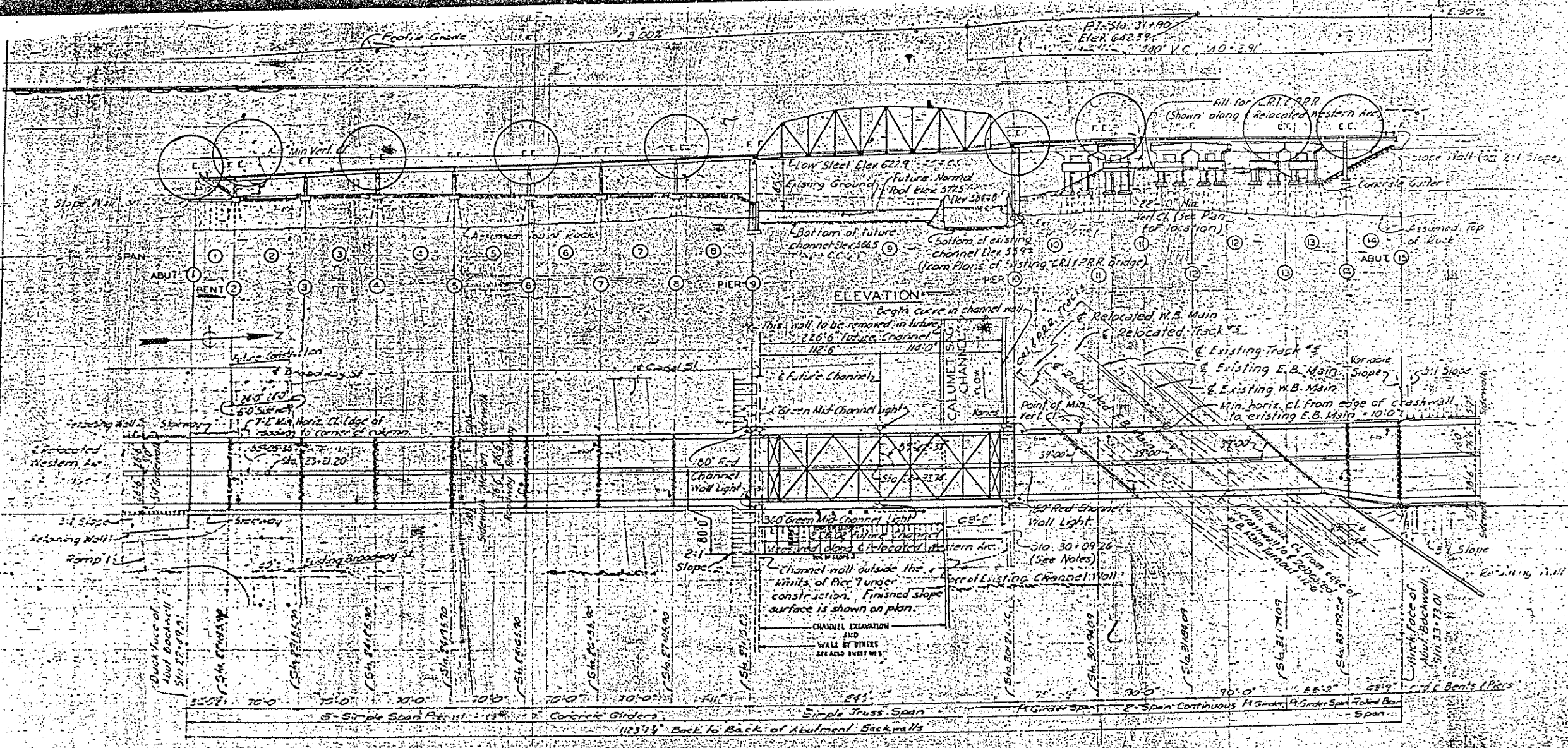
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

WESTERN AVE OVER
CAL. SAG.
SN:016-0777
FORMED CONCRETE REPAIR

SCALE: VERT. _____
HORIZ. _____
DATE _____

DRAWN BY _____
DESIGNED BY _____
CHECKED BY _____



PLAN

BEARING REPLACEMENT
OVER NORTH PIER 10 TO NORTH ABUTMENT

INDICATES STRUCTURAL STEEL
TO BE CLEANED AND PAINTED METHOD 1
(ALL STEEL 5 FT. FROM TRANSVERSE EXPANSION JOINTS)

FOR INFORMATION ONLY

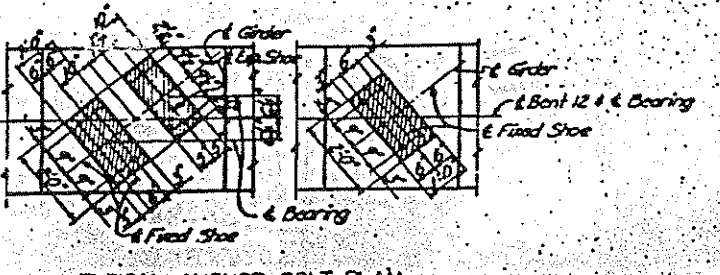
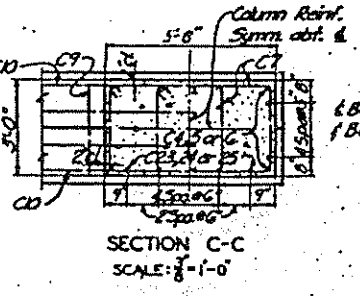
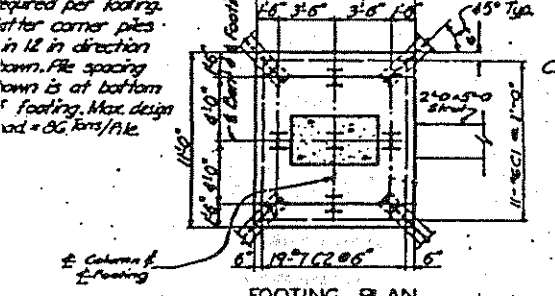
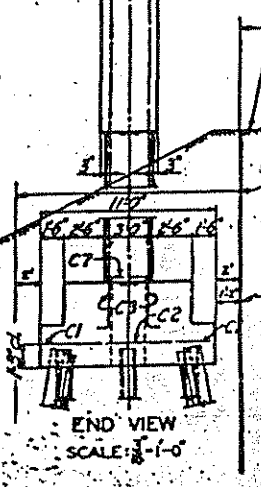
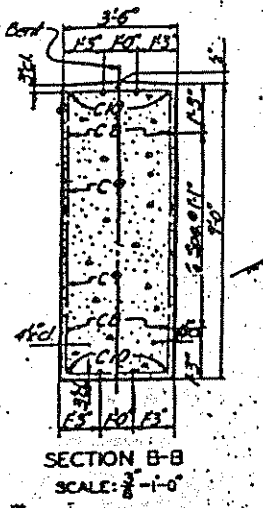
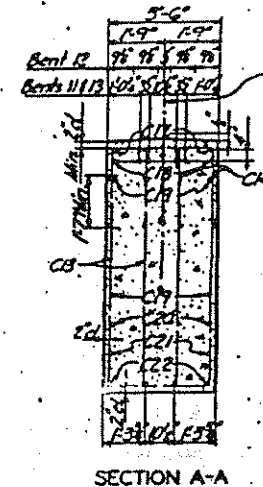
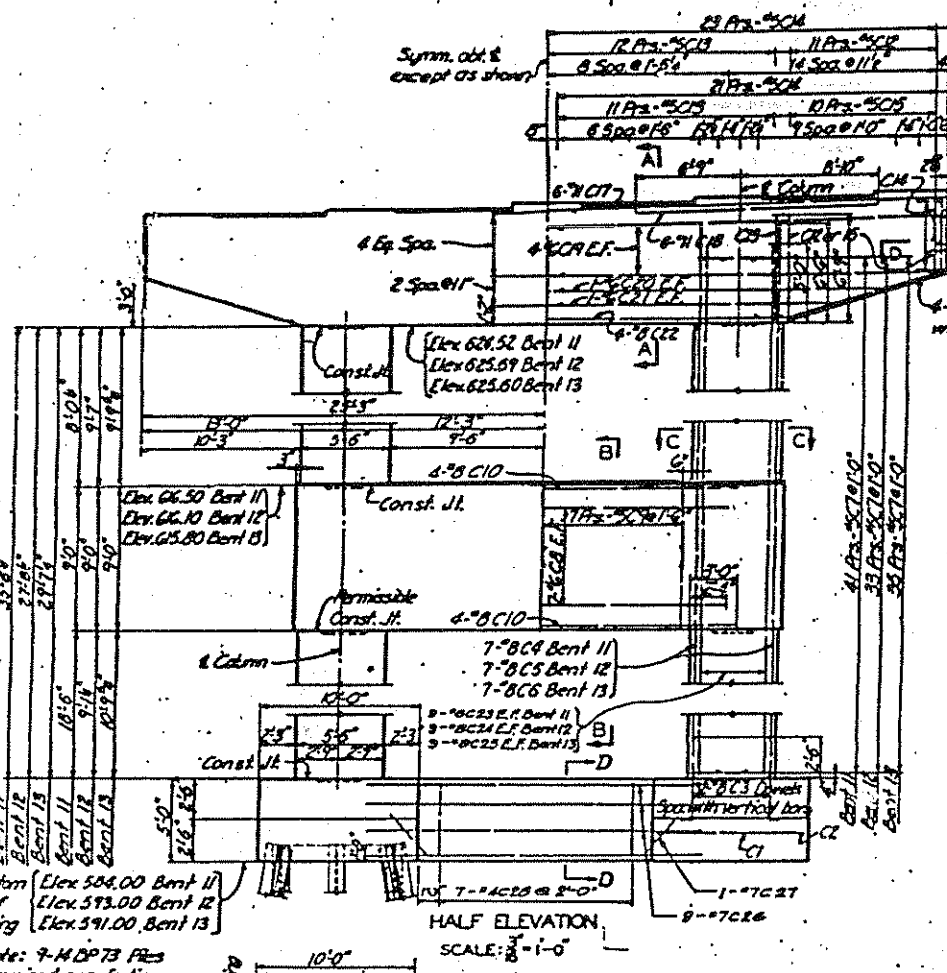
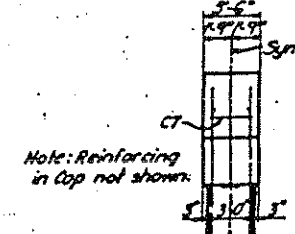
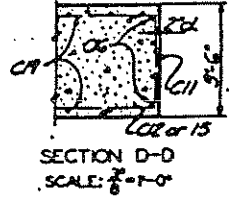
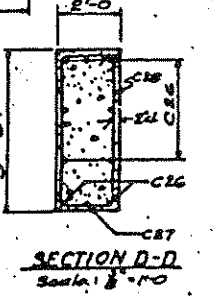
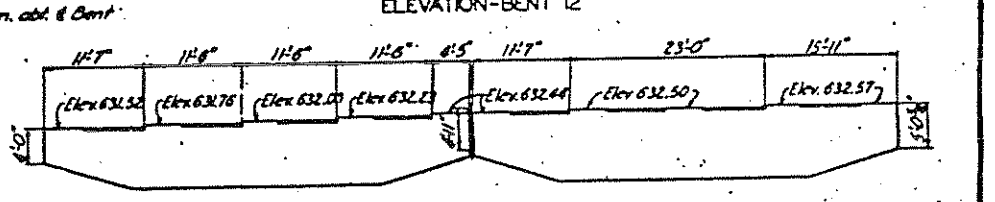
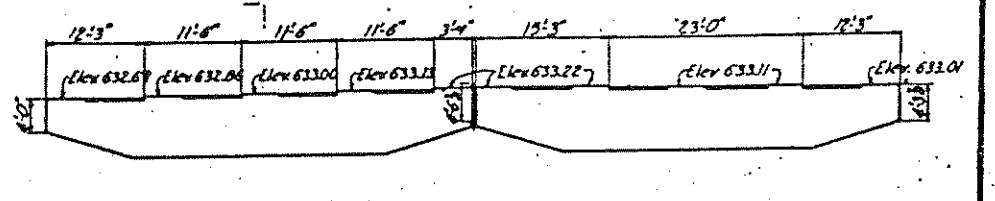
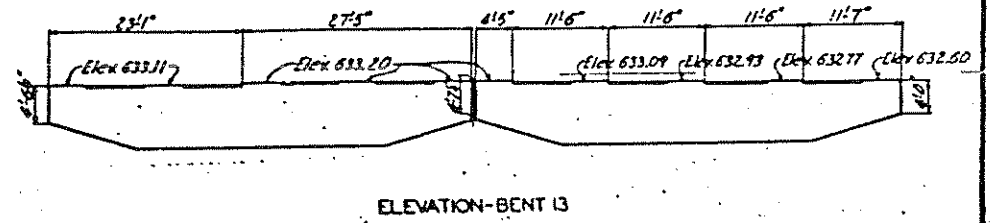
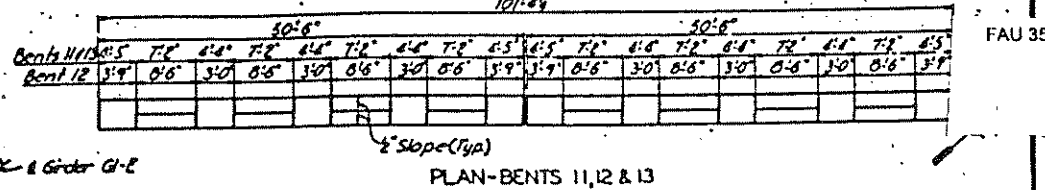
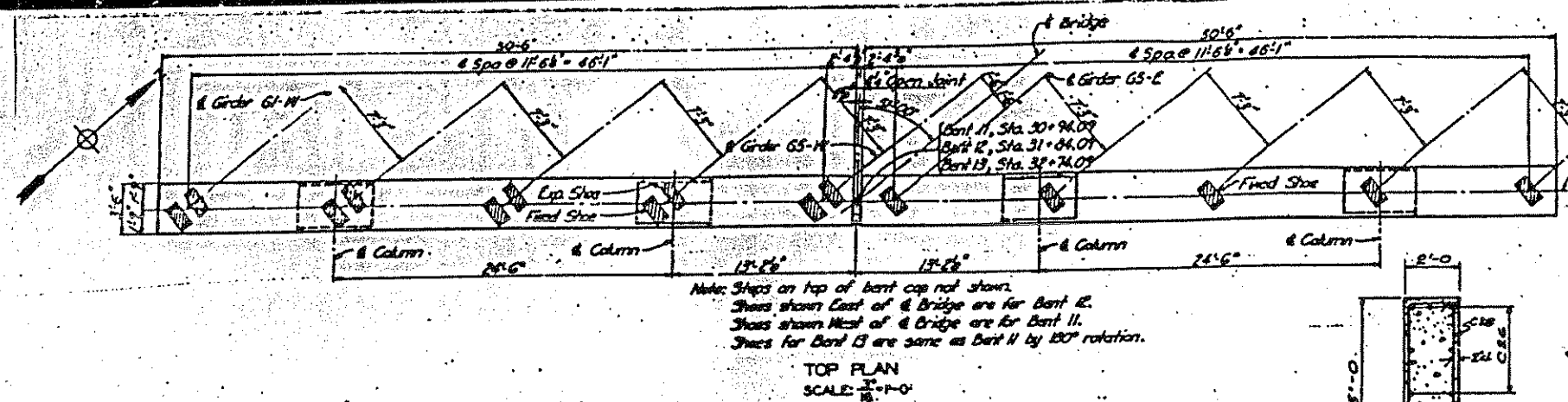
Horizontal clearance dimensions from
edge of roadway on Bents 1, 2 and 13
to adjacent railroad tracks, do not
show of 31' 0" 2 1/2'. Where no
clearance is in excess of 10' 0"
for existing tracks and relocated Track #5
and in excess of 12' 0" for relocated E.B.
Main.

See General Notes for construction
method which includes painting of
steel. Where no clearance is shown
clearance is in excess of 10' 0" for
existing tracks and relocated Track #5
and in excess of 12' 0" for relocated E.B.
Main.

PREPARED BY
SVERDRUP & PARCEL, INC.
ENGINEERS - ARCHITECTS
ST. LOUIS, MISSOURI

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS		SEYMOUR SIMON Principal Designer of Construction		WILLIAM J. WORTHEN Chief Draftsman of Construction	
GENERAL PLAN AND ELEVATION WESTERN AVENUE RELOCATION OVER CALUMET SAG CHANNEL					
DATE	BY	DESCRIPTION			
11.16.66	MS	REVISED DETAIL OF PLAN OF CHANNEL			
COMPUTED					
DRAWN					
CHECKED					
APPROVED					
SECTION	55A-0103-M.F.	SCALE	1"=50'	APPROVED	
DATE	11/16/66	BY	MS	SCALE	1"=50'
NO.	2	OF	4		

18/22



CAP DETAILS NOT TO SCALE
Note: Views shown are looking ahead on stationing.

NOTES

- See Sheet 6 for pile splice.
- See Sheet 21 for Anchor Bolts. Anchor bolts shall be cast in place.
- See Specifications for backfilling caissons at Piers 11, 12 and 13 with Stabilized Sand Embankment.

FOR INFORMATION ONLY

DEPARTMENT OF HIGHWAYS
COOK COUNTY, ILLINOIS

COMPUTED BY: *F. Derfner*
DRAWN BY: *W.J. Bolker*
CHECKED BY: *R.P. Beck*
APPROVED BY: *W.J. Bolker*

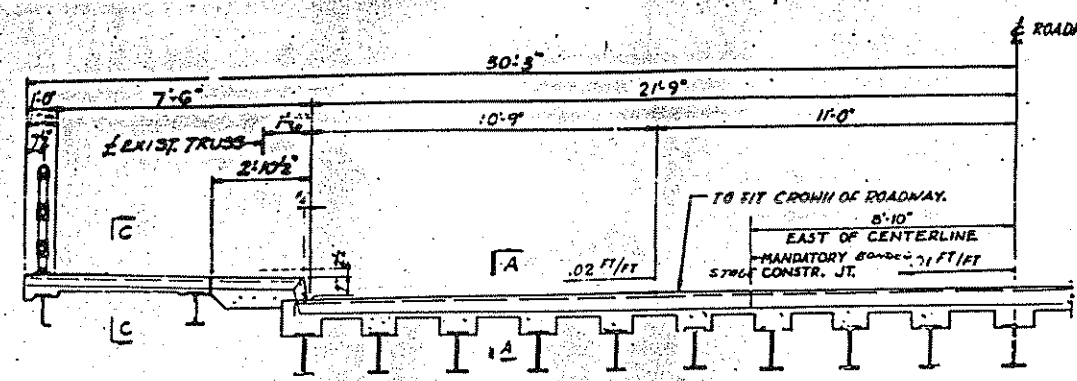
PROJECT: BENTS 11, 12 AND 13
WESTERN AVENUE RELOCATION
OVER
CALUMET SAG CHANNEL

DATE	BY	DESCRIPTION
8-17-91	R.P. Beck	Revised Bent 12 and 13

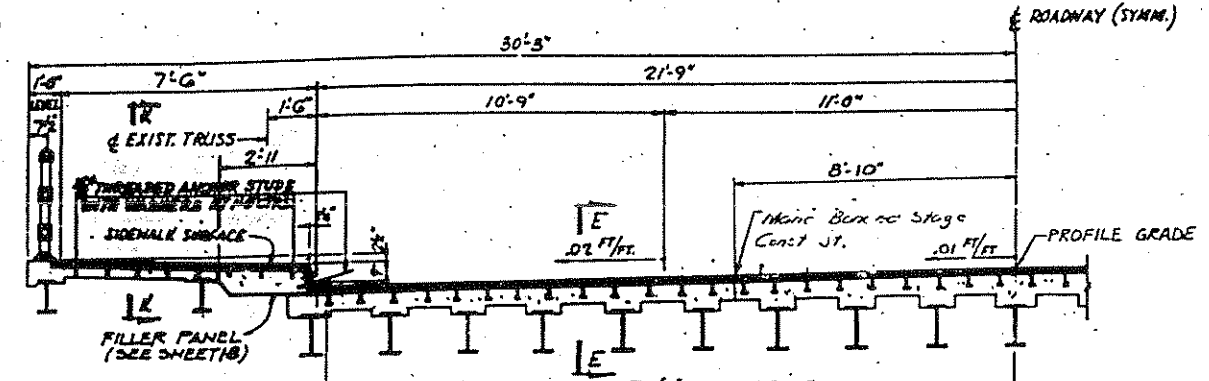
SCALE: AS SHOWN
SHEET: 11 OF 44

Note: Do not scale this drawing. Follow dimensions

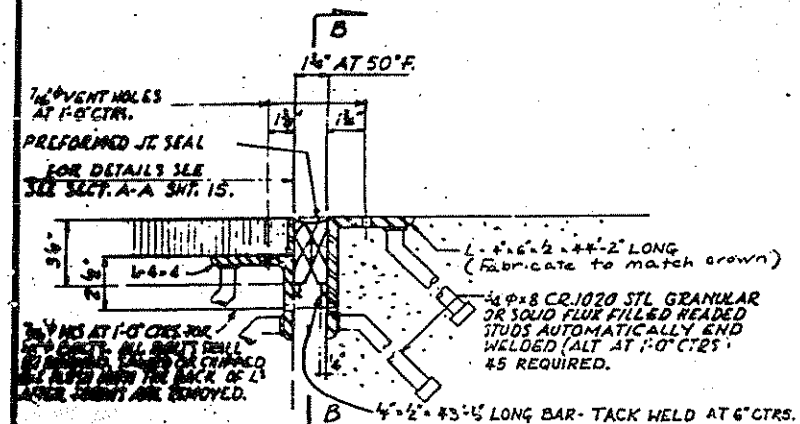
+	±	COOK	30	40
FAU 3578, FAU 2843				
1996-1221				
COOK				
21/22				



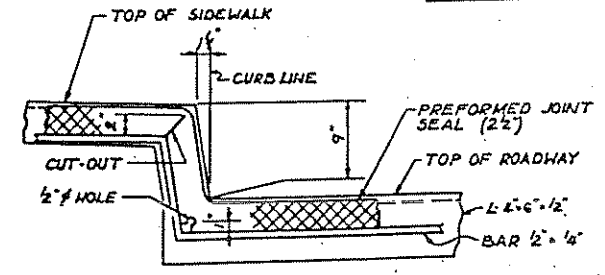
DECK CROSS SECTION - AT PIER 3
(LOOKING NORTH)



DECK CROSS SECTION - AT PIER 2
(LOOKING SOUTH)

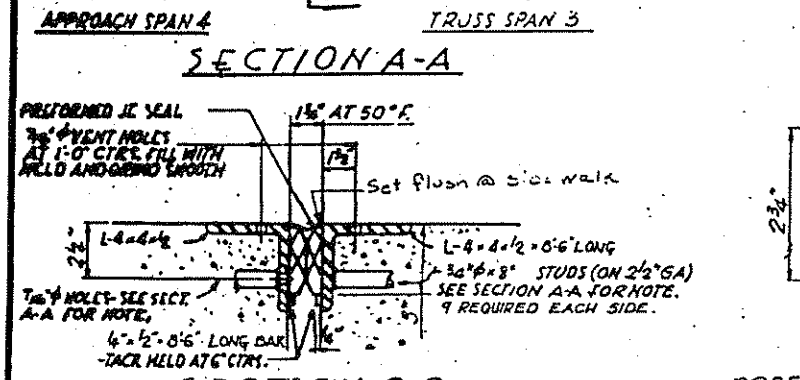


SECTION A-A

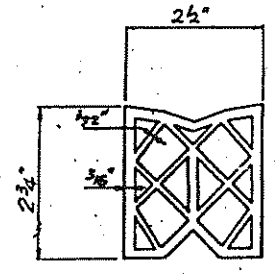


SECTION B-B (AT CURB)

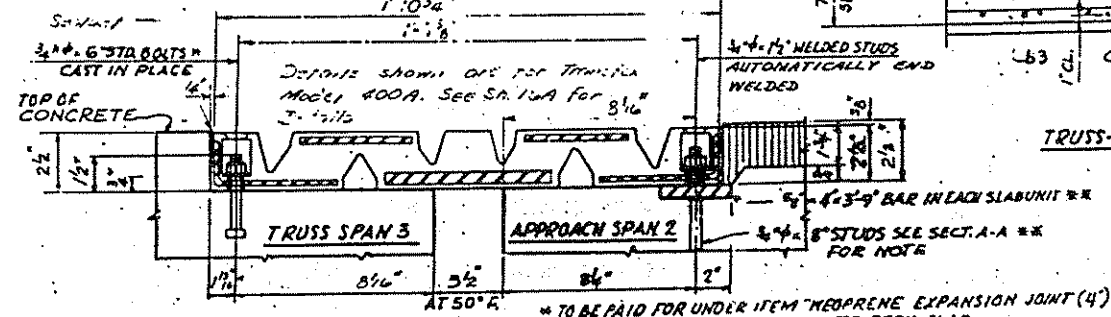
NOTE:
ANCHOR STUDS REQUIRE A CLIPPED WASHER,
LOCKWASHER AND HEX NUT.



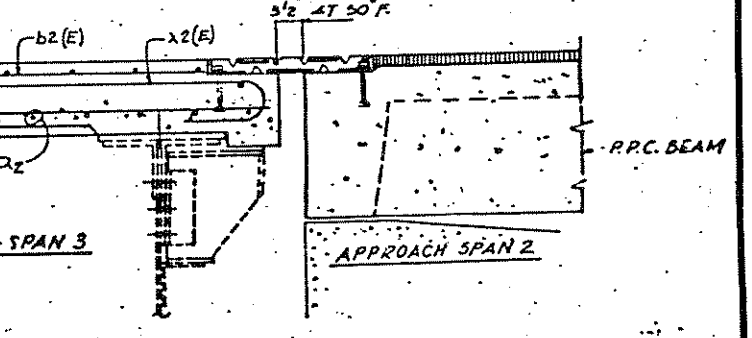
SECTION C-C



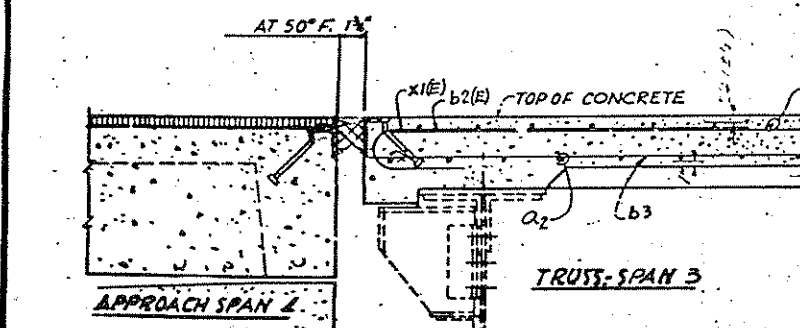
PREFORMED JOINT SEAL (2 1/2")



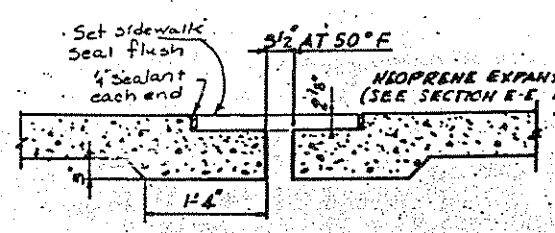
SECTION E-E



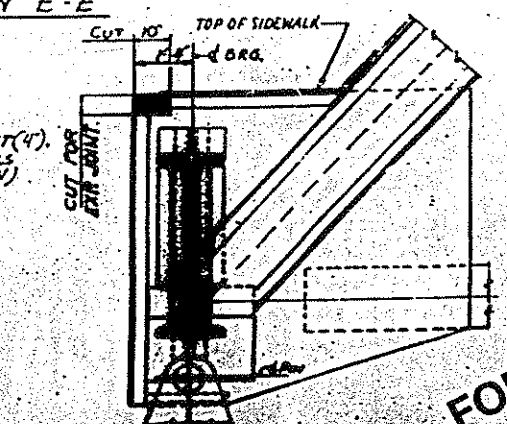
SECTION F-F (SEE SHT. 17)



SECTION H-H (SEE SHT. 17)



SECTION I-I



CUT EXISTING TRUSS AT NORTH END

NOTE: ALL ANGLES (BARS TO BE INCLUDED IN ITEM FURNISHING AND ERECTING STRUCTURAL STEEL, unless otherwise noted) JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH ARTICLE 503.07 (C) OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

FOR INFORMATION ONLY

EXPANSION GUARDS
ENGINEERED OVER
CHANNEL - SEE CHANNEL
FAURTE 3578 - FULL DRAWING
1996-1221

ALFRED BENECH & COMPANY
CONSULTING ENGINEERS
233 N. MICHIGAN AVE., CHICAGO, ILLINOIS

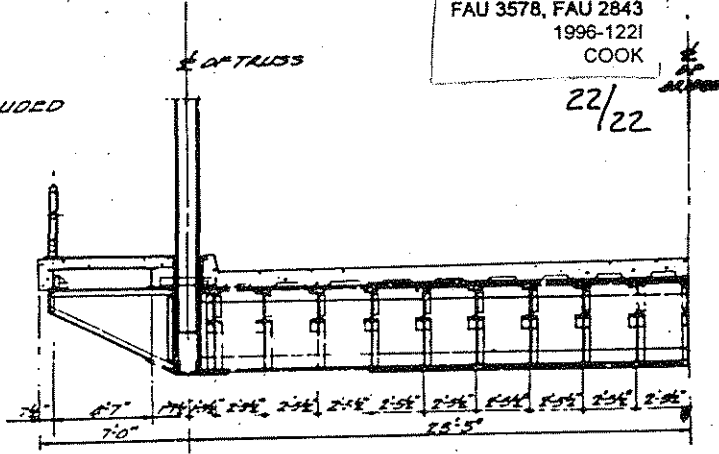
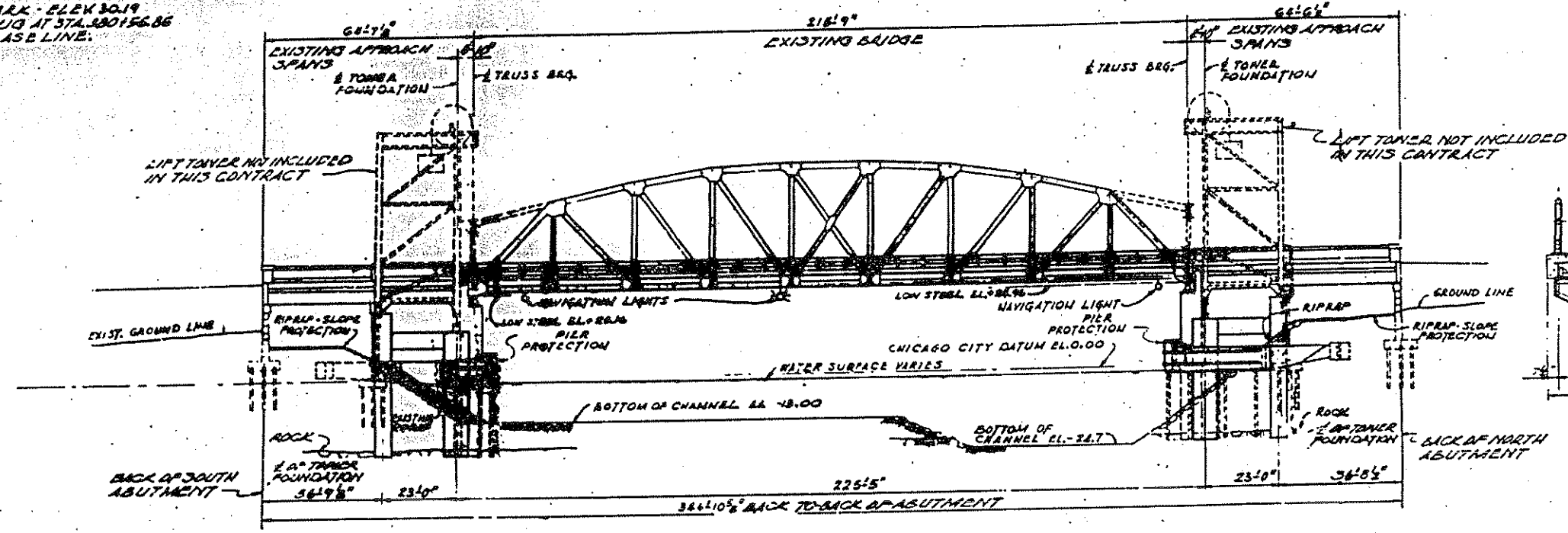
NO.	DATE	BY	TOTAL	REVISION
1		COOK		

FAU. RTE. 3578 & 1977-243-BR.

FAU 3578, FAU 2843
1996-1221
COOK

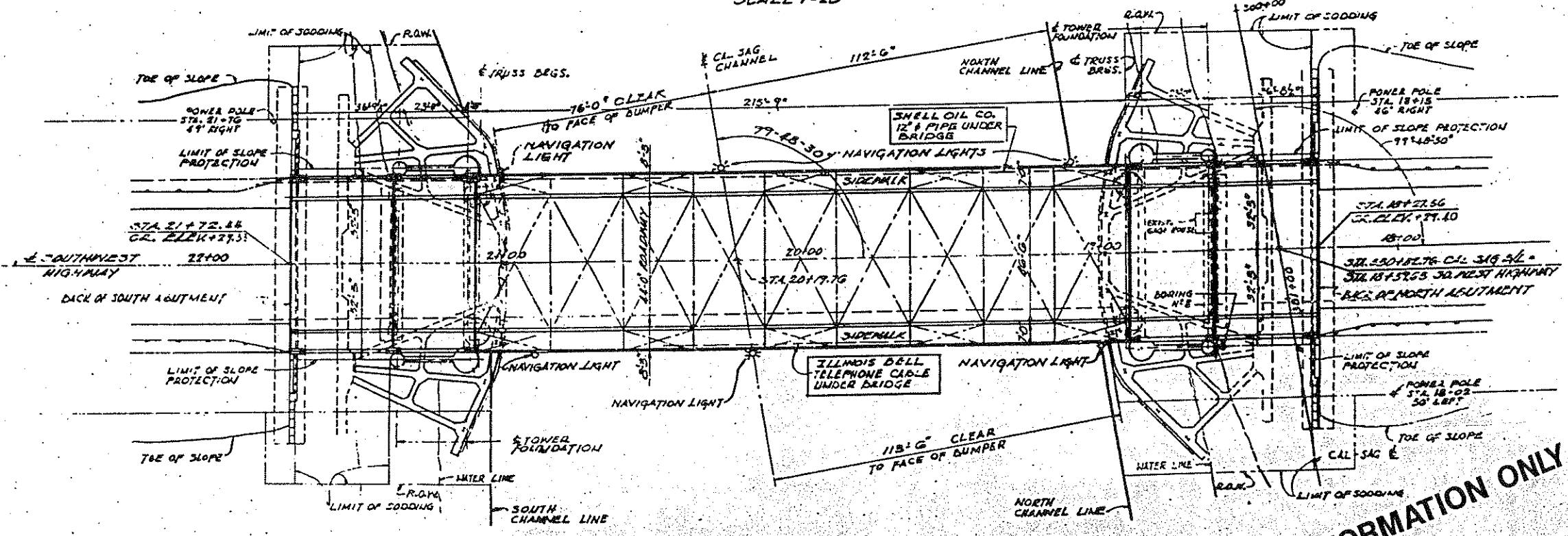
22/22

BENCHMARK - ELEV 30.19
BRASS PLUG AT STA. 20156.86
CAL-SAG BASE LINE.



TYPICAL CROSS SECTION
SCALE 1/4" = 1'-0"

ELEVATION
SCALE 1" = 20'



PLAN
SCALE 1" = 20'



NOTE!
STA. 20+00 SOUTHWEST HIGHWAY SURVEY
STA. 28+28 OF THE ORIGINAL BRIDGE PLANS.
ELEVATIONS SHOWN REFER TO CHICAGO
CITY DATUM (C.C.D.) WHICH IS 576.18 FEET
ABOVE MEAN WATER LEVEL AT FATHER
POINT, QUEBEC, INTERNATIONAL GREAT
LAKES DATUM (I.G.L.D.) (1985).
THE INTERSECTION OF THE SOUTHWEST
HIGHWAY WITH THE CAL SAG & WILL BE THE
WORKING POINT FOR THIS PROJECT. ALL STATIONING
ALONG SOUTHWEST HIGHWAY WILL BE BASED
ON THE STATION EQUATION AT THIS POINT.

FOR INFORMATION ONLY

GENERAL PLAN
EXISTING CONDITIONS
SOUTHWEST HIGHWAY OVER
CALUMET - SAG CHANNEL
FAU. RTE. 3578 (ILL. ROUTE 7)
SECTION 1977-243-BR.
COOK COUNTY
STATION 20+19.76

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS

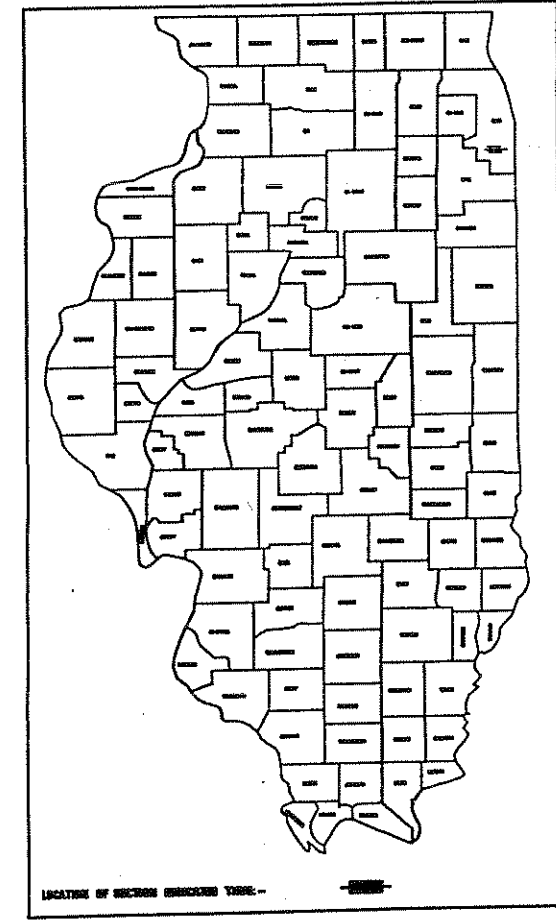
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

HAJ RTE	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
2843	0103BR-90	COOK	9	1

D-61-084-90



INDEX OF SHEETS

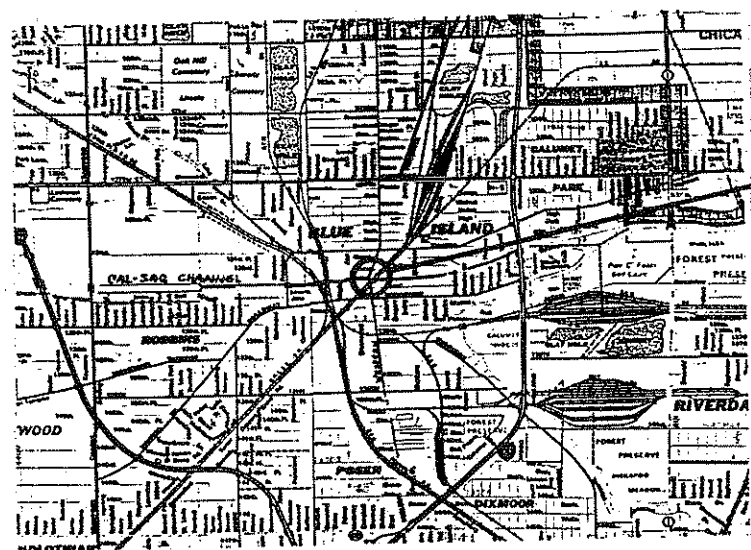
1. TITLE SHEET
LOCATION MAP
INDEX OF SHEETS
LIST OF APPLICABLE STATE STANDARDS
2. SUMMARY OF QUANTITIES
SCOPE OF WORK
3. GENERAL PLAN AND ELEVATION
4. TYPICAL SECTIONS
STAGE CONSTRUCTION
LOCATION SKETCHES-DECK PATCHING
5. SIDEWALK, HANDRAIL AND
MEDIAN REPAIR DETAILS
6. EXPANSION AND FIXED
JOINT RECONSTRUCTION
7. PREFORMED JOINT SEAL DETAILS
TRAFFIC CONTROL AND PROTECTION FOR
SIDEROADS, INTERSECTIONS, AND DRIVEWAYS
8. EXISTING HANDRAIL DETAILS
9. BAR SPLICER (COUPLER) DETAILS

SCALES
PLAN
PROFILE
GRADE

F.A.U. RTE.2843 (WESTERN AVE.)
SECTION 0103BR-90
COOK COUNTY
STATE BRIDGE NO. 016-0777
C-91-084-90

STATE STANDARDS

2230-15	2300-3
2298-7	2316-12
2299-10	2383-1
2307-6	U-2
2315-7	U-3



LOCATION OF WORK
WESTERN AVE./CAL. SAG. CHANNEL
BR. NO. 016-0777

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

DESIGNED BY James H. Stiles

EXAMINED BY Ray D. Gault

IN CHARGE [Signature]

APPROVED [Signature]

CONTRACT NO. 80681

JULIE TOLL FREE PHONE 1-800-892-0123

REV. 5-2-90
REEL 0-236

14-00000 10/19/87
 27-00000 10/19/87
 10/19/87
 VI-111
 14-00000 10/19/87
 27-00000 10/19/87
 10/19/87
 VI-111
 14-00000 10/19/87
 27-00000 10/19/87
 10/19/87
 VI-111

FAN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	0103BR-90	COOK	9	2
STA.		TO STA.		
FILE NO. DIST. NO.	DATE	FILE NO. PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
40600850	BITUMINOUS CONCRETE SURFACE COURSE, MIX D, CLASS I TYPE 2	TON	80
50102400	CONCRETE REMOVAL	CU. YD.	13.3
50300110	PREFORMED JOINT SEAL 1 3/4"	LIN. FT.	212
50300120	PREFORMED JOINT SEAL 2 1/2	LIN. FT.	141
50400300	CLASS X CONCRETE	CU. YD.	16.5
50700400	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	11,020
51200200	REINFORCEMENT BARS, EPOXY COATED	LBS.	2,110
61700046	BITUMINOUS SURFACE REMOVAL (COLD MILLING) 1 1/2"	SQ. YD.	290
61700600	SIDEWALK REMOVAL	SQ. FT.	325
61700910	BITUMINOUS CONCRETE REMOVAL (DECK)	SQ. YD.	460
62400300	PORTLAND CEMENT CONCRETE SIDEWALK 6"	SQ. FT.	325
62801300	FURNISHING AND INSTALLING RAIL ELEMENT PLATES	EACH	1
64700220	PAVEMENT MARKING TAPE, TYPE III	LIN. FT.	3600
64801700	TRAFFIC CONTROL AND PROTECTION	L. SUM	1
65000100	MOBILIZATION	L. SUM	1
65600400	INSTALL AND REMOVE TEMPORARY CONCRETE BARRIER	UNIT	11
* T5020200	PAINT PAVEMENT MARKING-LINE 1/4"	LIN. FT.	6040
Z0007400	BRIDGE SIDEWALK REPAIR(PARTIAL DEPTH)	SQ. FT.	60
Z0012750	CONCRETE MEDIAN REPAIR	SQ. FT.	380
Z0016200	DECK SLAB REPAIR(PARTIAL)	SQ. YD.	135
Z0020400	EPOXY MORTAR REPAIR	CU. FT.	2
Z0025800	FURNISHING AND INSTALLING SINGLE END SECTION	EACH	1
Z0037500	PAVEMENT MARKING REMOVAL	SQ. FT.	300
Z0026800	FURNISHING AND SETTING STEEL POSTS (MODIFIED)	EACH	1
Z0050100	REMOVE AND RE-ERECT EXISTING HANDRAIL	LIN. FT.	73
Z0077500	WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	460
X0300666	REPAIR ALUMINUM HANDRAIL	L. SUM	1

* SPECIALTY ITEM

SCOPE OF WORK

1. BITUMINOUS CONCRETE SURFACE REMOVAL FROM SOUTH APPROACH SLAB AND PORTIONS OF THE BRIDGE DECK.
2. DECK SLAB REPAIRS (PARTIAL), EXPANSION AND FIXED JOINT RECONSTRUCTION, MEDIAN AND SIDEWALK REPAIR.
3. BRIDGE HANDRAIL REPAIRS, STEEL PLATE BEAM GUARDRAIL REPAIRS, APPROACH SIDEWALK REMOVAL AND REPLACEMENT.
4. WATERPROOFING MEMBRANE SYSTEM ON PORTIONS OF THE BRIDGE DECK, BITUMINOUS CONCRETE SURFACE COURSE ON THE SOUTH APPROACH AND PORTIONS OF THE BRIDGE DECK.
5. PAINT PAVEMENT MARKING-LINE.

ALL WORK SHALL BE COMPLETED UTILIZING TWO STAGES OF CONSTRUCTION AND TRAFFIC CONTROL AND PROTECTION STANDARD 2316.

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 WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE AND VINYL PAINT SYSTEM. THE COLOR OF THE VINYL FINISH COATS SHALL BE MONSELL NO. 2.5YR 3/4 REDDISH BROWN.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-31, M-42, M-53 GRADE 60.

SUMMARY OF QUANTITIES AND SCOPE OF WORK

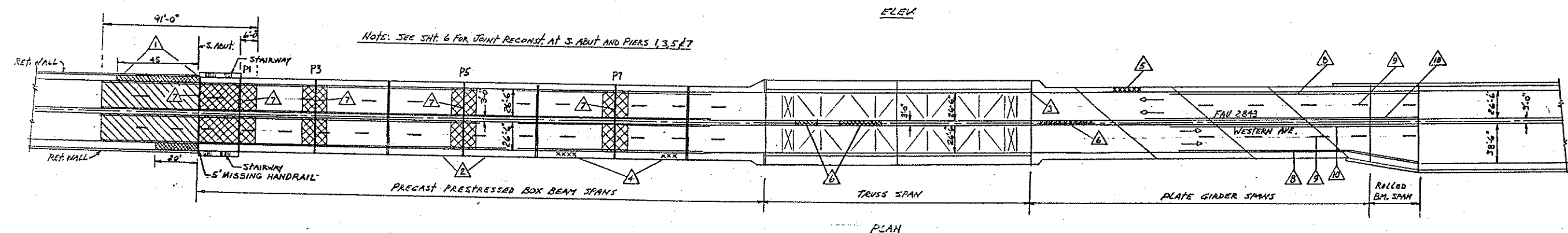
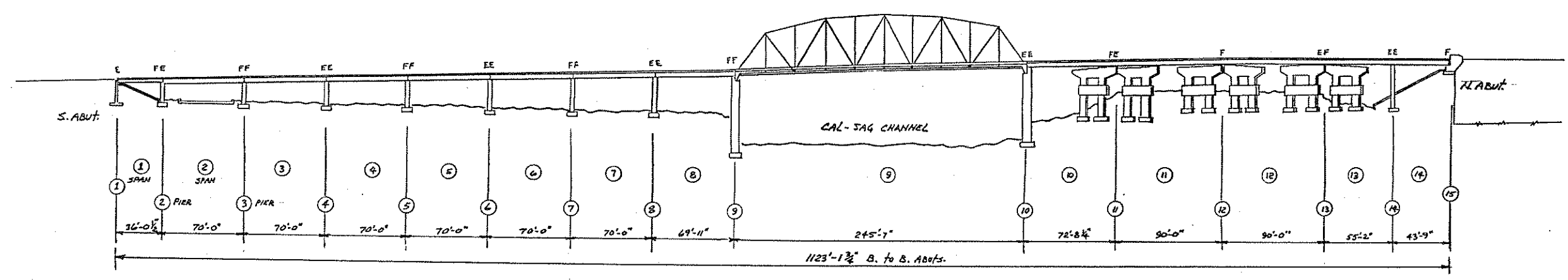
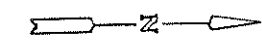
ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAU 2843 (WESTERN AVE.)
 SECTION 0103BR-90
 COOK COUNTY
 WESTERN AVE./CAL-SAG CHANNEL
 BR. NO. 816-8777

SCALE: VERT.
 HORIZ.
 DATE: 01-MAR-90

DRAWN BY: JS
 CHECKED BY:

REV. 4-4-90

ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
FAU 2843	0103BR-90	COOK	9	3



LEGEND

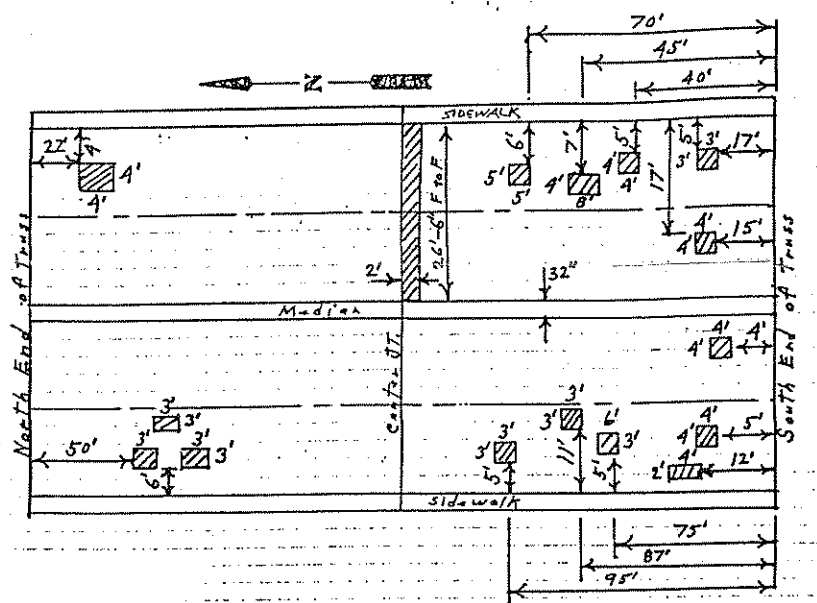
- Bifuminous SURFACE REMOVAL (COLD MILL) 1 1/2" AND 1 1/2" Bif. CONG. SURF. CRSE. MIX. D, CL I, T2
- Bifuminous CONCRETE REMOVAL (DECK), WATERPROOFING MEMBRANE SYSTEM AND Bif. CONG. SURF. CRSE. MIX. D, CL I, T2 (3" MAX)
- SIDEWALK REMOVAL AND P.C. CONCRETE SIDEWALK 6" - TOTAL 325 SQ. FT. SEE SHT. 5
- REMOVE AND RE-ERECT EXIST. HANDRAIL - 43 L.F. REPAIR ALUMINUM HANDRAIL & EPOXY MORTAR REPAIR. SEE SHT. 5
- REMOVE AND RE-ERECT EXIST. HANDRAIL - 30 L.F. REPAIR ALUMINUM HANDRAIL - 1-L.SUM. SEE SHT. 5. REPL. OF 5' MISSING HANDRAIL INCLUDED IN THE L.SUM. PAYMENT. REPAIR ALUMINUM HANDRAIL.
- GUARD RAIL DAMAGE: (SEE SPEC. PROJ.) FURN. & INSTAL. RAIL ELEMENT PLATE - 1 EACH FURN. & INSTAL. SINGLE END SECTION - 1 EACH FURN. & SET STEEL POST, MODIFIED - 1 EACH
- BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH) - TOTAL 15 S.F.F. BOX BEAM SPANS 6 & 7, E. SIDE SEE SHT. 5
- BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH) - 45 SQ. FT. PLATE GIRDER SPAN 11, W. SIDE SEE SHT. 5
- CONCRETE MEDIAN REPAIR - TRUSS SPAN 9 - 280 SQ. FT. PLATE GIRDER SPAN 10 - 100 SQ. FT. SEE SHT. 5
- EXPANSION/FIXED JOINT RECONSTRUCTION. SEE SHT. 6
- DECK SLAB REPAIRS (PARTIAL) (SEE BSP 5) PLATE GIRDER SPANS - 75 SQ. YDS. TRUSS SPAN - 60 SQ. YDS. TOTAL = 135 SQ. YDS. NOTE: SEE SHT. 4 FOR PATCH LOCATIONS
- PAINT PAVE. MARK-LINE 4"
- RIGHT EDGE LINE, SOLID WHITE
- LANE LINE, 10' LINE 30' SPACE, SKIP-DASH, WHITE
- LEFT EDGE LINE, SOLID YELLOW

NOTE: PAINT PAVE. MARK-LINE 4" IS TYPICAL & EXTENDS FROM A POINT 250' S. OF THE S. ABUT. NORTHERLY TO THE N. ABUT.

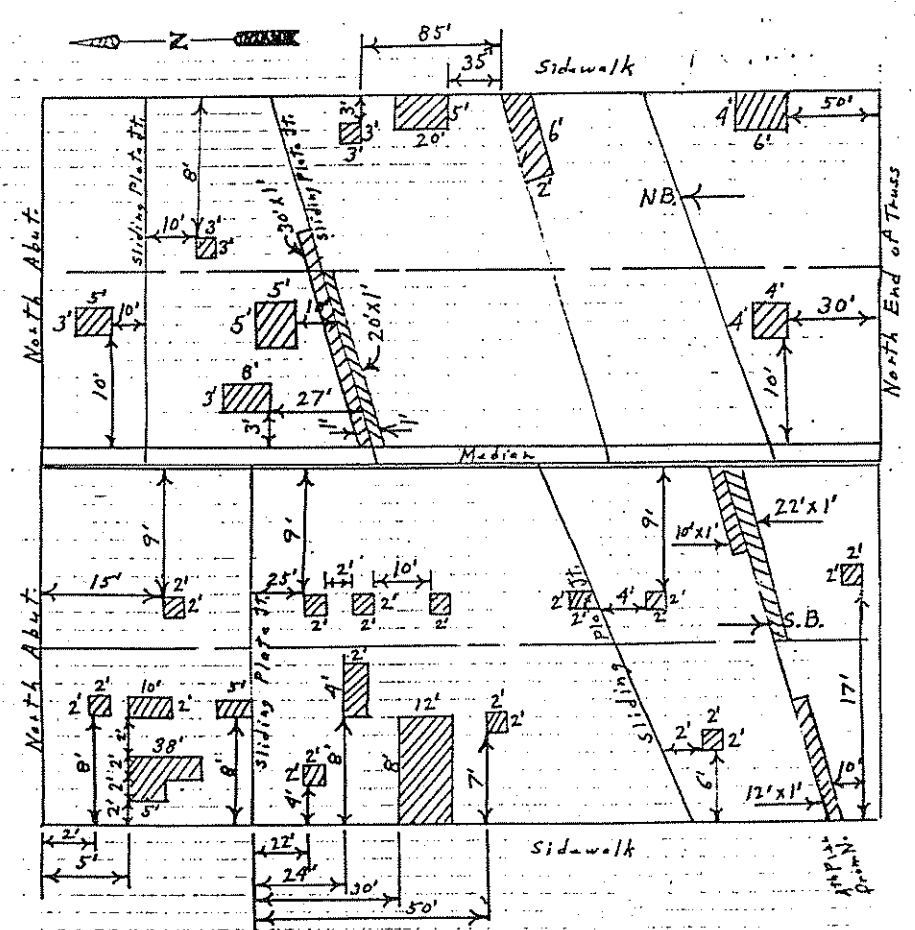
GENERAL PLAN AND ELEVATION

FAU 2843 (WESTERN AVE.)
SECTION 0103BR-90
COOK CO.
WESTERN AVE./CAL-SAG CHANNEL
BR. NO. 016-0777

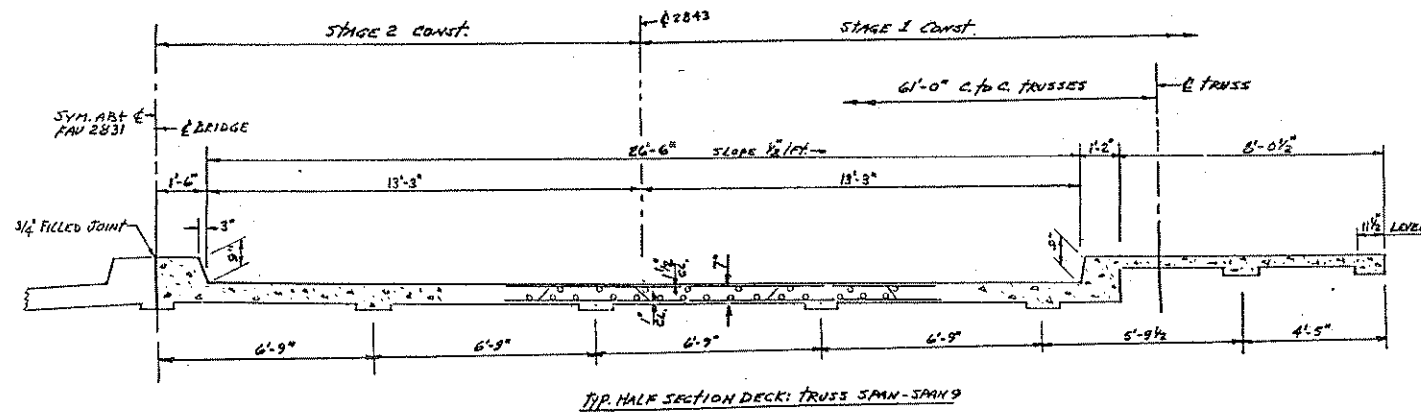
ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
FAU 2843	0103BR-90	COOK	9	4



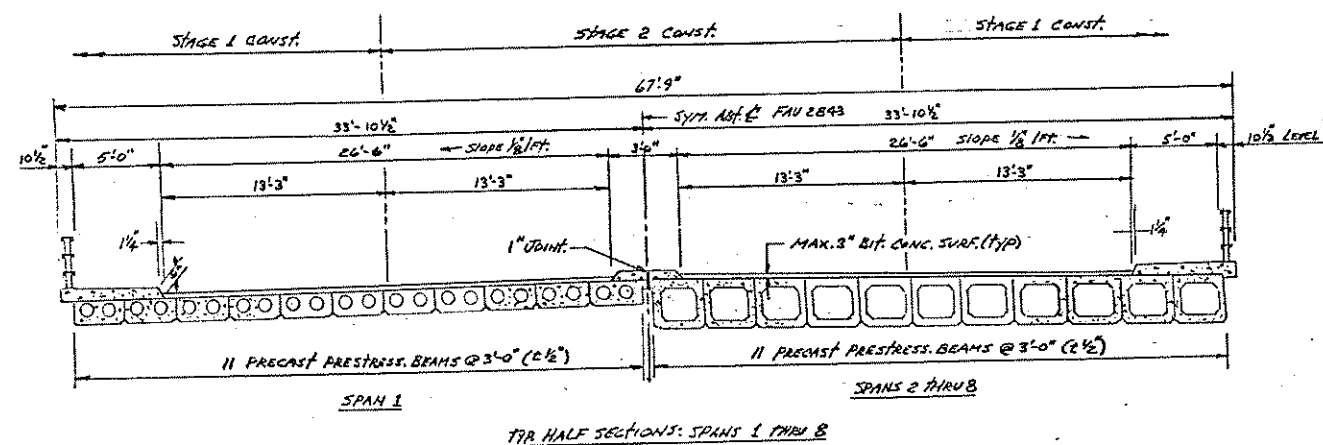
LOCATION SKETCH-DECK SLAB REPAIRS (PARTIAL)-60 S.Y. TRUSS SPAN 9



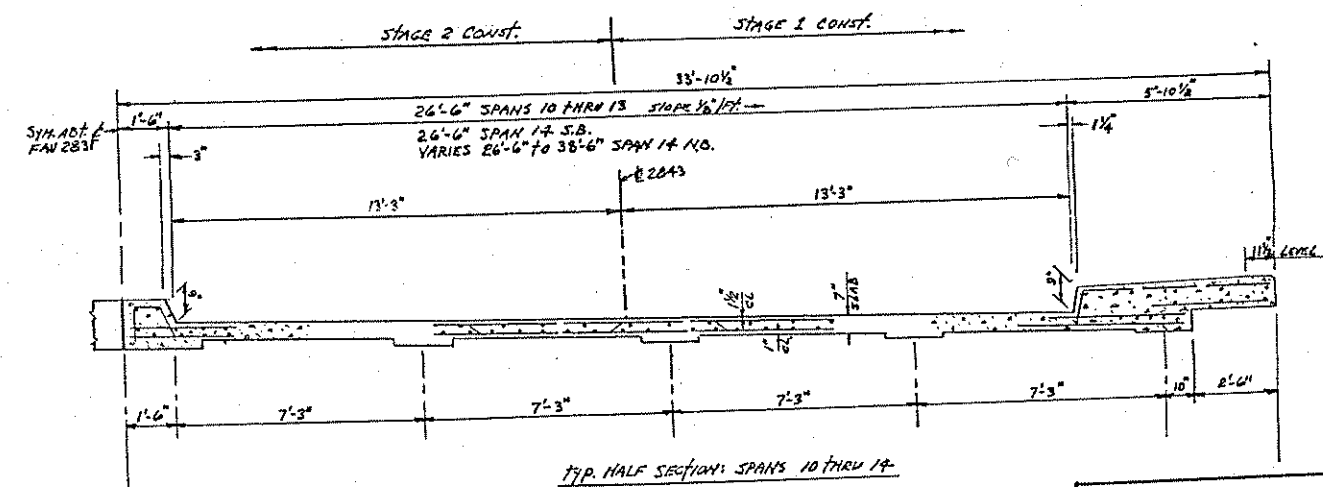
LOCATION SKETCH-DECK SLAB REPAIRS (PARTIAL)-75 S.Y. PLATE GIRDER SPANS



TYP. HALF SECTION DECK TRUSS SPAN 9



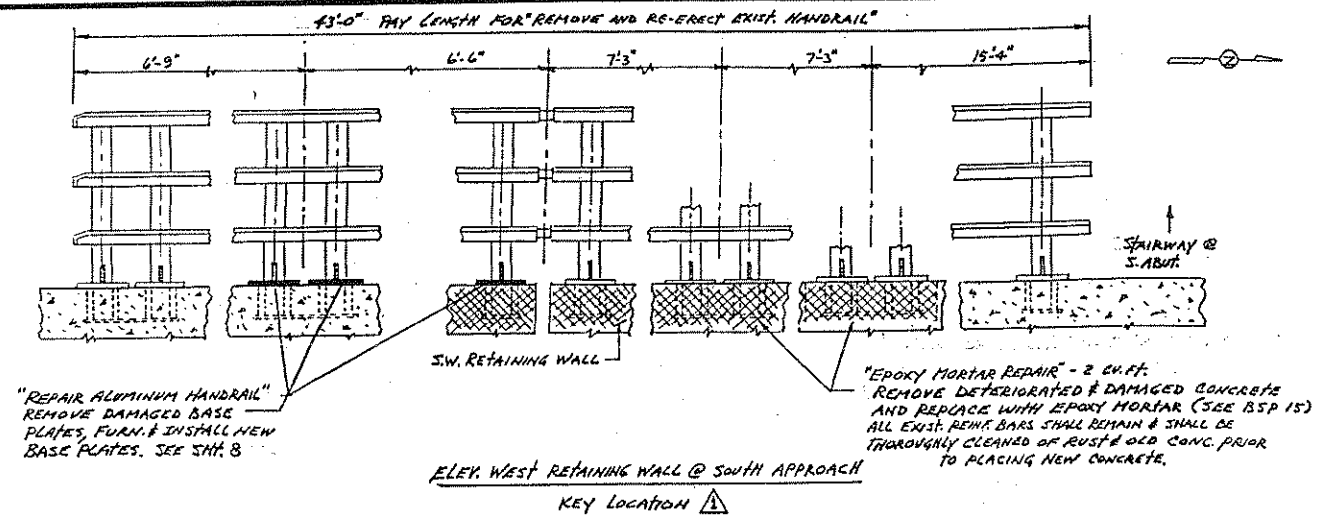
TYP. HALF SECTIONS SPANS 1 THRU 8



TYP. HALF SECTION SPANS 10 THRU 14

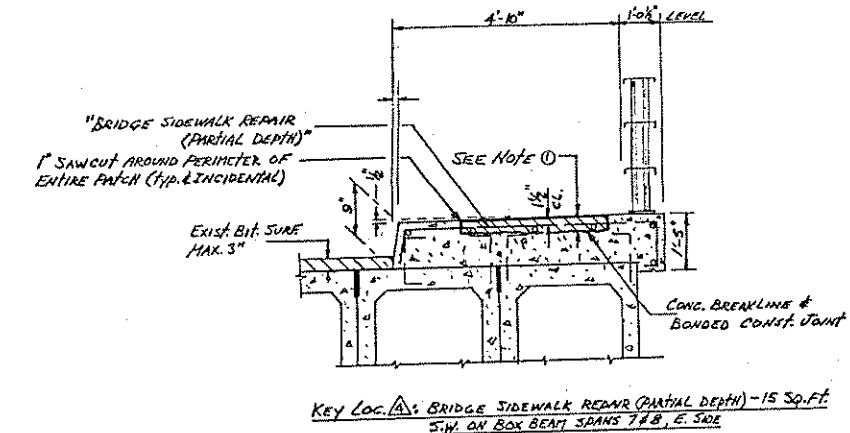
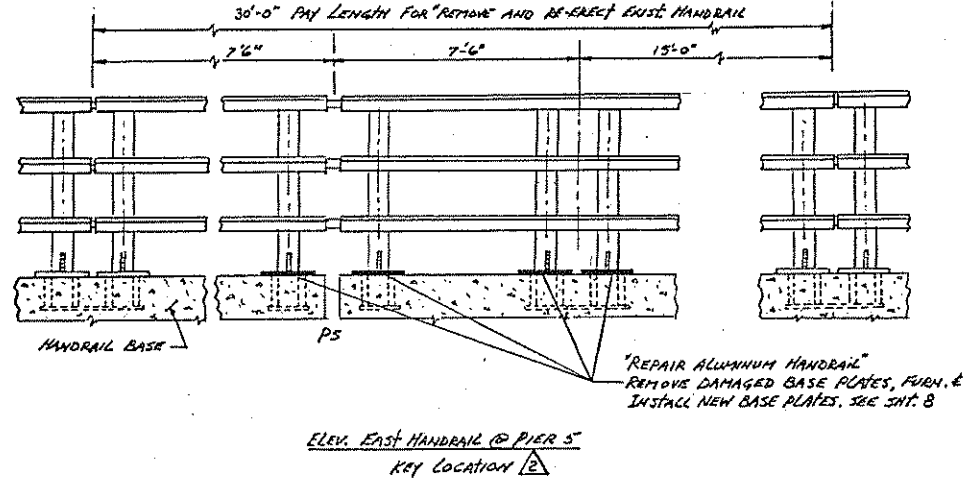
FAU 2843 (WESTERN AVE.)
SECTION 0103BR-90
COOK CO.
WESTERN AVE./CAL-SAG CHANNEL
BR. NO. 016-0777

ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
FAU 2843	0103BR-90	COOK	9	5

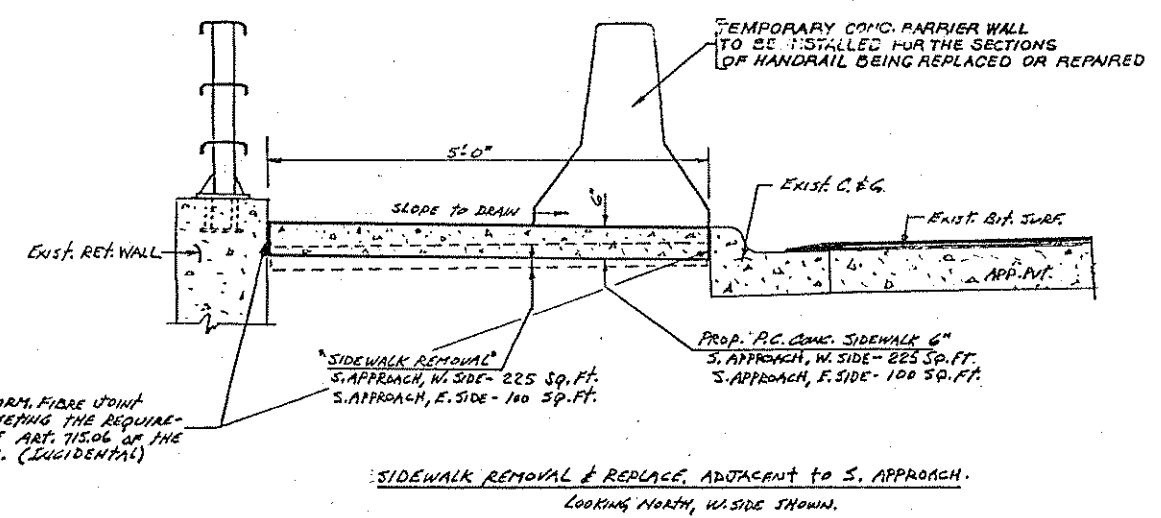
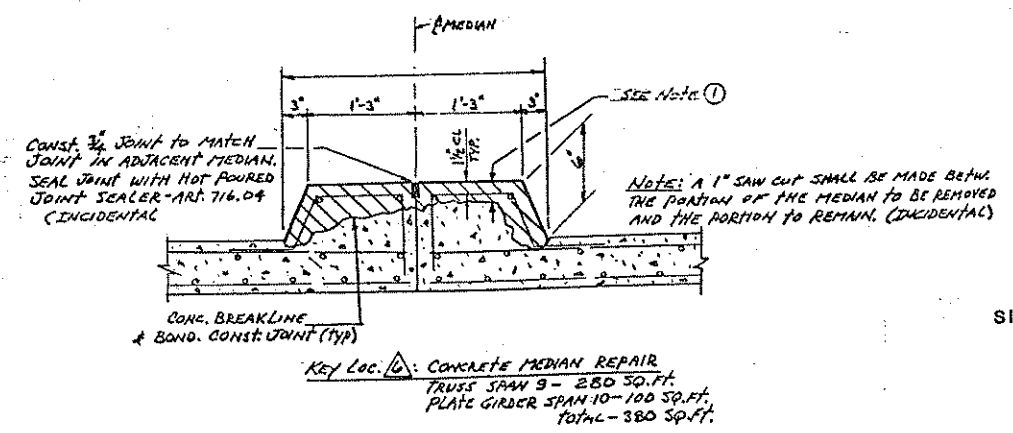
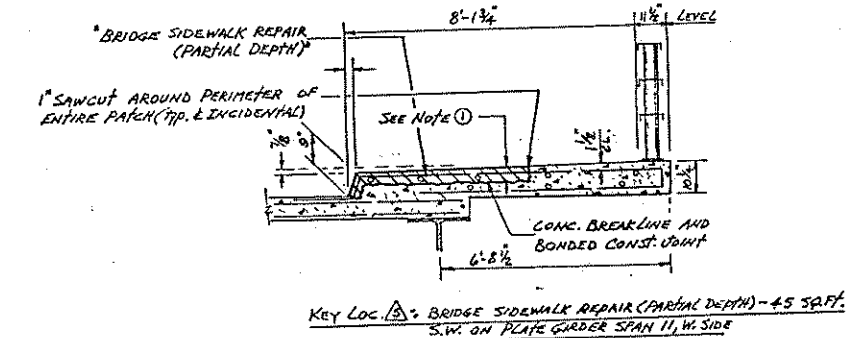


NOTE: NEW FACING PADS SHALL BE PROVIDED AT ALL POSTS WHERE THE HANDRAIL IS TO BE REMOVED AND RE-ERECTED, AND ALL RE-ERECTED HANDRAIL SHALL BE ALIGNED WITH ADJACENT HANDRAIL. TYP. A & B

THE REMOVAL, DESIGNATED REPAIRS AND RE-ERECTION OF THE HANDRAIL SHALL BE COMPLETED IN ONE (1) DAY.



NOTE ①: CONC. REMOVAL SHALL BE TO A MIN. DEPTH OF 1" BELOW THE TOP REINFORCEMENT BARS OR TO SOUND CONC., WHICHEVER DIMENS. IS GREATER. ALL EXIST. REINF. BARS SHALL REMAIN IN PLACE AND SHALL BE STRENGTHENED & CLEANED OF RUST & OLD CONC. PRIOR TO PLACING NEW CONC.

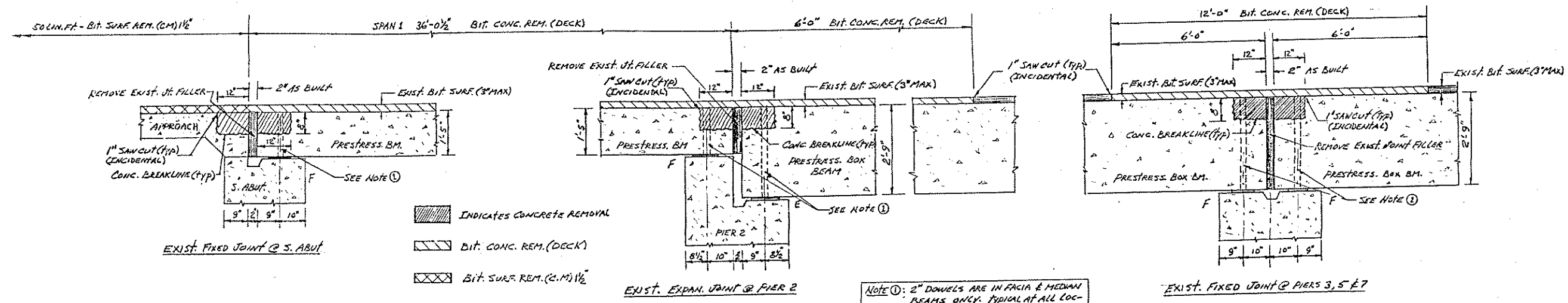


SIDEWALK, HANDRAIL, AND MEDIUM REPAIR

FAU 2843 (WESTERN AVE.)
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BR. NO. 016-0777

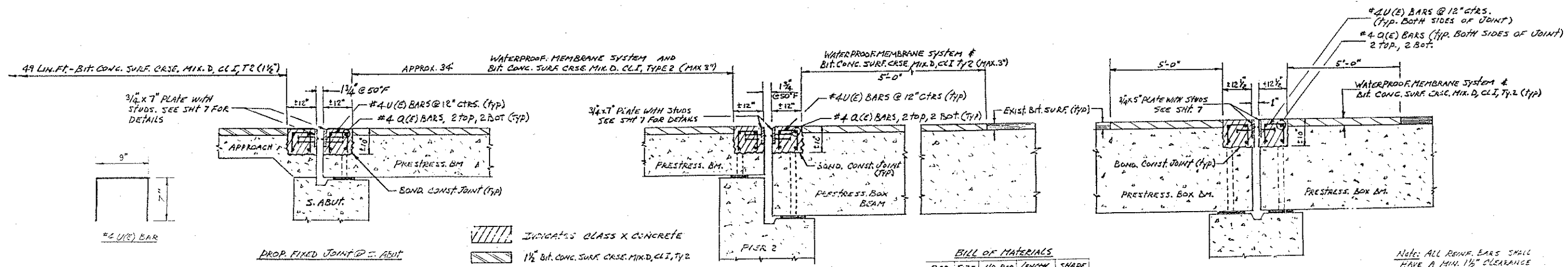
ROUTE	SECTION	COUNTY	TOTAL SHTS.	SH. NO.
FAU 2843	0103BR-90	COOK	9	6

NOTE: EXTREME CARE SHALL BE TAKEN TO AVOID ANY DAMAGE TO THE EXISTING PRECAST PRE-STRESSED CONCRETE BEAMS DURING THE CONCRETE REMOVAL.



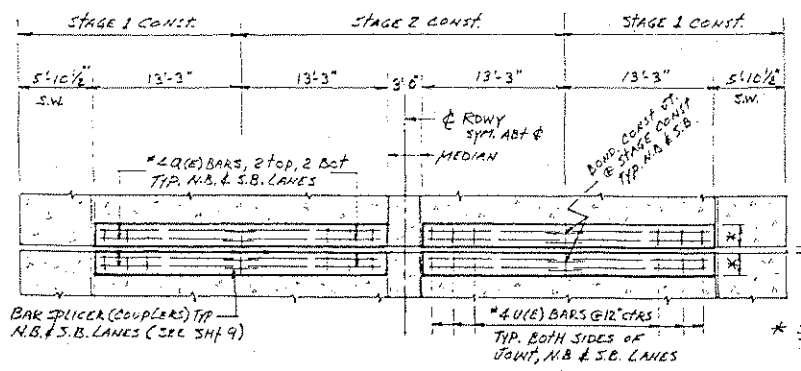
- INDICATES CONCRETE REMOVAL
- BIT. CONC. REM. (DECK)
- BIT. SURF. REM. (C.M.) 1 1/2"

NOTE ①: 2" DOWELS ARE IN FACIA & MEDIAN BEAMS ONLY. TYPICAL AT ALL LOCATIONS SHOWN.



- INDICATES CLASS X CONCRETE
- 1 1/2" BIT. CONC. SURF. CRSE. MIX. D. CL. I, T, 2
- WATERPROOFING MEMBRANE SYSTEM & BIT. CONC. SURF. CRSE. MIX. D. CL. I, T, 2 (3" MAX)

NOTE: PROP. PREFORMED JOINT SEALS FOR THE EXPANS. AND FIXED JOINTS ARE NOT SHOWN IN THE ABOVE SECTIONS. SEE SH. 7 FOR DETAILS. ALL CONST. JOINTS BETWEEN OLD AND NEW CONC. SHALL BE BONDED CONST. JOINTS.



BILL OF MATERIALS

BAR	SIZE	NO. REQ.	LENGTH	SHAPE
Q(C)	#4	160	13'-0"	—
U(E)	#4	560	1'-11"	□

REINF. BARS (EPOXY COATED) - 2110 LBS.
 CONCRETE REMOVAL - 13.3 CU. YD.
 CLASS X CONCRETE - 16.5 CU. YD.
 FURN. & ERECT. STRUCTURAL STEEL - 1120 LBS.
 PREFORMED JOINT SEAL 1 1/2" - 212 LIN. FT.
 PREFORMED JOINT SEAL 2 1/2" - 191 LIN. FT.
 BIT. CONC. REMOVAL (DECK) - 460 SY.
 WATERPROOFING MEMBRANE SYSTEM - 460 SY.
 * BIT. CONC. SURF. CRSE. MIX. D. CL. I, T, 2 - 53 TON

EXPANSION AND FIXED JOINT RECONSTRUCTION

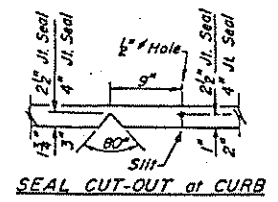
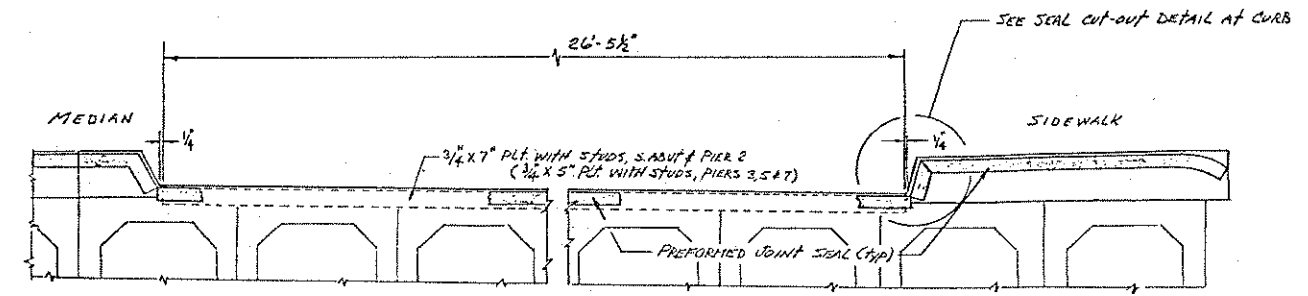
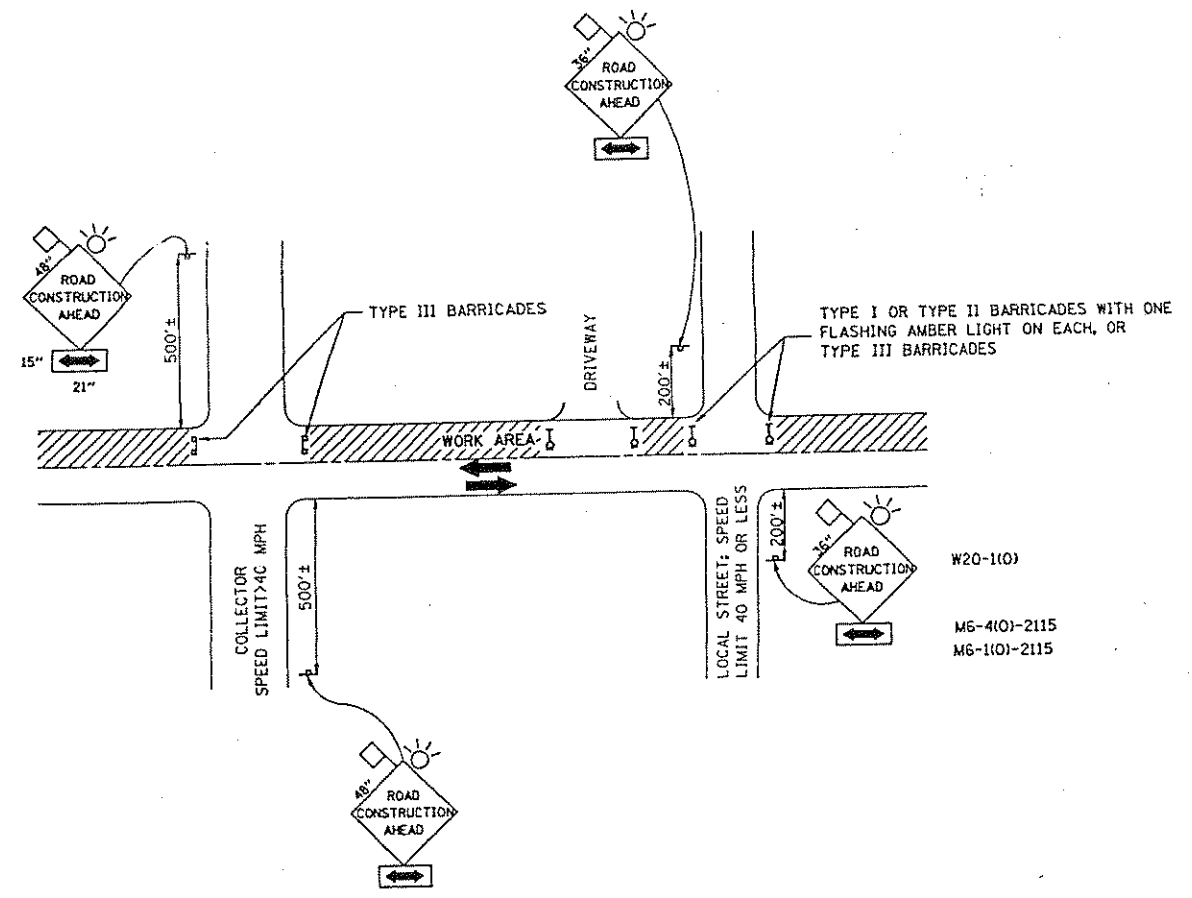
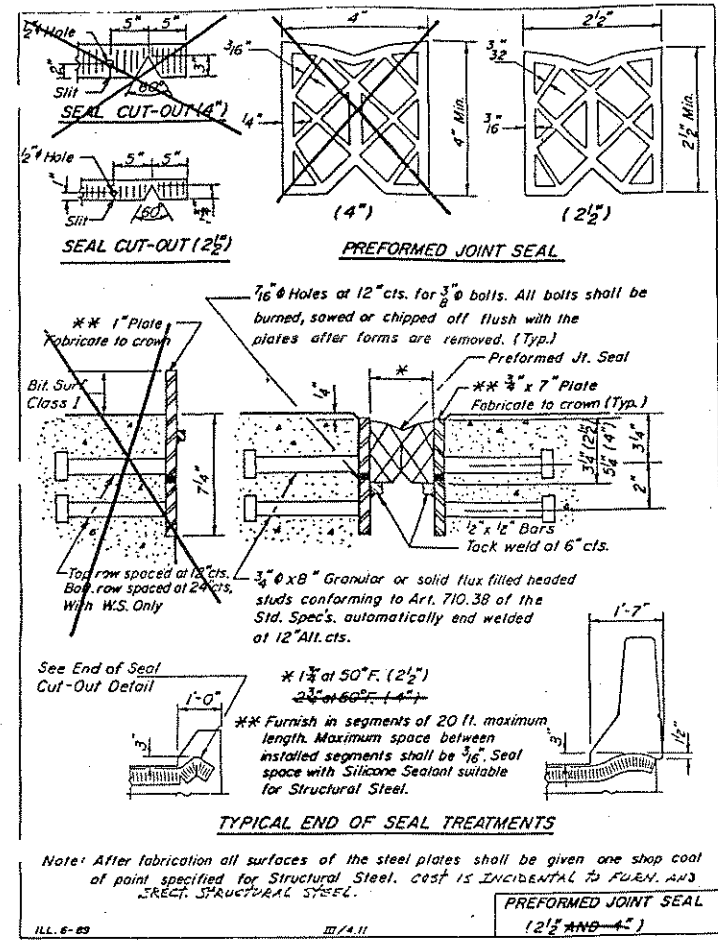
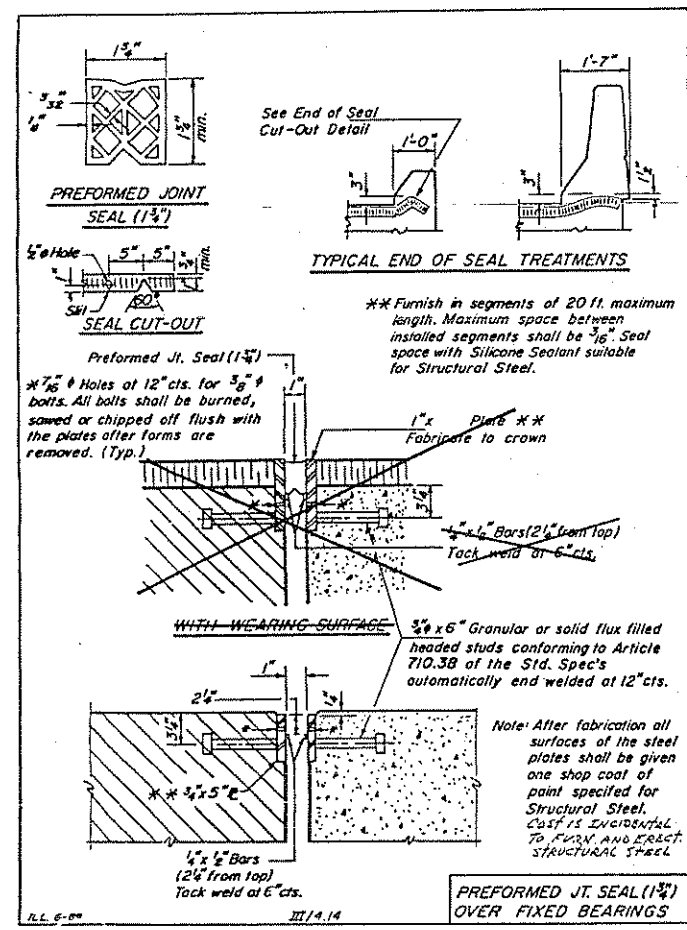
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 BR. NO. 016-0777

PLAN: REINF. LAYOUT, EXPANS. JOINT RECONSTR. - TYP. S. ABUT, PIERS 2, 3, 5 & 7.

NOTE: CONC. REMOVAL & REPLACE. SHALL BE LIMITED TO THE ROWY PORTION OF DECK. PREFORM. JOINT SEALS SHALL EXTEND FOR THE FULL WIDTH OF DECK, MEDIAN & S.W.

REV. 4-4-90

ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
FAU 2843	0103BR-90	COOK		7



NOTES:

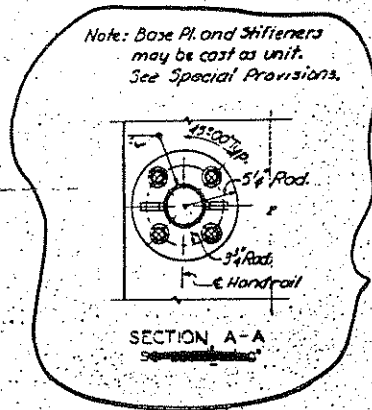
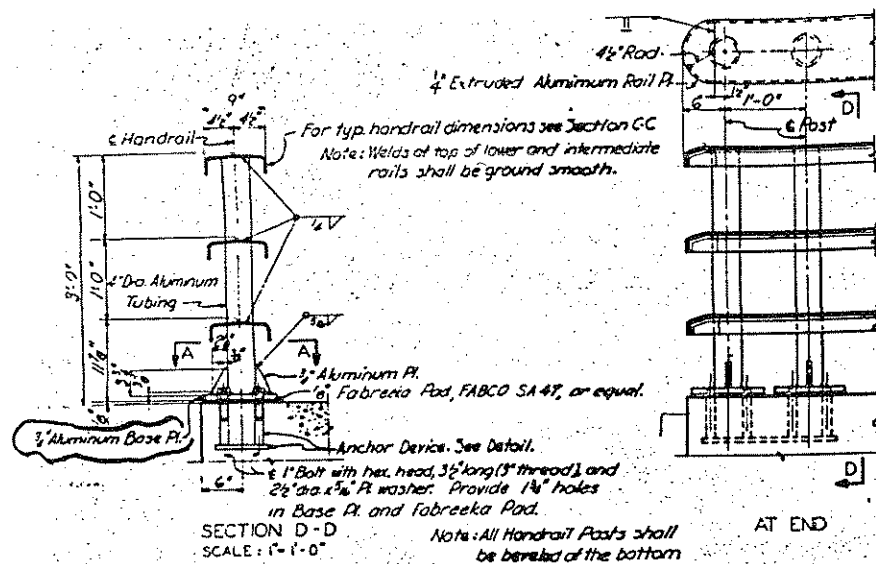
- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36" BY 36" WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200 FT. IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II, OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 48" BY 48" WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 500 FT. IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY: USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (CASE U-1, U-2 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.**
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.**
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS AND INTERSECTIONS SHALL BE INCLUDED IN THE CONTRACT UNIT LUMP SUM PRICE FOR "TRAFFIC CONTROL AND PROTECTION".**

PREFORMED JOINT SEAL DETAILS

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COOK CO.

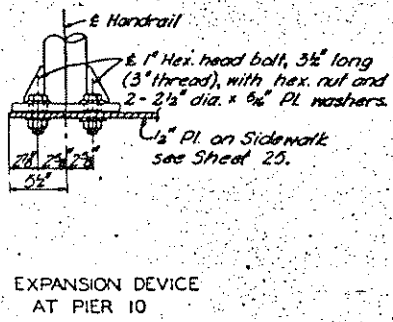
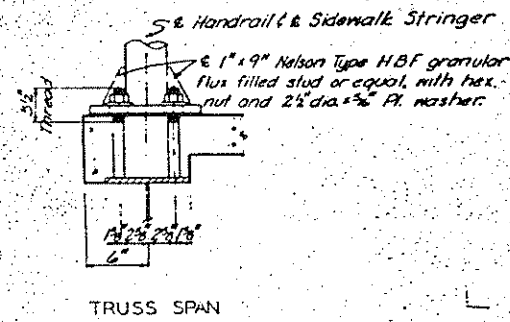
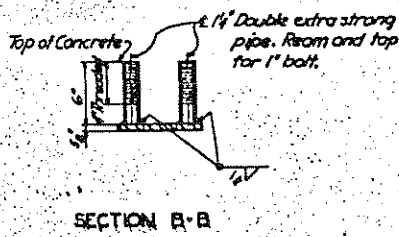
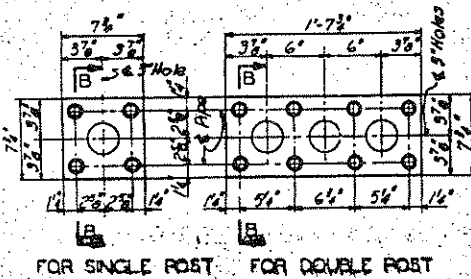
WESTERN AVE./CAL-SAG CHANNEL
BR. NO. 016-0777

ROUTE	SECTION	COUNTY	TOTAL SHTS.	SHT. NO.
FAU 2843	0103BR-90	COOK	9	8

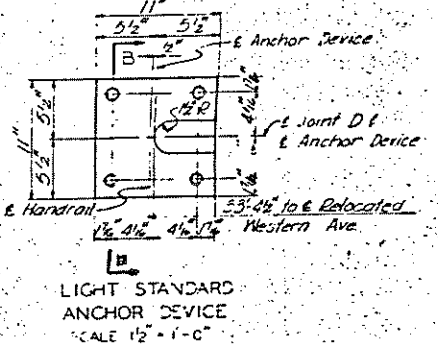
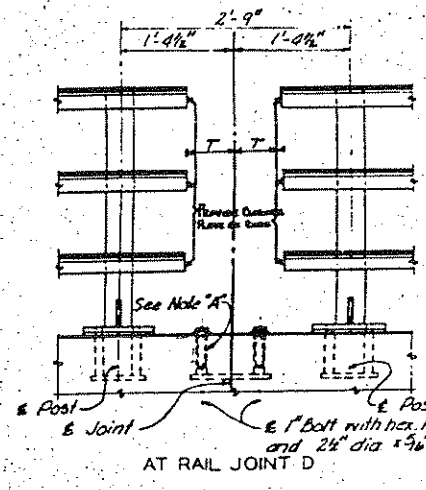
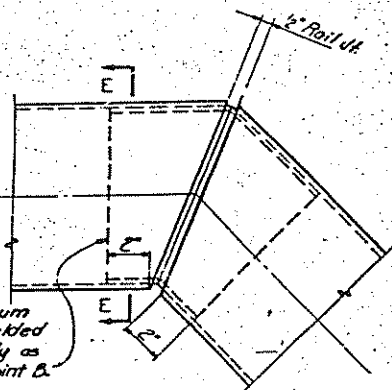
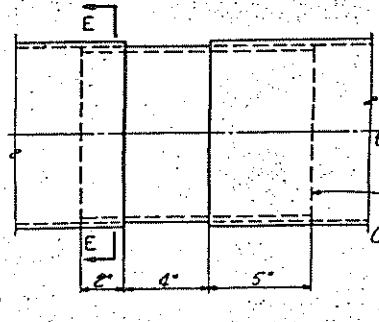
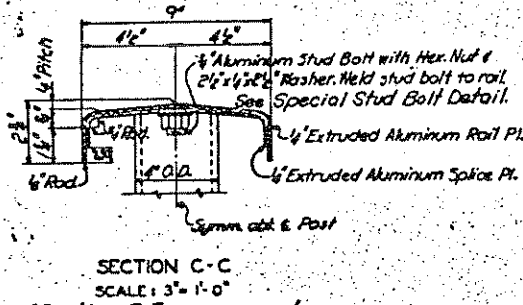
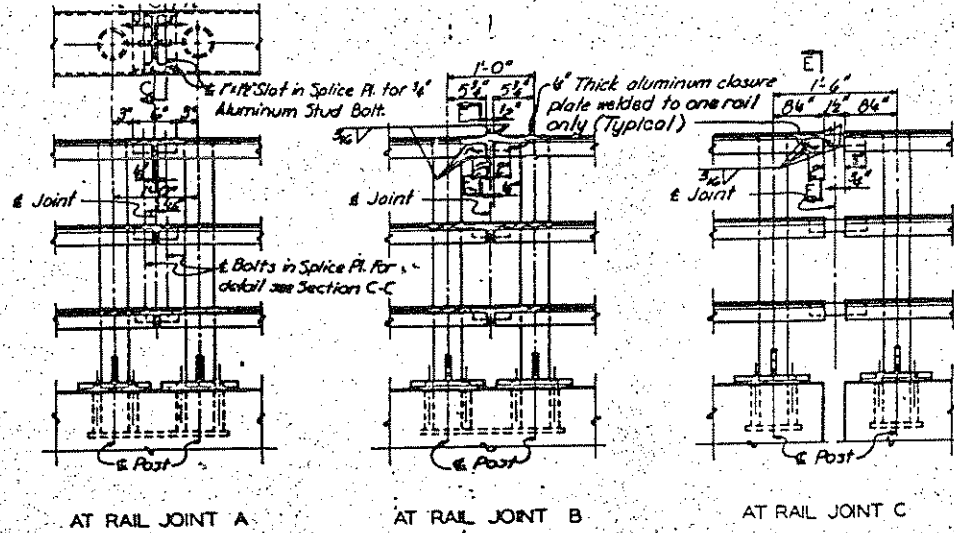


Note: All Handrail Posts shall be bored at the bottom as necessary, to make posts truly vertical.

Note: Base Pl. and Shifters may be cast as unit. See Special Provisions.



SPECIAL ANCHOR DETAILS
SCALE: 1/2" = 1'-0"



Note "A": Light Standard Anchor Device to be provided only at the locations indicated on Sheet 30.

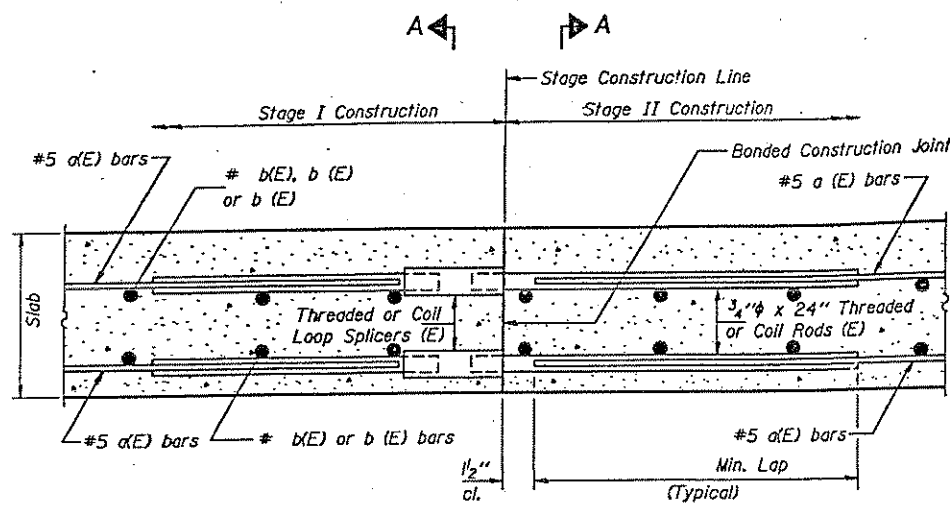
NOTES
All longitudinal dimensions are measured horizontally at top of sidewalk along & handrail.
Horizontal members of Handrail shall follow the bridge profile grade.
Work this sheet with Sheet 30.
For materials see Special Provisions.
The cost of all anchor devices for handrail posts shall be included in the unit price bid for Aluminum Handrail.
The cost of all light standard anchor devices shall be included in the lump sum price bid for Provisions for Roadway Signing.

EXISTING HANDRAIL DETAILS

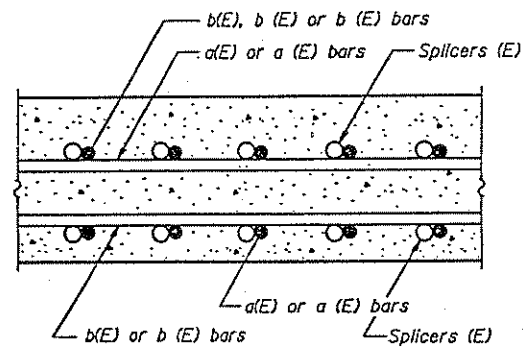
FAU 2843 (WESTERN AVE.)
SECTION 0103BR-90
COOK CO.
WESTERN AVE./CAL-SAG CHANNEL
BR. NO. 016-0777

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE NO.	SECTION	QUANTITY	DATE	POST	SHEET NO.
P.A.U. 2843	*	COOK	9	9	
PROJ. NAME, DIST., COUNTY, ROAD NO., PROJECT NO.					SHEETS
* O103BR-90					



SECTION THRU SLAB



SPLICER DETAILS
(No. Req'd. 4D)

Cost incidental to Reinforcement Bars (Epoxy Coated).

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

ROLLED THREAD DOWEL BAR



ONE PIECE

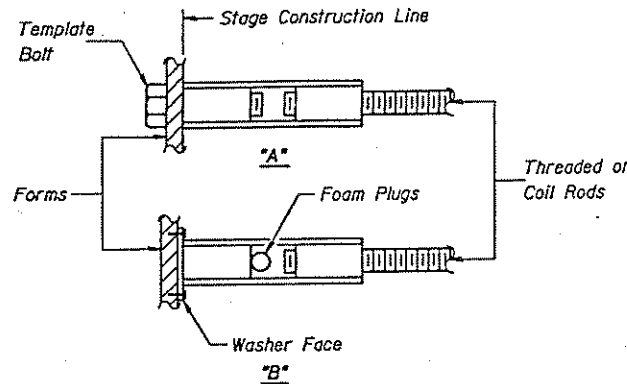
Wire Connector



WELDED SECTIONS

SPLICER ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

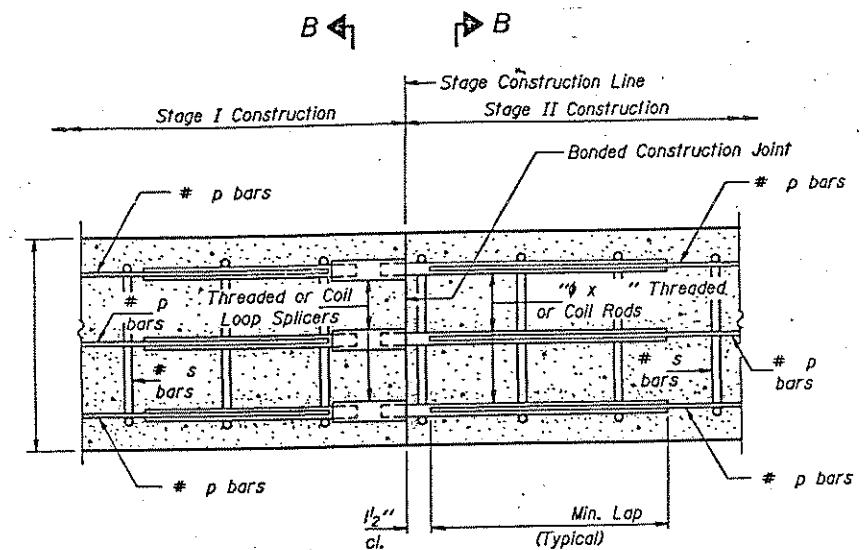
Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.
 All reinforcement bars shall be lapped and tied to the splicer rods.
 Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with 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 splicer (coupler) assembly satisfies the following requirements:

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

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_f = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

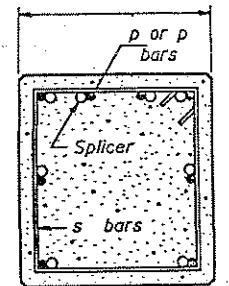
In Slabs	#5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
In Sub-Structure	#7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension
In Sub-Structure	#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 58.9 kips-tension Minimum Pull-out Strength = 23.6 kips-tension



SECTION THRU ABUTMENTS AND PIERS
No epoxy coating required.

SPLICER DETAILS
(No. Req'd.)

Cost incidental to Reinforcement Bars.



SECTION B-B

BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION

DESIGNED	EXAMINED	19
CHECKED	PASSED	ENGINEER OF BRIDGE DESIGN
DRAWN	APPROVED	ENGINEER OF BRIDGES AND STRUCTURES
CHECKED		DIRECTOR OF HIGHWAYS