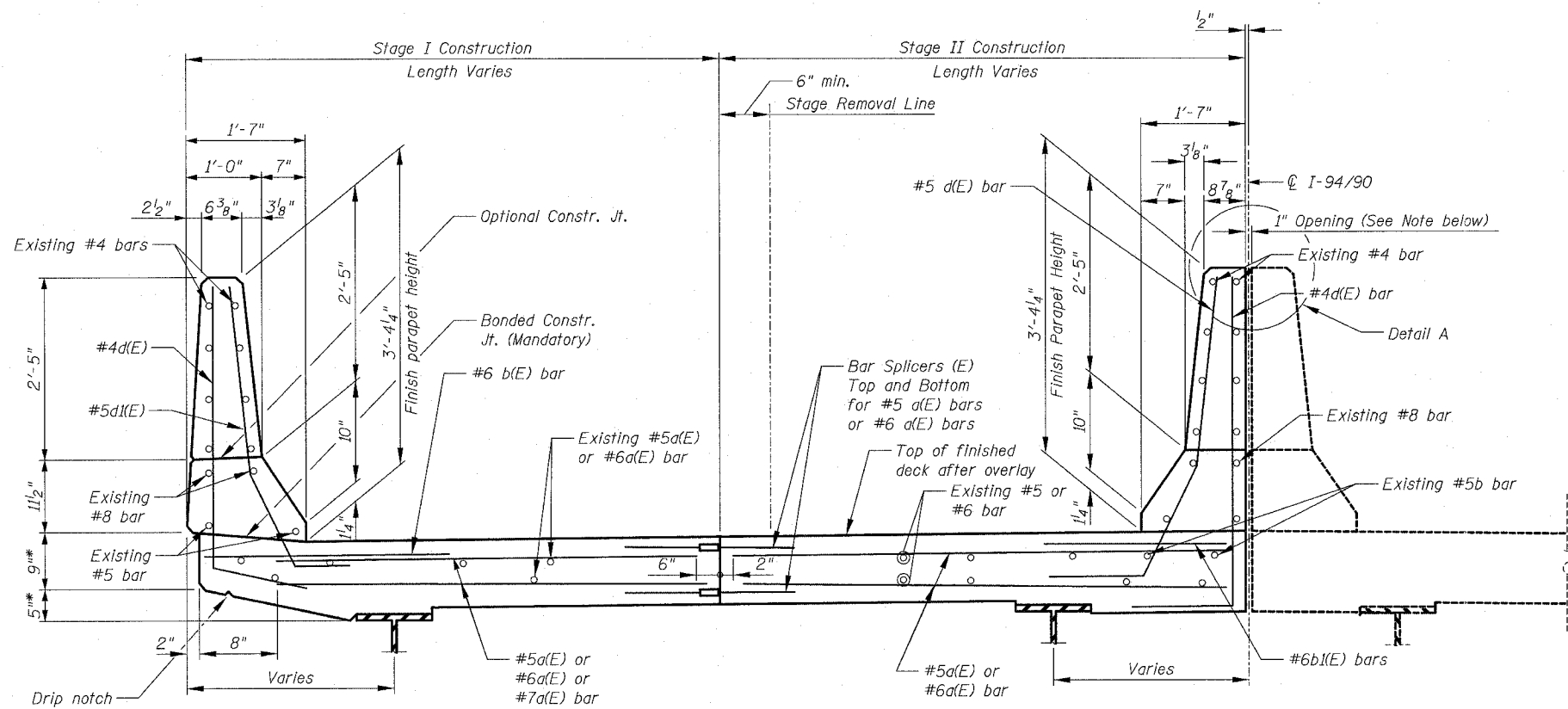


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	201
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	62581	



TYPICAL CROSS SECTION ALONG JOINT RECONSTRUCTION

* Match Existing

Notes:

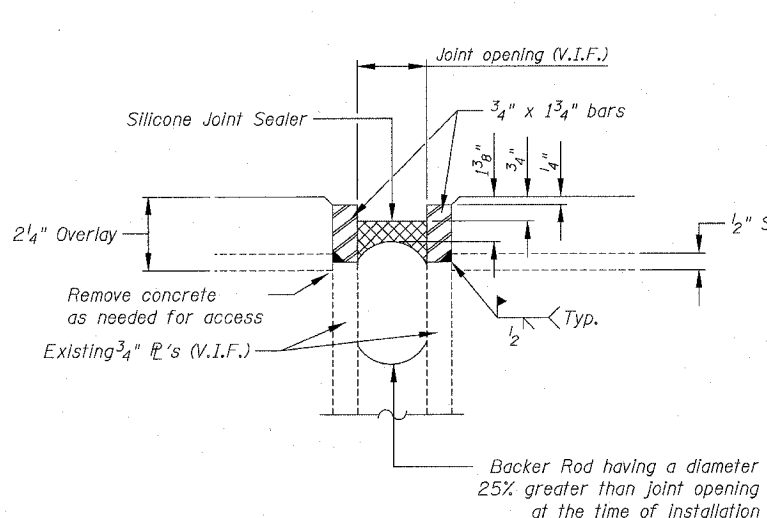
Existing longitudinal reinforcement in slab and barriers shall be cleaned, straightened and incorporated into new construction.

Bend #4 vertical parapet bars in field to clear the top flange of fascia girders as needed.

Remove existing rails, posts, anchors or other attachments as required for the partial removal of barriers for the joint reconstruction. Reinstall removed components as required to restore original condition. Cost included with "Concrete Removal" and "Concrete Superstructure".

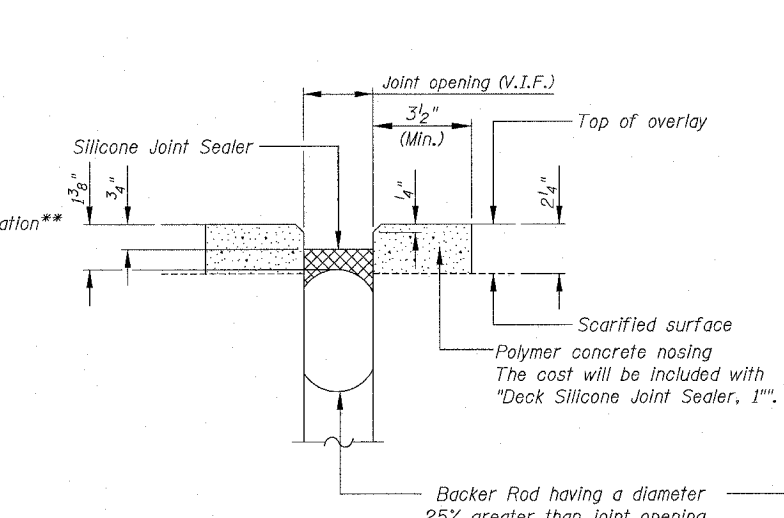
Place bars in parapet to maintain 1/2" cl.

Care should be exercised during concrete removal not to damage existing shear studs.

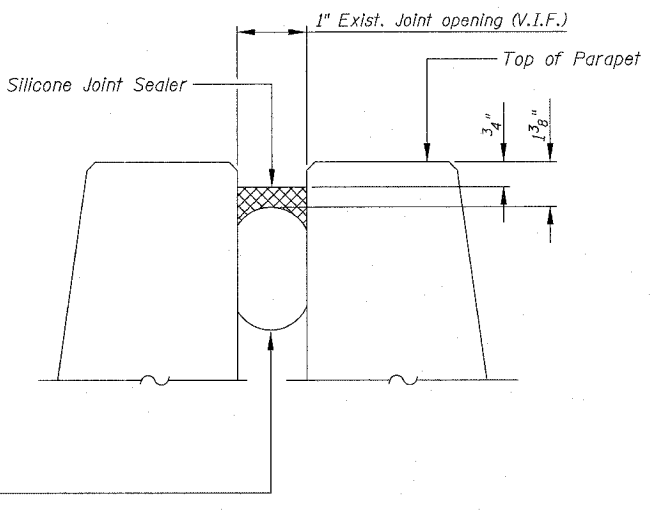


DECK SILICONE JOINT SEALER, 1" DETAIL

**Care shall be taken not to damage existing #s during Hydroscarification.
V.I.F. = Verify in field
If existing joint does not have steel plates see alternate Deck Silicone Joint Sealer, 1" Detail.
Cost of existing joint removal included with "Bridge Deck Hydro-Scarification, 1/2\"/>



ALTERNATE DECK SILICONE JOINT SEALER, 1" DETAIL



SILICONE JOINT SEALER, 1" - PARAPET DETAIL A

Existing longitudinal joint between concrete parapets shall be removed and replaced with Silicone Joint Sealer. The cost of the existing longitudinal joint removal will be included in the cost of "Silicone Joint Sealer, 1\"/>

BILL OF MATERIAL

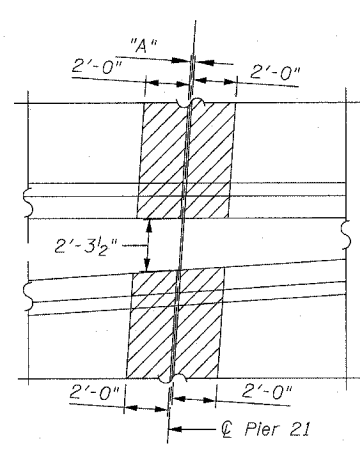
Item	Unit	Total
Deck Silicone Joint Sealer, 1"	Foot	107
Silicone Joint Sealer, 1"	Foot	10,486

REVISIONS	
NAME	DATE

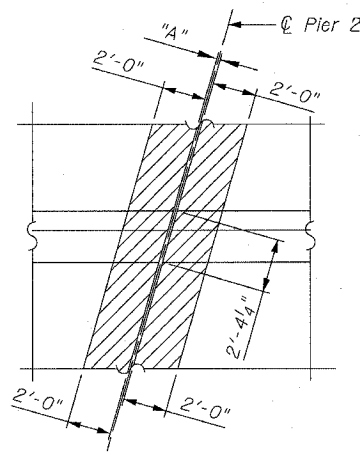
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
TYPICAL DECK SLAB CROSS SECTIONS
AND SILICONE JOINT SEALER DETAILS
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
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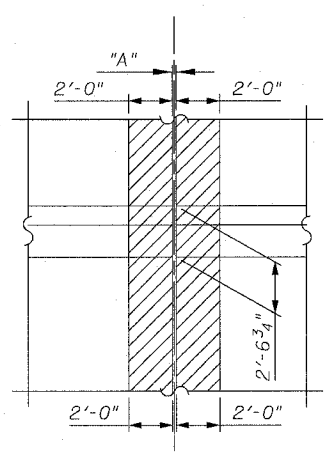
5/25/2006 3:50:02 PM I:\9400\BRIDGE\20\SHETS\660_201.DWG



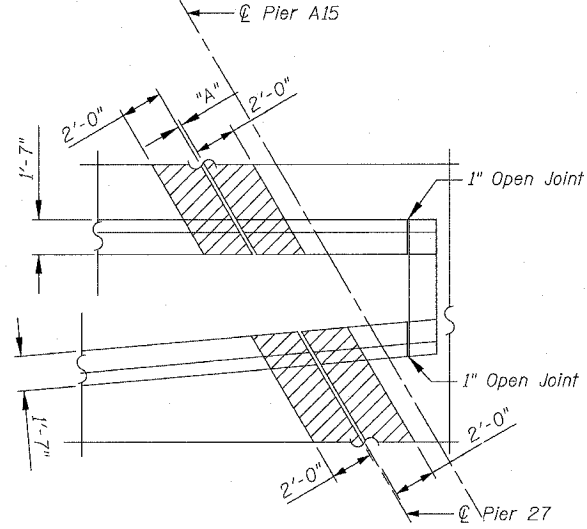
CLOSURE WALL DETAIL
SN 016-1115 PIER 21
(NTS)



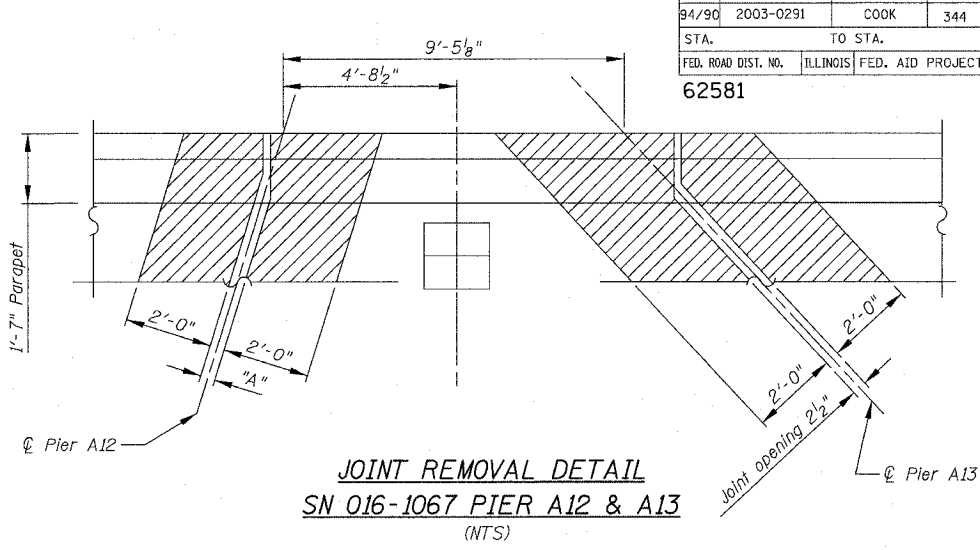
MEDIAN DETAIL
SN 016-1115 PIER 22
(NTS)



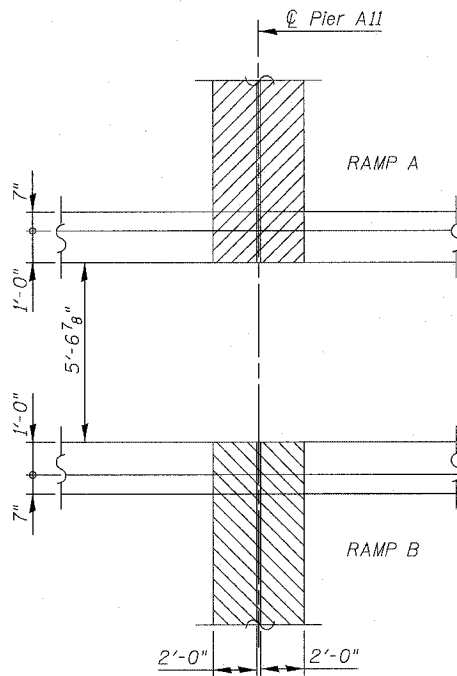
MEDIAN DETAIL
SN 016-1113 PIER 3
(NTS)



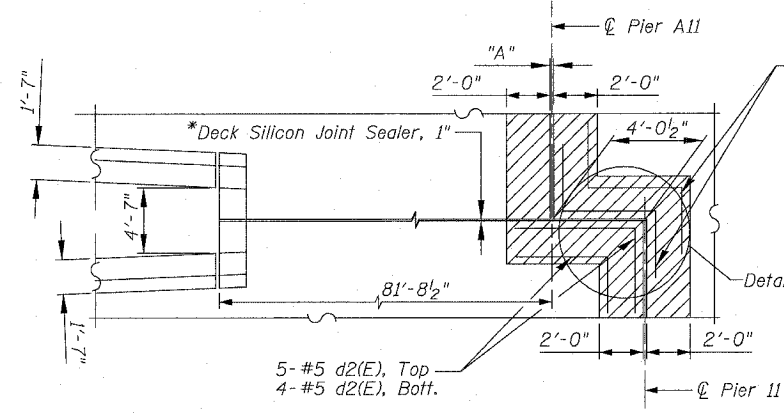
CLOSURE WALL DETAIL
SN 016-1112 PIER 27
(NTS)



JOINT REMOVAL DETAIL
SN 016-1067 PIER A12 & A13
(NTS)

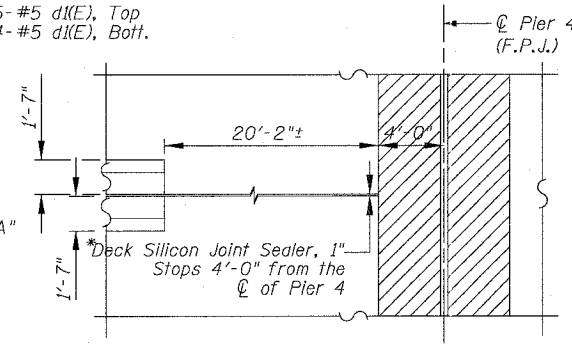


MEDIAN DETAIL
SN 016-1113 (RAMP A)
PIER A10
(NTS)

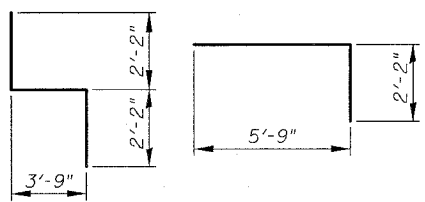


JOINT DETAIL
SN 016-1113 PIERS 11 & A11
(NTS)

*Existing 1" Neoprene Compressive Seal to be removed and replaced with 1" Silicone Joint Sealer.



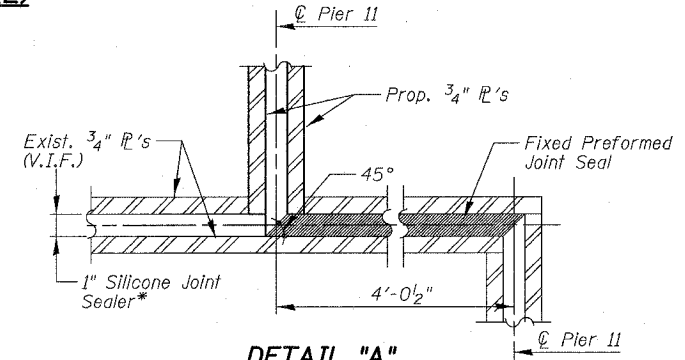
JOINT REMOVAL DETAIL
SN 016-1110 PIER 4
(NTS)



BAR d1(E) **BAR d2(E)**

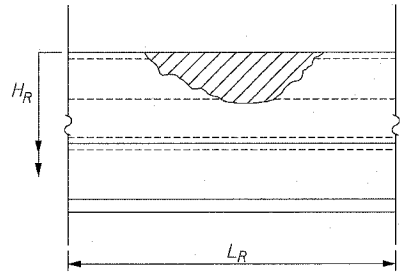
PIERS 11 & A11 (SN 016-1113)
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d1(E)	9	#5	8'-1"	L
d2(E)	9	#5	7'-11"	L
Item			Unit	Qty.
Reinforcement Bars, Epoxy Coated			Pound	150



DETAIL "A"

- Notes:
- At the 4'-0 1/2" section cut the Preformed Joint Seal at 45° and vulcanize in the field.
 - The cost for the 4'-0 1/2" section shall be incidental with the total cost of the fixed joints.
 - The joints manufacturer should be consulted to ensure that a proper bond will be provided between the Silicone Joint and Fixed Joint.



PARAPET REPAIRS - DETAIL "B"
(Front face of Parapet)

PARAPET REPAIR DIMENSIONS AND BILL OF MATERIALS

	Unit	SN 016-1067	SN 016-1062	SN 016-0137
LR	Ft	5'-0"	8'-0"	6'-0"
HR	Ft	3'-6"	3'-6"	3'-6"
Concrete Removal	Cu. Yd.	0.70	1.1	0.82
Concrete Superstructure	Cu. Yd.	0.70	1.1	0.82

NOTE:

- Cut Bars in the field to fit as required.

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
PARAPET REPAIR AND
JOINT REMOVAL DETAILS

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: BLU

REINFORCEMENT BAR SCHEDULES
SN 016-1117

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
S. Abut	a1		#6	33'-6"				5	6
	a2		#5	33'-6"				-	-
	b1		#6	4'-0"				10	-
1	u1		#5	2'-8"				-	35
	a3		#6	33'-0"				5	5
	a4		#5	33'-0"				4	4
2	b1		#6	4'-0"				10	10
	a4		#5	33'-0"				14	9
	b1		#6	4'-0"				16	10
3	x2		#5	4'-2"				34	-
	a4		#5	33'-0"				14	9
	b1		#6	4'-0"				16	10
4	x2		#5	4'-2"				34	-
	a4		#5	33'-0"				14	9
	b1		#6	4'-0"				16	10
5	x2		#5	4'-2"				34	-
	a5		#6	33'-11"				8	-
	a6		#5	33'-11"				6	9
6	b1		#6	4'-0"				16	10
	x2		#5	4'-2"				34	-
	a7		#6	34'-5"				8	5
7	a8		#5	34'-5"				6	4
	b1		#6	4'-0"				16	10
	x2		#5	4'-2"				35	-
8	a9		#6	35'-3"				8	5
	a10		#5	35'-3"				6	4
	b1		#6	4'-0"				16	10
9	x2		#5	4'-2"				36	-
	a11		#6	36'-1"				5	5
	a12		#5	36'-1"				5	4
11	b1		#6	4'-0"				10	10
	a13		#6	22'-1"				2x5	2x5
	a14		#5	21'-9"				2x4	2x4
13	b1		#6	4'-0"				10	10
	x1		#5	2'-3"				23	23
	a15		#6	23'-3"				2x9	-
15	a16		#5	23'-0"				-	2x9
	b1		#6	4'-0"				10	10
	x1		#5	2'-3"				-	44
18	a17		#7	23'-6"				2x9	-
	a18		#5	22'-10"				-	2x9
	b1		#6	4'-0"				10	10
19	a19	a20	#5	24'-8"	31'-7"	2x9	2x9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	a21	a20	#5	20'-9"	31'-7"	2x9	2x14	9	14
20	b1	b1	#6	4'-0"	4'-0"	5	8	5	8
	x2	x2	#5	4'-2"	-	-	40	-	32
	a22	a20	#5	36'-7"	31'-7"	9	14	9	14
21	b1	b1	#6	4'-0"	4'-0"	5	8	5	8
	x2	x2	#5	4'-2"	4'-2"	-	37	-	32
	a22	a20	#5	36'-7"	31'-7"	9	14	9	14
22	b1	b1	#6	4'-0"	4'-0"	5	8	5	8
	x2	x2	#5	4'-2"	4'-2"	-	37	-	32
	a22	a20	#5	36'-7"	31'-7"	9	14	9	14
23	b1	b1	#6	4'-0"	4'-0"	5	8	5	8
	x2	x2	#5	4'-2"	4'-2"	-	37	-	31

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
S. Abut	d1		#5	4'-7"				6	4
	d3		#4	4'-10"				3	2
	d5		#4	6'-7"				3	2
1	d1		#5	4'-7"				6	6
	d3		#4	4'-10"				3	3
	d5		#4	6'-7"				-	3
2	d6		#4	6'-4"				3	-
	d1		#5	4'-7"				5	6
	d3		#4	4'-10"				5	3
3	d6		#4	6'-4"				5	3
	d2		#4	5'-10"				5	-
	d1		#5	4'-7"				5	6
4	d3		#4	4'-10"				5	3
	d6		#4	6'-4"				-	3
	d2		#4	5'-10"				5	3
5	d1		#5	4'-7"				5	6
	d3		#4	4'-10"				5	3
	d6		#4	6'-4"				-	3
6	d2		#4	5'-10"				5	3
	d1		#5	4'-7"				5	6
	d3		#4	4'-10"				5	3
7	d6		#4	6'-4"				-	3
	d2		#4	5'-10"				5	3
	d1		#5	4'-7"				5	6
8	d3		#4	4'-10"				5	3
	d2		#4	5'-10"				3	3
	d1		#5	4'-7"				6	6
11	d3		#4	4'-10"				3	3
	d2		#4	5'-10"				3	3
	d1		#5	4'-7"				6	6
13	d3		#4	4'-10"				3	3
	d2		#4	5'-10"				3	3
	d1		#5	4'-7"				6	6
15	d3		#4	4'-10"				3	3
	d2		#4	5'-10"				-	3
	d1		#5	4'-7"				6	6
18	d3		#4	4'-10"				3	3
	d4		#4	7'-10"				3	3
	d1	d1	#5	4'-7"	4'-7"	3	3	-	-
19	d4		#4	7'-10"				3	3
	d3		#4	4'-10"				-	-
	d12		#4	4'-6"				-	-
20	d2		#4	5'-10"				-	4
	d1	d1	#5	4'-7"	4'-7"	3	4	3	4
	d5		#4	4'-9"				3	-
21	d10		#4	4'-6"				3	3
	d1	d1	#5	4'-7"	4'-7"	-	4	3	4
	d10	d10	#4	4'-6"	4'-6"	-	4	-	4
22	d5		#4	4'-9"				-	-
	d2		#4	5'-10"				-	-
	d7		#5	6'-0"				-	-
23	d1		#5	4'-7"				3	4
	d5	d3	#4	4'-9"	5'-10"	3	4	-	-
	d7		#5	6'-0"				-	4
22	d8		#5	2'-10"				3	4
	d9		#4	2'-6"				3	-
	d1		#5	4'-7"				3	4
23	d5		#4	4'-9"				3	4
	d9		#4	2'-6"				-	-
	d8		#5	2'-10"				3	4

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 REINFORCEMENT BAR SCHEDULE
 SN 016-1117

SCALE: N/A
 DATE: 5/25/2006

DRAWN BY: BDC
 CHECKED BY: BLU

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1/2/2007 PM 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	203
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	62581	

REINFORCEMENT BAR SCHEDULES

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029	COOK	344	204
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

SN 016-1067

Deck Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
	Stage IA		Stage IA	Side A	Side B
S. Abut.	a1	#7	26'-9"	2 x 5	2 x 2
	a2	#5	26'-1"	2 x 4	2 x 2
	b1	#6	4'-0"	10	-
A2	u1	#5	2'-8"	-	46
	a3	#7	23'-2"	2 x 5	2 x 5
	a4	#5	22'-5"	2 x 4	2 x 4
A4	b1	#6	4'-0"	10	10
	a5	#7	22'-10"	2 x 8	2 x 5
	a6	#5	22'-2"	2 x 6	2 x 4
A5	b1	#5	4'-0"	16	10
	x2	#5	4'-2"	-	40
	a5	#7	22'-10"	-	2 x 5
A6	a6	#5	22'-2"	2 x 4	2 x 4
	b1	#6	4'-0"	16	10
	x2	#5	4'-2"	40	-
A9	a7	#6	22'-4"	2 x 5	2 x 5
	a8	#5	22'-1"	2 x 4	2 x 4
	b1	#6	4'-0"	10	10
A12	a3	#7	23'-2"	2 x 5	-
	a9	#6	22'-8"	-	2 x 5
	a4	#5	22'-5"	2 x 4	2 x 4
A13	b1	#6	4'-0"	10	10
	a10	#6	25'-8"	2 x 5	2 x 8
	a11	#5	25'-5"	2 x 4	2 x 6
A15	b1	#6	4'-0"	10	16
	x2	#5	4'-2"	-	43
	a12	#7	34'-0"	2 x 8	-
A15	a13	#6	33'-6"	-	2 x 5
	a14	#5	33'-4"	2 x 6	2 x 4
	b1	#6	4'-0"	16	10
A15	x2	#5	4'-2"	45	-
	a15	#7	34'-5"	2 x 5	2 x 5
	a16	#5	33'-9"	2 x 4	2 x 4
b1	#6	4'-0"	10	10	

Parapet Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
	Stage IA		Stage IA	Side A	Side B
S. Abut.	d1	#5	4'-7"	6	4
	d11	#4	6'-10"	6	4
A2	d1	#5	4'-7"	6	6
	d11	#4	6'-10"	6	6
A4	d1	#5	4'-7"	8	6
	d8	#4	6'-7"	8	-
A5	d3	#4	6'-4"	8	-
	d1	#5	4'-7"	8	6
A6	d8	#4	6'-7"	-	6
	d11	#4	6'-10"	3	-
A9	d1	#5	4'-7"	6	-
	d6	#4	6'-4"	-	3
	d2	#4	5'-10"	3	3
A12	d12	#4	5'-4"	-	3
	d1	#5	4'-7"	6	6
	d11	#4	6'-10"	-	3
A13	d8	#4	6'-7"	3	-
	d2	#4	5'-10"	3	-
	d13	#4	7'-10"	-	3
A15	d1	#5	4'-7"	10	6
	d11	#4	6'-10"	10	3
	d13	#4	7'-10"	-	3
A15	d1	#5	4'-7"	5	6
	d11	#4	6'-10"	-	6
	d13	#4	7'-10"	3	-
d3	#4	4'-10"	2	-	

SN 016-1116

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
3	a1	a2	#5	23'-5"	31'-4"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
3	d2	d2	#4	5'-10"	5'-10"	3	-	3	-
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
		d15	#4	5'-7"					3
		d9	#4	6'-1"			3		

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1067 & 016-1116
SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

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REINFORCEMENT BAR SCHEDULES
SN 016-1115

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-02	COOK	344	205
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

62581

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
1	a1	a2	#5	22'-8"	29'-11"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
5	a3	a2	#5	26'-5"	29'-11"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
8	a5	a2	#5	26'-5"	29'-11"	14	9	14	9
	b1	b1	#6	4'-0"	4'-0"	8	5	8	5
	x1	x1	#5	2'-3"	2'-3"	-	27	-	30
	x2	x2	#5	4'-2"	4'-2"	27	-	30	-
9	a4	a5	#5	26'-7"	30'-0"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
10	a4	a6	#5	26'-7"	30'-2"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	27	-	31	-
	x2	x2	#5	4'-2"	4'-2"	-	27	-	31
12	a7	a6	#5	26'-11"	30'-2"	14	9	14	9
	b1	b1	#6	4'-0"	4'-0"	8	5	8	5
	x1	x1	#5	2'-3"	2'-3"	-	28	-	31
	x2	x2	#5	4'-2"	4'-2"	28	-	31	-
13	a8	a6	#5	27'-8"	30'-2"	14	9	14	9
	b1	b1	#6	4'-0"	4'-0"	8	5	8	5
	x2	x2	#5	4'-2"	4'-2"	28	-	31	-
14	a8	a9	#5	27'-8"	31'-2"	14	9	14	9
	b1	b1	#6	4'-0"	4'-0"	8	5	8	5
	x2	x2	#5	4'-2"	4'-2"	28	-	32	-
15	a10	a11	#5	28'-6"	31'-8"	14	9	14	9
	b1	b1	#6	4'-0"	4'-0"	8	5	8	5
	x2	x2	#5	4'-2"	4'-2"	28	-	32	-
16	a4	a5	#5	26'-7"	30'-0"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
18	a12	a13	#5	27'-1"	29'-6"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
20	a14	a15	#5	27'-3"	30'-5"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
21	a16	a17	#5	25'-8"	31'-7"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	28	28	32	32
22	a18	a2	#5	27'-5"	29'-11"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	28	-	30	-

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
1	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
5	d2	d2	#4	5'-10"	5'-10"	3	2	3	3
	d1	d1	#5	4'-7"	4'-7"	3	2	3	3
8	d2	d2	#4	5'-10"	5'-10"	4	3	-	4
	d1	d1	#5	4'-7"	4'-7"	4	3	4	4
		d16	#4		5'-1"			4	-
9	d2	d2	#4	5'-10"		3	3	-	-
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
		d16	#4		5'-1"			3	3
10	d2		#4	5'-10"		3	4		
	d1	d1	#5	4'-7"	4'-7"	3	4	3	4
		16	#4		5'-1"			3	4
12	d2	d2	#4	5'-10"	5'-10"	4	3	4	3
	d1	d1	#5	4'-7"	4'-7"	4	3	4	3
13	d2	d2	#4	5'-10"	5'-10"	4	3	4	3
	d1	d1	#5	4'-7"	4'-7"	4	3	4	3
14	d2	d2	#4	5'-10"	5'-10"	4	3	4	3
	d1	d1	#5	4'-7"	4'-7"	4	3	4	3
15	d2	d2	#4	5'-10"	5'-10"	4	3	4	3
	d1	d1	#5	4'-7"	4'-7"	4	3	4	3
16	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
18	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
20	d2	d2	#4	5'-10"	5'-10"	3	3	-	3
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
		d16	#4		5'-1"			3	-
21	d2	d2	#4	5'-10"	5'-10"	-	3	3	-
	d1	d1	#5	4'-7"	4'-7"	-	3	3	3
		d16	#4		5'-1"			-	3
22		d1	#5		4'-7"			3	3
		d4	#4		5'-4"			3	-
		d2	#4		5'-10"			-	3

Location	Bar		Size	Length		Number			
	Stage IB	Stage IC		Stage IB	Stage IC	Stage IB		Stage IC	
						Side A	Side B	Side A	Side B
21	a19	a20	#5	18'-7"	35'-1"	9	9	9	9
(016-1062)	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	56	56
22	a21	a22	#5	19'-0"	35'-4"	9	9	9	9
(016-1062)	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	-	20	-	36

Location	Bar		Size	Length		Number			
	Stage IB	Stage IC		Stage IB	Stage IC	Stage IB		Stage IC	
						Side A	Side B	Side A	Side B
21	d2		#4	5'-10"		3	3		
(016-1062)	d1		#5	4'-7"		3	3		
22	d1		#5	4'-7"		3	3		
(016-1062)	d2		#4	5'-10"		3	3		

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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1115

SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

4/14/2006 11:02:50 AM

REINFORCEMENT BAR SCHEDULES

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0295	COOK	344	206
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

62581

SN 016-1046

Deck Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
	Stage IA		Stage IA	Side A	Side B
5	a1	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
	x1	#5	2'-3"	-	24
53	a1	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
57	a2	#5	25'-0"	9	9
	b1	#6	4'-0"	10	10

Parapet Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
	Stage IA		Stage IA	Side A	Side B
5	d1	#5	4'-7"	6	5
	d14	#4	7'-4"	3	2
	d2	#4	5'-10"	3	-
53	d16	#4	5'-1"	-	3
	d1	#5	4'-7"	6	6
57	d2	#4	5'-10"	6	6
	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6

SN 016-1062

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
						Stage IB		Stage IC	
	Stage IB		Stage IB	Stage IC	Side A	Side B	Side A	Side B	
20	a19	a20	#5	18'-7"	35'-1"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	56	56
21	a21	a22	#5	19'-0"	35'-4"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	-	20	-	36
F1	a1		#5	39'-5"		9	9		
	b1		#6	4'-0"		5	10		
	x1		#5	2'-3"		38	-		
69	a2		#5	33'-2"		9	9		
65	b1		#6	4'-0"		10	10		
	a2		#5	33'-2"		9	9		
67	b1		#6	4'-0"		10	10		
	a2		#5	33'-2"		9	9		
71	b1		#6	4'-0"		10	10		
	a2		#5	33'-2"		14	-		
	a3		#7	33'-2"		-	8		
	a4		#6	33'-2"		-	6		
	b1		#6	4'-0"		16	16		
	x1		#6	4'-2"		32	32		

SN 016-1050

Deck Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IC	
	Stage IC		Stage IC	Side A	Side B
F1	a2	#5	20'-1"	2 x 14	2 x 9
	b1	#6	4'-0"	16	10
	x2	#5	4'-2"	35	-
74	a3	#5	35'-1"	9	9
	b1	#6	4'-0"	10	10
78	a4	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
80	a4	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
82	a4	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
84	a4	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
86	a4	#5	28'-2"	9	9
	b1	#6	4'-0"	10	10
Abut. 89	a1	#6	28'-2"	9	4
	b1	#6	4'-0"	10	-
	u3	#5	3'-4"	-	36
	x1	#5	2'-3"	36	-

Parapet Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IC	
	Stage IC		Stage IC	Side A	Side B
F1	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
74	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
78	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
80	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
82	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
84	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
86	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
Abut. 89	d1	#5	4'-7"	6	-
	d2	#4	5'-10"	6	-

Parapet Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IB	
	Stage IB		Stage IB	Side A	Side B
21	d2	#4	5'-10"	3	3
	d1	#5	4'-7"	3	3
22	d1	#5	4'-7"	3	3
	d2	#4	5'-10"	3	3
F1	d1	#5	4'-7"	5	6
	d2	#4	5'-10"	5	6
69	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
65	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
67	d1	#5	4'-7"	6	6
	d2	#4	5'-10"	6	6
71	d2	#4	5'-10"	8	8
	d1	#5	4'-7"	8	8

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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1046, 016-1050, 016-1062, 016-1114
SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

4/14/2006 10:30:07 AM

REINFORCEMENT BAR SCHEDULES

SN 016-1113

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029BR I	COOK	344	207
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IC	Stage II		Stage IC	Stage II	Stage IC		Stage II	
						Side A	Side B	Side A	Side B
3	a1	a2	#5	31'-6"	29'-10"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
5	a3	a4	#5	35'-0"	29'-7"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
7	a5	a6	#5	22'-7"	30'-0"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
10	a7	a8	#5	25'-3"	30'-0"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
11	a9	a10	#5	27'-5"	31'-1"	2 x 9	2 x 4	9	9
	a11		#6	27'-8"			2 x 5		
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	53		32	
B11	a12		#5	29'-0"		9	4		
(Ramp B)	a13		#6	29'-0"			5		
	b1		#6	4'-0"		10	10		
	x1		#5	2'-3"		30	30		

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IC	Stage II		Stage IC	Stage II	Stage IC		Stage II	
						Side A	Side B	Side A	Side B
3	d1	d1	#5	4'-7"	4'-7"	6	6	3	3
		d2	#4		5'-10"			3	3
5	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3		3	3
	d14		#4	7'-4"			3		
7	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
10	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
11		d1	#5		4'-7"			3	3
		d2	#4		5'-10"			3	3
B11	d1		#5	4'-7"		3	3		
(Ramp B)	d6		#4	6'-4"		3	3		

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
A3	a21	a22	#5	18'-8"	23'-11"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
A5	a21	a22	#5	18'-8"	28'-11"	9	4	9	4
	a23	a24	#6	28'-8"	28'-11"		5		5
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
A7	a16	a20	#5	18'-7"	36'-11"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
A9	a16	a19	#5	18'-7"	22'-8"	9	9	2 x 9	2 x 9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	44	44
A10	a16	a18	#5	18'-7"	21'-2"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
B10		a14	#5		30'-1"			4	9
(Ramp B)		a15	#6		30'-1"			5	
		b1	#6		4'-0"			10	10
A11	a16	a17	#5	18'-7"	21'-3"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	19	19

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
A3	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A5	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A7	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
	d3	d1	#4	6'-10"		3		3	
A9	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A10	d1	d1	#5	4'-7"	4'-7"	3	3	3	2
	d2	d2	#4	5'-10"	5'-7"	3	3	3	2
B10	d1		#5	4'-7"		6	5		
(Ramp B)	d2		#4	5'-10"		6	5		
A11	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3		3	
	d5	d5	#4	5'-7"	5'-7"		3		3

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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1113

SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

4/14/2006 10:35:25 AM

REINFORCEMENT BAR SCHEDULES

SN 016-1112

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0299 I	COOK	344	208
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581

Deck Reinforcement Schedule

Location	Bar			Size	Length			Number											
	Stage IA	Stage IC	Stage II		Stage IA		Stage IC		Stage II		Stage IA		Stage IC		Stage II				
					Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B			
12	a13		a3	#5	26'-8"		29'-7"	9	9	-	-	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
14	a13		a3	#5	26'-8"		29'-7"	9	9	-	-	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
15	a12		a3	#5	26'-5"		29'-7"	9	9	-	-	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
19	a12		a3	#5	26'-5"		29'-7"	9	9	-	-	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
22	a10		a11	#5	36'-6"		21'-9"	9	9	-	-	2x9	2x9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
26	a8		a9	#5	36'-8"		23'-5"	9	9	-	-	2x9	2x9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
27	a6		a7	#5	37'-3"		24'-3"	9	9	-	-	2x9	2x9						
	b1		b1	#6	4'-0"		4'-0"	5	5	-	-	5	5						
28	a1		a3	#5	18'-9"		29'-7"	9	9	2x9	2x9	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	5	5	5	5						
	x1		x1	#5	2'-3"		2'-3"	19	19	55	55	34	34						
29	a1		a3	#5	18'-9"		29'-7"	9	9	2x9	2x9	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	5	5	5	5						
31	a1		a3	#5	18'-9"		29'-7"	9	9	9	9	9	9						
	b1		b1	#6	4'-0"		4'-0"	5	5	5	5	5	5						

Parapet Reinforcement Schedule

Location	Bar			Size	Length			Number											
	Stage IA	Stage IC	Stage II		Stage IA		Stage IC		Stage II		Stage IA		Stage IC		Stage II				
					Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B	Side A	Side B			
12	d1		d1	#5	4'-7"		4'-7"					3				3			3
	d2		d2	#4	5'-10"		5'-10"					3				3			3
14	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
15	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
19	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
22	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
26	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
27	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2		d2	#4	5'-10"		5'-10"	3	3							3			3
28	d3		d2	#4	6'-4"		5'-10"	3								3			3
	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d2			#4	5'-10"											3			3
29	d14		d2	#4	7'-4"		5'-10"	3								3			3
	d1		d1	#5	4'-7"		4'-7"	3	3							3			3
	d3			#4	6'-4"														
31	d2		d17	#4	5'-10"		2'-5"	3								3			3
	d1		d18	#5	4'-7"		2'-5"	3	3							3			3
	d14			#4	7'-4"											3			

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1112

SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

4/14/2006 10:34:45 AM

REINFORCEMENT BAR SCHEDULES

SN 016-1112 (RAMP A)

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0299	COOK	344	209
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
A12	a14	a16	#5	18'-7"	15'-3"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	19	19
A13	a14	a15	#5	18'-7"	18'-1"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	19	19
A16	a14	a15	#5	18'-7"	18'-1"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	19	19
A19	a14	a17	#5	18'-7"	20'-0"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
	x1	x1	#5	2'-3"	2'-3"	19	19	38	38
A21	a18	a19	#5	21'-8"	22'-9"	4	9	4	9
	a20	a21	#6	21'-8"	22'-9"	5	-	5	-
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
A22	a22	a23	#5	26'-6"	25'-4"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
A27	a24	a25	#5	26'-6"	35'-0"	9	9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
A12	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A13	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A16	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A19	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A21	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A22	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
A27	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d2	d2	#4	5'-10"	5'-10"	3	3	3	3

SN 016-1112 (RAMP B)

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
B12		a32	#5	26'-4"			2 x 9	2 x 9	
		b1	#6	4'-0"			10	10	
B14		a25	#5	21'-8"			2 x 9	2 x 9	
		b1	#6	4'-0"			10	10	
B16		a33	#5	31'-7"			14	9	
		b1	#6	4'-0"			16	10	
		x2	#5	4'-2"			30	-	
		x1	#5	2'-3"			-	30	
Abut. B17		a34	#6	27'-1"			4	9	
		b1	#6	4'-0"			-	10	
		u1	#5	2'-8"			26	-	
		x1	#5	2'-3"			-	26	

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IC		Stage IA	Stage IC	Stage IA		Stage IC	
						Side A	Side B	Side A	Side B
B12		d1	#5	4'-7"				6	6
		d2	#4	5'-10"				6	-
		d3	#4	6'-4"				-	3
B14		d1	#5	4'-7"				6	6
		d2	#4	5'-10"				6	6
B16		d1	#5	4'-7"				10	6
		d2	#4	5'-10"				10	6
Abut. B17		d1	#5	4'-7"				4	6
		d2	#4	5'-10"				4	6

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REVISIONS	
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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1112 RAMPS A & B
SCALE: N/A
DATE: 4/14/2006
DRAWN BY: BDC
CHECKED BY: BLU

150448 AM
4/14/2006

REINFORCEMENT BAR SCHEDULES

SN 016-1111

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	210
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581

Location	Bar			Size	Length			Number					
	Stage IA	Stage IC	Stage II		Stage IA	Stage IC	Stage II	Stage IA		Stage IC		Stage II	
								Side A	Side B	Side A	Side B	Side A	Side B
D7	a1	a1	a1	#6	27'-1"	27'-1"	27'-1"	9	4	9	4	9	4
	b1	b1	b1	#6	4'-0"	4'-0"	4'-0"	10	4	10	4	10	4
	u1	u1	u1	#5	2'-8"	2'-8"	2'-8"	-	28	-	28	-	28
D7	a1			#6	27'-1"			9	4				
	b1			#6	4'-0"			10	4				
	u1			#5	2'-8"			-	28				

Location	Bar		Size	Length		Number			
	Stage IA	Stage II		Stage IA	Stage II	Stage IA		Stage II	
						Side A	Side B	Side A	Side B
D7	d2	d2	#4	5'-10"	5'-10"	4	4	4	4
	d1	d1	#5	4'-7"	4'-7"	28	28	28	28
	d2	d2	#4	5'-10"	5'-10"	6	6		
	d1	d1	#5	4'-7"	4'-7"	6	6		

SN 016-1110

Deck Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
				Side A	Side B
D1	a1	#6	24'-2"	5	5
	a2	#5	24'-2"	4	4
	b1	#6	4'-0"	10	10
Susp. Span A	a1	#6	24'-2"	5	5
	a2	#5	24'-2"	4	4
	b1	#6	4'-0"	10	10
	x1	#5	2'-3"	25	25
	a1	#6	24'-2"	-	5
	a2	#5	24'-2"	10	5
Susp. Span B	a2	#5	24'-2"	10	5
	b1	#6	4'-0"	10	10

Parapet Reinforcement Schedule

Location	Bar	Size	Length	Number	
				Stage IA	
				Side A	Side B
D1	d	#4	5'-10"	6	6
	d1	#5	4'-7"	6	6
Susp. Span A	d	#4	5'-10"	6	6
	d1	#5	4'-7"	6	6
Susp. Span B	d	#4	5'-10"	6	6
	d1	#5	4'-7"	6	6

SN 016-0137

Deck Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IB		Stage IA	Stage IB	Stage IA		Stage IB	
						Side A	Side B	Side A	Side B
7	a1	a2	#5	24'-5"	29'-7"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
11	a1	a2	#5	24'-5"	29'-7"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
15	a1	a2	#5	24'-5"	29'-7"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
19	a3	a2	#5	25'-9"	29'-7"	2 x 9	2 x 9	9	9
	b1	b1	#6	4'-0"	4'-0"	5	5	5	5
23	a5	a2	#5	28'-8"	29'-7"	-	2 x 14	-	14
	a7	a4	#6	28'-10"	29'-7"	2 x 6	-	6	-
	a8	a6	#7	29'-5"	29'-7"	2 x 8	-	8	-
	b1	b1	#6	4'-0"	4'-0"	8	8	8	8
	x1	x1	#5	4'-2"	4'-2"	56	56	30	30
	N. Abut	a9	a4	#6	29'-9"	29'-7"	2 x 4	-	2 x 4
	a9	a4	#6	29'-9"	29'-7"	-	2 x 6	-	2 x 6
	a10	a6	#7	30'-5"	29'-7"	-	2 x 8	-	2 x 8
	b1	b1	#6	4'-0"	4'-0"	-	5	-	5
	u2	u2	#5	2'-7"	2'-7"	58	-	58	-

Parapet Reinforcement Schedule

Location	Bar		Size	Length		Number			
	Stage IA	Stage IB		Stage IA	Stage IB	Stage IA		Stage IB	
						Side A	Side B	Side A	Side B
7	d2	d1	#4	5'-10"	4'-7"	3	3		
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
11	d16	d16	#4	5'-1"	5'-1"			3	3
	d2	d1	#4	5'-10"	4'-7"	3	3		
15	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
	d16	d16	#4	5'-1"	5'-1"			3	3
19	d2	d1	#4	5'-10"	4'-7"	3	3		
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3
23	d16	d16	#4	5'-1"	5'-1"			3	3
	d2	d1	#4	5'-10"	4'-7"	3	3		
N. Abut.	d1	d1	#5	4'-7"	4'-7"	4	4	4	4
	d16	d16	#4	5'-1"	5'-1"			4	4
N. Abut.	d2	d2	#4	5'-10"	5'-10"	3	3	3	3
	d1	d1	#5	4'-7"	4'-7"	3	3	3	3

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
REINFORCEMENT BAR SCHEDULE
SN 016-1111, 016-1110 & 016-0137

SCALE: N/A
DATE: 5/25/2006

DRAWN BY: BDC
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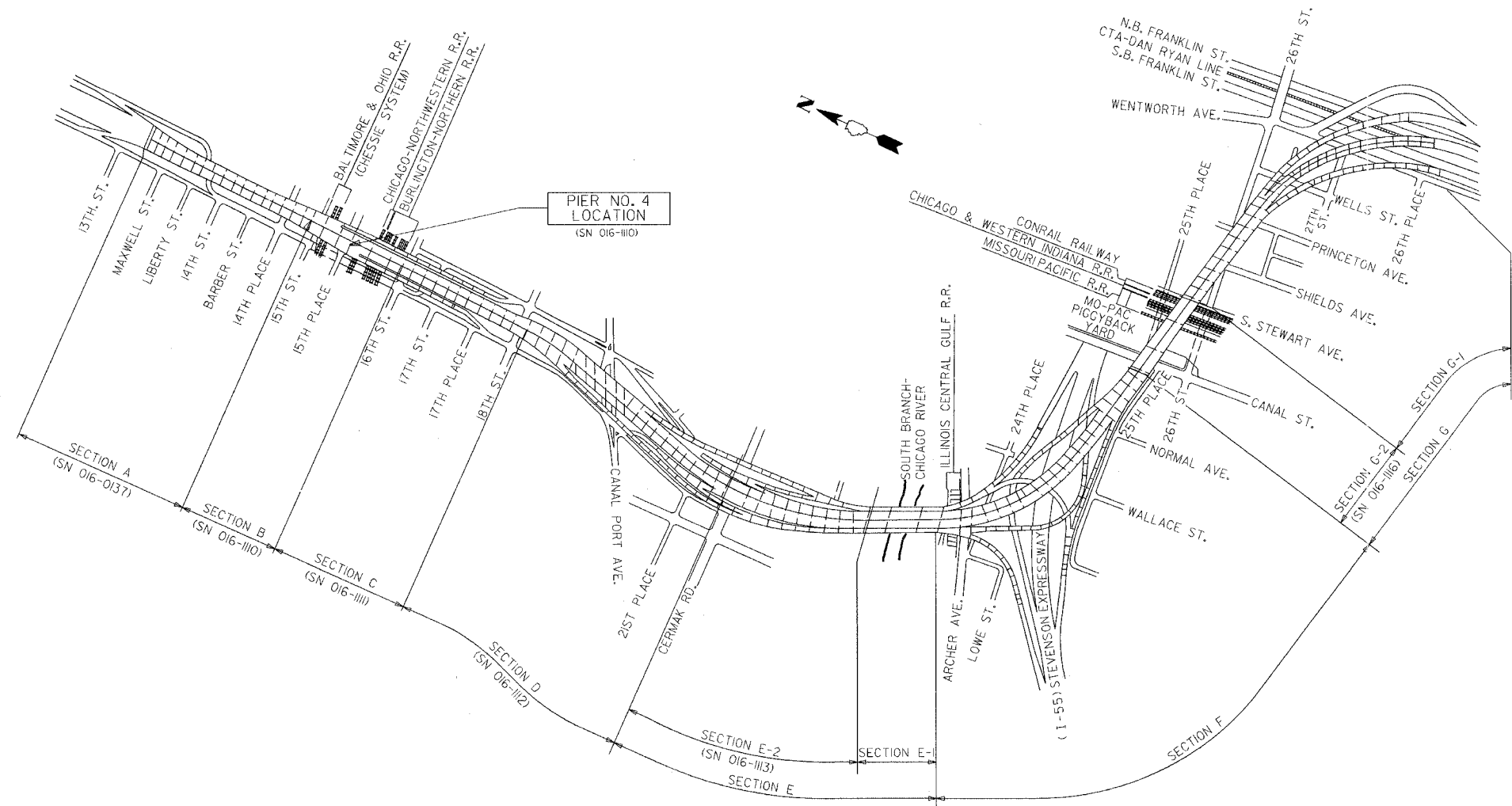
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	212
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
2003-0291				

Sheet No 1
of 8 Sheets

CONTRACT #62581



PIER NO. 4
LOCATION
(SN 016-1110)

KEY PLAN
DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

Thomas E. Szymanski
5-18-06
exp. 11-30-06

GENERAL 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 for the work.
- The slab is to be removed in stages. Before starting the concrete removal, the Contractor is required to submit to the Engineer for approval his staging plans and method of removal.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.
- Field welding of construction accessories will not be permitted to beams or girders.
- Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
- The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.
- Finger plate expansion joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
- 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.
- Fasteners shall be high strength bolts. Bolts 3/4" ϕ , open holes 13/16" ϕ unless otherwise noted.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
- All Construction joints shall be bonded.
- Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.
- Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".
- Existing design and fabrication plans are available upon request.
- All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 35,620 lbs.

DESIGN STRESSES

$f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	24.0
Concrete Superstructure	Cu Yd	27.8
Furnishing and Erecting Structural Steel	LS	0.15
Reinforcement Bars, Epoxy Coated	Pound	3320
Fabric Reinforced Elastomeric Trough	Foot	89
Mechanical Splice	Each	178
Bar Splicer	Each	24
Field Measurements	L. Sum	0.15

PIER NO. 4

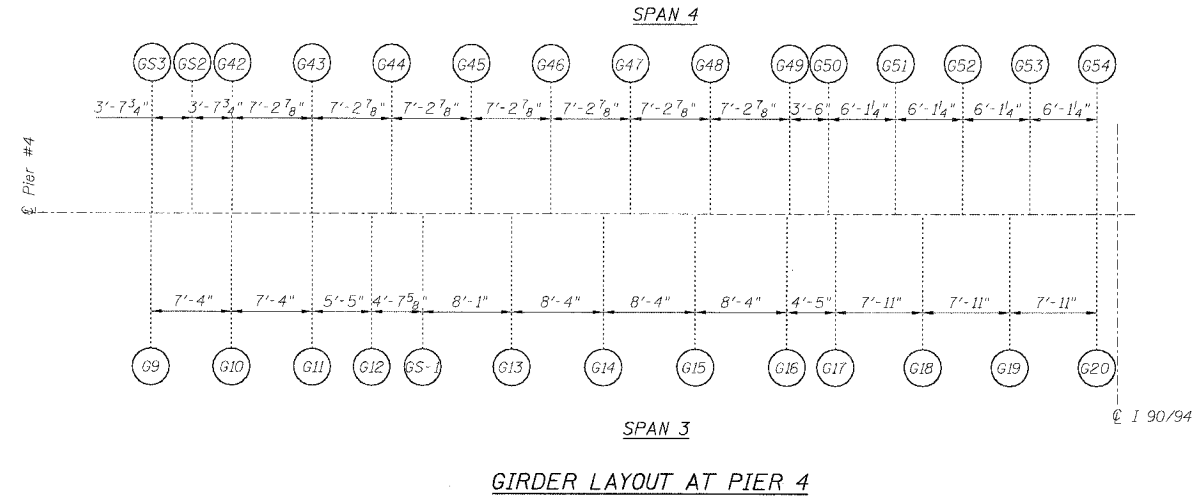
KEY PLAN

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY: <i>RLK</i> DATE: 5/03 CHECKED BY: <i>SDS</i> DATE: 5/03 BOOK NUMBER:
FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1110 (SOUTHBOUND)		PROJECT NO. 4222-3
SEC 2003-0291 COOK COUNTY		SHEET NO.
CHASTAIN & ASSOCIATES CONSULTING ENGINEERS 8000 W. BERTH MARVE AVENUE SUITE 804 CHICAGO, ILLINOIS 60681 TEL: 774-0000 FAX: 837-4400		

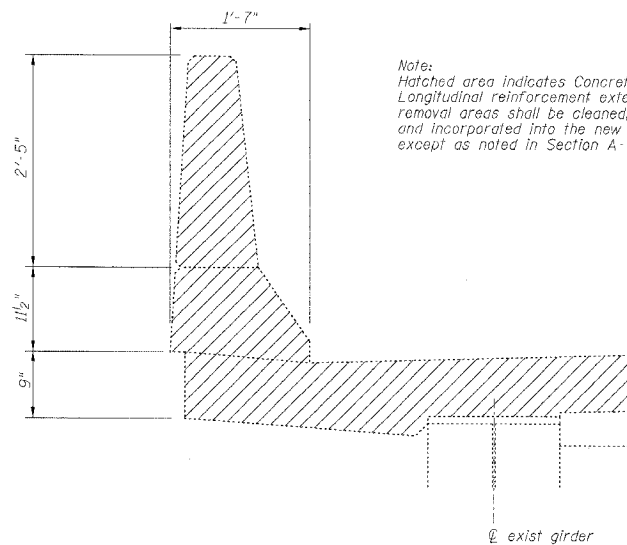
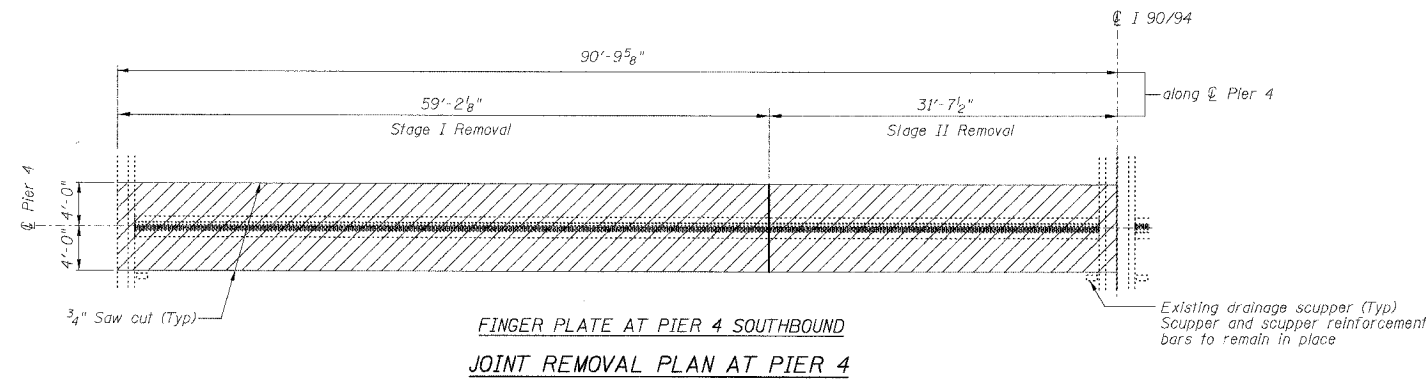
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	213
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
* 2003-0291				
CONTRACT #62581				

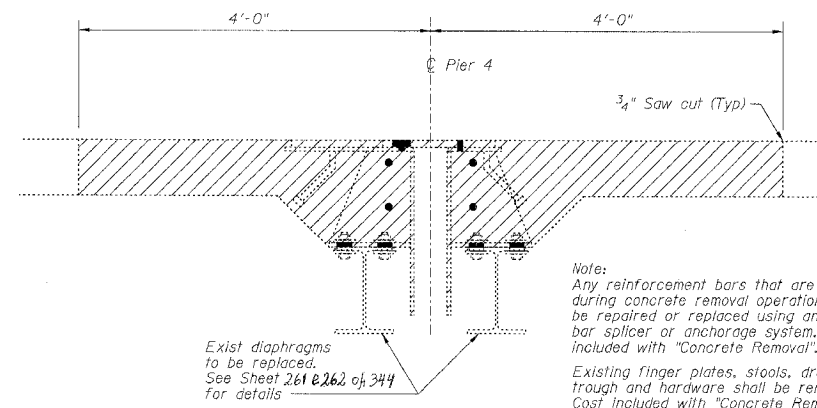
Sheet No 2
of 8 Sheets



Note:
All dimensions on girder layout
are given along centerline of bearing.

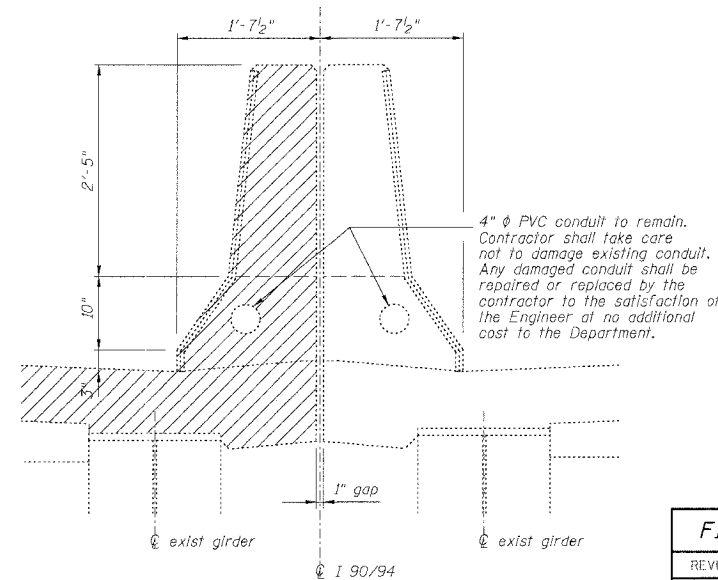


Note:
Hatched area indicates Concrete Removal.
Longitudinal reinforcement extending into
removal areas shall be cleaned, straightened
and incorporated into the new construction
except as noted in Section A-A on Sheet 4



Exist diaphragms
to be replaced.
See Sheet 261 & 262 of 344
for details

Note:
Any reinforcement bars that are damaged
during concrete removal operations shall
be repaired or replaced using an approved
bar splicer or anchorage system. Cost
included with "Concrete Removal".
Existing finger plates, stools, drainage
trough and hardware shall be removed.
Cost included with "Concrete Removal".



4" ϕ PVC conduit to remain.
Contractor shall take care
not to damage existing conduit.
Any damaged conduit shall be
repaired or replaced by the
contractor to the satisfaction of
the Engineer at no additional
cost to the Department.

PIER NO. 4

FINGER PLATE EXPANSION JOINT REMOVAL DETAILS

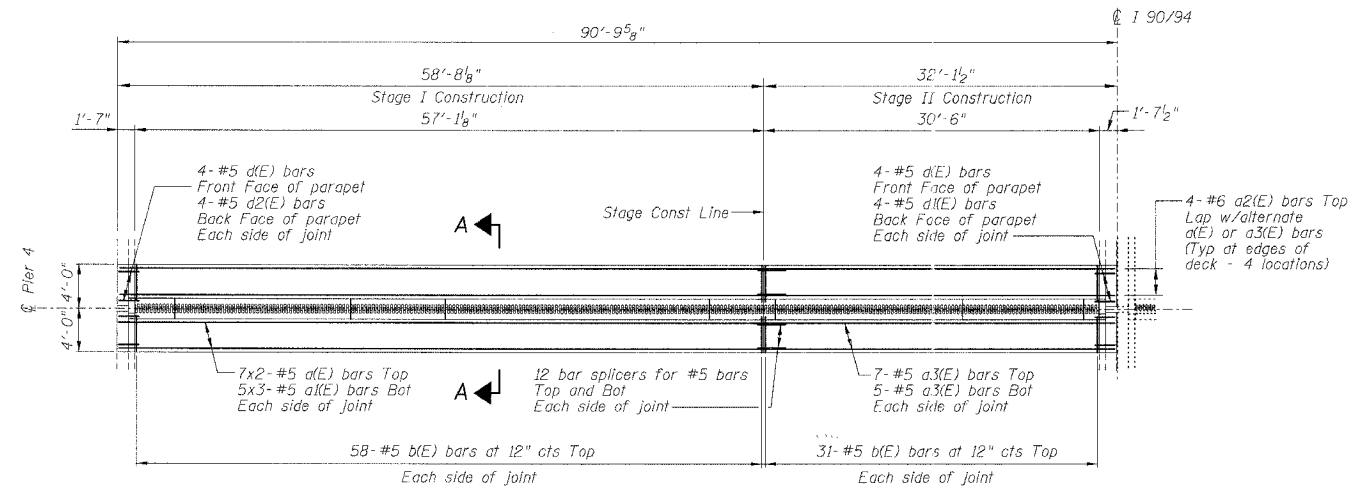
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			DRAWN BY: RLK DATE: 5/03
FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1110 (SOUTHBOUND)			CHECKED BY: SDS DATE: 5/03
SEC 2003-0291 COOK COUNTY			PROJECT NO.: 4222-3
			SHEET NO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

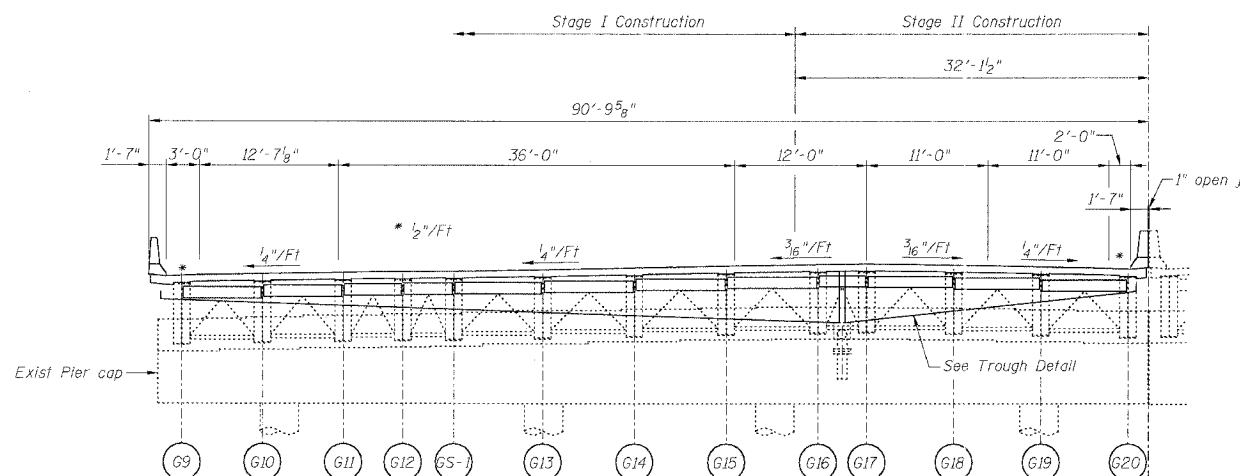
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	244	214
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
* 2003-0291				

Sheet No 3
of 8 Sheets

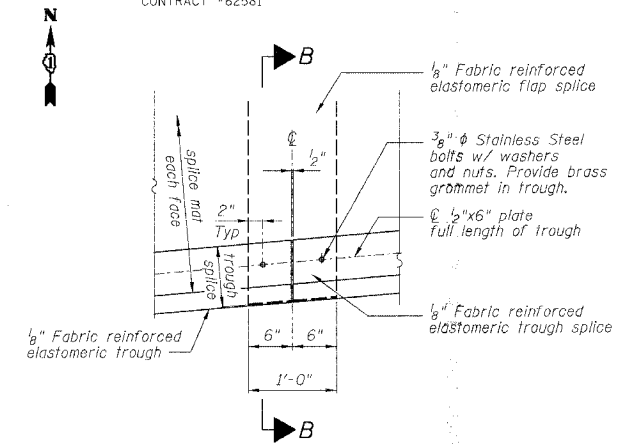
CONTRACT #62581



FINGER PLATE AT PIER 4 SOUTHBOUND
JOINT RECONSTRUCTION PLAN AT PIER 4
(Dimensions along C/Pier)

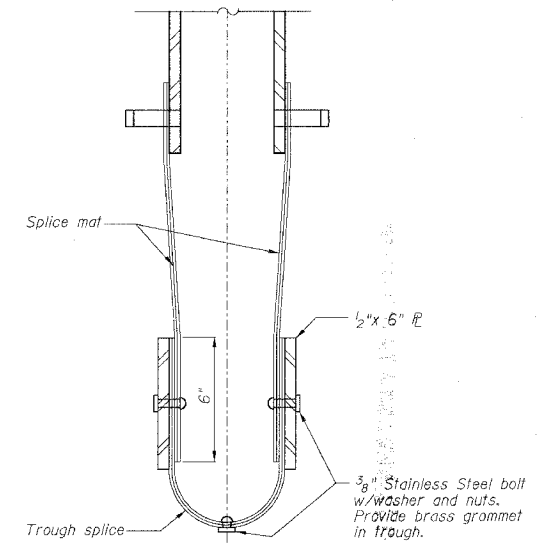


PIER 4 SOUTHBOUND
ELEVATION AT PIER 4 (LOOKING NORTH)
(Dimensions along C/Pier)

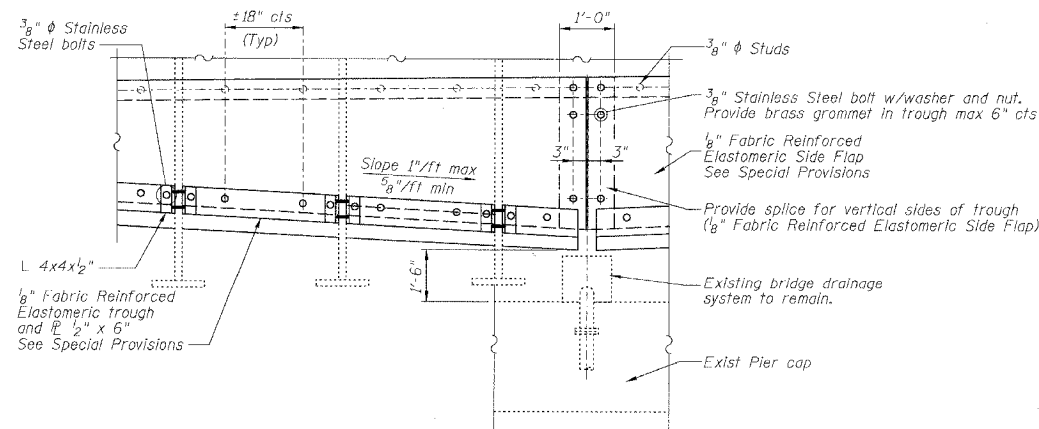


TROUGH SPLICE DETAIL

MIN BAR LAP
#5 bar = 1'-8"



SECTION B-B



TROUGH DETAIL

NOTES

For Section A-A see Sheet 4 of 8.

Bars indicated thus 5 x 3 - #5 etc. indicates 5 lines of bars with 3 lengths per line.

PIER NO. 4

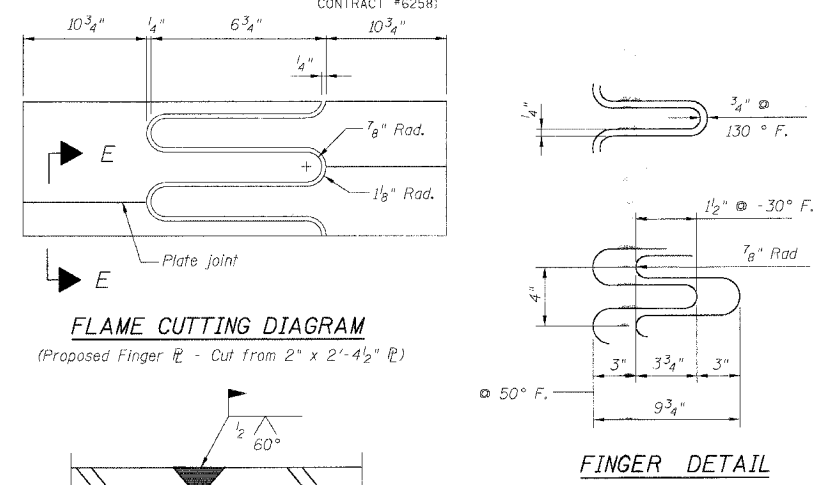
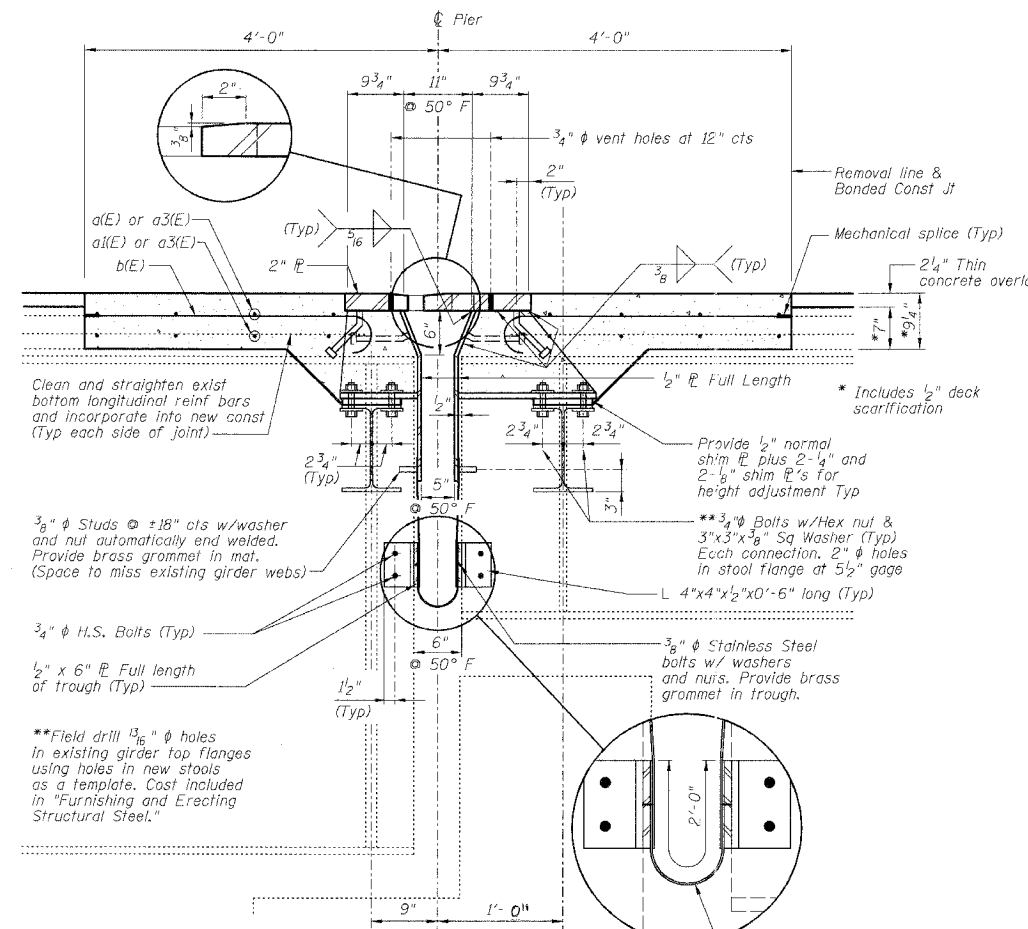
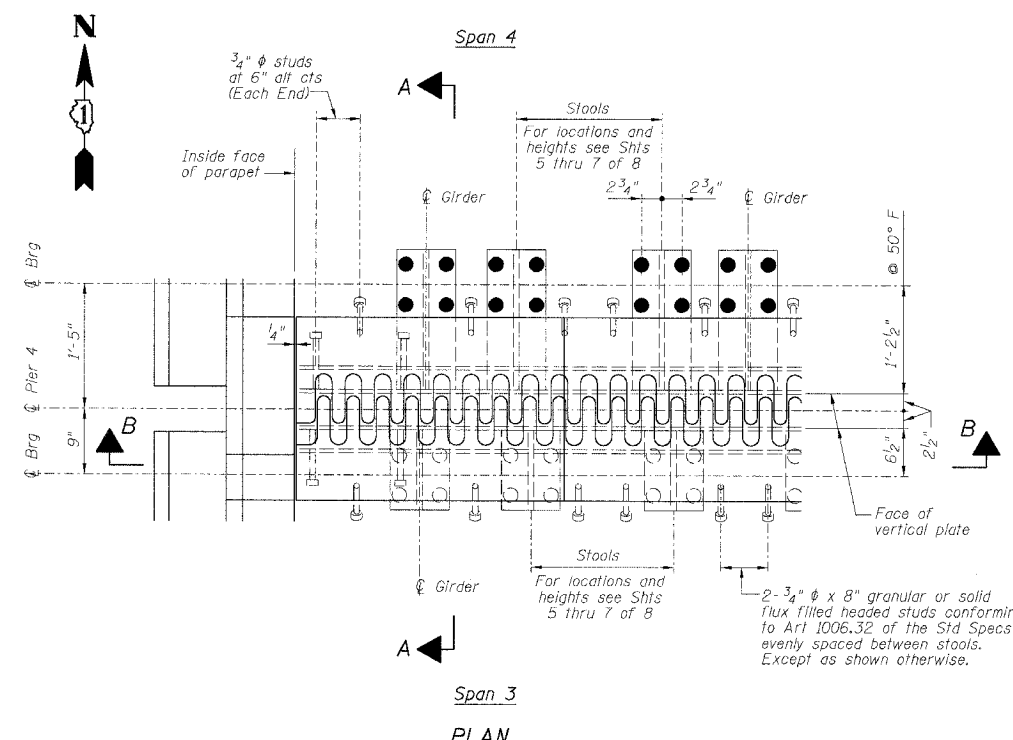
REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE
No.	DATE	INITIALS	DRAWN BY	RLK	5/03
1			CHECKED BY	SDS	5/03
2			BOOK NUMBER		
3			PROJECT NO.	4222-3	
4			SHEET NO.		
5			FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1110 (SOUTHBOUND) SEC 2003-0291 COOK COUNTY		
6			HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS 6800 W. BEVY MARSH AVENUE SUITE 204 CHICAGO, ILLINOIS 60631 TEL: 774-0030 FAX: 774-0035		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	215
FED/ADJ DIST. NO.		LANDS		
PROJECT				

Sheet No 4
of 8 Sheets

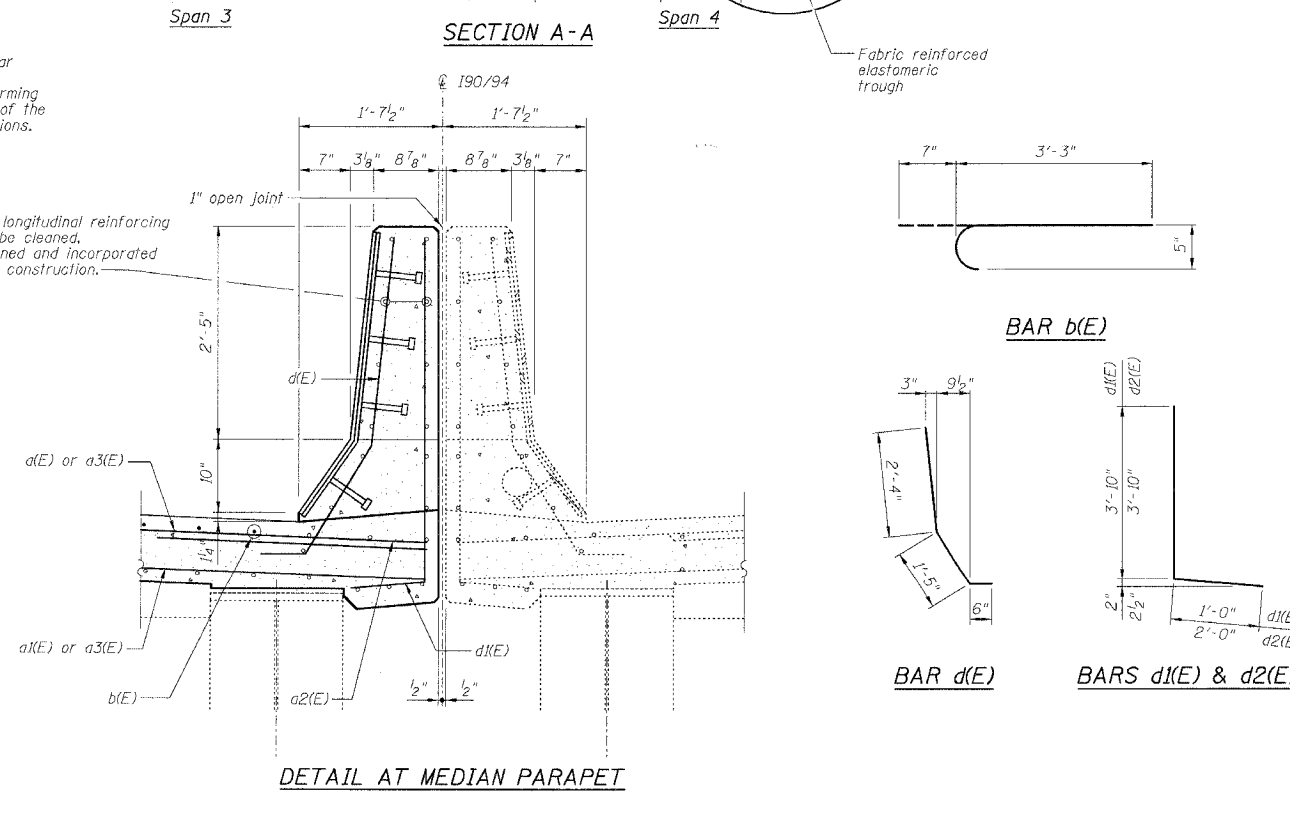
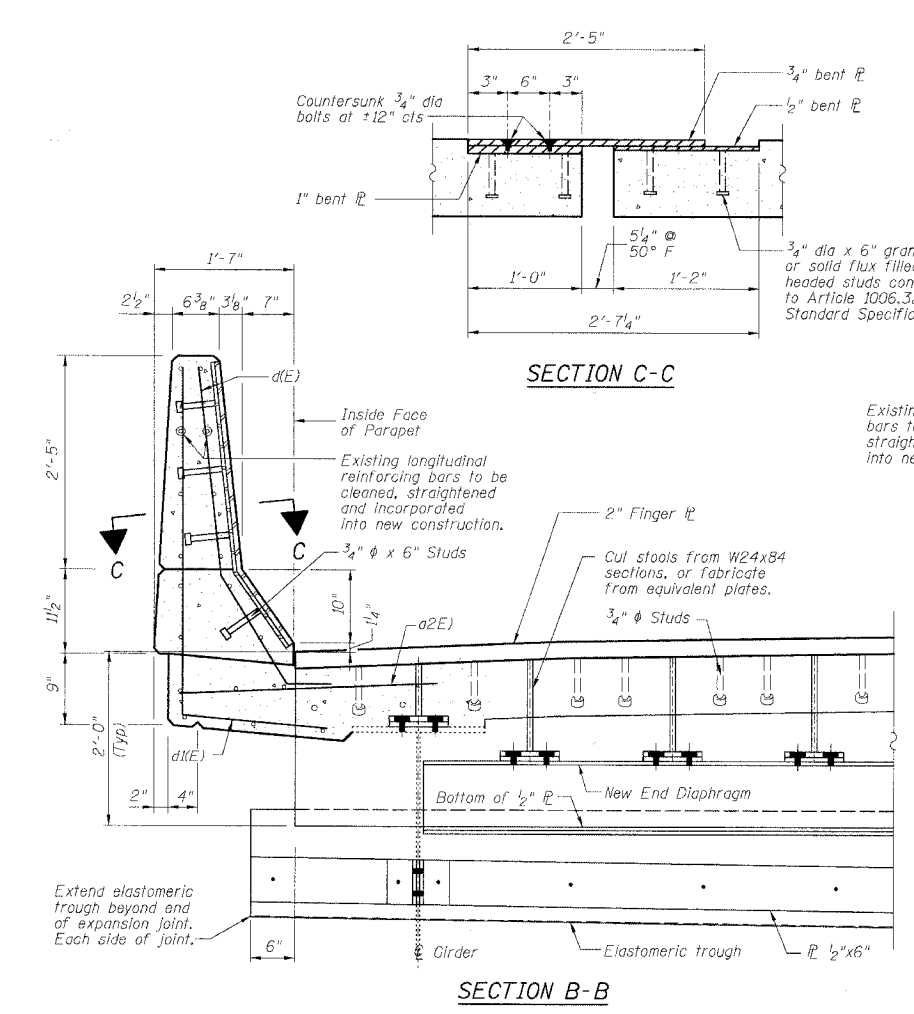
2003-029
CONTRACT #62581



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	28	#5	30'-6"	—	
a1(E)	30	#5	20'-9"	—	
a2(E)	16	#6	4'-6"	—	
a3(E)	24	#5	31'-10"	—	
b(E)	178	#5	3'-10"	C	
d(E)	16	#5	4'-3"	L	
d1(E)	8	#5	4'-10"	L	
d2(E)	8	#5	5'-10"	L	
Reinforcement Bars, Epoxy Coated				Pound	3320
Concrete Removal				Cu Yd	24.0
Concrete Superstructure				Cu Yd	27.8
Mechanical Splice				Each	178
Bar Splicers				Each	24

Reinforcing bars designated (E) shall be epoxy coated.



- NOTES**
- The Contractor shall bolt the Stools of the Fingerplate Joint Assembly to the top of the New End Diaphragms and to the top of the existing girders, as shown in Section A-A of this drawing.
 - Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
 - The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting Structural Steel".
 - Expansion Length = 348.5'

PIER NO. 4

FINGER PLATE EXPANSION JOINT DETAILS

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE RLK 5/03	
NO.	DATE	INITIALS	FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	CHECKED BY DATE SDS 5/03
1			SN 016-1110 (SOUTHBOUND)	COOK COUNTY	BOOK NUMBER
2			SEC 2003-029I		PROJECT NO. 4222-3
3					SHEET NO.

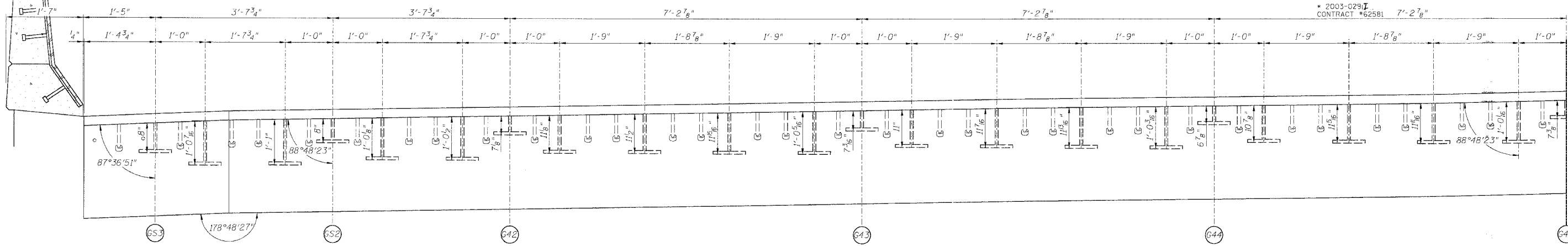
CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS

352 W. BRYN MAWR AVENUE
SUITE 304
CHICAGO, ILLINOIS 60611
312.734.0050
FAX 312.734.0055

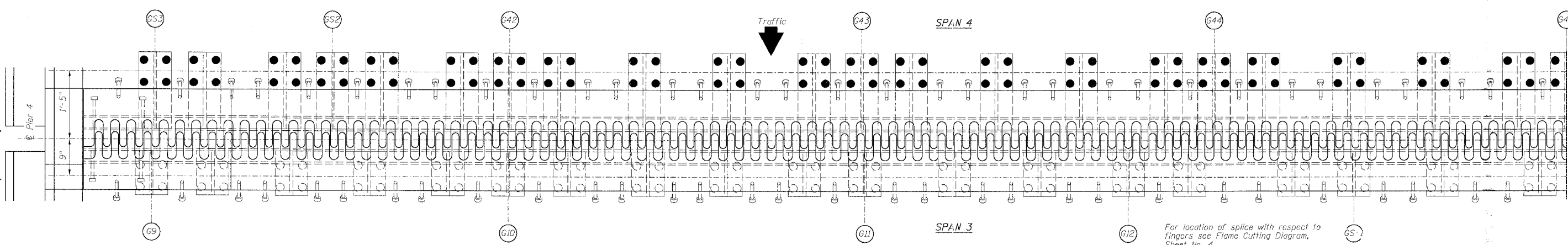
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.	ILLINOIS PROJECT			
* 2003-0291	CONTRACT #62581 7'-2 7/8"			

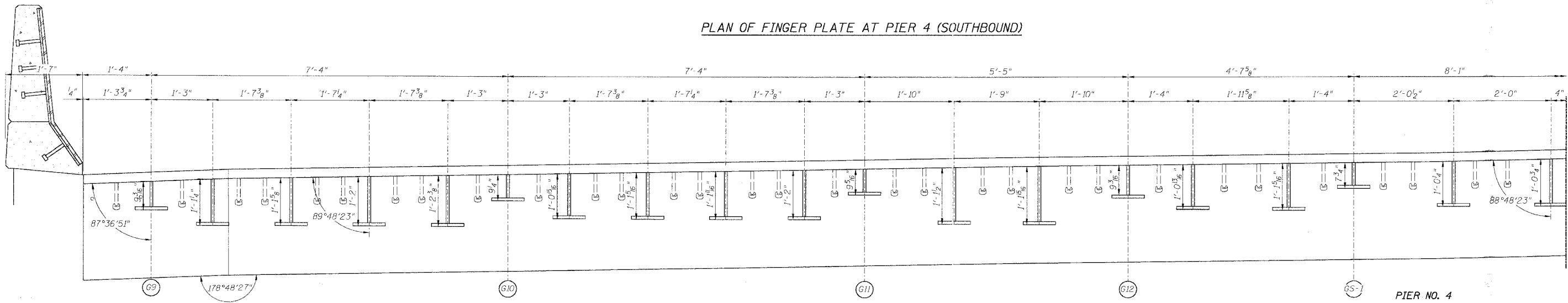
Sheet No 5
of 8 Sheets



SECTION A-A



PLAN OF FINGER PLATE AT PIER 4 (SOUTHBOUND)



SECTION B-B

PIER NO. 4

Note:
For optional splice detail see
flame cutting diagram on Sheet No. 4

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE
1		RLK	5/03	
2		SDS	5/03	
3				
4				
5				
6				
7				
8				
9				
0				

FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	PROJECT NO.	4222-3
SN 016-1110 (SOUTHBOUND)		SHEET NO.	
SEC 2003-0291	COOK COUNTY		

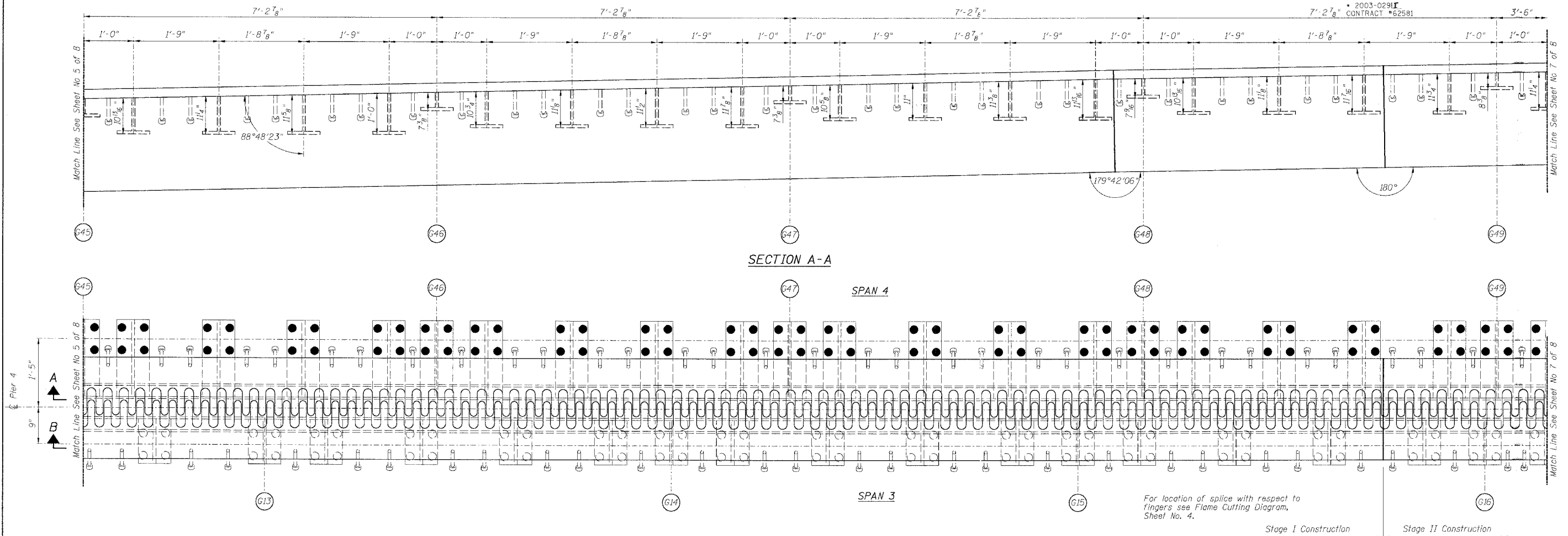
CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	8000 W. BRYN MAWR AVENUE SUITE 204 CHICAGO, ILLINOIS 60618 312-774-9950 FAX 312-774-0055
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

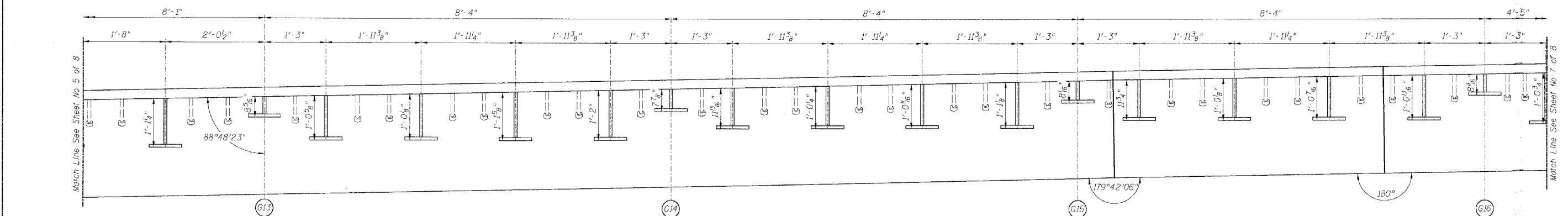
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FAI 90/94	*	COOK	344	217
FED/ADAD DIST. NO.	ILLINOIS	PROJECT		

Sheet No 6
of 8 Sheets

2003-0291I
CONTRACT #62581



PLAN OF FINGER PLATE AT PIER 4 (SOUTHBOUND)



SECTION B-B

PIER NO. 4

Note:
For optional splice detail see
Flame cutting diagram on Sheet No. 4

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY: DATE: RLK 5/03	
1	DATE	INITIALS		CHECKED BY: DATE: SDS 5/03	PROJECT NO. BOOK NUMBER
2					
3					
4					
5					
6					
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8					
9					
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FAI RTE 90/94 SB DAN RYAN EXPRESSWAY
SN 016-1110 (SOUTHBOUND)
SEC 2003-0291I COOK COUNTY

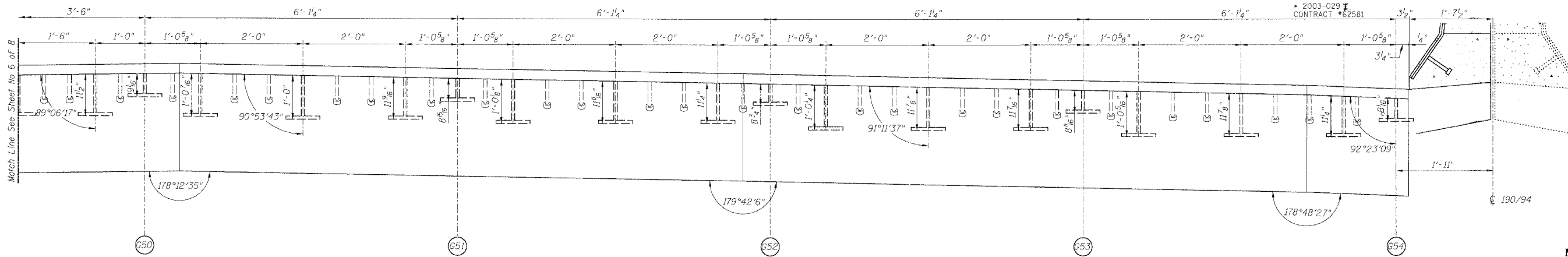
HOMER L.
CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
5929 W. BRYN MAWR AVENUE
SUITE 204
CHICAGO, ILLINOIS 60631
312-734-0000
FAX 312-734-0005

PROJECT NO.
4222-3
SHEET NO.

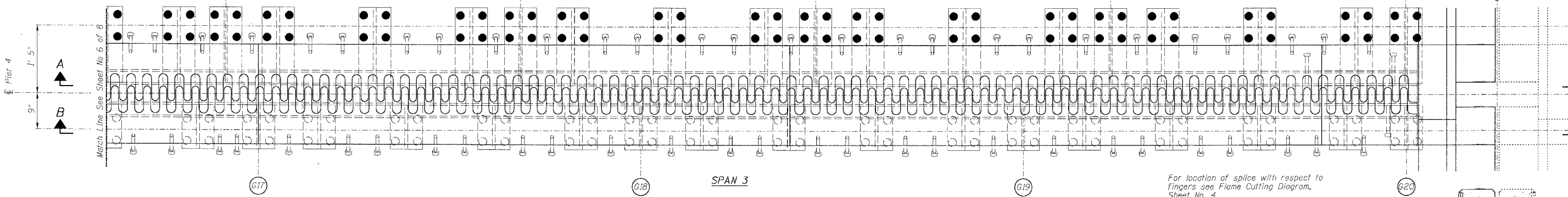
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

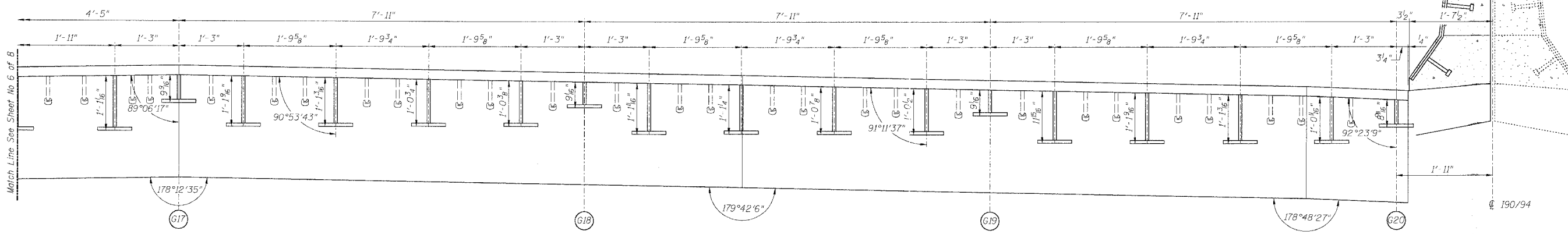
Sheet No 7
of 8 Sheets



SECTION A-A



PLAN OF FINGER PLATE AT PIER 4 (SOUTHBOUND)



SECTION B-B

For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

PIER NO. 4

Note:
For optional splice detail see flame cutting diagram on Sheet No. 4

REVISIONS			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY RLK	DATE 5/03
1						
2						
3						
4						
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7						
8						
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10						

FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	PROJECT NO. 4222-3
SN 016-1110 (SOUTHBOUND)	COOK COUNTY	
SEC 2003-029 I		

CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
9800 W. BRYAN MAWR AVENUE
SUITE 204
CHICAGO, ILLINOIS 60631
815-714-0500
FAX: 815-714-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	219
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
* 2003-0291 I CONTRACT #62581				

Sheet No 8
of 8 Sheets

NOTES

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

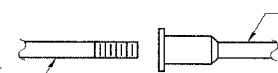
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s,allow} \times A_t$

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

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

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

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

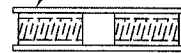


ROLLED THREAD DOWEL BAR



**** ONE PIECE**

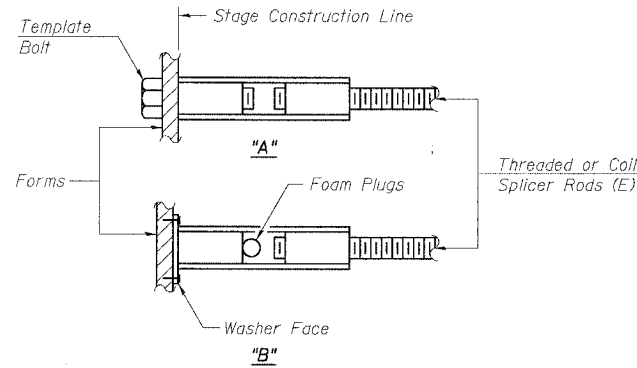
Wire Connector



WELDED SECTIONS

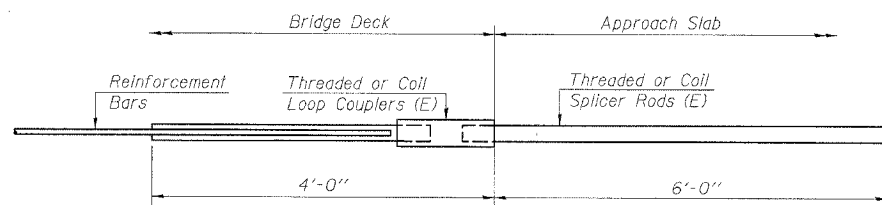
BAR SPLICER ASSEMBLY ALTERNATIVES

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



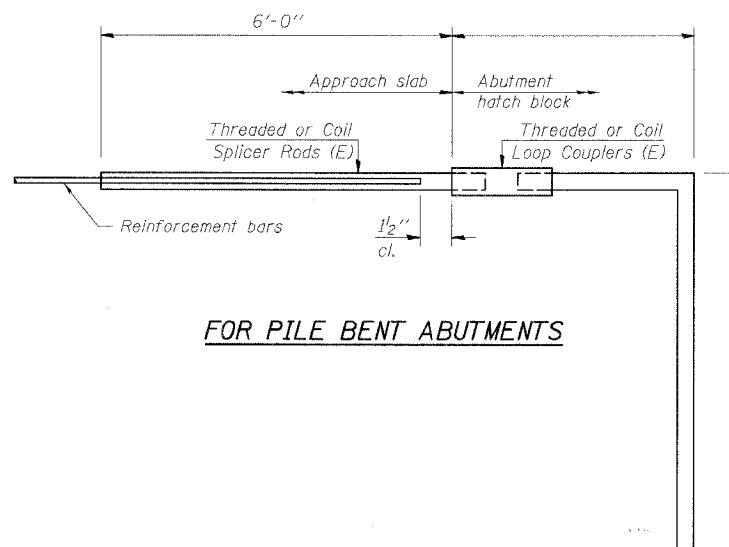
INSTALLATION AND SETTING METHODS

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



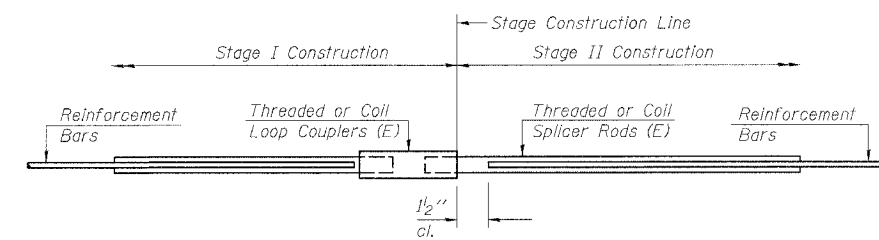
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	At Stage Construction Line in Deck

PIER NO. 4

BAR SPLICER ASSEMBLY DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY: RLK DATE: 5/03
1		CHECKED BY: SDS DATE: 5/03
2		BOOK NUMBER
3		PROJECT NO.
4		4222-3
5		SHEET NO.
6		
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FAI RTE 90/94 SB DAN RYAN EXPRESSWAY
SN 016-1110 (SOUTHBOUND)
SEC 2003-0291 I COOK COUNTY

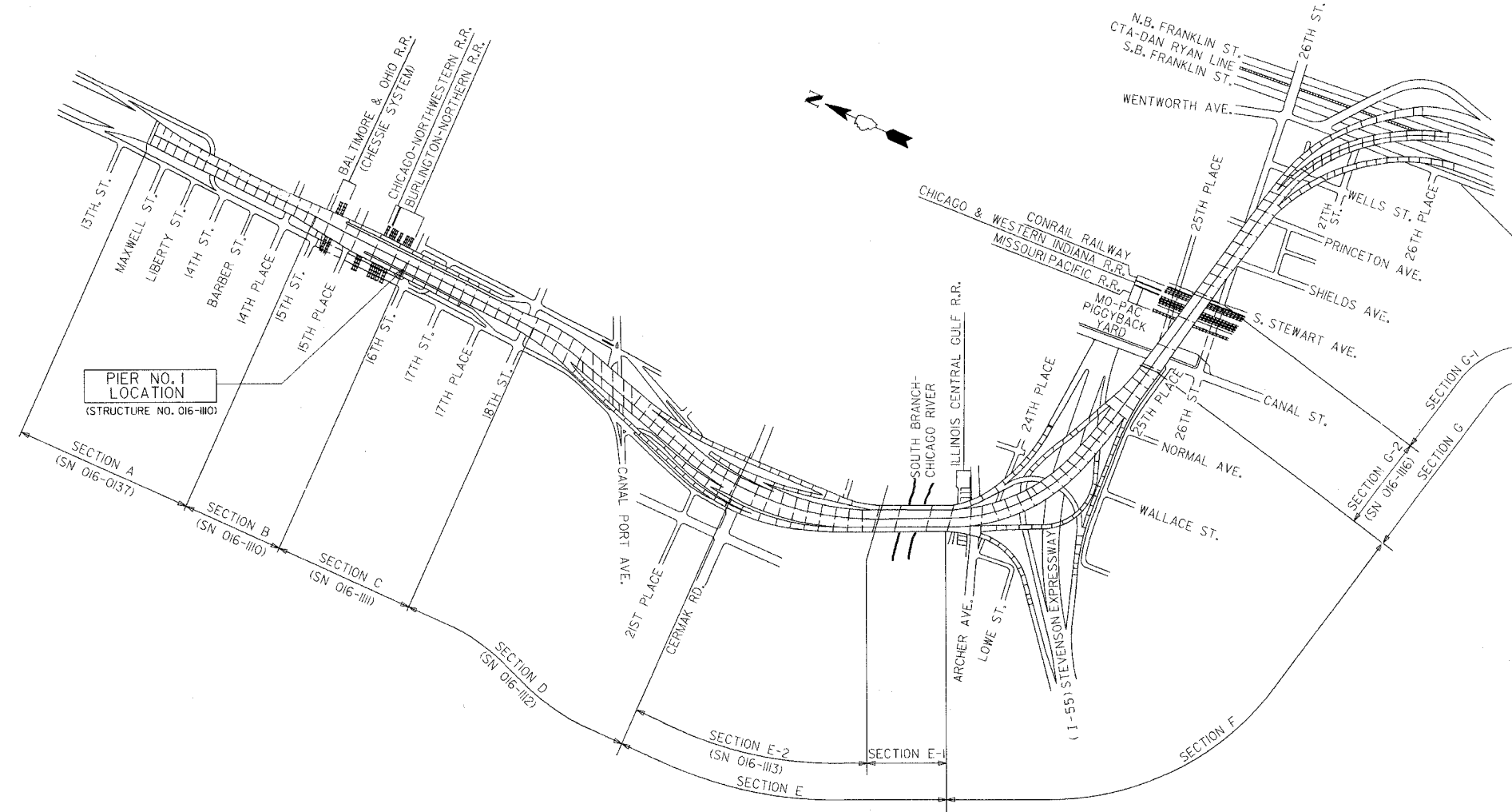
HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
4600 W. BERTH MARSH AVENUE
SUITE 204
CHICAGO, ILLINOIS 60681
312-714-9900
FAX 312-714-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	220

Sheet No. 1
of 8 Sheets

FED. ROAD DIST. NO. ILLINOIS PROJECT
* 2003-0291
CONTRACT #62581



KEY PLAN
DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

Thomas E. S. [Signature]
CHICAGO STRUCTURAL STEEL
5-18-06
expired 11-30-06

GENERAL 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 for the work.
- The slab is to be removed in stages. Before starting the concrete removal, the Contractor is required to submit to the Engineer for approval his staging plans and method of removal.
- Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.
- Field welding of construction accessories will not be permitted to beams or girders.
- Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".
- The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications
- Finger plate expansion joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
- 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
- Fasteners shall be high strength bolts. Bolts 3/4" ϕ , open holes 13/16" ϕ unless otherwise noted.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type I. Cost included with "Furnishing and Erecting Structural Steel".
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
- All Construction joints shall be bonded.
- Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.
- Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".
- Existing design and fabrication plans are available upon request.
- All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 25,610 lbs.

DESIGN STRESSES

$f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	17.3
Concrete Superstructure	Cu Yd	19.1
Furnishing and Erecting Structural Steel	LS	0.11
Reinforcement Bars, Epoxy Coated	Pound	2430
Fabric Reinforced Elastomeric Trough	Foot	64
Mechanical Splice	Each	130
Bar Splicer	Each	24
Field Measurements	L. Sum	0.11

PIER NO. 1

KEY PLAN

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE RLK 5/03
No.	DATE		INITIALS
1			BOOK NUMBER
2			PROJECT No.
3			4222-3
4			SHEET No.
5			
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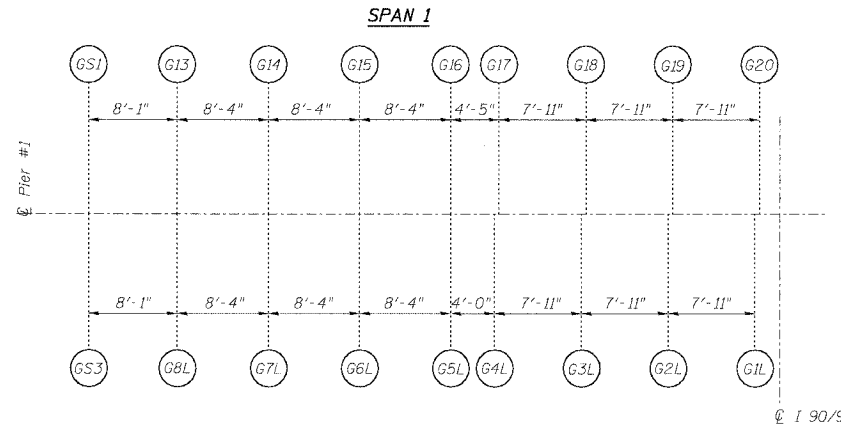
CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
8000 W. BRYN MAWR AVENUE
SUITE 204
CHICAGO, ILLINOIS 60611
312-774-0000
FAX: 312-774-0000

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

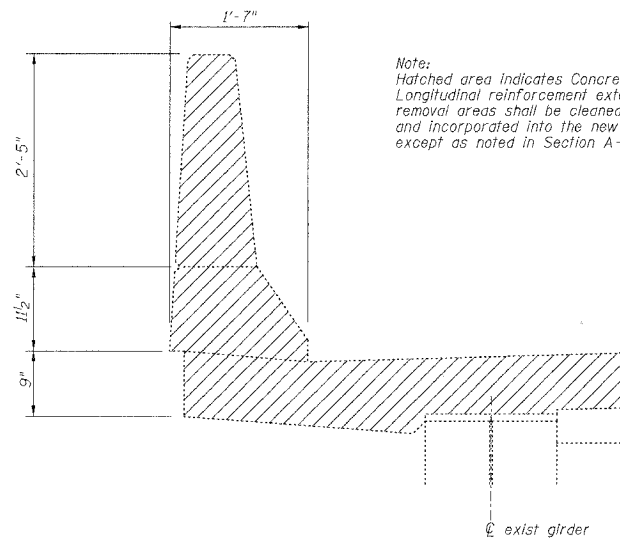
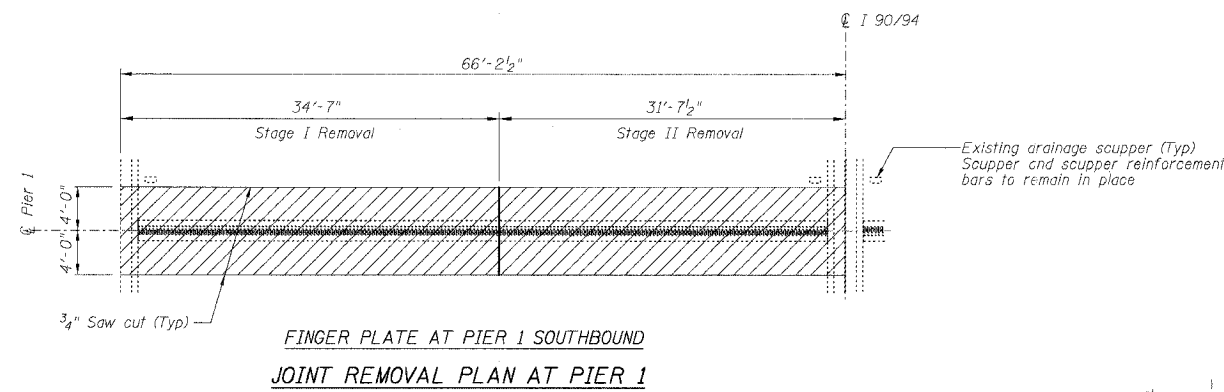
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	221
ROADWAY DIST. NO.	ILLINOIS	PROJECT		

Sheet No 2
of 8 Sheets

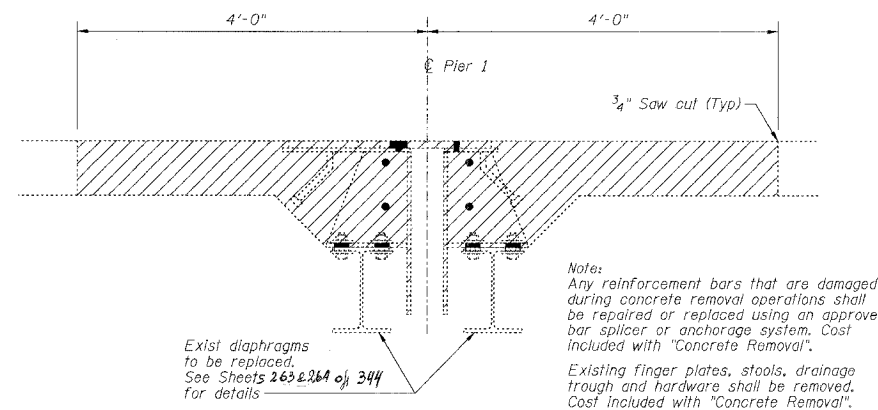
2003-0291
CONTRACT #62581



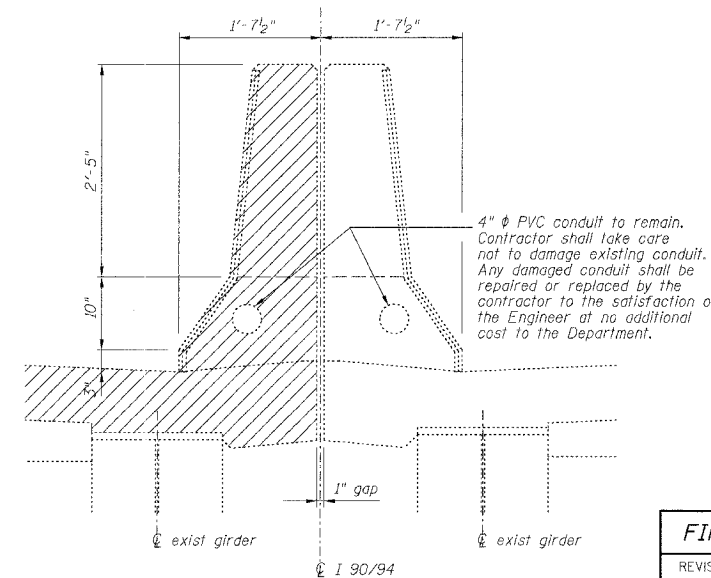
Note:
All dimensions on girder layout
are given along centerline of bearing.



Note:
Hatched area indicates Concrete Removal.
Longitudinal reinforcement extending into
removal areas shall be cleaned, straightened
and incorporated into the new construction
except as noted in Section A-A on Sheet 4



Note:
Any reinforcement bars that are damaged
during concrete removal operations shall
be repaired or replaced using an approved
bar splicer or anchorage system. Cost
included with "Concrete Removal".
Existing finger plates, stools, drainage
trough and hardware shall be removed.
Cost included with "Concrete Removal".



REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE
1				RLK 5/03
2				CHECKED BY DATE
3				SDS 5/03
4				BOOK NUMBER
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FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	PROJECT No.	4222-3
SN 016-1110 (SOUTHBOUND)		SHEET No.	
SEC 2003-0291	COOK COUNTY		

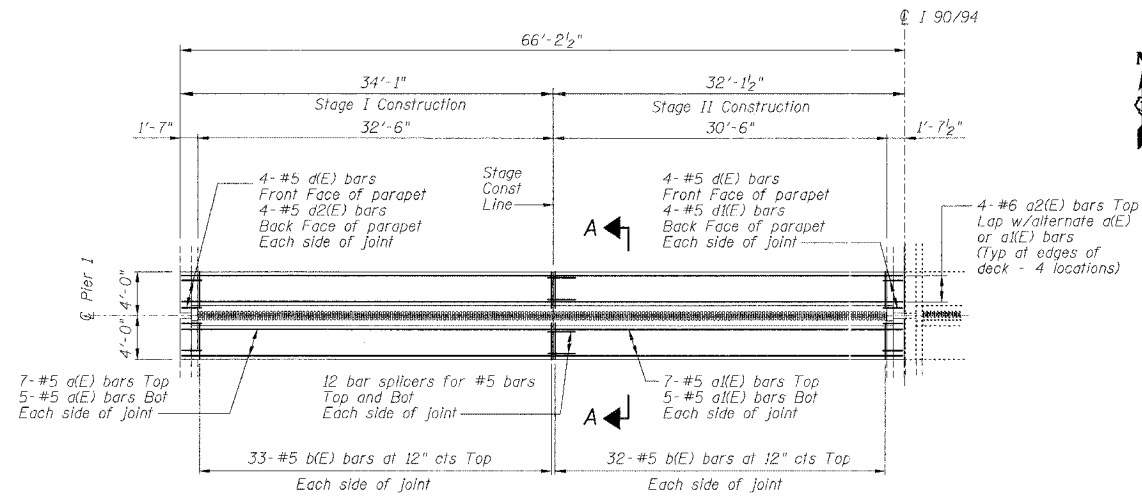
CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	1100 W. BRYN MAWR AVENUE SUITE 204 CHICAGO, ILLINOIS 60614 312-714-0000 FAX 312-714-0008
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

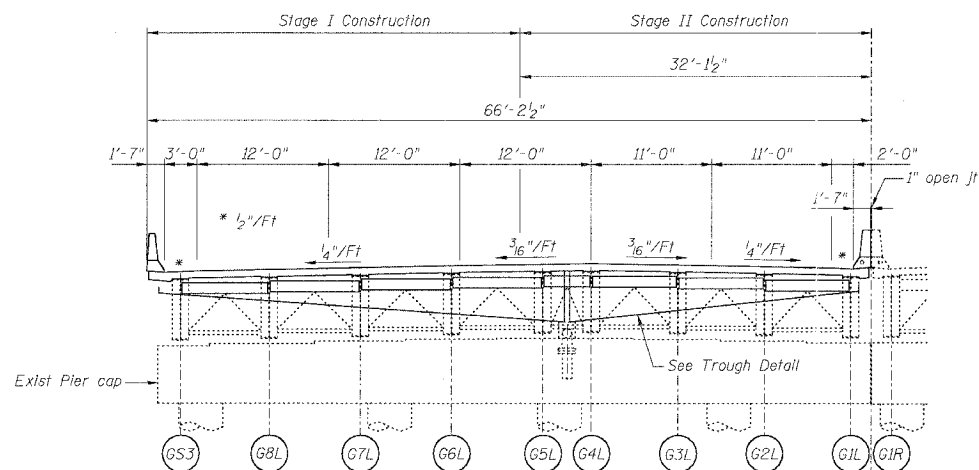
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FA1		COOK	344	222
FEEDBACK DIST. NO.		ILLINOIS PROJECT		

Sheet No 3
of 8 Sheets

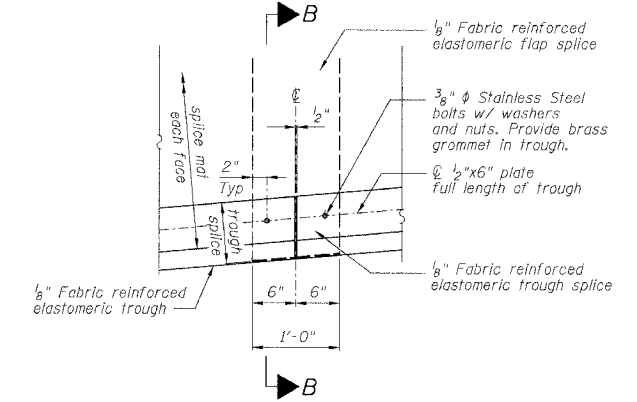
2003-029 I
CONTRACT #62581



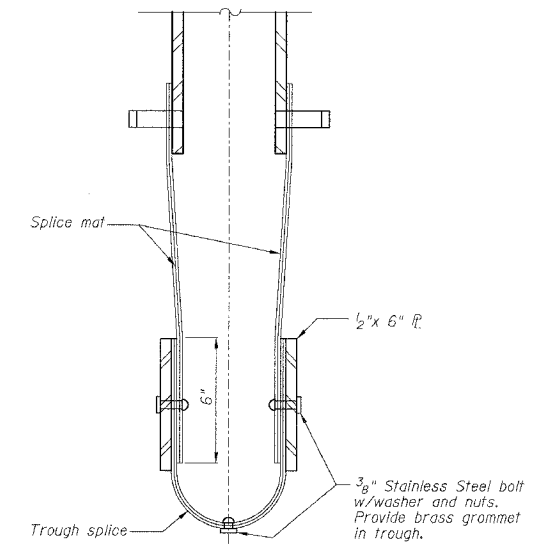
FINGER PLATE AT PIER 1 SOUTHBOUND
JOINT RECONSTRUCTION PLAN AT PIER 1



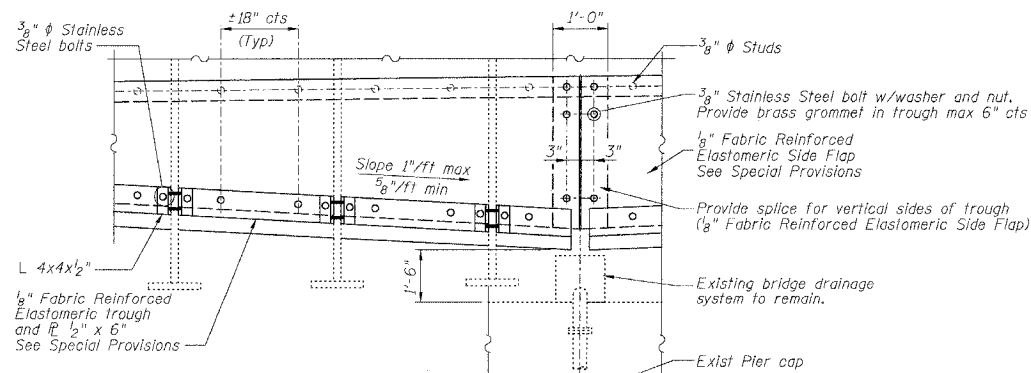
PIER 1 SOUTHBOUND
ELEVATION AT PIER 1 (LOOKING NORTH)



TROUGH SPLICE DETAIL



SECTION B-B



TROUGH DETAIL

NOTES

For Section A-A see Sheet 4 of B.

PIER NO. 1

FINGER PLATE EXPANSION JOINT DETAILS

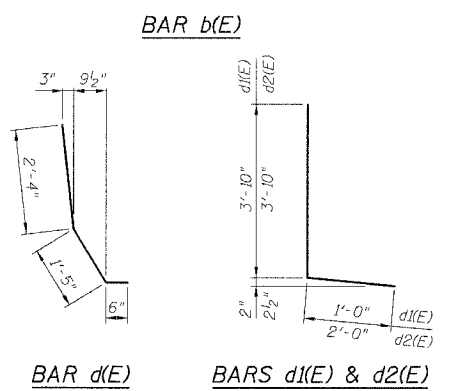
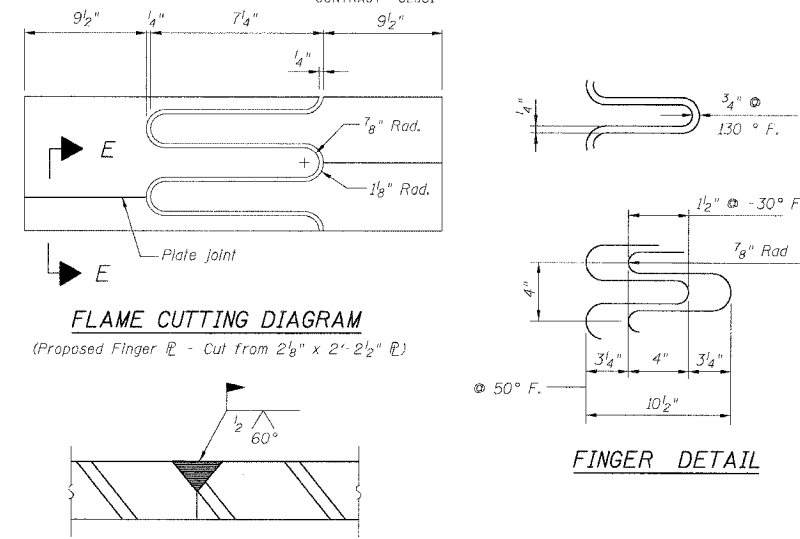
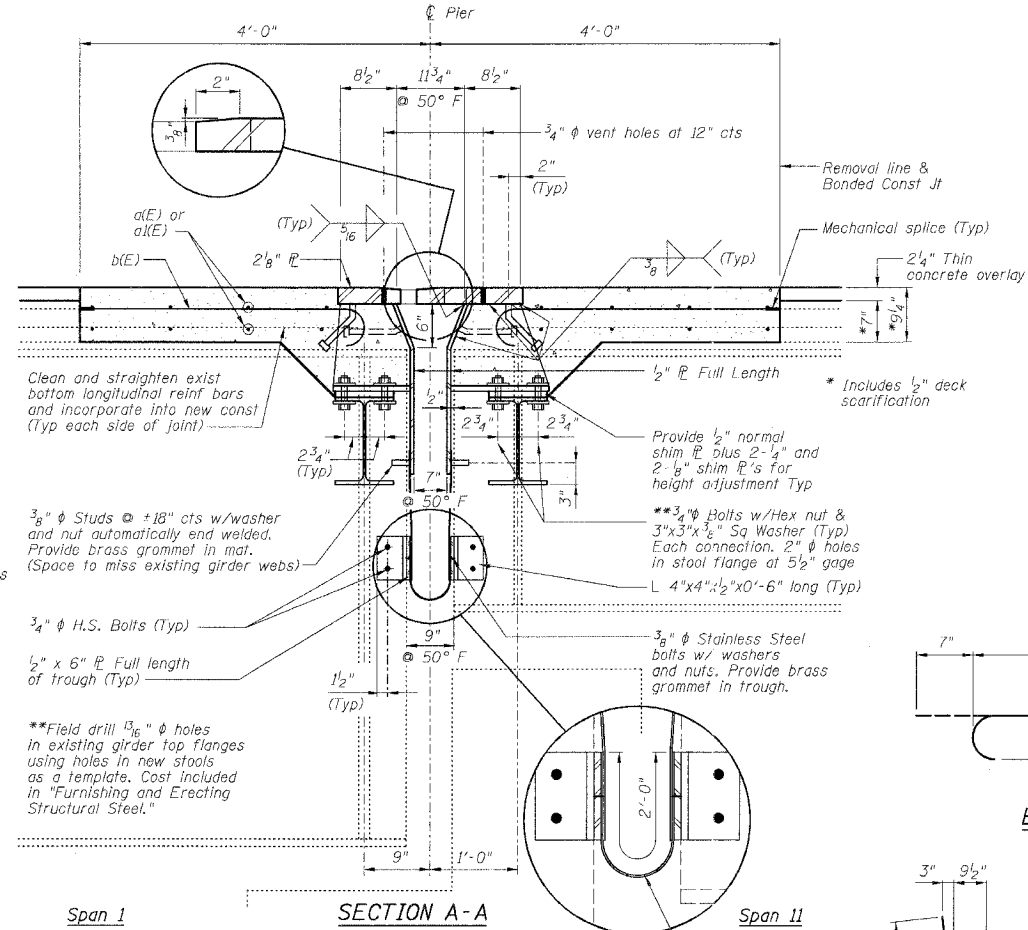
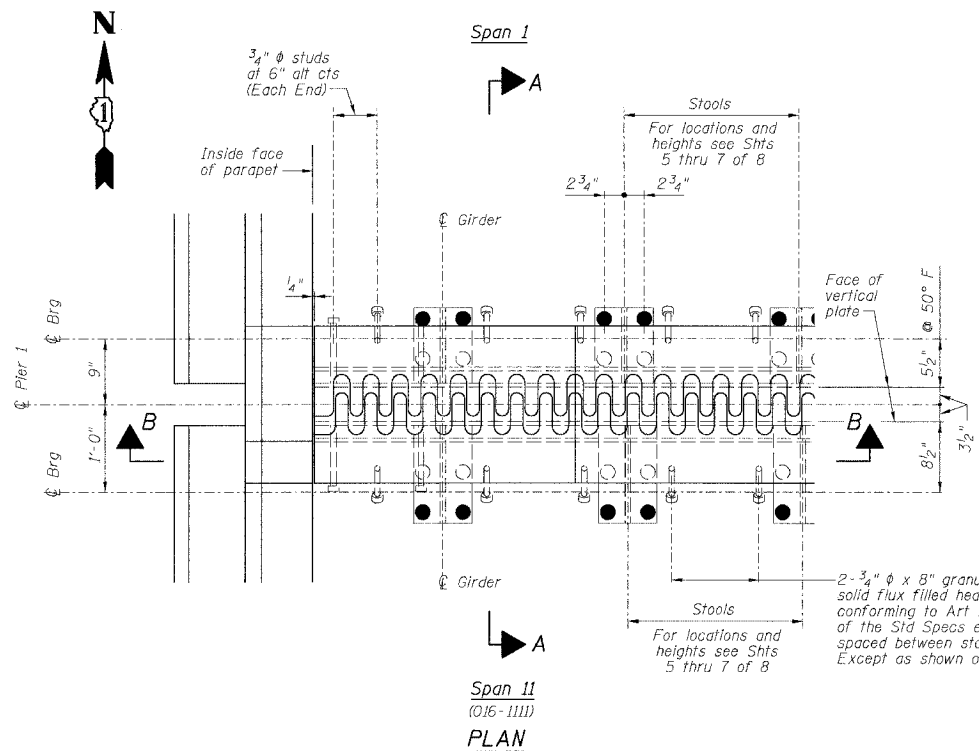
REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE RLK 5/03	
1	DATE	INITIALS	CHECKED BY DATE SDS 5/03		BOOK NUMBER
2			FAI RTE 90/94 SB DAN RYAN EXPRESSWAY		
3			SN 016-1110 (SOUTHBOUND)		
4			SEC 2003-029 I COOK COUNTY		PROJECT No.
5			HOMER L. CHASTAIN & ASSOCIATES		4222-3
6			4800 W. BEYTS MAWR AVENUE SUITE 304		SHEET No.
7			CHICAGO, ILLINOIS 60631		
8			312-714-6090		
9			FAX 312-714-0088		
10					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	223
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

Sheet No 4
of 8 Sheets

2003-029 I
CONTRACT #62581

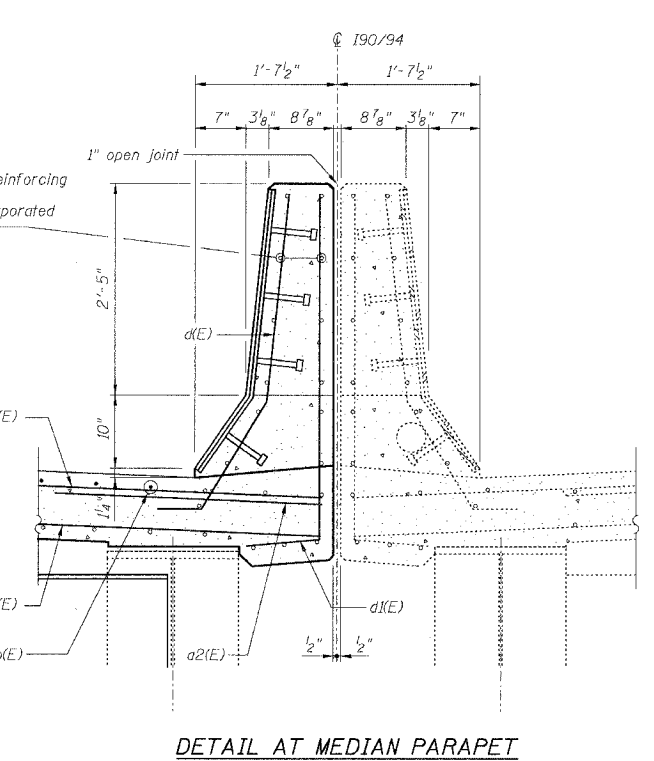
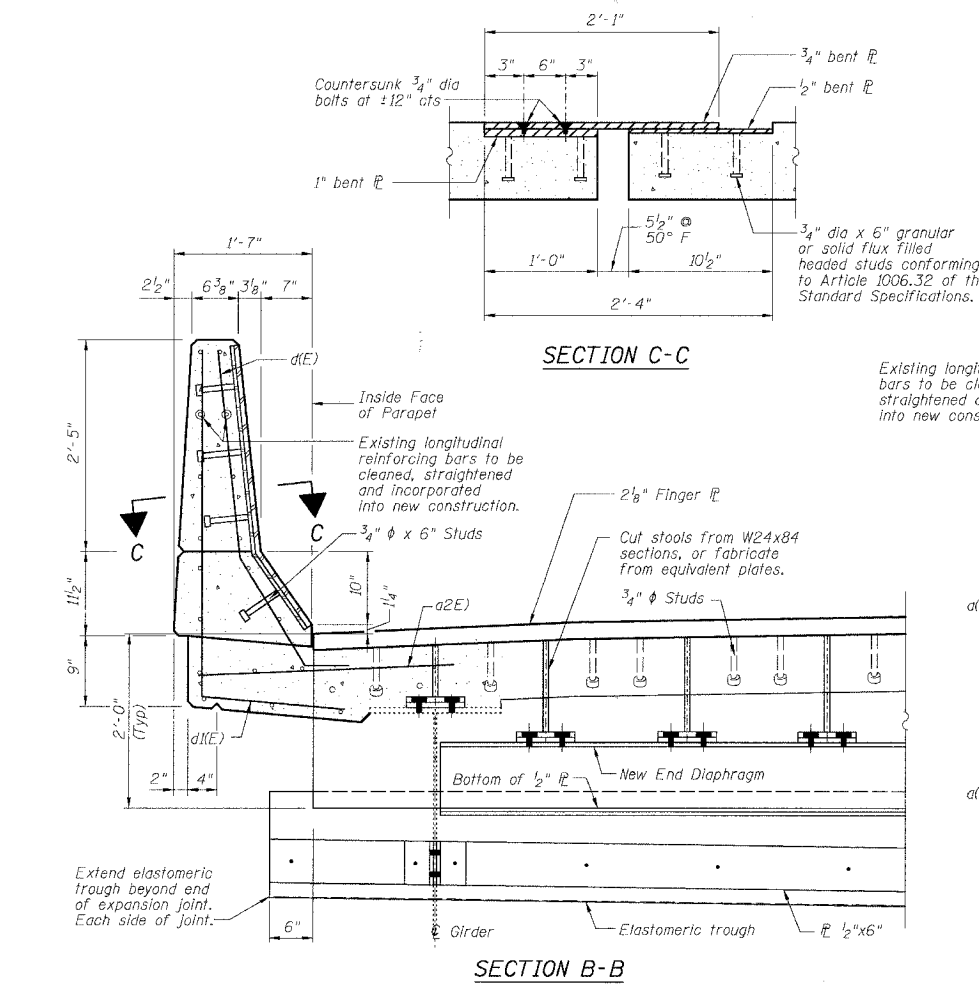


BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	24	#5	33'-7"	—	
a1(E)	24	#5	31'-10"	—	
a2(E)	16	#6	4'-6"	—	
b(E)	130	#5	3'-10"	—	
d(E)	16	#5	4'-3"	—	
d1(E)	8	#5	4'-10"	—	
d2(E)	8	#5	5'-10"	—	
Reinforcement Bars, Epoxy Coated				Pound	2430
Concrete Removal				Cu Yd	17.3
Concrete Superstructure				Cu Yd	19.1
Mechanical Splice				Each	130
Bar Splicers				Each	24

Reinforcing bars designated (E) shall be epoxy coated.

- NOTES**
- The Contractor shall bolt the Stools of the Fingerplate Joint Assembly to the top of New End diaphragms and to the top of the existing girders, as shown in Section A-A of this drawing.
 - Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
 - The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting Structural Steel".
 - Expansion Length = 403.6'



PIER NO. 1

FINGER PLATE EXPANSION JOINT DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE RLK 5/03
1	FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1110 (SOUTHBOUND)	CHECKED BY DATE SDS 5/03
2	SEC 2003-029 I COOK COUNTY	BOOK NUMBER
3		PROJECT NO. 4222-3
4		SHEET NO.
5		
6		
7		
8		
9		
10		

CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS

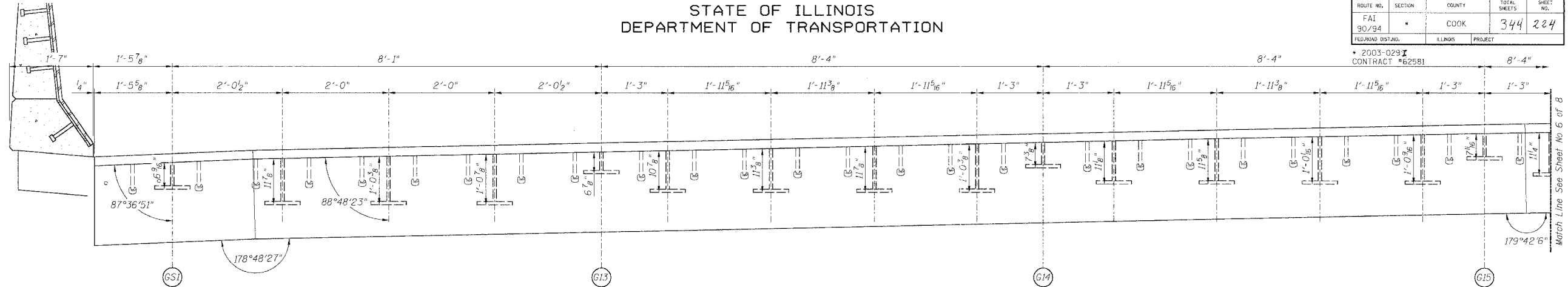
8609 W. BRYAN MAJOR AVENUE
SUITE 304
CHICAGO, ILLINOIS 60631
312-714-0000
FAX 312-714-0058

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

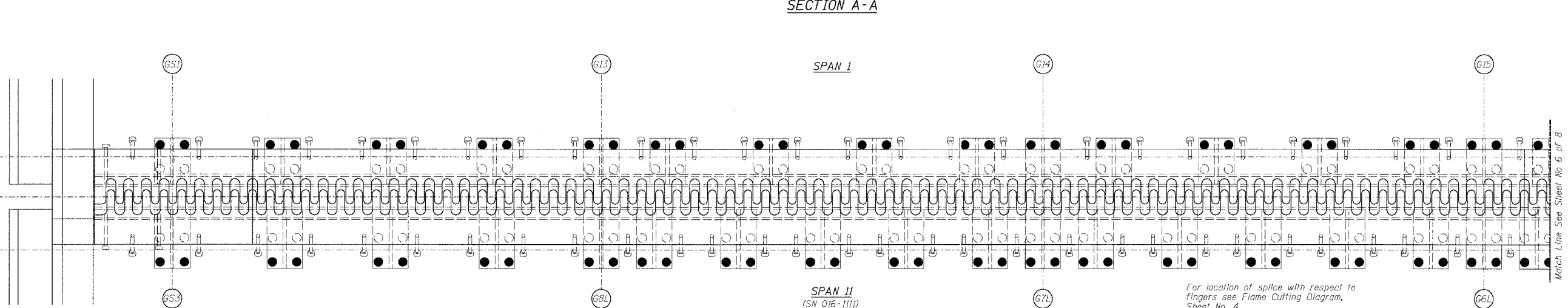
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	344	224
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

Sheet No 5
of 8 Sheets

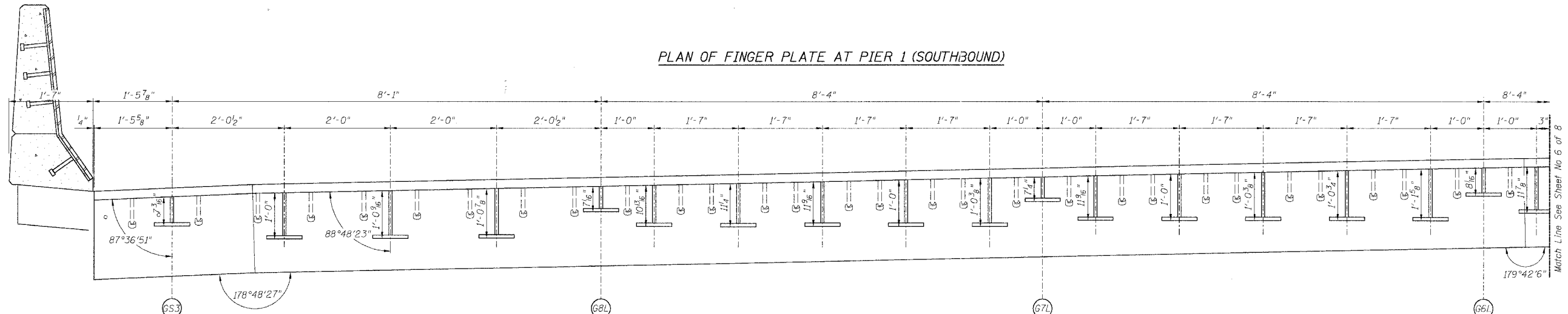
* 2003-029 I
CONTRACT #62581



SECTION A-A



PLAN OF FINGER PLATE AT PIER 1 (SOUTHBOUND)



SECTION B-B

For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

Note:
For optional splice detail see flame cutting diagram on Sheet No. 4

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE
1		FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	RLK 5/03
2		SN 016-1110 (SOUTHBOUND)		CHECKED BY DATE
3		SEC 2003-029 I	COOK COUNTY	SDS 5/03
4				BOOK NUMBER
5				PROJECT NO.
6				4222-3
7				SHEET NO.
8				
9				
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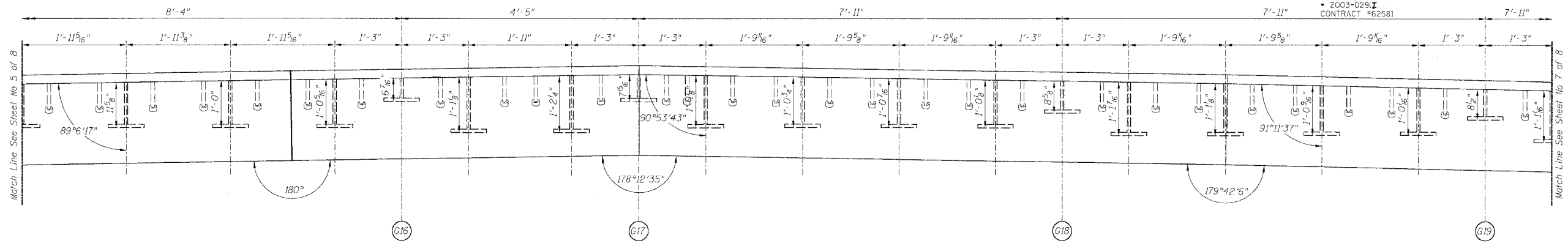
CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
4650 W. BRYAN AVE. SUITE 304
CHICAGO, ILLINOIS 60641
312-714-0650 FAX 312-714-0650

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

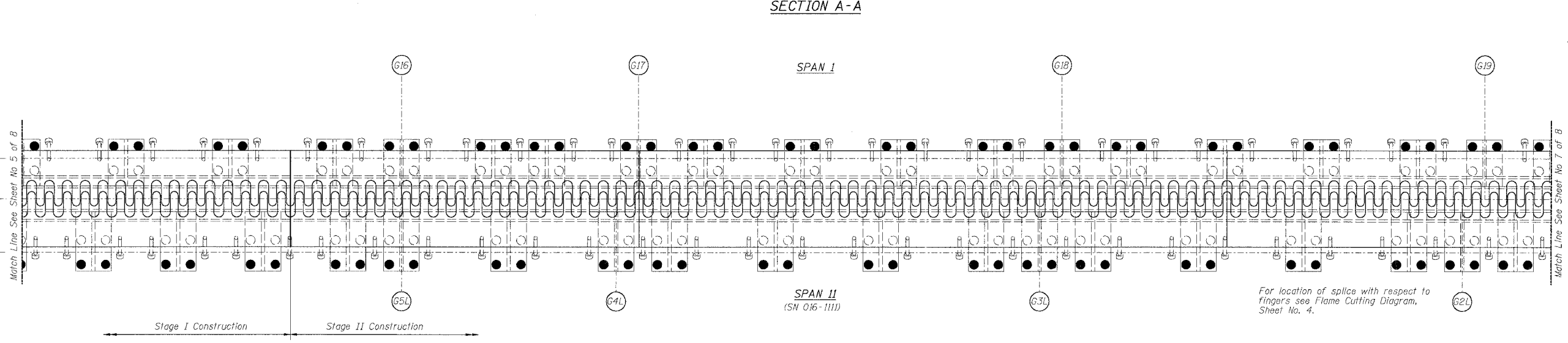
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FED. ROAD DIST. NO.	ILLINOIS PROJECT			

Sheet No 6
of 8 Sheets

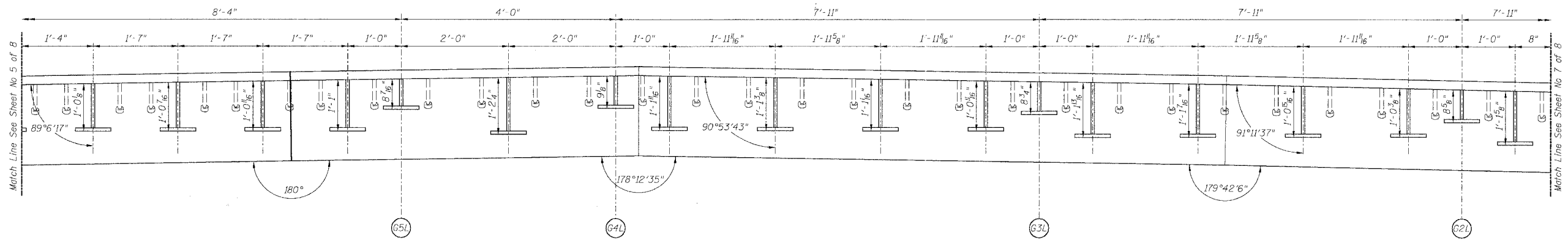
2003-029 I
CONTRACT #62581



SECTION A-A



PLAN OF FINGER PLATE AT PIER 1 (SOUTHBOUND)



SECTION B-B

PIER NO. 1

FINGER PLATE PLAN AND ELEVATION DETAILS

Note:
For optional splice detail see
flame cutting diagram on Sheet No. 4

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY RLK	DATE 5/03
No.	DATE	INITIALS		CHECKED BY SDS	DATE 5/03
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2					
3					
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9					
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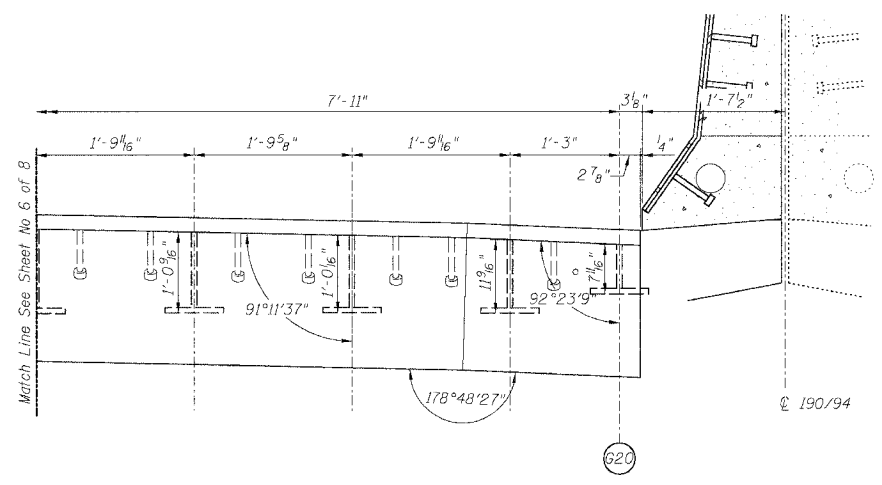
FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	PROJECT NO.
SN 016-1110 (SOUTHBOUND)		4222-3
SEC 2003-029 I	COOK COUNTY	SHEET NO.

HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	8600 W. BROWN MAJOR AVENUE SUITE 204 CHICAGO, ILLINOIS 60631 312-714-0550 FAX 312-714-0068
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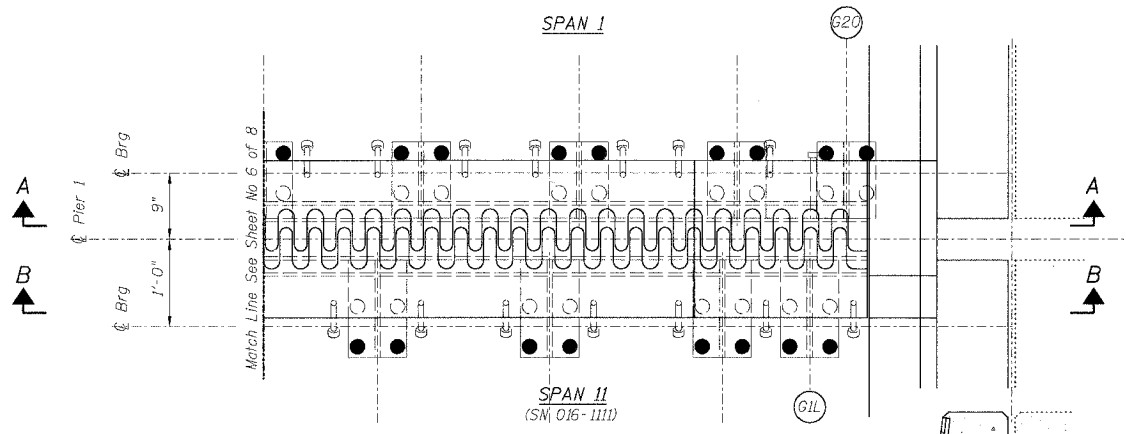
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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* 2003-029 I CONTRACT #62581				

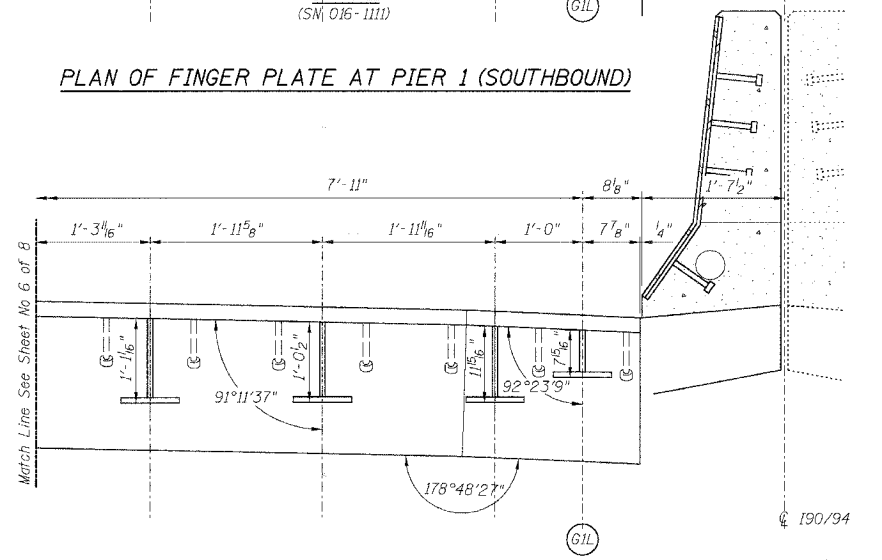
Sheet No 7
of 8 Sheets



SECTION A-A



PLAN OF FINGER PLATE AT PIER 1 (SOUTHBOUND)



SECTION B-B



For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

Note:
For optional splice detail see flame cutting diagram on Sheet No. 4

PIER NO. 1

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY RLK	DATE 5/03
1					CHECKED BY SDS
2					DATE 5/03
3					DISK NUMBER
4					
5					
6					
7					
8					
9					
10					

FAI RTE 90/94 SB		DAN RYAN EXPRESSWAY		PROJECT NO.	4222-3
SN 016-1110 (SOUTHBOUND)		COOK COUNTY		SHEET NO.	
SEC 2003-029 I		CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		8808 W. BRYEN BLAINE AVENUE SUITE 204 CHICAGO, ILLINOIS 60631 312-714-2000 FAX 312-714-0000	

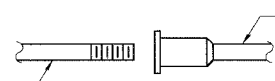
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	227
FEDERAL DISTRICT		ILLINOIS	PROJECT	

2003-029 I
CONTRACT #62581

Sheet No 8
of 8 Sheets

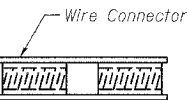
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



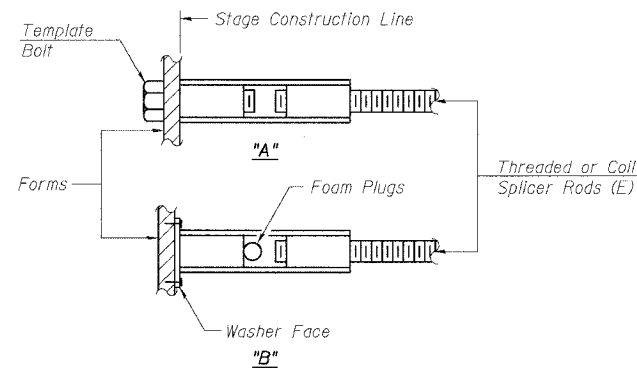
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

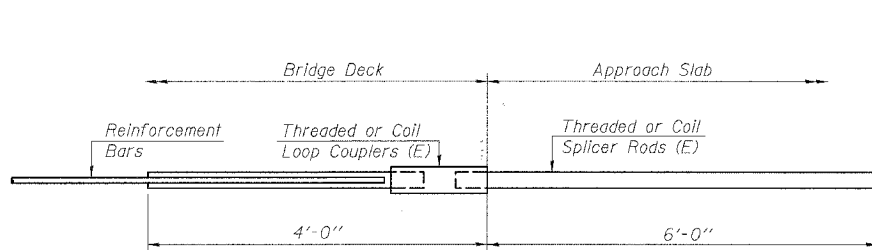
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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:

- Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(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_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

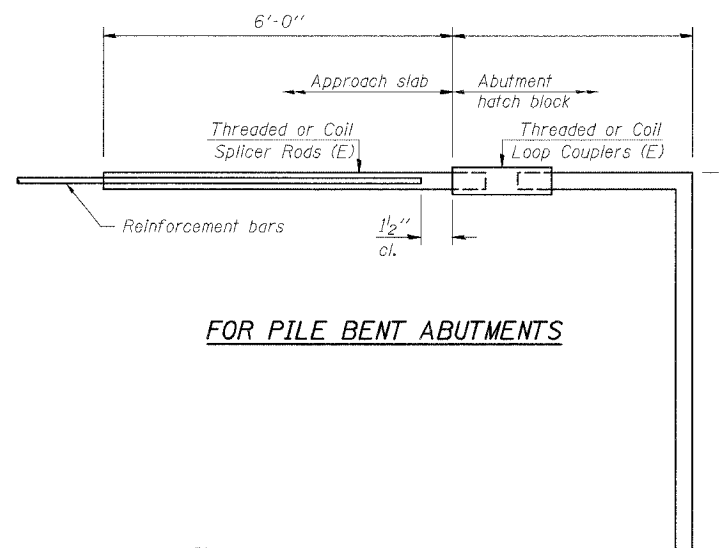
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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



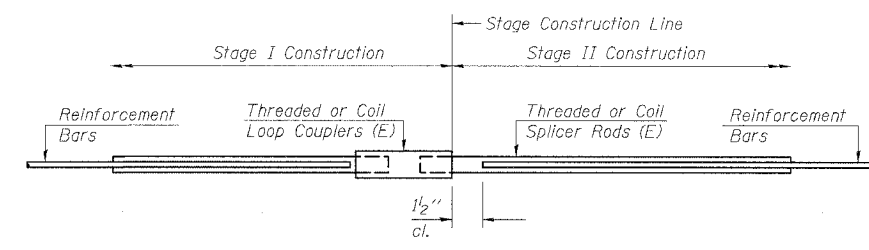
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	At Stage Construction Line in Deck

PIER NO. 1

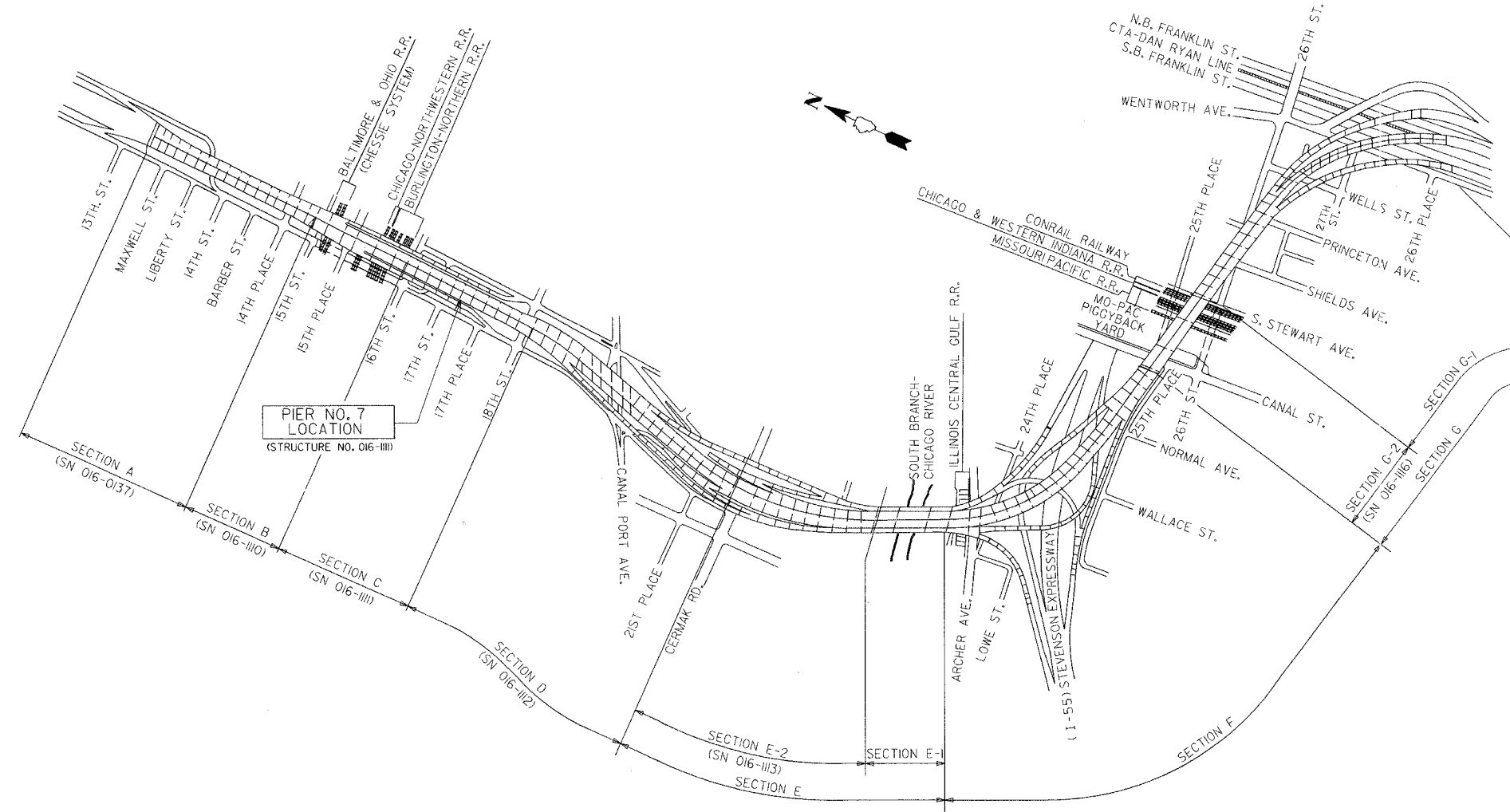
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1				RLK 5/03
2				CHECKED BY DATE
3				SDS 5/03
4				BOOK NUMBER
5				PROJECT NO.
6				4222-3
7				SHEET NO.
8				
9				
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	228
FEDROAD DIST. NO.		ILLINOIS PROJECT		

Sheet No 1
of 8 Sheets

• 2003-0291
CONTRACT #62581



PIER NO. 7
LOCATION
(STRUCTURE NO. 016-1111)

KEY PLAN
DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

Thomas E. Szkolnik
5-18-06
Approved 11-30-06

GENERAL 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 for the work.

The slab is to be removed in stages. Before starting the concrete removal, the Contractor is required to submit to the Engineer for approval his staging plans and method of removal.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Field welding of construction accessories will not be permitted to beams or girders.

Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications

Finger plate expansion joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

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

Fasteners shall be high strength bolts. Bolts 3/4" ϕ , open holes 13/16" ϕ unless otherwise noted.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".

The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

All Construction joints shall be bonded.

Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.

Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".

Existing design and fabrication plans are available upon request.

All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 25,350 lbs.

DESIGN STRESSES

f'_c = 3500 psi
 f_y = 60,000 psi (Reinf)
 f_y = 50,000 psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	17.1
Concrete Superstructure	Cu Yd	18.6
Furnishing and Erecting Structural Steel	LS	0.11
Reinforcement Bars, Epoxy Coated	Pound	2430
Fabric Reinforced Elastomeric Trough	Foot	64
Mechanical Splice	Each	130
Bar Splicer	Each	24
Field Measurements	L. Sum	0.11

PIER NO. 7

KEY PLAN

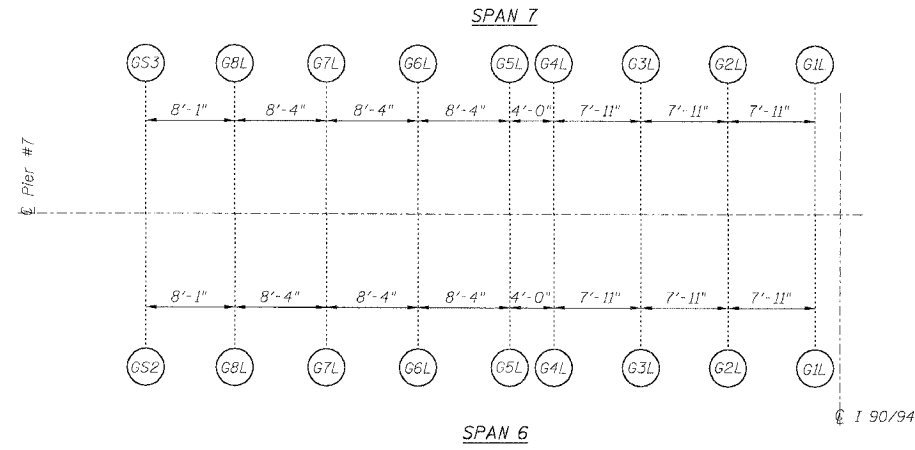
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NO.	DATE	INITIALS	FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1111 (SOUTHBOUND)	CHECKED BY DATE SDS 5/03
1			SEC 2003-0291	BOOK NUMBER
2			COOK COUNTY	PROJECT NO.
3				4222-3
4				SHEET NO.
5				
6				
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HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
8600 W. BERTY MAWLE AVENUE
SUITE 204
CHICAGO, ILLINOIS 60631
812-774-0000
FAX 812-774-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

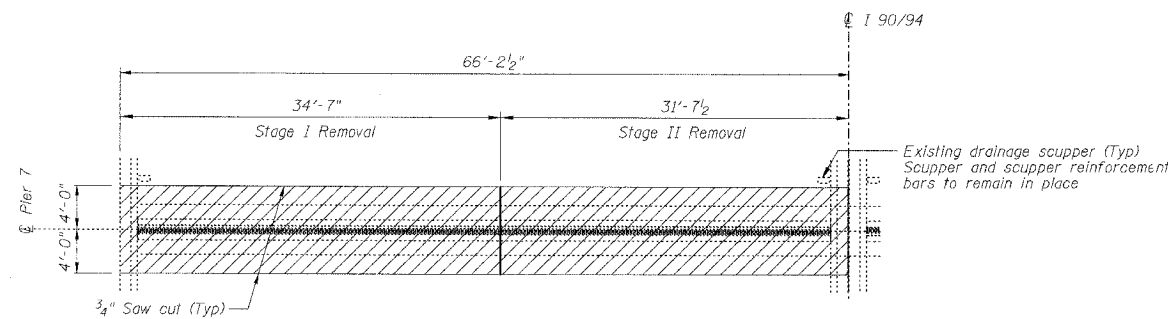
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	244	229
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
* 2003-0291 CONTRACT #62581				

Sheet No 2
of 8 Sheets

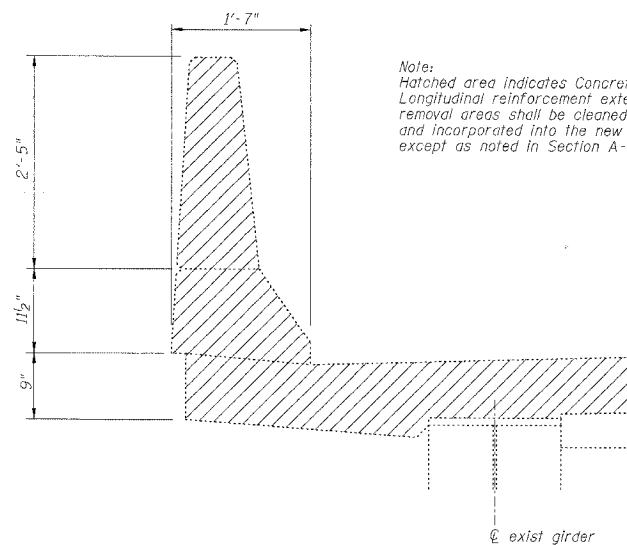


Note:
All dimensions on girder layout
are given along centerline of bearing.

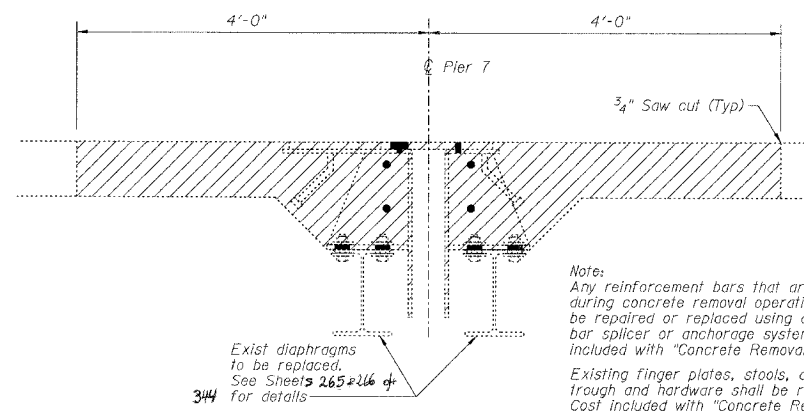
GIRDER LAYOUT AT PIER 7



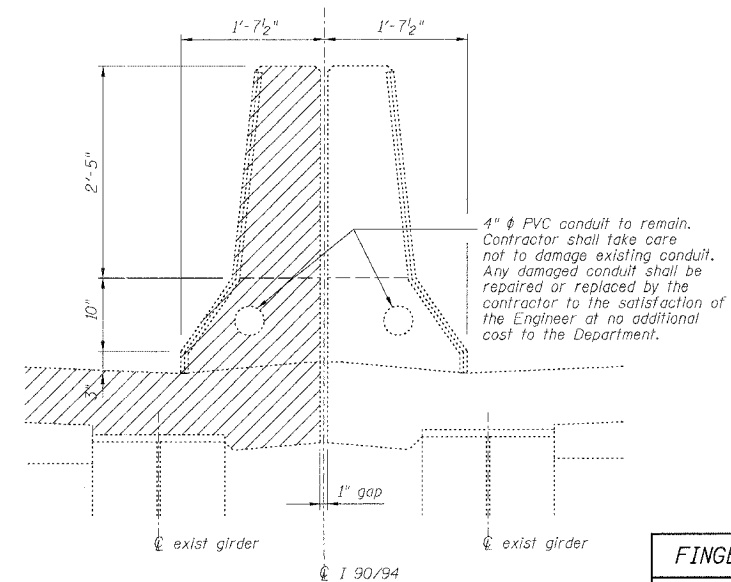
FINGER PLATE AT PIER 7 SOUTHBOUND
JOINT REMOVAL PLAN AT PIER 7



DETAIL AT EXISTING OUTSIDE PARAPET



SECTION AT EXISTING FINGER PLATE AT PIER 7



DETAIL AT EXISTING MEDIAN PARAPET

PIER NO. 7

FINGER PLATE EXPANSION JOINT REMOVAL DETAILS

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DATE 5/03
NO.	DATE	INITIALS	DRWN BY RLK	CHECKED BY SDS
1				5/03
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FAI RTE 90/94 SB DAN RYAN EXPRESSWAY
SN 016-1111 (SOUTHBOUND)
SEC 2003-0291 COOK COUNTY

HOMER L.
CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
9600 W. BRYAN MAWRE AVENUE
SUITE 204
CHICAGO, ILLINOIS 60618
312-751-0050
FAX 312-751-0058

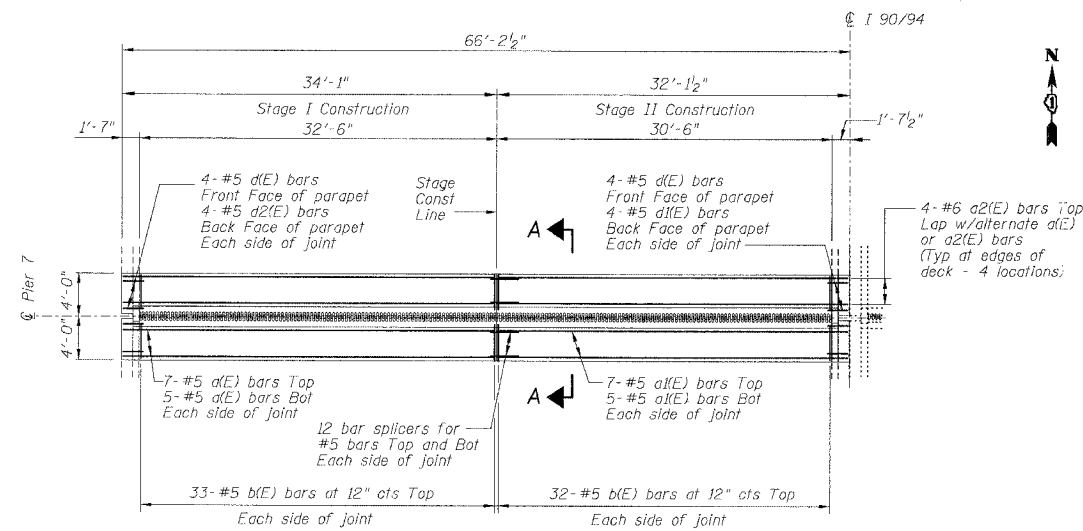
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4222-3
SHEET NO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

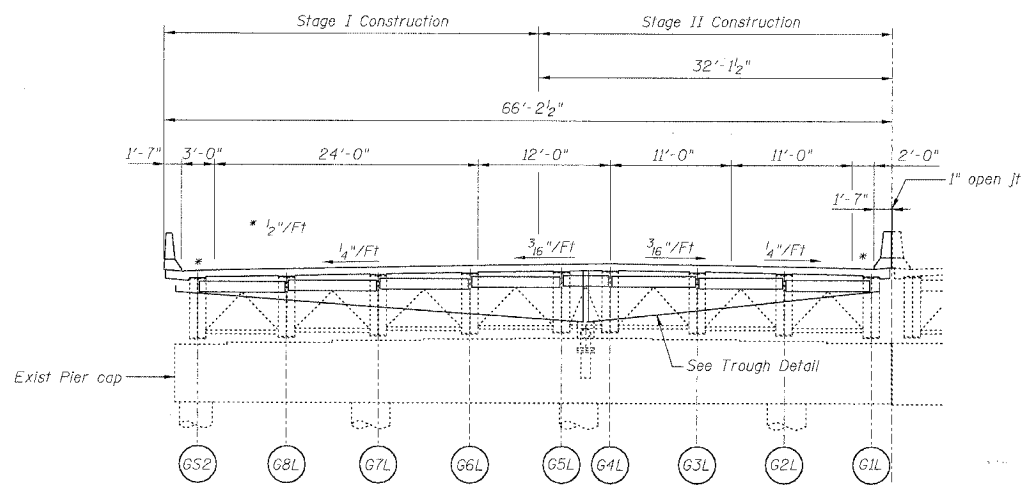
Sheet No 3
of 8 Sheets

2003-029 I
CONTRACT #62581

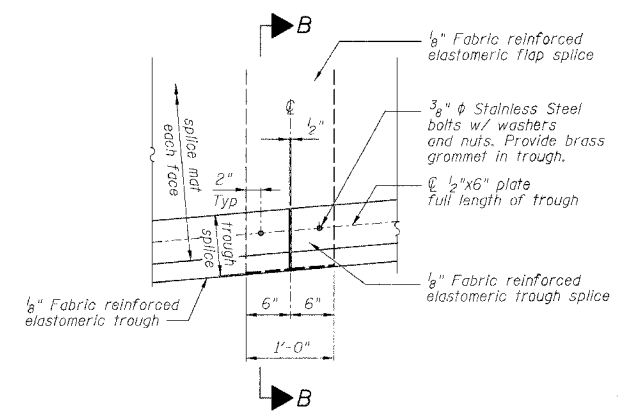


FINGER PLATE AT PIER 7 SOUTHBOUND
JOINT RECONSTRUCTION PLAN AT PIER 7

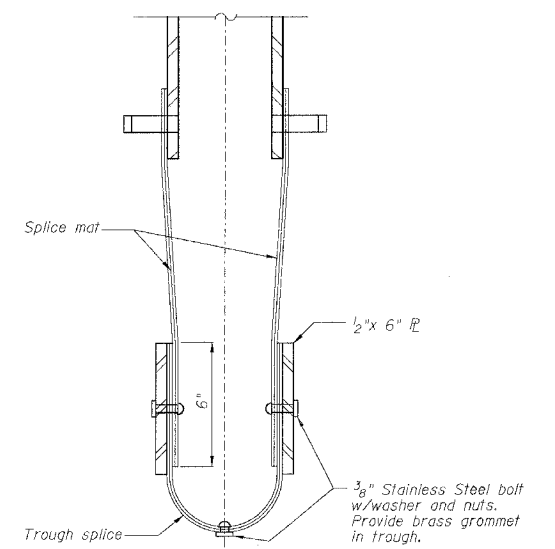
MIN BAR LAP
#5 bar = 1'-3"



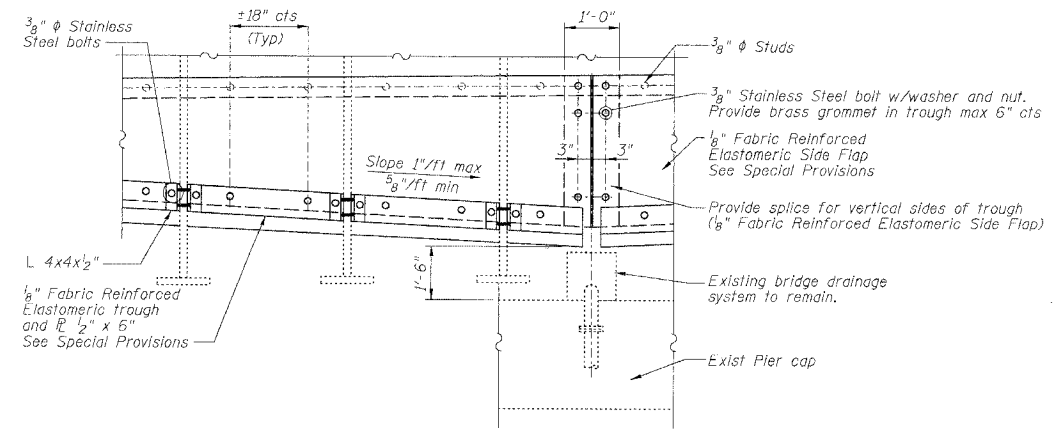
PIER 7 SOUTHBOUND
ELEVATION AT PIER 7 (LOOKING NORTH)



TROUGH SPLICE DETAIL



SECTION B-B



TROUGH DETAIL

NOTES
For Section A-A see Sheet 4 of 8.

PIER NO. 7
FINGER PLATE EXPANSION JOINT DETAILS

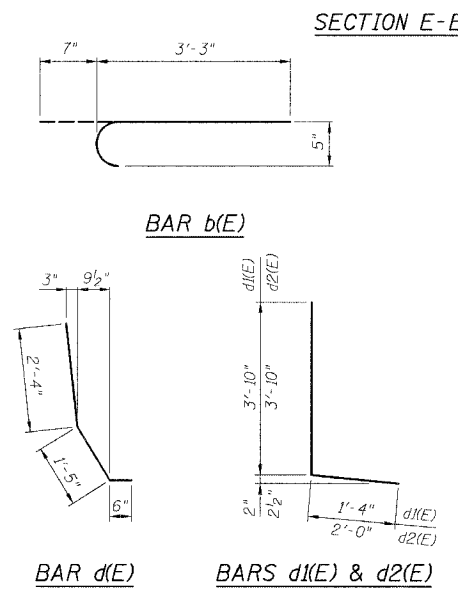
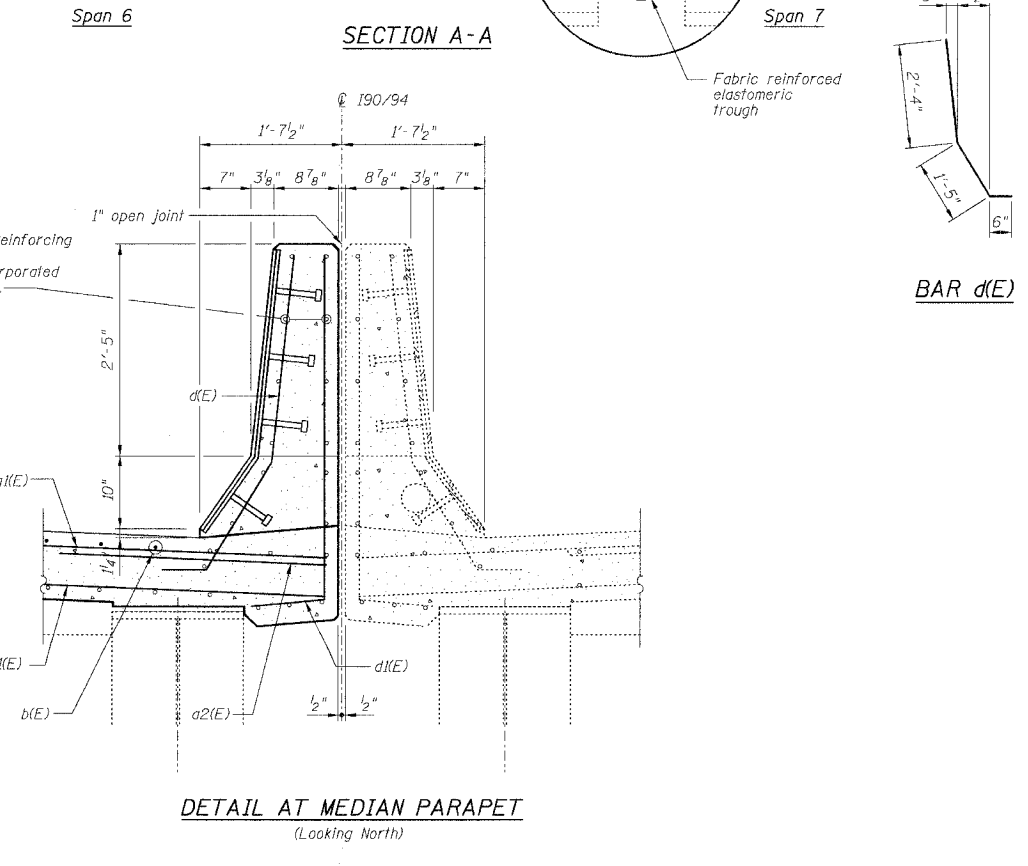
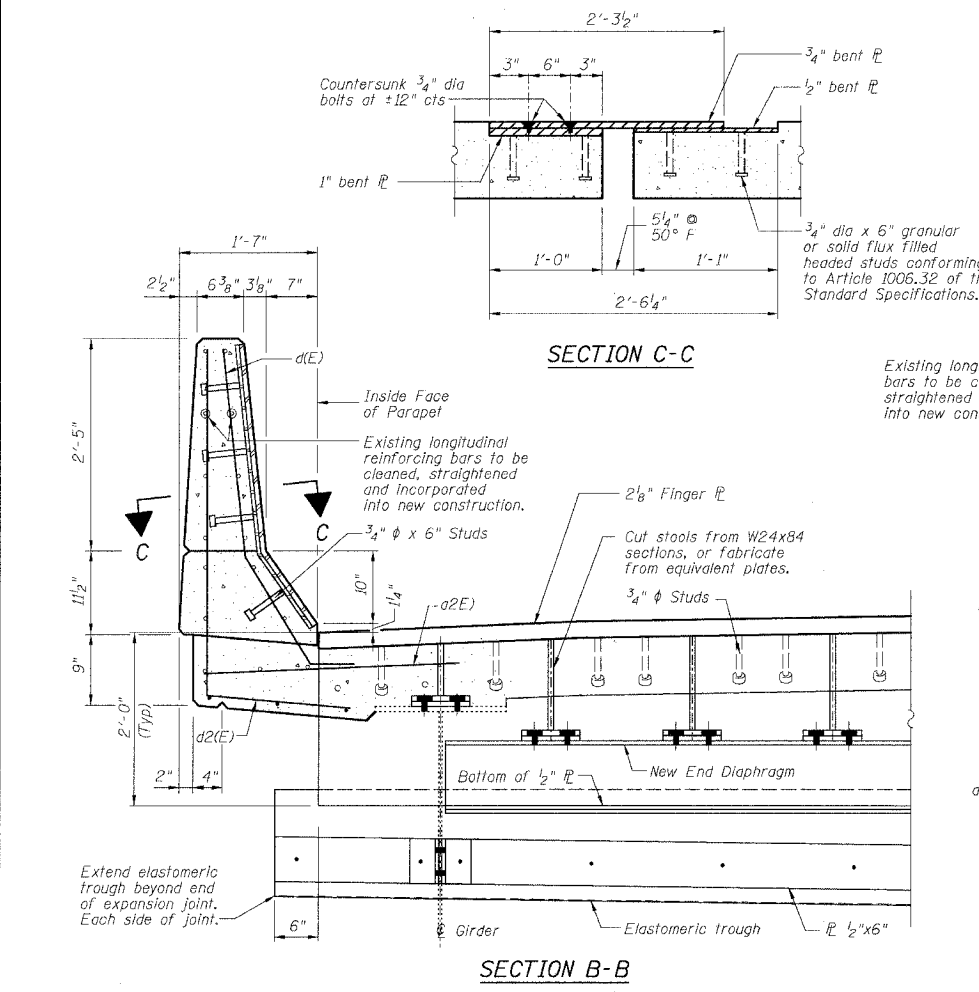
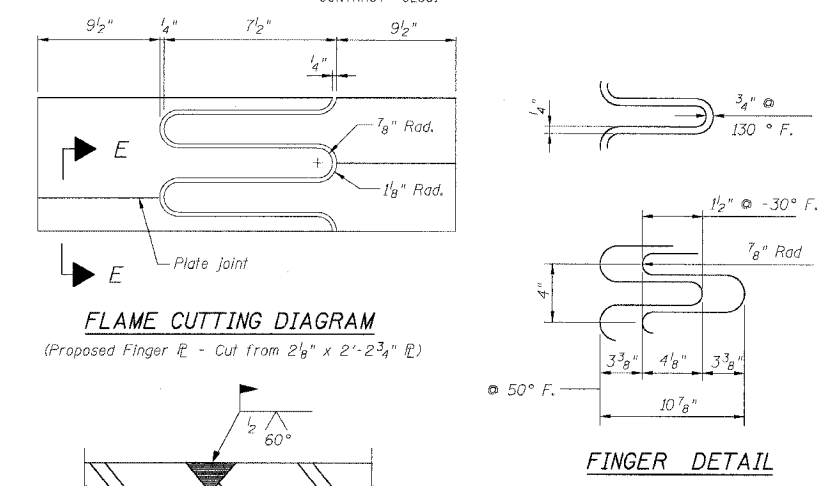
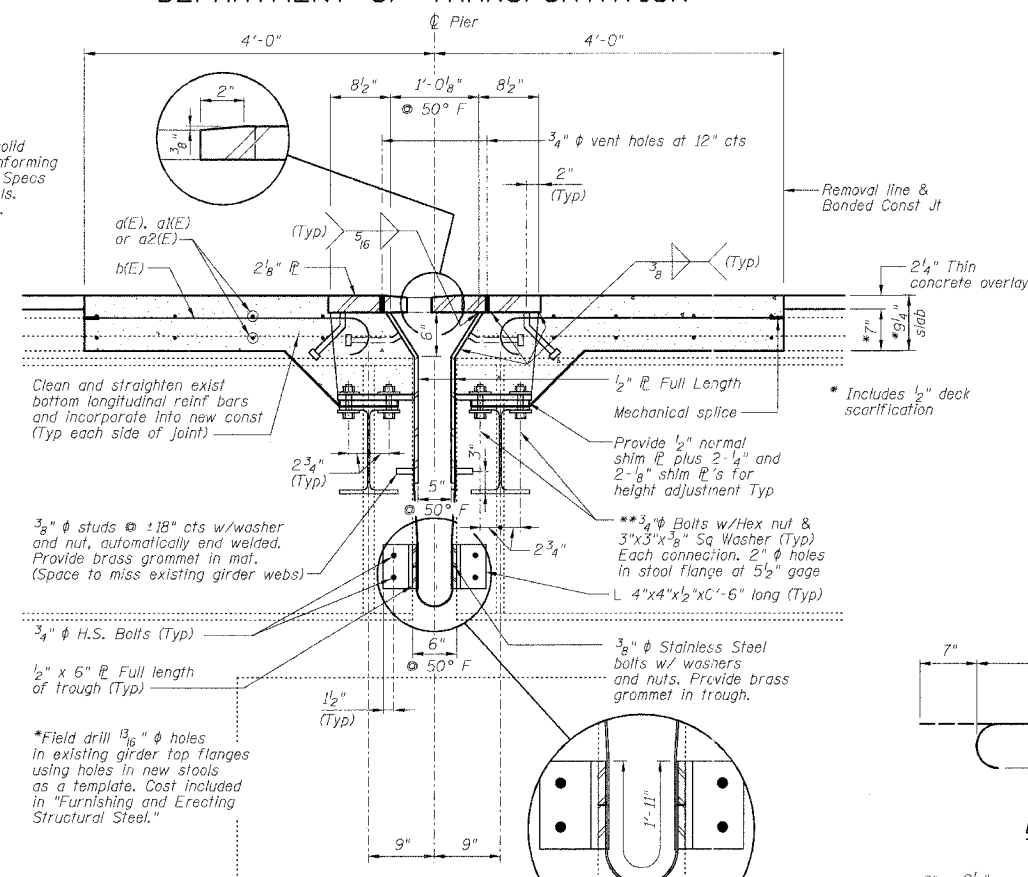
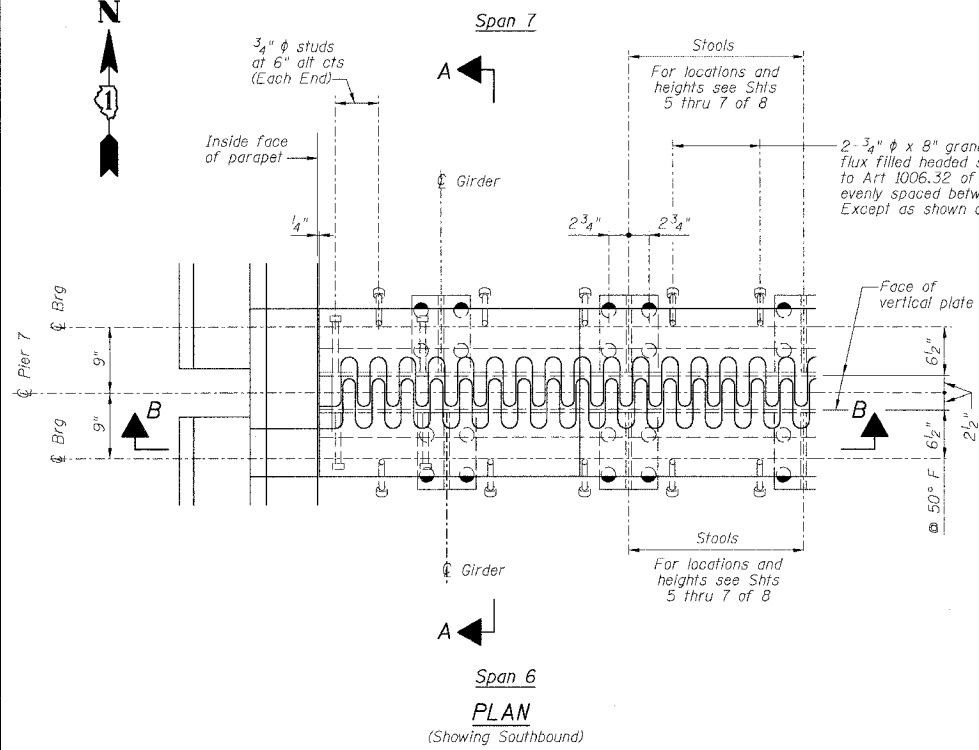
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HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		8800 W. BRYN MAWR AVENUE SUITE 304 CHICAGO, ILLINOIS 60618 312-714-0050 FAX 312-714-0055	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	231

Sheet No 4
of 8 Sheets

2003-029 L
CONTRACT #625B1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	24	#5	33'-7"	—
a1(E)	24	#5	31'-10"	—
a2(E)	16	#6	4'-6"	—
b(E)	130	#5	3'-10"	—
d(E)	16	#5	4'-3"	—
d1(E)	8	#5	5'-2"	—
d2(E)	8	#5	5'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	2430
Concrete Removal			Cu Yd	17.1
Concrete Superstructure			Cu Yd	18.6
Bar Splicers			Each	24
Mechanical Splice			Each	130

Reinforcing bars designated (E) shall be epoxy coated.

- NOTES**
- The Contractor shall bolt the Stools of the Fingerplate Joint Assembly to the top of New End Diaphragms and to the top of the existing girders, as shown in Section A-A of this drawing.
 - Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
 - The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting Structural Steel".
 - Expansion Length = 418.6'

PIER NO. 7

FINGER PLATE EXPANSION JOINT DETAILS

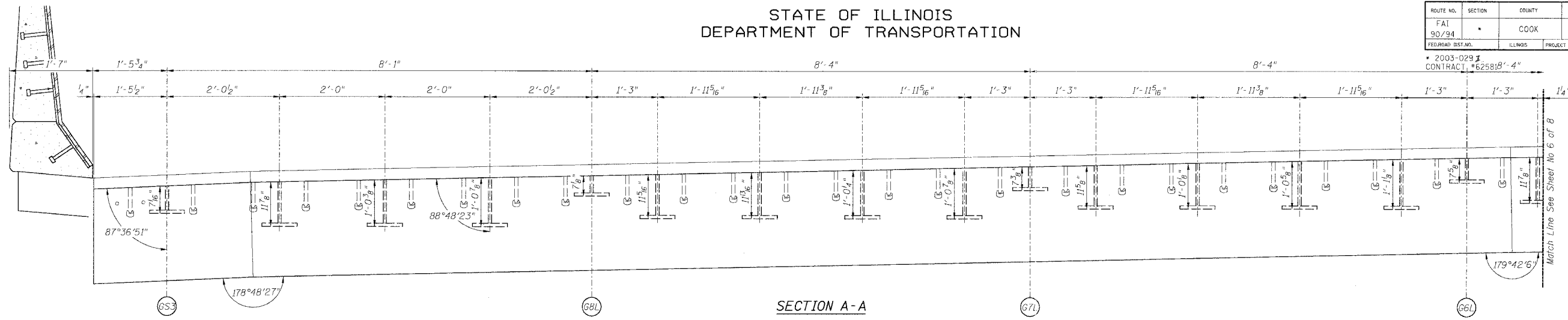
REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE RLK 5/03
1	FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SH 016-1111 (SOUTHBOUND)	CHECKED BY DATE SDS 5/03
2	SEC 2003-0291 COOK COUNTY	BOOK NUMBER
3		PROJECT NO. 4222-3
4		SHEET NO.
5	CHASTAIN & ASSOCIATES CONSULTING ENGINEERS	
6	800 W. BRYEN MAJOR AVENUE SUITE 204 CHICAGO, ILLINOIS 60614 812-754-0500 FAX: 812-754-0666	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

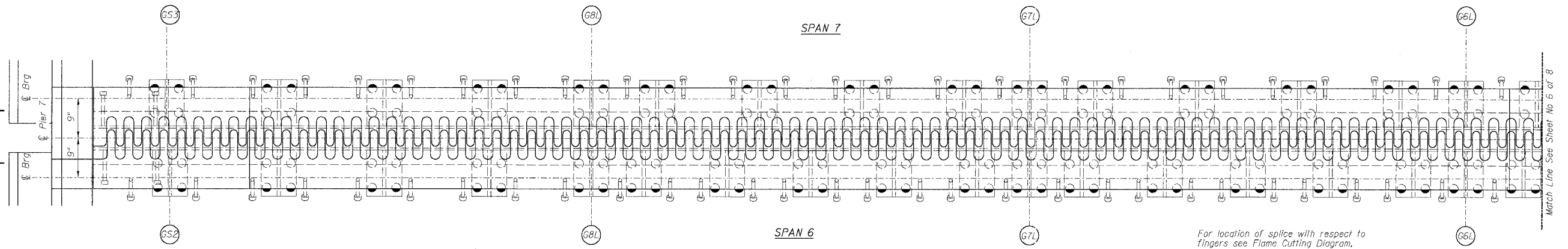
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	232
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

Sheet No 5
of 8 Sheets

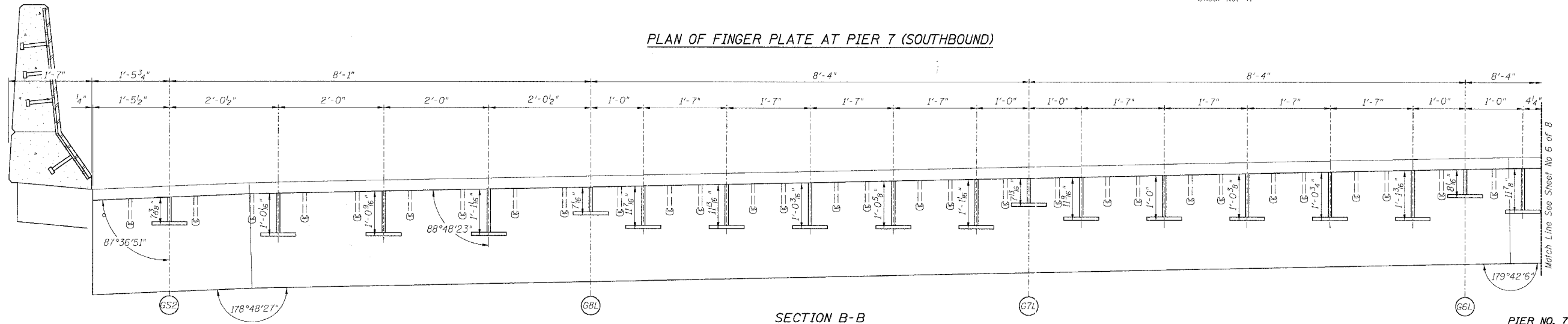
2003-029 I
CONTRACT # 625B1B'-4"



SECTION A-A



SPAN 7



SECTION B-B

PLAN OF FINGER PLATE AT PIER 7 (SOUTHBOUND)

For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

Note:
For optional splice detail see
Flame cutting diagram on Sheet No. 4

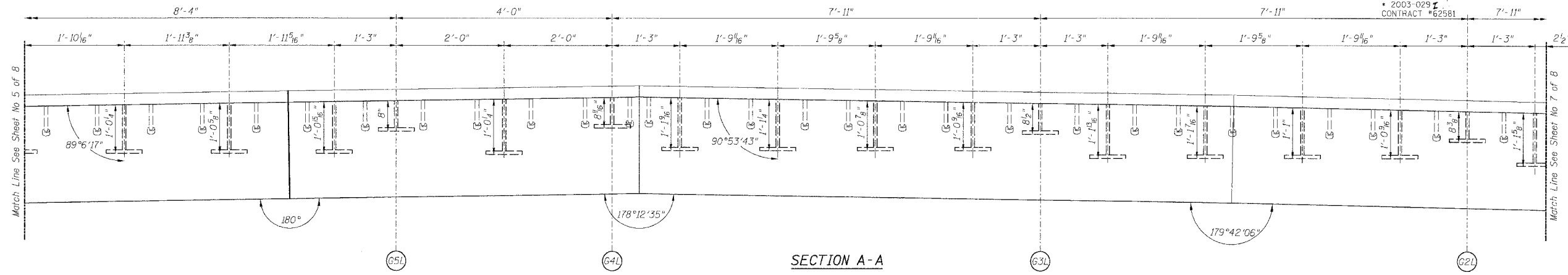
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--	--	---	---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

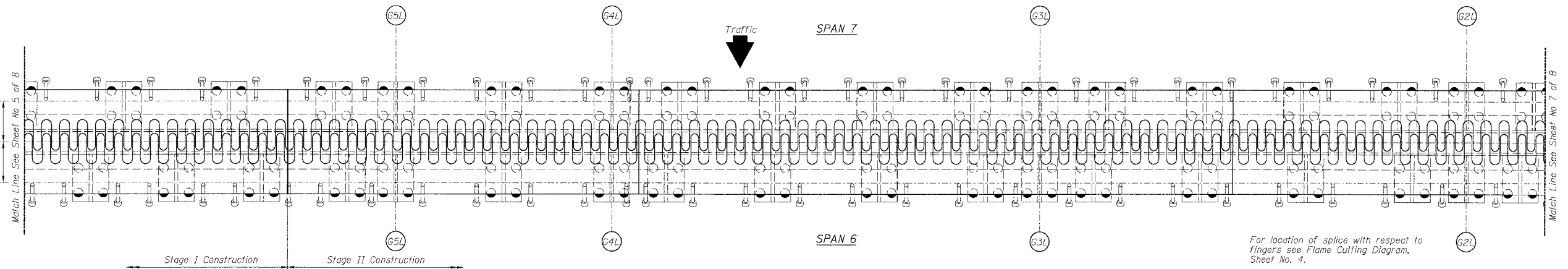
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	344	233
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

Sheet No 6
of 8 Sheets

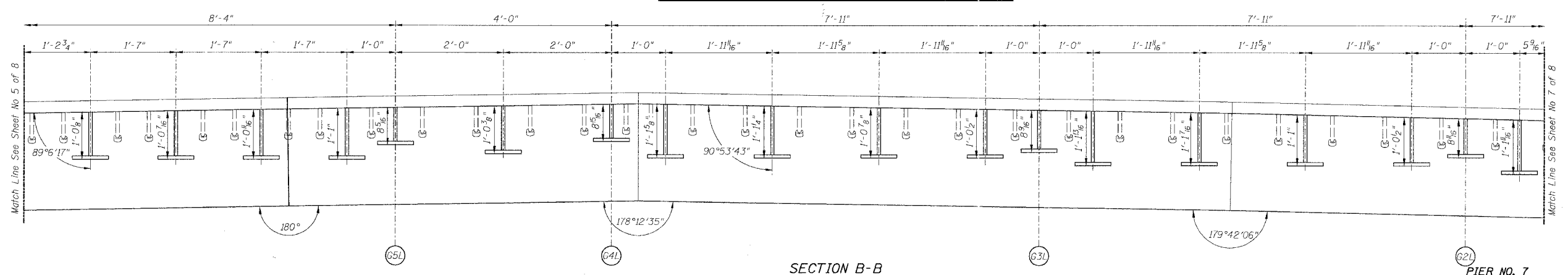
2003-029
CONTRACT #62581



SECTION A-A



PLAN OF FINGER PLATE AT PIER 7 (SOUTHBOUND)



SECTION B-B

For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

Note:
For optional splice detail see flame cutting diagram on Sheet No. 4

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY DATE
1	DATE	INITIALS		RLK 5/03
2				CHECKED BY DATE
3				SDS 5/03
4				BOOK NUMBER
5				
6				
7				
8				
9				
10				

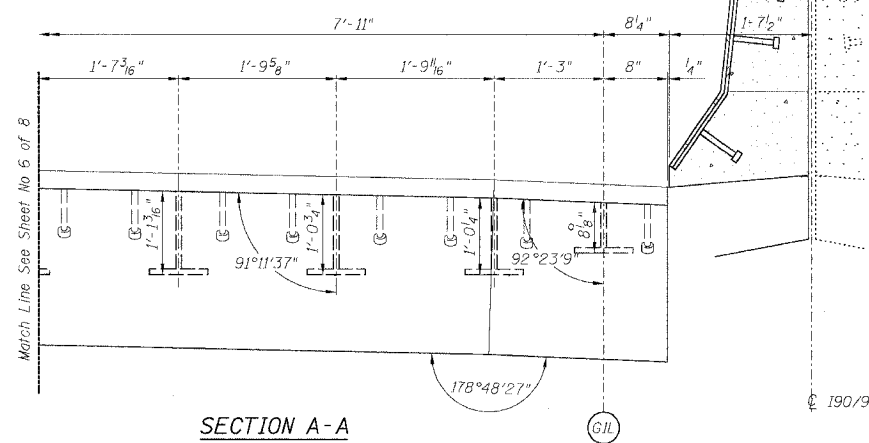
FAI RTE 90/94 SB	DAN RYAN EXPRESSWAY	PROJECT No.
SN 016-1111 (SOUTHBOUND)		4222-3
SEC 2003-029.I	COOK COUNTY	SHEET NO.
CHASTAIN & ASSOCIATES CONSULTING ENGINEERS		
8800 W. BRYN MAWR AVENUE SUITE 204 CHICAGO, ILLINOIS 60611 312-734-0090 FAX 312-734-0088		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

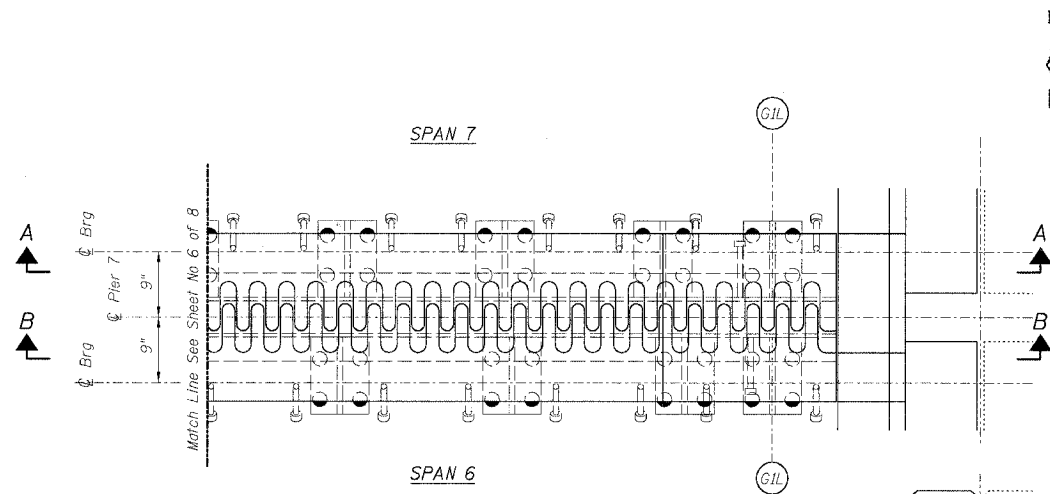
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	234
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

Sheet No 7
of 8 Sheets

2003-029-I
CONTRACT #62581

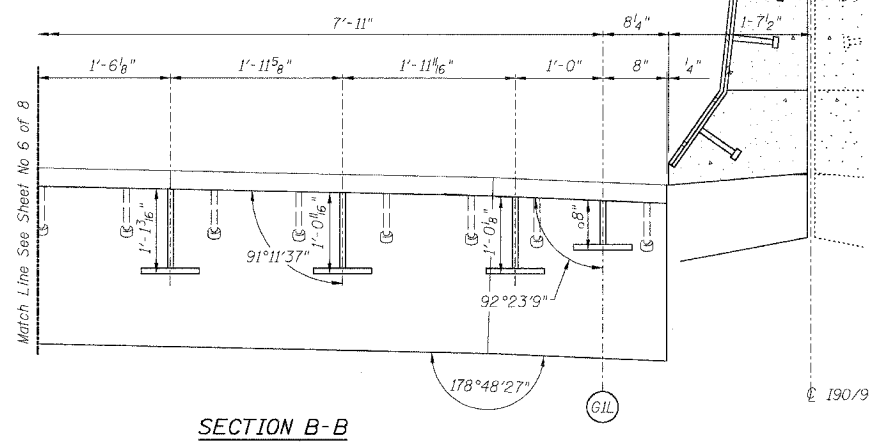


SECTION A-A



SPAN 7

PLAN OF FINGER PLATE AT PIER 7 (SOUTHBOUND)



SECTION B-B

For location of splice with respect to fingers see Flame Cutting Diagram, Sheet No. 4.

Note:
For optional splice detail see flame cutting diagram on Sheet No. 4

PIER NO. 7

REVISIONS		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		DRAWN BY RLK	DATE 5/03
1				CHECKED BY SDS	DATE 5/03
2				BOOK NUMBER	
3		FAI RTE 90/94 SB DAN RYAN EXPRESSWAY		PROJECT No.	
4		SN 016-1111 (SOUTHBOUND)		4222-3	
5		SEC 2003-029-I COOK COUNTY		SHEET No.	
6					
7					
8					
9					
0					

CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
8809 W. BRYN MAWR AVENUE
SUITE 204
CHICAGO, ILLINOIS 60618
312-716-0000
FAX 312-716-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94		COOK	344	235
FEDERAL DISTRICT	ILLINOIS	PROJECT		

Sheet No 8
of 8 Sheets

• 2003-029
CONTRACT #625B1

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:

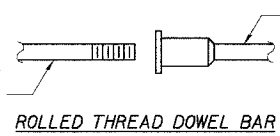
- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(Tension in kips)

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

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

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

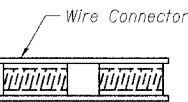
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



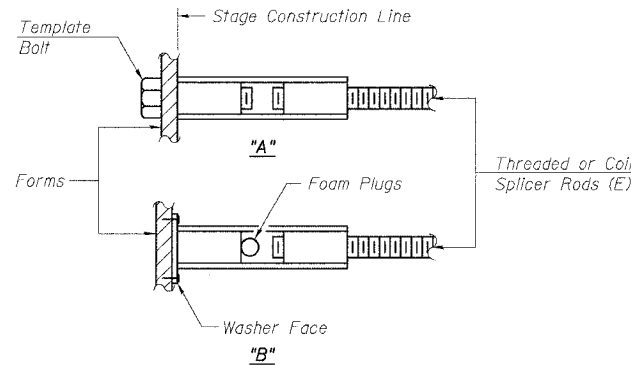
** ONE PIECE



WELDED SECTIONS

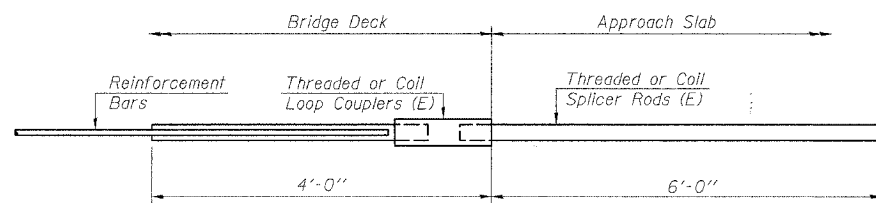
BAR SPLICER ASSEMBLY ALTERNATIVES

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



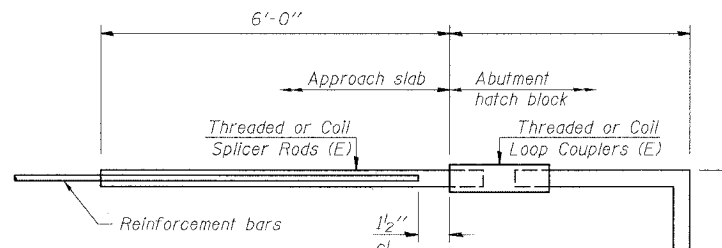
INSTALLATION AND SETTING METHODS

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



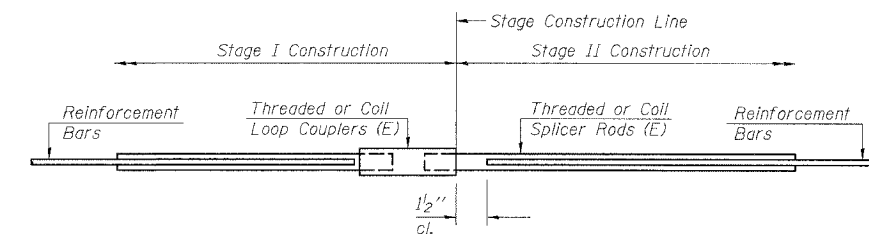
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	At Stage Construction Line in Deck

PIER NO. 7

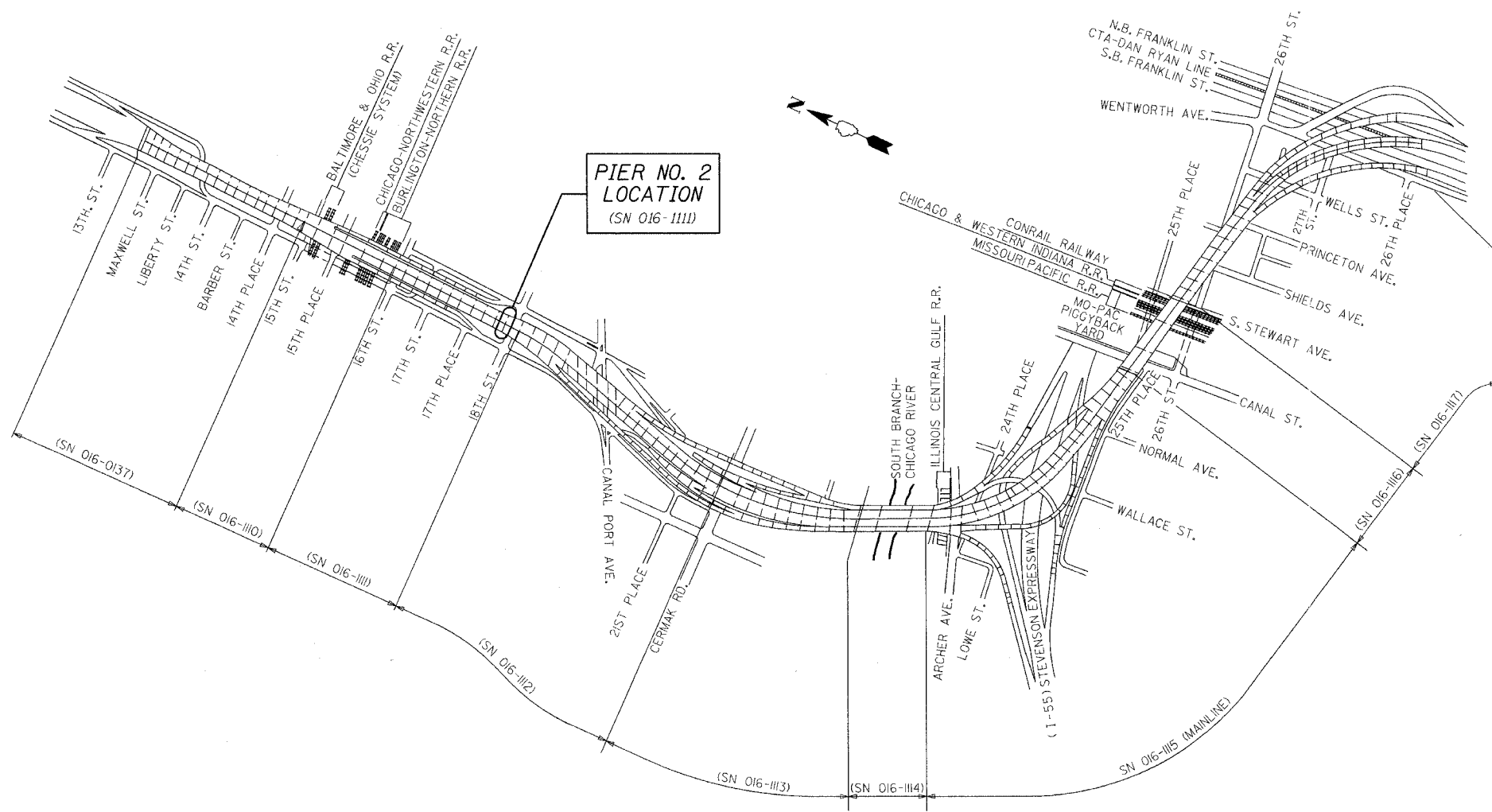
BAR SPLICER ASSEMBLY DETAILS

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	DRAWN BY DATE RLK 5/03
1	FAI RTE 90/94 SB DAN RYAN EXPRESSWAY SN 016-1111 (SOUTHBOUND)	CHECKED BY DATE SDS 5/03
2	SEC 2003-029 I COOK COUNTY	BOOK NUMBER
3		PROJECT No. 4222-3
4		SHEET No.
5		
6		
7		
8		
9		
10		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	236
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 2003-0294		Contract #62581		

SHEET NO. 1
8 SHEETS



PIER NO. 2
LOCATION
(SN 016-1111)

KEY PLAN
DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

DESIGN STRESSES

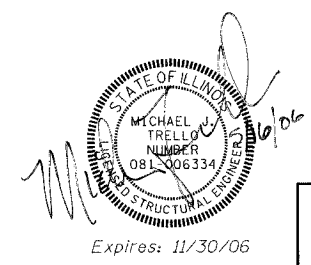
$f'c = 3500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	14.1
Concrete Superstructure	Cu Yd	16.7
Furnishing and Erecting Structural Steel	L.S.	0.41
Reinforcement Bars, Epoxy Coated	Found	2410
Fabric Reinforced Elastomeric Trough	Foot	64
Mechanical Splice	Each	128
Bar Splicers	Each	24
Field Measurements	L. Sum	0.41

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.
Finger Plate Expansion Joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.
Field welding of construction accessories will not be permitted to beams or girders.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
All Construction joints shall be bonded.
Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost included in "Furnishing and Erecting Structural Steel".
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.
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".
Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.
Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".
Existing design and fabrication plans are available upon request.
All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 25,590 lbs.



ILLINOIS DEPARTMENT OF TRANSPORTATION
KEY PLAN
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

REVISIONS	
NAME	DATE

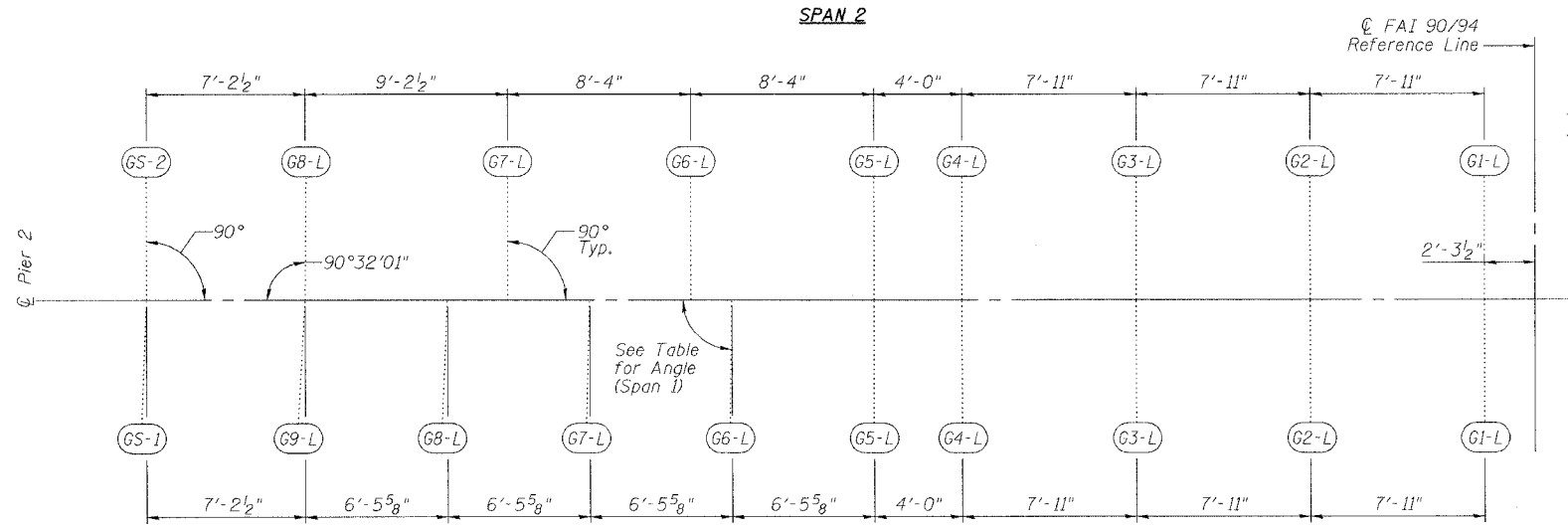
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HORIZ.
DATE: 7/19/05
DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR
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PROJECT 04286-W05
5/16/06-MML

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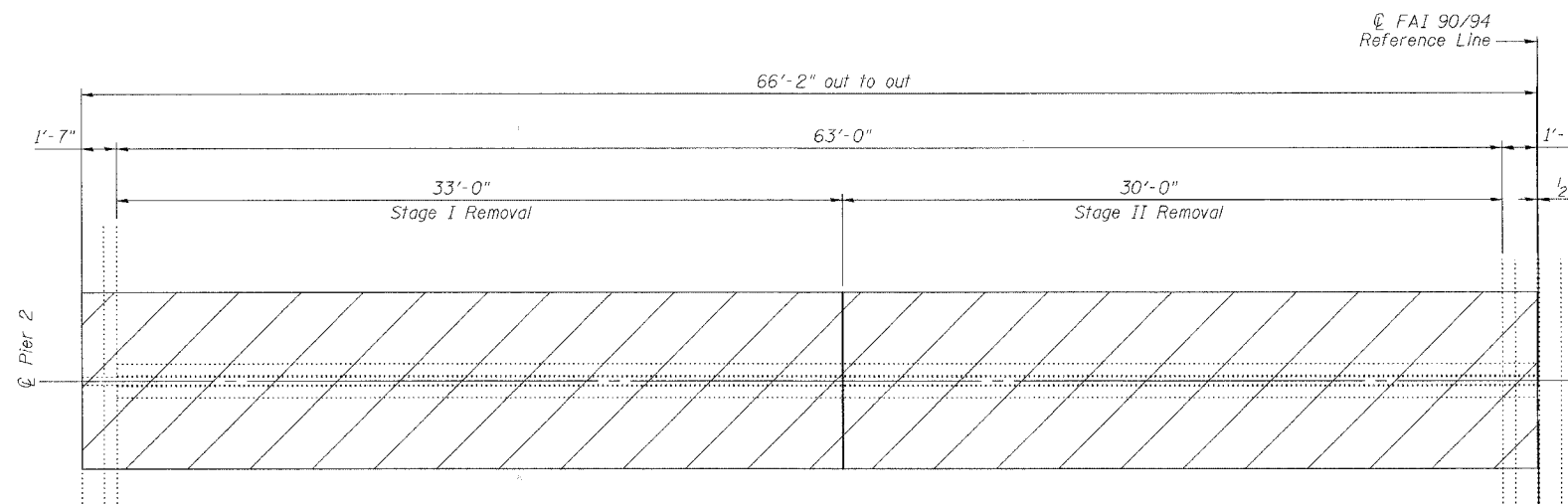
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 8 SHEETS
FAI 90/94	*	COOK	344	237	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			
* 2003-0291 Contract #62581					

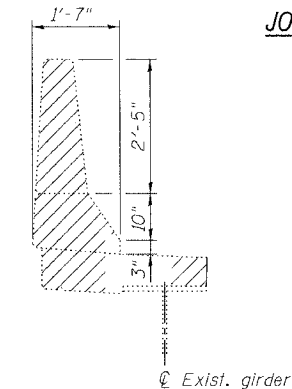
Girder	Angle
G1-L	90°00'00"
G2-L	90°00'00"
G3-L	90°00'00"
G4-L	90°00'00"
G5-L	90°00'00"
G6-L	89°10'18"
G7-L	88°20'36"
G8-L	87°30'58"
G9-L	86°41'23"
GS-1	87°44'23"



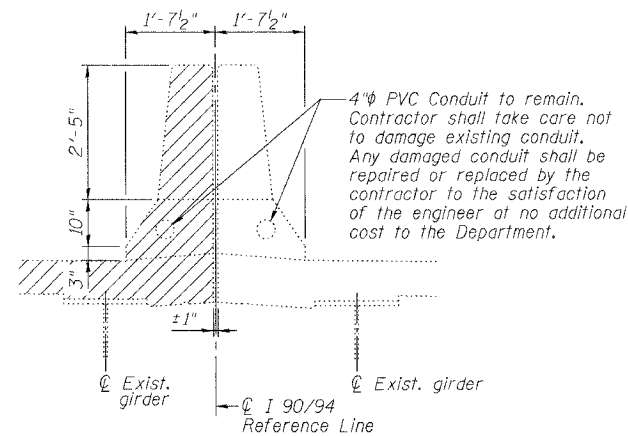
GIRDER LAYOUT AT PIER 2



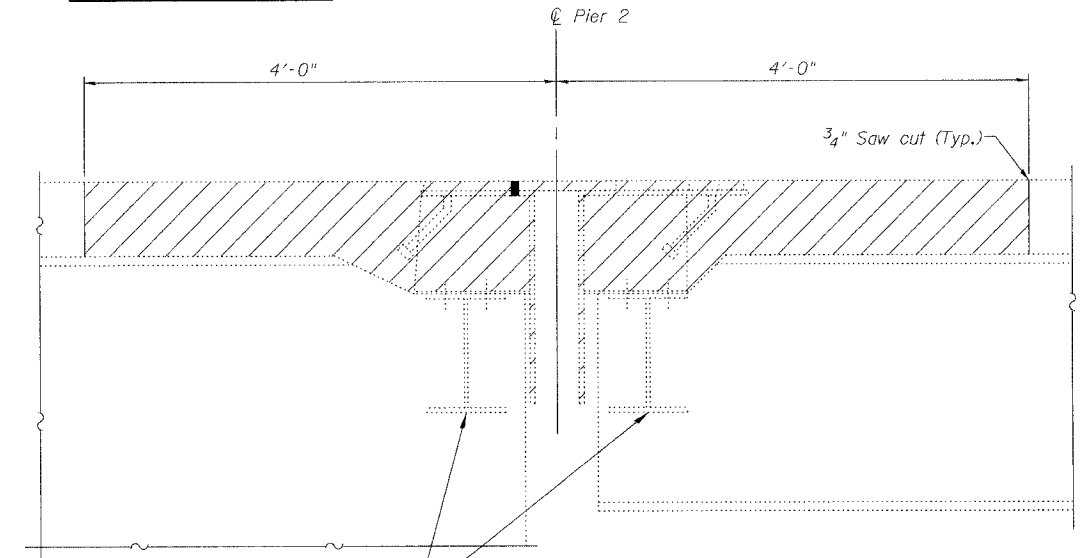
JOINT REMOVAL PLAN AT PIER 2



DETAIL AT EXISTING OUTSIDE PARAPET



DETAIL AT EXISTING FAI 90/94 MEDIAN PARAPET



Existing diaphragms to be replaced. See Sheets 267 & 268 of 344 for details.

Note: Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

Existing finger plates, stools, drainage trough and hardware shall be removed. Cost included with "Concrete Removal".

SECTION AT EXISTING FINGER PLATE

Notes:
Hatched Area indicates "Concrete Removal".
Longitudinal reinforcement extending into removal areas shall be cleaned, straightened and incorporated into the new construction except as noted on Section A-A on Sheet 5.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE EXPANSION JOINT REMOVAL DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. _____
HORIZ. _____
DATE: 7/19/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

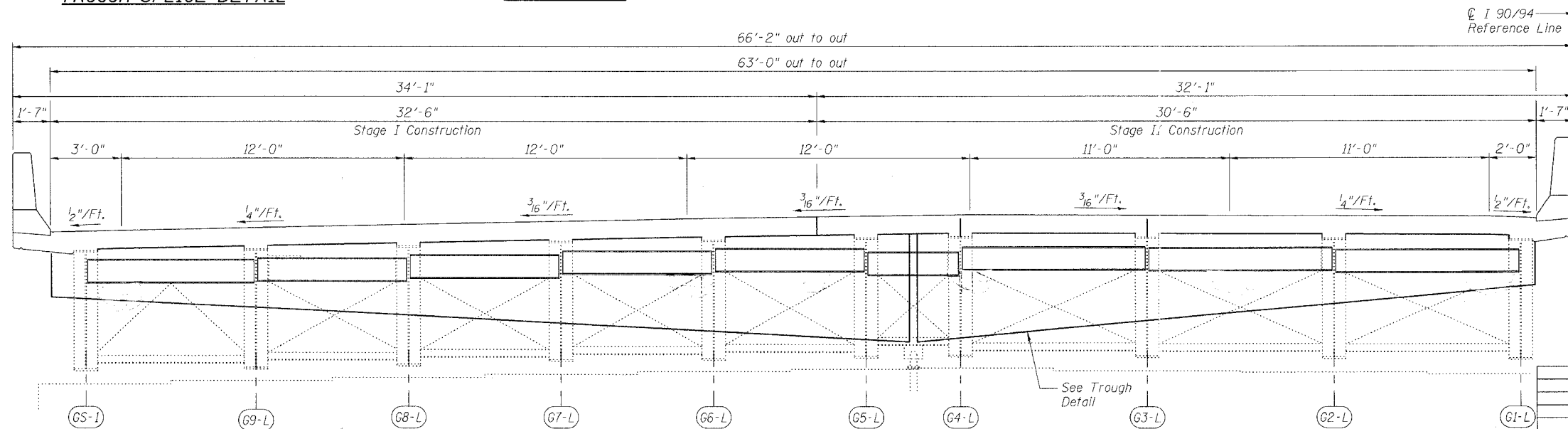
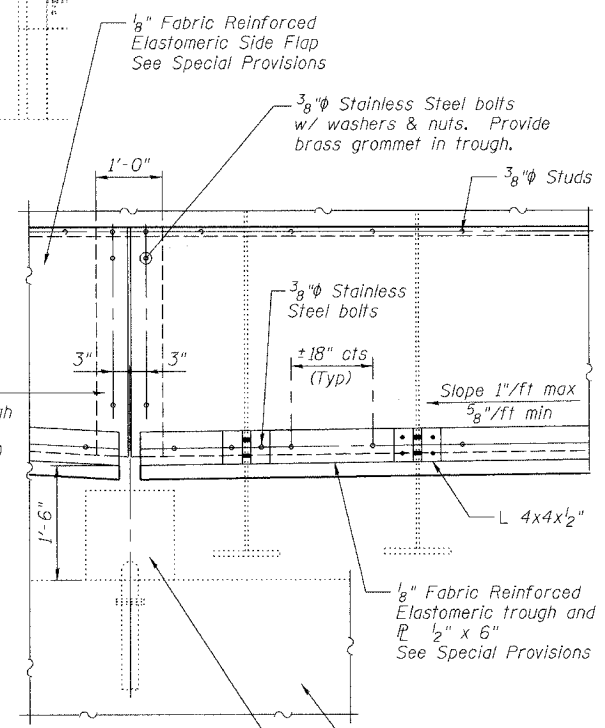
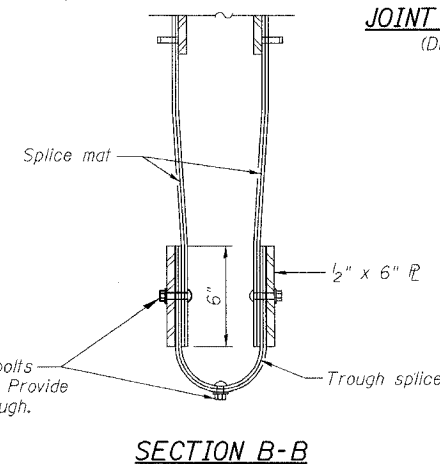
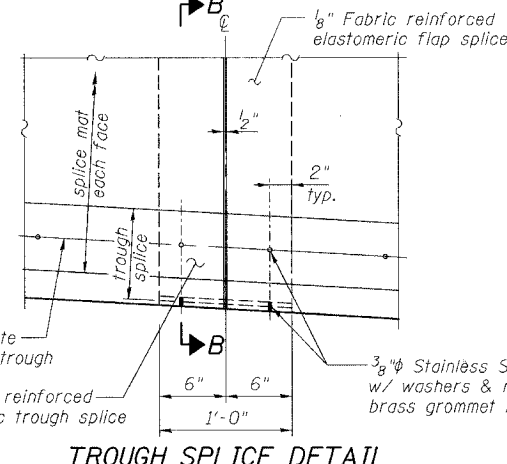
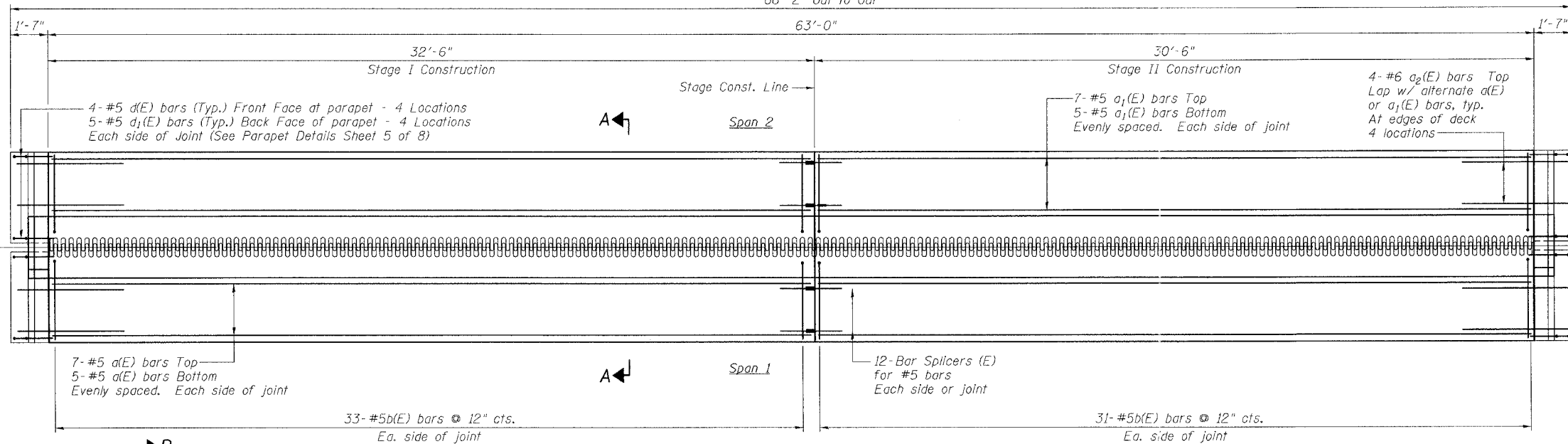
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
1615 W. 18TH STREET, SUITE 200
CHICAGO, ILLINOIS 60618
TEL: 312.467.1000 FAX: 312.467.1001

COMPUTER FILE NO.
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PROJECT 04286-W05
5/16/06-MML

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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
66'-2" Out to Out

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 8 SHEETS
FAI 90/94	*	COOK	344	236	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		
2003-0290		Contract #62581			



- Notes:
1. For Parapet Details and Superstructure Bill of Material, see Sheet 5 of 8.
 2. For Section A-A, see Sheet 4 of 8.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 2 JOINT DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. 1"=4'-0"
HORIZ. 1"=40'-0"
DATE: 7/19/05

DESIGNED BY: LANDREY
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 04286-W05-SB-PJ1

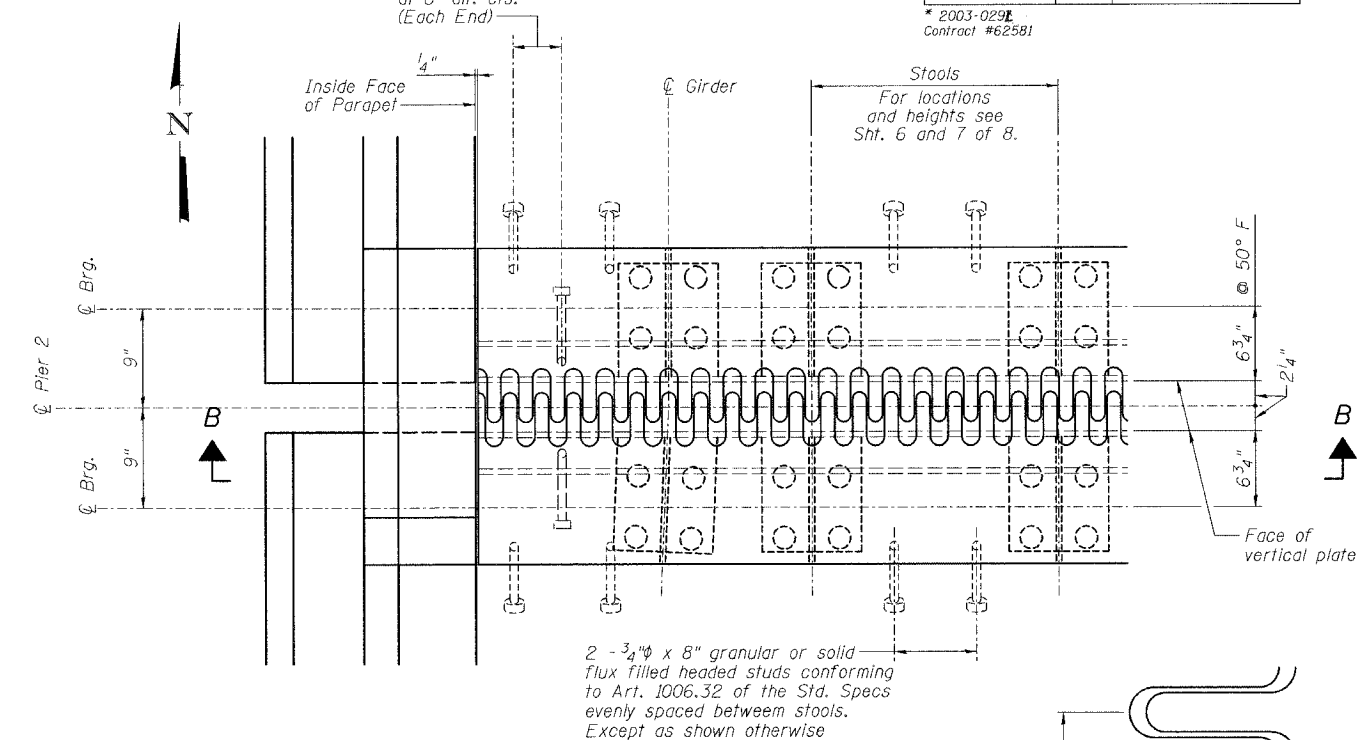
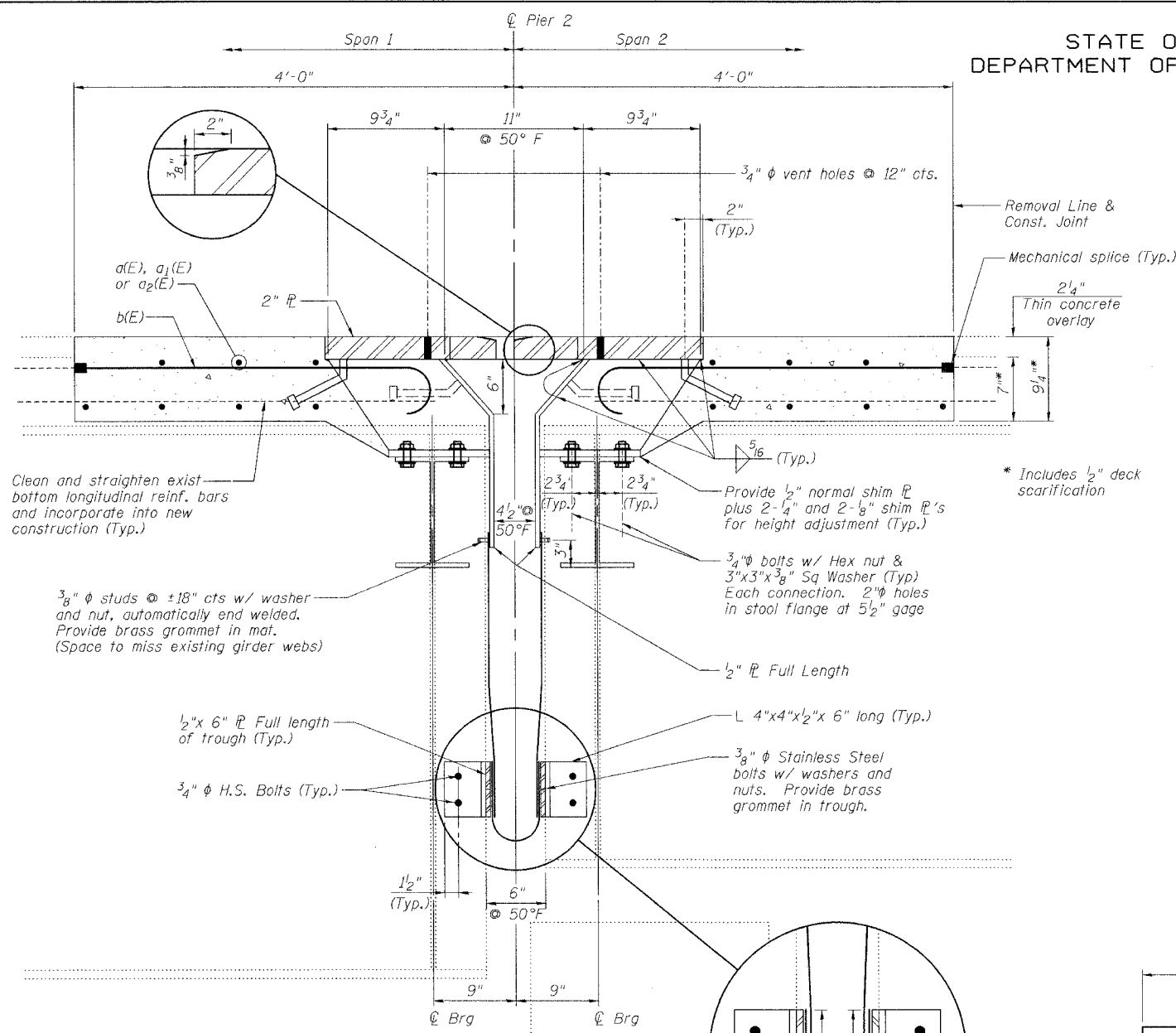
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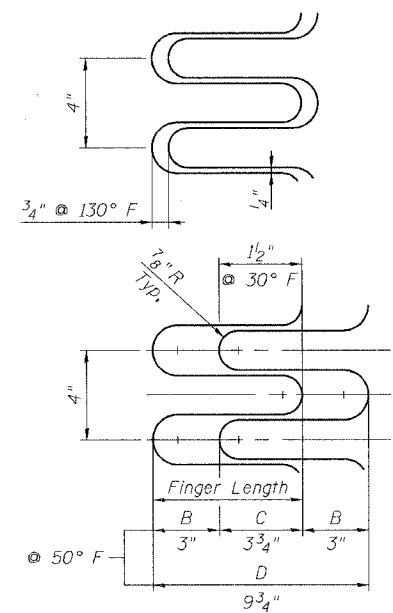
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 8 SHEETS
FA1 90/94	*	COOK	344	239	

FED. ROAD DIST. NO. ILLINOIS
* 2003-029
Contract #62581



PLAN



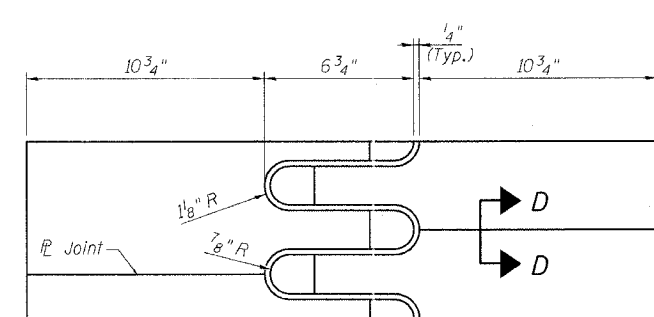
FINGER DETAIL

Finger Length = 6 3/4"

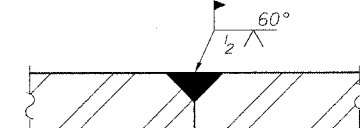
Weld Length = 9 3/4"

Weld Size = 5/16"

Expansion Length = 359.4'



FLAME CUTTING DIAGRAM
(Proposed Finger φ - Cut from 2" x 2'-4 1/2" φ)



SECTION D-D

SECTION A-A

NOTES

1. Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
2. The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting Structural Steel".
3. For Section B-B, see Sheet 5 of 8.
4. The contractor shall bolt the stools of the finger plate joint assembly to the top of the new end diaphragms and to the top of the existing girders as shown in Section A-A of this drawing.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PIER 2 JOINT DETAILS

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. _____
HORIZ. _____
DATE: 7/19/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
(OF SPRINGFIELD)
CONSULTING ENGINEERS
STRUCTURAL DIVISION
PROFESSIONAL DESIGN FIRM NO. 04286
1807 W. 89th St. P.O. Box 1027, O'Leary, IL 62450-0102
www.greenebradford.com

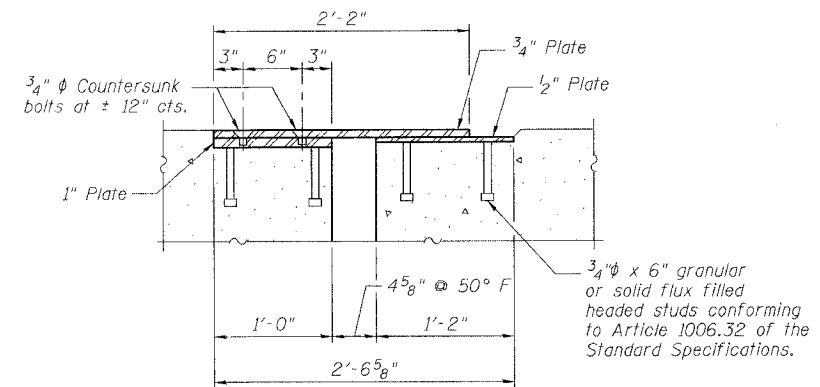
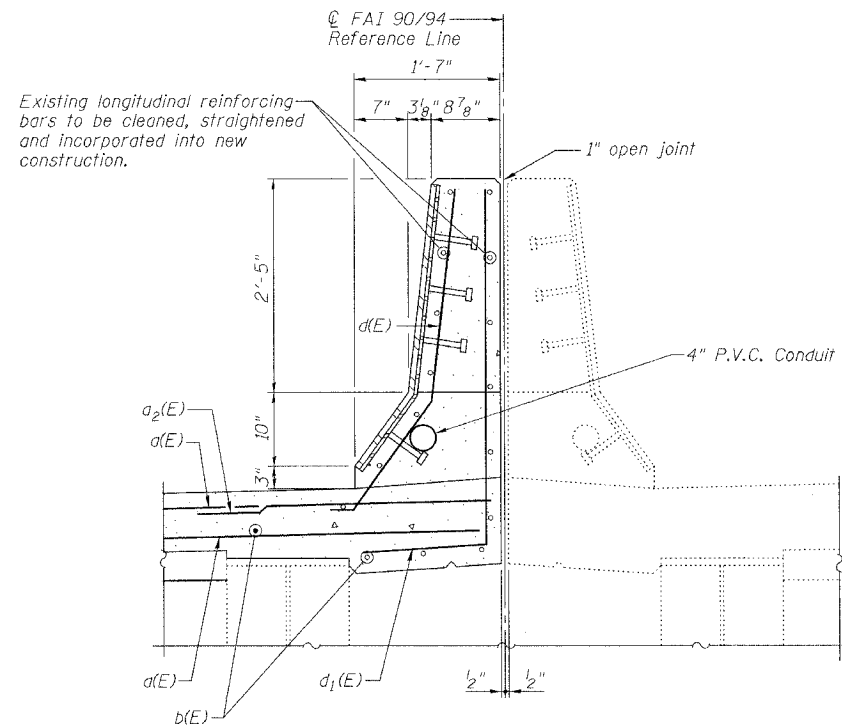
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PROJECT 04286-W05
5/16/06-MML

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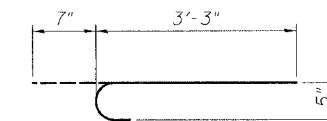
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	240
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
2003-0293			Contract #62581	

SHEET NO. 5
8 SHEETS



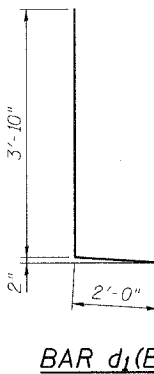
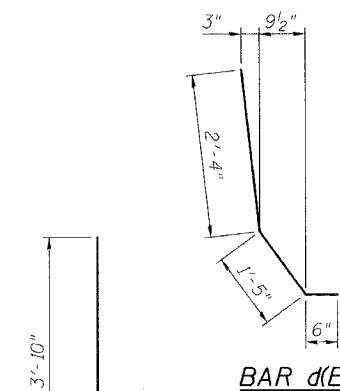
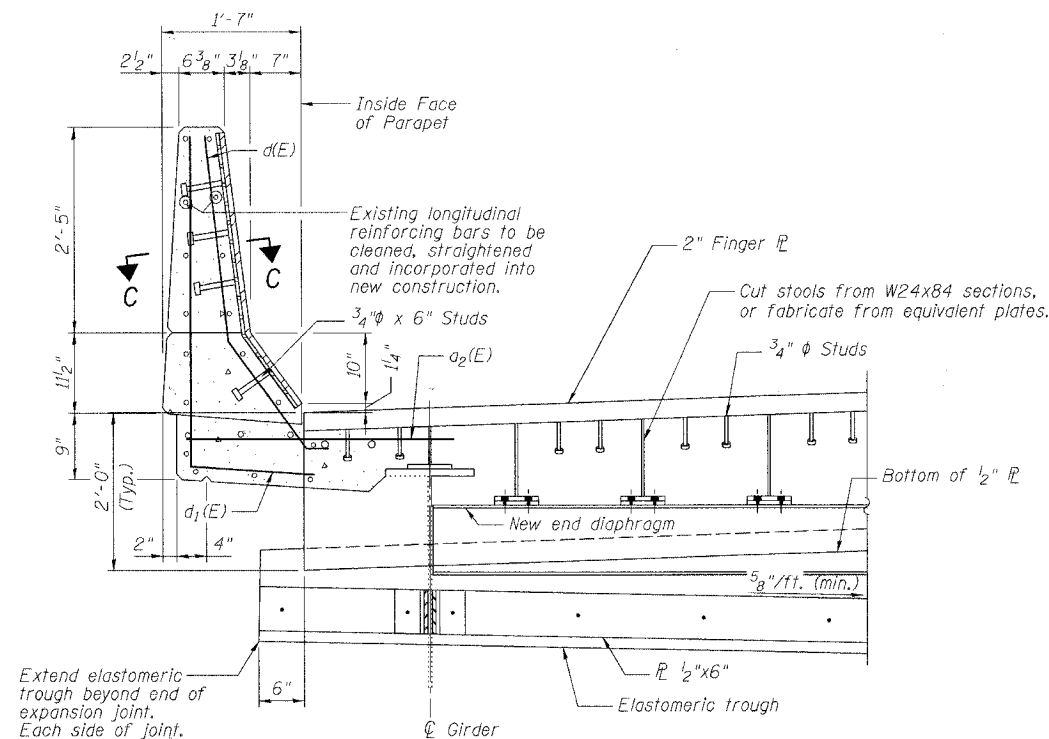
DETAIL AT MEDIAN PARAPET
(Looking North)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	24	#5	33'-0"	—
a ₁ (E)	24	#5	31'-0"	—
a ₂ (E)	16	#6	4'-6"	—
b(E)	128	#5	3'-10"	┌
d(E)	16	#5	4'-3"	└
d ₁ (E)	20	#5	5'-10"	└
Reinforcement Bars, Epoxy Coated		Pound	2410	
Concrete Removal		Cu. Yd.	14.1	
Concrete Superstructure		Cu. Yd.	16.7	
Mechanical Splice		Each	128	
Bar Splicers		Each	24	

Reinforcing bars designated (E) shall be epoxy coated.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PARAPET DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. _____
HORIZ. _____
DATE: 7/19/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

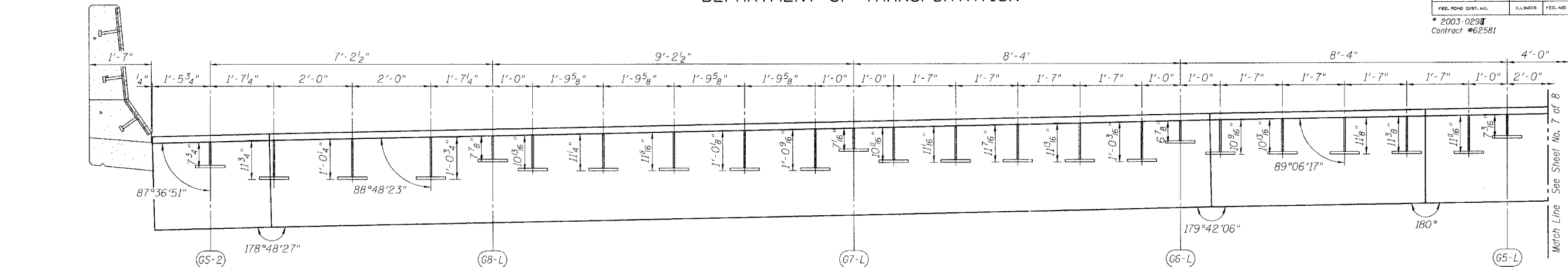
GREENE & BRADFORD, INC.
OF SPRINGFIELD

COMPUTER FILE NO.
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PROJECT 04286-W05
5/16/06-MML

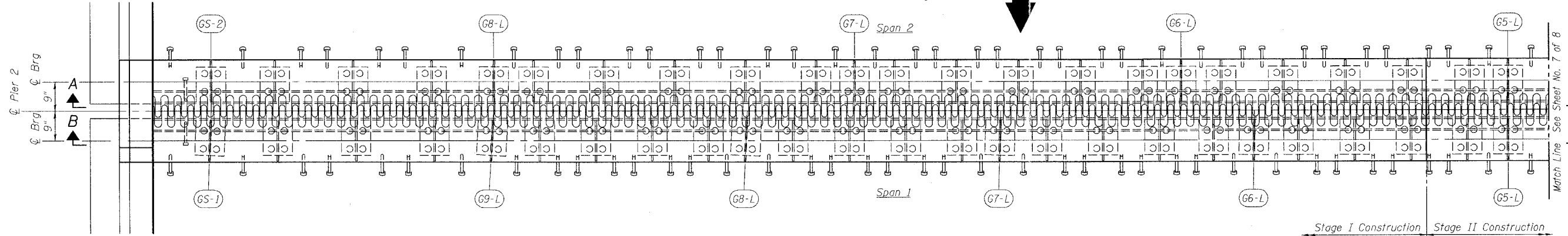
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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

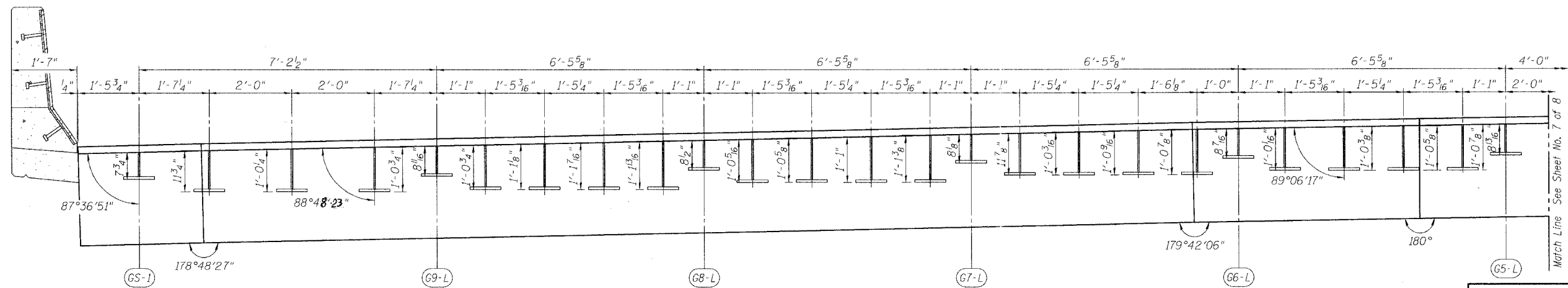
ROUTE NO. FAI 90/94	SECTION #	COUNTY COOK	TOTAL SHEETS 344	SHEET NO. 241	SHEET NO. 6 8 SHEETS
FED. ROAD DIST. NO. * 2003-0291 Contract #62581		ILLINOIS FED. AID PROJECT-			



SECTION A-A
(Dimensions are along \hat{C} Pier)



PLAN OF FINGER PLATE AT PIER 2



SECTION B-B
(Dimensions are along \hat{C} Pier)

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

REVISIONS	
NAME	DATE

SCALE: VERT.
HORIZ.
DATE: 7/19/05

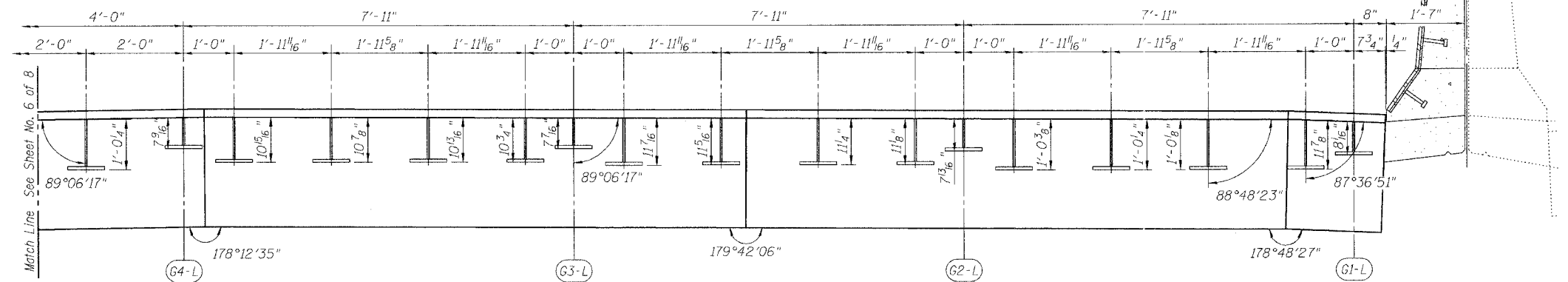
DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

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PROJECT 04286-W05
5/16/06-MML

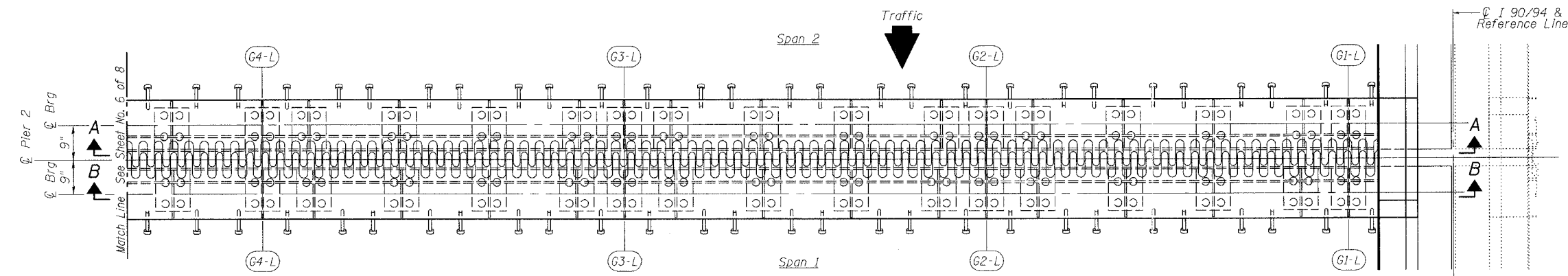
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PLOT DATE = 5/16/2006
PLOT TIME = 3:08:20 PM
OPERATOR = michelle

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

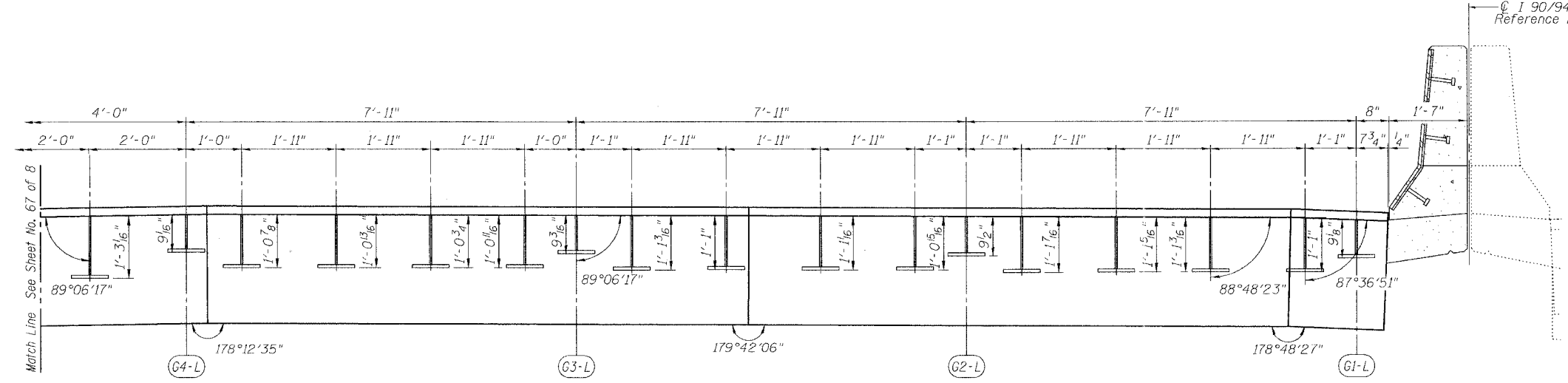
ROUTE NO. FAI 90/94	SECTION *	COUNTY COOK	SHEET NO. 344	SHEET 242	SHEET NO. 7 8 SHEETS
FED. ROAD DIST. NO. * 2003-029, I Contract #62581		ILLINOIS	FED. AID PROJECT		



SECTION A-A
(Dimensions are along \bar{C} Pier)



PLAN OF FINGER PLATE AT PIER 2



SECTION B-B
(Dimensions are along \bar{C} Pier)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. _____
HORIZ. _____
DATE: 7/19/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEERS
PROFESSIONAL DESIGN FIRM NO. 042-0022
1001 W. 18TH ST., SUITE 100, SPRINGFIELD, ILL. 62761
TEL: 217-223-8944, FAX: 217-223-8947, WWW: www.greenegb.com

COMPUTER FILE NO.
04286-W05-SB-PE2
PROJECT 04286-W05
5/16/06-MML

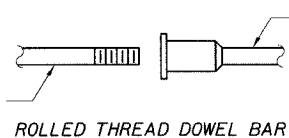
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PLOT DATE = 5/16/2006
PLOT TIME = 3:08:22 PM
OPERATOR = MICHELEBI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	243
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
2003-029		Contract #62581		

SHEET NO. 8
8 SHEETS

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

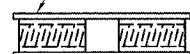


ROLLED THREAD DOWEL BAR



** ONE PIECE

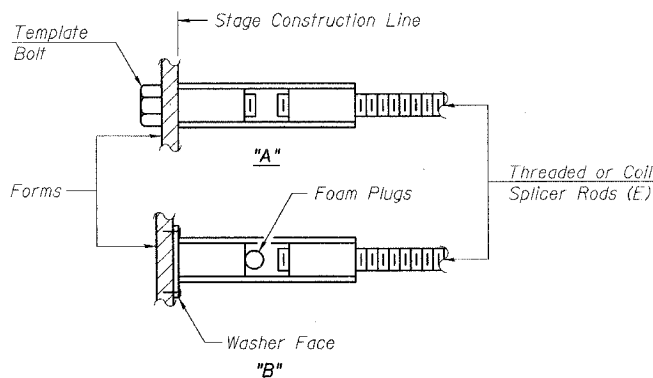
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

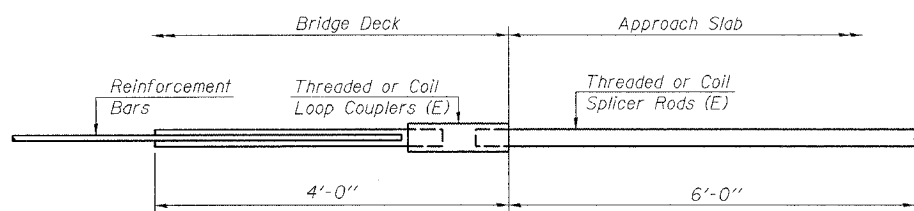
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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:

- Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(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_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

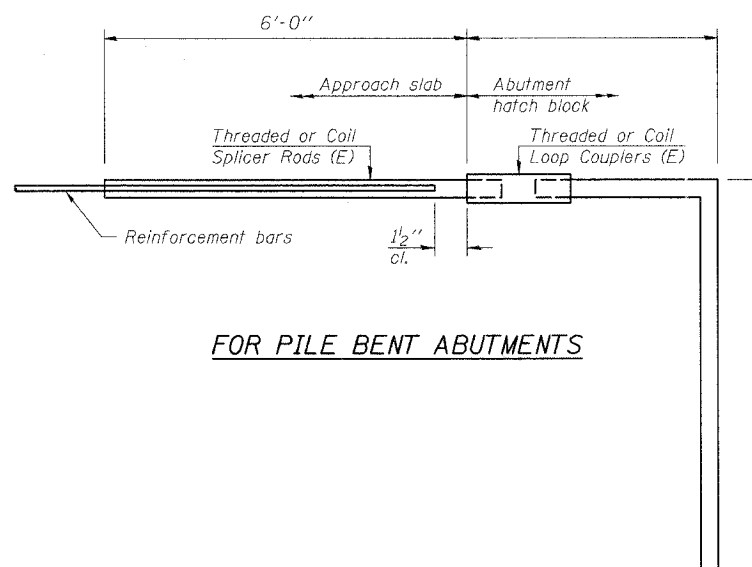
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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



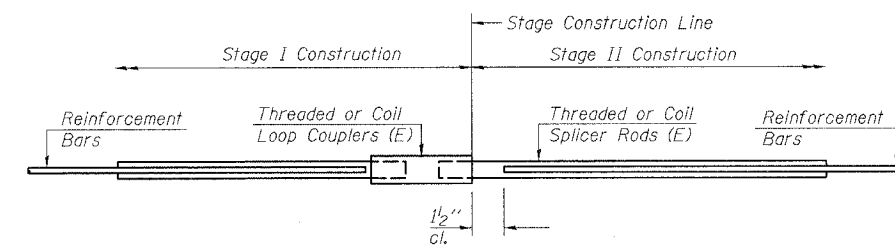
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	Deck

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
16TH STREET TO 18TH STREET
COOK COUNTY
S.N. 016-1111 - PIER 2

SCALE: VERT. _____
HORIZ. _____
DATE: 7/19/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
1600 N. ELSTON STREET, SUITE 200
CHICAGO, ILLINOIS 60642
TEL: 773-342-1000 FAX: 773-342-1001
WWW.GREENE-AND-BRADFORD.COM

COMPUTER FILE NO.
04286-W05-SB-BSD
PROJECT 04286-W05
5/16/06-MML

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BSD-1

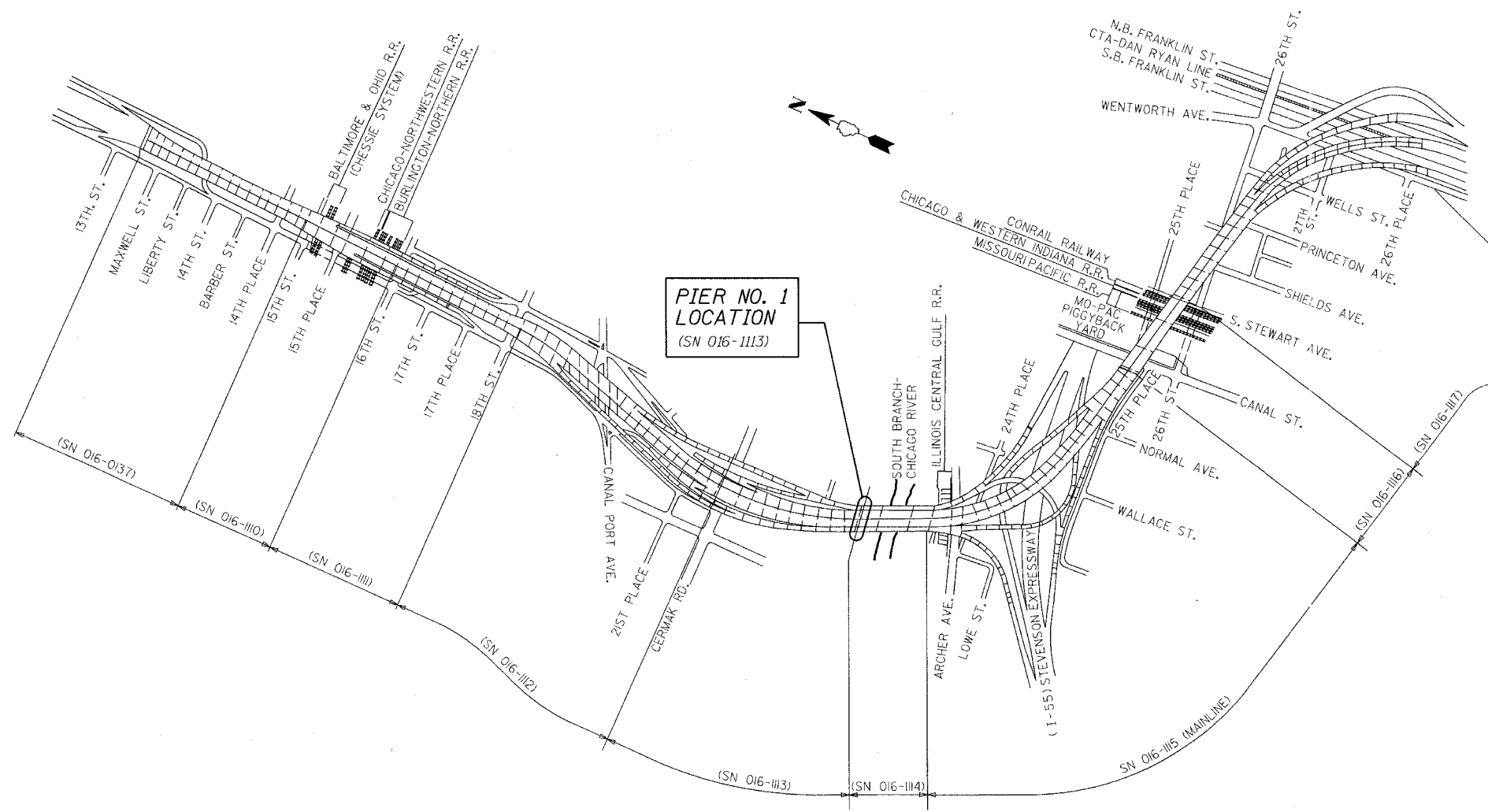
10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
90/94	*	COOK	344	214
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
9 SHEETS

* 2003-029
Contract #62581



PIER NO. 1
LOCATION
(SN 016-1113)

KEY PLAN

DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

DESIGN STRESSES

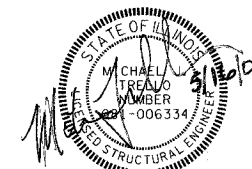
$f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	21.5
Concrete Superstructure	Cu Yd	25.8
Furnishing and Erecting Structural Steel	L.S.	0.22
Reinforcement Bars, Epoxy Coated	Pound	3540
Fabric Reinforced Elastomeric Trough	Foot	98
Mechanical Splice	Each	184
Bar Splicers	Each	48
Field Measurements	L. Sum	0.22

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.
Finger Plate Expansion Joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.
Field welding of construction accessories will not be permitted to beams or girders.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
All Construction joints shall be bonded.
Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost included in "Furnishing and Erecting Structural Steel".
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.
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".
Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.
Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".
Existing design and fabrication plans are available upon request.
All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 50,810 lbs.



Expires: 11/30/06

ILLINOIS DEPARTMENT OF TRANSPORTATION

KEY PLAN

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

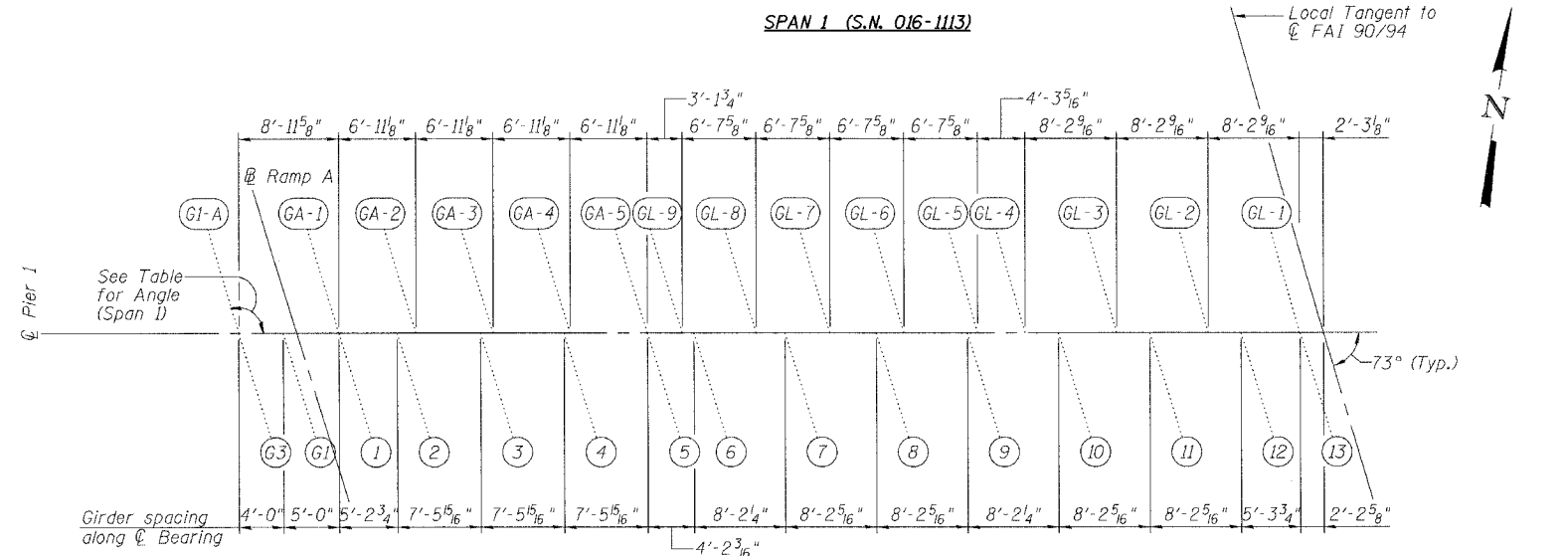
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DESIGNED BY: SANFORD
CHECKED BY: MATHUR

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5/11/06-MML

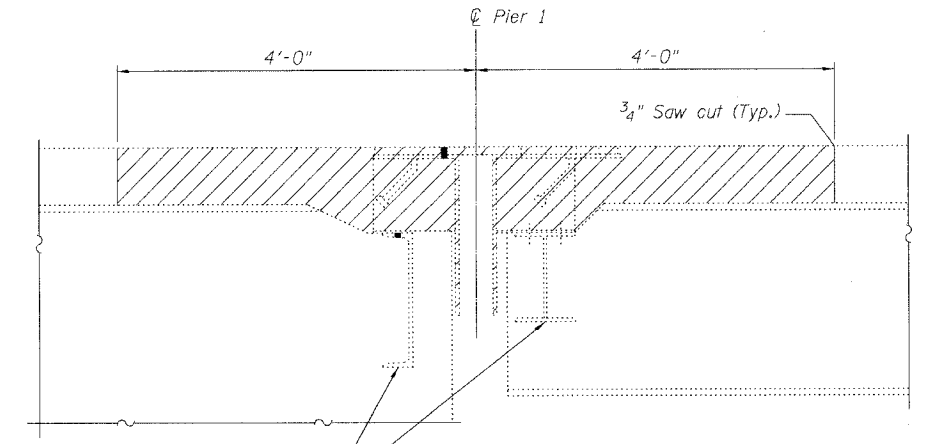
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OPERATOR = mitchell

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

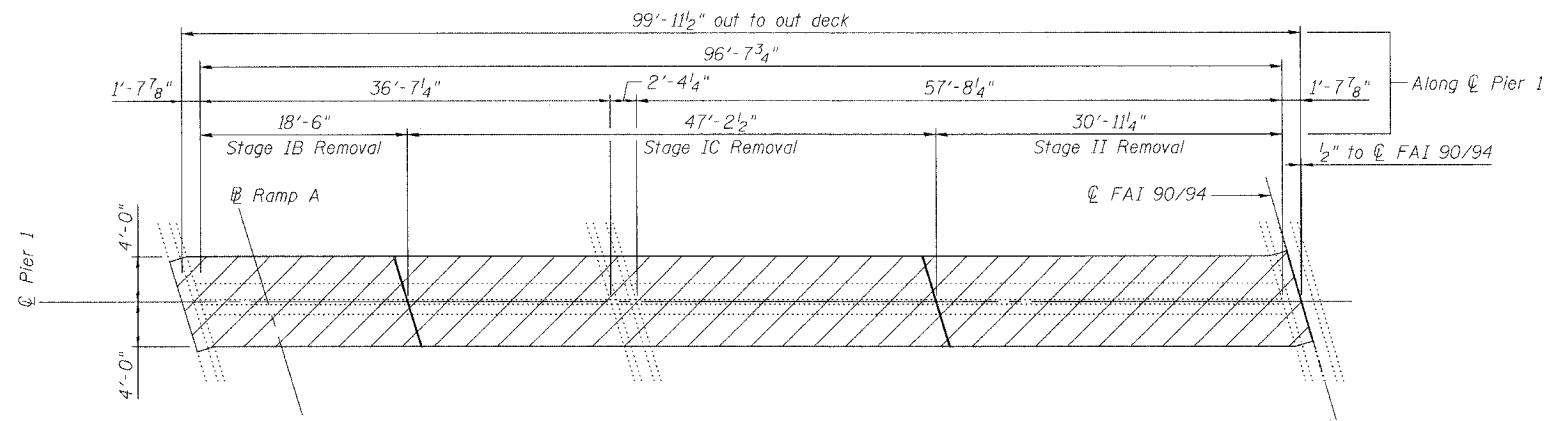
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 2
FAI 90/94	*	COOK	344	245
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 2003-029 I Contract #62581				



Girder	Angle
G1-A	106°26'36"
GA-1	106°36'42"
GA-2	106°42'57"
GA-3	106°48'55"
GA-4	106°54'37"
GA-5	107°00'04"
GL-9	106°59'29"
GL-8	106°35'22"
GL-7	106°12'11"
GL-6	105°49'53"
GL-5	105°28'24"
GL-4	105°33'08"
GL-3	105°33'08"
GL-2	105°33'08"
GL-1	105°33'08"



SPAN 3 (S.N. 016-1114)
GIRDER LAYOUT AT PIER 1

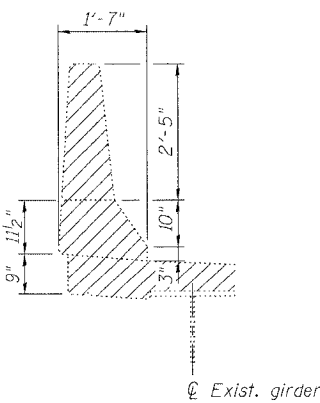


JOINT REMOVAL PLAN AT PIER 1

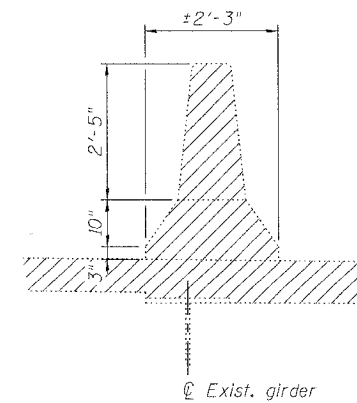
SECTION AT EXISTING FINGER PLATE

(Dimensions at Rt. L's)

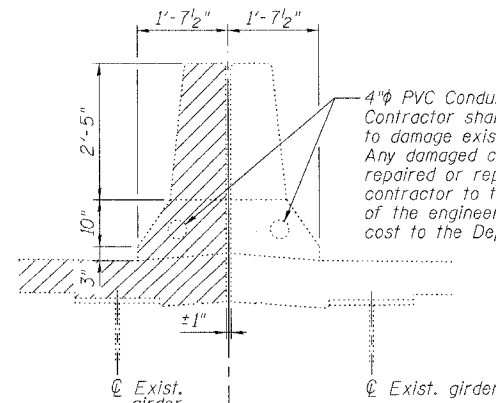
Notes:
Hatched Area indicates "Concrete Removal".
Existing transverse bars in the deck are placed at right angles to \perp Roadway. Existing transverse bars extending into removal areas shall be cut to miss the new finger joint, cleaned and incorporated into the new construction.
Longitudinal reinforcement extending into removal areas shall be cleaned, straightened and incorporated into the new construction except as noted on Section A-A on Sheet 5.



DETAIL AT EXISTING OUTSIDE PARAPET
(Dimensions at Rt. L's)



DETAIL AT EXISTING FAI 90/94 & RAMP A PARAPET
(Dimensions at Rt. L's)



DETAIL AT EXISTING FAI 90/94 MEDIAN PARAPET
(Dimensions at Rt. L's)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 1 JOINT REMOVAL DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT. 1"=4'-0"
HORIZ. 1"=40'-0"
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

COMPUTER FILE NO. 04286-W01-SB-REM
PROJECT 04286-W01
5/11/06-MML

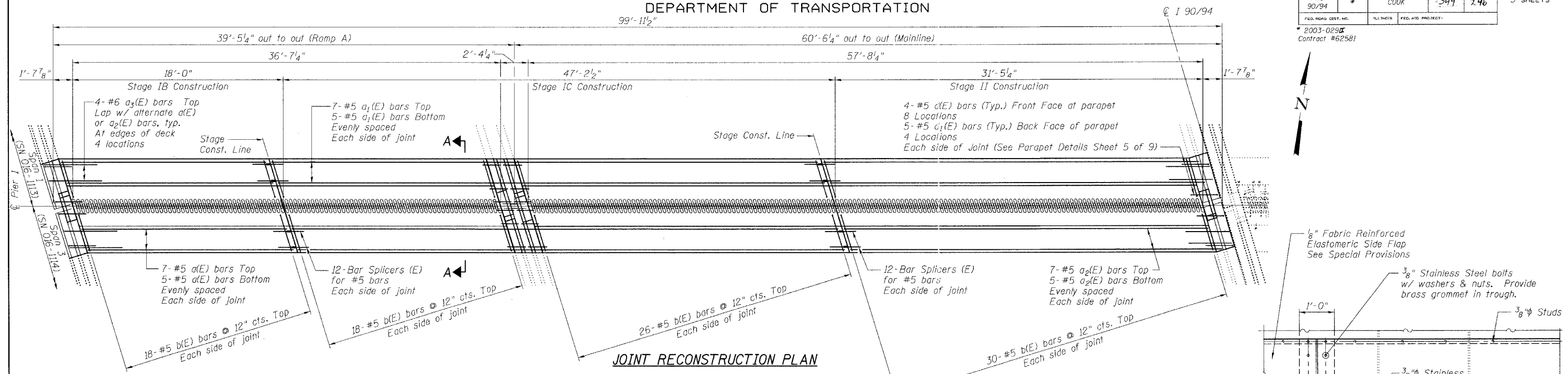
GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 021-00000000
PROFESSIONAL ENGINEERING COMPANY
1001 N. WASHINGTON ST., SUITE 200
SPRINGFIELD, IL 62762-4000
TEL: 217-223-8800 FAX: 217-223-8801

FILE NAME = I:\04286\W01\DRAWINGS\Southbound\04286-W01-SB-REM.dgn
PLOT DATE = 5/16/2006
PLOT TIME = 2:28:53 PM
OPERATOR = michellel

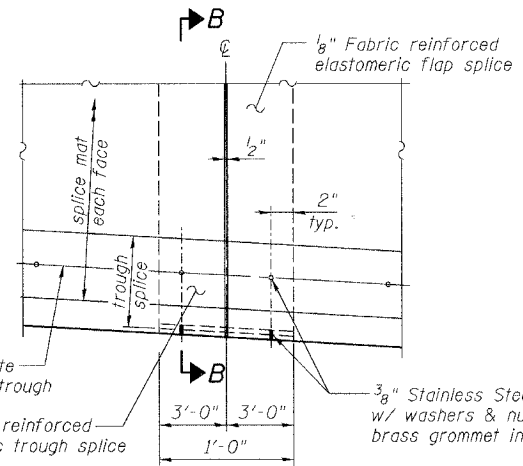
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	344	246
9 SHEETS				

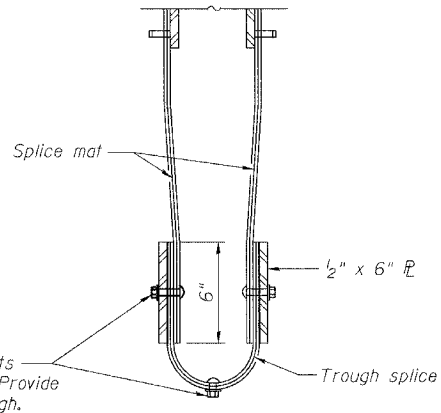
2003-0299E
Contract #62581



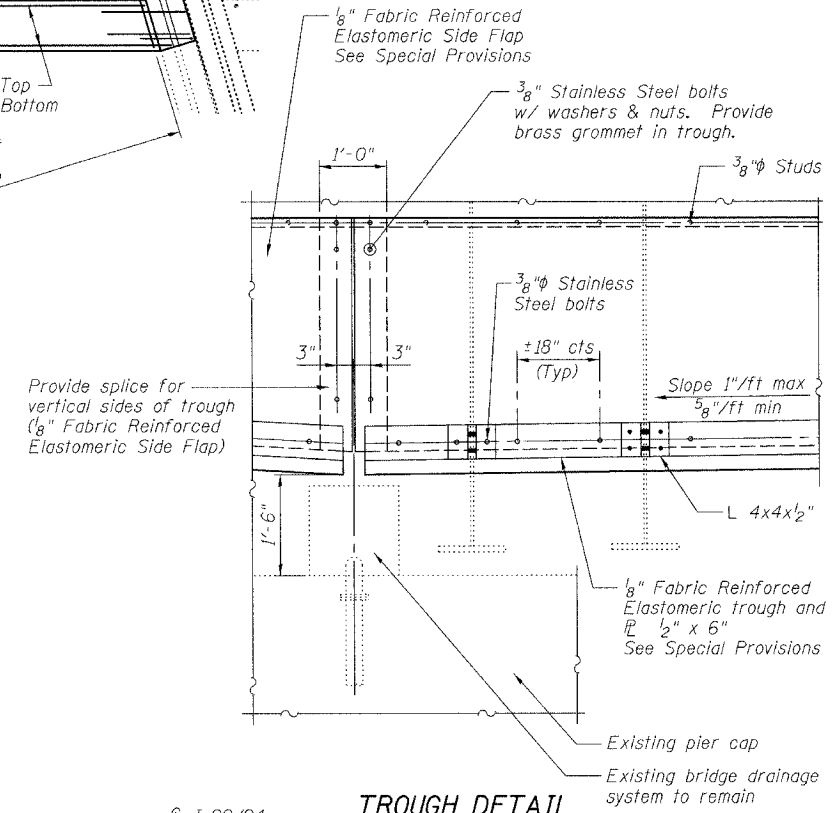
JOINT RECONSTRUCTION PLAN



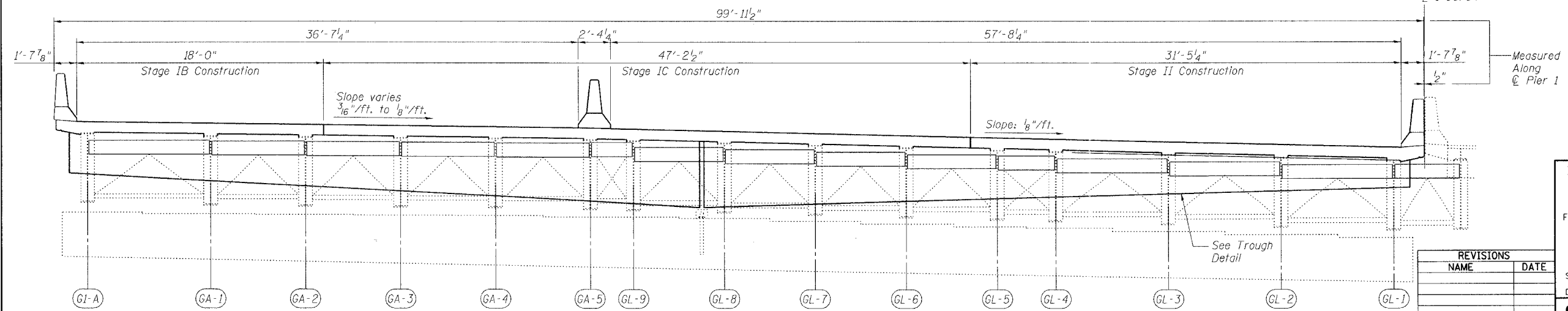
TROUGH SPLICE DETAIL



SECTION B-B



TROUGH DETAIL



ELEVATION (LOOKING NORTH)

- Notes:
- For Parapet Details and Superstructure Bill of Material, see Sheet 5 of 9.
 - For Section A-A, see Sheet 4 of 9.
 - Deck cross slopes shown are at right angles to \bar{C} Roadway.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 1 JOINT DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

COMPUTER FILE NO.
04286-W01-SB-PJ1
PROJECT 04286-W01
5/11/06-MML

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEERS
REGISTERED IN ILLINOIS
1001 WEST BARKER ROAD, SUITE 200
SPRINGFIELD, ILLINOIS 62761-1000
TEL: 217-223-8800 FAX: 217-223-8801
WWW.GREENE-AND-BRADFORD.COM

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PLOT TIME = 2:28:50 PM
OPERATOR = michellel

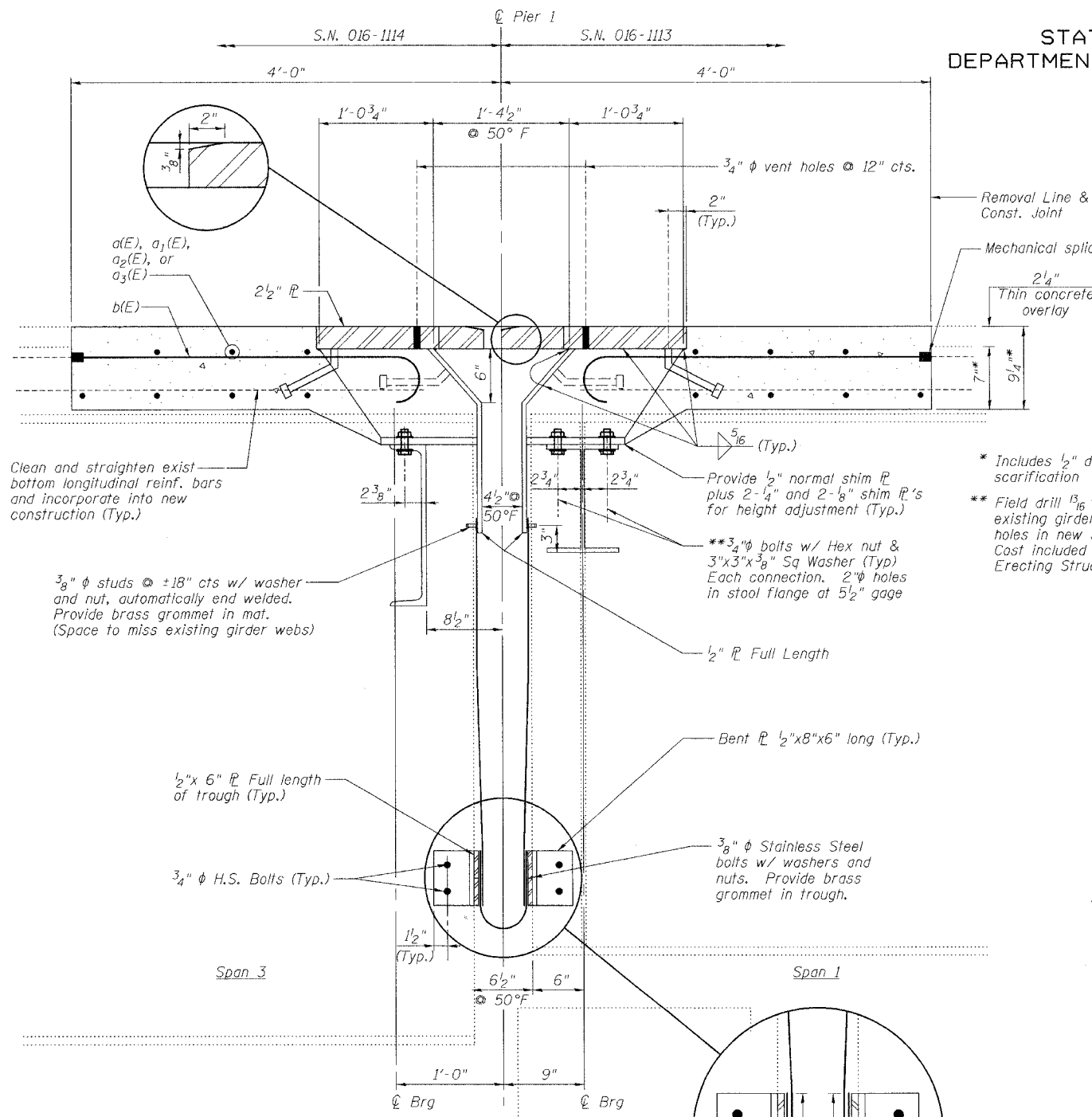
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
FAI 90/94	*	COOK	344	247
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
9 SHEETS

* 2003-029
Contract #62581

For locations and heights see Shts. 6 thru 8 of 9.



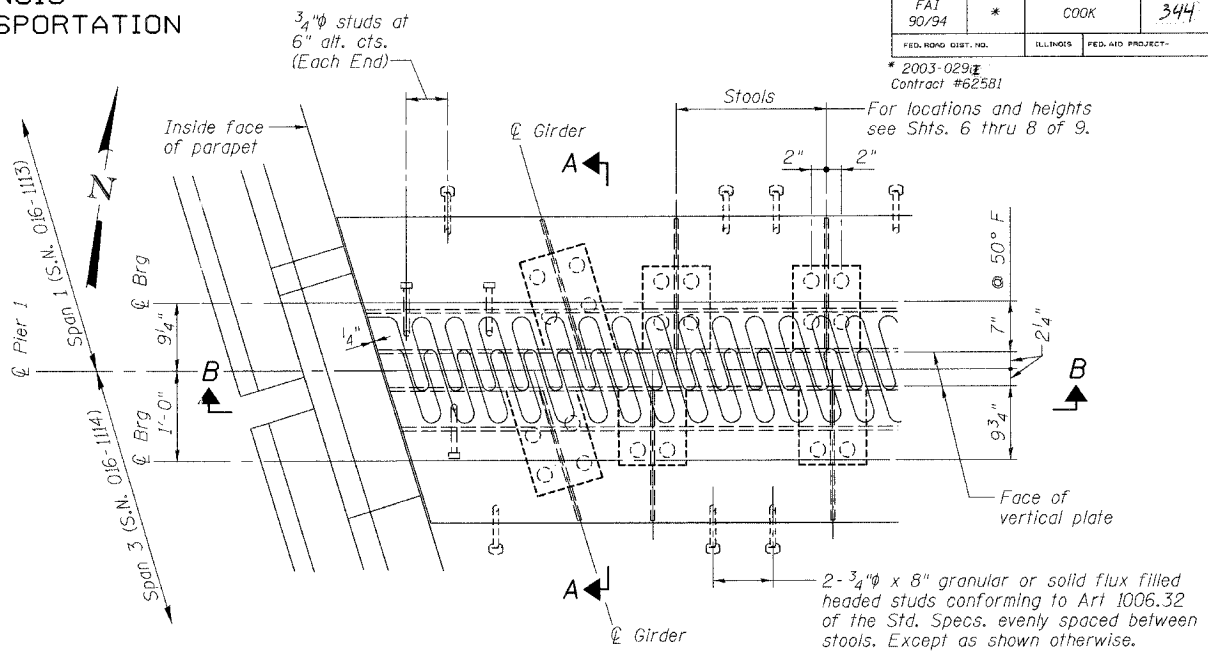
Clean and straighten exist bottom longitudinal reinf. bars and incorporate into new construction (Typ.)

3/8" ϕ studs @ 18" cts w/ washer and nut, automatically end welded. Provide brass grommet in mat. (Space to miss existing girder webs)

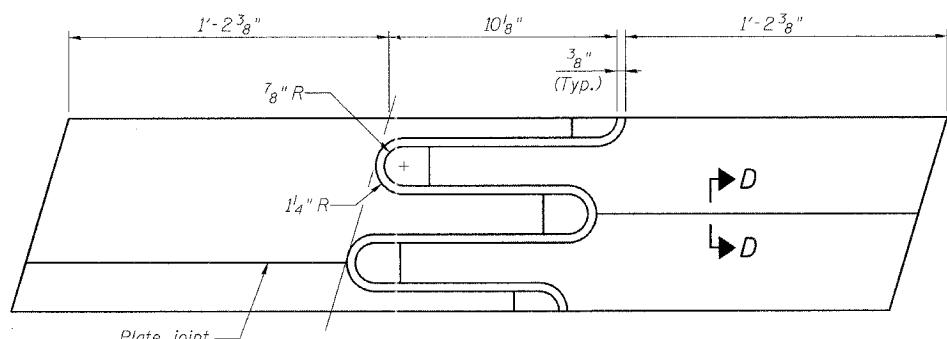
Provide 1/2" normal shim \bar{r} plus 2-4" and 2-1/8" shim \bar{r} 's for height adjustment (Typ.)

**3/4" ϕ bolts w/ Hex nut & 3"x3"x3/8" Sq Washer (Typ) Each connection. 2" ϕ holes in stool flange at 5 1/2" gage

* Includes 1/2" deck scarification
** Field drill 13/16" ϕ holes in existing girder top flanges using holes in new stools as a template. Cost included in "Furnishing and Erecting Structural Steel."

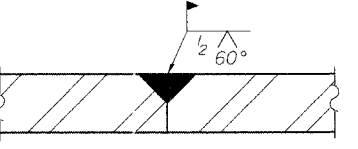


PLAN

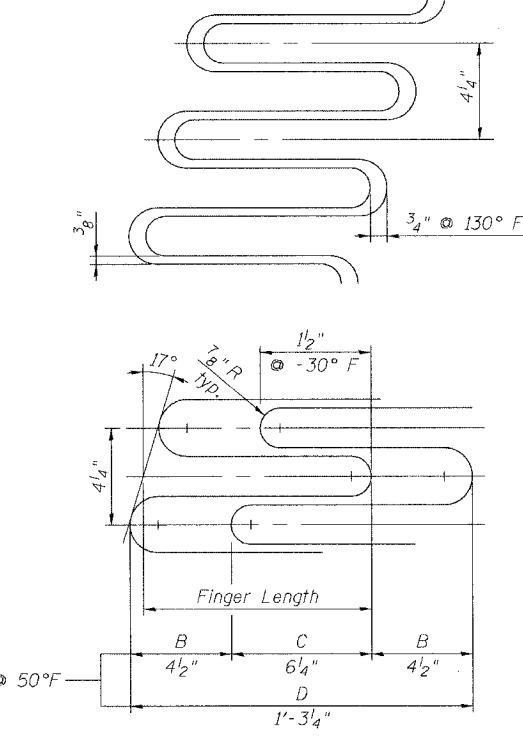


FLAME CUTTING DIAGRAM

(Proposed Finger \bar{r} - Cut from 2 1/2" x 3'-1 13/16" \bar{r})



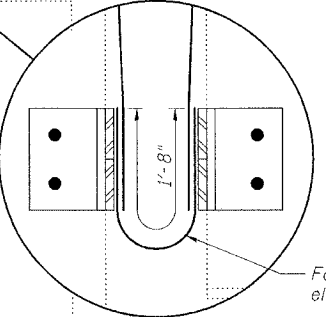
SECTION D-D



FINGER DETAIL

Finger Length = 10 1/8"
Weld Length = 12 1/4"
Expansion Length = 477.4"

SECTION A-A



Fabric reinforced elastomeric trough

NOTES

- The Contractor shall bolt the Stools of the Fingerplate Joint Assembly to the top of existing girders and to the top of new diaphragms, as shown in Section A-A of this drawing.
- Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
- The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting Structural Steel".
- For Section B-B, see Sheet 5 of 9.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 1 JOINT DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT.
HORIZ.
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

COMPUTER FILE NO.
04286-W01-SB-FPJ

PROJECT 04286-W01
5/11/06-MML

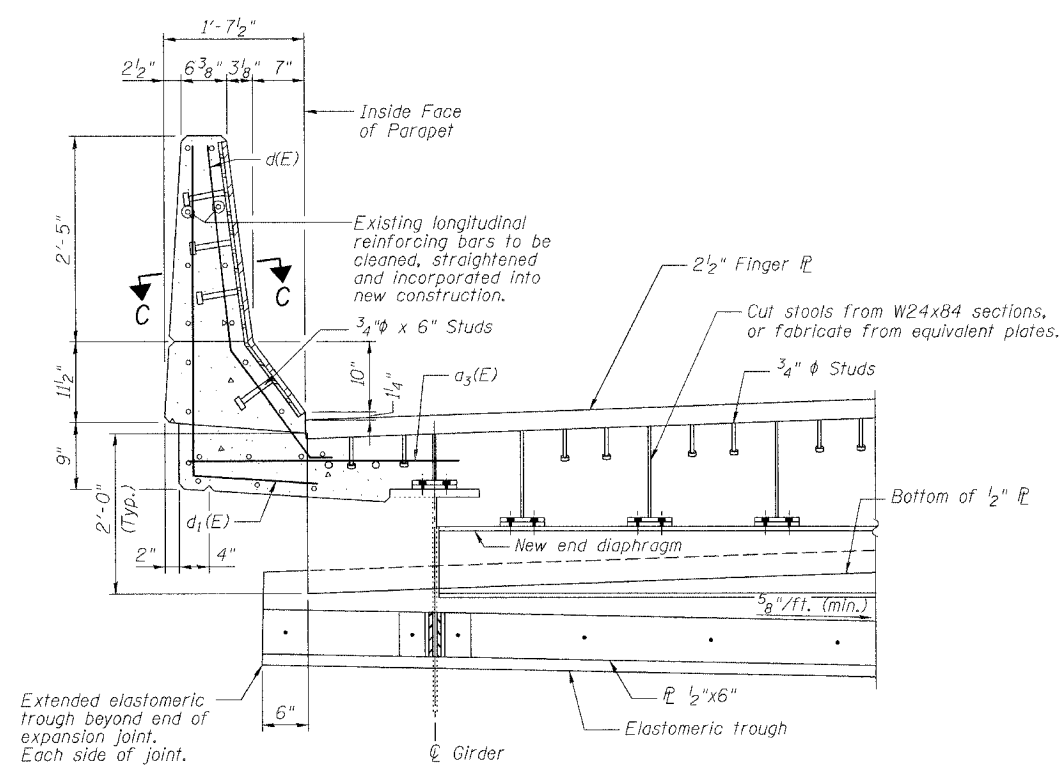
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEERS
REGISTERED IN ILLINOIS
NO. 04286-01
1011 W. 10th St., Springfield, IL 62761-1011
TEL: 217-223-1111 FAX: 217-223-1111

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PLOT DATE = 5/16/2006
PLOT TIME = 2:28:23 PM
OPERATOR = mcrumley

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

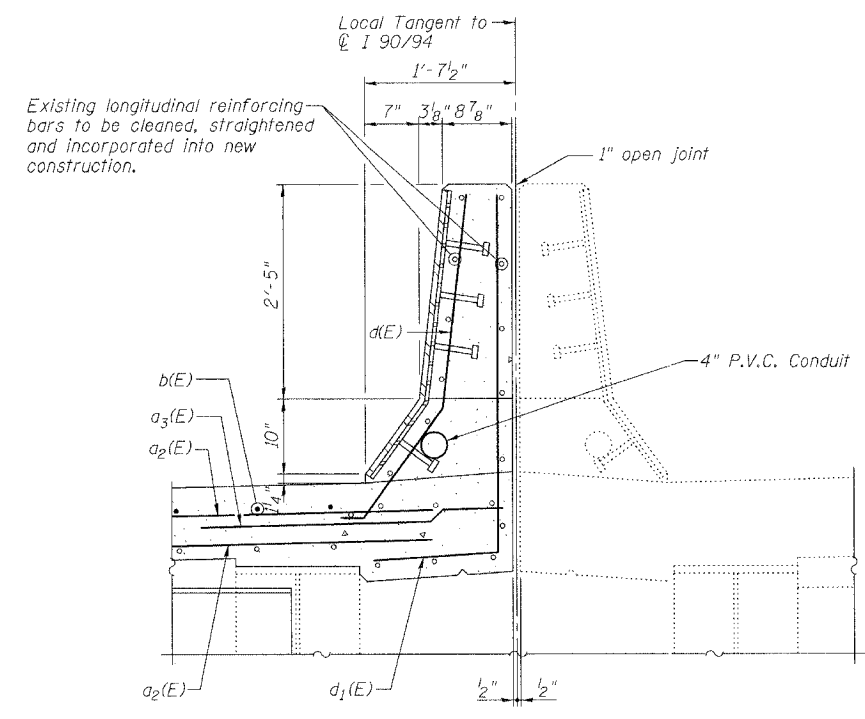
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
FAI 90/94	*	COOK	344	248
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 2003-0291 Contract #62581				

SHEET NO. 5
9 SHEETS



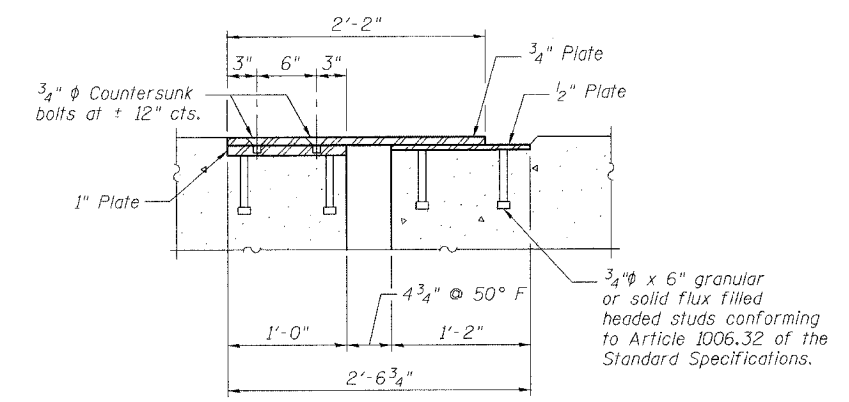
SECTION B-B

(For location of Section B-B, See Sheet 3 of 9)

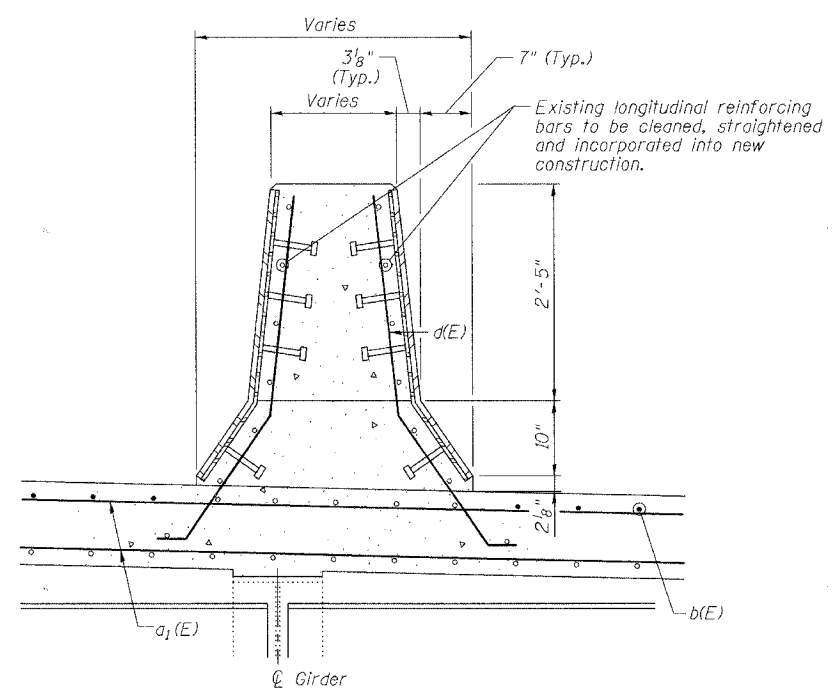


DETAIL AT MEDIAN PARAPET

(Looking North)

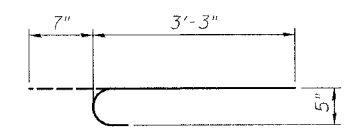


SECTION C-C

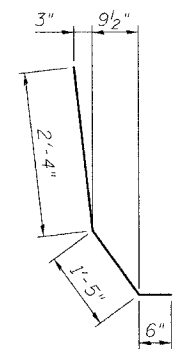


DETAIL AT EXISTING S.B. FAI 90/94 & RAMP A PARAPET

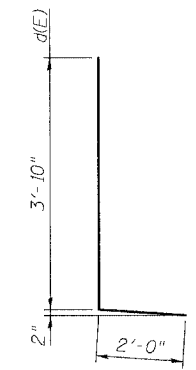
(Dimensions at Rt. L's)
(Looking North)



BAR b(E)



BAR d(E)



BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	24	#5	18'-6"	—
a1(E)	24	#5	46'-10"	—
a2(E)	24	#5	32'-0"	—
a3(E)	16	#6	4'-6"	—
b(E)	184	#5	3'-10"	C
d(E)	32	#5	4'-3"	—
d1(E)	20	#5	5'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	3540
Concrete Superstructure			Cu. Yd.	26.3
Concrete Removal			Cu. Yd.	22.1
Bar Splicers			Each	48
Mechanical Splice			Each	184

Reinforcing bars designated (E) shall be epoxy coated.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PARAPET DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

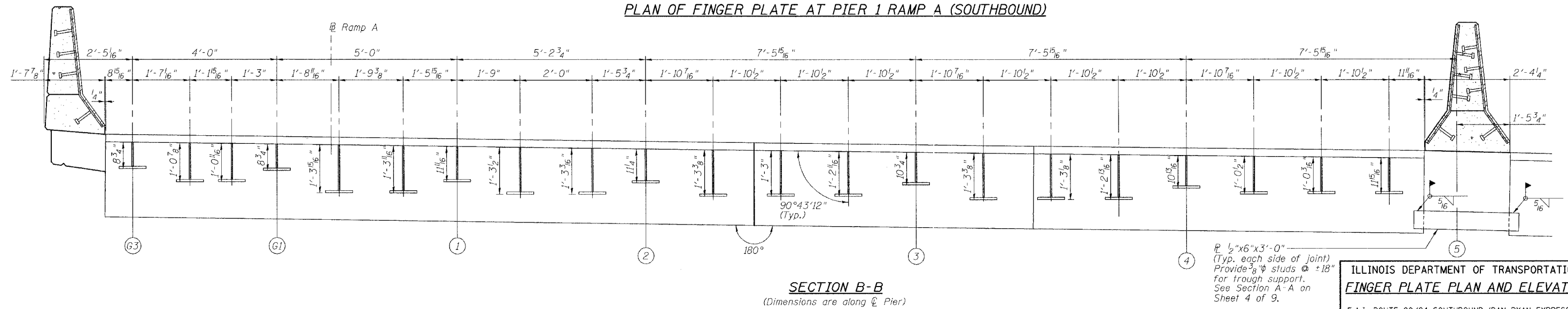
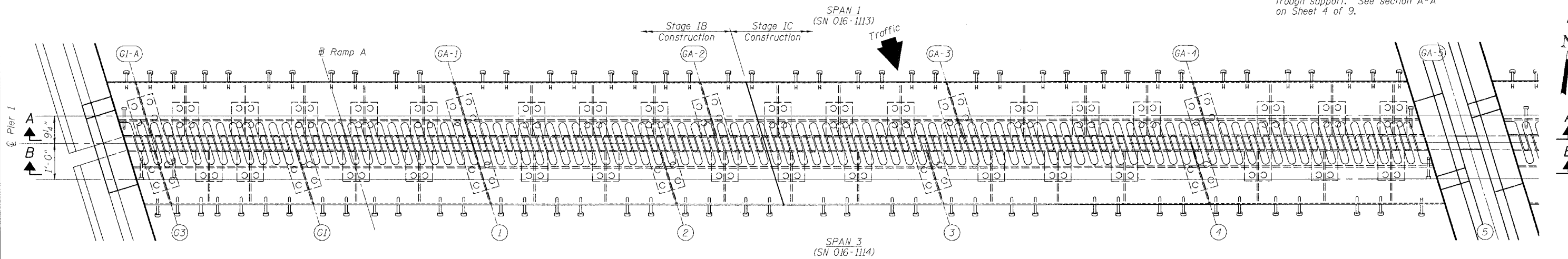
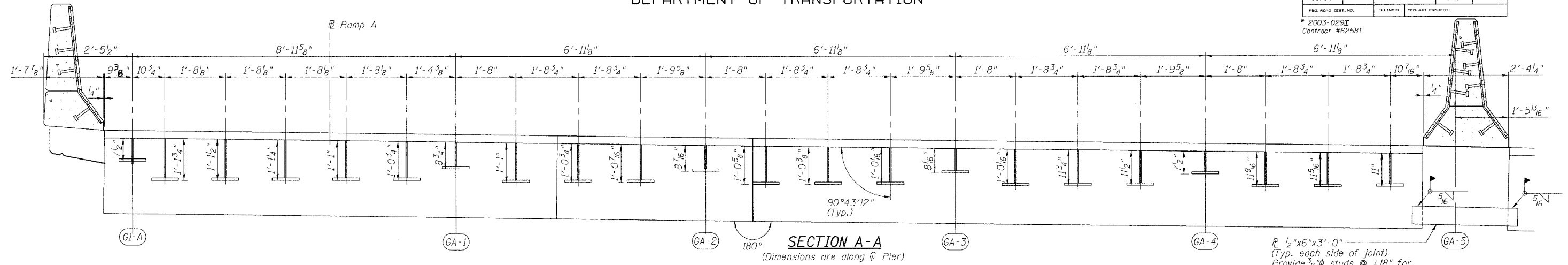
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS 60601
PROJECT: 04286-W01-SB-PD
5/11/06-MML

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OPERATOR = michelle

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 6
FAI 90/94	*	COOK	344	249
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

2003-0291
Contract #62581



ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

COMPUTER FILE NO.
04286-W01-SB-PE1
PROJECT 04286-W01
5/11/06-MML

GREENE & BRADFORD, INC.
OF SPRINGFIELD

REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 04286-01
PROFESSIONAL DESIGN FIRM NO. 04286-01
PROFESSIONAL ARCHITECTURE FIRM NO. 04286-01
1211 730-8244, 1211 730-8227, P.O. Box 1, Springfield, Illinois 62761-0001

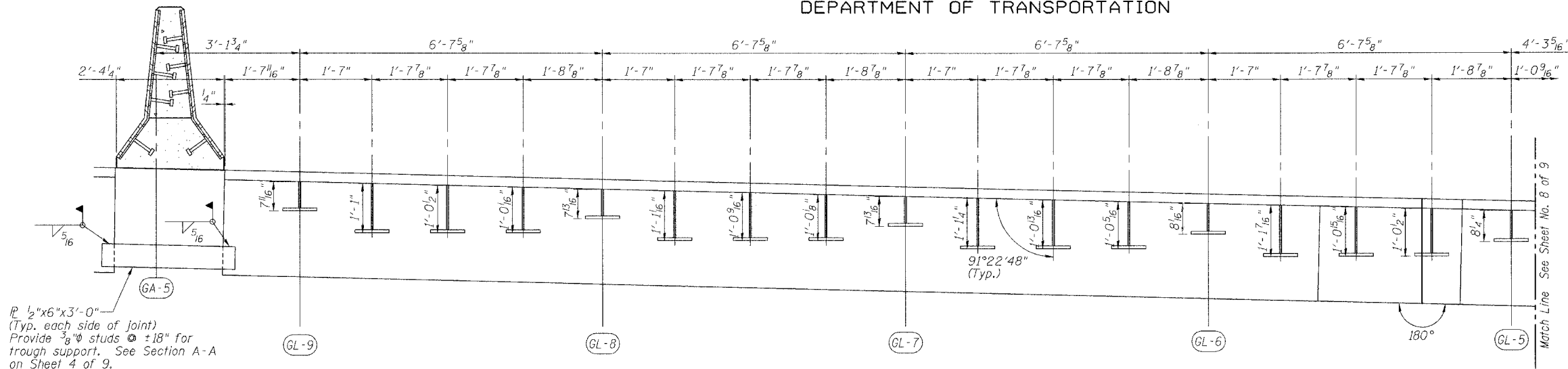
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OPERATOR = michelb

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
90/94	*	COOK	344	250
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

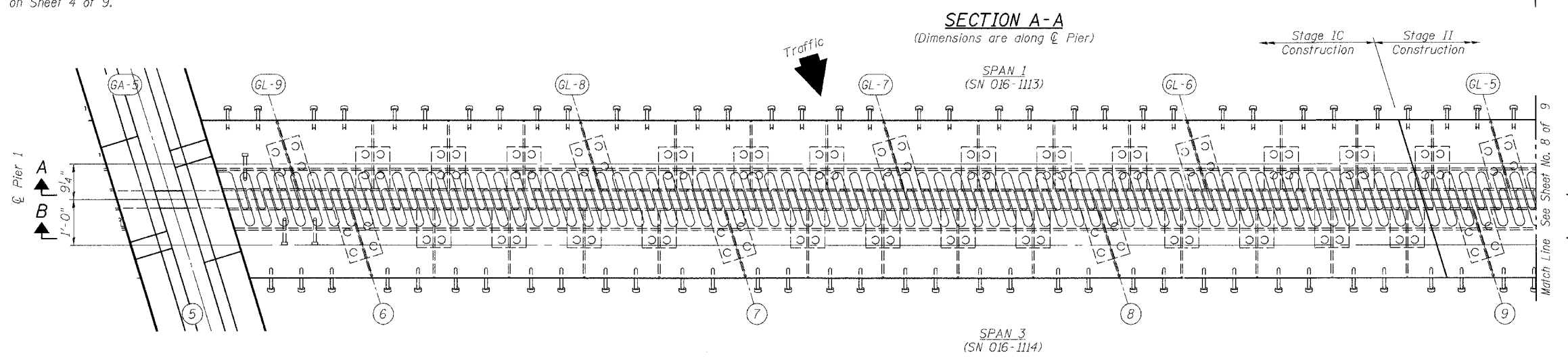
SHEET NO. 7
9 SHEETS

* 2003-0291
Contract #62581

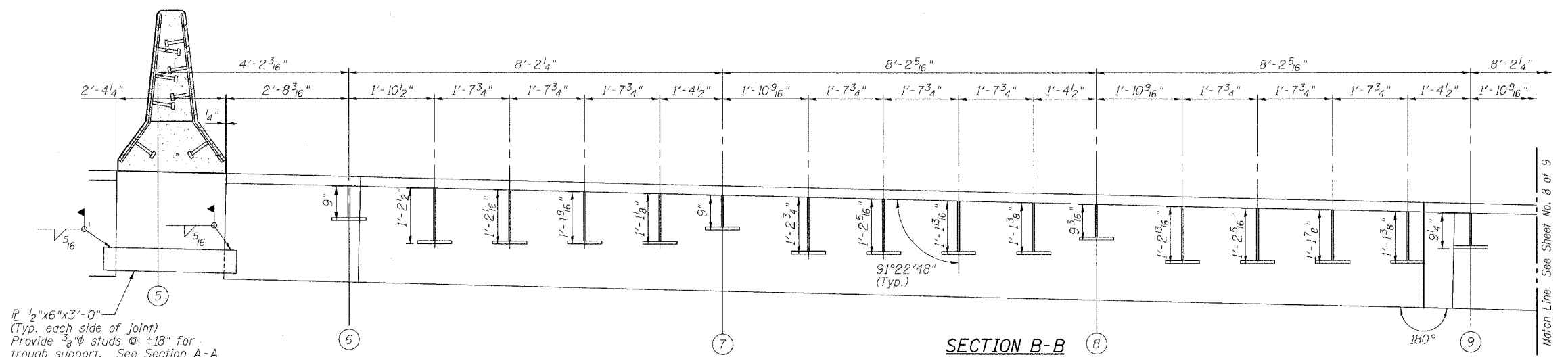


SECTION A-A

(Dimensions are along Q Pier)



PLAN OF FINGER PLATE AT PIER 1 (SOUTHBOUND)



SECTION B-B

(Dimensions are along Q Pier)

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

REVISIONS	
NAME	DATE

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

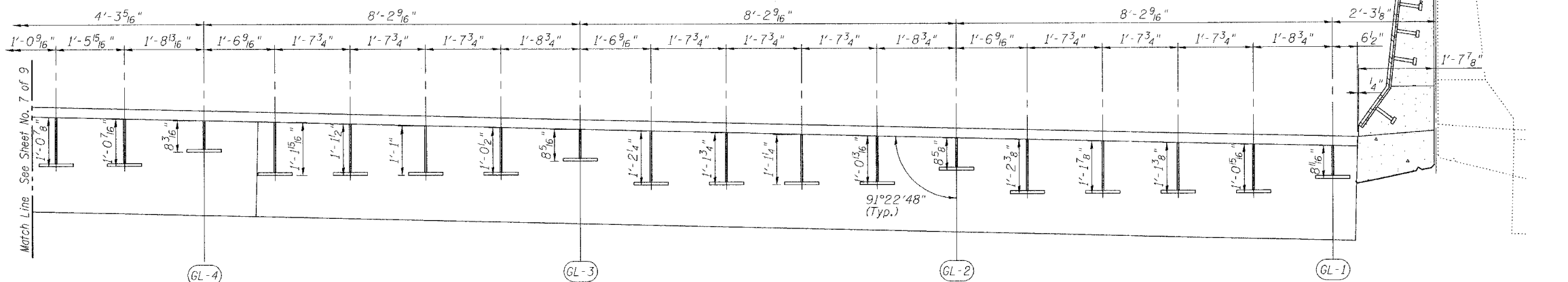
GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
PROFESSIONAL SEAL AND LICENSE NO. 04286-W01-SB-PE2
COMPUTER FILE NO. 04286-W01-SB-PE2
PROJECT 04286-W01
5/11/06-MML

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OPERATOR = MATHUR

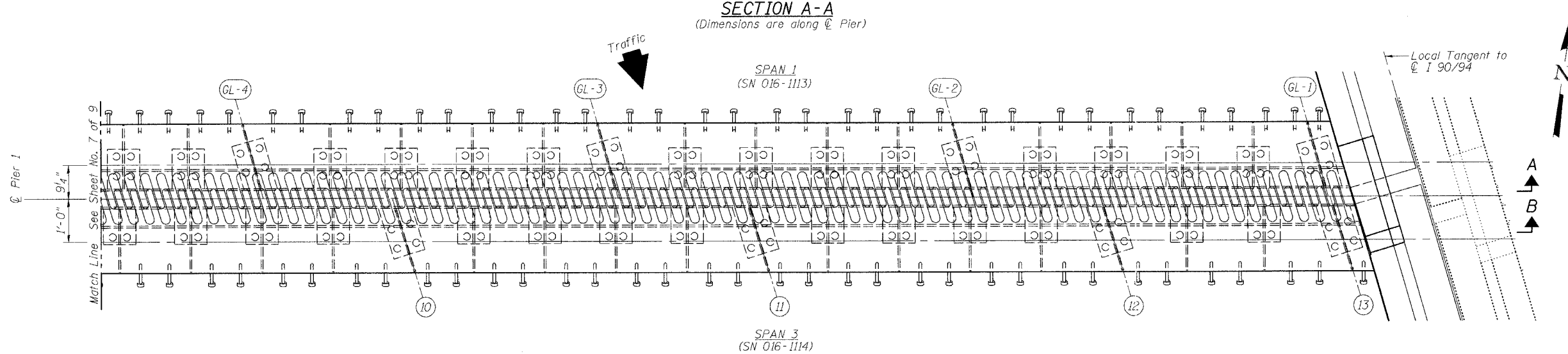
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	251
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT:	
			2003-0294	
Contract #62581				

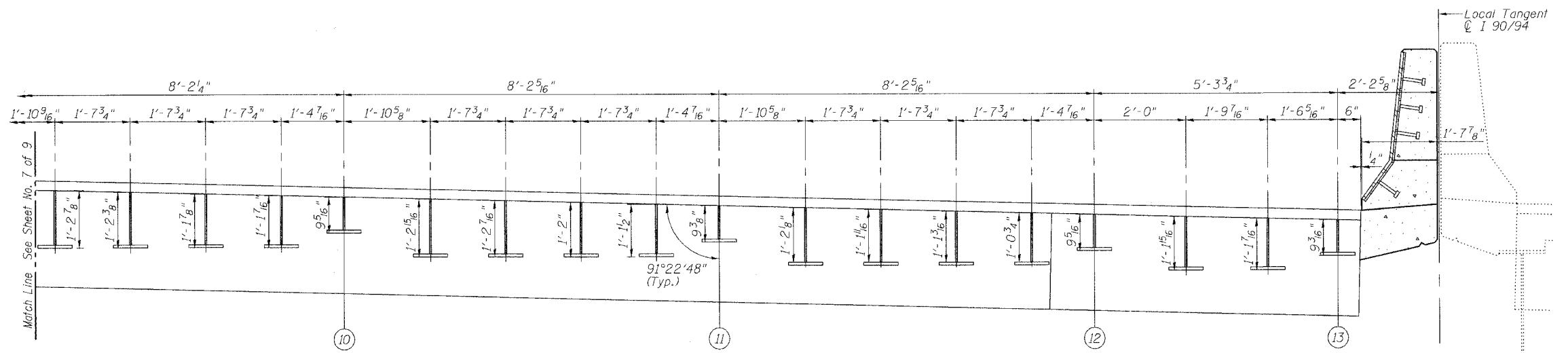
SHEET NO. 8
9 SHEETS



SECTION A-A
(Dimensions are along Q Pier)



PLAN OF FINGER PLATE AT PIER 1 (SOUTHBOUND)



SECTION B-B
(Dimensions are along Q Pier)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT. HORIZ. DATE: 4/7/05
DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR
COMPUTER FILE NO. 04286-W01-SB-PE3
PROJECT 04286-W01
5/11/06-MML



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAI 90/94	*	COOK	344	252
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
2003-0291 Contract #62581				

SHEET NO. 9
9 SHEETS

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:

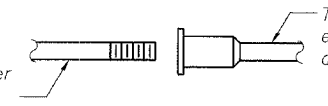
- ① Minimum Capacity = $1.25 \times f_y \times A_f$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_f$
(Tension in kips)

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

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

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

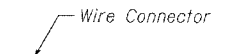
The diameter of this part is equal or larger than the diameter of bar spliced.
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



** ONE PIECE

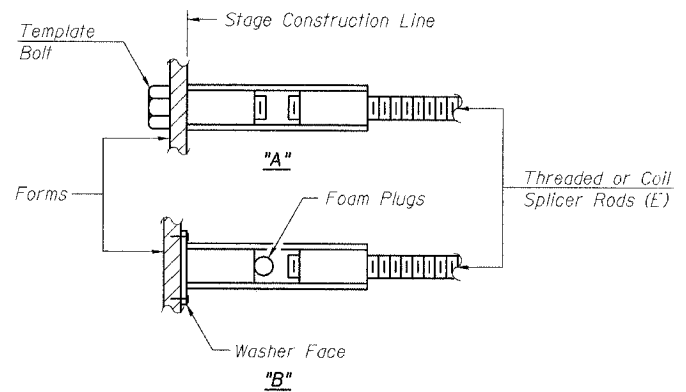


WIRE CONNECTOR

WELDED SECTIONS

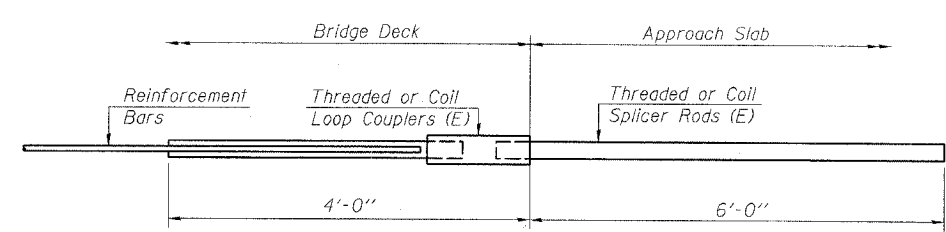
BAR SPLICER ASSEMBLY ALTERNATIVES

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



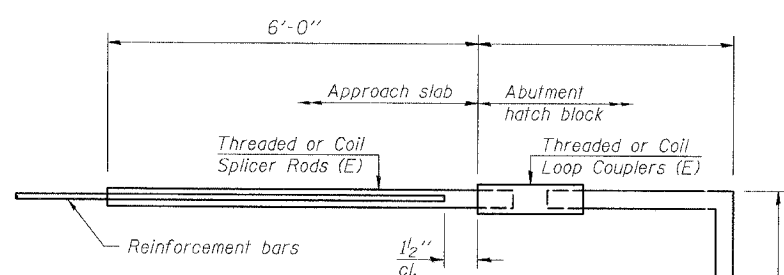
INSTALLATION AND SETTING METHODS

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



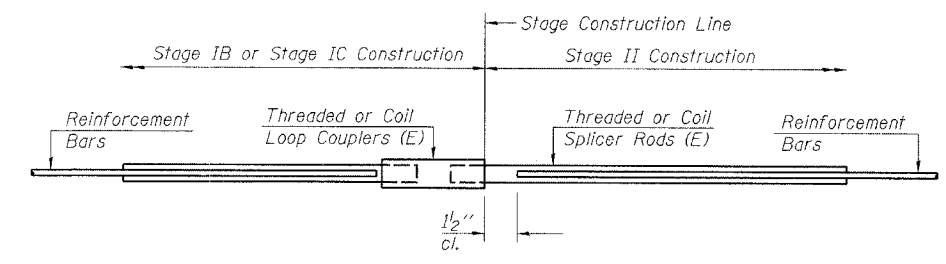
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	48	Deck

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER SOUTH BRANCH - CHICAGO RIVER
COOK COUNTY
S.N. 016-1113 - PIER 1

SCALE: VERT. _____
SCALE: HORIZ. _____
DATE: 4/7/05

DRAWN BY: LANDREY
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

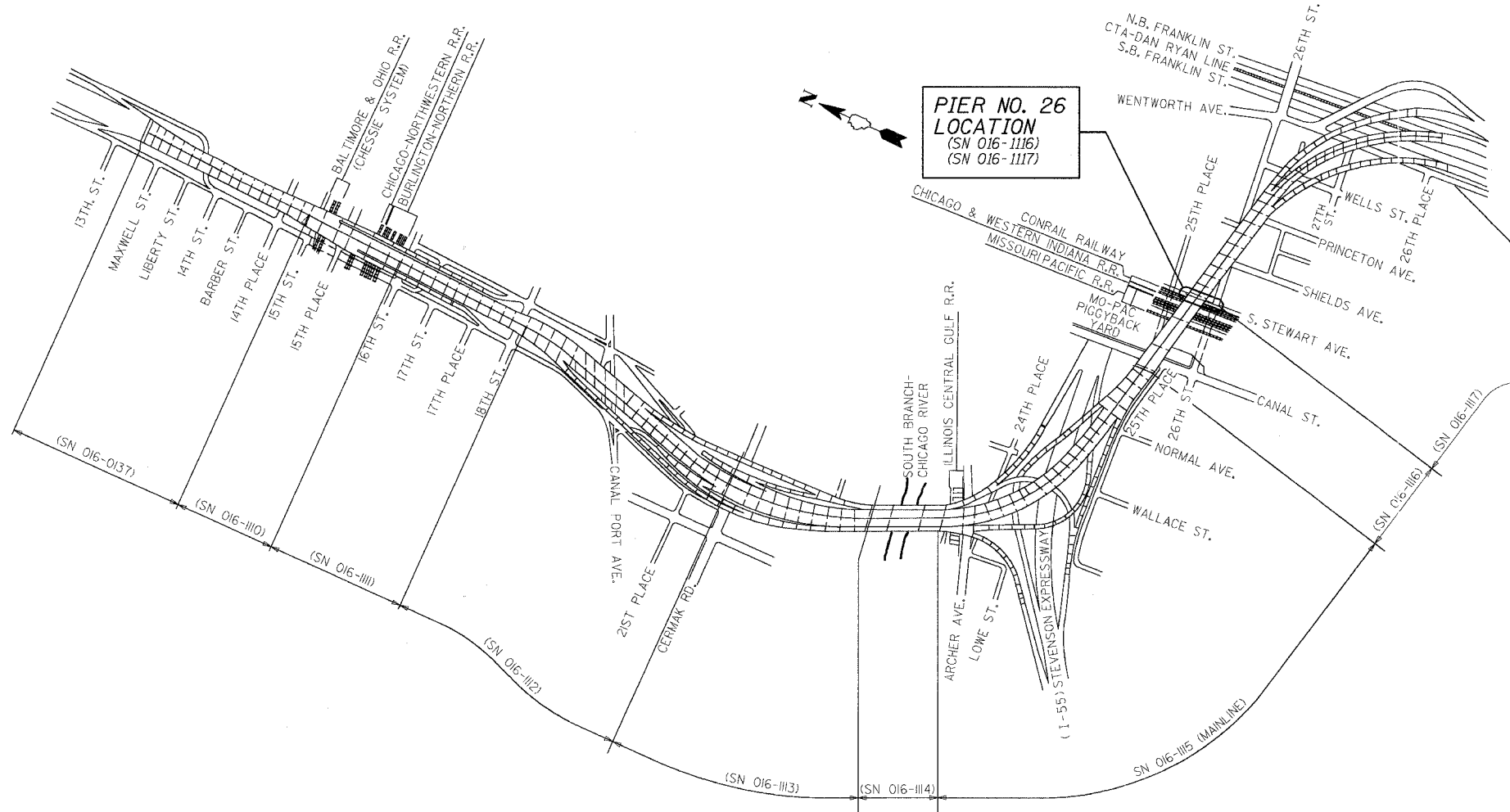
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
PROFESSIONAL ENGINEERS
REGISTERED IN THE STATE OF ILLINOIS
1015 W. 11TH ST. SPRINGFIELD, ILL. 62761
TEL: 217-223-1111 FAX: 217-223-1112

COMPUTER FILE NO.
04286-W01-SB-BSD
PROJECT 04286-W01
5/11/06-MML

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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	253
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 2003-029 I Contract #62581				



KEY PLAN
DAN RYAN EXPRESSWAY (I-90/I-94) VIADUCT
COOK COUNTY, ILLINOIS

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.

Finger Plate Expansion Joints shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

Field welding of construction accessories will not be permitted to beams or girders.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

All Construction joints shall be bonded.

Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost included in "Furnishing and Erecting Structural Steel".

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.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with "Furnishing and Erecting Structural Steel".

Traffic to be maintained during construction, see Roadway Plans for Stage Construction Details.

Field measurements are required to verify the proper dimensions of the finger plates and stools. See special provision "Field Measurements".

Existing design and fabrication plans are available upon request.

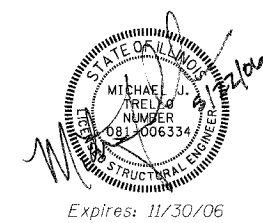
All structural steel shall be AASHTO M270 Grade 50 unless noted otherwise. Calculated weight of structural steel = 34,050 lbs.

DESIGN STRESSES

$f'_c = 3500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (M270 Grade 50)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	14.6
Concrete Superstructure	Cu Yd	17.5
Furnishing and Erecting Structural Steel	L.S.	0.14
Reinforcement Bars, Epoxy Coated	Pound	2,490
Fabric Reinforced Elastomeric Trough	Foot	68
Mechanical Splice	Each	126
Bar Splicers	Each	24
Field Measurements	L. Sum	0.14



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

KEY PLAN

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY) OVER 28th ST. TO S. STEWART ST. COOK COUNTY S.N. 016-1117 - PIER 26

VERT. SCALE: HORIZ. DATE: 4/17/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC. OF SPRINGFIELD
04286-W03-SB-KEY
PROJECT 04286-W03
5/22/06-MML

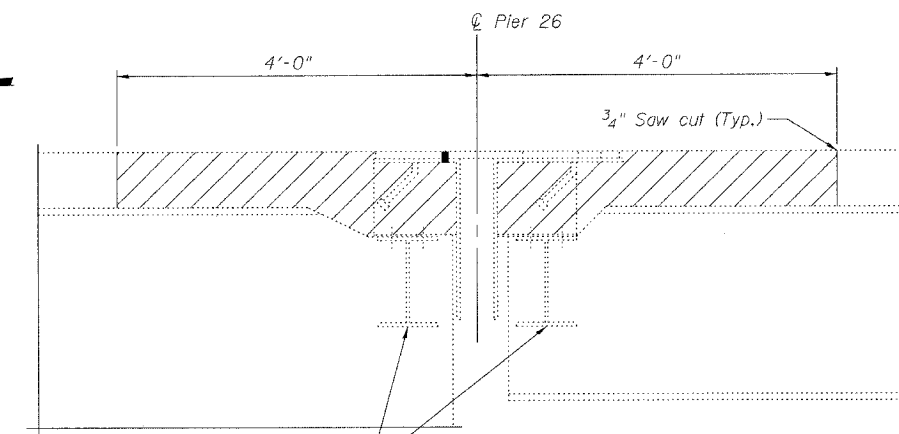
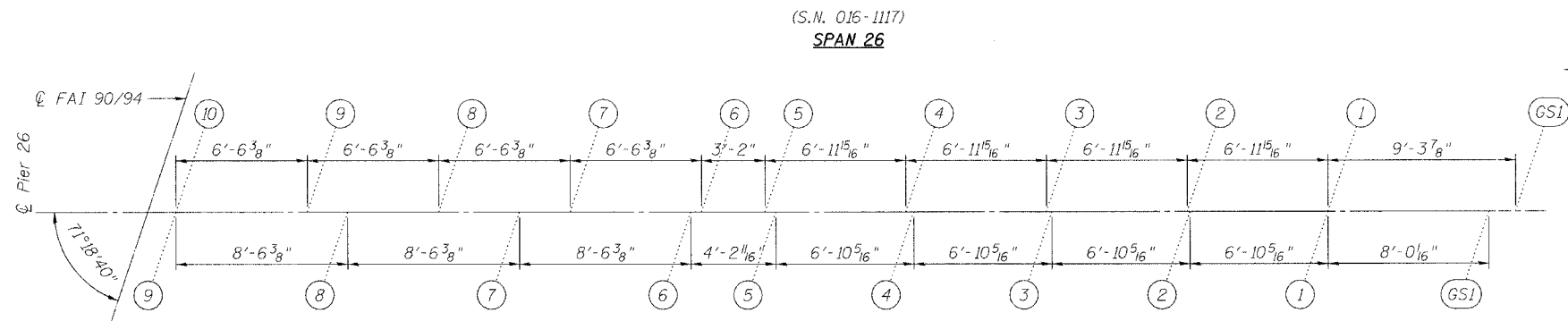
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

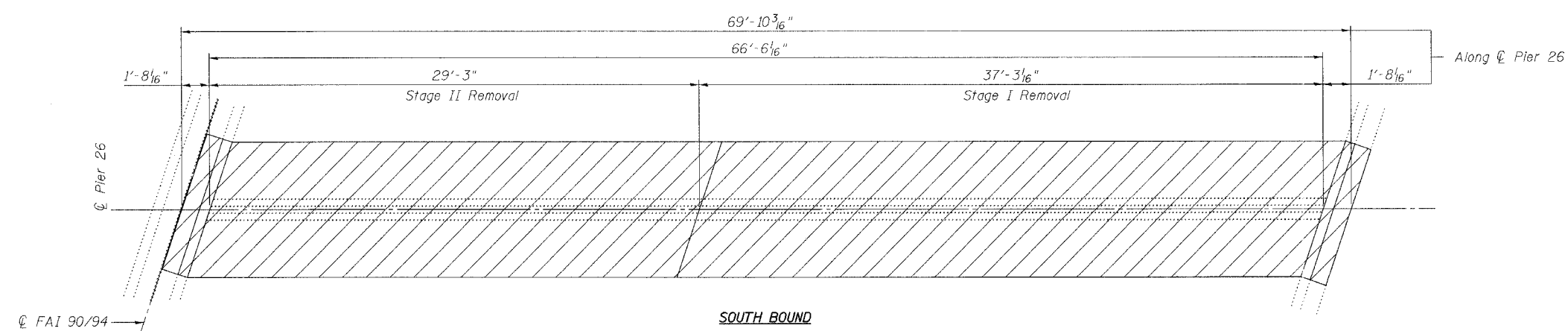
ROUTE NO.	SECTION	COUNTY	DISTRICT	SHEET NO.
FAI 90/94	*	COOK	344	254
FED. ROAD DIST. NO.	ELLIPSE	FED. AID PROJECT		

SHEET NO. 2
8 SHEETS

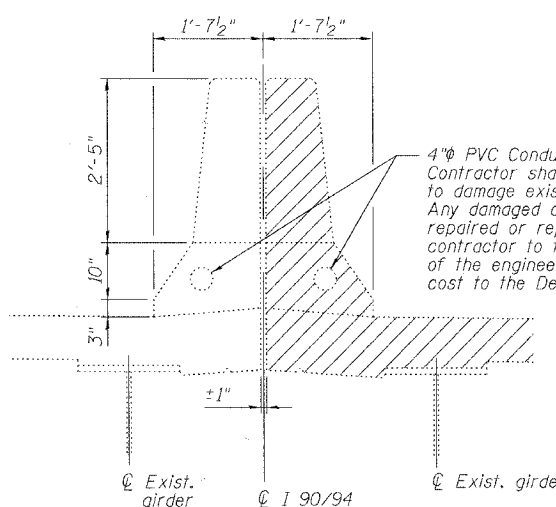
* 2003-0294
Contract #62581



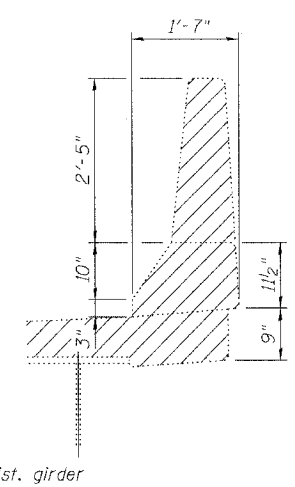
SECTION AT EXISTING FINGER PLATE
(Dimensions at Rt. L's)



JOINT REMOVAL PLAN AT PIER 26
(Dimensions at Rt. L's)



DETAIL AT EXISTING \bar{C} FAI 90/94 MEDIAN PARAPET
(Dimensions at Rt. L's)



DETAIL AT EXISTING OUTSIDE PARAPET
(Dimensions at Rt. L's)

Notes:

Hatched Area indicates "Concrete Removal". Existing transverse bars in the deck are placed at right angles to \bar{C} Roadway. Existing transverse bars extending into removal areas shall be cut to miss the new finger joint, cleaned and incorporated into the new construction.

Longitudinal reinforcement extending into removal areas shall be cleaned, straightened and incorporated into the new construction except as noted on Section A-A on Sheet 5.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE EXPANSION JOINT REMOVAL DETAILS

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY) OVER 28th ST. TO S. STEWART ST. COOK COUNTY S.N. 016-1117 - PIER 26

SCALE: VERT. HORIZ. DATE: 4/7/05

DRAWN BY: HEBERLING DESIGNED BY: SANFORD CHECKED BY: MATHUR

GREENE & BRADFORD, INC. OF SPRINGFIELD

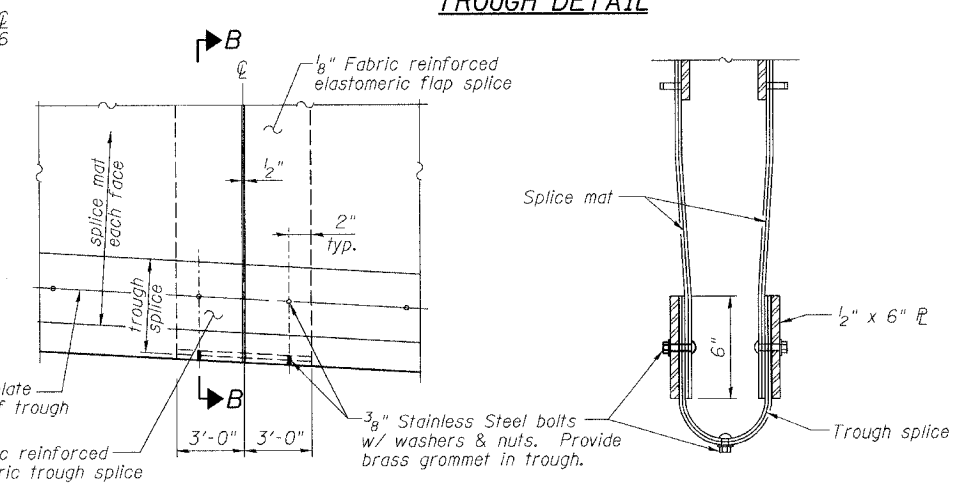
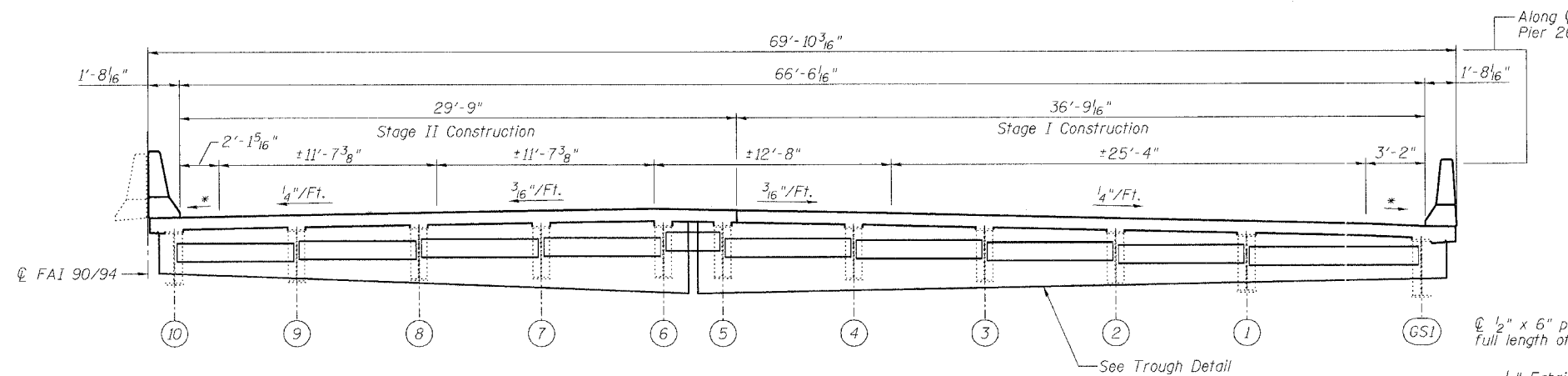
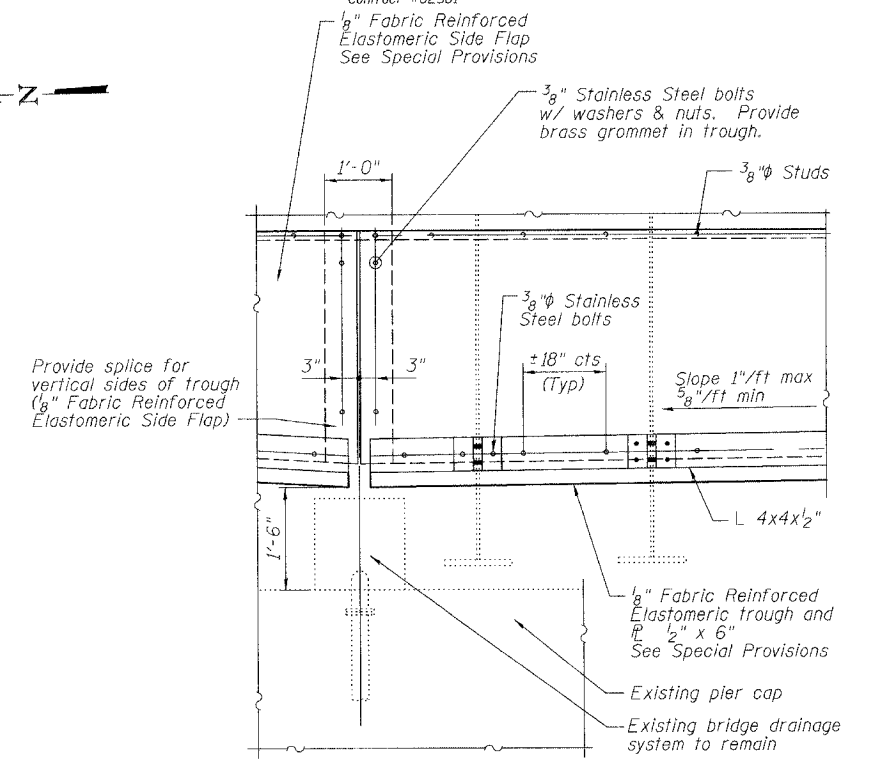
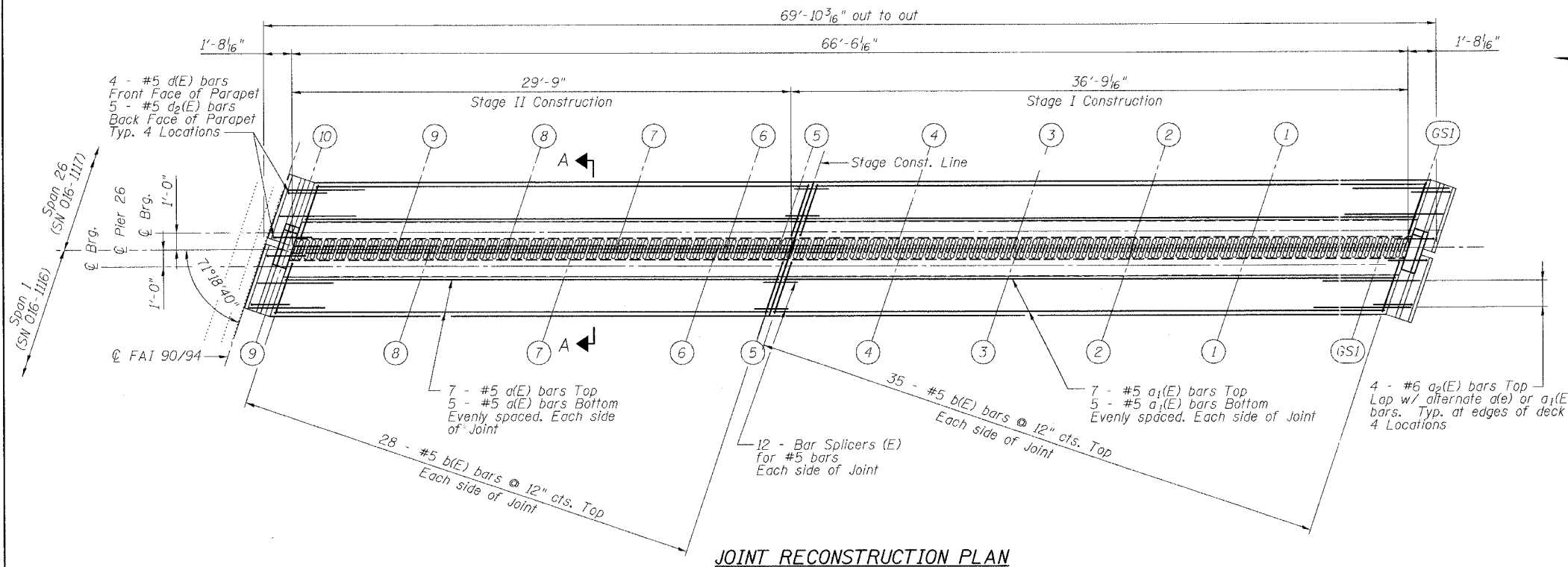
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET NO.	SHEET NO. 3
FAI 90/94	*	COOK	344	255	8 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

* 2003-029T
Contract #62581



ELEVATION (LOOKING EAST)
(Showing Span 26 Configuration)

TROUGH SPLICE DETAIL

SECTION B-B

Notes:

1. For Parapet Details and Superstructure Bill of Material, see Sheet 5 of 9.
2. For Section A-A, see Sheet 4 of 9.
3. Deck cross slopes shown are at right angles to \bar{C} Rdwy.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 26 JOINT DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER 28th ST. TO S. STEWART ST.
COOK COUNTY
S.N. 016-1117 - PIER 26

SCALE: VERT.
HORIZ.
DATE: 4/1/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
PROFESSIONAL ENGINEERING FIRM NO. 02089
PROFESSIONAL SURVEYING FIRM NO. 02089
COM 702-8844, FAX 702-8277, WWW: www.greenegbradford.com

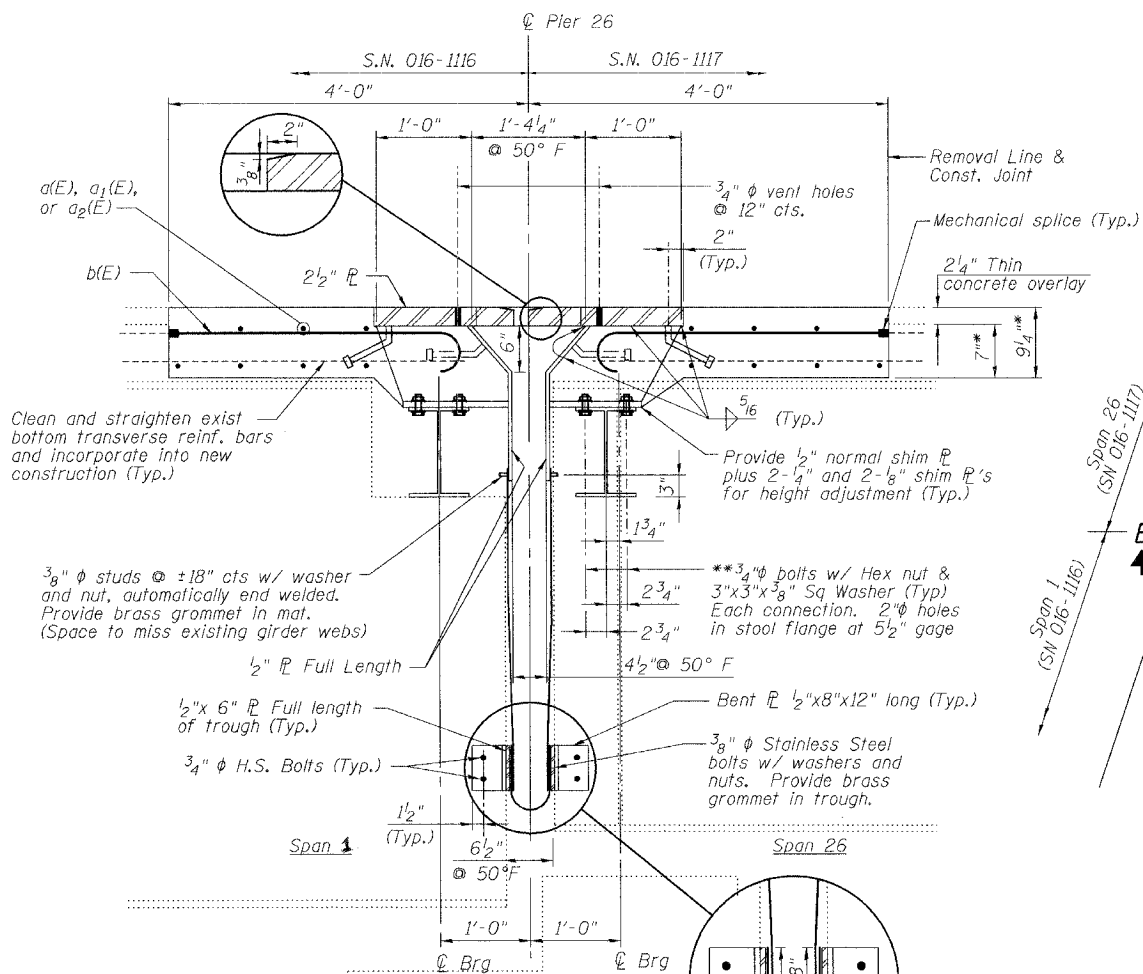
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04286-W03-SB-PJ1
PROJECT 04286-W03
5/15/06-MML

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	256
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
8 SHEETS

* 2003-0297
Contract #62581



Clean and straighten exist bottom transverse reinf. bars and incorporate into new construction (Typ.)

3/8" ϕ studs @ $\pm 18"$ cts w/ washer and nut, automatically end welded. Provide brass grommet in mat. (Space to miss existing girder webs)

1/2" ϕ Full Length
1/2" x 6" ϕ Full length of trough (Typ.)
3/4" ϕ H.S. Bolts (Typ.)

Provide 1/2" normal shim ϕ plus 2-1/4" and 2-8" shim ϕ 's for height adjustment (Typ.)

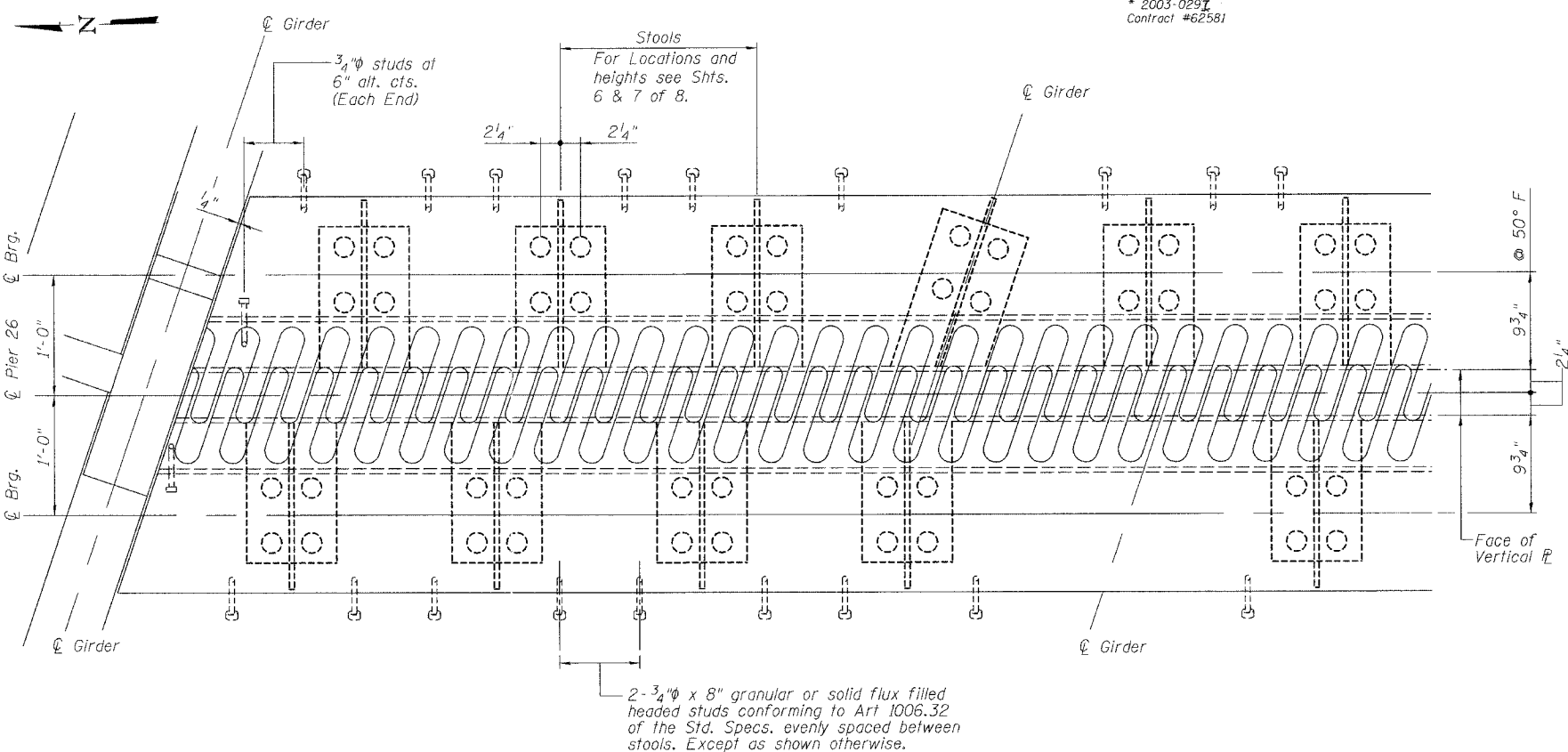
Bent ϕ 1/2" x 8" x 12" long (Typ.)
3/8" ϕ Stainless Steel bolts w/ washers and nuts. Provide brass grommet in trough.

Fabric reinforced elastomeric trough

* Includes 1/2" deck scarification

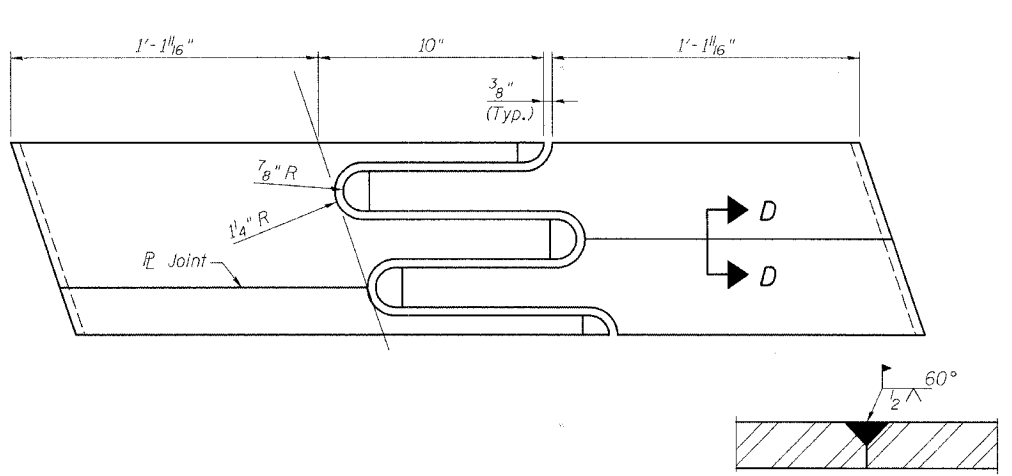
** Field drill 13/16" ϕ holes in existing girder top flanges using holes in new stools as a template. Cost included in "Furnishing and Erecting Structural Steel."

SECTION A-A

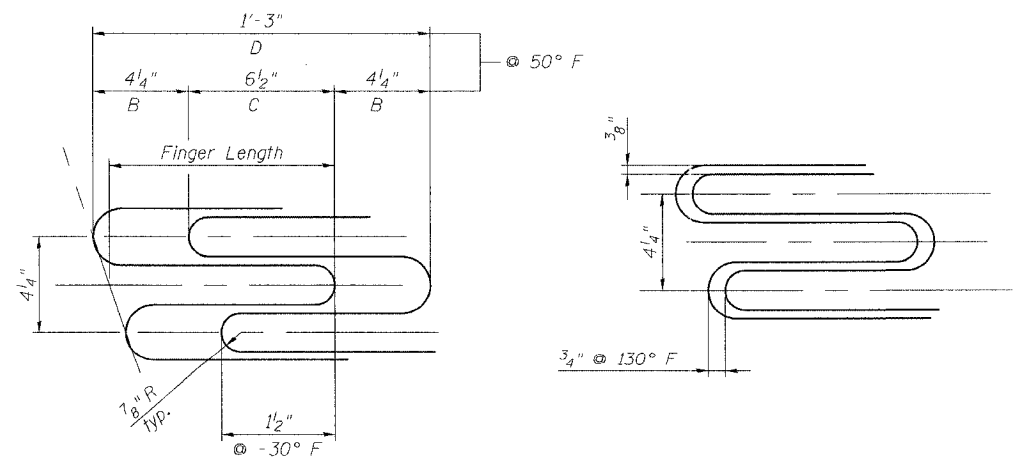


2-3/4" ϕ x 8" granular or solid flux filled headed studs conforming to Art 1006.32 of the Std. Specs. evenly spaced between stools. Except as shown otherwise.

PLAN



FLAME CUTTING DIAGRAM
(Proposed Finger ϕ - Cut from 2 1/2" x 2'-11 3/4" ϕ)



FINGER DETAIL
Finger Length = 10"
Weld Length = 12"
Weld Size = 5/16"
Expansion Length = 567.1"

NOTES

1. The Contractor shall bolt the Stools of the Fingerplate Joint Assembly to the top of existing girders on the Span 26 side, to Girders 1 and GS1 on the Span 1 side, and to the top of the new diaphragms, as shown.
2. Stainless steel bolts, washers and nuts shall meet the requirements of ASTM A193.
3. The furnishing and installation of all necessary hardware, stainless steel bolts, studs and washers, plates and angles shall be included with "Furnishing and Erecting of Structural Steel".
4. For Section B-B, see Sheet 5 of 8.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER 26 JOINT DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER 28TH ST. TO S. STEWART ST.
COOK COUNTY
S.N. 016-1117 - PIER 26

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 04286-03
PROFESSIONAL SEAL FILE NO. 0008
1001 N. BROADWAY, SUITE 200, SPRINGFIELD, ILL. 62761
TEL: 217.244.1111 FAX: 217.244.1112

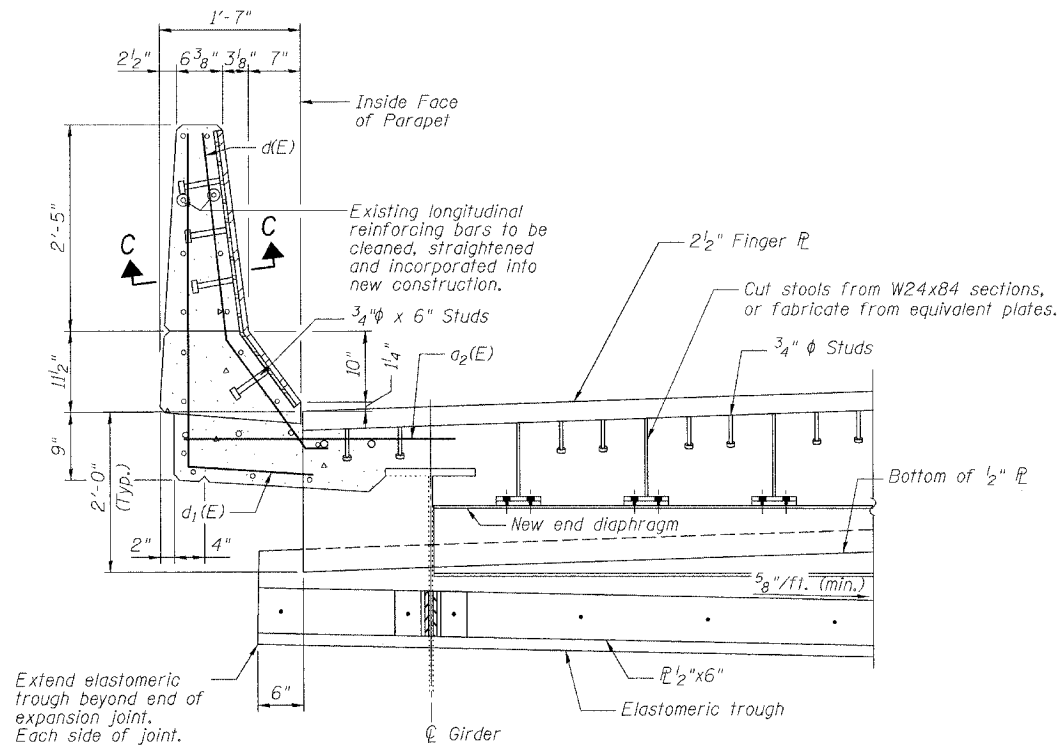
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PROJECT 04286-W03
5/15/06-MML

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

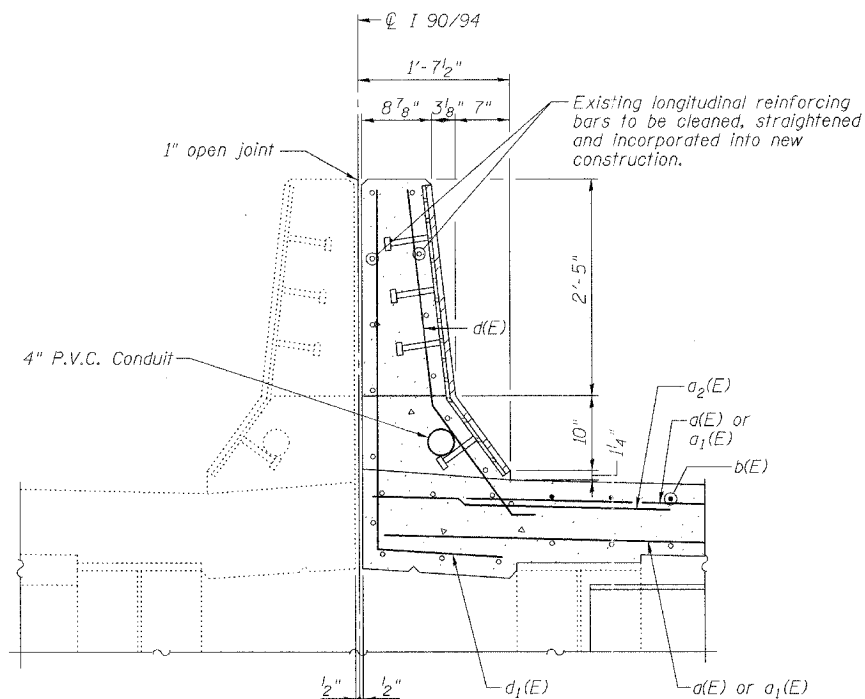
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 5
FAI 90/94	*	COOK	344	257	8 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-			

* 2003-0297
Contract #62581



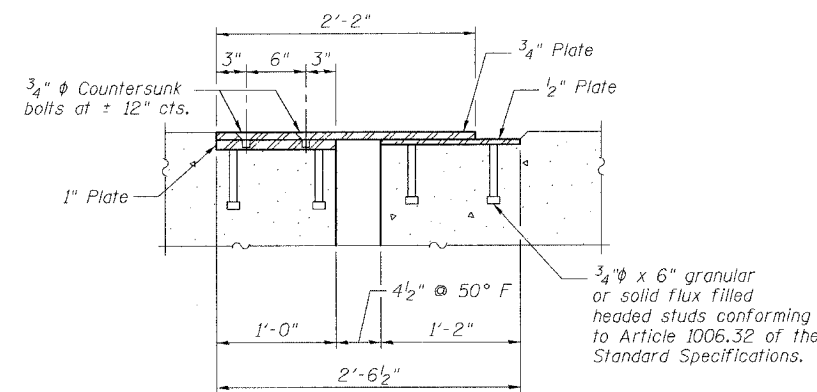
SECTION B-B

(For location of Section B-B, See Sheet 4 of 8)

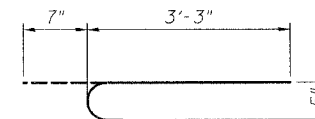


DETAIL AT MEDIAN PARAPET

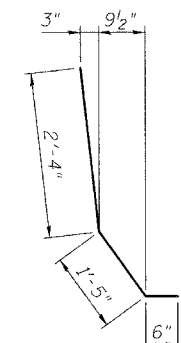
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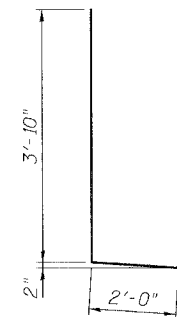
SECTION C-C



BAR b(E)



BAR d(E)



BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	24	#5	30'-3"	—
a1(E)	24	#5	37'-3"	—
a2(E)	16	#6	4'-6"	—
b(E)	126	#5	3'-10"	┌
d(E)	16	#5	4'-3"	└
d1(E)	20	#5	5'-10"	└
Reinforcement Bars, Epoxy Coated			Pound	2490
Concrete Removal			Cu. Yd.	14.6
Concrete Superstructure			Cu. Yd.	17.5
Mechanical Splice			Each	126
Bar Splicers			Each	24

Reinforcing bars designated (E) shall be epoxy coated.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PARAPET DETAILS
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER 28th ST. TO S. STEWART ST.
COOK COUNTY
S.N. 016-1117 - PIER 26

SCALE: VERT. _____
HORIZ. _____
DATE: 4/7/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

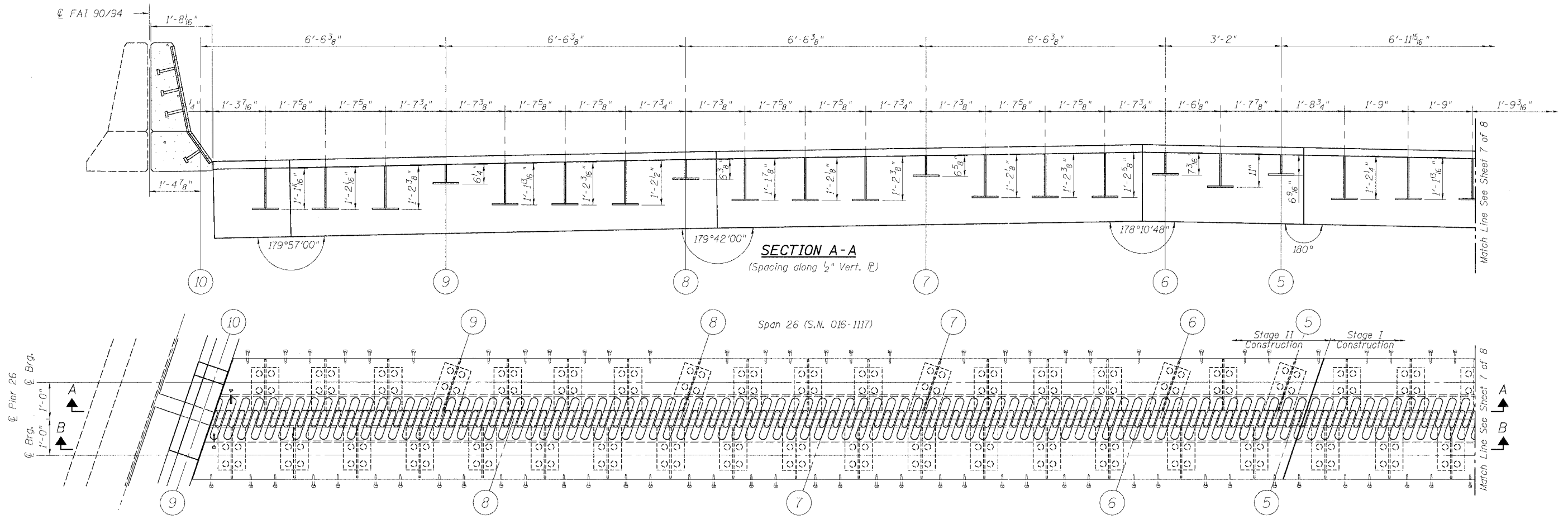
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
PROFESSIONAL ENGINEER LICENSE NO. 04286-W03-SB-PD
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PROJECT 04286-W03
5/15/06-MML

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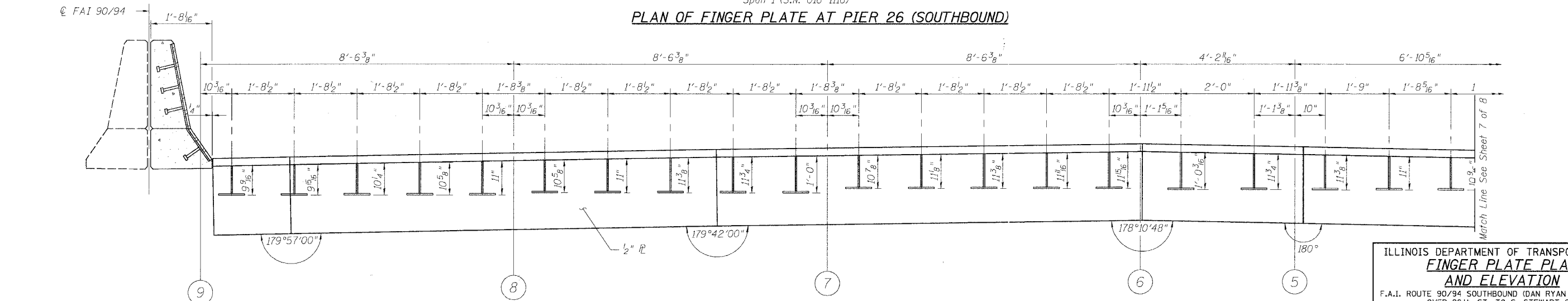
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	*	COOK	344	258
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
* 2003-0291 Contract #62581				

SHEET NO. 6
8 SHEETS



PLAN OF FINGER PLATE AT PIER 26 (SOUTHBOUND)



SECTION B-B
(Spacing along 1/2" Vert. R.)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FINGER PLATE PLAN
AND ELEVATION**
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER 28th ST. TO S. STEWART ST.
COOK COUNTY
S.N. 016-1117 - PIER 26

VERT. SCALE: HORIZ. DATE: 4/1/05

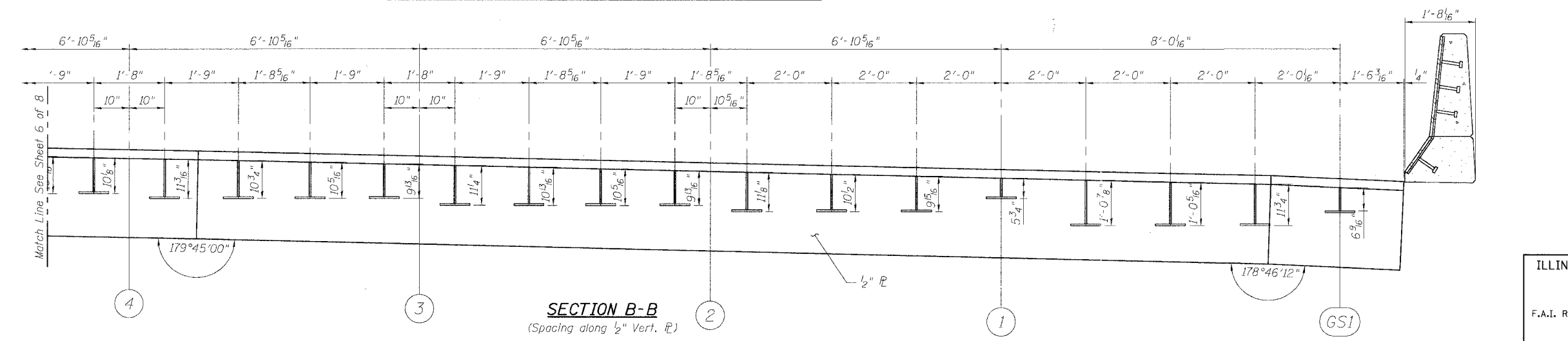
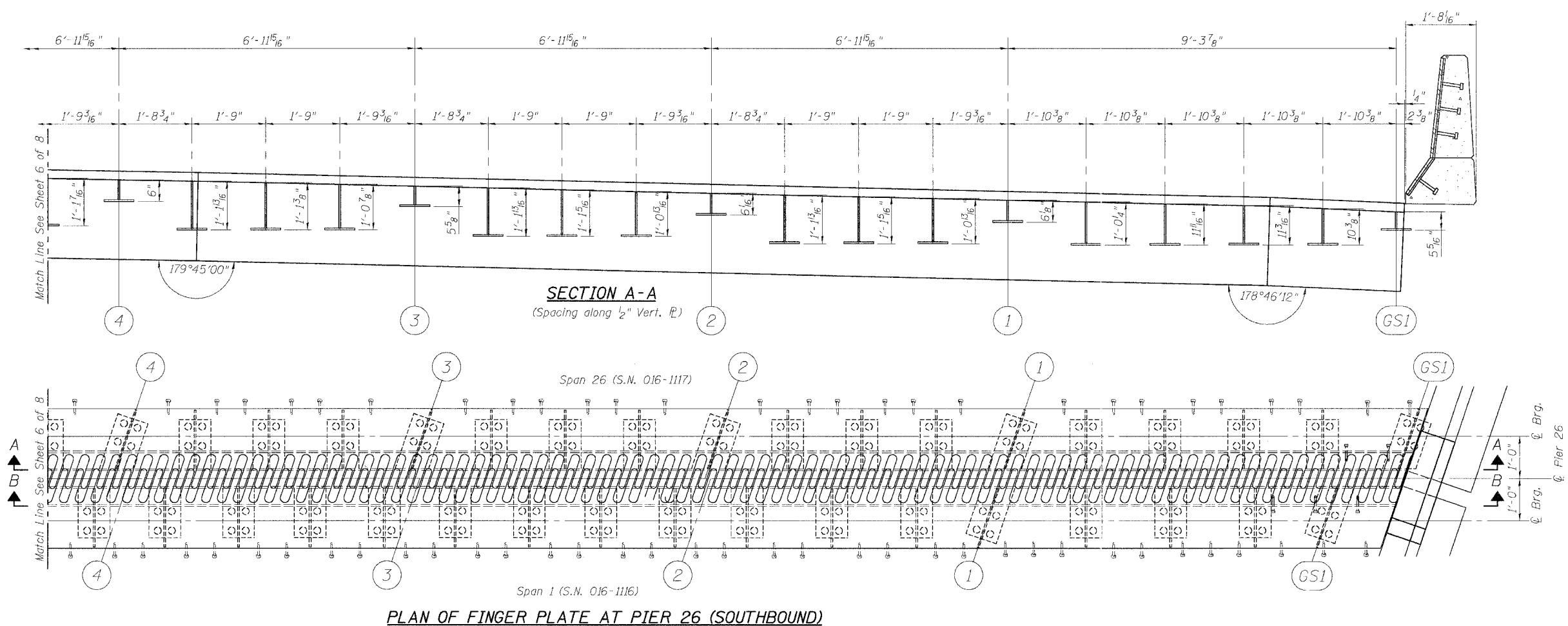
DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD
REGISTERED PROFESSIONAL ENGINEERS
ILLINOIS LICENSE NO. 04286-W03-PE1
PROJECT 04286-W03
5/22/06-MML

PLOT DATE = 5/22/2006
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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. 90/94	SECTION *	COUNTY COOK	TOTAL SHEETS 344	SHEET NO. 259	SHEET NO. 7 8 SHEETS
FED. ROAD DIST. NO. * 2003-0291		ILLINOIS FED. AID PROJECT Contract #62581			



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FINGER PLATE PLAN AND ELEVATION
F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY) OVER 28th ST. TO S. STEWART ST. COOK COUNTY S.N. 016-1117 - PIER 26

SCALE: VERT. _____
HORIZ. _____
DATE: 4/1/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

GREENE & BRADFORD, INC.
OF SPRINGFIELD

COMPUTER FILE NO.
04286-W03-PE2
PROJECT 04286-W03
5/22/06-MML

PLOT DATE = 5/22/2006
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OPERATOR = michellel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAI 90/94	SECTION *	COUNTY COOK	SHEET NO. 344	SHEET TOTAL 260
FED. ROAD DIST. NO. * 2003-02S I		ILLINOIS	FED. AID PROJECT Contract #62581	

SHEET NO. 8
8 SHEETS

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 = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(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_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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

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

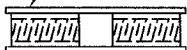
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

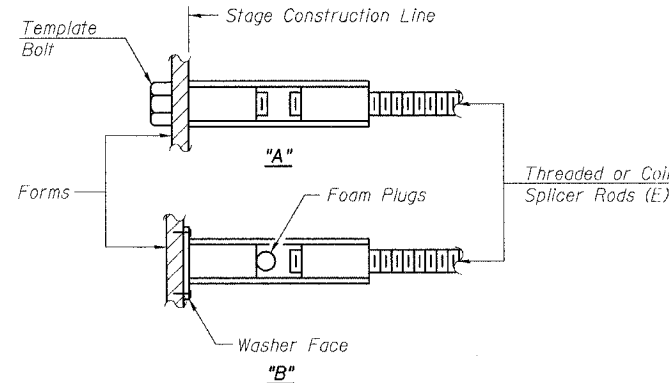
Wire Connector



WELDED SECTIONS

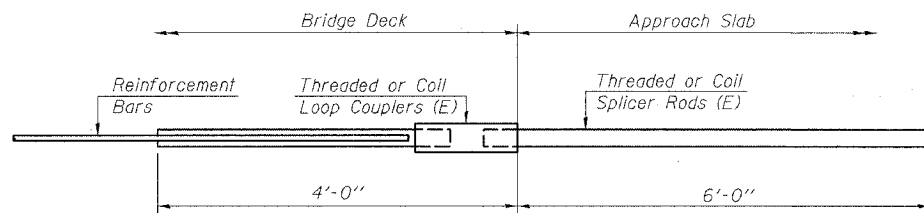
BAR SPLICER ASSEMBLY ALTERNATIVES

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



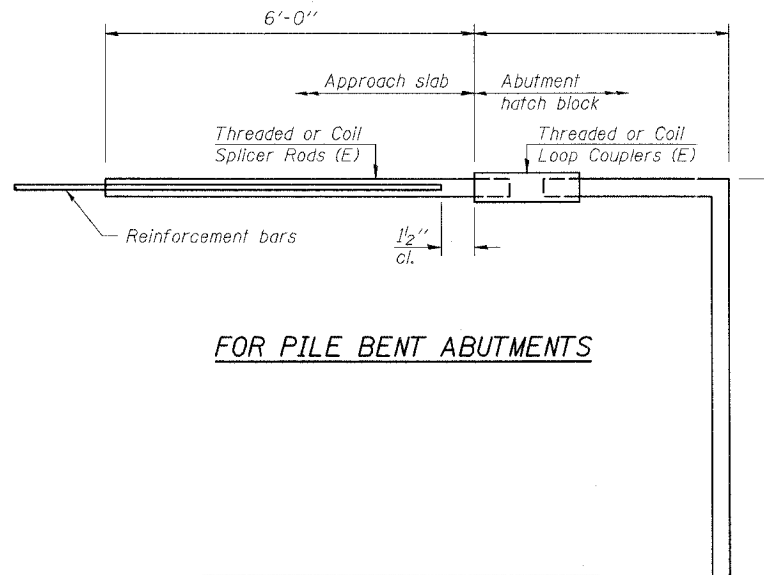
INSTALLATION AND SETTING METHODS

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



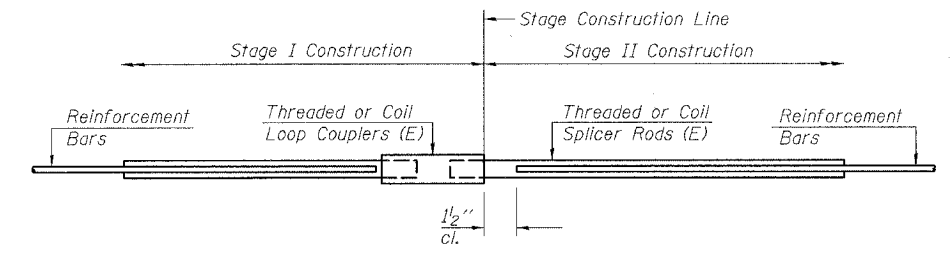
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	Deck

REVISIONS	
NAME	DATE

**ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER ASSEMBLY DETAILS**

F.A.I. ROUTE 90/94 SOUTHBOUND (DAN RYAN EXPRESSWAY)
OVER 28th ST. TO S. STEWART ST.
COOK COUNTY
S.N. 016-1117 - PIER 26

SCALE: VERT. _____
HORIZ. _____
DATE: 4/1/05

DRAWN BY: HEBERLING
DESIGNED BY: SANFORD
CHECKED BY: MATHUR

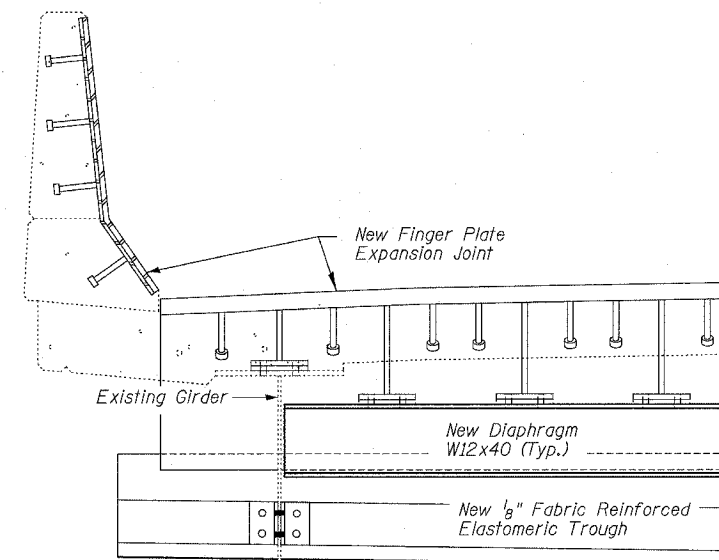
GREENE & BRADFORD, INC.
CONSULTING ENGINEERS
OF SPRINGFIELD
COMPUTER FILE NO.
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PROJECT 04286-W03
5/15/06-MML

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OPERATOR = mchib@

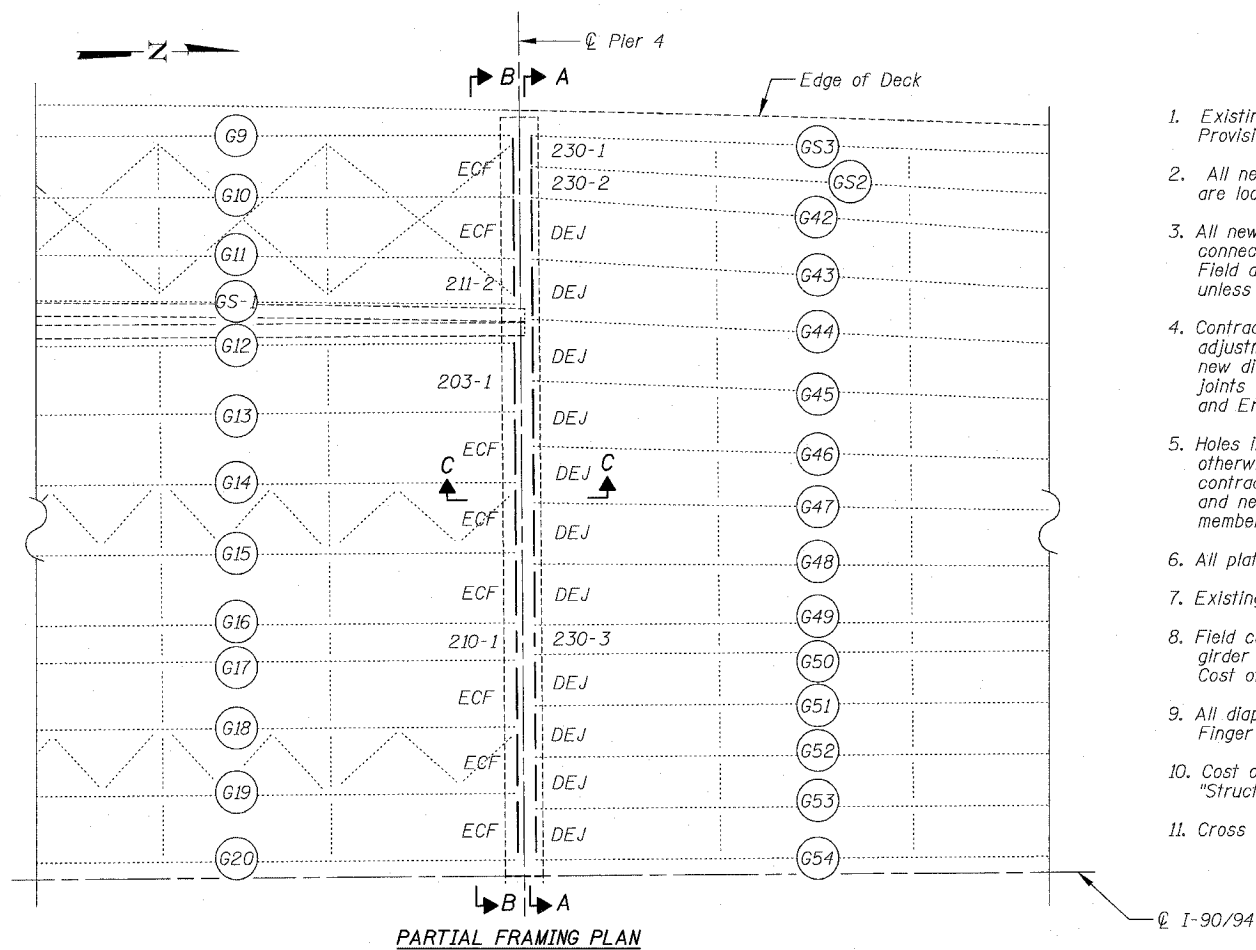
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	261
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

DIAPHRAGM REPLACEMENT NOTES

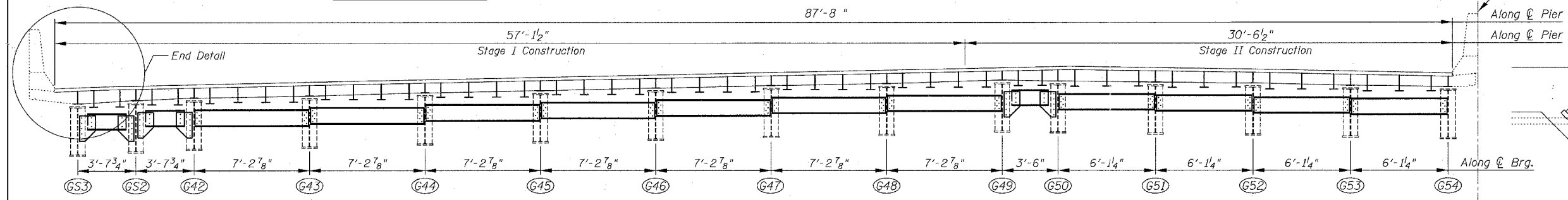
- Existing structural steel shall be cleaned and painted in accordance with the Special Provision for Cleaning and Painting Contact Surface Areas of Existing Steel Structures.
- All new diaphragms shall be level, and all cross frame and diaphragm details shown are looking toward \odot Pier unless otherwise noted.
- All new fasteners shall be $\frac{3}{4}$ " ϕ H.S. bolts with 2 washers (one on each side of connection) unless otherwise noted. Minimum edge distance for bolts shall be $1\frac{1}{2}$ ". Field drill $\frac{13}{16}$ " ϕ bolt holes to match existing and new stool dimensions unless otherwise noted.
- Contractor shall set the finger plate joints in place in the field and make all necessary adjustments to establish line and grade for the joints and then field drill $\frac{13}{16}$ " ϕ holes in new diaphragms to match stools and shims. Field drilling and removal and resetting of joints to accomplish field drilling, if necessary, will be included in the cost of Furnishing and Erecting Structural Steel.
- Holes in new diaphragms or connection plates shall be field drilled $\frac{13}{16}$ " ϕ unless otherwise noted, to match holes in existing members. Select connections may require the contractor to field drill, new $\frac{13}{16}$ " ϕ holes unless otherwise noted, through both existing and new members. Cost of all field drilling required to replace diaphragms and associated members will be included with Furnishing and Erecting Structural Steel.
- All plate dimensions refer to Width x Height x Thickness.
- Existing gusset plates shall be removed by removing welds and grinding smooth.
- Field cutting shall use the air-arc method. Flame cutting will not be permitted within 2" of girder web or flange. Grinding shall be done parallel to the longitudinal beam direction. Cost of field cutting, grinding shall be included with Structural Steel Removal.
- All diaphragm replacements shall be coordinated with stage construction for Finger Plate Expansion Joints.
- Cost of removal and disposal of existing steel shall be included in the cost of "Structural Steel Removal".
- Cross Frame designations reference original shop drawings.



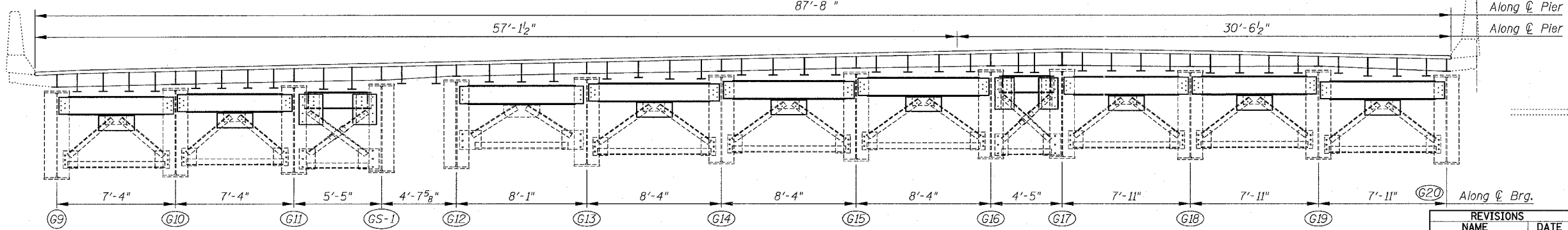
END DETAIL



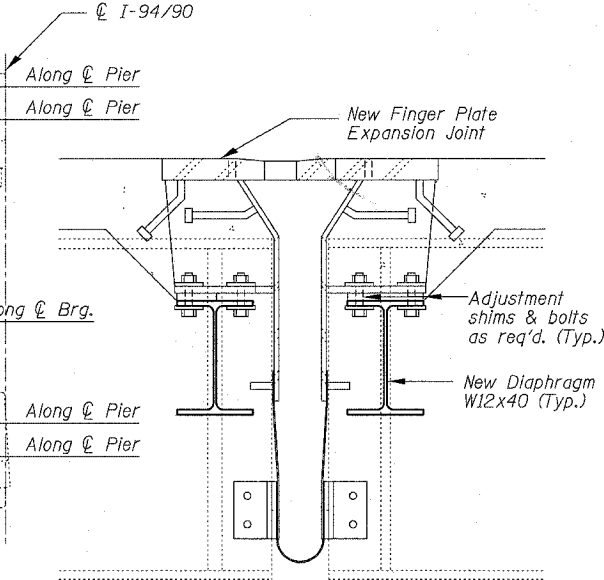
PARTIAL FRAMING PLAN



SECTION A-A



SECTION B-B



SECTION C-C

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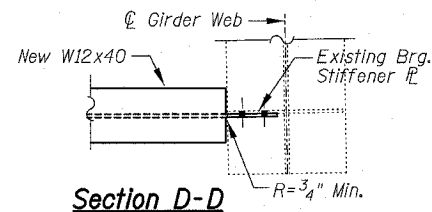
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 4, SN 016-1110
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

18-0650-COORD BRIDGE SHEET 215 SHEET 215-016-110-F-11-0107 4:31 PM 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	262
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

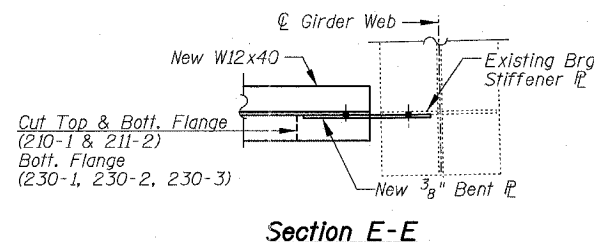
62581



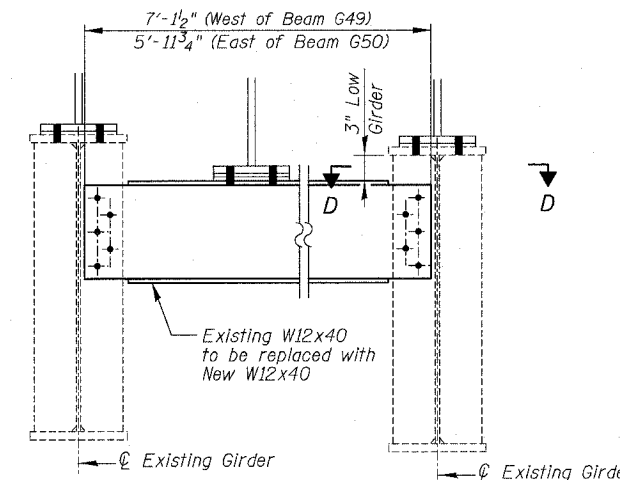
Section D-D

NOTES:

- Use 7/8" φ H.S. bolts for all cross frame/diaphragm connections at this pier location (excluding stool connections).
- Field drill 15/16" φ holes for 7/8" φ bolts. Use 2" min. edge distance for all 7/8" φ bolts unless otherwise noted.
- Calculated weight of Structural Steel used for the Item "Furnishing & Erecting Structural Steel" = 7,980 Lbs.
- E.S. denotes East Side. W.S. indicates West Side.

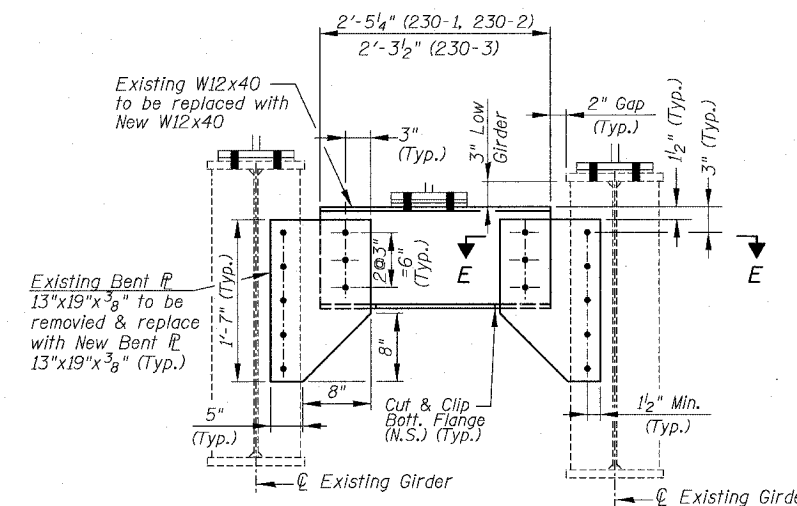


Section E-E



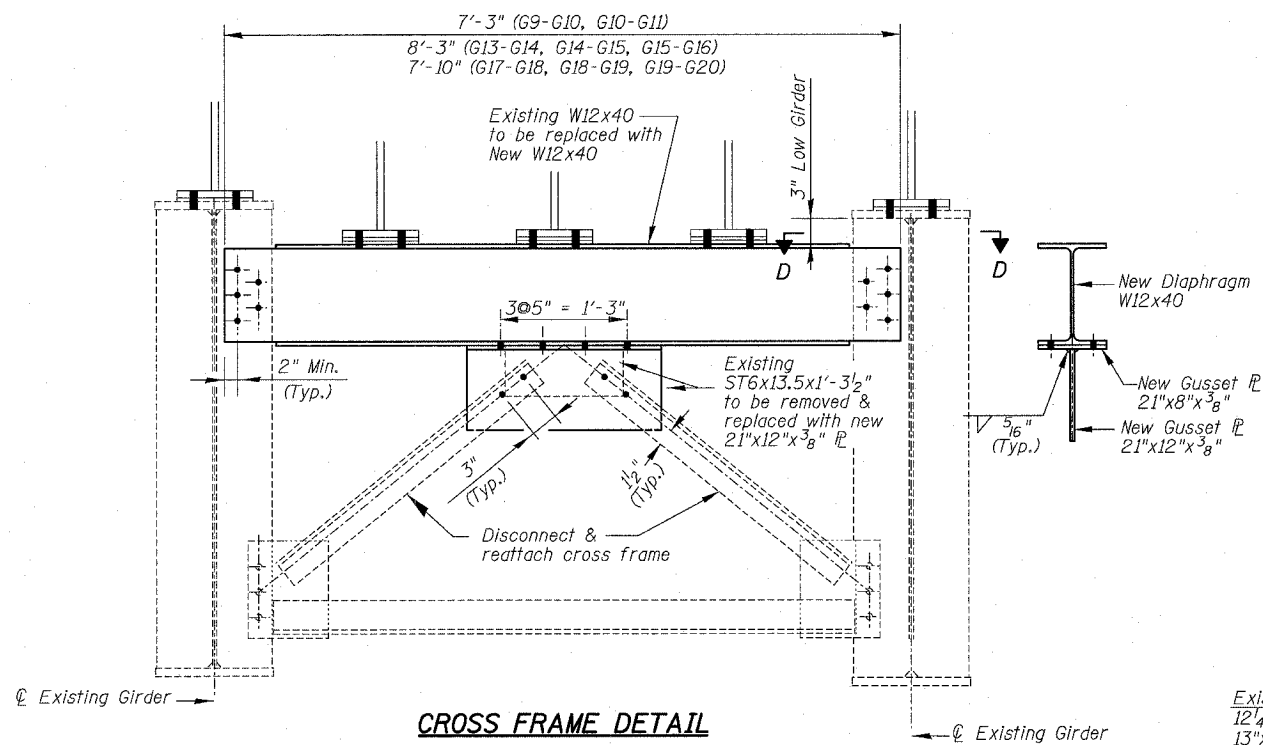
DIAPHRAGM DETAIL

S.N. 016-1110 (DEJ)	
DEJ	11 REQ'D



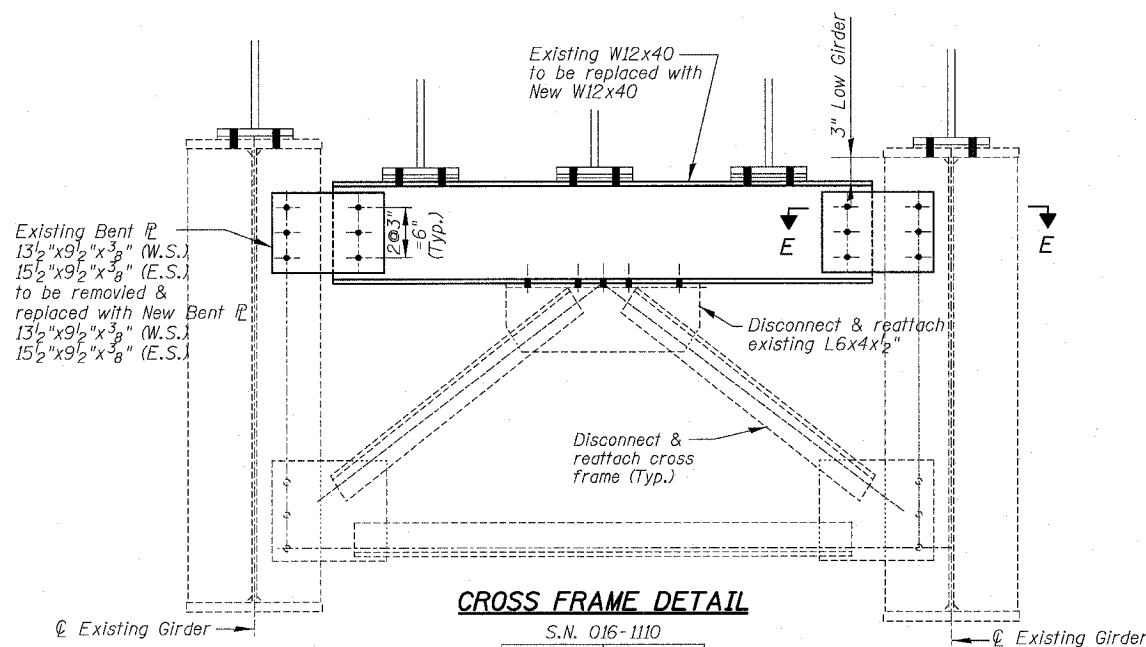
DIAPHRAGM DETAIL

S.N. 016-1110	
230-1	1 REQ'D
230-2	1 REQ'D
230-3	1 REQ'D



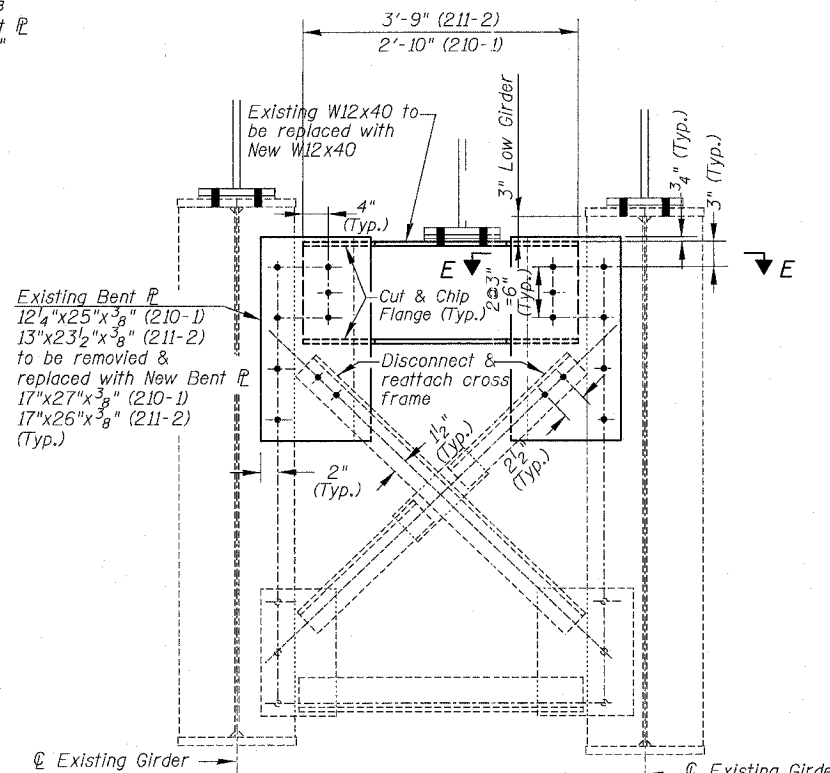
CROSS FRAME DETAIL

S.N. 016-1110	
ECF	8 REQ'D



CROSS FRAME DETAIL

S.N. 016-1110	
203-1	1 REQ'D



CROSS FRAME DETAIL

S.N. 016-1110	
210-1	1 REQ'D
211-2	1 REQ'D

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.03
Structural Steel Removal	Pound	7,660

REVISIONS	
NAME	DATE

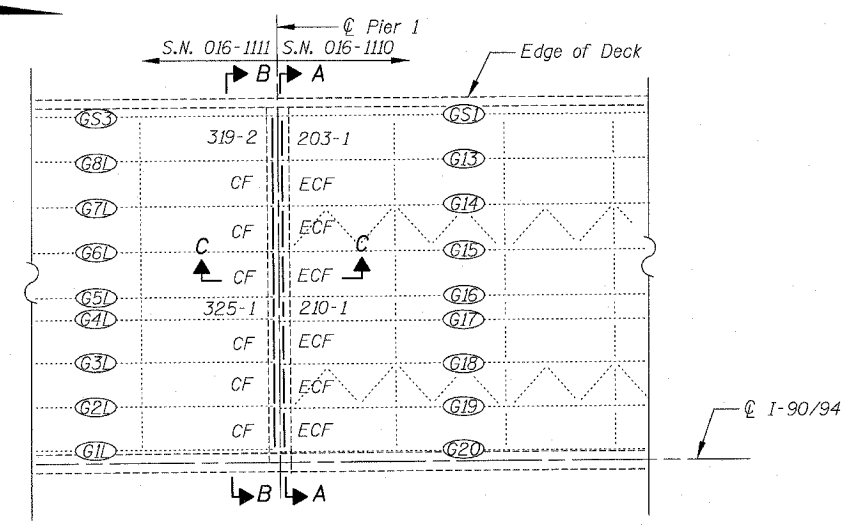
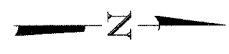
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 DIAPHRAGM REPLACEMENT
 PIER 4, SN 016-1110

SCALE: NTS
 DATE: 5/25/2006

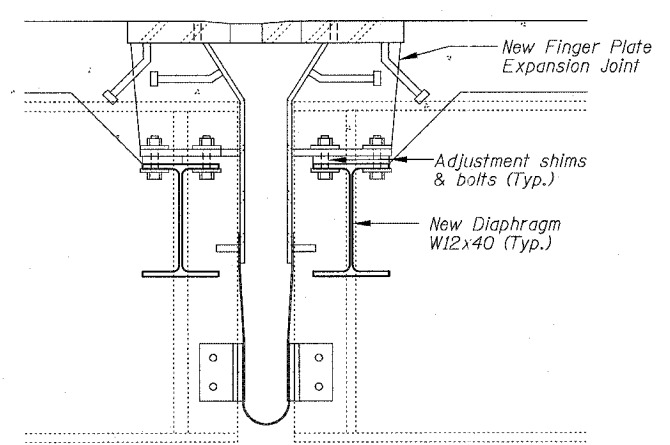
DRAWN BY: MTR
 CHECKED BY: BLU

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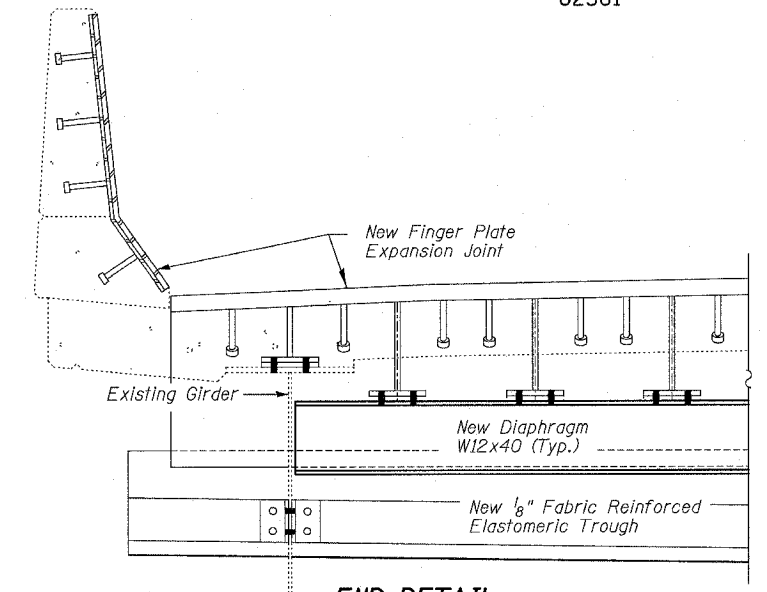
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	263
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



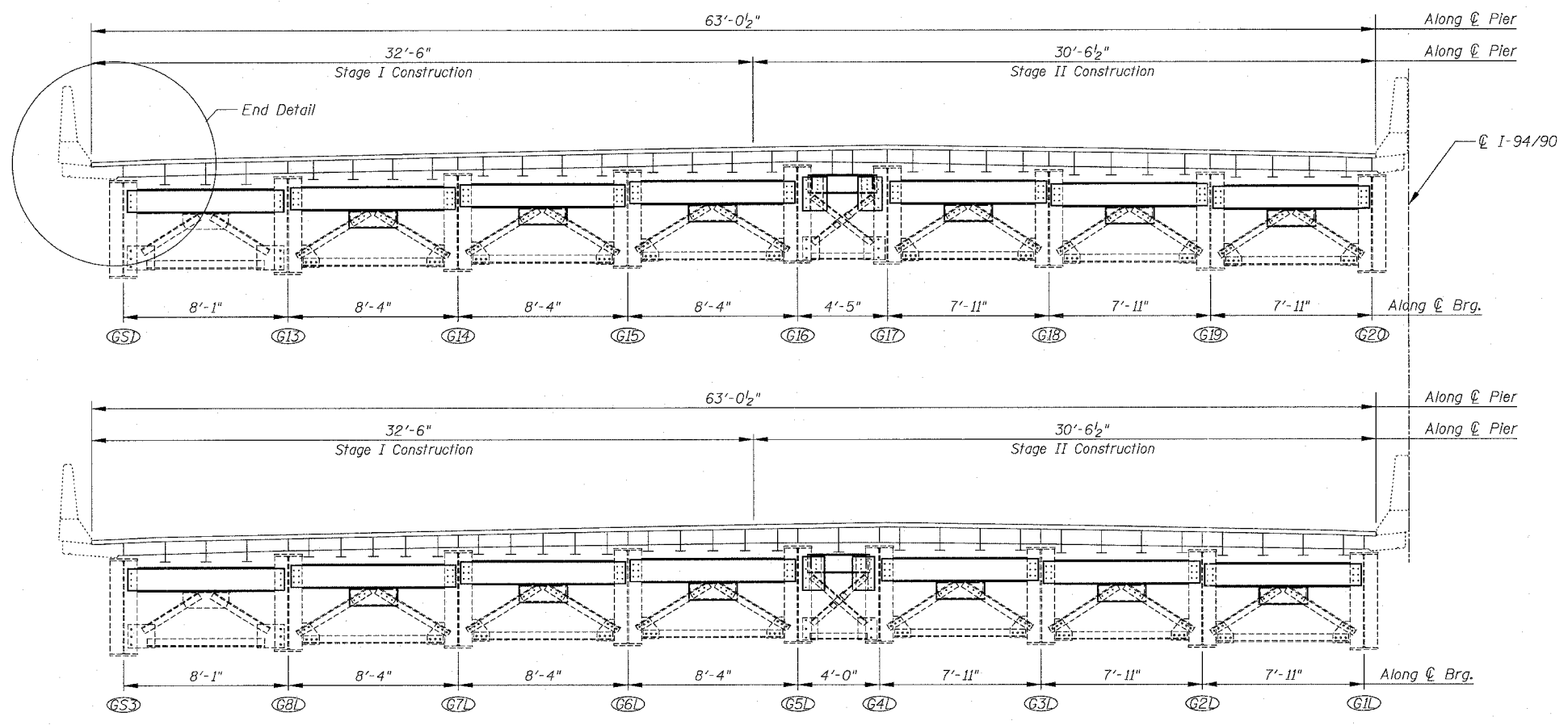
PARTIAL FRAMING PLAN



SECTION C-C



END DETAIL

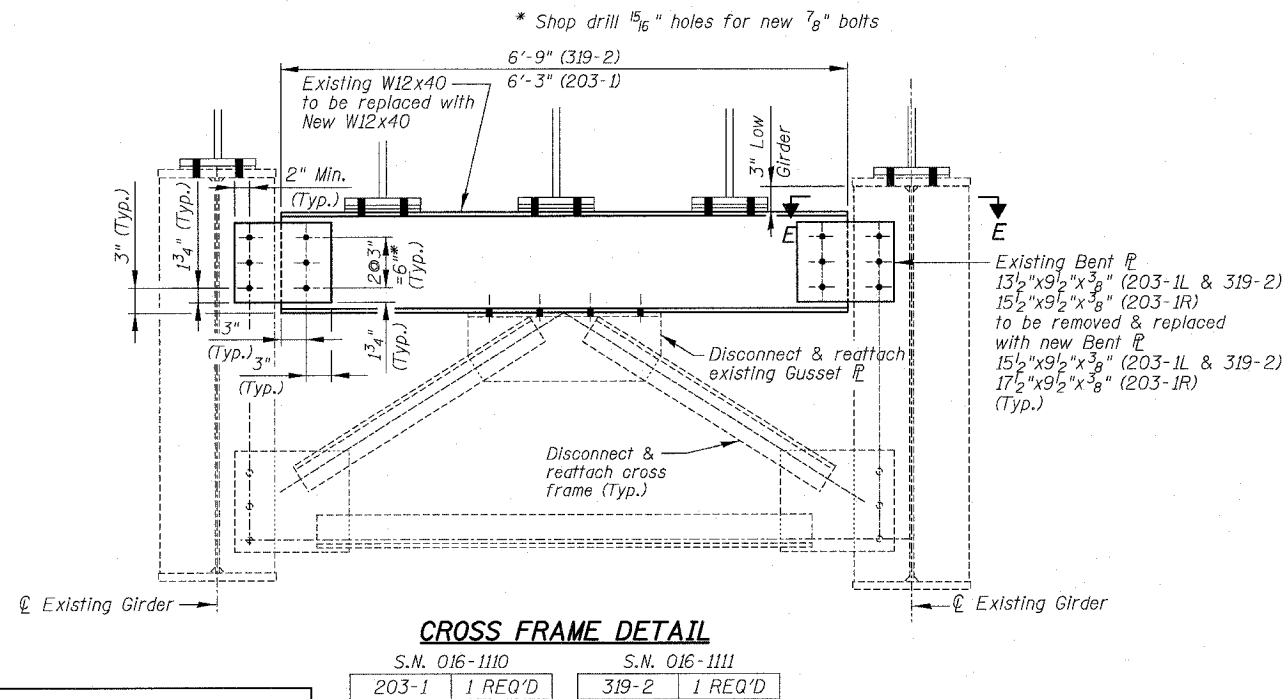
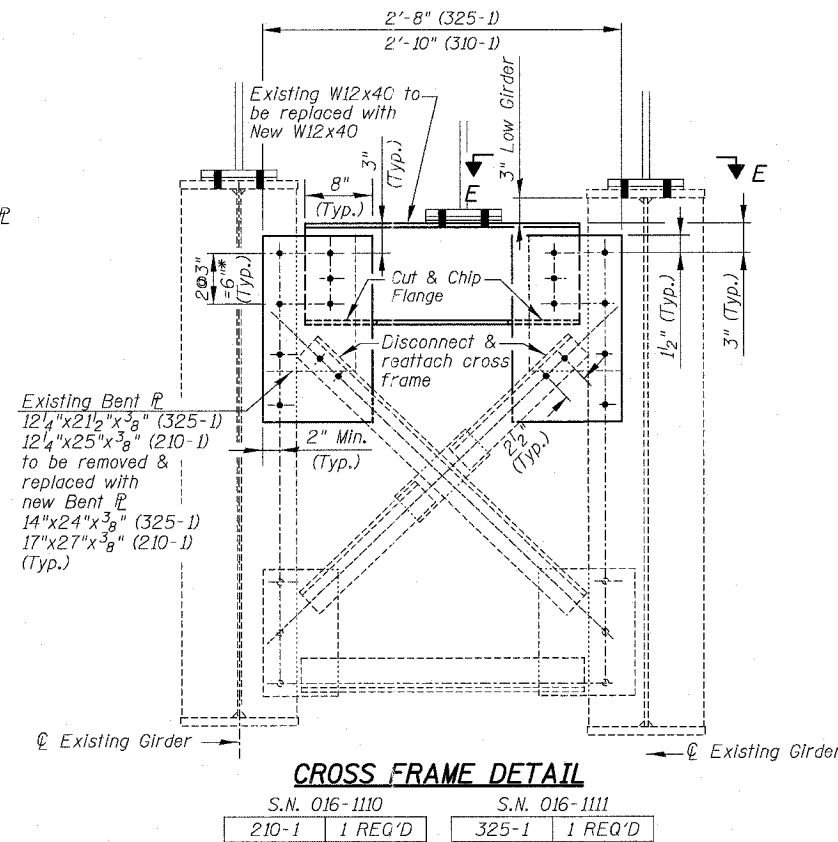
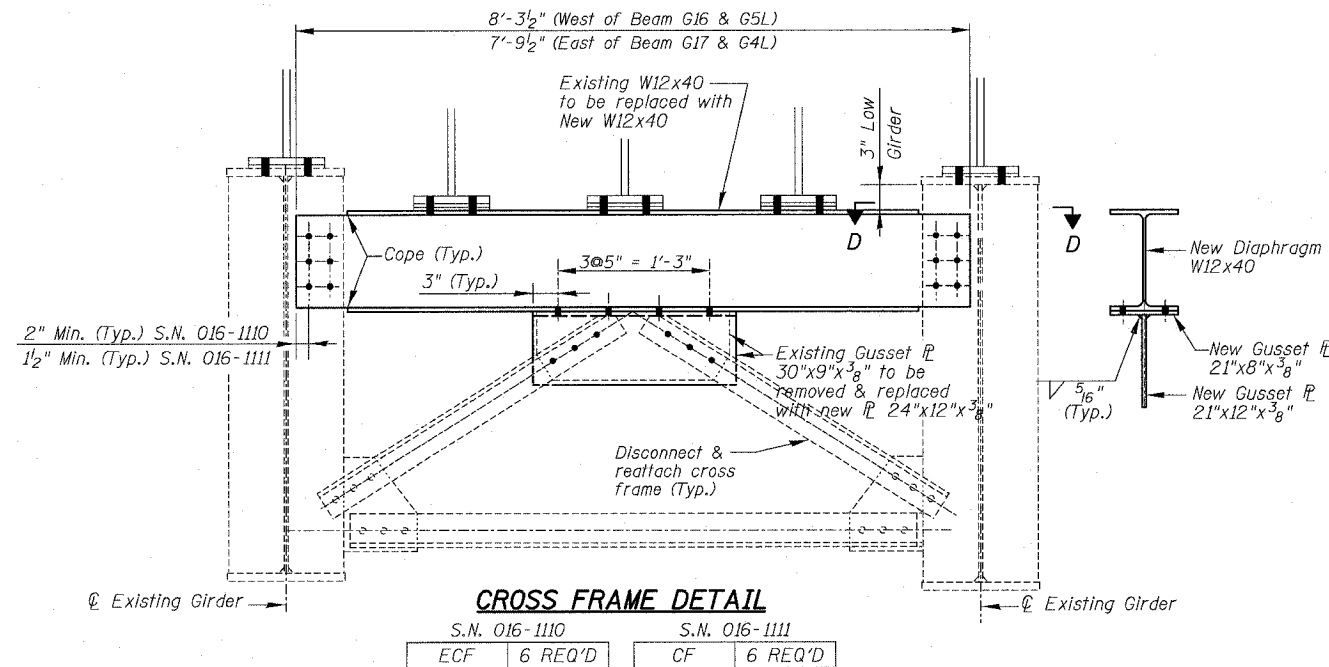
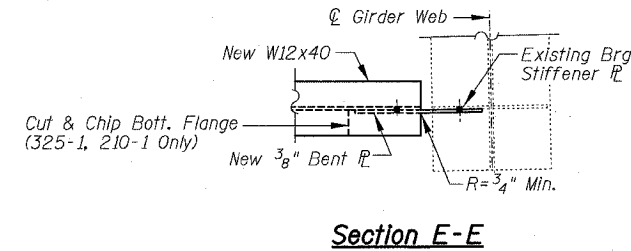
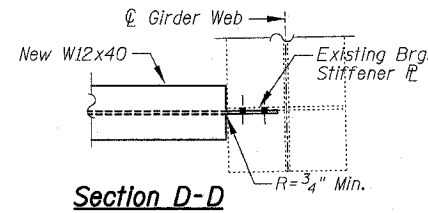


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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 1, SN 016-1110
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: IYL

I:\660\COOK\BRIDGE\2\ASHEETS\660_21_016-110_FF_12.dwg 4/30/05 PM 5/25/2006



NOTES:

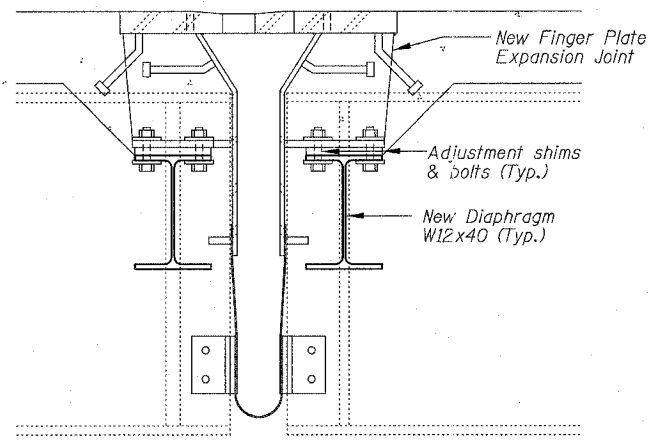
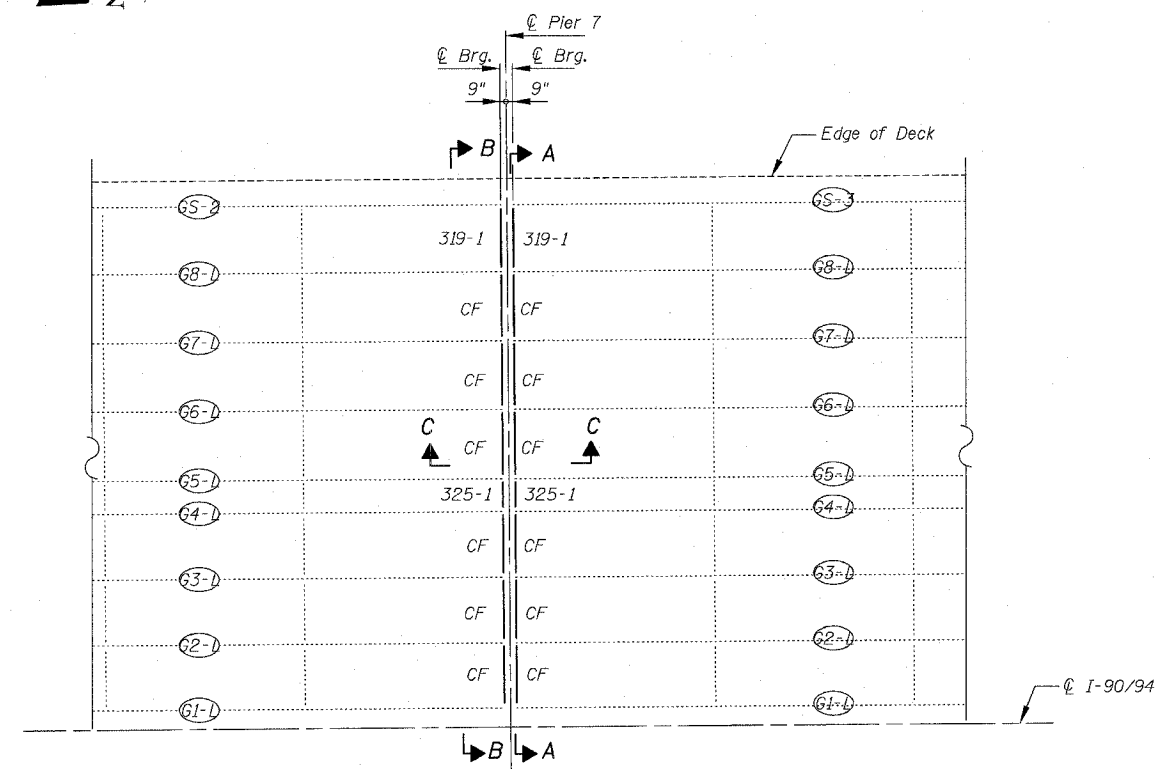
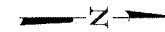
- Use 7/8" φ H.S. bolts for all cross frame/diaphragm connections at this pier location (excluding stool connections).
- Field drill 15/16" φ holes for 7/8" bolts. Use 2" min. edge distance for all 7/8" φ bolts unless otherwise noted.
- Calculated weight of Structural Steel used for the item "Furnishing & Erecting Structural Steel" = 6,300 Lbs. and itemized as follows:
 S.N. 016-1110 = 3,080 Lbs
 S.N. 016-1111 = 3,220 Lbs
- Calculated weight of Structural Steel used for the item "Structural Steel Removal" = 5,710 Lbs. and itemized as follows:
 S.N. 016-1110 = 2,770 Lbs
 S.N. 016-1111 = 2,940 Lbs

BILL OF MATERIAL

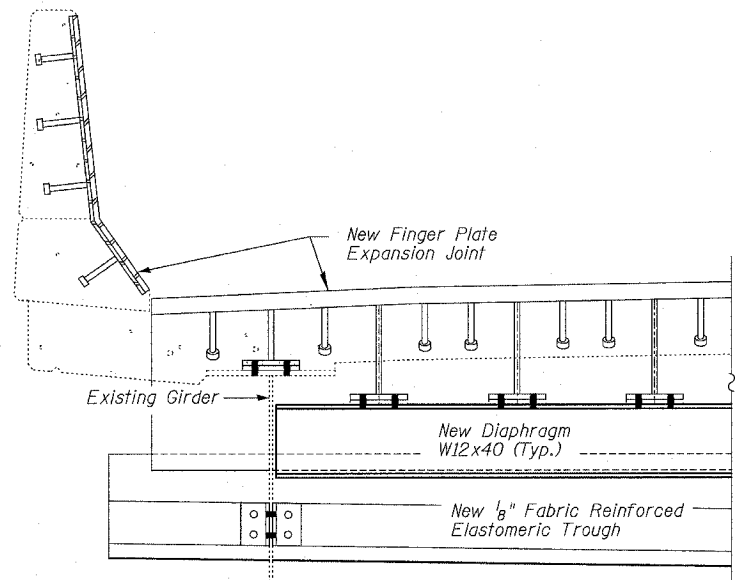
Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.03
Structural Steel Removal	Pound	5,710

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY) SB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS DIAPHRAGM REPLACEMENT PIER 1, SN 016-1110	
		SCALE: NTS	DRAWN BY: BDC
		DATE: 5/25/2006	CHECKED BY: IYL

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	265
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

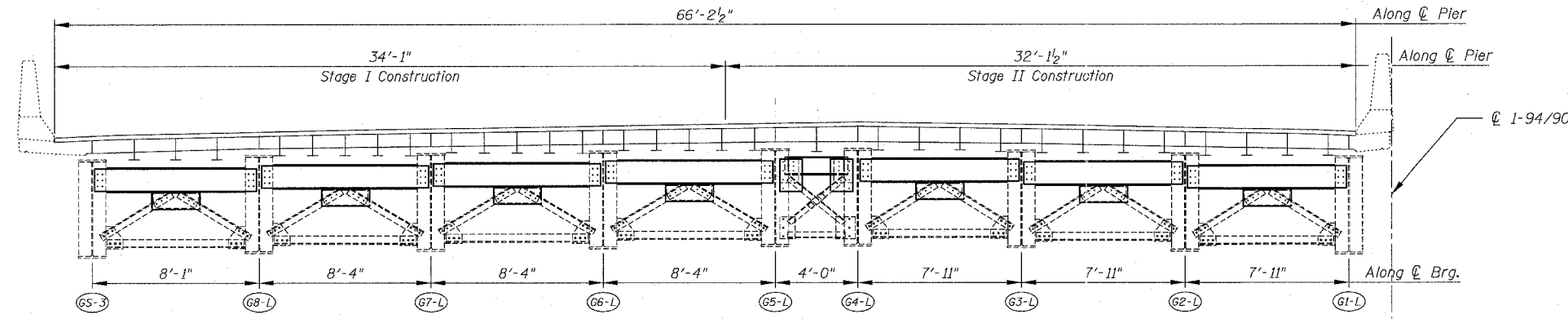


SECTION C-C

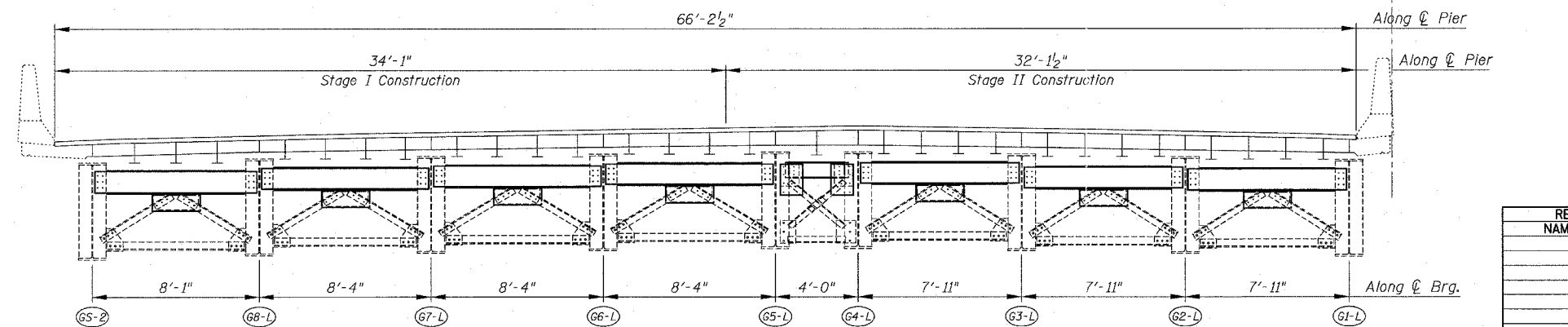


END DETAIL

PARTIAL FRAMING PLAN



SECTION A-A



SECTION B-B

BOWMAN, BARRETT & ASSOCIATES INC.
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REVISIONS		NAME	DATE
NO.	DESCRIPTION		

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 7, SN 016-1111

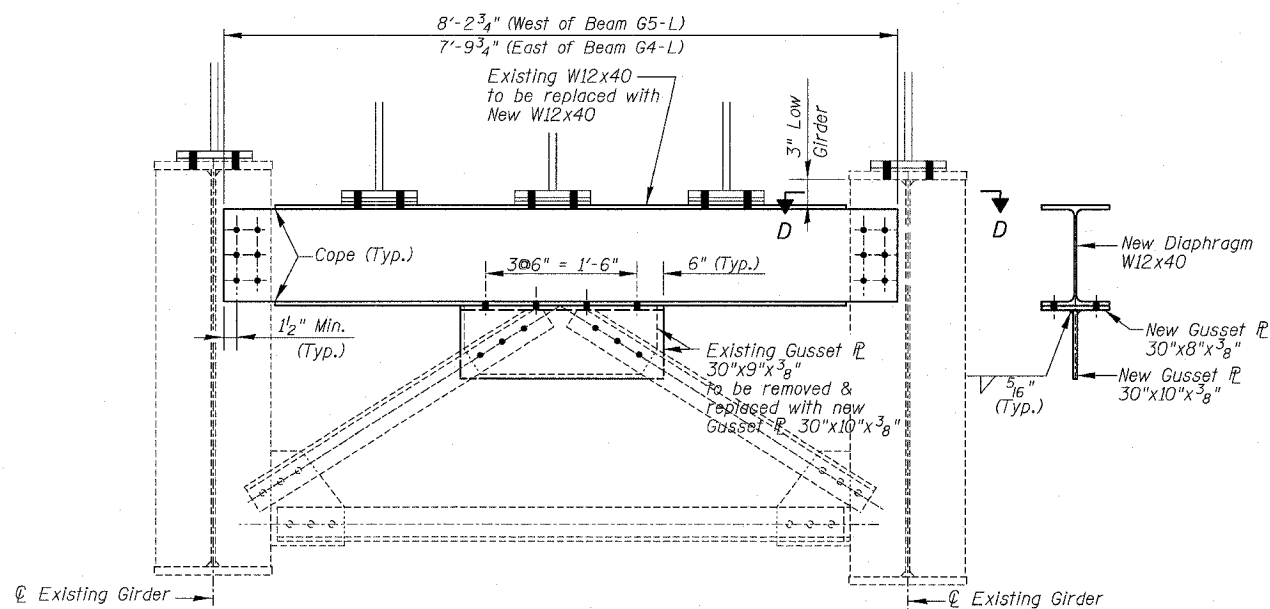
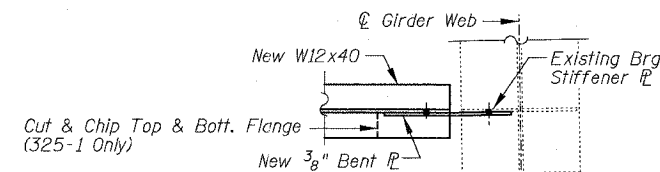
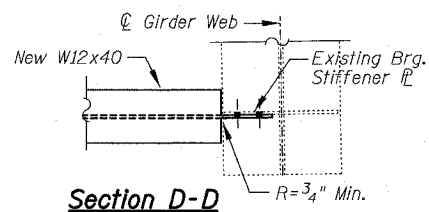
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: IYL

I:\PROJECTS\94\90\SB\BRIDGE\DIAPHRAGM\PIER 7\62581.DWG (11/11/06) (11/11/06)

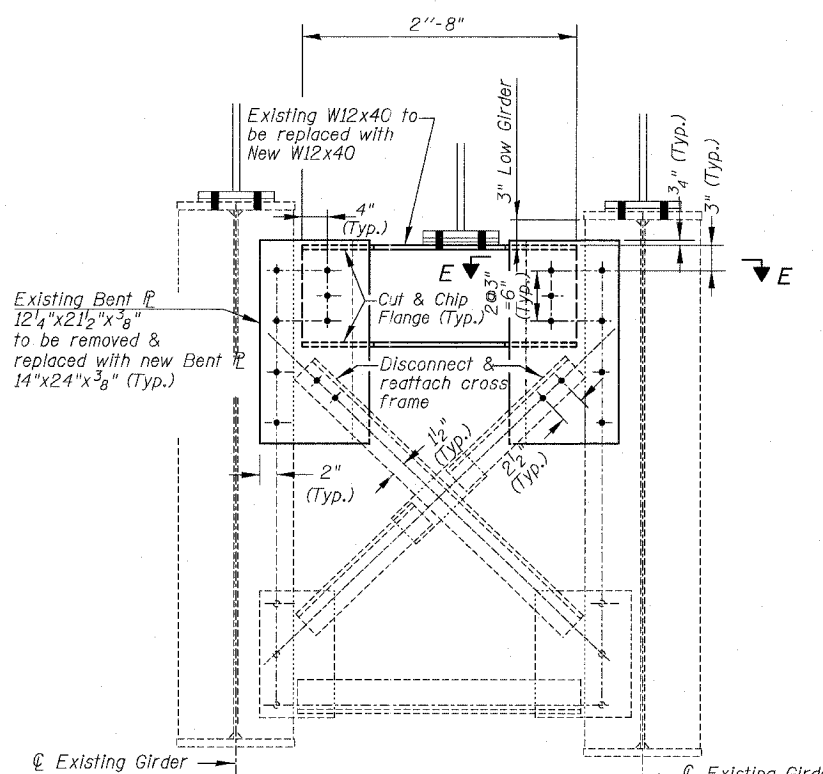
4/28/06 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				



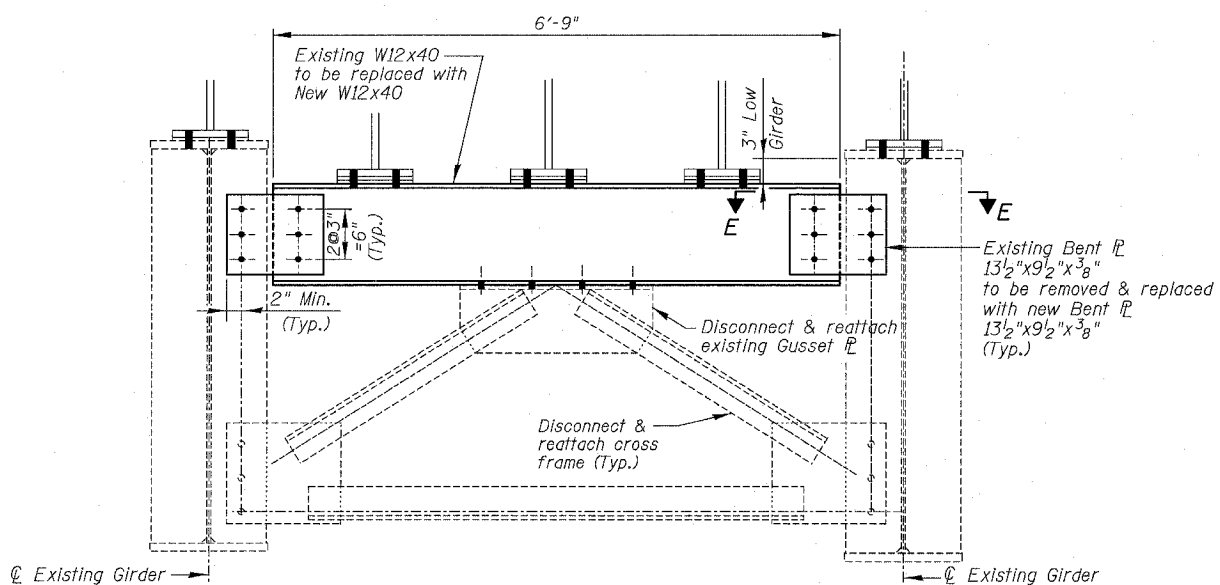
CROSS FRAME DETAIL

S.N. 016-1111
CF 12 REQ'D



CROSS FRAME DETAIL

S.N. 016-1111
325-1 2 REQ'D



CROSS FRAME DETAIL

S.N. 016-1111
319-1 2 REQ'D

NOTES:

1. Use 7/8" H.S. bolts for all cross frame/diaphragm connections at this pier location (excluding stool connections).
2. Field drill 15/16" holes for 7/8" bolts. Use 2" min. edge distance for all 7/8" bolts unless otherwise noted.
3. Calculated weight of Structural Steel used for the item "Furnishing & Erecting Structural Steel" = 6,360 Lbs.

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.03
Structural Steel Removal	Pound	5,880

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REVISIONS	DATE
NAME	

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 7, SN 016-1111

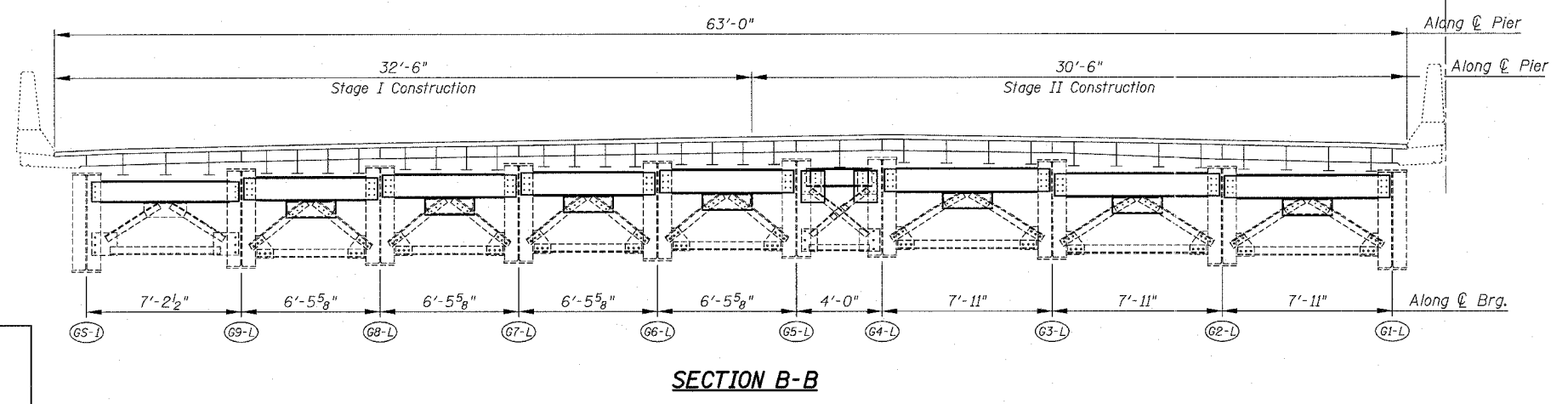
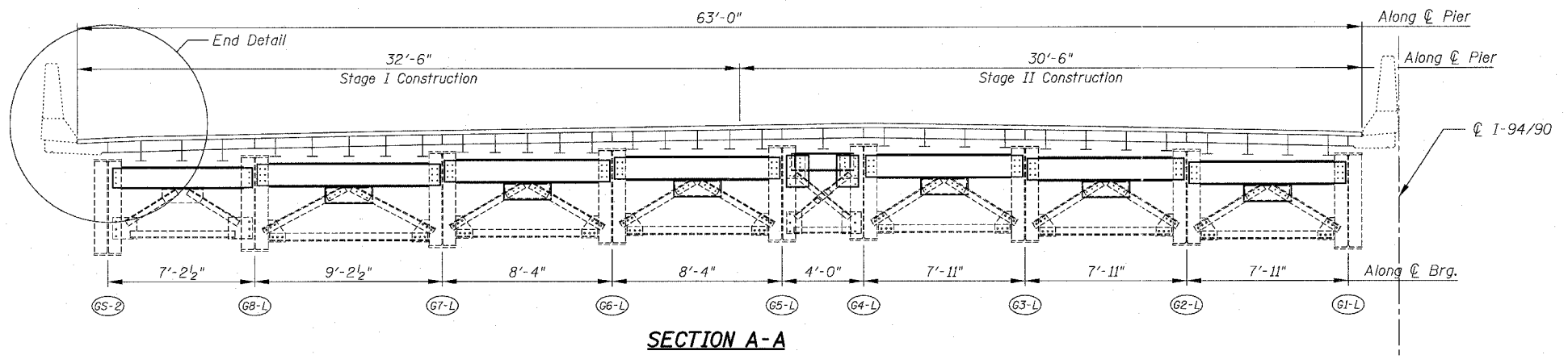
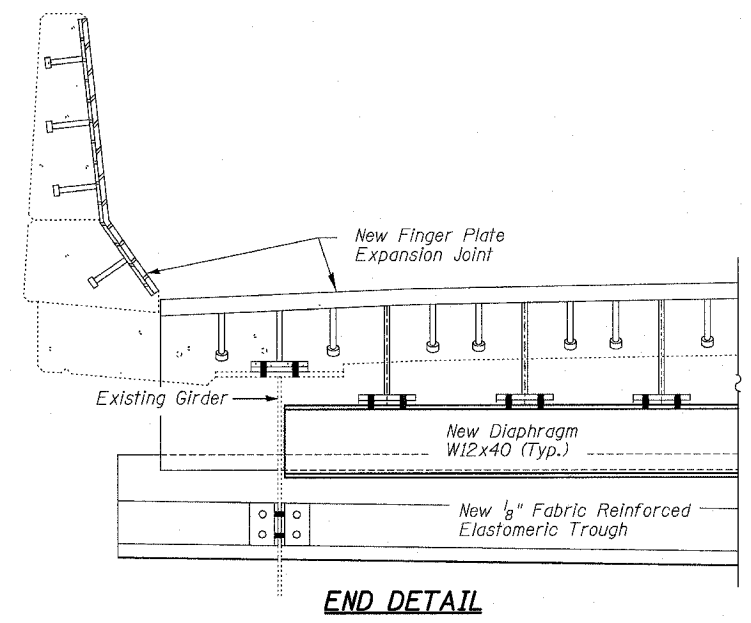
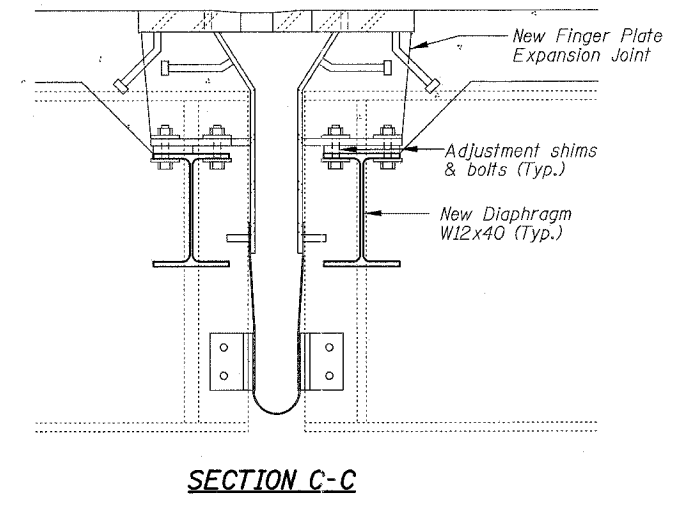
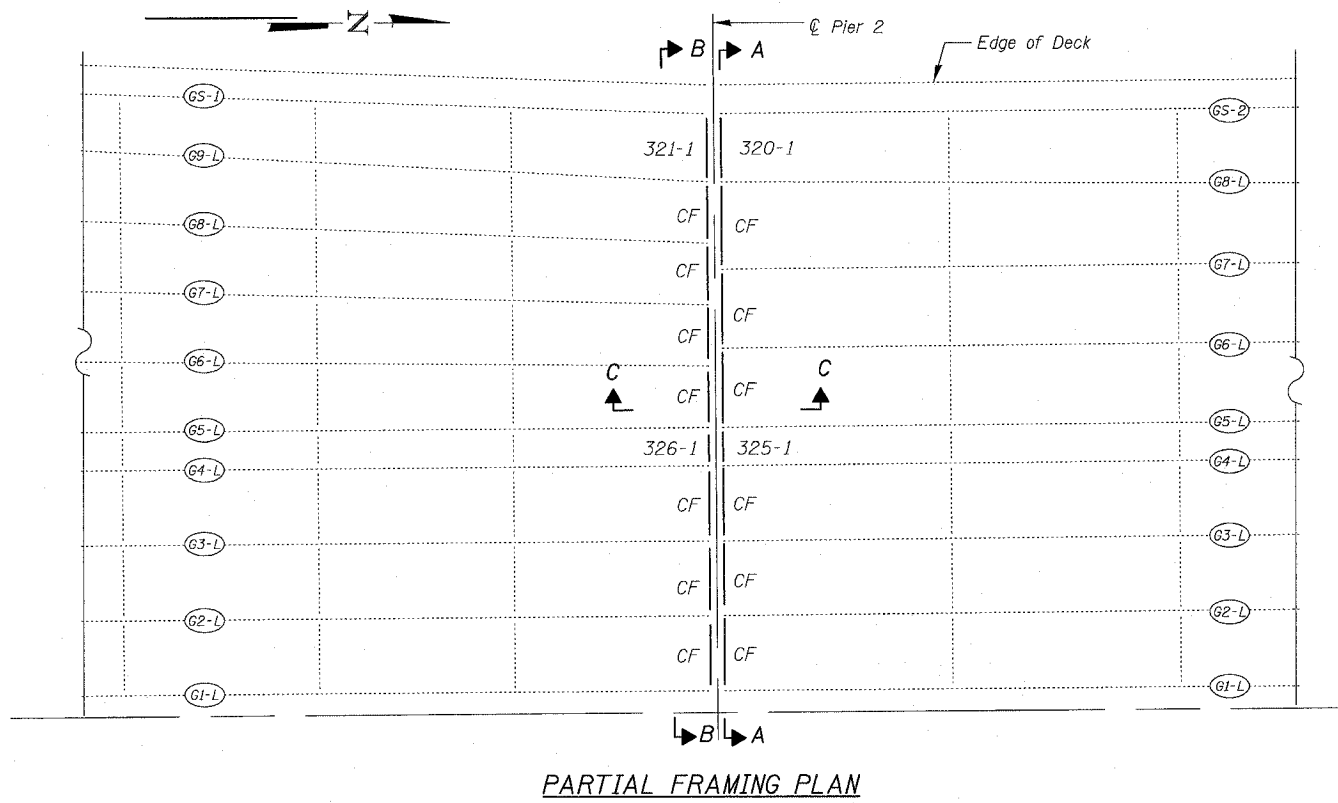
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: IYL

I:\650\0000\BRIDGE\SN016\1111\FR.DWG

4/4/2006 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	267
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



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REVISIONS	
NAME	DATE

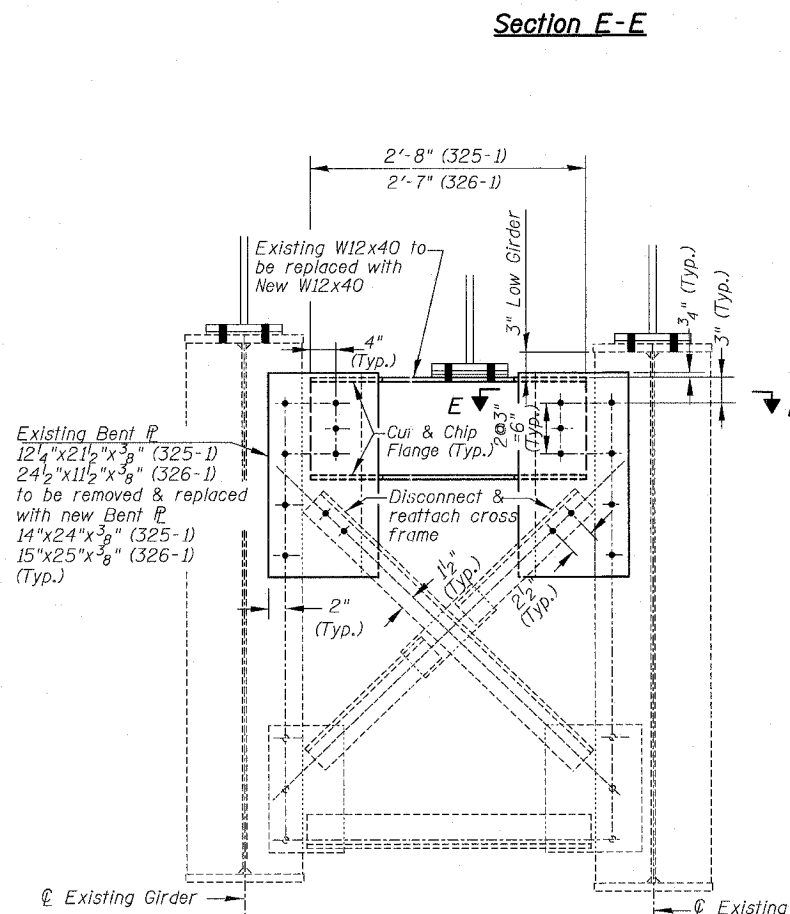
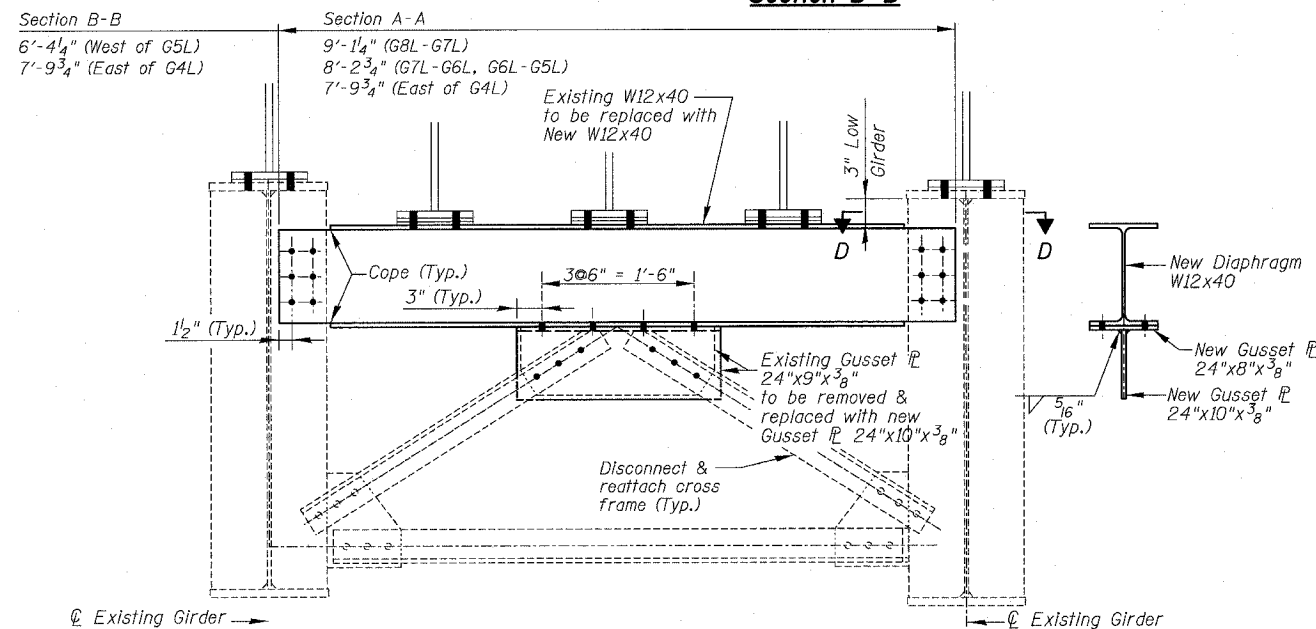
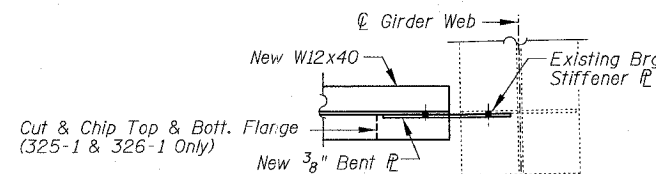
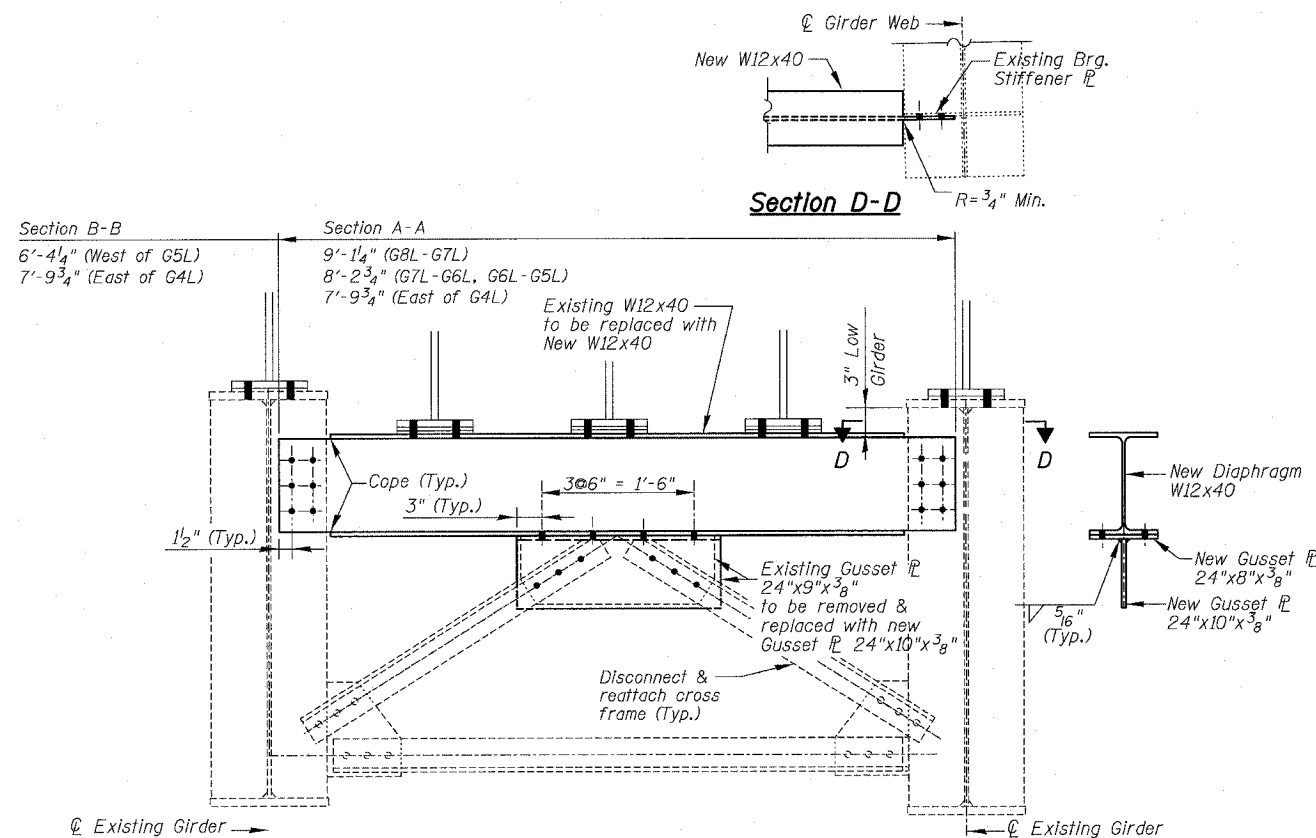
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 2, SN 016-1111

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: IYL

14-4458 PM 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	268
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

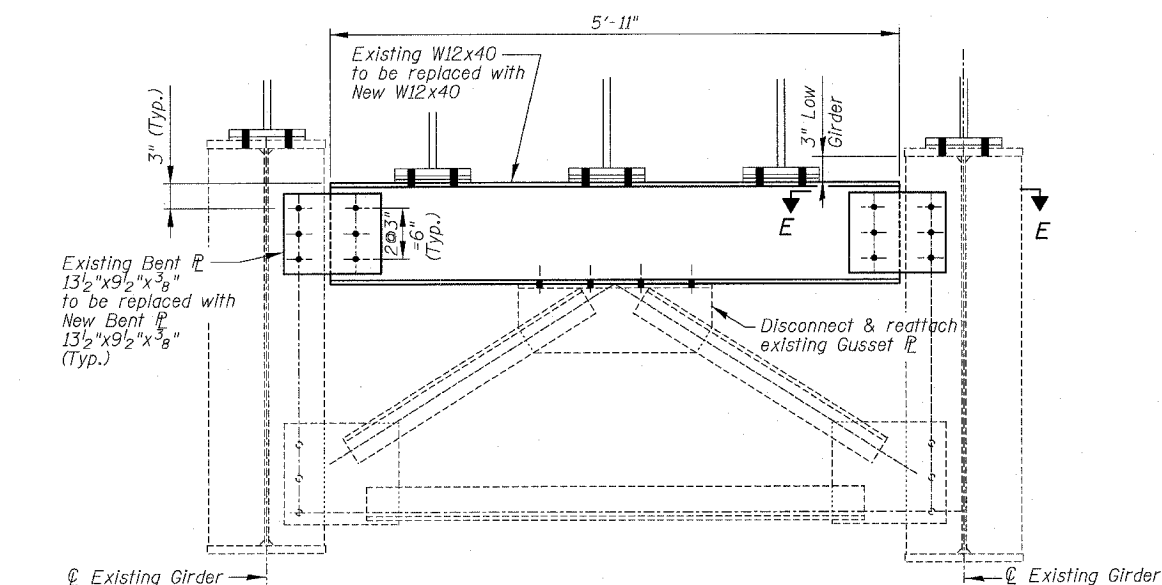


CROSS FRAME DETAIL

S.N. 016-1111	
CF	13 REQ'D

NOTES:

1. Use 7/8" H.S. bolts for all cross frame/diaphragm connections at this pier location (excluding stool connections).
2. Field drill 1 5/16" holes for 7/8" bolts. Use 2" min. edge distance for all 7/8" bolts unless otherwise noted.
3. Calculated weight of Structural Steel used for the item "Furnishing & Erecting Structural Steel" = 5,780 Lbs.



CROSS FRAME DETAIL

S.N. 016-1111	
320-1	1 REQ'D
321-1	1 REQ'D

CROSS FRAME DETAIL

S.N. 016-1111	
325-1	1 REQ'D
326-1	1 REQ'D

BILL OF MATERIAL

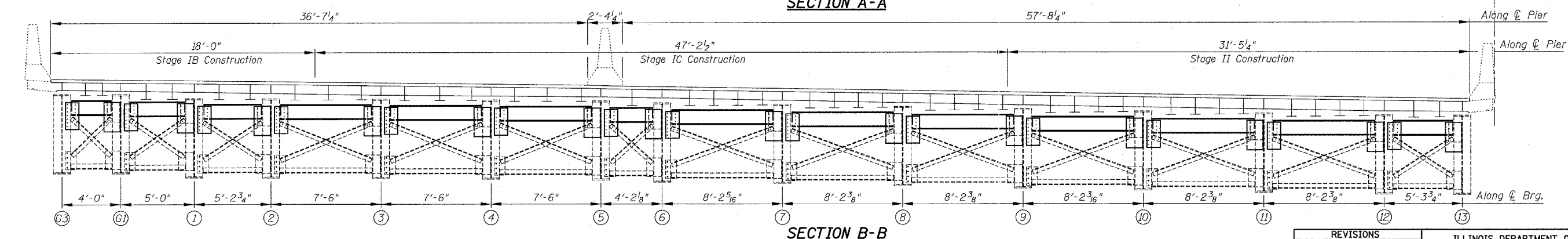
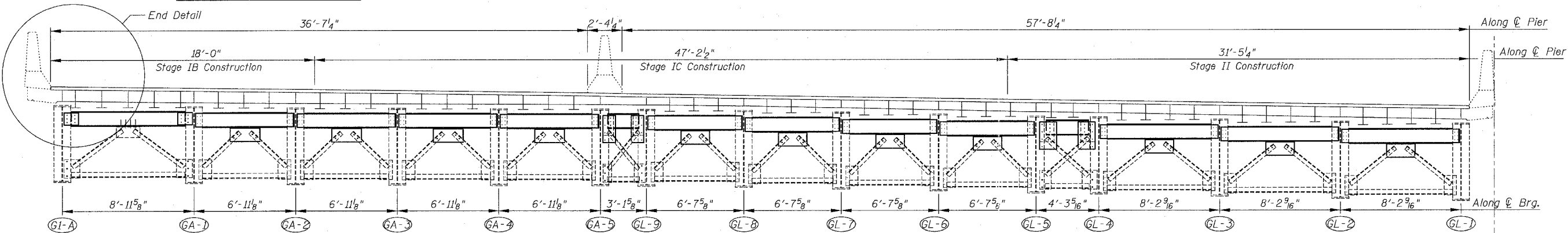
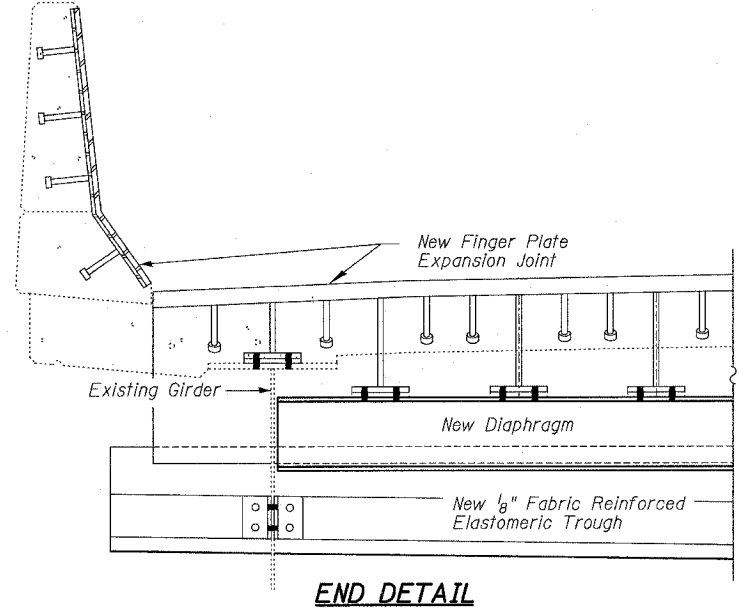
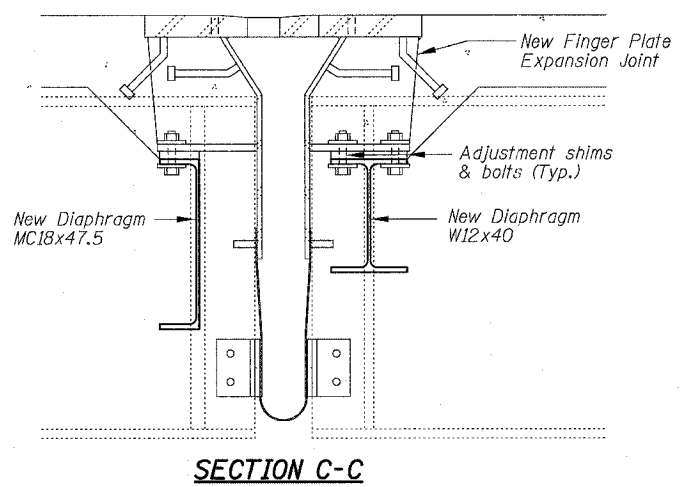
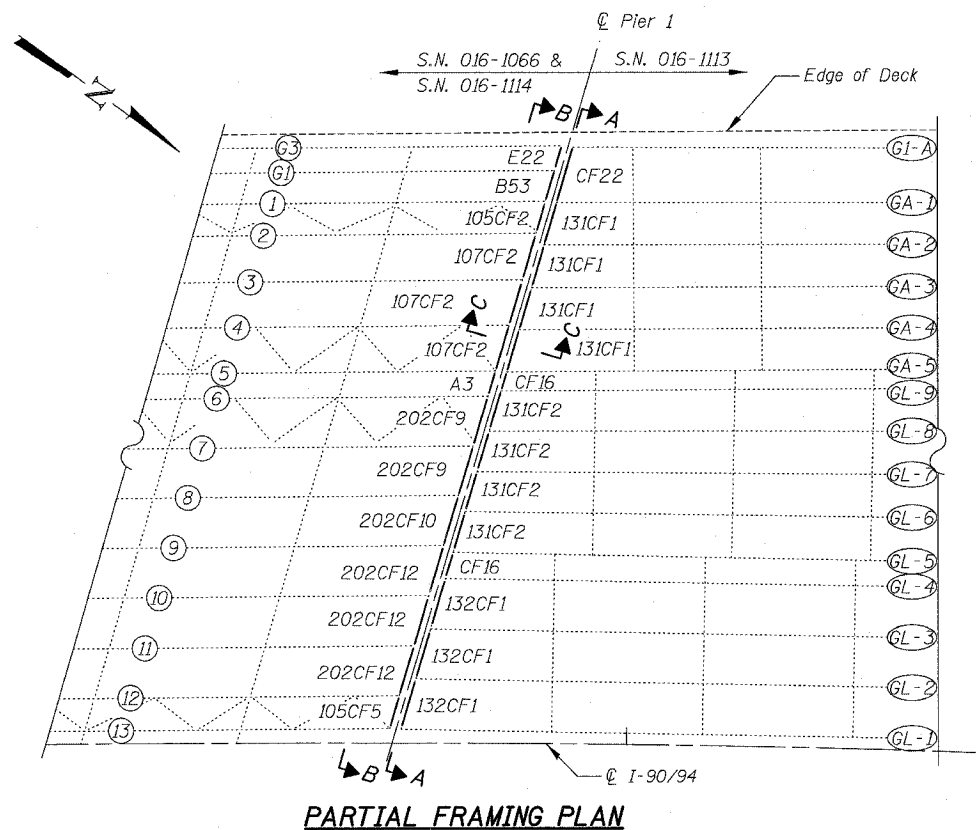
Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.02
Structural Steel Removal	Pound	5,440

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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) SB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS DIAPHRAGM REPLACEMENT PIER 2, SN 016-1111
NAME	DATE	
		SCALE: NTS
		DATE: 5/25/2006
		DRAWN BY: BOC
		CHECKED BY: IYL

4-4533.PW 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	269
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				



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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 1, SN 016-1113

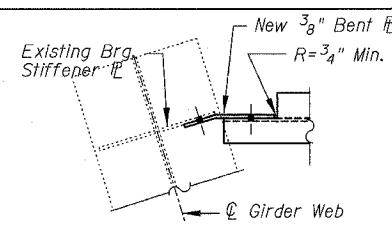
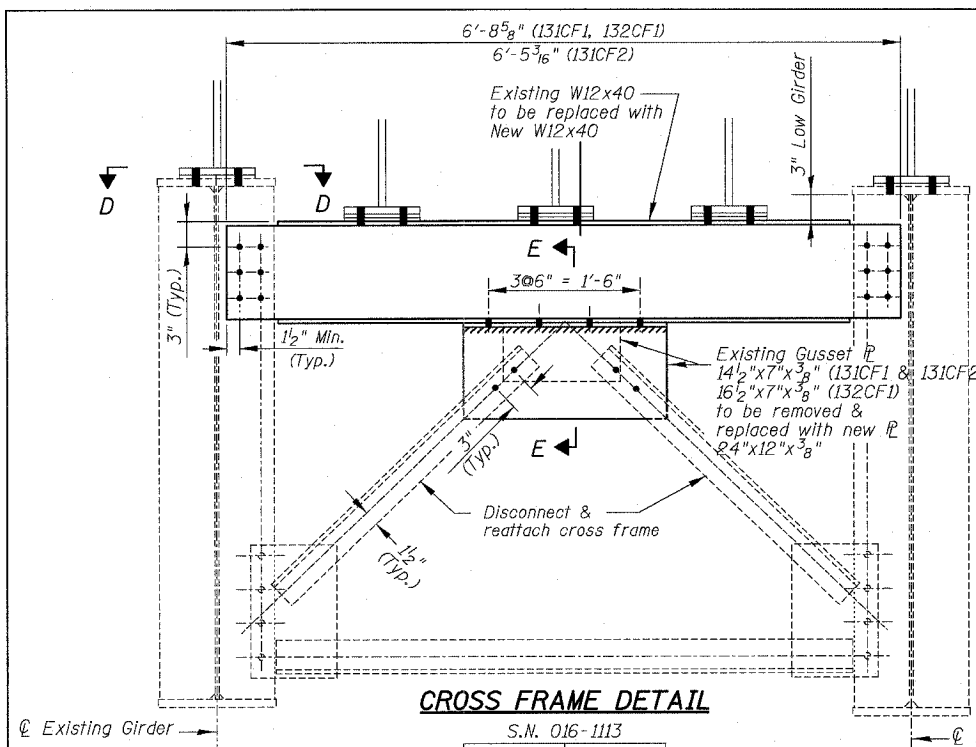
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: IYL

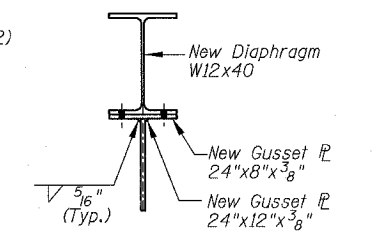
4/25/07 PM 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	270
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581



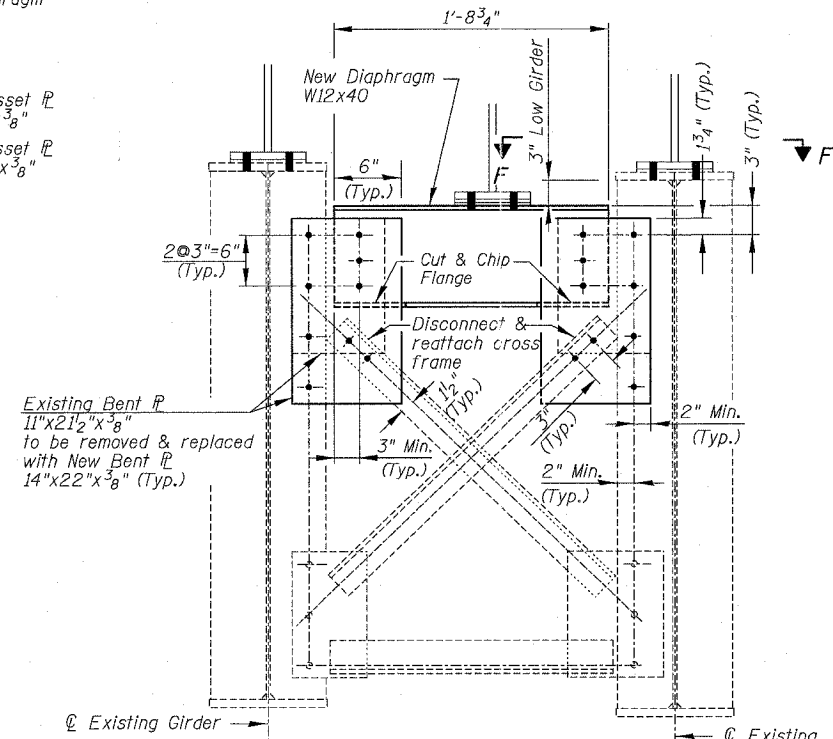
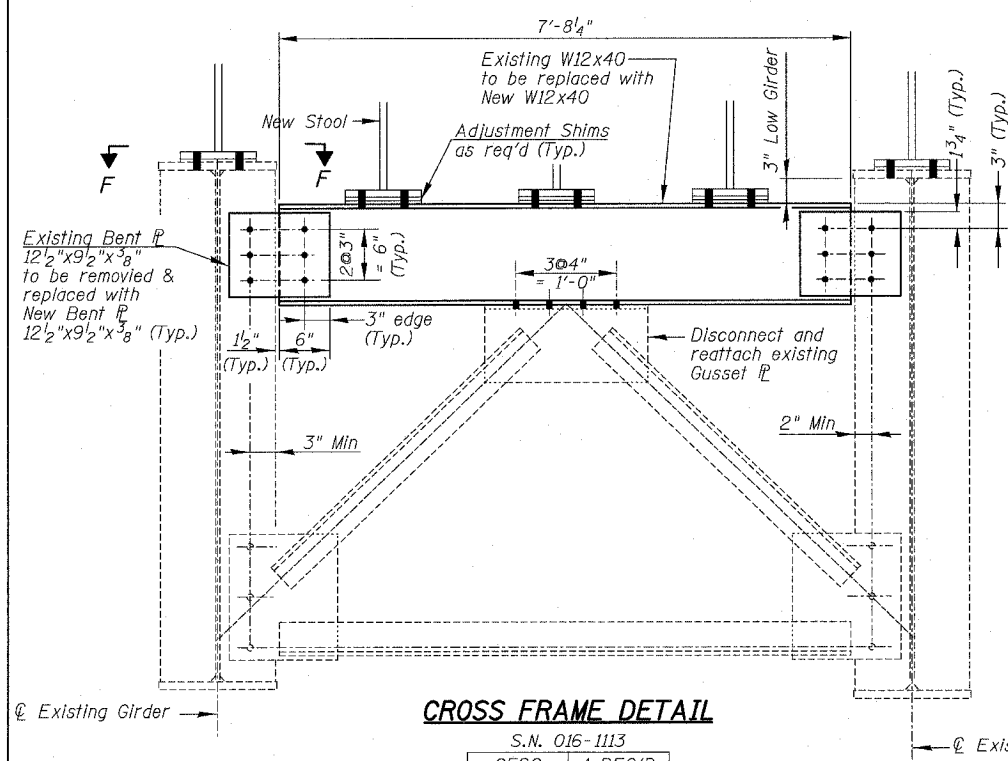
Section D-D



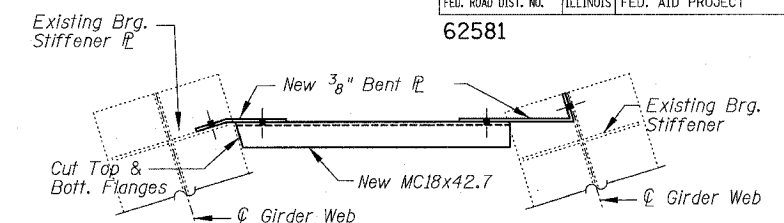
Section E-E

CROSS FRAME DETAIL

S.N. 016-1113	
131CF1	4 REQ'D
131CF2	4 REQ'D
132CF1	3 REQ'D



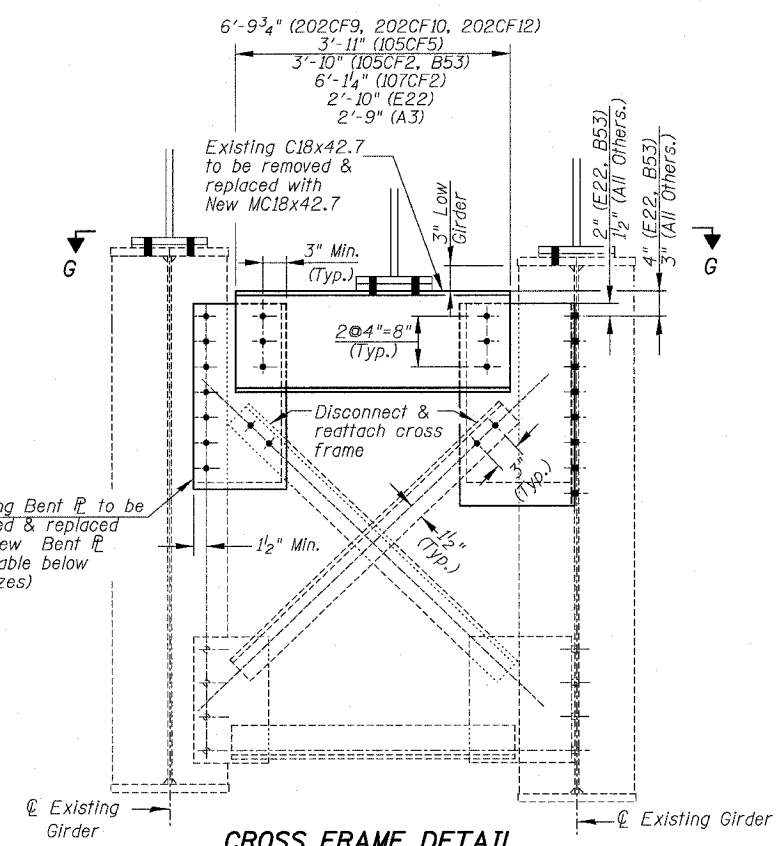
Section F-F



Section G-G

CROSS FRAME DETAIL

S.N. 016-1113	
CF16	2 REQ'D



CROSS FRAME DETAIL

S.N. 016-1114		S.N. 016-1066	
202CF9	2 REQ'D	105CF2	1 REQ'D
202CF10	1 REQ'D	107CF2	3 REQ'D
202CF12	3 REQ'D	A3	1 REQ'D
105CF5	1 REQ'D	E22	1 REQ'D
		B53	1 REQ'D

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.03
Structural Steel Removal	Pound	6,520

Diaphragm Designation	Existing Bent Plate Removal	New Bent Plate
E22	11 1/4"x24 1/2"x3/8" (W.S.) 14 1/4"x24 1/2"x3/8" (E.S.)	18"x35"x3/8" (Both Sides)
B53	15 3/4"x23 1/2"x3/8" (W.S.) 15 3/4"x25"x3/8" (E.S.)	17"x35"x3/8" (Both Sides)
105CF2	14 1/2"x26"x3/8" (W.S.)	18"x27"x3/8" (W.S.)
105CF5	17 1/4"x26"x3/8" (E.S.)	21"x27"x3/8" (E.S.)
107CF2	18"x24"x3/8" (W.S.) 15"x24"x3/8" (E.S.)	18"x27"x3/8" (W.S.) 21"x27"x3/8" (E.S.)
A3	15 3/4"x25 1/2"x3/8" (W.S.) 16"x39"x3/8" (E.S.)	18"x27"x3/8" (W.S.) 18"x30"x3/8" (E.S.)
202CF9, 202CF10, 202CF12	14"x24"x3/8" (W.S.) 17"x24"x3/8" (E.S.)	18"x27"x3/8" (W.S.) 21"x27"x3/8" (E.S.)

NOTES:

1. Calculated weight of Structural Steel used for the item "Furnishing & Erecting Structural Steel" = 7,200 Lbs, and itemized as follows:
S.N. 016-1113 = 1,850 Lbs
S.N. 016-1066 = 2,390 Lbs
S.N. 016-1114 = 2,960 Lbs
2. Calculated weight of Structural Steel used for the item "Structural Steel Removal" = 6,520 Lbs, and itemized as follows:
S.N. 016-1113 = 2,140 Lbs
S.N. 016-1066 = 2,710 Lbs
S.N. 016-1114 = 1,670 Lbs
3. E.S. denotes East Side. W.S. indicates West Side.

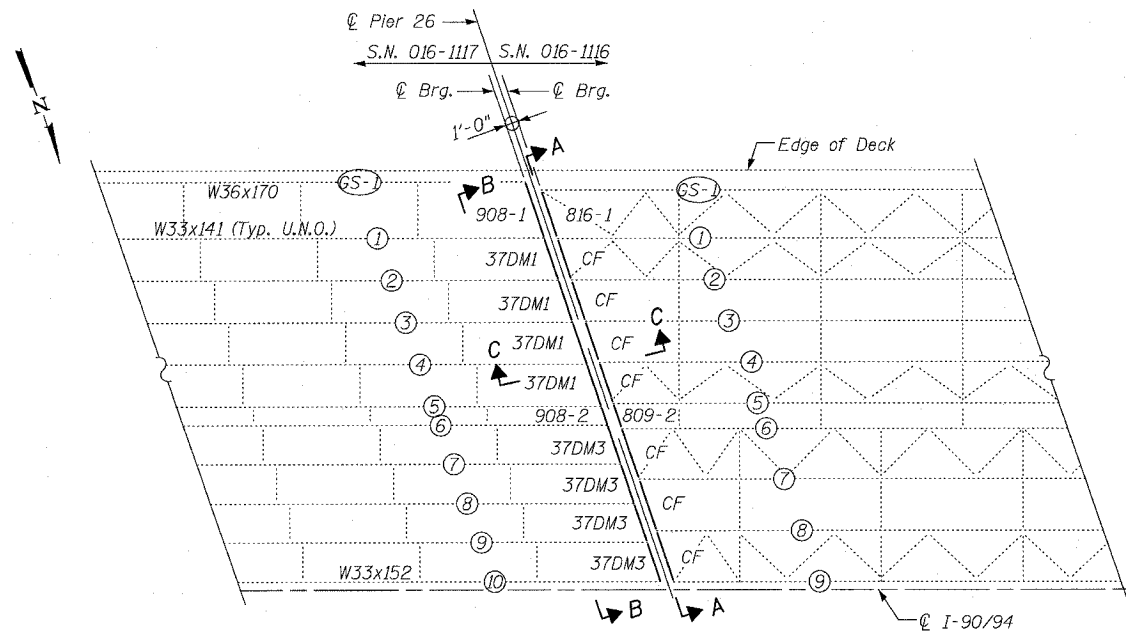
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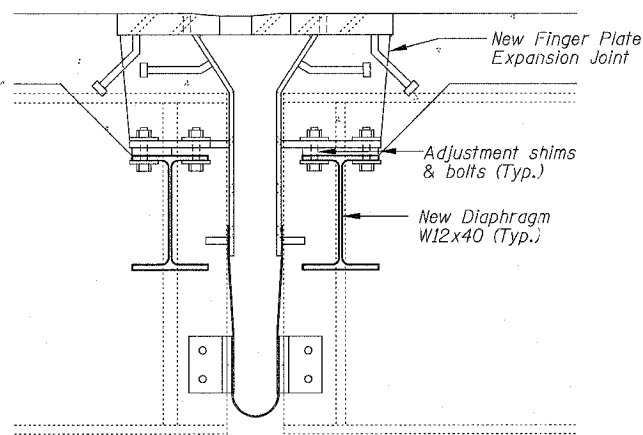
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT DETAILS
PIER 1, SN 016-1113
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: IYL

I:\660\94\90\BRIDGE\20\SHETS\660_21_016-1113-F.F.J.dwg 4/46/06 5/25/2006

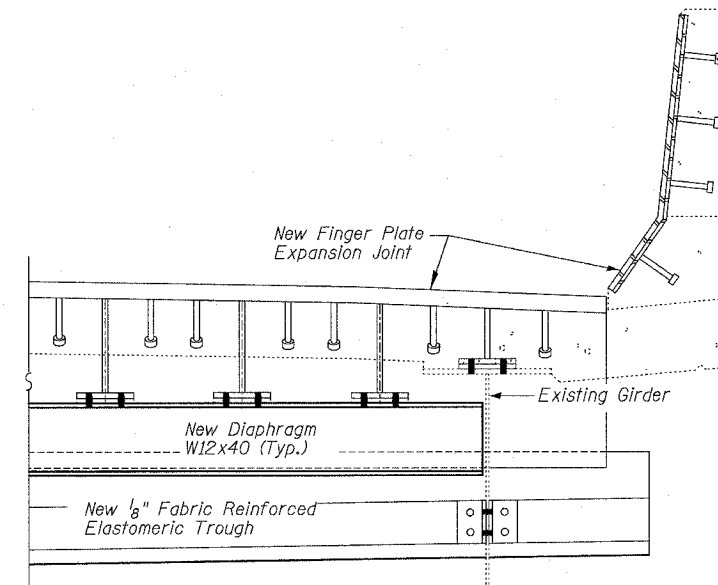
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62581				



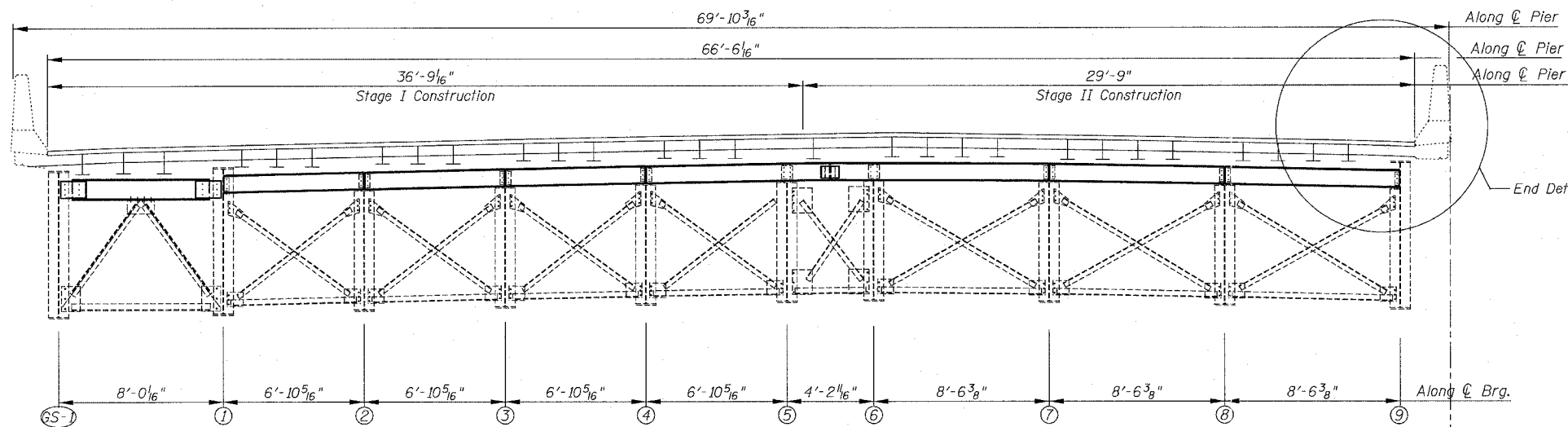
PARTIAL FRAMING PLAN



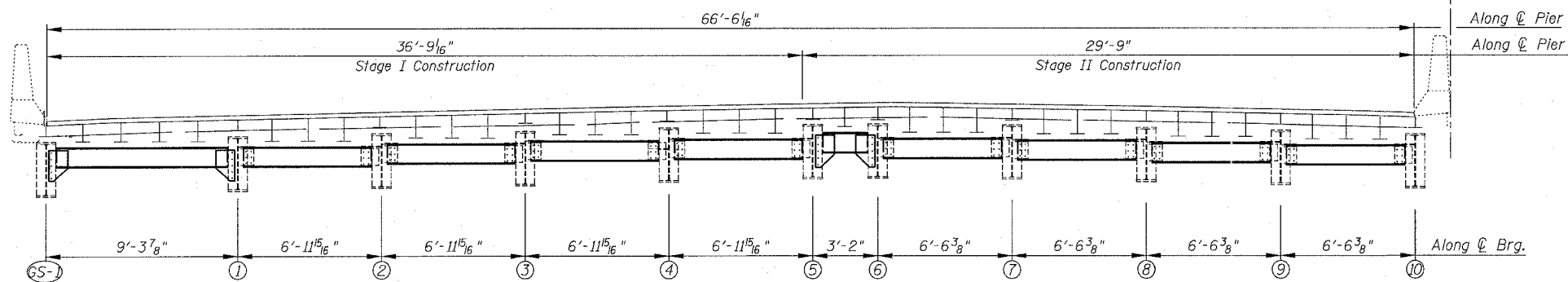
SECTION C-C



End Detail



SECTION A-A



SECTION B-B

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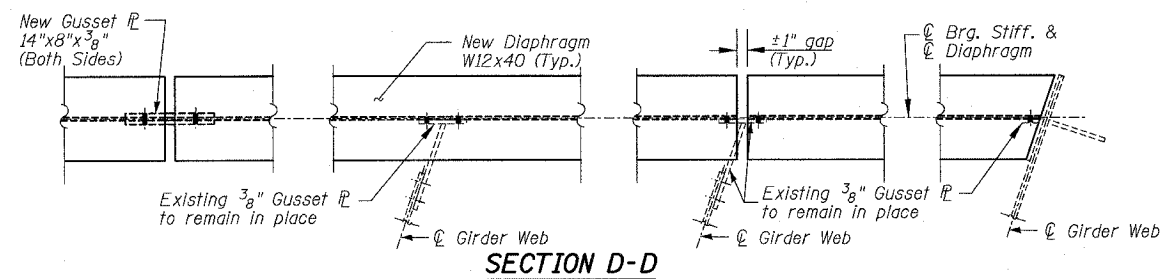
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT
PIER 26, SN 016-1117
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: TYL

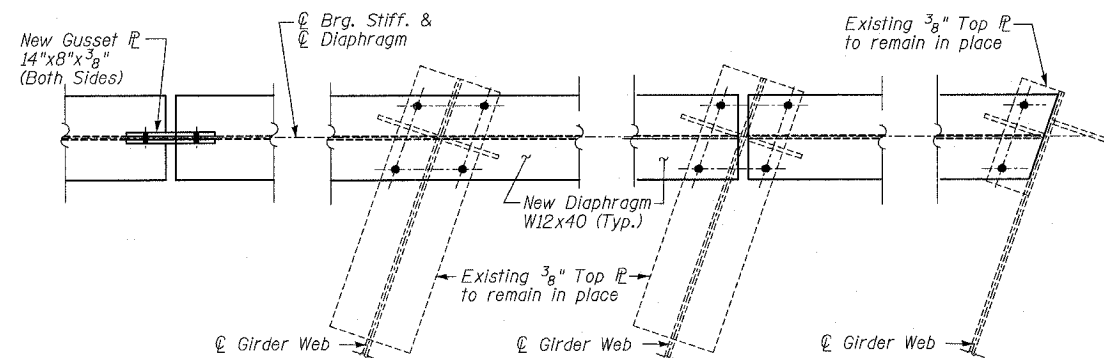
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

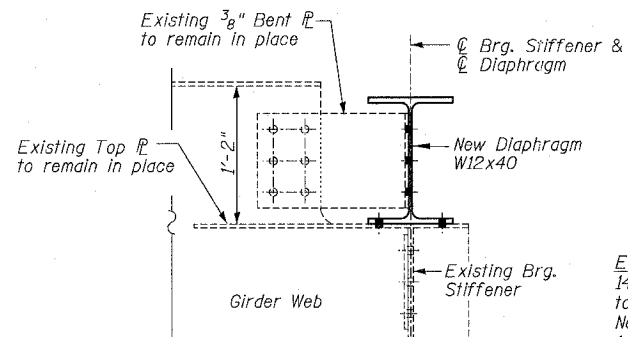
62581



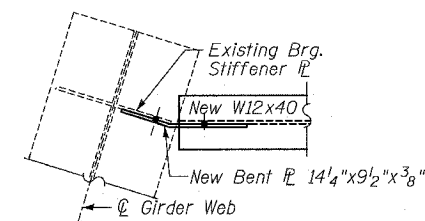
SECTION D-D



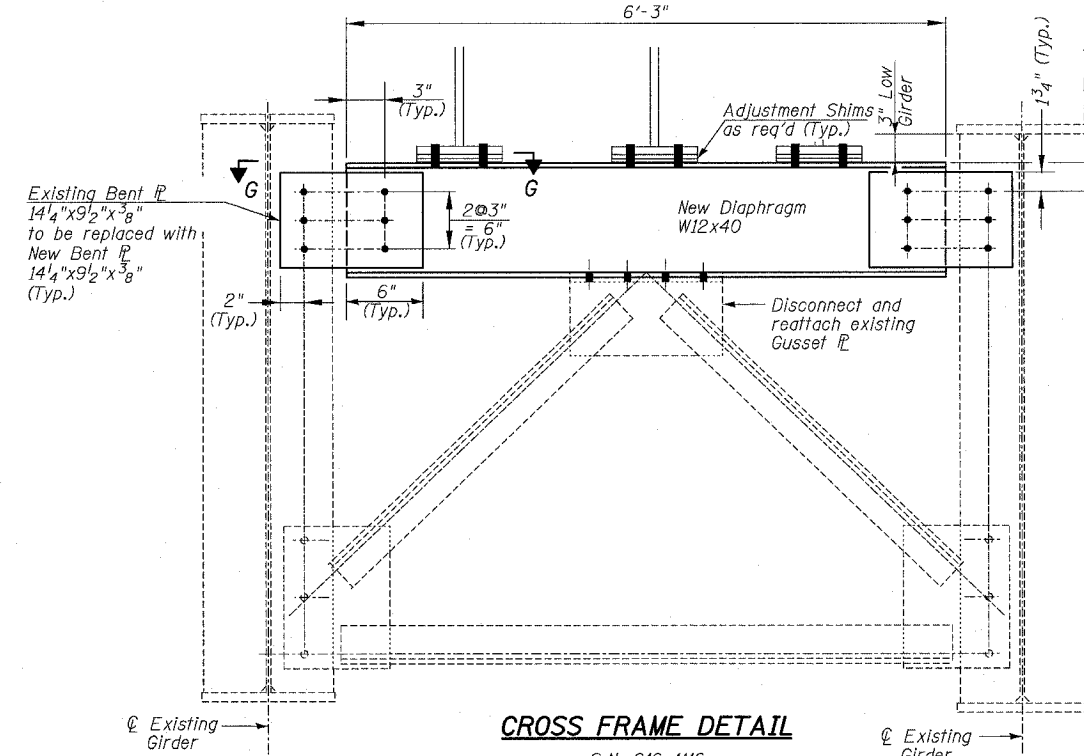
SECTION E-E



SECTION F-F



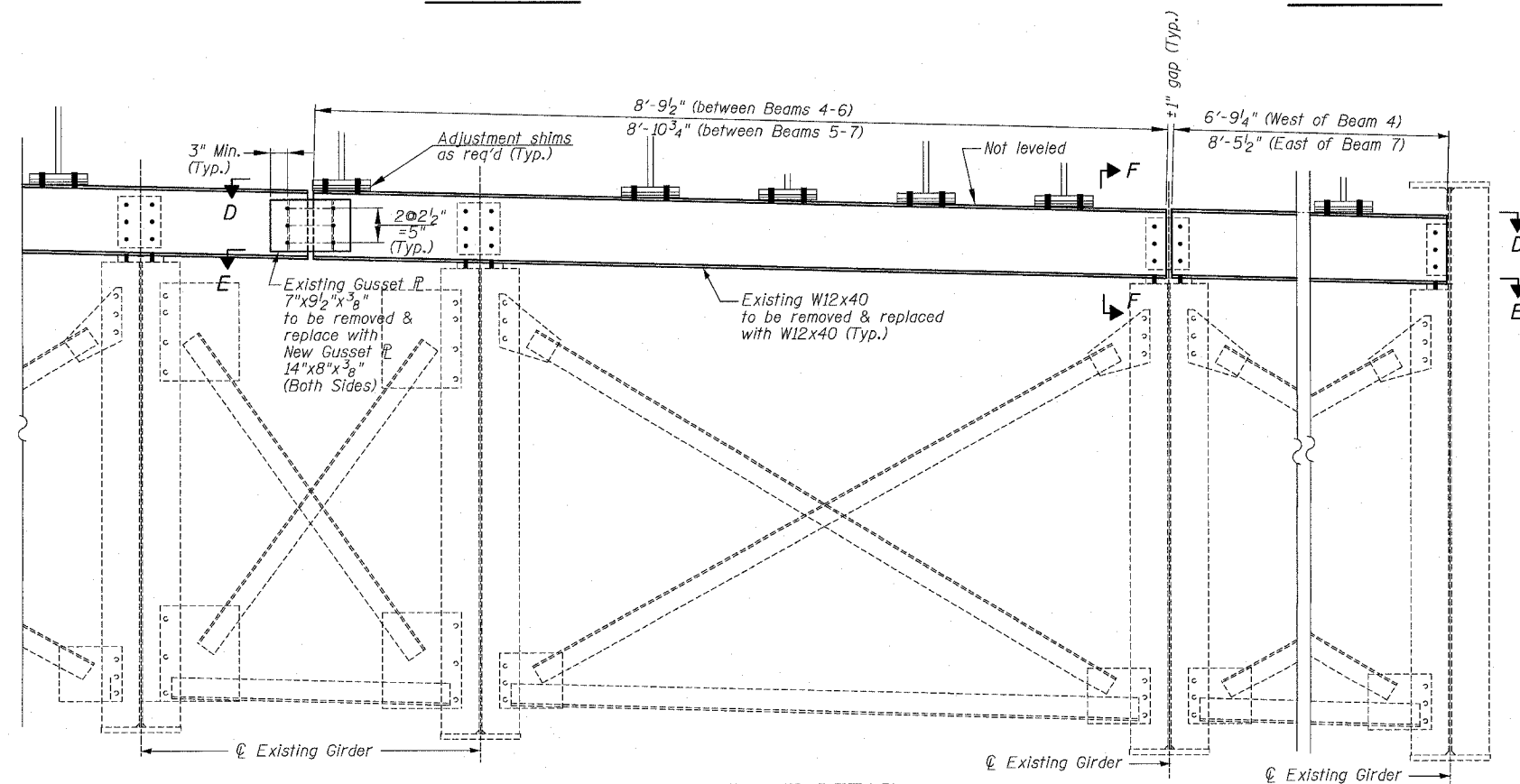
Section G-G



CROSS FRAME DETAIL

S.N. 016-1116

816-1 1 REQ'D



CROSS FRAME DETAIL

S.N. 016-1116

CF 7 REQ'D
809-2 1 REQ'D

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
DIAPHRAGM REPLACEMENT DETAILS
PIER 26, SN 016-1117

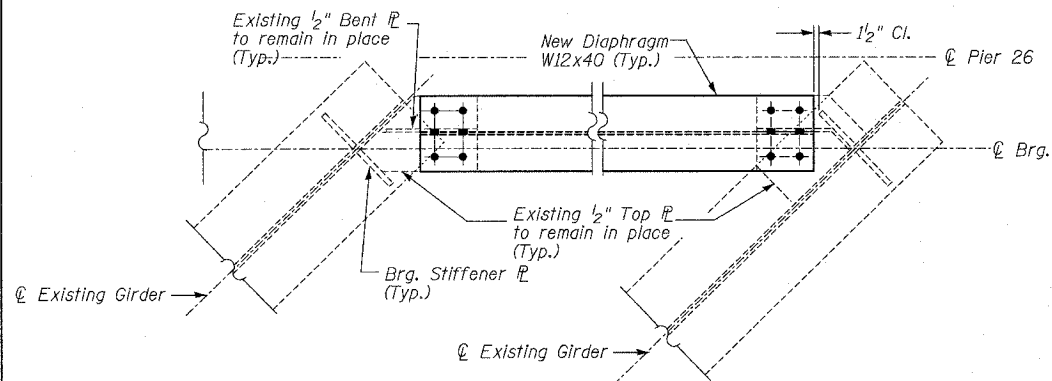
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: BDC
CHECKED BY: IYL

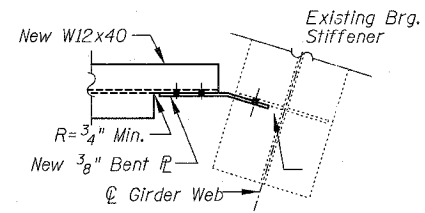
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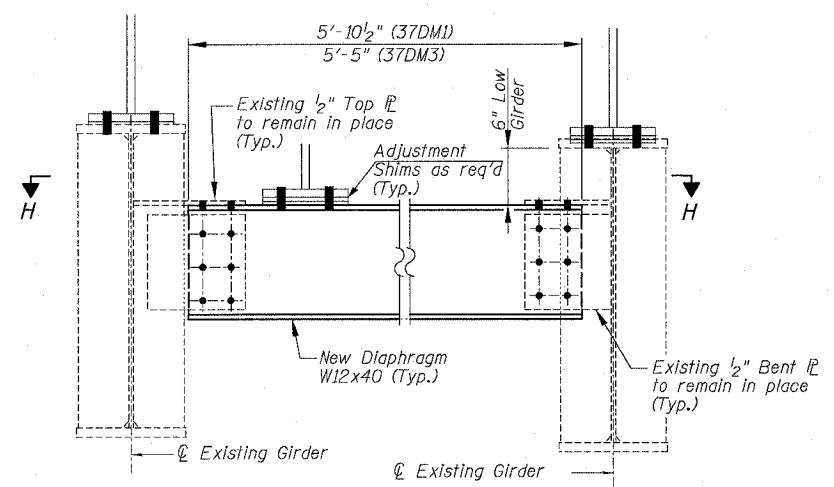
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94/90	2003-0291	COOK	344	272A
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



SECTION H-H



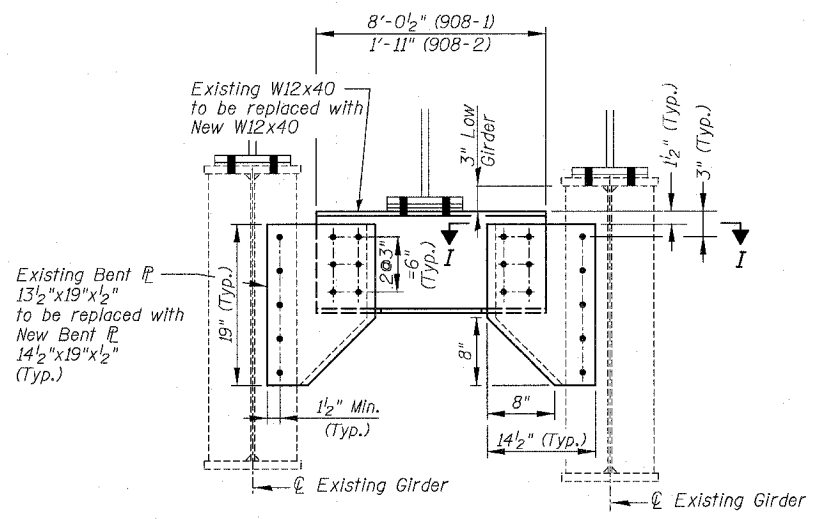
Section I-I



CROSS FRAME DETAIL

S.N. 016-1117

37DM1	4 REQ'D
37DM3	4 REQ'D



DIAPHRAGM DETAIL

S.N. 016-1117

908-1	1 REQ'D
908-2	1 REQ'D

NOTES:

1. Calculated weight of Structural Steel used for the item "Furnishing & Erecting Structural Steel" = 5,610 Lbs. and itemized as follows:
S.N. 016-1116 = 2,760 Lbs
S.N. 016-1117 = 2,850 Lbs
2. Calculated weight of Structural Steel used for the item "Structural Steel Removal" = 5,580 Lbs. and itemized as follows:
S.N. 016-1116 = 2,740 Lbs
S.N. 016-1117 = 2,840 Lbs

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	Lum Sum	0.02
Structural Steel Removal	Pound	5,580

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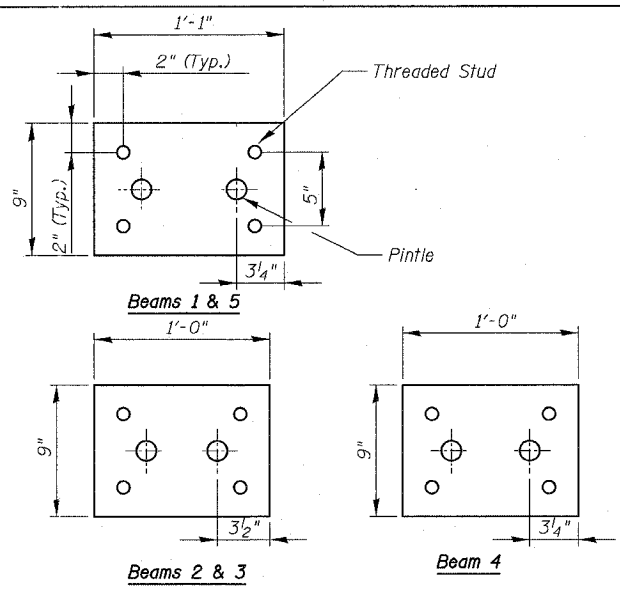
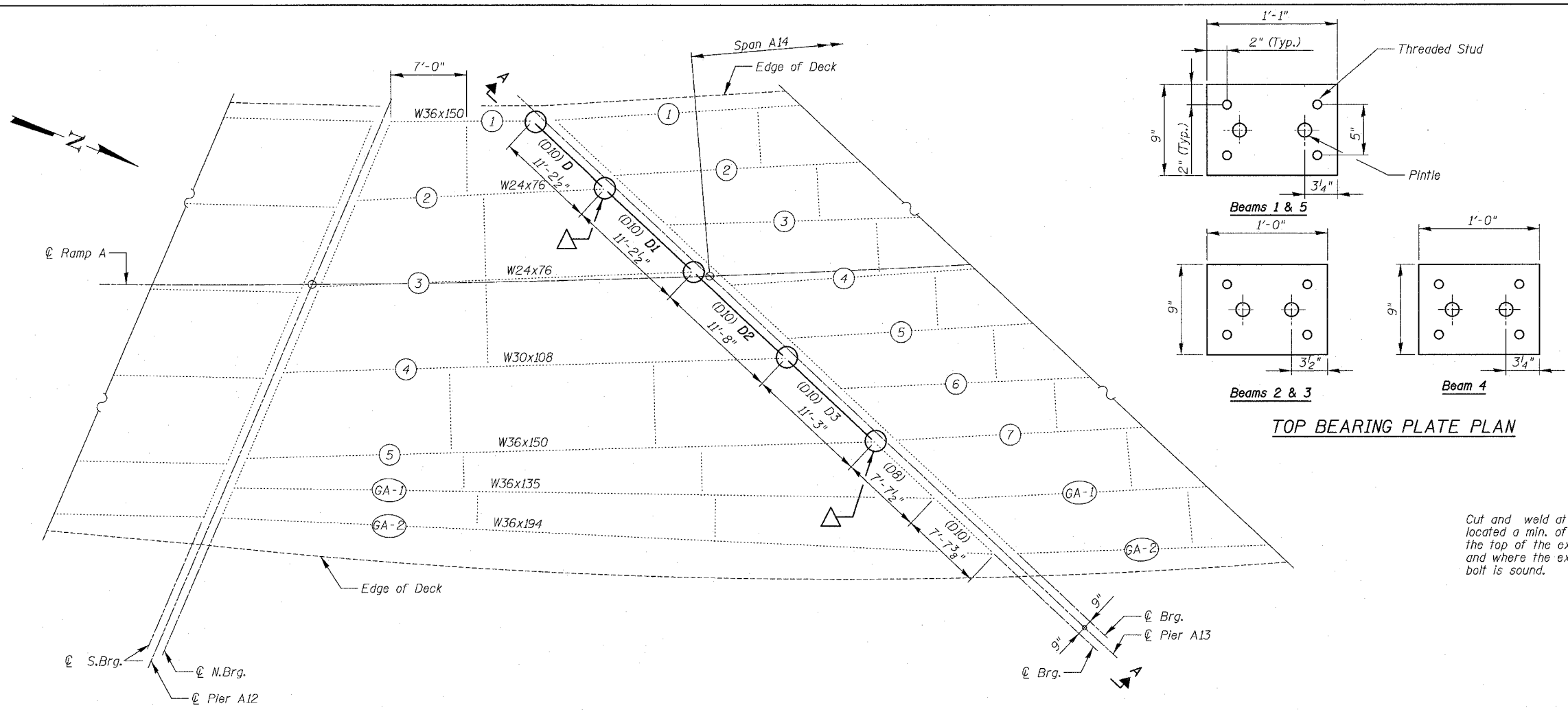
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) SB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS DIAPHRAGM REPLACEMENT DETAILS PIER 26, SN 016-1117
NAME	DATE	
		SCALE: NTS DATE: 5/25/2006 DRAWN BY: BDC CHECKED BY: IYL

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4-4-01 PM
5/25/2006

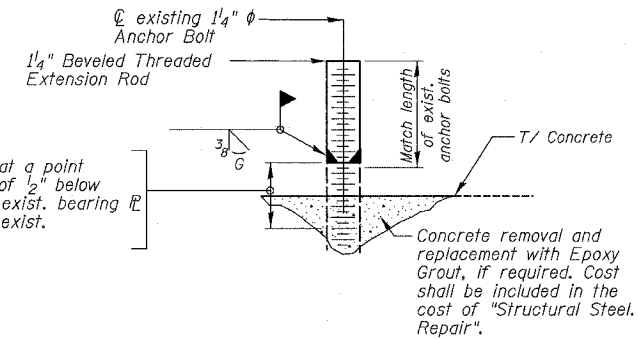
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	273
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

NOTES:

- See Partial Deck Plans for Joint Replacement Details.
- The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal and at other locations as required in order to maintain the existing deck profile. The support and/or shoring systems shall be approved by the Engineer. Such approval will not relieve the Contractor of responsibility for the safety of the structure.
- See Sht. 275 for view A-A.



TOP BEARING PLATE PLAN

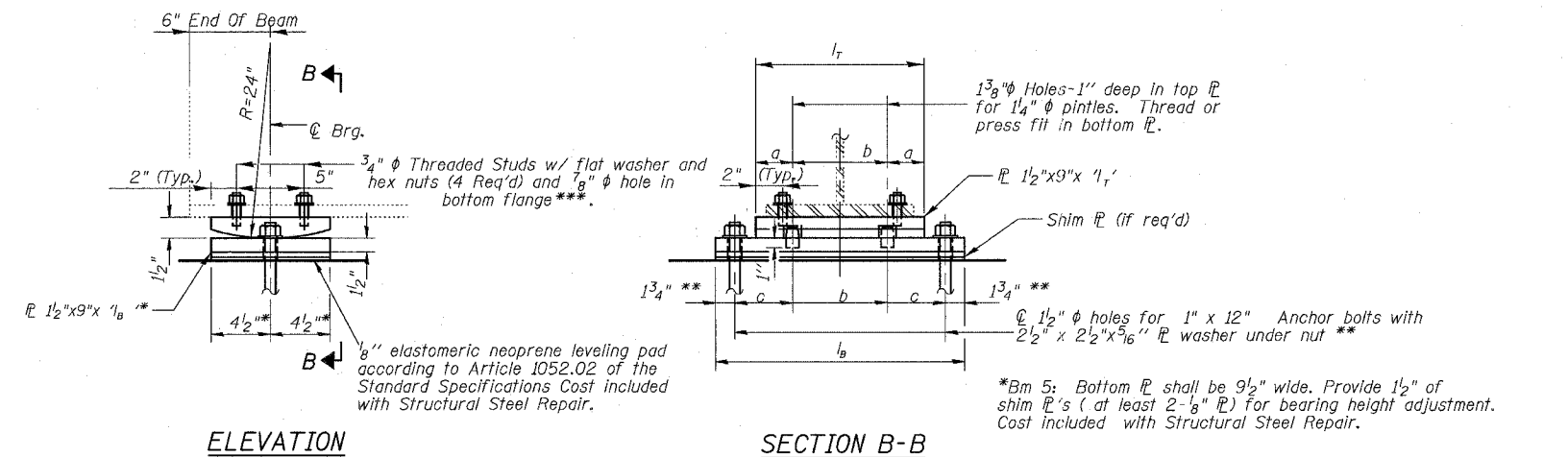


ANCHOR BOLT EXTENSION DETAIL

The furnishing and installation of required Anchor Bolt Extensions shall be included in the cost of "Structural Steel Repair".

PROPOSED FIXED BEARING TABLE

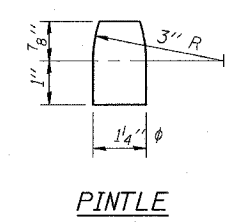
Beam No.	l_b	l_r	a	b	c	Req'd.
1	26"	13"	3 1/4"	6 1/2"	8"	1
2	22"	12"	3 1/2"	5"	6 3/4"	1
3	17 1/2"	12"	3 1/2"	5"	4 1/4"	1
4	22"	12"	3 1/4"	5 1/2"	6 1/2"	1
5	20 1/2"	13"	3 1/4"	6 1/2"	5 1/4"	1



ELEVATION

SECTION B-B

PROPOSED FIXED BEARING



PINTLE

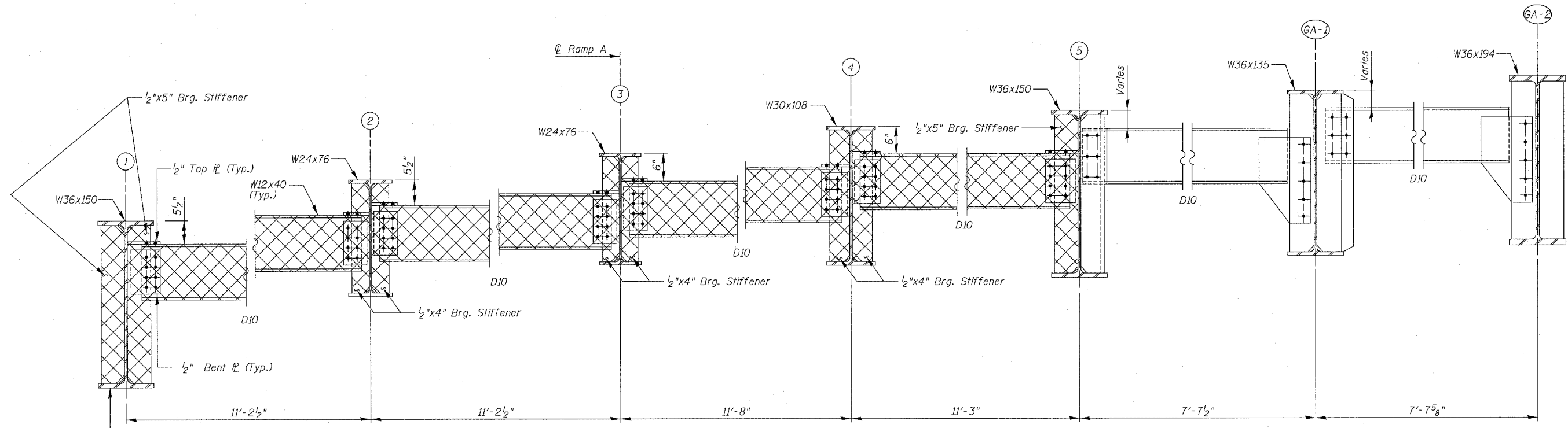
LEGEND:

- Steel Diaphragms to be replaced
- Remove & Replace Exist. Steel Bearing
- △ Concrete Pedestal Work
- (D10) Exist. Diaphragm Designation
- D Prop. Diaphragm Designation

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NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		SB DAN RYAN ELEVATED BRIDGE	
		PIER A 13 SN 016-1067	
		STEEL REPAIR PLAN	
		SCALE: NTS	DRAWN BY: BDC
		DATE: 5/25/2006	CHECKED BY: IYL

4503 PM 5/25/2006



EXISTING ELEVATION- VIEW A-A
(Show South Bearing Lane)

LEGEND:

- Structural Steel Removal
- Jack and Remove Existing Bearings

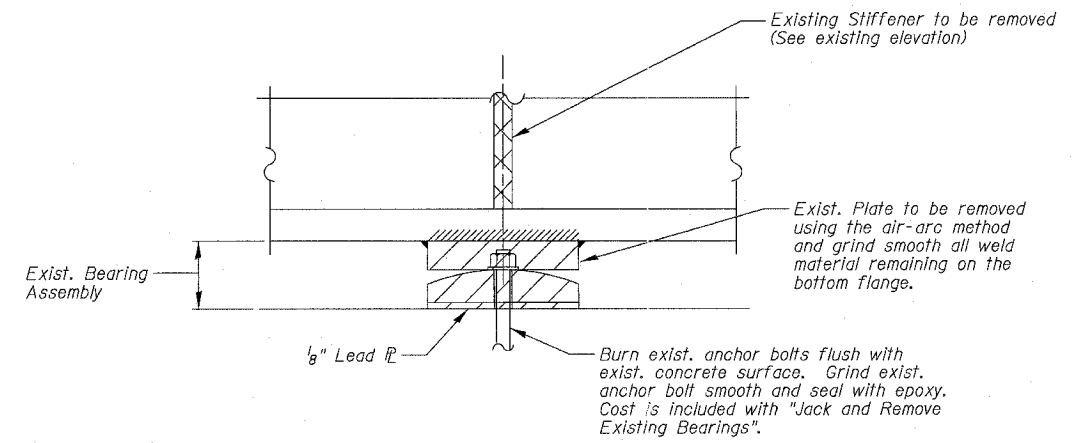
EXISTING BEARING ASSEMBLY

SUPPORT REACTIONS & MINIMUM JACKING CAPACITY

S/N	Girder	DL + 1/2(LL+I)	Min. Jack. Capacity (k)
016-1067 (Pier A13)	1	26	30
	2	67	70
	3	78	80
	4	95	95
	5	78	80

BEAM	HEIGHT*
1	3 1/4"
2	3"
3	3"
4	3"
5	1 1/2"

* Includes 1/8" lead PL



EXISTING BEARING REMOVAL DETAIL

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	Pound	2,230
Jack and Remove Existing Bearings	Each	5
Temporary Shoring and Cribbing	Each	5

NOTES:

1. The quantity of "Jack and Remove Existing Bearings" includes the jacking and removal of the existing fixed bearings at beams 1 to 5.
2. See Sheet 275 for bearing seat work at beams 2 and 5.

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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE

PIER A13 SN 016-1067
STEEL REMOVAL DETAILS

SCALE: NTS
DATE: 5/25/2006

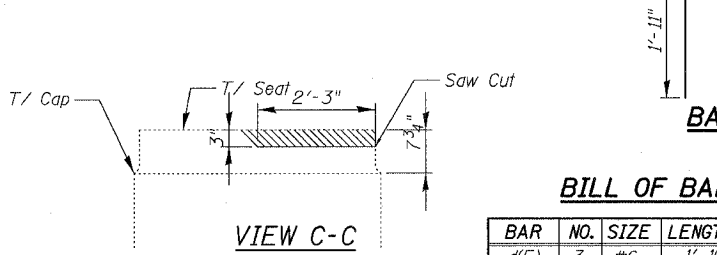
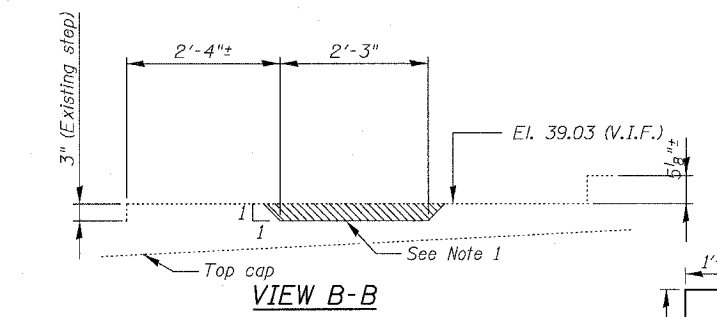
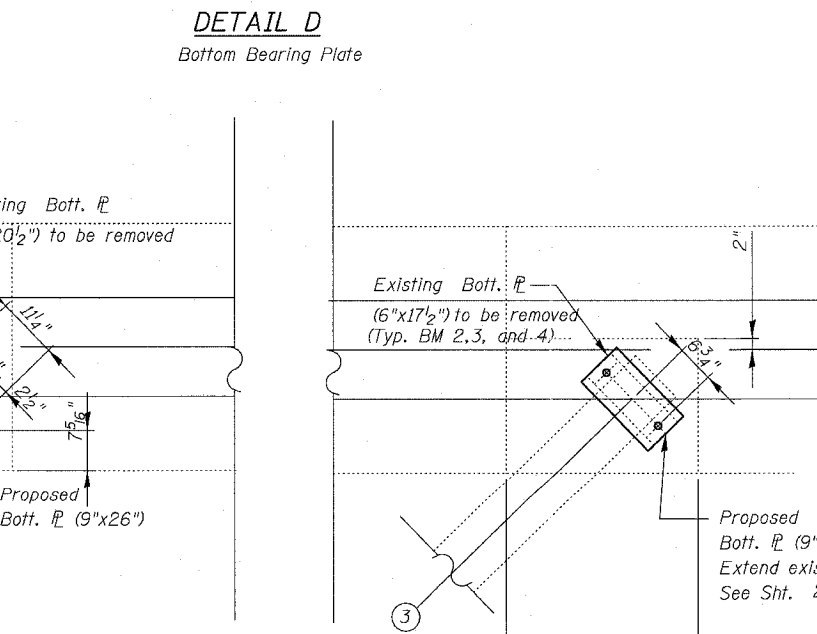
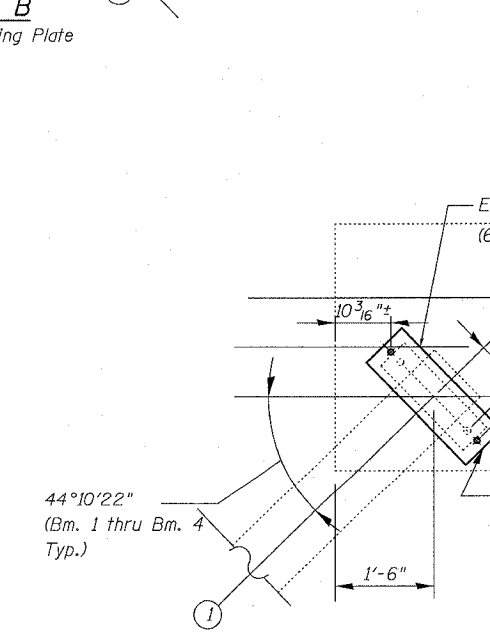
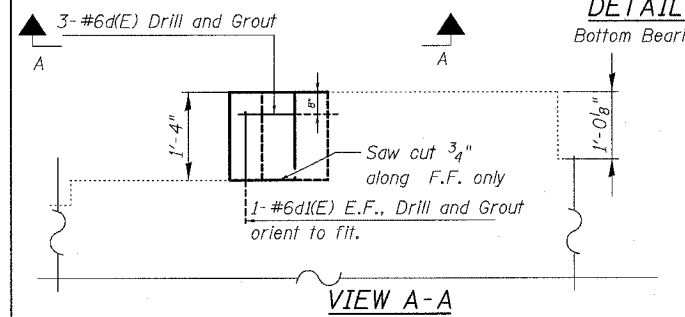
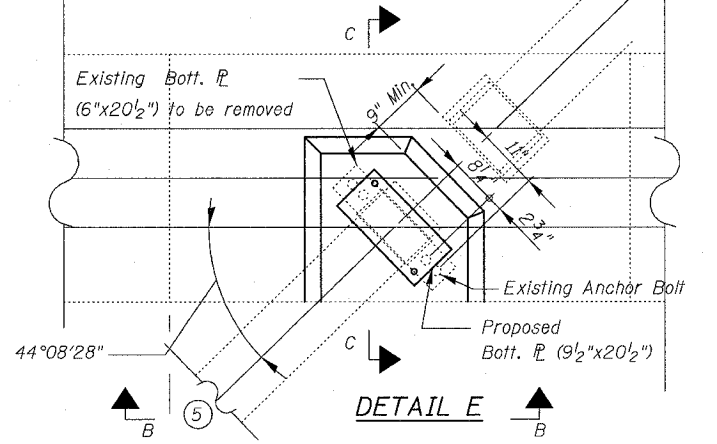
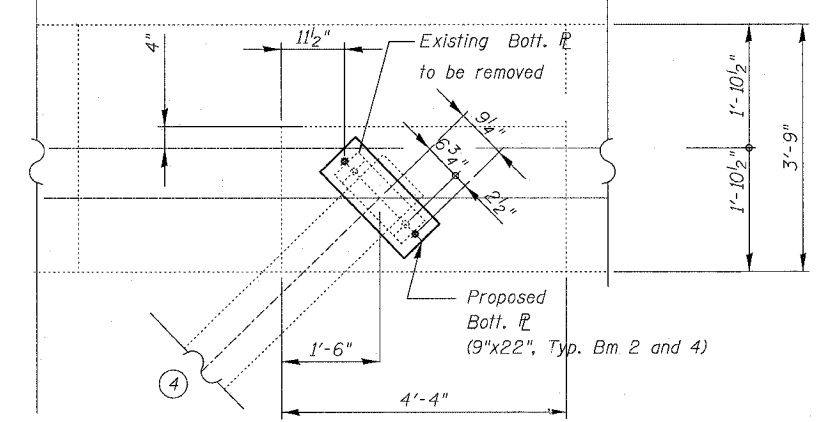
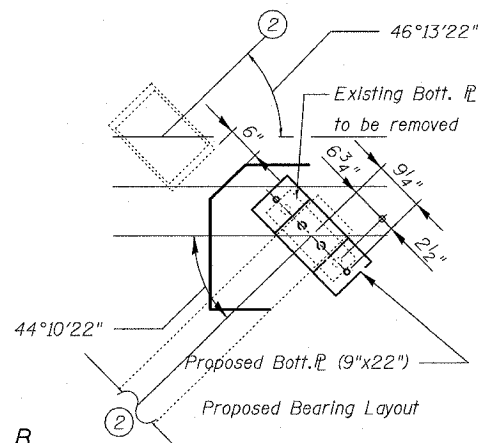
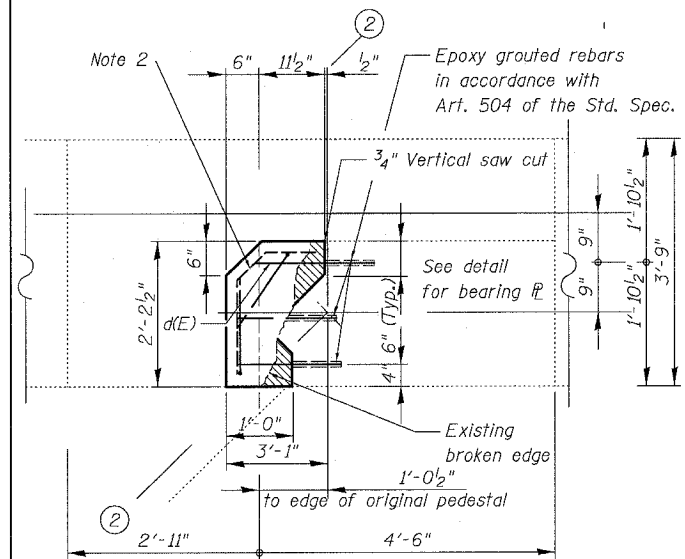
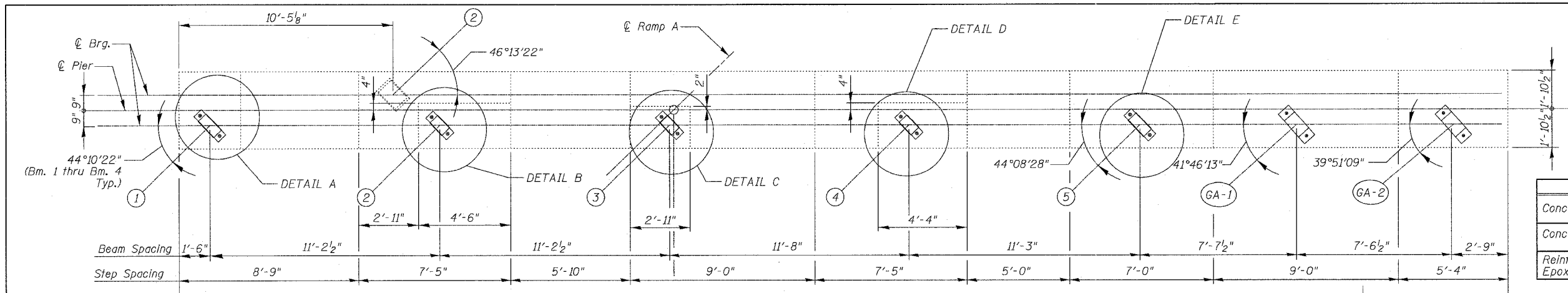
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CHECKED BY: IYL

I-680 BRIDGE SHEETS 660.21-DIG-ITF-F0449

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	275
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.1
Concrete Superstructure	Cu. Yd.	0.2
Reinforcement Bars, Epoxy Coated.	Pound	20



NOTE 1:
Remove 3" of existing seat concrete as shown. Saw cut front face. Remove concrete to within 1/2"± of that indicated and finish remaining removal by grinding to obtain a level bearing surface.

NOTE 2:
Provide 6x6-W4.0xW4.0 W.W.F. along side and top faces with 2" cover bend and form to concrete shape as required.

BILL OF BARS

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	3	#6	1'-10"	—
d(E)	2	#6	3'-4"	┌

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
PIER A13, SN 016-1067
BEARING AND PEDESTAL DETAILS

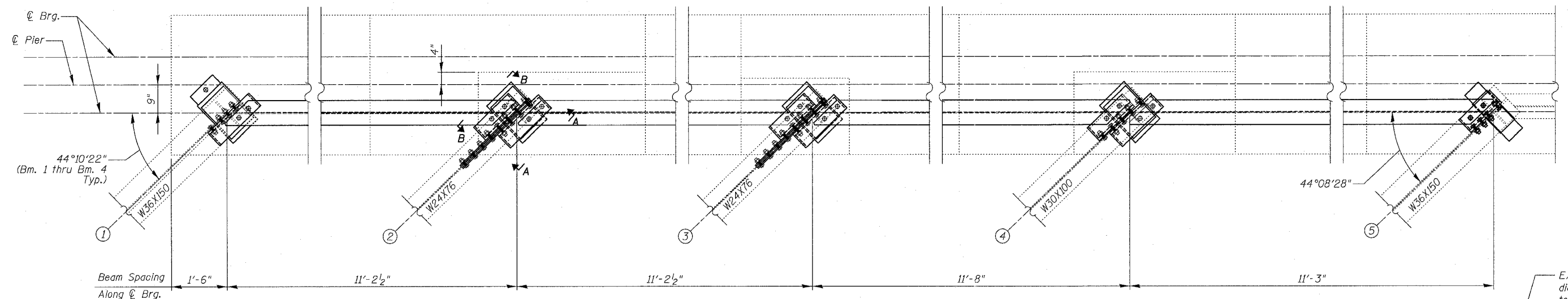
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DATE: 5/25/2006

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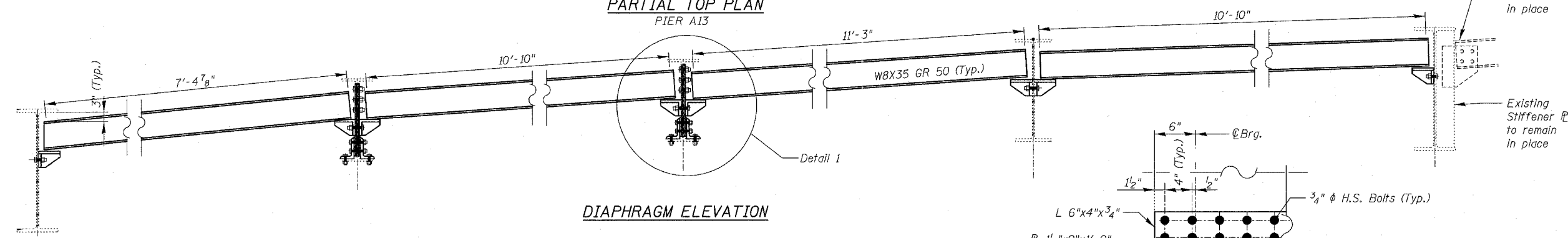
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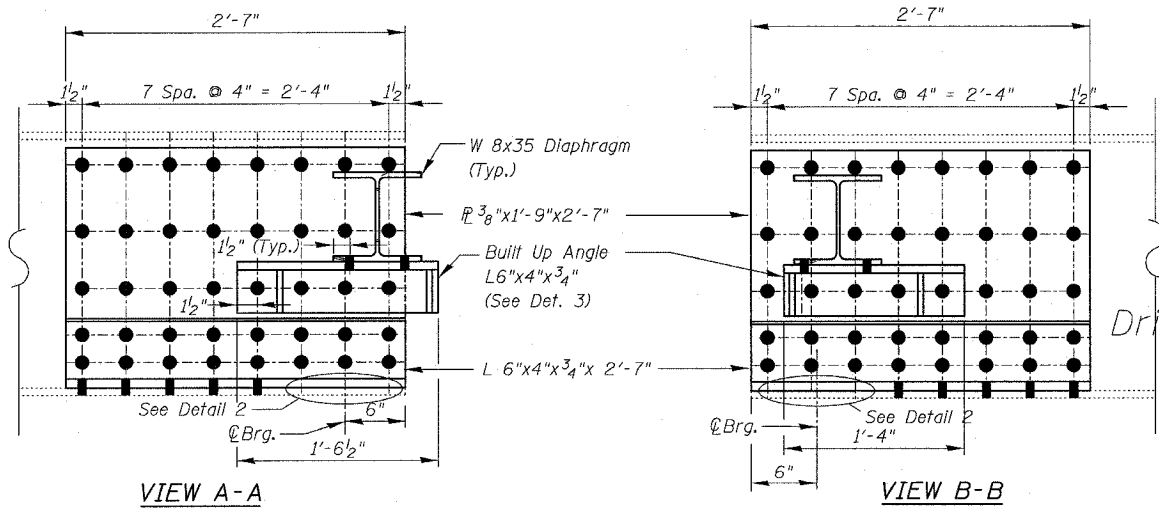
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94/90	2003-029I	COOK	344	276
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



PARTIAL TOP PLAN
PIER A13

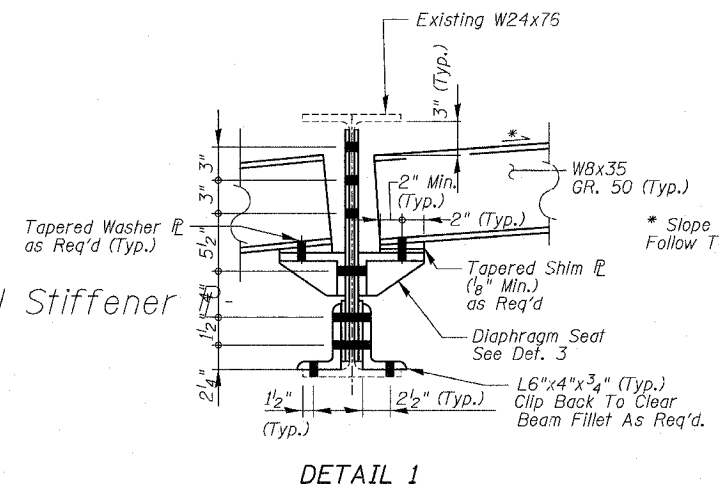


DIAPHRAGM ELEVATION

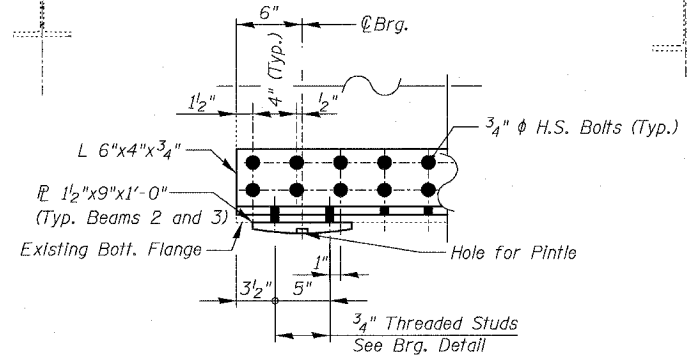


VIEW A-A

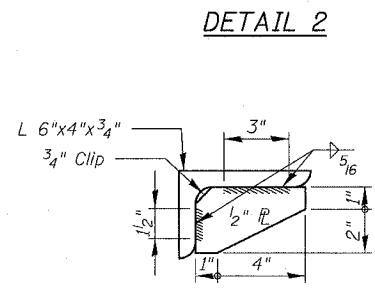
VIEW B-B



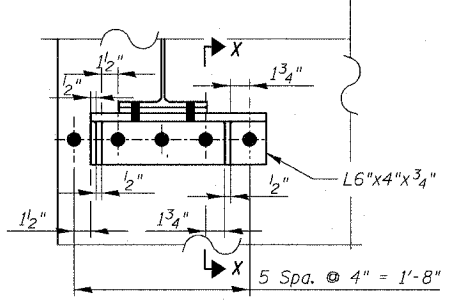
DETAIL 1



DETAIL 2



SECTION X-X



DETAIL 3

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	3,310

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NAME	DATE

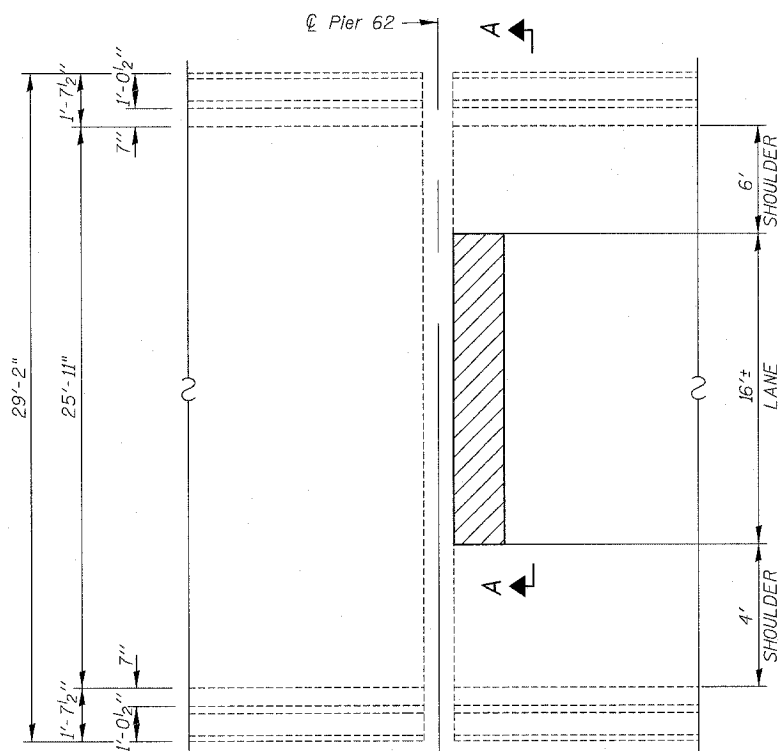
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
PIER A13, SN 016-1067
DIAPHRAGM/BEAM REPAIR DETAILS

SCALE: NTS
DATE: 5/25/2006

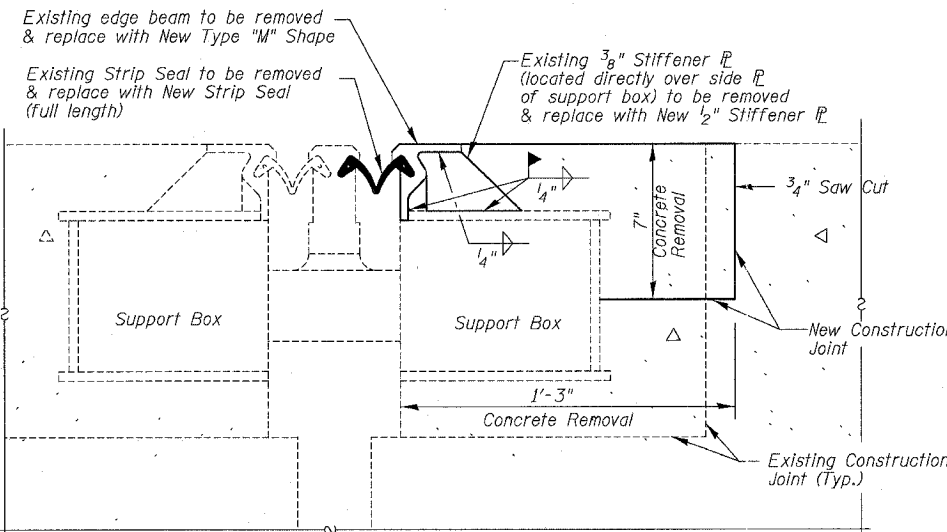
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458-88 PM 5/25/2006

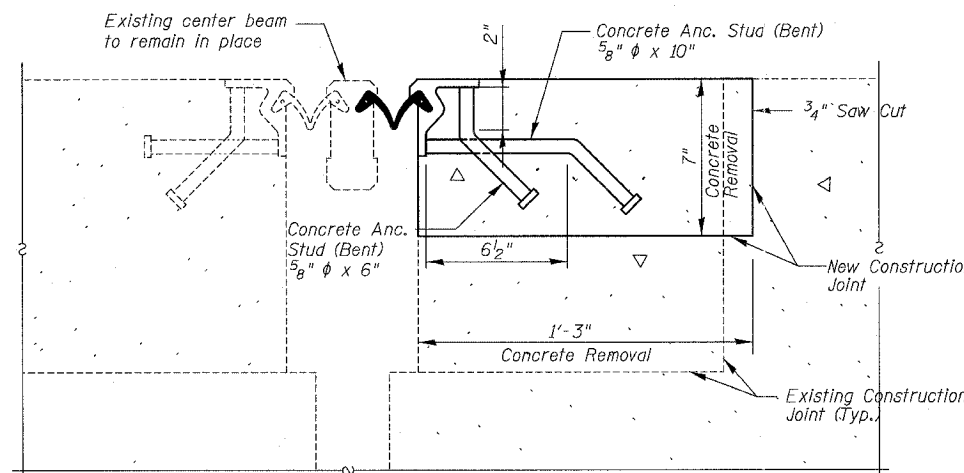
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	277
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



PARTIAL DECK PLAN - PIER 62



SECTION B-B



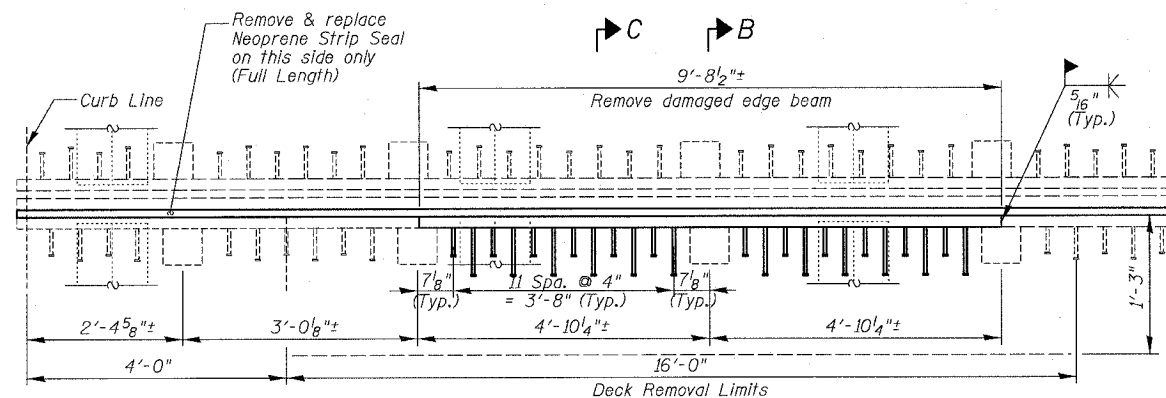
SECTION C-C

MODULAR EXPANSION JOINT REPAIR NOTES

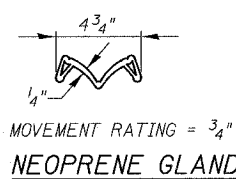
- Existing edge beam and stiffener plates shall be removed by removing welds and grinding smooth. Field cut shall use air arc method. Flame cutting will not be permitted within 2" of top and side plates of support boxes. Grind surface after cutting to a surface roughness of (Ra) 250µ inch or less. Grinding shall be done parallel to the longitudinal direction of support box beams. Cost of field cutting, grinding and drilling shall be included with "Modular Expansion Joint Repair".
- Cost of removal and disposal of existing steel and strip seal shall be included in the cost of "Modular Expansion Joint Repair".
- Existing junction plates at parapet shall be disconnected and reattached to install new strip seal. Cost included in "Modular Expansion Joint Repair".
- Spalled or hollow concrete beyond the specified removal dimensions, if any, shall be removed prior to the edge beam replacement. Concrete patching after joint repair shall be in accordance with the Special Provision for Deck Slab Repair. Cost included in "Concrete Removal". The cost of saw cut for concrete removal shall be included in "Concrete Removal".
- Existing deck rebars within the removal area and depth, if any, shall remain.. Bend conflicting rebars as directed by Field Engineer. Rebars damaged during concrete removal shall be replaced at no cost to the Department.
- Contractor shall place formwork so that no concrete flows into boxes and joint gap opening.
- Contractor shall field verify all relevant dimensions prior to ordering or fabricating materials. See Special Provision for Field Measurements.

BILL OF MATERIAL

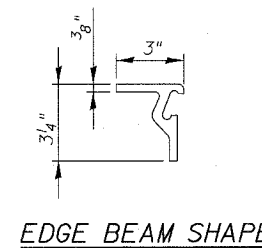
ITEM	UNIT	QTY.
CONCRETE REMOVAL	CU. YD.	1
CONCRETE SUPERSTRUCTURES	CU. YD.	0.4
MODULAR EXPANSION JOINT REPAIR	L. SUM	1



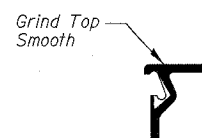
SECTION A-A



NEOPRENE GLAND

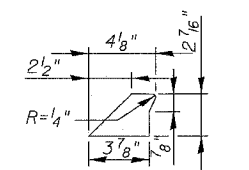


EDGE BEAM SHAPE



FIELD WELD

NOTE: Shaded area to be groove welded



STIFFENER PLATE

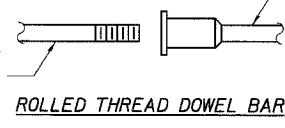
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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		SB DAN RYAN ELEVATED BRIDGE	
		REPAIR FROM 15TH TO 28TH STREETS	
		MODULAR EXPANSION JOINT REPAIR	
		SN 016-1046	
		SCALE: NTS	DRAWN BY: BDC
		DATE: 5/25/2006	CHECKED BY: IYL

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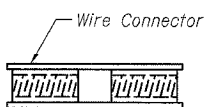
The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



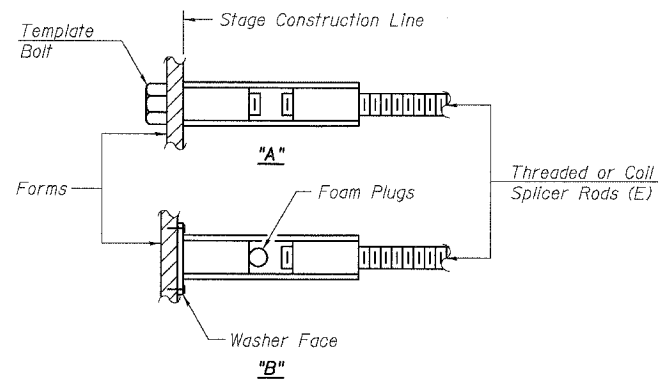
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

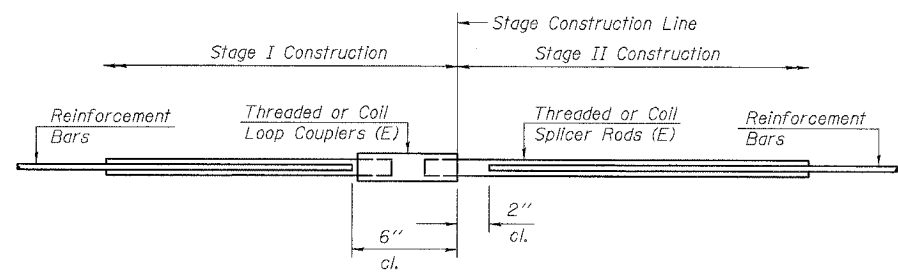
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the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

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

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

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	-	-
#6	-	-
Total	-	-

* See Table "TOTAL BILL OF MATERIAL"

BAR SPLICER ASSEMBLIES

BAR SIZE	TOTAL NO. ASSEMBL. REQ'D	LOCATION					
		016-1117	016-1115	016-1062	016-1113	016-1112	016-0137
#5	1120	133	295	36	193	377	86
#6	26				5	5	16
#7	16						16
TOTAL	1,162	133	295	36	198	382	118

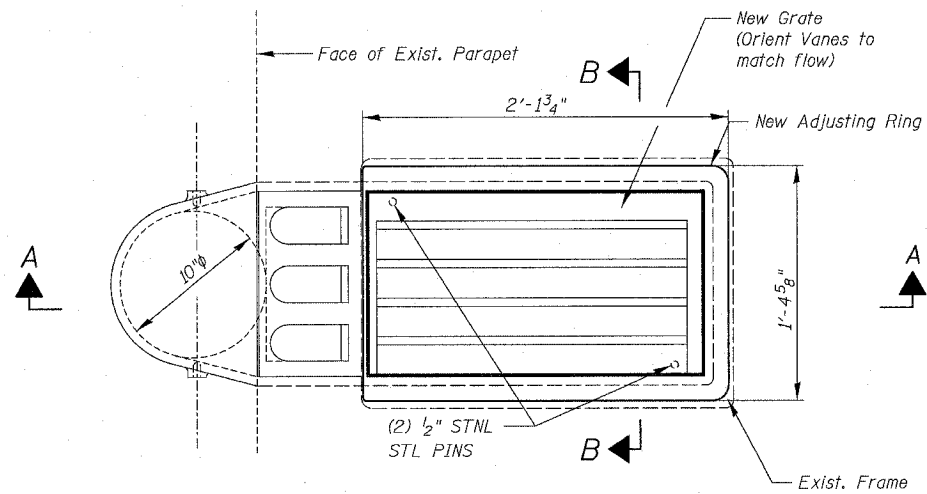
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 BAR SPLICER ASSEMBLY DETAILS

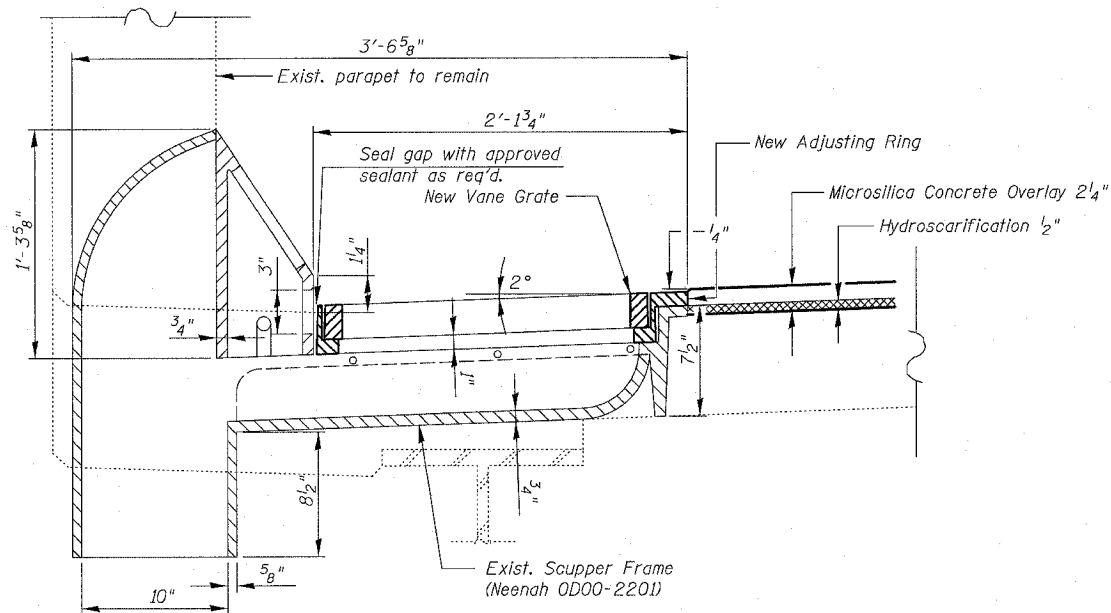
SCALE: NTS
 DATE: 5/25/2006

DRAWN BY: LM
 CHECKED BY: BLU

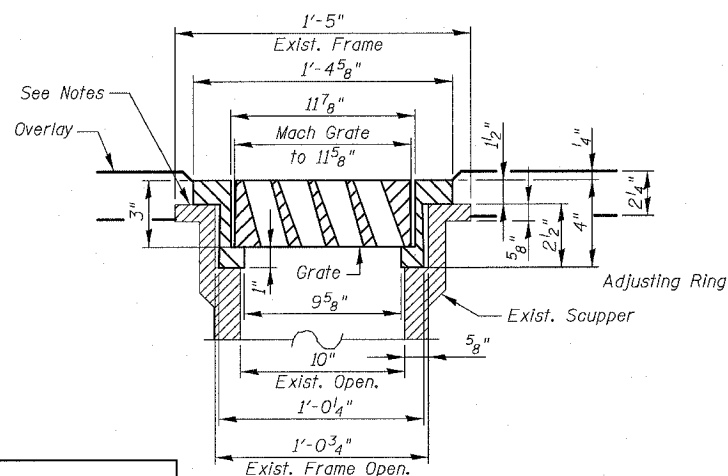
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62581				



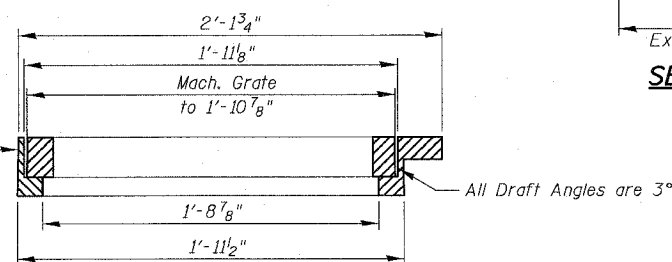
PLAN TYPE A SCUPPER



SECTION THRU TYPE A SCUPPER



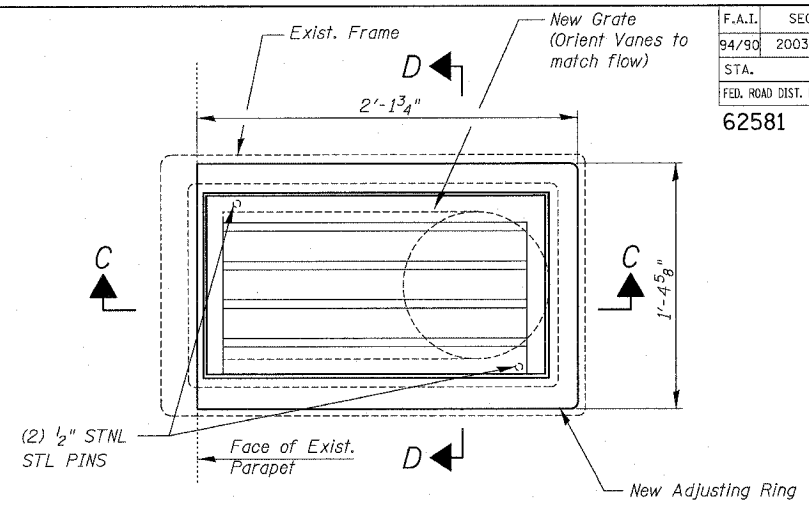
SECTION B-B



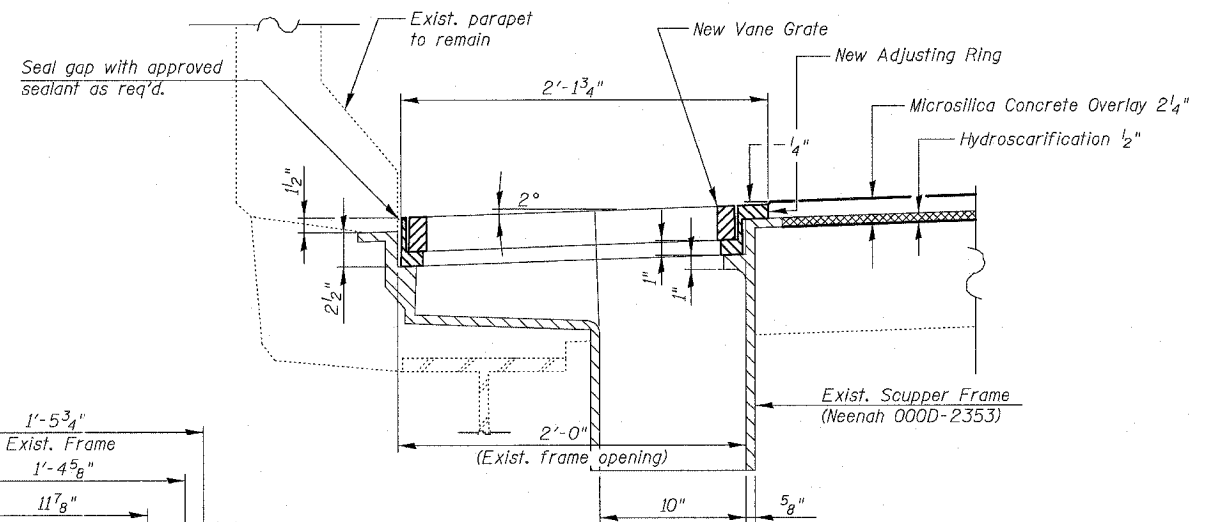
SECTION A-A

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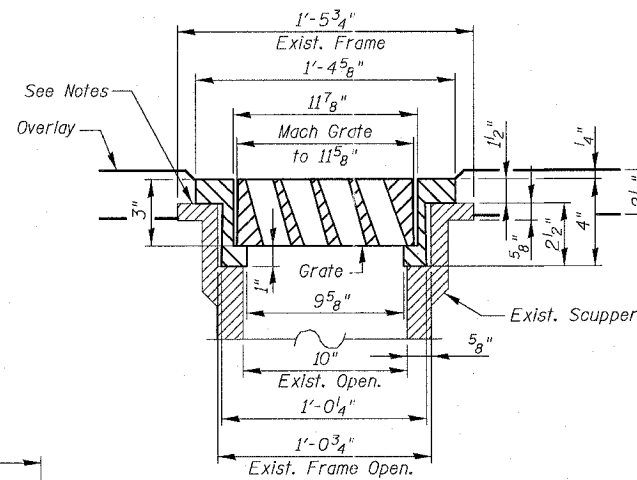
For additional notes and Bill of Material, see Sheet 280.
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Cast iron parts shall be unfinished.
 The Contractor Shall take appropriate measures to assure that Protective Coat is not applied to the scuppers.
 For scupper locations, see Partial Deck Plans.
 Adjusting ring and grates shall be from Neenah or approved equal. Structural steel weldments or equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
 Provide a₈ fillet weld around perimeter of new adjusting ring to secure to existing scupper. Electrode shall be compatible with cast iron.



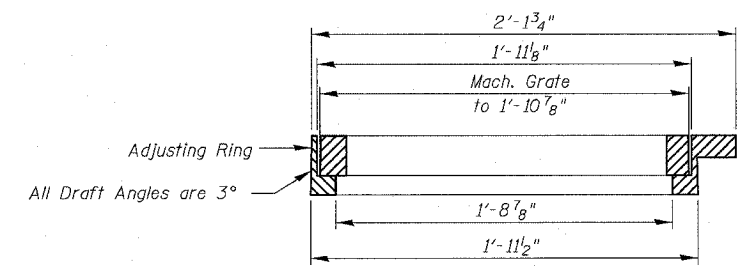
PLAN TYPE B SCUPPER



SECTION THRU TYPE B SCUPPER



SECTION D-D



SECTION C-C

All Draft Angles are 3°

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DRAINAGE SCUPPER DETAILS - TYPE A

Vane Grate 3922-0006 machined to fit

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 ADJUSTING DRAINAGE SCUPPER
 DETAILS

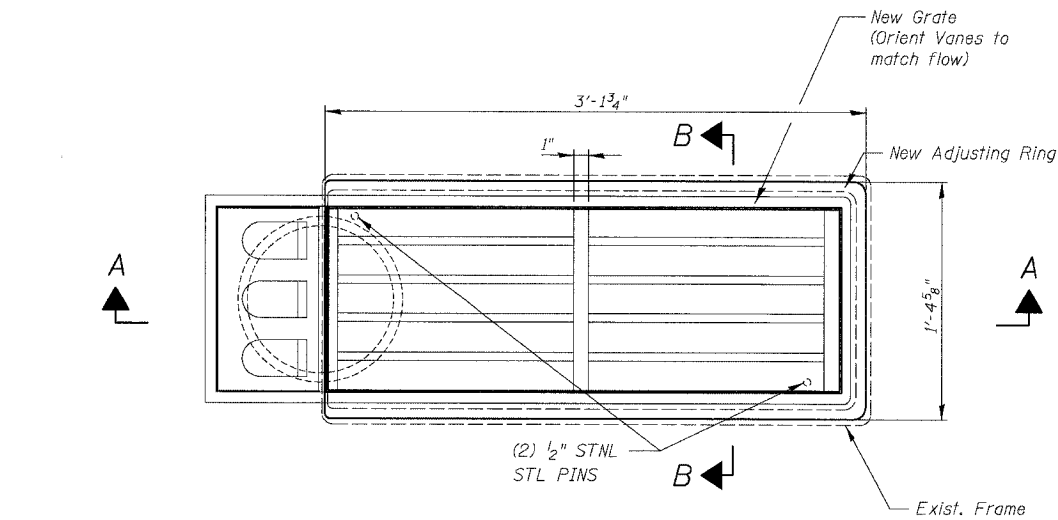
SCALE: NTS
 DATE: 5/25/2006

DRAWN BY: BDC
 CHECKED BY: BLU

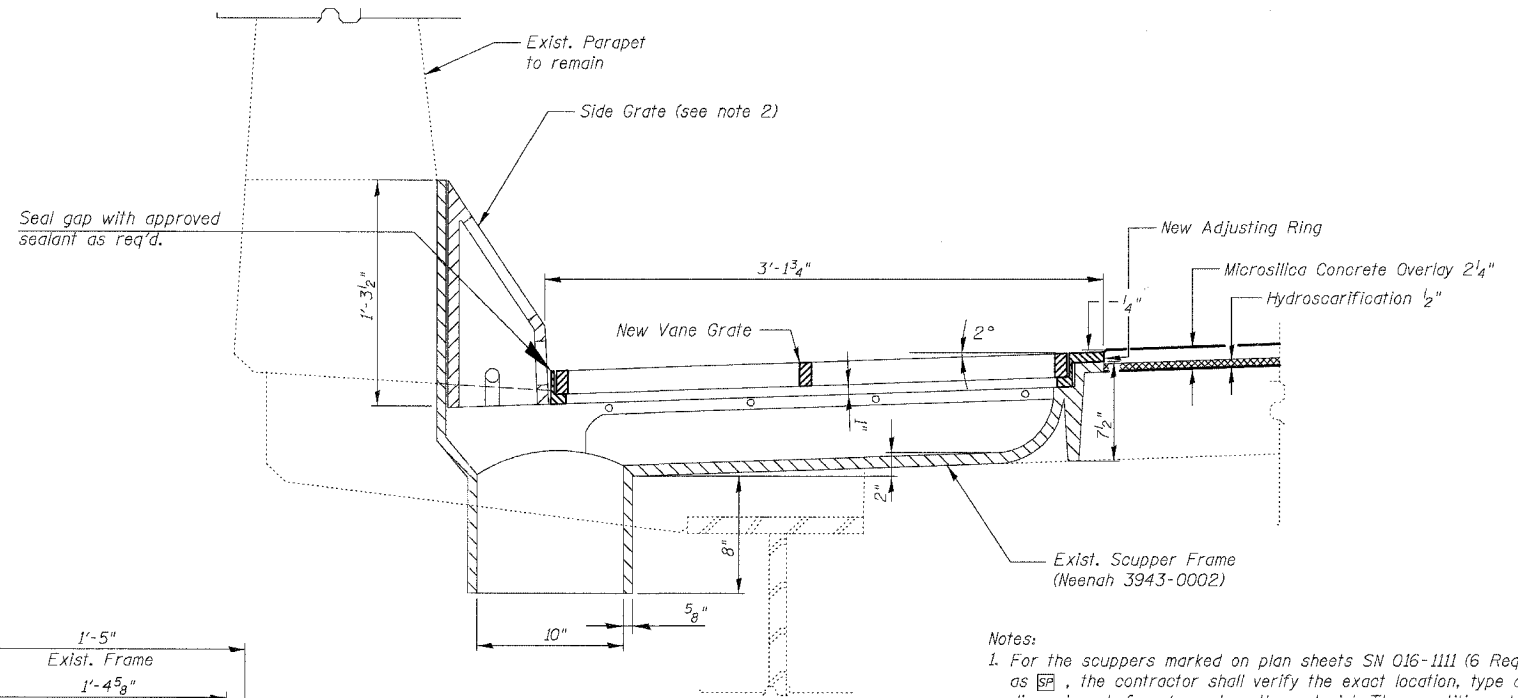
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BILL OF MATERIAL

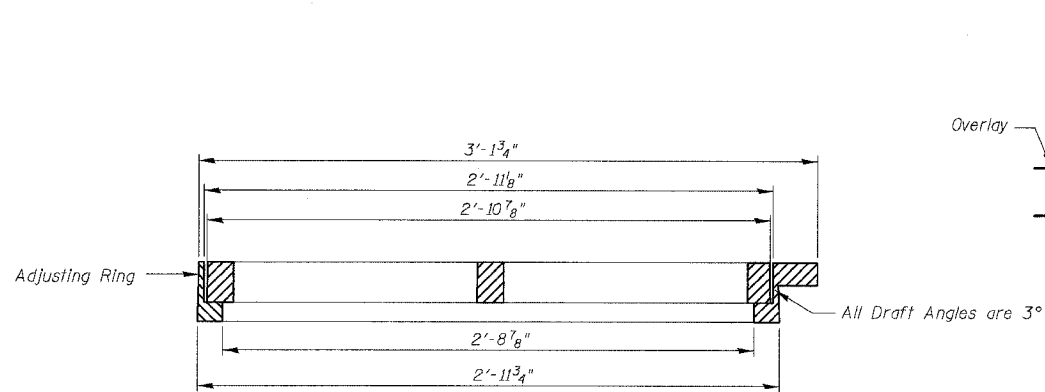
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ADJUSTING DRAINAGE SCUPPERS, TYPE A	EACH	128	-	9	-	28	4	1	-	11	12	20	11	11	21
ADJUSTING DRAINAGE SCUPPERS, TYPE B	EACH	60	17	-	8	12	-	-	-	10	10	-	3	-	-
ADJUSTING DRAINAGE SCUPPERS, TYPE C	EACH	81	14	13	8	5	-	-	-	-	6	19	8	8	-



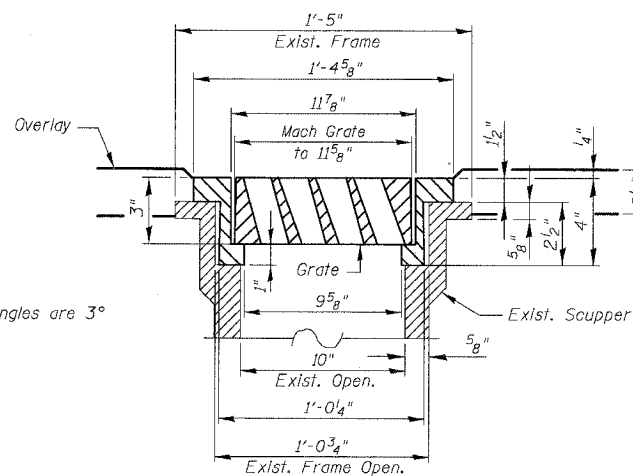
PLAN TYPE C SCUPPER



SECTION THRU TYPE C SCUPPER



SECTION A-A



SECTION B-B

- Notes:**
- For the scuppers marked on plan sheets SN 016-1111 (6 Req'd) as **B**, the contractor shall verify the exact location, type and dimensions before he orders the material. The quantity and pay item is included in "Adjust Drainage Scuppers, Type A".
 - For scupper locations, see Partial Deck Plan Sheets.
 - A paint stripe shall be applied over the existing stripe to the face of the Concrete Barrier Wall at all drainage scupper locations. The stripe shall be 4" wide x 12" long and extend vertically at 90 degrees from the top edge of the barrier. The paint color shall be specified by the Engineer. Cost of the stripe is to be included in "Adjusting Drainage Scuppers" of the type specified.

DRAINAGE SCUPPER DETAILS - TYPE C

Vane Grate 3943-0002 machined to fit

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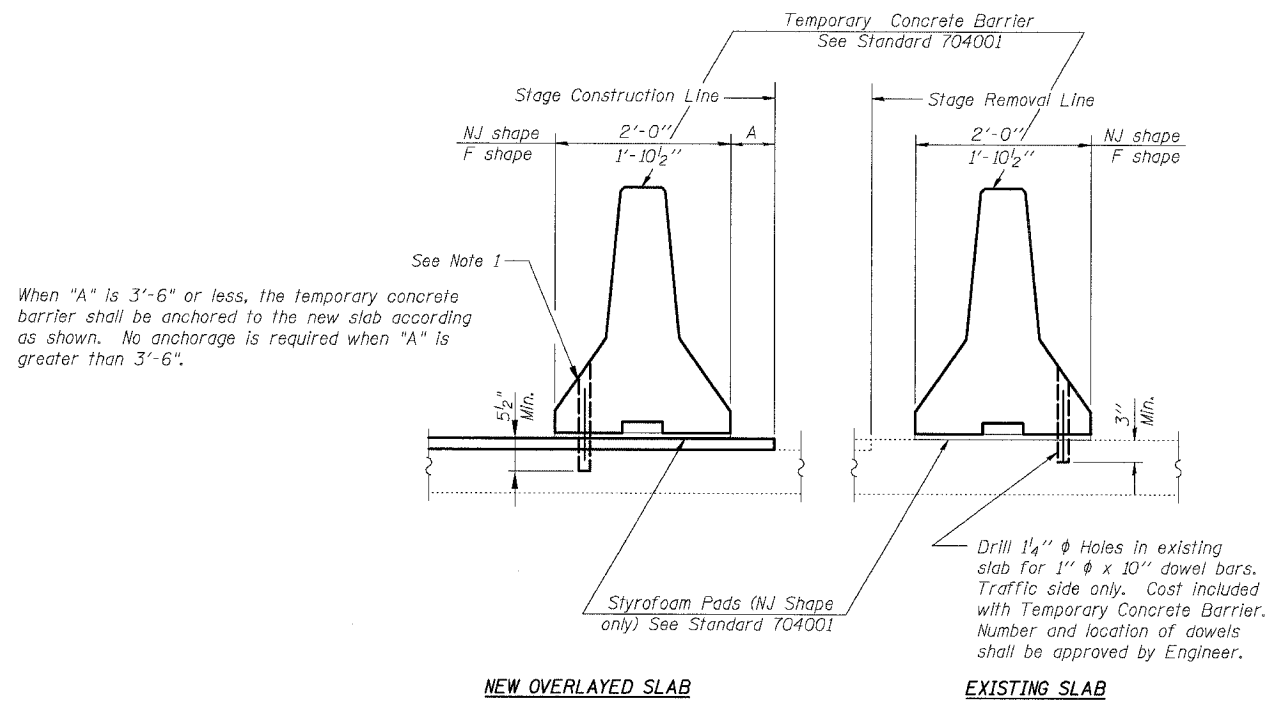


REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) SB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS ADJUSTING DRAINAGE SCUPPER DETAILS
NAME	DATE	
		SCALE: N/A
		DATE: 5/25/2006
		DRAWN BY: BDC
		CHECKED BY: BLU

12/17/02 PM 5/25/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	281
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

14-660-0000 BRIDGE DASH SHEETS 660.21.6000.400



SECTIONS THRU SLAB

NOTE:

1. Drill 1/4" ϕ Holes through new overlay into slab for 1" ϕ x 12" dowel bars. Traffic side only as directed by Engineer. Repair hole with non-shrink epoxy grout as directed by the Engineer. Cost of anchorage and repair included with Temporary Concrete Barrier. Number and location of dowels shall be approved by the Engineer.
2. Contractor may provide alternate method of anchoring barrier to deck if reviewed and approved by the Engineer.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: LM
CHECKED BY: BLU

5/25/2006 10:17:31 AM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	282
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

62581

GENERAL NOTES

Furnish PJS steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.

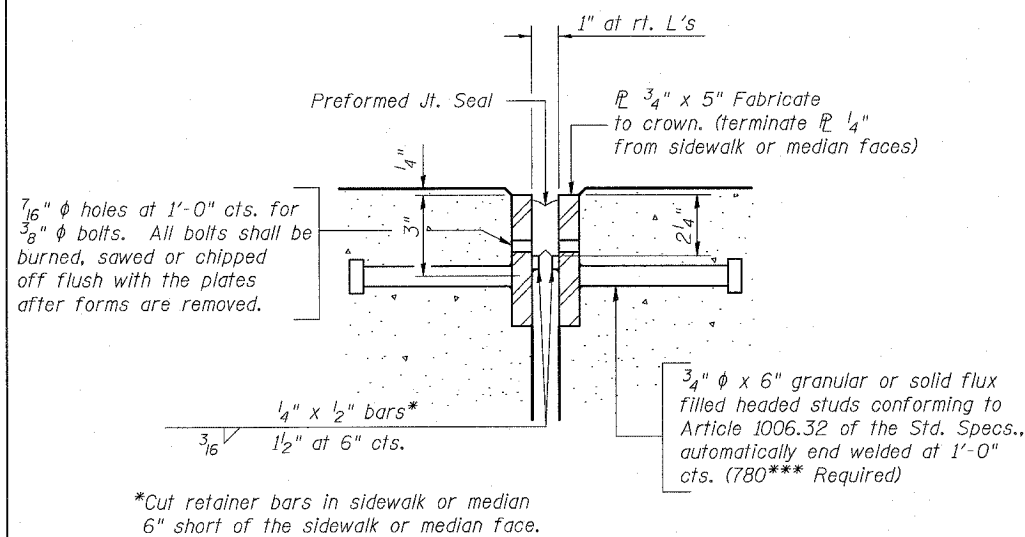
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

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

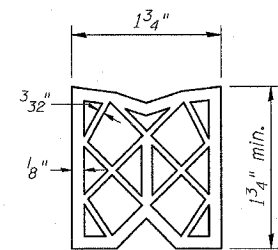
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

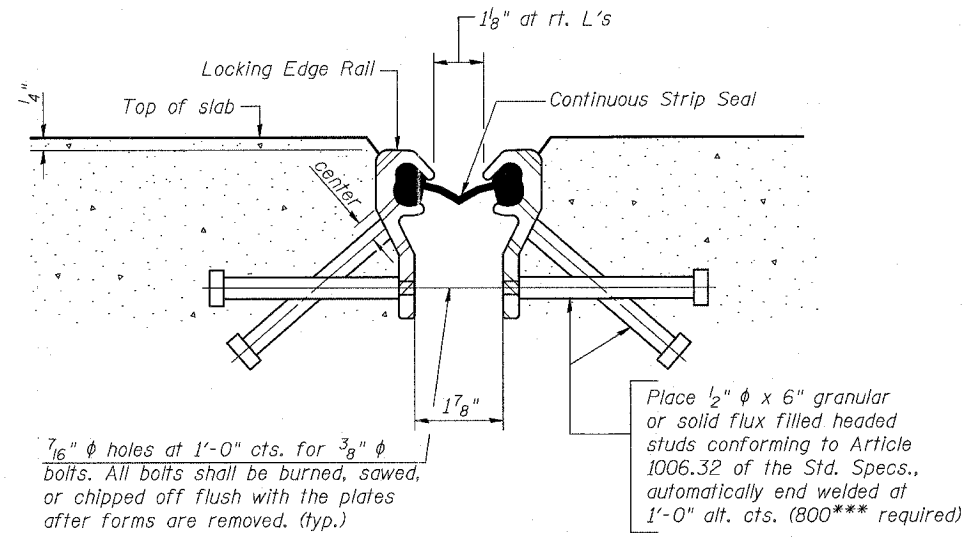
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the Department.



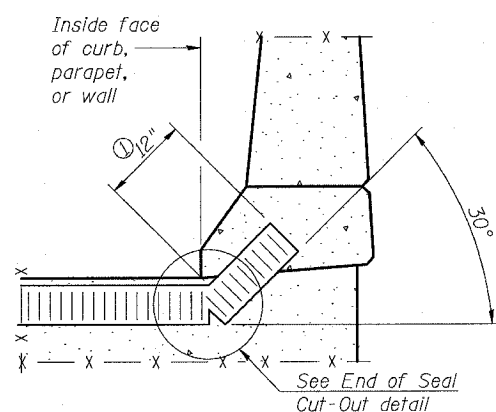
SECTION THRU FIXED PREFORMED JOINT SEAL



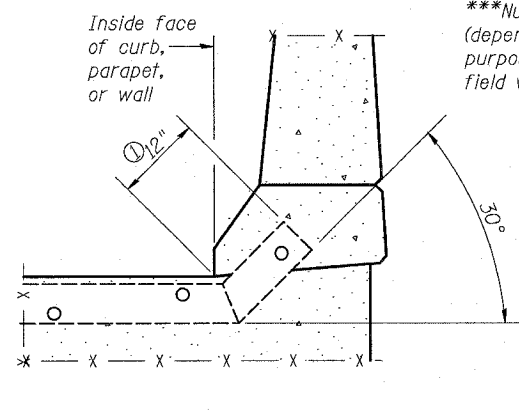
PREFORMED JOINT SEAL



SECTION THRU FIXED STRIP SEAL JOINT

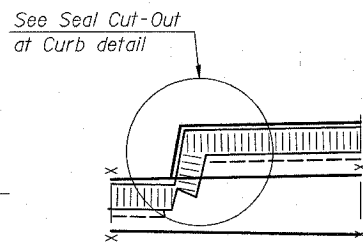


AT CURB, PARAPET, OR WALL (Showing seal)

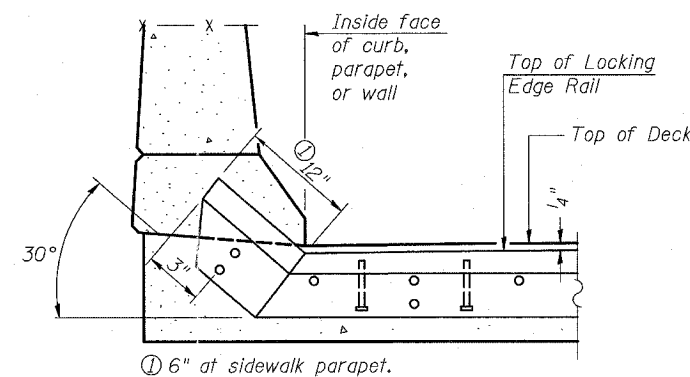


AT CURB, PARAPET, OR WALL (Showing plate)

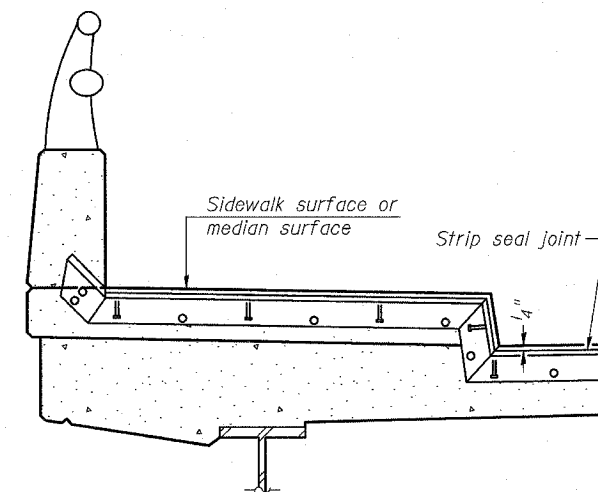
***Number provided is a total for this sheet only (depending on option) and is provided for estimating purposes only. Contractor shall verify based on field verification of joint lengths.



AT SIDEWALK OR MEDIAN

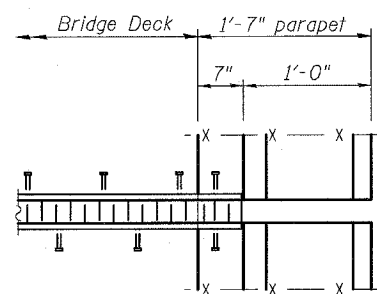


AT CURB, PARAPET, OR WALL

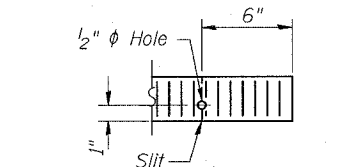


AT SIDEWALK OR MEDIAN

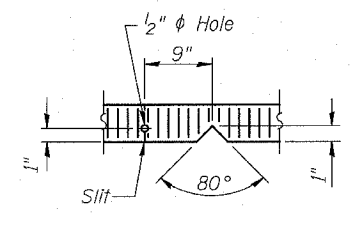
TYPICAL END TREATMENTS FOR PREFORMED JOINT SEAL



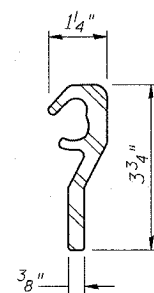
PLAN AT PARAPET



END OF SEAL CUT-OUT

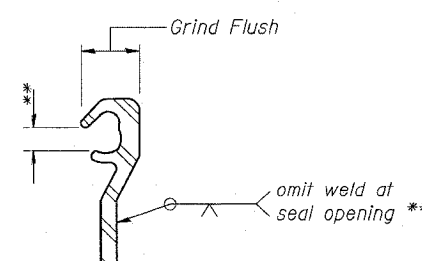


SEAL CUT-OUT AT CURB



LOCKING EDGE RAIL

The inside of the Locking Edge Rail groove shall be free of weld residue.



LOCKING EDGE RAIL SPLICE

TYPICAL END TREATMENTS FOR STRIP SEAL

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FJ-BJS 9-01-03

REVISIONS	DATE
NAME	

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
BRIDGE JOINT SYSTEM - FIXED

SCALE: NTS
DATE: 5/25/2006

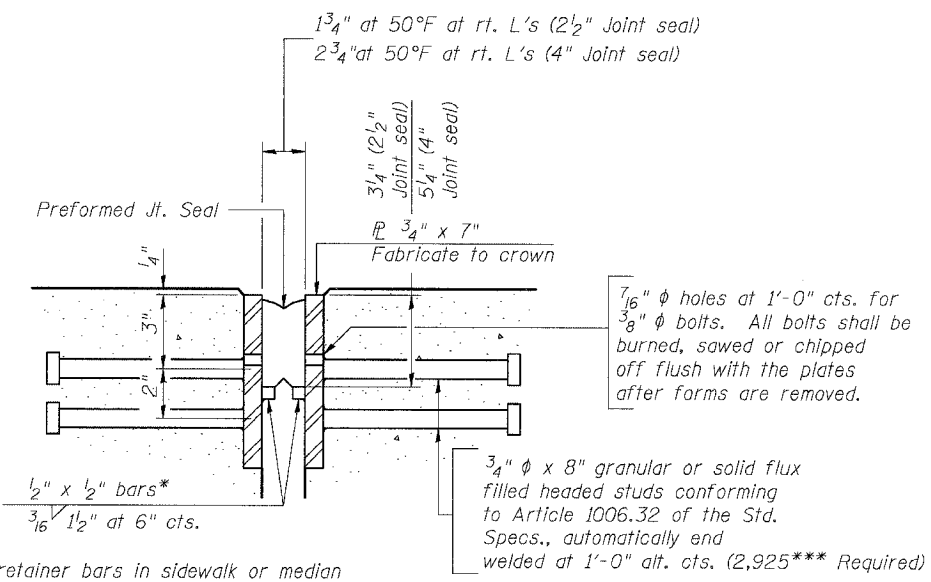
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CHECKED BY: BLU

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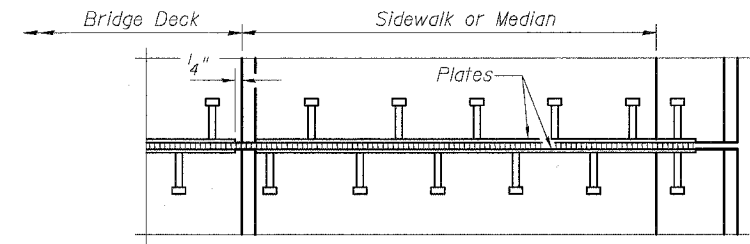
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	283
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.



Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"
1 5/8"	4"	2"



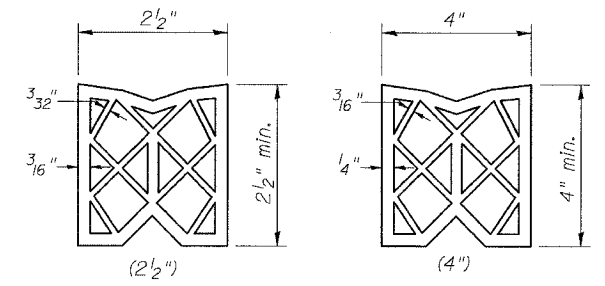
PLAN AT SIDEWALK OR MEDIAN

SECTION THRU EXPANSION JOINT

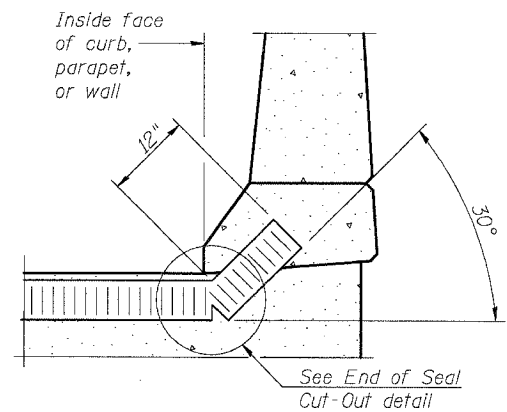
(2 1/2" and 4" joint seals)

*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

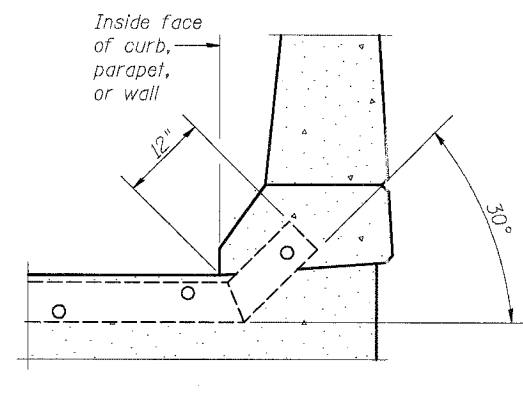
***Number provided is a total for this sheet only and is provided for estimating purposes only. Contractor shall verify based on field verification of joint lengths.



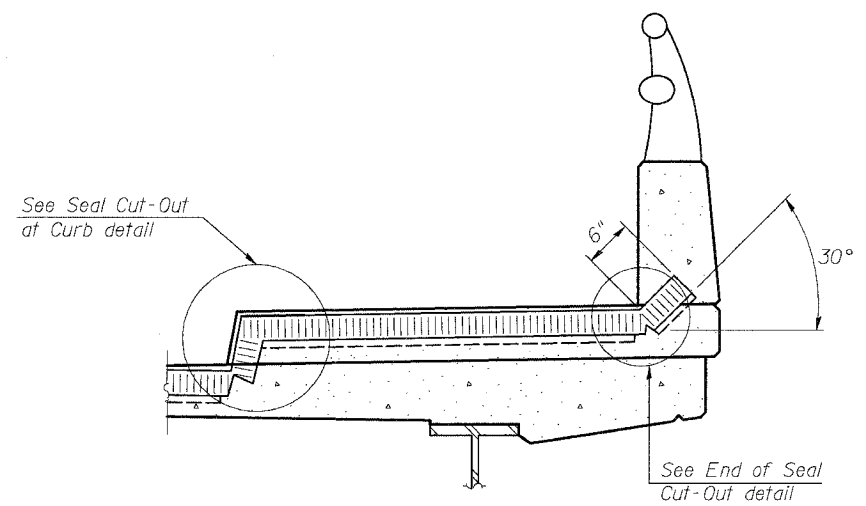
PREFORMED JOINT SEAL



AT CURB, PARAPET, OR WALL (Showing seal)



AT CURB, PARAPET, OR WALL (Showing plate)

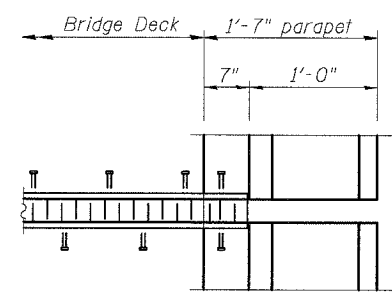


AT SIDEWALK OR MEDIAN**

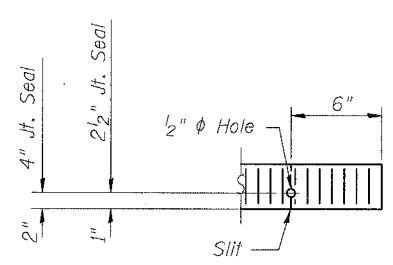
(Showing plate and seal)

** Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

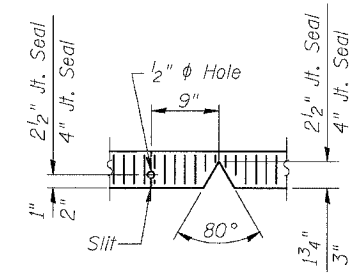
TYPICAL END TREATMENTS



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

(Sheet 1 of 2)

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) SB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS BRIDGE JOINT SYSTEM - EXPANSION (PREFORMED JOINT SEAL)
NAME	DATE	
		SCALE: NTS
		DATE: 5/25/2006
		DRAWN BY: BDC
		CHECKED BY: BLU

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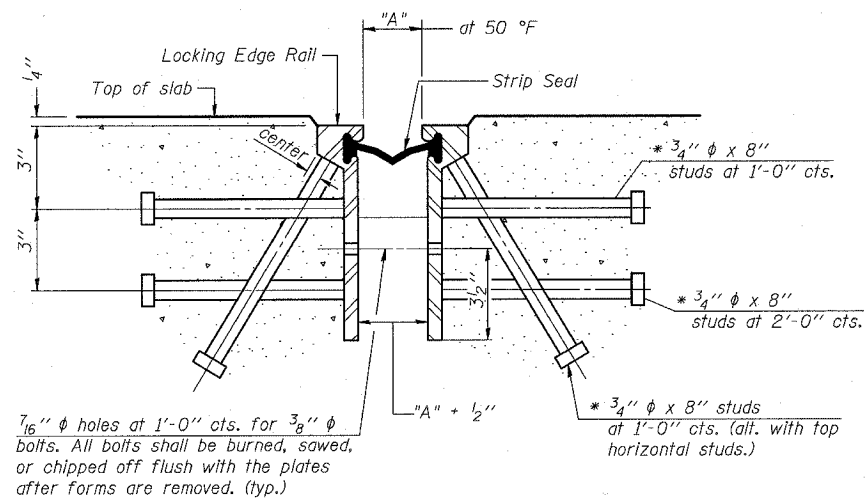
EJ-BJS 9-01-03

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10:08:24 AM 5/25/2006

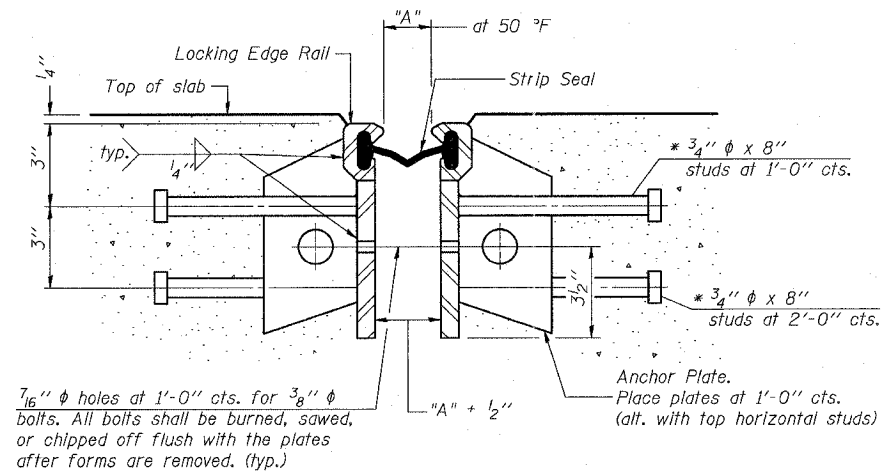
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029I	COOK	344	284
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581



SECTION THRU ROLLED RAIL EXP. JOINT
(7,240*** Studs Required)

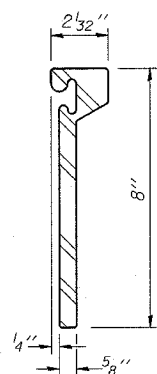
Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



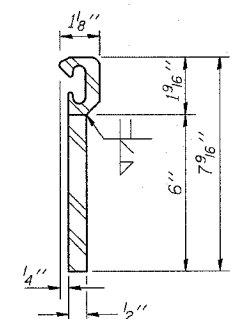
SECTION THRU WELDED RAIL EXP. JOINT
(4,450*** Studs Required)
(2,800*** Anchor Plates Required)

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

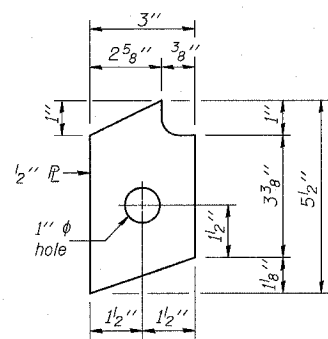
***Number provided is a total for this sheet only (depending on option) and is provided for estimating purposes only. Contractor shall verify based on field verification of joint lengths.



ROLLED (EXTRUDED) RAIL

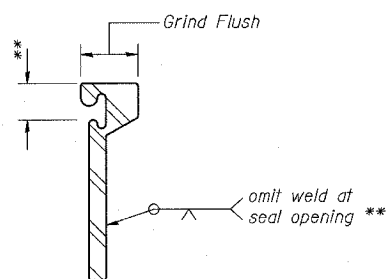


WELDED RAIL



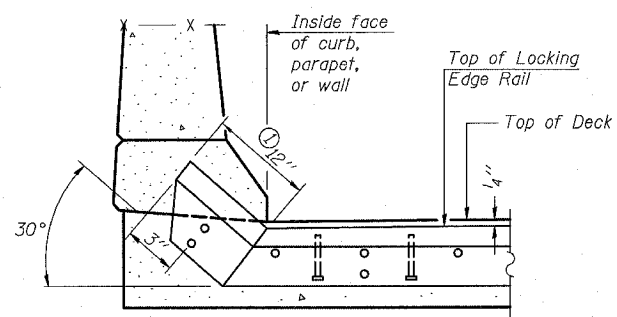
ANCHOR PLATE
(for welded rail)

LOCKING EDGE RAILS

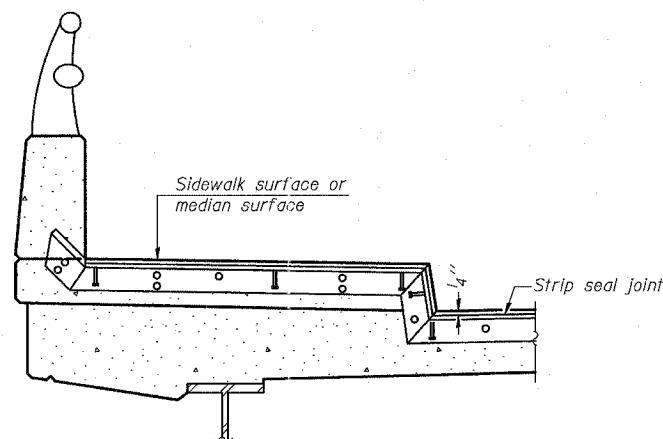


LOCKING EDGE RAIL SPLICE

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



AT CURB, PARAPET, OR WALL
① 6" at sidewalk parapet.



AT SIDEWALK OR MEDIAN***

***Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the Department.

(Sheet 2 of 2)

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

EJ-BJS 9-01-03

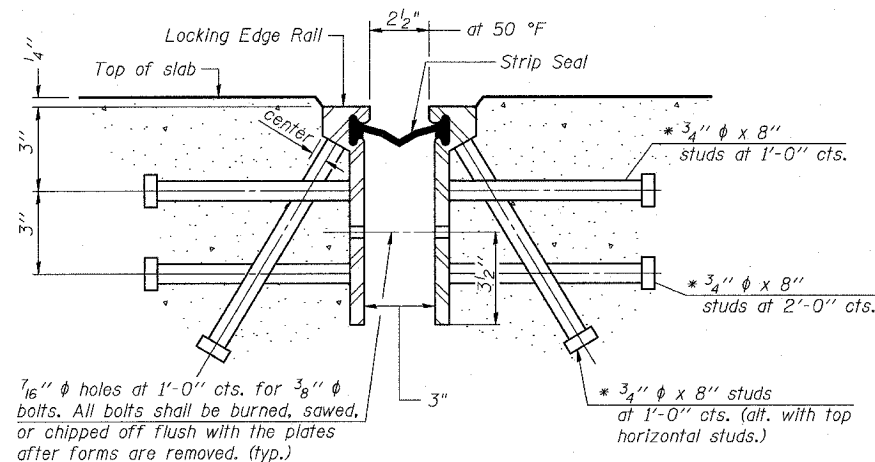
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
BRIDGE JOINT SYSTEM - EXPANSION
(ALTERNATE - STRIP SEAL)
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: BLU

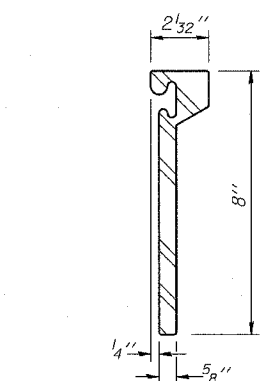
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	285
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

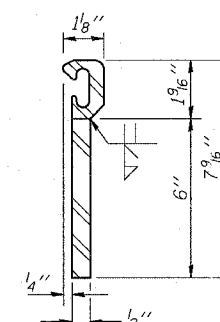
62581



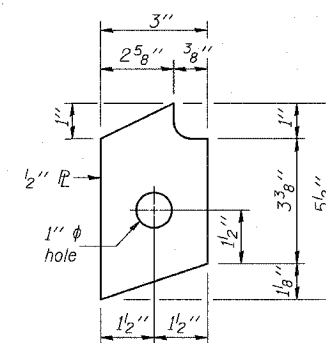
SECTION THRU ROLLED RAIL EXP. JOINT
(17,810*** Studs Required)



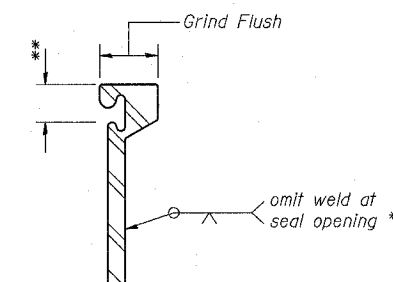
ROLLED (EXTRUDED) RAIL



WELDED RAIL



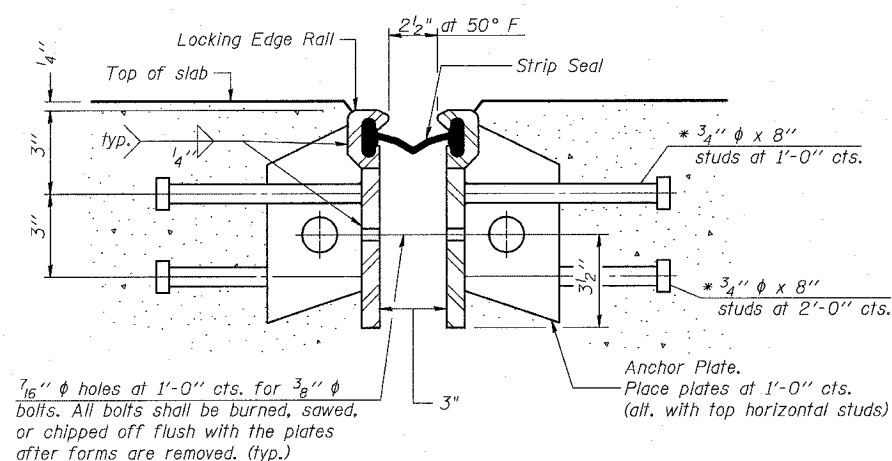
ANCHOR PLATE
(for welded rail)



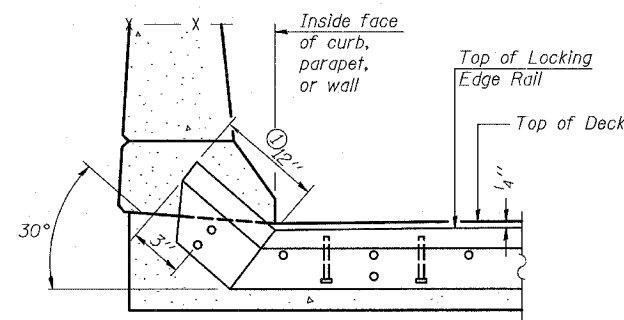
LOCKING EDGE RAIL SPLICE

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

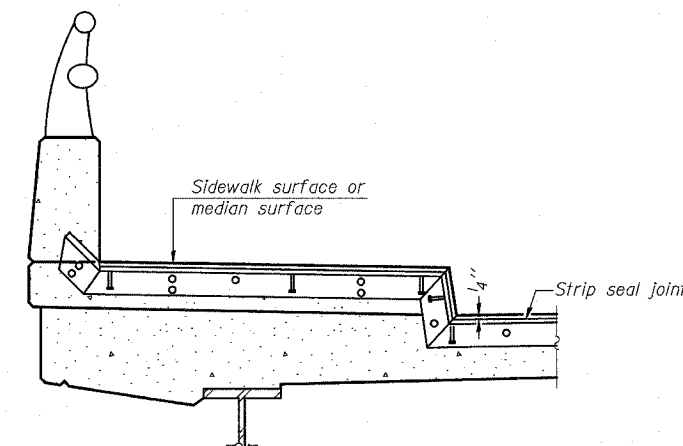
EXPANSION JOINT LOCKING EDGE RAIL DETAILS



SECTION THRU WELDED RAIL EXP. JOINT
(10,900*** Studs Required)
(7,120*** Anchor Plates Required)



AT CURB, PARAPET, OR WALL
① 6" at sidewalk parapet.



AT SIDEWALK OR MEDIAN*
* Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints. The manufacturer's recommended installation methods shall be followed.

***Number provided is a total for this sheet only (depending on option) and is provided for estimating purposes only. Contractor shall verify based on field verification of joint lengths.

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
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* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

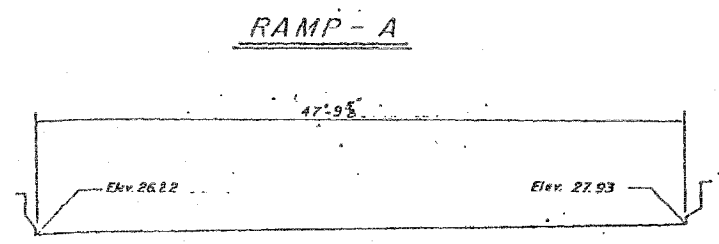
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
STRIP SEAL EXPANSION JOINT
ASSEMBLY DETAILS
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: BDC
CHECKED BY: BLU

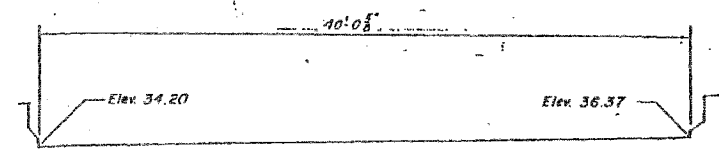
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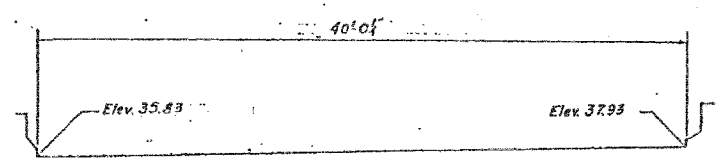
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	286
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



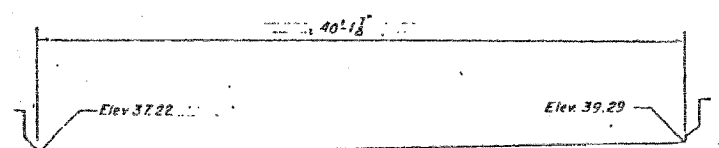
② AT SOUTH ABUTMENT
P.J.S. 2 1/2"



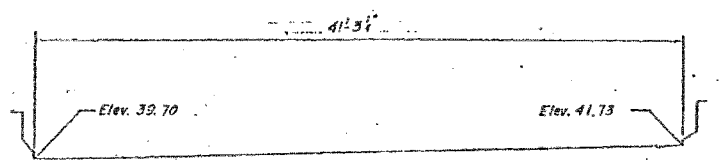
② AT PIER A 4
P.J.S. 2 1/2"



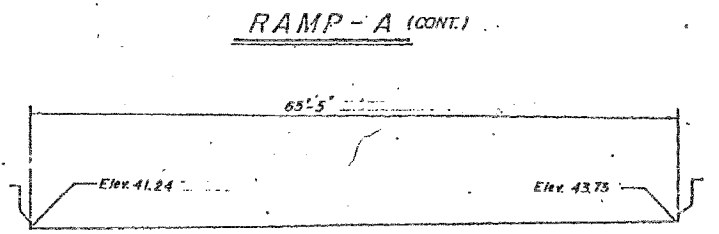
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P.J.S. 2 1/2"



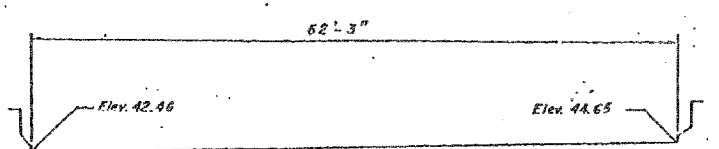
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P.J.S. 2 1/2"



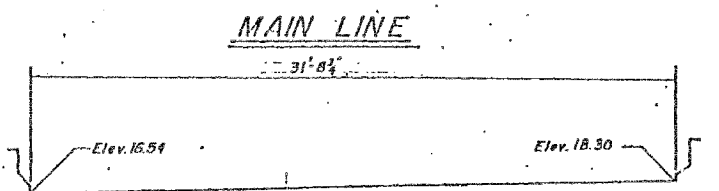
② AT PIER A 9
P.J.S. 2 1/2"



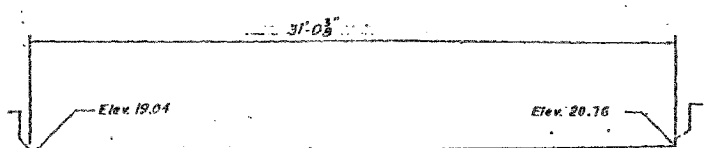
② AT PIER A 13
P.J.S. 2 1/2"



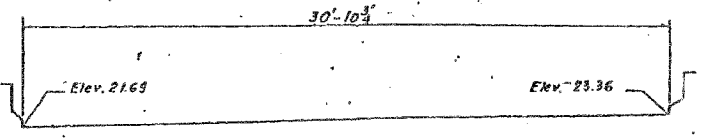
② AT PIER A 15
P.J.S. 2 1/2"



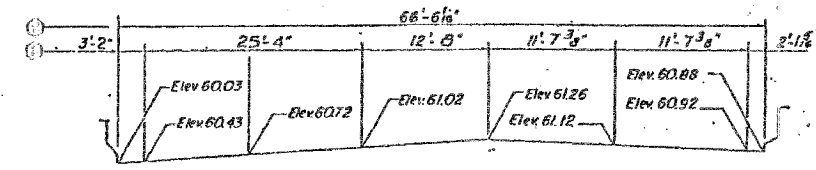
② AT SOUTH ABUTMENT
P.J.S. 4"



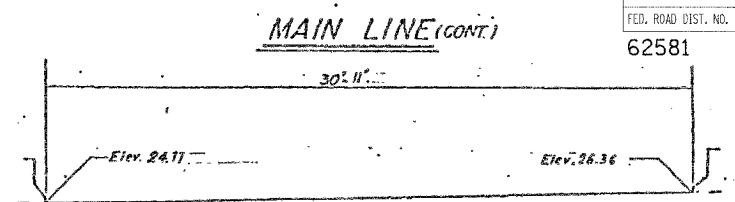
① AT PIER 1
P.J.S. 2 1/2"



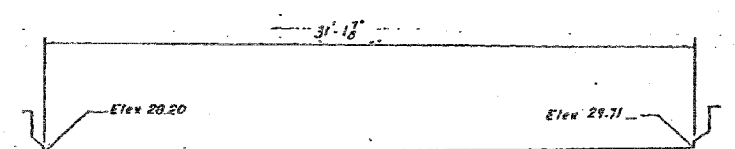
① AT PIER 2
P.J.S. 4"



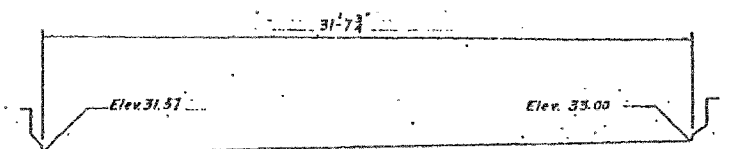
AT PIER 26 (FINGER PLATE JOINT)



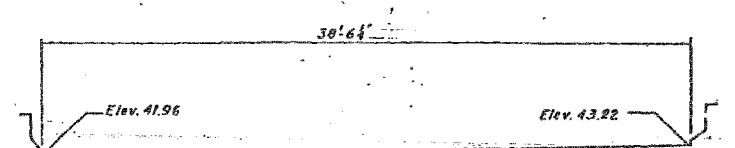
② AT PIER 3
P.J.S. 4"



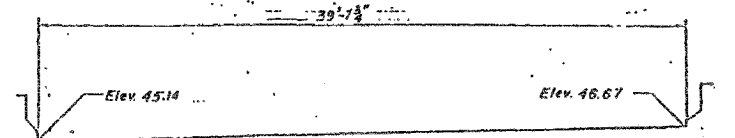
② AT PIER 4
P.J.S. 4"



② AT PIER 5
P.J.S. 4"



② AT PIER 11
P.J.S. 2 1/2"



② AT PIER 15
P.J.S. 2 1/2"

Dimensions measured along
slope of Joint

NOTES
For Steel Finger Plate dt. See Sheet TJ1, Vol. 13
For PJS Detail See Sheet TJ3, Vol. 13

SHEET J 38 OF 109

REVISIONS	
Name	Date
(2) Rev.	2/25/07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
EAL ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082R-COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1057 & 1117 (RAMP A'S MAINLINE)
TRANSVERSE DECK JOINT ELEVATIONS
Scale: NONE
Date: AUGUST 14, 1997
DRAWN BY: J.R.
CHECKED BY: J.S.K.
EMERSON ENGINEERS INC.
Chicago, Illinois

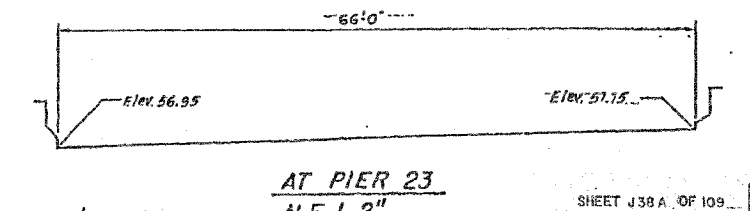
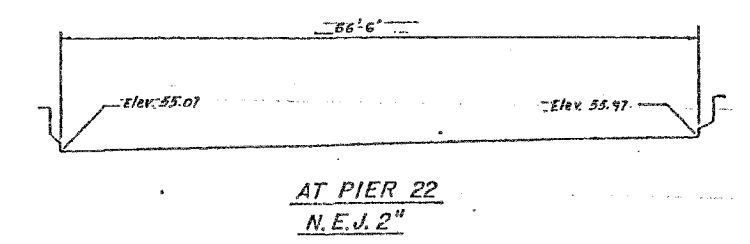
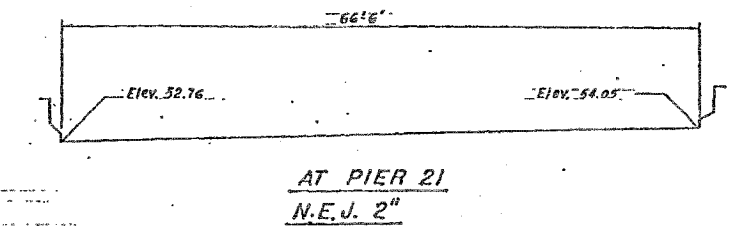
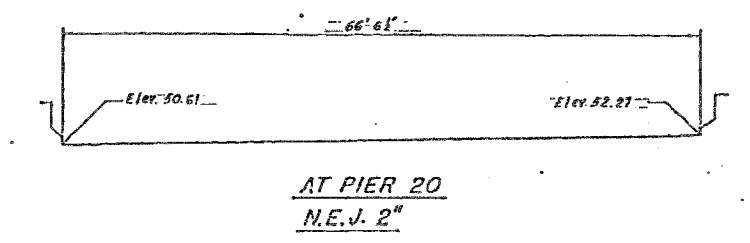
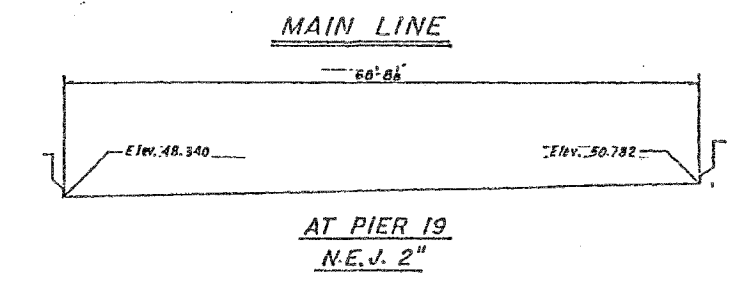
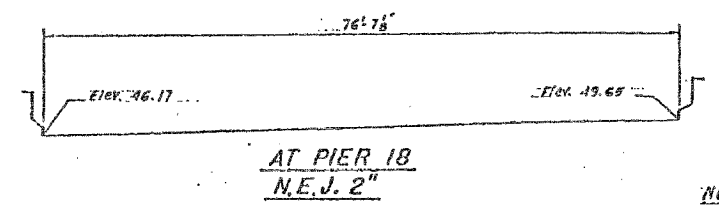
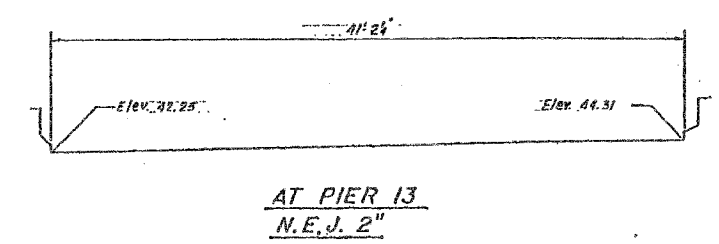
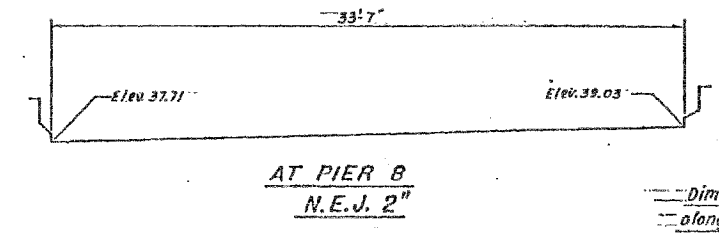
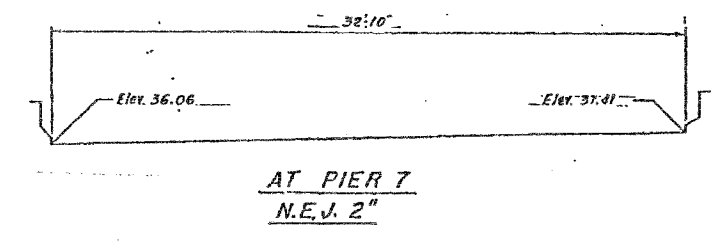
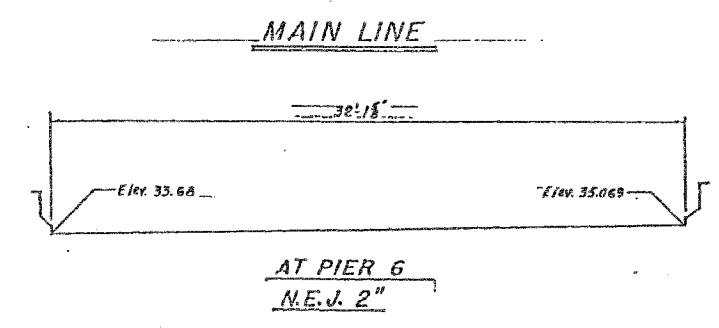
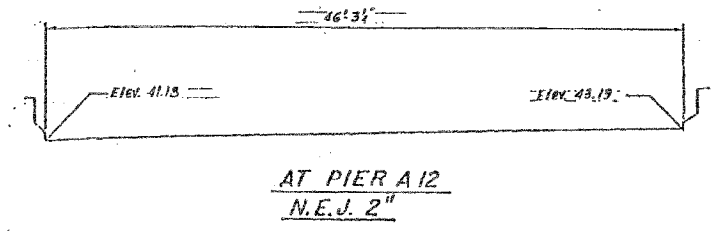
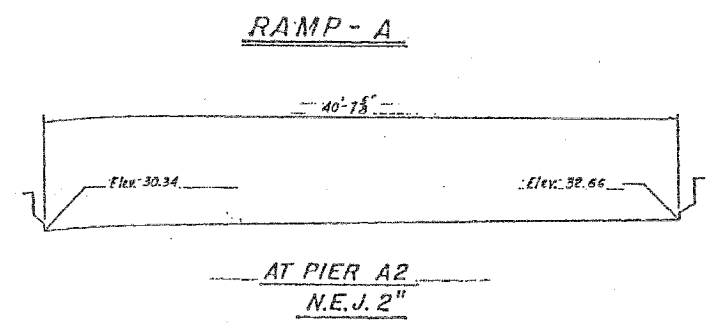
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	287
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				



--- Dimensions measured ---
--- along slope of Joint ---

- NOTES:**
- For Steel Finger Plate Jt. see Sheet T11-Vol.13
 - For P/S Detail See Sheet T12 Vol.13
 - Work this steel with J38

SHEET J38 A OF 109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 016-1067 & 016-1067 (RAMP 'A'S MAINLINE)
STRUCTURE 016-1067 & 016-1067 (RAMP 'A'S MAINLINE)
TRANSVERSE DECK JOINT ELEVATIONS

REVISIONS	NAME	DATE
(2) New Sheet		2/5/00

Scale: NONE
Date: _____
Drawn By: J.C.
Checked By: S.K.
ENVIRONMENTAL ENGINEERS INC.
CHICAGO, ILL.

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

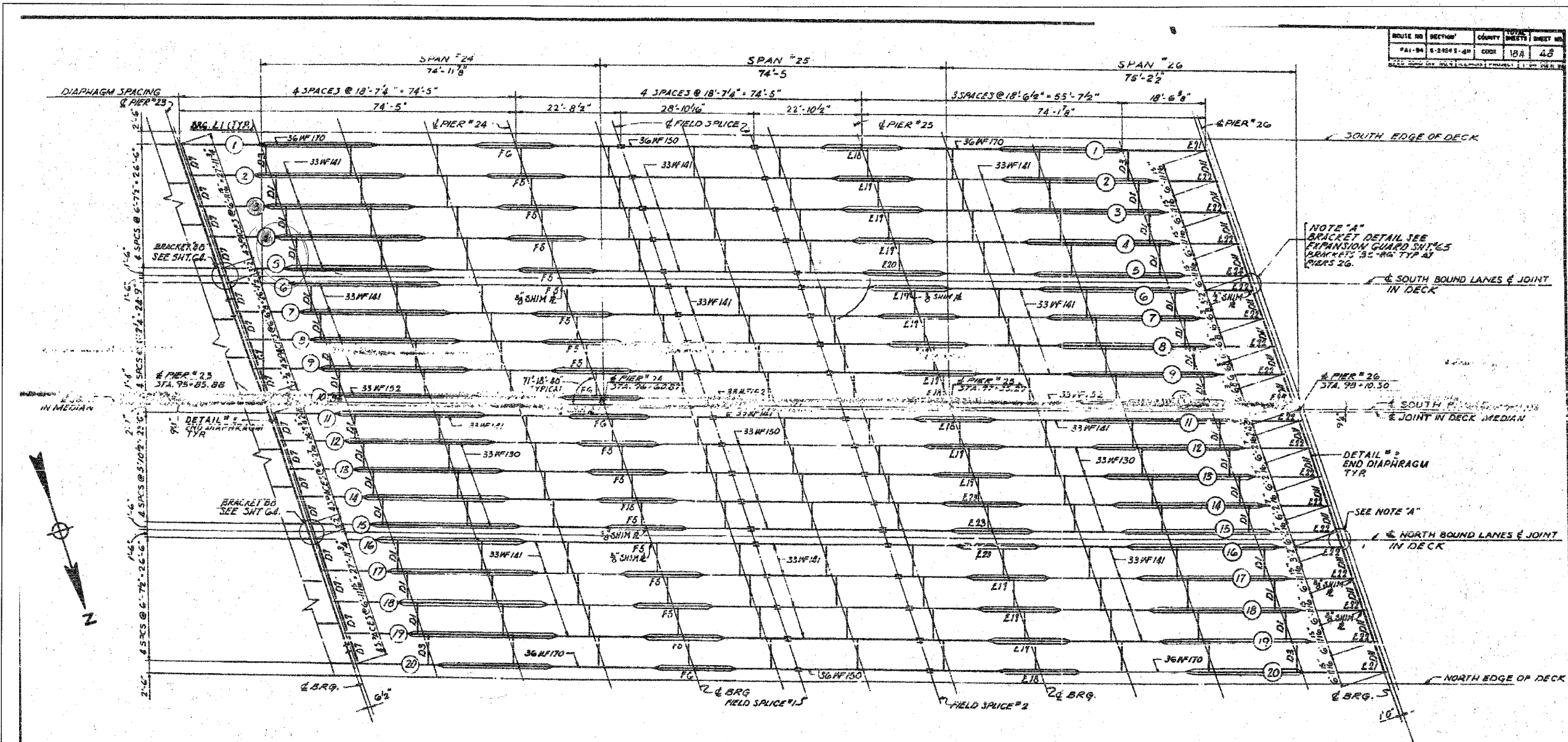
FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067

SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

5/23/2006 3:53:55 PM



NOTE "A"
BRACKET DETAIL SEE
EXPANSION GUARD SHEETS
BRACKET: 32" HGT TYP AT
PIERS 26.

DETAIL "B"
END DIAPHRAGM
TYP.

FRAMING PLAN SPANS 24 TO 26
3 SPAN CONTINUOUS

TOP OF BEAM ELEVATIONS AT & BEARING		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
LOCATION	SPAN																					
PIER 23	SPAN 23	56.611	56.855	57.070	57.234	57.253	57.211	57.119	56.995	57.043	57.258	57.435	57.571	57.589	57.533	57.425	57.289					
	SPAN 24	56.611	56.831	57.003	57.140	57.248	57.267	57.243	57.201	57.115	57.019	57.078	57.231	57.384	57.490	57.584	57.602	57.576	57.521	57.428	57.289	
PIER 24		57.937	58.113	58.285	58.417	58.510	58.534	58.495	58.441	58.350	58.279	58.313	58.451	58.597	58.703	58.793	58.819	58.786	58.780	58.620	58.531	
	FIELD SPLICE #1	58.303	58.457	58.623	58.737	58.856	58.871	58.840	58.780	58.690	58.583	58.640	58.786	58.933	59.039	59.125	59.140	59.100	59.036	58.924	58.846	
	FIELD SPLICE #2	58.780	58.881	59.045	59.176	59.273	59.287	59.254	59.195	59.100	58.990	59.047	59.190	59.336	59.438	59.523	59.537	59.499	59.428	59.394	59.298	
PIER 25		59.023	59.194	59.356	59.484	59.579	59.608	59.547	59.488	59.391	59.314	59.345	59.477	59.620	59.730	59.803	59.826	59.781	59.715	59.609	59.514	
PIER 26	SPAN 26	59.913	60.077	60.233	60.349	60.439	60.449	60.408	60.348	60.245	60.142	60.120	60.317	60.454	60.544	60.621	60.637	60.586	60.513	60.401	60.281	

NOTES:
TOP OF BEAM ELEVATIONS AT PIER 23
ARE AT A STEEL PIER SEE DETAIL
347-055.
TOP OF BEAM ELEVATIONS GIVEN ARE
ACTUAL TOP OF FLANGE ELEVATIONS,
NOT TOP OF COVER PLATES EXTENDED
DOWN FROM THE TOP OF BEAM.
ELEVATIONS AT PIER 24 & 25 AND
AT FIELD SPLICES ARE AT THE TOP
OF COVER AND SPLICE PLATES.



ALFRED BERESCH & ASSOCIATES CONSULTING ENGINEERS
10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

BILL OF MATERIAL

DESCRIPTION	UNIT	QUANTITY
STRUCTURAL STEEL	LBS.	760,500

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
**SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY**
28TH PLACE TO STEWART AVE.
SECTION S-2424 3-4H
**FRAMING PLAN
SPANS 24 TO 26**
SHEET NO. 48 OF 184 SHEETS DATE: MARCH, 1961

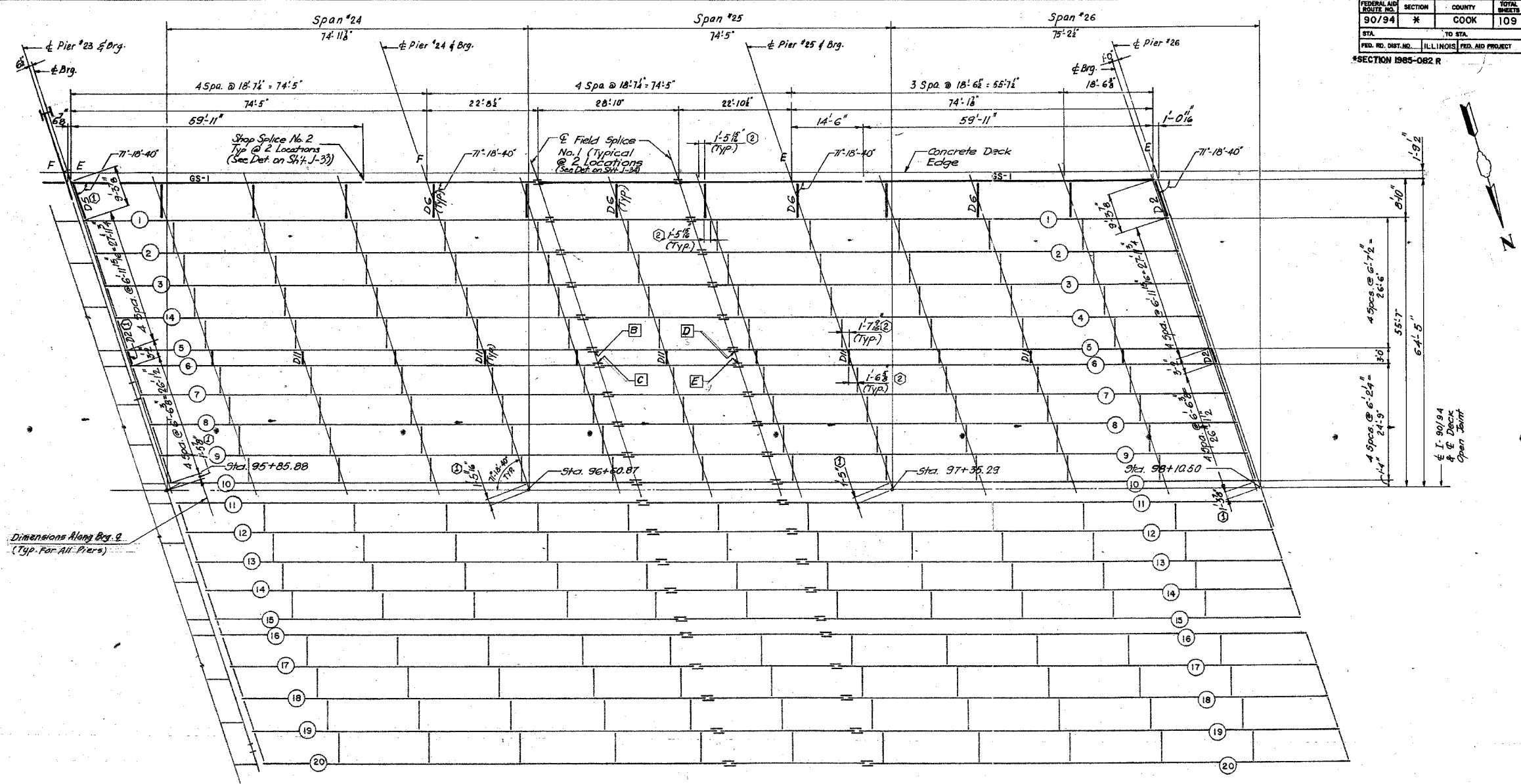
BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

F.A.I. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90 2003-0291	COOK	344	289
STA.	TO STA.		
62581			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
SECTION 1985-082 R			



- ① B Field Splice No. 20, Type 4, See Sht. SR-2, Vol. 13 for detail.
- ① C Field Splice No. 21, Type 4, See Sht. SR-2, Vol. 13 for detail.
- ① D Field Splice No. 22, Type 4, See Sht. SR-2 Vol. 13 for detail.
- ① E Field Splice No. 23, Type 4, See Sht. SR-2 Vol. 13 for detail.

Notes:
 E = Exp. Brg.
 F = Fixed Brg.

For diaphragm detail D1 see sheet no. J33
 For diaphragm detail D6 see sheet no. J34
 For diaphragm detail D7 see sheet no. J35

PLAN - SPANS 24, 25 & 26

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

SHEET J 29 OF 109

REVISIONS	
Name	Date
① Rev.	1-8-88
② Rev.	2-5-88

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R - COOK COUNTY
 S.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1117 (MAINLINE)
 FRAMING PLAN SPANS 24 TO 26

Scale: NONE
 Date: AUGUST 14, 1987
 Drawn By: E.D.
 Checked By: [Signature]
 ENVIRODYNE ENGINEERS INC.
 Chicago, Illinois

AS REVISED

BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbandainc.com

FOR INFORMATION ONLY

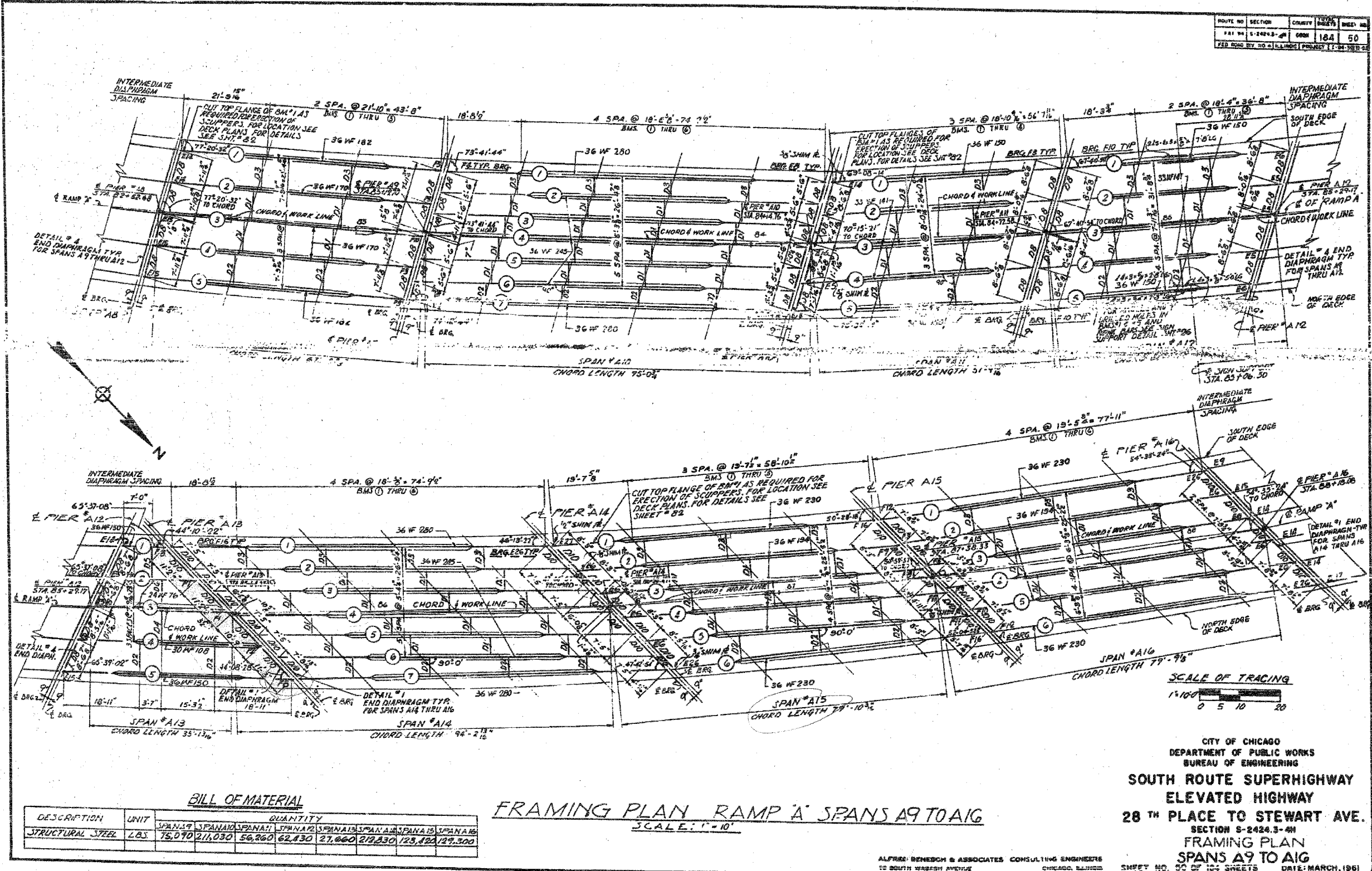
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1117 & 016-1067

SCALE: NTS
 DATE: 5/25/2006
 DRAWN BY: MTR
 CHECKED BY: BLU

1985-082 R SHEETS 680.21 EP-DIG-117E.dgn
 3/5/93 PM
 5/23/2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FBI 94	S-2424.3-4H	COOK	184	50
FED. ROAD DIST. NO. 04 ILLINOIS POLICY 11-94-30012				



BILL OF MATERIAL

DESCRIPTION	UNIT	QUANTITY							
STRUCTURAL STEEL	LBS.	SPAN A9	SPAN A10	SPAN A11	SPAN A12	SPAN A13	SPAN A14	SPAN A15	SPAN A16
		75,070	216,030	56,260	62,430	27,660	212,530	123,120	129,300

FRAMING PLAN RAMP A SPANS A9 TO A16
SCALE: 1"=10'

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
**SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY**
28TH PLACE TO STEWART AVE.
SECTION S-2424.3-4H
**FRAMING PLAN
SPANS A9 TO A16**
ALFRED BENECH & ASSOCIATES CONSULTING ENGINEERS
10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS SHEET NO. 50 OF 104 SHEETS DATE: MARCH, 1961

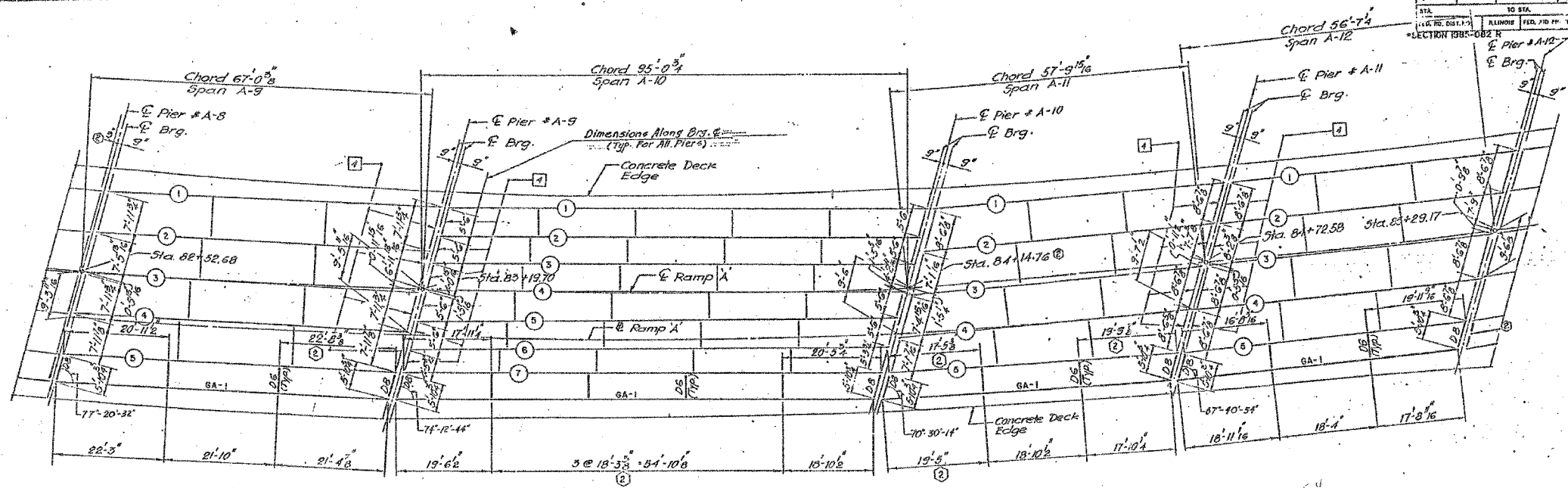
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

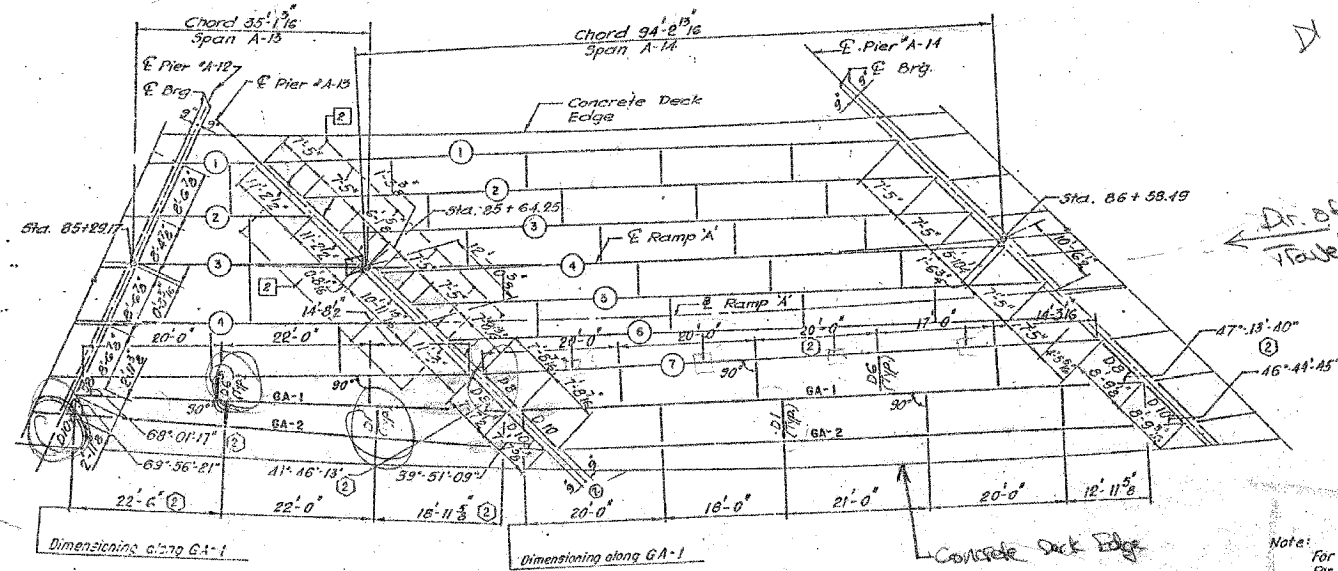
FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	291
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				



PLAN - SPANS A-9, A-10, A-11 & A-12



PLAN - SPANS A-13 & A-14

- ① ④ End Cross Frame, Type D8, See Sheet SR-3 Vol 13 For Details
- ① ② End Cross Frame, Type D10, See Sheet SR-3 Vol 13 For Details

D6 D10
DK

Dr. of
Vlabel

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1905-001F), UNLESS NOTED OTHERWISE.

AS REVISED

SHEET J 21 OF 109

REVISIONS	
Name	Date
(1) Rev.	1-8-83
(2) Rev.	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1905-002 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1067 (RAMP A)
FRAMING PLAN SPANS A9 TO A14
Scale: NONE
Date: AUGUST 14, 1987
Ch: MTR By: SK
ENVIRONMENTAL ENGINEERS INC.
Chicago, Illinois

Note:
For diaphragm detail D1 see sheet no. J33
For diaphragm detail D6 see sheet no. J34
For diaphragm details D8 and D10 see sheet no. J35

FOR INFORMATION ONLY

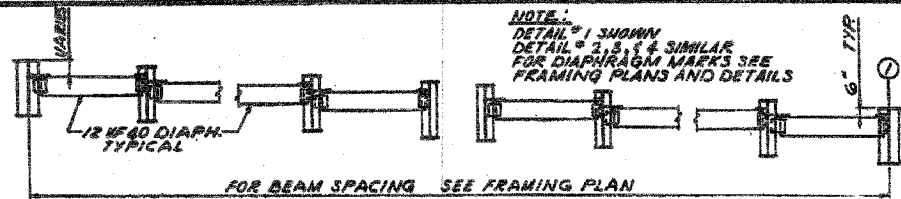
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067

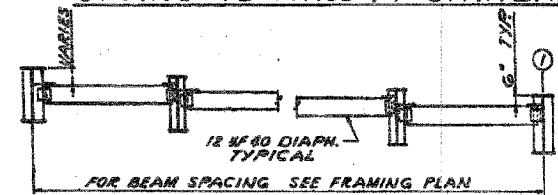
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

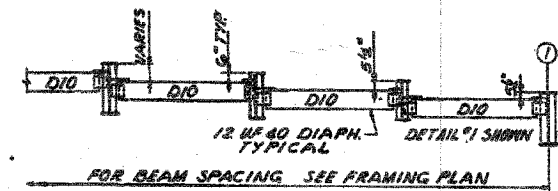
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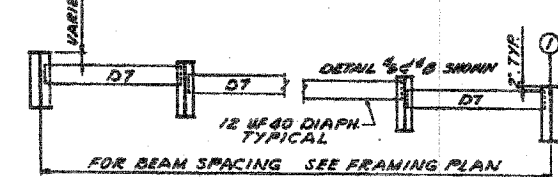
TYPICAL PARTIAL ELEVATION
SPAN #14 SHOWN SPANS #8 THRU #11.
SPANS #15 THRU #19 SIMILAR



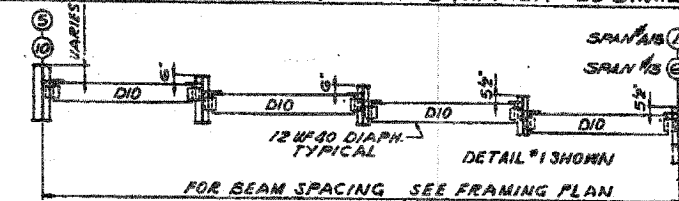
TYPICAL PARTIAL ELEVATION
SPAN #A14 SHOWN SPANS #A1 THRU #A3, #A7 THRU #A12
SPANS #A15 THRU #A17 & SPANS #H1 THRU #H14 SIMILAR.



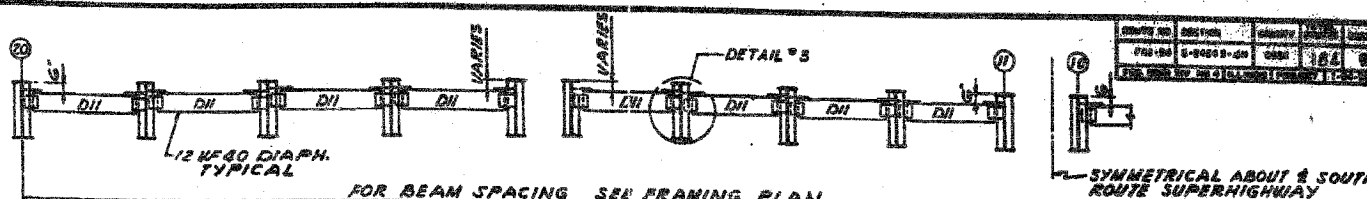
TYPICAL PARTIAL ELEVATION
SPAN #12 AT PIER #13 SHOWN
SPAN #H6 AT PIER #H6 SIMILAR
SCALE: 1/2" = 1'-0"



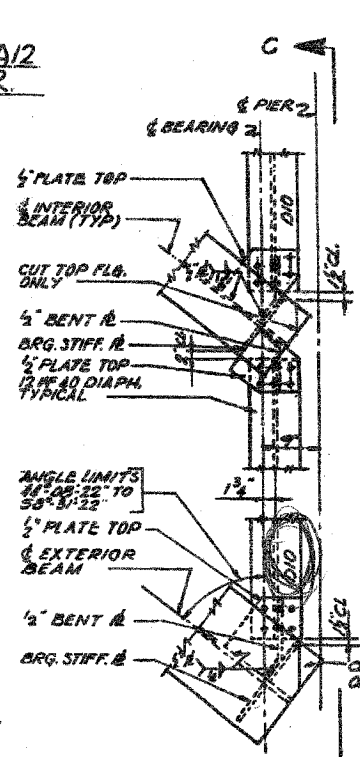
TYPICAL PARTIAL ELEVATION
SPAN #6 AT PIER #6 SHOWN SPAN #7 AT PIER #7
SPAN #A4 THRU #A6 AT PIER #A3 THRU #A6
SPAN #H1 AT SOUTH ABUT. & SPAN #24 AT PIER #23 SIMILAR



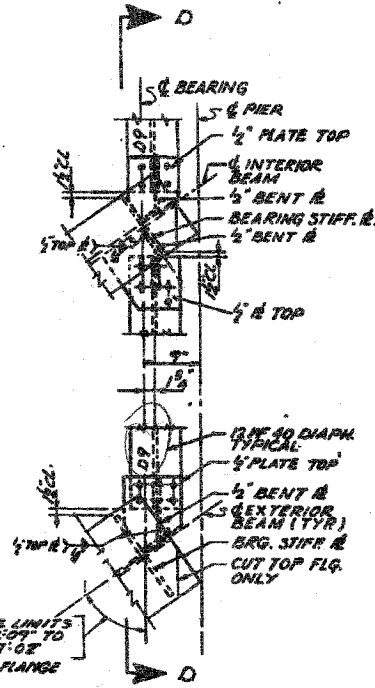
TYPICAL ELEVATION
SPAN #13 AT PIER #13 SHOWN
SPAN #A3 AT PIER #A3 SIMILAR



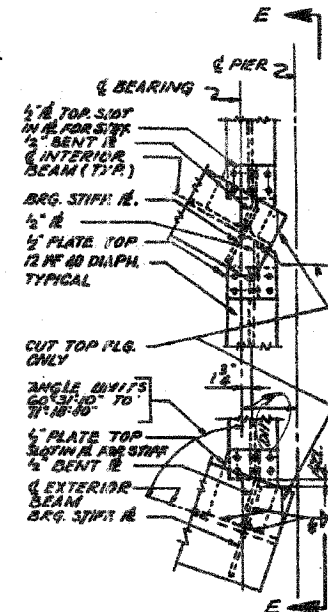
HALF ELEVATION
SPAN #26 AT PIER #26



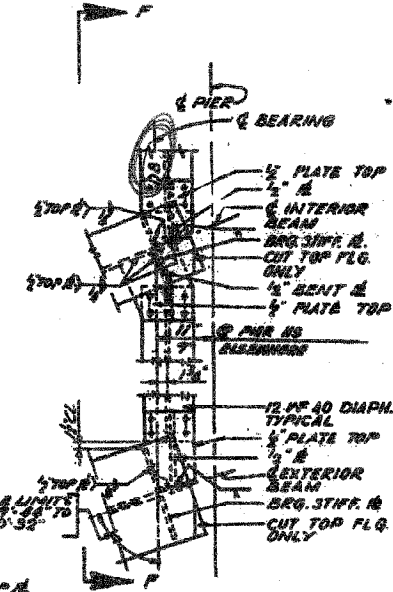
DETAIL #1
SCALE: 1" = 1'-0"



DETAIL #2
SCALE: 1" = 1'-0"

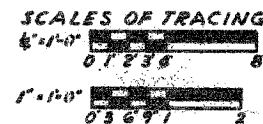


DETAIL #3
SCALE: 1" = 1'-0"



DETAIL #4
SCALE: 1" = 1'-0"

NOTES:
WORK THIS SHEET WITH SHEET 58
WORK THIS SHEET WITH FRAMING
PLAN SHEET #1 TO #2



ALFRED BENECH & ASSOCIATES CONSULTING ENGINEERS
20 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY
28TH PLACE TO STEWART AVE.
SECTION 2-2454-7-01
END DIAPHRAGM DETAILS

SHEET NO. 57 OF 124 SHEETS DATE: MARCH, 1961

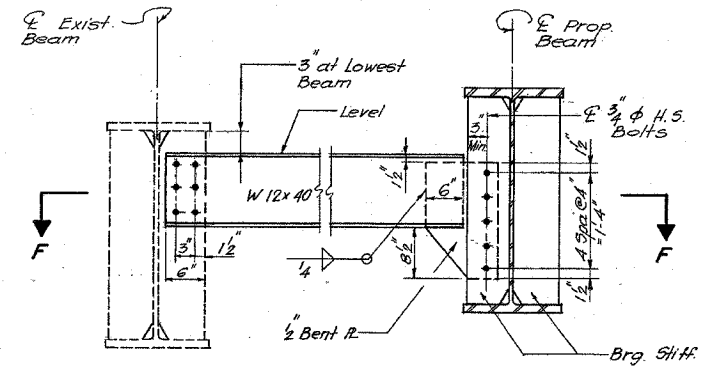
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067
SCALE: NTS DRAWN BY: MTR
DATE: 5/25/2006 CHECKED BY: BLU

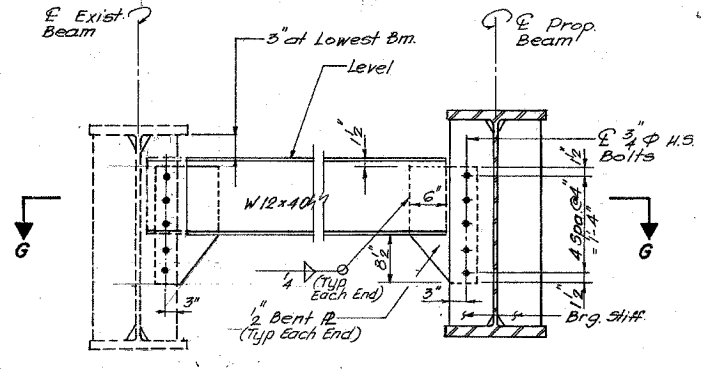
FOR INFORMATION ONLY

FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	109	35
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*SECTION 1985-082 R				

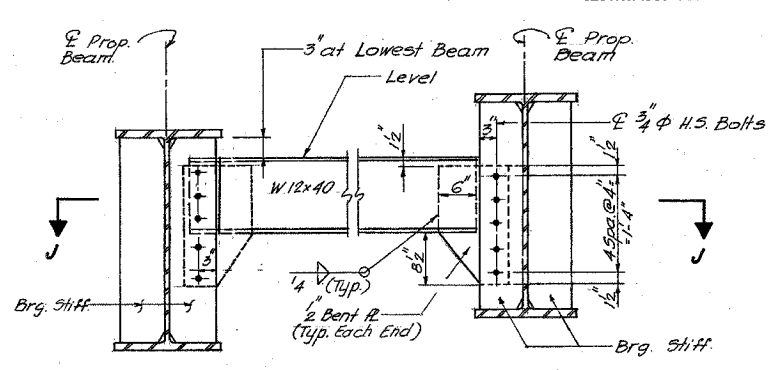
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	293
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



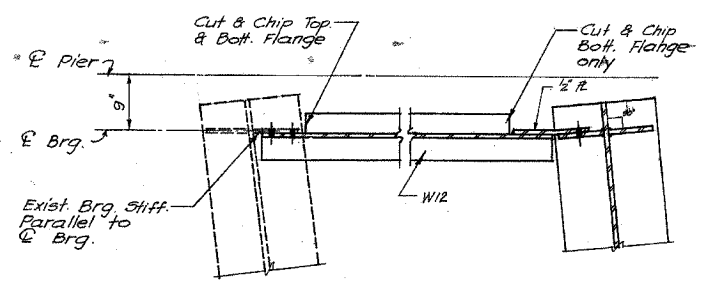
D 7
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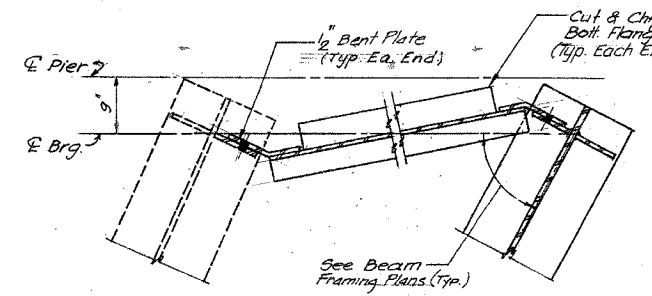
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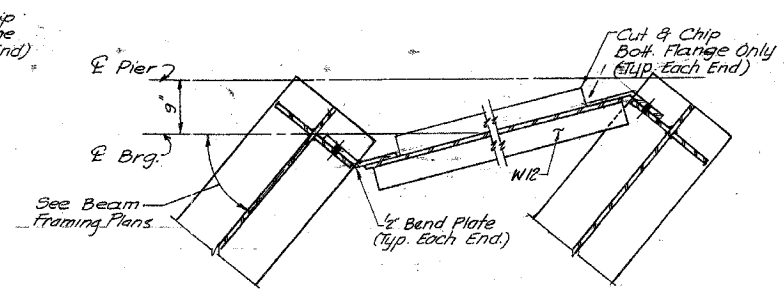
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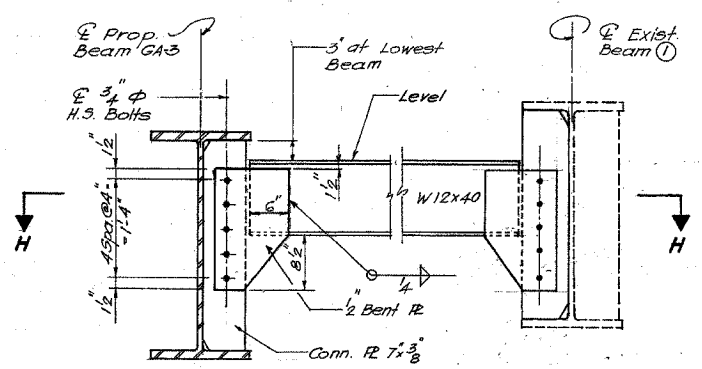
SECTION F-F



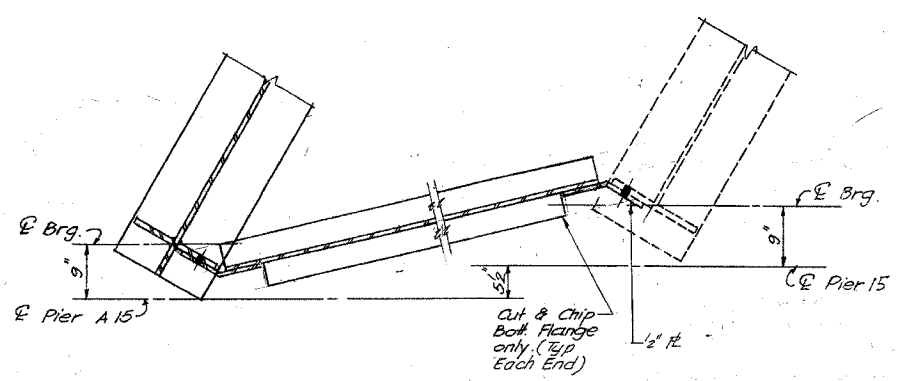
SECTION G-G



SECTION J-J



D 9
END DIAPHRAGM



SECTION H-H

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

SHEET J 35 OF 109

REVISIONS	
Name	Date
3	3/11/88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1067 & 1117 (RAMP 'A' & MAINLINE)
STRUCTURAL STEEL DETAILS
Scale: NONE Drawn By: E.D.
Date: AUGUST 14, 1987 Checked By: SK
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
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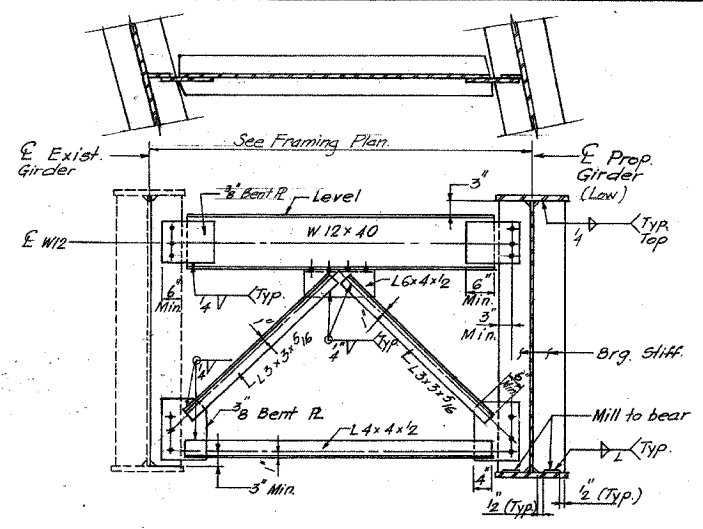
FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

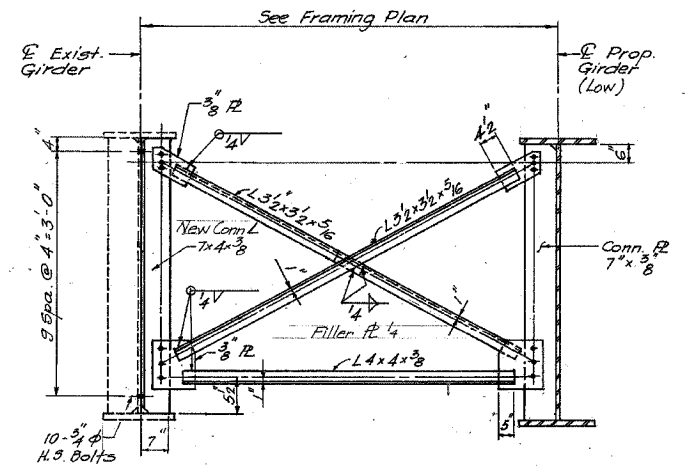
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 1067
SCALE: NTS DRAWN BY: MTR
DATE: 5/25/2006 CHECKED BY: BLU

44-494 PM 5/23/2006

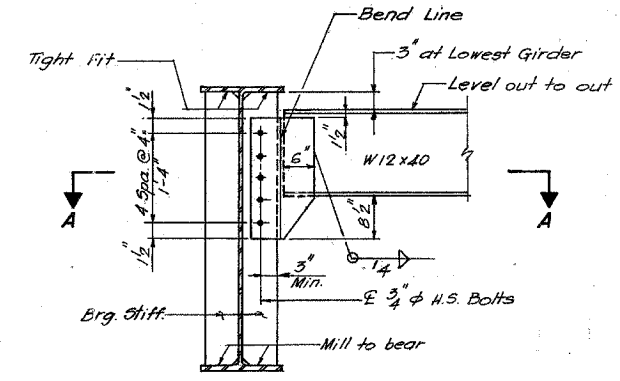
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	109	33
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS FED. AID PROJECT		
*SECTION 1985-082 R				



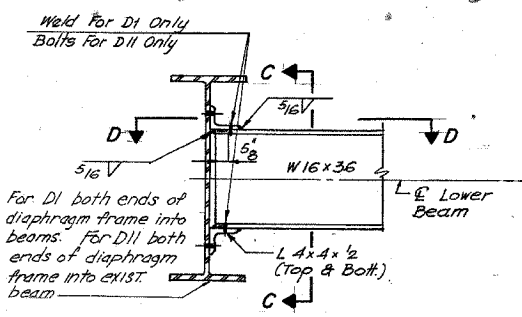
CF 1
TYPICAL END CROSS FRAME



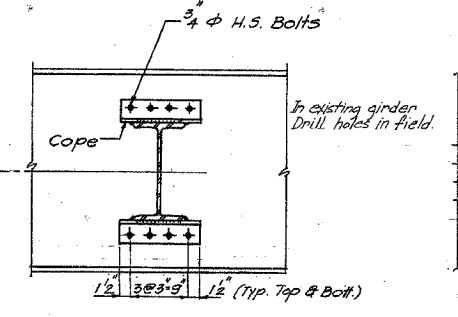
CF 2
TYPICAL INTERIOR CROSS FRAME



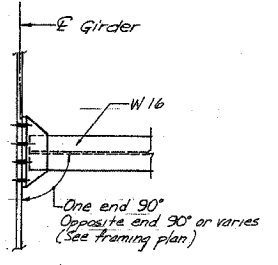
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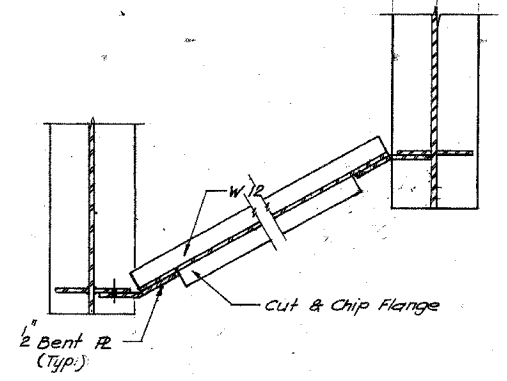
D1, D11
INTERIOR DIAPHRAGM



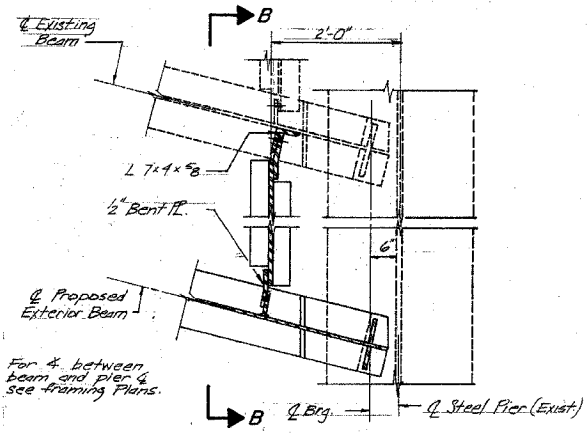
SECTION C-C



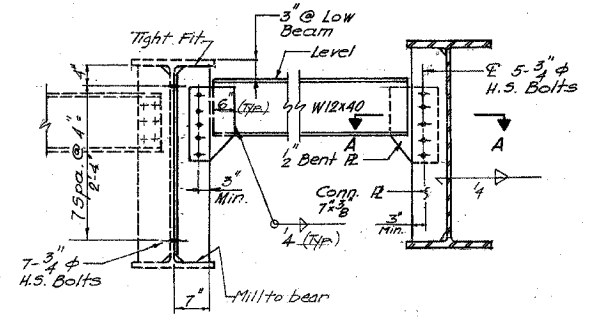
PLAN VIEW D-D



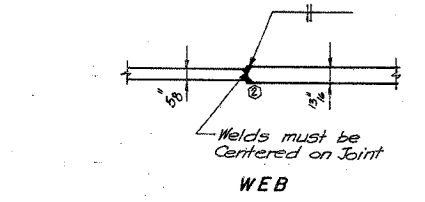
SECTION A-A



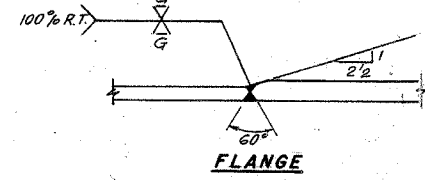
D 5
END DIAPHRAGM



SECTION B-B



WEB



FLANGE
SHOP WELD SPlice DETAIL A

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

SHEET J 33 OF 109

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R BY-COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1067 & 1117 (RAMP 'A' & MAINLINE)
STRUCTURAL STEEL DETAILS
Scale: NONE
Date: AUGUST 14, 1987
Drawn By: E.D.
Checked By: SK
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

REVISIONS	
Name	Date
Rev.	2/5/88

REVISIONS	
NAME	DATE

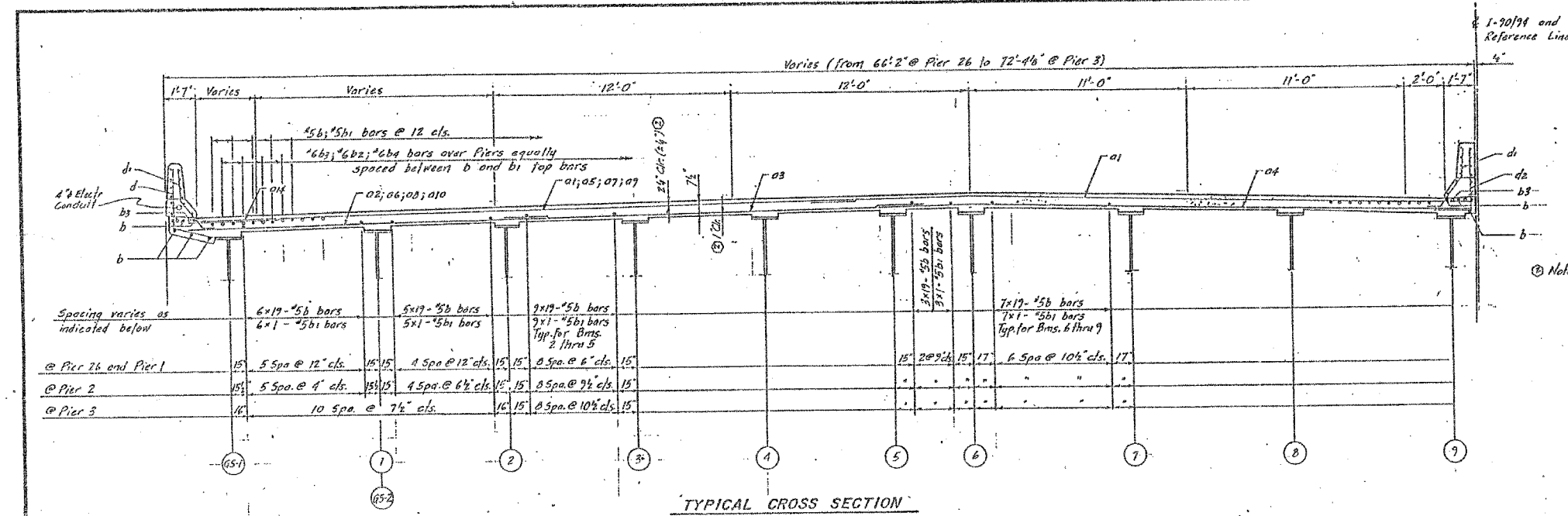
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1117 & 016-1067
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

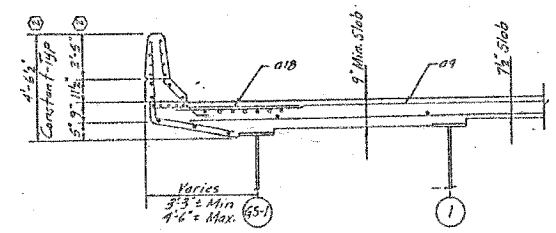
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	295
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				

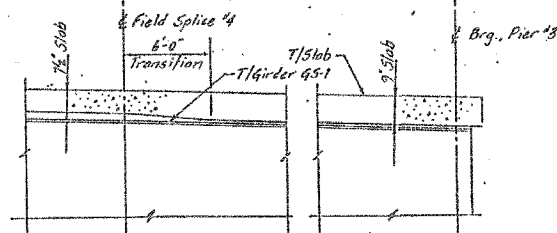


FEDERAL AID ROUTE NO.	STATE	COUNTY	FED. AID PROJECT
90/94	IL	COOK	20 17
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
1965-082R			

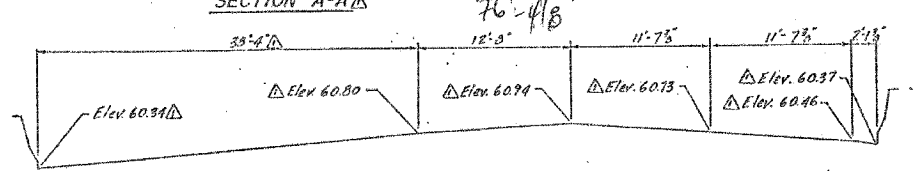
Note: Parapet bars are billed separately from deck bars.



SECTION A-A



SECTION B-B



AT PIER 3
Neoprene Expansion Joint, 4'

For Notes see Sheet 114

SHEET 117 OF 120

REVISIONS	
Name	Date

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 085-082R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016 1116
DECK CROSS SECTION
Scale: NONE
Date: AUG. 18, 1987
Drawn By: A.W.P.
Checked By: A.W.
ENVIRONMENTAL ENGINEERS INC.
Chicago, Illinois

FOR INFORMATION ONLY

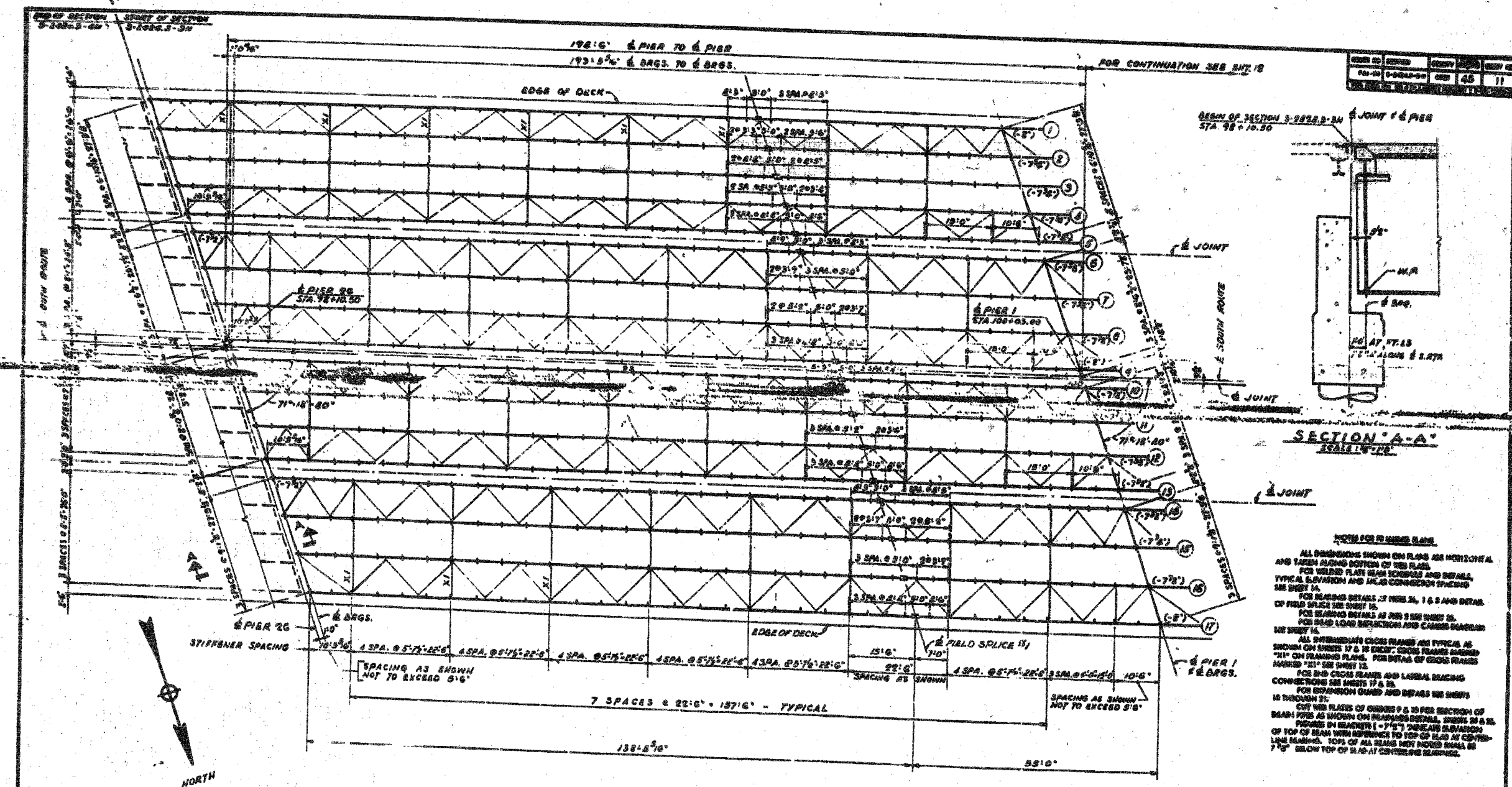
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1116
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

11-66070000-BRIDGE-2ASHEET 5/25/06-11:14:31 PM

62581



NOTES FOR THIS PLAN

ALL DIMENSIONS SHOWN ON PLANS ARE HORIZONTAL AND TAKEN ALONG BOTTOM OF THE SLAB.

FOR WELDED PLATE BEAM JOINTS AND DETAILS, TYPICAL ELEVATION AND ANGLE CONNECTIONS SEE SHEET 14.

FOR BEAM END DETAILS, 1 & 2 AND DETAIL OF FIELD SPICE SEE SHEET 15.

FOR BEAM END DETAILS AT PIER 1 SEE SHEET 16.

FOR BEAM END CONNECTIONS AND CAMBER CHARTS SEE SHEET 16.

ALL INTERMEDIATE CROSS FRAMES ARE TYPICAL AS SHOWN ON SHEETS 17 & 18 EXCEPT CROSS FRAMES MARKED "X" ON FRAMING PLANS. FOR DETAILS OF CROSS FRAMES MARKED "X" SEE SHEET 12.

FOR END CROSS FRAMES AND LATERAL BRACING CONNECTIONS SEE SHEETS 17 & 18.

FOR EXPANSION GUARD AND DETAILS SEE SHEETS 16 THROUGH 18.

CUT THE PLATES OF GIRDERS 9 & 10 FOR SECTION OF BEAM-PIER AS SHOWN ON BEAMING DETAILS, SHEETS 20 & 21. FORMED IN BEAMS (1-7) IS TYPICAL ELEVATION OF TOP OF BEAM WITH REFERENCE TO TOP OF SLAB AT CENTERLINE BRACING. TOP OF ALL BEAMS MUST BE 7" BELOW TOP OF SLAB AT CENTERLINE BRACING.

FRAMING PLAN - SPAN 1
SCALE: 1" = 10' FT.

BEAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
TOE OF PIER 26	59.990	60.000	60.305	60.527	60.645	60.676	60.678	60.628	60.519	60.356	60.162	60.076	60.076	60.077	60.077	60.077	60.077
TOE OF PIER 1	61.178	61.526	61.650	61.573	61.648	61.681	61.571	61.430	61.261	61.066	61.070	61.613	61.870	61.670	61.671	61.667	61.561
TOE OF PIER 2	62.033	61.891	61.188	61.551	61.593	61.593	61.291	61.126	60.781	60.782	61.112	61.252	61.870	61.871	61.178	61.787	60.778
TOE OF PIER 3	59.691	59.739	59.712	59.668	59.614	59.614	59.600	59.628	59.629	59.629	59.764	59.867	59.877	59.877	59.777	59.877	59.544

BILL OF MATERIAL

DESCRIPTION	UNIT	QUANTITY
FURNISHING SELECTING STRUCTURAL STEEL	LBS	4,282,000

* INCLUDES WEIGHT OF BEARINGS & EXPANSION GUARDS

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING

**SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY**

STEWART AVE. TO CANAL ST.
SECTION 8-2024.3-20
**FRAMING PLAN
SPAN 1**

SHEET NO. 11 OF 45 SHEETS DATE: JUN 1, 1964

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1116

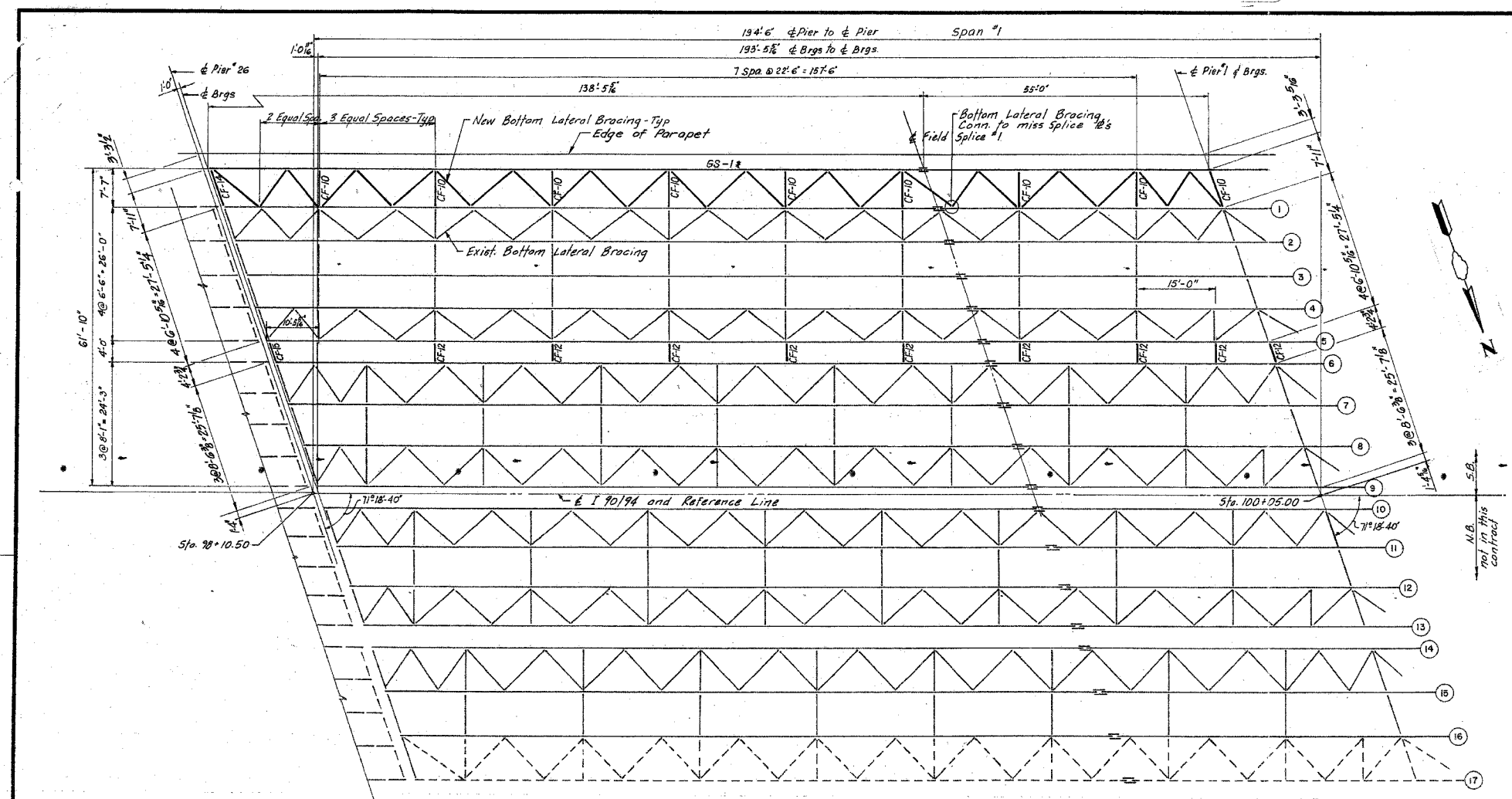
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU

F:\9400\9400 BRIDGE\2\11 SHEETS\62581.DWG (11) 5/23/2006 4:03:39 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	297
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

62581



FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	#	COOK	20	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

1985 - 082 R



- Notes:
- 1) For Bearing Details see Sheets BRG 34 thru BRG 40, Vol. #13
 - 2) For Cross Frame and Bottom Lateral Bracing Details see Sheet 110

LEGEND

* new plate girder (For size and length see Sheet I-8)

PLAN - SPAN 1 (S.B.)

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

SHEET 15 OF 120

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1118
FRAMING PLAN SPAN 1
Scale: NONE
Date: AUG. 14, 1987
Drawn By: A.V.P.
Checked By: A.W.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

REVISIONS	
Name	Date

FOR INFORMATION ONLY

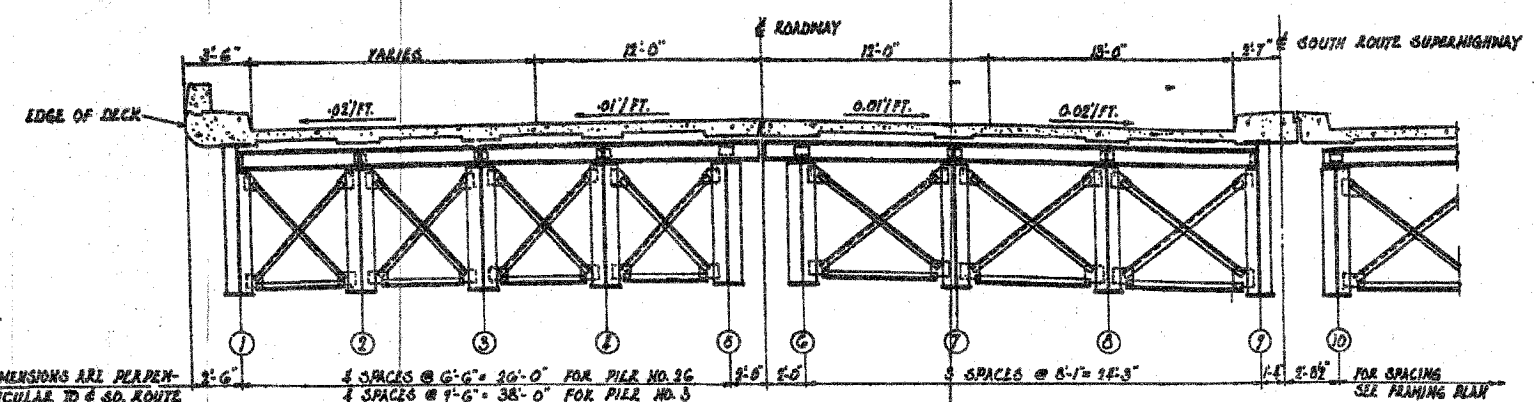
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1116
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

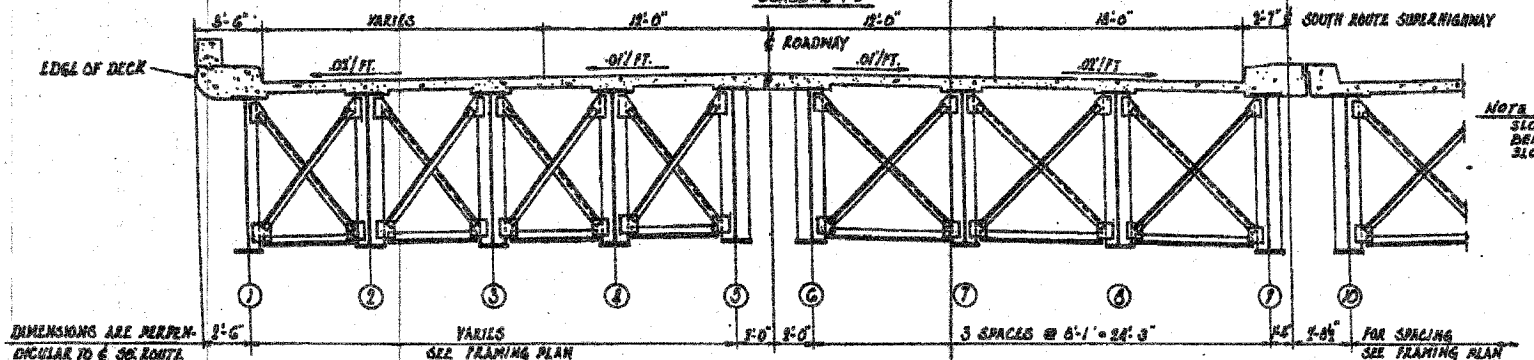
BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

44-403 74 5/23/2006

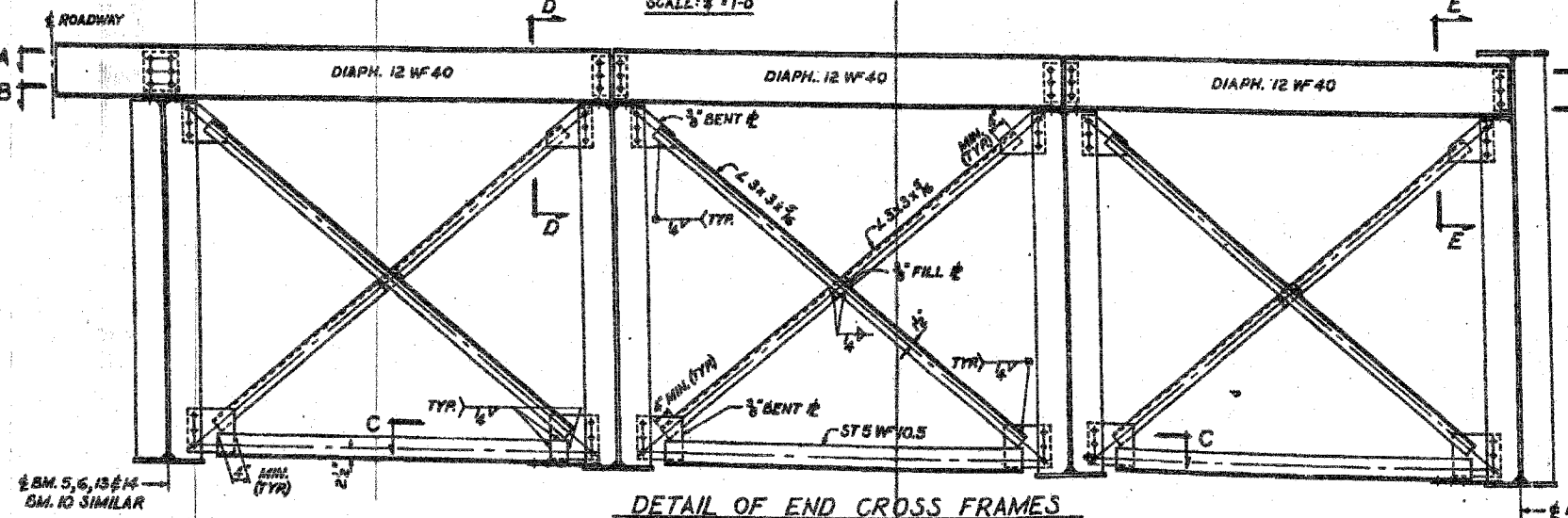
DATE	BY	CHECKED	DATE
04-15-04	B. BARRETT	MTR	04-17-04



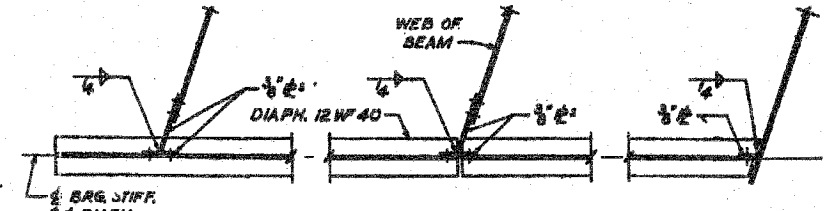
END CROSS FRAMES
PIER 2G AND PIER 3
SCALE: 3/8" = 1'-0"



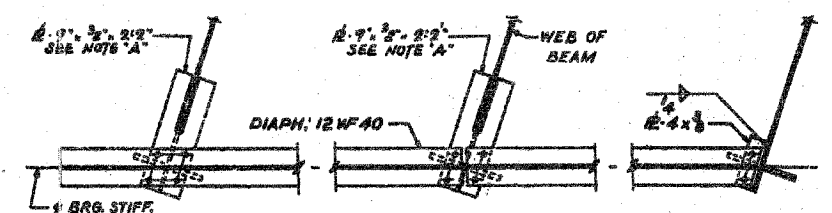
INTERMEDIATE CROSS FRAMES
PIER CROSS FRAMES AT PIER 1 AND PIER 2 SIMILAR
SCALE: 3/8" = 1'-0"



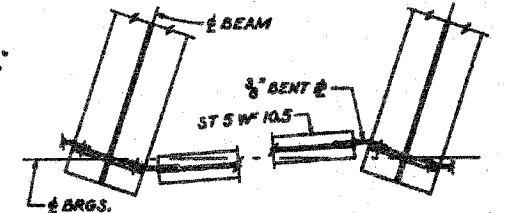
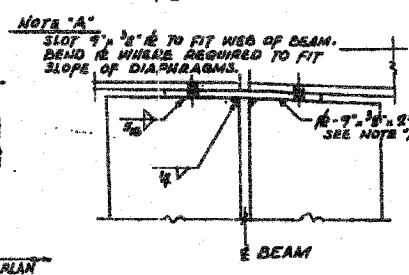
DETAIL OF END CROSS FRAMES



SECTION A-A
SCALE: 3/8" = 1'-0"

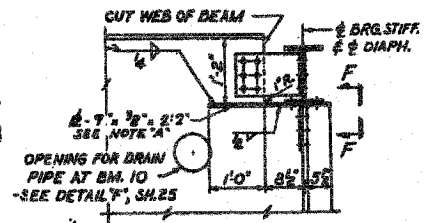


SECTION B-B
SCALE: 3/8" = 1'-0"

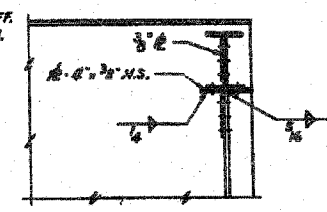


SECTION C-C
SCALE: 3/8" = 1'-0"

SECTION F-F
SCALE: 3/8" = 1'-0"



SECTION D-D
TYPICAL BEAM
SCALE: 3/8" = 1'-0"



SECTION E-E
BEAMS 1, 9, & 17
SCALE: 3/8" = 1'-0"

NOTE:
FOR DETAIL OF INTERMEDIATE CROSS FRAME AND PIER CROSS FRAME SEE SH. 18

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY
STEWART AVE. TO CANAL ST.
SECTION 8-8424.3-3H
CROSS FRAME DETAILS

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1116
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

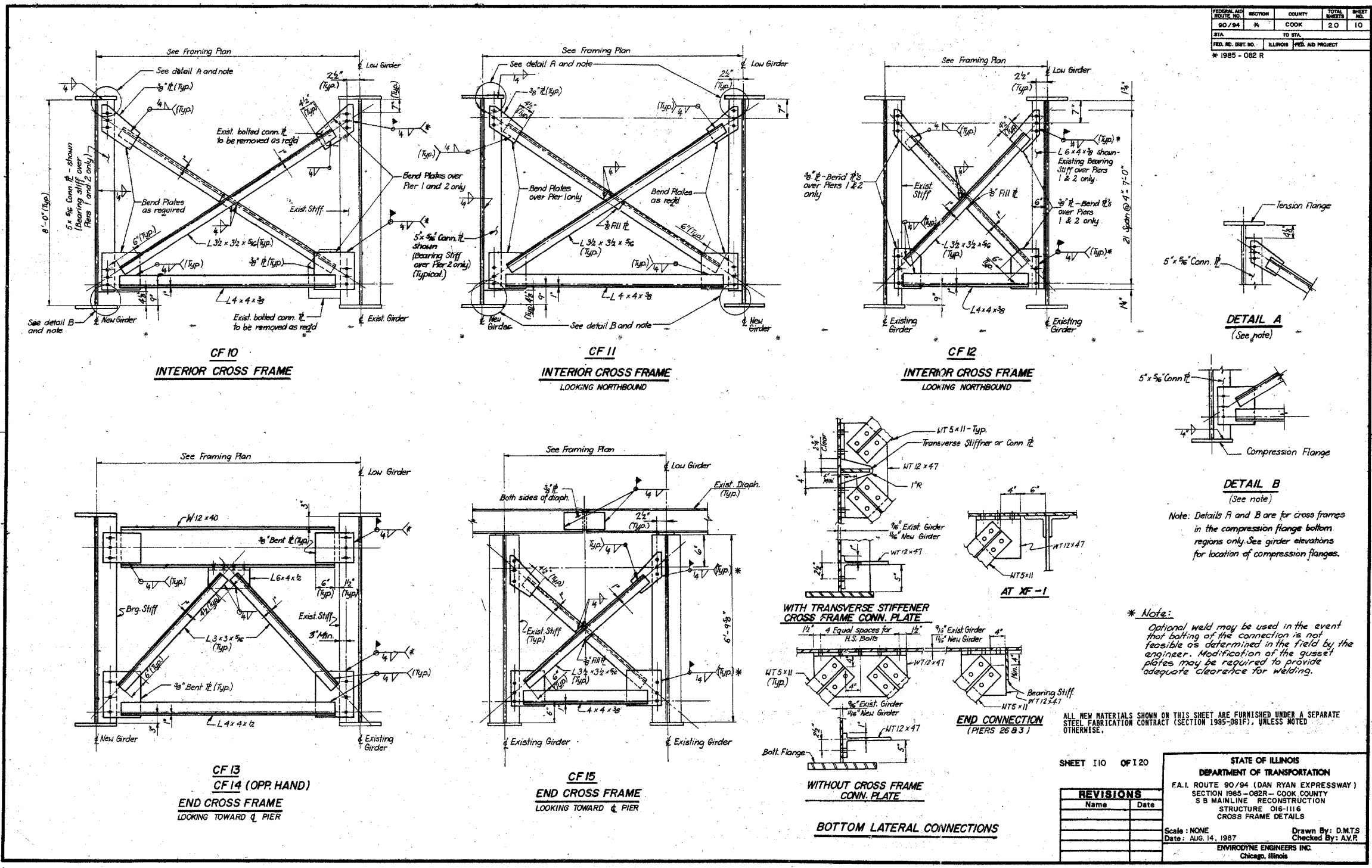
FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

4/26/03 FH

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2003-0291	COOK	344	299
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

* 1985 - 082 R



SHEET 110 OF 120

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082R - COOK COUNTY
 S B MAINLINE RECONSTRUCTION
 STRUCTURE 016-1116
 CROSS FRAME DETAILS

Scale: NONE
 Date: AUG. 14, 1987
 Drawn By: D.M.T.
 Checked By: A.V.R.

ENVIRODYNE ENGINEERS INC.
 Chicago, Illinois

REVISIONS	
Name	Date

FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1116

SCALE: NTS
 DATE: 5/25/2006
 DRAWN BY: MTR
 CHECKED BY: BLU

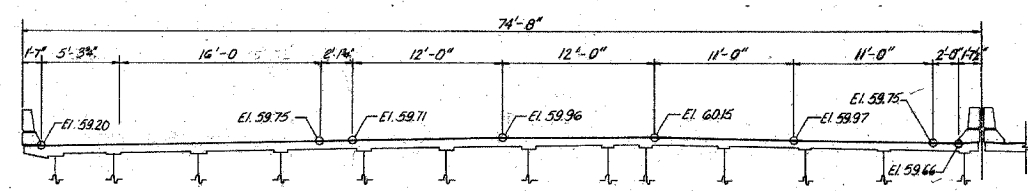
BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

4/16/06 PM 5/23/2006

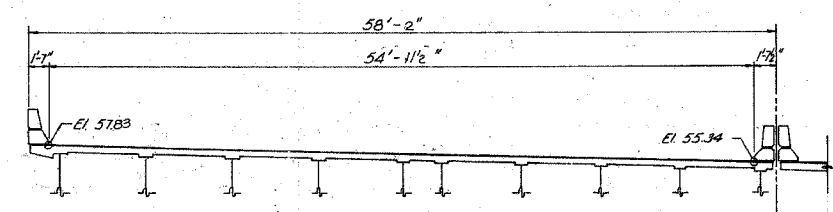
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029BR	COOK	344	300
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581

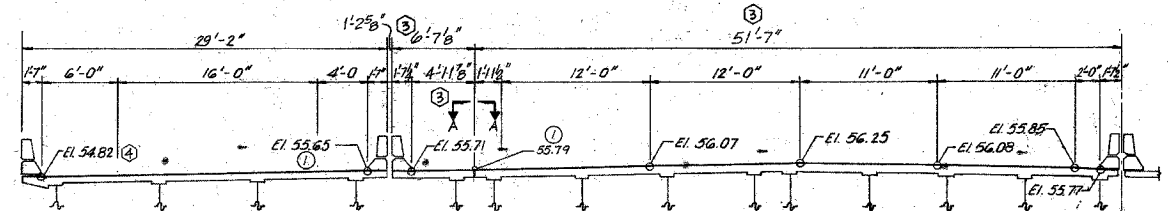
FEDERAL AID PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/54	*	COOK	89	41
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 1985-082 R				



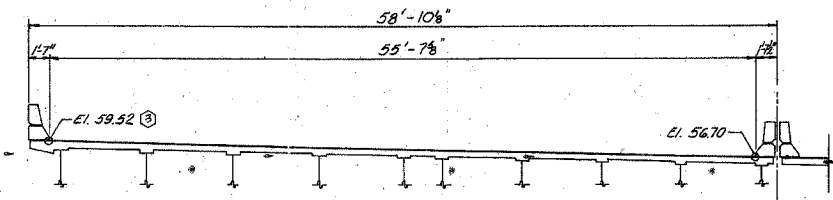
② EXPANSION JOINT AT PIER No. 1
4in. NEOPRENE



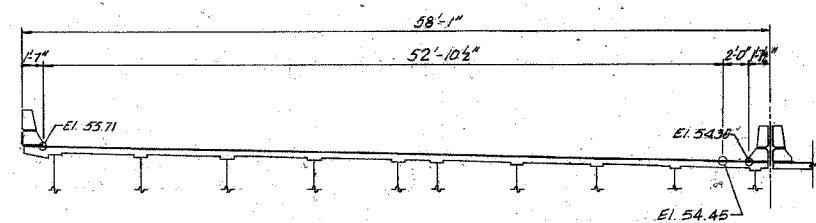
② EXPANSION JOINT AT PIER No. 10
4in. PREFORMED JOINT SEAL



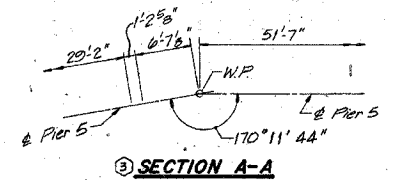
② EXPANSION JOINT AT PIER No. 5
4in. NEOPRENE



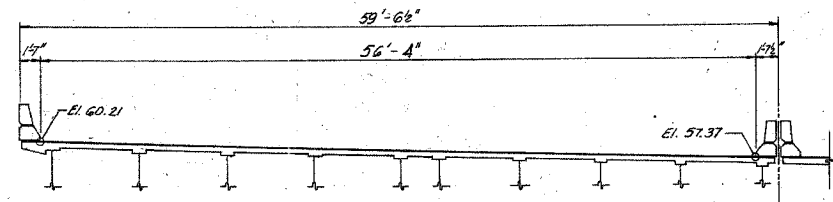
② EXPANSION JOINT AT PIER No. 12
4in. PREFORMED JOINT SEAL



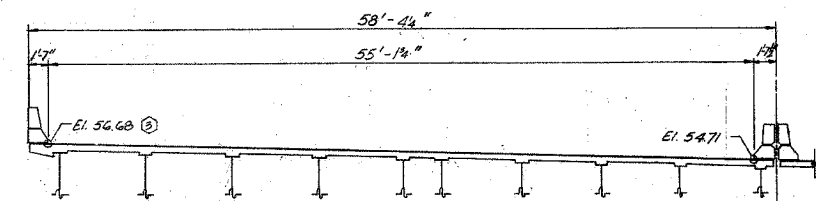
② EXPANSION JOINT AT PIER No. 8
2 1/2 in. PREFORMED JOINT SEAL



③ SECTION A-A



② EXPANSION JOINT AT PIER No. 13
2in. NEOPRENE



② EXPANSION JOINT AT PIER No. 9
2in. NEOPRENE

SHEET 41 OF 89

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R- COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1118
TRANSVERSE DECK JOINT ELEVATION

Scale: NONE
Date: AUGUST 14, 1987
LDrawn By: A.V.
Checked By: M.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

REVISIONS	Name	Date
②	Revision	2-5-88
③	Revision	5-11-88
①		

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
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FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1115

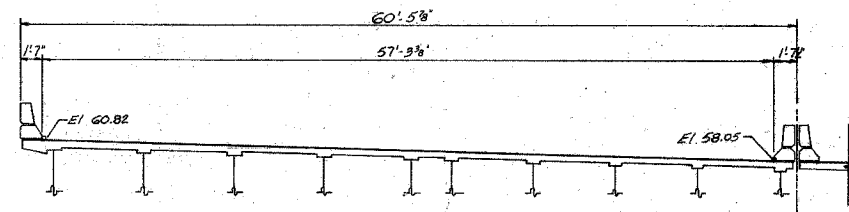
SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU

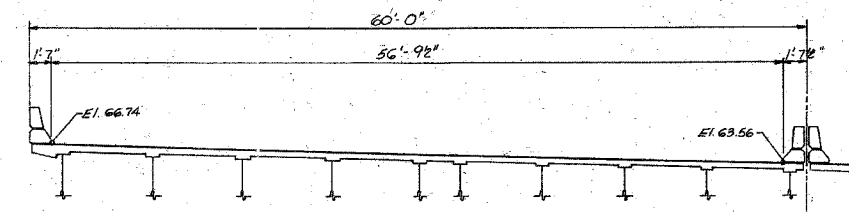
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	301
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

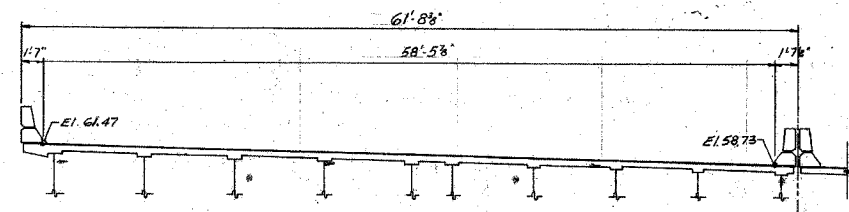
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	89	42
STA.	TO STA.			
FED. NO. DIST. NO.	ILLINOIS	FED. AID PROJECT		
*1985-082 R				



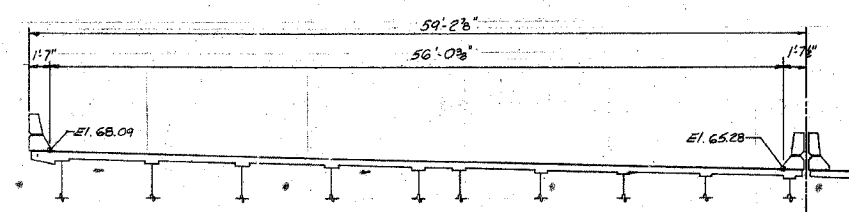
EXPANSION JOINT AT PIER No. 14
2 in. NEOPRENE



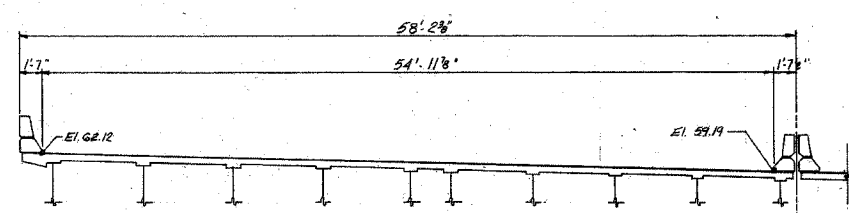
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2 1/2 in. NEOPRENE



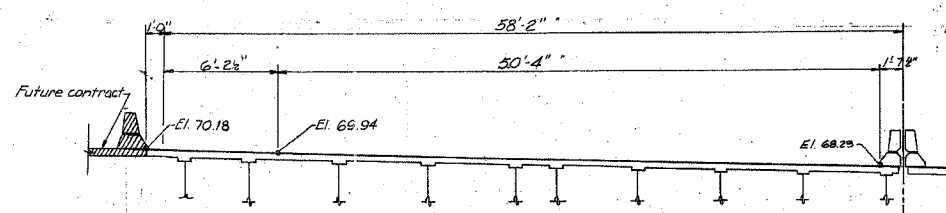
EXPANSION JOINT AT PIER No. 15
2 in. NEOPRENE



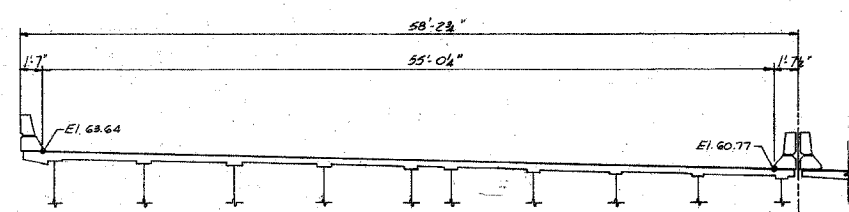
EXPANSION JOINT AT PIER No. 21
2 1/2 in. PREFORMED JOINT SEAL



EXPANSION JOINT AT PIER No. 16
2 1/2 in. NEOPRENE



EXPANSION JOINT AT PIER No. 22
4 in. NEOPRENE



EXPANSION JOINT AT PIER No. 18
2 1/2 in. NEOPRENE

SHEET G 42 OF G 89

REVISIONS	
Name	Date
Revision	2-11-99

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1115
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUG. 14, 1987
Drawn By: A.V.
Checked By: M.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbansainc.com

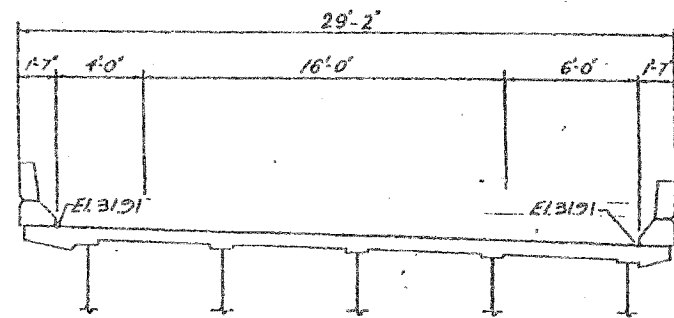
FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

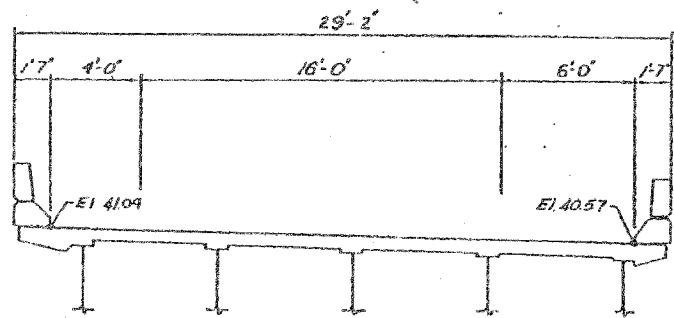
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1115
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

420605 PM 5/23/2006

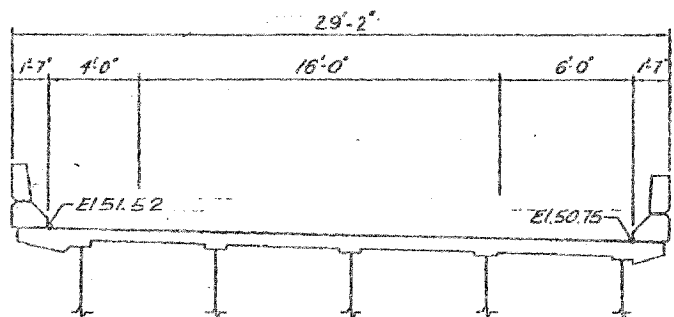
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	302
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



② EXPANSION JOINT AT PIER No. 61
2 1/2 in. PREFORMED JOINT SEAL



EXPANSION JOINT AT PIER No. 57
4 in. NEOPRENE



② EXPANSION JOINT AT PIER No. 53
2 in. NEOPRENE

SHEET H 23 OF H 69

REVISIONS	
Name	Date
① Revision	6-5-08

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1905 - 052 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016 - 1046
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUG. 14, 1997
Drawn By: A.Y.
Checked By: M.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

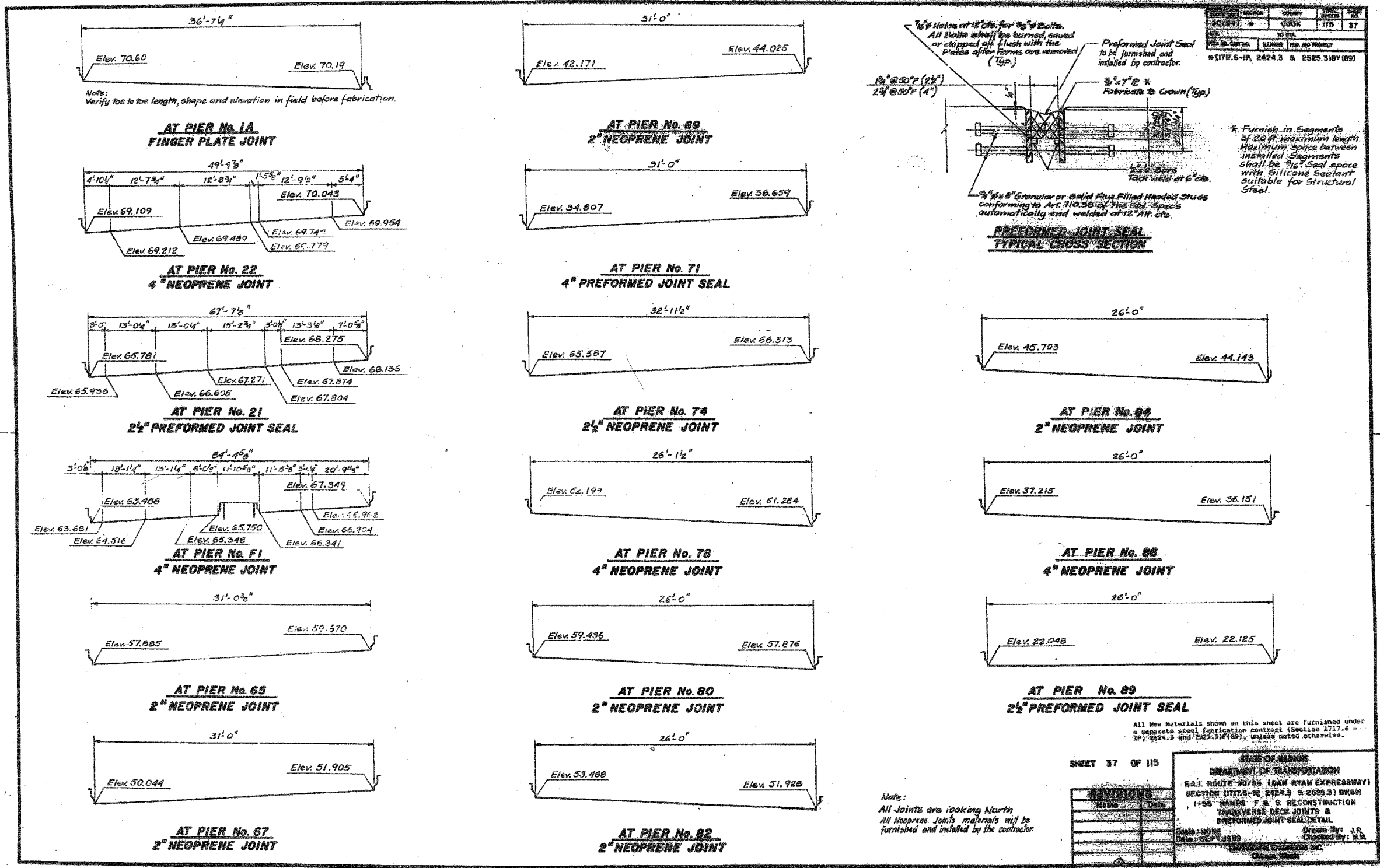
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		SB DAN RYAN ELEVATED BRIDGE	
		REPAIR FROM 15TH TO 28TH STREETS	
		EXISTING PLAN INFORMATION	
		SN 016-1046	
		SCALE: NTS	DRAWN BY: MTR
		DATE: 5/25/2006	CHECKED BY: BLU

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

4/21/09 PM 5/23/2006

62581



Note:
All Joints are looking North
All Neoprene Joints materials will be furnished and installed by the contractor.

SHEET 37 OF 115

REVISIONS	NAME	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
E.A.I. ROUTE 94/90 (DAN RYAN EXPRESSWAY)
SECTION 1717.6 - IP, 2424.3 & 2525.3 BY09
1+55 RAMP F & G RECONSTRUCTION
TRANSVERSE DECK JOINTS & PREFORMED JOINT SEAL DETAIL
Scale: NONE
Date: SEPT 2009
Drawn By: J.R.
Checked By: M.M.
BOWMAN, BARRETT & ASSOCIATES, INC.
Chicago, Illinois

BOWMAN, BARRETT & ASSOCIATES, INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.229.0100
www.bbainc.com

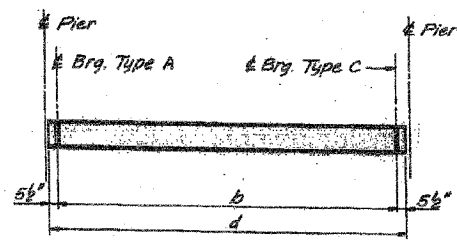
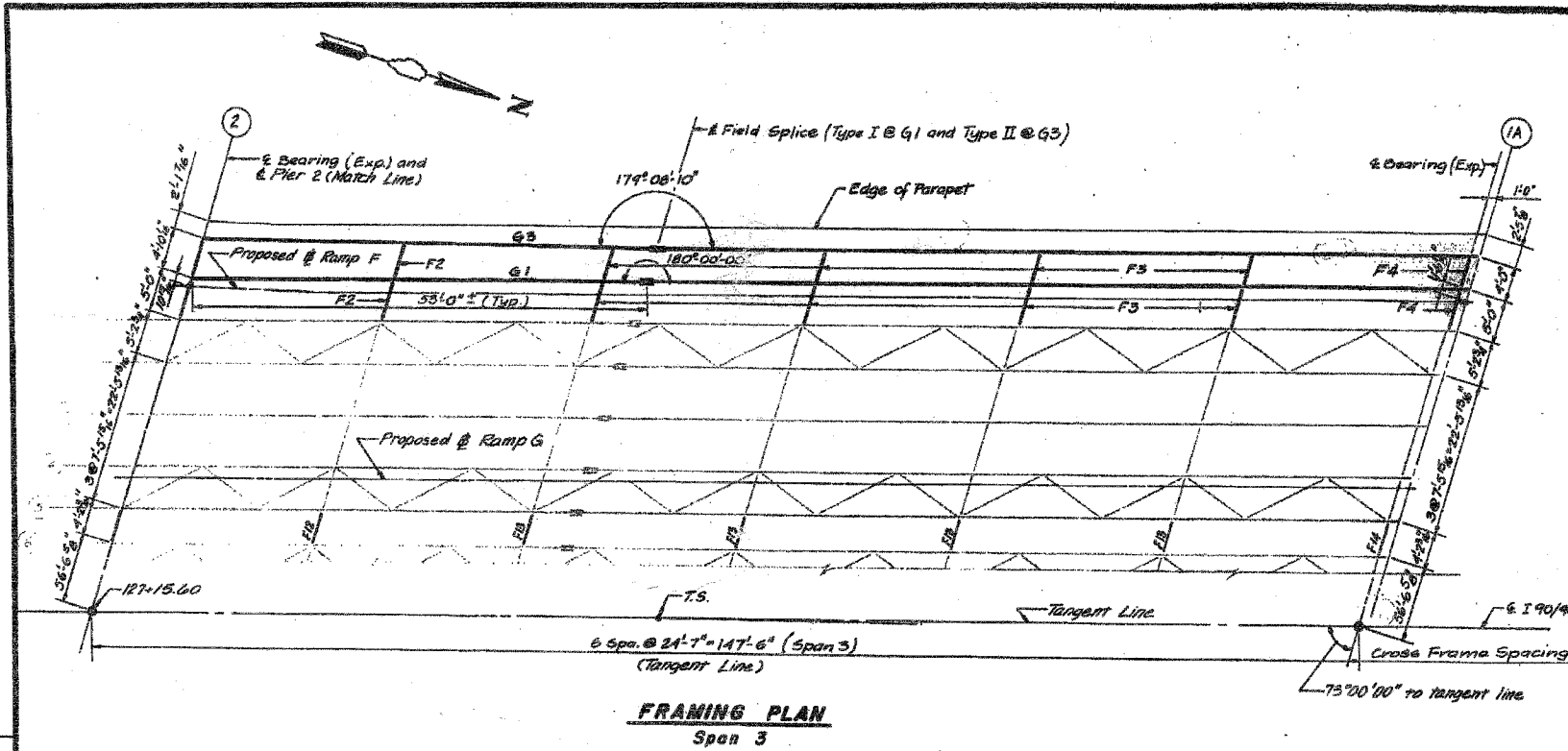
FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1050, 1062, 1066
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

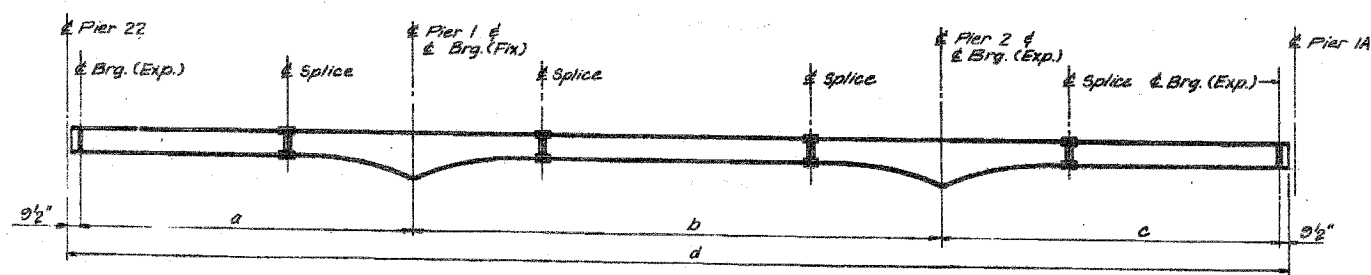
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SECTION	COUNTY	DATE	BY
1177.6 - 1177.6	COOK	1/15/02	22
1177.6 - 1177.6 3 B 2525.3 BY (89)			



GIRDER ELEVATION
Girders G4 thru G8
(Structure No. 016-1062)

Dimension Table							
Location	Girder	Type	A	b	Type	C	d
Span F2	G4	Fix	162'-5 1/2"	Fix	163'-4 1/2"		
Span F2	G5	Fix	163'-3"	Fix	164'-0"		
Span F2	G6	Fix	165'-0 3/4"	Fix	165'-11 3/4"		
Span F1	G7	Fix	84'-1 1/2"	Fix	85'-0 3/4"		
Span F1	G8	Fix	83'-10 7/8"	Fix	84'-0 3/4"		
Span F1	G9	Fix	83'-8 1/2"	Fix	84'-7 1/2"		



GIRDER ELEVATION
Girders G1 & G3

Dimension Table					
Location	Girder	a	b	c	d
Spans 1-3	G1	147'-8 1/2"	220'-0"	147'-6"	516'-7 1/2"
Spans 1-3	G3	146'-2 3/4"	218'-2"	147'-3"	513'-2 3/4"

All New Materials shown on this sheet are furnished under a separate steel fabrication contract (Section 1717.6 - 1P, 2424.3 and 2525.3)(89), unless noted otherwise.

SHEET 22 OF 115

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	
EAL. ROUTE 80/28 (DAN RYAN EXPRESSWAY)	
SECTION (1177.6 - 1177.6 3 B 2525.3) (89)	
1 - SB DAN RYAN ELEVATED BRIDGE	
STRUCTURE - SN 016-1050, 1062, 1066	
FRAMING PLAN - SHEET 22 OF 115	
DESIGNED BY	Checked by W.K.K.

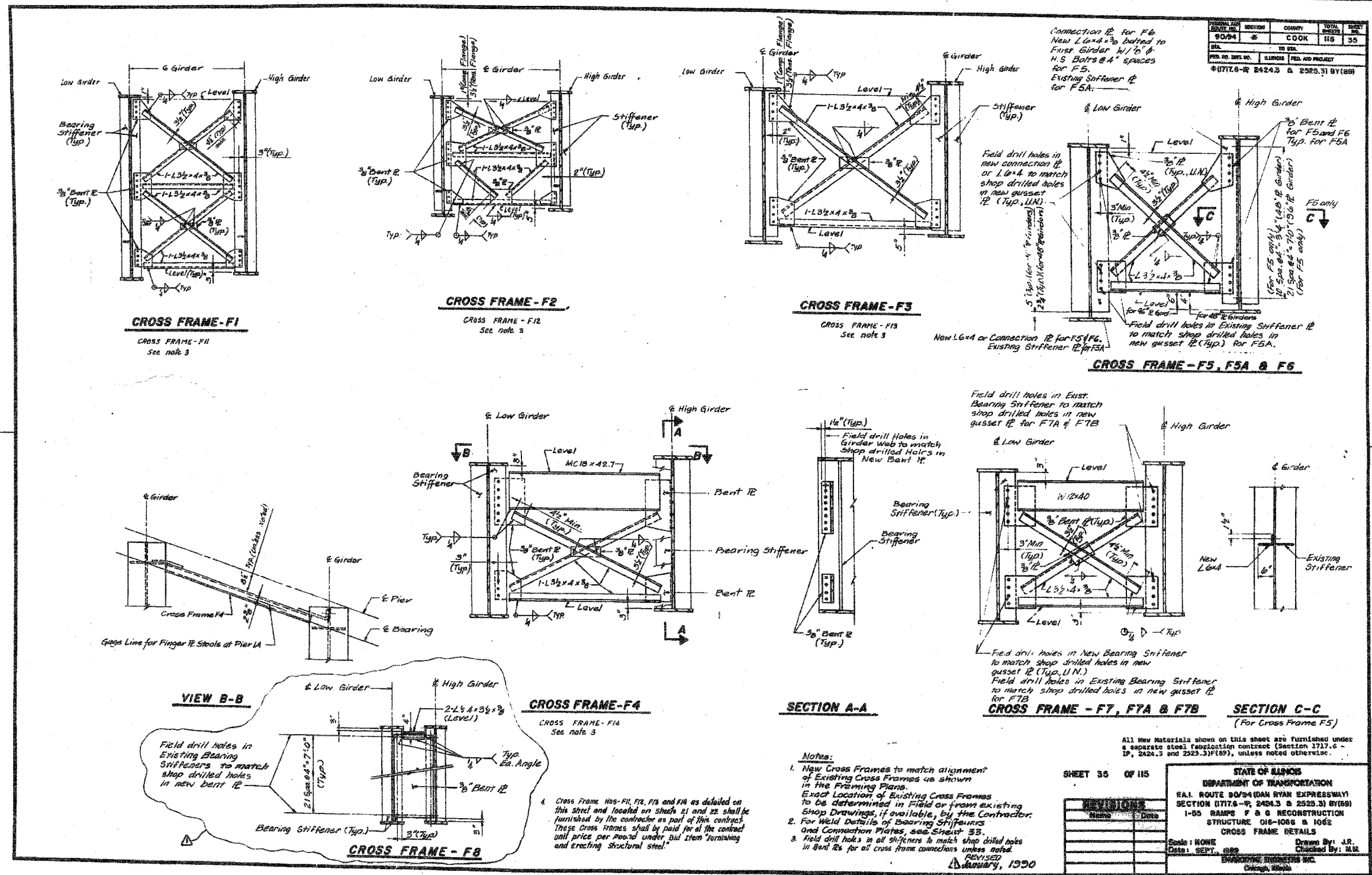
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1050, 1062, 1066

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU

FOR INFORMATION ONLY



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5094	COOK	344	305
TO SEAL			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		

All New Materials shown on this sheet are furnished under a separate steel fabrication contract (Section 1717.6 - IP, 2424.3 and 2525.3)(F89), unless noted otherwise.

SHEET 35 OF 115

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
R.A.I. ROUTE 50/94 (DAN RYAN EXPRESSWAY)
SECTION (1717.6 - R, 2424.3 & 2525.3) (F89)
I-55 RAMP F & G RECONSTRUCTION
STRUCTURE 016-1062 & 1062
CROSS FRAME DETAILS

Scale: NONE
Date: SEPT, 1989
Drawn By: J.R.
Checked By: BLU

ENGINEERING BUSINESS INC.
Chicago, Illinois

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1050, 1062, 1066

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU

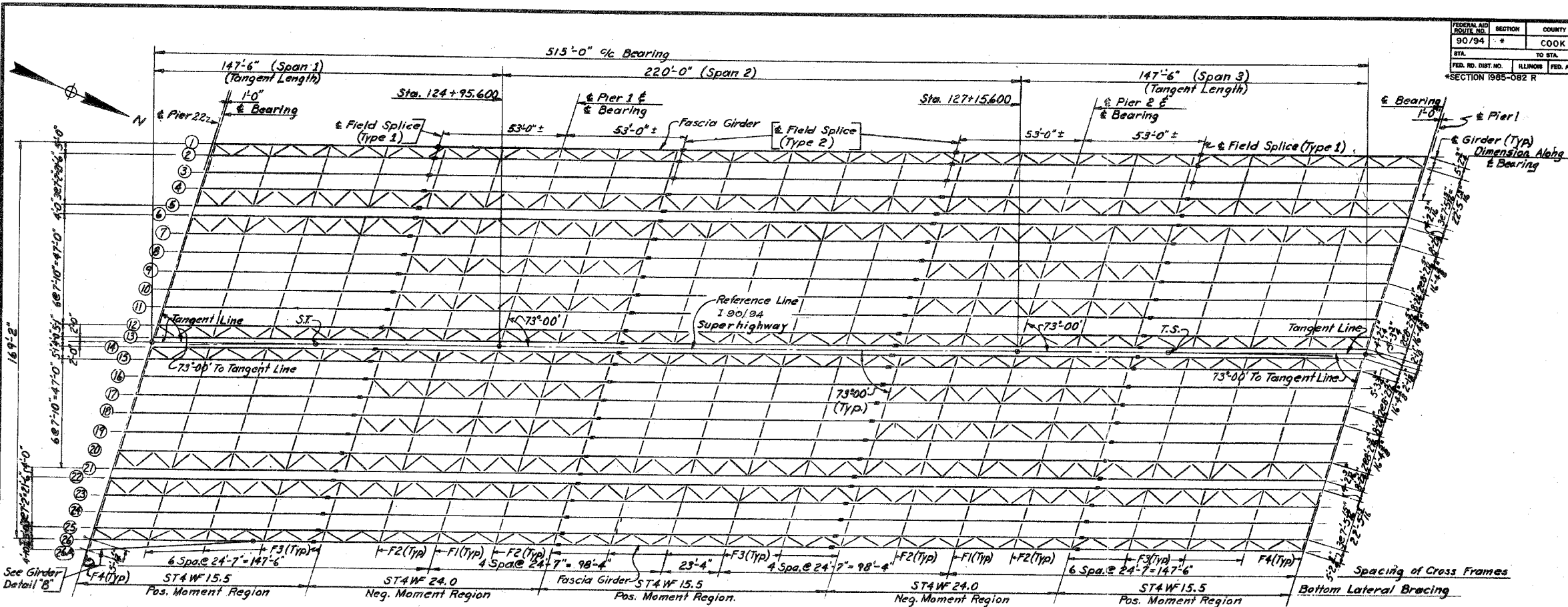
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FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

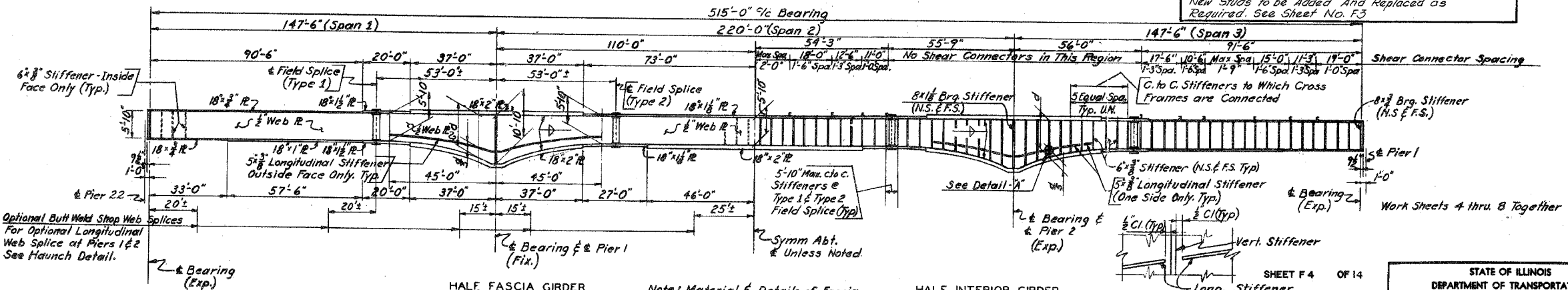
SECTION 1985-082 R



Note: There shall be no Cross Frames between Girders 5 & 6, 13 & 14, 21 & 22.

EXISTING FRAMING PLAN

NOTES
 This Sheet is Furnished for Reference Only. No New Steel Plate Girders or Crossframes are Req'd. New Studs to be Added and Replaced as Required. See Sheet No. F3.



Note: Material & Details of Fascia & Intermediate Girders are the same unless shown or noted.

EXISTING GIRDER ELEVATION

DETAIL 'A'

SHEET F 4 OF 14

REVISIONS	
Name	Date

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R COOK COUNTY
 STRUCTURE NO. 016-1114
 S.B. MAINLINE RECONSTRUCTION
 EXISTING FRAMING PLAN

Scale: None
 Date: AUGUST 14, 1997
 Drawn By: S.R.
 Checked By: sk
 ENVIRONMENTAL ENGINEERS INC.
 Chicago, Illinois

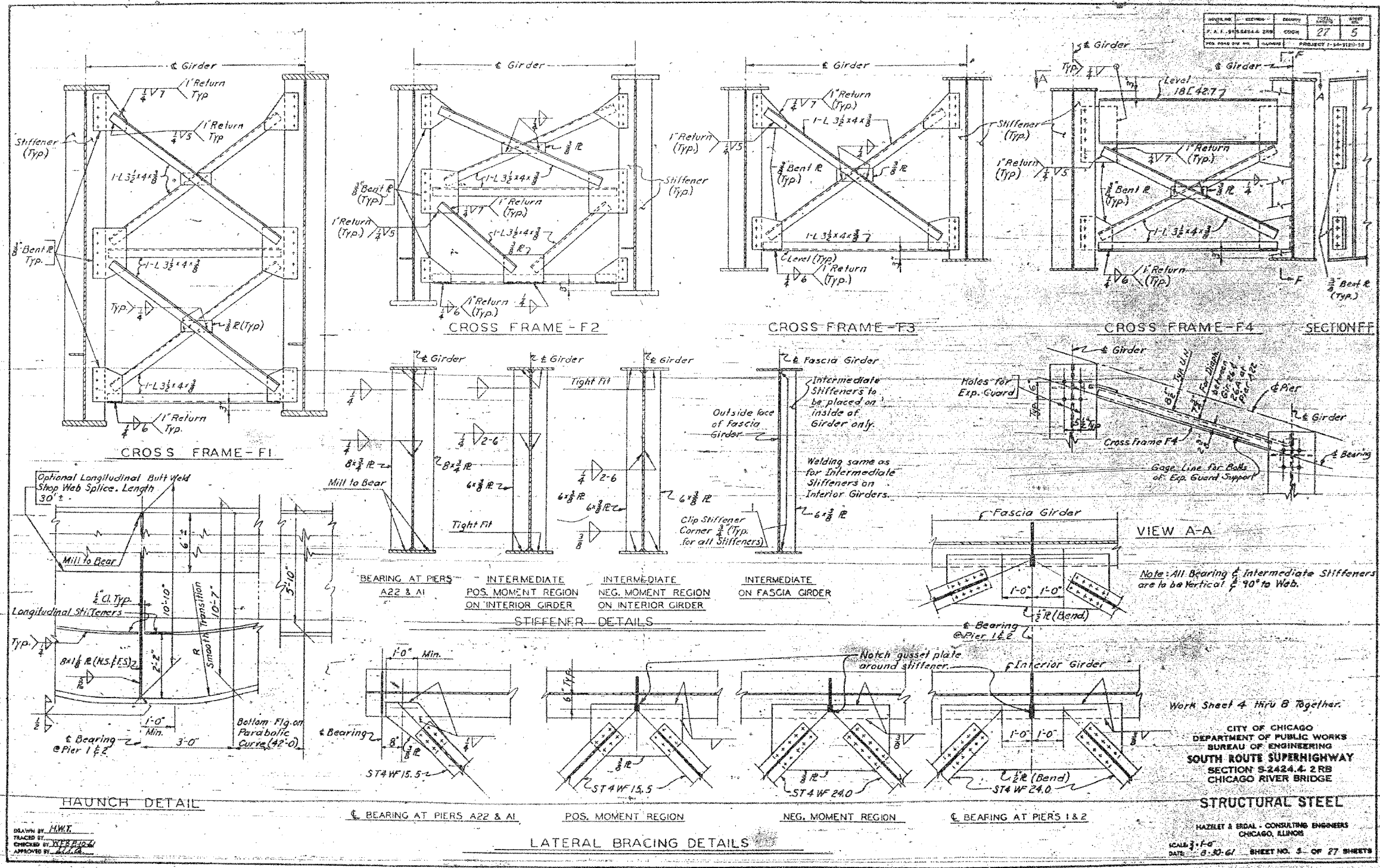
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1114

SCALE: NTS
 DATE: 5/25/2006
 DRAWN BY: MTR
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REVISIONS	
NAME	DATE

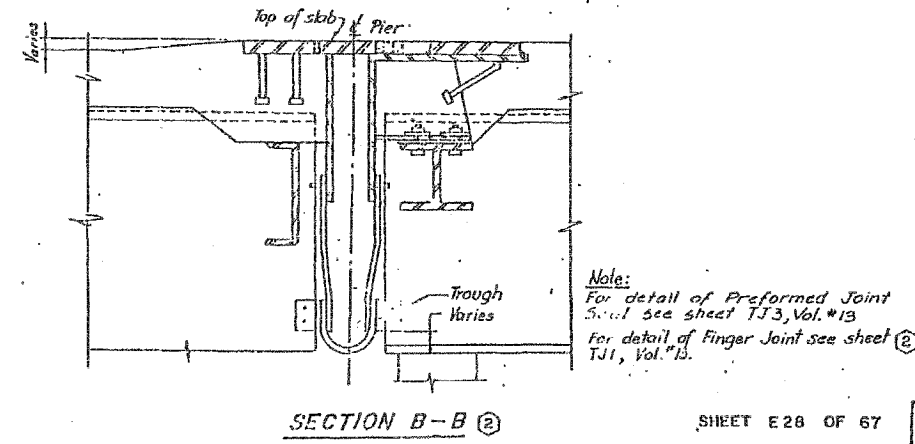
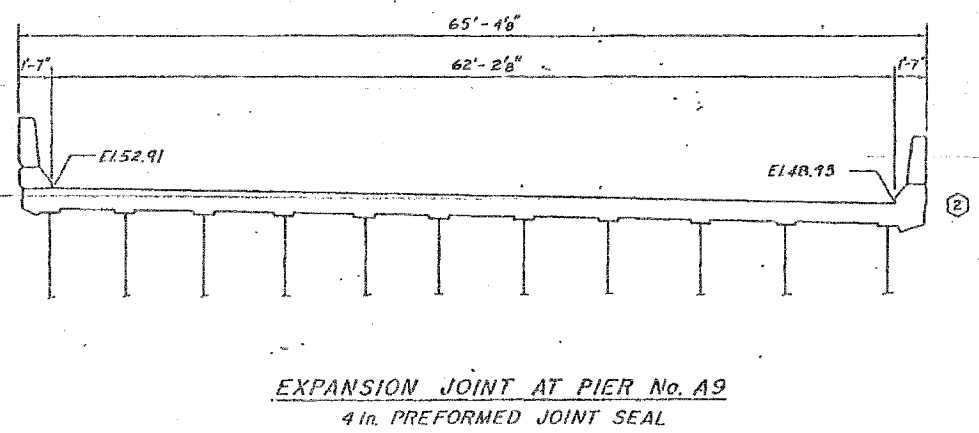
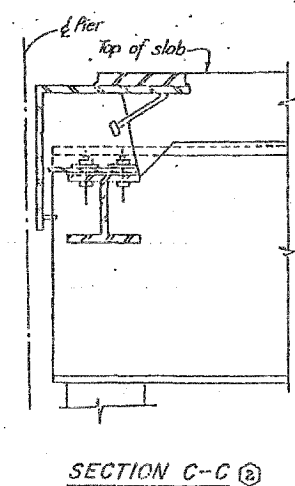
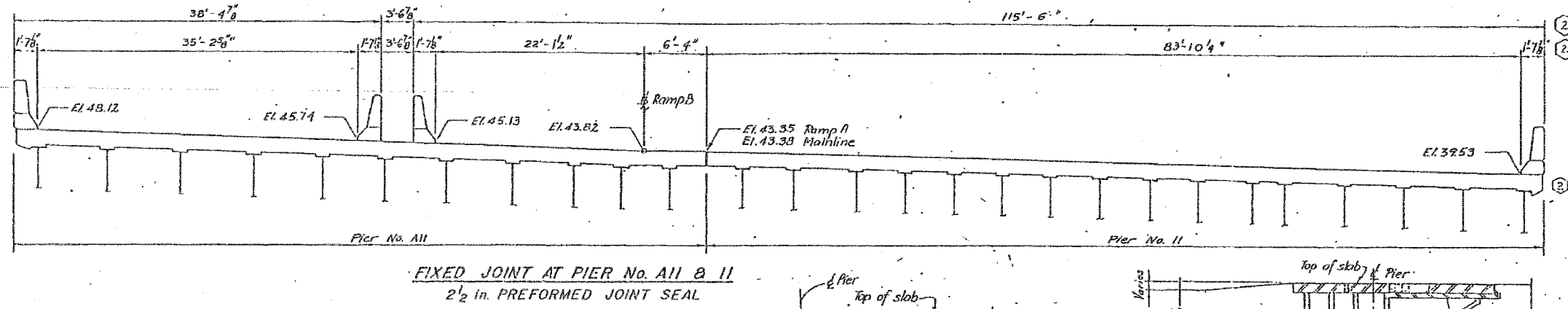
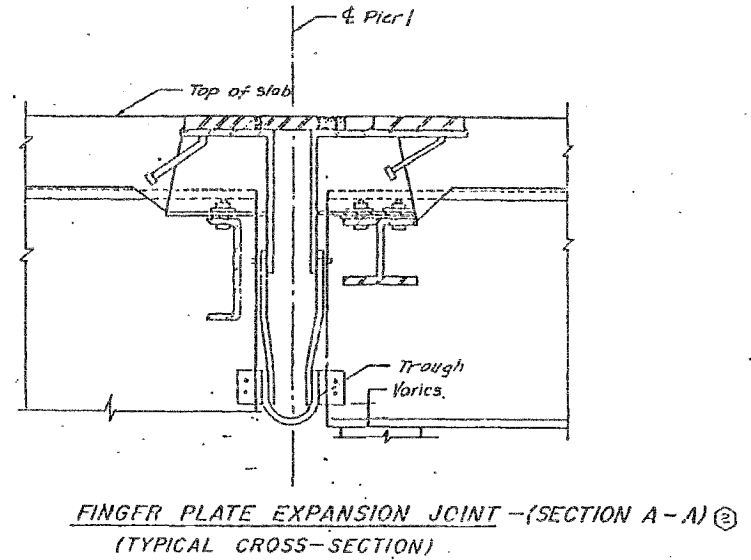
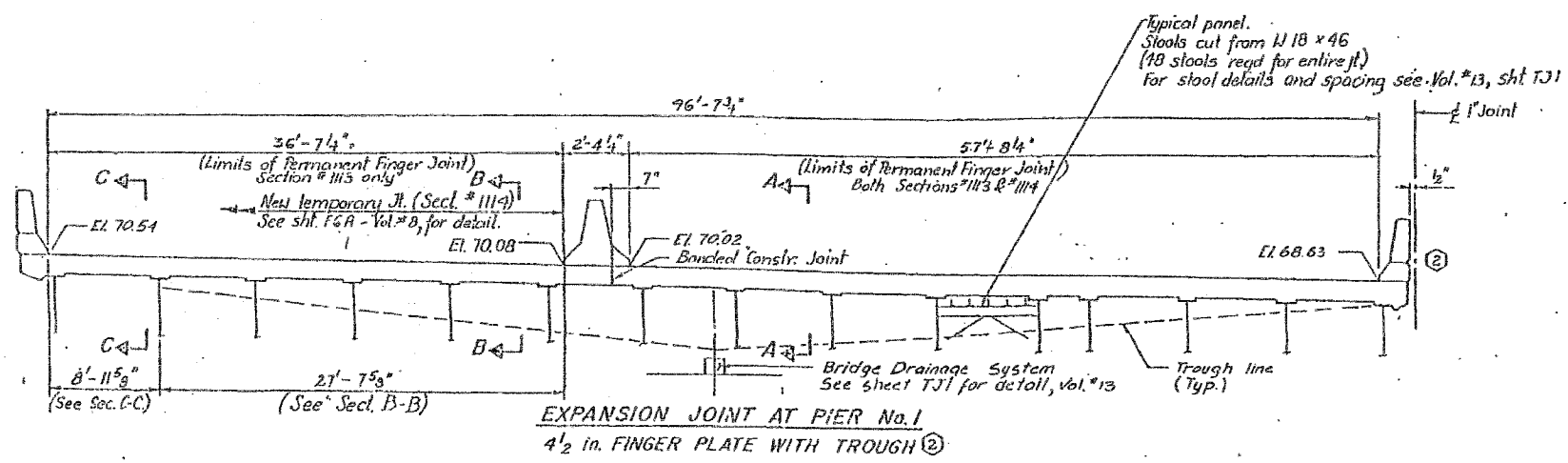
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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1114

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
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4/26/06 5:23/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62581				



SHEET E28 OF 67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.D. MAINLINE RECONSTRUCTION
STRUCTURE 016-1113
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUG. 14, 1987
Drawn By: H.C.
Checked By: M.M.
ENVIRONMENTAL ENGINEERS INC.
Chicago, Illinois

REVISIONS	
Name	Date
(2) Revision	2-5-88

REVISIONS NAME	DATE

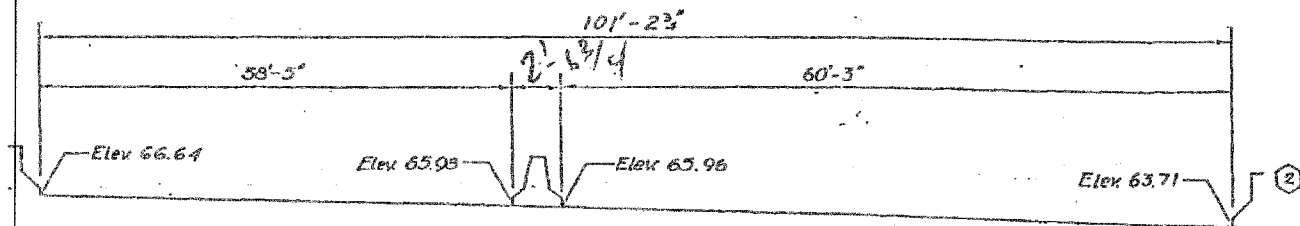
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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1113
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

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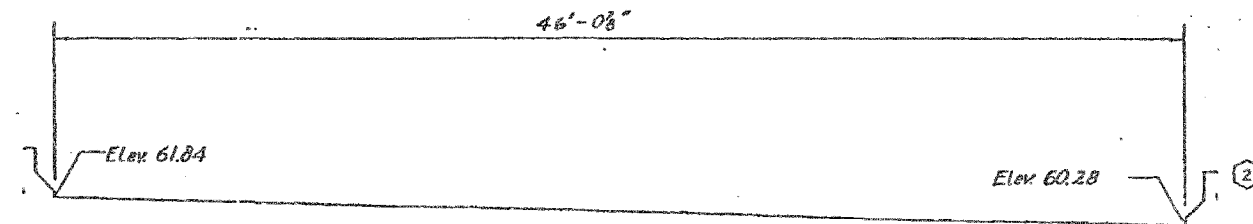
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RANGE 0000 BRIDGE SHEETS 660-21 016-1113 ELEVATION

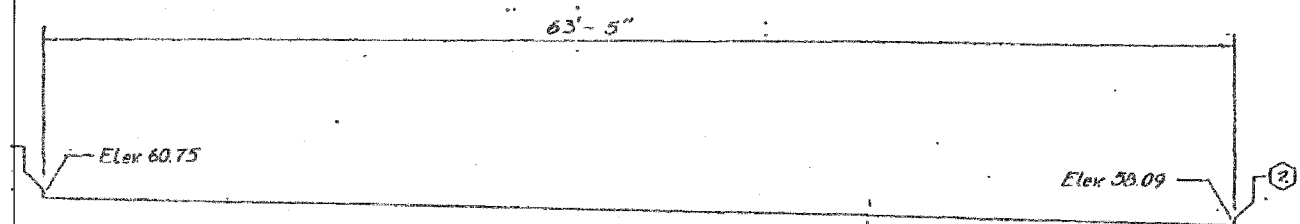
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				



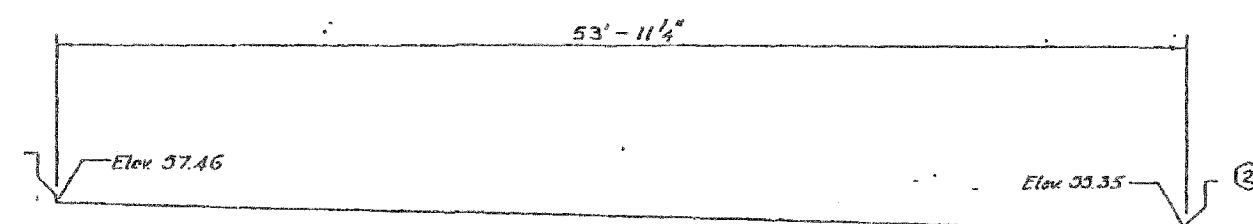
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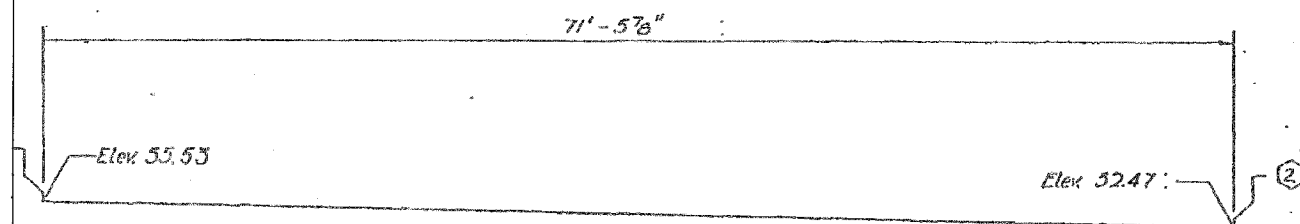
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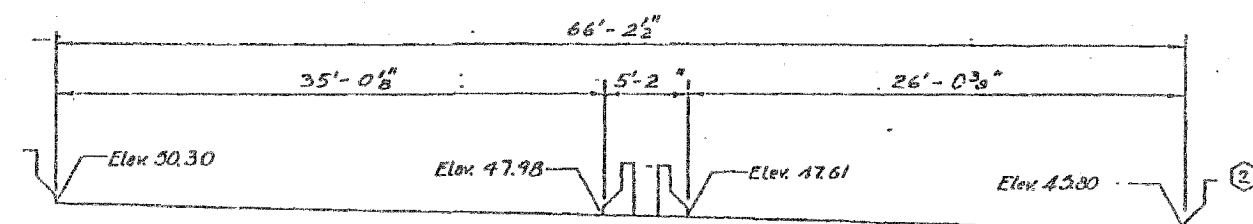
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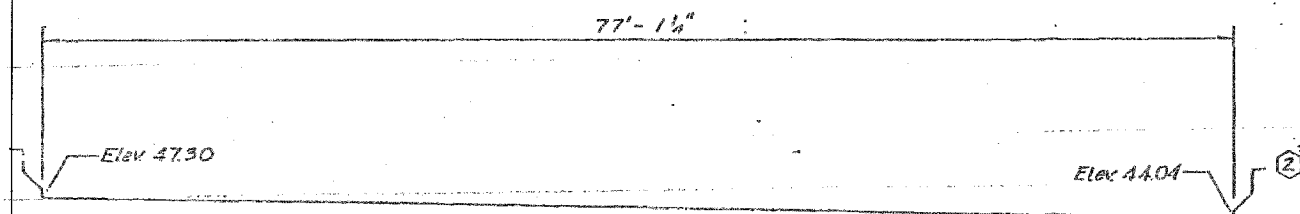
AT PIER No. A7
2 1/2" NEOPRENE JOINT



AT PIER No. 7
4" NEOPRENE JOINT



AT PIER No. A10
4" NEOPRENE JOINT



AT PIER No. 10
4" NEOPRENE JOINT

SHEET E29 OF 67		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
F.A.I. ROUTE 94/90 (DAN RYAN EXPRESSWAY)		SECTION 1985-082 R - COOK COUNTY	
S.B. MAINLINE RECONSTRUCTION		STRUCTURE 016-1113	
TRANSVERSE DECK JOINT ELEVATION		Drawn By: G.D.	
Scale: NONE		Checked By: J.L.H.	
Date: AUG 14, 1987		ENVIROTYPE ENGINEERS INC.	
		Chicago, Illinois	

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1113

SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

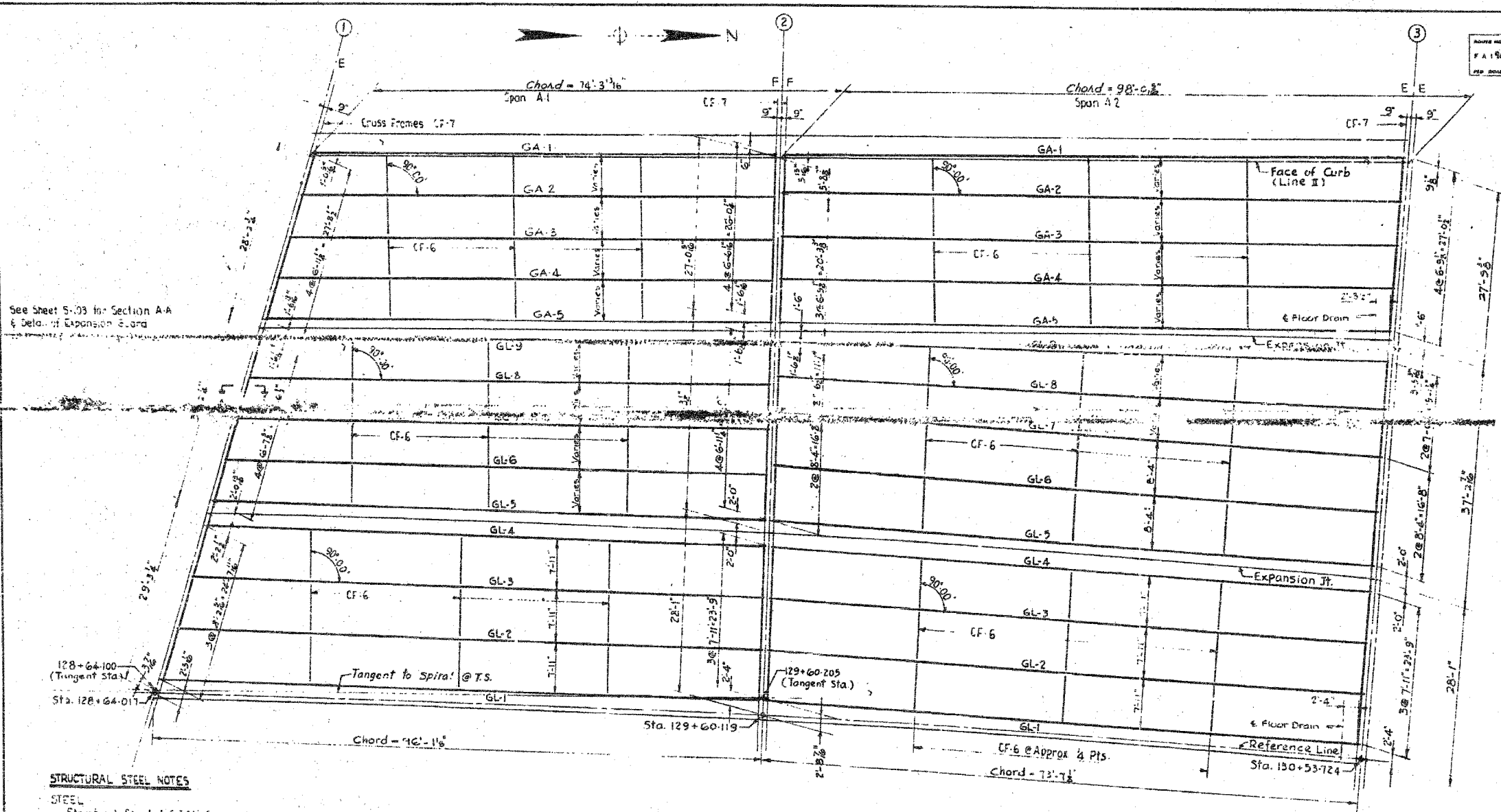
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PAGE 000009 BRIDGE SHEETS 660.21.DWG 11/25/06 4:30:01 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	310
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				

ADDITIONAL SHEETS	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 94/90	COOK	152	06



See Sheet S-03 for Section A-A & Det. of Expansion Guard

STRUCTURAL STEEL NOTES

STEEL
Structural Steel A 57M Designation A373 shall be used throughout except as noted below.

A 57M Designation A7 Steel to be used for cross frames, expansion plates, anchor bolts, field splice plates, expansion guards, channel shear connectors & floor drain brackets.

FIELD CONNECTIONS
Cross Frames - 3/4 High Strength Bolts A 57M A 325
Girder Splices - 1/4 High Strength Bolts A 57M A 325
Expansion Guard Brackets - 3/4 R Bolts
Floor Drain Brackets - 3/4 High Strength Bolts. See Sheet S

SPICES (Continuous Girders)
Field splices may be vertical or normal to the girders at the option of the fabricator. Holes for field splices shall bereamed with the girders assembled in position, in accordance with the blocking diagrams.
Shop web splices shall be made vertical.

PLAN - SPANS 1 & 2 - LEFT

(Continued)

FLANGE PLATE WELDS
Weld flanges to web with continuous fillet weld each side of web.
Size of Weld Flange Thickness
3/8 up to & including 3/4
3/8 up to & including 1 1/4
3/8 up to & including 1 3/4
1/2 greater than 2 1/4

PAINTING
The Contractor for Section 5-2424.3-1HF shall furnish & apply one shop coat of red lead paint & two field coats of paint to all structural steel, except as noted below.
The tops of girder top flanges will not be painted except for a distance of five feet each way from piers.

EXPANSION GUARDS
See Structure Plan & Elevation Drawings for locations of expansion guards.
See Expansion Guard Drawings for dimensions & details.

(Continued)

ROCKERS
See Rocker Drawings & Schedule for dimensions & details.

SIMPLE SPAN GIRDERS
See Simple span Girder Details & Simple Span Girder Schedules for girder dimensions, shear connector spacings, web stiffener spacings, plate sizes, angles with piers, and lengths.

CONTINUOUS GIRDERS
See Continuous Girder Details for dimensions, shear connectors, web stiffeners, plate sizes & lengths.

CROSS FRAMES
Intermediate Cross Frames to be located at approximate 1/4 etc points as shown on plans. Maximum spacing to be 25'-0"

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DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
SECTION NO. 5-2424.3-1H
SECTION NO. 5-2424.3-1HF
CHICAGO RIVER TO W. CERMAK RD.
FRAMING PLAN
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS
DESIGNED BY R.L.F. CHECKED BY H.S.M.
DRAWN BY DATE: SEP 1961
SCALE: 1/8" = 1'-0" SHEET NO. S-76 OF 152

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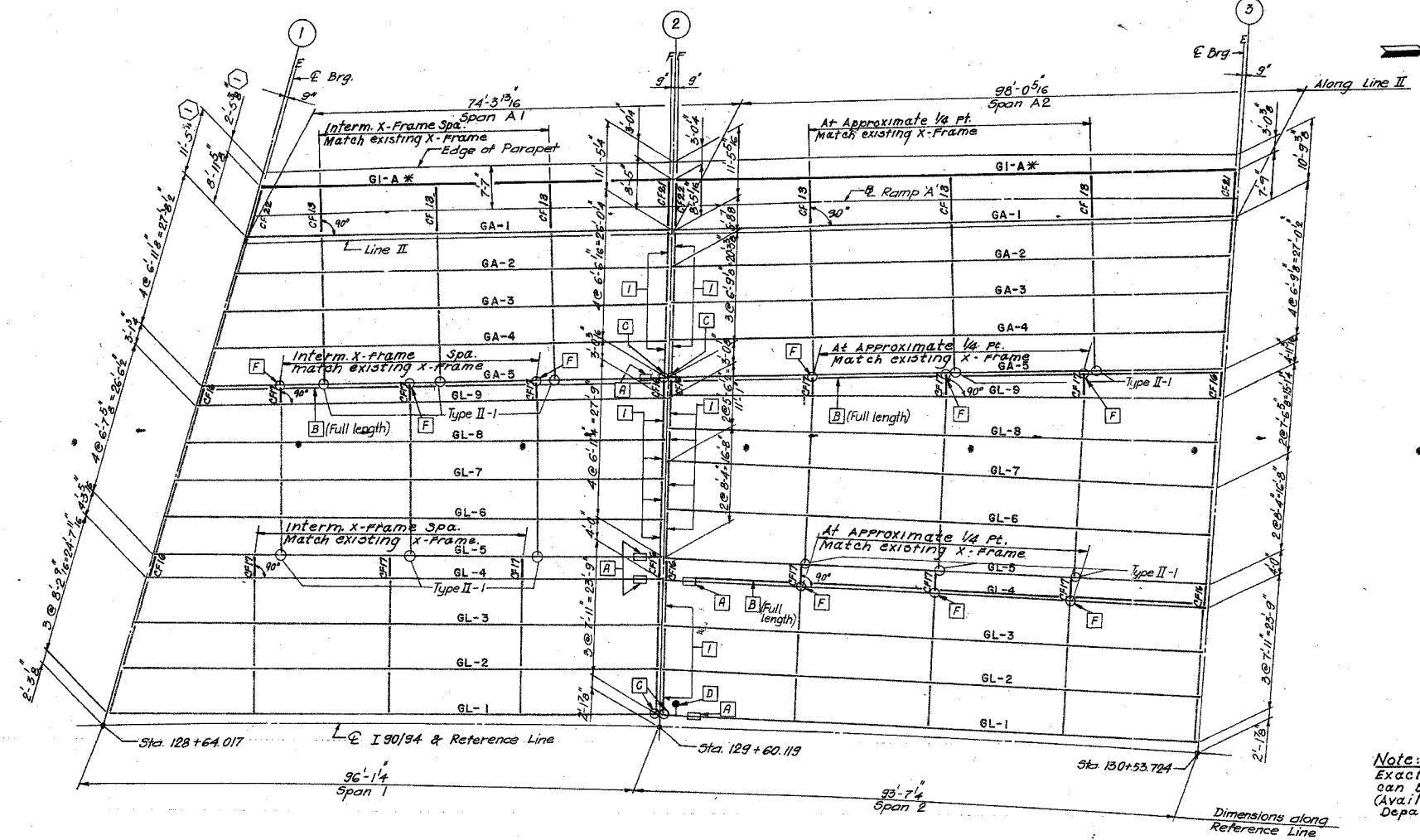
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REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1113
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

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FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	67	15
STA.		TO STA.		
FED. NO. DIST. NO.		ILLINOIS FED. AID PROJECT		
* 1985-082 R				



Note:
Exact location of existing X-Frame can be obtained from Shop Drawings. (Available from State Of Illinois, Department Of Transportation.)

PLAN- SPANS 1 & 2 (S.B.)

Legend:
* New R Girder (For size and length see sheet E22)

TYPE II - Detail Number
Retrofit
Cross Frame at bottom Flange
See Sht. E 26

- (1) End X-Frame, Type 2. See Sht SR-3, Vol. #13 for detail.
- (A) For Repair, Girder Web near Bearing Stiffener. See Sht. SR-5, Vol. #13 for detail.
- (C) For Repair, Web Plate at end of Girder. See Sht. SR-5, Vol. #13 for detail.
- (F) Special Cross Frame Connection at longitudinal Reinforcing. See Sht. SR-6, Vol. #13 for detail.
- (D) For Repair, End Bearing Stiffener (side(s) indicated). See Sht. SR-5, Vol. #13 for detail.
- (B) Longitudinal Reinforcing Repair (side indicated). See Sht. SR-5, Vol. #13 for detail.

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

SHEET E15 OF 67

REVISIONS	
Name	Date
(1) Revision	1-8-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R-COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-113 (RAMP A & MAINLINE)
FRAMING PLAN SPANS 1 & 2, A1 & A2

Scale: NONE
Date: AUG. 14, 1987
Drawn By: R.G.
Checked By: M.M.

ENVIRODYNE ENGINEERS INC.
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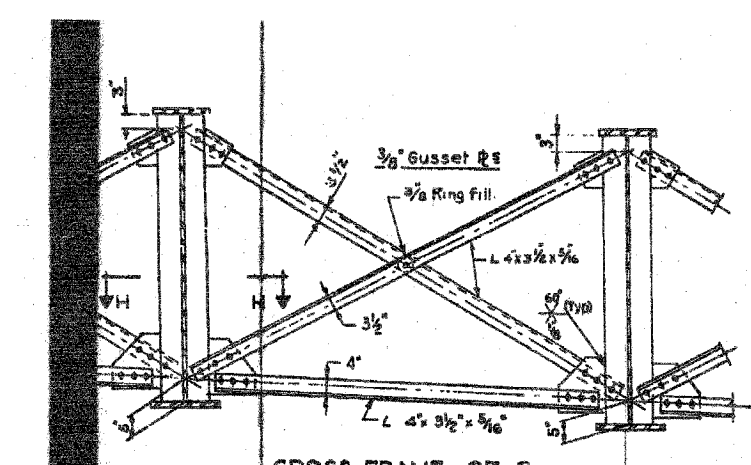
REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1113

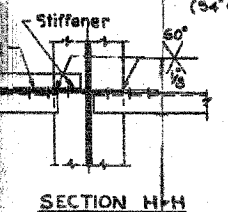
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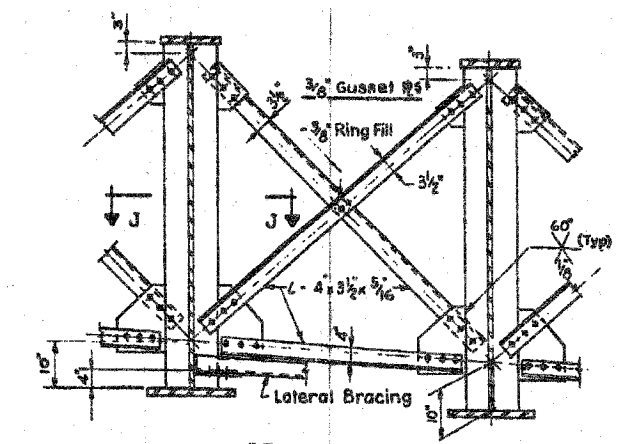
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FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				



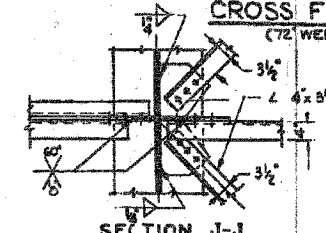
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(54" OR 60" WEB GIRDERS)



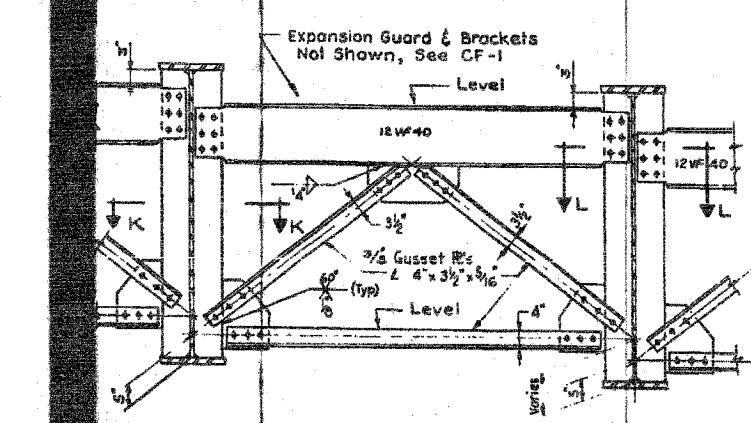
SECTION H-H



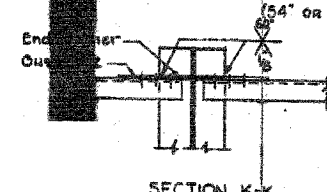
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(72" WEB GIRDERS)



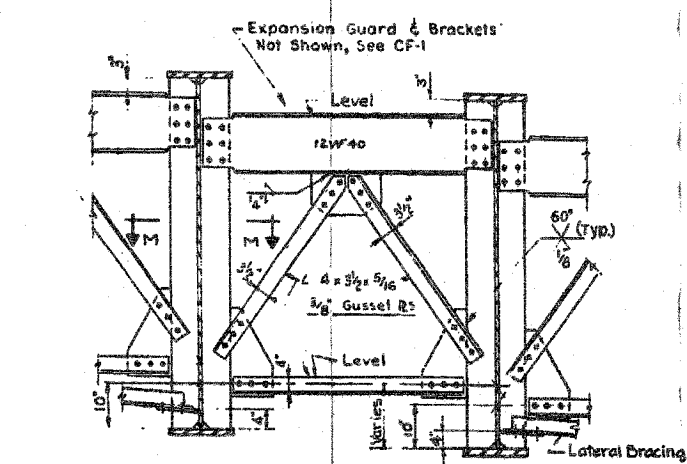
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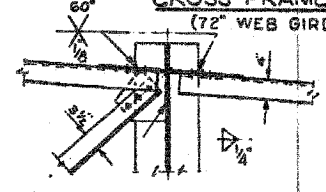
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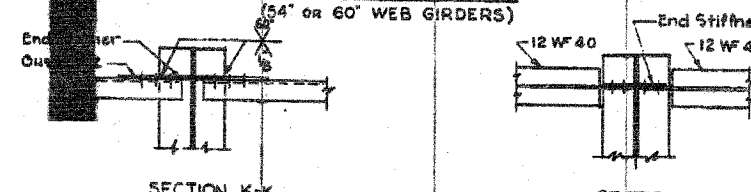
SECTION K-K



CROSS FRAME CF-9
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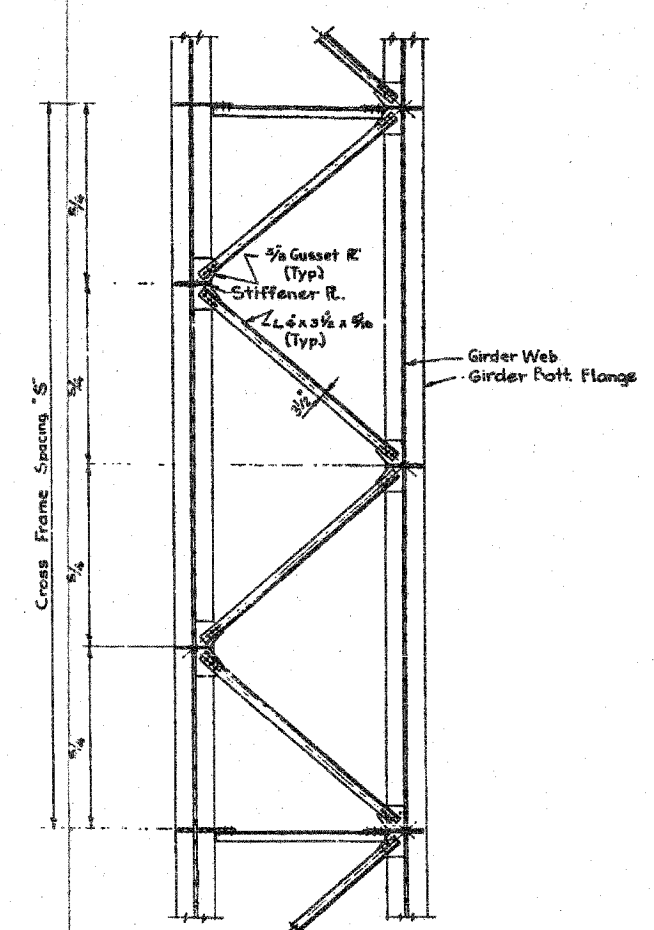


SECTION M-M



SECTION L-L

END CROSS FRAMES



LATERAL BRACING PLAN
(SPANS 10 & 19)

Note: For general layout of lateral bracing, see Framing Plans

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
SECTION NO. 13-2424.3-11H
(S. 2424.3-11H)
CHICAGO RIVER TO W. CERMAK RD
STRUCTURAL STEEL DETAILS
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS
DESIGNED BY I.A.A. CHECKED BY RLF
DRAWN BY J.H. Dwyer IN CHARGE OF H.S.M.
SCALE: NONE DATE: 5/20/94

REVISIONS	NAME	DATE

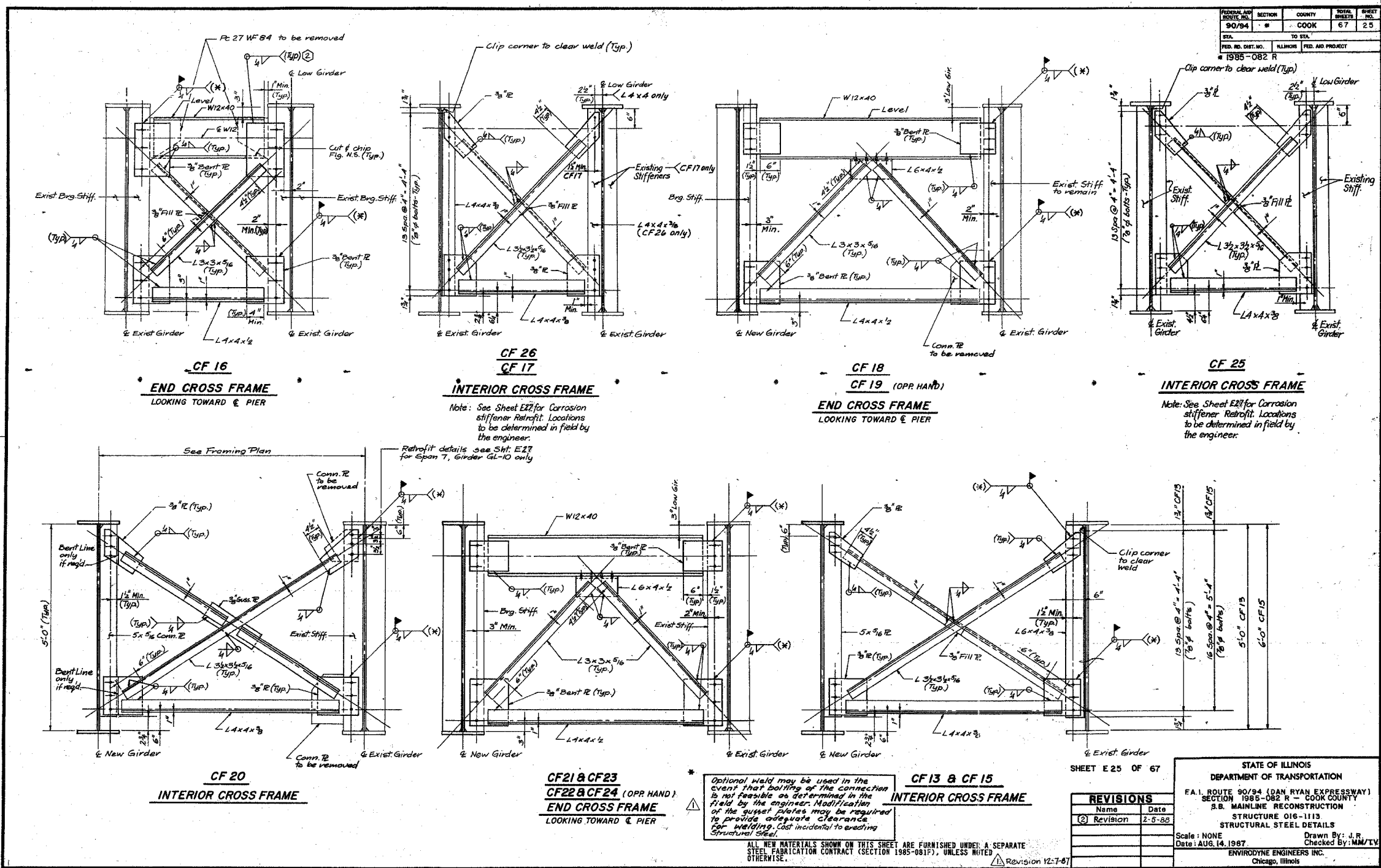
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1113
SCALE: NTS
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DRAWN BY: MTR
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REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
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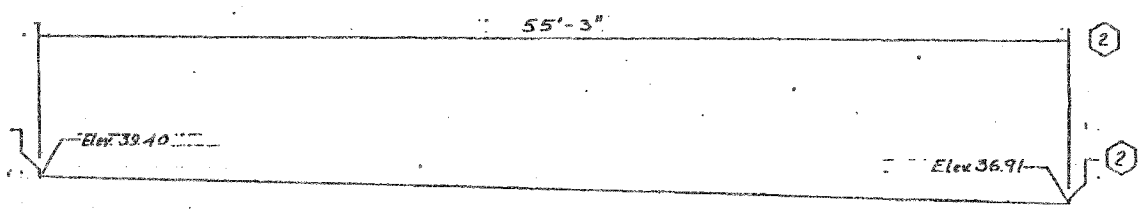
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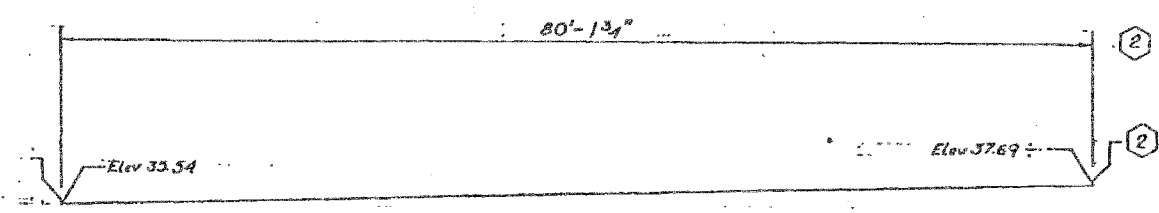
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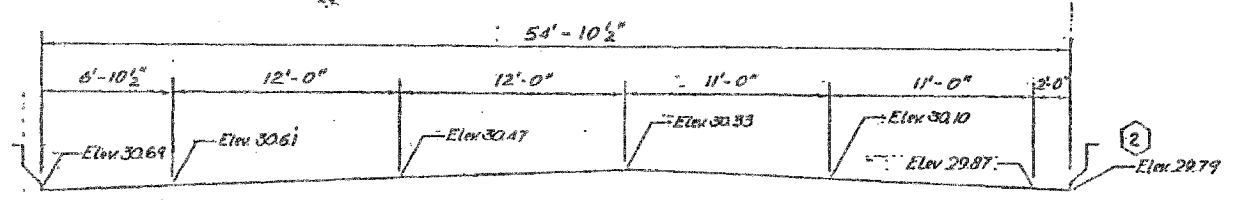
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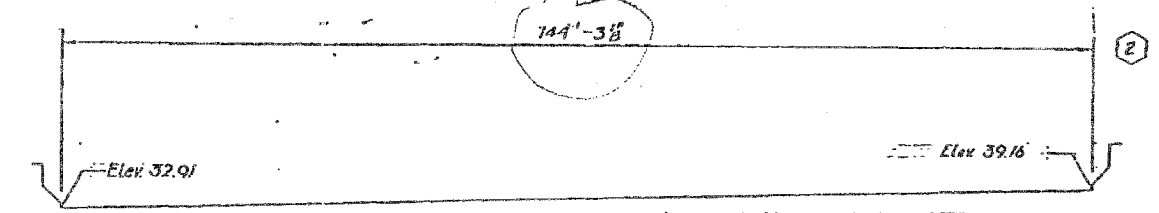
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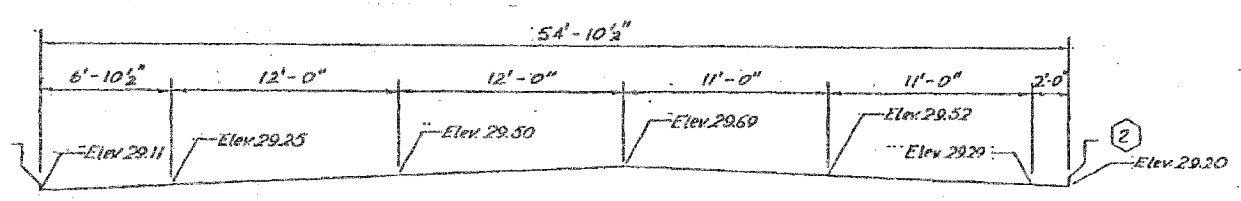
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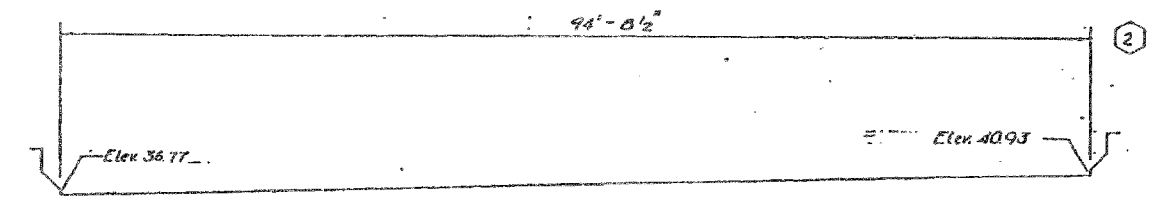
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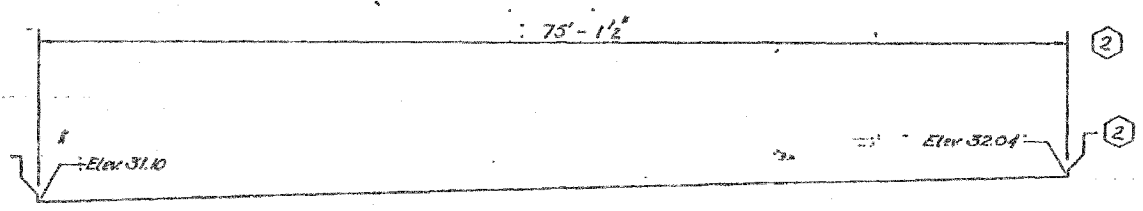
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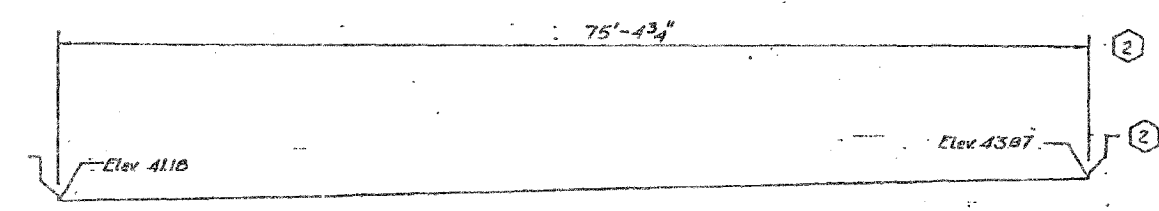
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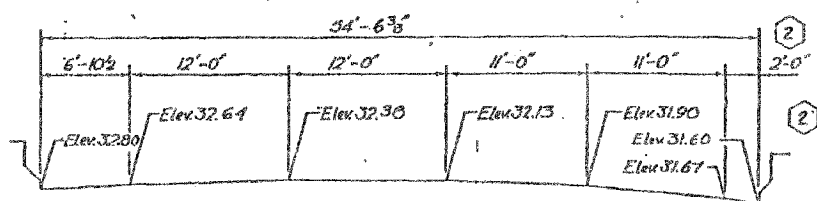
AT PIER No. 29
2 1/2" NEOPRENE JOINT



AT PIER No. 22
4" NEOPRENE JOINT



AT PIER No. 31
2 1/2" NEOPRENE JOINT



AT PIER No. 14
2 1/2" NEOPRENE JOINT

SHEET 049 OF 120

REVISIONS	
Rev.	Date
(1) Rev.	2-5-98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R- COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1112
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUG. 14, 1987
Drawn By: O.O. Cl. 2nd Ryl. I.V.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

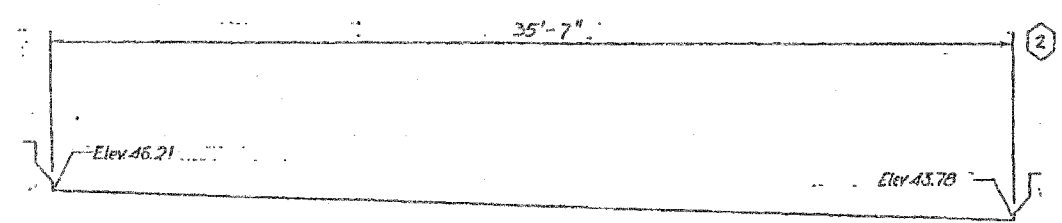
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		SB DAN RYAN ELEVATED BRIDGE	
		REPAIR FROM 15TH TO 28TH STREETS	
		EXISTING PLAN INFORMATION	
		SN 016-1112	
		SCALE: NTS	DRAWN BY: MTR
		DATE: 5/25/2006	CHECKED BY: BLU

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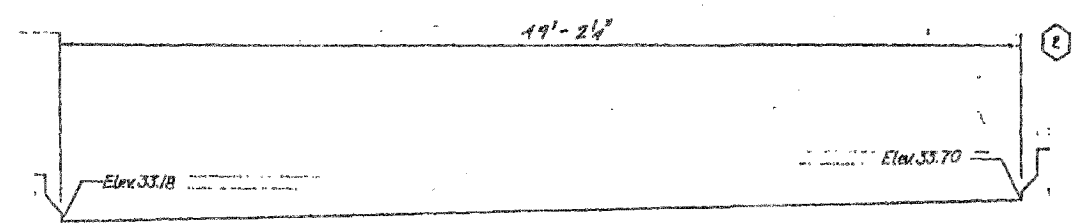
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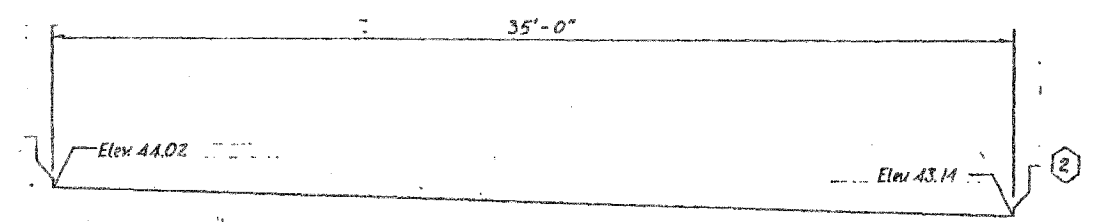
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STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



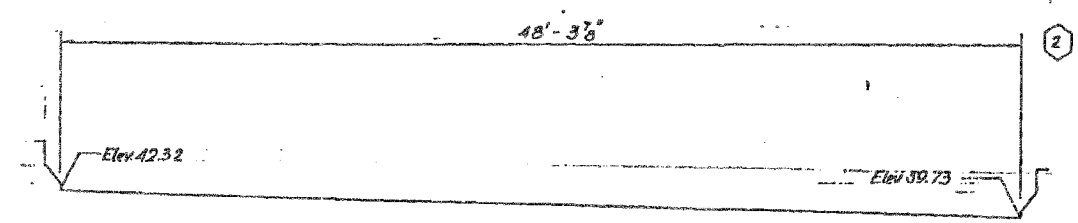
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2 1/2" NEOPRENE JOINT



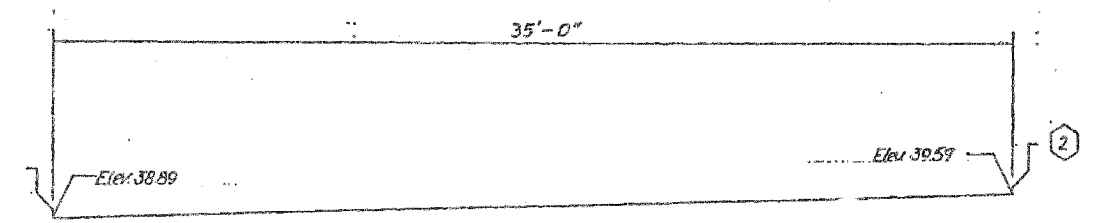
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4" NEOPRENE JOINT



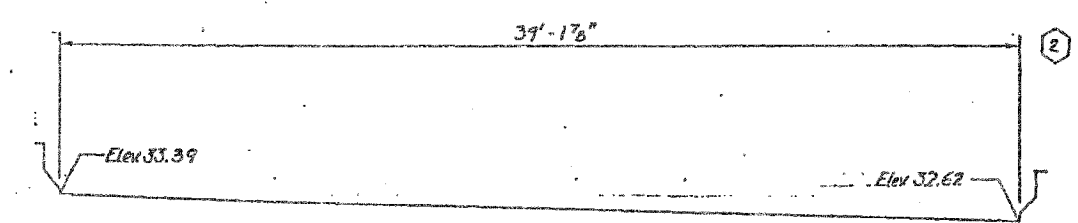
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2 1/2" NEOPRENE JOINT



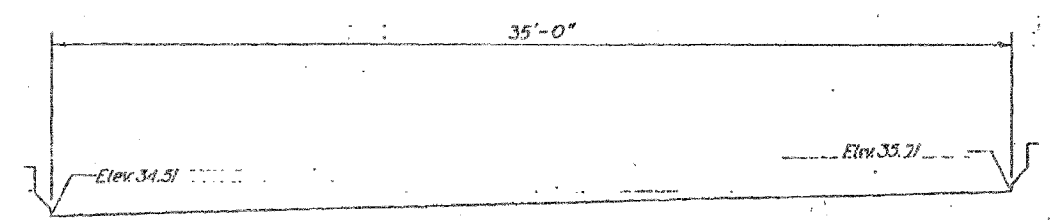
AT PIER No. B12
2 1/2" NEOPRENE JOINT



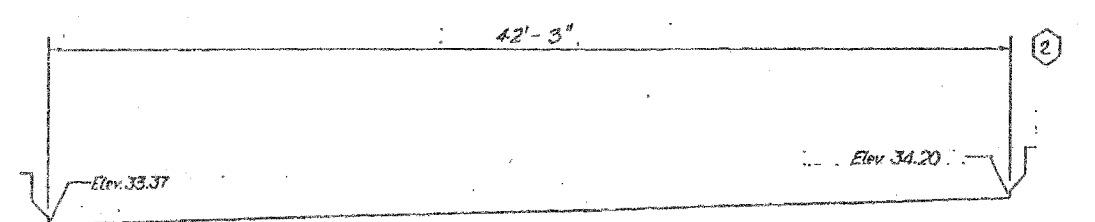
AT PIER No. A16
4" NEOPRENE JOINT



AT PIER No. B14
4" NEOPRENE JOINT



AT PIER No. A19
2 1/2" NEOPRENE JOINT



AT PIER No. A21
2" NEOPRENE JOINT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1112

SCALE: NTS
 DATE: 5/25/2006

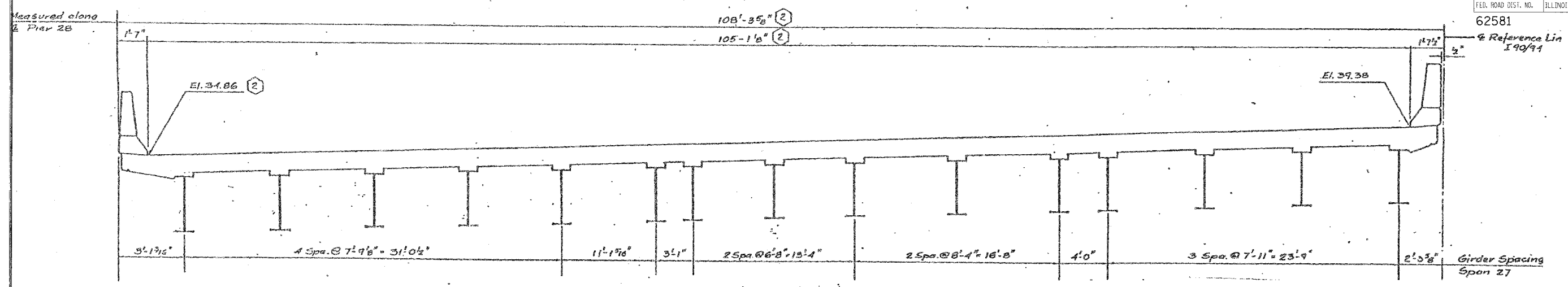
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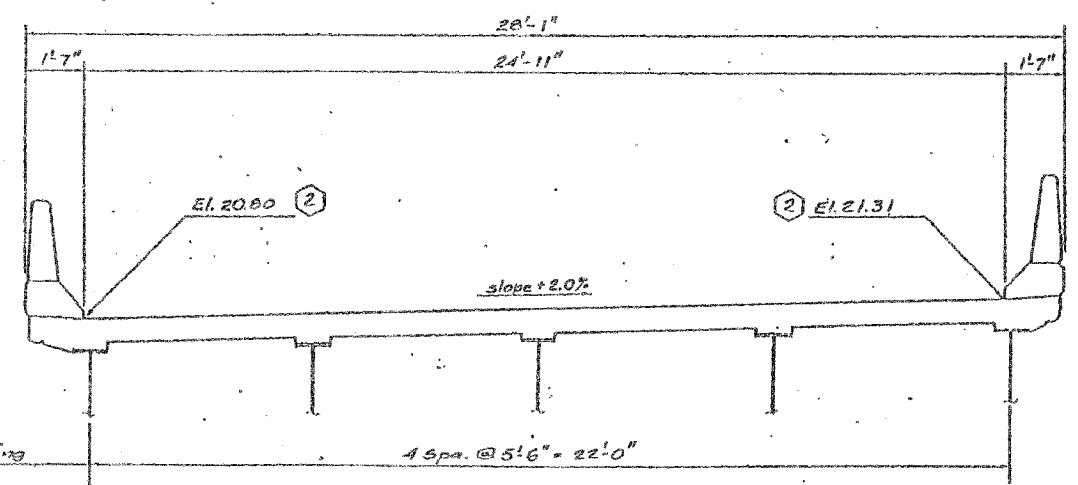
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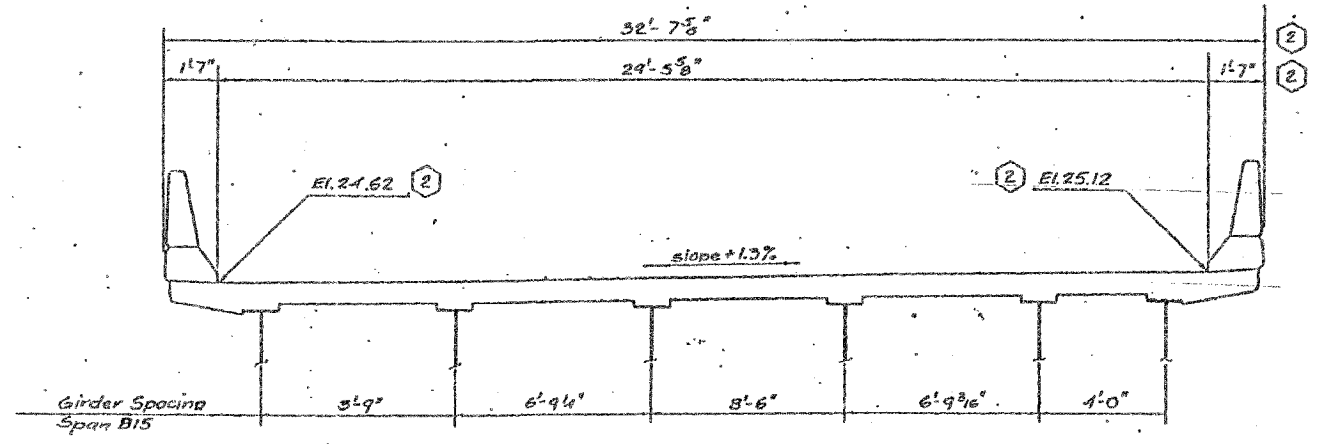
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	316
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FIXED JOINT AT PIER 28
2 1/2" PREFORMED JOINT SEAL



JOINT AT ABUTMENT B17
4" PREFORMED JOINT SEAL



JOINT AT PIER B16
4" PREFORMED JOINT SEAL

Note:
For Joint Detail, see Sht. T13

FOR INFORMATION ONLY

SHEET D51 OF 120

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1112
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUG. 14, 1997
Drawn By: J.R.
Checked By: M.J.
ENVIRONMENTAL ENGINEERS INC.
Chicago, Illinois

REVISIONS	NAME	DATE
(2) Rev.		2-5-98

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1112

SCALE: NTS
DATE: 5/25/2006

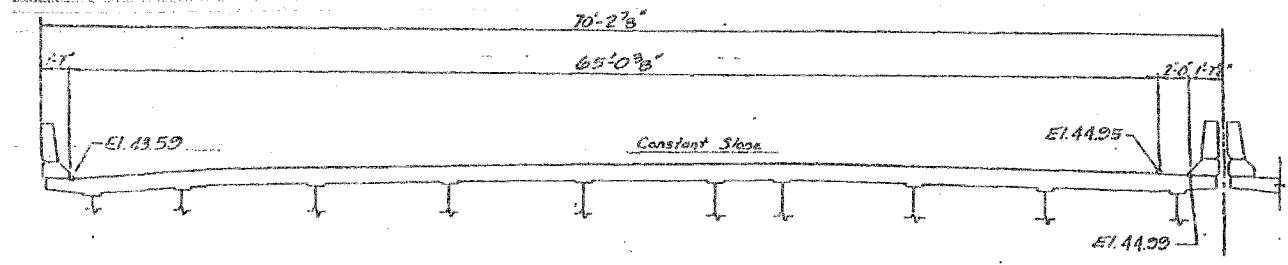
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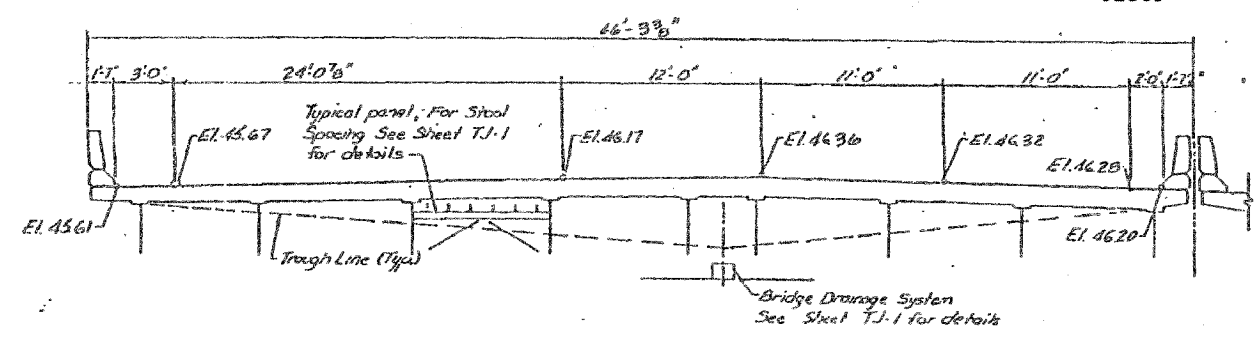
4-29-23 PM 5/23/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

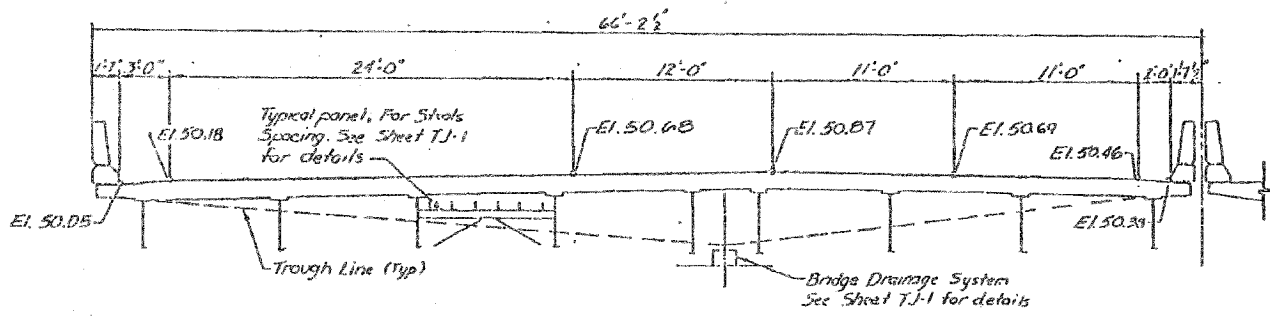
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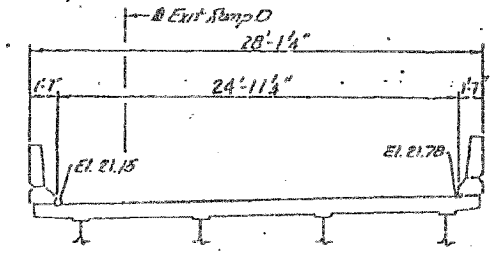
② EXPANSION JOINT AT PIER No. 1
2 1/2 in. PREFORMED JOINT SEAL



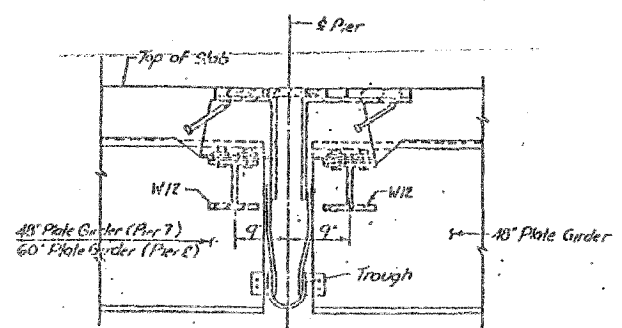
② EXPANSION JOINT AT PIER No. 2
4 1/2 in. FINGER PLATE



② EXPANSION JOINT AT PIER No. 7
4 1/2 in. FINGER PLATE



② EXPANSION JOINT AT PIER No. D7
4 in. NEOPRENE



FINGER PLATE EXPANSION JOINT
(TYPICAL CROSS SECTION)

SHEET C17 OF C 38

REVISIONS	
NO.	DATE
①	8-5-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-092 B - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1111
TRANSVERSE DECK JOINT ELEVATION
Scale: NONE
Date: AUGUST 14, 1997
DRAWN BY: A.V.
CHECKED BY: M.E.M.
EJMHODDY ENGINEERS INC.
Chicago, Illinois

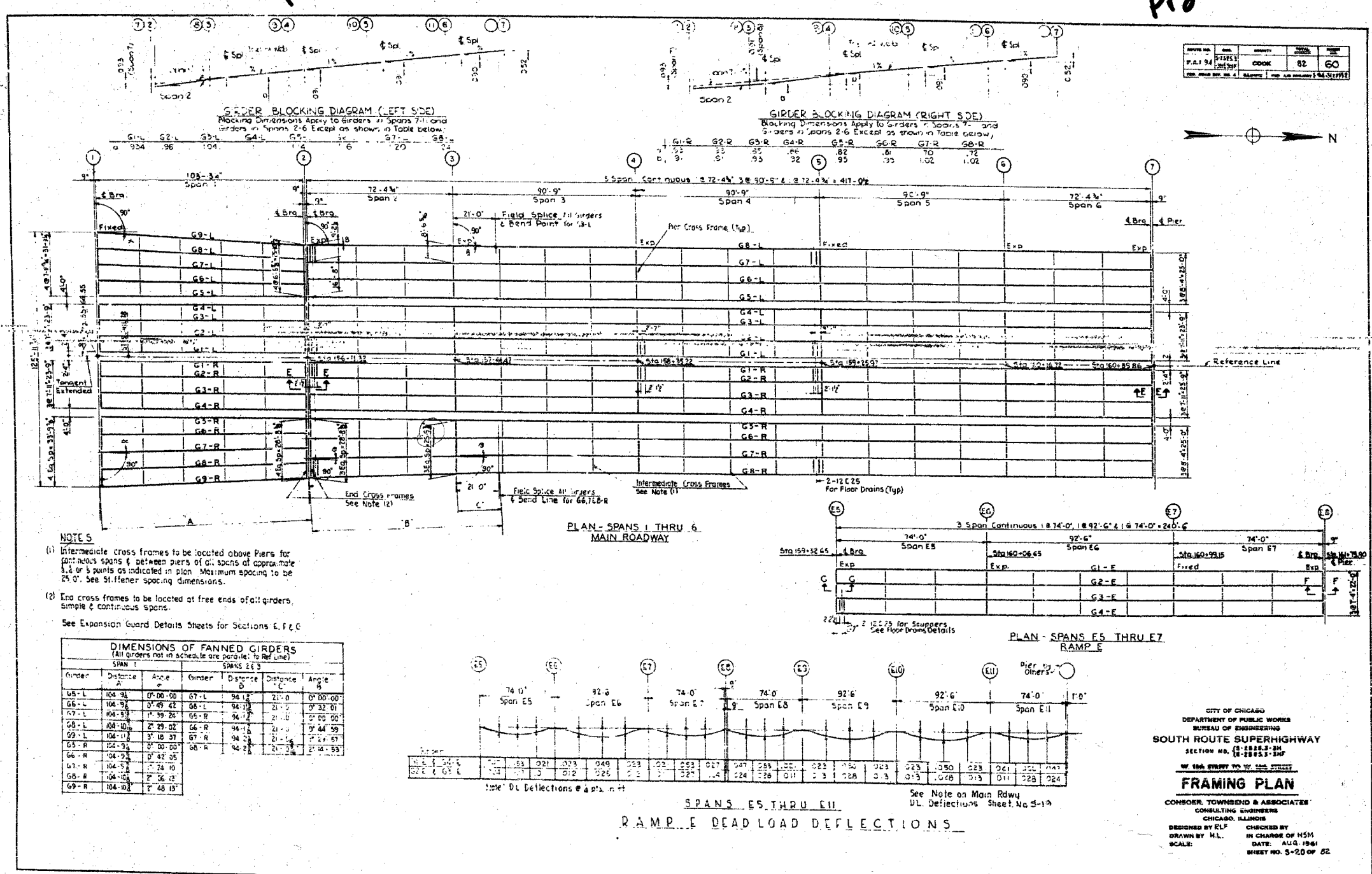
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1111
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

FOR INFORMATION ONLY

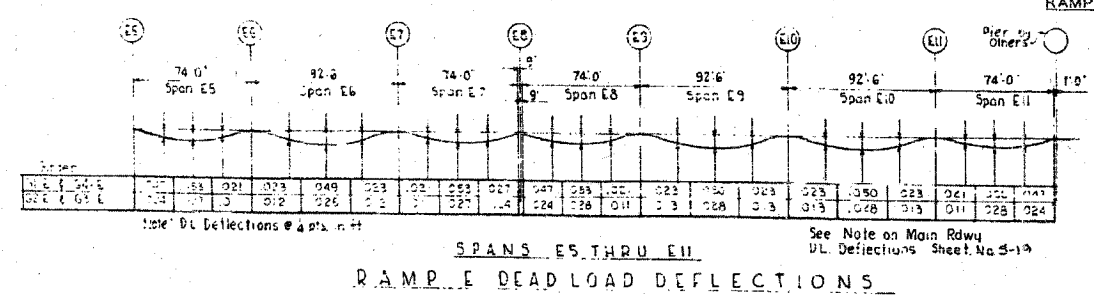
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4-4060 TM 5/23/2006



- NOTES**
- Intermediate cross frames to be located above Piers for continuous spans & between piers of all spans of approximate 1/4 or 3/8 points as indicated in plan. Maximum spacing to be 25'-0". See Stiffener spacing dimensions.
 - End cross frames to be located at free ends of all girders, simple & continuous spans.
- See Expansion Guard Details Sheets for Sections E, F & G

DIMENSIONS OF FANNED GIRDERS				
SPAN 1			SPANS E5	
Girder	Distance A	Angle P	Girder	Distance B
G5-L	104-36	0° 00' 00"	G7-L	94-12
G6-L	104-36	0° 49' 42"	G8-L	94-12
G7-L	104-36	1° 39' 24"	G9-L	94-12
G8-L	104-36	2° 29' 02"	G1-R	94-12
G9-L	104-36	3° 18' 37"	G2-R	94-12
G5-R	104-36	0° 00' 00"	G3-R	94-12
G6-R	104-36	0° 42' 05"	G4-R	94-12
G7-R	104-36	1° 24' 10"	G5-R	94-12
G8-R	104-36	2° 06' 12"	G6-R	94-12
G9-R	104-36	2° 48' 15"	G7-R	94-12



CITY OF CHICAGO
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 BUREAU OF ENGINEERING
 SOUTH ROUTE SUPERHIGHWAY
 SECTION NO. 15-2823-SHP
 W. 15th STREET TO W. 28th STREET
FRAMING PLAN
 CONSER, TOWNSEND & ASSOCIATES
 CONSULTING ENGINEERS
 CHICAGO, ILLINOIS
 DESIGNED BY ELP. CHECKED BY H. CHARGE OF HSM
 DRAWN BY H.L. DATE: AUG. 1961
 SCALE: SHEET NO. 5-20 OF 52

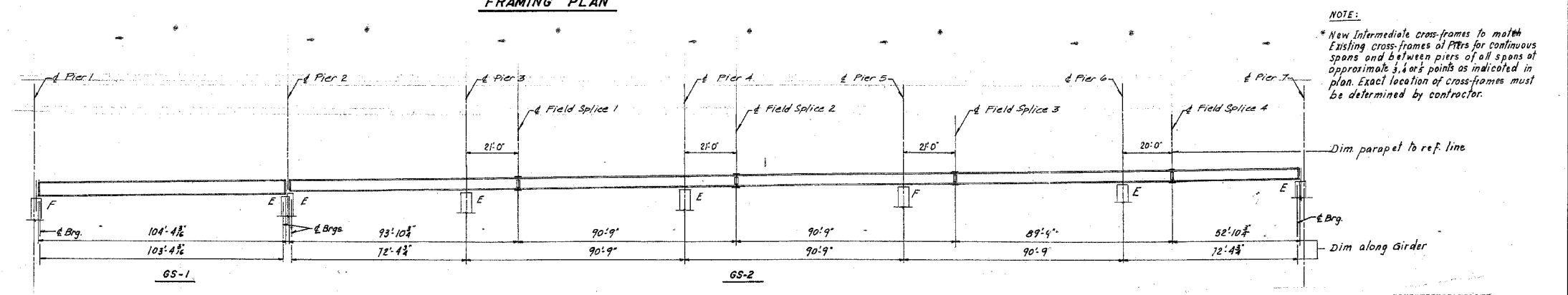
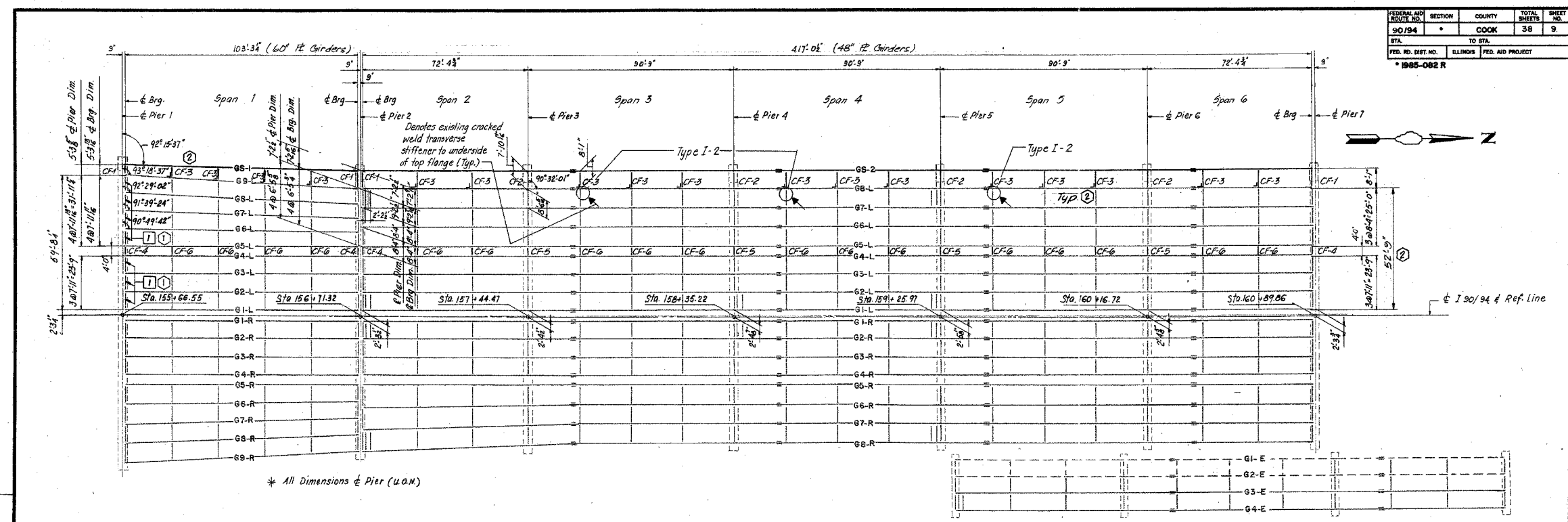
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 CONSULTING ENGINEERS
 Chicago, Illinois
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FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1111
 SCALE: NTS
 DATE: 5/25/2006
 DRAWN BY: MTR
 CHECKED BY: BLU

4-90057 PM 5/23/2006



NOTE:
* New Intermediate cross-frames to match Existing cross-frames of Piers for continuous spans and between piers of all spans at approximate 3/4 or 5 points as indicated in plan. Exact location of cross-frames must be determined by contractor.

LEGEND

TYPE I - 1: CROSS-FRAME RETROFIT AT TOP FLANGE (See sheet C16)

Replace End Cross Frame (Type I) See Sheet SR3, Vol. 13 for Detail

SHEET C9 OF C38

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1111
FRAMING PLAN SPANS 1 TO 6

Scale: NONE
Date: AUG. 14, 1987.
Drawn By: J.G.
Checked By: J.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

REVISIONS	Name	Date
①	Revisions	1-25-88
②		2-5-88

AS REVISED

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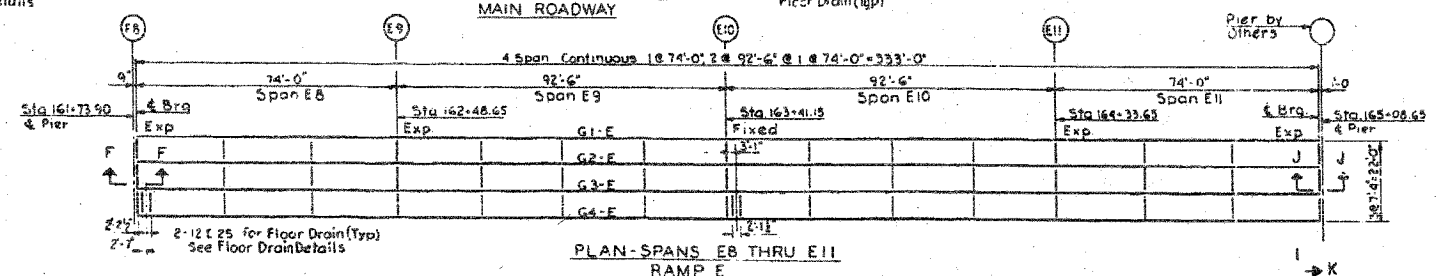
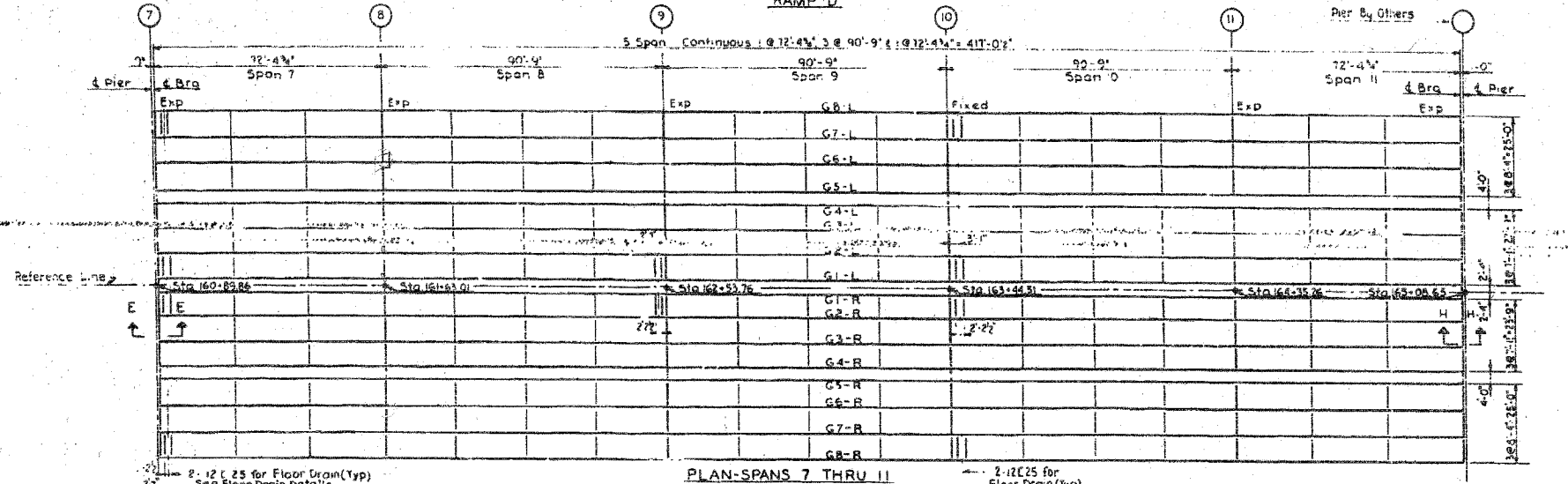
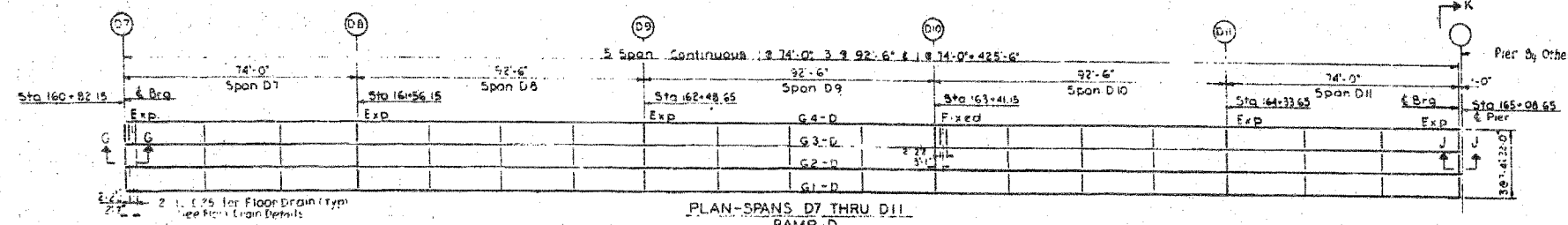
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REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1111

SCALE: NTS
DATE: 5/25/2006
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Girder

G1-D & G4-D	.047	.053	.021	.023	.050	.023	.023	.049	.023	.023	.050	.023	.021	.053	.047
G2-D & G3-D	.024	.027	.011	.012	.025	.012	.012	.025	.012	.012	.025	.012	.011	.027	.024

Note: Deflections @ 4 pts. in ft.

SPANS D7 THRU D11
RAMP D DEAD LOAD DEFLECTIONS
Includes Weight of Concrete only



STRUCTURAL STEEL NOTES

- STEEL**
Structural Steel ASTM Designation A-373 shall be used throughout except as noted below.
- ASTM Designation A-7 steel to be used for cross frames, masonry plates, anchor bolts, field splice plates, expansion guards, channel shear connectors, and scupper channels.
- FIELD CONNECTIONS**
Cross Frames - 2" High-Strength Bolts A.S.T.M. A-325
Girder Splices - 4" High-Strength Bolts A.S.T.M. A-325
Expansion Guard Brackets - 1/2" Dia. Round Bolts
Scupper Channels - 2" HS Fl. See Sheet S-30
- FIELD PLATE WELDS**
Flange to web with 1/4" fillet welds for flange plates up to and including 1/4" thickness. Use 3/8" fillet welds for flange plates up to and including 1/4" thickness. Use 1/2" fillet welds for flange plates up to and including 2" thickness.
- SPLICES**
Field splices may be vertical or normal to the girders at the option of the fabricator. Holes for field splices shall be reamed with the girders unspliced in position in accordance with the Blocking Diagrams.
Shop web splices shall be made vertical.
- PAINTING**
The Contractor for Section S-2525-3-3HF shall furnish and apply 1 shop coat of red lead paint and 2 field coats of paint to all structural steel except as noted below.
The tops of girder top flanges will not be painted except for a distance of 5 feet each way from interior piers & abutments.

See Expansion Guard Detail Sheets S-25, S-26, S-27 for Sections E, F, G, H, J & K

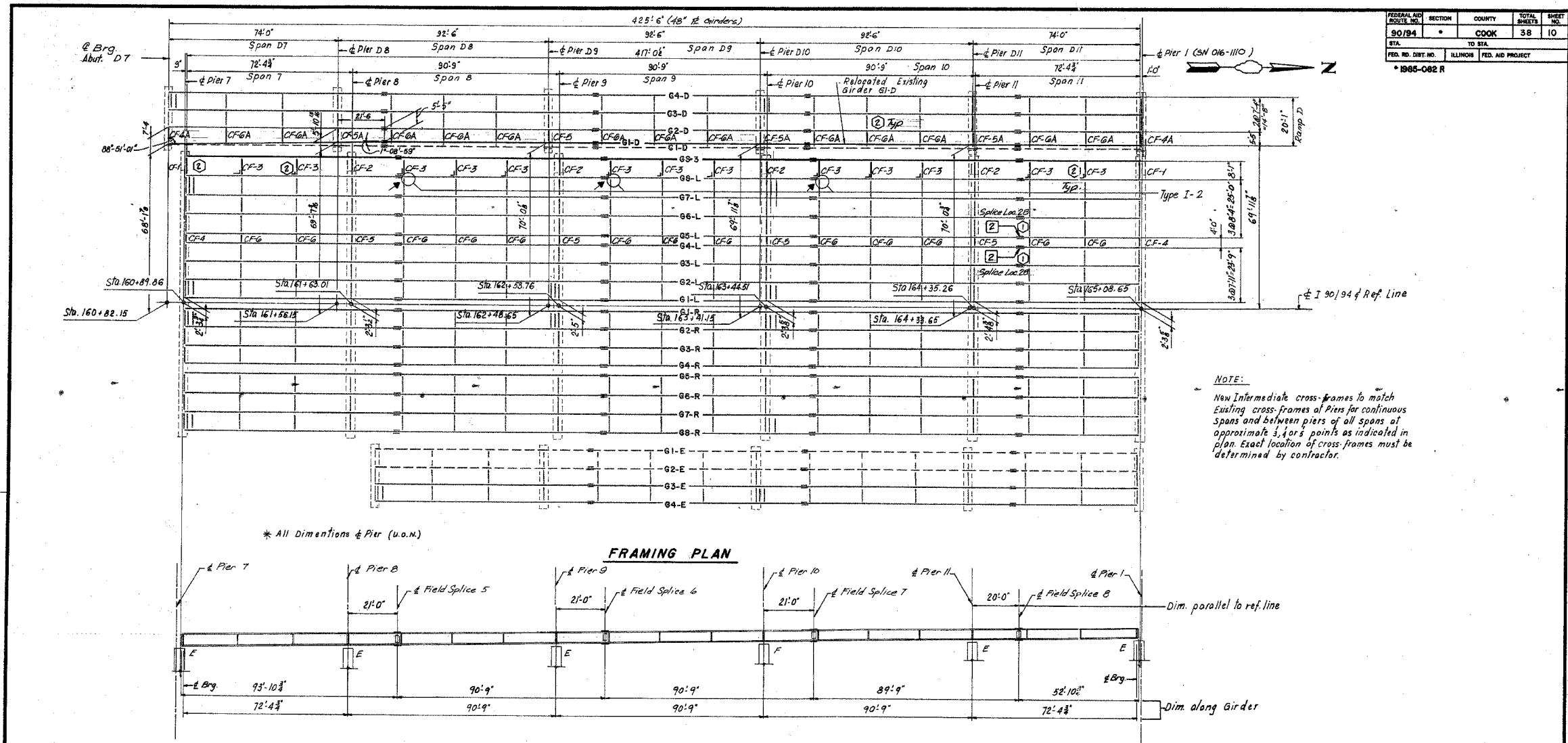
CITY OF CHICAGO
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BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
SECTION NO. S-2525-3-3H
W 106 STREET TO W 104 STREET
FRAMING PLAN
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS
DESIGNED BY RLF
DRAWN BY H.L.
SCALE:
CHECKED BY IN CHARGE OF H5M
DATE: AUG 1981
SHEET NO. S-21 OF 82

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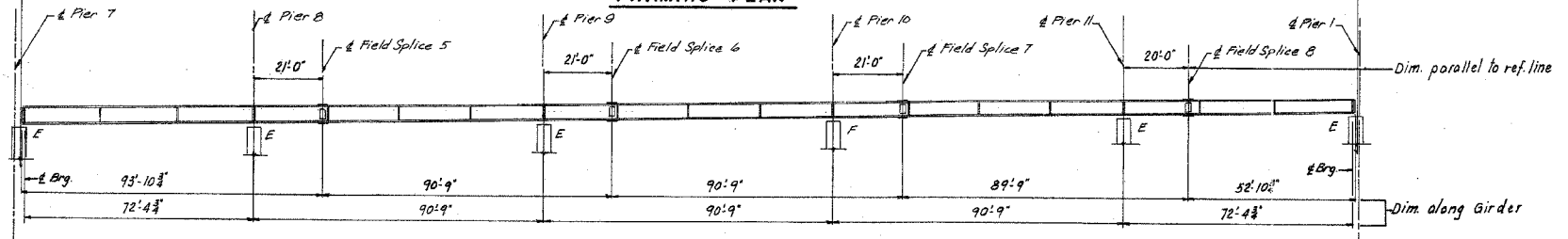
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1111
SCALE: NTS
DATE: 5/25/2006
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NOTE:
 New Intermediate cross-frames to match existing cross-frames of Piers for continuous spans and between piers of all spans at approximate 1/4 points as indicated in plan. Exact location of cross-frames must be determined by contractor.

* All Dimensions in Pier (u.o.n.)

FRAMING PLAN



GIRDER ELEVATION GS-3

LEGEND
 ① ② Replace Splice Plate Bolts Only
 Type I - L Detail Number Retrofit Type
 Type I: Cross-Frame Retrofit at Top Flange (See Sheet C16)

AS REVISED

SHEET C10 OF C39

REVISIONS	
Name	Date
①	1/25/88
②	2-5-88

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R - COOK COUNTY
 S.B. MAINLINE RECONSTRUCTION
 STRUCTURE 016-1111
 FRAMING PLAN SPANS 7 TO 11
 Scale: NONE
 Date: AUG. 14, 1987
 Drawn By: J.G.
 Checked By: M.E.M.
 ENVIRODYNE ENGINEERS INC.
 Chicago, Illinois

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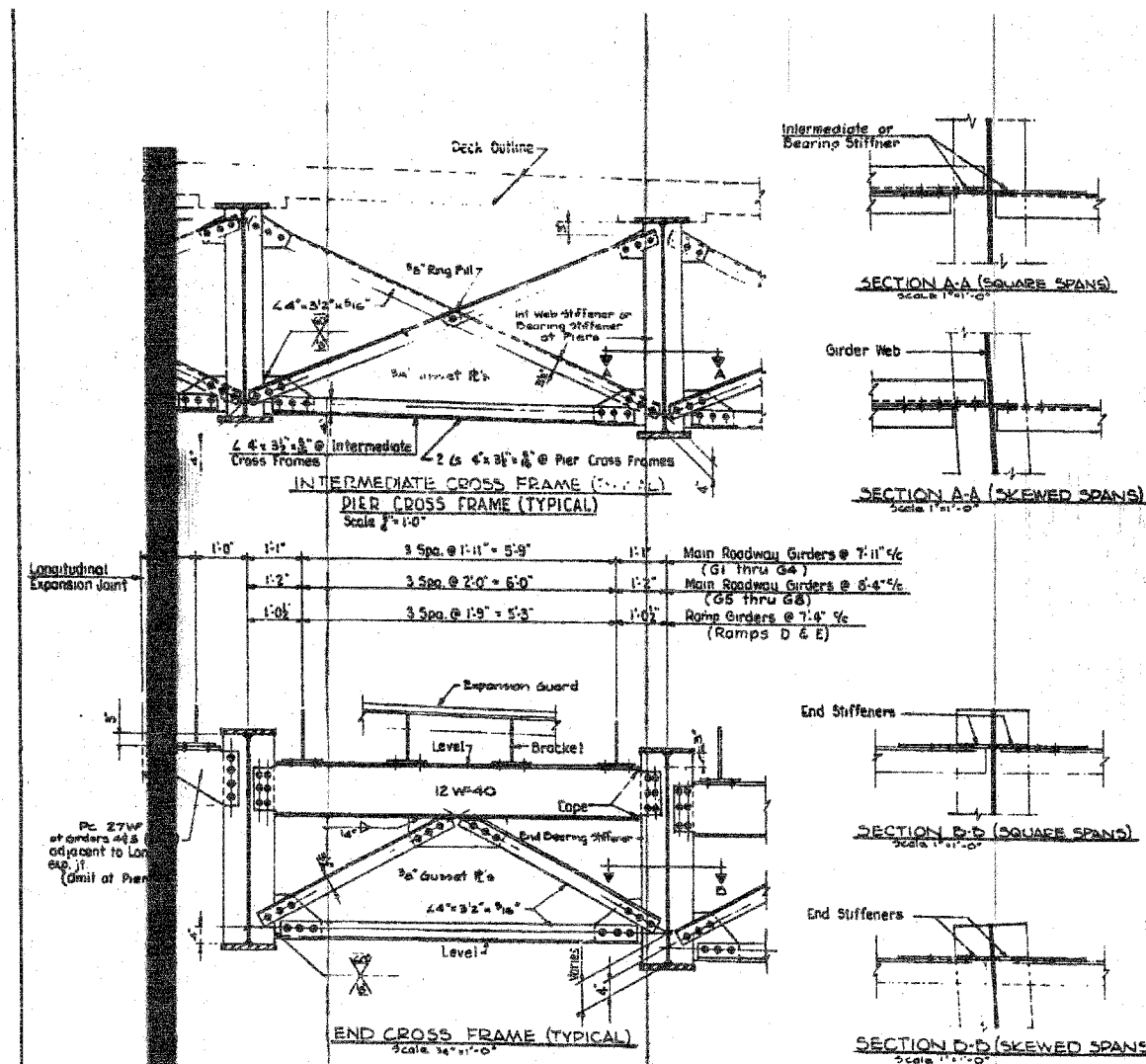
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NAME	DATE

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 EXISTING PLAN INFORMATION
 SN 016-1111
 SCALE: NTS
 DATE: 5/25/2006
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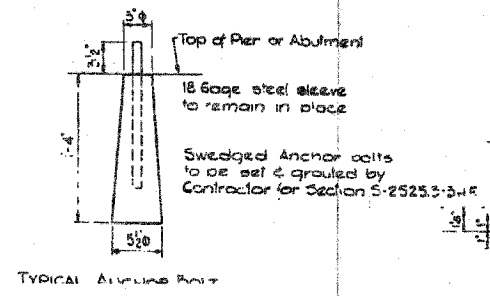
NOTES

Expansion Guard bracket spacings shown are typical at locations where girders are parallel.

Dimensions to be adjusted by detailer where girders are formed. Hold bracket spacings to E3 max. See Framing Plans for 1/4 dimensions of lapped girders.

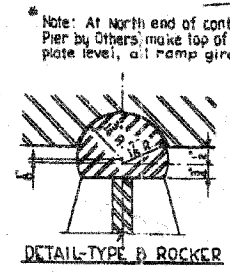
Special bracket spacing dimensions to be used at north end of contract to meet expansion guard supplied by others. See Expansion Guard Details Sheet 5-27.

Intermediate Cross Frames and End Cross Frames shown are typical for simple spans & continuous spans. Pier cross frames typical are at interior piers of continuous spans. See Framing Plans & Girder Details for girder dimensions & spacings.

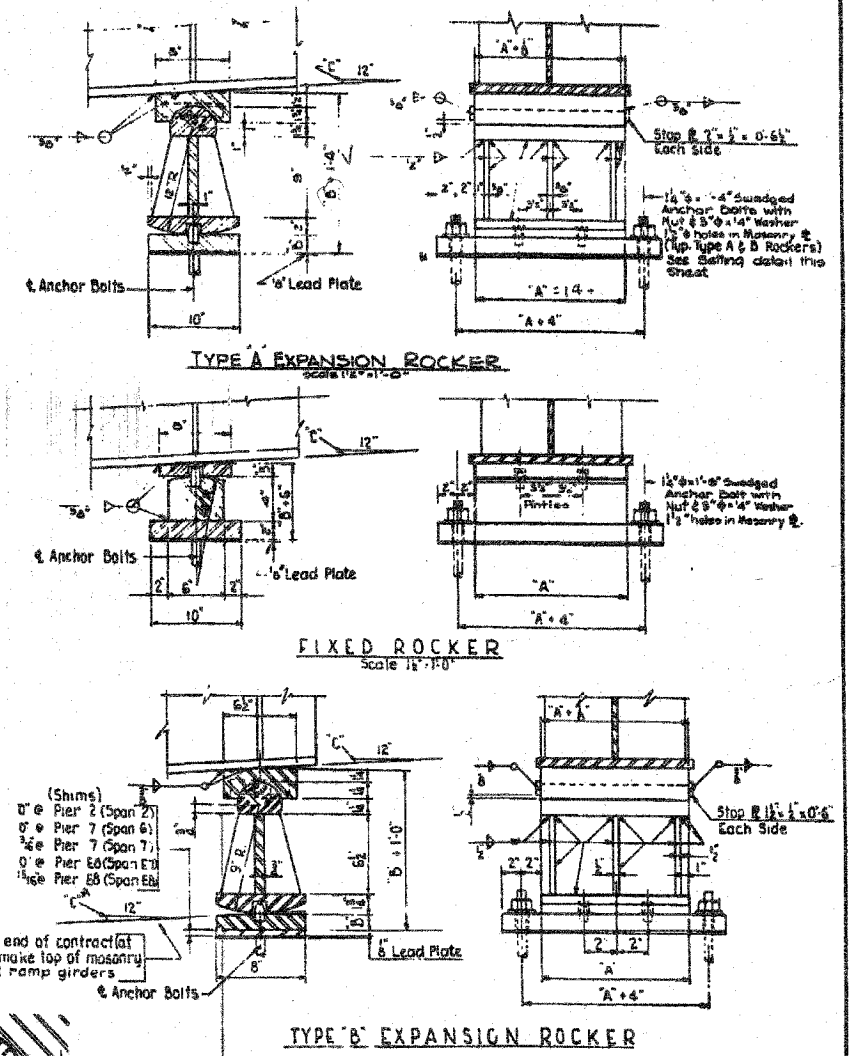


ROCKER SCHEDULE

Girder	Type	A'	B'	C'
PIER 1- SPAN 1				
G1- L&R	Fixed	10'	17'	16'
G2,3, L&R	Fixed	10'	17'	16'
G4,5, L&R	Fixed	10'	17'	16'
G6-9, L&R	Fixed	10'	17'	16'
PIER 2- SPAN 1				
G1- L&R	B	11'	19'	18'
G2,3, L&R	B	11'	19'	18'
G4,5, L&R	B	11'	19'	18'
G6-9, L&R	B	11'	19'	18'
PIER 2- SPAN 2				
G1- L&R	B	10'	17'	16'
G2,3, L&R	B	10'	17'	16'
G4,5, L&R	B	10'	17'	16'
G6-9, L&R	B	10'	17'	16'
PIERS 3,4,6,8,9 & 11				
G1- L&R	A	11'	19'	18'
G2,3, L&R	A	15'	19'	18'
G4,5, L&R	A	12'	19'	18'
G6-9, L&R	A	14'	19'	18'
PIER 7 & PIER BY OTHERS				
G1- L&R	B	10'	17'	16'
G2,3, L&R	B	10'	17'	16'
G4,5, L&R	B	10'	17'	16'
G6-9, L&R	B	10'	17'	16'
PIERS 5 & 10				
G1- L&R	Fixed	11'	19'	18'
G2,3, L&R	Fixed	13'	19'	18'
G4,5, L&R	Fixed	12'	19'	18'
G6-9, L&R	Fixed	14'	19'	18'
RAMP E				
ABUTMENT E9 & PIER BY OTHERS				
All Girders	B	10'	16'	9'-4"
PIERS E6, E9, & E11				
All Girders	A	14'	2'	9'-4"
PIERS E7 & E10				
All Girders	Fixed	14'	13'-6"	9'-4"
PIER E8				
All Girders	B	10'	14'	9'-4"
RAMP D				
ABUTMENT D7 & PIER BY OTHERS				
All Girders	B	10'	14'	9'-4"
PIER D8, D9, & D11				
All Girders	A	14'	2'	9'-4"
PIER D10				
All Girders	Fixed	14'	13'-6"	9'-4"



ROCKER DETAILS



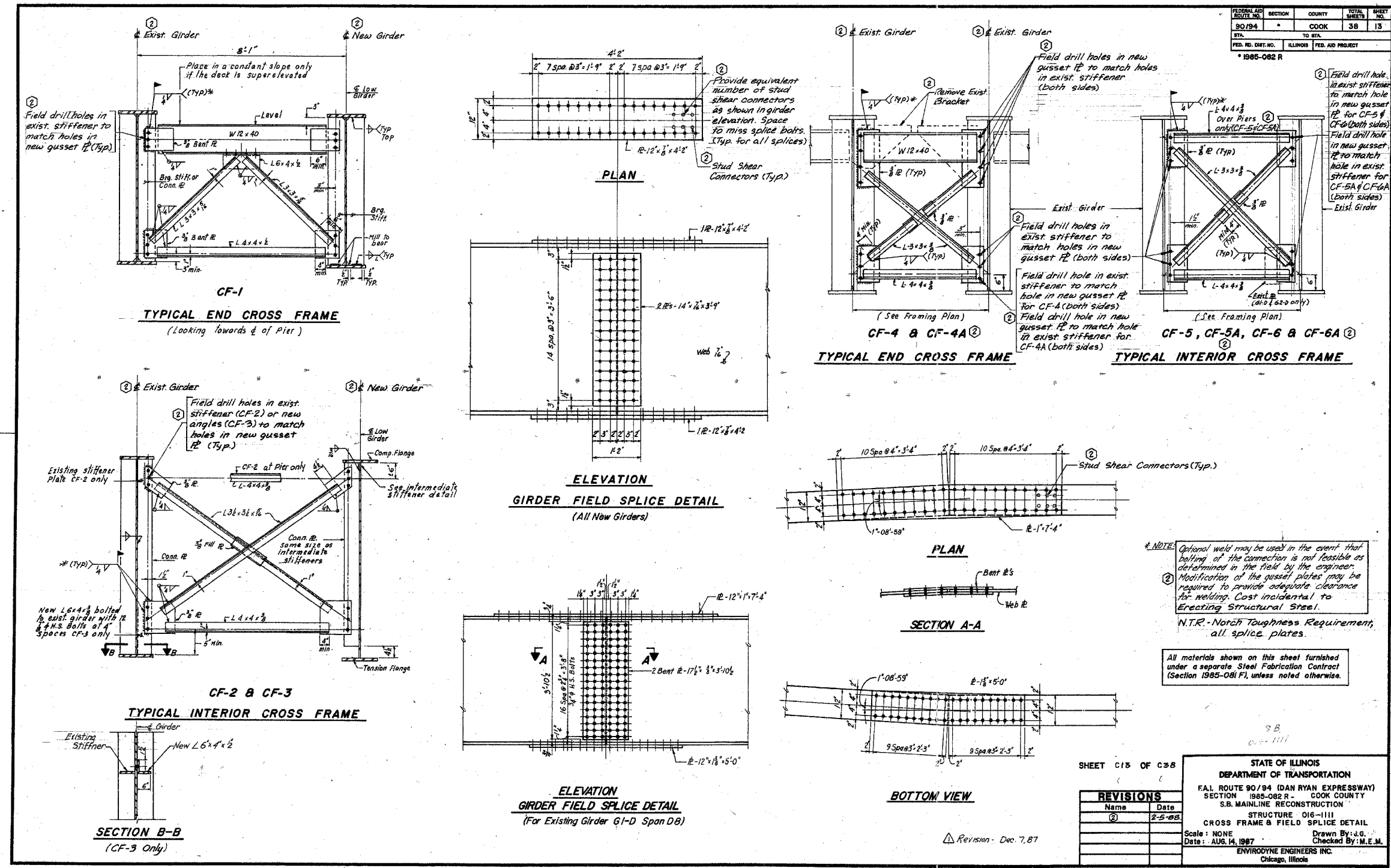
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SOUTH ROUTE SUPERHIGHWAY
SECTION NO. 18-1858.3-SH
SECTION NO. 18-1858.3-SHP
W. 156 STREET TO W. 156 STREET
CROSS FRAMES & ROCKERS
CONSOR, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS
DESIGNED BY RLF CHECKED BY MTR
DRAWN BY IN CHARGE OF HSM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1111

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU



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CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
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FOR INFORMATION ONLY

REVISIONS	NAME	DATE

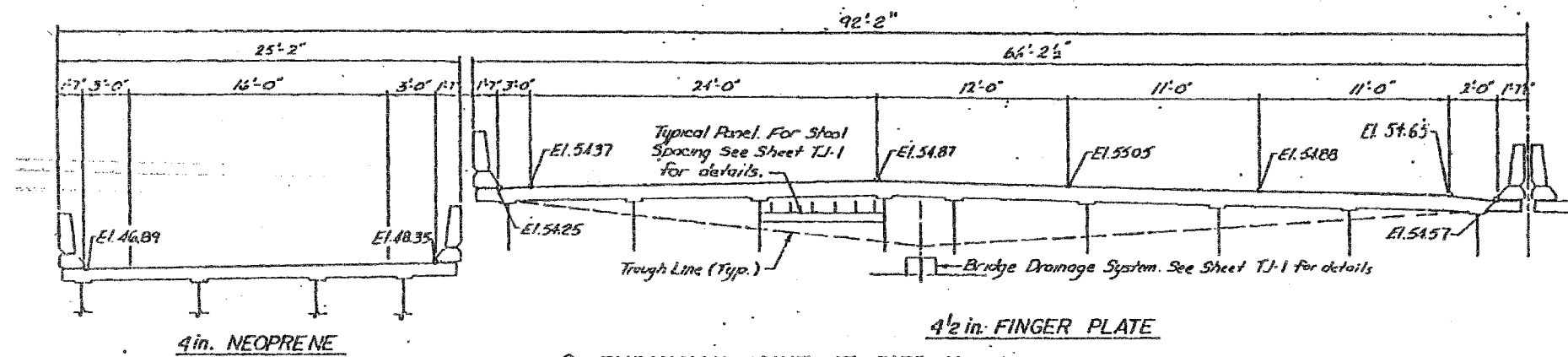
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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1111

SCALE: NTS
DATE: 5/25/2006

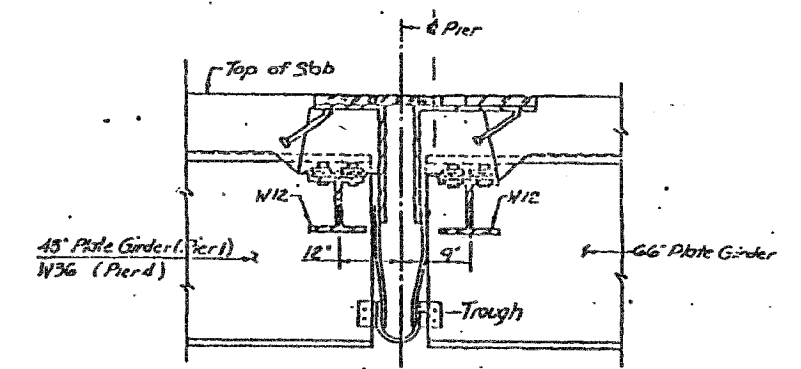
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44054 FM 5/23/2006

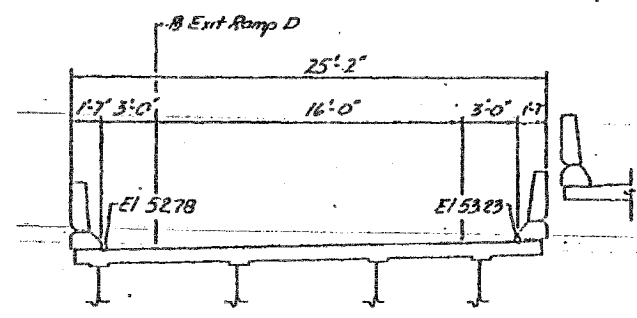
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-029BR	COOK	344	324
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



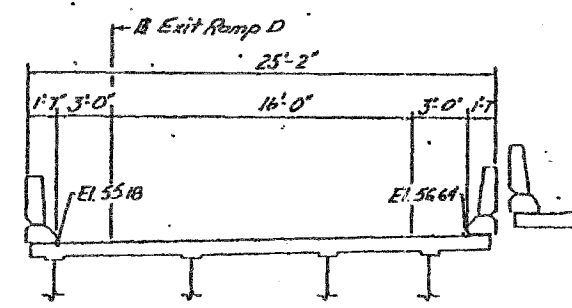
② EXPANSION JOINT AT PIER No. 1



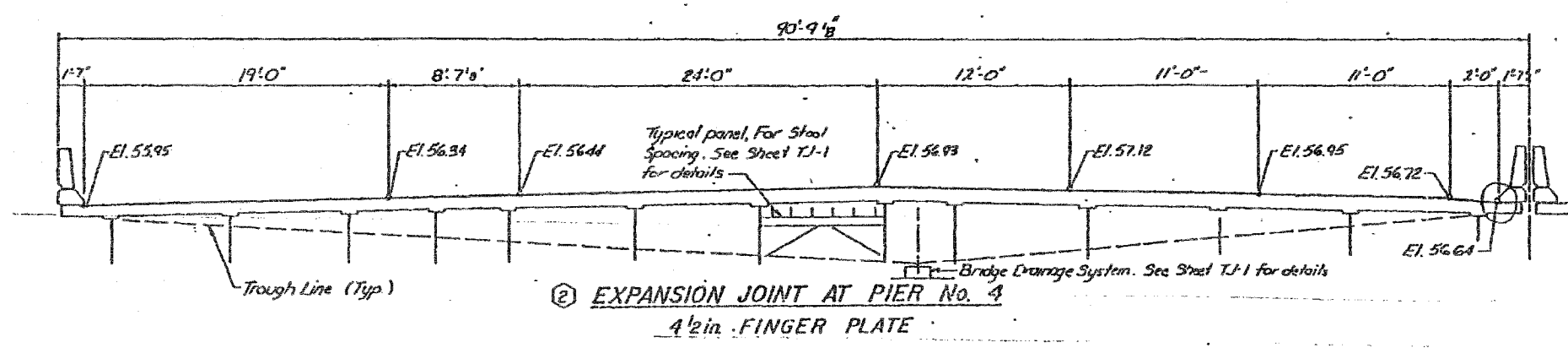
FINGER PLATE EXPANSION JOINT (TYPICAL CROSS SECTION)



② EXPANSION JOINT 'A' SPAN 2
2 1/2 in. PREFORMED JOINT SEAL



② EXPANSION JOINT 'B' SPAN 2
2 in. NEOPRENE



② EXPANSION JOINT AT PIER No. 4
4 1/2 in. FINGER PLATE

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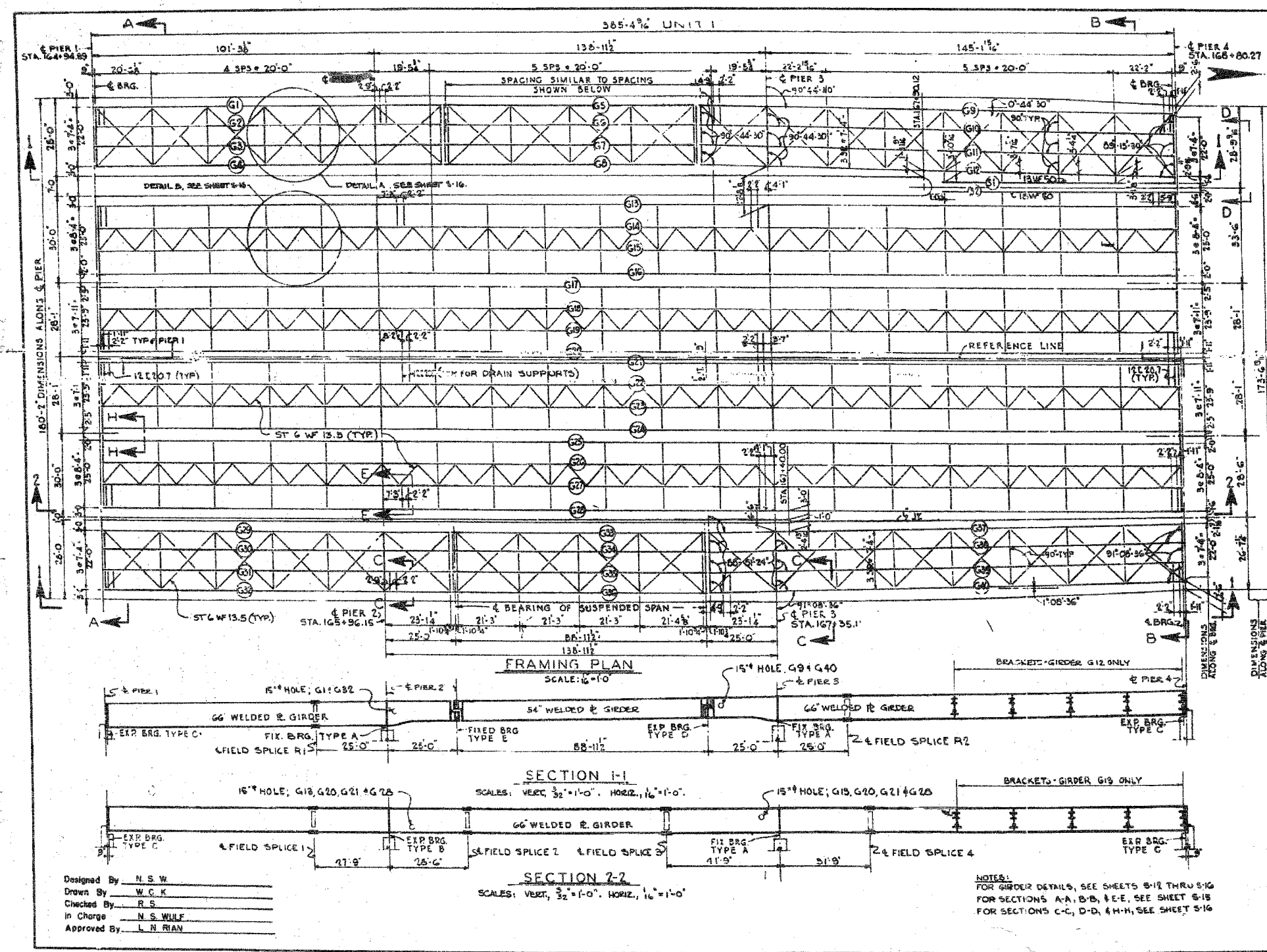
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110

SCALE: NTS
DATE: 5/25/2006

DRAWN BY: MTR
CHECKED BY: BLU

4-49624 PM 5/23/2006



ROUTE NO.	SECTION	COUNTY	SYMBOL	SHEET NO.
F.A.I. 94-25223-2H	COOK	56	20	
FED. ROAD DIST. NO. (ILLINOIS)		PROJECT 1-94-25223-2H		

STRUCTURAL STEEL NOTES

ALL FURNISHING, FABRICATING, TRANSPORTING, ERECTING AND PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTIONS 54 AND 58 OF THE STANDARD SPECIFICATIONS.

EXCEPT WHERE OTHERWISE NOTED, ALL STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATIONS FOR STEEL FOR BRIDGES AND BUILDINGS ASTM DESIGNATION A-7 AND ASTM DESIGNATION A-36 AND WHERE APPLICABLE, TO THE REQUIREMENTS OF ARTICLE 124.2, AND 124.3 (a) OF THE STANDARD SPECIFICATIONS.

BEARING AND SPLICE NOTES:-

ALL GIRDER FIELD SPLICES SHALL BE SUB-PUNCHED, REAMED AND MATCHMARKED FOR SHIPMENT WHILE THE MEMBERS ARE SHOP ASSEMBLED IN PROPER ALIGNMENT WITH OR WITHOUT DIAPHRAGMS. ALL GIRDER FIELD SPLICES SHALL BE SUB-PUNCHED 17/16" Ø, REAMED TO 13/16" Ø FOR 3/4" Ø BOLTS AND REAMED TO 15/16" Ø FOR 7/8" Ø BOLTS.

ALL GIRDERS SHALL BE ERECTED FULL LENGTH IN THE SHOP BEFORE REAMING AND INSPECTION.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT. PARTS UNACCESSIBLE AFTER ERECTION SHALL HAVE TWO SHOP COATS OF RED LEAD PAINT. FOR ADDITIONAL SHOP AND FIELD PAINT CONTS, SEE THE SPECIAL PROVISIONS.

ALL ROLLERS, ROCKERS, BOLSTERS, BEARING PLATES, LEAD PLATES, FINISHES, ANCHOR BOLTS AND SPLICES SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLES 54.5 OF THE STANDARD SPECIFICATIONS AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 24.6(a). THESE ITEMS ARE INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL.

SPLICE PLATES TO BE MATCH-MARKED FOR SHIPMENT.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER PIERS AND ABUTMENTS.

FINISHED SURFACES OF BEARINGS AND ROLLERS SHALL BE TREATED WITH ZINCO-PRIMER COMPOUND BEFORE SHIPMENT AS STATED IN ARTICLE 24.4 OF THE STANDARD SPECIFICATIONS.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" Ø OR 7/8" Ø HIGH STRENGTH BOLTS AS INDICATED.

ALL RIVETS, UNLESS OTHERWISE SHOWN OR NOTED, SHALL BE 3/4" Ø, OPEN HOLES 13/16" Ø.

KEY PLAN

SUMMARY OF STRUCTURAL STEEL UNIT

ITEM	UNIT	QUANTITY	QUANTITY
		ASTM A7	ASTM A36
GIRDERS	POUND		2,654,881
CROSS FRAMES	POUND	166,854	
LATERAL BRACINGS	POUND	108,325	
GIRDER BEARINGS	POUND	87,800	
EXPANSION GUARDS	POUND	81,032	
TOTAL	POUND	589,011	2,654,881

INCLUDED IN SUMMARY ON SHEET 21

CITY OF CHICAGO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
SOUTH ROUTE SUPERHIGHWAY
ELEVATED HIGHWAY
W. 16TH. ST. TO W. 15 TH. ST.
8" x 11" JUN 8-25223-2H

STEEL FRAMING PLAN
UNIT 2

DE LEUW, CATHNER & COMPANY
CONSULTING ENGINEERS CHICAGO
SCALE: AS NOTED DATE: AUGUST, 1961
SHEET 5 II OF 56 SHEETS

DESIGNED BY: N. S. W.
DRAWN BY: W. C. K.
CHECKED BY: R. S.
IN CHARGE: N. S. WILF
APPROVED BY: L. N. RIAN

NOTES:
FOR GIRDER DETAILS, SEE SHEETS 5-12 THRU 5-16
FOR SECTIONS A-A, B-B, & E-E, SEE SHEET 5-15
FOR SECTIONS C-C, D-D, & H-H, SEE SHEET 5-16

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FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110

SCALE: NTS
DATE: 5/25/2006

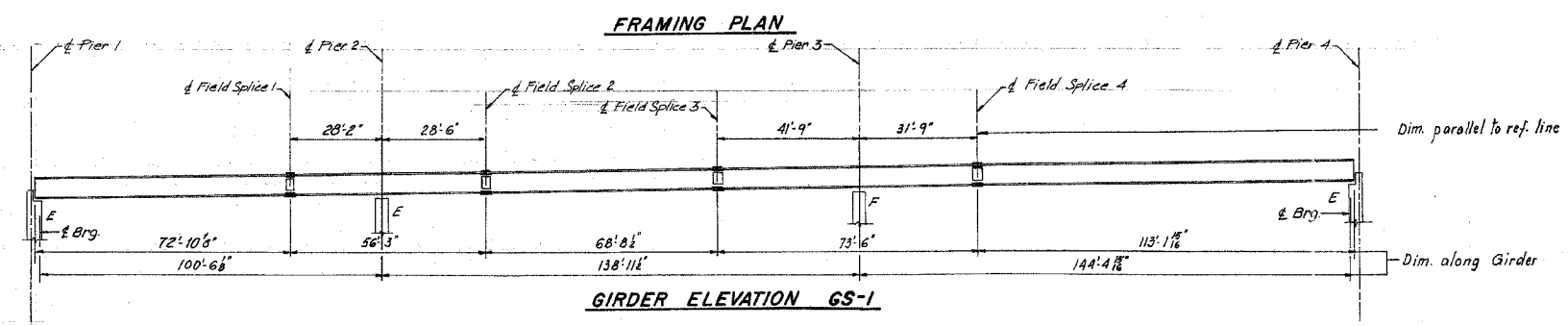
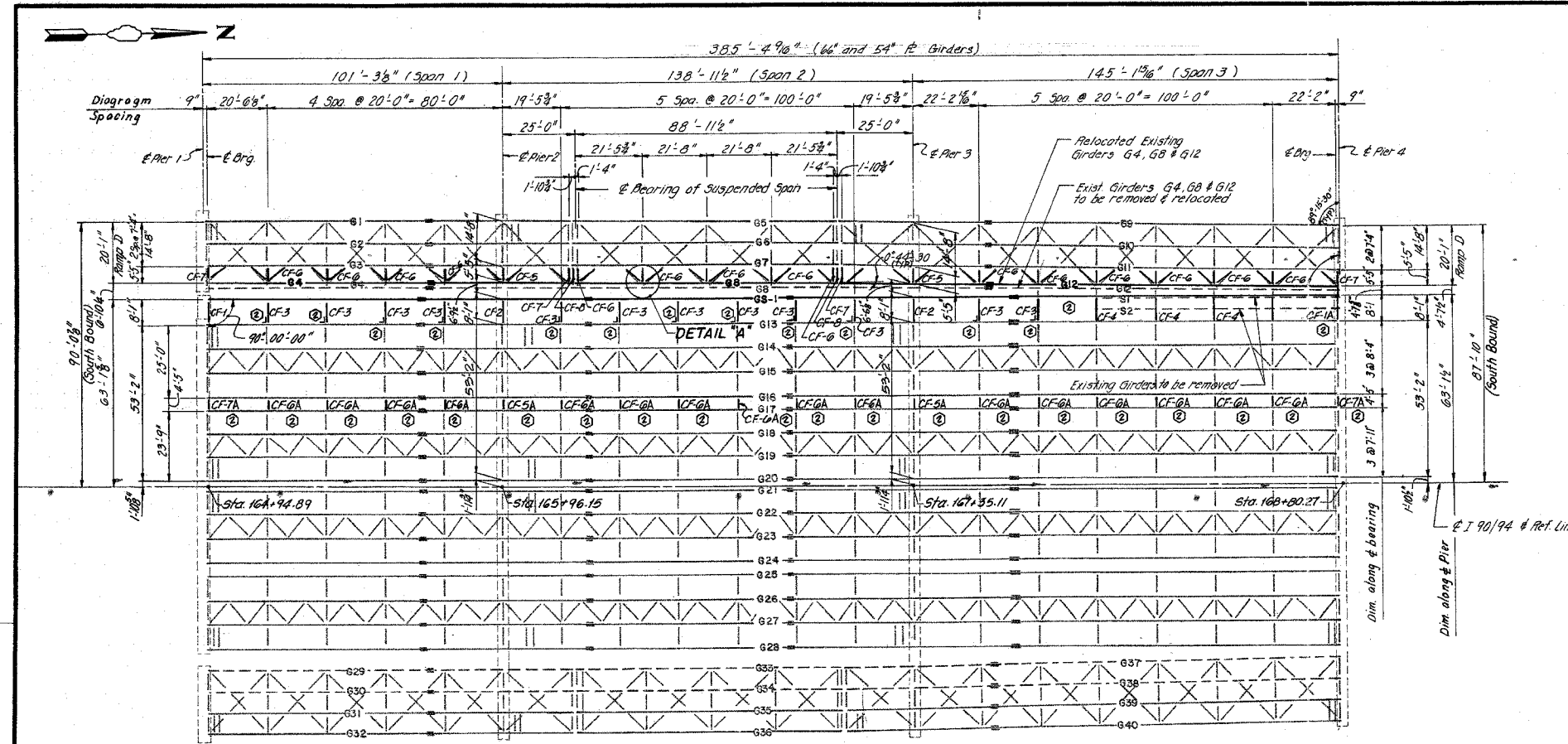
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	326
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

62581

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	32	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 1985-082R



Note:
For Detail 'A' see sheet B14

SHEET B8 OF B32

REVISIONS	
Name	Date
(2)	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082R COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1110
FRAMING PLAN SPANS 1 TO 3
Scale: NONE
Date: AUG. 14, 1987
Checked By: J.G.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

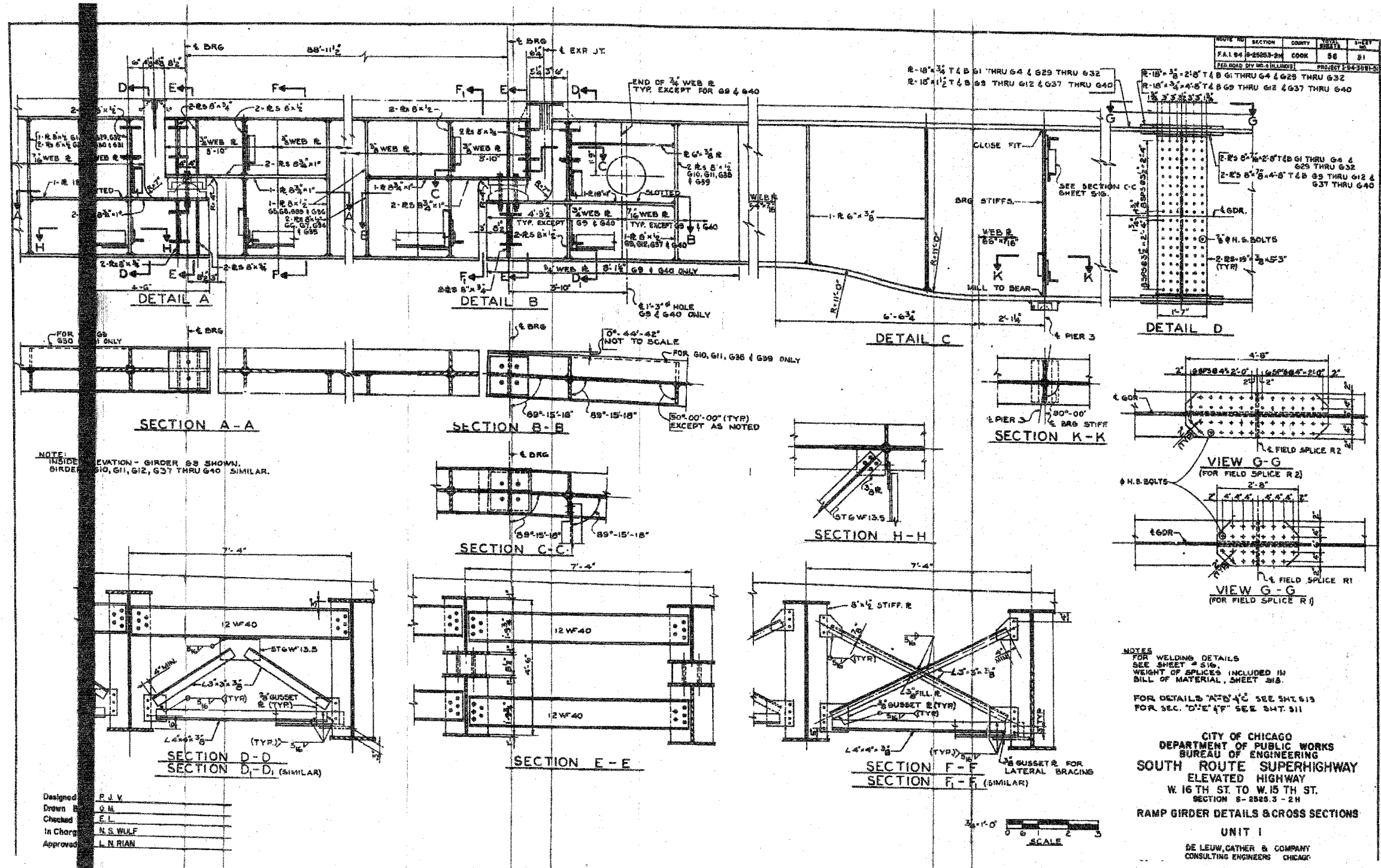
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FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

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REVISIONS	
NAME	DATE

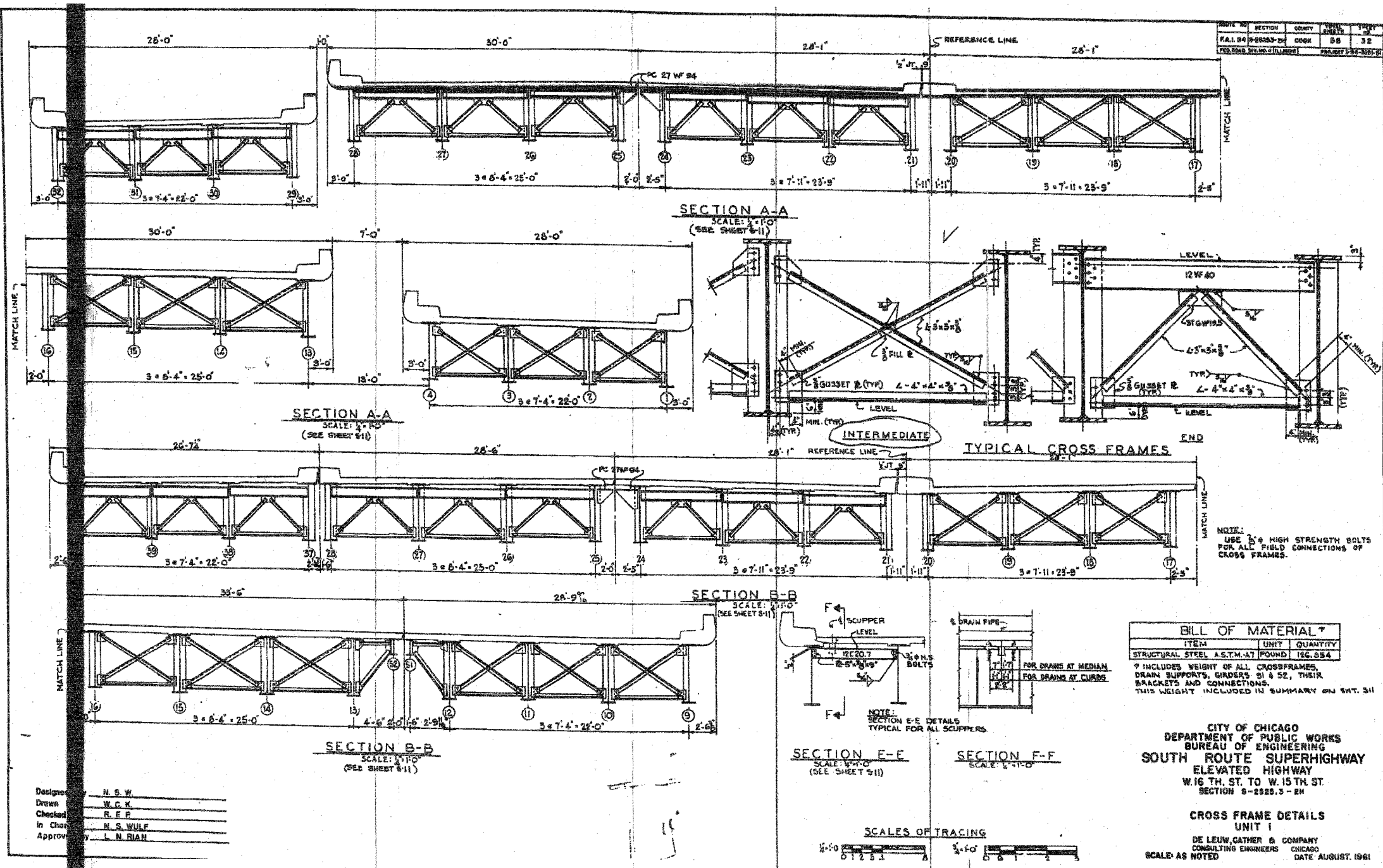
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION
 SN 016-1110

SCALE: NTS
 DATE: 5/25/2006

DRAWN BY: MTR
 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	328
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62581				



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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110

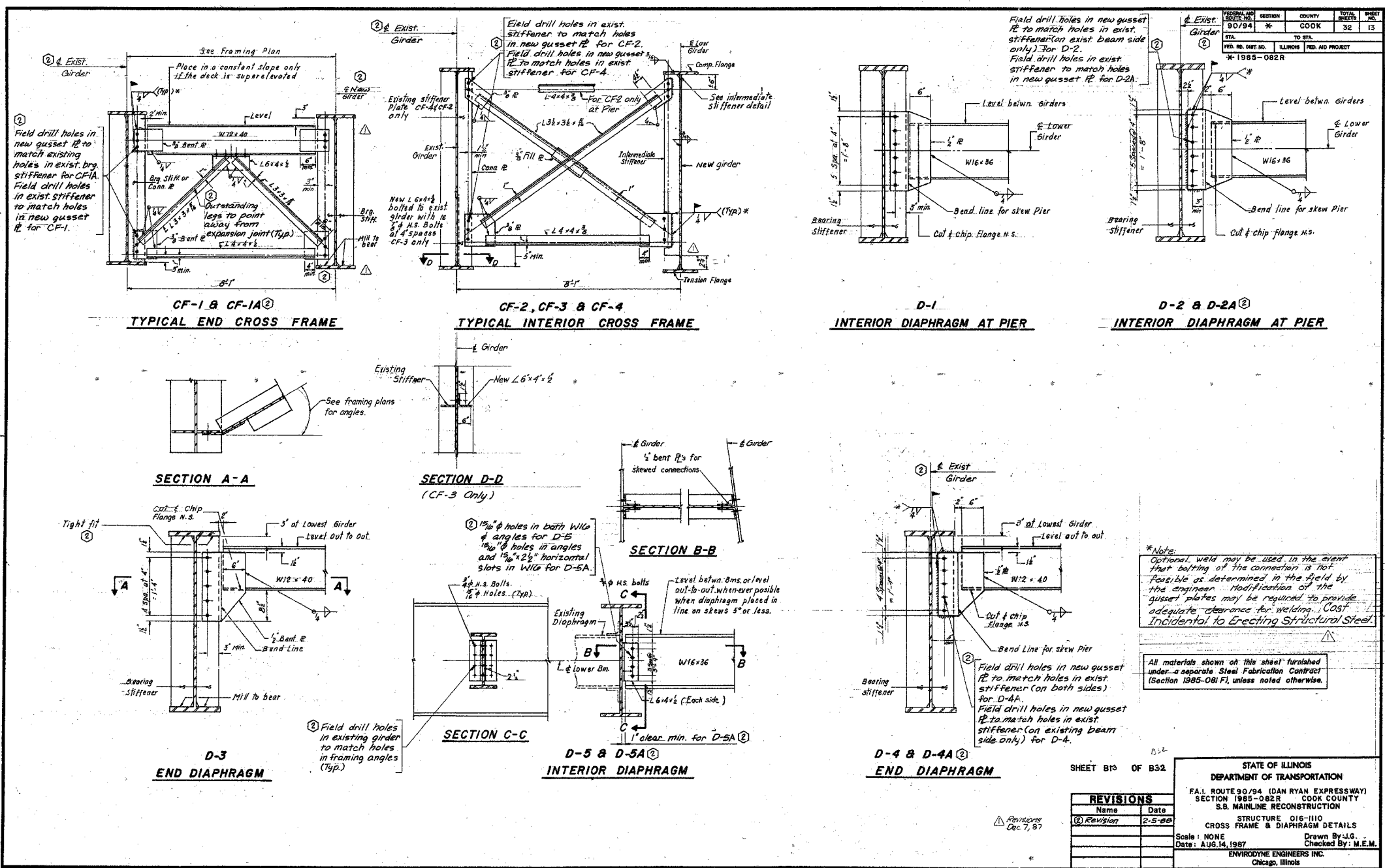
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4/56/07 PM 5/23/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	329
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581



*Note:
Optional weld may be used in the event that bolting of the connection is not possible as determined in the field by the engineer. Modification of the gusset plates may be required to provide adequate clearance for welding. Cost incidental to Erecting Structural Steel.

All materials shown on this sheet furnished under a separate Steel Fabrication Contract (Section 1985-081F), unless noted otherwise.

REVISIONS	
Name	Date
Revision	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082R COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-110
CROSS FRAME & DIAPHRAGM DETAILS
Scale: NONE Drawn By: J.G.
Date: AUG. 14, 1987 Checked By: M.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

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CONSULTING ENGINEERS
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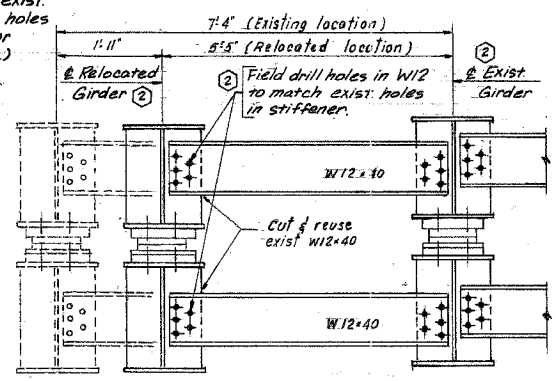
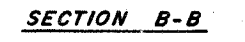
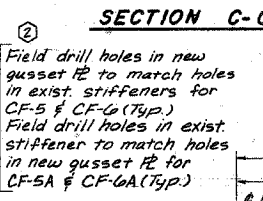
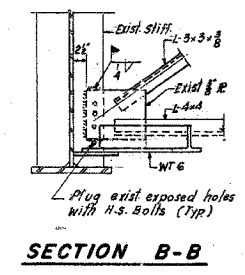
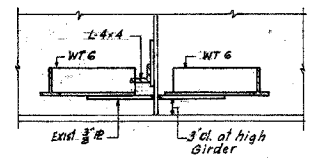
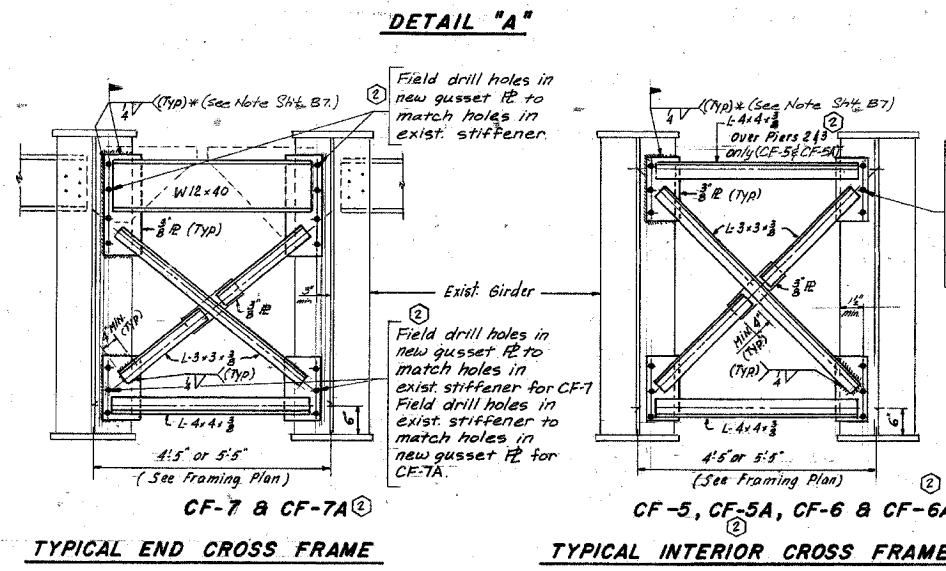
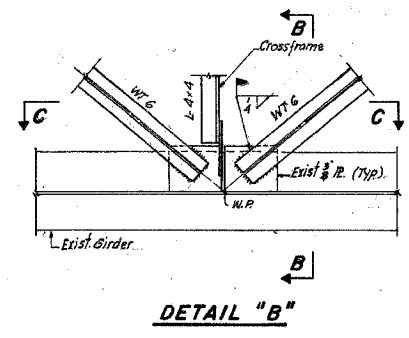
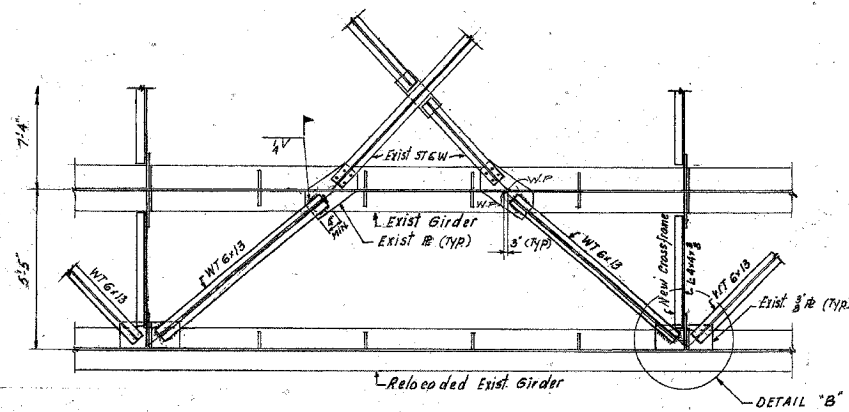
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110
SCALE: NTS DRAWN BY: MTR
DATE: 5/25/2006 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	330
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	32	14
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS FED. AID PROJECT		
*1985-082R				



All materials shown on this sheet furnished under a separate Steel Fabrication Contract (Section 1985-081 F), unless noted otherwise.

SHEET B14 OF B32

REVISIONS	
Name	Date
②	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082R COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-1110
CROSS FRAME & BTM LAT. BRACING
Scale: NONE
Date: AUG. 14, 1987
Drawn By: J.G.
Checked By: M.E.M.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-1110

SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

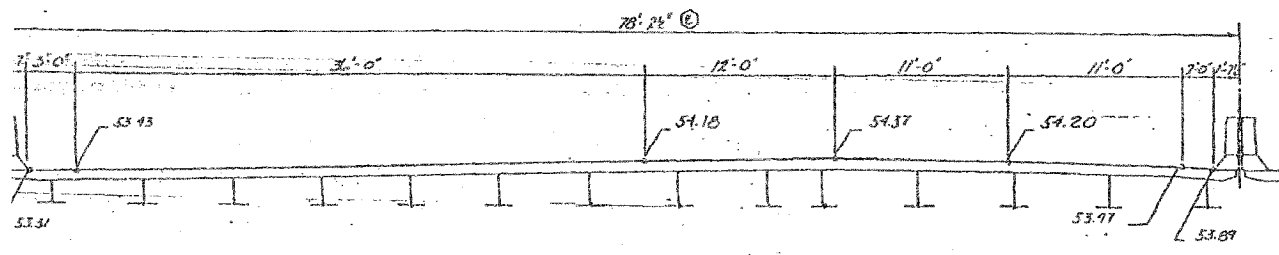
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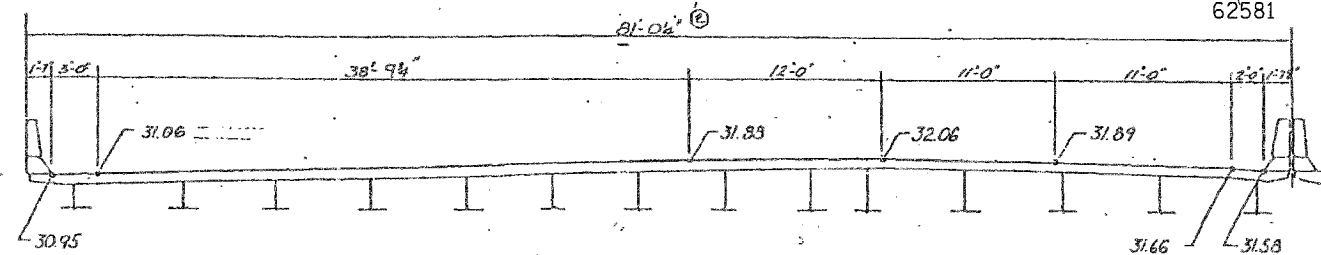
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

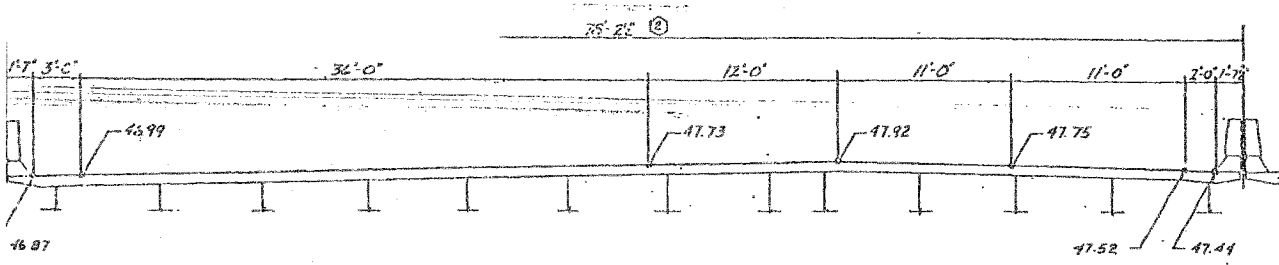
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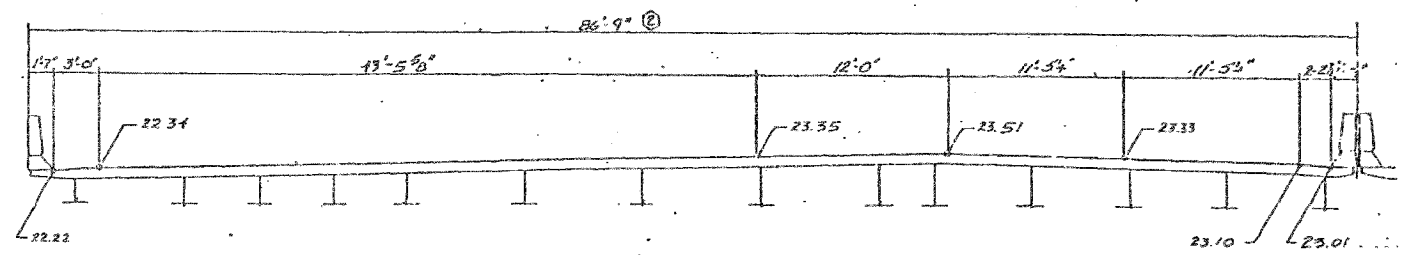
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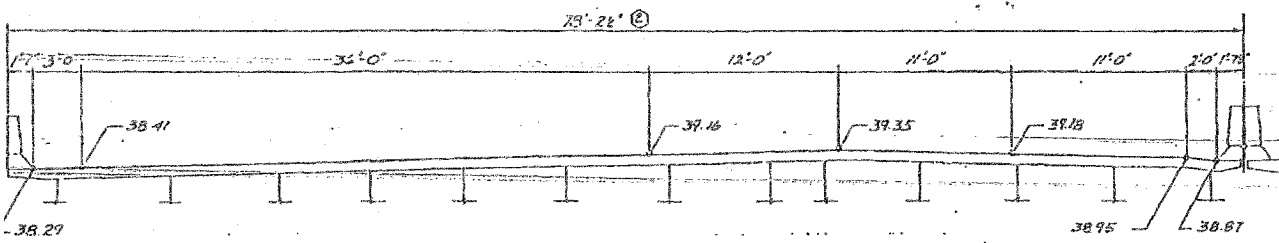
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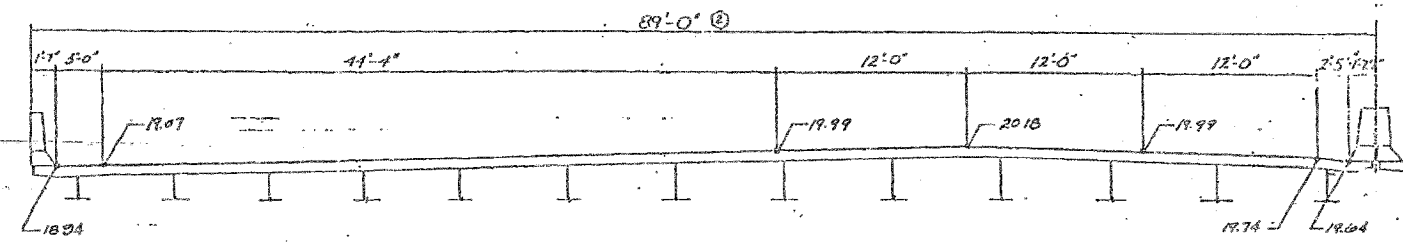
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4 in. NEOPRENE



② EXPANSION JOINT AT PIER No. 23
2 1/2 in. NEOPRENE



EXPANSION JOINT AT PIER No. 15
4 in. NEOPRENE



② EXPANSION JOINT AT NORTH ABUTMENT
2 1/2 in. PREFORMED JOINT SEAL

SHEET A.51 OF A.60

REVISIONS	
Name	Date
② Elevation	2-5-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985 - COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
STRUCTURE 016-0137
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Scale: NONE
Date: AUG 14, 1987
Drawn By: A.V.
Checked By: MEM
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

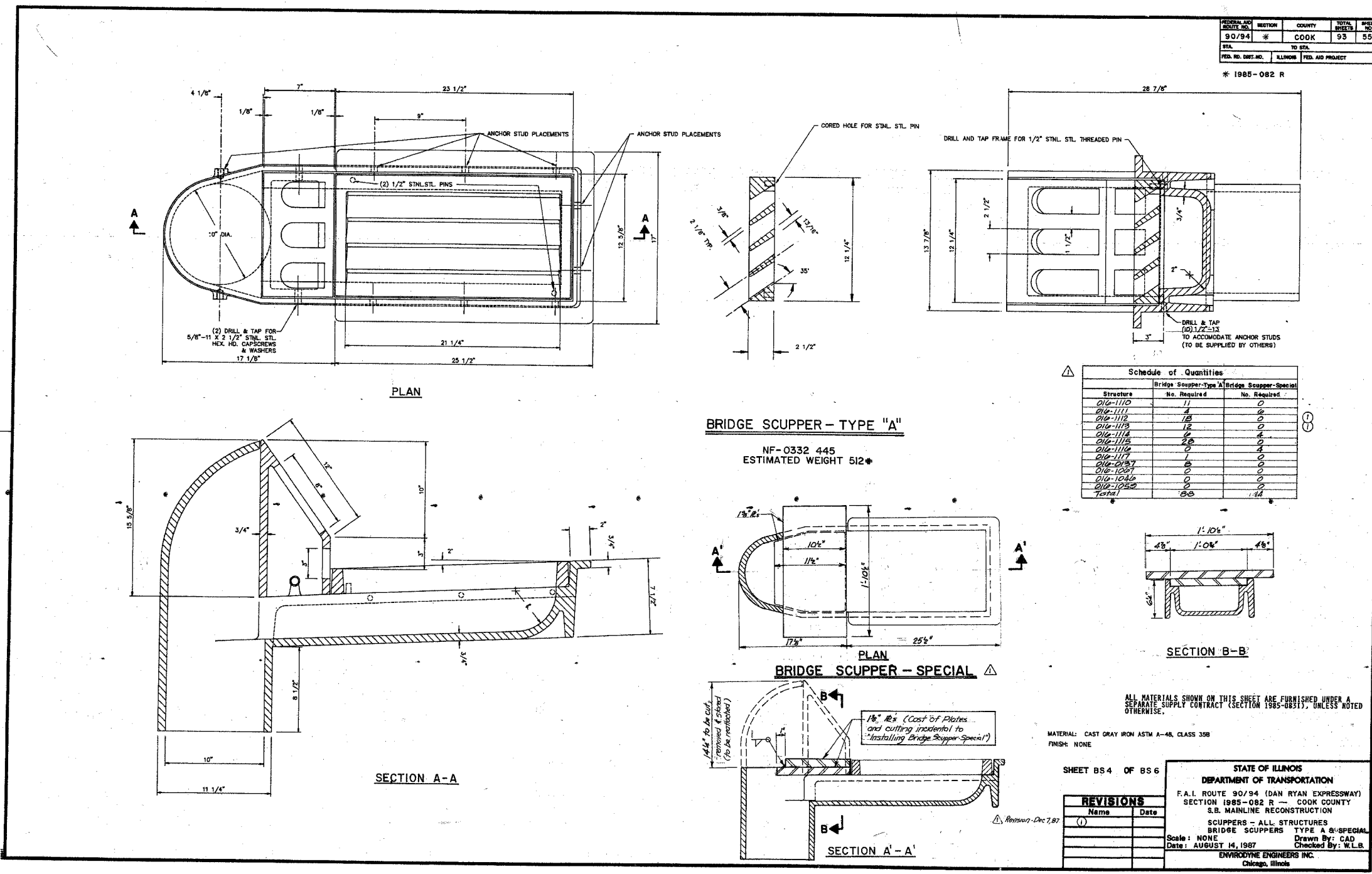
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SN 016-0137
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

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ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION

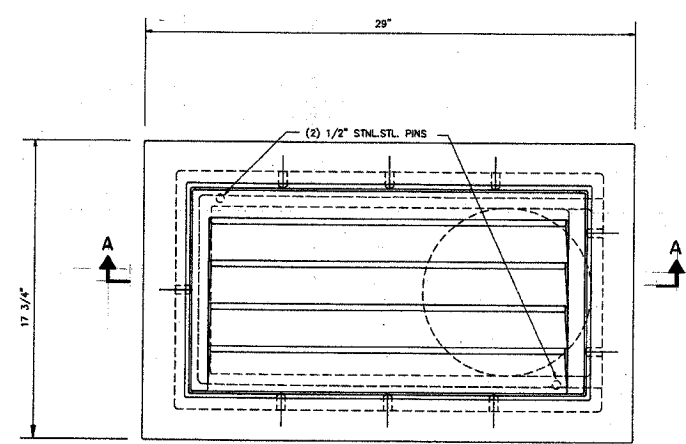
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CHECKED BY: BLU

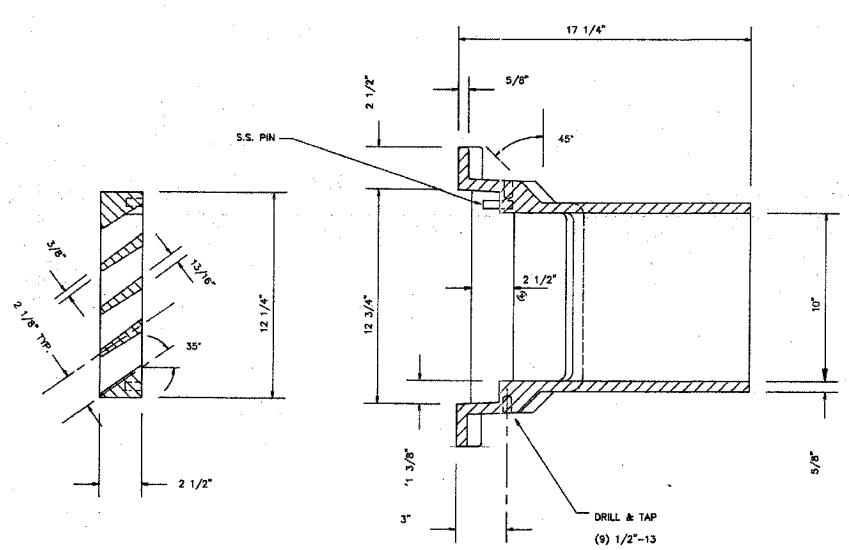
45393 PH 5/23/2006

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62581				

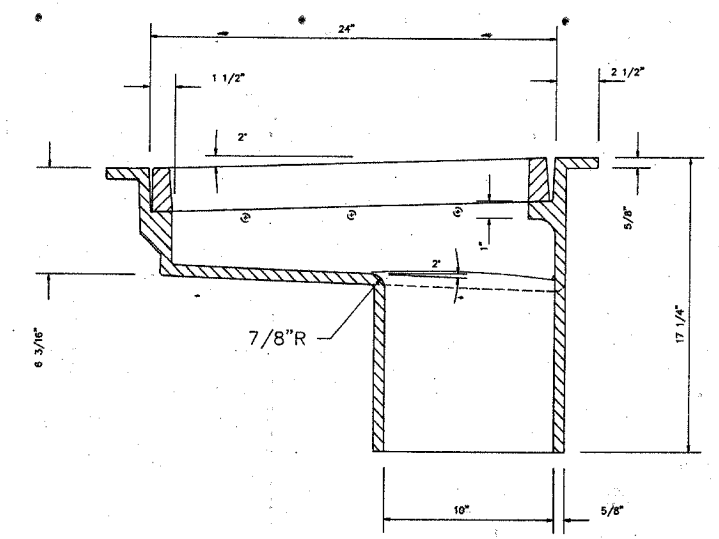
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90/94	2	COOK	93	56
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* 1985-082 R				



PLAN



BRIDGE SCUPPER - TYPE "B"
NF-0332 435
ESTIMATED WEIGHT 235*



SECTION A-A

STRUCTURE	No. REQUIRED
016-1110	-
016-1111	3
016-1112	-
016-1113	11
016-1114	-
016-1115	11
016-1116	8
016-1117	16
016-1037	3
016-1067	-
016-1046	5
016-1059	1
TOTAL	58

MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT

SHEET BS 5 OF BS 6

REVISIONS	Name	Date
(1)		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 1985-082 R COOK COUNTY
S.B. MAINLINE RECONSTRUCTION
SCUPPERS - ALL STRUCTURES
BRIDGE SCUPPER - TYPE "B"
Scale: NONE
Date: AUGUST 14, 1987
Drawn By: CAD
Checked By: W.L.B.
ENVIRODYNE ENGINEERS INC.
Chicago, Illinois

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1985-0851), UNLESS NOTED OTHERWISE.

Revision 12-7-87

FOR INFORMATION ONLY

REVISIONS	NAME	DATE

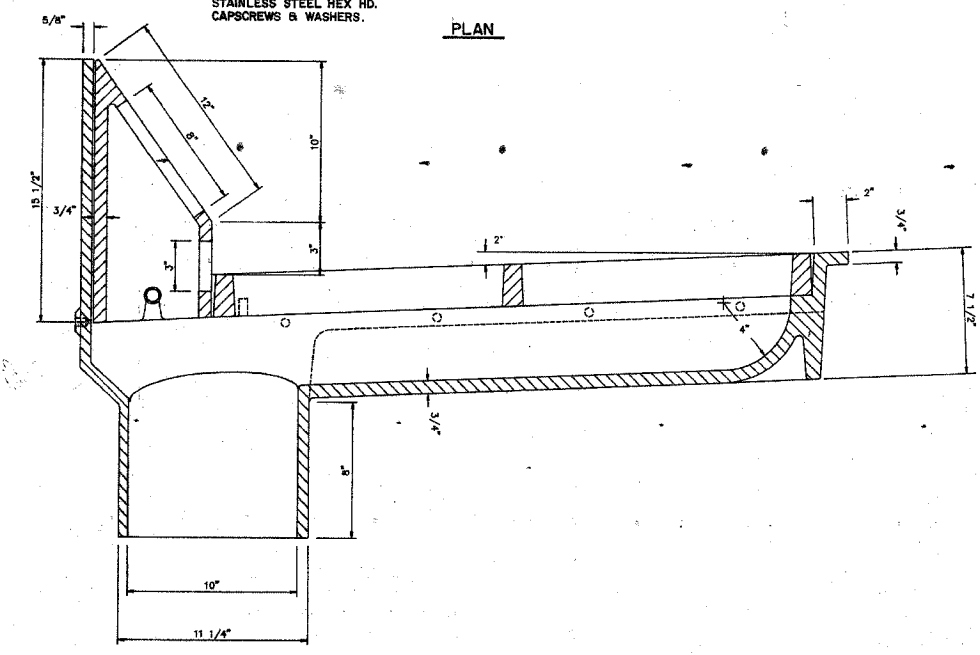
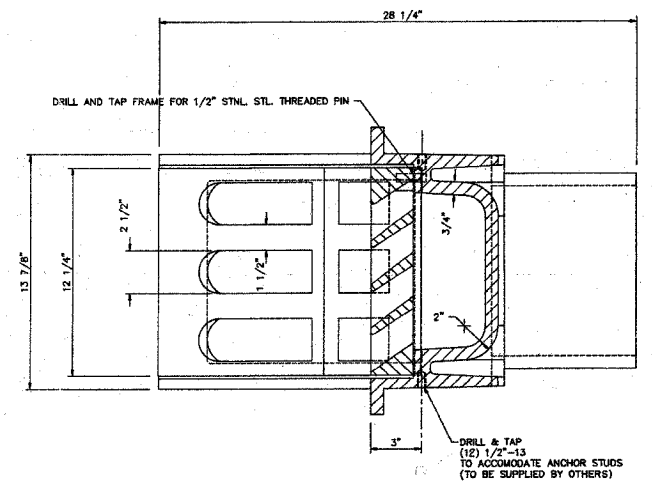
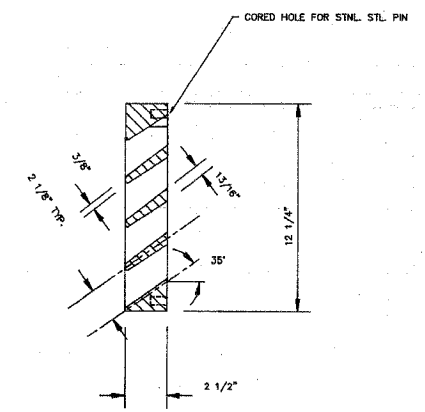
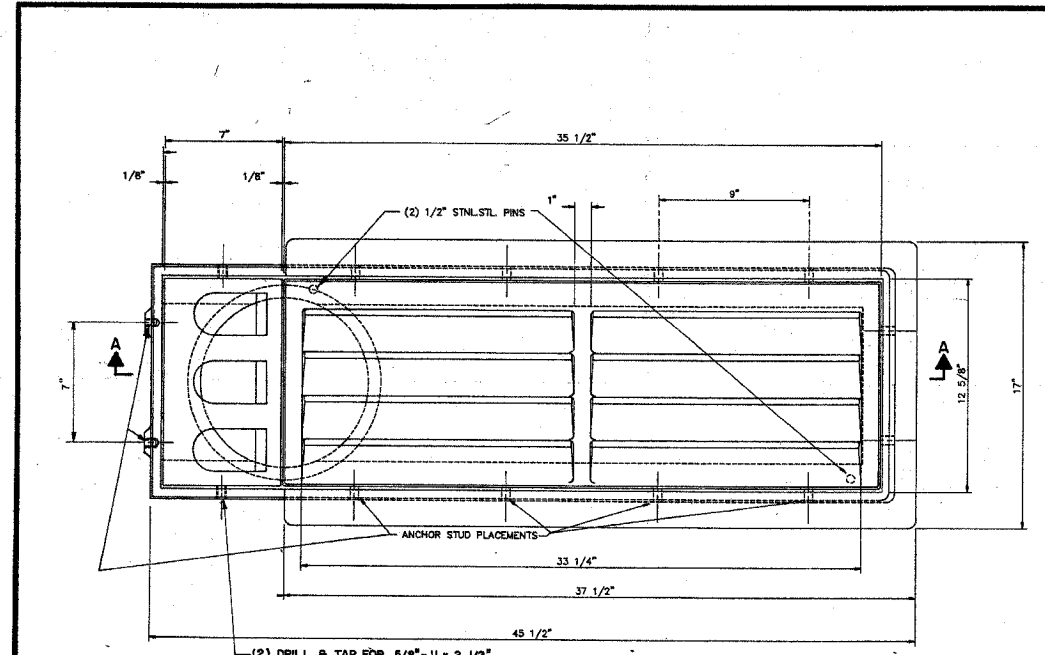
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SB DAN RYAN ELEVATED BRIDGE
REPAIR FROM 15TH TO 28TH STREETS
EXISTING PLAN INFORMATION
SCALE: NTS
DATE: 5/25/2006
DRAWN BY: MTR
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

1985-082 R BRIDGE SHEETS 680-21-EP-DIST ADP 5/23/2006 5:00:00 PM

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	93	57
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS FED. AID PROJECT		

* 1985 - 082 R



BRIDGE SCUPPER - TYPE "C"
 NF-0332 440
 ESTIMATED WEIGHT 623*

STRUCTURE	No. REQUIRED
O16-1110	8
O16-1111	9
O16-1112	23
O16-1113	5
O16-1114	5
O16-1115	5
O16-1116	8
O16-1117	14
O16-0137	10
O16-1067	15
O16-1046	—
O16-1059	5
TOTAL	102

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1985-0831), UNLESS NOTED OTHERWISE.

MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
 FINISH: NONE

SHEET BS 6 OF BS 6

REVISIONS	Name	Date
(1)		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
 SECTION 1985-082 R - COOK COUNTY
 S.B. MAINLINE RECONSTRUCTION
 SCUPPERS - ALL STRUCTURES
 BRIDGE SCUPPER TYPE C
 Scale: NONE
 Date: AUGUST 14, 1987
 Drawn By: CAD
 Checked By: W.L.B.
 ENVIRODYNE ENGINEERS INC.
 Chicago, Illinois

Rev. 12-7-87

BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

FOR INFORMATION ONLY

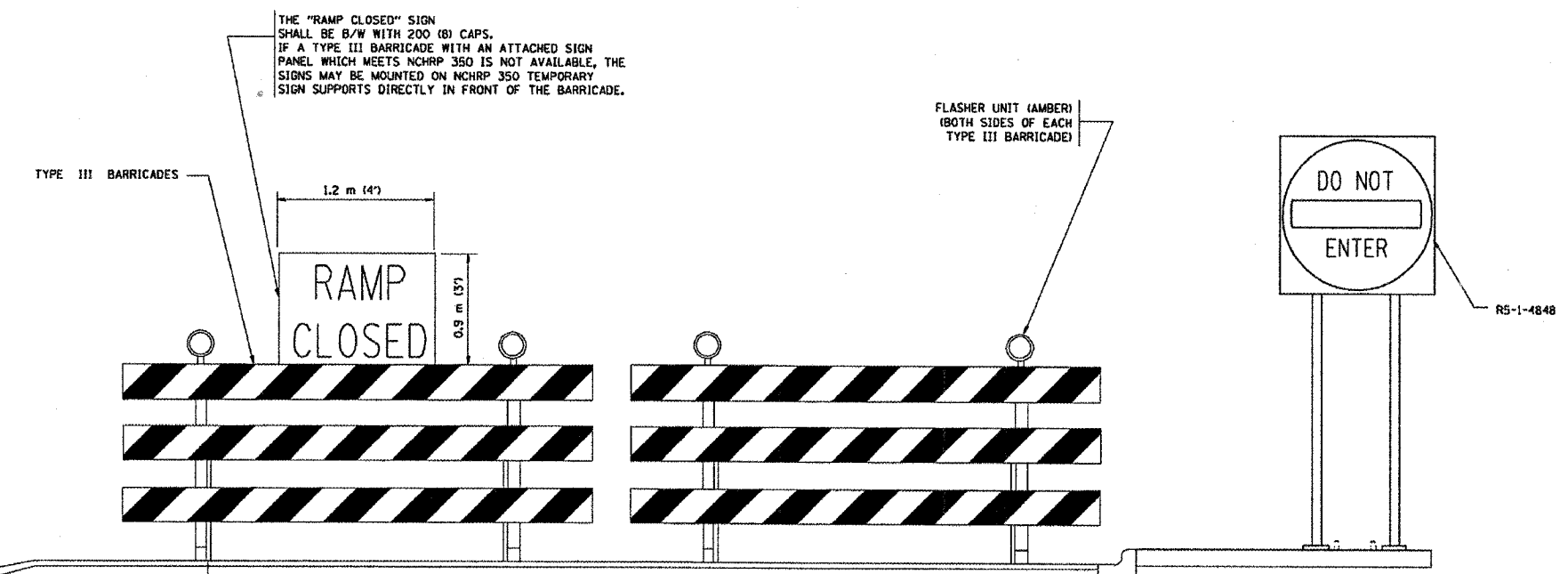
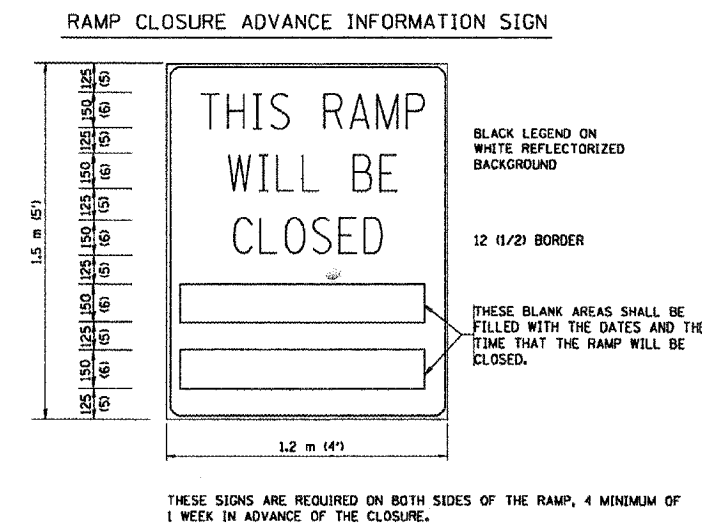
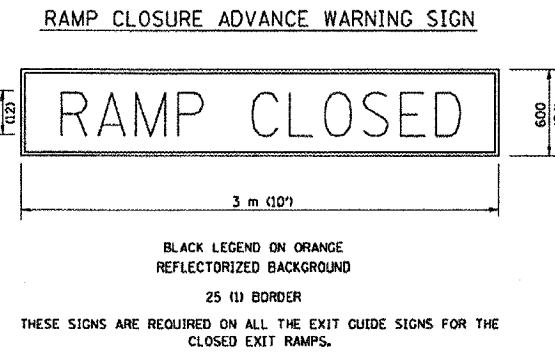
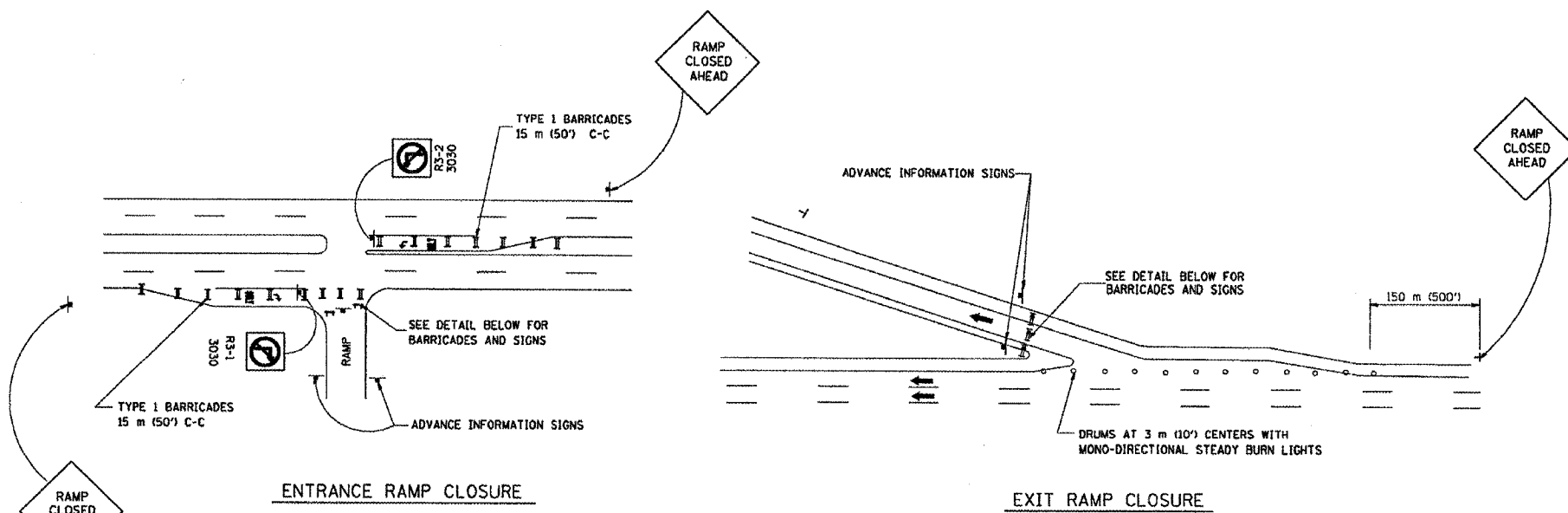
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SB DAN RYAN ELEVATED BRIDGE
 REPAIR FROM 15TH TO 28TH STREETS
 EXISTING PLAN INFORMATION

SCALE: NTS
 DATE: 5/25/2006
 DRAWN BY: MTR
 CHECKED BY: BLU

5/23/2006 5:06:40 PM I:\66000\BRIDGE\KSHEETS\60-21\EP_2037.dwg

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	339
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DETAIL FOR REQUIRED BARRICADES & SIGNS

- NOTES:
- CONES MAY BE SUBSTITUTED FOR TYPE I AND TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28" IN HEIGHT.
 - STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
 - THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS.
 - ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY FOUR (24) HOURS IN LENGTH.

- GENERAL NOTES:
- CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 700 (28) HIGH.
 - STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
 - A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
 - FOR DAYTIME RAMP CLOSURES, LASTING 6 HOURS OR LESS, THE CONTRACTOR MAY ELIMINATE THE ADVANCE WARNING SIGNS ON THE EXIT GUIDE SIGNS.
 - ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
 - THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL AND PROTECTION.
 - AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.

REVISIONS	
NAME	DATE
DWS	2-83
DWS	1/90
DWS	3/94
DWS	12/94
DWS/JAF	12/02
Revise devices to meet NCHRP 350	4/03

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

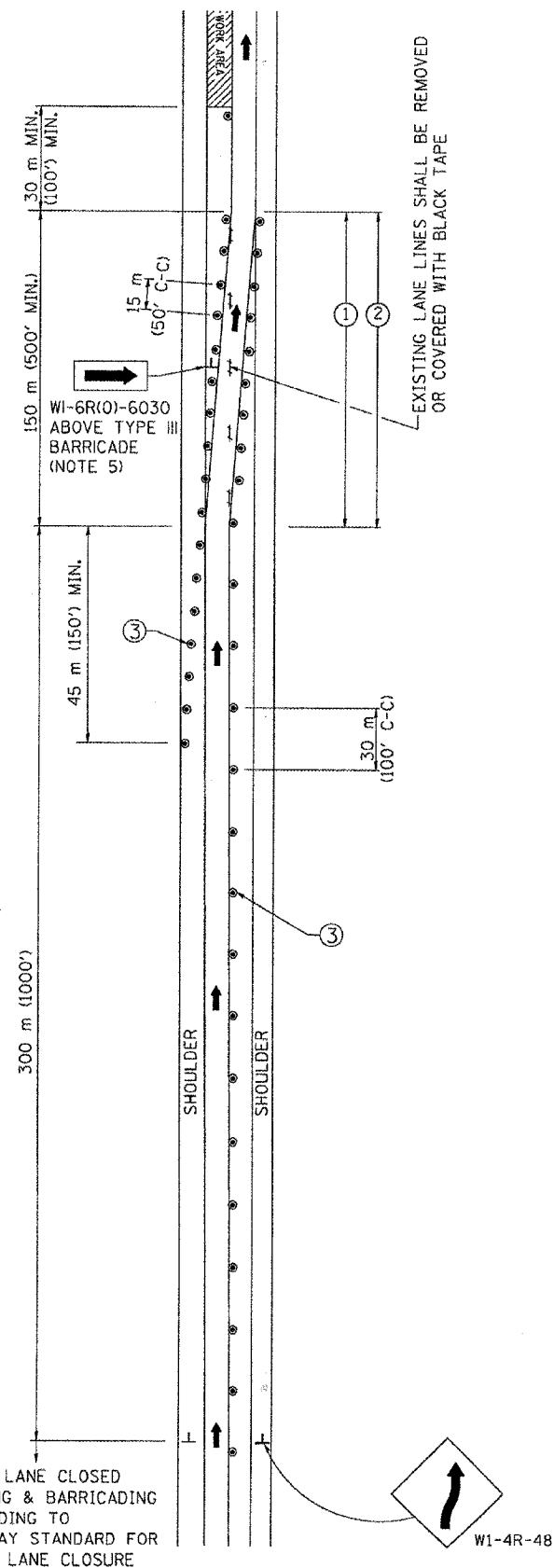
ILLINOIS DEPARTMENT OF TRANSPORTATION

FREEWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS

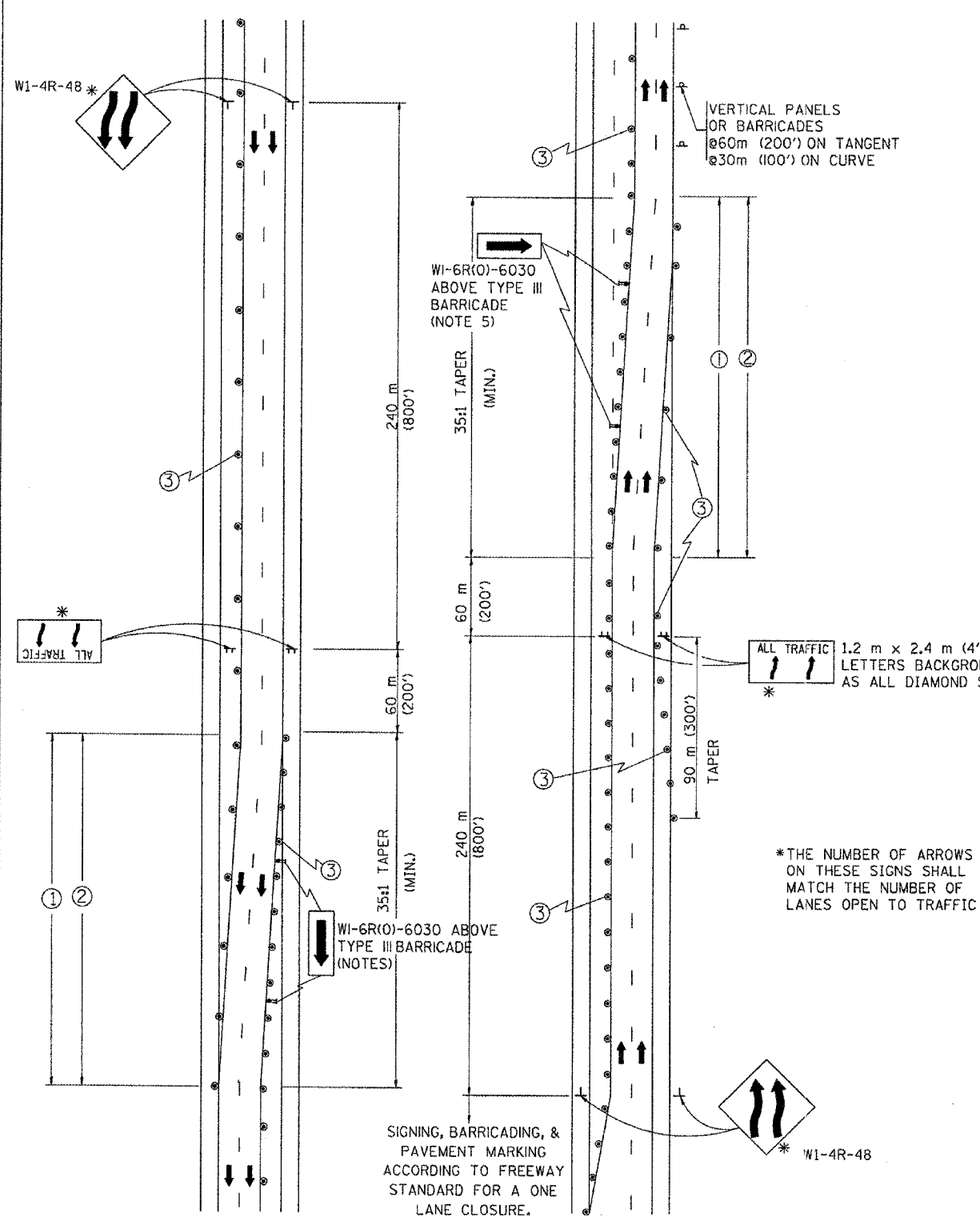
SCALE: NONE
DATE 05/06/2003

DRAWN BY TC-8
CHECKED BY

SINGLE LANE WEAVE



MULTI-LANE WEAVE



- GENERAL NOTES**
- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED OR COVERED WITH BLACK TAPE. PAVEMENT MARKING REMOVAL OR BLACK TAPE SHALL NOT BE REQUIRED FOR LANE CLOSURES UNDER 24 HOURS IN DURATION.
 - CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 90 m (300') ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVE LANE LINES SHALL BE 3 M-9 M (10'-30') SKIP DASH, WHITE.
 - PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 15 m (50') C-C SPACING IN TAPERS AND 30 m (100') C-C SPACING IN TANGENTS.
 - ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
 - IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS DIRECTLY IN FRONT OF THE BARRICADE.

- SYMBOLS**
- ↑ DIRECTION OF TRAFFIC
 - ▨ WORK AREA
 - ┆ SIGN ON PORTABLE OR PERMANENT SUPPORT
 - ⊙ DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT

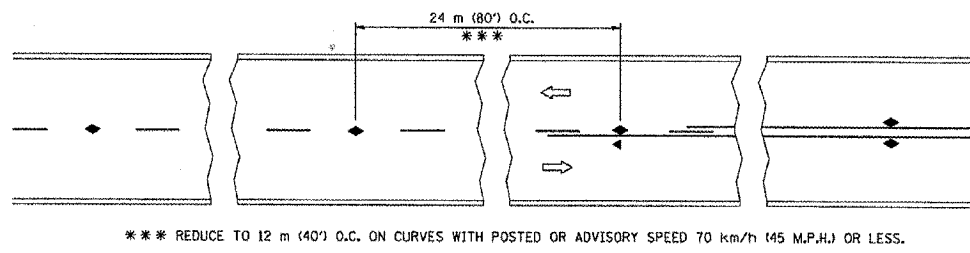
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL DETAILS
FOR FREEWAY
SINGLE & MULTI-LANE WEAVE

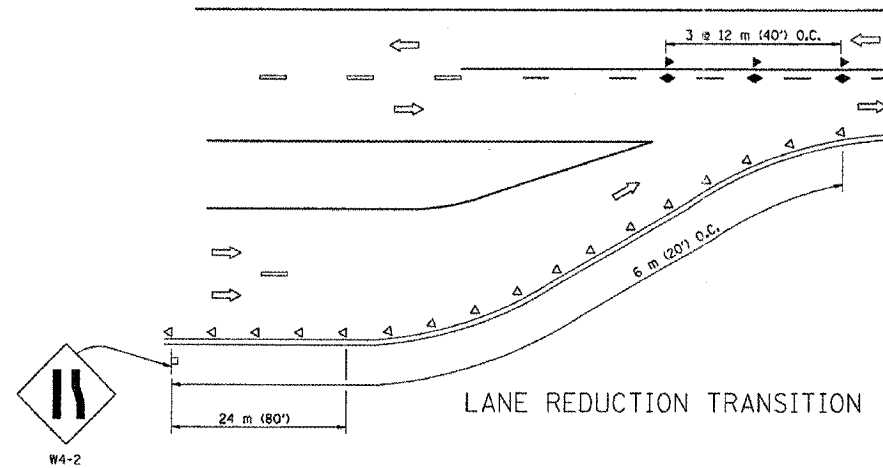
REVISIONS	
NAME	DATE
DWS	2/87
DWS	1/90
DWS	12/27/94
DWS	11/96
JAF	4/03

SCALE: NONE
DATE: 05/12/2003

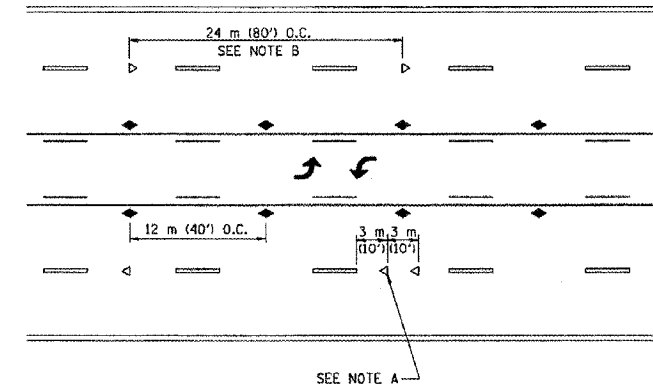
DRAWN BY R.H.
CHECKED BY
TC-9



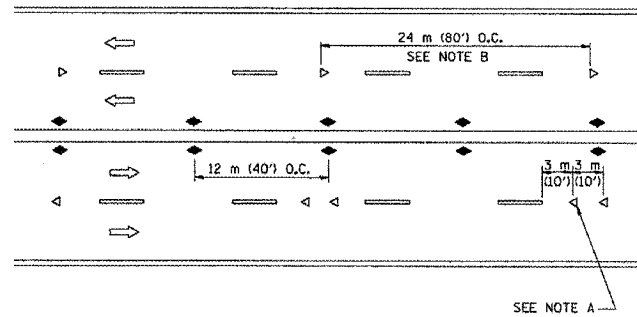
TWO-LANE/TWO-WAY



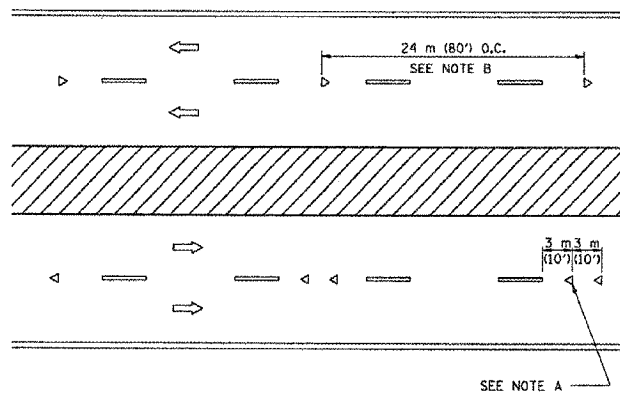
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 50 TO 75 (2 TO 3) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 150 m (500') IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

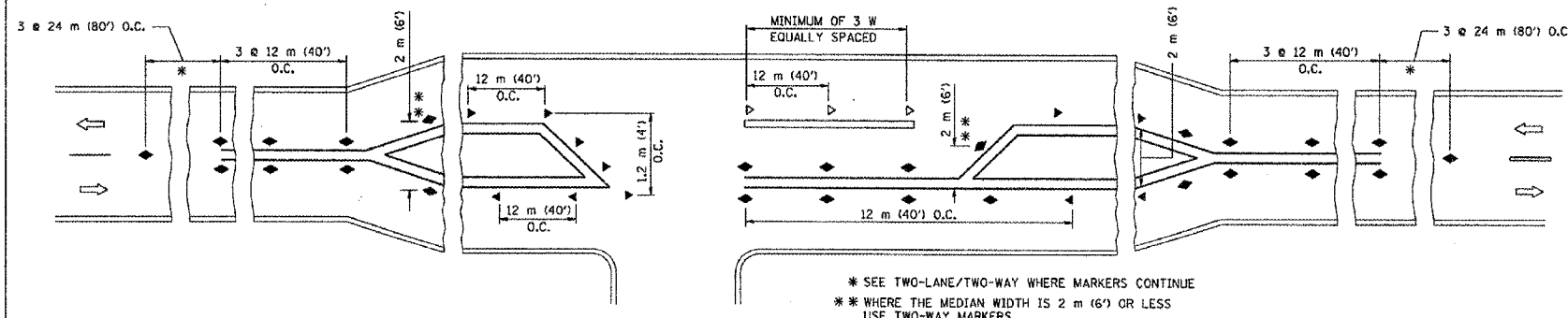
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 12 m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 20 km/h (10 M.P.H.) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS
 (SNOW-PLOW RESISTANT)

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

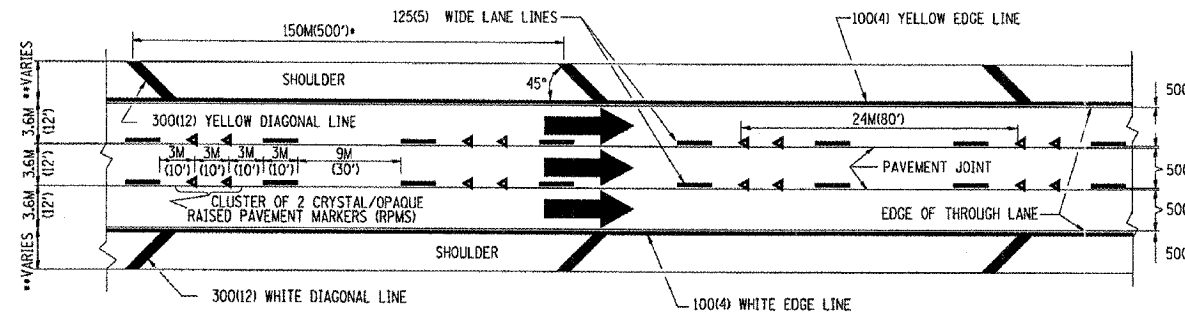
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 DATE: 10/18/2002

DRAWN BY CADD
 CHECKED BY TC-11

REVISION DATE: 01/06/00

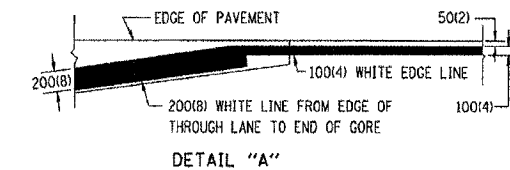
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			344	333
STA. TO STA.		ALIGNED		
FED. ROAD DIST. NO. 7		FED. AID PROJECT		

- THE DIAGONAL LINES SHALL BE SPACED AT 12M (40') C-C ACROSS ALL STRUCTURES WHICH ARE 150M (500') OR LESS IN LENGTH
- THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 1.8M (6') OR LESS IN WIDTH

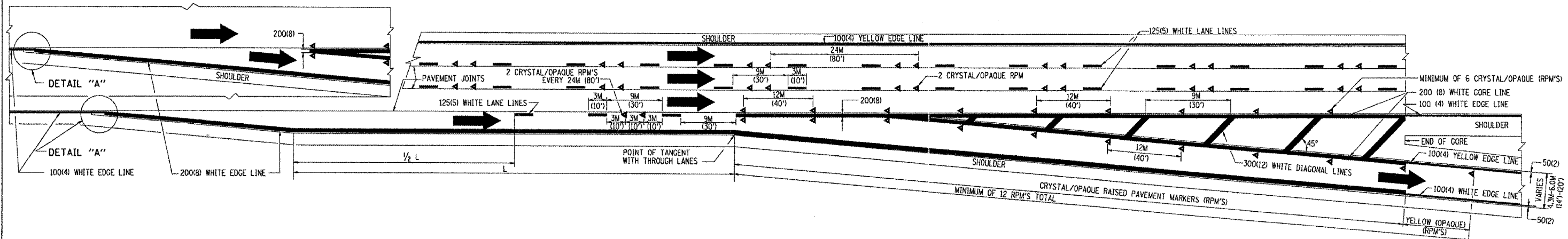


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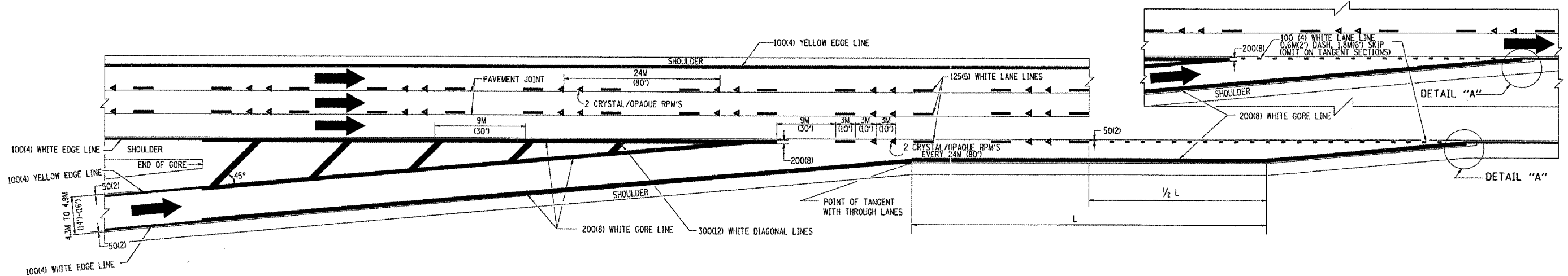
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES
3. PREFORMED PLASTIC PAVEMENT MARKING LINE SHALL BE USED ON PCC PAVEMENT.



TYPICAL EDGE LINES & LANE LINES



TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91
AH	3/96
DWS	7/96

ILLINOIS DEPARTMENT OF TRANSPORTATION

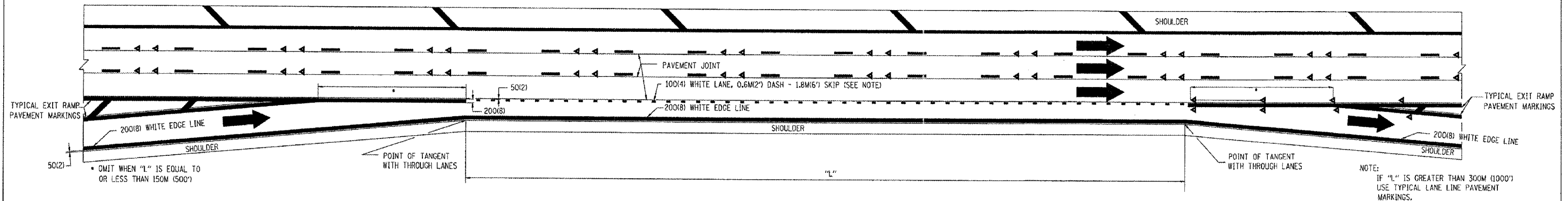
MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS

SCALE: NONE
DATE: 10/18/2002

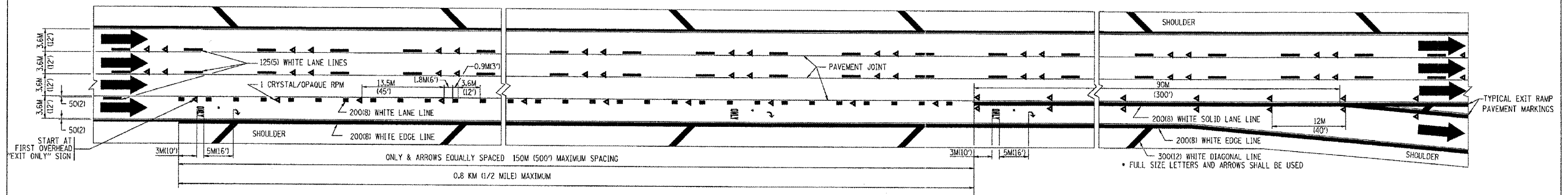
DRAWN BY C.A.D.D.
CHECKED BY
TC12 SHEET 1 OF 2
REVISION DATE: 01/01/96

DATE-TIME
DGN-SPEC
VHFC12

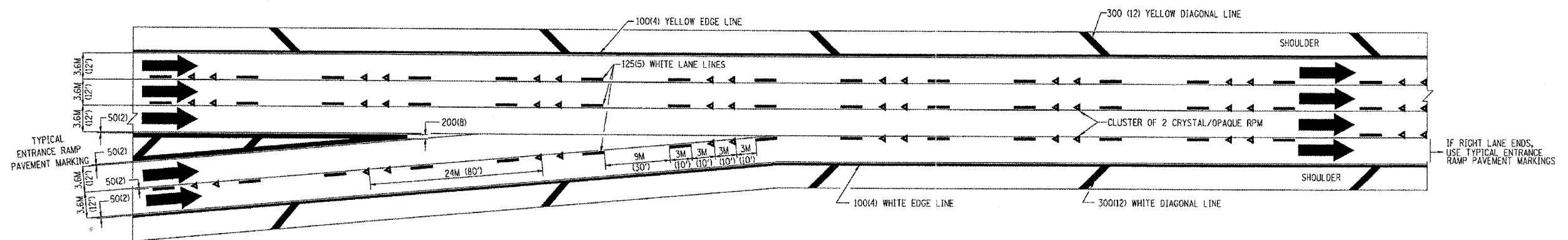
F. A. RILEY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	339
STA.		TO STA.		
FED. ROAD DIST. NO. 1		BLINDS		FED. AID PROJECT



TYPICAL ENTRANCE/EXIT RAMP COMBINATION PAVEMENT MARKINGS



TYPICAL EXIT ONLY LANE PAVEMENT MARKINGS



TYPICAL TWO LANE ENTRANCE RAMP PAVEMENT MARKINGS

DATE-TIME:
DGN-SPEC:
VIT/CJZ

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91

ILLINOIS DEPARTMENT OF TRANSPORTATION

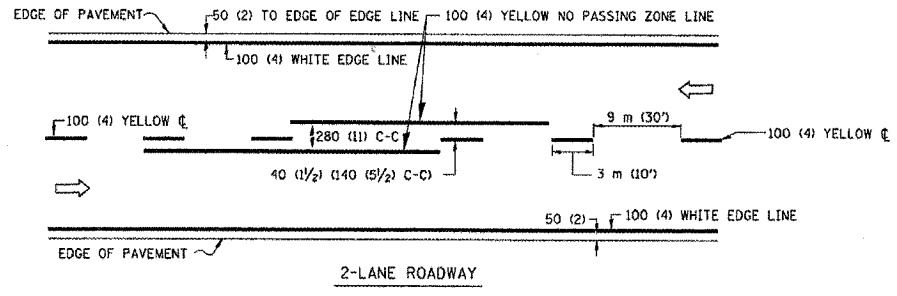
**MULTI-LANE FREEWAY
PAVEMENT MARKING
DETAILS**

SCALE: NONE
DATE: 10/18/2002

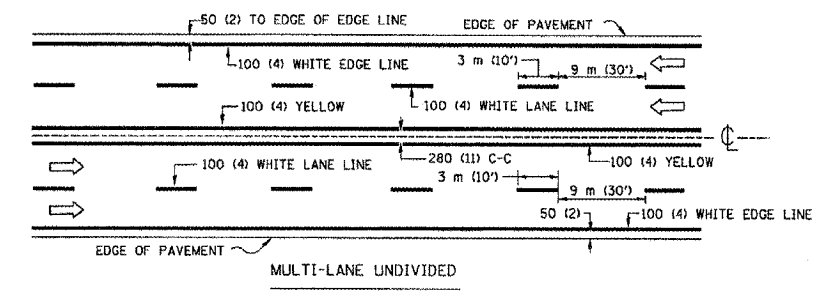
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CHECKED BY

TC12 SHEET 2 OF 2

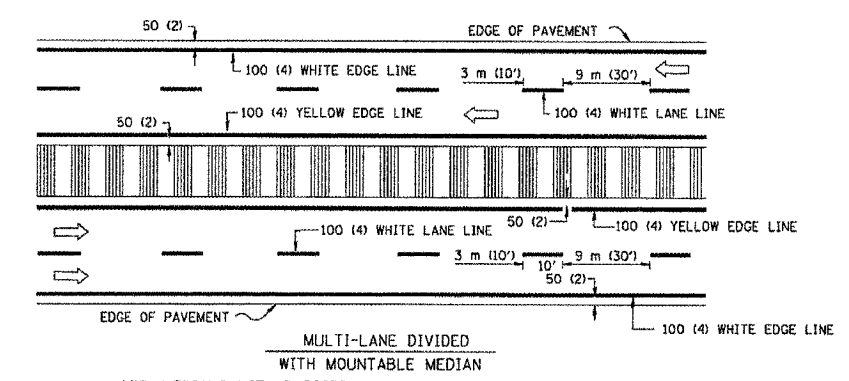
REVISION DATE: 01/01/96



2-LANE ROADWAY



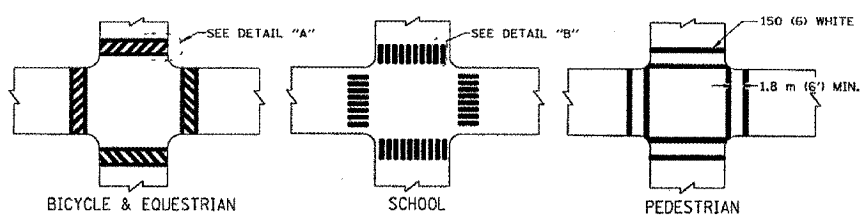
MULTI-LANE UNDIVIDED



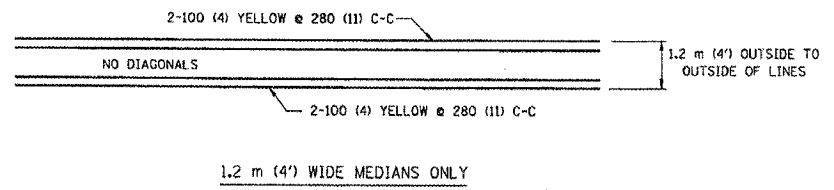
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

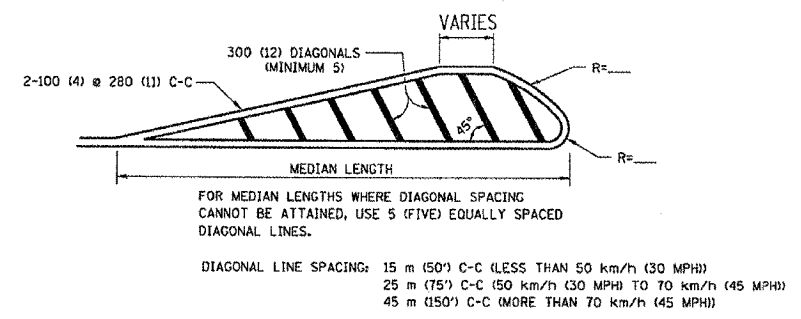
TYPICAL LANE AND EDGE LINE MARKING



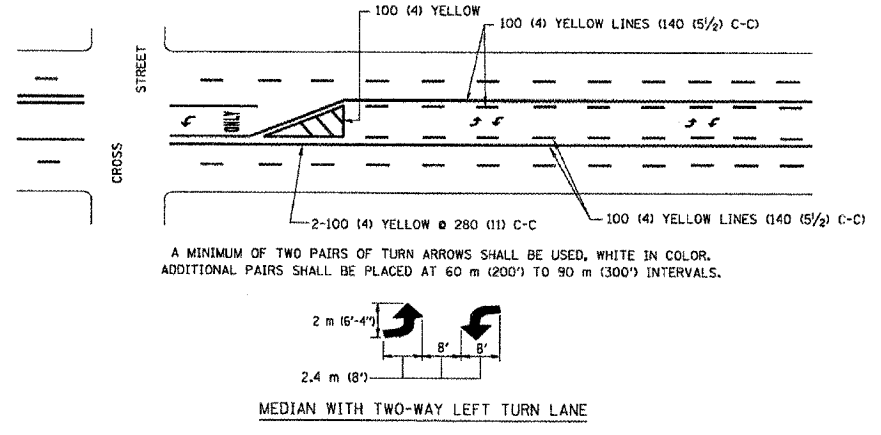
TYPICAL CROSSWALK MARKING



1.2 m (4') WIDE MEDIANS ONLY

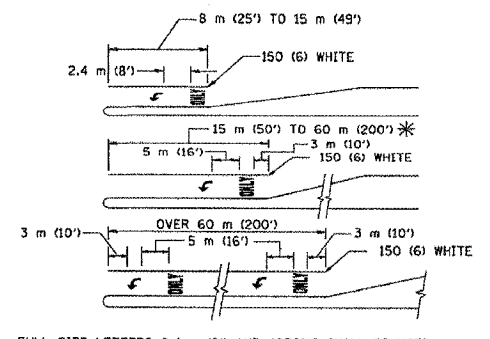


MEDIANS OVER 1.2 m (4') WIDE



TYPICAL PAINTED MEDIAN MARKING

A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 60 m (200') TO 90 m (300') INTERVALS.

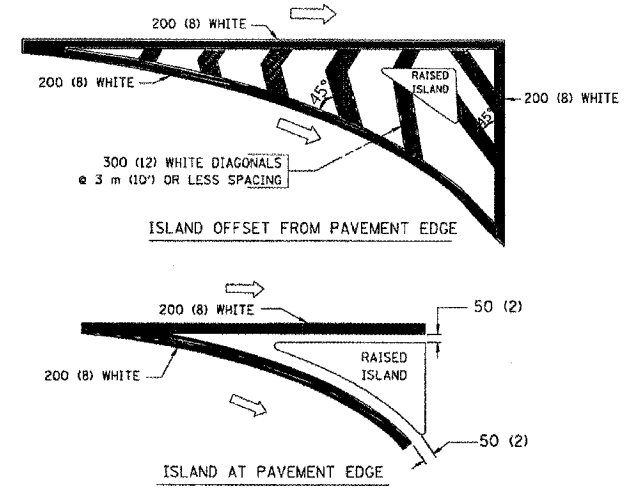


TYPICAL LEFT (OR RIGHT) TURN LANE

FULL SIZE LETTERS 2.4 m (8') AND ARROWS SHALL BE USED. AREA = 1.5 m² (15.6 SQ. FT.) ONLY AREA = 1.9 m² (20.8 SQ. FT.)

* TURN LANES IN EXCESS OF 120 m (400') IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m ² (3.6 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

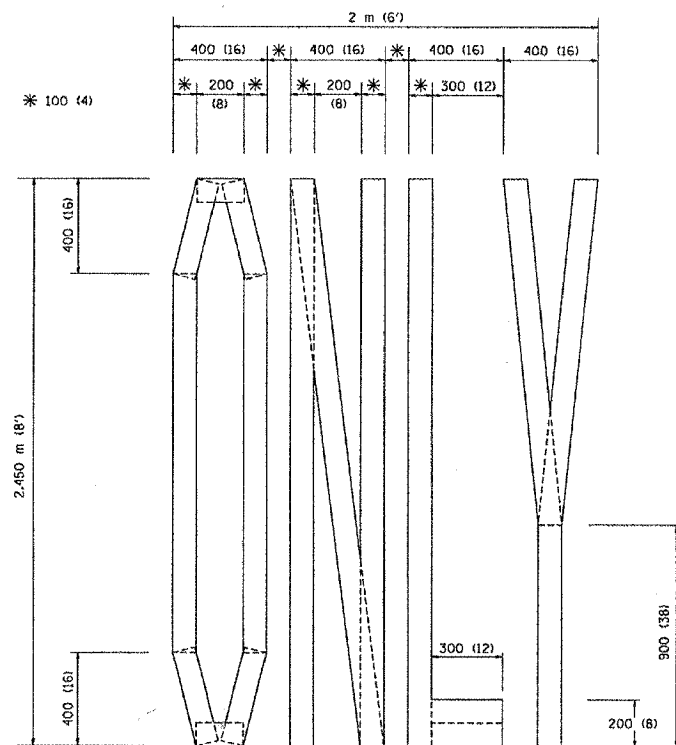
All dimensions are in millimeters (inches) unless otherwise shown.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

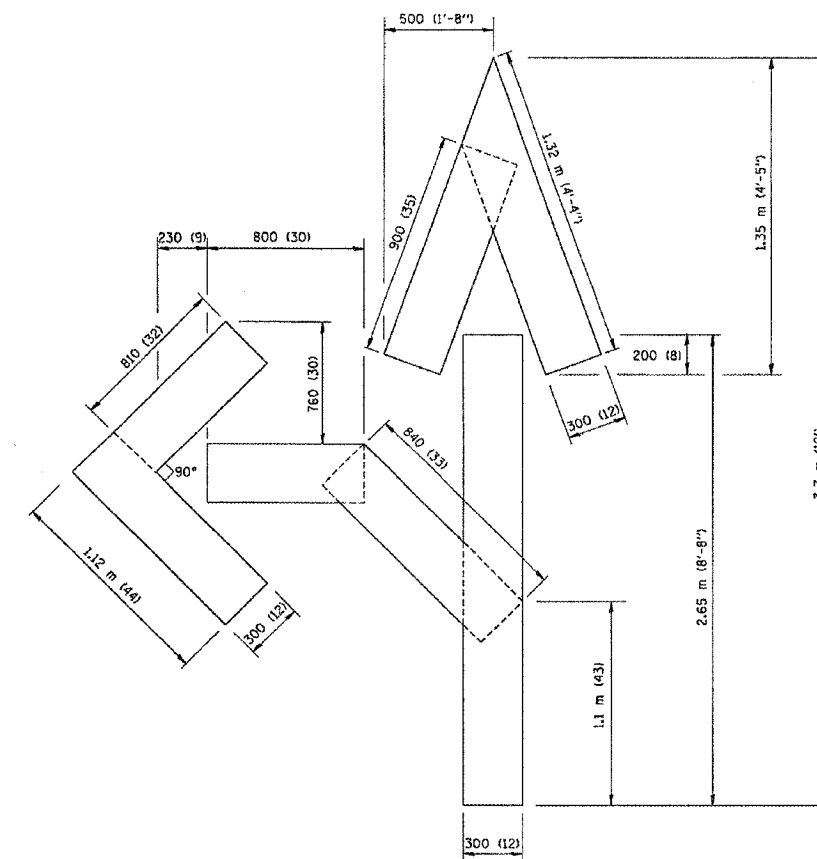
REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSE	10-09-96
ALEX HOUSE	10-17-96
T. RAMMACHER	01-06-00

SCALE: NONE
DATE 10/18/2002
DRAWN BY CADD
CHECKED BY TC-13

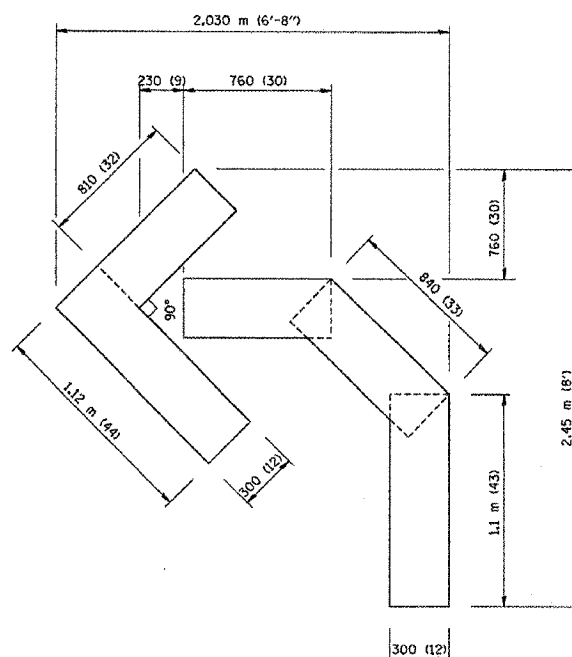
F. A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	341
STA.		TO STA.		
FED. ROAD DIST. NO.	MILEAGE	FED. AID PROJECT		



QUANTITY
 100 (4) LINE = 19.7 m (64.1 ft.)
 1.97 sq. m (21.1 sq. ft.)



QUANTITY
 100 (4) LINE = 25.3 m (82.5 ft.)
 2.53 sq. m (27.5 sq. ft.)



QUANTITY
 100 (4) LINE = 13.9 m (45.5 ft.)
 1.39 sq. m (15.2 sq. ft.)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING
 LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

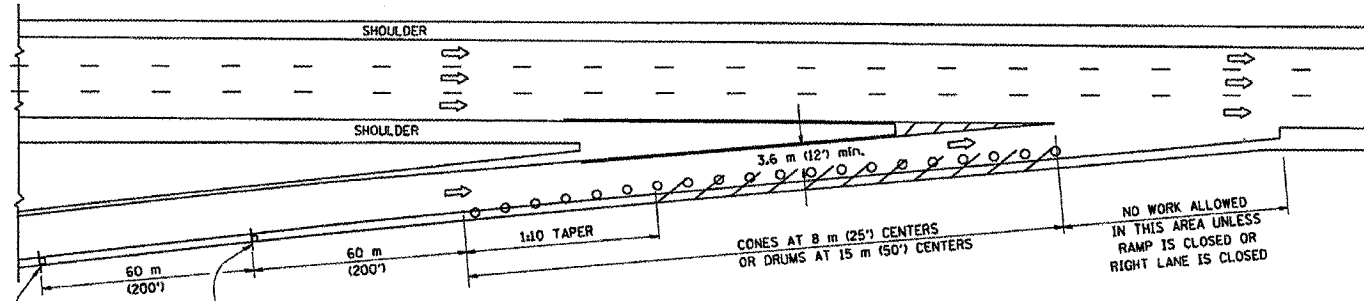
REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

SCALE: NONE
 DATE: 10/18/2002

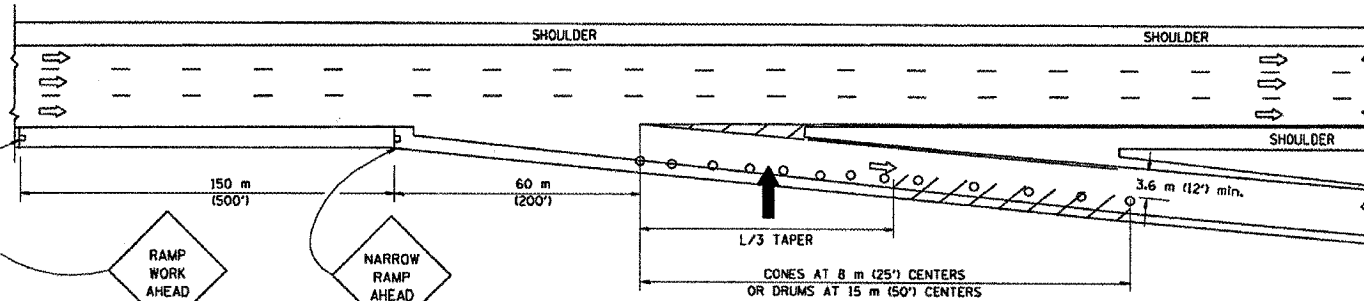
DRAWN BY CADD
 CHECKED BY TC-16

REVISION DATE: 08/28/00

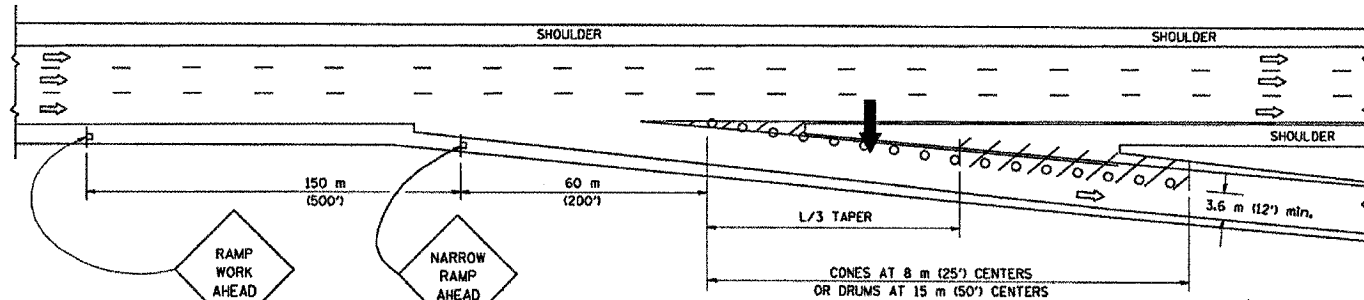
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- CONES - 700 (28) IN HEIGHT

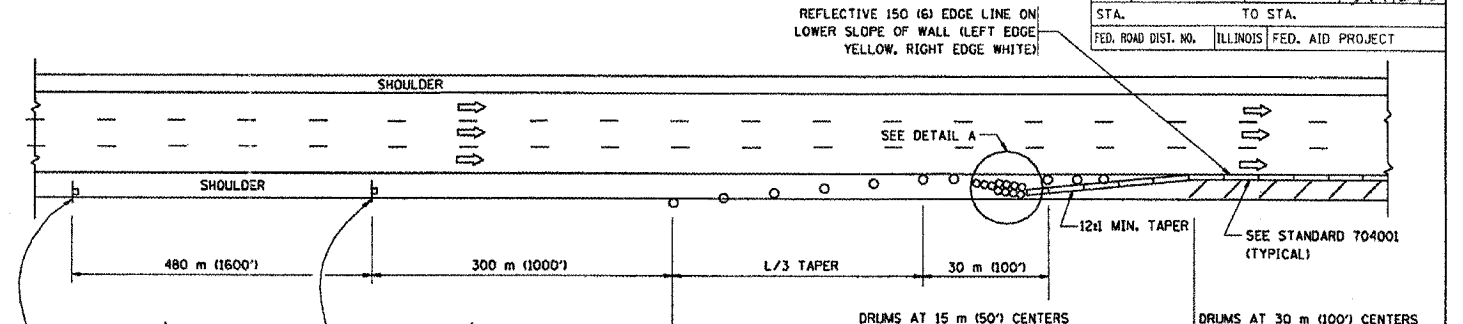
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

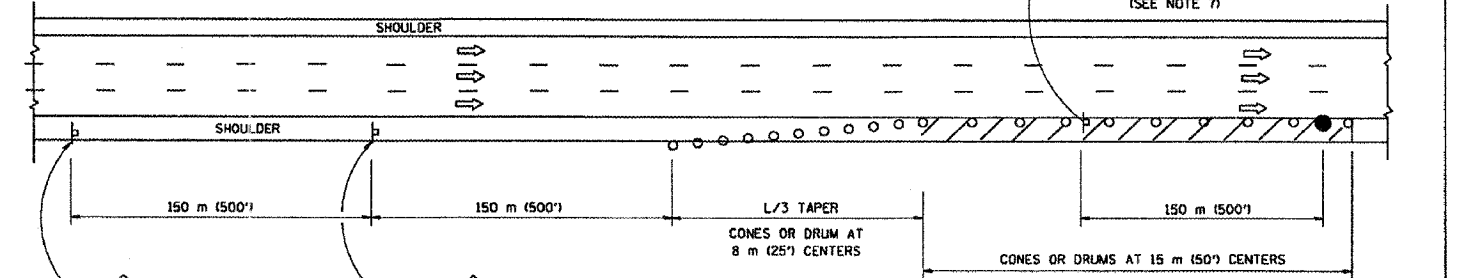
SPEED LIMIT	FORMULAS
80 km/h (45 mph) OR GREATER:	METRIC $L=0.65(W+S)$ ENGLISH $L=(W+S)$
	W = WIDTH OF OFFSET IN METERS (FEET)
	S = NORMAL POSTED SPEED KM/H (MPH)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	342
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

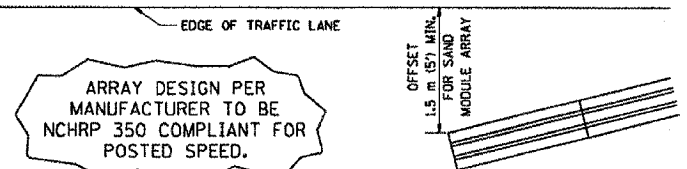


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 4.5 m (15') TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
 IMPACT ATTENUATOR, TEMPORARY
 (SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS OUTSIDE THE CLEAR ZONE OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 30 m (100') TO 60 m (200') IN ADVANCE OF THE WORKERS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
 ILLINOIS DEPARTMENT OF TRANSPORTATION

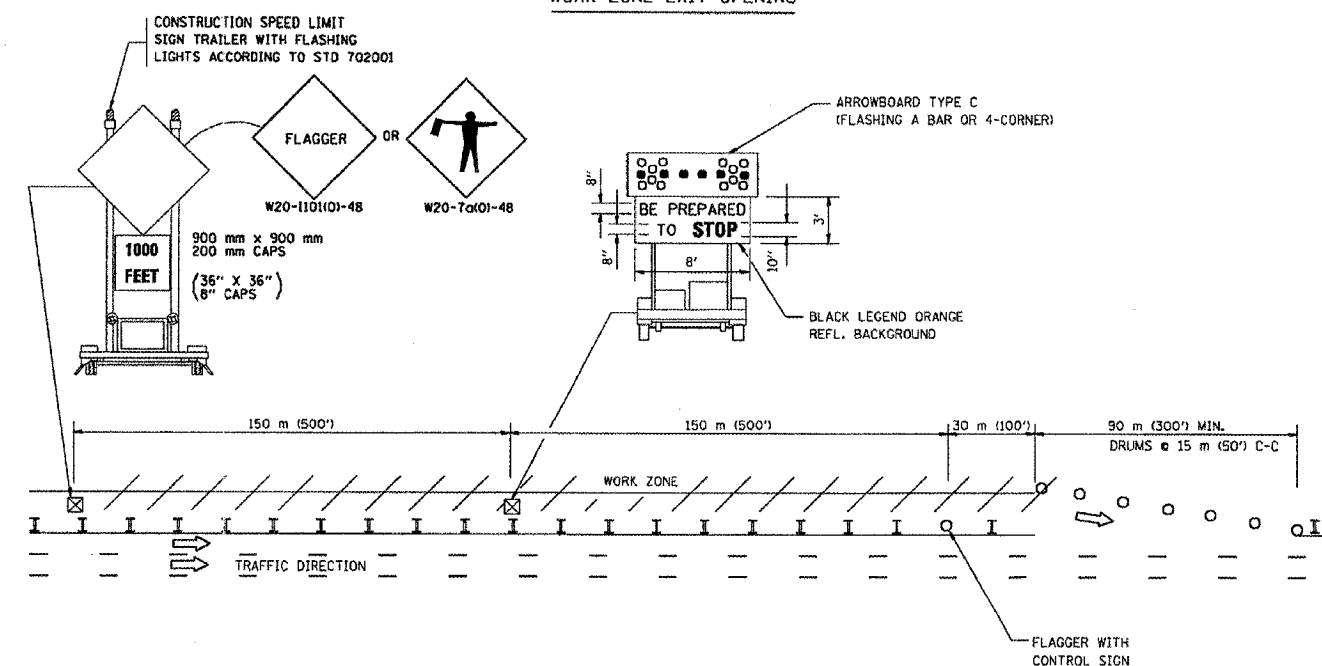
REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03

TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES
 SCALE: NONE
 DATE: 05/06/2003
 DRAWN BY: DWS
 DESIGNED BY: DWS
 CHECKED BY:
 TC-17

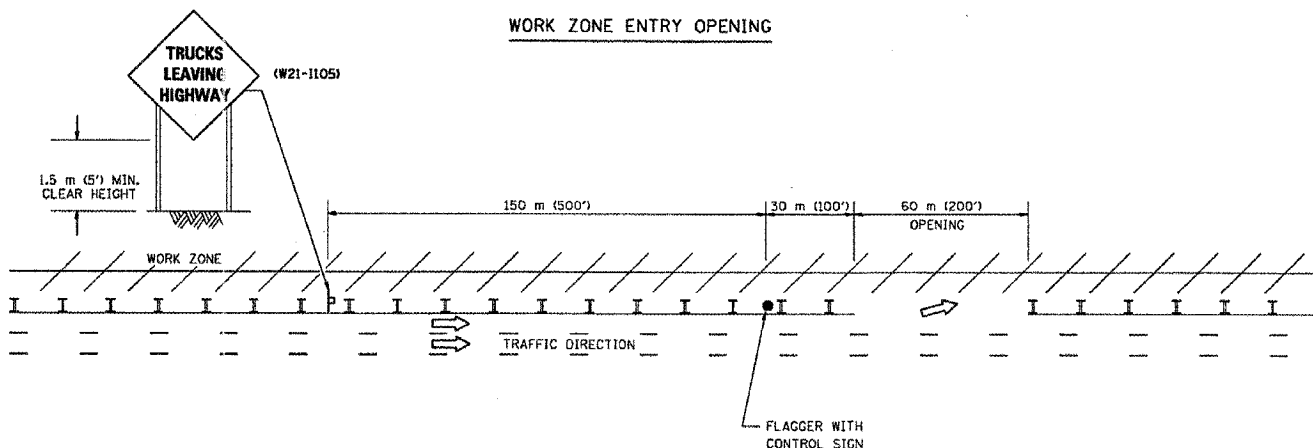
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	343
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
2. Work Zone Exit Openings should be a minimum of one half mile apart.
3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

ILLINOIS DEPARTMENT OF TRANSPORTATION

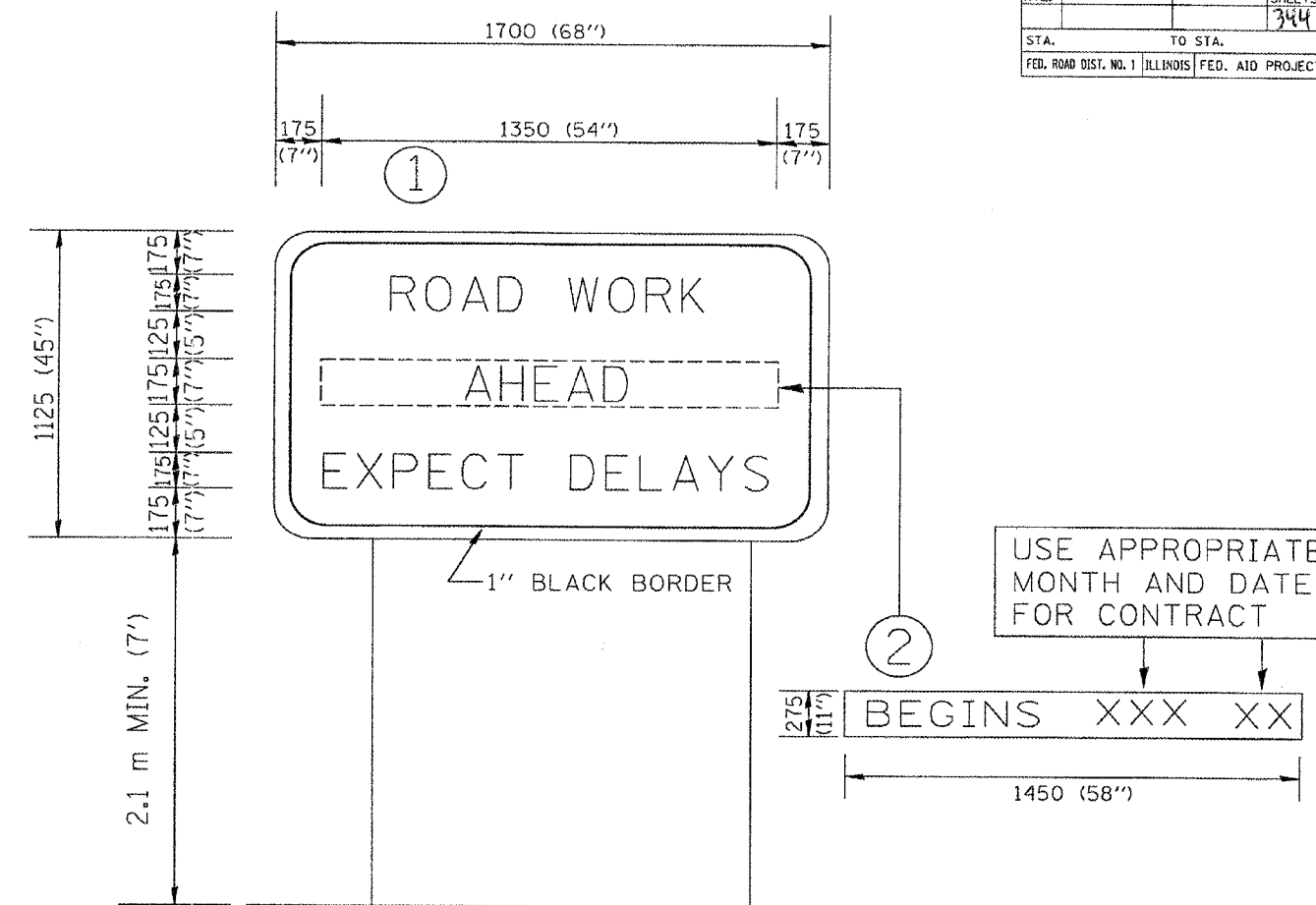
SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

REVISIONS	
NAME	DATE
DWS	8/98
JAF	4/03

SCALE: NONE
DATE 05/06/2003

DRAWN BY CADD
CHECKED BY TC-18

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			344	344
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 2.3 SQ. M. (25.70 SQ. FT.)

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

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	2-11-97
T. RAMMACHER	2-2-99

ILLINOIS DEPARTMENT OF TRANSPORTATION
TEMPORARY INFORMATION SIGNING

SCALE: DATE 10/18/2002
DRAWN BY: BUR. OF DESIGN
CHECKED BY: