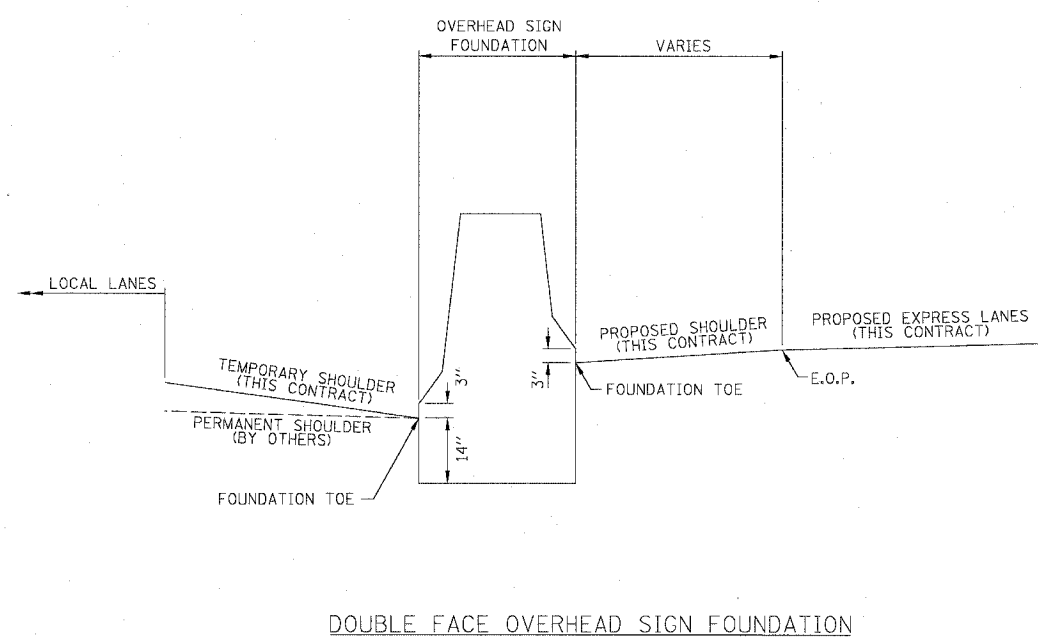


CONCRETE BARRIER DOUBLE FACE

EXPRESS LANE STATION	E.O.P. ELEV. OUTSIDE EXPRESS LANES	TOE OF BARRIER ELEV. ALONG EXPRESS LANES	TOE OF BARRIER ELEV. ALONG LOCAL LANES
1530+00	-0.01	-0.23	-2.36
1530+50	0.56	0.34	-1.98
1531+00	1.13	0.91	-1.49
1531+50	1.63	1.39	-0.91
1532+00	1.83	1.49	-0.41
1532+50	2.03	1.64	0.03
1533+00	2.24	1.85	0.47
1533+50	2.44	2.05	0.93
1534+00	2.64	2.25	1.41
1534+50	2.84	2.45	1.91
1535+00	3.04	2.65	2.43
1535+50	3.24	2.85	2.92
1536+00	3.45	3.05	3.48
1536+50	3.65	3.18	4.07
1537+00	3.84	3.28	4.44
1537+50	4.39	3.81	4.75
1538+00	4.96	4.38	5.06
1538+50	5.51	4.93	5.39
1539+00	5.98	5.40	5.70
1539+50	6.39	5.81	6.03
1540+00	6.72	6.14	6.36
1540+50	6.99	6.41	6.70



DOUBLE FACE OVERHEAD SIGN FOUNDATION

LOCAL LANE STATION	TOE OF FOUNDATION ELEV. ALONG LOCAL LANES	TOE OF FOUNDATION ELEV. ALONG EXPRESS LANES	E.O.P. ELEV. OUTSIDE EXPRESS LANES	EXPRESS LANE STATION
3531+94.62	-0.65	1.45	1.72	1531+70.59
3532+05.37	-0.53	1.48	1.76	1531+81.05
3542+94.63	6.87	7.42	7.67	719+57.22
3543+05.37	6.89	7.49	7.74	719+46.48
3550+81.62	-0.44	0.07	0.51	711+70.36
3550+92.37	-0.62	-0.10	0.35	711+59.61
3566+30	-4.62	-3.50	-3.08	1566+42.66
3566+40	-4.70	-3.58	-3.16	1566+52.66
3576+82	-0.35	0.27	0.65	1576+94.66
3576+92	-0.48	0.14	0.52	1577+04.66
3586+44	1.32	1.62	1.98	1586+56.66
3586+56	1.58	1.88	2.24	1586+68.66
3586+74	1.98	2.27	2.63	1586+86.66
3586+86	2.23	2.53	2.89	1586+98.66
3595+95	11.55	12.06	12.43	1596+07.66
3596+05	11.54	12.06	12.43	1596+17.66
3603+10.25	4.79	5.50	5.85	1603+22.91
3603+13.75	4.72	5.44	5.79	1603+26.41
3615+95	2.17	3.04	3.40	1616+07.66
3616+05	2.13	3.01	3.37	1616+17.66

REVISIONS	
NAME	DATE

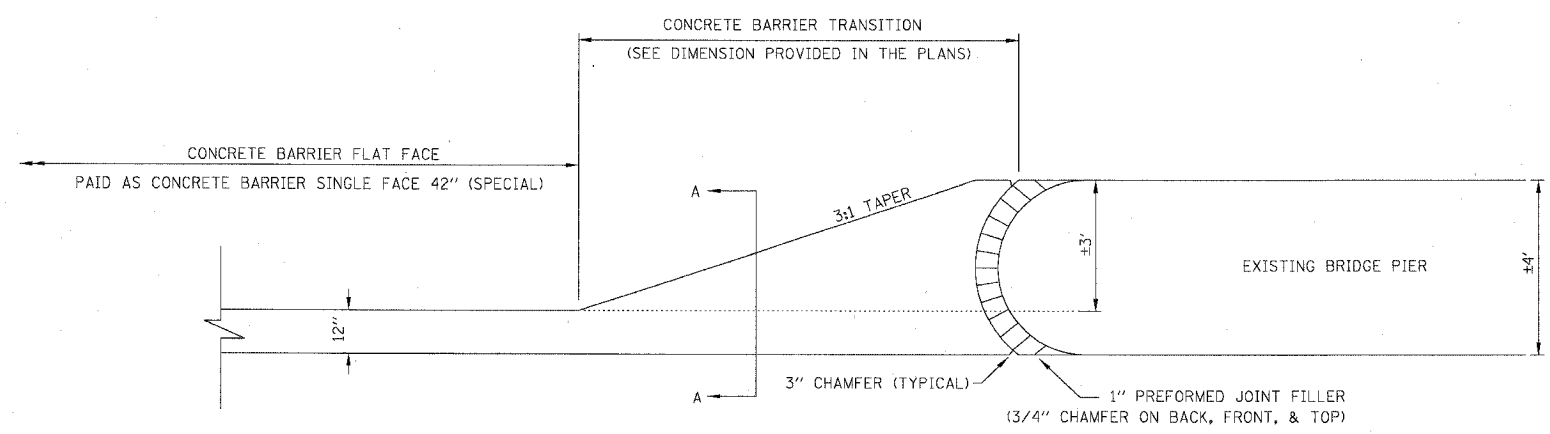
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 DOUBLE FACE BARRIER  
 ELEVATIONS

SCALE: NTS  
 DATE: 07/07/05

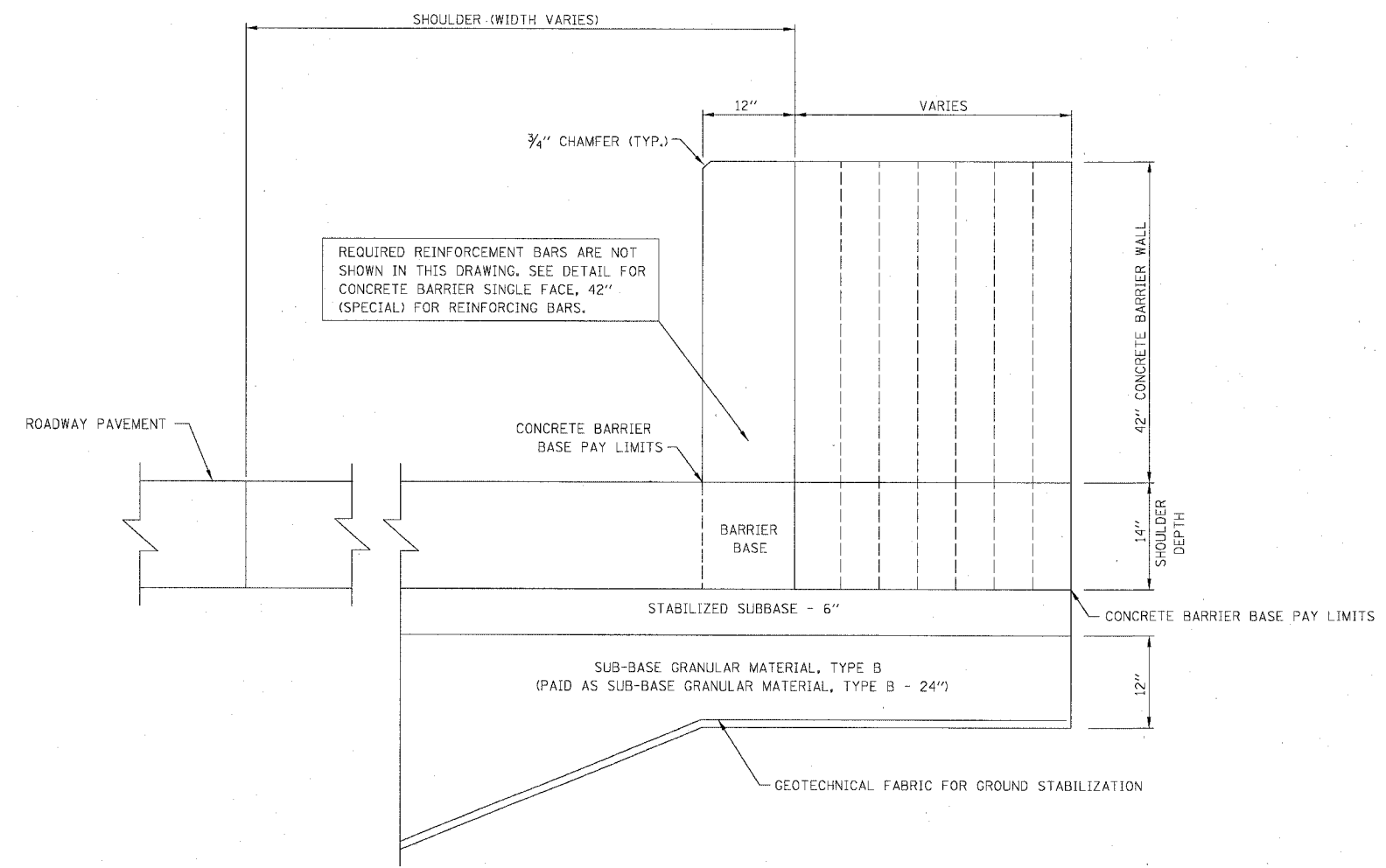
DRAWN BY: JDC  
 CHECKED BY: RS

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

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	402
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302 * (1818, ETC. 2324.6-1P/R-9				



**CONCRETE BARRIER FLAT FACE**  
 STA. 1575+63.01 TO 1576+02.11  
 STA. 1576+18.15 TO 1576+45.23



SECTION A-A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
**CONCRETE BARRIER FLAT FACE**

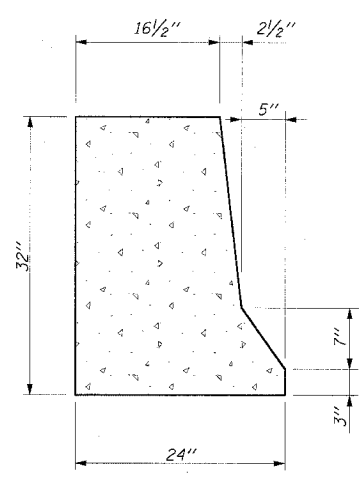
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 DATE: 07/07/05

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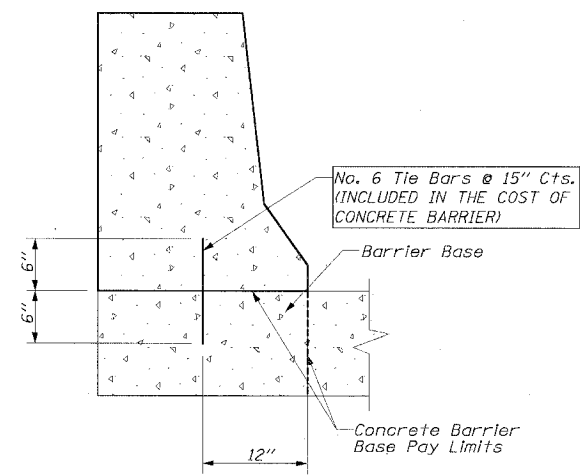
BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

CDT-15  
 6/27/2005

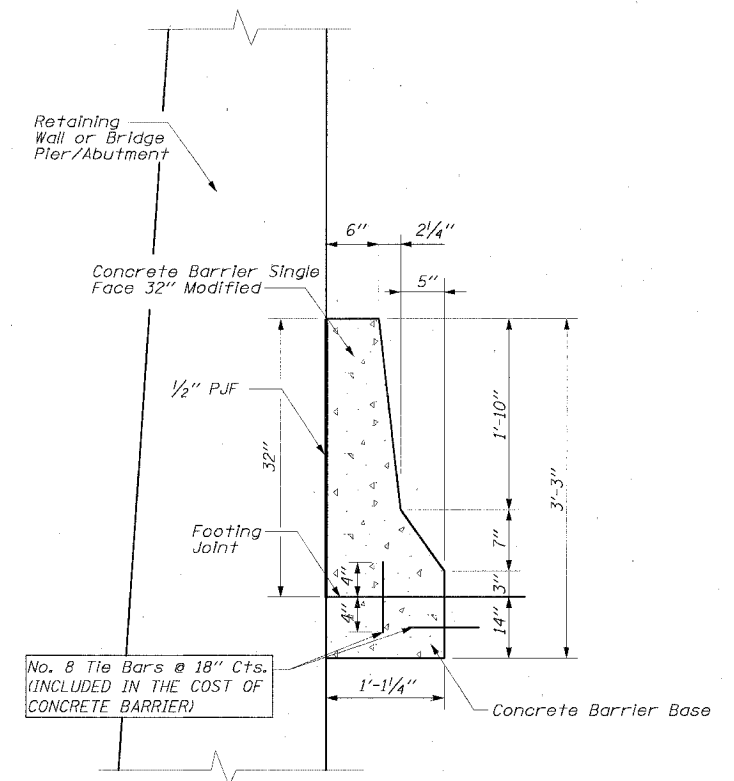
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	403
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		(1818, ETC, 2324.6-1PR-9		



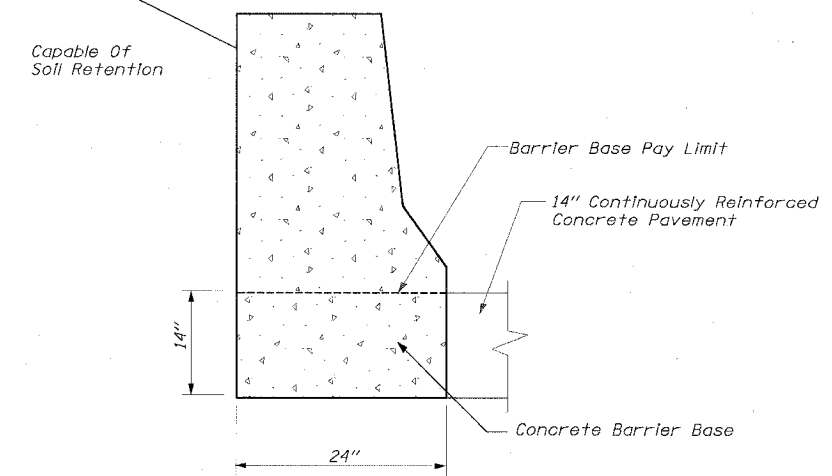
**CONCRETE BARRIER  
TYPICAL SECTION**



**ANCHORING METHOD**

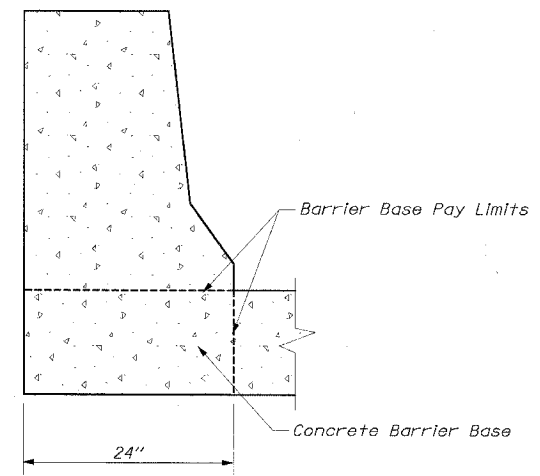


**CONCRETE BARRIER  
SINGLE FACE, 32 IN, MODIFIED**  
(Used Adjacent to Retaining Walls  
or Bridge Piers or Abutments)

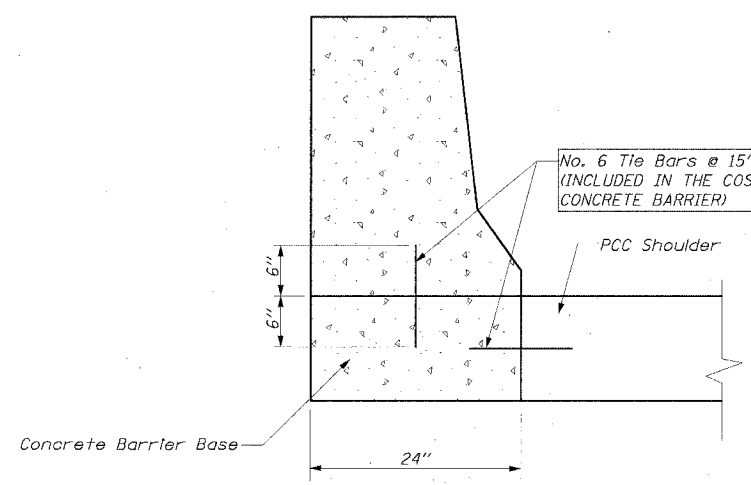


**CONCRETE BARRIER  
ALTERNATE ANCHORING METHOD**

IF SOIL RETENTION IS USED, 14" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT MUST BE IN PLACE PRIOR TO BACKFILLING BARRIER WALL



**CONCRETE BARRIER INTEGRAL  
WITH PCC SHOULDER SLAB**



**CONCRETE BARRIER ON  
INDEPENDANT FOUNDATION**

- NOTE:
1. THE CONTRACTOR HAS THE OPTION OF CHOOSING BETWEEN ANCHORING METHODS SHOWN ON THIS SHEET.
  2. ALL TIE BARS SHOWN ON THIS SHEET SHALL BE EPOXY COATED.

**Edwards  
AND  
Kelcey**  
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CHICAGO, IL 60606  
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FAX: (312) 251-3015  
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION

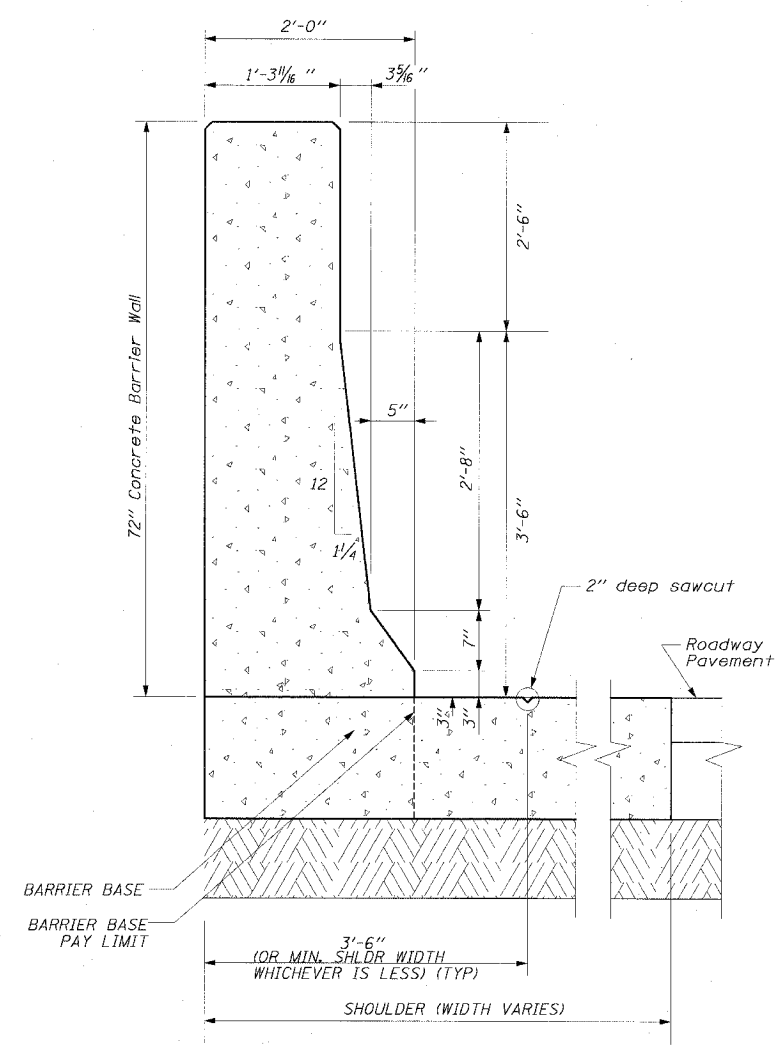
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CONCRETE BARRIER, SINGLE FACE, 32"

SCALE: NOT TO SCALE  
DATE: 7/7/05

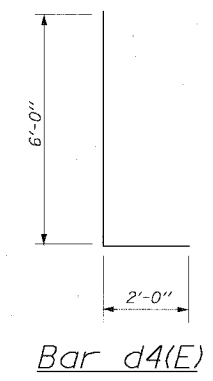
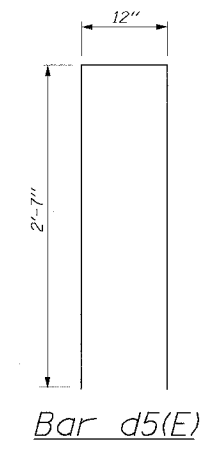
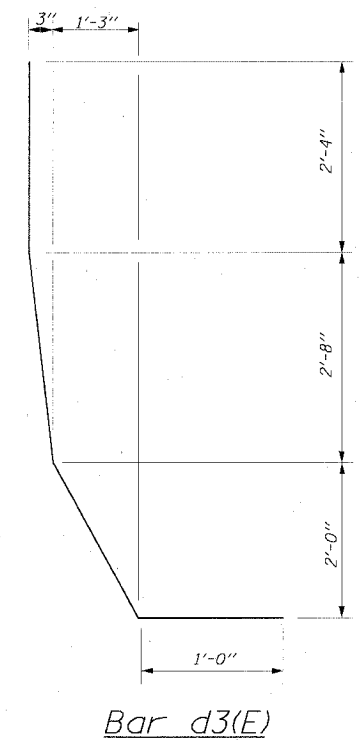
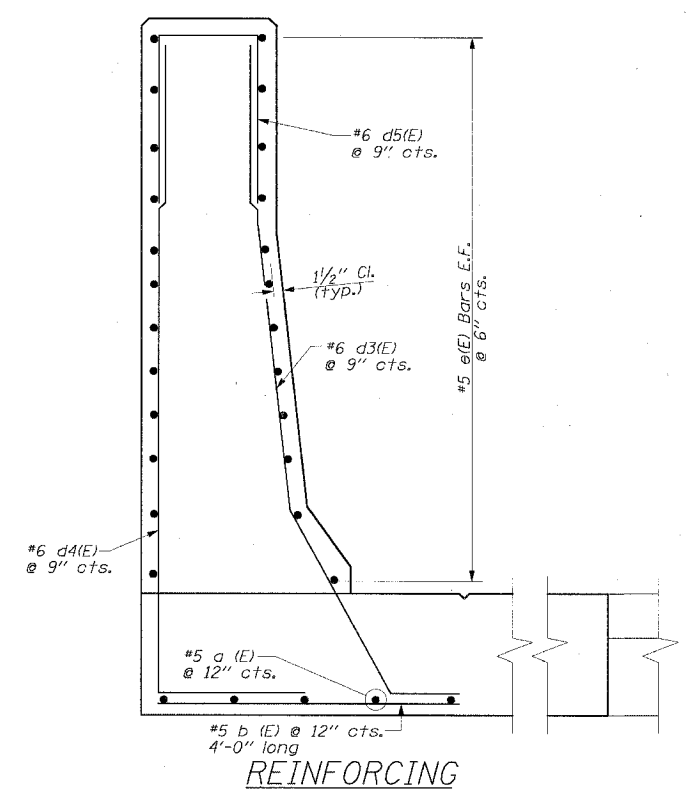
DRAWN BY: AJW  
CHECKED BY: EL

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	404
STA.		TO STA.		
62302		• (1818, ETC, 2324.6-1PIR-9		



**DIMENSIONS**



- NOTES:**
1. All reinforcing bars, tie bars and dowel bars shall be seated in the final position prior to the concrete operations. The cost of these items is included in the cost of the barrier wall. Bars cannot be mucked into place.
  2. Maintain slope of face as shown on details.

**MIN LAP:**  
 #5 Bars - 2'-2"  
 #6 Bars - 2'-7"  
 \*Lap varies as necessary

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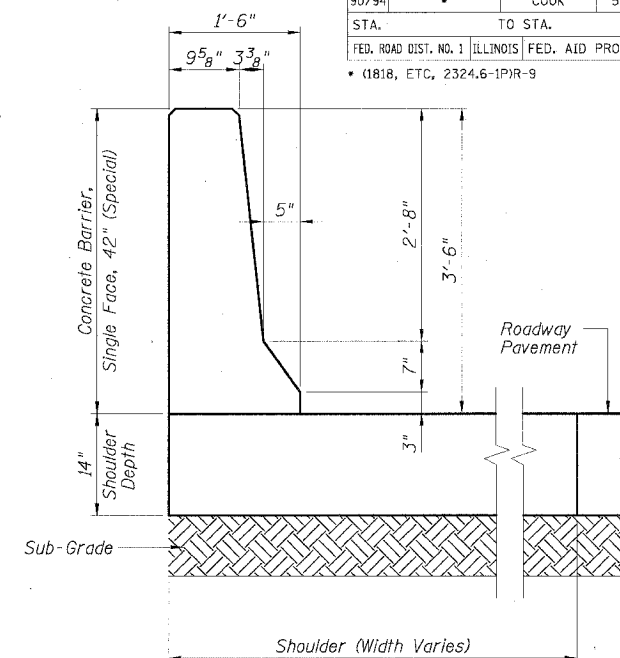
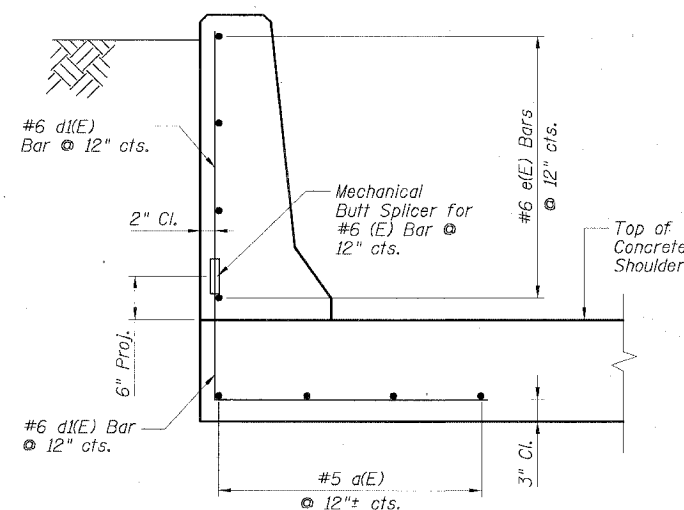
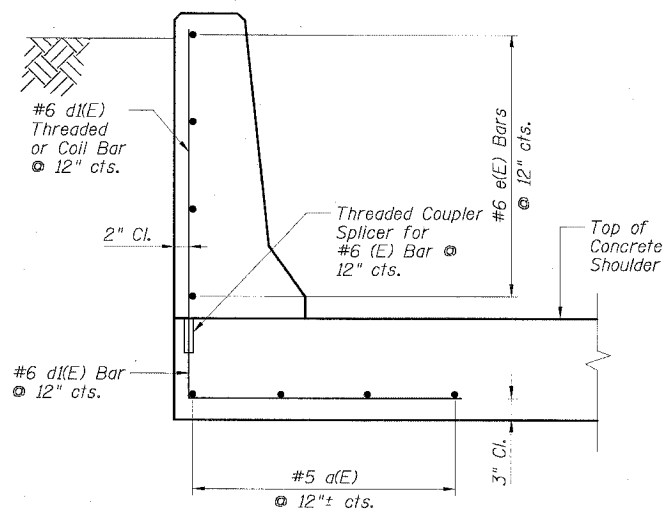
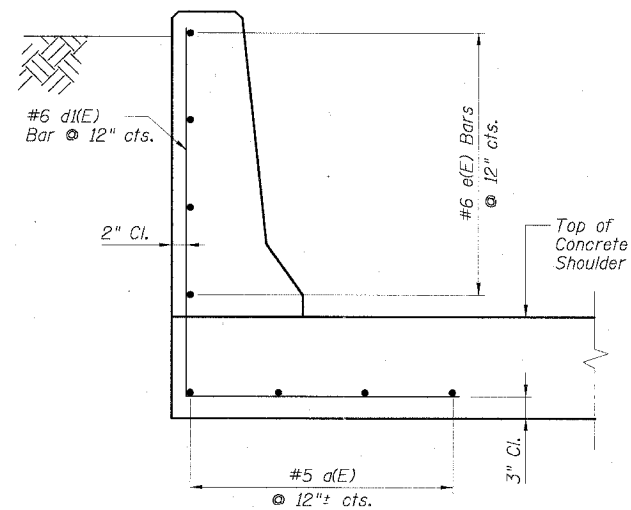
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 CONCRETE BARRIER,  
 SINGLE FACE 72" (SPECIAL)  
 SCALE: NOT TO SCALE  
 DATE: 7/1/05  
 DRAWN BY: AJW  
 CHECKED BY: EL

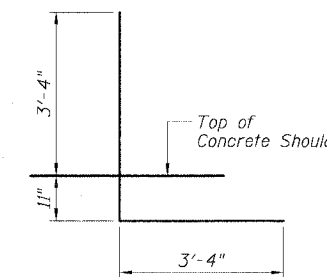
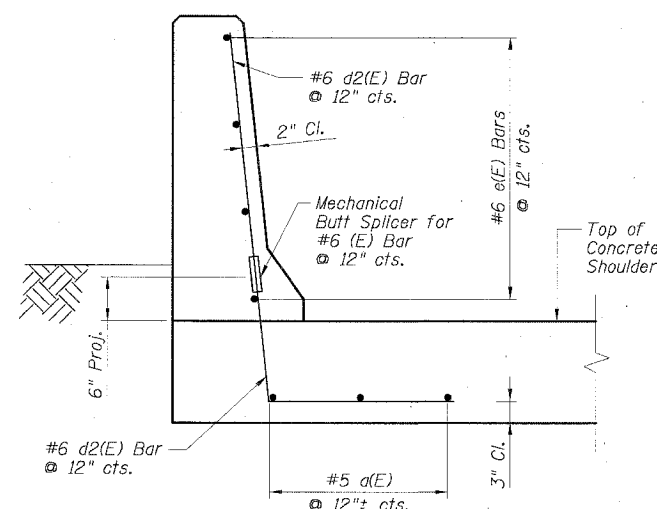
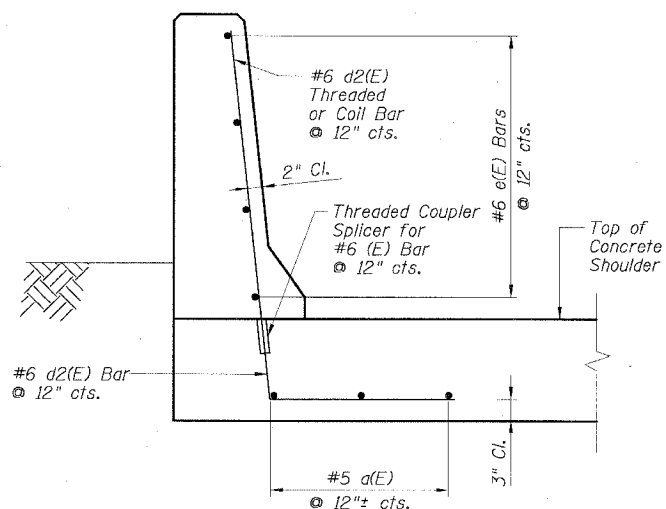
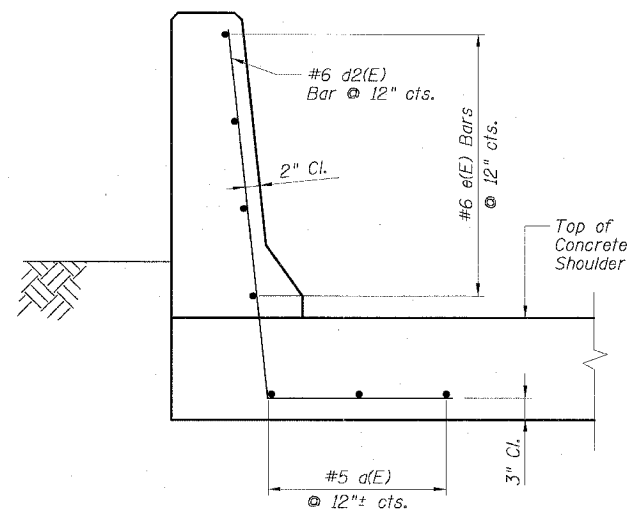
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

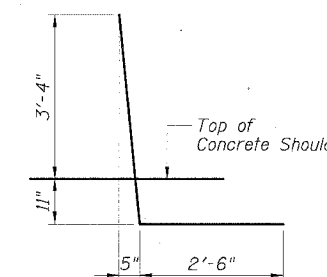
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	405
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
(1818, ETC, 2324.6-1PIR-9		62302		



DIMENSIONS



BAR d1(E)



BAR d2(E)

CONCRETE BARRIER,  
SINGLE FACE, 42" (SPECIAL)  
ALTERNATE I

CONCRETE BARRIER,  
SINGLE FACE, 42" (SPECIAL)  
ALTERNATE II

CONCRETE BARRIER,  
SINGLE FACE, 42" (SPECIAL)  
ALTERNATE III

NOTES:

- The cost of furnishing and placing reinforcing in concrete shoulders and barriers shall be included in the cost per foot for "Concrete Barrier, Single Face, 42" (Special).

NOTES:

- The cost of furnishing and placing reinforcing and threaded coupler splicer in concrete shoulders and barriers shall be included in the cost per foot for "Concrete Barrier, Single Face, 42" (Special).
- Threaded coupler splicers shall be capable of developing a minimum of 125% of the yield strength of a #6 bar.

NOTES:

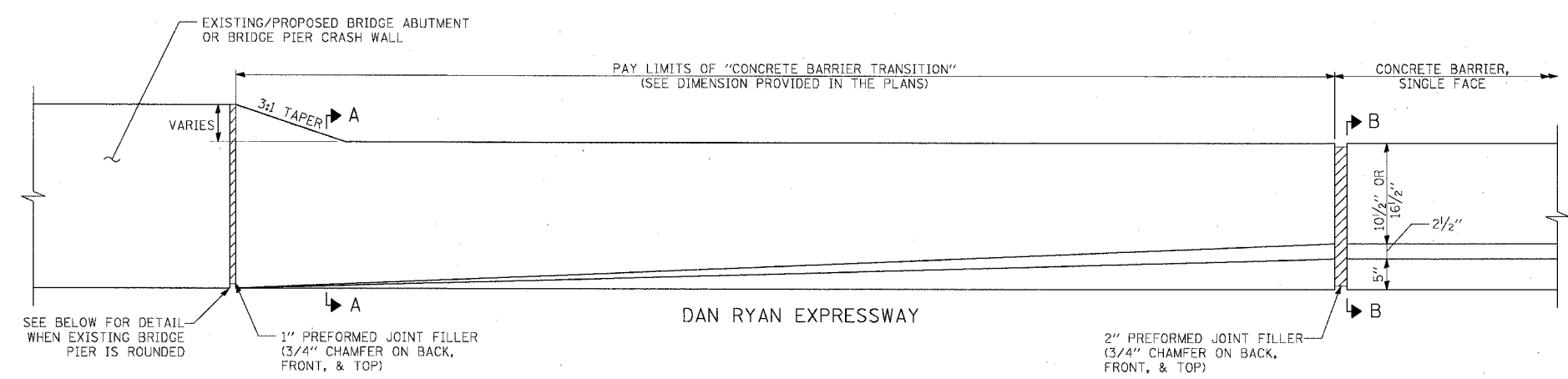
- The cost of furnishing and placing reinforcing in concrete shoulders and barriers shall be included in the cost per foot for "Concrete Barrier, Single Face, 42" (Special).
- Mechanical butt splicers shall be capable of developing a minimum of 125% of the yield strength of a #6 bar.

REVISIONS	
NAME	DATE

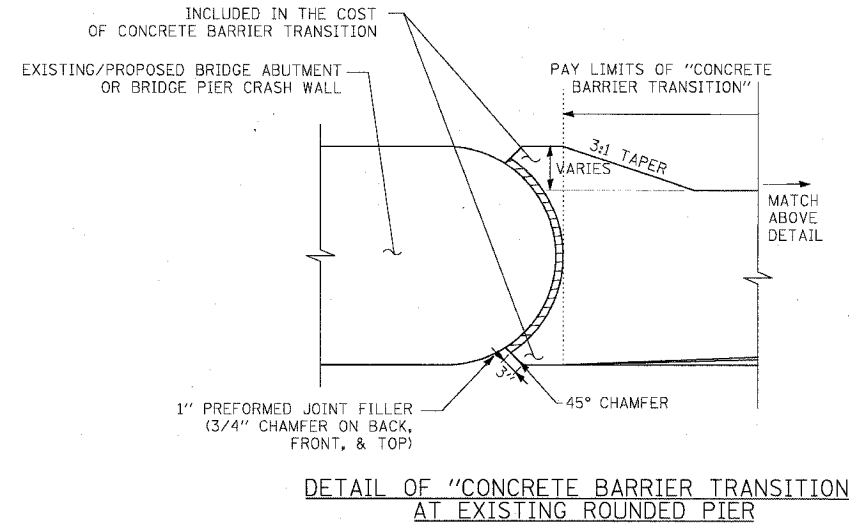
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
CONCRETE BARRIER  
SINGLE FACE, 42" (SPECIAL)  
ALTERNATES

SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY:  
CHECKED BY:

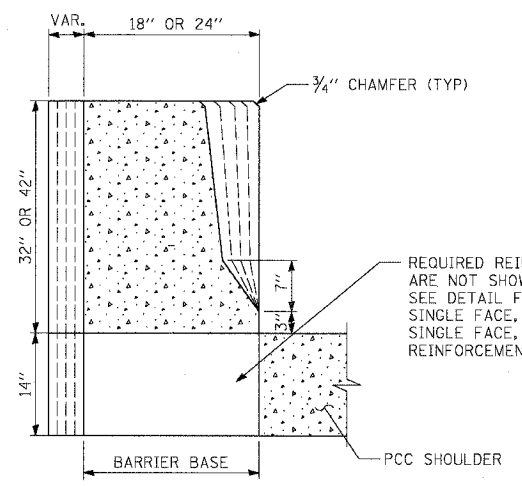
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94/90		COOK	598	406
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		(1818, ETC, 2324.6-1PJR-9		



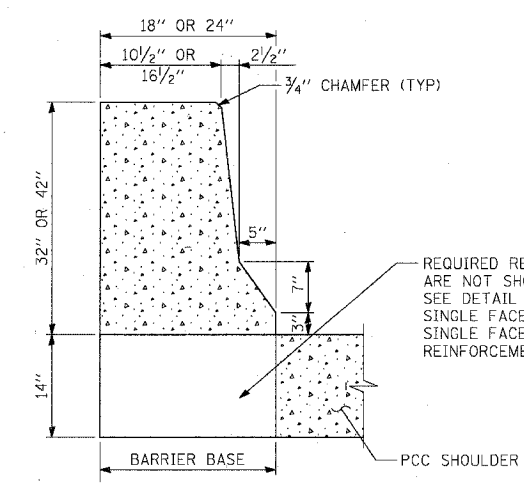
DETAIL OF "CONCRETE BARRIER TRANSITION"  
FOR SINGLE FACE BARRIER WALL



DETAIL OF "CONCRETE BARRIER TRANSITION"  
AT EXISTING ROUNDED PIER



SECTION A-A  
CONCRETE BARRIER TRANSITION



SECTION B-B  
CONCRETE BARRIER, SINGLE FACE  
& CONCRETE BARRIER BASE

NOTE:  
ALL TRANSITIONS PAID FOR AS  
CONCRETE BARRIER TRANSITION

**Edwards AND Kelcey**  
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CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
WEB: WWW.EKCORP.COM

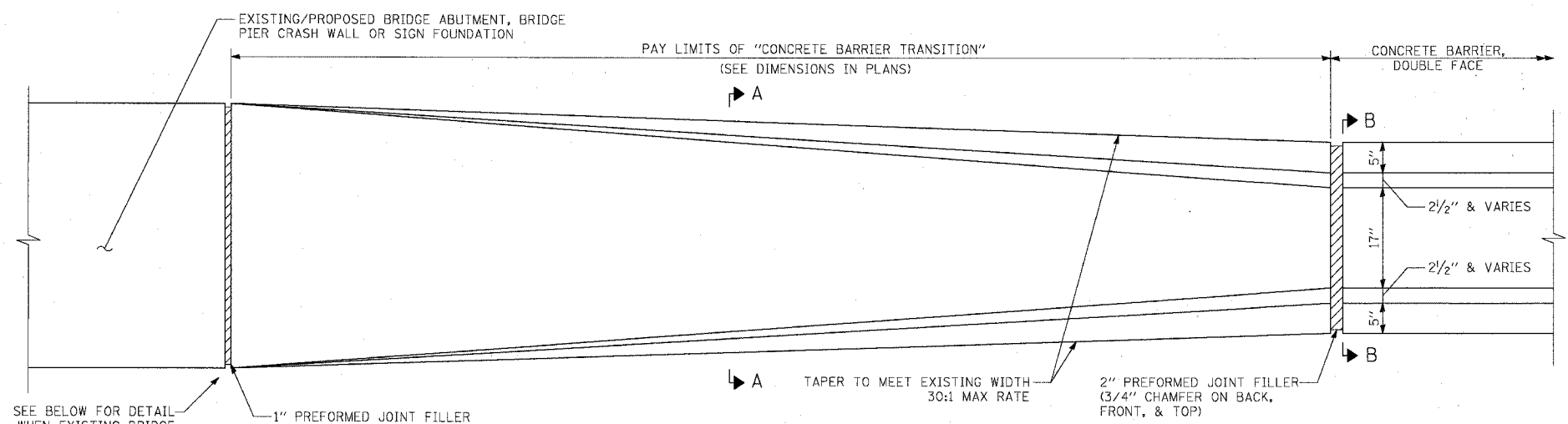
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
CONCRETE BARRIER TRANSITION  
(SHEET 1 OF 3)  
SCALE: NONE  
DATE: 7/7/05  
DRAWN BY: TAI  
CHECKED BY: PJM

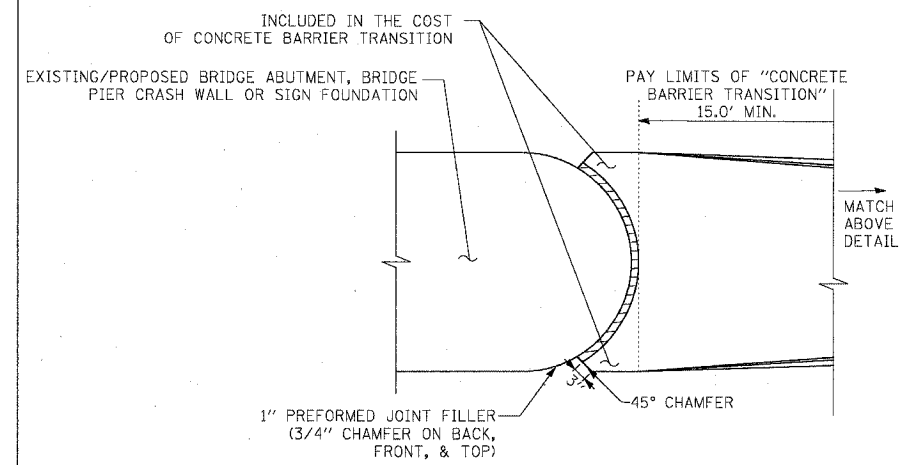
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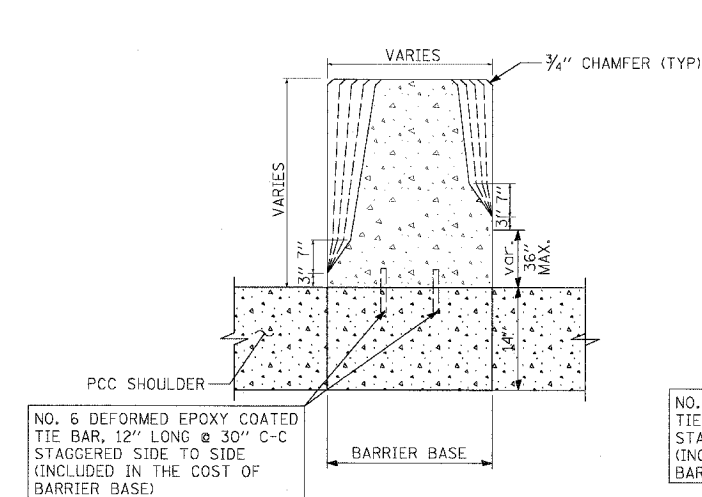
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	407
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		• (1818, ETC, 2324.6-1P)R-9		



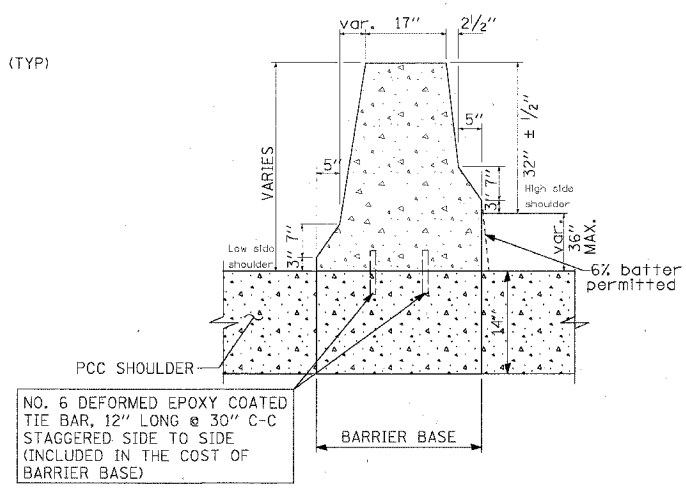
DETAIL OF "CONCRETE BARRIER TRANSITION" FOR DOUBLE FACE BARRIER WALL



DETAIL OF "CONCRETE BARRIER TRANSITION" AT EXISTING ROUNDED PIER



SECTION A-A CONCRETE BARRIER TRANSITION



SECTION B-B DOUBLE FACE BARRIER WALL

NOTE: ALL TRANSITIONS PAID FOR AS CONCRETE BARRIER TRANSITION

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 FAX: (312) 251-3015  
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 CONCRETE BARRIER TRANSITION  
 (SHEET 2 OF 3)

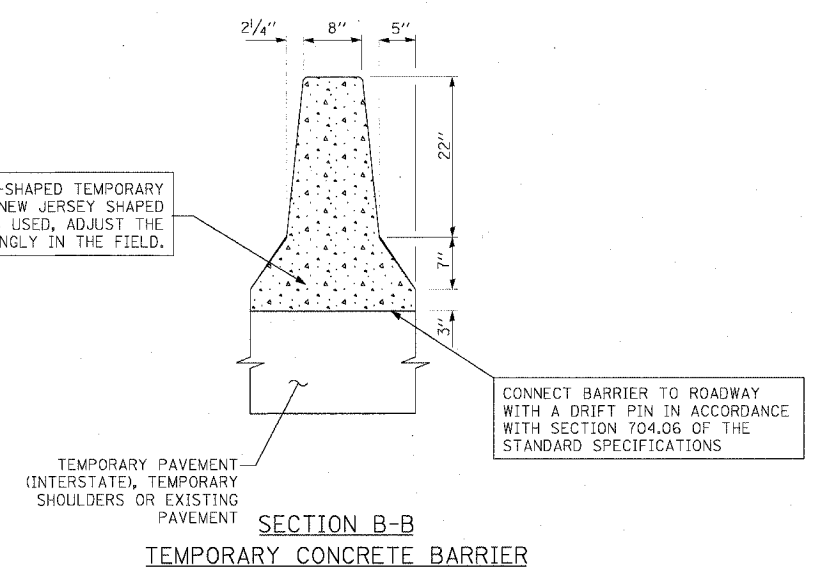
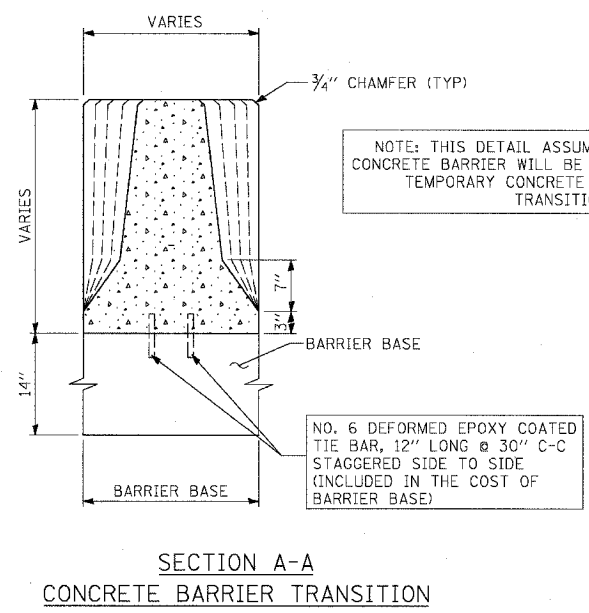
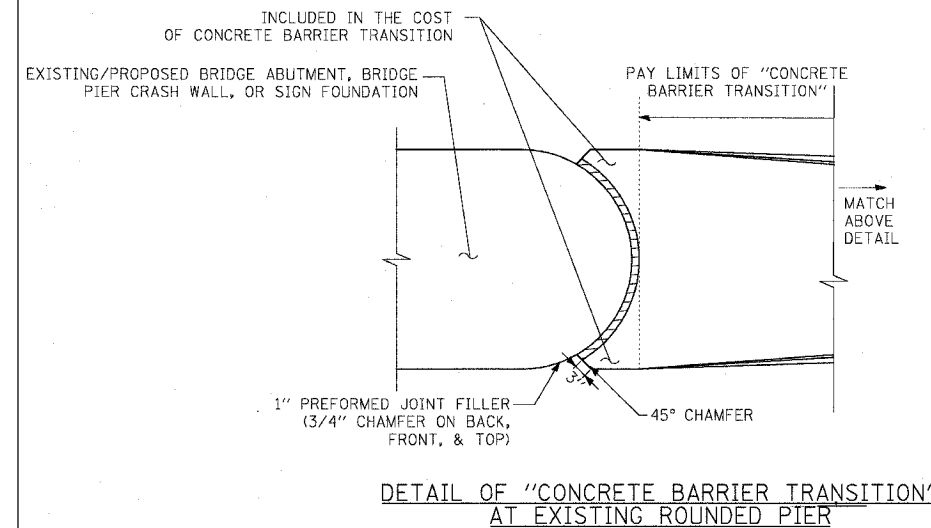
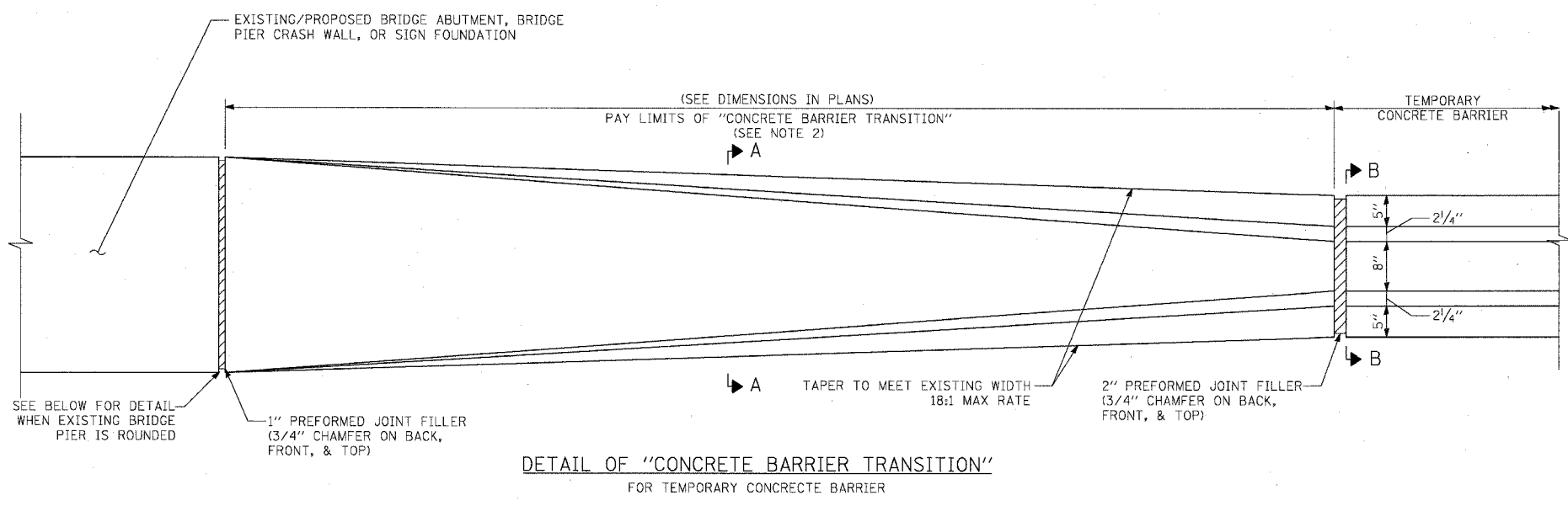
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	408
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	• (1818, ETC, 2324.6-1P)R-9			



- NOTE:
1. ALL TRANSITIONS PAID FOR AS CONCRETE BARRIER TRANSITION.
  2. LENGTHS PROVIDED IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR MUST ADJUST THE LENGTH OF CONCRETE BARRIER TRANSITION AS NECESSARY TO MEET TEMPORARY CONCRETE BARRIER SEGMENTS USED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 CONCRETE BARRIER TRANSITION  
 (SHEET 3 OF 3)

SCALE: NONE  
 DATE: 7/7/05

DRAWN BY: TAI  
 CHECKED BY: PJM

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 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
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 FAX: (312) 251-3015  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	409
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
* 11818, ETC, 2324.6-1PR-9		62302		

CTA BARRIER WALL LOCATION AND MODIFICATION TABLE

STATION	NORTH BOUND						SOUTH BOUND							
	Soldier Piles			Proposed T / Shoulder At or Above Existing		Proposed T / Shoulder Below Existing		Soldier Piles			Proposed T / Shoulder At or Above Existing		Proposed T / Shoulder Below Existing	
	Size	Length	Max. Spacing	Location	Modification	Location	Modification	Size	Length	Max. Spacing	Location	Modification	Location	Modification
35 th St.	W12x120	30'	5'-0"	Sta. 2611+51 to 2618+39	6" Facing	-----	-----	W12x120	30'	5'-0"	Sta. 1611+71 to 1618+59	6" Facing	-----	-----
47 th St.	W12x106	20'	5'-0"	-----	-----	Sta. 2530+19 to 2537+02	1'-4 1/2" Facing	W12x72	20'	6'-6"	Sta. 1530+63 to 1537+46	6" Facing	-----	-----
55 th St.	W12x106	20'	8'-0"	-----	-----	Sta. 2476+06 to 2481+81	1'-4 1/2" Facing	W12x106	20'	8'-0"	-----	-----	Sta. 1475+89 to 1484+84	1'-4 1/2" Facing
63 rd St.	W12x72	20'	8'-0"	Sta. 2422+99 to 2428+31	①	-----	-----	W12x106	20'	8'-0"	-----	-----	Sta. 1422+79 to 1426+92	①
69 th St.	W12x72	20'	8'-0"	Sta. 2372+94 to 2378+56	②	-----	-----	W12x106	20'	8'-0"	Sta. 1372+75 to 1374+50	①	Sta. 1374+50 to 1378+53	①

- ① Replace Exist. 32" Barrier with Single Face Barrier, 42" Special
- ② Reface Existing CTA Barrier Wall with Vertical Facing

GENERAL NOTES:

1. Utility locations shown on these plans may not be correct or complete. The contractor shall coordinate construction activities with the respective utilities of the city of Chicago. Before starting any excavation, the contractor shall call "Cuan" (Chicago Utility Alert Network) at 312-744-7000 for field locations of buried electric, telephone, and gas facilities (48 hour notification is required). Contact the department of water management permit section at (312) 747-7893 for water and sewer locations.
2. In locations where the main sewers, drainage structures, public, and private drain connections are disturbed or damaged during construction by the contractor, it will be the contractor's responsibility to restore and replace the damaged facilities at his/her own expense to the satisfaction of the department of water management. The sewer flows must be maintained at all times.
3. In locations where pilings/drilled shafts are being proposed in the vicinity of the existing sewer facilities, a licensed structural engineer should approve construction methods of support in order to maintain the structural integrity of the city's sewer system.
4. The Location of various items such as pavement, barrier walls and drainage structures built in contracts under construction during the preparation of these plans is based on the published contract plan drawings available during design. The contractor must field verify limits, locations and elevations of these previously constructed items.
5. The contractor shall use care in grading or excavating near any and all existing items which will not be removed. Any damage done to existing items by the contractor shall be repaired by the contractor at the contractor's own expense.
6. The contractor shall take all necessary safety precautions to protect and provide access to abutting CTA property, utilities and vehicular traffic.
7. It shall be the contractor's responsibility to ensure that no gap remains between proposed CTA fencing or where proposed CTA fencing terminates and existing CTA fence remains in place.
8. Hammer driving of piles will not be allowed. All piles must be vibrated into place.
9. Plan dimensions and details relating to existing structures 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 or a change in the scope of work. However the Contractor will be paid for the quantity actually furnished at the unit price for the work.
10. All construction joints shall be bonded.
11. All exposed concrete edges shall have a 3/4" by 45° chamfer except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of 1 foot below the finished ground line.
12. A protective coat shall be applied within the limits shown on the plans according to Section 503.19 of the Standard Specifications.
13. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
14. Reinforcement bars designated "(E)" shall be epoxy coated.

15. For Existing Barrier Wall Modifications for Proposed T / Shoulder Below Existing, See Sheets B2 and B3.
16. For Existing Barrier Wall Modifications for Proposed T / Shoulder At or Above Existing, See Sheet B4 and B5.
17. For Existing Barrier Wall Modifications for 63rd St. Station (NB & SB), For 69th St. Station (SB) See Sheet B6.
18. For Existing Barrier Wall Modifications for 69rd St. Station (NB) See Sheet B7.
19. For Refaced Barrier to Pier, Transition Details (Taper), Proposed T / Shoulder Below Existing, See Sheet B8.
20. For Refaced Barrier to Pier, Transition Details (No Taper), Proposed T / Shoulder Below Existing, See Sheet B9.
21. For Refaced Barrier to Pier, Transition Details (Taper), Proposed T / Shoulder At or Above Existing, See Sheet B10.
22. For Refaced Barrier to Pier, Transition Details (No Taper), Proposed T / Shoulder At or Above Existing, See Sheet B11.
23. For New 42" Barrier to Vert. Refaced Barrier, Transition Details (Taper), Proposed T / Shoulder At or Above Existing, See Sheet B12.
24. For Vert. Refaced Barrier to Pier, Transition Details (No Taper), Proposed T / Shoulder At or Above Existing, See Sheet B13.
25. For Refaced Barrier to New 42" Barrier, Transition Details, Proposed T / Shoulder Below Existing, See Sheet B14.
26. For Refaced Barrier to New 42" Barrier, Transition Details, Proposed T / Shoulder At or Above Existing, See Sheet B15.
27. For New 42" Barrier to Pier, Transition Details, Proposed T / Shoulder Below or Above Existing, See Sheet B16.
28. For Refaced Barrier to New Sign Structure, Transition Plan, Elevation and Details, Proposed T / Shoulder Below Existing, See Sheets B17 and B18.

DESIGN STRESSES:

FIELD UNITS  
f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)

Sheet B1 of 18

REVISIONS	
NAME	DATE

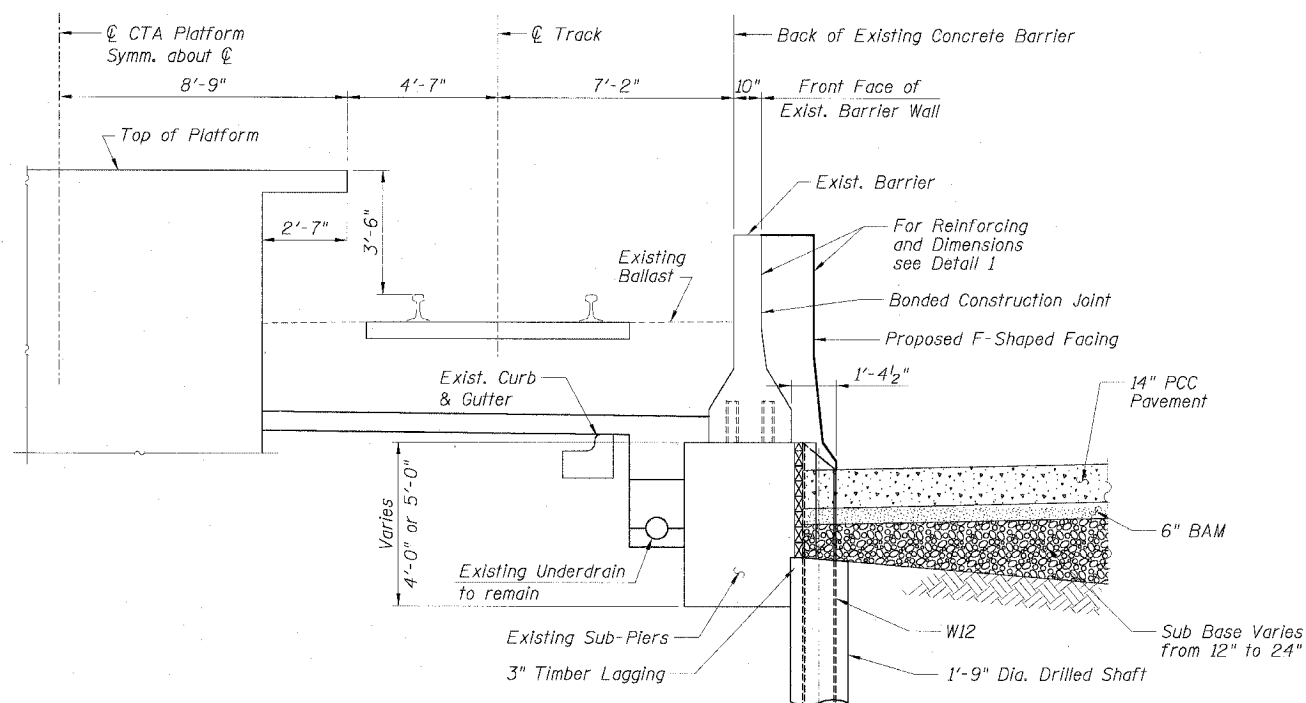
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL  
AT CTA STATIONS  
LOCATION AND MODIFICATION TABLE**

SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY: KWT  
CHECKED BY: RDP

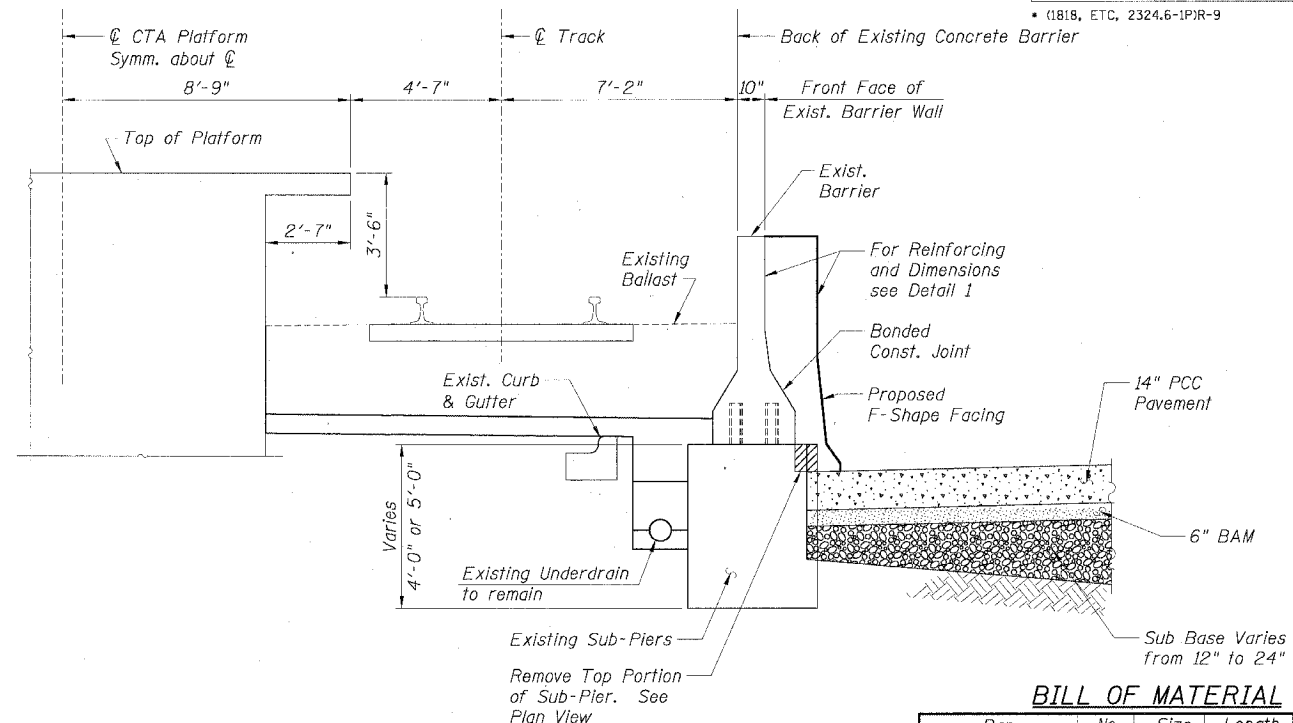
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	COOK	598	410
STA. TO STA.			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		62302	
(1818, ETC. 2324.6-1P)R-9			



TYPICAL SECTION  
BETWEEN SUB-PIERS



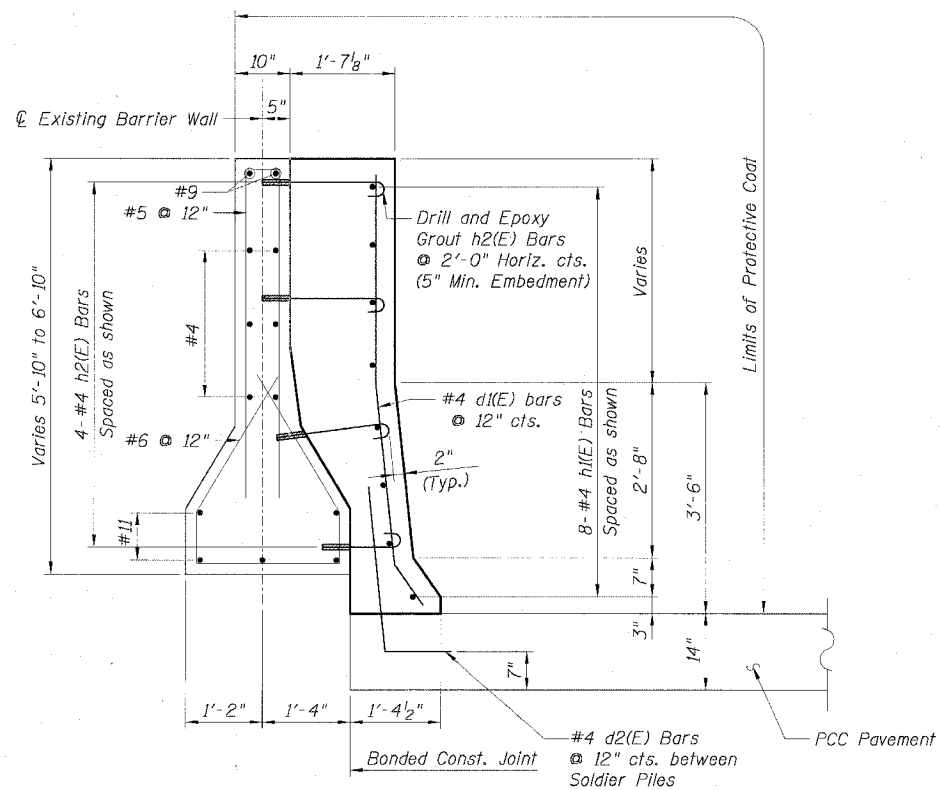
TYPICAL SECTION  
AT SUB-PIER

BILL OF MATERIAL

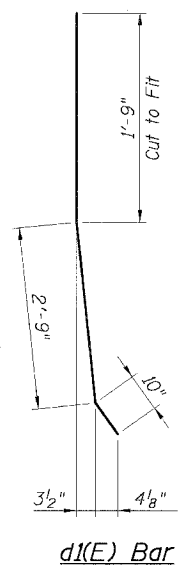
Bar	No.	Size	Length	Shape
d1(E)		#4	5'-4"	┌
d2(E)		#4	3'-6"	└
h1(E)		#4		—
h2(E)		#4	2'-4"	└
Item	Unit	Quantity		
Furnishing Soldier Piles, W12x	Foot			
Drilling and Setting				
Soldier Piles (in Soil)	Cu. Ft.			
Untreated Timber Lagging	Sq. Ft.			
Concrete Removal	Cu. Yd.			
Reinforcement Bars, Epoxy Coated	Lbs.			
Concrete Structures	Cu. Yd.			
Protective Coat	Sq. Yd.			

NOTES:

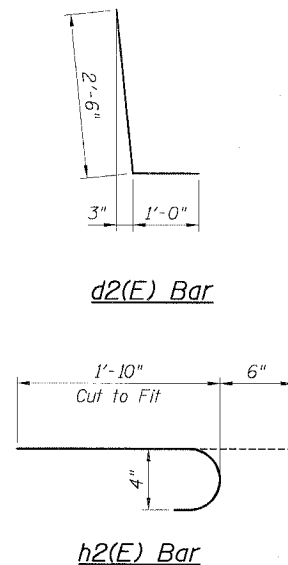
- Drilling and grouting of #4 h2(E) bars shall be in accordance with Section 584 of the Standard Specifications.
- #4 d2(E) bars shall be seated in their final position prior to the placement of the concrete shoulder. Bars shall not be mucked into place.
- The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h2(E) bars shall be included in the cost per cubic yard for Concrete Structures.
- Provide joints in facing to match those in the existing barrier.



DETAIL 1



d1(E) Bar



h2(E) Bar

LEGEND:

	Concrete Removal
	PCC Pavement
	BAM
	Sub Base
	Earth

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS**  
**PROPOSED T/S SHOULDER BELOW EXISTING  
TYPICAL SECTIONS & DETAILS**

SCALE: None DRAWN BY: KWT  
DATE: JULY 7, 2005 CHECKED BY: RDP

Sheet B2 of 18

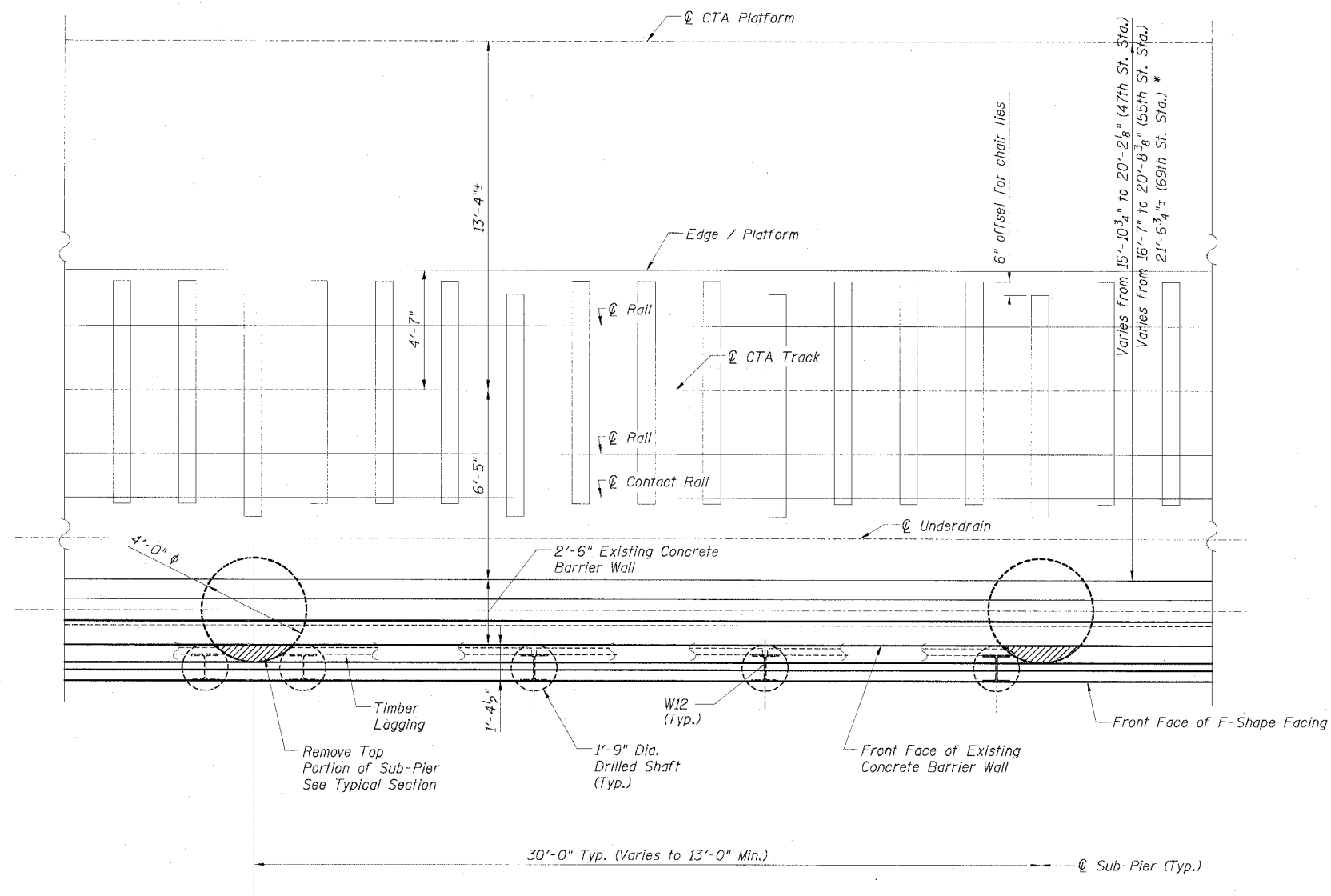
CTE | AECOM

CTE  
323 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2776  
312.938.5200 F 312.938.3100 www.cte.aecom.com

P:\P\040665\Struct\EB&L\Drawings\CTA\_B23020\_03\_CTA\_BarrWall\VT0906022A-CTA.B2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	411
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT
• (1818, ETC, 2324.6-1PR-9				62302



PLAN - (NORTH BOUND SHOWN)  
(SOUTH BOUND SIMILAR)

Sheet B3 of 18

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/S SHOULDER BELOW EXISTING  
TYPICAL PLAN**

SCALE: None  
DATE: JULY 7, 2005

DRAWN BY: KWT  
CHECKED BY: RDP

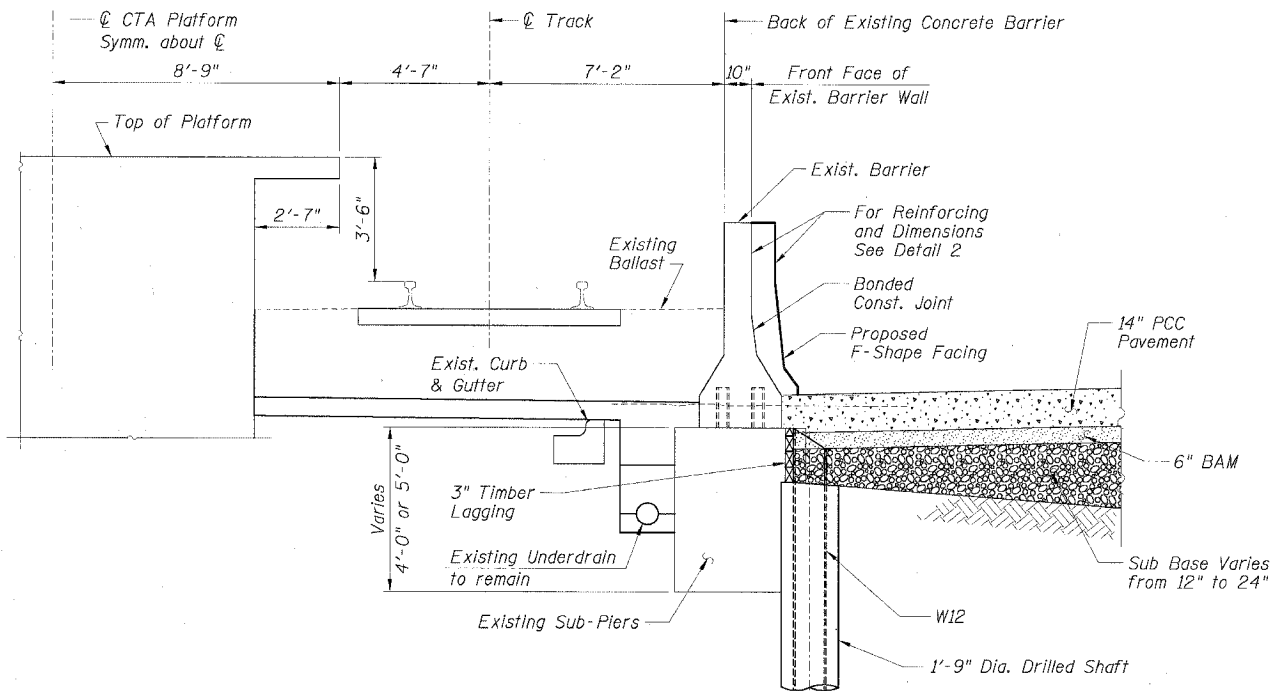
**CTE | AECOM**

CTE  
201 East Wacker Drive, Suite 600, Chicago, Illinois 60601-5276  
T 312.318.2000 F 312.318.2009 www.cteaecom.com

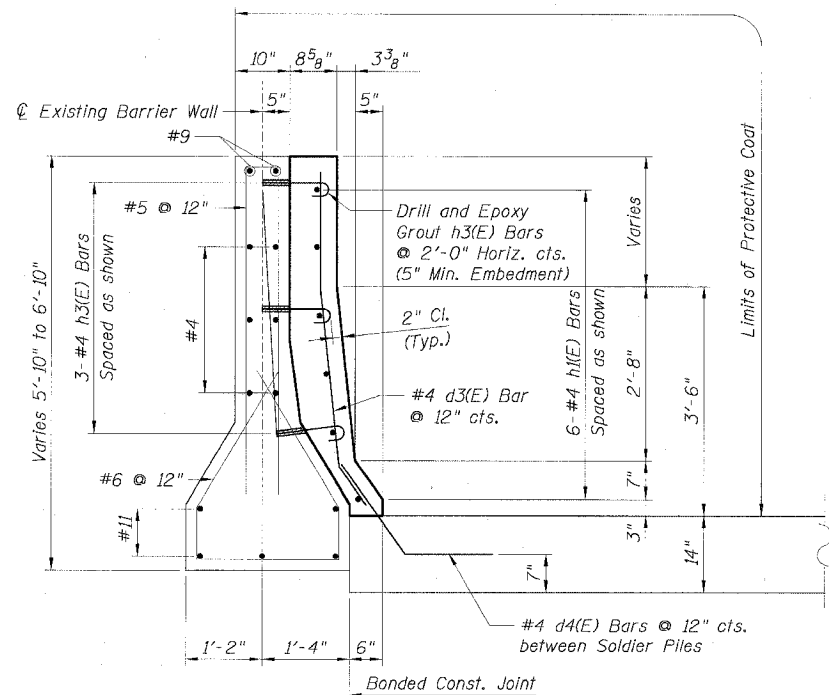
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

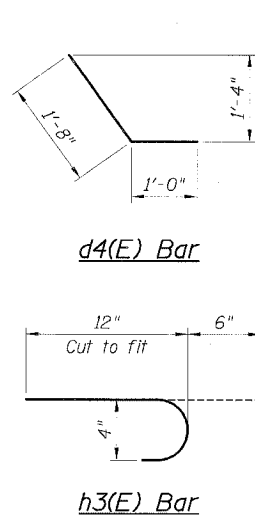
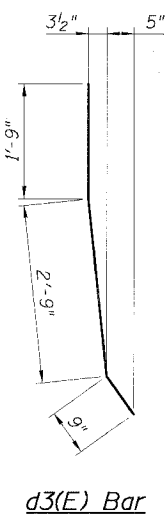
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STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
• (1818, ETC, 2324.6-IPR-9				62302



TYPICAL SECTION  
AT STATION PLATFORM



DETAIL 2



LEGEND:

	PCC Pavement
	BAM
	Sub Base
	Earth

NOTES:

1. Drilling and grouting of #4 h3(E) bars shall be in accordance with Section 584 of the Standard Specifications.
2. #4 d4(E) bars shall be seated in their final position prior to the placement of the concrete shoulder. Bars shall not be mucked into place.
3. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h3(E) bars shall be included in the cost per cubic yard for Concrete Structures.
4. Provide joints in facing to match those in the existing barrier.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d3(E)		#4	5'-3"	—
d4(E)		#4	2'-8"	—
h1(E)		#4		—
h3(E)		#4	1'-6"	—
Item	Unit	Quantity		
Furnishing Soldier Piles, W12x...	Foot			
Drilling and Setting				
Soldier Piles (in Soil)	Cu. Ft.			
Untreated Timber Lagging	Sq. Ft.			
Reinforcement Bars,				
Epoxy Coated	Lbs.			
Concrete Structures	Cu. Yd.			
Protective Coat	Sq. Yd.			

CTE AECOM

C.T.E.  
390 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2975  
T: 312.588.0200 F: 312.588.1123 www.cteaec.com

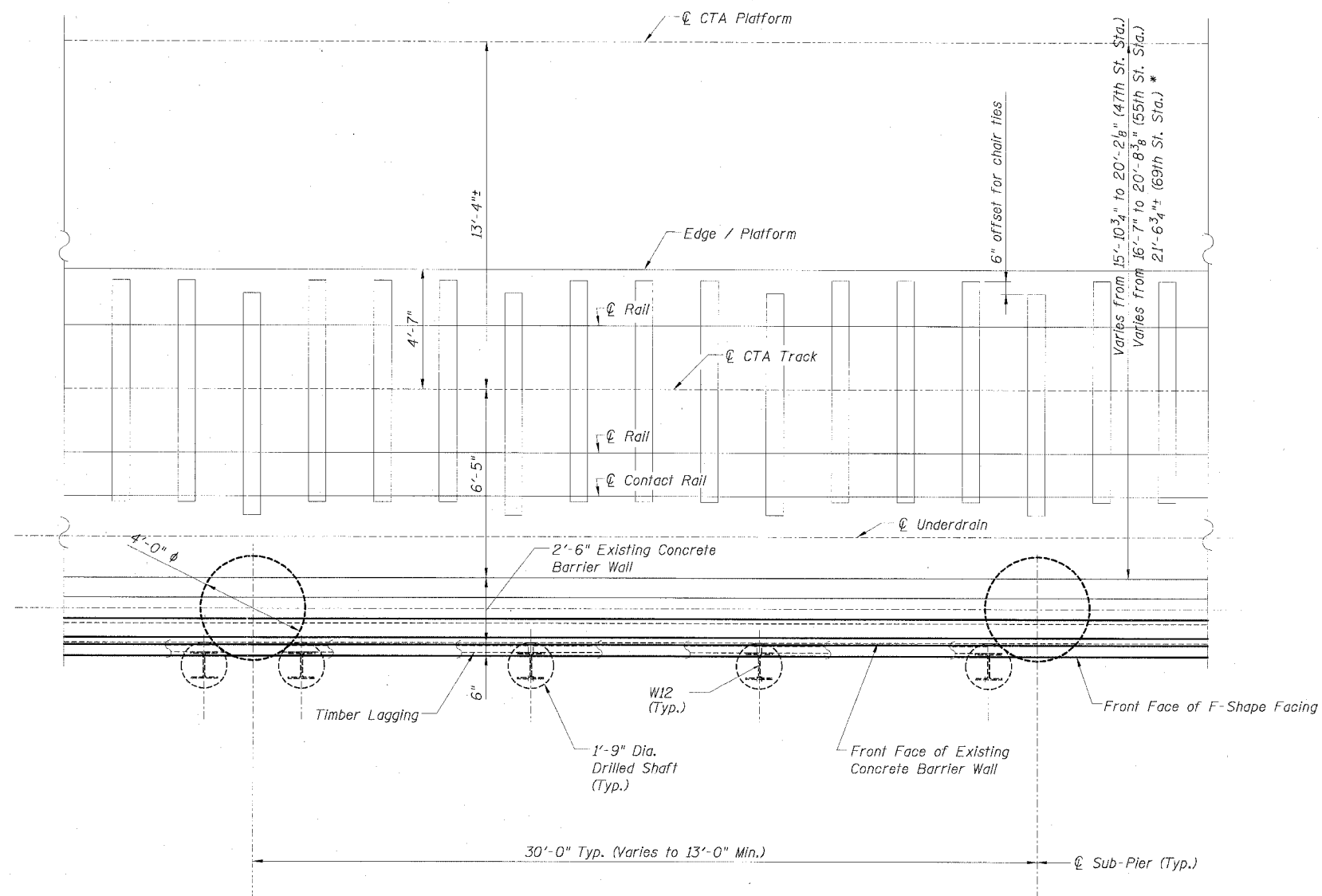
REVISIONS	
NAME	DATE

Sheet B4 of 18  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
TYPICAL SECTIONS & DETAILS  
SCALE: None DRAWN BY: KWT  
DATE: JULY 7, 2005 CHECKED BY: RDP

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	413
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
* (1818, ETC, 2324.6-1PIR-9				62302



PLAN - (NORTH BOUND SHOWN)  
(SOUTH BOUND SIMILAR)

Sheet B5 of 18

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS**  
**PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
TYPICAL PLAN**

SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY: KWT  
CHECKED BY: RDP

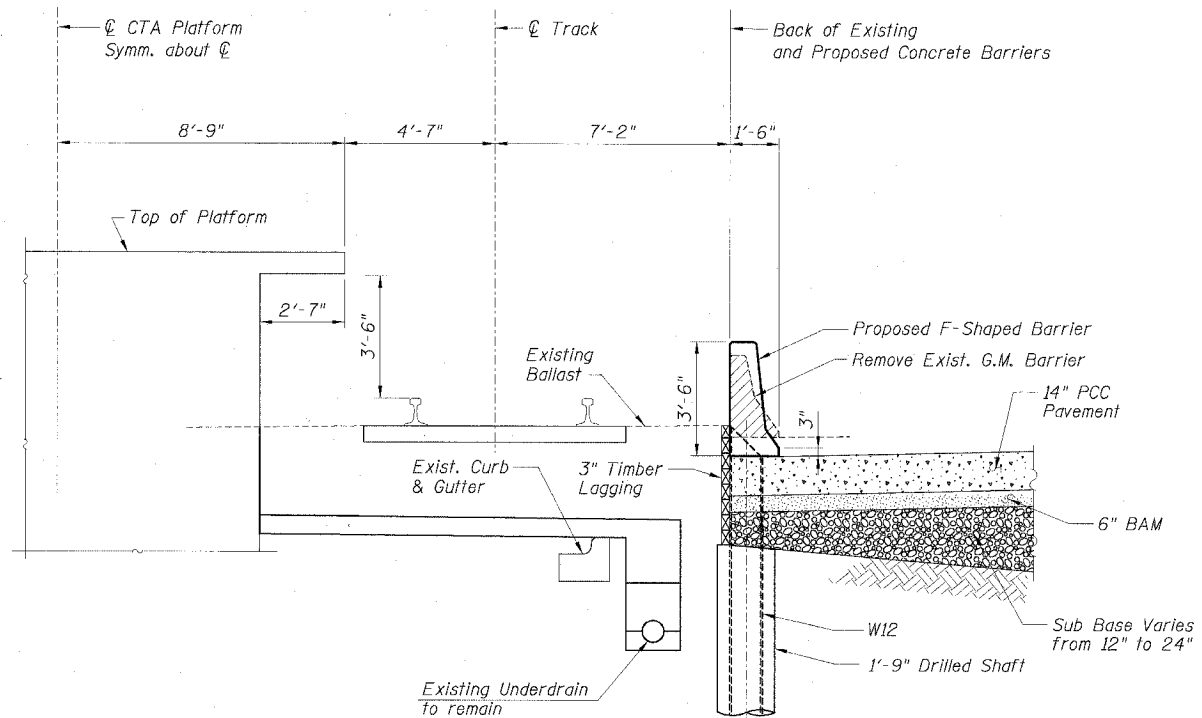
**CTE | AECOM**  
CTE  
303 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2026  
T 312.538.0300 F 312.538.1100 www.cteaecom.com

06/24/2005 02:48:53 PM

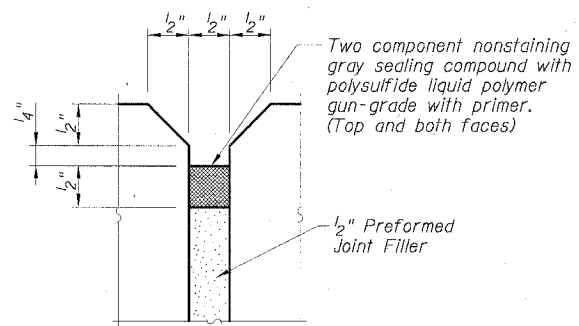
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
			62302	

• (1818, ETC, 2324.6-1)PR-9



**TYPICAL SECTION**  
**AT 69TH ST. STATION (SB)**  
**AT 63TH ST. STATION (SB)**  
**AT 63TH ST. STATION (NB)**



**EXPANSION JOINT DETAIL**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
Item	Unit	Quantity		
Concrete Barrier Removal	Foot			
Furnishing Solder Piles W12x	Foot			
Drilling and Setting				
Solder Piles (in Soil)	Cu. Ft.			
Untreated Timber Lagging	Sq. Ft.			
Reinforcement Bars, Epoxy Coated	Lbs.			
Concrete Structures	Cu. Yd.			
Protective Coat	Sq. Yd.			

**NOTES:**

- See "Concrete Barrier Single Face, 42" (Special)" for F-Shaped Barrier dimensions and reinforcing details.
- Provide construction joints in the Type F Barrier on maximum of 30'-0" centers.
- Provide 1/2" expansion joints in the Type F Barrier on maximum 90'-0" centers.
- The cost of furnishing and installing sealing compound shall be included in the cost per cubic yard for "Concrete Structures".

**LEGEND:**

	Concrete Removal
	PCC Pavement
	BAM
	Sub Base
	Earth

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS**  
**AT CTA STATIONS**  
**TYPICAL SECTIONS & DETAILS**  
**FOR 63rd ST. STATION (NB & SB)**  
**FOR 69th ST. STATION (SB)**

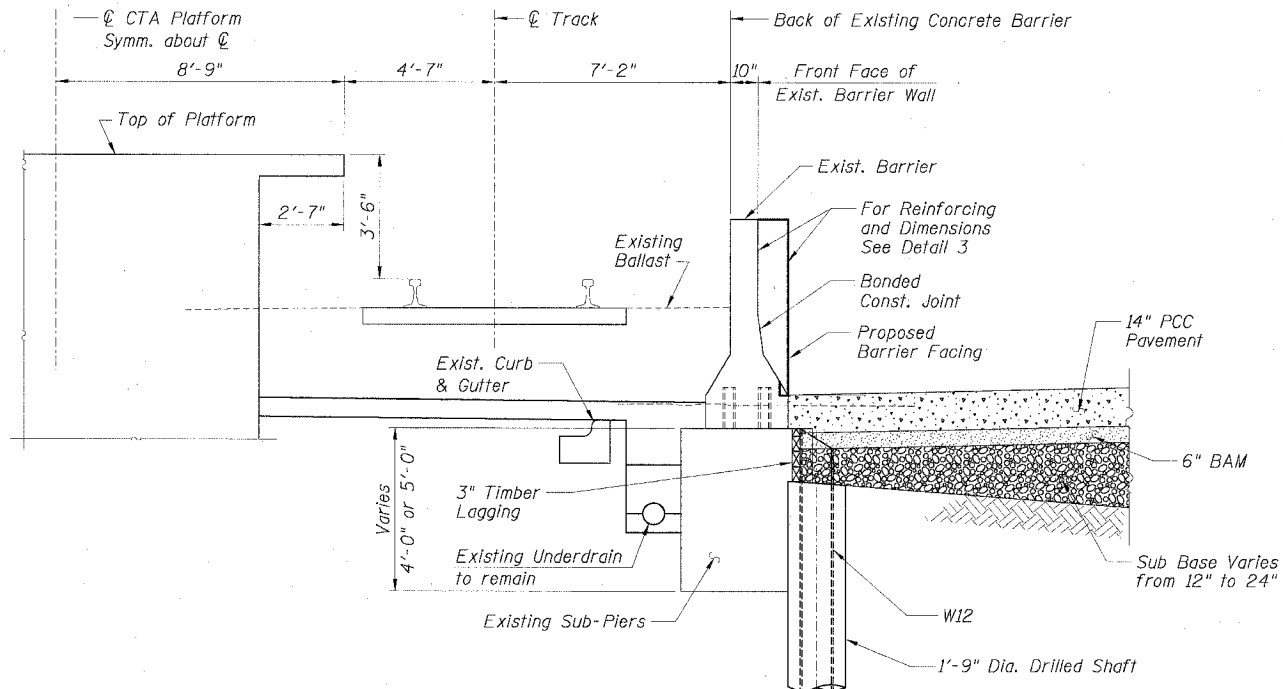
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DATE: JULY 7, 2005 CHECKED BY: RDP

Sheet B6 of 18

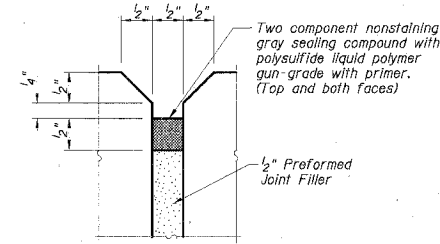
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	415
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
* 1818, ETC, 2324.6-1P1R-9		62302		



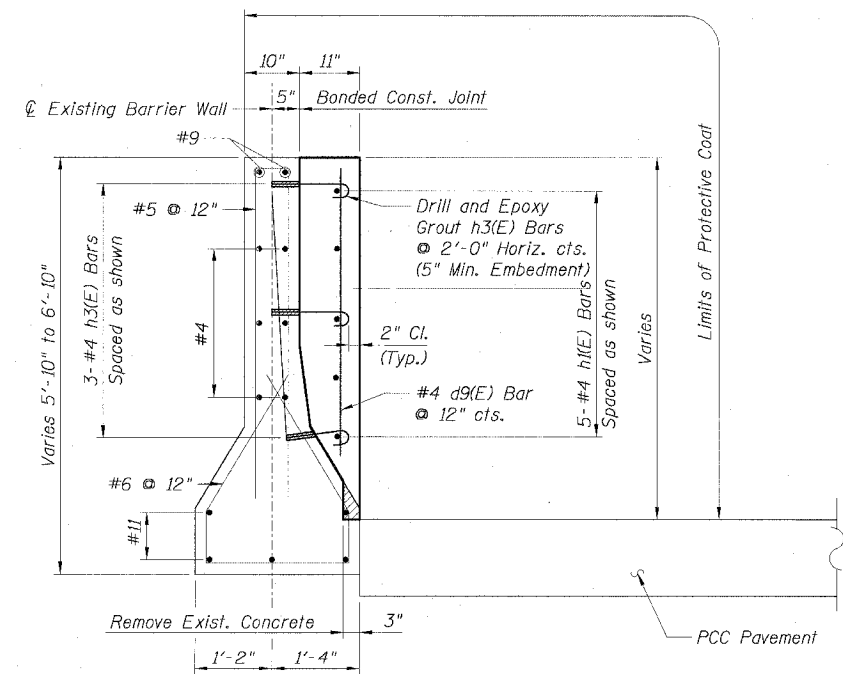
TYPICAL SECTION  
BETWEEN SUB-PIERS  
AT 69TH ST. STATION (NB)



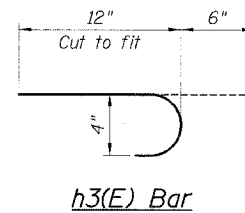
EXPANSION JOINT DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d9(E)		#4	4'-4"	—
h1(E)		#4		—
h3(E)		#4	1'-6"	—
Item	Unit	Quantity		
Furnishing Soldier Piles W12x	Foot			
Drilling and Setting				
Soldier Piles (in Soil)	Cu. Ft.			
Untreated Timber Lagging	Sq. Ft.			
Concrete Removal	Cu. Yd.			
Reinforcement Bars, Epoxy Coated	Lbs.			
Concrete Structures	Cu. Yd.			
Protective Coat	Sq. Yd.			



DETAIL 3



h3(E) Bar

LEGEND:

- Concrete Removal
- PCC Pavement
- BAM
- Sub Base
- Earth

NOTES:

1. Drilling and grouting of #4 h3(E) bars shall be in accordance with Section 584 of the Standard Specifications.
2. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h3(E) bars shall be included in the cost per cubic yard for Concrete Structures.
3. Provide joints in facing to match those in the existing barrier.

REVISIONS	
NAME	DATE

Sheet B7 of 18

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

EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
TYPICAL SECTIONS & DETAILS  
FOR 69th ST. STATION (NB)

SCALE: None DRAWN BY: KWT  
DATE: JULY 7, 2005 CHECKED BY: RDP

CTE | AECOM

CTE - 323 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2776  
312.934.2300 F. 312.934.3029 www.cteaecom.com

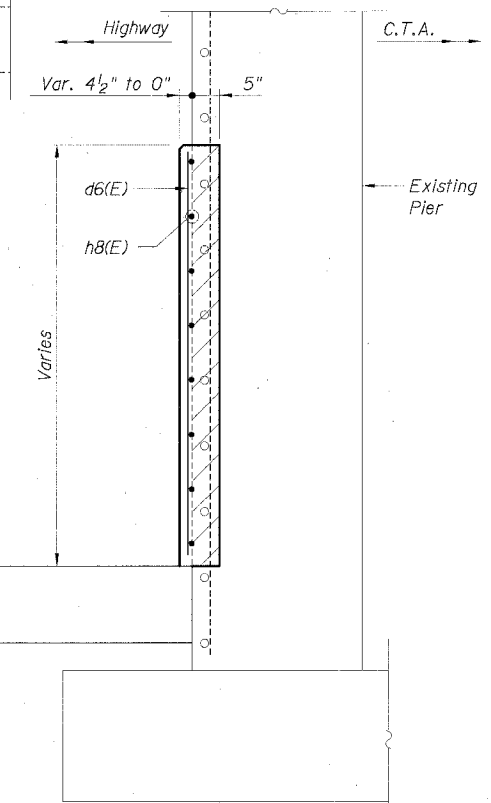
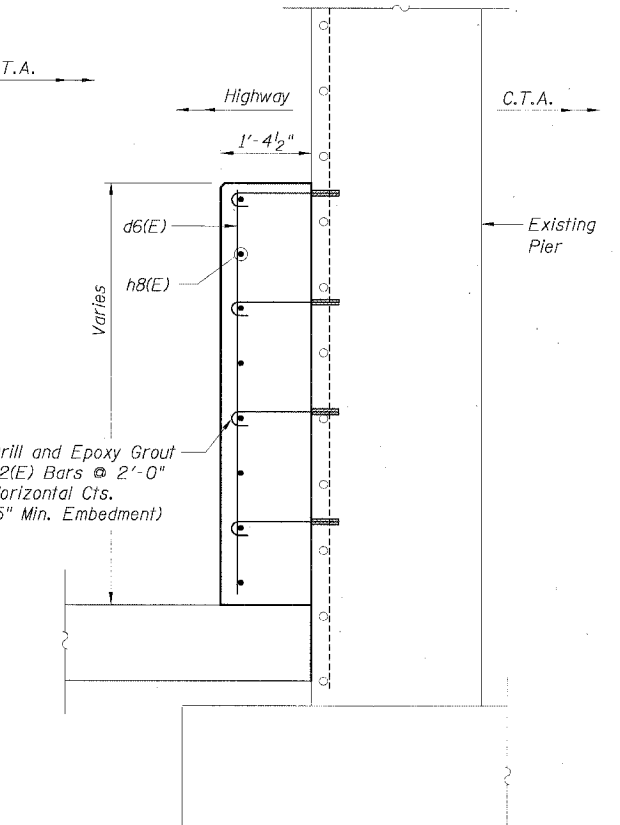
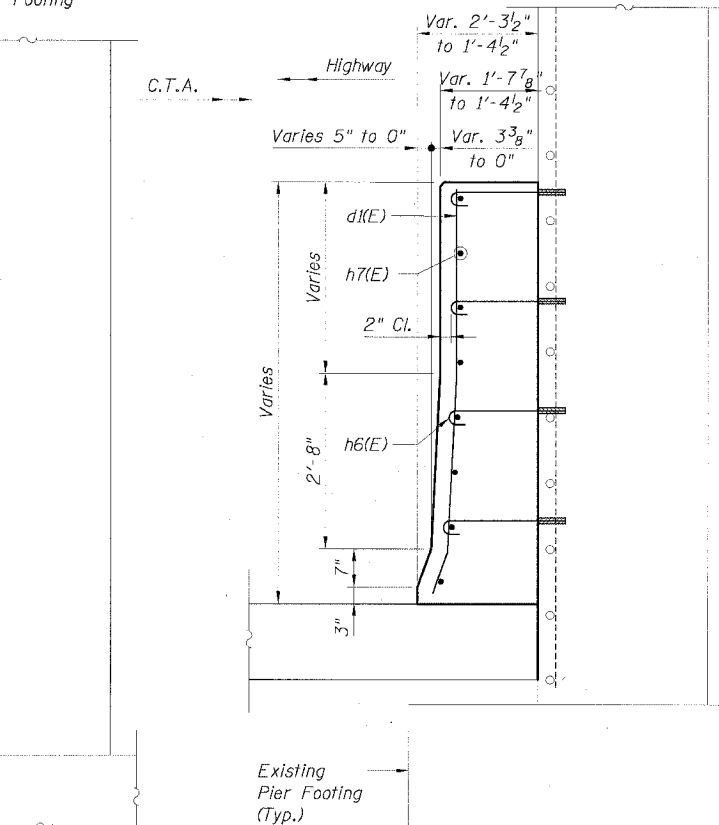
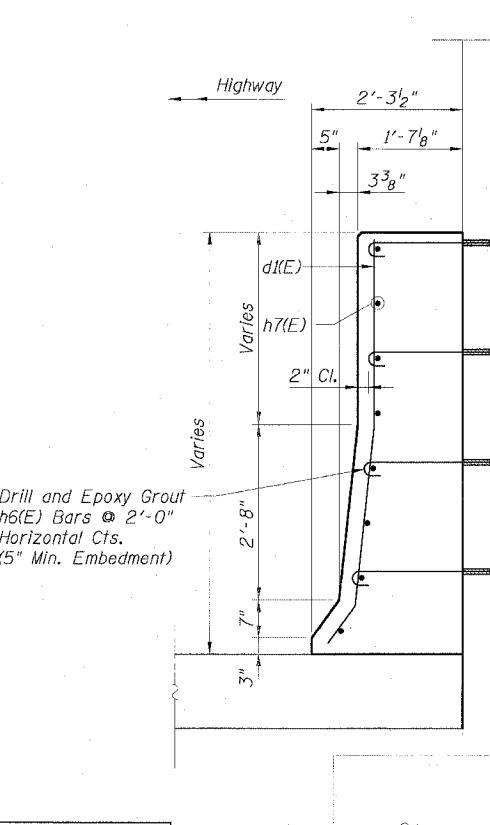
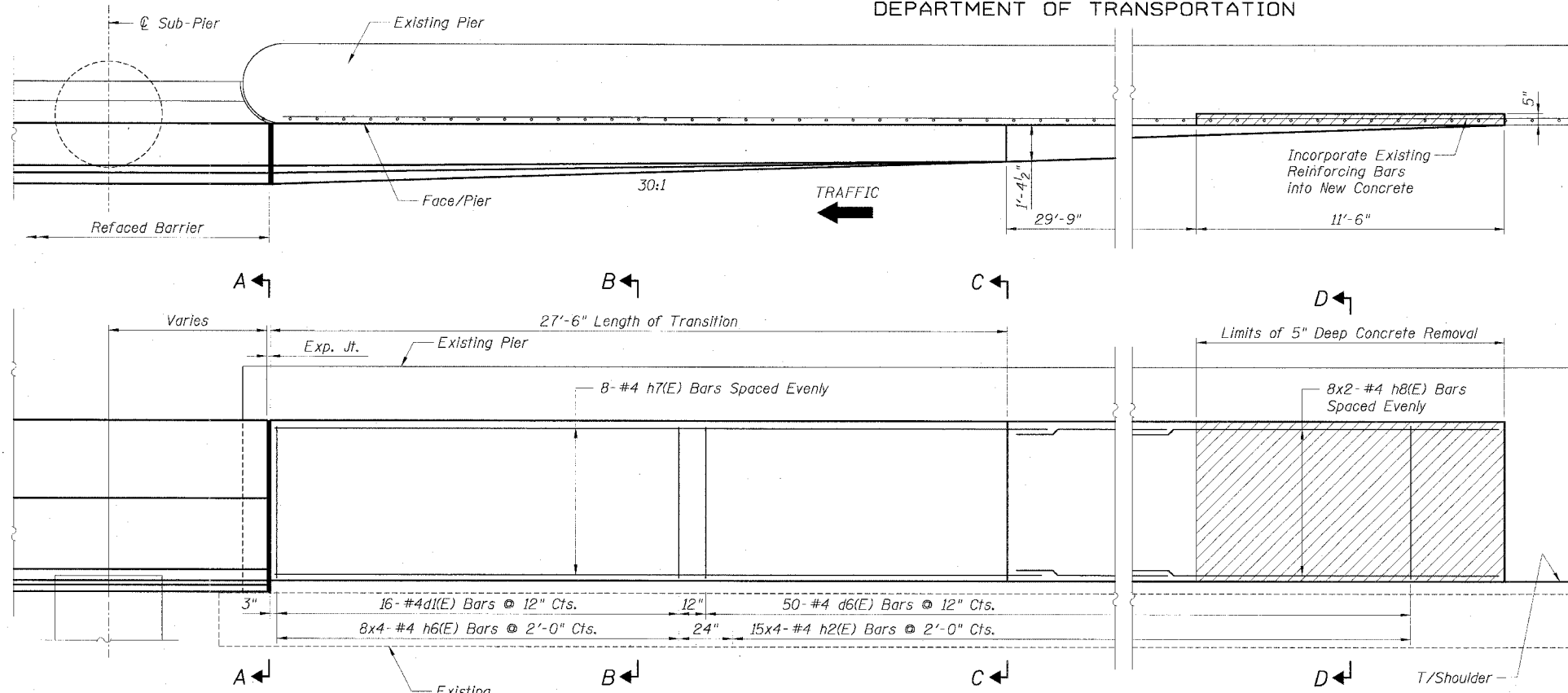
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	416
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
• (1818, ETC, 2324.6-1)PR-9				62302

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d1(E)	17	#4	5'-4"	—
d6(E)	50	#4	6'-0"	—
h2(E)	60	#4	2'-4"	—
h6(E)	32	#4	2'-6"	—
h7(E)	8	#4	28'-10"	—
h8(E)	16	#4	21'-2"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	790		
Concrete Structures	Cu. Yd.	18.6		
Protective Coat	Sq. Yd.	56		
Concrete Removal	Cu. Yd.	1.1		



**LEGEND:**  
Existing Pier  
Concrete Removal

- NOTES:**
1. Drilling and grouting of h2(E) and h6(E) bars shall be in accordance with Section 584 of the Standard Specifications.
  2. The cost of drilling holes, furnishing and placing Epoxy Grout and setting h2(E) and h6(E) bars shall be included in the cost per cubic yard for Concrete Structures.
  3. Provide joints in facing to match those in the existing barrier.
  4. For Refaced Barrier details see Sheets B2 and B3.
  5. For locations of Transition, see Roadway Plans.

SECTION D-D

Sheet B8 of 18

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS AT CTA STATIONS**  
**PROPOSED T/S SHOULDER BELOW EXISTING REFACED BARRIER TO PIER TRANSITION DETAILS (TAPER)**  
SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP

CTE | AECOM  
303 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2076  
1 312.578.0000 2 312.578.3000 www.cte.com

SECTION A-A

SECTION B-B

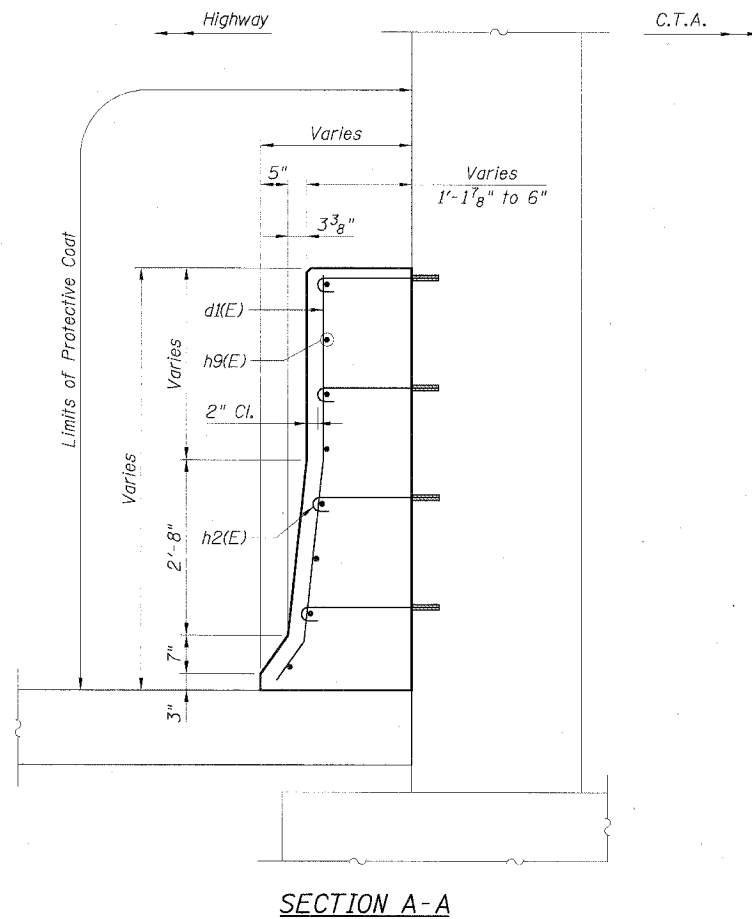
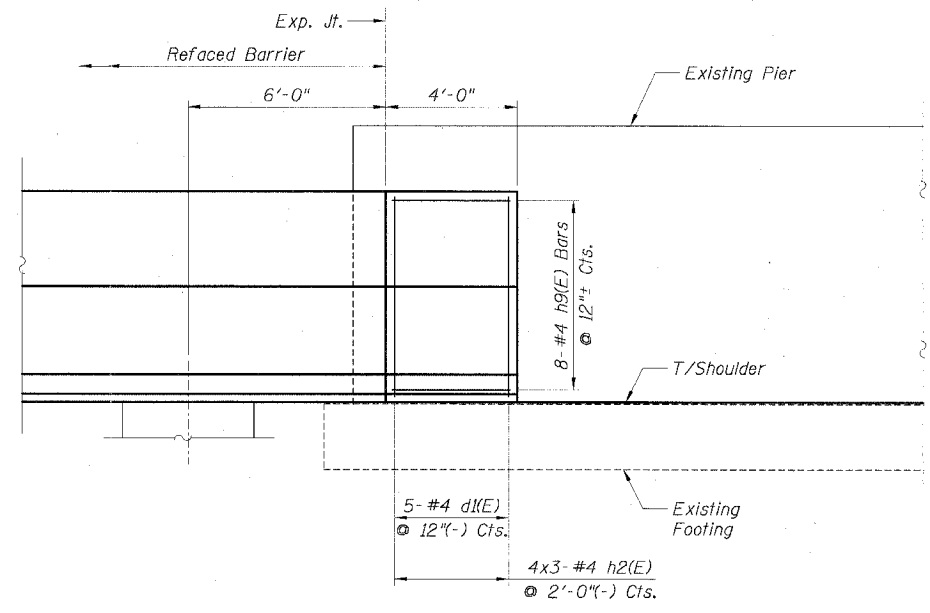
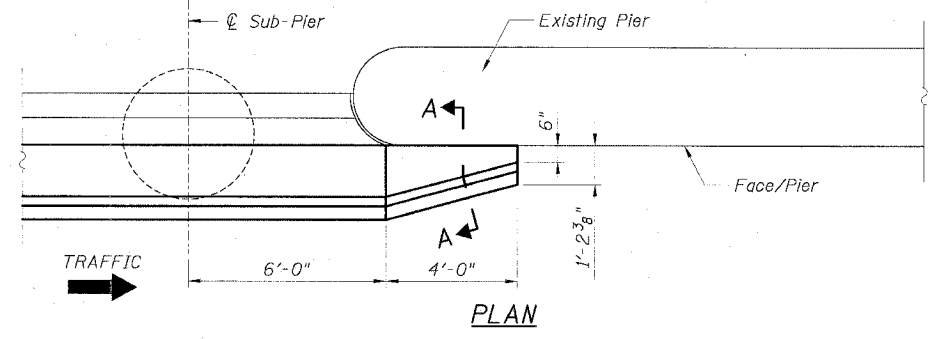
SECTION C-C

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

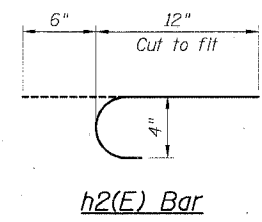
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	417
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
* 1818, ETC, 2324.6-1P)R-9				62302



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h2(E)	12	#4	2'-4"	—
h9(E)	8	#4	3'-8"	—
d(E)	5	#4	5'-4"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	60		
Concrete Structures	Cu. Yd.	0.9		
Protective Coat	Sq. Yd.	3.3		

- LEGEND:**
- Concrete Removal
- NOTES:**
1. Drilling and grouting of #4 h2(E) bars shall be in accordance with Section 584 of the Standard Specifications.
  2. The cost of drilling holes, furnishing and setting #4 h2(E) bars shall be included in the cost per cubic yard for Concrete Structures.
  3. Provide joints in facing to match those in the existing barrier.
  4. For h2(E) bar details, see Sheet B2.
  5. For Refaced Barrier details, see Sheets B2 and B3.
  6. For locations of Transition, see Roadway Plans.



REVISIONS

NAME	DATE

Sheet B9 of 18

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/SOULDER BELOW EXISTING  
REFACED BARRIER TO PIER  
TRANSITION DETAILS (NO TAPER)**

SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: MJP

A:\P\40465\Struc\E&K\_Dwg\Struc\_B2302\03.ctb A-Barr\barrier\VT090902A-CT B31F 08/24/2005 02:09:47 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

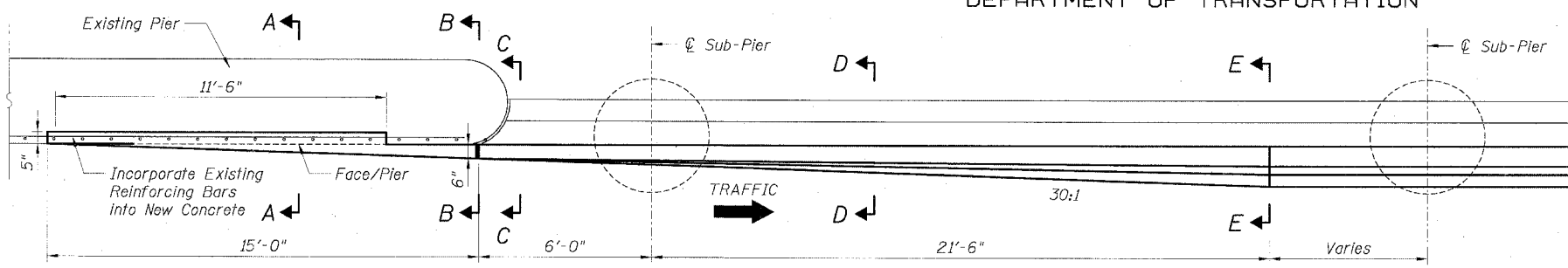
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS: NO.
90/94	*	COOK	598 418
STA.	TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	
* (1818, ETC, 2324.6-1P)R-9			62302

**BILL OF MATERIAL  
FOR ONE TRANSITION**

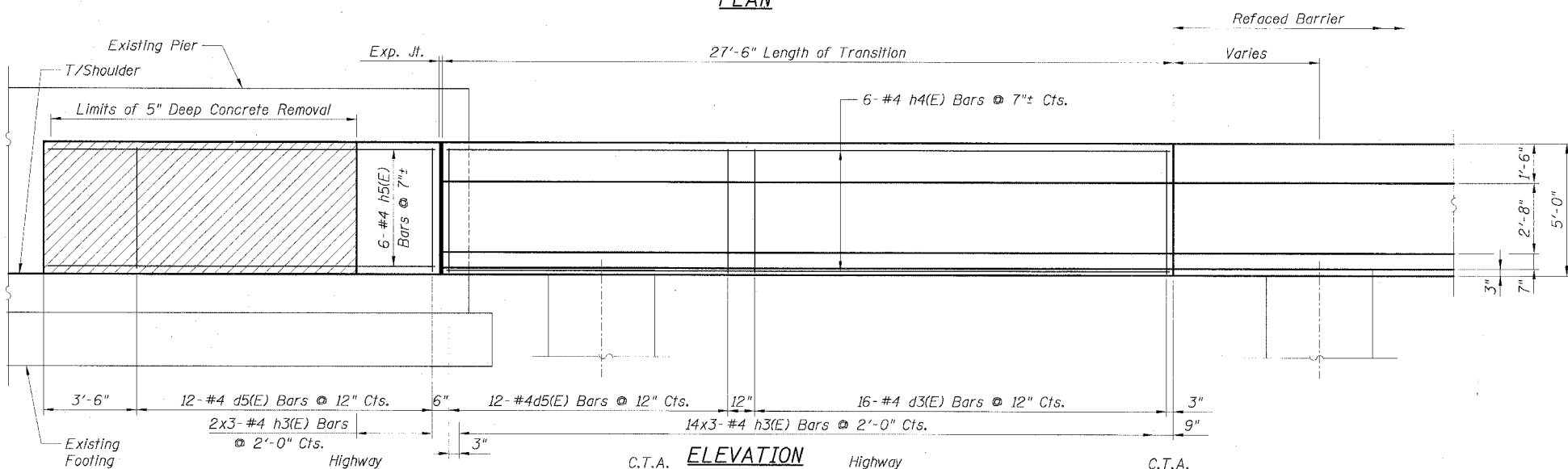
Bar	No.	Size	Length	Shape
d3(E)	16	#4	5'-3"	—
d5(E)	24	#4	4'-8"	—
h3(E)	48	#4	1'-6"	—
h4(E)	6	#4	26'-8"	—
h5(E)	6	#4	14'-8"	—

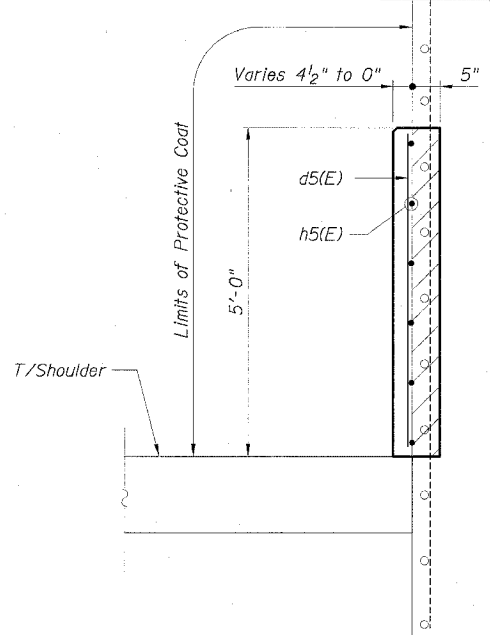
Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Lbs.	345
Concrete Structures	Cu. Yd.	4.6
Protective Coat	Sq. Yd.	22.5
Concrete Removal	Cu. Yd.	0.9



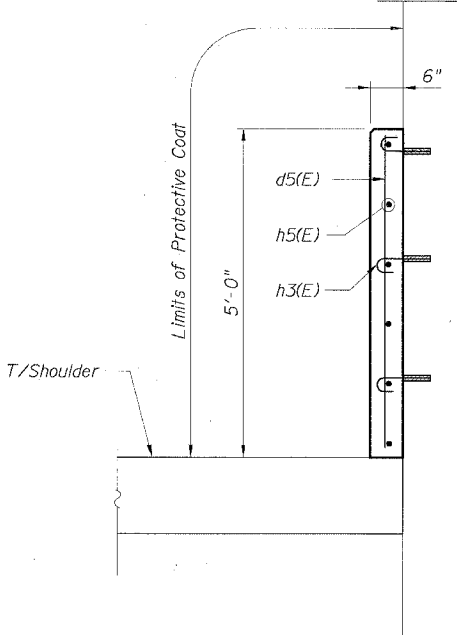
PLAN



ELEVATION

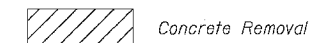


SECTION A-A



SECTION B-B

**LEGEND:**



**NOTES:**

1. Drilling and grouting of #4 h3(E) bars shall be in accordance with Section 584 of the Standard Specifications.
2. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h3(E) bars shall be included in the cost per cubic yard for Concrete Structures.
3. Provide joints in facing to match those in the existing barrier.
4. For Refaced Barrier details, see Sheets B4 and B5.
5. For Sections C-C, D-D and E-E see Sheet B11.
6. For d3(E) and h3(E) bar details, see Sheet B4.
7. For locations of Transition, see Roadway Plans.

Sheet B10 of 18

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS**  
**PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
REFACED BARRIER TO PIER  
TRANSITION DETAILS (TAPER)**

SCALE: None  
DATE: JULY 7, 2005

DRAWN BY: CHD  
CHECKED BY: MJP

CTE | AECOM

300 East Wacker Drive, Suite 600, Chicago, Illinois 60601-5278  
T 312.438.0200 F 312.438.0103 www.cte.aecom.com

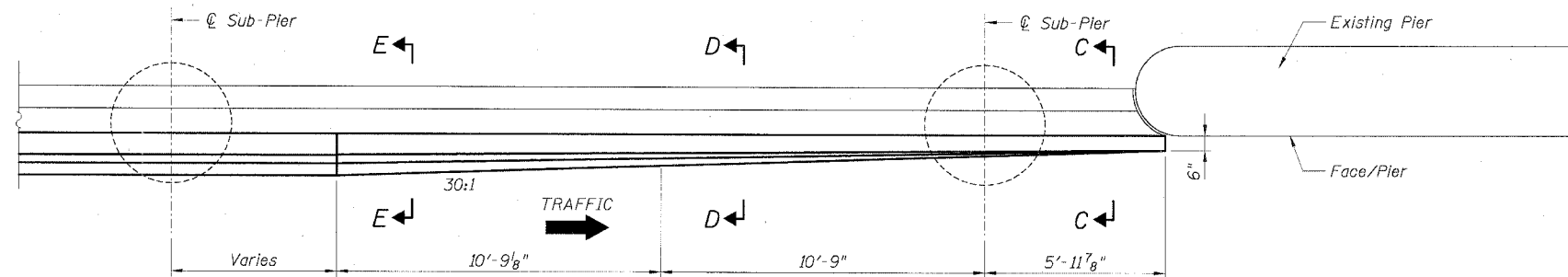
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

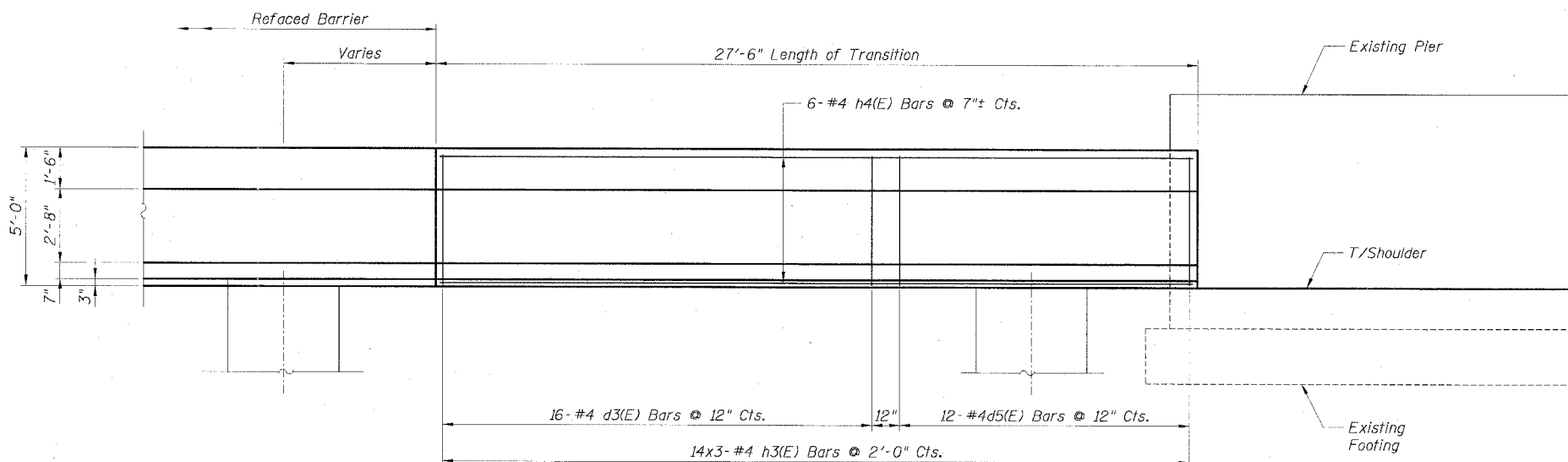
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	419
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
• (1818, ETC, 2324.6-1P)R-9			62302	

**BILL OF MATERIAL  
FOR ONE TRANSITION**

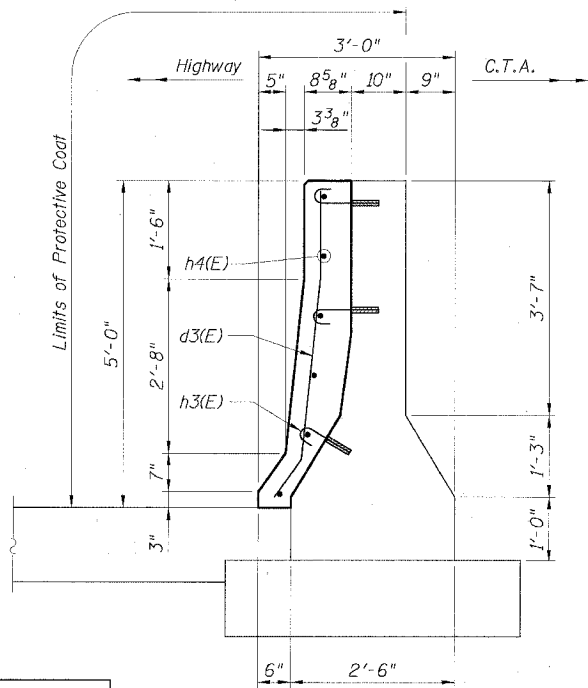
Bar	No.	Size	Length	Shape
d3(E)	16	#4	5'-3"	—
d5(E)	12	#4	4'-8"	—
h3(E)	42	#4	1'-6"	—
h4(E)	6	#4	26'-8"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated		250		
Concrete Structures		3.0		
Protective Coat		19.6		
Concrete Removal				



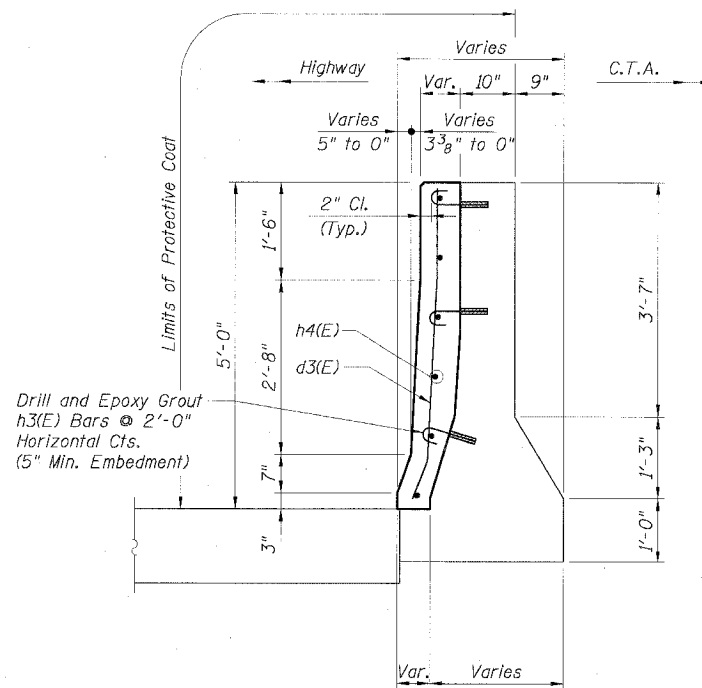
PLAN



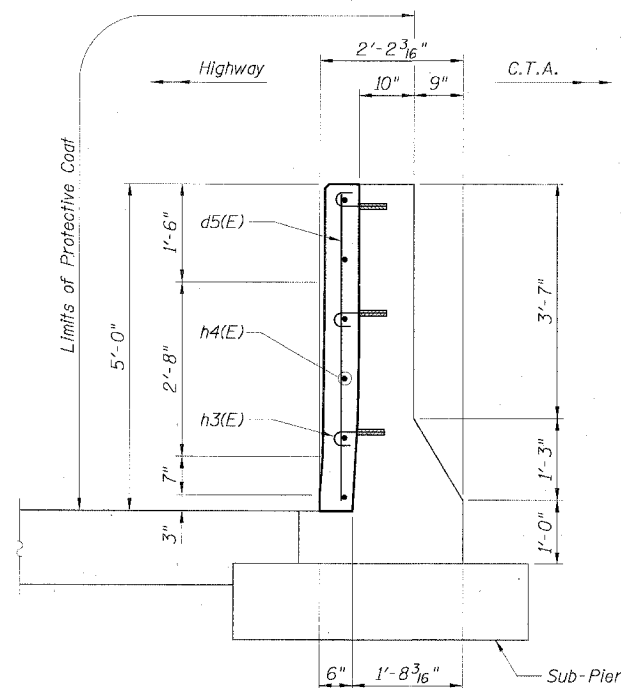
ELEVATION



SECTION E-E

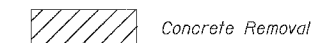


SECTION D-D



SECTION C-C

**LEGEND:**



**NOTES:**

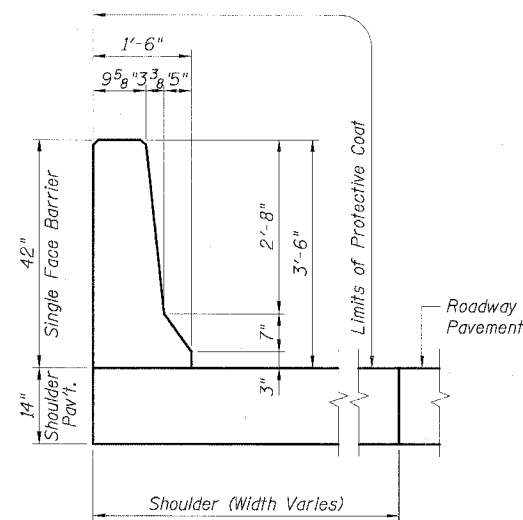
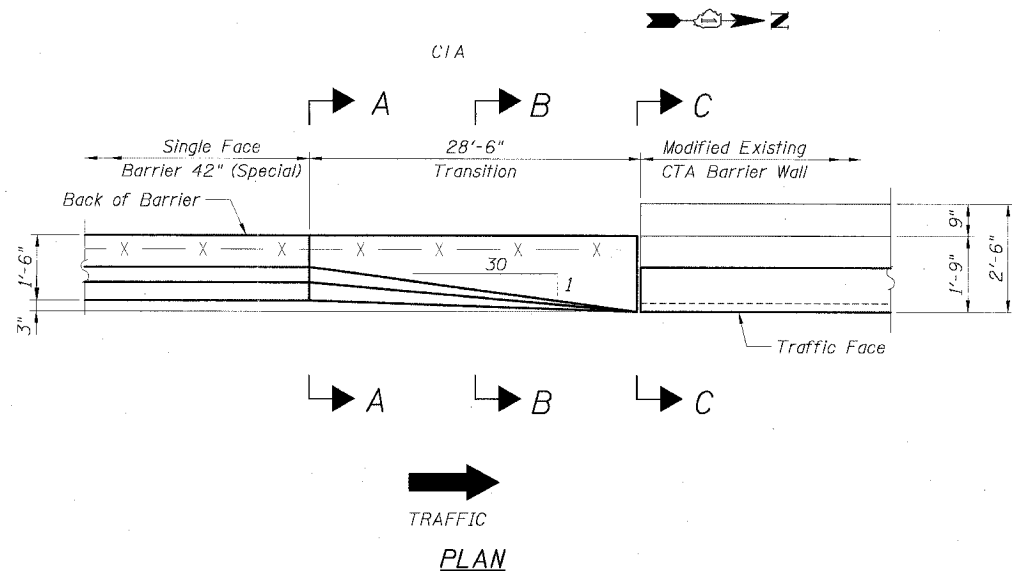
1. Drilling and grouting of #4 h3(E) bars shall be in accordance with Section 584 of the Standard Specifications.
2. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h3(E) bars shall be included in the cost per cubic yard for Concrete Structures.
3. Provide joints in facing to match those in the existing barrier.
4. For Refaced Barrier details, see Sheets B4 and B5.
5. For locations of Transition, see Roadway Plans.

REVISIONS	
NAME	DATE

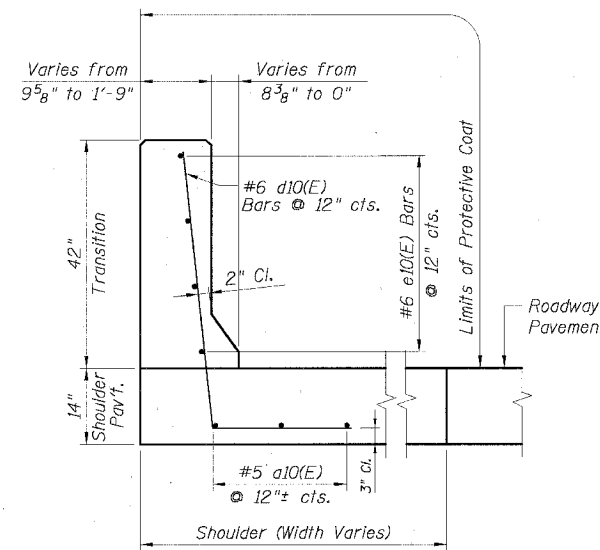
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
REFACED BARRIER TO PIER  
TRANSITION DETAILS (NO TAPER)  
SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

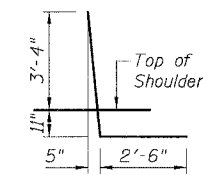
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90/94	COOK	598	420
STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
		• (1818, ETC, 2324.6-IPR-9 62302	



SECTION A



SECTION B



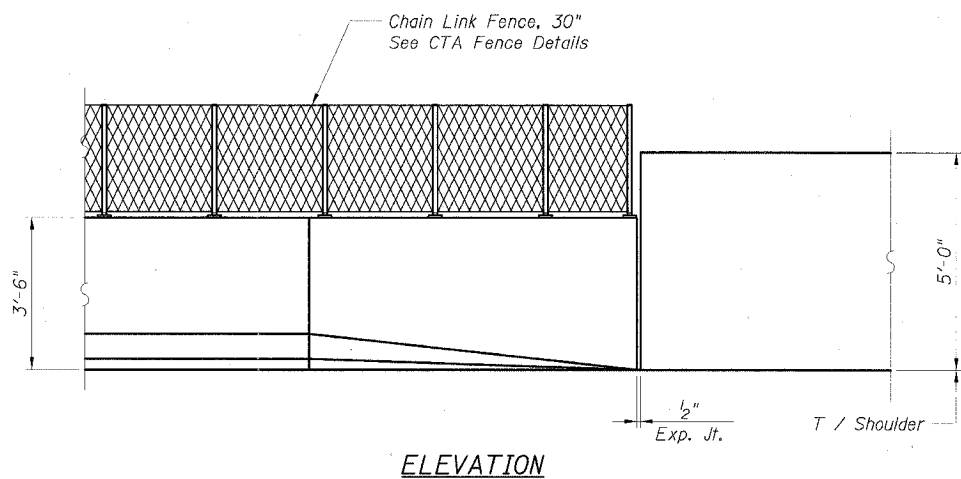
BAR d10(E)

BILL OF MATERIAL  
FOR ONE TRANSITION

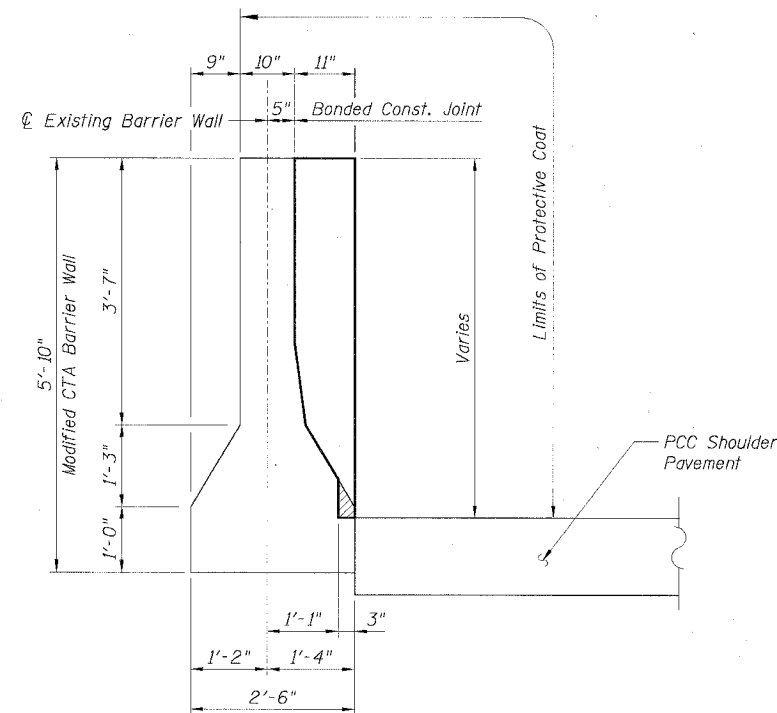
Bar	No.	Size	Length	Shape
a10	3	#5	28'-2"	—
d10	29	#6	6'-9"	L
e10	4	#4	28'-2"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	460		
Concrete Structures	Cu. Yd.	5.2		
Protective Coat	Sq. Yd.	16		

NOTES:

- For alternative vertical reinforcing details, see "Concrete Barrier Single Face, 42" Alternates".
- For existing CTA Barrier modifications - vertical facing, see sheet B7.
- For locations of Transition, see Roadway Plans.



ELEVATION



SECTION C

REVISIONS	NAME	DATE

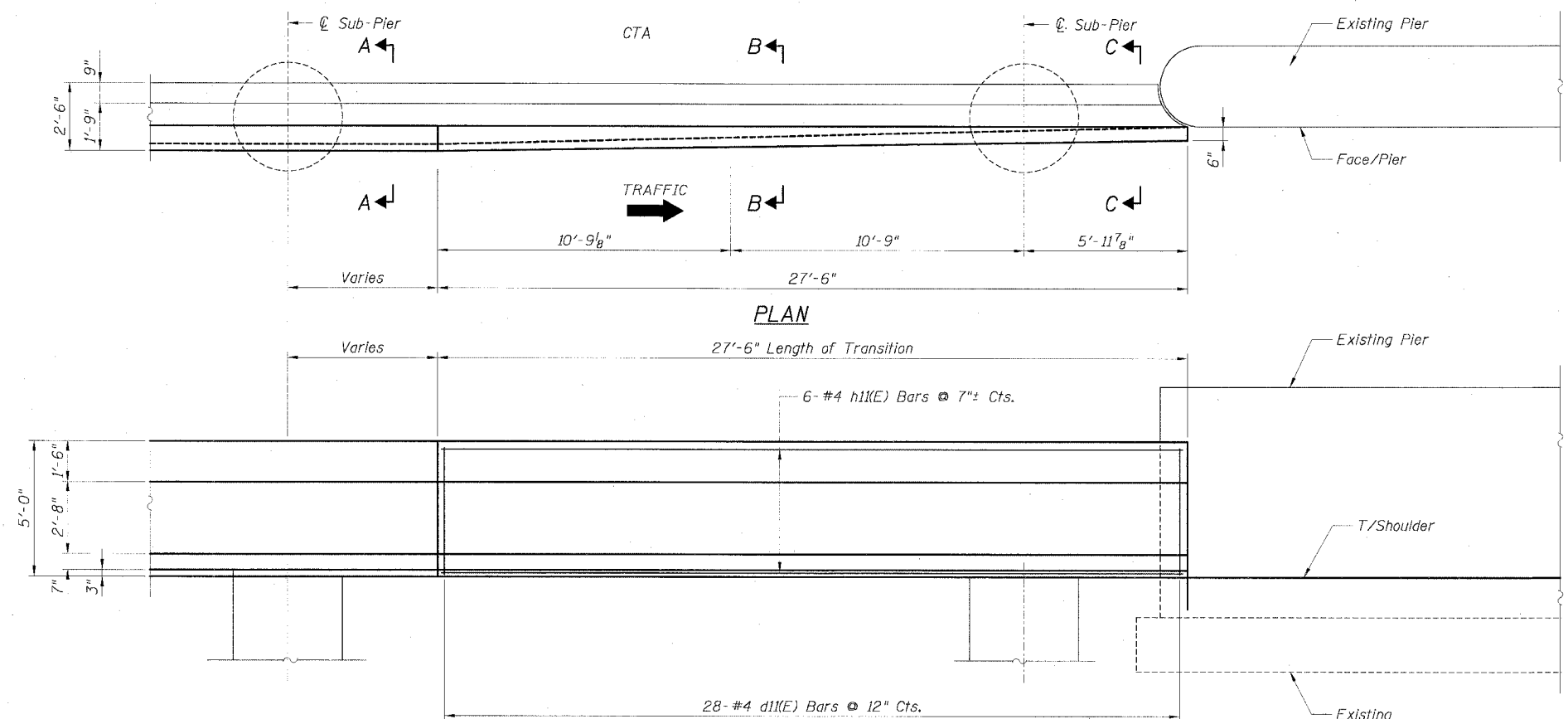
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/SHOULDER AT OR ABOVE EXISTING  
VERT. NEW 42" BARRIER TO REFACED BARRIER  
TRANSITION DETAILS (TAPER)  
SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	421
STA.		TO STA.		
FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT		
* (1818, ETC, 2324.6-1P)R-9		62302		

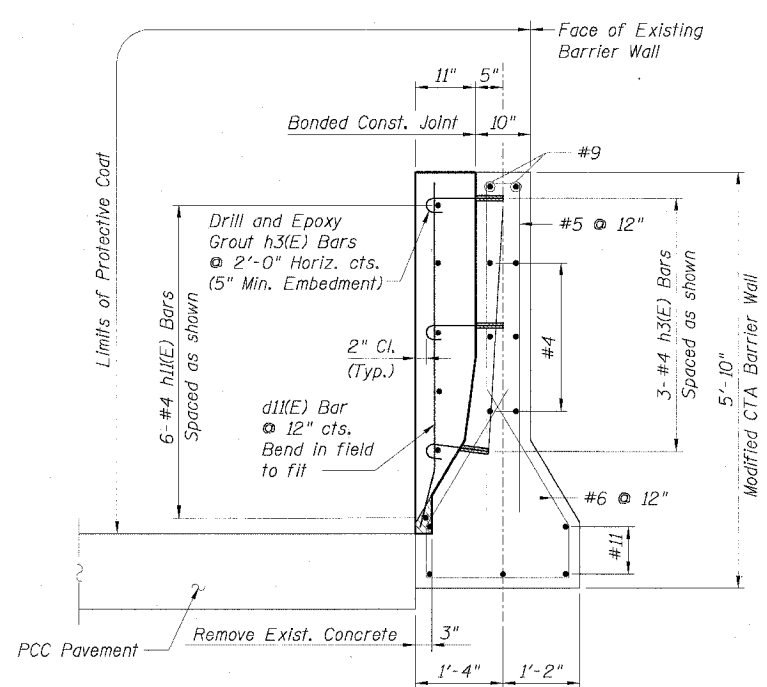
**BILL OF MATERIAL  
FOR ONE TRANSITION**

Bar	No.	Size	Length	Shape
d1(E)	28	#4	5'-3"	—
h3(E)	42	#4	1'-6"	⌋
h1(E)	6	#4	27'-2"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	250		
Concrete Structures	Cu. Yd.	3.2		
Protective Coat	Sq. Yd.	40		
Concrete Removal	Cu. Yd.	0.1		

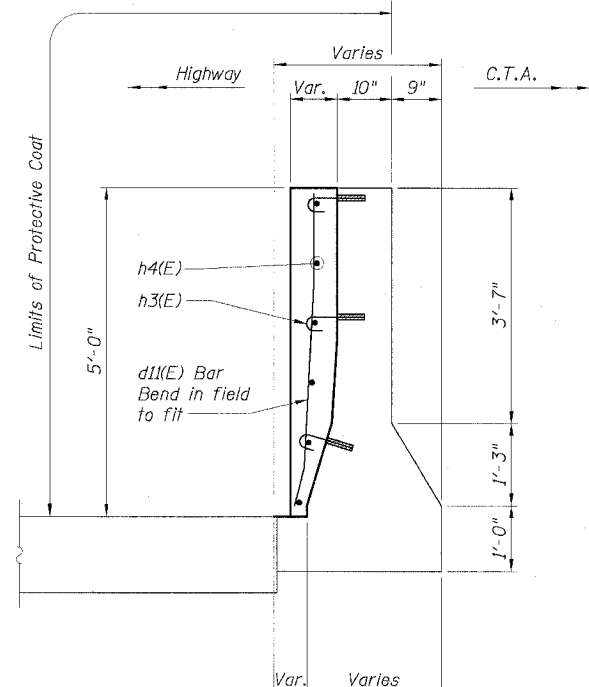


**LEGEND:**  
 Concrete Removal

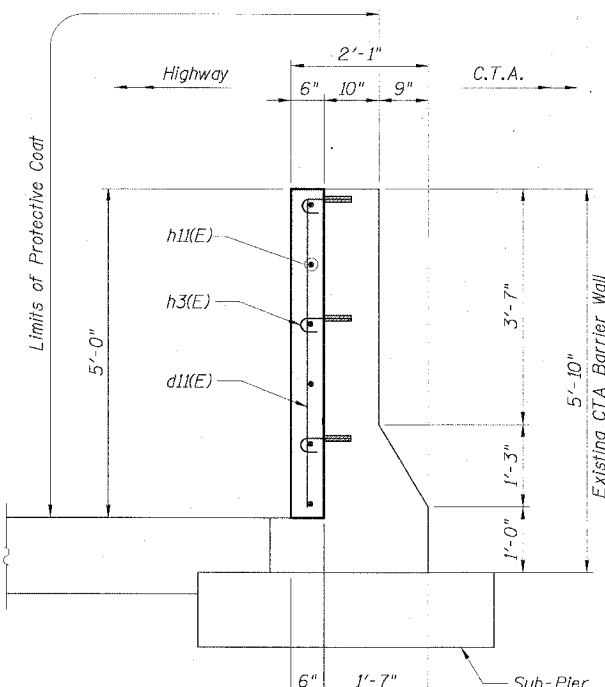
- NOTES:**
1. Drilling and grouting of #4 h3(E) bars shall be in accordance with Section 584 of the Standard Specifications.
  2. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h3(E) bars shall be included in the cost per cubic yard for Concrete Structures.
  3. Provide joints in facing to match those in the existing barrier.
  4. For Soldier Pile and Lagging Retention System see Sheets 4 and 5.
  5. For Sections C-C, D-D and E-E see Sheet
  6. For locations of Transition, see Roadway Plans.



**SECTION A**



**SECTION B**



**SECTION C-C**

REVISIONS	
NAME	DATE

Sheet B13 of 18  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
 AT CTA STATIONS  
 PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
 VERT. REFACED BARRIER TO PIER  
 TRANSITION DETAILS (NO TAPER)**  
 SCALE: None DRAWN BY: CHD  
 DATE: JULY 7, 2005 CHECKED BY: RDP

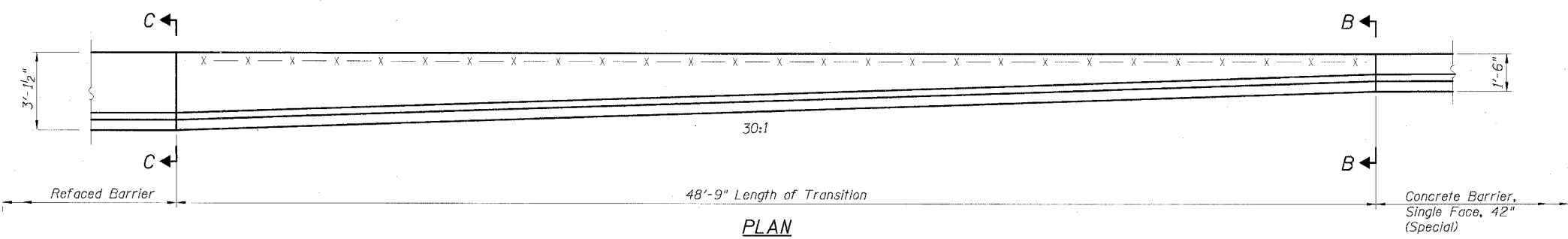
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

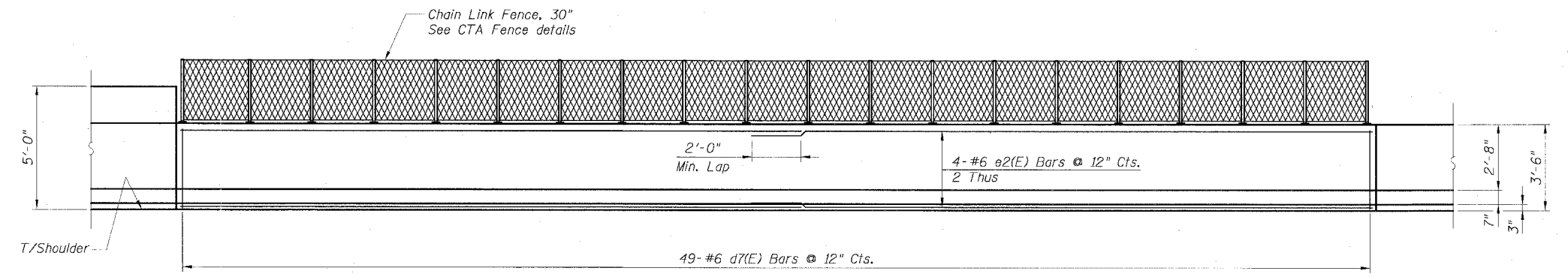
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STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
* (1818, ETC, 2324.6-1PIR-9			62302	

**BILL OF MATERIAL**

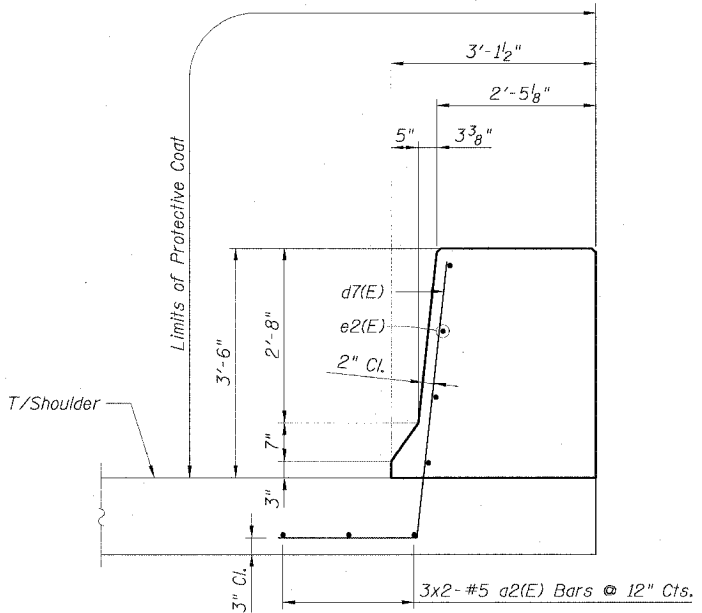
Bar	No.	Size	Length	Shape
a2(E)	6	#5	25'-3"	
d7(E)	49	#6	6'-9"	
e2(E)	8	#6	25'-3"	
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	1,030		
Concrete Structures	Cu. Yd.	11.7		
Protective Coat	Sq. Yd.	28.5		



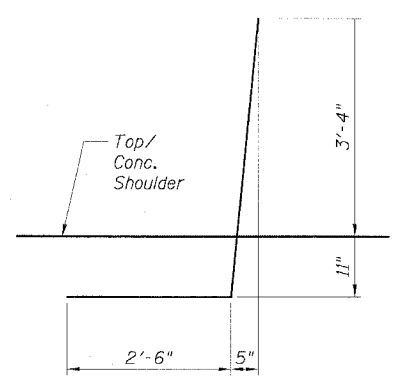
**PLAN**



**ELEVATION**



**SECTION C-C**



**d7(E) BAR**

**NOTES:**

1. Provide joints in facing to match those in the Existing Barrier.
2. For Refaced Barrier details, see Sheets B2 and B3.
3. For Concrete Barrier, Single Face, 42" (Special), see Civil details.
4. For locations of Transition, see Roadway Plans.

Sheet B14 of 18

REVISIONS	
NAME	DATE

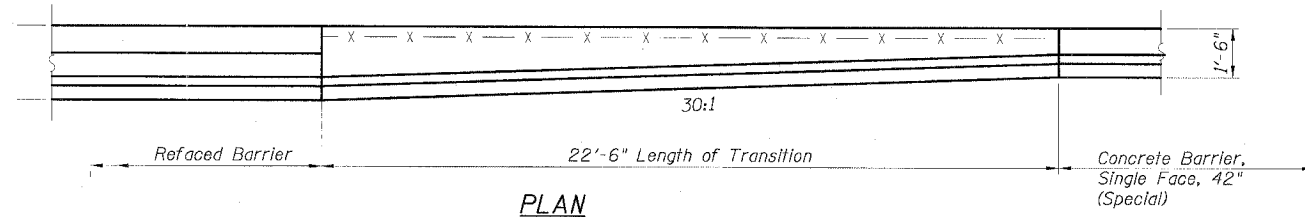
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/SOULDER BELOW EXISTING  
REFACED BARRIER TO NEW 42" BARRIER  
TRANSITION DETAILS  
SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP

CTE | AECOM  
CTE  
300 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2025  
T 312.298.6500 F 312.298.1674 www.cte-aecom.com

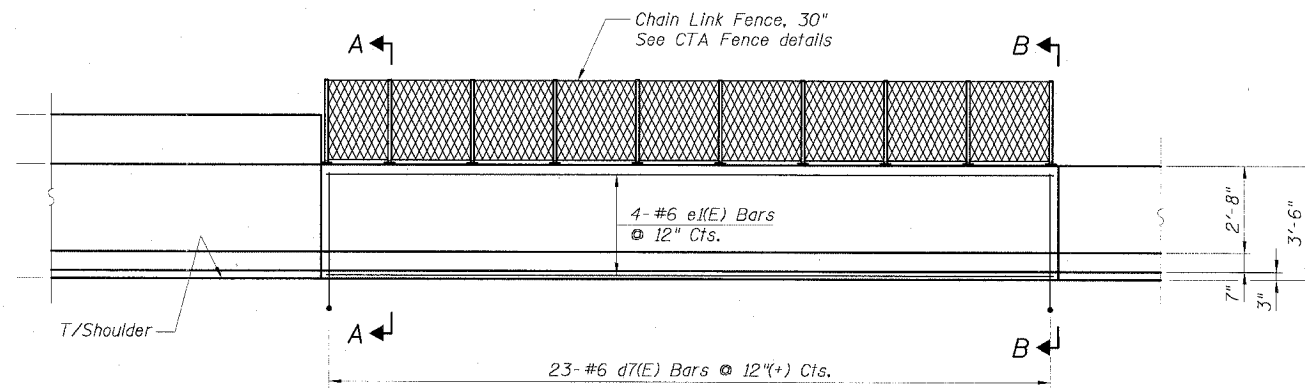
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

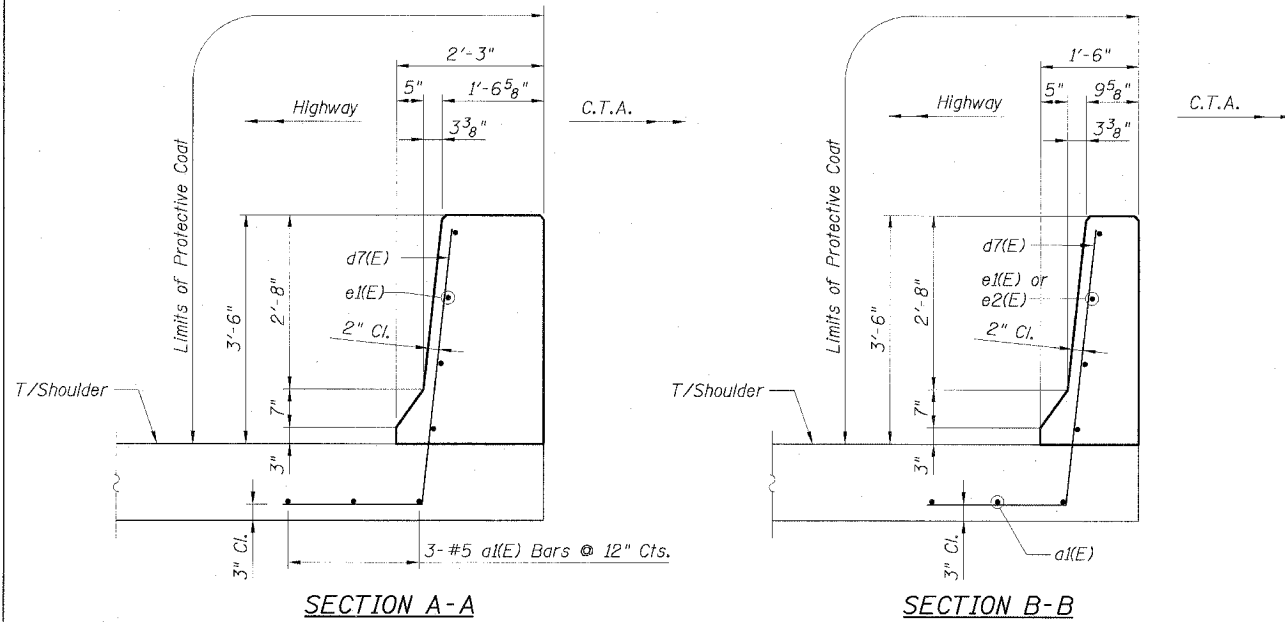
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90/94		COOK	598	423
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
• (1818, ETC, 2324.6-1PIR-9				62302



PLAN



ELEVATION



SECTION A-A

SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1(E)	3	#5	22'-2"	—
d7(E)	23	#6	6'-9"	—
e1(E)	4	#6	22'-2"	—
Item		Unit	Quantity	
Reinforcement Bars, Epoxy Coated		Lbs.	470	
Concrete Structures		Cu. Yd.	4.2	
Protective Coat		Sq. Yd.	12.2	

NOTES:

1. Provide joints in facing to match those in the Existing Barrier.
2. For d7(E) bar details, see Sheet B14.
3. For Refaced Barrier details, see Sheets B4 and B5.
4. For Concrete Barrier, Single Face, 42" (Special), see Civil details.
5. For locations of Transition, see Roadway Plans.

Sheet B15 of 18

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/S SHOULDER AT OR ABOVE EXISTING  
REFACED BARRIER TO NEW 42" BARRIER  
TRANSITION DETAILS  
SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP

CTE | AECOM  
CIC  
307 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2016  
T: 312.251.0100 F: 312.251.0102 www.cteaecom.com

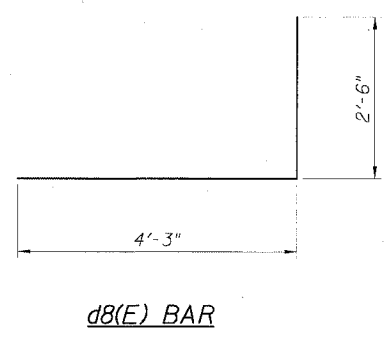
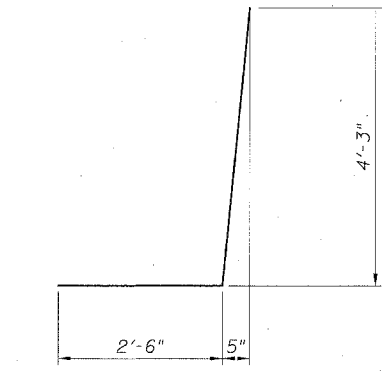
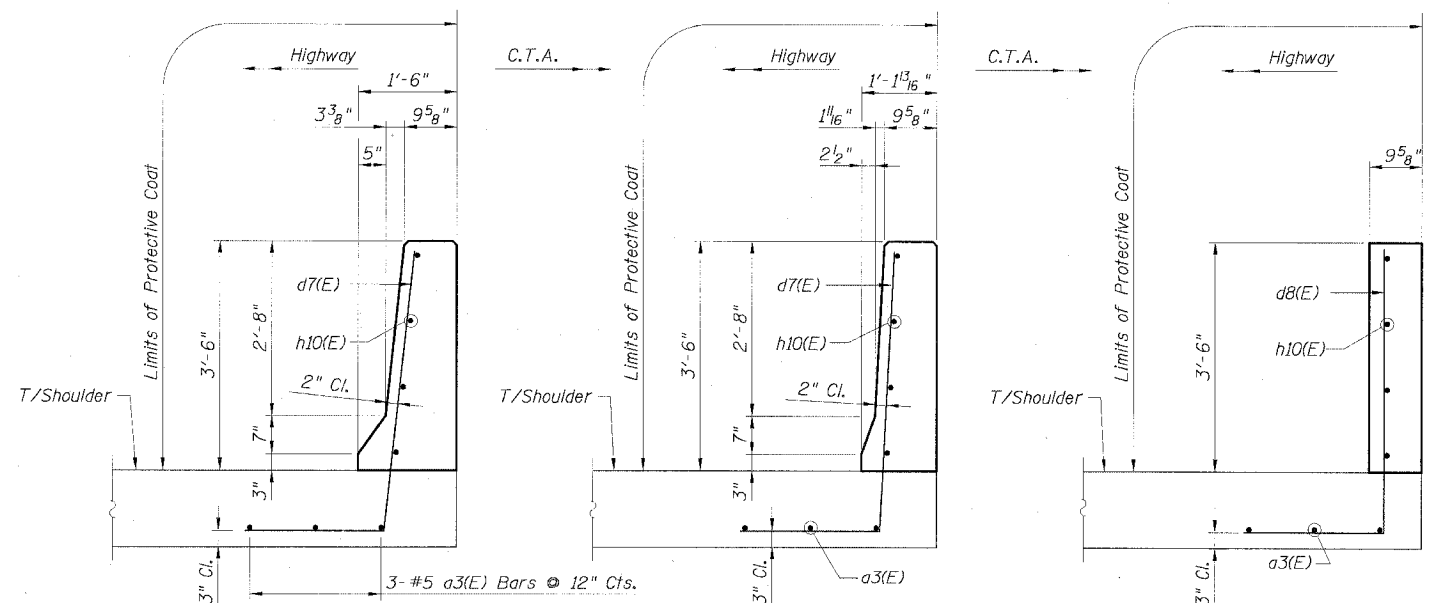
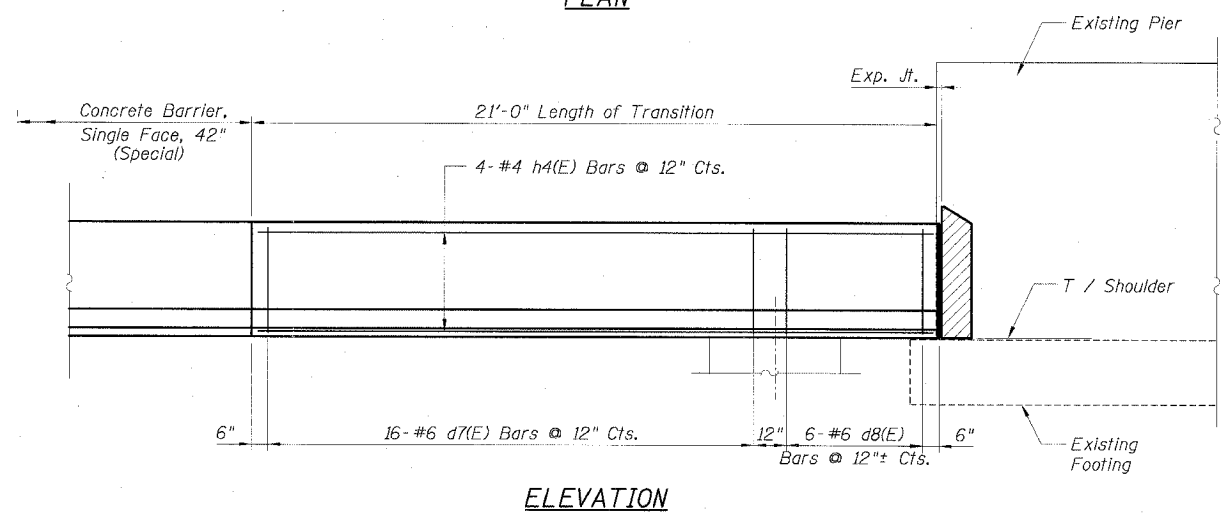
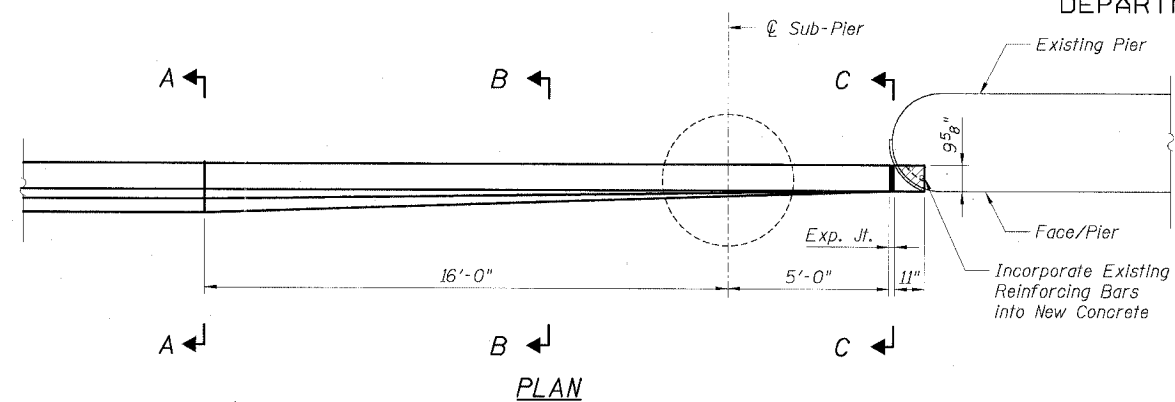
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

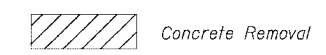
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	424
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
• (B18, ETC, 2324.6-1)IR-9		62302		

**BILL OF MATERIAL  
FOR ONE TRANSITION**

Bar	No.	Size	Length	Shape
a3(E)	3	#5	20'-8"	—
d7(E)	15	#6	6'-9"	—
d8(E)	5	#6	6'-9"	—
h10(E)	4	#4	20'-8"	—
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Lbs.	365		
Concrete Structures	Cu. Yd.	2.7		
Protective Coat	Sq. Yd.	11		
Concrete Removal	Cu. Yd.	0.1		



**LEGEND:**



**NOTES:**

1. Provide joints in facing to match those in the existing barrier.
2. For Concrete Barrier, Single Face, 42" (Special), see Civil details.
3. For locations of Transition, see Roadway Plans.

REVISIONS	
NAME	DATE

Sheet B16 of 18

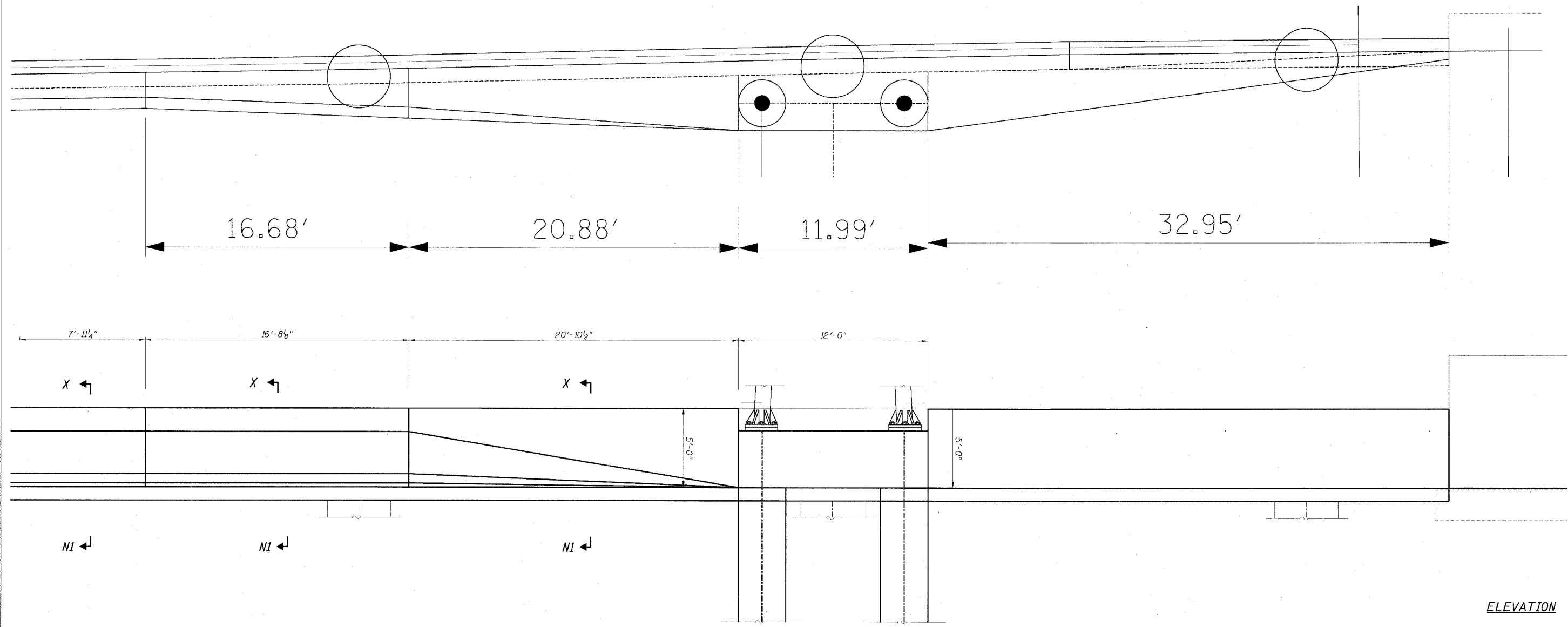
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROP. T/SOULDER ABOVE OR BELOW EXISTING  
NEW 42" BARRIER TO PIER  
TRANSITION DETAILS

SCALE: None DRAWN BY: CHD  
DATE: JULY 7, 2005 CHECKED BY: RDP



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE. 90/94	SECTION •	COUNTY COOK	TOTAL SHEETS 598	SHEET NO. 424A
STA.		TO STA.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
• (1818, ETC. 2324.6-1P)R-9				62302



Sheet B17 of 18

CTE | AECOM

CTE  
901 East Wacker Drive, Suite 1400, Chicago, Illinois 60601-2076  
T 312.926.0200 F 312.926.1192 www.cte-aecom.com

REVISIONS	
NAME	DATE

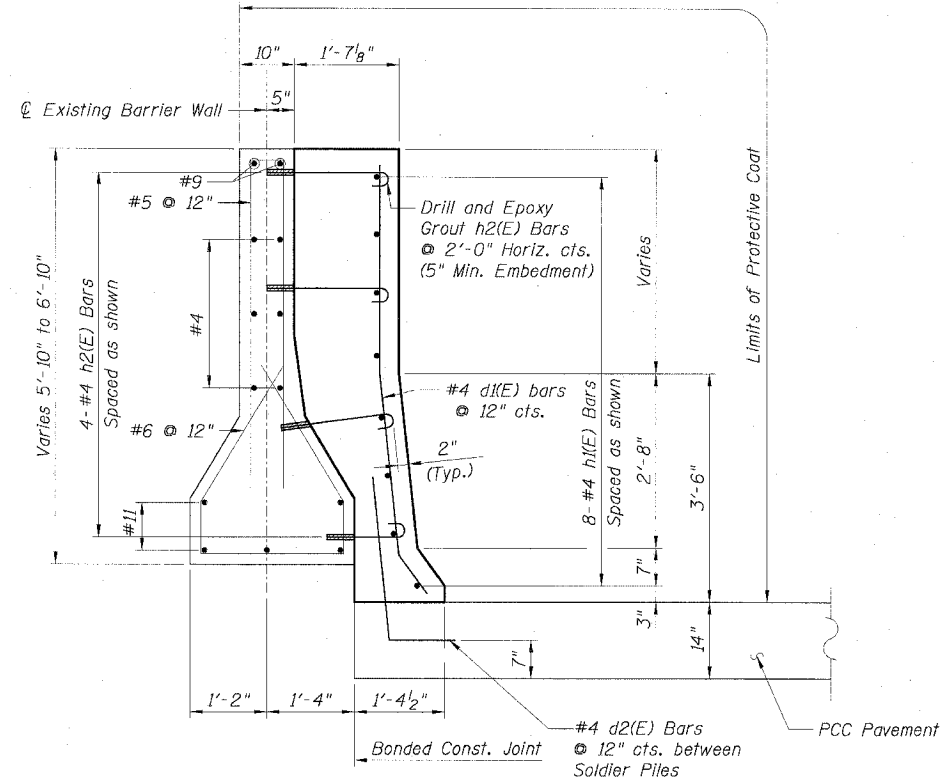
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS  
PROPOSED T/SHOULDER BELOW EXISTING  
REFACED BARRIER TO NEW SIGN STRUCTURE  
TRANSITION PLAN AND ELEVATION  
SCALE: None DRAWN BY: JSS  
DATE: JULY 7, 2005 CHECKED BY: RDP

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	424B
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
• (1818, ETC, 2324.6-1)R-9		62302		



DETAIL 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
dx(E)		#4	X'-4"	┌
dx(E)		#4	X'-6"	└
hx(E)		#4		—
hx(E)		#4	X'-4"	└
Item		Unit	Quantity	
Furnishing Soldier Piles, W12x		Foot		
Drilling and Setting				
Soldier Piles (in Soil)		Cu. Ft.		
Untreated Timber Lagging		Sq. Ft.		
Concrete Removal		Cu. Yd.		
Reinforcement Bars, Epoxy Coated		Lbs.		
Concrete Structures		Cu. Yd.		
Protective Coat		Sq. Yd.		

NOTES:

1. Drilling and grouting of #4 h2(E) bars shall be in accordance with Section 584 of the Standard Specifications.
2. #4 d2(E) bars shall be seated in their final position prior to the placement of the concrete shoulder. Bars shall not be mucked into place.
3. The cost of drilling holes, furnishing and placing Epoxy Grout and setting #4 h2(E) bars shall be included in the cost per cubic yard for Concrete Structures.
4. Provide joints in facing to match those in the existing barrier.

Sheet B18 of 18

LEGEND:

	Concrete Removal
	PCC Pavement
	BAM
	Sub Base
	Earth

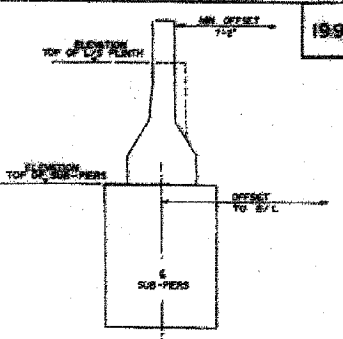
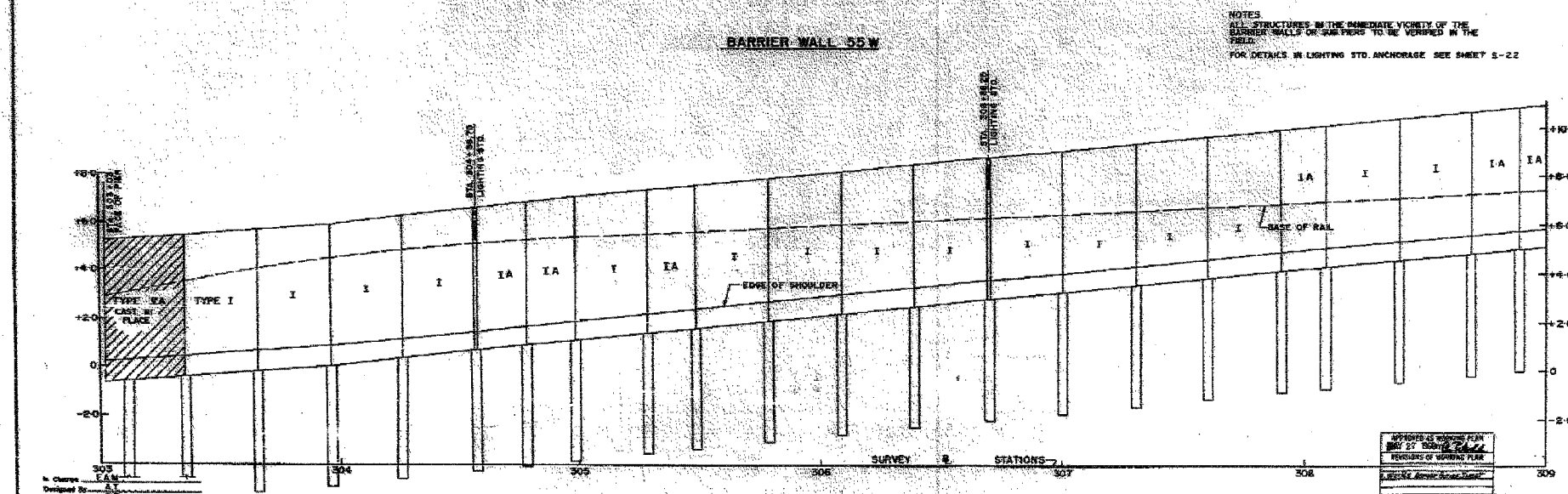
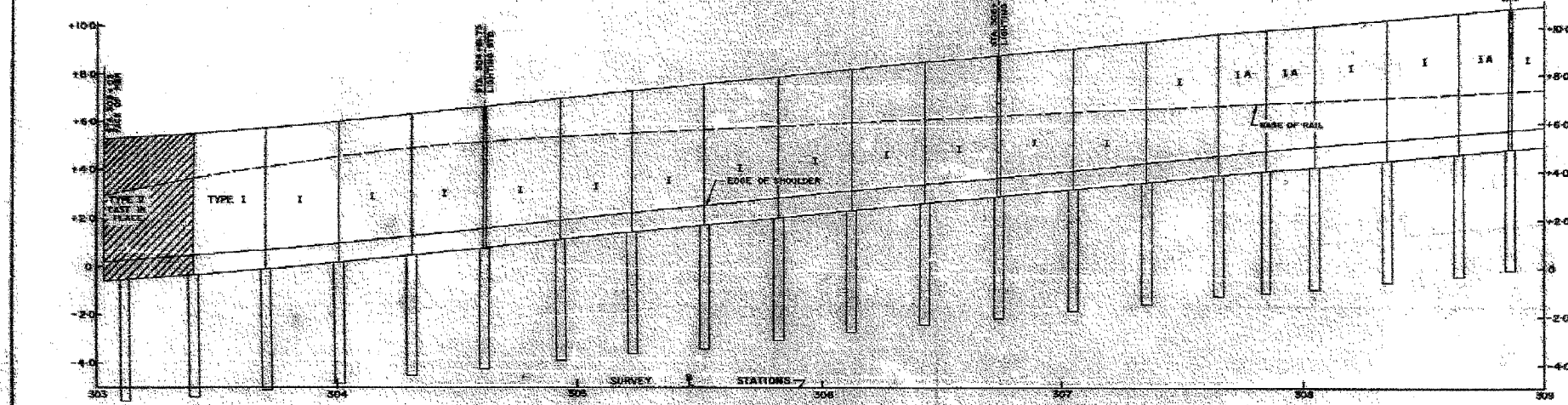
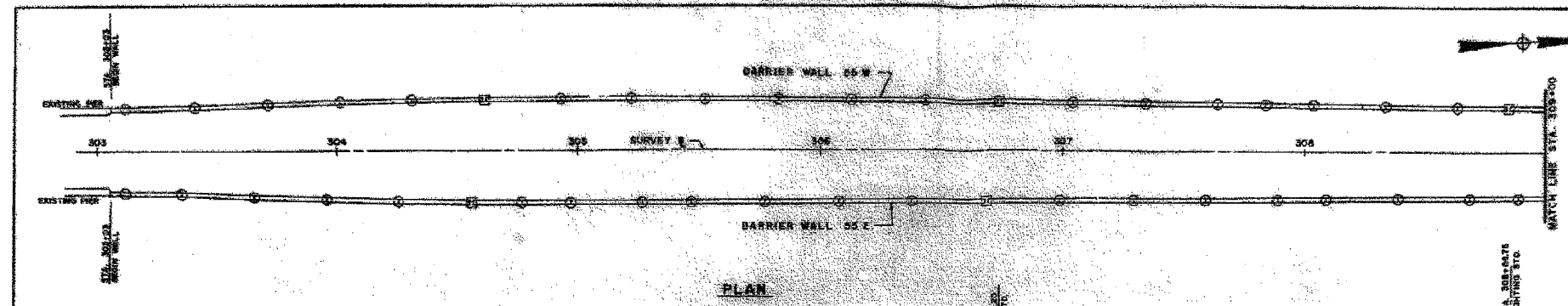
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**EXISTING BARRIER WALL MODIFICATIONS  
AT CTA STATIONS**  
**PROPOSED T/SOULDER BELOW EXISTING  
REFACED BARRIER TO NEW SIGN STRUCTURE  
TRANSITION DETAILS**  
SCALE: None DRAWN BY: KWT  
DATE: JULY 7, 2005 CHECKED BY: RDP

CTE AECOM

CTE  
300 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2076  
T 312.384.0900 F 312.384.1109 www.cteaecom.com

6/24/2005 2:38:51 PM



BARRIER WALL 55W

STATION	TYPE	HEIGHT	WIDTH	SPACING	REMARKS
303+00	I	4.00	4.00	10.00	
303+25	I	4.00	4.00	10.00	
303+50	I	4.00	4.00	10.00	
303+75	I	4.00	4.00	10.00	
304+00	I	4.00	4.00	10.00	
304+25	I	4.00	4.00	10.00	
304+50	I	4.00	4.00	10.00	
304+75	I	4.00	4.00	10.00	
305+00	I	4.00	4.00	10.00	
305+25	I	4.00	4.00	10.00	
305+50	I	4.00	4.00	10.00	
305+75	I	4.00	4.00	10.00	
306+00	I	4.00	4.00	10.00	
306+25	I	4.00	4.00	10.00	
306+50	I	4.00	4.00	10.00	
306+75	I	4.00	4.00	10.00	
307+00	I	4.00	4.00	10.00	
307+25	I	4.00	4.00	10.00	
307+50	I	4.00	4.00	10.00	
307+75	I	4.00	4.00	10.00	
308+00	I	4.00	4.00	10.00	
308+25	I	4.00	4.00	10.00	
308+50	I	4.00	4.00	10.00	
308+75	I	4.00	4.00	10.00	
309+00	I	4.00	4.00	10.00	

BARRIER WALL 55E

STATION	TYPE	HEIGHT	WIDTH	SPACING	REMARKS
303+00	I	4.00	4.00	10.00	
303+25	I	4.00	4.00	10.00	
303+50	I	4.00	4.00	10.00	
303+75	I	4.00	4.00	10.00	
304+00	I	4.00	4.00	10.00	
304+25	I	4.00	4.00	10.00	
304+50	I	4.00	4.00	10.00	
304+75	I	4.00	4.00	10.00	
305+00	I	4.00	4.00	10.00	
305+25	I	4.00	4.00	10.00	
305+50	I	4.00	4.00	10.00	
305+75	I	4.00	4.00	10.00	
306+00	I	4.00	4.00	10.00	
306+25	I	4.00	4.00	10.00	
306+50	I	4.00	4.00	10.00	
306+75	I	4.00	4.00	10.00	
307+00	I	4.00	4.00	10.00	
307+25	I	4.00	4.00	10.00	
307+50	I	4.00	4.00	10.00	
307+75	I	4.00	4.00	10.00	
308+00	I	4.00	4.00	10.00	
308+25	I	4.00	4.00	10.00	
308+50	I	4.00	4.00	10.00	
308+75	I	4.00	4.00	10.00	
309+00	I	4.00	4.00	10.00	

NOTES:  
 1. ALL STRUCTURES IN THE IMMEDIATE VICINITY OF THE BARRIER WALLS OR SUB-PERS TO BE VERIFIED IN THE FIELD.  
 2. FOR DETAILS IN LIGHTING STD. ANCHORAGE SEE SHEET S-22

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DAN RYAN RAPID TRANSIT  
 MEDIAN PREPARATION & FENCING  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA. 303+00 TO STA 309+00  
 HORZ. 1"=20'  
 VERT. 1"=2'  
 APRIL, 1968  
 SHEET NO. 514 OF 211 SHEETS

**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
 PHONE: (312) 251-3000  
 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

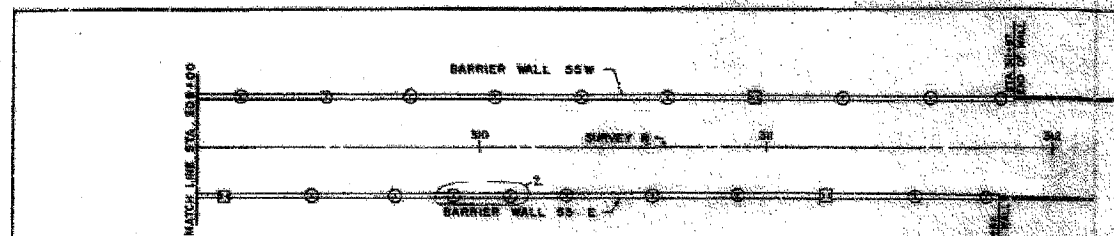
FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

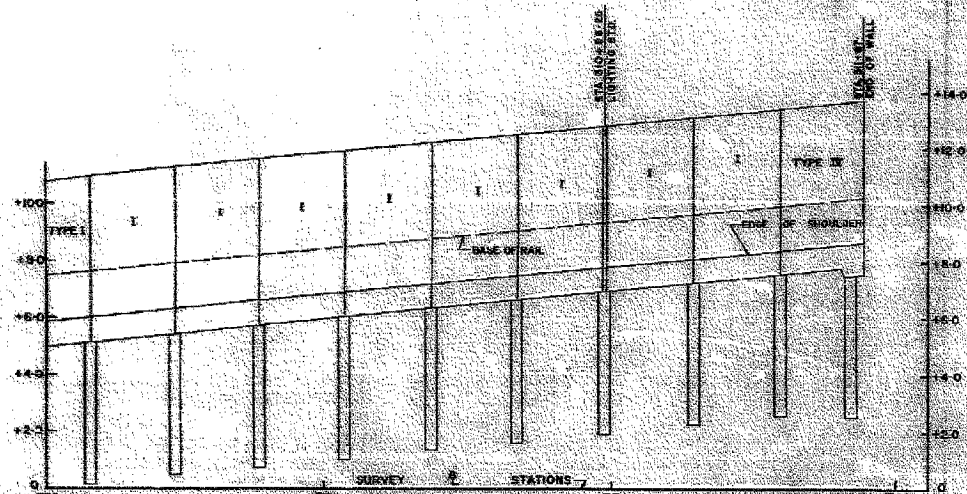
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS

SCALE: NONE  
 DATE: 7/7/05

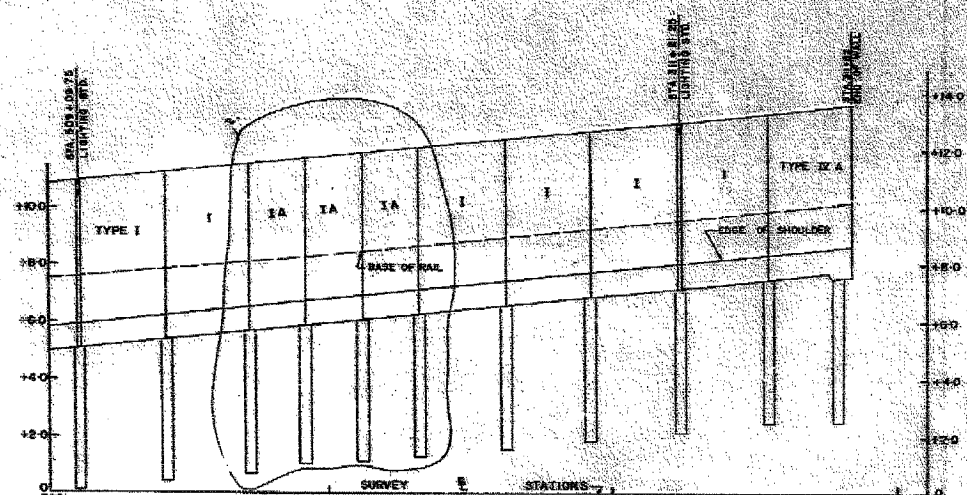
DRAWN BY: CTA  
 CHECKED BY: CTA



PLAN



BARRIER WALL 55W

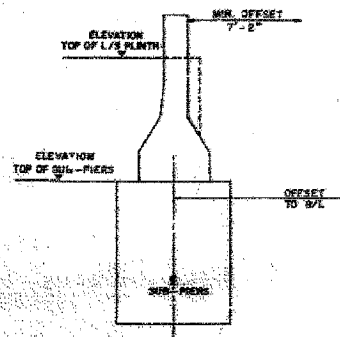


BARRIER WALL 55E

In Charge: S.S.M.  
 Designed By: S.S.M.  
 Drawn By: S.S.M.  
 Checked By: S.S.M.  
 Approved By: U.T.B.



200

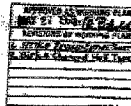


BARRIER WALL CONTROL LOCATION

BARRIER WALL 55W						BARRIER WALL 55E					
STATION	PIER NO.	TYPE	HEIGHT	WIDTH	REMARKS	STATION	PIER NO.	TYPE	HEIGHT	WIDTH	REMARKS
309+00	1	I	7.00	7.00		309+00	1	I	7.00	7.00	
309+10	2	I	7.00	7.00		309+10	2	I	7.00	7.00	
309+20	3	I	7.00	7.00		309+20	3	I	7.00	7.00	
309+30	4	I	7.00	7.00		309+30	4	I	7.00	7.00	
309+40	5	I	7.00	7.00		309+40	5	I	7.00	7.00	
309+50	6	I	7.00	7.00		309+50	6	I	7.00	7.00	
309+60	7	I	7.00	7.00		309+60	7	I	7.00	7.00	
309+70	8	I	7.00	7.00		309+70	8	I	7.00	7.00	
309+80	9	I	7.00	7.00		309+80	9	I	7.00	7.00	
309+90	10	I	7.00	7.00		309+90	10	I	7.00	7.00	
310+00	11	I	7.00	7.00		310+00	11	I	7.00	7.00	
310+10	12	I	7.00	7.00		310+10	12	I	7.00	7.00	
310+20	13	I	7.00	7.00		310+20	13	I	7.00	7.00	
310+30	14	I	7.00	7.00		310+30	14	I	7.00	7.00	
310+40	15	I	7.00	7.00		310+40	15	I	7.00	7.00	
310+50	16	I	7.00	7.00		310+50	16	I	7.00	7.00	
310+60	17	I	7.00	7.00		310+60	17	I	7.00	7.00	
310+70	18	I	7.00	7.00		310+70	18	I	7.00	7.00	
310+80	19	I	7.00	7.00		310+80	19	I	7.00	7.00	
310+90	20	I	7.00	7.00		310+90	20	I	7.00	7.00	

NOTE: ALL WALLS ARE TYPE I UNLESS OTHERWISE NOTED.

NOTES:  
 ALL STRUCTURES IN THE IMMEDIATE VICINITY OF THE BARRIER WALLS OR SUB-PIERS TO BE VERIFIED IN THE FIELD.  
 FOR DETAILS OF LIGHT STANDARD ARCHITECTURE SEE SHEET 5-22



CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DAN RYAN RAPID TRANSIT  
 MEDIAN PREPARATION & FENCING  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA. 309+00 TO STA. 311+87  
 HORIZ. 1"=20'  
 VERT. 1"=2'  
 SCALE: VERT. 1"=2'  
 SHEET NO. 5 15 OF 211 SHEETS  
 APRIL, 1968

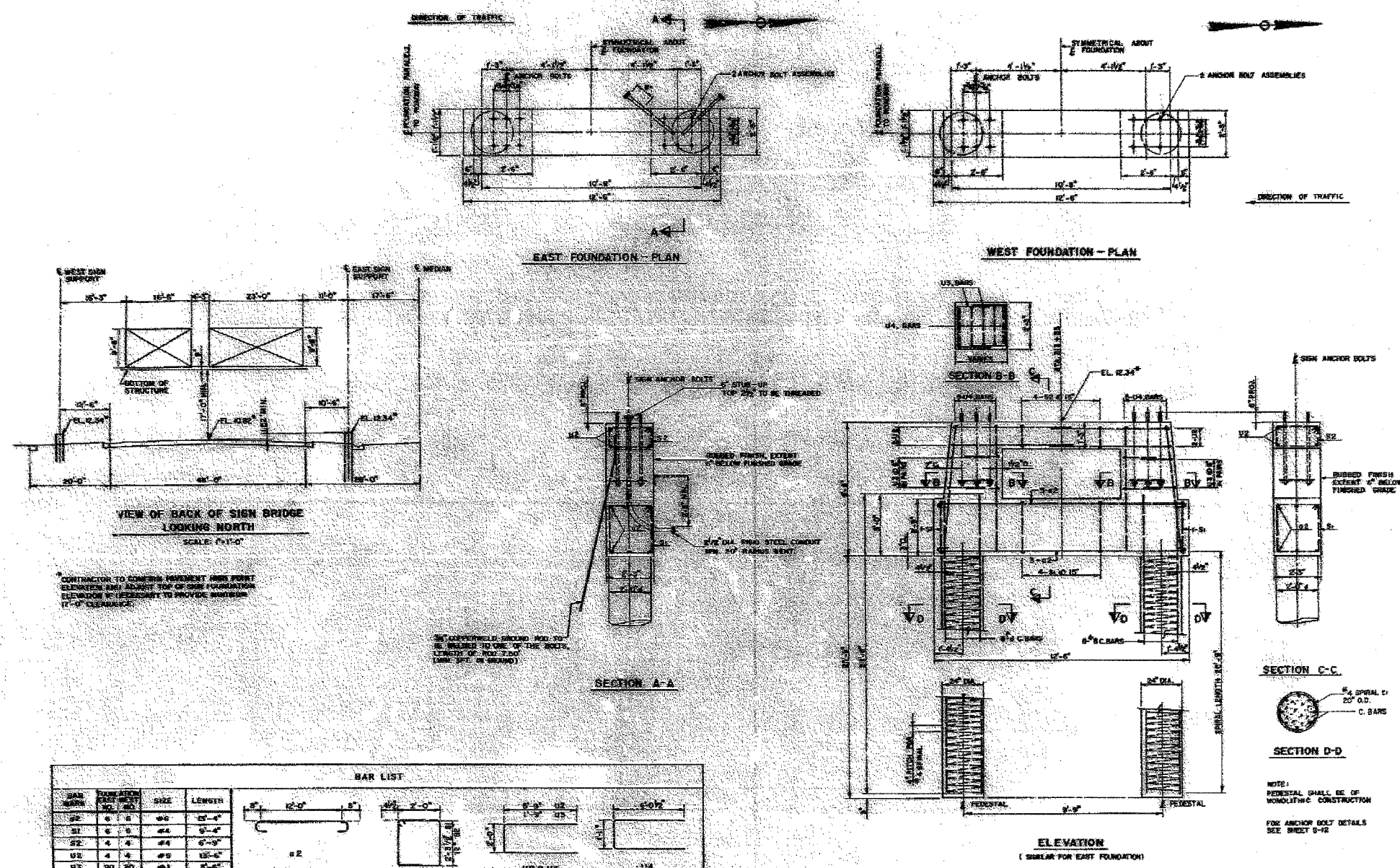
SHEET SD-2 OF SD-10

**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
 PHONE: (312) 251-3000  
 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS  
 SCALE: NONE  
 DATE: 7/7/05  
 DRAWN BY: CTA  
 CHECKED BY: CTA



**BAR LIST**

BAR MARK	QUANTITY	SIZE	LENGTH
S1	6	#4	12'-0"
S2	4	#4	6'-0"
U2	4	#4	12'-0"
U3	20	#4	6'-0"
U4	10	#4	12'-0"
C	SEE ELEVATION & SECTION D-D		
L1	2	#4	25'-0"

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
**DAN RYAN RAPID TRANSIT**  
MEDIAN PREPARATION AND FENCING  
CONTRACT DR-8  
PIERS FOR SIGN BRIDGE AT 55TH ST.  
STA. 313 + B5  
SCALE: 1/2" = 1'-0" APRIL, 1968  
SHEET NO. 5 16 OF 211 SHEETS

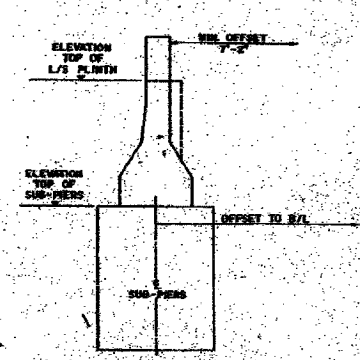
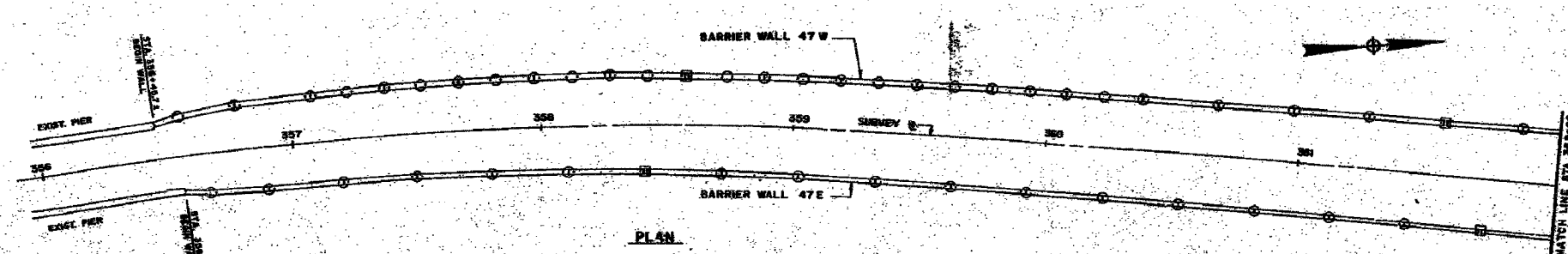
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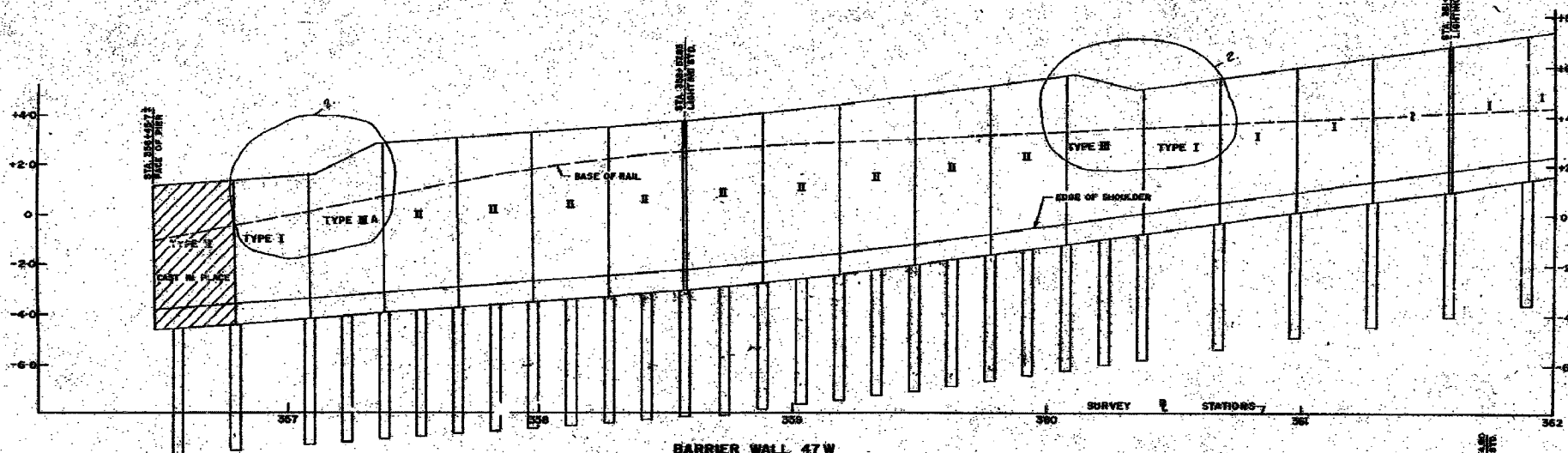
**REVISIONS**

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
EXISTING BARRIER WALL PLANS  
AT CTA STATIONS  
SCALE: NONE DRAWN BY: CTA  
DATE: 7/7/05 CHECKED BY: CTA

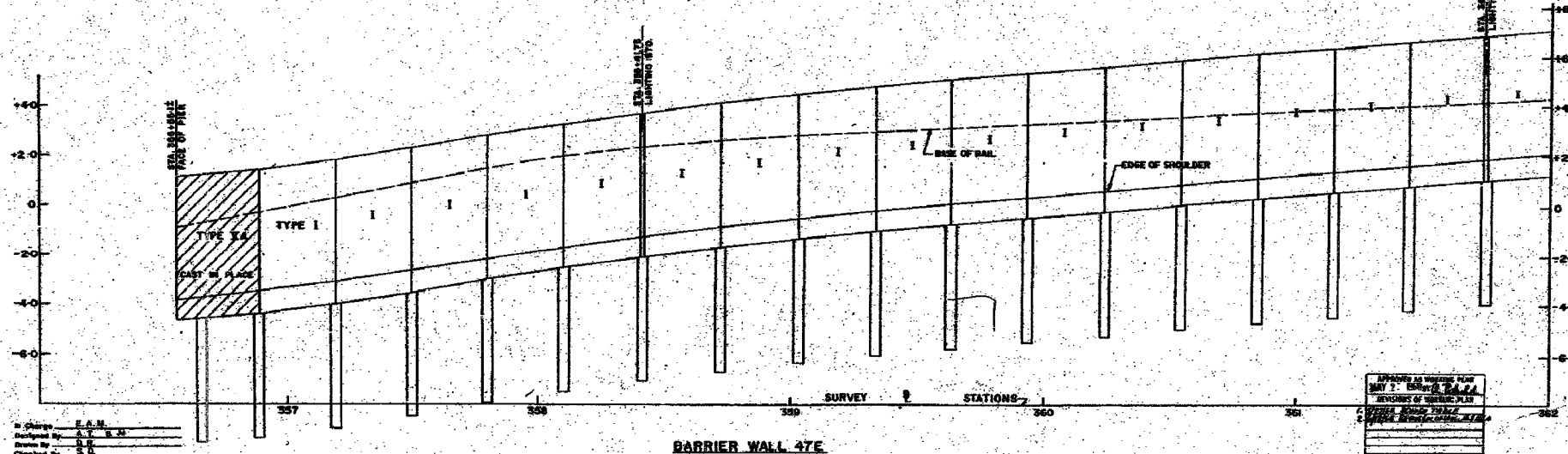


NOTES:  
 ALL STRUCTURES IN THE IMMEDIATE VICINITY OF THE BARRIER WALLS OR SUB-PIERS TO BE VERIFIED IN THE FIELD.  
 FOR DETAILS OF LIGHTING STA ANCHORAGE SEE SHEET S-22



BARRIER WALL CONTROL LOCATION

STATION	ELEVATION TOP OF SUB-PIERS	ELEVATION TOP OF L/S FLUSH	OFFSET TO R/L	REMARKS
357+00	10.00	10.00	0.00	TYPE I
357+10	10.00	10.00	0.00	TYPE I
357+20	10.00	10.00	0.00	TYPE I
357+30	10.00	10.00	0.00	TYPE I
357+40	10.00	10.00	0.00	TYPE I
357+50	10.00	10.00	0.00	TYPE I
357+60	10.00	10.00	0.00	TYPE I
357+70	10.00	10.00	0.00	TYPE I
357+80	10.00	10.00	0.00	TYPE I
357+90	10.00	10.00	0.00	TYPE I
358+00	10.00	10.00	0.00	TYPE I
358+10	10.00	10.00	0.00	TYPE I
358+20	10.00	10.00	0.00	TYPE I
358+30	10.00	10.00	0.00	TYPE I
358+40	10.00	10.00	0.00	TYPE I
358+50	10.00	10.00	0.00	TYPE I
358+60	10.00	10.00	0.00	TYPE I
358+70	10.00	10.00	0.00	TYPE I
358+80	10.00	10.00	0.00	TYPE I
358+90	10.00	10.00	0.00	TYPE I
359+00	10.00	10.00	0.00	TYPE I
359+10	10.00	10.00	0.00	TYPE I
359+20	10.00	10.00	0.00	TYPE I
359+30	10.00	10.00	0.00	TYPE I
359+40	10.00	10.00	0.00	TYPE I
359+50	10.00	10.00	0.00	TYPE I
359+60	10.00	10.00	0.00	TYPE I
359+70	10.00	10.00	0.00	TYPE I
359+80	10.00	10.00	0.00	TYPE I
359+90	10.00	10.00	0.00	TYPE I
360+00	10.00	10.00	0.00	TYPE I
360+10	10.00	10.00	0.00	TYPE I
360+20	10.00	10.00	0.00	TYPE I
360+30	10.00	10.00	0.00	TYPE I
360+40	10.00	10.00	0.00	TYPE I
360+50	10.00	10.00	0.00	TYPE I
360+60	10.00	10.00	0.00	TYPE I
360+70	10.00	10.00	0.00	TYPE I
360+80	10.00	10.00	0.00	TYPE I
360+90	10.00	10.00	0.00	TYPE I
361+00	10.00	10.00	0.00	TYPE I
361+10	10.00	10.00	0.00	TYPE I
361+20	10.00	10.00	0.00	TYPE I
361+30	10.00	10.00	0.00	TYPE I
361+40	10.00	10.00	0.00	TYPE I
361+50	10.00	10.00	0.00	TYPE I
361+60	10.00	10.00	0.00	TYPE I
361+70	10.00	10.00	0.00	TYPE I
361+80	10.00	10.00	0.00	TYPE I
361+90	10.00	10.00	0.00	TYPE I
362+00	10.00	10.00	0.00	TYPE I



BARRIER WALL 47E

STATION	ELEVATION TOP OF SUB-PIERS	ELEVATION TOP OF L/S FLUSH	OFFSET TO R/L	REMARKS
357+00	10.00	10.00	0.00	TYPE I
357+10	10.00	10.00	0.00	TYPE I
357+20	10.00	10.00	0.00	TYPE I
357+30	10.00	10.00	0.00	TYPE I
357+40	10.00	10.00	0.00	TYPE I
357+50	10.00	10.00	0.00	TYPE I
357+60	10.00	10.00	0.00	TYPE I
357+70	10.00	10.00	0.00	TYPE I
357+80	10.00	10.00	0.00	TYPE I
357+90	10.00	10.00	0.00	TYPE I
358+00	10.00	10.00	0.00	TYPE I
358+10	10.00	10.00	0.00	TYPE I
358+20	10.00	10.00	0.00	TYPE I
358+30	10.00	10.00	0.00	TYPE I
358+40	10.00	10.00	0.00	TYPE I
358+50	10.00	10.00	0.00	TYPE I
358+60	10.00	10.00	0.00	TYPE I
358+70	10.00	10.00	0.00	TYPE I
358+80	10.00	10.00	0.00	TYPE I
358+90	10.00	10.00	0.00	TYPE I
359+00	10.00	10.00	0.00	TYPE I
359+10	10.00	10.00	0.00	TYPE I
359+20	10.00	10.00	0.00	TYPE I
359+30	10.00	10.00	0.00	TYPE I
359+40	10.00	10.00	0.00	TYPE I
359+50	10.00	10.00	0.00	TYPE I
359+60	10.00	10.00	0.00	TYPE I
359+70	10.00	10.00	0.00	TYPE I
359+80	10.00	10.00	0.00	TYPE I
359+90	10.00	10.00	0.00	TYPE I
360+00	10.00	10.00	0.00	TYPE I
360+10	10.00	10.00	0.00	TYPE I
360+20	10.00	10.00	0.00	TYPE I
360+30	10.00	10.00	0.00	TYPE I
360+40	10.00	10.00	0.00	TYPE I
360+50	10.00	10.00	0.00	TYPE I
360+60	10.00	10.00	0.00	TYPE I
360+70	10.00	10.00	0.00	TYPE I
360+80	10.00	10.00	0.00	TYPE I
360+90	10.00	10.00	0.00	TYPE I
361+00	10.00	10.00	0.00	TYPE I
361+10	10.00	10.00	0.00	TYPE I
361+20	10.00	10.00	0.00	TYPE I
361+30	10.00	10.00	0.00	TYPE I
361+40	10.00	10.00	0.00	TYPE I
361+50	10.00	10.00	0.00	TYPE I
361+60	10.00	10.00	0.00	TYPE I
361+70	10.00	10.00	0.00	TYPE I
361+80	10.00	10.00	0.00	TYPE I
361+90	10.00	10.00	0.00	TYPE I
362+00	10.00	10.00	0.00	TYPE I

ALL WALLS ARE TYPE I UNLESS OTHERWISE NOTED.

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 DAN RYAN RAPID TRANSIT  
 MEDIAN PREPARATION & FENCING  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA 356+45 TO STA 362+00  
 47E & 47W  
 SCALE: HORIZ. 1" = 20'  
 VERT. 1" = 2'  
 APRIL, 1988  
 SHEET NO. S 17 OF 211 SHEETS

In Charge: E.A.M.  
 Designed By: A.T.R.M.  
 Drawn By: B.B.  
 Checked By: B.B.  
 Approved By: H.T.B.

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

FOR INFORMATION ONLY

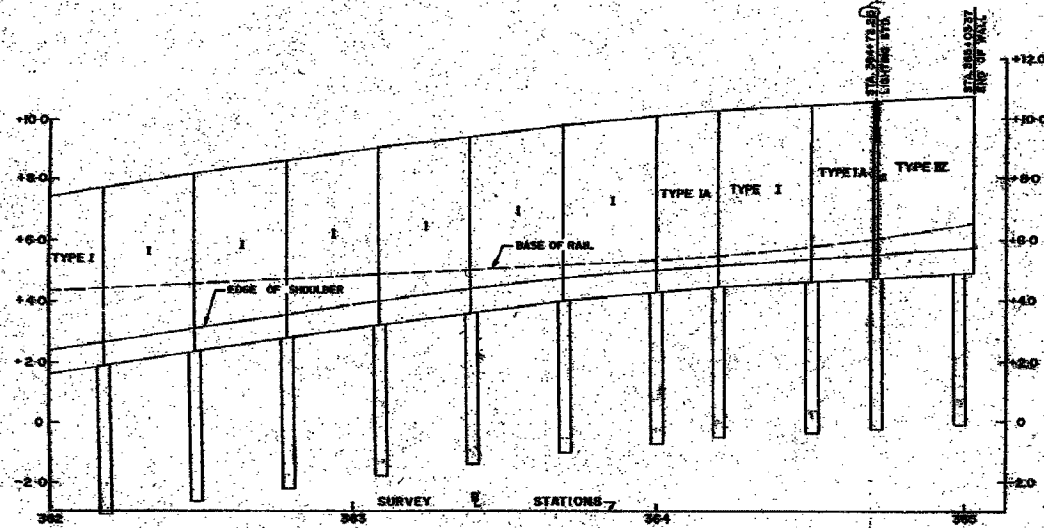
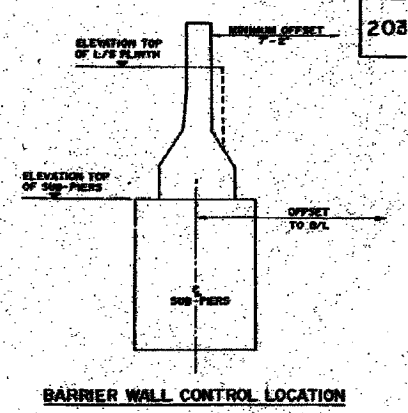
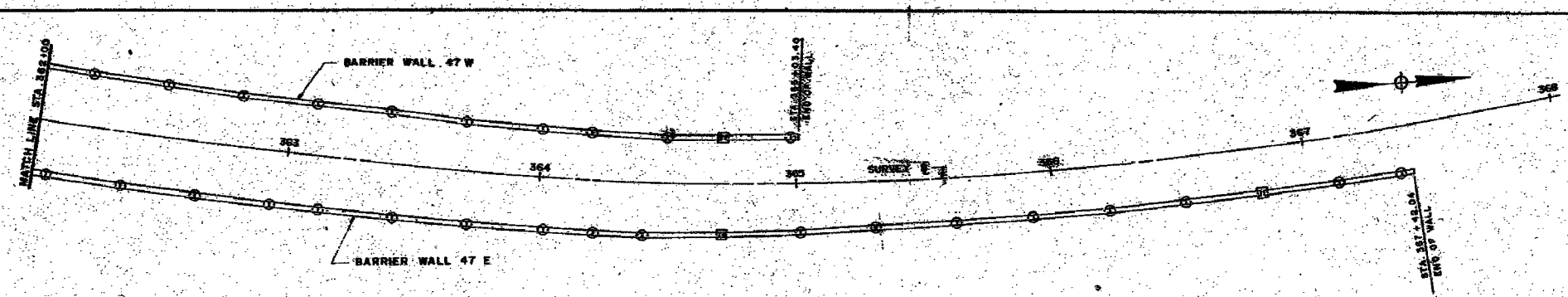
REVISIONS	
NAME	DATE

SHEET SD-4 OF SD-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS

SCALE: N.T.S.  
 DATE: 07/07/05  
 DRAWN BY: MTR  
 CHECKED BY: BLU

140250 AM 5/24/2005 140250 AM 5/24/2005



PLAN

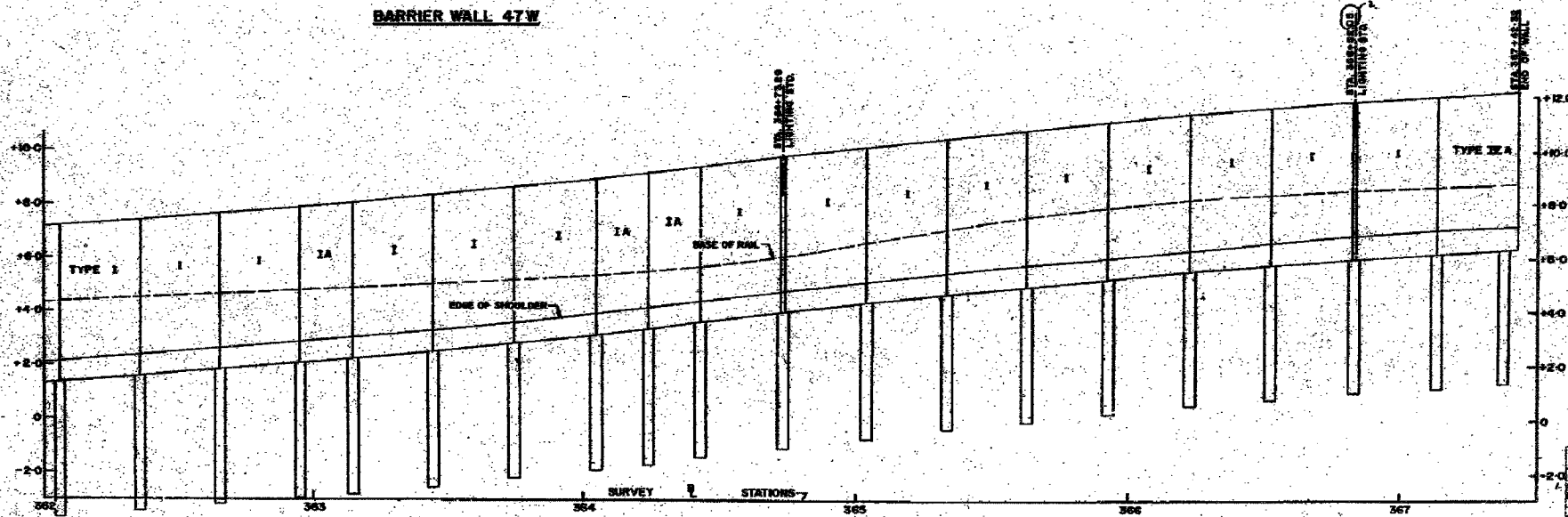
NOTES  
 ALL DIMENSIONS IN FEET UNLESS OTHERWISE SPECIFIED.  
 THE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGE AND STRUCTURES, 1981 EDITION, SECTION 6-22.

BARRIER WALL 47W

STATION	TYPE	WIDTH	HEIGHT	REMARKS
362+00	I	21.10	1.75	
362+10	I	21.10	1.75	
362+20	I	21.10	1.75	
362+30	I	21.10	1.75	
362+40	I	21.10	1.75	
362+50	I	21.10	1.75	
362+60	I	21.10	1.75	
362+70	I	21.10	1.75	
362+80	I	21.10	1.75	
362+90	I	21.10	1.75	
363+00	I	21.10	1.75	
363+10	I	21.10	1.75	
363+20	I	21.10	1.75	
363+30	I	21.10	1.75	
363+40	I	21.10	1.75	
363+50	I	21.10	1.75	
363+60	I	21.10	1.75	
363+70	I	21.10	1.75	
363+80	I	21.10	1.75	
363+90	I	21.10	1.75	
364+00	I	21.10	1.75	
364+10	I	21.10	1.75	
364+20	I	21.10	1.75	
364+30	I	21.10	1.75	
364+40	I	21.10	1.75	
364+50	I	21.10	1.75	
364+60	I	21.10	1.75	
364+70	I	21.10	1.75	
364+80	I	21.10	1.75	
364+90	I	21.10	1.75	
365+00	I	21.10	1.75	
365+10	I	21.10	1.75	
365+20	I	21.10	1.75	
365+30	I	21.10	1.75	
365+40	I	21.10	1.75	
365+50	I	21.10	1.75	
365+60	I	21.10	1.75	
365+70	I	21.10	1.75	
365+80	I	21.10	1.75	
365+90	I	21.10	1.75	
366+00	I	21.10	1.75	
366+10	I	21.10	1.75	
366+20	I	21.10	1.75	
366+30	I	21.10	1.75	
366+40	I	21.10	1.75	
366+50	I	21.10	1.75	
366+60	I	21.10	1.75	
366+70	I	21.10	1.75	
366+80	I	21.10	1.75	
366+90	I	21.10	1.75	
367+00	I	21.10	1.75	

BARRIER WALL 47E

STATION	TYPE	WIDTH	HEIGHT	REMARKS
362+00	I	21.10	1.75	
362+10	I	21.10	1.75	
362+20	I	21.10	1.75	
362+30	I	21.10	1.75	
362+40	I	21.10	1.75	
362+50	I	21.10	1.75	
362+60	I	21.10	1.75	
362+70	I	21.10	1.75	
362+80	I	21.10	1.75	
362+90	I	21.10	1.75	
363+00	I	21.10	1.75	
363+10	I	21.10	1.75	
363+20	I	21.10	1.75	
363+30	I	21.10	1.75	
363+40	I	21.10	1.75	
363+50	I	21.10	1.75	
363+60	I	21.10	1.75	
363+70	I	21.10	1.75	
363+80	I	21.10	1.75	
363+90	I	21.10	1.75	
364+00	I	21.10	1.75	
364+10	I	21.10	1.75	
364+20	I	21.10	1.75	
364+30	I	21.10	1.75	
364+40	I	21.10	1.75	
364+50	I	21.10	1.75	
364+60	I	21.10	1.75	
364+70	I	21.10	1.75	
364+80	I	21.10	1.75	
364+90	I	21.10	1.75	
365+00	I	21.10	1.75	
365+10	I	21.10	1.75	
365+20	I	21.10	1.75	
365+30	I	21.10	1.75	
365+40	I	21.10	1.75	
365+50	I	21.10	1.75	
365+60	I	21.10	1.75	
365+70	I	21.10	1.75	
365+80	I	21.10	1.75	
365+90	I	21.10	1.75	
366+00	I	21.10	1.75	
366+10	I	21.10	1.75	
366+20	I	21.10	1.75	
366+30	I	21.10	1.75	
366+40	I	21.10	1.75	
366+50	I	21.10	1.75	
366+60	I	21.10	1.75	
366+70	I	21.10	1.75	
366+80	I	21.10	1.75	
366+90	I	21.10	1.75	
367+00	I	21.10	1.75	



BARRIER WALL 47E

APPROVED AS SHOWN FOR  
 DAN RYAN RAPID TRANSIT  
 MEDIAN PREPARATION & FENCING  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA. 362+00 TO STA. 367+42.32  
 47E & 47W  
 SCALE: HORIZ 1"=20'  
 VERT 1"=2'

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**DAN RYAN RAPID TRANSIT  
 MEDIAN PREPARATION & FENCING**  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA. 362+00 TO STA. 367+42.32  
 47E & 47W  
 SCALE: HORIZ 1"=20'  
 VERT 1"=2'  
 APRIL, 1968  
 SHEET NO. 5 OF 211 SHEETS

Checked by: [Signature]  
 Approved by: [Signature]

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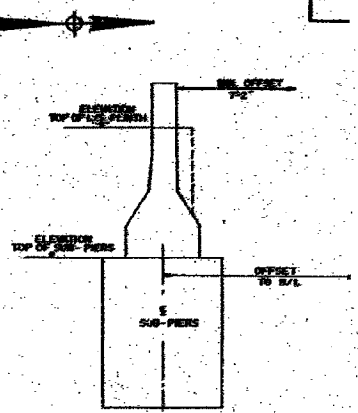
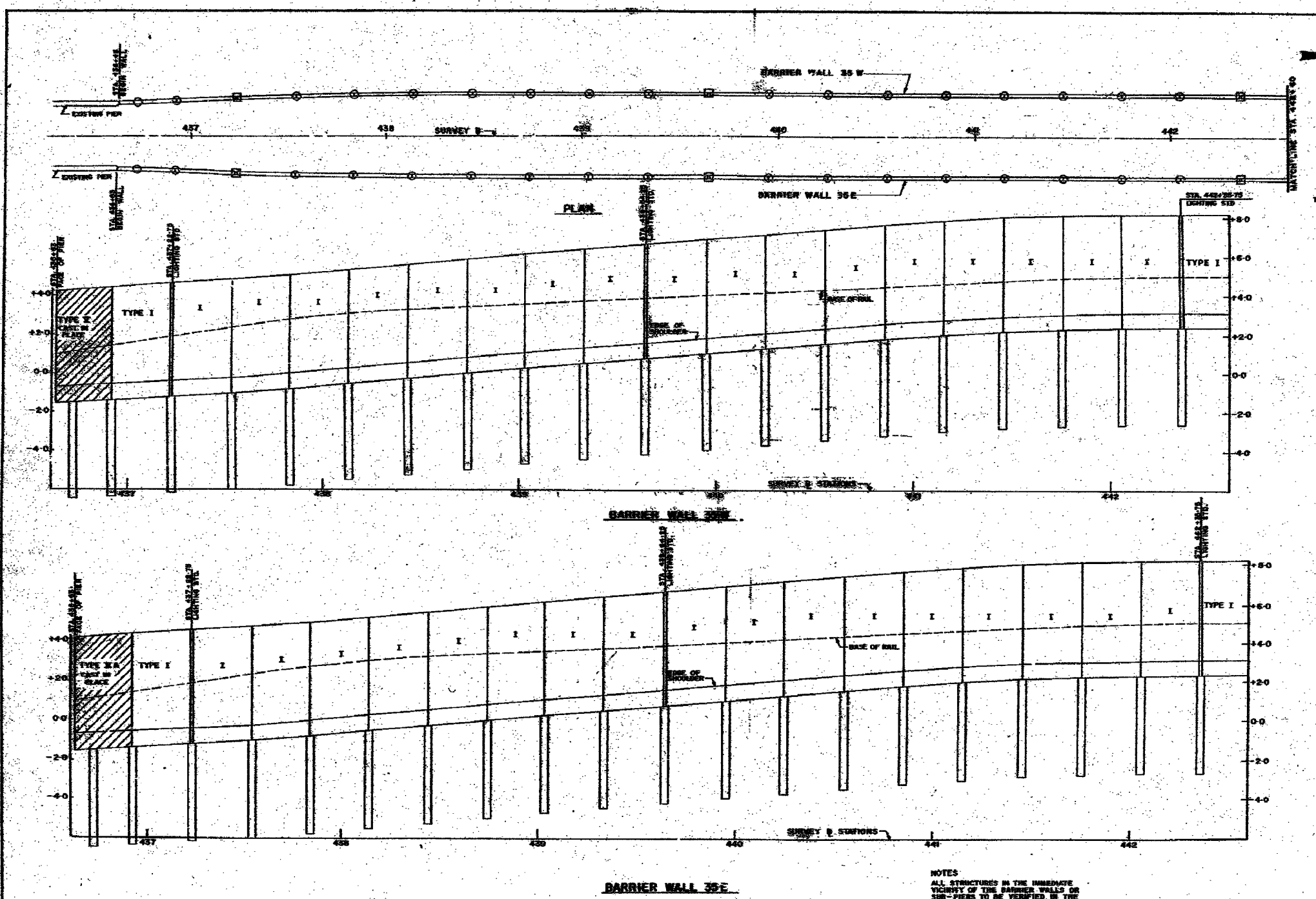
FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS  
 SCALE: N.T.S.  
 DATE: 07/07/05  
 DRAWN BY: MTR  
 CHECKED BY: BLU

6/24/2005 11:03:05 AM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	430
STA. 2596+00		TO STA. 2602+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		• (1818, ETC, 2324.6-1PIR-9		



**BARRIER WALL CONTROL LOCATION**  
BARRIER WALL 35E

STATION	OFFSET FROM DA TO SUB-PIERS	ELEVATION TOP OF SUB-PIERS	ELEVATION TOP OF RAIL	OFFSET TO R/L	REMARKS
437-43	17.80	-1.87			
437-47	18.07	-1.87			
438-22-23	18.78	-1.87	2.37		BASE SUB.
438-51-52	19.82	-1.87			
439-00-01	20.45	-1.87			
439-11-12	20.87	-1.87			
439-41-42	21.89	-1.87			
439-71-72	22.90	-1.87			
439-81-82	23.00	-1.87			
439-91-92	23.10	-1.87			
440-01-02	23.10	-1.87	4.30		BASE SUB.
440-11	23.10	-1.87			
440-21	23.10	-1.87			
440-31	23.10	-1.87			
440-41	23.10	-1.87			
440-51	23.10	-1.87			
440-61	23.10	-1.87			
440-71	23.10	-1.87			
440-81	23.10	-1.87			
440-91	23.10	-1.87			
441-01	23.10	-1.87			
441-11	23.10	-1.87			
441-21	23.10	-1.87			
441-31	23.10	-1.87			
441-41	23.10	-1.87			
441-51	23.10	-1.87			
441-61	23.10	-1.87			
441-71	23.10	-1.87			
441-81	23.10	-1.87			
441-91	23.10	-1.87			
442-01	23.10	-1.87	5.87		BASE SUB.

**BARRIER WALL 35E**

STATION	OFFSET FROM DA TO SUB-PIERS	ELEVATION TOP OF SUB-PIERS	ELEVATION TOP OF RAIL	OFFSET TO R/L	REMARKS
438-2	17.80	-1.87			
438-6	18.07	-1.87			
439-22-23	18.78	-1.87	2.37		BASE SUB.
439-51	19.82	-1.87			
439-81	20.45	-1.87			
439-91	20.87	-1.87			
440-41	21.89	-1.87			
440-71	22.90	-1.87			
440-81	23.00	-1.87			
440-91	23.10	-1.87			
441-01	23.10	-1.87	4.30		BASE SUB.
441-11	23.10	-1.87			
441-21	23.10	-1.87			
441-31	23.10	-1.87			
441-41	23.10	-1.87			
441-51	23.10	-1.87			
441-61	23.10	-1.87			
441-71	23.10	-1.87			
441-81	23.10	-1.87			
441-91	23.10	-1.87			
442-01	23.10	-1.87	5.87		BASE SUB.

NOTES:  
ALL WALLS ARE TYPE I UNLESS OTHERWISE NOTED.  
FOR DETAILS OF LIGHTING STANDARD ANCHORAGE SEE SHEET 5-22

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DAN RYAN RAPID TRANSIT  
MEDIAN PREPARATION & FENCING  
CONTRACT DR-8  
BARRIER WALL PLAN & PROFILES  
STA. 436 + 63 TO STA 442 + 60-0  
HORIZ. 1" = 20'  
VERT. 1" = 2'  
SCALE: SHEET NO. 5 19 OF 24 SHEETS  
APRIL, 1964

in Charge: E.A.M.  
Designed by: J.L.  
Checked by: J.L.  
Approved: J.L.

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312 228 0100  
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NAME	DATE

SHEET SD-6 OF SD-10

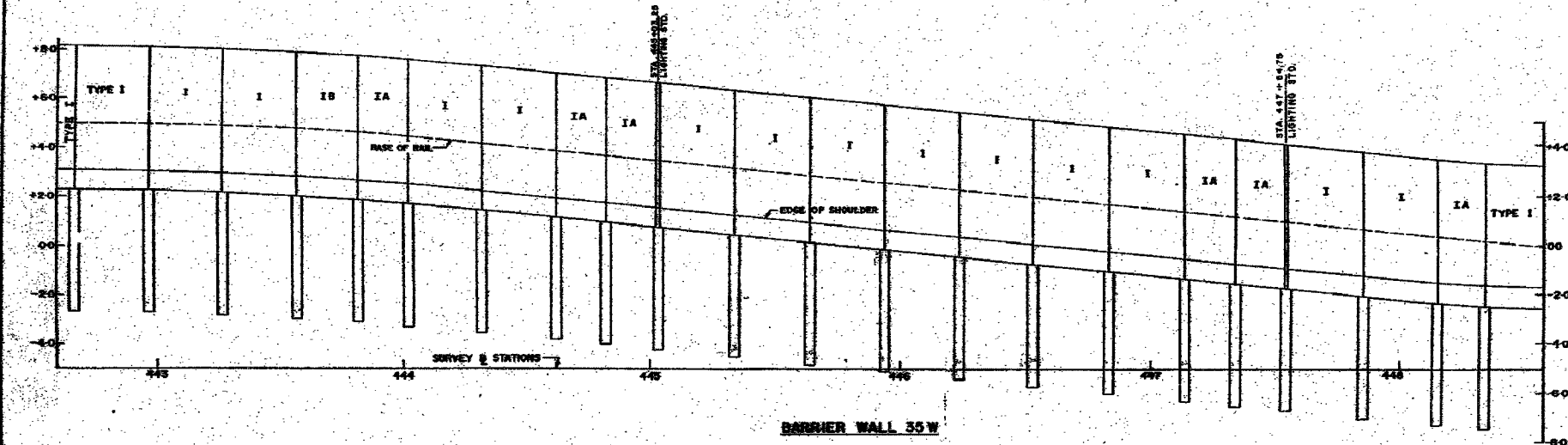
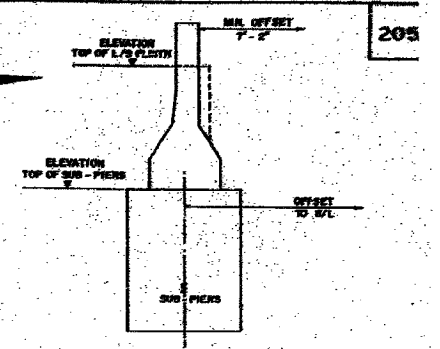
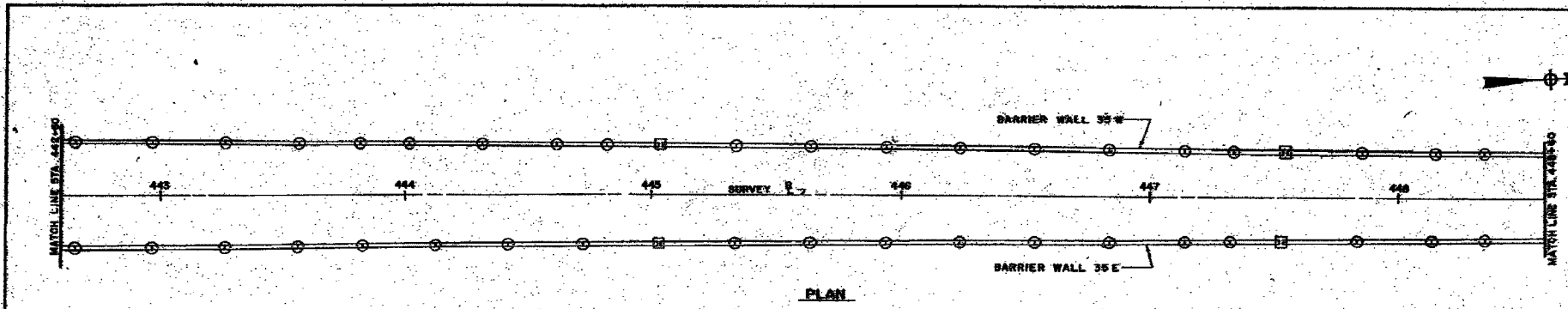
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
EXISTING BARRIER WALL PLANS  
AT CTA STATIONS

SCALE: N.T.S.  
DATE: 07/07/05

DRAWN BY: MTR  
CHECKED BY: BLU

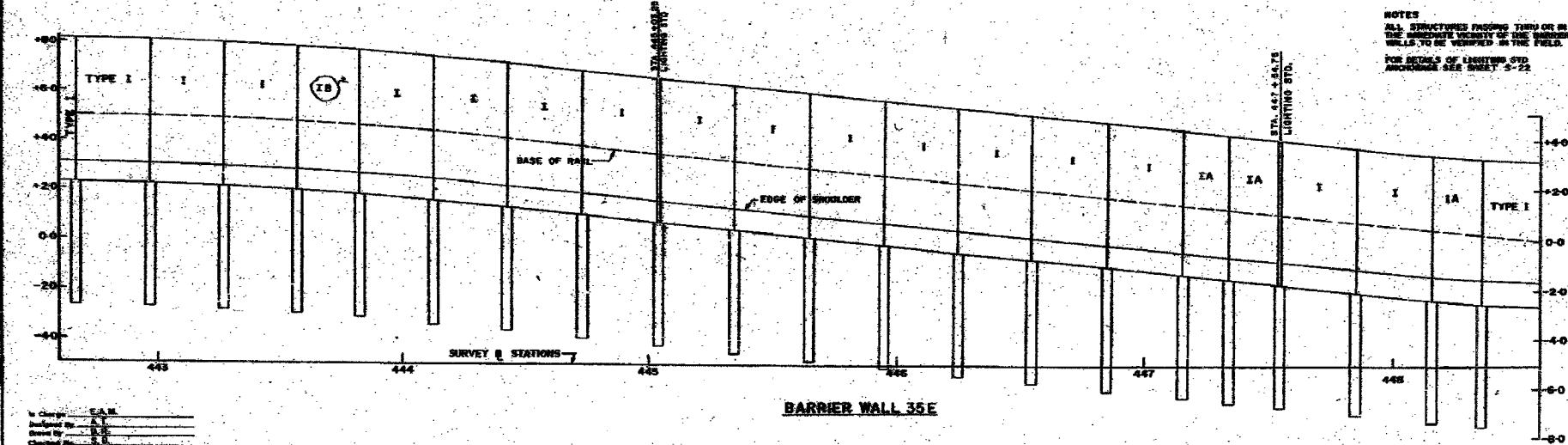
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BARRIER WALL 35W

STATION	HEIGHT	TYPE	REMARKS
443+00	11.00	I	
443+10	11.00	I	
443+20	11.00	I	
443+30	11.00	I	
443+40	11.00	I	
443+50	11.00	I	
444+00	11.00	I	
444+10	11.00	I	
444+20	11.00	I	
444+30	11.00	I	
444+40	11.00	I	
444+50	11.00	I	
445+00	11.00	I	
445+10	11.00	I	
445+20	11.00	I	
445+30	11.00	I	
445+40	11.00	I	
445+50	11.00	I	
446+00	11.00	I	
446+10	11.00	I	
446+20	11.00	I	
446+30	11.00	I	
446+40	11.00	I	
446+50	11.00	I	
447+00	11.00	I	
447+10	11.00	I	
447+20	11.00	I	
447+30	11.00	I	
447+40	11.00	I	
447+50	11.00	I	
448+00	11.00	I	
448+10	11.00	I	
448+20	11.00	I	
448+30	11.00	I	
448+40	11.00	I	
448+50	11.00	I	



BARRIER WALL 35E

STATION	HEIGHT	TYPE	REMARKS
443+00	11.00	I	
443+10	11.00	I	
443+20	11.00	I	
443+30	11.00	I	
443+40	11.00	I	
443+50	11.00	I	
444+00	11.00	I	
444+10	11.00	I	
444+20	11.00	I	
444+30	11.00	I	
444+40	11.00	I	
444+50	11.00	I	
445+00	11.00	I	
445+10	11.00	I	
445+20	11.00	I	
445+30	11.00	I	
445+40	11.00	I	
445+50	11.00	I	
446+00	11.00	I	
446+10	11.00	I	
446+20	11.00	I	
446+30	11.00	I	
446+40	11.00	I	
446+50	11.00	I	
447+00	11.00	I	
447+10	11.00	I	
447+20	11.00	I	
447+30	11.00	I	
447+40	11.00	I	
447+50	11.00	I	
448+00	11.00	I	
448+10	11.00	I	
448+20	11.00	I	
448+30	11.00	I	
448+40	11.00	I	
448+50	11.00	I	

NOTES  
 ALL STRUCTURES FACING THROUGH OR IN THE VICINITY OF THE BARRIER WALLS TO BE VERIFIED IN THE FIELD.  
 FOR DETAILS OF LIGHTING STD. REFER TO SHEET 5-22.

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**DAN RYAN RAPID TRANSIT**  
 MEDIAN PREPARATION & FENCING  
 CONTRACT DR-8  
 BARRIER WALL PLAN & PROFILES  
 STA. 442+60.0 TO STA. 448+60.0  
 SCALE: VERT. 1" = 20' 35E & 35W APRIL, 1998  
 SHEET NO. 5 20 OF 21 SHEETS

In Charge:             
 Designed by:             
 Checked by:             
 Approved by:           

BOWMAN, BARRETT & ASSOCIATES INC  
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 312.228.0100  
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REVISIONS	
NAME	DATE

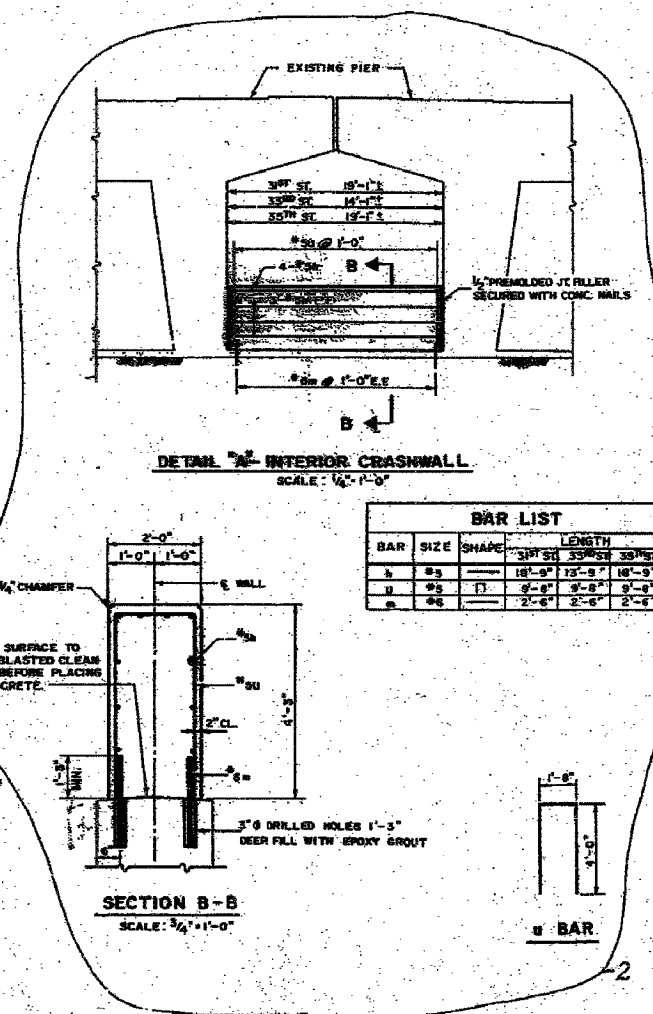
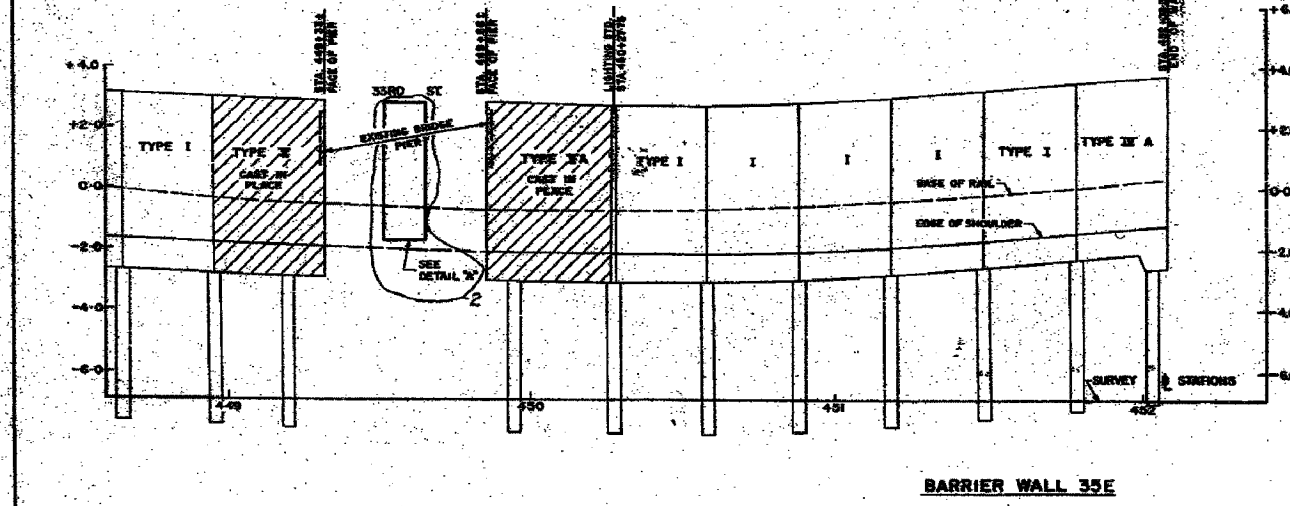
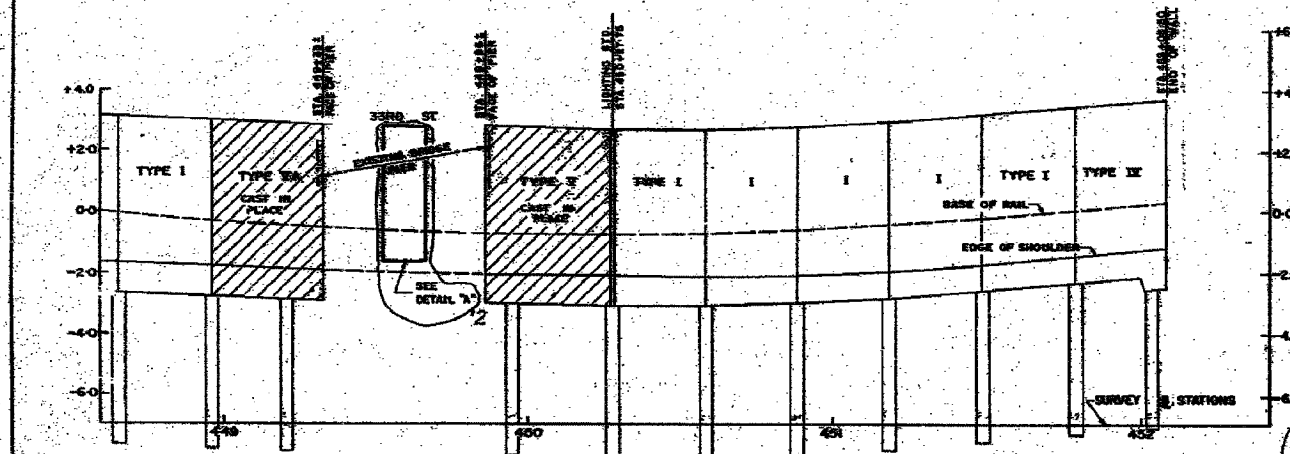
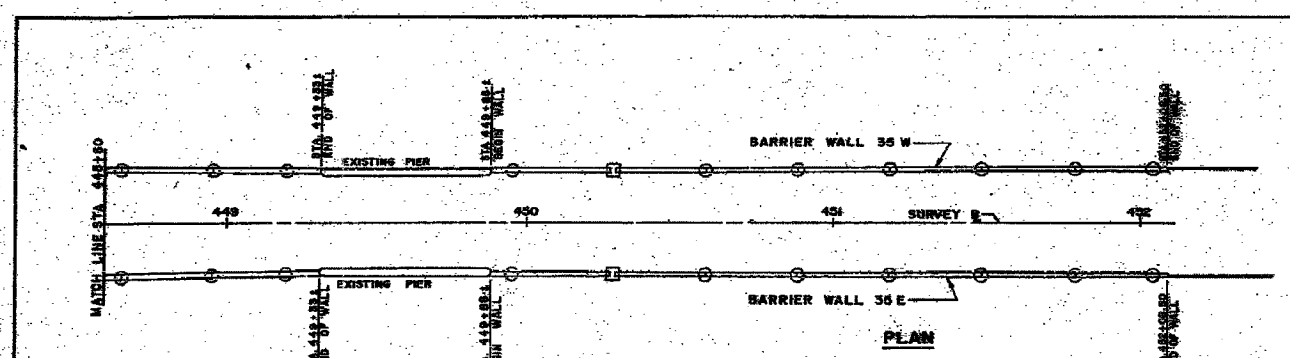
SHEET SD-7 OF SD-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS

SCALE: N.T.S. DRAWN BY: MTR  
 DATE: 07/07/05 CHECKED BY: BLU

m:\62302\62302\STRUCTURES\CTA\_BARRIER\_A\BUILTS\660\SUBCTA\_BARRIER\_PLAN.DWG 11/05/98 AM 6/24/2005

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	432
STA. 2596+00		TO STA. 2602+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		* (1818, ETC, 2324.6-1)PR-9		



BAR	SIZE	SHAPE	LENGTH
a	#5	18'-0"	12'-0"
b	#5	9'-0"	9'-0"
c	#6	2'-0"	2'-0"

STATION	SUB-PIERS	OFFSET TO B/L	REMARKS
448+00	17.77	-3.75	EXIST. WALL
448+00	17.80	-2.85	TYPE II
448+00	17.85	-3.15	TYPE III
448+00	17.90	-3.30	TYPE III
448+00	17.95	-3.45	TYPE III
448+00	18.00	-3.60	TYPE III
448+00	18.05	-3.75	TYPE III
448+00	18.10	-3.90	TYPE III
448+00	18.15	-4.05	TYPE III
448+00	18.20	-4.20	TYPE III
448+00	18.25	-4.35	TYPE III
448+00	18.30	-4.50	TYPE III
448+00	18.35	-4.65	TYPE III
448+00	18.40	-4.80	TYPE III
448+00	18.45	-4.95	TYPE III
448+00	18.50	-5.10	TYPE III
448+00	18.55	-5.25	TYPE III
448+00	18.60	-5.40	TYPE III
448+00	18.65	-5.55	TYPE III
448+00	18.70	-5.70	TYPE III
448+00	18.75	-5.85	TYPE III
448+00	18.80	-6.00	TYPE III
448+00	18.85	-6.15	TYPE III
448+00	18.90	-6.30	TYPE III
448+00	18.95	-6.45	TYPE III
448+00	19.00	-6.60	TYPE III
448+00	19.05	-6.75	TYPE III
448+00	19.10	-6.90	TYPE III
448+00	19.15	-7.05	TYPE III
448+00	19.20	-7.20	TYPE III
448+00	19.25	-7.35	TYPE III
448+00	19.30	-7.50	TYPE III
448+00	19.35	-7.65	TYPE III
448+00	19.40	-7.80	TYPE III
448+00	19.45	-7.95	TYPE III
448+00	19.50	-8.10	TYPE III
448+00	19.55	-8.25	TYPE III
448+00	19.60	-8.40	TYPE III
448+00	19.65	-8.55	TYPE III
448+00	19.70	-8.70	TYPE III
448+00	19.75	-8.85	TYPE III
448+00	19.80	-9.00	TYPE III
448+00	19.85	-9.15	TYPE III
448+00	19.90	-9.30	TYPE III
448+00	19.95	-9.45	TYPE III
448+00	20.00	-9.60	TYPE III

STATION	SUB-PIERS	OFFSET TO B/L	REMARKS
448+00	17.83	-3.75	EXIST. WALL
448+00	17.87	-2.85	TYPE II
448+00	17.90	-3.15	TYPE III
448+00	17.95	-3.30	TYPE III
448+00	17.98	-3.45	TYPE III
448+00	18.02	-3.60	TYPE III
448+00	18.05	-3.75	TYPE III
448+00	18.08	-3.90	TYPE III
448+00	18.12	-4.05	TYPE III
448+00	18.15	-4.20	TYPE III
448+00	18.18	-4.35	TYPE III
448+00	18.22	-4.50	TYPE III
448+00	18.25	-4.65	TYPE III
448+00	18.28	-4.80	TYPE III
448+00	18.32	-4.95	TYPE III
448+00	18.35	-5.10	TYPE III
448+00	18.38	-5.25	TYPE III
448+00	18.42	-5.40	TYPE III
448+00	18.45	-5.55	TYPE III
448+00	18.48	-5.70	TYPE III
448+00	18.52	-5.85	TYPE III
448+00	18.55	-6.00	TYPE III
448+00	18.58	-6.15	TYPE III
448+00	18.62	-6.30	TYPE III
448+00	18.65	-6.45	TYPE III
448+00	18.68	-6.60	TYPE III
448+00	18.72	-6.75	TYPE III
448+00	18.75	-6.90	TYPE III
448+00	18.78	-7.05	TYPE III
448+00	18.82	-7.20	TYPE III
448+00	18.85	-7.35	TYPE III
448+00	18.88	-7.50	TYPE III
448+00	18.92	-7.65	TYPE III
448+00	18.95	-7.80	TYPE III
448+00	18.98	-7.95	TYPE III
448+00	19.02	-8.10	TYPE III
448+00	19.05	-8.25	TYPE III
448+00	19.08	-8.40	TYPE III
448+00	19.12	-8.55	TYPE III
448+00	19.15	-8.70	TYPE III
448+00	19.18	-8.85	TYPE III
448+00	19.22	-9.00	TYPE III
448+00	19.25	-9.15	TYPE III
448+00	19.28	-9.30	TYPE III
448+00	19.32	-9.45	TYPE III
448+00	19.35	-9.60	TYPE III
448+00	19.38	-9.75	TYPE III
448+00	19.42	-9.90	TYPE III
448+00	19.45	-10.05	TYPE III
448+00	19.48	-10.20	TYPE III
448+00	19.52	-10.35	TYPE III
448+00	19.55	-10.50	TYPE III
448+00	19.58	-10.65	TYPE III
448+00	19.62	-10.80	TYPE III
448+00	19.65	-10.95	TYPE III
448+00	19.68	-11.10	TYPE III
448+00	19.72	-11.25	TYPE III
448+00	19.75	-11.40	TYPE III
448+00	19.78	-11.55	TYPE III
448+00	19.82	-11.70	TYPE III
448+00	19.85	-11.85	TYPE III
448+00	19.88	-12.00	TYPE III
448+00	19.92	-12.15	TYPE III
448+00	19.95	-12.30	TYPE III
448+00	19.98	-12.45	TYPE III
448+00	20.00	-12.60	TYPE III

NOTES:  
ALL WALLS ARE TYPE I UNLESS OTHERWISE NOTED.

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
**DAN RYAN RAPID TRANSIT**  
MEDIAN PREPARATION AND FENCING  
CONTRACT DR-6  
**BARRIER WALL PLAN & PROFILES**  
STA. 448+60.0 TO STA. 452+08.5  
HORIZ. 1" = 20'  
SCALE: VERT. 1" = 2'  
APRIL, 1968  
SHEET NO. 521 OF 211 SHEETS

NOTES  
ALL STRUCTURES IN THE IMMEDIATE VICINITY OF THE BARRIER WALLS OR SUB-PIERS TO BE VERIFIED IN THE FIELD.  
FOR DETAILS OF LIGHTING STANDARD ANCHORAGE SEE SHEET 3-22

APPROVED AS SHOWN PLAN  
DATE: 27 APRIL 1968  
REVISIONS TO SHOWN PLAN  
BY: [Signature]  
DATE: [Signature]

In Charge: E.A.M.  
Designed By: [Signature]  
Drawn By: [Signature]  
Checked By: [Signature]  
Approved By: [Signature]

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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbbandainc.com

FOR INFORMATION ONLY

REVISIONS	NAME	DATE

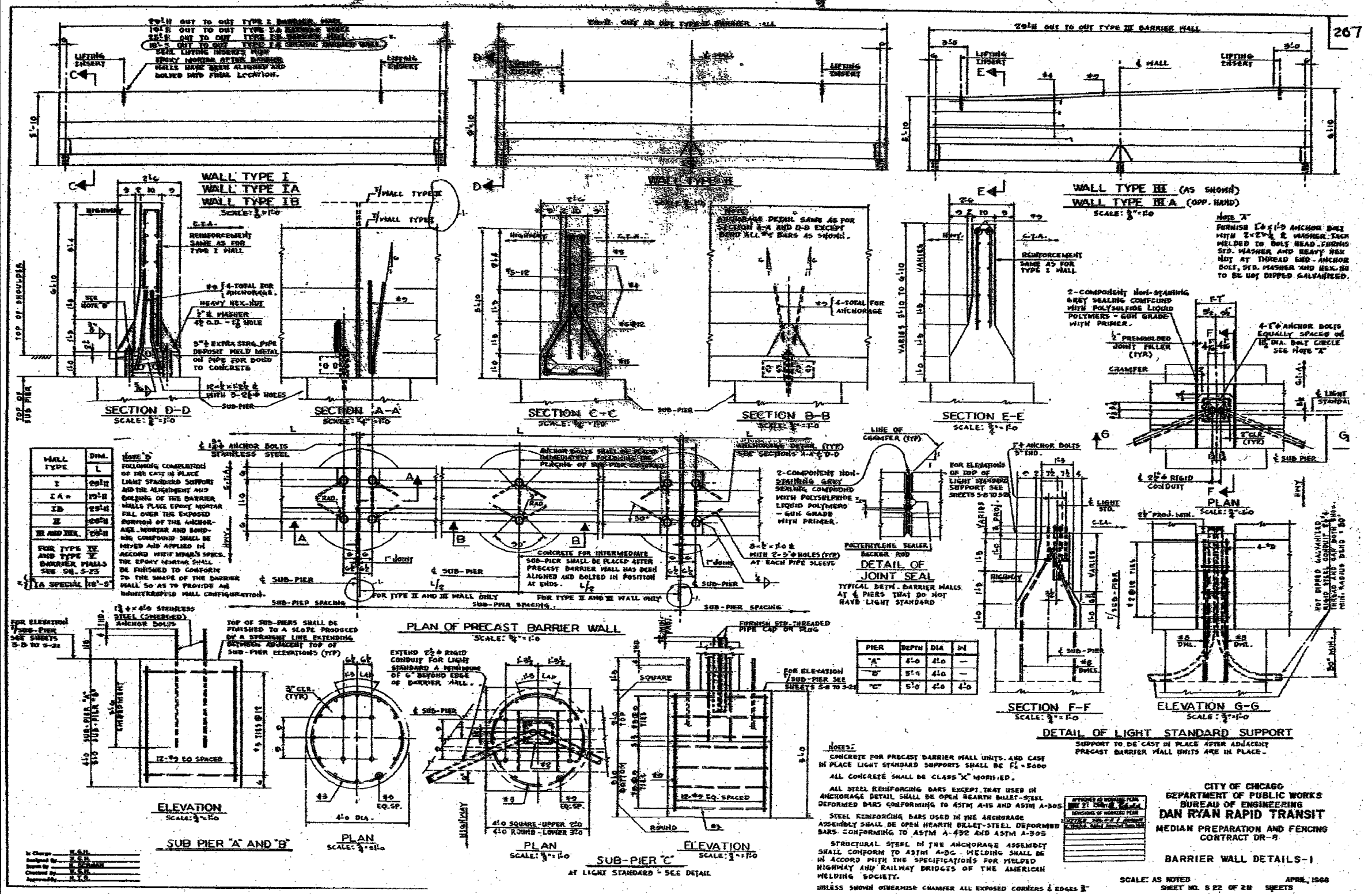
SHEET SD-8 OF SD-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
EXISTING BARRIER WALL PLANS  
AT CTA STATIONS

SCALE: N.T.S.  
DATE: 07/07/05

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CHECKED BY: BLU

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REVISIONS	
NAME	DATE

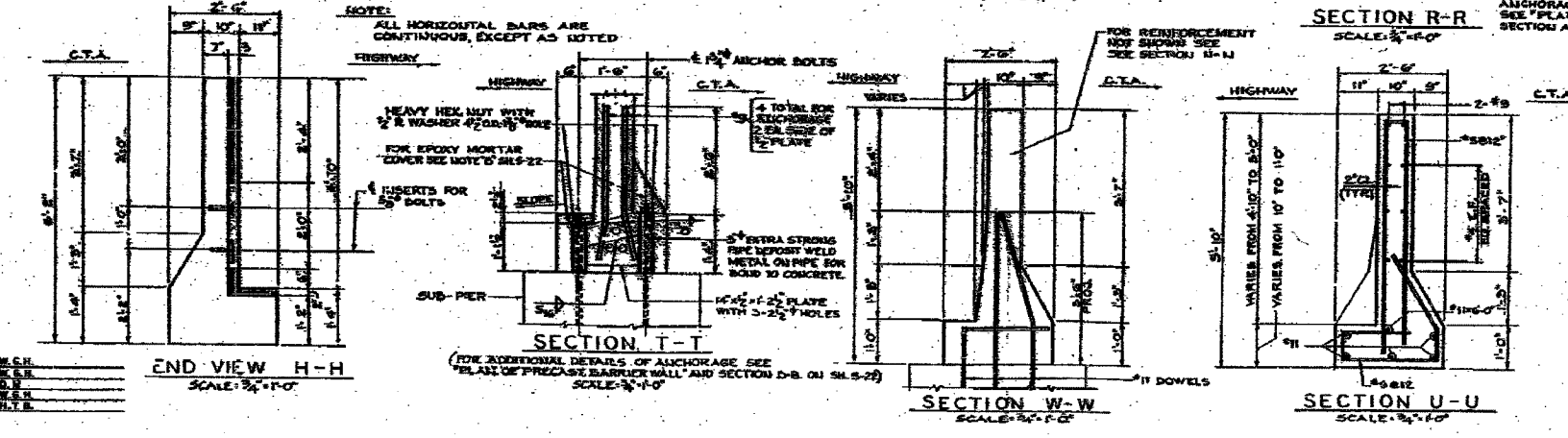
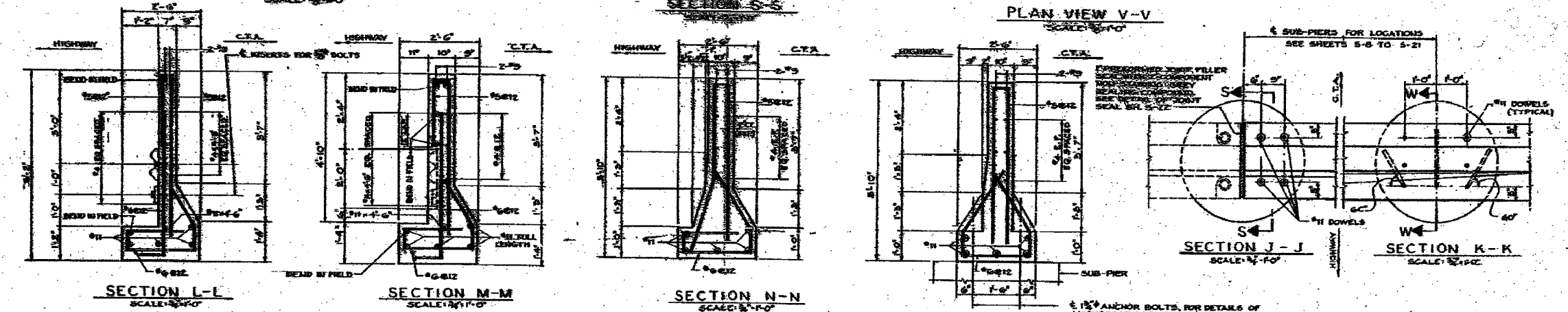
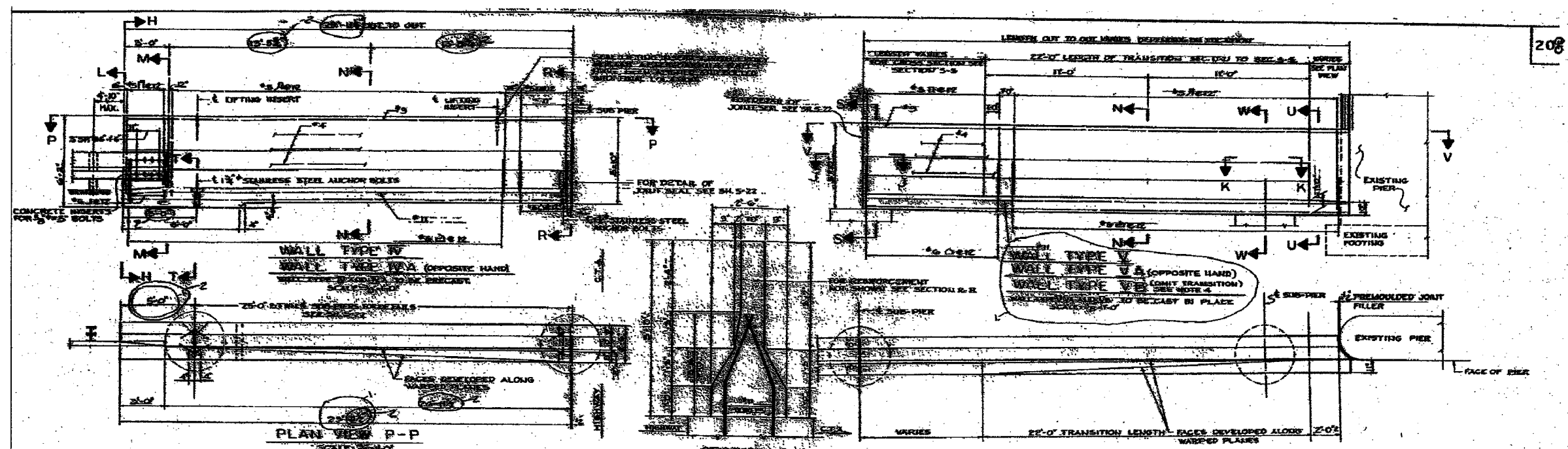
SHEET SD-9 OF SD-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 EXISTING BARRIER WALL PLANS  
 AT CTA STATIONS

SCALE: N.T.S. DATE: 07/07/05  
 DRAWN BY: MTR  
 CHECKED BY: BLU

12-25-82 PM 5/24/2005  
 12-25-82 PM 5/24/2005

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	434
STA. 2596+00		TO STA. 2602+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62302		* (1818, ETC., 2324.6-1PJR-9)		



NOTE:  
ALL HORIZONTAL BARS ARE CONTINUOUS, EXCEPT AS NOTED

- NOTES:
1. CONCRETE FOR PRECAST AND CAST IN PLACE BARRIER WALLS SHALL BE FC-5000.
  2. ALL CONCRETE SHALL BE CLASS X MODIFIED.
  3. FOR ANCHOR BOLT AND SUB-PIER DETAILS AND SUPPLEMENTARY NOTES AND DETAILS SEE SH. S-22.
  4. WALL TYPE X8 SHALL HAVE HIGHWAY FACE SAME AS WALL TYPE I BUT SHALL BE CAST IN PLACE.

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
DAN RYAN RAPID TRANSIT  
MEDIAN PREPARATION AND FENCING  
CONTRACT DR-8  
BARRIER WALL DETAILS-2

SCALE: AS NOTED  
APRIL, 1968  
SHEET NO. 23 OF 211 SHEETS

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

SHEET SD-10 OF SD-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
EXISTING BARRIER WALL PLANS  
AT CTA STATIONS

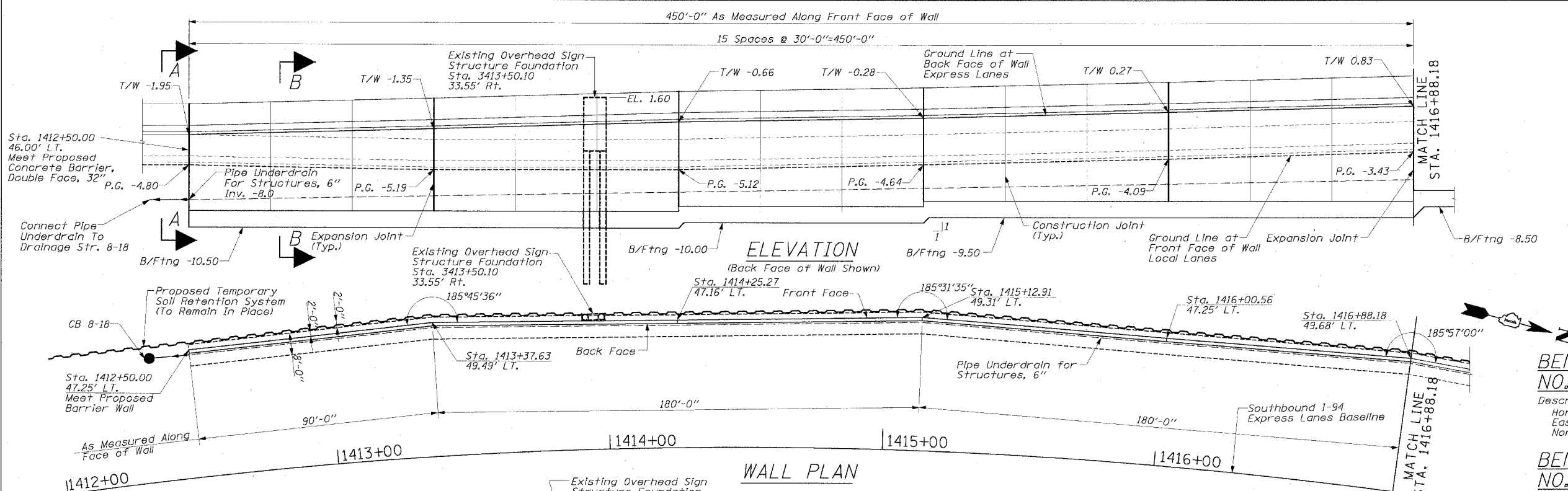
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DATE: 01/07/05

DRAWN BY: MTR  
CHECKED BY: BLU

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	435
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	11818, ETC, 2324.6-1P/R-9			

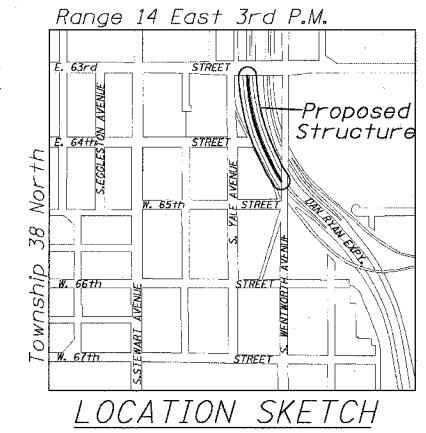
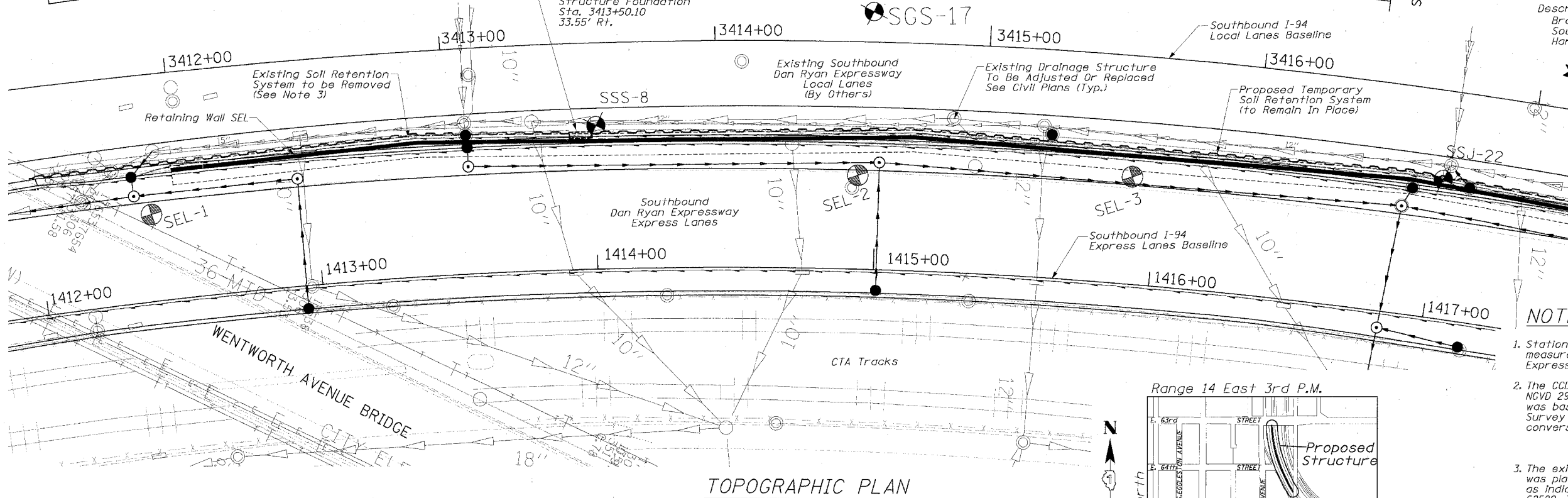


**BENCH MARK**  
**NO. 3532 ELEV. 18.84**  
 Description:  
 Horizontal bolt on CTA "EL" structure,  
 East side of Wells St. Approx. 50 feet  
 North of 59th Place.

**BENCH MARK**  
**NO. 3533 ELEV. 19.71**  
 Description:  
 Brass Disk (CTA Monument) at  
 Southwest corner of 63rd St and  
 Harvard St.

**LEGEND:**  
 B/Ftng = Bottom Of Footing Elev.  
 T/W = Top Of Wall Elev.  
 P.G. = Proposed Ground Elev.  
 SEL-1 Soil Boring Location

- NOTES:**
- Stations and Offsets for the Retaining Wall are measured from the Base Line of I 94/90 SB Express Lanes.
  - The CCD, by City Ordinance, is based on the NVD 29 Datum. The mapping for the project was based on the NAVD 88 Datum. American Survey Consultants has computed the following conversion factor from CCD to NAVD 88:  
 NAVD 88 Elevation = CCD + 579.19
  - The existing Soil Retention System to be removed was placed during contract 62589, and is shown as indicated on the contract plans for contract 62589. The contractor must field verify its location.



**HIGHWAY CLASSIFICATION**  
 F.A.I. 94 / 90 (Dan Ryan Expressway)  
 Class: Urban Interstate  
 ADT: 272,000 (2000)  
 DHV: 7,410  
 Posted Speed: 55 MPH  
 Design Speed: 60 MPH

**DESIGN STRESSES**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

**DESIGN SPECIFICATIONS**  
 2002 AASHTO Standard Specification  
 for Highway Bridges

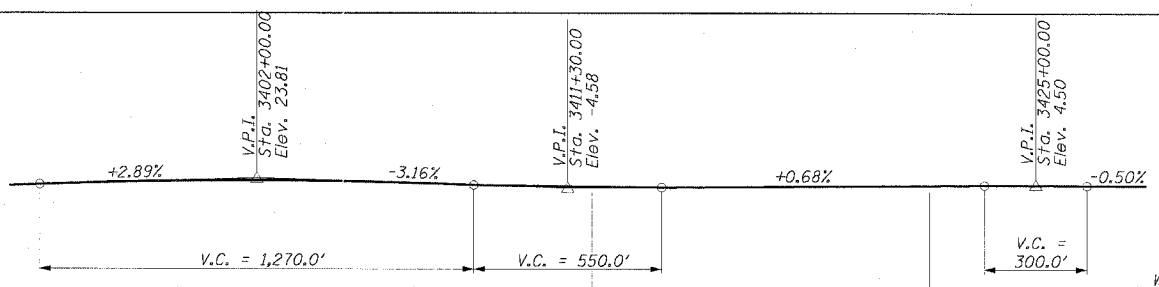
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NAME	DATE	
		SCALE: 0' 20' 40'
		DATE: 7/7/05 DRAWN BY: ABW CHECKED BY: EL



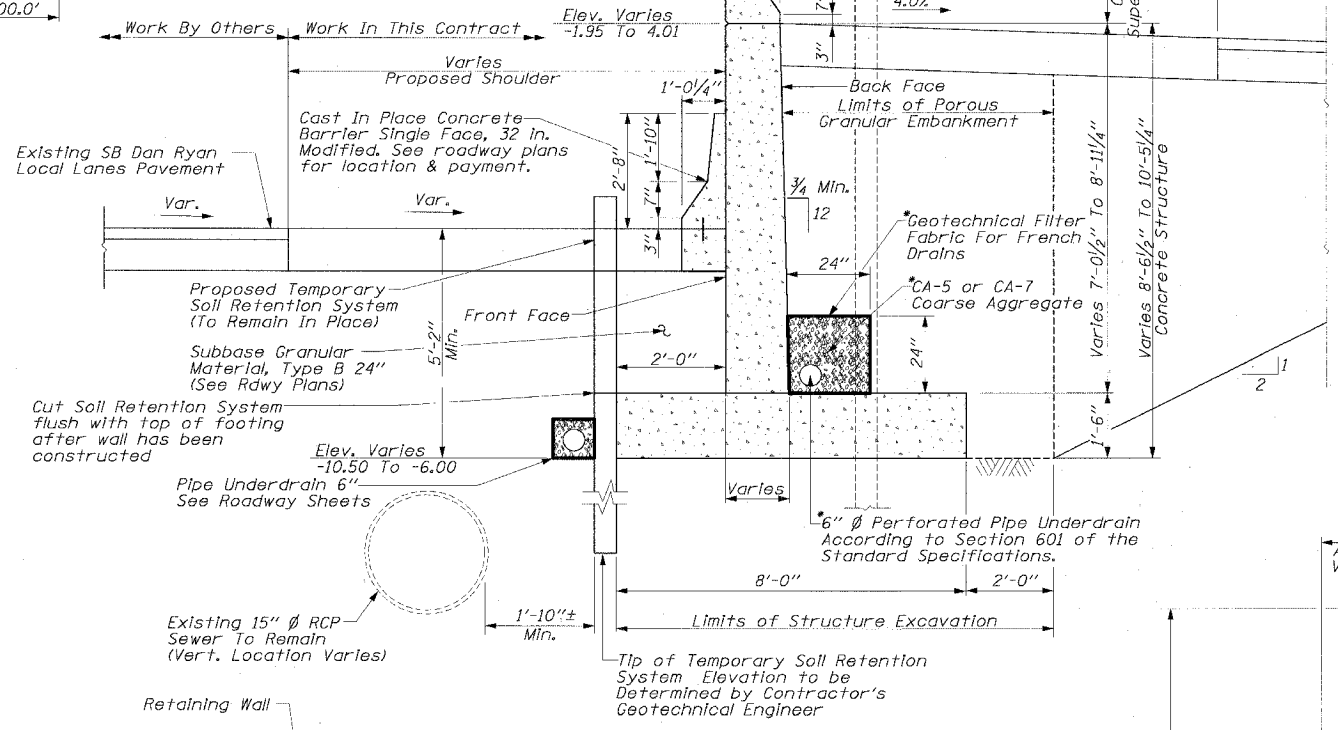
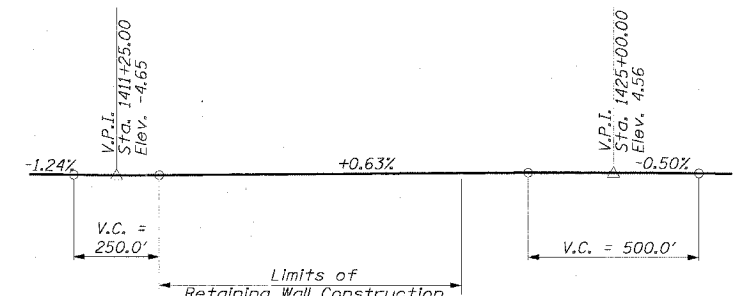


F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	437
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	(1818, ETC.	2324.6-1PR-9		

**SOUTHBOUND LOCAL LANES PROFILE GRADE**

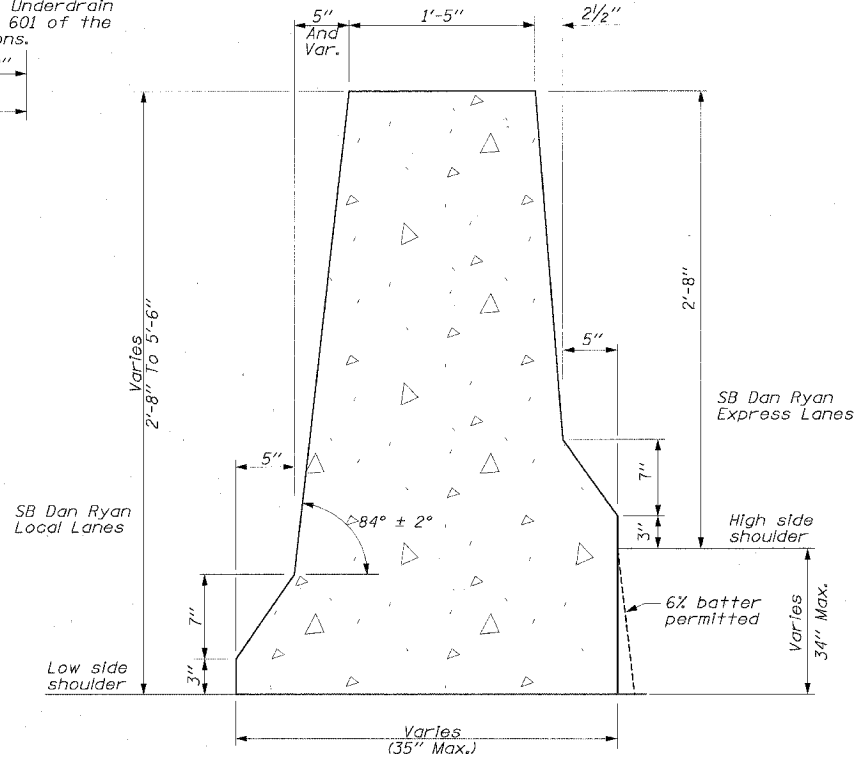


**SOUTHBOUND EXPRESS LANES PROFILE GRADE**



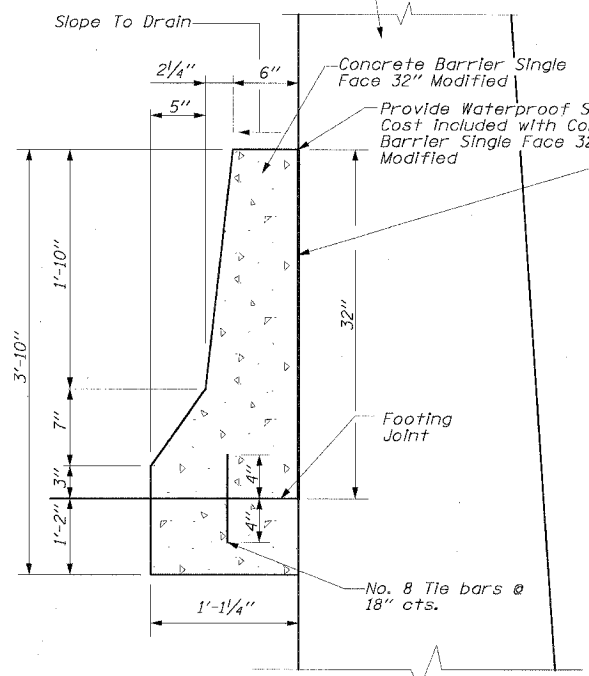
**TYPICAL SECTION B-B**

Cost Included with Pay Item  
Pipe Underdrains for Structures, 6"



**SECTION A-A**  
(See Standard 637001-02)

**CONCRETE BARRIER  
SINGLE FACE, 32 IN, MODIFIED**  
(Used Adjacent to Retaining Wall)



**NOTES:**

- Construction joints shall be provided at 30'-0" intervals and expansion joints at 90'-0" intervals, unless otherwise noted. Reinforcing steel shall be placed continuously through construction joints.
- The back face of Retaining Walls shall be waterproofed according to Article 503.18 of the Standard Specifications.
- A protective coat shall be applied according to Section 503 of the Standard Specifications to all concrete surfaces not in contact with soil.
- Existing utilities in conflict with retaining wall shall be abandoned or relocated according to directions given on the Roadway Plans.
- All exposed concrete edges shall have a 3/4" by 45° chamfer except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of 1 foot below the finished ground line.
- Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
- Reinforcement bars bending dimensions are out to out.
- Reinforcement bars designated "E" shall be epoxy coated.
- The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
- All construction joints shall be bonded.
- Existing Temporary Soil Retention System is to be removed as needed to construct the retaining wall and the proposed pavement. Portions of the existing temporary soil retention system may be left in place with the approval of the Engineer. Its location varies and it may be located at either side of the proposed wall. The cost of removal is to be included in the cost of Structure Excavation.

**TOTAL BILL OF MATERIAL**

ITEM	Unit	Quantity
Porous Granular Embankment	Cu. Yd.	965
Structure Excavation	Cu. Yd.	2,695
Concrete Structures	Cu. Yd.	865.0
Concrete Superstructure Protective Coat	Sq. Yd.	1,570
Reinforcement Bars, Epoxy Coated	Pounds	109,910
Pipe Underdrains for Structures 6"	Foot	1,100
Temporary Soil Retention System (to Remain In Place)	Sq. Ft.	16,000

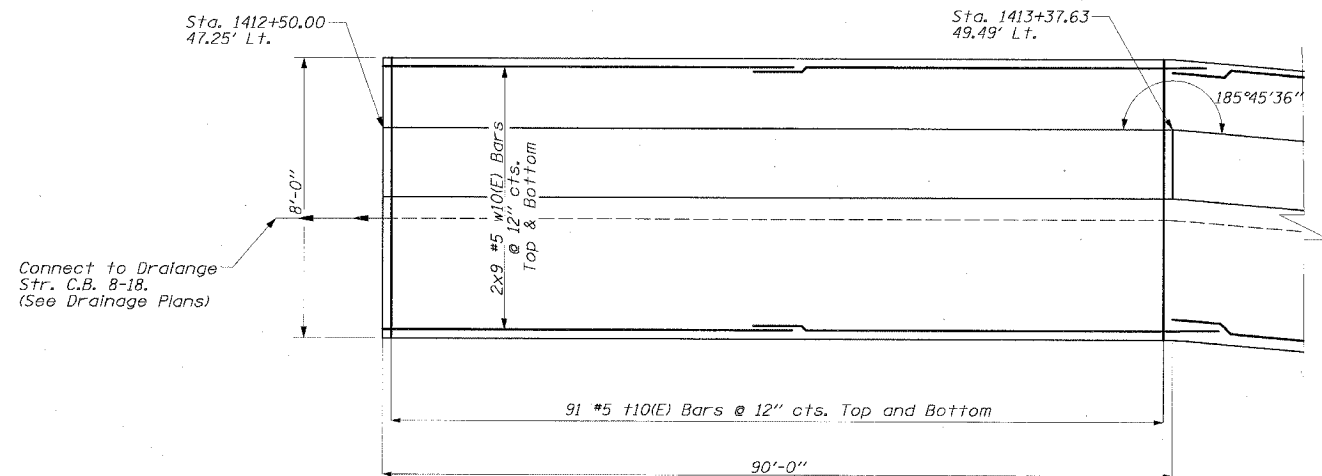
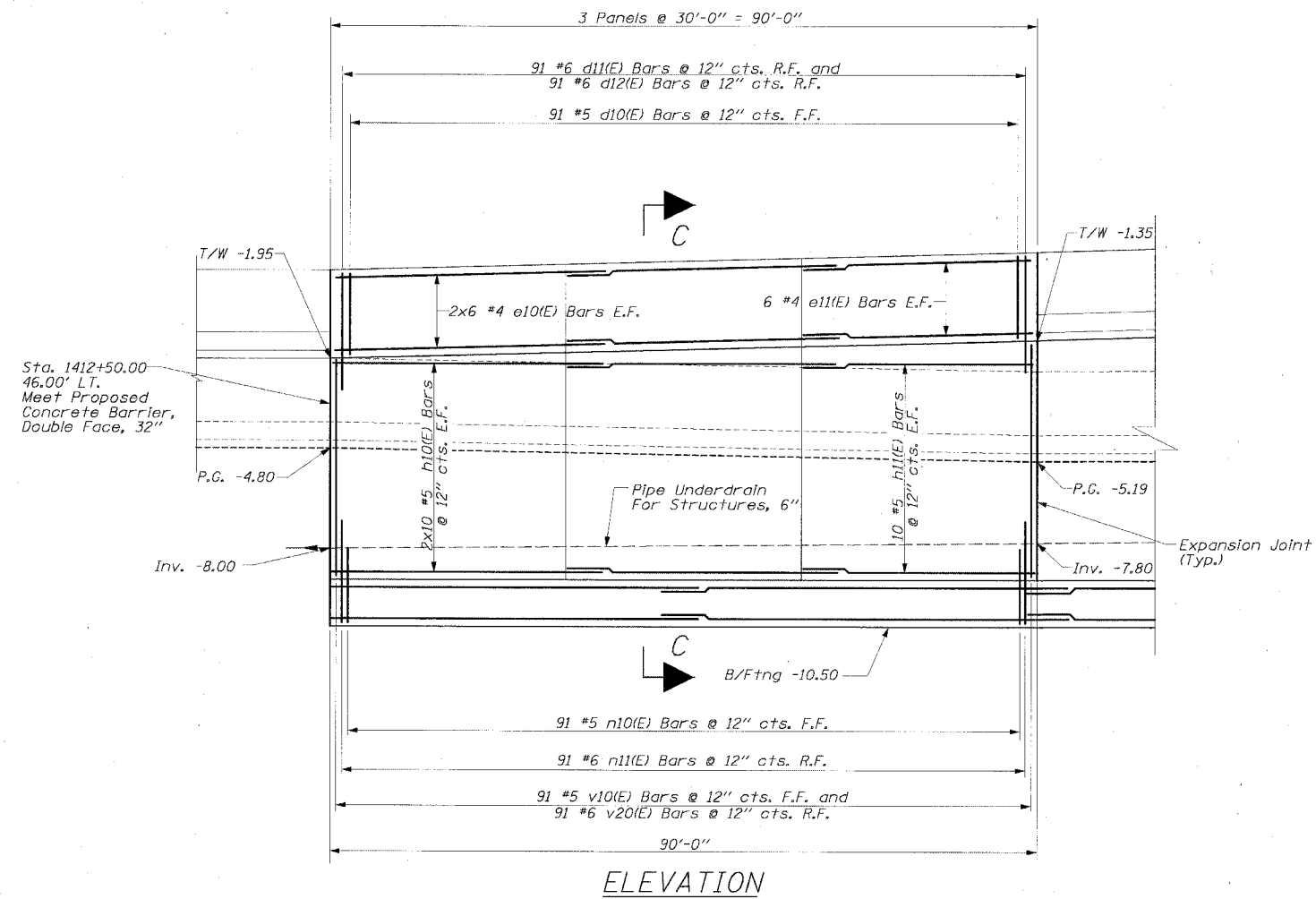
**Edwards AND Kelcey**  
ONE NORTH FRANKLIN  
CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
WEB: WWW.EKCORP.COM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
RETAINING WALL SEL  
BARRIER WALL DETAILS  
STRUCTURE NO. NONE  
SCALE: NOT TO SCALE  
DATE: 1/1/05  
DRAWN BY: ABW  
CHECKED BY: EL

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	438
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		• (1818, ETC, 2324.6-1P)R-9		



ELEVATION

FOOTING PLAN

**LEGEND:**  
 B/Ftng = Bottom Of Footing Elev.  
 T/W = Top Of Wall Elev.  
 P.G. = Proposed Ground Elev.  
 Soil Boring Location SSSJ-22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE  
 SCALE: 1" = 20'  
 DATE: 07/17/05  
 DRAWN BY: ABW  
 CHECKED BY: EL

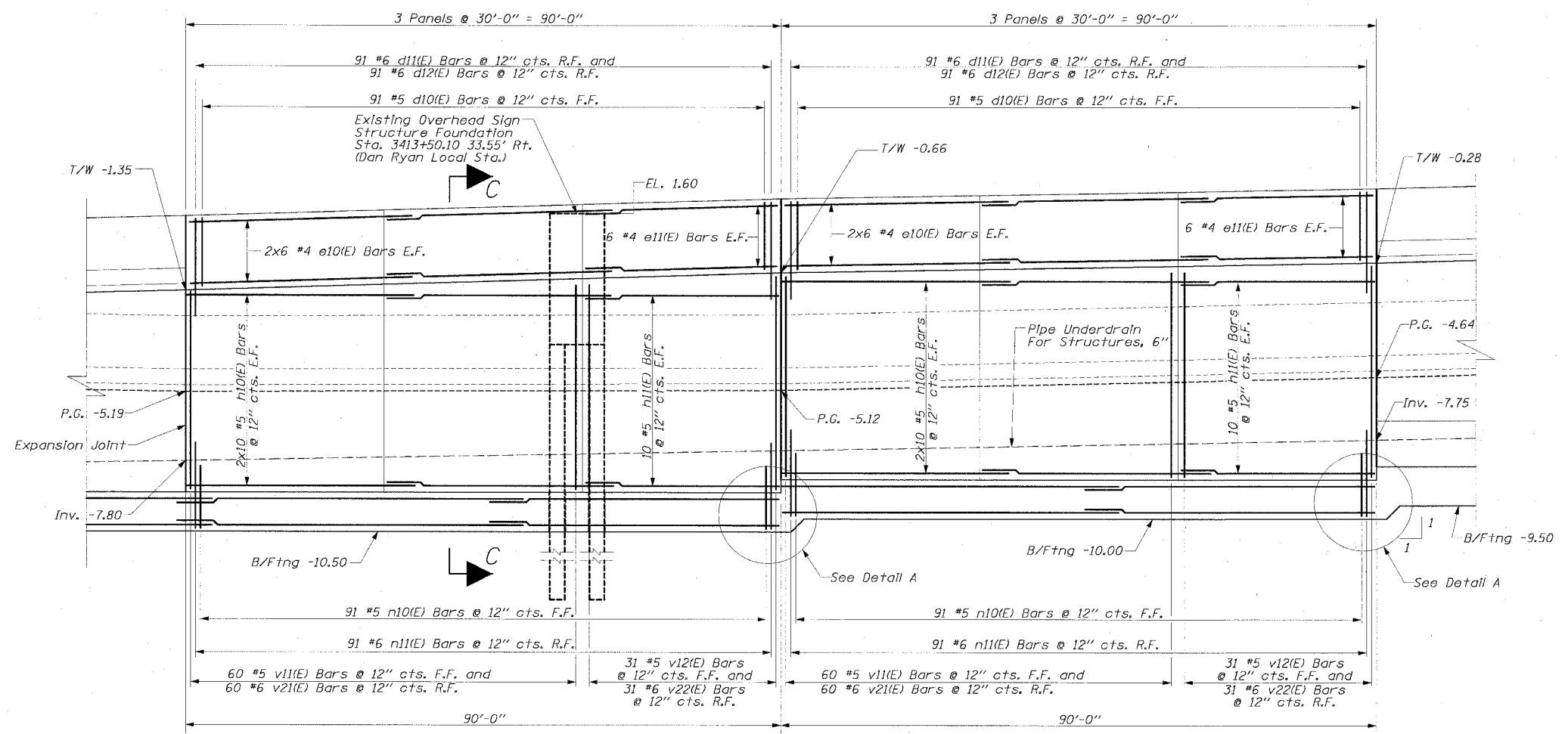
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SEL-4

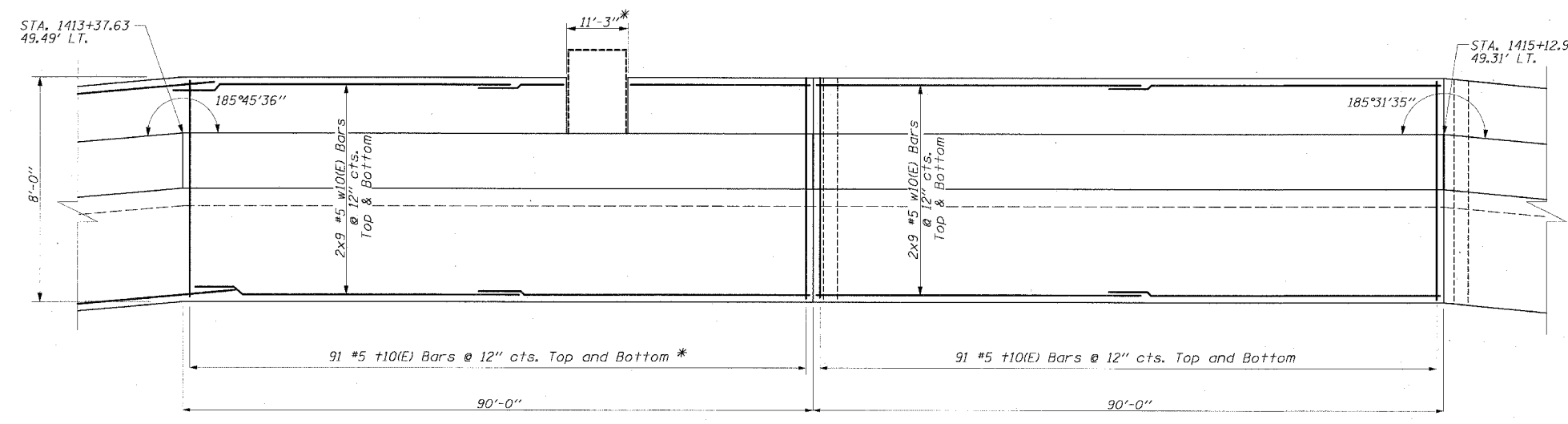
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STA.		TO STA.		
62302		1818, ETC, 2324.6-1PR-9		

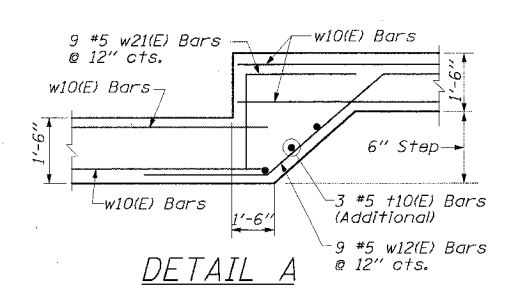


ELEVATION



FOOTING PLAN

\*Cut bars as needed in field to clear Existing Overhead Sign Foundation. Contractor to verify location in field.



DETAIL A

**LEGEND:**  
 B/Ftng = Bottom Of Footing Elev.  
 T/W = Top Of Wall Elev.  
 P.G. = Proposed Ground Elev.  
 SSSJ-22 Soil Boring Location

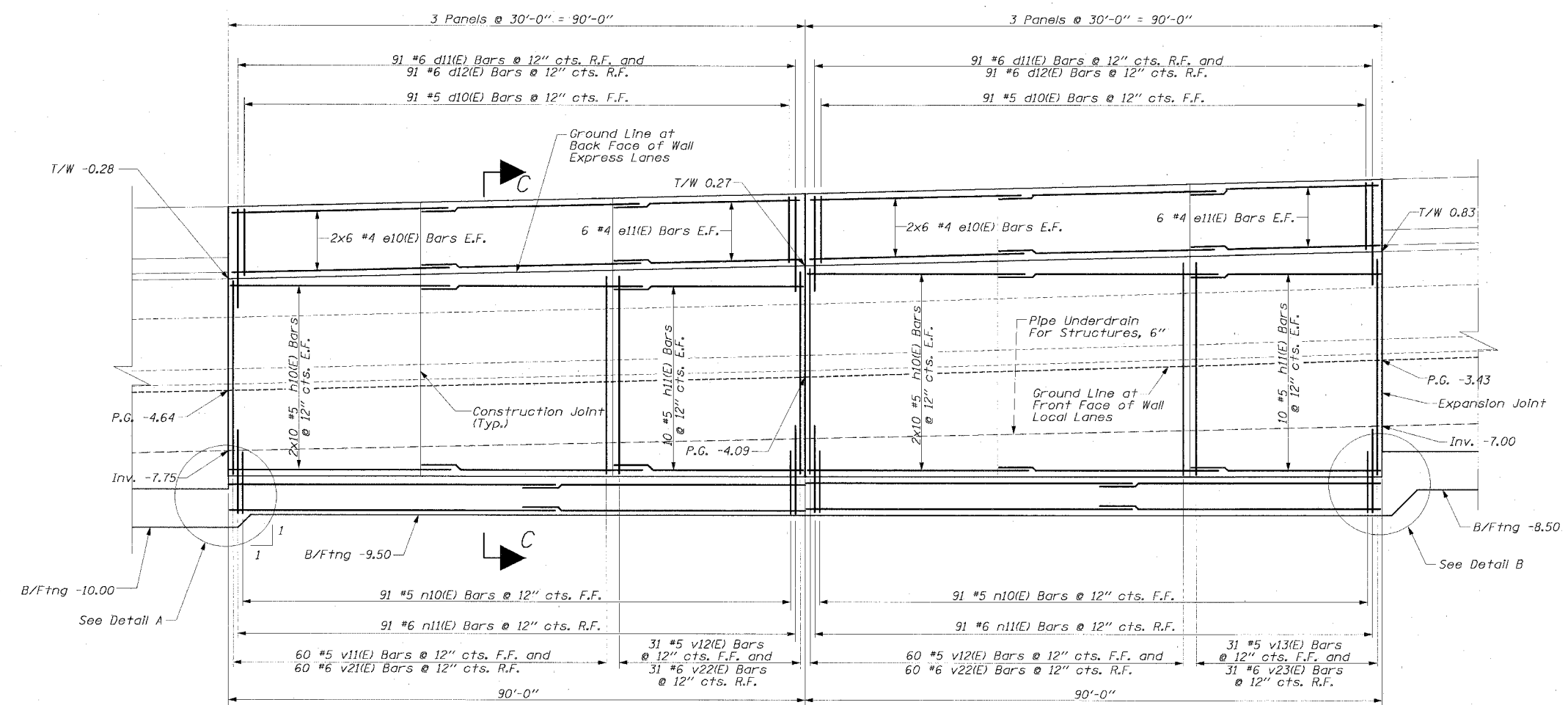
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE  
 SCALE: 1" = 20'  
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 DRAWN BY: ABW  
 CHECKED BY: EL

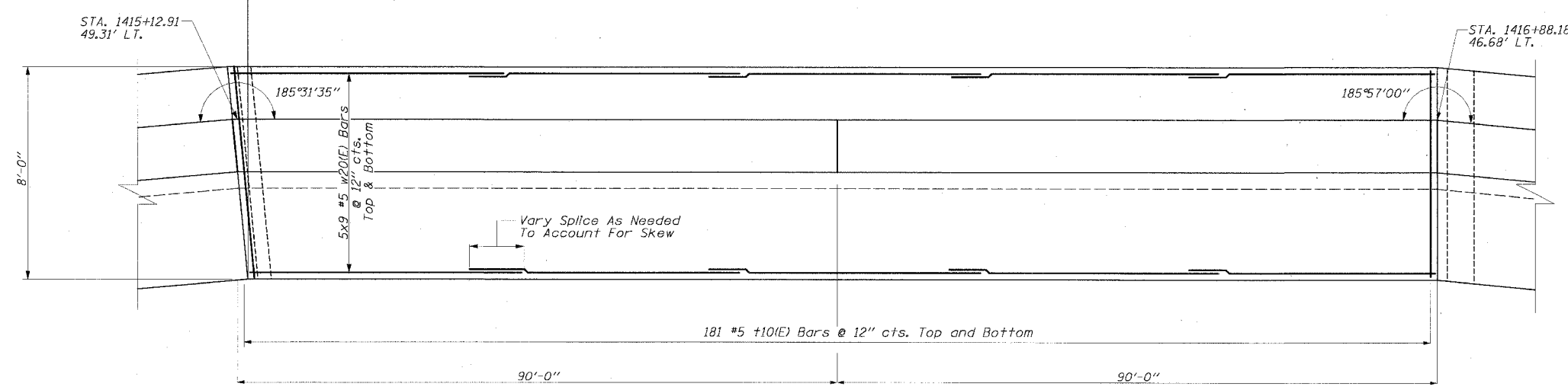
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 FAX: (312) 251-3015  
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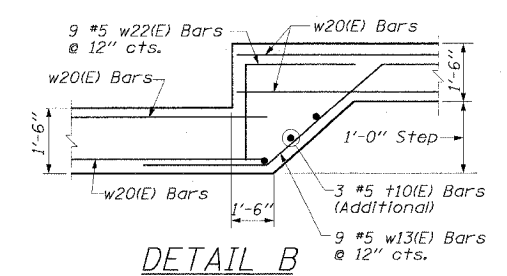
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94/90		COOK	598	440
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	• (1818, ETC, 2324.6-1PR-9			



ELEVATION



FOOTING PLAN



DETAIL B

**LEGEND:**  
 B/Ftng = Bottom Of Footing Elev.  
 T/W = Top Of Wall Elev.  
 P.G. = Proposed Ground Elev.  
 SSS = Soil Boring Location  
 SSS-22

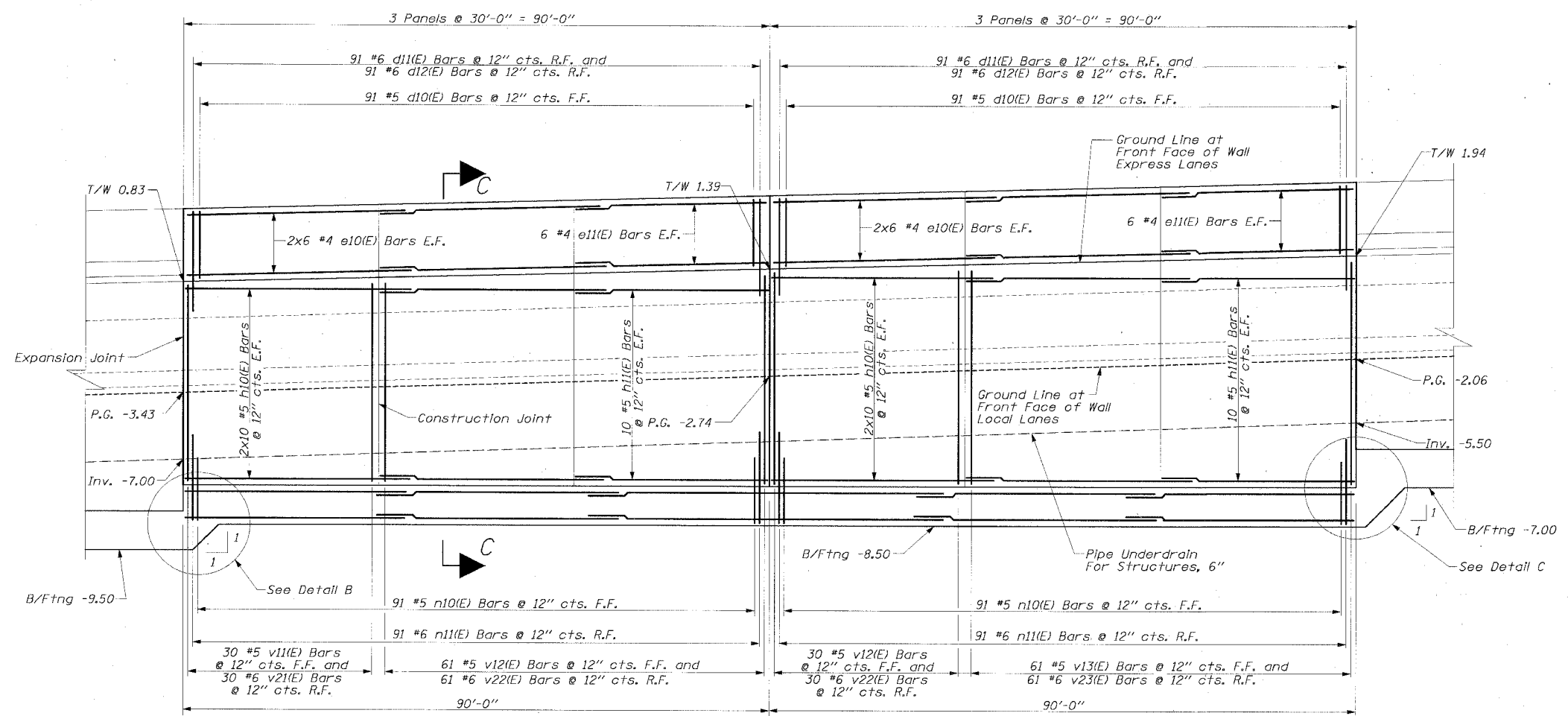
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE  
 SCALE: 1" = 40'  
 DATE: 07/17/05  
 DRAWN BY: ABW  
 CHECKED BY: EL

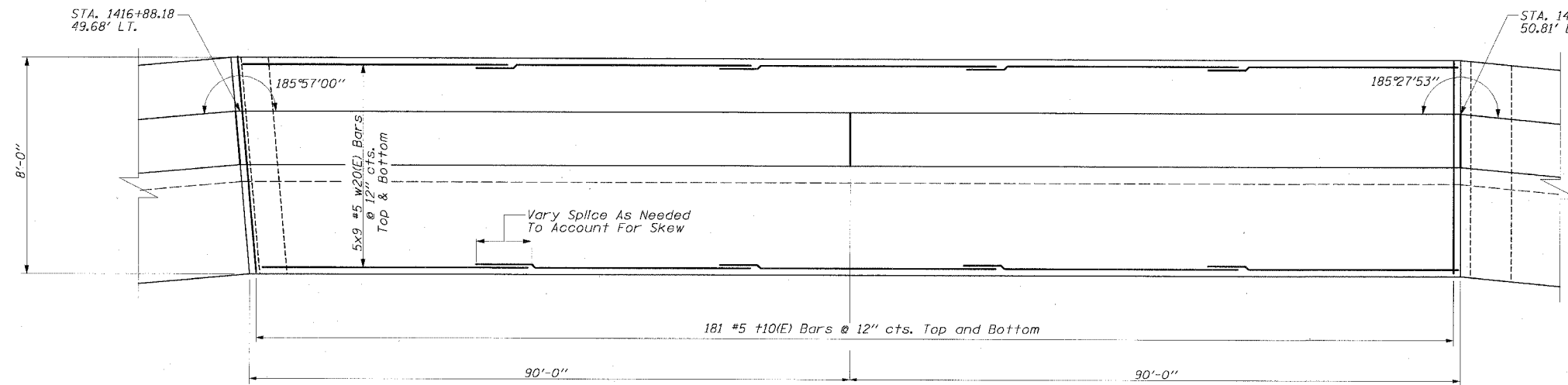
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 FAX: (312) 251-3015  
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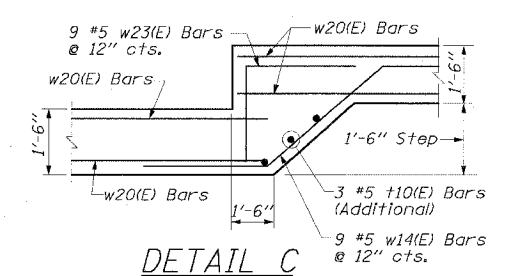
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94/90		COOK	598	441
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	(1818, ETC, 2324.6-1PIR-9			



ELEVATION



FOOTING PLAN



DETAIL C

- LEGEND:**
- B/Ftng = Bottom Of Footing Elev.
  - T/W = Top Of Wall Elev.
  - P.G. = Proposed Ground Elev.
  - = Soil Boring Location
  - SSJ-22

REVISIONS	
NAME	DATE

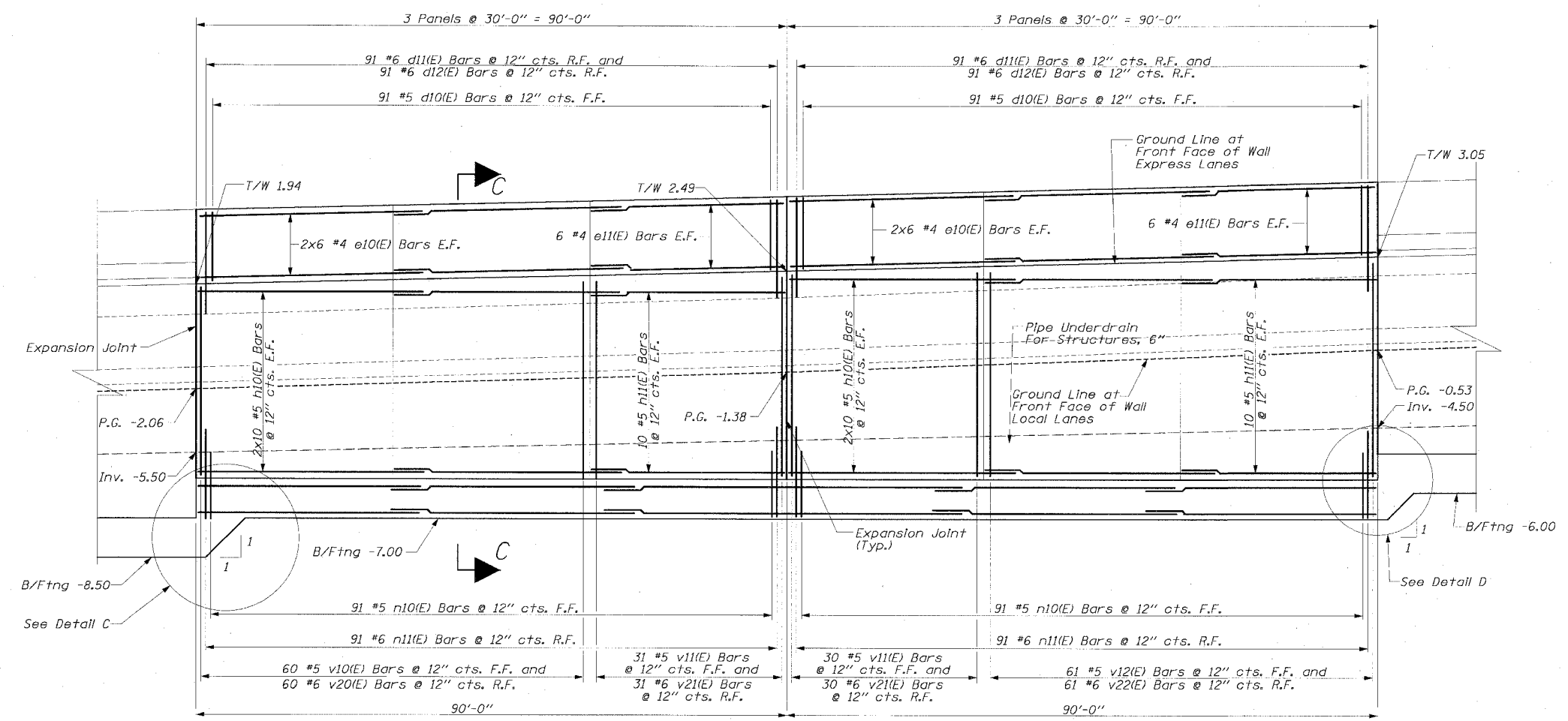
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE

SCALE: 1" = 20' / 1" = 40'  
 DATE: 07/17/05  
 DRAWN BY: ABW  
 CHECKED BY: EL

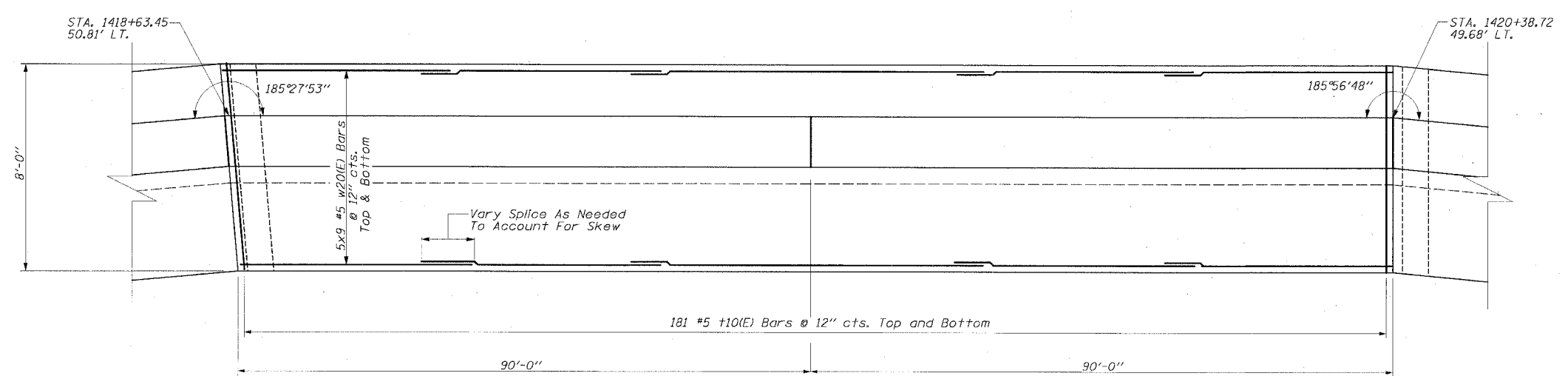
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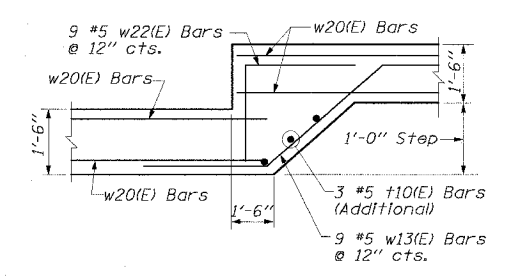
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	442
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	1818, ETC, 2324.6-1PR-9			



ELEVATION



FOOTING PLAN



DETAIL D  
(Similar to Detail B on SEL-6)

**LEGEND:**  
 B/Ftng = Bottom Of Footing Elev.  
 T/W = Top Of Wall Elev.  
 P.G. = Proposed Ground Elev.  
 Soil Boring Location  
 SSS-22

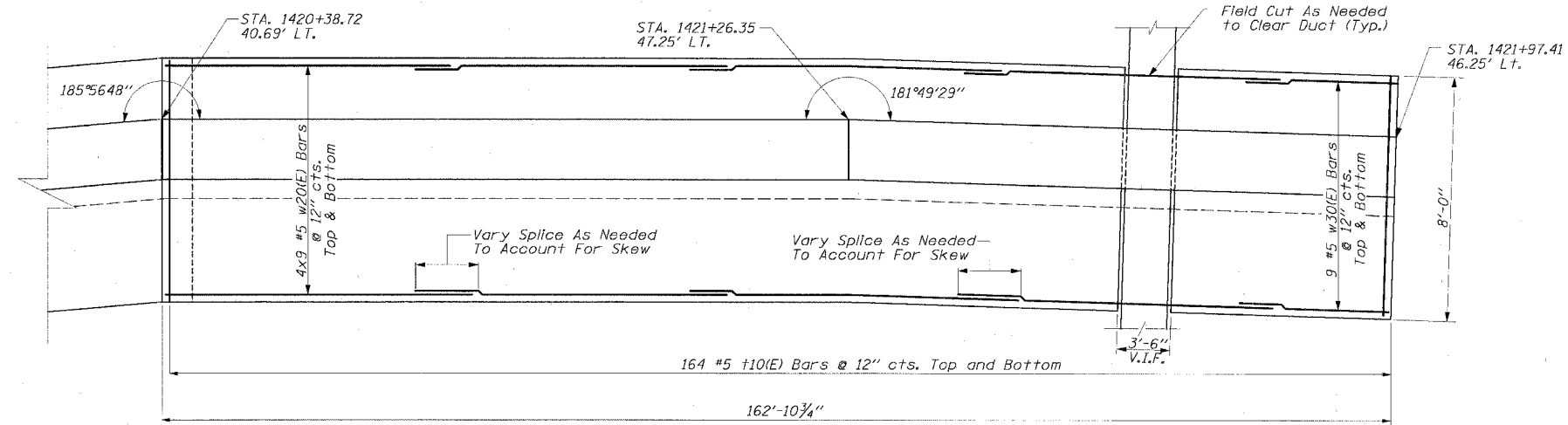
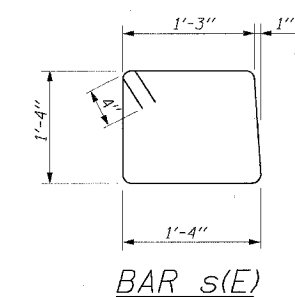
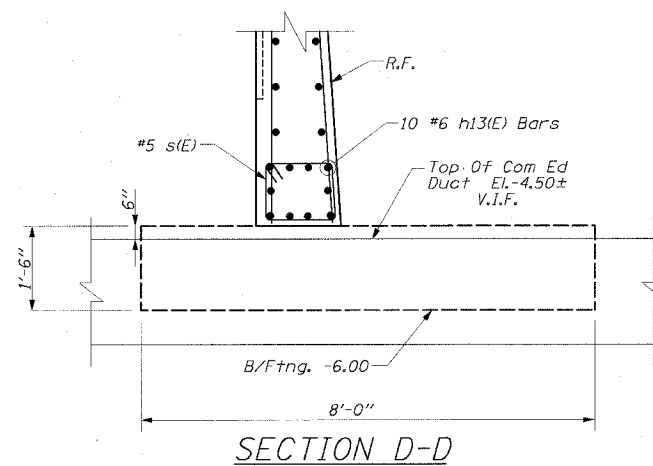
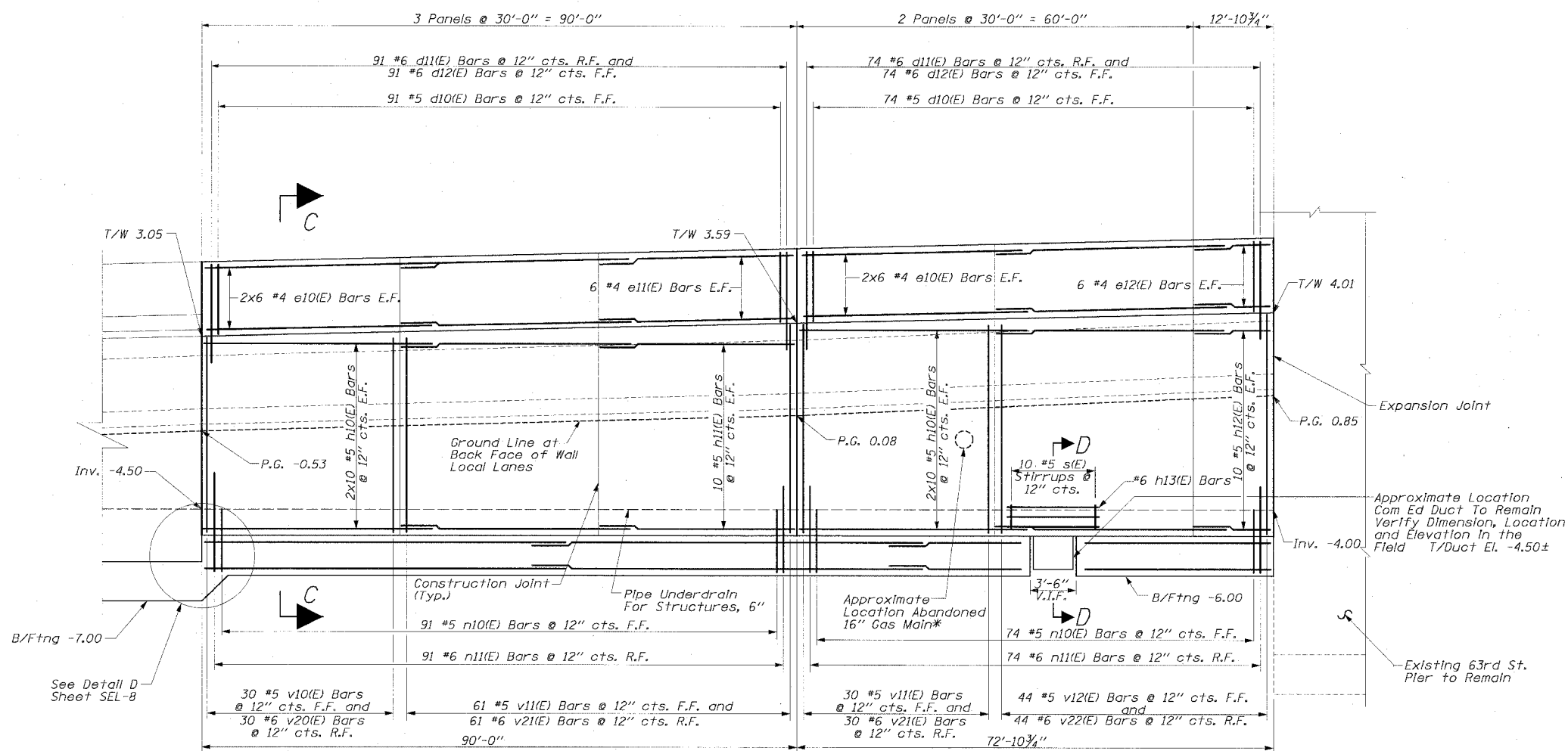
REVISIONS	
NAME	DATE

SEL-8  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO, NONE  
 SCALE: 1" = 40'  
 DATE: 07/17/05  
 DRAWN BY: ABW  
 CHECKED BY: EL

**Edwards AND Kelcey**  
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 CHICAGO, IL 60606  
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 FAX: (312) 251-3015  
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	443
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	• (1818, ETC, 2324.6-IPR-9			



\* To Be Removed As Needed by People's Energy and / or as Directed by the Engineer.

- NOTES:**
- Note that the cost for field cutting and adjusting reinforcement to accommodate blockouts is included with the Pay Item "Reinforcement Bars, Epoxy Coated".
  - Contractor to verify Com Ed Duct and block-out footing as needed. Field cut bars as required to clear blockout.

**LEGEND:**

B/Ftng = Bottom Of Footing Elev.  
T/W = Top Of Wall Elev.  
P.G. = Proposed Ground Elev.  
SSJ-22 = Soil Boring Location

REVISIONS		NAME	DATE
NO.	DESCRIPTION		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
RETAINING WALL SEL  
GENERAL PLAN AND ELEVATION  
SB STA. 1416+88.18 TO STA. 1421+97.41  
STRUCTURE NO. NONE

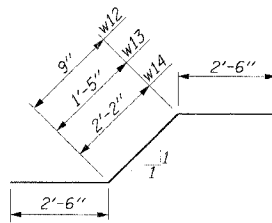
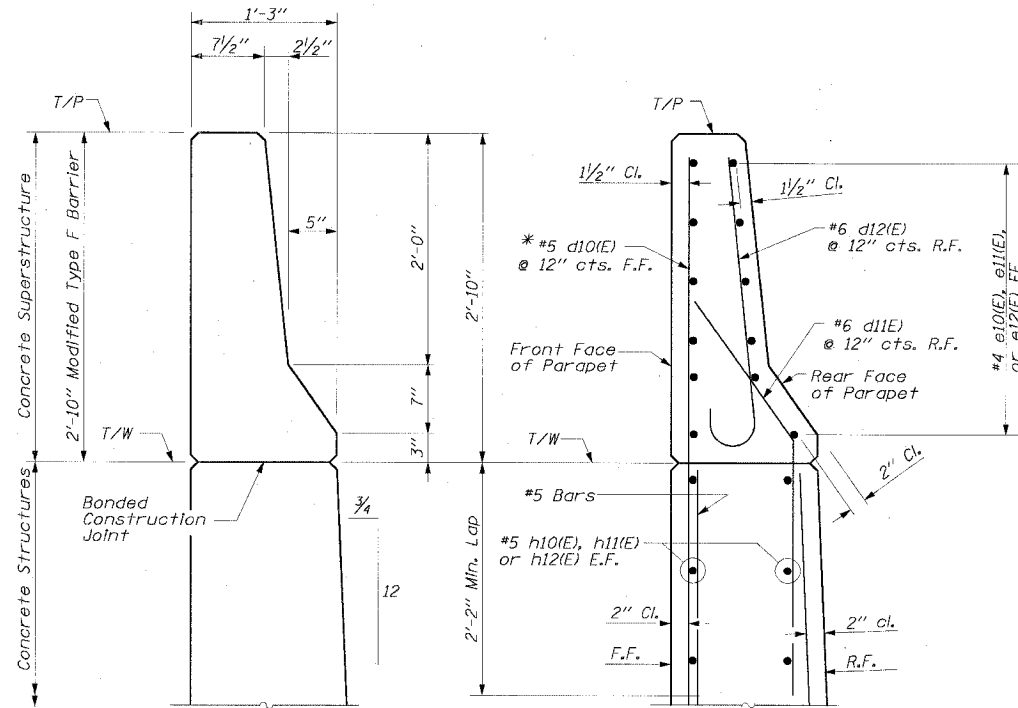
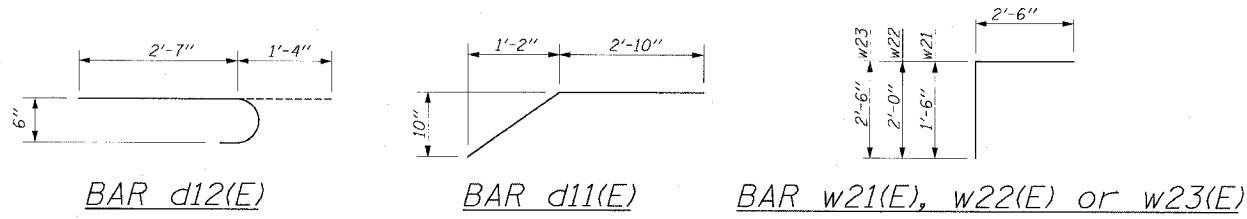
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DATE: 07/17/05      CHECKED BY: EL

**Edwards AND Kelcey**

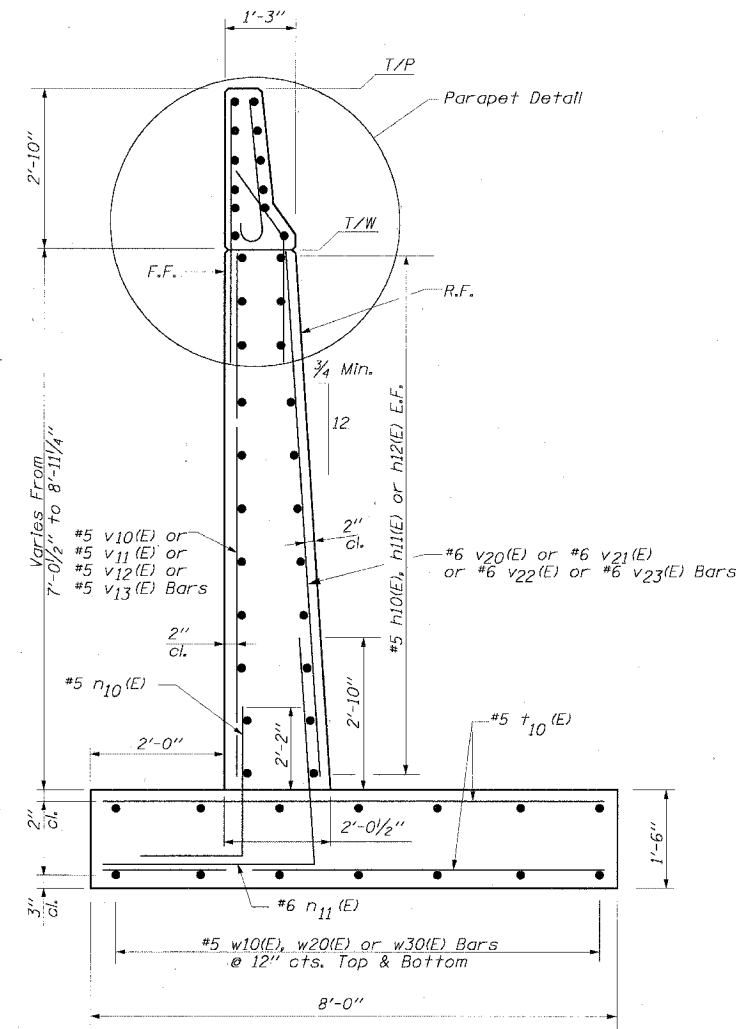
ONE NORTH FRANKLIN  
CHICAGO, IL 60606  
PHONE: (312) 251-3000  
FAX: (312) 251-3015  
WEB: WWW.EKCORP.COM

P:\0-001910-0-35\Corr 14815\CADD\15-Retaining Wall\Plan\SEL-9.dwg

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	---	COOK	598	444
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	• (1818, ETC. 2324.6-1P)R-9			

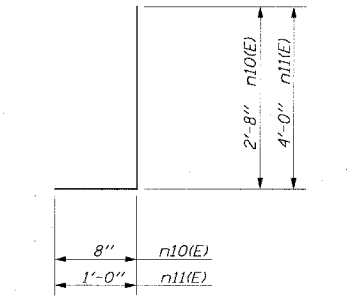


BAR w12(E), w13(E) or w14(E)



DIMENSIONS REINFORCING  
PARAPET DETAIL - MODIFIED TYPE F BARRIER

\* Note Bar d10(E) has been detailed at 6'-0" long to ensure a min. 2'-2" lap with v(E) Bars as the wall height changes



BAR n10(E) & n11(E)

- MIN LAP:**
- #4 Bars - 1'-8"
  - #5 Bars - 2'-2"
  - #6 Bars - 2'-7"
  - #7 Bars - 3'-5"
  - #8 Bars - 4'-6"
  - #9 Bars - 5'-9"
  - #10 Bars - 7'-2"
- NOTATION:**
- T/P - Top of Parapet
  - T/W - Top of Wall
  - B/Fing - Bottom of Footing
  - F.F. - Front Face
  - R.F. - Rear Face
  - E.F. - Each Face
  - T - Top
  - B - Bottom
  - P.C. Elev. - Proposed Grade Elevation

REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 GENERAL PLAN AND ELEVATION  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE

SCALE: \_\_\_\_\_  
 DATE: 07/1/05 20' 40'  
 DRAWN BY: ABW  
 CHECKED BY: EJ

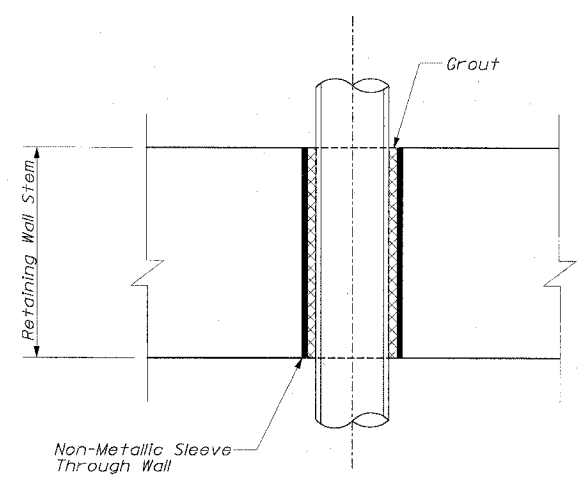


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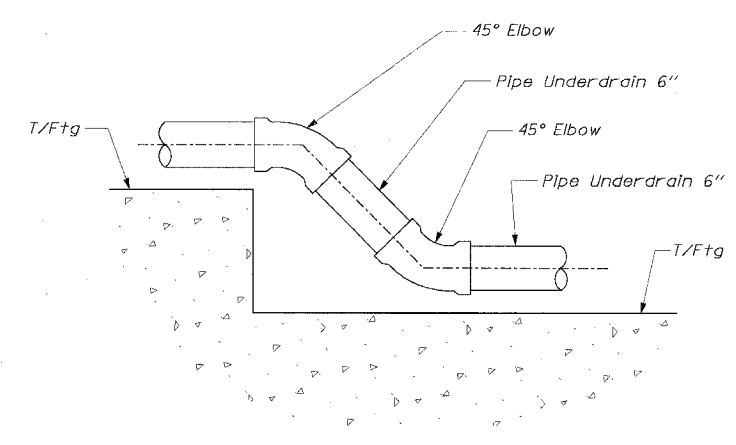
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	445
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
62302 • (1818, ETC, 2324.6-1P)R-9				

### BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e10(E)	264	#4	32'-2"	
e11(E)	120	#4	29'-10"	
e12(E)	12	#4	12'-8"	
d10(E)	984	#5	6'-0"	
d11(E)	984	#6	1'-5"	
d12(E)	984	#6	3'-11"	
h10(E)	440	#5	32'-2"	
h11(E)	200	#5	29'-10"	
h12(E)	20	#5	12'-8"	
h13(E)	10	#6	10'-0"	
n10(E)	984	#5	3'-4"	
n11(E)	984	#6	5'-0"	
s(E)	10	#5	6'-0"	
†10(E)	1975	#5	7'-8"	
v10(E)	181	#5	7'-2"	
v11(E)	362	#5	7'-10"	
v12(E)	349	#5	8'-3"	
v13(E)	92	#5	8'-10"	
v20(E)	181	#6	7'-2"	
v21(E)	362	#6	7'-10"	
v22(E)	349	#6	8'-3"	
v23(E)	92	#6	8'-10"	
w10(E)	108	#5	46'-8"	
w12(E)	18	#5	5'-9"	
w13(E)	18	#5	6'-5"	
w14(E)	9	#5	7'-2"	
w20(E)	342	#5	38'-0"	
w21(E)	18	#5	4'-0"	
w22(E)	18	#5	4'-6"	
w23(E)	9	#5	5'-0"	
w30(E)	18	#5	21'-4"	
Reinforcement Bars, Epoxy Coated		Pounds	109,910	
Concrete Structures		Cu. Yd.	865.0	
Concrete Superstructure		Cu. Yd.	86.0	

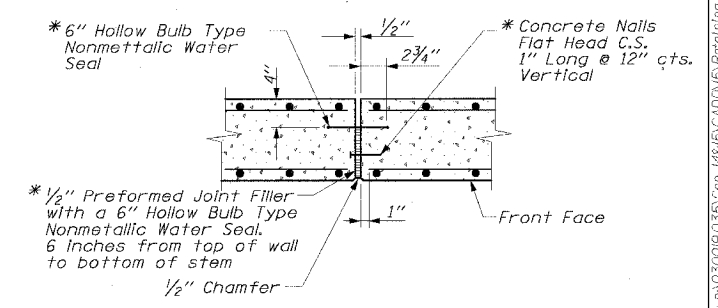


**Detail 1**  
Non-Metallic Sleeve and Grout  
Furnishing and Installing Non-Metallic Sleeve and Grout is included in the cost of Concrete Structures.

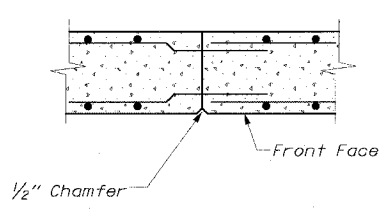


**Detail 2**  
45° Bend for Pipe Underdrain 6"

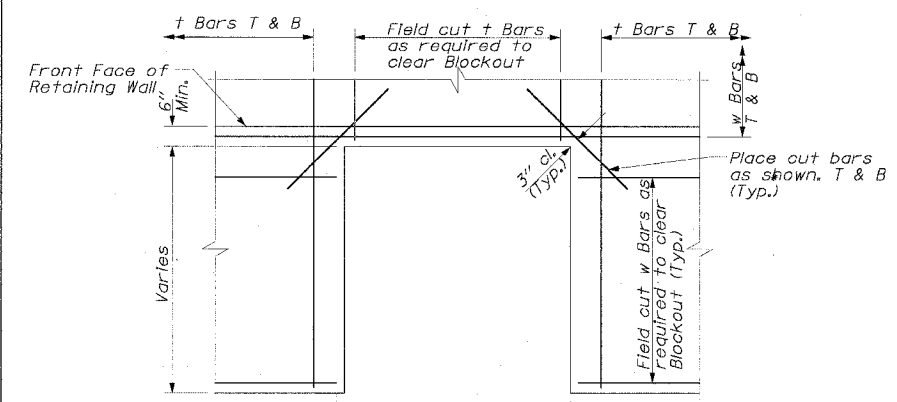
### WALL DRAINAGE DETAILS



**EXPANSION JOINT DETAIL**  
\* Cost Included with Concrete Structures



**CONSTRUCTION JOINT DETAIL**

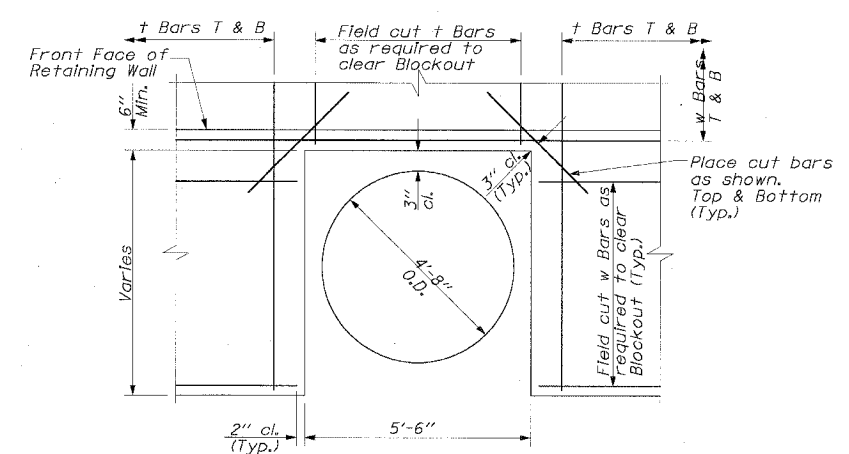


### BLOCKOUT AT HANDHOLE

\*Note that the cost for field cutting and adjusting reinforcement to accommodate blockouts is included with the Pay Item "Reinforcement Bars, Epoxy Coated"

#### NOTES:

- Contractor to Field Coordinate/Verify Location of Existing And Proposed Catch Basin and Handholes (Station and Offset) prior to forming the blockouts.
- See Drainage Plans for Proposed Catch Basin Locations.



### BLOCKOUT AT CATCH BASIN

\*Note that the cost for field cutting and adjusting reinforcement to accommodate blockouts is included with the Pay Item "Reinforcement Bars, Epoxy Coated"

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WEB: WWW.EKCORP.COM

REVISIONS		SEL-11	
NAME	DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION	
		F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		31ST STREET TO 71ST STREET	
		SB EXPRESS LANE RECONSTRUCTION	
		RETAINING WALL SEL	
		GENERAL PLAN AND ELEVATION	
		SB STA. 1416+88.18 TO STA. 1421+97.41	
		STRUCTURE NO. NONE	
SCALE:		DRAWN BY: ABW	
DATE: 07/17/05	20' 40'	CHECKED BY: EL	

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**BORING SEL-1**



Illinois Department of Transportation  
 Division of Highway  
 AMERICAN GEOTECHNICAL ENGINEERING, INC.

**SOIL BORING LOG**

Page .1 of .1  
 Date 1/28/05

ROUTE F.A.I. 1-90 / I-94 DESCRIPTION Dan Ryan Expressway (D-91-419-01) LOGGED BY R.P.  
 SECTION 1818, ETC, 2324.6-1PJR-9 LOCATION Chicago, Illinois

COUNTY	Cook	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	Automatic
STRUCT. NO.	None	D B U M	Surface Water Elev.	ft	D B U M
Station	Wall-SEL	E L C O	Stream Bed Elev.	ft	E L C O
		P O S I			P O S I
BORING NO.	SEL-1	T W S	Groundwater Elev.	ft	T W S
Station	1412+41.27	H S Qu T	First Encounter	Dry ft	H S Qu T
Offset	-31.49ft (SBDOR)		Upon Completion	ft	
Ground Surface Elev.	-0.41		After	ft	
			Hrs.		
Asphalt 2"	-0.58		Very Stiff to Hard / Medium Dense		
Concrete 12"	-1.58		Gray		
Sub Base, Gravel (FILL)	-2.33		SILTY CLAY LOAM / SILTY LOAM (continued)		
Very Stiff to Hard	4				
Gray	6				
SILTY CLAY LOAM	8				
	3				
	5				
	8				
End of Boring	25.41				
	4				
	6				
	7				
Very Stiff to Hard / Medium Dense	-7.91				
Gray	3				
SILTY CLAY LOAM / SILTY LOAM	4				
	6				
	10				
	13				
	14				
	9				
	10				
	13				
	7				
	8				
	9				
	6				
	6				
	8				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

**BORING SEL-2**



Illinois Department of Transportation  
 Division of Highway  
 AMERICAN GEOTECHNICAL ENGINEERING, INC.

**SOIL BORING LOG**

Page .1 of .1  
 Date 1/28/05

ROUTE F.A.I. 1-90 / I-94 DESCRIPTION Dan Ryan Expressway (D-91-419-01) LOGGED BY R.P.  
 SECTION 1818, ETC, 2324.6-1PJR-9 LOCATION Chicago, Illinois

COUNTY	Cook	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	Automatic
STRUCT. NO.	None	D B U M	Surface Water Elev.	ft	D B U M
Station	Wall-SEL	E L C O	Stream Bed Elev.	ft	E L C O
		P O S I			P O S I
BORING NO.	SEL-2	T W S	Groundwater Elev.	ft	T W S
Station	1414+93.47	H S Qu T	First Encounter	Dry ft	H S Qu T
Offset	-34.12ft (SBDOR)		Upon Completion	ft	
Ground Surface Elev.	-0.03		After	ft	
			Hrs.		
Asphalt 3"	-0.28		Very Stiff to Hard / Medium Dense		
Concrete 9"	-1.03		Gray		
Sub Base, Gravel (FILL)	-2.03		SILTY CLAY LOAM / SILTY LOAM (continued)		
Very Stiff	6				
Gray	5				
SILTY CLAY LOAM	6				
	6				
	7				
Very Stiff to Hard / Medium Dense	-5.03				
Gray	8				
SILTY CLAY LOAM / SILTY LOAM	8				
	8				
	9				
	6				
	7				
	7				
	10				
	10				
	8				
	10				
	13				
	9				
	11				
	13				
	7				
	11				
	13				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

**BORING SEL-3**



Illinois Department of Transportation  
 Division of Highway  
 AMERICAN GEOTECHNICAL ENGINEERING, INC.

**SOIL BORING LOG**

Page .1 of .1  
 Date 1/28/05

ROUTE F.A.I. 1-90 / I-94 DESCRIPTION Dan Ryan Expressway (D-91-419-01) LOGGED BY R.P.  
 SECTION 1818, ETC, 2324.6-1PJR-9 LOCATION Chicago, Illinois

COUNTY	Cook	DRILLING METHOD	Hollow Stem Auger	HAMMER TYPE	Automatic
STRUCT. NO.	None	D B U M	Surface Water Elev.	ft	D B U M
Station	Wall-SEL	E L C O	Stream Bed Elev.	ft	E L C O
		P O S I			P O S I
BORING NO.	SEL-3	T W S	Groundwater Elev.	ft	T W S
Station	1415+90.63	H S Qu T	First Encounter	Dry ft	H S Qu T
Offset	-39.04ft (SBDOR)		Upon Completion	ft	
Ground Surface Elev.	0.30		After	ft	
			Hrs.		
Concrete 9"	-0.45		Hard / Dense		
Sub Base, Gravel (FILL)	-0.76		Gray		
Hard	5		SILTY CLAY LOAM / SILTY LOAM (continued)		
Gray	7				
SILTY CLAY LOAM	8				
	8				
	6				
	6				
End of Boring	24.70				
	6				
	6				
	7				
Hard / Dense	-4.70				
Gray	5				
SILTY CLAY LOAM / SILTY LOAM	7				
	10				
	9				
	7				
	7				
	9				
	8				
	9				
	12				
	11				
	16				
	19				
	9				
	11				
	14				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



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 CHICAGO, IL 60606  
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 WEB: WWW.EKCORP.COM

SEL-12

REVISIONS	DATE
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 RETAINING WALL SEL  
 SOIL BORINGS 1  
 SB STA. 1416+88.18 TO STA. 1421+97.41  
 STRUCTURE NO. NONE  
 SCALE: DATE: 01/17/05 20' 40'  
 DRAWN BY: ABW CHECKED BY: EL

AN3009035 Con. 14x15 CAD/CADD/Verifying Main/Plan/Sect/Frame/Schedule/Title





F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	448
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		• (1818, ETC, 2324.6-1P)R-9		

BORING SEL-7



Illinois Department of Transportation  
Division of Highway  
AMERICAN GEOTECHNICAL ENGINEERING, INC.

SOIL BORING LOG

Page 1 of 1

Date 1/28/05

ROUTE F.A.I. 1-90 / I-94 DESCRIPTION Dan Ryan Expressway (D-91-419-01) LOGGED BY R.P.

SECTION 1818, ETC, 2324.6-1P)R-9 LOCATION Chicago, Illinois

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	None	D	B	U	M	Surface Water Elev.	ft	D	B	U	M
Station	Wall-SEL	P	O	S	I	Stream Bed Elev.	ft	P	O	S	I
BORING NO.	SEL-7	T	W	S	T	Groundwater Elev.:		T	W	S	T
Station	1420+46.70	H	S	Q	u	First Encounter	Dry	H	S	Q	u
Offset	-38.39ft (SBDP)					Upon Completion	ft				
Ground Surface Elev.	2.63	ft	(ft)	(ft)	(%)	After	Hrs	(ft)	(ft)	(ft)	(%)
Concrete 10"						Hard / Dense					
	1.81					Gray					
Sub Base, Gravel (FILL)	1.13	6				SILTY CLAY LOAM / SILTY LOAM (continued)		12			
Very Stiff to Hard Gray		7	B		14.0			19	4.5	10.0	
SILTY CLAY LOAM								19	P		
		5						10			
		6	2.8		12.0			15	10.9	11.0	
		8	P					19	S		
		6						-22.37	-25		
		6									
		5	2.7		19.0						
		8	B								
		5									
		7	3.6		15.0						
		10	B								
		5									
		6	3.9		14.0						
		8	B								
		5									
		5	3.6		13.0						
		8	B								
		11									
		10	7.6		13.0						
		14	B								
Hard / Dense Gray	-14.87										
SILTY CLAY LOAM / SILTY LOAM		9									
		12	8.5		13.0						
		15	B,S								
		20									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 6-99)

**Edwards AND Kelcey**  
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CHICAGO, IL 60606  
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WEB: WWW.EKCORP.COM

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
RETAINING WALL SEL  
SOIL BORINGS 3  
SB STA. 1416+88.18 TO STA. 1421+97.41  
STRUCTURE NO. NONE

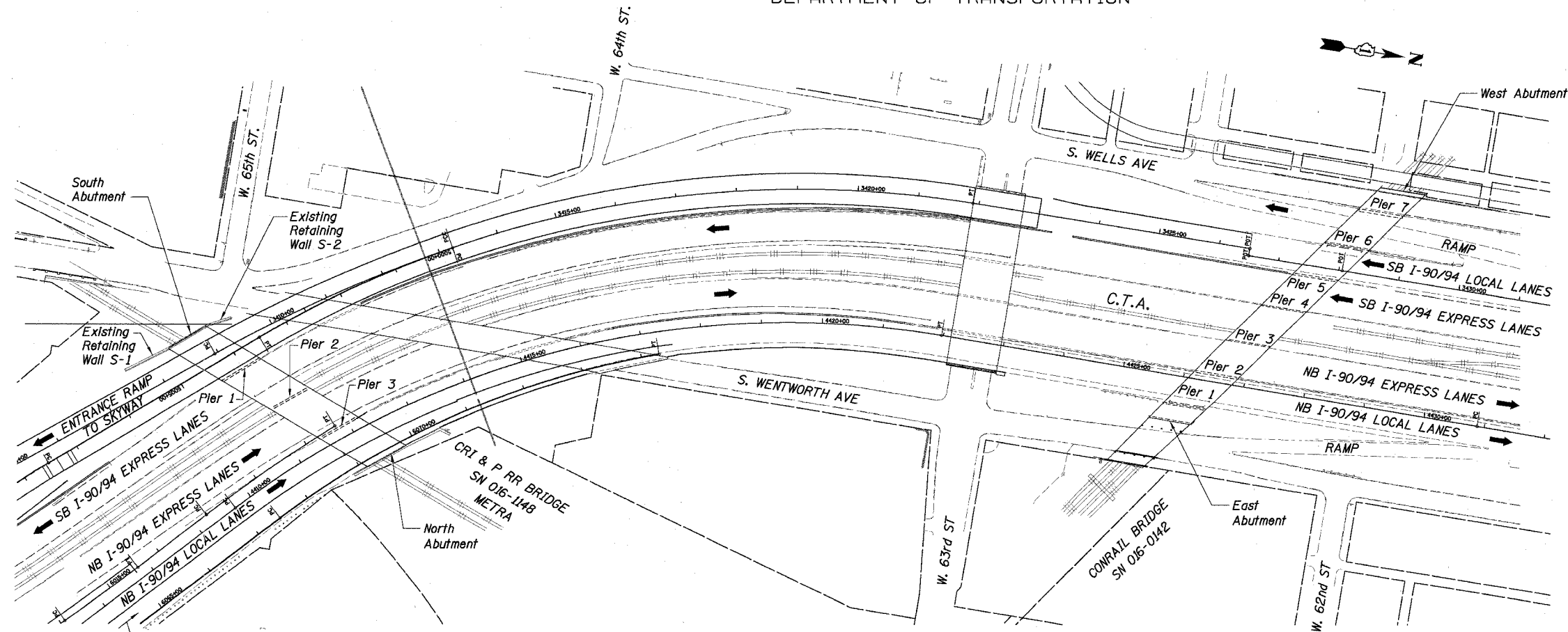
REVISIONS  
NAME DATE

SCALE: 0" = 20' 40'  
DATE: 01/17/05  
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CHECKED BY: EL

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	449
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
* (1818, ETC. 2324.6-1PIR-9		62302		



PLAN

TOTAL BILL OF MATERIAL		
Item	Unit	Quantity
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	655
Formed Concrete Repair (Depth Greater Than 5")	Sq Ft	40
Epoxy Crack Sealing	LF	124
Railroad Protective Liability Insurance	LS	0.2
Protective Coat	Sq Yd	68

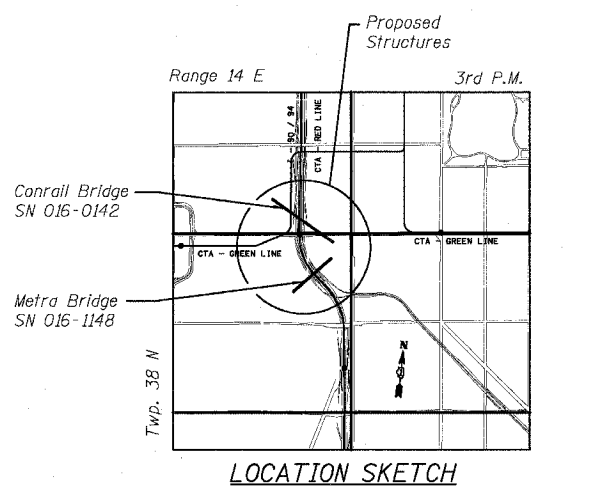
INDEX OF SHEETS	
S1	General Plan
S2	Pier 1 - Plan and Elevation (SN 016-1148)
S3	Pier 4 - Plan and Elevation (SN 016-0142)
S4	Pier 5 - Plan and Elevation (SN 016-0142)

**DESIGN SPECIFICATIONS**  
2002 AASHTO, Standard Specifications for Highway Bridges

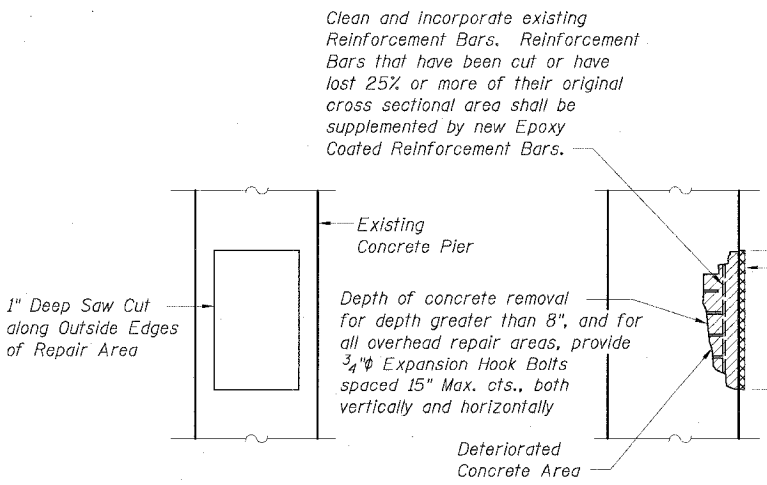
**DESIGN STRESSES**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)

- SUBSTRUCTURE REPAIR WORK ITEMS**
- Metra Railroad Bridge (SN 016-1148)
    - Pier 1 Repairs (North Face)
  - Conrail Railroad Bridge (SN 016-0142)
    - Pier 4 Repairs (West Face)
    - Pier 5 Repairs (East Face)

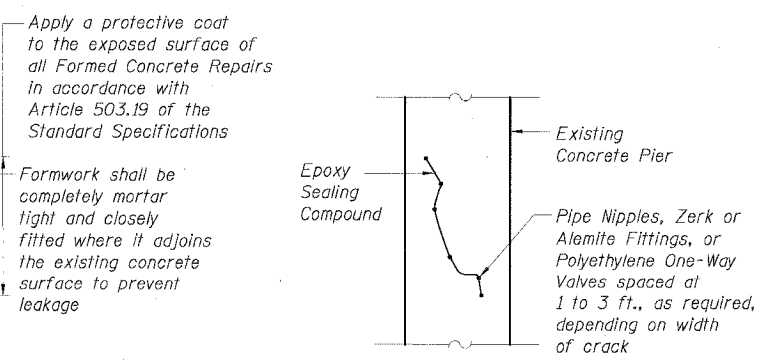
- GENERAL NOTES:**
- Pier Repair Locations and Quantities are estimated. The necessary adjustments based on current field conditions will be made at time of construction. However, such variations shall not be cause for additional compensation for a change in the Scope of Work; however, the Contractor will be paid for the quantity actually furnished at the Unit Price bid for the Work.
  - Delaminated and spalled areas of concrete shall be repaired by utilizing formed concrete repair and described in the Specifications as Formed Concrete Repair.
  - Cracks shall be repaired by utilizing the Epoxy Crack Sealing and described in Section 590 of the Standard Specifications as Epoxy Crack Sealing.
  - The approximate location of the downspout is shown in the Elevation. If repairs are to be made near the attachments of the downspout, the downspout shall be detached before making the repairs. The Contractor shall reattach the downspout. The cost of the detachment and reattachment of the downspouts to the Piers shall be incidental to the Formed Concrete Repair.
  - Existing rustication shall be maintained and re-established in new repair areas.
  - The Contractor shall provide Railroad Protective Liability Insurance in accordance with Articles 107.11 and 107.12 of the Standard Specifications for all Railroad Highway Crossings and the Chicago Transit Authority (CTA). The CTA has additional requirements as shown in the "CTA Coordination" provision as shown in the Contract Special Provisions.



LOCATION SKETCH



FORMED CONCRETE REPAIR DETAIL



EPOXY CRACK SEALING DETAIL

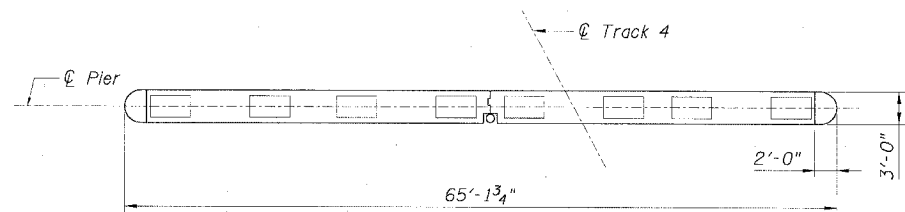
REVISIONS	
NAME	DATE

Sheet S1 of 4  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**GENERAL PLAN  
SUBSTRUCTURE REPAIRS  
METRA BRIDGE (SN 016-1148) AND  
CONRAIL BRIDGE (SN 016-0142)  
COOK COUNTY**  
SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY: CHD  
CHECKED BY: MJP

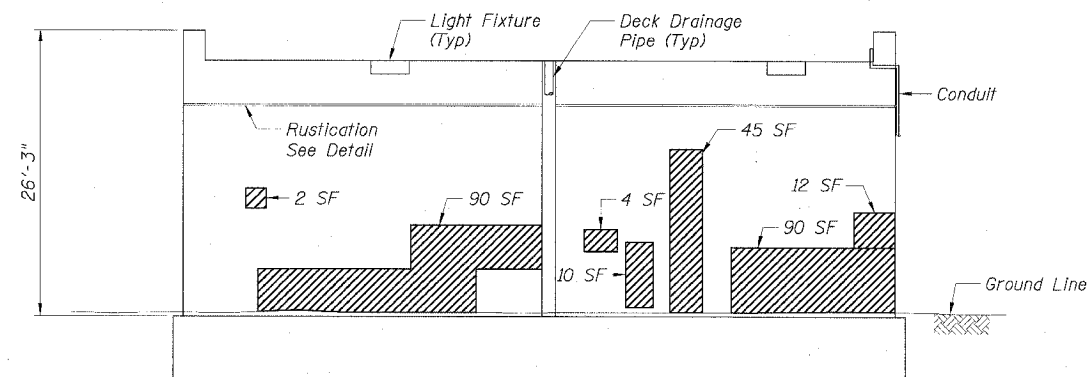
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

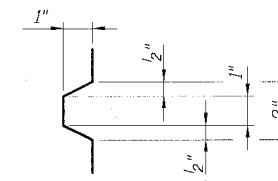
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94		COOK	598	450
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		
1818, ETC, 2324.6-1P1R-9			62302	



PLAN  
PIER 1  
(S.N. 016-1148)



ELEVATION  
PIER 1 - NORTH FACE  
(S.N. 016-1148)



DETAIL OF  
RUSTICATION

LEGEND

- Area of Formed Concrete Repair (Depth Equal to or Less than 5")
- Area of Formed Concrete Repair (Depth Greater than 5")
- Epoxy Crack Sealing

Sheet S2 of 4

BILL OF MATERIAL		
Item	Unit	Quantity
		Pier 1 North Face
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	253
Formed Concrete Repair (Depth Greater Than 5")	Sq Ft	
Epoxy Crack Sealing	LF	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
PIER 1 - PLAN AND ELEVATION  
SUBSTRUCTURE REPAIRS  
METRA BRIDGE (SN 016-1148)  
COOK COUNTY

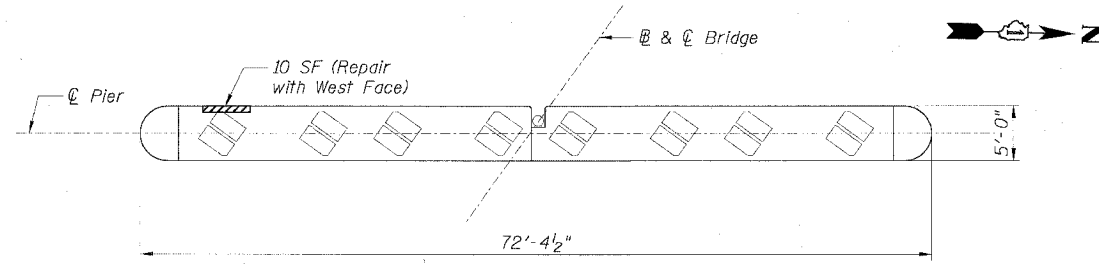
SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY: CHD  
CHECKED BY: MJP

CTE | AECOM  
325 East Wacker Drive, Suite 600, Chicago, Illinois 60601-2276  
T 312.495.2200 F 312.495.1100 www.cteaecom.com

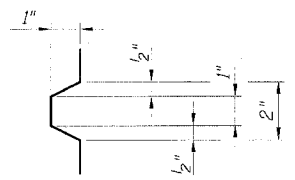
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

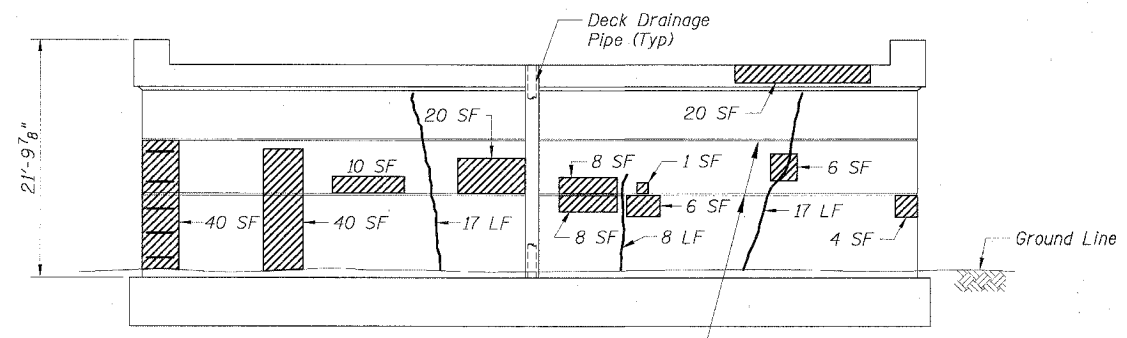
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	•	COOK	598	451
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
• (1818, ETC, 2324.6-1PR-9				62302



PLAN  
PIER 4  
(S.N. 016-0142)



DETAIL OF  
RUSTICATION



ELEVATION  
PIER 4 - WEST FACE  
(S.N. 016-0142)

LEGEND

- Area of Formed Concrete (Depth Equal to or Less than 5")
- Area of Formed Concrete Repair (Depth Greater than 5")
- Epoxy Crack Sealing

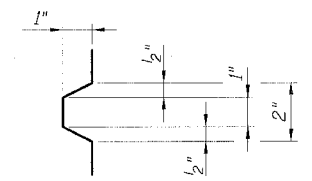
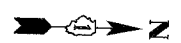
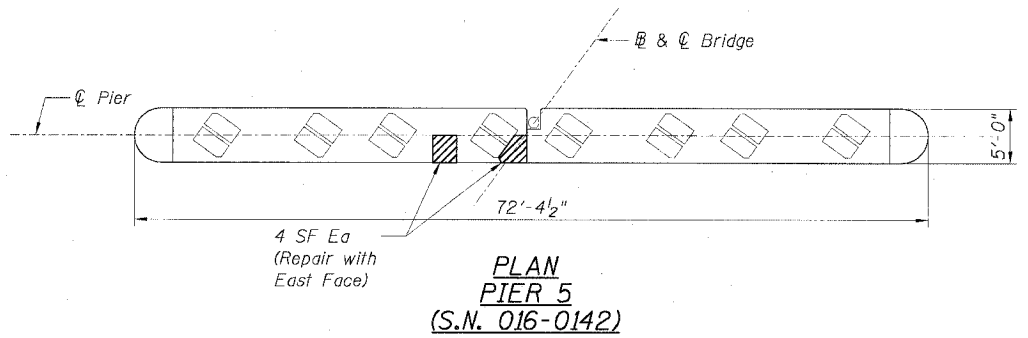
BILL OF MATERIAL		
Item	Unit	Quantity
		Pier 4 West Face
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	133
Formed Concrete Repair (Depth Greater Than 5")	Sq Ft	40
Epoxy Crack Sealing	LF	42

REVISIONS	
NAME	DATE

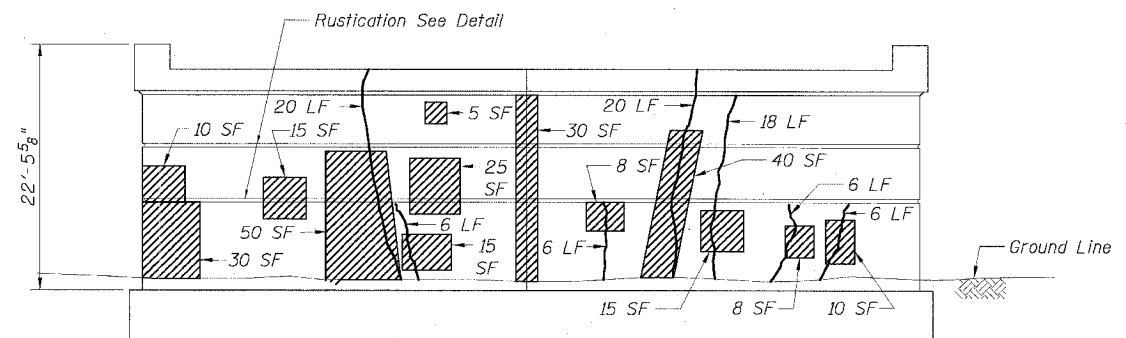
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**PIER 4 - PLAN AND ELEVATION  
SUBSTRUCTURE REPAIRS  
CONRAIL BRIDGE (SN 016-0142)  
COOK COUNTY**  
SCALE: None  
DATE: JULY 7, 2005  
DRAWN BY: CHD  
CHECKED BY: MJP

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	598	452
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
* (1818, ETC, 2324.6-1PR-9		62302		



DETAIL OF  
RUSTICATION



LEGEND

- Formed Concrete Repair (Depth Equal to or Less Than 5")
- Formed Concrete Repair (Depth Greater Than 5")
- Epoxy Crack Sealing

BILL OF MATERIAL		
Item	Unit	Quantity
		Pier 5 East Face
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft	269
Formed Concrete Repair (Depth Greater Than 5")	Sq Ft	
Epoxy Crack Sealing	LF	82

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 90/94 (DAN RYAN EXPRESSWAY)  
**PIER 5 - PLAN AND ELEVATION  
SUBSTRUCTURE REPAIRS  
CONRAIL BRIDGE (SN 016-0142)  
COOK COUNTY**

SCALE: None  
DATE: JULY 7, 2005

DRAWN BY: CHD  
CHECKED BY: MJP

CTE | AECOM  
CTE  
300 East Wacker Drive, Suite 800, Chicago, Illinois 60601-2745  
T 312.538.0100 F 312.538.1100 www.cte.com

P:\V\0468\STRUCTURE\B&K\_DWG\SN016-0142\_Pier5\Drawings\PIER5.PLT 02/22/05 02:22:17 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	453
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
	(1818, ETC, 2324.6-1P)R-9			

62302

**DESIGN SPECIFICATIONS**

2002 AASHTO

**DESIGN LOADING**

Live Load = HS20-44  
 Future Wearing Surface = 50 psf  
 Traffic Surcharge = 250 psf  
 Equivalent Fluid Soil Pressure = 50 pcf  
 Earth Load = 120 pcf

**DESIGN STRESSES**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

**NOTES:**

- For additional information, see Special Provisions.
- For reinforcement details, see Sheets JC-3, JC-4, & JC-5.
- Work point (W.P.) located at outside edge of existing drop manhole as shown. Mirror proposed Junction Chamber about line X-X when existing drop shaft is located north of existing access shaft.  $\phi$  Junction Chamber is parallel to  $\phi$  Main Drain.
- For elevations a and b, rim elevations, invert elevations, pipe openings, and dimensions c, d, e, & f, see "Table of Junction Chamber Information" on Sheet JC-2.
- Precast concrete rings shall conform to ASTM C76 for 'Reinforced Concrete Culvert, Storm Drain and Sewer Pipe', Class II, Wall B. Standard lengths of rings are: 4'-0", 2'-8", 1'-4", 0'-8", and 0'-4" collar. Cost included with Junction Chamber. All reinforcement steel required for precast concrete rings shall be included with Junction Chamber.
- The maximum width of excavation is the width of the junction chamber plus 2 feet either side, and the maximum length is the length of the junction chamber plus 2 feet either side. Excavation outside the maximum dimensions specified will not be measured for payment.
- The design of the excavation for junction chambers and jacking/receiving pits is the responsibility of the Contractor. The Contractor shall submit drawings and design for the braced excavation to the Engineer for approval. The braced excavation design and drawings shall be signed and sealed by an Illinois Licensed Structural Engineer, submitted and approved prior to the start of any work. The Engineer's approval shall not relieve the Contractor from the sole responsibility of the structural integrity of the braced excavation system. Excavation shall be paid as "Braced Excavation", see Special Provisions and Drainage Plans and Schedule.
- Work this sheet with Sheets JC-2, JC-3, JC-4, and JC-5.

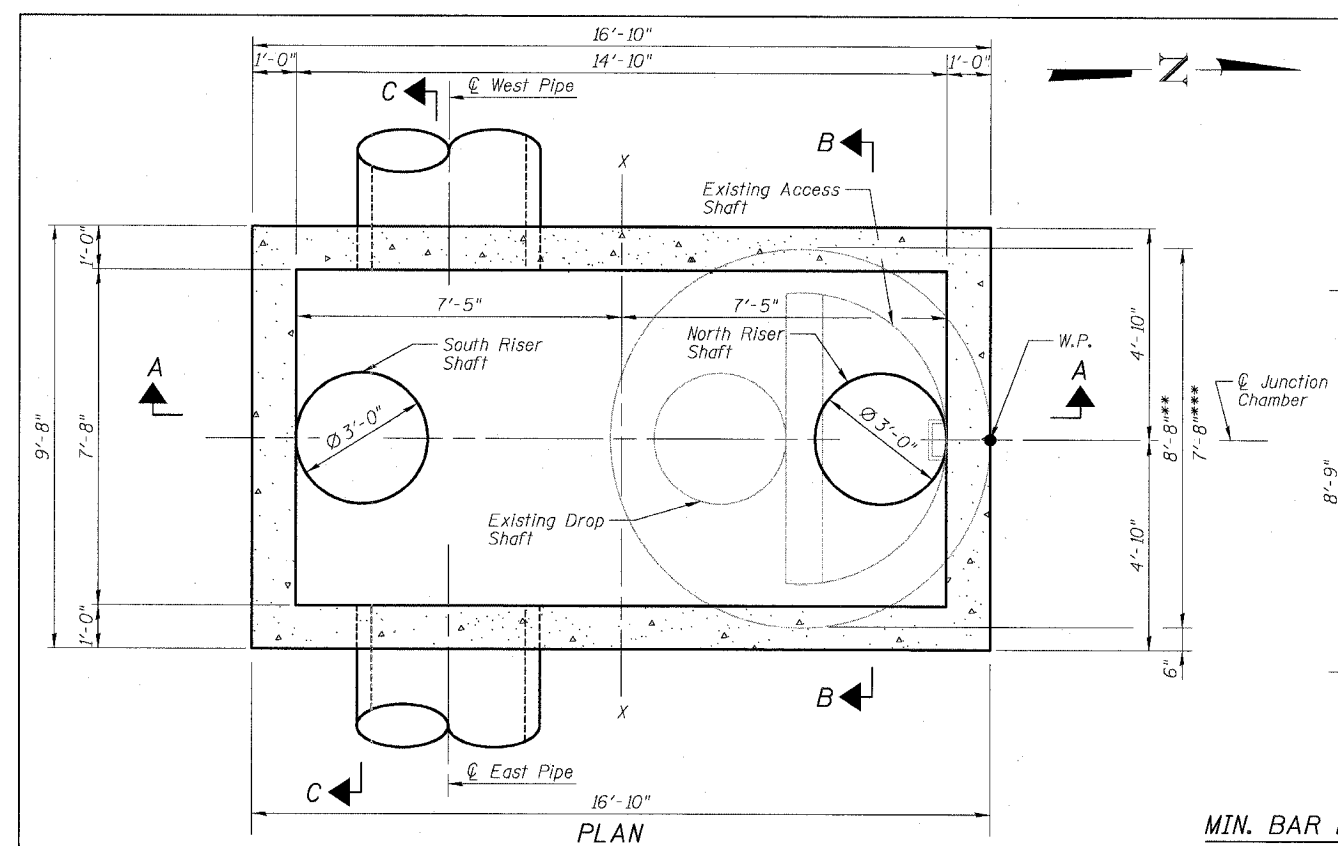
**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
*** Junction Chamber, No. 1	Each	1
*** Junction Chamber, No. 2	Each	1
*** Junction Chamber, No. 3	Each	1
*** Junction Chamber, No. 4	Each	1
** Junction Chamber, No. 5	Each	1
** Junction Chamber, No. 6	Each	1
** Junction Chamber, No. 7	Each	1
*** Junction Chamber, No. 8	Each	1
*** Junction Chamber, No. 9	Each	1
** Junction Chamber, No. 10	Each	1
** Junction Chamber, No. 11	Each	1
** Junction Chamber, No. 12	Each	1

SHEET JC-1 OF JC-22

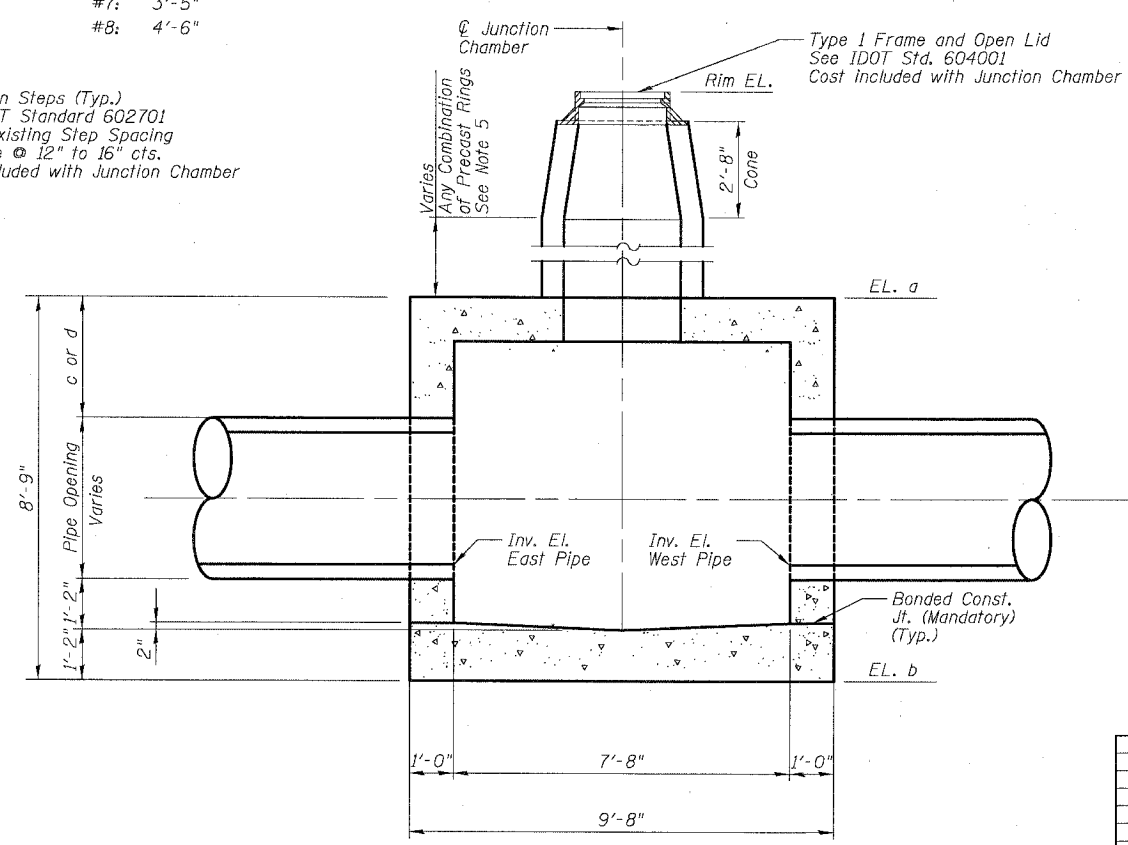
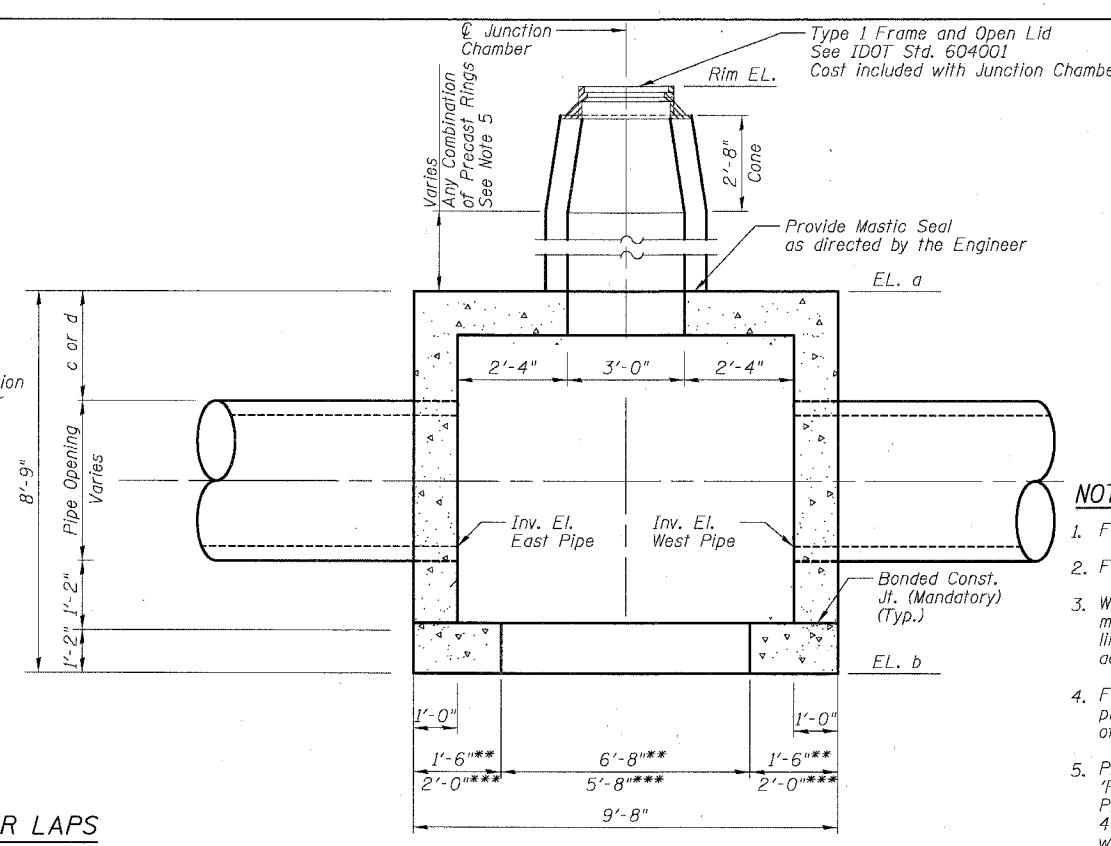
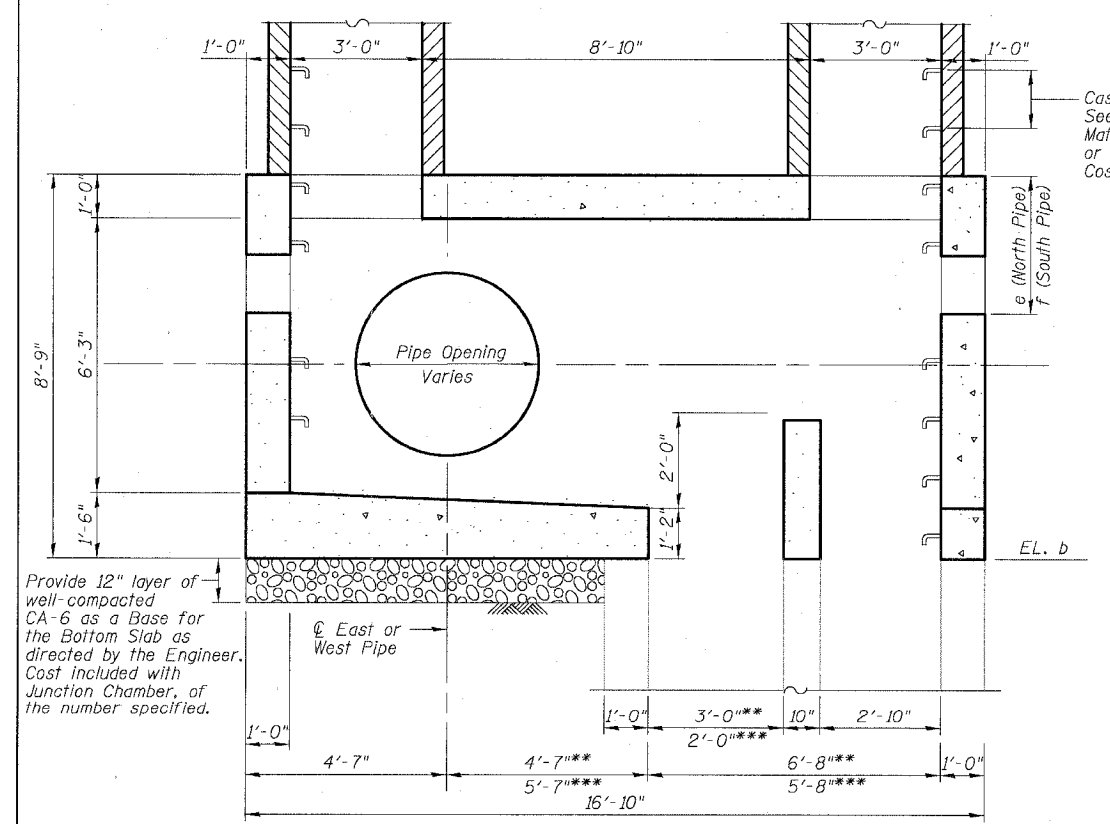
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBER, TYPE 2  
 GENERAL PLAN AND ELEVATION

SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU



**MIN. BAR LAPS**

- #5: 2'-2"
- #6: 2'-7"
- #7: 3'-5"
- #8: 4'-6"



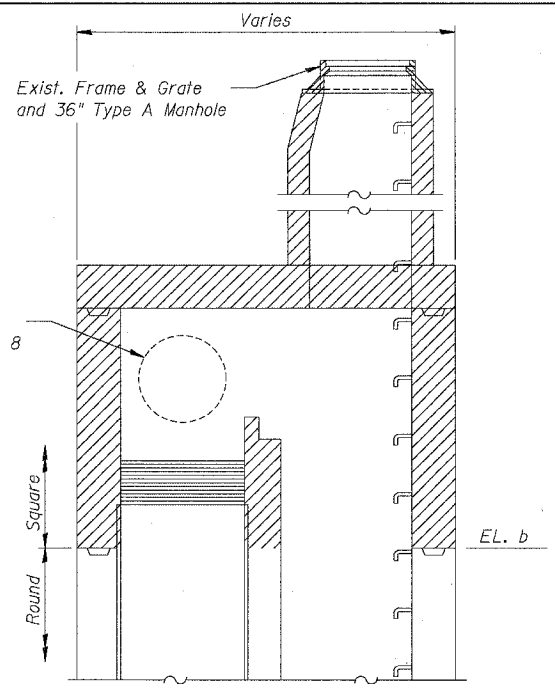
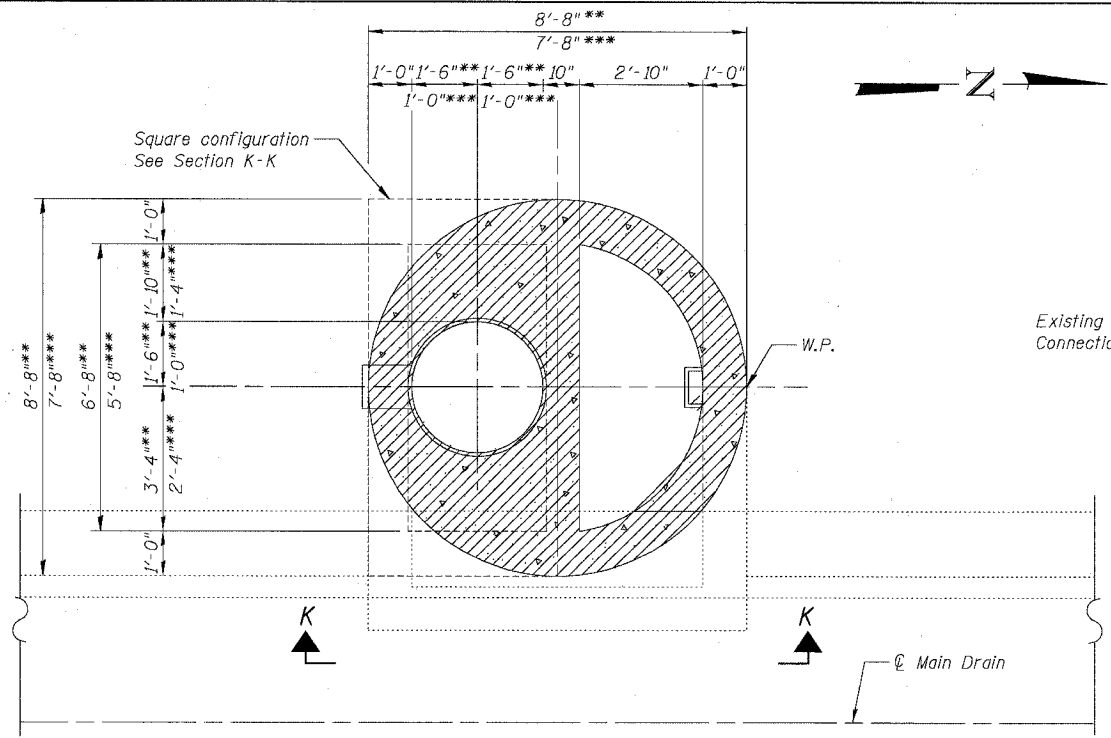
BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
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**SECTION A-A**

**SECTION C-C**

REVISIONS	
NAME	DATE

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**LEGEND:**  
 Removal

- NOTES:**
1. Adjust elevations and dimensions provided in the table as necessary for the East and West pipe invert elevations set in the field.
  2. Adjust North and South connecting pipes to fit inside openings provided in Junction Chamber.
  3. For additional connections to the North and South riser shafts, see Drainage Plans.
  4. For As-Built drawings of the existing drop manholes, See Sheets JC-6 thru JC-22.
  5. Adjust station and offset provided in the table for the Work Point (W.P.) to match location of existing drop manhole found in the field.
  6. Contractor shall take care during removal of the existing drop manhole not to damage the existing clay drop shaft. Any repairs to the drop shaft shall not be measured for payment and shall be as directed by the Engineer.
  7. Removal of the existing drop manhole shall be included in the cost of the Junction Chamber and shall include the existing frame and lid, riser shafts, ladder rungs, concrete, reinforcement, and weir wall as shown. See Special Provisions.
  8. See Drainage Plans for location and abandonment/maintaining of existing storm sewers in drop manholes.

JC T2 19-01	***
JC T2 20-01	***
JC T2 23-01	***
JC T2 24-01	***
JC T2 28-01	**
JC T2 32-01	**
JC T2 35-02	**
JC T2 37-01	***
JC T2 38-01	**
JC T2 41-01	**
JC T2 44-01	**
JC T2 46-01	**

**TABLE OF JUNCTION CHAMBER INFORMATION**

Junction Chamber No.	Structure No.	Work Point		Existing Drop Manhole		North Rim. EL.	South Rim. EL.	EL. a	EL. b	West Pipe Connection			East Pipe Connection			North Pipe Connection			South Pipe Connection								
		Station	Offset	No.	Type					Pipe φ	Pipe Opening	Inv. El.	c	Pipe φ	Pipe Opening	Inv. El.	d	Pipe φ	Pipe Opening	Inv. El.	e	g	Pipe φ	Pipe Opening	Inv. El.	f	j
1	JC T2 19-01	2473+21	-6.0	-	B24N	-1.37	-1.36	-6.17	-14.92	36"	44"	-12.25	2'-9"	36"	44"	-12.25	2'-9"	15"	20"	-9.13	2'-2"	2'-0"	12"	16"	-9.32	2'-4"	2'-0"
2	JC T2 20-01	2478+13	-5.0	-	B24S	2.34	2.31	-3.95	-12.70	42"	51"	-9.99	2'-2"	42"	51"	-9.99	2'-2"	-	-	-	-	-	12"	16"	-7.32	2'-6"	2'-0"
3	JC T2 23-01	2499+01	-6.0	-	B24S	1.55	1.80	-3.56	-12.31	42"	51"	-9.60	2'-2"	42"	51"	-9.60	2'-2"	-	-	-	-	-	12"	16"	-6.56	2'-2"	2'-0"
4	JC T2 24-01	2504+44	-7.0	-	B24S	-2.14	-2.31	-4.94	-13.69	42"	51"	-10.98	2'-2"	42"	51"	-10.98	2'-2"	-	-	-	-	-	15"	20"	-9.11	3'-4"	2'-0"
5	JC T2 28-01	2527+73	-7.0	-	B36S	-4.21	-4.11	-11.39	-20.14	48"	51"	-17.39	1'-7"	42"	51"	-17.39	2'-2"	-	-	-	-	-	-	-	-	-	-
6	JC T2 32-01	2554+05	-3.2	DMH-48	B36S	-3.30	-3.21	-8.46	-17.21	42"	51"	-14.50	2'-2"	42"	51"	-14.50	2'-2"	12"	16"	-10.96	1'-8"	1'-11"	12"	16"	-10.96	1'-8"	1'-11"
7	JC T2 35-01	2568+63	-3.7	DMH-51	B36S	-3.55	-3.61	-8.76	-17.51	42"	51"	-14.80	2'-2"	36"	44"	-14.80	2'-8"	-	-	-	-	-	12"	16"	-11.26	1'-8"	1'-11"
8	JC T2 37-01	2580+04	-4.2	DMH-53	B24S	-4.36	-4.19	-10.42	-19.17	36"	44"	-16.50	2'-9"	36"	44"	-16.50	2'-9"	-	-	-	-	-	-	-	-	-	-
9	JC T2 38-01	2584+42	-7.2	DMH-54	36"DR	-3.37	-3.59	-8.50	-17.25	48"	58"	-14.50	1'-7"	42"	51"	-14.50	2'-1"	12"	16"	-11.00	1'-8"	1'-11"	12"	16"	-11.00	1'-8"	1'-11"
10	JC T2 41-01	2607+79	-7.9	DMH-57	36"DR	-1.18	-1.12	-9.00	-17.75	48"	58"	-15.00	1'-7"	48"	58"	-15.00	1'-7"	-	-	-	-	-	-	-	-	-	-
11	JC T2 44-01	2620+94	-4.0	DMH-59	36"DR	-0.69	-0.56	-9.96	-18.71	42"	51"	-16.00	2'-2"	42"	51"	-16.00	2'-2"	-	-	-	-	-	-	-	-	-	-
12	JC T2 46-01	2637+82	-7.3	DMH-60	36"DR	-3.77	-3.89	-11.80	-20.55	48"	58"	-17.80	1'-7"	36"	44"	-17.80	2'-8"	-	-	-	-	-	-	-	-	-	-

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REVISIONS	
NAME	DATE

SHEET JC-2 OF JC-22

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBER, TYPE 2  
REMOVAL PLAN

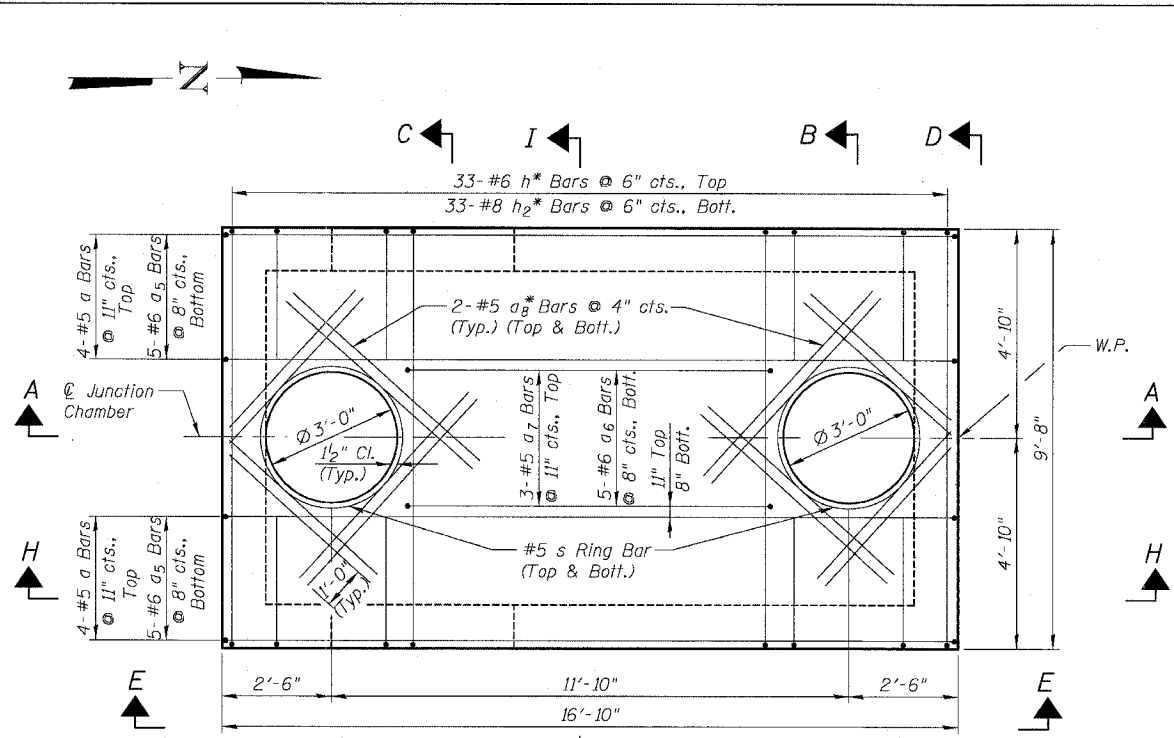
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	455
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		(1816, ETC, 2324.6-1P/R-9		

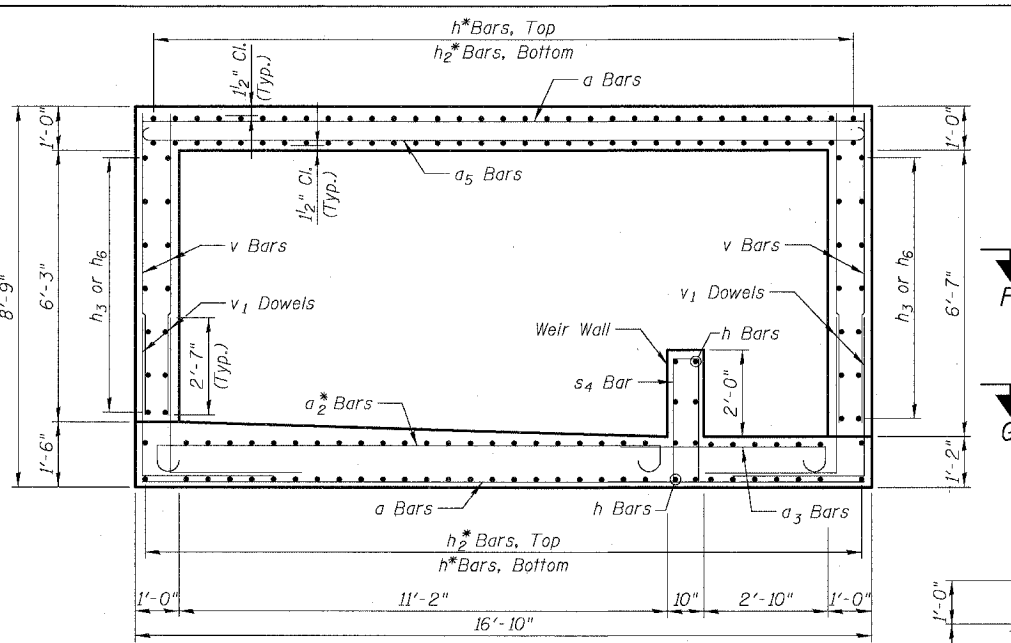
62302



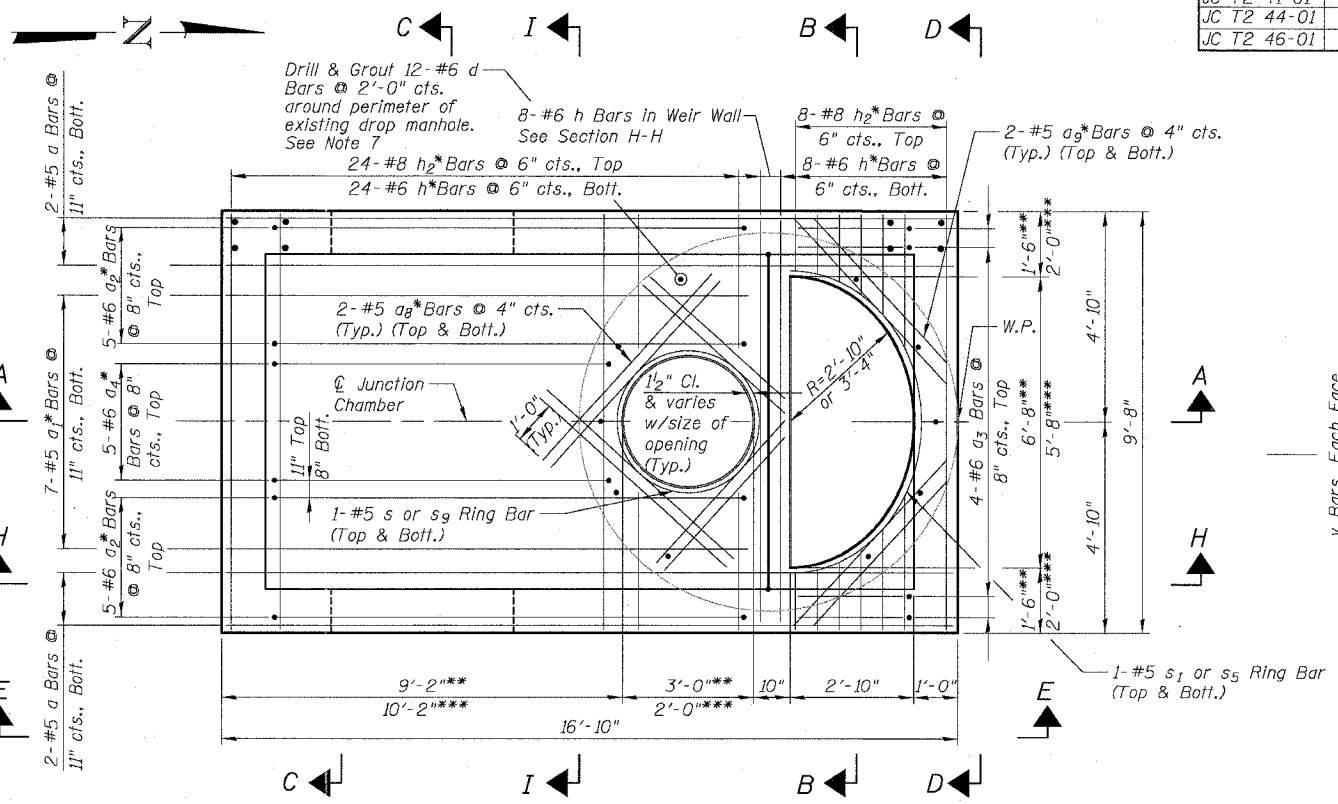
**TOP SLAB PLAN**

Adjust openings in top slab for final location of frame and grate required due to roadway barrier location. Adjust reinforcement as required for position of openings.

JC T2 19-01	***
JC T2 20-01	***
JC T2 23-01	***
JC T2 24-01	***
JC T2 28-01	**
JC T2 32-01	**
JC T2 35-02	**
JC T2 37-01	***
JC T2 38-01	**
JC T2 41-01	**
JC T2 44-01	**
JC T2 46-01	**



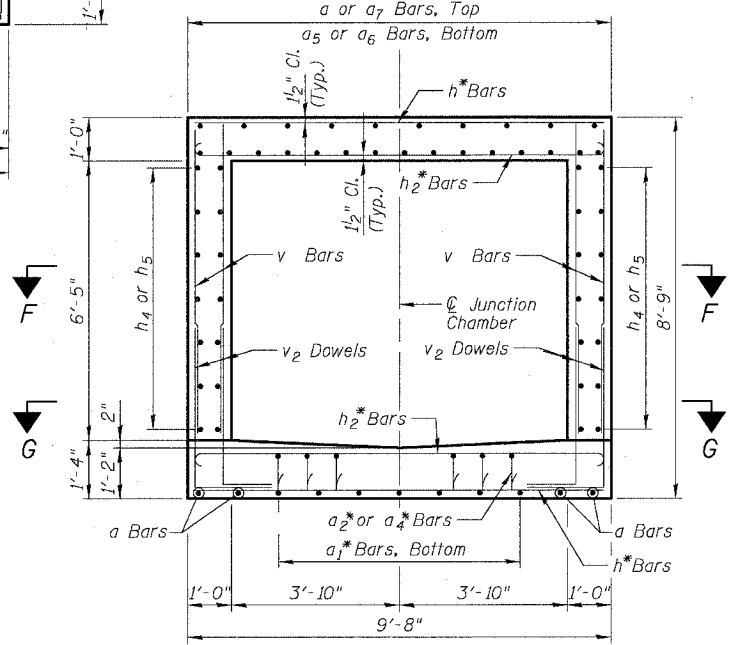
**SECTION H-H**



**BOTTOM SLAB PLAN**

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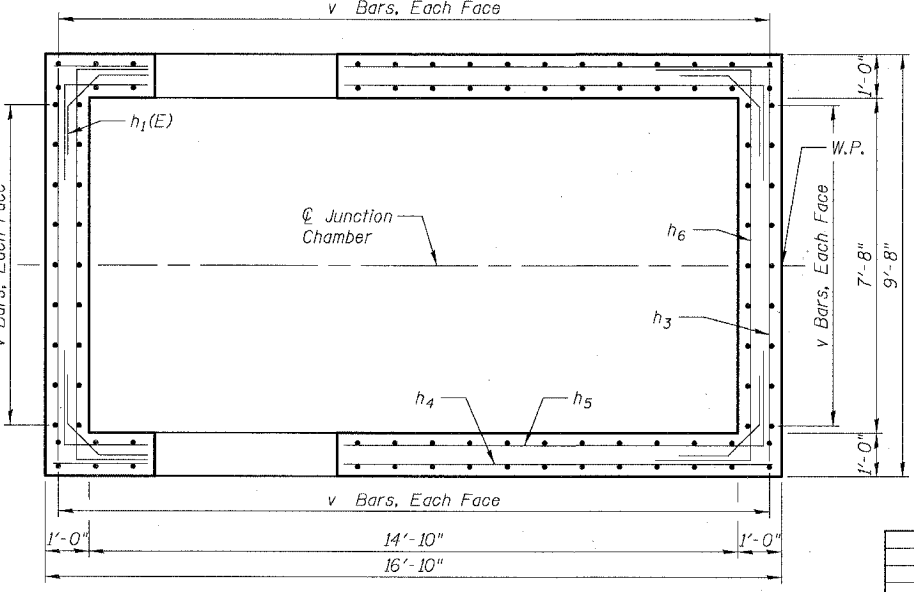
- \* - Cut bars to fit in field.
- E.F. - denotes Each Face
- E.S. - denotes Each Side
- I.F. - denotes Inside Face
- O.F. - denotes Outside Face



**SECTION I-I**

**NOTES:**

1. See Sheet JC-4 for Sections A-A, B-B, C-C, D-D and Sectional Plan G-G. See Sheet JC-5 for Section E-E and Bill of Bars.
2. All dimensions and elevations shall be field verified prior to construction.
3. Concrete pipe sizes shall be coordinated with openings provided into junction chamber before pouring concrete.
4. Manhole Frame, Ladder Rungs and any inserts installation shall be coordinated with Drainage Plans.
5. Concrete cover for reinforcement steel to be 2" unless otherwise noted.
6. All lap splices marked on the drawings are minimum.
7. Epoxy Grout #6 d bars in drilled holes with a min. depth of 9" in accordance with Art. 584 of the Std. Specs. Drill holes a min. of 4" from edge of existing concrete. Orient hook to fit.

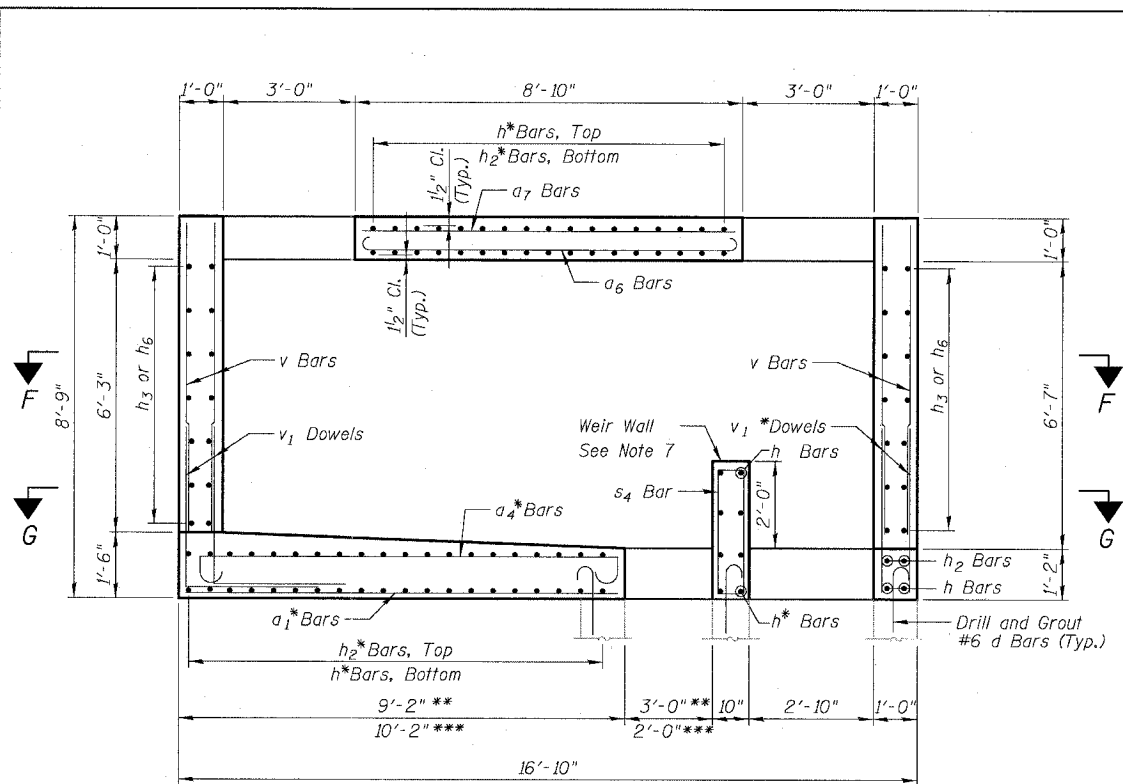


**SECTIONAL PLAN F-F**

REVISIONS	NAME	DATE

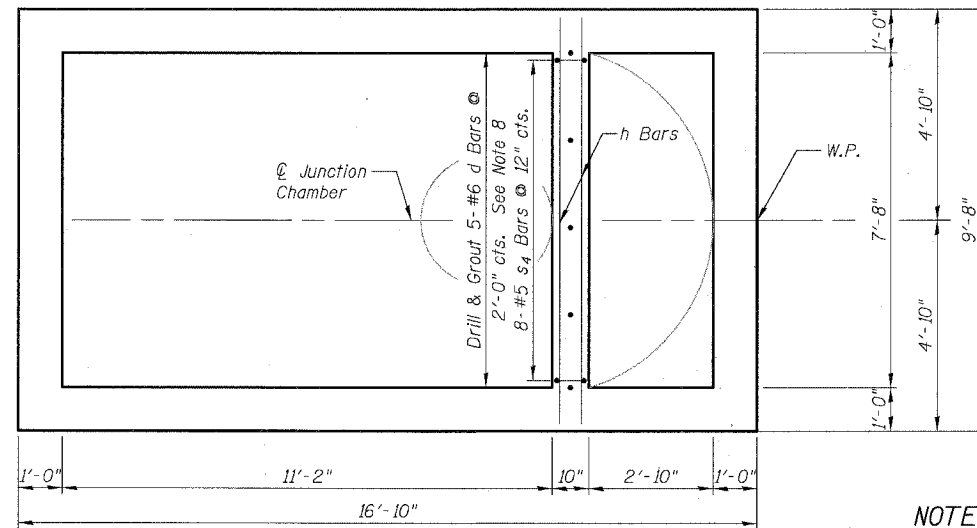
SHEET JC-3 OF JC-22  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBER, TYPE 2  
REINFORCEMENT DETAILS 1  
SCALE: N.T.S. DRAWN BY: DJM  
DATE: 07/07/05 CHECKED BY: BLU

15/28/2005 10:07:46 AM



SECTION A-A

JC T2 19-01	***
JC T2 20-01	***
JC T2 23-01	***
JC T2 24-01	***
JC T2 28-01	**
JC T2 32-01	**
JC T2 35-02	**
JC T2 37-01	***
JC T2 38-01	**
JC T2 41-01	**
JC T2 44-01	**
JC T2 46-01	**



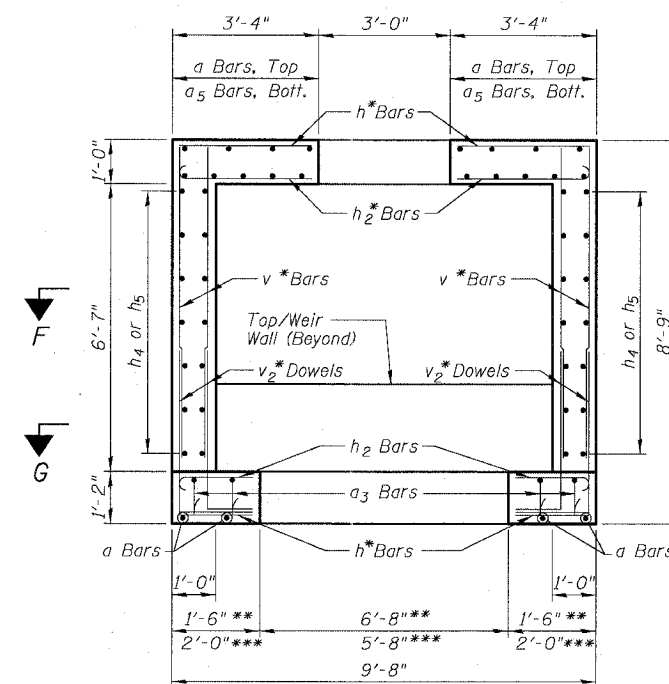
SECTIONAL PLAN G-G

See Sectional Plan F-F on Sheet JC-3  
For Reinforcement not shown

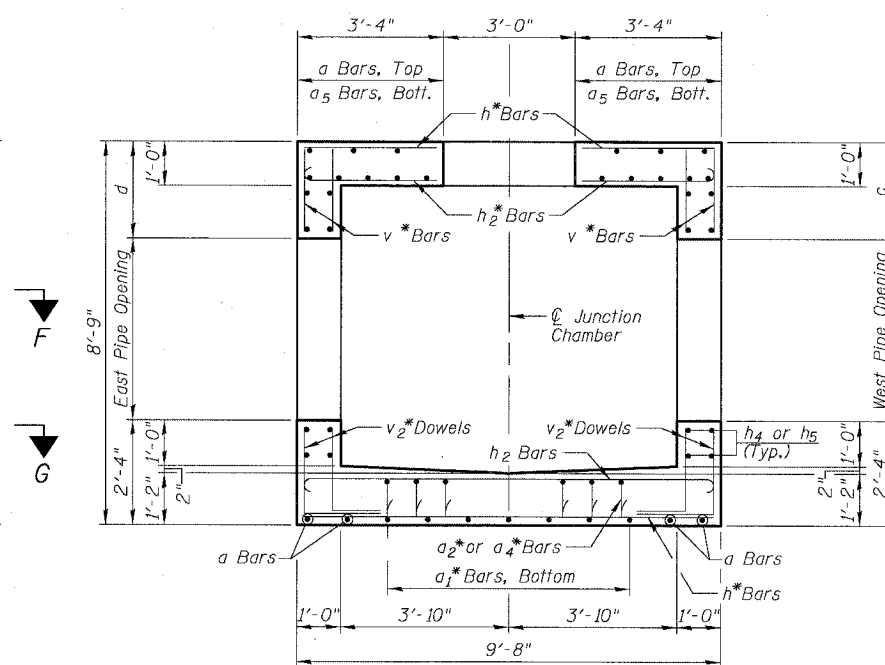
NOTES:

- All dimensions and elevations shall be field verified prior to construction.
- For Pipe Openings and dimensions c, d, e, f, g, and j, see "Table of Junction Chamber Information" on Sheet JC-2.
- Concrete pipe sizes shall be coordinated with openings provided into junction chamber before pouring concrete.
- Manhole Frame, Ladder Rungs and any inserts installation shall be coordinated with Roadway Plans.
- Concrete cover for reinforcement steel to be 2" unless otherwise noted.
- All lap splices marked on the drawings are minimum.
- Provide 1" Galvanized Rod and formed notch to match existing removed from weir wall. Cost included with Junction Chamber of the number specified.
- Epoxy Grout #6 d bars in drilled holes with a min. depth of 9" in accordance with Art. 584 of the Std. Specs. Drill holes a min. of 4" from edge of existing concrete. Orient hook to fit.

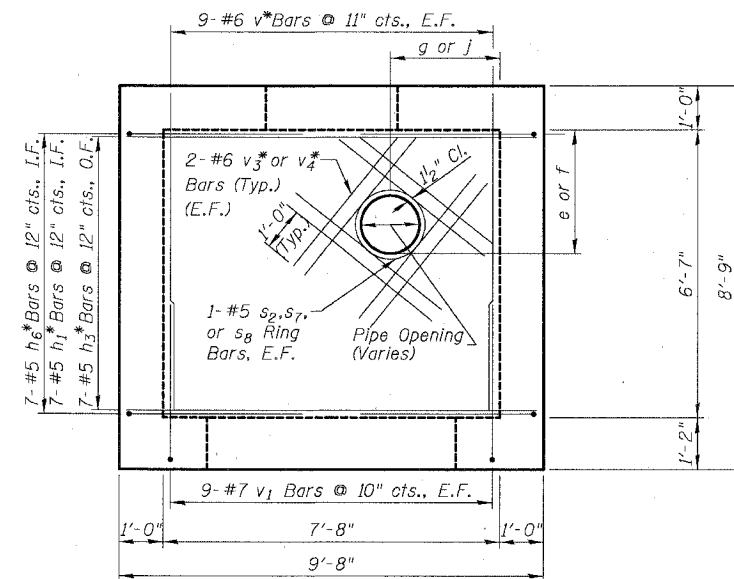
- \* - Cut bars to fit in field.
- E.F. - denotes Each Face
- E.S. - denotes Each Side
- I.F. - denotes Inside Face
- O.F. - denotes Outside Face



SECTION B-B



SECTION C-C



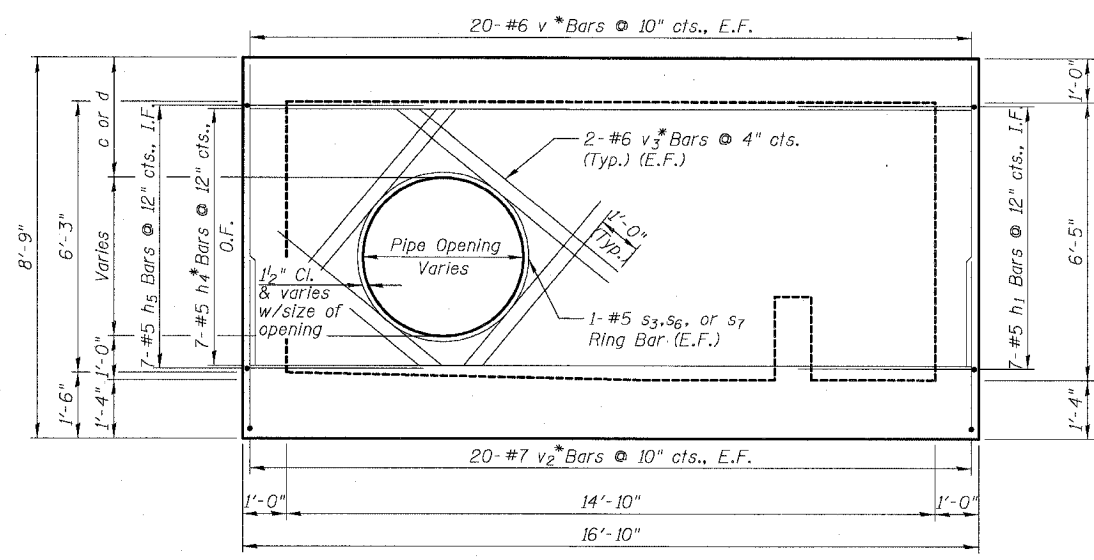
SECTION D-D  
(Opposite Wall Typical)

REVISIONS	
NAME	DATE

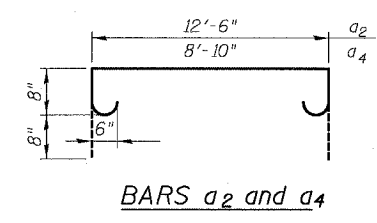
SHEET JC-4 OF JC-22

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBER, TYPE 2  
REINFORCEMENT DETAILS 2

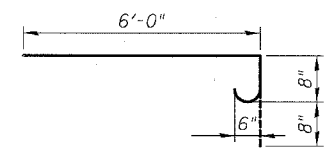
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DATE: 07/07/05      CHECKED BY: BLU



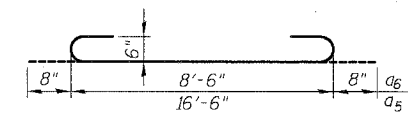
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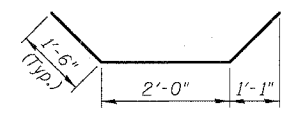
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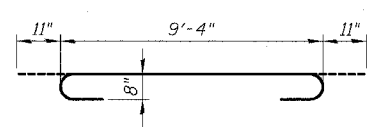
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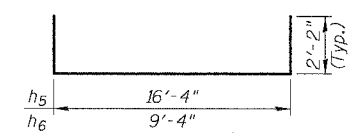
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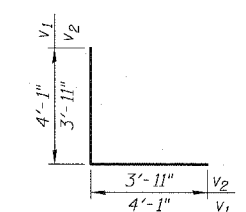
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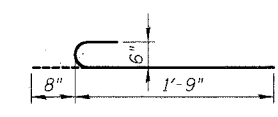
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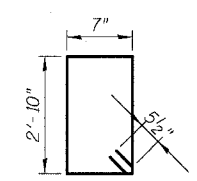
BARS h<sub>5</sub> and h<sub>6</sub>



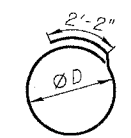
BARS v<sub>1</sub> and v<sub>2</sub>



BAR d

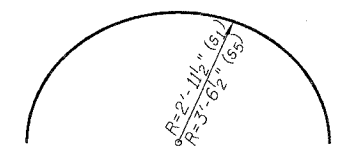


BAR s<sub>4</sub>



BARS s, s<sub>2</sub>, s<sub>3</sub>, s<sub>6</sub>, s<sub>7</sub>, s<sub>8</sub>, and s<sub>9</sub>

Pipe Sizes	Opening Size	φ	Bar
-	36"	39"	s
15"	20"	23"	s <sub>2</sub>
48"	58"	61"	s <sub>3</sub>
36"	44"	47"	s <sub>6</sub>
42"	51"	54"	s <sub>7</sub>
12"	16"	19"	s <sub>8</sub>
-	24"	27"	s <sub>9</sub>



BARS s<sub>1</sub> and s<sub>5</sub>

NOTES:

- For Pipe Openings and dimensions c and d, see "Table of Junction Chamber Information" on Sheet JC-2.
- All dimensions and elevations shall be field verified prior to construction.
- Concrete pipe sizes shall be coordinated with openings provided into junction chamber before pouring concrete.
- Manhole Frame, Ladder Rungs and any inserts installation shall be coordinated with Drainage Plans.
- Concrete cover for reinforcement steel to be 2" unless otherwise noted.
- v<sub>3</sub> Bars are for pipes 36"φ or larger. v<sub>4</sub> Bars are for 12"φ and 15"φ pipes.
- Any annular space left between the pipes and the Junction Chamber walls shall be filled with an approved non-shrink grout as directed by the Engineer.
- All lap splices marked on the drawings are minimum.
- Cut bars in field to fit pipe openings as necessary.
- The Concrete Structures and Reinforcement Bars quantities shown are for estimating purposes only. Quantity for concrete is calculated based on 3"φ Drop Shaft but without subtracting volume removed due to pipe openings in walls.

JUNCTION CHAMBER  
BAR SCHEDULE

Bar	No.	Size	Length	Shape
a	12	#5	16'-6"	—
a <sub>1</sub>	7	#5	9'-10"	—
a <sub>2</sub>	10	#6	15'-2"	U
a <sub>3</sub>	4	#6	7'-4"	U
a <sub>4</sub>	5	#6	11'-6"	U
a <sub>5</sub>	10	#6	17'-10"	U
a <sub>6</sub>	5	#6	9'-10"	U
a <sub>7</sub>	3	#5	8'-6"	—
a <sub>8</sub>	48	#5	5'-11"	—
a <sub>9</sub>	8	#5	6'-0"	—
d	17	#6	2'-5"	U
h	73	#6	9'-4"	—
h <sub>1</sub>	28	#5	5'-0"	—
h <sub>2</sub>	65	#8	11'-2"	U
h <sub>3</sub>	14	#5	9'-4"	—
h <sub>4</sub>	14	#5	16'-4"	—
h <sub>5</sub>	14	#5	20'-8"	—
h <sub>6</sub>	14	#5	13'-8"	—
s	62	#5	12'-4"	○
s <sub>1</sub>	10	#5	9'-3"	○
s <sub>2</sub>	4	#5	7'-0"	○
s <sub>3</sub>	8	#5	17'-1"	○
s <sub>4</sub>	8	#5	7'-9"	○
s <sub>5</sub>	14	#5	11'-2"	○
s <sub>6</sub>	12	#5	13'-4"	○
s <sub>7</sub>	28	#5	15'-3"	○
s <sub>8</sub>	18	#5	6'-1"	○
s <sub>9</sub>	10	#5	8'-2"	○
v	116	#6	7'-0"	—
v <sub>1</sub>	36	#7	8'-2"	L
v <sub>2</sub>	80	#7	7'-10"	L
v <sub>3</sub>	384	#6	8'-0"	—
v <sub>4</sub>	176	#6	4'-3"	—
Concrete Structures		Cu. Yd.	24.3	
Reinforcement Bars		Pound	9,300	

① Bars indicated are for all Junction Chambers. Use Bar at appropriate opening. Weight of Reinforcement Bars Indicated is for JC T2 19-01.

- \* - Cut bars to fit in field.
- E.F. - denotes Each Face
- E.S. - denotes Each Side
- I.F. - denotes Inside Face
- O.F. - denotes Outside Face

REVISIONS	
NAME	DATE

SHEET JC-5 OF JC-22  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBER, TYPE 2  
REINFORCEMENT DETAILS 3  
SCALE: N.T.S. DRAWN BY: DJM  
DATE: 01/07/05 CHECKED BY: BLU

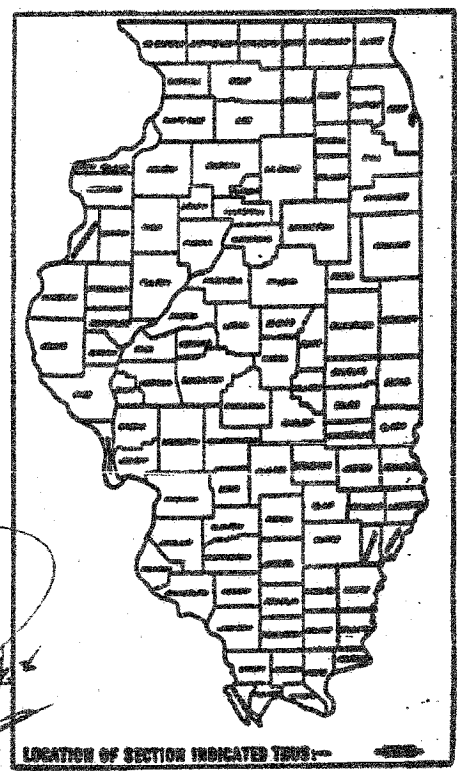
40256  
DR #11

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS  
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

F.A.I. ROUTE 94 SEC. 2022-932T  
F.A.I. ROUTE 94 SEC. 2022-933T  
MAIN DRAIN & FRONTAGE ROAD SEWERS

SOUTH EXPRESSWAY

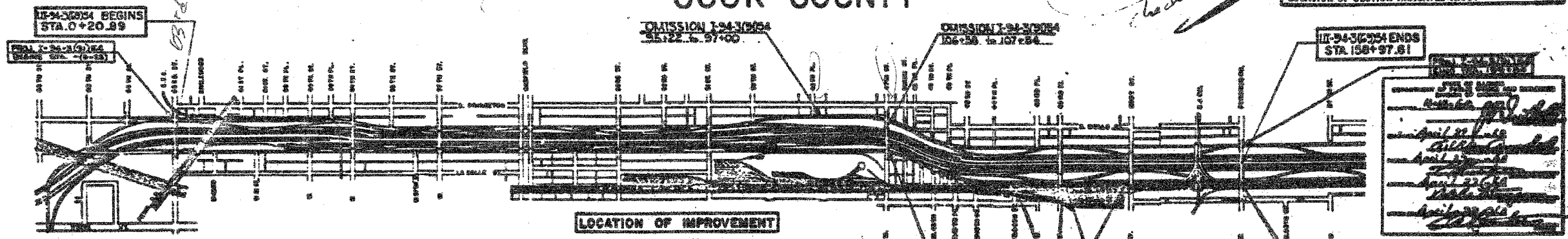
PROJECT UI-94-3(69)54 &  
PROJECT I-94-3(91)54  
COOK COUNTY



DESCRIPTION OF PROJECT

**SECTION 2022-932T**  
THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A MAIN DRAIN COLLECTOR SEWER IN TUNNEL OF THE SIZE INDICATED ON THE PLANS AND THE CONSTRUCTION OF MANHOLES ALONG THE SOUTH EXPRESSWAY FROM 63rd STREET TO FERNBERG ROAD AS SHOWN ON THE PLANS.

**SECTION 2022-933T**  
THE CONSTRUCTION OF FRONTAGE ROAD SEWERS ALONG THE EAST AND WEST SIDES OF THE SOUTH EXPRESSWAY, AND ALL OTHER INCIDENTAL WORK NECESSARY TO COMPLETE THE PROJECT AS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIAL PROVISIONS.  
SEE SHEET NO.2 FOR GENERAL NOTES & INDEX OF SHEETS.  
SEE SHEET NO.3 FOR SUMMARY OF QUANTITIES.



PREPARED BY: *[Signature]*  
 EXAMINED BY: *[Signature]*  
 EXAMINED BY: *[Signature]*  
 ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY BY: *[Signature]*

LENGTH OF MAIN DRAIN STORM SEWER 15,876.72 FEET (3.007 MILES) (PROJECT I-94-3(91)54)  
 LENGTH WL FRONTAGE ROAD STORM SEWERS 15,713 FEET 2.976 MILES (PROJECT I-94-3(91)54)  
 PLANS PREPARED BY: DE LUW CATHEN & CO ENGINEERS CHICAGO

REVISIONS  
 NAME DATE  
 [Handwritten notes and signatures]

DEPARTMENT OF COMMERCE  
 BOARD OF PUBLIC WORKS  
 [Signature]

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	458
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62302		*1818, ETC. 2324.6-1PR-9		

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

FOR INFORMATION ONLY

REVISIONS	NAME	DATE

SHEET JC- 6 OF JC-22  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS  
 SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	459
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*(1816, ETC, 23246-1)PR-9		

**GENERAL NOTES**

CONTRACTOR AND SUB-CONTRACTORS ARE WARNED THAT NO SEWER CARRYING LIVE SEWAGE MAY BE DESTROYED OR INTERRUPTED IN ANYWAY UNTIL PROVISION IS MADE FOR ITS FLOW ACCEPTABLE TO THE BUREAU OF SEWERS, CITY OF CHICAGO.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS, OR CATCH BASINS. HE SHALL PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. HE SHALL PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT, IF NECESSARY, AND A TEMPORARY OUTLET, AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL SUCH TIME AS THE PERMANENT CONNECTIONS WITH THE SEWERS ARE BUILT AND IN SERVICE AND ACCEPTED BY THE BUREAU OF SEWERS. THE WORK SHALL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

IF THE PLACEMENT OF MANHOLES OR CONNECTIONS NECESSITATE REMOVING ANY TREES, TEMPORARY REMOVAL AND REPLACEMENT OF ANY LIGHT POSTS, OR REROUTING OF EXISTING UTILITIES, THE WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLES, OR CONNECTIONS.

THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND SHALL USE EVERY PRECAUTION NECESSARY TO PREVENT DAMAGE AND INJURY THEREOF. THE COST OF THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ALL WORK INVOLVING A PRIVATE UTILITY WILL BE PERFORMED BY THE UTILITY INVOLVED. WORK INVOLVING THE CITY OF CHICAGO, BUREAU OF WATER WILL BE PERFORMED BY BUREAU FORCES. COORDINATION OF ALL UTILITY WORK INVOLVED IN THE CONSTRUCTION AREA WILL BE DISCUSSED AT THE BOARD OF UNDERGROUND UTILITIES MEETING AND AT A PRE-CONSTRUCTION CONFERENCE.

INVERT ELEVATIONS SHOWN FOR SEWERS ARE FOR THE DOWN STREAM END AT THE INSIDE WALL OF THE STRUCTURE, UNLESS OTHERWISE NOTED.

WHERE THE INVERT ELEVATION OF A SEWER IS NOT SHOWN THE PIPE SHALL BE LAID ON A SLOPE OF 1% (PER CENT)

A DEDUCTION OF 4 FT. OR 5 FT. OF STORM SEWER HAS BEEN MADE AT EACH TYPE A MANHOLE, AND A DEDUCTION OF 5 FT. AND 10 FT. OF SEMI-ELLIPTICAL STORM SEWER HAS BEEN MADE RESPECTIVELY AT EACH TYPE B OR TYPE C MANHOLE, AND A DEDUCTION OF 6 FT. HAS BEEN MADE AT EACH TYPE D MANHOLE AND A DEDUCTION OF CONSTRUCTED LENGTH HAS BEEN MADE AT EACH CONNECTION AND AT EACH TYPE "E" MANHOLE.

LARGER SIZES SHALL BE INCLUDED IN ALL MANHOLES.

**MAIN DRAIN SEWER NOTES**

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR ROCK EXCAVATION FOR ONLY THE ROCK ACTUALLY ENCOUNTERED WITHIN THE AREA ENCOMPASSED BY THE "HEAT LINE" AS SHOWN ON THE DETAIL SHEETS FOR SEMI-ELLIPTICAL CONCRETE SEWER IN TUNNEL. THE QUANTITY AS SHOWN ON THE SUMMARY OF QUANTITIES IS AN ESTIMATED QUANTITY BASED ON ALL AVAILABLE INFORMATION AT THE OFFICE OF THE ILLINOIS DIVISION OF HIGHWAYS.

THE CONTRACTOR WILL NOT BE PERMITTED TO BREAK UP ROCK BY BLASTING BETWEEN STATIONS 81+00 TO 82+00. ROCK SHALL BE BROKEN BY MECHANICAL MEANS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY BRACES, SHORING AND SUPPORTS TO MAINTAIN EXISTING 18" x 20" SEMI-ELLIPTICAL SEWER ON GARFIELD BLVD. AT STATION 82+10.01 & CONSTRUCTION. SEE SPECIAL PROVISIONS.

**MANHOLE MANHOLES:**

- SEAL MANHOLE BELOW EXISTING GROUND TO PREVENT FOREIGN MATERIALS FROM ENTERING SEWER.
- EXCAVATION FROM SEWER TO PROPOSED TOP OF MANHOLE SHALL BE BACKFILLED WITH TRENCH BACKFILL.
- PLACE 2"x2" WOOD MARKERS ON TOP OF MANHOLE AND EXTEND 3 FEET ABOVE EXISTING GROUND. THE EXTENDED PORTION OF MARKER IS TO BE PAINTED YELLOW, WITH THE LETTERS M.S. AND THE STATION OF MANHOLE SUPERIMPOSED IN BLACK PAINT.
- THE COST OF THE 2"x2" WOOD MARKERS, TRENCH BACKFILL AND BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLE.

**FRONTAGE ROAD SEWER NOTES**

ALL SEWERS ON CITY STREETS AND FRONTAGE ROADS, 27" DIAMETER AND SMALLER SHALL BE OF VITRIFIED CLAY PIPE, CONFORMING TO A.S.T.M. DESIGNATION C200-571. ALL SEWERS LARGER THAN 27 INCHES DIAMETER SHALL BE OF REINFORCED CONCRETE IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS.

UNDERMINING OF SEWERS AS CALLED FOR ON THE PLANS WILL BE ACCOMPLISHED AS CALLED FOR IN THE SPECIAL PROVISIONS "PLUGGING EXISTING DRAINS & SEWERS" AND PAYMENT WILL BE MADE FOR PLUGGING EXISTING DRAINS & SEWERS (12" OR LESS) OR PLUGGING EXISTING DRAINS AND SEWERS (OVER 12").

PROPOSED STOPS FOR FUTURE CONNECTIONS SHALL BE SEALED WITH A STOPPER. THE COST OF THE STOPPER SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION SHALL BE ALLOWED.

TYPE "A" CATCH BASINS SHALL HAVE CONCENTRIC CORNER. UNIT HALF-TAPS ON TYPE "A" CATCH BASIN.

CONNECTIONS OF SEWERS TO EXISTING MANHOLES AS SHOWN ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.

1" CONNECTION FITTINGS SHALL BE INSTALLED IN PROPOSED SEWER LINES TO CONNECT EACH DOMESTIC AND INDUSTRIAL DRAINS AND STREET SEWERS THAT ARE ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS OF THIS IMPROVEMENT. CONNECTIONS OF 1" CONNECTION FITTINGS SHALL BE INCIDENTAL TO THE WORK AND PAYMENT SHALL BE INCLUDED IN THE PRICE FOR LOCAL PORT OF THE SEWERS.

WHEN A CONNECTION IS MADE TO AN EXISTING SEWER 27 INCHES OR LESS IN DIAMETER A LENGTH OF EXISTING PIPE SHALL BE REMOVED AND REPLACED WITH A 1" CONNECTION FITTING. THE REMOVAL OF EXISTING PIPE AND REPLACING THE 1" CONNECTION FITTING SHALL BE INCIDENTAL TO THE WORK AND PAYMENT SHALL BE INCLUDED IN THE PRICE FOR LOCAL PORT OF THE SEWERS.

**(CONTINUED)**

REMOVAL & REPLACEMENT OF EXISTING PAVEMENT SHALL BE REQUIRED WHEN REMOVED DUE TO PROPOSED SEWER CONSTRUCTION, AND SUBSEQUENTLY SUBJECT TO TRAFFIC, WILL BE PAID FOR RESPECTIVELY AS PAVEMENT REPLACEMENT-ENTIRE OR PAVEMENT REMOVAL AND REPLACEMENT, SPECIAL (107)

REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK SHALL BE REQUIRED WHEN REMOVED DUE TO PROPOSED SEWER CONSTRUCTION, AND SUBSEQUENTLY SUBJECT TO TRAFFIC, WILL BE PAID FOR RESPECTIVELY AS:

- a) SIDEWALK REMOVAL AND
- b) PORTLAND CEMENT CONCRETE SIDEWALK 2 INCH AT LOCATIONS SHOWN ON PLANS WHERE SIDEWALK WILL BE REMOVED ON SUBSEQUENT CONTRACTS.
- OR c) PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH AT LOCATIONS SHOWN ON PLANS.

REMOVAL AND REPLACEMENT OF EXISTING CURBS OR CURB & GUTTER SHALL BE REQUIRED WHEN REMOVED DUE TO PROPOSED SEWER CONSTRUCTION, AND SUBSEQUENTLY SUBJECT TO TRAFFIC WILL BE PAID FOR RESPECTIVELY AS:

- a) CURB REMOVAL AND
- b) CONCRETE CURB TYPE B AT LOCATIONS SHOWN ON PLANS WHERE CURBS WILL BE REMOVED ON SUBSEQUENT CONTRACTS
- OR c) COMBINATION CONCRETE CURB AND GUTTER TYPE 3 AT LOCATIONS SHOWN ON PLANS

Two (2) Standard 2134-S signs shall be erected at locations as directed by the Engineer.

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51	SPECIAL MANHOLE TYPE 600C
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87	STANDARDS: 1007-1; 10-20; 1810
88	STANDARDS: 1700-1; 1000-1; 2110
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**ILLINOIS DIVISION OF HIGHWAYS**  
SOUTH EXPRESSWAY  
**GENERAL NOTES & INDEX OF SHEETS**

SHEET JC- 7 OF JC-22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS

SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
CHECKED BY: BLU

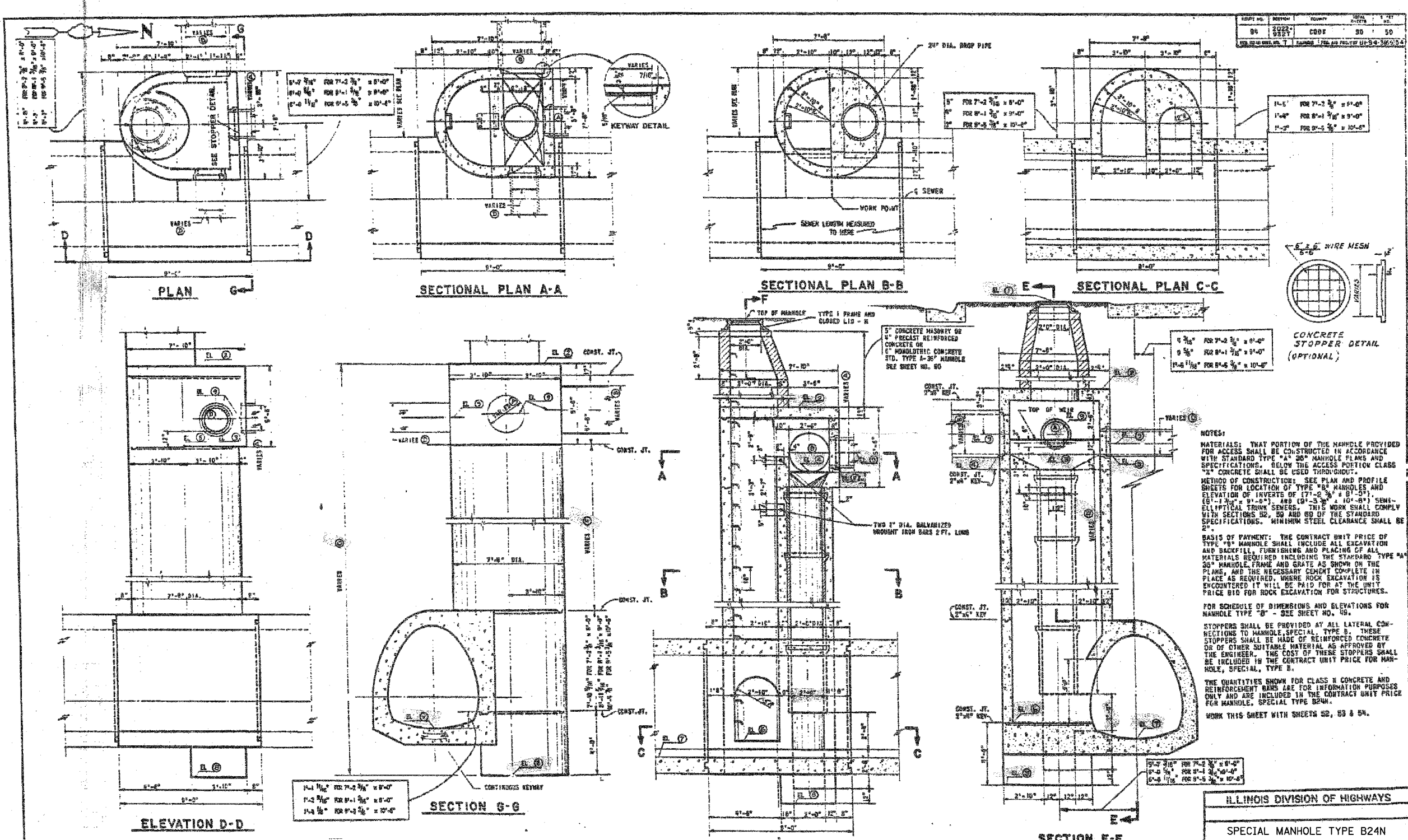
FOR INFORMATION ONLY

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

11/58/00 AM 6/24/2005



F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	461
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*1818, ETC, 2324.6-1P1R-9		



**NOTES:**

MATERIALS: THAT PORTION OF THE MANHOLE PROVIDED FOR ACCESS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD TYPE "A" 26" MANHOLE PLANS AND SPECIFICATIONS. BELOW THE ACCESS PORTION CLASS "B" CONCRETE SHALL BE USED THROUGHOUT.

METHOD OF CONSTRUCTION: SEE PLAN AND PROFILE SHEETS FOR LOCATION OF TYPE "B" MANHOLES AND ELEVATION OF INVERTS OF (7'-0" DIA. x 8'-0") (8'-0" DIA. x 9'-0") AND (9'-0" DIA. x 10'-0") SEMI-ELLIPTICAL TRUNK SEWERS. THIS WORK SHALL COMPLY WITH SECTIONS 82, 83 AND 84 OF THE STANDARD SPECIFICATIONS. MINIMUM STEEL CLEARANCE SHALL BE 2".

BASIS OF PAYMENT: THE CONTRACT UNIT PRICE OF TYPE "B" MANHOLE SHALL INCLUDE ALL EXCAVATION AND BACKFILL, FURNISHING AND PLACING OF ALL MATERIALS REQUIRED INCLUDING THE STANDARD TYPE "A" 26" MANHOLE FRAME AND GRATE AS SHOWN ON THE PLANS, AND THE NECESSARY CEMENT COMPLETE IN PLACE AS REQUIRED, WHERE ROCK EXCAVATION IS ENCOUNTERED IT WILL BE PAID FOR AT THE UNIT PRICE B10 FOR ROCK EXCAVATION FOR STRUCTURES.

FOR SCHEDULE OF DIMENSIONS AND ELEVATIONS FOR MANHOLE TYPE "B" - SEE SHEET NO. 48.

STOPPERS SHALL BE PROVIDED BY ALL LATERAL CONNECTIONS TO MANHOLE, SPECIAL TYPE B. THESE STOPPERS SHALL BE MADE OF REINFORCED CONCRETE OR OF OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER. THE COST OF THESE STOPPERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE, SPECIAL, TYPE B.

THE QUANTITIES SHOWN FOR CLASS B CONCRETE AND REINFORCEMENT BARS ARE FOR INFORMATION PURPOSES ONLY AND ARE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE, SPECIAL TYPE B24N.

WORK THIS SHEET WITH SHEETS 52, 53 & 54.

REVISIONS	
NAME	DATE

SHEET JC- 9 OF JC-22

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS

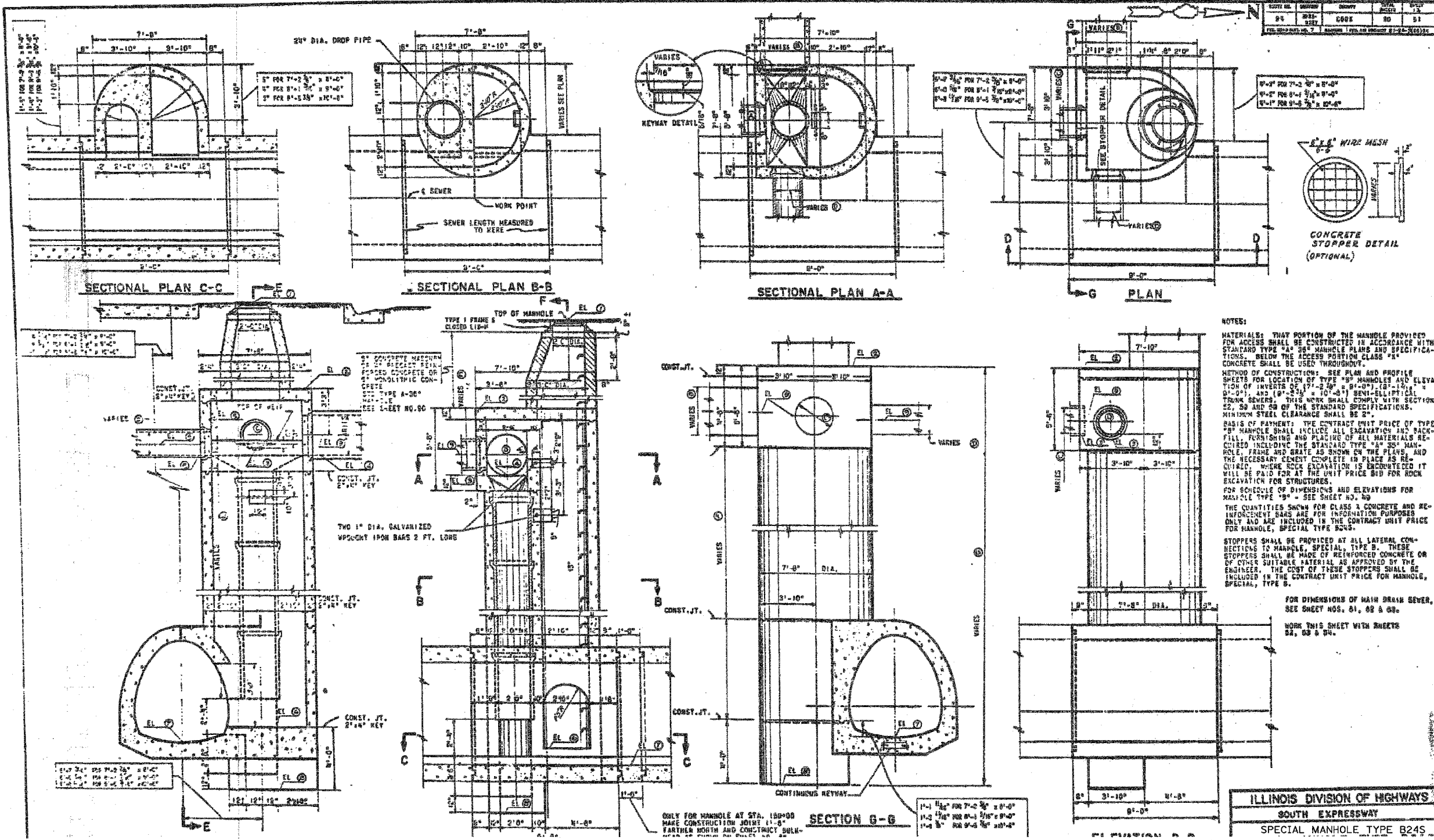
SCALE: NTS  
 DATE: 07/07/05

DRAWN BY: BDC  
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6/28/2005 10:02:58 AM



ILLINOIS DIVISION OF HIGHWAYS  
SOUTH EXPRESSWAY  
SPECIAL MANHOLE TYPE B24S

SHEET JC-10 OF JC-22

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS

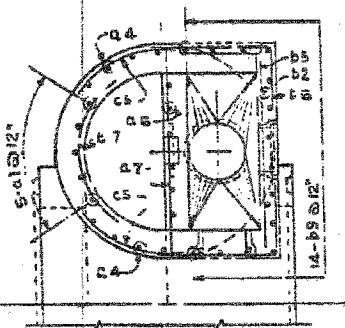
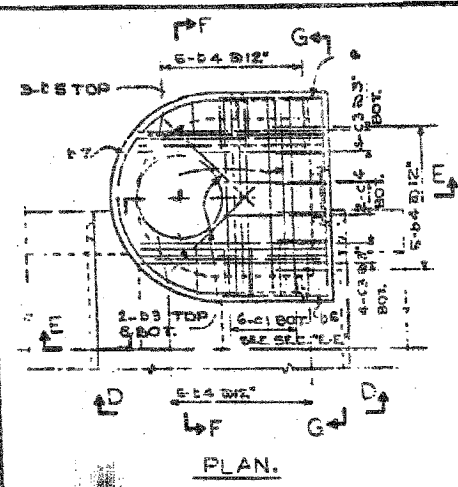
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DATE: 07/07/05  
DRAWN BY: BDC  
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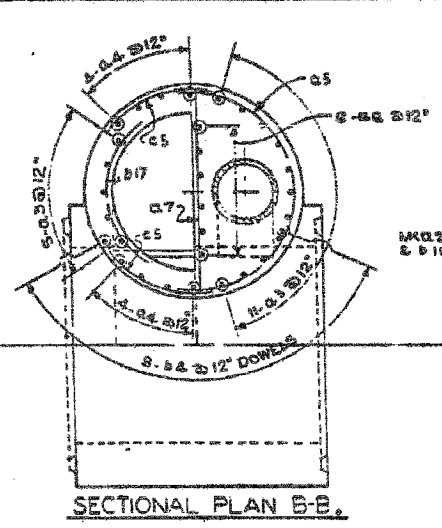
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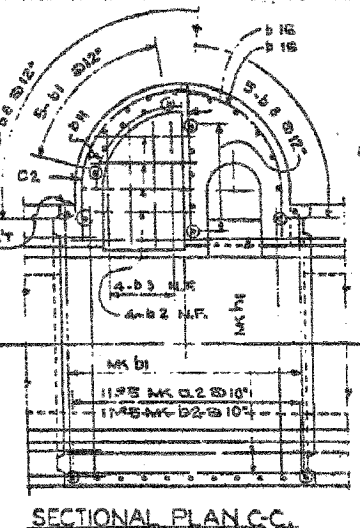
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	463
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		*1818, ETC, 2324.6-1P1R-9		



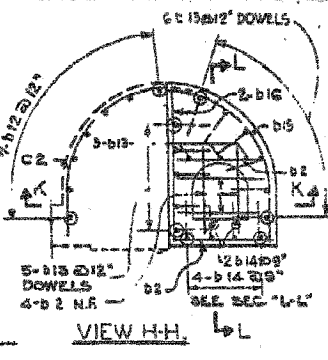
SECTIONAL PLAN A-A



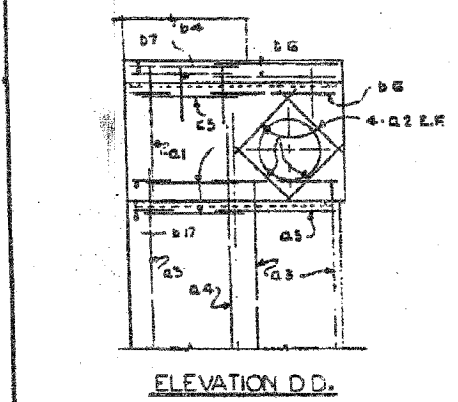
SECTIONAL PLAN B-B



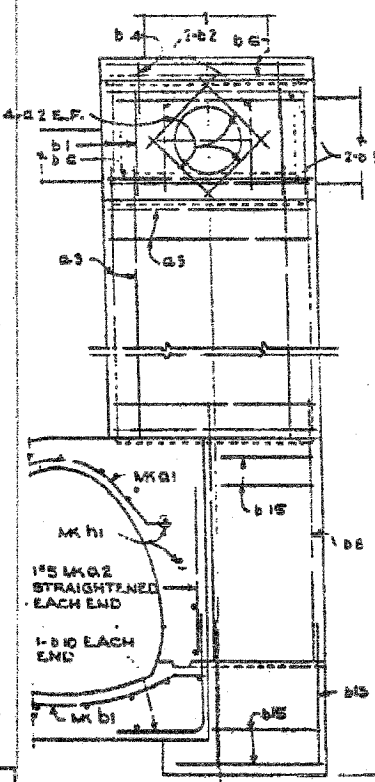
SECTIONAL PLAN C-C



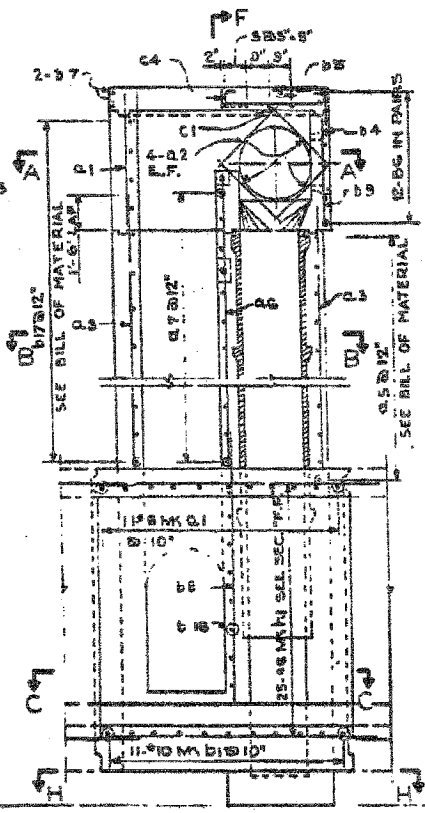
VIEW H-H



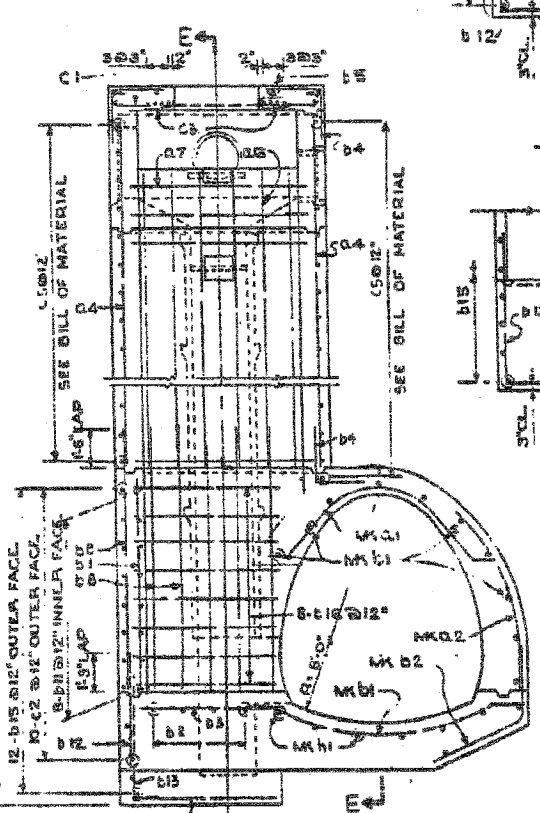
ELEVATION D-D



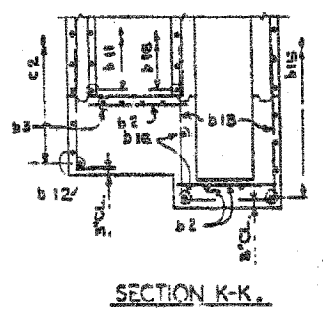
SECTION G-G



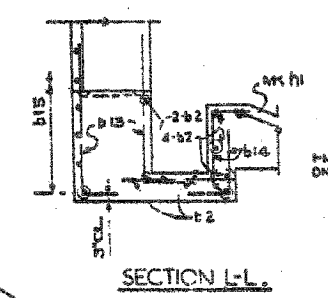
SECTION E-E



SECTION F-F



SECTION K-K



SECTION L-L

BAR	A	B	C
B4	2'-0"	2'-0"	
B6	4'-9"	4'-9"	
B10	4'-3"	3'-0"	
B15	2'-6"	7'-3"	
B14	1'-5"	7'-3"	

BAR	A	B	C
B7	2'-0"	1'-7"	3'-0"
C5	4'-3"	8'-0"	3'-0"
D11	4'-3"	10'-4"	3'-0"

BAR	A	B	C
C2	7'-6"	1'-4"	3'-0"
B18	5'-7"	3'-5"	3'-0"

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

NOTES:  
 MINIMUM STEEL CLEARANCE SHALL BE 2" EXCEPT AS NOTED  
 MINIMUM LAP OF REINFORCEMENT SHALL BE 33 DIAMETERS  
 BEND IF POSSIBLE OR BURN OFF REINFORCING BARS  
 IN FIELD TO CLEAR OBSTACLES

REINFORCING  
 TYPE S-24 N SHOWN  
 TYPE S-24 S OPPOSITE SIDE

F.A.I.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
94	COOK	60	52	52

**BILL OF MATERIAL**  
 BARS TYPICAL OF ALL TYPE 'B' MANHOLES

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
B4	2	2"	0"		1.7
B6	2	4"	9"		11.8
B10	2	4"	3"		1.3
B15	2	2"	6"		1.1
B14	2	1"	5"		0.3
B7	2	2"	0"		1.7
C5	2	4"	3"		1.3
D11	2	4"	3"		1.3
C2	2	7"	6"		25.7
B18	2	5"	7"		13.5
<b>TOTAL</b>					<b>58.2</b>

**ADDITIONAL BARS FOR MANHOLE AT STATION**  
 6+80.4 22+88

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
B4	16	2"	0"		23.5
B6	8	4"	9"		13.9
B10	2	4"	3"		1.3
B15	2	2"	6"		1.1
B14	2	1"	5"		0.3
<b>TOTAL</b>					<b>40.1</b>

**ADDITIONAL BARS FOR MANHOLE AT STA. 38+13**

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
B4	16	2"	0"		23.5
B6	8	4"	9"		13.9
B10	2	4"	3"		1.3
B15	2	2"	6"		1.1
B14	2	1"	5"		0.3
<b>TOTAL</b>					<b>40.1</b>

**ADDITIONAL BARS FOR MANHOLE AT STA. 38+13**

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
B4	16	2"	0"		23.5
B6	8	4"	9"		13.9
B10	2	4"	3"		1.3
B15	2	2"	6"		1.1
B14	2	1"	5"		0.3
<b>TOTAL</b>					<b>40.1</b>

ILLINOIS DIVISION OF HIGHWAYS  
 SOUTH EXPRESSWAY  
 REINFORCING  
 SPECIAL MANHOLE TYPE "B" 24  
 MAIN DRAIN

REVISIONS	NAME	DATE

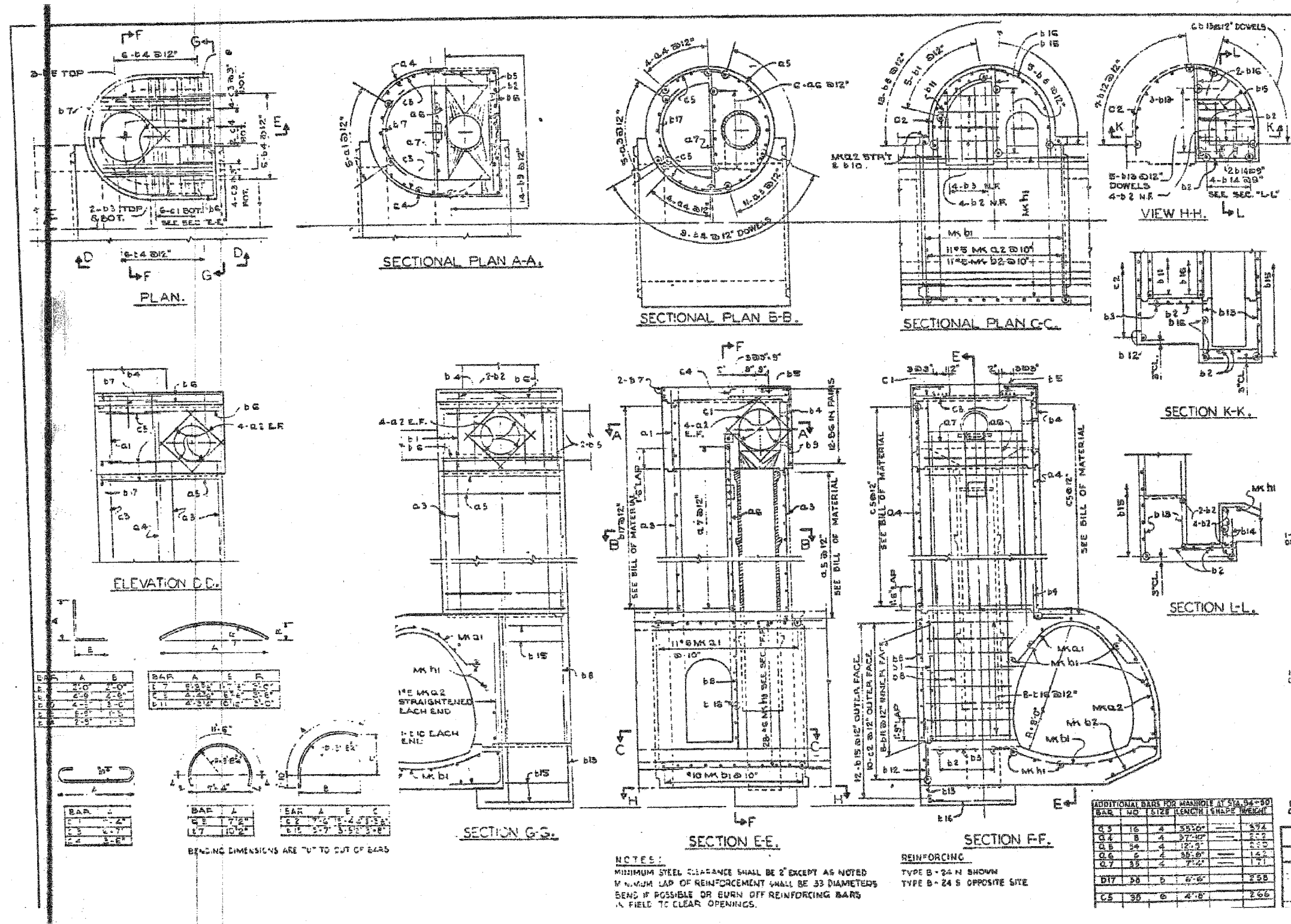
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS

SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

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BILL OF MATERIAL				
BARS TYPICAL OF ALL TYPE B MANHOLES				
BAR NO.	SIZE	LENGTH	SHAPE	WEIGHT
D1	2	2	2	1.7
D2	2	2	2	1.7
D3	2	2	2	1.7
D4	2	2	2	1.7
D5	2	2	2	1.7
D6	2	2	2	1.7
D7	2	2	2	1.7
D8	2	2	2	1.7
D9	2	2	2	1.7
D10	2	2	2	1.7
D11	2	2	2	1.7
D12	2	2	2	1.7
D13	2	2	2	1.7
D14	2	2	2	1.7
D15	2	2	2	1.7
D16	2	2	2	1.7
D17	2	2	2	1.7
D18	2	2	2	1.7
D19	2	2	2	1.7
D20	2	2	2	1.7
D21	2	2	2	1.7
D22	2	2	2	1.7
D23	2	2	2	1.7
D24	2	2	2	1.7
D25	2	2	2	1.7
D26	2	2	2	1.7
D27	2	2	2	1.7
D28	2	2	2	1.7
D29	2	2	2	1.7
D30	2	2	2	1.7
C1	6	6	6	7.8
C2	10	6	6	14.6
C3	8	6	6	9.1
C4	2	6	6	1.1
MK Q1	11	6	11	18.6
MK Q2	15	6	11	26.4
MK Q3	11	10	11	22.2
MK Q4	20	6	11	36.2
ADDITIONAL BARS FOR MANHOLES AT STATIONS 71+20 & 76+00				
D3	16	4	24	2.62
D4	8	4	27	1.6
D5	22	4	12	2.64
D6	6	4	25	1.00
D7	28	4	7	1.22
D17	28	5	6	1.80
C5	28	6	4	1.86
TOTAL WEIGHT REIN. BARS LBS 3887				
TOTAL VOL. CLASS X CONCRETE CU YDS 50.5				
ADDITIONAL BARS FOR MANHOLE AT STA. 87+40				
D3	16	4	22	2.23
D4	8	4	25	1.37
D5	22	4	12	2.67
D6	6	4	23	1.05
D7	23	4	7	1.13
D17	28	5	6	1.76
C5	26	6	4	1.62
TOTAL WEIGHT REIN. BARS LBS 3806				
TOTAL VOL. CLASS X CONCRETE CU YDS 47.8				
ADDITIONAL BARS FOR MANHOLE AT STA. 94+00				
D3	16	4	25	3.04
D4	8	4	27	1.67
D5	28	4	12	2.98
D6	6	4	23	1.15
D7	29	4	7	1.42
D17	32	5	6	2.17
C5	32	6	4	2.24
TOTAL WEIGHT REIN. BARS LBS 4208				
TOTAL VOL. CLASS X CONCRETE CU YDS 54.2				

NOTES:  
 MINIMUM STEEL CLEARANCE SHALL BE 2" EXCEPT AS NOTED  
 MINIMUM LAP OF REINFORCEMENT SHALL BE 33 DIAMETERS  
 BEND IF POSSIBLE OR BURN OFF REINFORCING BARS  
 IN FIELD TO CLEAR OPENINGS.

REINFORCING  
 TYPE B-24 N SHOWN  
 TYPE B-24 S OPPOSITE SIDE

ILLINOIS DIVISION OF HIGHWAYS  
 SOUTH EXPRESSWAY  
 REINFORCING  
 SPECIAL MANHOLE TYPE "B" 24  
 MAIN DRAIN

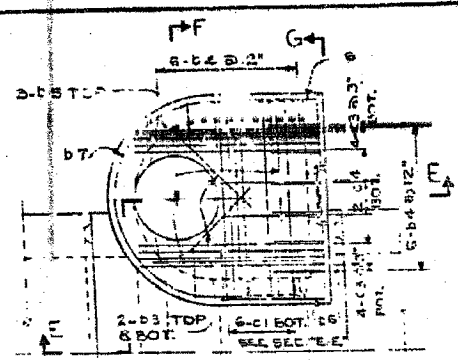
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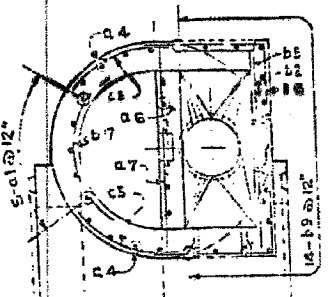
REVISIONS	
NAME	DATE

SHEET JC-12 OF JC-22  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS  
 SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

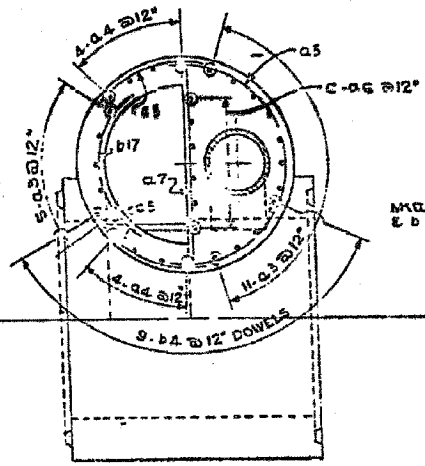
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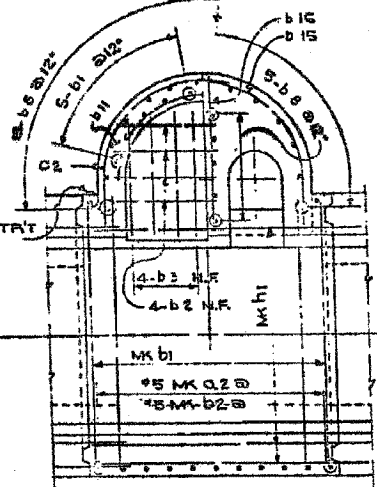
PLAN.



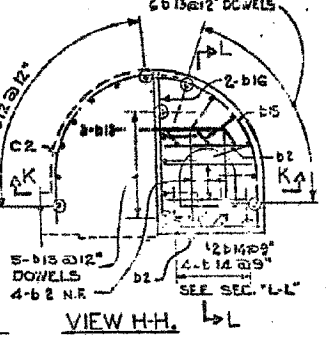
SECTIONAL PLAN A-A.



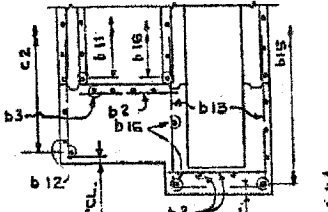
SECTIONAL PLAN B-B.



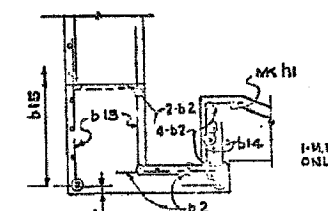
SECTIONAL PLAN C-C.



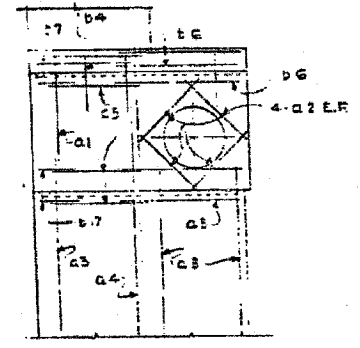
VIEW H-H.



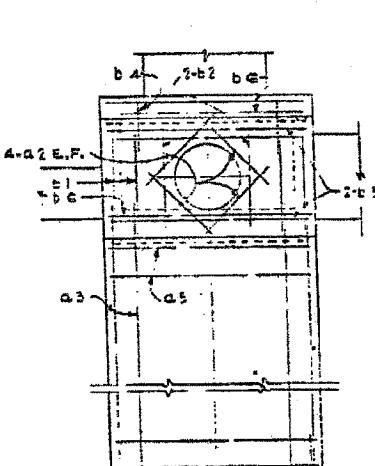
SECTION K-K.



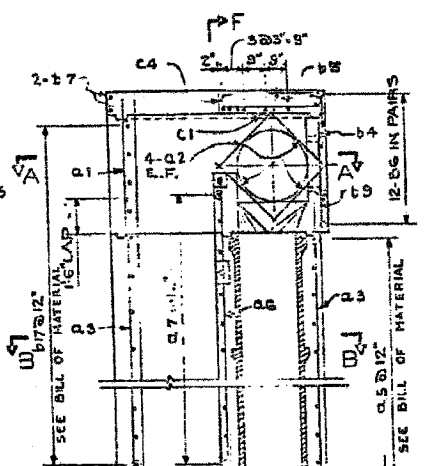
SECTION L-L.



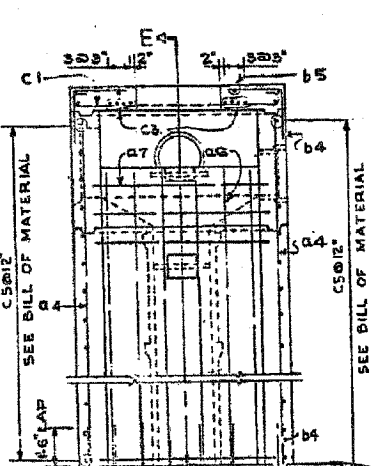
ELEVATION D-D.



SECTION G-G.



SECTION E-E.



SECTION F-F.

BAR	A	B
E-2	2'-0"	2'-0"
E-3	2'-0"	2'-0"
E-4	2'-0"	2'-0"
E-5	2'-0"	2'-0"
E-6	2'-0"	2'-0"
E-7	2'-0"	2'-0"
E-8	2'-0"	2'-0"



BAR	A	B	C
F-1	7'-2"		
F-2	7'-2"		
F-3	7'-2"		
F-4	7'-2"		

NOTES:  
 MINIMUM STEEL CLEARANCE SHALL BE 2" EXCEPT AS NOTED  
 MINIMUM LAP OF REINFORCEMENT SHALL BE 33 DIAMETERS  
 RWD IF POSSIBLE OR BURN OFF REINFORCING BARS

REINFORCING  
 TYPE B-24 N SHOWN  
 TYPE B-24 S OPPOSITE SITE

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
D-3	16	4	28'-6"		273
D-4	8	4	28'-4"		151
D-5	25	4	12'-9"		213
D-6	6	4	28'-10"		104
D-7	26	4	7'-4"		127
D-17	29	5	6'-6"		196
D-8	29	6	4'-8"		203

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	94/90	COOK	598	465

BARS TYPICAL OF ALL TYPE "B" MANHOLES

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
D-1	5	5	7'-		40
D-2	14	5	5'-		17
D-3	8	5	2'-		16
D-4	27	5	2'-0"		118
D-5	5	5	10'-6"		19
D-6	12	5	9'-2"		63
D-7	15	5	9'-2"		73
D-8	14	5	4'-2"		61
D-9	2	5	7'-		25
D-10	2	5	7'-		25
D-11	8	5	4'-2"		37
D-12	4	5	9'-2"		102
D-13	4	5	9'-2"		102
D-14	4	5	9'-2"		102
D-15	16	5	5'-6"		33
D-16	10	5	5'-6"		37

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
C-1	6	6	2'-5"		78
C-2	10	6	9'-2"		145
C-3	6	6	9'-2"		93
C-4	2	6	5'-2"		11

ADDITIONAL BARS FOR MANHOLE AT STATION:

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
D-3	16	4	28'-6"		246
D-4	8	4	28'-4"		136
D-5	25	4	12'-9"		94
D-6	6	4	28'-10"		118
D-7	26	4	7'-4"		176
D-17	35	5	6'-6"		182
D-8	35	6	4'-8"		182

ADDITIONAL BARS FOR MANHOLE AT STATION:

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
D-3	16	4	28'-6"		332
D-4	8	4	28'-4"		182
D-5	30	4	12'-9"		256
D-6	6	4	28'-10"		127
D-7	31	4	7'-4"		152
D-17	38	5	6'-6"		297
D-8	38	6	4'-8"		245

ADDITIONAL BARS FOR MANHOLE AT STATION:

BAR	NO.	SIZE	LENGTH	SHAPE	WEIGHT
D-3	16	4	28'-6"		281
D-4	8	4	28'-4"		156
D-5	25	4	12'-9"		215
D-6	6	4	28'-10"		108
D-7	26	4	7'-4"		127
D-17	30	5	6'-6"		203
D-8	30	6	4'-8"		210

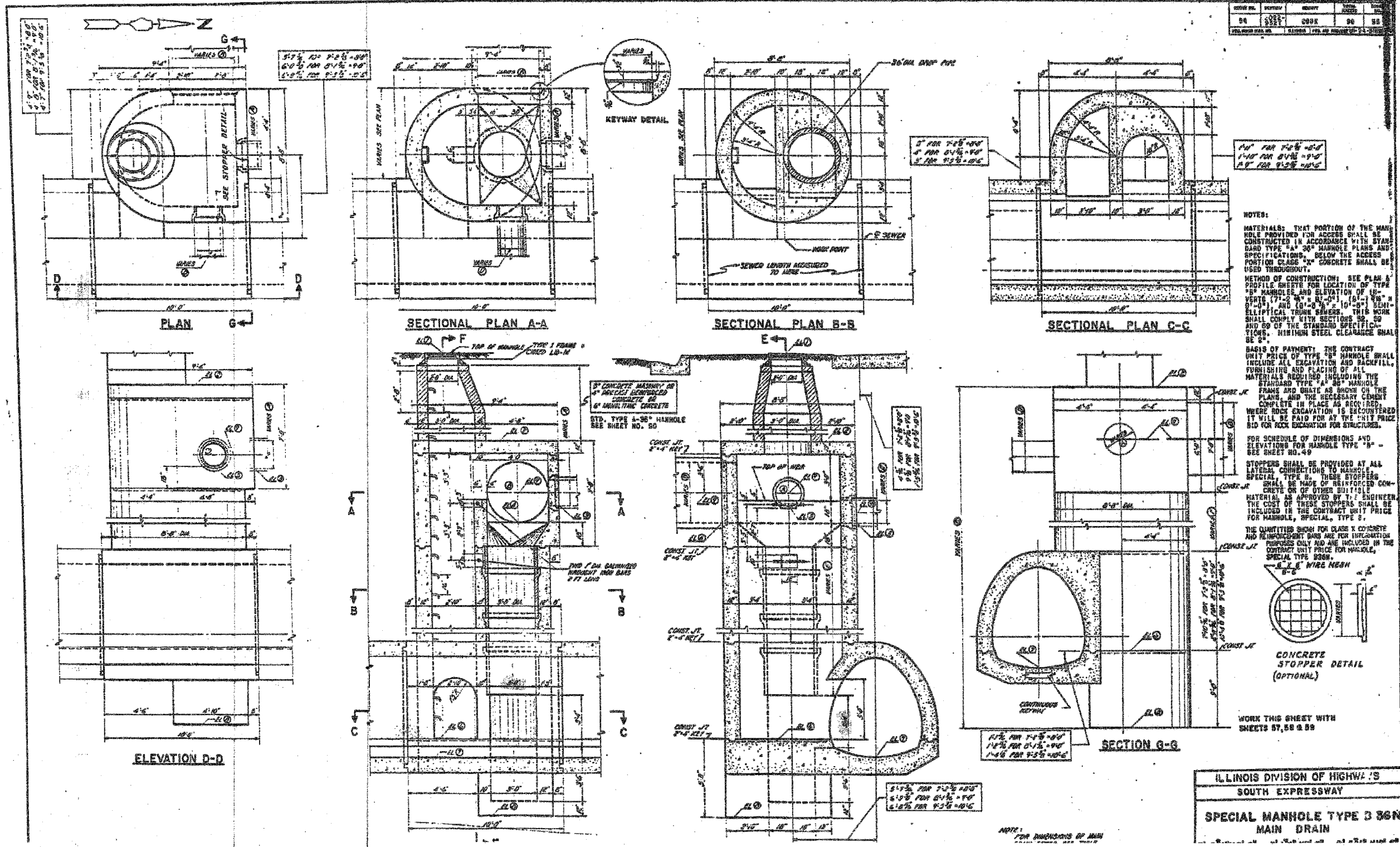
ILLINOIS DIVISION OF HIGHWAYS  
 SOUTH EXPRESSWAY  
 REINFORCING  
 SPECIAL MANHOLE TYPE "B" 24  
 MAIN DRAIN

REVISIONS	NAME	DATE

SHEET JC-13 OF JC-22  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS

SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

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REVISIONS	
NAME	DATE

SHEET JC-14 OF JC-22

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS

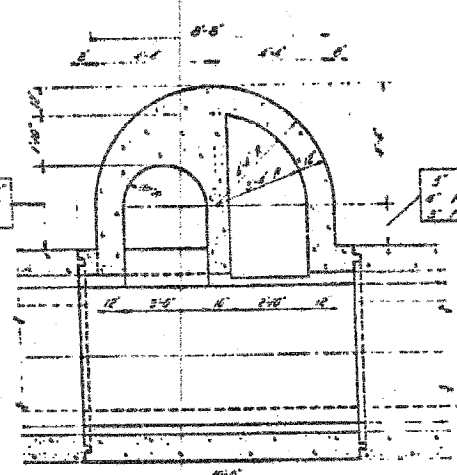
SCALE: NTS  
DATE: 07/07/05

DRAWN BY: BDC  
CHECKED BY: BLU

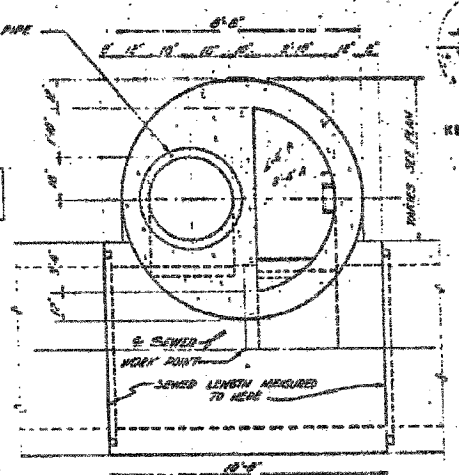
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	467
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		*1818, ETC., 2324.6-1PR-9		

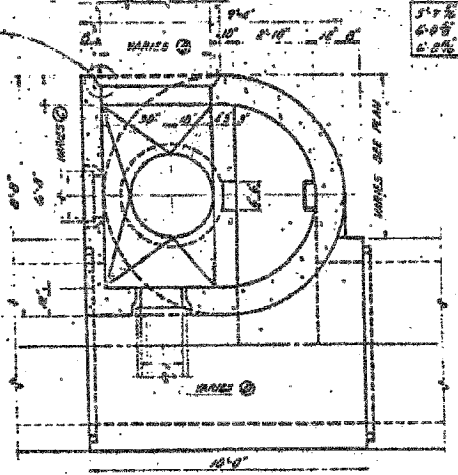
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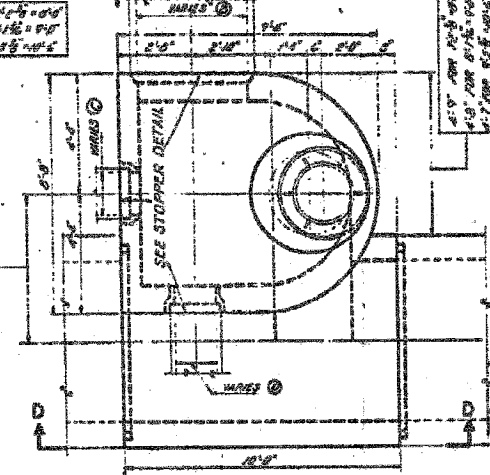
SECTIONAL PLAN C-C



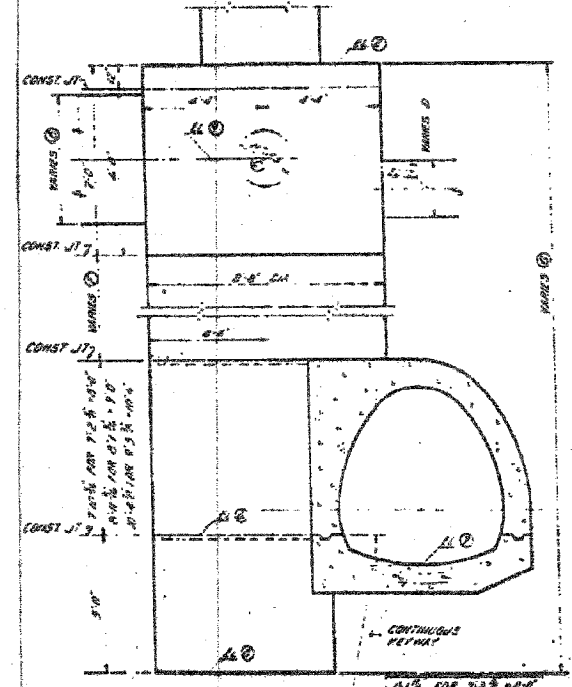
SECTIONAL PLAN B-B



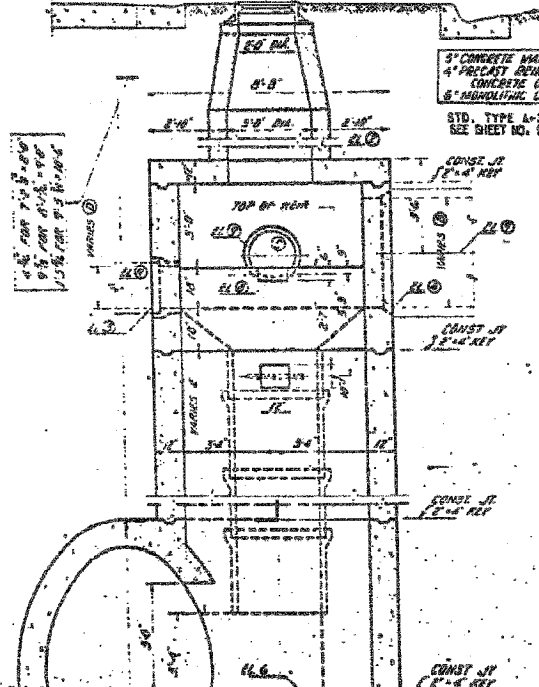
SECTIONAL PLAN A-A



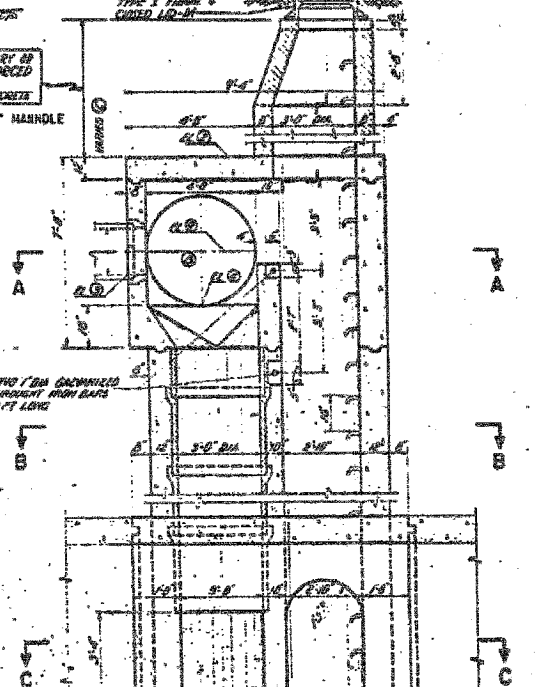
PLAN



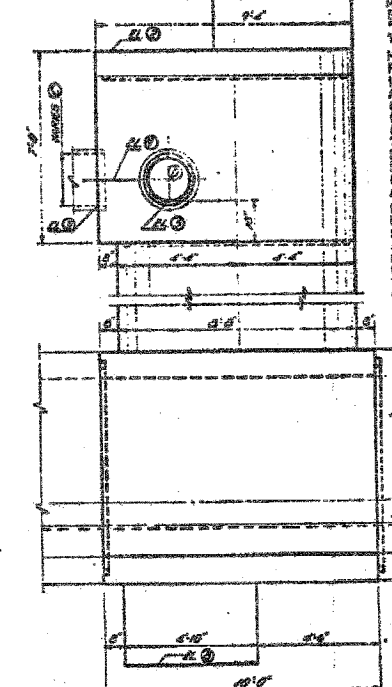
SECTION G-G



SECTION E-E



SECTION A-A



SECTION D-D

**NOTES:**  
 MATERIALS: THAT PORTION OF THE MANHOLE PROVIDED FOR ACCESS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD TYPE "A" 36" MANHOLE PLANS AND SPECIFICATIONS BELOW THE ACCESS PORTION CLASS "A" CONCRETE SHALL BE USED THROUGHOUT.  
 METHOD OF CONSTRUCTION: SEE PLAN AND PROFILE SHEETS FOR LOCATION OF TYPE "A" MANHOLES AND ELEVATION OF INVERTS OF (1) 36" x 36" x 8'-0" AND (2) 36" x 36" x 10'-0" SEMI-ELLIPTICAL TRUNK SENSORS. THIS WORK SHALL COMPLY WITH SECTIONS 22.50 AND 22.55 OF THE STANDARD SPECIFICATIONS. MINIMUM STEEL CLEARANCE SHALL BE 2".  
 BASIS OF PAYMENT: THE CONTRACT UNIT PRICE OF TYPE "A" MANHOLE SHALL INCLUDE ALL EXCAVATION AND BACKFILL, FURNISHING AND PLACING OF ALL MATERIALS REQUIRED INCLUDING THE STANDARD TYPE "A" 36" MANHOLE FRAME AND GRATE AS SHOWN ON THE PLANS AND THE NECESSARY CEMENT COMPLETE IN PLACE AS REQUIRED. WHERE ROCK EXCAVATION IS ENCOUNTERED IT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ROCK EXCAVATION FOR STRUCTURES.  
 FOR SCHEDULE OF DIMENSIONS AND ELEVATIONS FOR MANHOLE TYPE "A" SEE SHEET NO. 48.  
 STOPPERS SHALL BE PROVIDED AT ALL LATERAL CONNECTIONS TO MANHOLE SPECIAL TYPE "B". THESE STOPPERS SHALL BE MADE OF REINFORCED CONCRETE OR OF OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER. THE COST OF THESE STOPPERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE, SPECIAL, TYPE "B".  
 THE QUANTITIES SHOWN FOR CLASS "A" CONCRETE AND REINFORCEMENT BARS ARE FOR INFORMATION PURPOSES ONLY AND ARE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE, SPECIAL TYPE "B".

ILLINOIS DIVISION OF HIGHWAYS  
 SOUTH EXPRESSWAY  
 SPECIAL MANHOLE TYPE B 36S  
 MAIN DRAIN

SHEET JC-15 OF JC-22

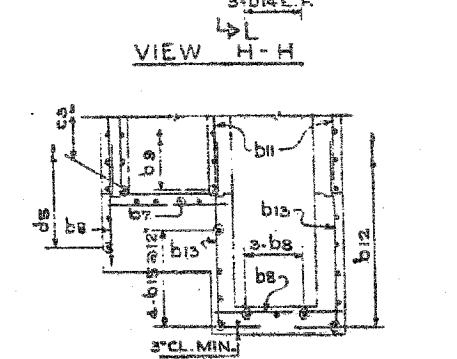
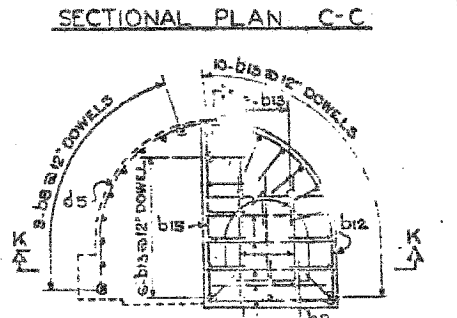
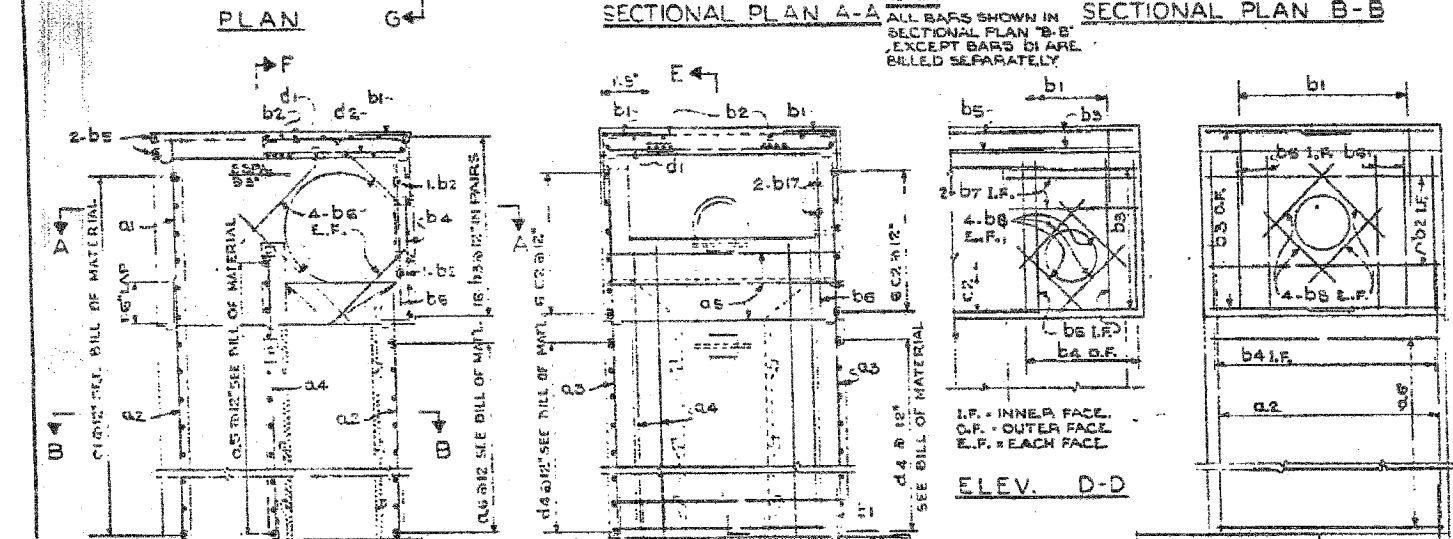
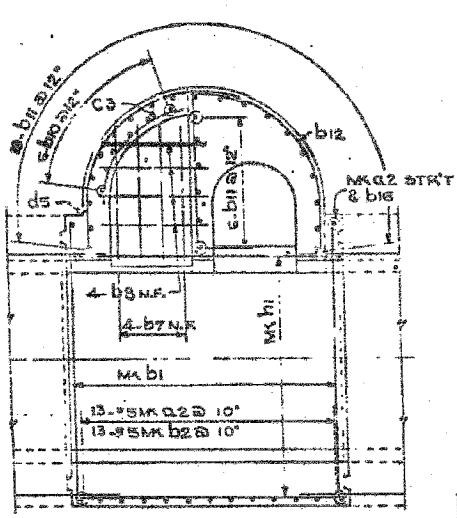
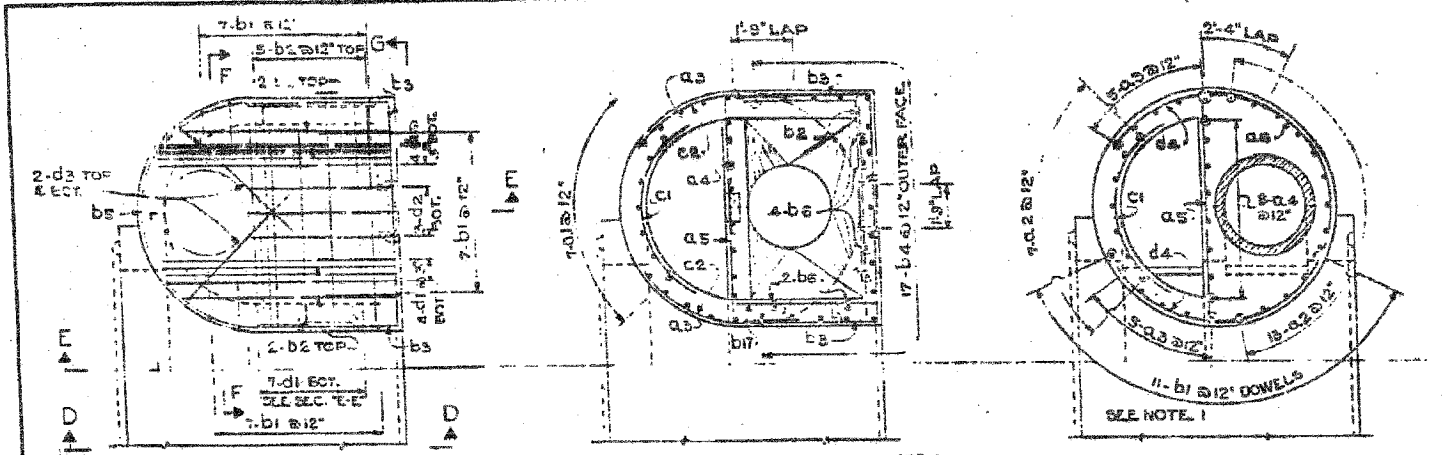
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS  
 SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

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 CONSULTING ENGINEERS  
 Chicago, Illinois  
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BAR	A	B
b1	2'-6"	1'-9"
b2	5'-2"	5'-0"
b3	5'-10"	1'-2"
b4	5'-7"	1'-7"
b5	4'-2"	1'-3"
b6	4'-5"	4'-0"

BAR	A	B	R
c1	5'-8"	1'-6"	3'-0"
c2	4'-6"	10'	3'-0"
c3	7'-1"	2'-0"	4'-2"

BAR	A	B	R
d1	5'-8"	1'-6"	3'-0"
d2	4'-6"	10'	3'-0"
d3	7'-1"	2'-0"	4'-2"

BAR	A	B	R
e1	5'-8"	1'-6"	3'-0"
e2	4'-6"	10'	3'-0"
e3	7'-1"	2'-0"	4'-2"

BAR	A	B	R
f1	5'-8"	1'-6"	3'-0"
f2	4'-6"	10'	3'-0"
f3	7'-1"	2'-0"	4'-2"

BAR	A	B	R
g1	5'-8"	1'-6"	3'-0"
g2	4'-6"	10'	3'-0"
g3	7'-1"	2'-0"	4'-2"

BAR	A	B	R
h1	5'-8"	1'-6"	3'-0"
h2	4'-6"	10'	3'-0"
h3	7'-1"	2'-0"	4'-2"

REV.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	2022-1	COOK	598	57

BARS TYPICAL OF ALL TYPES & MARKINGS				
BAR NO.	SIZE	LENGTH	SHAPE	NO. OF
a1	7	4	B-10'	52
b1	3/8	3	4'-3"	47
b2	1/2	3	8'-0"	108
b3	1/2	3	10'-7"	127
b4	1/2	3	9'-2"	127
b5	1/2	3	15'-0"	34
b6	1/2	3	5'-10"	98
b7	6	3	2'-0"	25
b8	2/3	5	5'-0"	138
b9	3/4	5	5'-0"	138
b10	3/4	5	7'-8"	48
b11	3/4	5	8'-0"	12
b12	3/4	5	8'-0"	12
b13	3/4	5	8'-0"	12
b14	3/4	5	5'-7"	35
b15	3/4	5	8'-0"	26
b16	3/4	5	8'-0"	18
b17	3/4	5	3'-0"	10
c1	12	6	6'-0"	108
c2	3	6	8'-0"	60
d1	15	7	9'-0"	289
d2	8	7	6'-5"	39
d3	4	7	8'-0"	47
d4	10	7	10'-8"	220
e1	15	6	10'-3"	200
e2	15	5	9'-11"	111
e3	15	10	10'-0"	218
e4	15	5	6'-0"	111
e5	15	6	11'-0"	481

ADDITIONAL BARS FOR MANHOLES AT STATIONS				
BAR NO.	SIZE	LENGTH	SHAPE	NO. OF
g2	20	4	18'-6"	247
g3	10	4	22'-0"	183
g4	8	4	10'-2"	103
g5	21	4	8'-2"	158
g6	19	4	15'-0"	158
h1	24	6	8'-8"	294
h2	37	7	6'-9"	497

ADDITIONAL BARS FOR MANHOLES AT STA.				
BAR NO.	SIZE	LENGTH	SHAPE	NO. OF
g2	20	4	18'-6"	178
g3	10	4	22'-0"	132
g4	8	4	22'-4"	69
g5	21	4	8'-2"	111
g6	19	4	12'-0"	162
h1	24	6	8'-8"	308
h2	37	7	6'-9"	516

ADDITIONAL BARS FOR MANHOLES AT STA.				
BAR NO.	SIZE	LENGTH	SHAPE	NO. OF
g2	20	4	18'-6"	178
g3	10	4	22'-0"	132
g4	8	4	22'-4"	69
g5	21	4	8'-2"	111
g6	19	4	12'-0"	162
h1	24	6	8'-8"	308
h2	37	7	6'-9"	516

ILLINOIS DIVISION OF HIGHWAYS  
SOUTH EXPRESSWAY  
REINFORCING  
SPECIAL MANHOLE TYPE "B" 36  
MAIN DRAIN

NOTES:  
MINIMUM STEEL CLEARANCE SHALL BE 2" EXCEPT AS NOTED  
MINIMUM LAP OF REINFORCEMENT SHALL BE 33 DIAMETERS  
BEND IF POSSIBLE OR BURN OFF REINFORCING BARS IN  
FIELD TO CLEAR OPENINGS.

REINFORCING:  
TYPE B-36 N SHOWN  
TYPE B-36 S OPPOSITE HAND

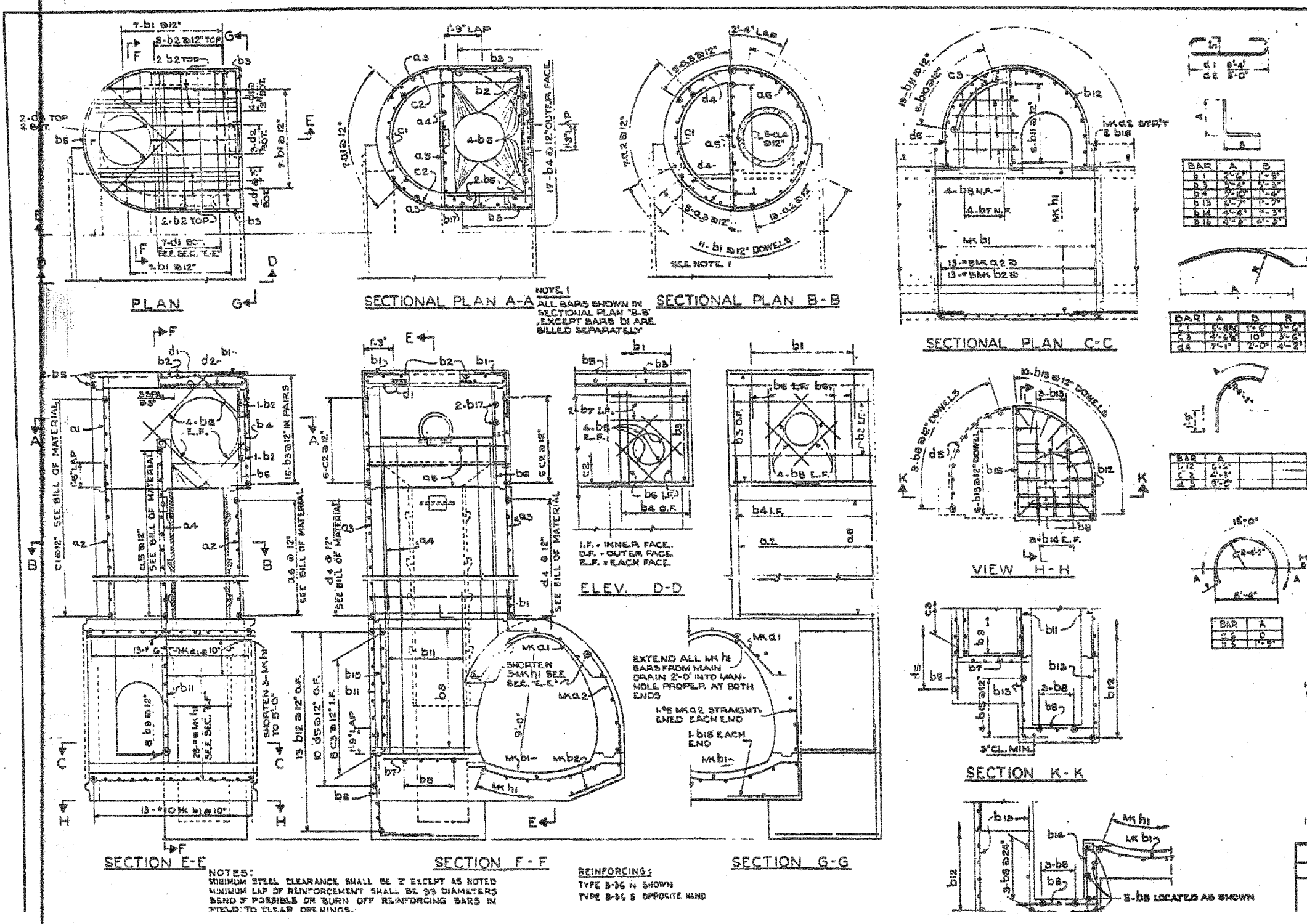
EXTEND ALL MK #1  
BARS FROM MAIN  
DRAIN 2'-0" INTO MAIN  
HOLE PROPER AT BOTH  
ENDS  
1" B-36 STRAIGHT-  
ENED EACH END  
1" B-36 EACH  
END  
MK #1

REVISIONS	
NAME	DATE

SHEET JC-16 OF JC-22  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS  
SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
CHECKED BY: BLU

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BAR NO.	SIZE	LENGTH	SHAPE	WEIGHT
b1	3/4"	1'-2"	L	1.2
b2	1/2"	8'-0"	C	0.3
b3	1/2"	10'-0"	C	0.4
b4	1/2"	10'-0"	C	0.4
b5	1/2"	10'-0"	C	0.4
b6	1/2"	10'-0"	C	0.4
b7	1/2"	10'-0"	C	0.4
b8	1/2"	10'-0"	C	0.4
b9	1/2"	10'-0"	C	0.4
b10	1/2"	10'-0"	C	0.4
b11	1/2"	10'-0"	C	0.4
b12	1/2"	10'-0"	C	0.4
b13	1/2"	10'-0"	C	0.4
b14	1/2"	10'-0"	C	0.4
b15	1/2"	10'-0"	C	0.4
b16	1/2"	10'-0"	C	0.4
b17	1/2"	10'-0"	C	0.4
b18	1/2"	10'-0"	C	0.4
b19	1/2"	10'-0"	C	0.4
b20	1/2"	10'-0"	C	0.4
b21	1/2"	10'-0"	C	0.4
b22	1/2"	10'-0"	C	0.4
b23	1/2"	10'-0"	C	0.4
b24	1/2"	10'-0"	C	0.4
b25	1/2"	10'-0"	C	0.4
b26	1/2"	10'-0"	C	0.4
b27	1/2"	10'-0"	C	0.4
b28	1/2"	10'-0"	C	0.4
b29	1/2"	10'-0"	C	0.4
b30	1/2"	10'-0"	C	0.4
b31	1/2"	10'-0"	C	0.4
b32	1/2"	10'-0"	C	0.4
b33	1/2"	10'-0"	C	0.4
b34	1/2"	10'-0"	C	0.4
b35	1/2"	10'-0"	C	0.4
b36	1/2"	10'-0"	C	0.4

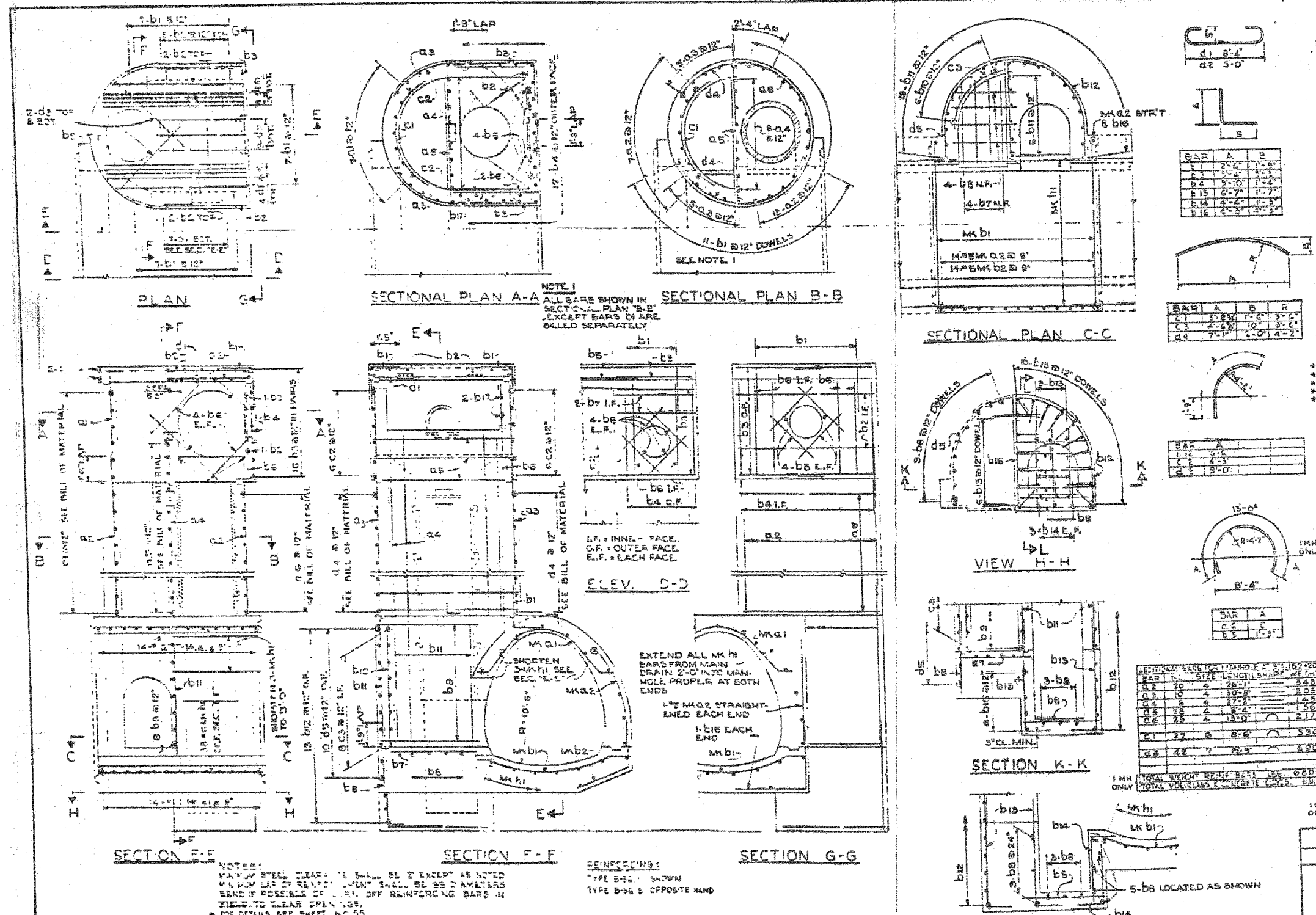
ILLINOIS DIVISION OF HIGHWAYS  
SOUTH EXPRESSWAY  
REINFORCING  
SPECIAL MANHOLE TYPE "B" 36

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REVISIONS	NAME	DATE

SHEET JC-17 OF JC-22  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS  
SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
CHECKED BY: BLU



F.A.I. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	2022	COOK	598	470

BAR NO.	SIZE	LENGTH	SHAPE	WEIGHT
D1	7	11	6-10	32
D2	8	11	6-10	32
D3	9	11	6-10	32
D4	10	11	6-10	32
D5	11	11	6-10	32
D6	12	11	6-10	32
D7	13	11	6-10	32
D8	14	11	6-10	32
D9	15	11	6-10	32
D10	16	11	6-10	32
D11	17	11	6-10	32
D12	18	11	6-10	32
D13	19	11	6-10	32
D14	20	11	6-10	32
D15	21	11	6-10	32
D16	22	11	6-10	32
D17	23	11	6-10	32
D18	24	11	6-10	32
D19	25	11	6-10	32
D20	26	11	6-10	32
D21	27	11	6-10	32
D22	28	11	6-10	32
D23	29	11	6-10	32
D24	30	11	6-10	32
D25	31	11	6-10	32
D26	32	11	6-10	32
D27	33	11	6-10	32
D28	34	11	6-10	32
D29	35	11	6-10	32
D30	36	11	6-10	32
D31	37	11	6-10	32
D32	38	11	6-10	32
D33	39	11	6-10	32
D34	40	11	6-10	32
D35	41	11	6-10	32
D36	42	11	6-10	32
D37	43	11	6-10	32
D38	44	11	6-10	32
D39	45	11	6-10	32
D40	46	11	6-10	32
D41	47	11	6-10	32
D42	48	11	6-10	32
D43	49	11	6-10	32
D44	50	11	6-10	32
D45	51	11	6-10	32
D46	52	11	6-10	32
D47	53	11	6-10	32
D48	54	11	6-10	32
D49	55	11	6-10	32
D50	56	11	6-10	32
D51	57	11	6-10	32
D52	58	11	6-10	32
D53	59	11	6-10	32
D54	60	11	6-10	32
D55	61	11	6-10	32
D56	62	11	6-10	32
D57	63	11	6-10	32
D58	64	11	6-10	32
D59	65	11	6-10	32
D60	66	11	6-10	32
D61	67	11	6-10	32
D62	68	11	6-10	32
D63	69	11	6-10	32
D64	70	11	6-10	32
D65	71	11	6-10	32
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D67	73	11	6-10	32
D68	74	11	6-10	32
D69	75	11	6-10	32
D70	76	11	6-10	32
D71	77	11	6-10	32
D72	78	11	6-10	32
D73	79	11	6-10	32
D74	80	11	6-10	32
D75	81	11	6-10	32
D76	82	11	6-10	32
D77	83	11	6-10	32
D78	84	11	6-10	32
D79	85	11	6-10	32
D80	86	11	6-10	32
D81	87	11	6-10	32
D82	88	11	6-10	32
D83	89	11	6-10	32
D84	90	11	6-10	32
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D86	92	11	6-10	32
D87	93	11	6-10	32
D88	94	11	6-10	32
D89	95	11	6-10	32
D90	96	11	6-10	32
D91	97	11	6-10	32
D92	98	11	6-10	32
D93	99	11	6-10	32
D94	100	11	6-10	32

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REVISIONS	NAME	DATE

SHEET JC-18 OF JC-22  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS  
 SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

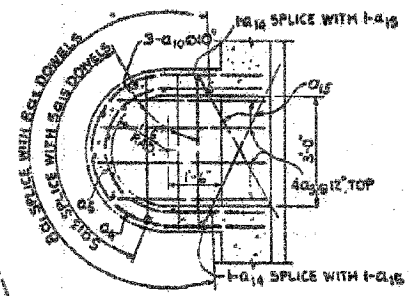
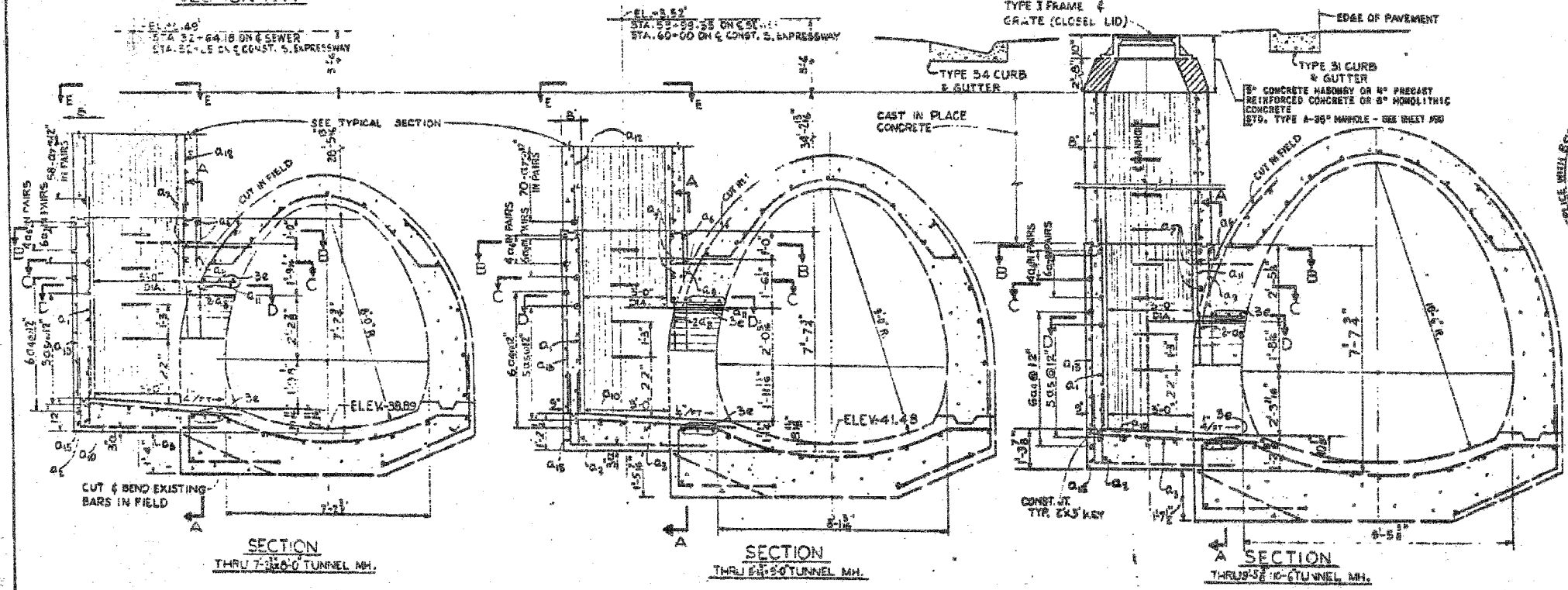
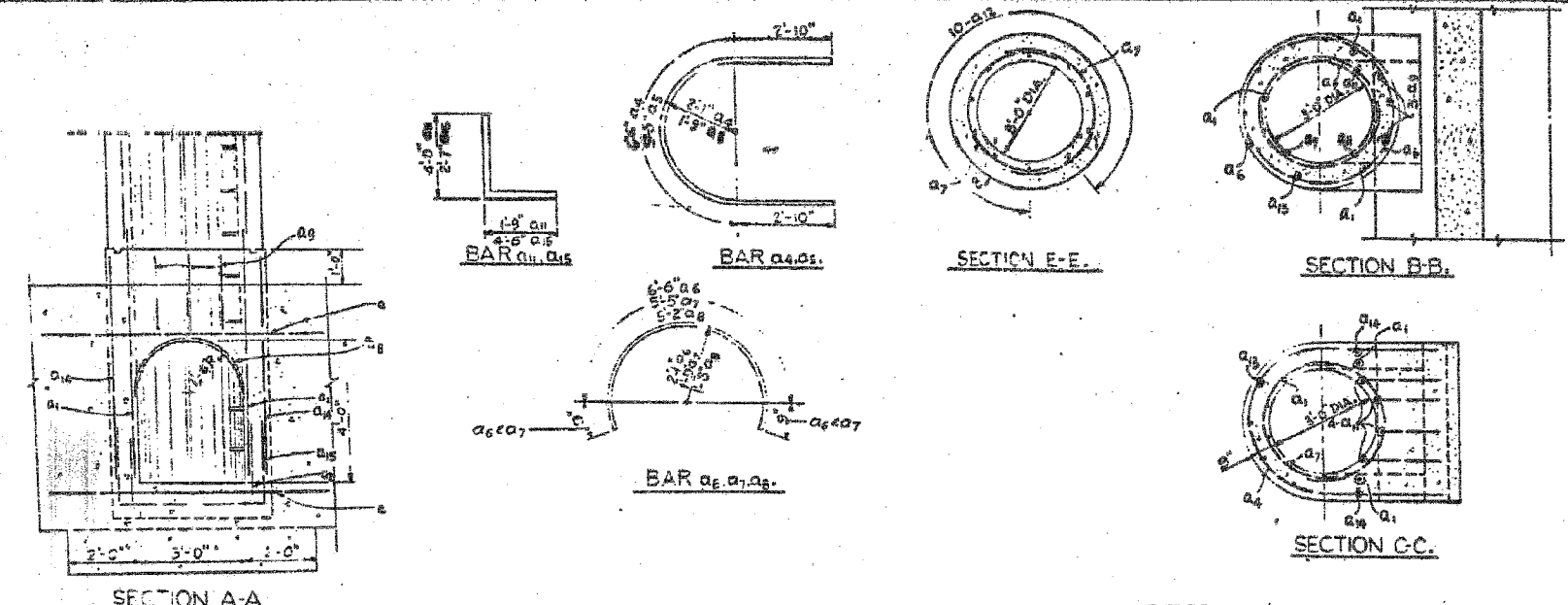
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	94/90	COOK	598	471

BAR SIZE	NO.	SHAPE	LGTH	WT.
a1	4	□	8'-0"	88
a2	4	□	2'-8"	14
a3	4	□	5'-3"	14
a4	6	□	12'-2"	49
a5	5	□	11'-1"	37
a6	4	□	8'-0"	21
a7	2	□	5'-2"	7
a8	3	□	2'-0"	4
a9	3	□	2'-0"	4
a10	4	□	5'-3"	15
a11	3	□	6'-3"	21
a12	2	□	5'-3"	7
a13	4	□	7'-1"	33
a14	6	□	8'-6"	136
a15	4	□	6'-11"	256
a16	3	□	28'-0"	197
WT. OF BARS M.H. STA. 32+64.18				
882				
VOL. OF CONC. M.H. STA. 32+64.18				
11.5				
WT. OF BARS M.H. STA. 59+99.55				
886				
VOL. OF CONC. M.H. STA. 59+99.55				
13.0				

NOTE: VOLUME OF CONCRETE FOR M.H. DOES NOT INCLUDE MAIN DRAIN.



NOTES:  
 MATERIALS: THAT PORTION OF THE MANHOLE PROVIDED FOR ACCESS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD TYPE "30" MANHOLE PLANS AND SPECIFICATIONS BELOW THE ACCESS PORTION CLASS "1" CONCRETE SHALL BE USED THROUGHOUT.  
 METHOD OF CONSTRUCTION: SEE PLAN AND PROFILE SHEETS FOR LOCATION OF TYPE "30" MANHOLES AND ELEVATION OF INVERTS OF SEMI-ELLIPTICAL TROUGH BOXES. THIS WORK SHALL COMPLY WITH SECTIONS 52, 53 & 60 OF THE STANDARD SPECIFICATIONS HIGHWAY STRUCTURE SHALL BE 3".  
 BASIS OF PAYMENT: THE CONTRACT UNIT PRICE OF TYPE "30" MANHOLE SHALL INCLUDE ALL EXCAVATION AND BACKFILL, FORMWORK AND PLACING OF ALL MATERIALS REQUIRED INCLUDING THE STANDARD TYPE "30" MANHOLE, FRAME & GRATE AS SHOWN ON THE PLANS & THE NECESSARY CEMENT COMPLETE IN PLACE AS REQUIRED HEREIN AND EXCAVATION IS EXCEPTED. IT WILL BE PAID FOR AT THE UNIT PRICE BID FOR SUCH EXCAVATION STRUCTURES.  
 THE QUANTITIES SHOWN FOR CLASS "2" CONCRETE AND REINFORCEMENT BARS ARE FOR INFORMATION PURPOSES ONLY AND ARE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE, SPECIAL, TYPE "C".

NOTE: BENDING DIMENSIONS OUT TO OUT OF BARS.

ILLINOIS DIVISION OF HIGHWAYS  
 SOUTH EXPRESSWAY  
 SPECIAL MANHOLE TYPE "C"  
 MAIN DRAIN

SHEET JC-19 OF JC-22

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 JUNCTION CHAMBERS  
 EXISTING DROP MANHOLE PLANS

SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

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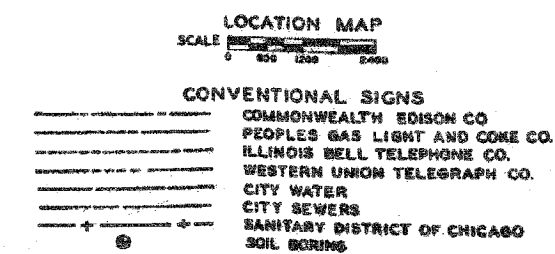
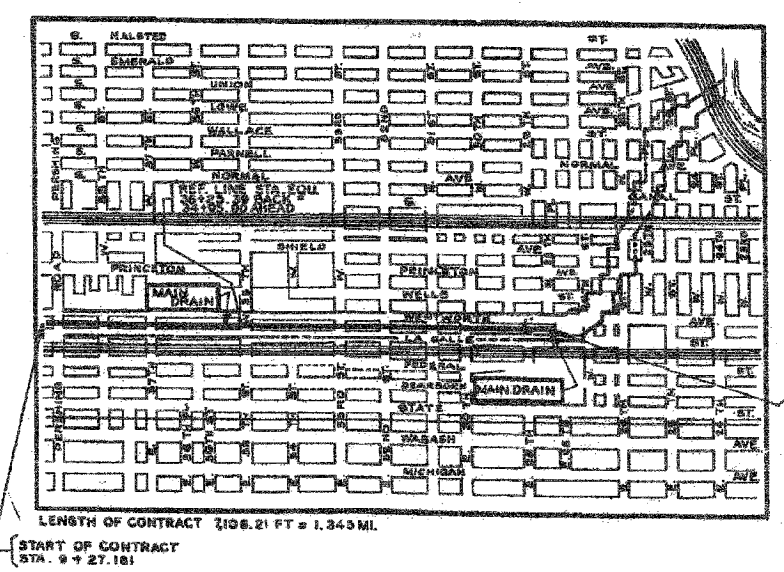
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	472
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*0818, ETC, 2324.6-IPR-9		

**STATE OF ILLINOIS**  
**CITY OF CHICAGO**  
**DEPARTMENT OF PUBLIC WORKS**  
**BUREAU OF ENGINEERING**

**SOUTH ROUTE SUPERHIGHWAY**  
**PLANS FOR**  
**MAIN DRAIN**  
**SECTION S-2324.8-1D**  
**W. PERSHING ROAD TO W. 28TH PLACE**  
**F.A.I. ROUTE NO.94 PROJECT UI-1-94 3(87)52**

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SUMMARY OF ITEMS			
ITEM NO.	UNIT	QUANTITY	DESCRIPTION
1	LIN. FT.	7,106.21	MAIN DRAIN, 9.45' X 10.5' SECTION
2	EACH	8	MANHOLES
3	LB.	1,550,000	REINFORCEMENT BARS
4	CU. YDS.	9,400	ROCK EXCAVATION
5	CU. YDS.	200	ADDITIONAL EARTH EXCAVATION IN TUNNEL
6	CU. YDS.	200	ADDITIONAL CONCRETE IN TUNNEL



CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING

DATE MARCH 1991

APPROVED *C. F. Reiter*  
CHIEF SURVEY AND SUPERVISORY ENGINEER

APPROVED *M. J. Kramiec*  
ASSISTANT CHIEF ENGINEER

APPROVED *John J. ...*  
CHIEF ENGINEER

APPROVED *...*  
COMMISSIONER

---

THE DEPARTMENT OF  
PUBLIC WORKS AND BUILDINGS  
DIVISION OF HIGHWAYS

APPROVED [Signature] 1991

APPROVED [Signature] 1991

DIRECTOR

---

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED [Signature] 1991

SHEET 6-1 OF 21 SHEETS

SHEET JC-20 OF JC-22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS

SCALE: NTS  
DATE: 07/07/05

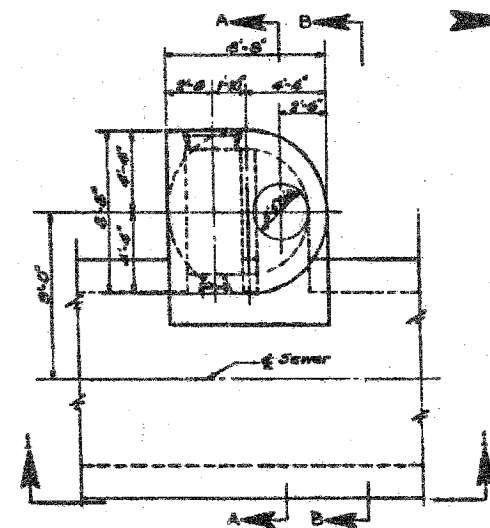
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CHECKED BY: BLU

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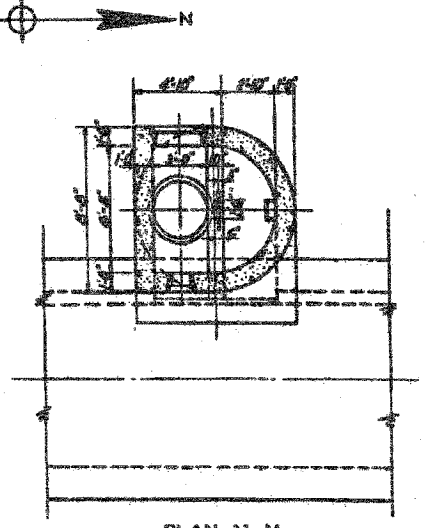
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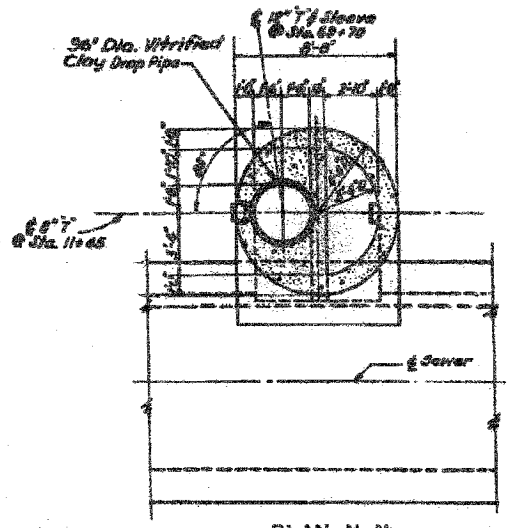
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	473
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	*1818, ETC, 2324.6-1PIR-9			



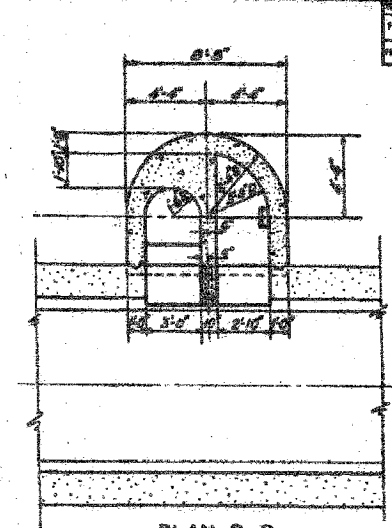
TOP PLAN  
Item 2



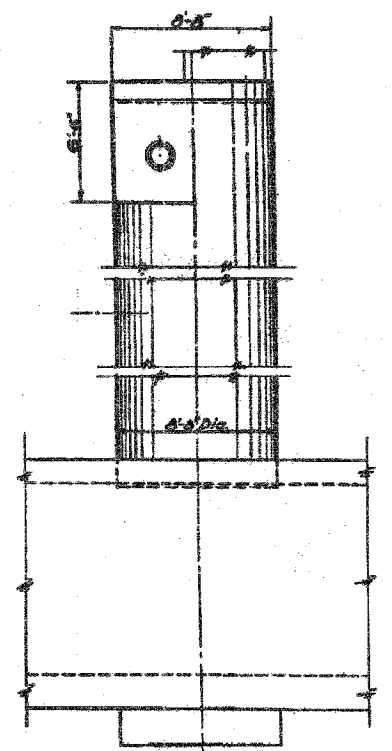
PLAN M-M



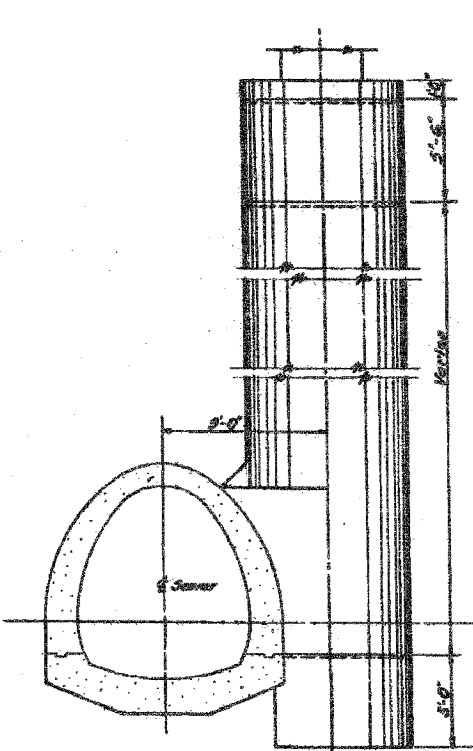
PLAN N-N



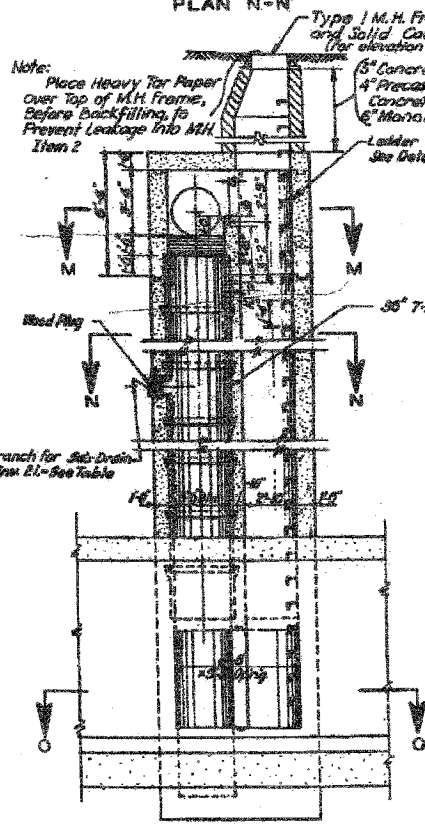
PLAN D-D



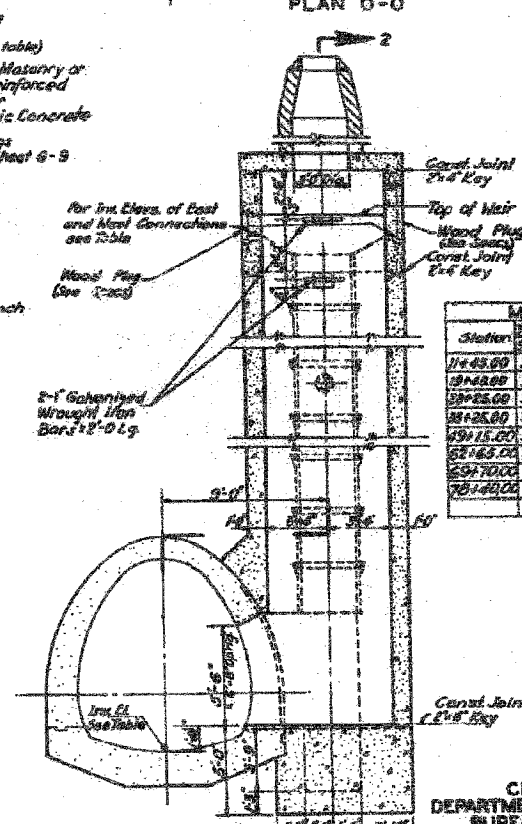
ELEVATION 1-1



SECTION B-B



SECTION 2-2



SECTION A-A

Note: Place Heavy Tar Paper over Top of M.H. Frame, Before Backfilling, to Prevent Leakage into M.H. Item 2

5" Concrete Masonry or 4" Precast Reinforced Concrete or 6" Monolithic Concrete

Ladder Rungs See Detail, Sheet 6-9

For Int. Elev. of East and West Connections see Table

Wood Plug (See Table)

35" T-Branch

2" Galvanized Wrought Iron Bars 18" O.C.

1" Branch for Sub-Drain 1/2" Dia. See Table

Station	3" Conn. to Conn. Y Branch	Main Drain Int. Elev.
11+45.00	30" x 30" x 12' x 12" x 8"	-4.75
11+45.00	30" x 30" x 12' x 12" x 8"	-48.15
11+45.00	30" x 30" x 12' x 12" x 8"	-48.20
11+45.00	30" x 30" x 12' x 12" x 8"	-48.24
11+45.00	30" x 30" x 12' x 12" x 8"	-48.58
11+45.00	30" x 30" x 12' x 12" x 8"	-50.58
11+45.00	30" x 30" x 12' x 12" x 8"	-50.65
11+45.00	30" x 30" x 12' x 12" x 8"	-51.00

Station	Elevation
11+45.00	-4.15
11+40.00	+8.88
78+25.00	+8.92
95+25.00	-1.72
49+15.00	-2.45
62+65.00	-4.57
69+70.00	+6.51
78+40.00	+1.30

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION 3-2324.6-1D  
MAIN DRAIN  
MANHOLE DETAILS

SCALE 1/4"=1'-0"

MARCH 1981

SHEET NO. 0-8 OF 25 SHEETS

Drawn by: A.C. Haffarick  
Checked by: P.H. Ruffalo  
Approved by: [Signature]

Note: Connection to 8" x 10" Sewer as shown  
For Type 1 M.H. Frame see Sheet 6-7  
For Location of Manholes see Sheets 6-2 to 6-7 incl.  
For Reinforcement Details see Sheet 5-11

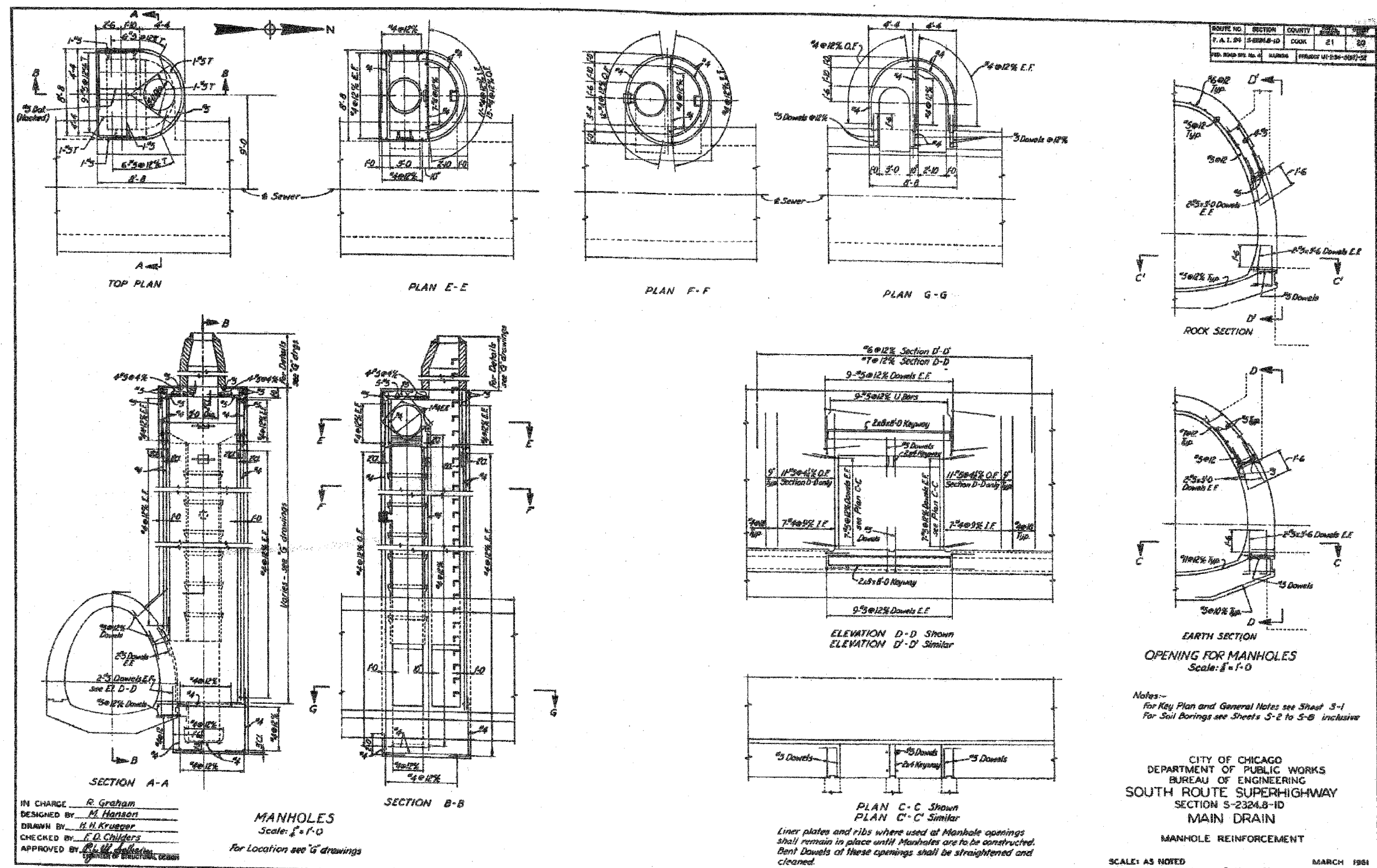
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REVISIONS	NAME	DATE

SHEET JC-21 OF JC-22  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
JUNCTION CHAMBERS  
EXISTING DROP MANHOLE PLANS  
SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
CHECKED BY: BLU

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	598	474
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62302		*(1B16, ETC, 2324.6-1PIR-9)		



IN CHARGE R. Graham  
DESIGNED BY M. Hanson  
DRAWN BY H. H. Krueger  
CHECKED BY F. D. Childers  
APPROVED BY [Signature]  
ENGINEER OF STRUCTURAL DESIGN

**MANHOLES**  
Scale: 1" = 1'-0"  
For Location see "G" drawings

PLAN C-C Shown  
PLAN C'-C Similar  
Liner plates and ribs where used at Manhole openings shall remain in place until Manholes are to be constructed. Bent Dowels at these openings shall be straightened and cleaned.

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION S-2324.8-1D  
**MAIN DRAIN**  
MANHOLE REINFORCEMENT

SCALE: AS NOTED  
SHEET NO. 3-11 OF 21 SHEETS  
MARCH 1981

SHEET JC-22 OF JC-22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
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SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
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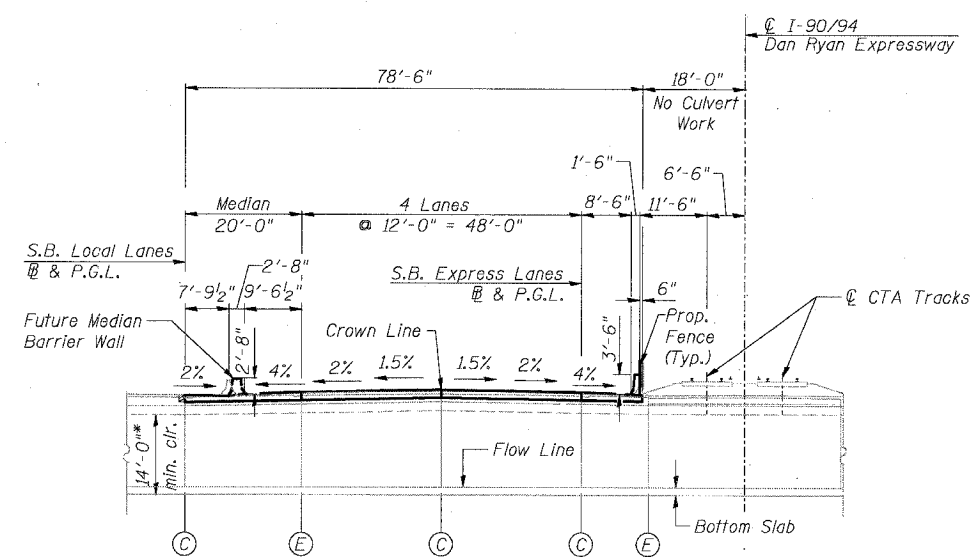
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	475
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	• (1818, ETC, 2324.6-1P)R-9			

Benchmark: BM No. 3540

"□" Cut on the Southwest corner of traffic control box at the Northeast corner of 39th and LaSalle Streets. El. 12.33

**Existing Structure:** The existing structure was built in 1962 under Section S-2323.2-4B and is identified as S.N. 016-2625. The structure is a 12'-0" clear span by 14'-0" clear height double barrel reinforced concrete box culvert. It conveys sanitary and storm water under the Dan Ryan Expressway for the MWRDGC. The length of culvert under the expressway is 325'-0" and the culvert transitions horizontally, vertically and in cross section to connect to an existing circular brick sewer under the centerline of 39th Street. The top slab of the culvert is the expressway pavement and consists of a minimum of 1'-3" of reinforced concrete with an approximately 5" thick overlay (either concrete or bituminous). The centerline of the culvert has no skew relative to the Dan Ryan baselines. There are 20'-6" long approach slabs on each side of the culvert over the width of the traffic lanes. Barrier wall is attached to the top slab and separates the express and local lanes of the expressway and the expressway from the CTA tracks. The barrier is supported by PCC shoulders outside the limits of the culvert. The culvert will be rehabilitated utilizing stage construction. Portions of the top slab and all components of the culvert below grade shall be re-used.

All elevations are based on the Chicago City Datum (C.C.D.)



**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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

All construction joints shall be bonded.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QTY.
Bridge Approach Pavement	Sq. Yd.	452
Bituminous Surface Removal, 5"	Sq. Yd.	143
Bituminous Surface Removal (Variable Depth)	Sq. Yd.	82
Approach Slab Removal	Sq. Yd.	219
Concrete Superstructure	Cu. Yd.	112.2
Bridge Deck Grooving	Sq. Yd.	212
Protective Coat	Sq. Yd.	257
Reinforcement Bars, Epoxy Coated	Pound	21,450
Bar Splicers	Each	257
Concrete Slab Hydro-Demolition	Sq. Yd.	237
CTA Fence	Foot	87
Video Taping of MWRD Culvert	Foot	245
Temporary CTA Ballast Retention	L. Sum	1

**DESIGN SPECIFICATIONS**

2002 AASHTO

**LOADING HS20-44 & ALT.**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

New:  
 f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)

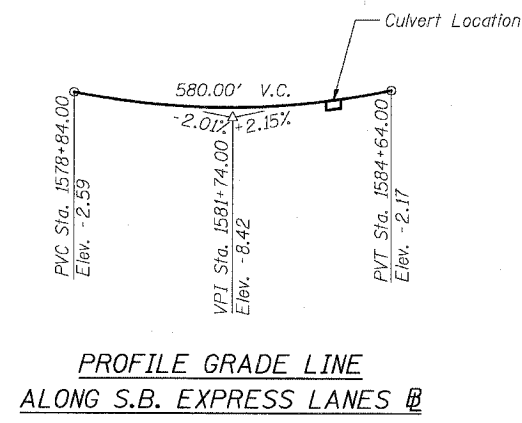
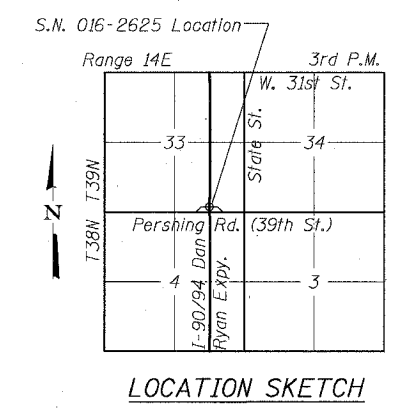
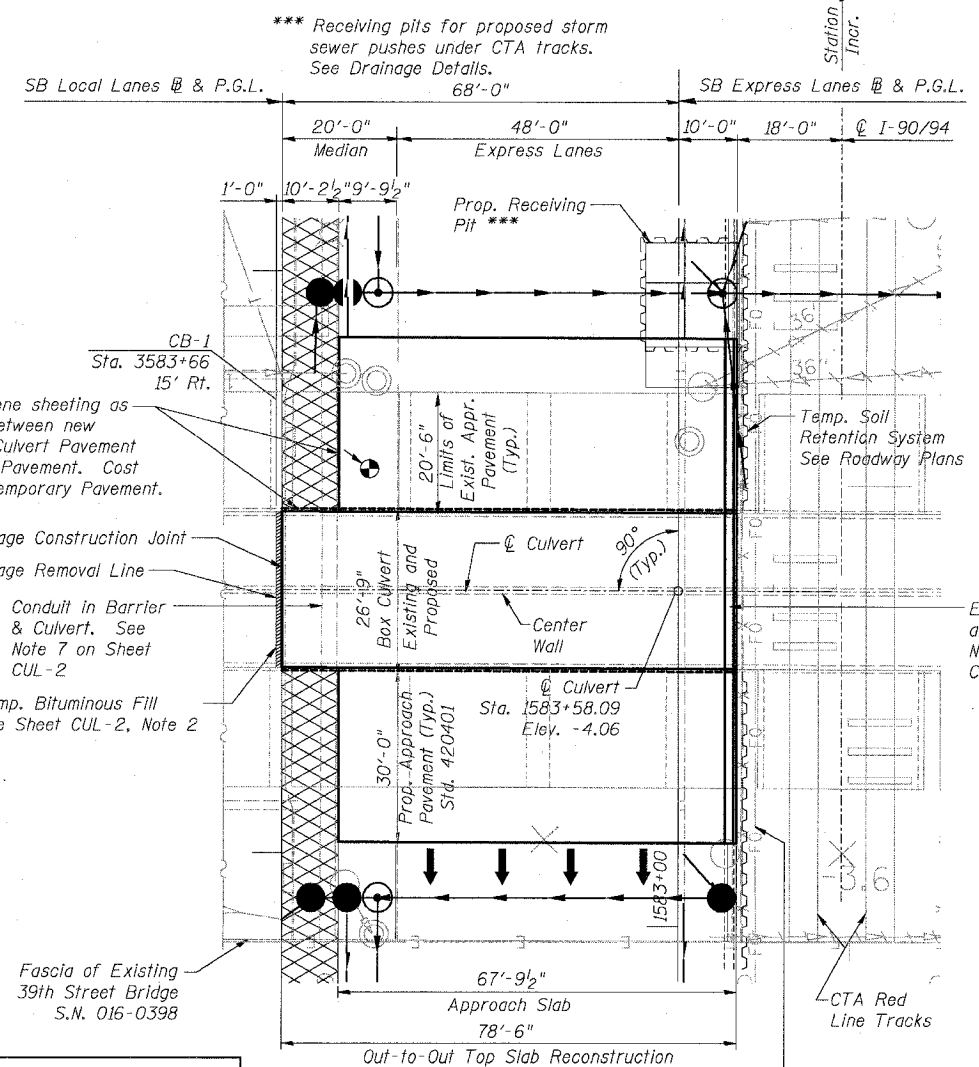
Existing:  
 f'c = 3,500 psi  
 fy = 40,000 psi (Reinforcement)

**LEGEND**

- CB-1 = Soil Boring Location
- = Exist. Catch basin
- ⊙ = Exist. Manhole
- = Exist. Inlet
- = Exist. Storm sewer
- = Exist. Underdrain
- = Prop. Catch basin
- ⊙ = Prop. Manhole
- = Prop. Storm sewer
- = Prop. Underdrain
- ▨ = Temporary Pavement
- ▩ = Temporary Bituminous Fill

**ABBREVIATIONS**

- MWRDGC = Metropolitan Water Reclamation or MWRD District of Greater Chicago
- CTA = Chicago Transit Authority
- E = Expansion Joint
- C = Construction Joint
- P.G.L. = Profile Grade Line
- NB = Northbound
- SB = Southbound



REVISIONS	
NAME	DATE

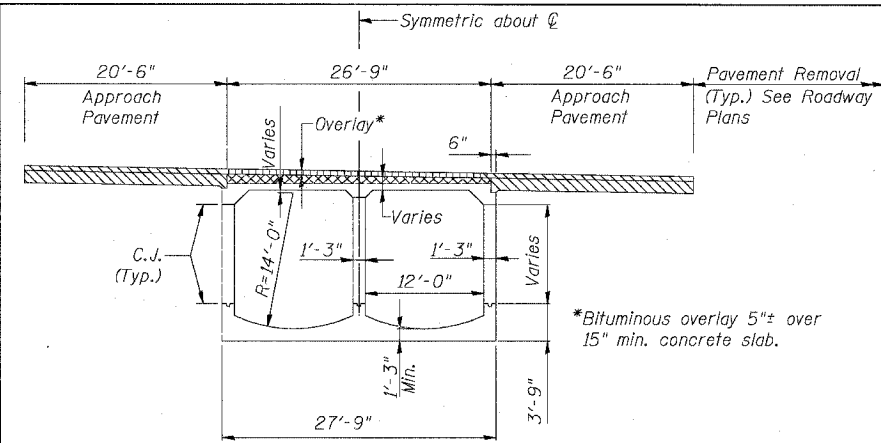
SHEET CUL-1 OF CUL-14

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.,  
 COOK COUNTY, S.N. 016-2625  
 GENERAL PLAN

SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU

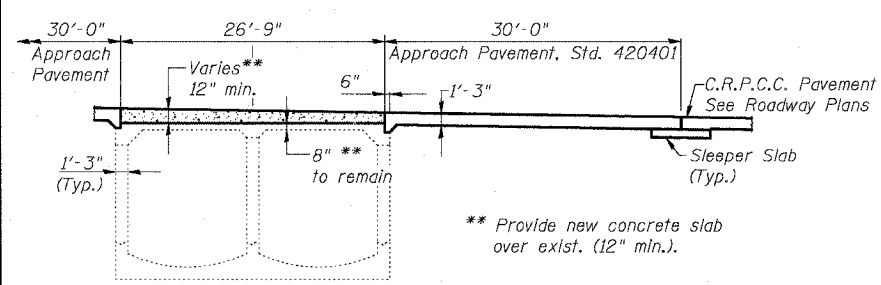
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	476
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	*1818, ETC. 2324.6-1PJR-9			



**EXISTING SECTION THRU CULVERT**

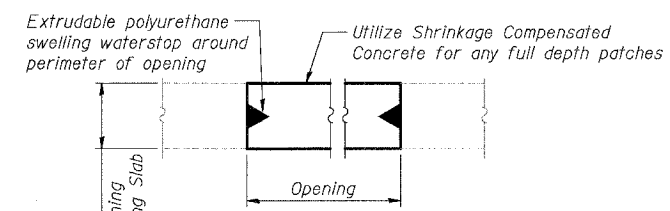
Exist. vertical, diagonal, and partially embedded horizontal reinforcement bars to be cleaned, straightened and incorporated into new concrete slab. Horizontal reinforcement bars that are not partially embedded in exist. slab shall be removed.



**PROPOSED SECTION THRU CULVERT**

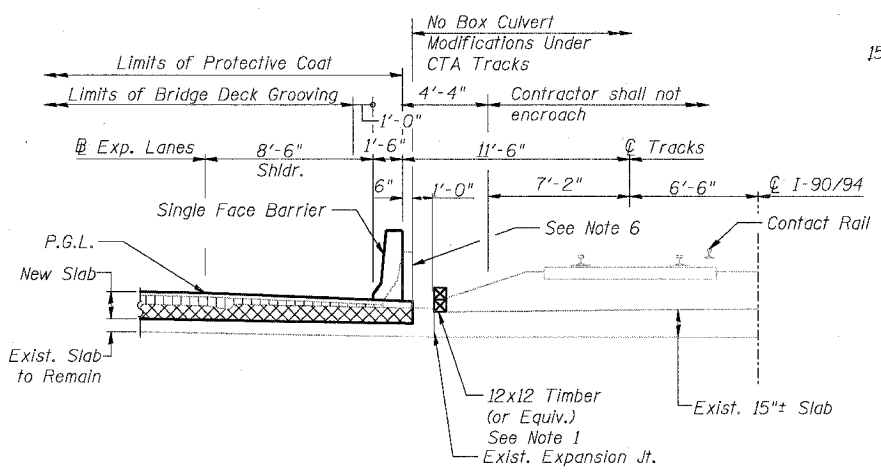
**ANTICIPATED SEQUENCE OF CONSTRUCTION:**

1. Televis existing culvert per Special Provisions.
2. Remove existing single face barrier along CTA and double face barrier between express and local lanes. Provide temporary concrete barrier and CTA ballast support as necessary.
3. Core drill full-depth through existing top slab to determine exact location of bottom of top slab before full-depth saw cutting.
4. Remove existing bituminous overlay to level of top reinforcement by scarification methods.
5. Remove remaining portion of top slab and reinforcement by hydro-demolition methods. The Contractor shall exercise care during the partial removal of the top slab of the culvert to ensure the remaining slab's integrity will not be detrimentally impacted. The Contractor shall repair any damage to the remaining slab caused by his operations as directed by the Engineer at no additional cost to the Department. The depth of removal varies from 7" to 11" and shall be determined in the field by the Engineer to ensure that a minimum of 8" of existing slab remains and a minimum of 12" of new concrete can be poured.
6. Repair unsound areas of remaining slab with partial or full depth repair methods and plug full-depth cores.
7. Construct new top slab and barrier along CTA.
8. Re-televis culvert and repair any damage per Special Provisions.
9. Approach slabs can be removed and replaced as necessary to coincide with top slab and adjacent pavement reconstruction. Provide CTA ballast support as required.
10. Any full-depth holes or patches shall be provided with water seals to prevent sewage from accumulating between the existing and proposed slab during future storm events. Cost included with Concrete Superstructure.



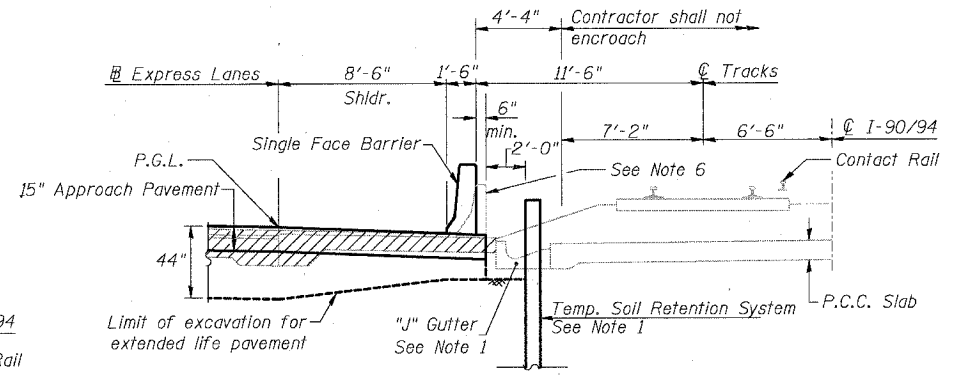
**WATER SEAL DETAIL**

Utilize Sika Swell S-2 by Sika Corporation or approved equal. Cost included with Concrete Superstructure.



**SECTION AT (CULVERT SLAB)**

See Note 4



**SECTION AT CTA (APPROACH PAVEMENT)**

See Note 4

**NOTES**

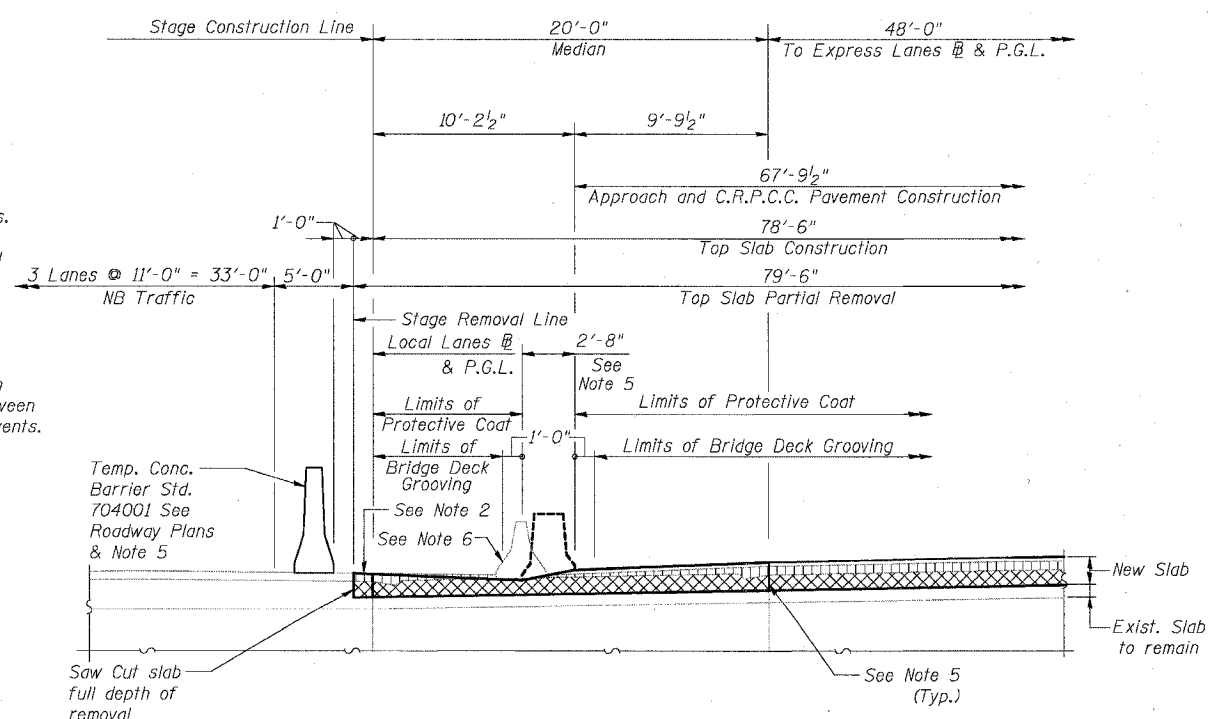
1. See Roadway Plans and Special Provisions for details and limits on either side of culvert. Do not damage PCC slab to remain under CTA tracks when installing or removing system.
2. Provide temporary pavement as a water seal to be removed by others. Provide polyethylene sheeting as indicated on Sheet CUL-1.
3. Temporary CTA Ballast Retention, see Special Provisions. Coordinate with requirements indicated in Roadway Plans and CTA Coordination Special Provision.
4. Exist. and prop. fence attached to CTA barrier not shown for clarity.
5. Future median barrier (by others) and approximate location of TCB after completion of contract. Adjust location of TCB to provide level base or provide temp. pavement to level base as directed by Engineer. Cost included with Relocate Temporary Concrete Barrier. Any temp. pavement placed on new pavement shall be separated with 10 mil polyethylene sheeting as bond breaker..
6. Existing CTA Barrier across culvert and approach slab shall be removed under item "CTA Barrier Removal". Existing median barrier between express and local lanes across culvert and approach shall be removed under the item "Concrete Barrier Removal". See Roadway Plans. Existing barriers anchored to culvert slab. Contractor shall use care when removing to damage culvert.
7. Contractor shall remove any abandoned lighting conduit exposed by removal operations as required. Cost included in the various removal items. Coordinate with IDOT Contract 62583 as required for timing of removals.

**LEGEND**

- Concrete Slab Hydro-Demolition
- Bituminous Surface Removal, 5" (Variable depth on shoulders)
- Approach Slab Removal

**ABBREVIATIONS**

C.J. = Construction Joint



**STAGING DETAILS @ EXPRESS/LOCAL LANES MEDIAN**

See Longitudinal Section for Dimensions not shown

REVISIONS	NAME	DATE

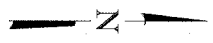
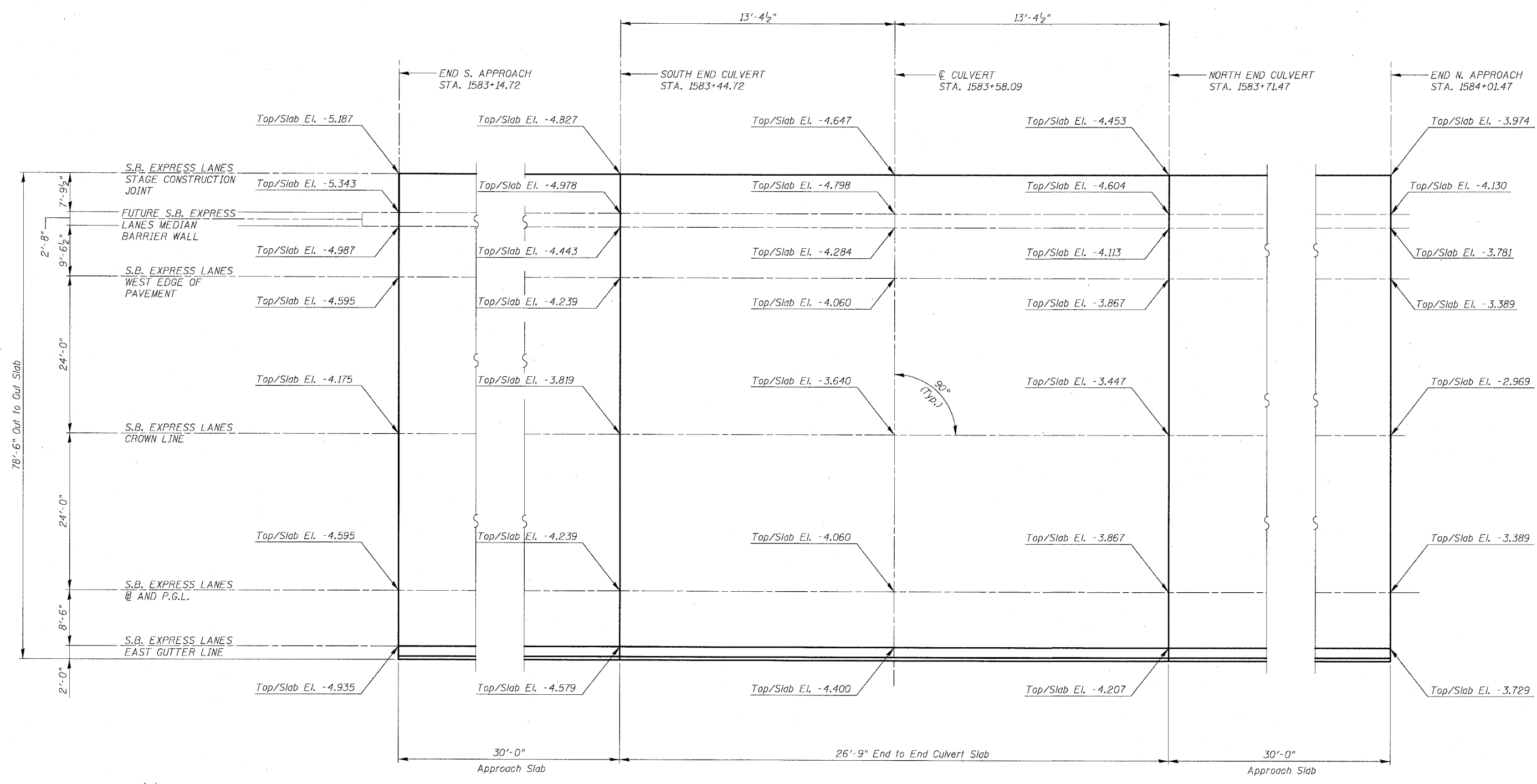
SHEET CUL-2 OF CUL-14

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.,  
 COOK COUNTY, S.N. 016-2625  
 MISC. DETAILS

SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	477
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*1818, ETC, 2324.6-IPJR-9		



PLAN

SHEET CUL-3 OF CUL-14

REVISIONS	
NAME	DATE

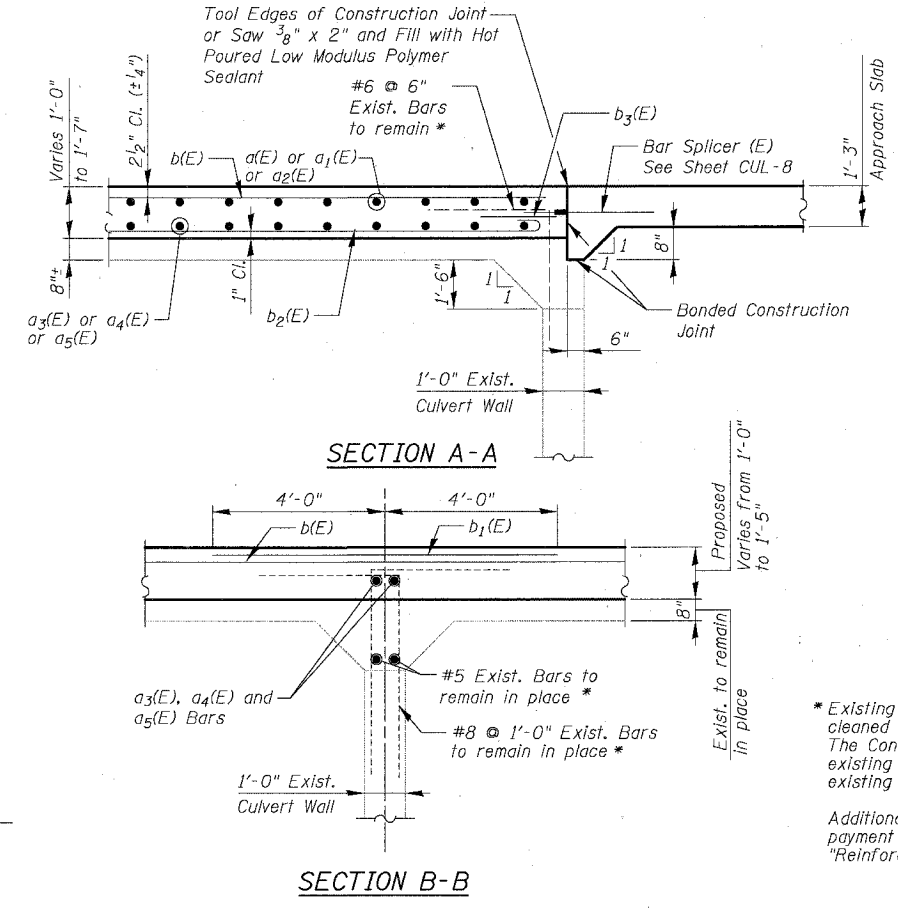
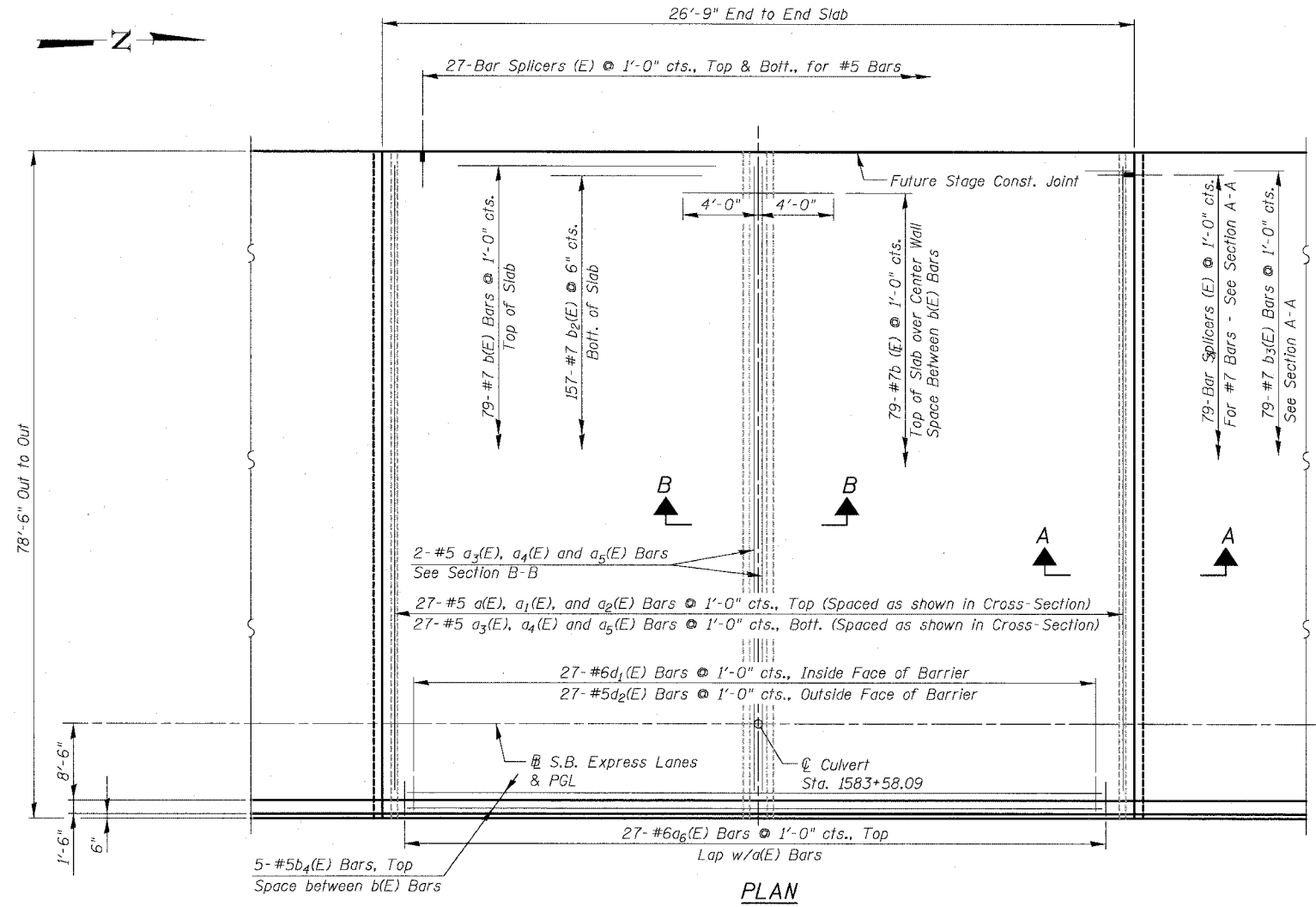
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.,  
 COOK COUNTY, S.N. 016-2625  
 TOP SLAB ELEVATIONS

SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	478
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*(1816, ETC., 2324.6-1PIR-9)		



\* Existing Reinforcement Bars shown are to be cleaned and incorporated into new construction. The Contractor also has the option to cut the existing bars and use new bars anchored to the existing concrete pier per approval of the Engineer.

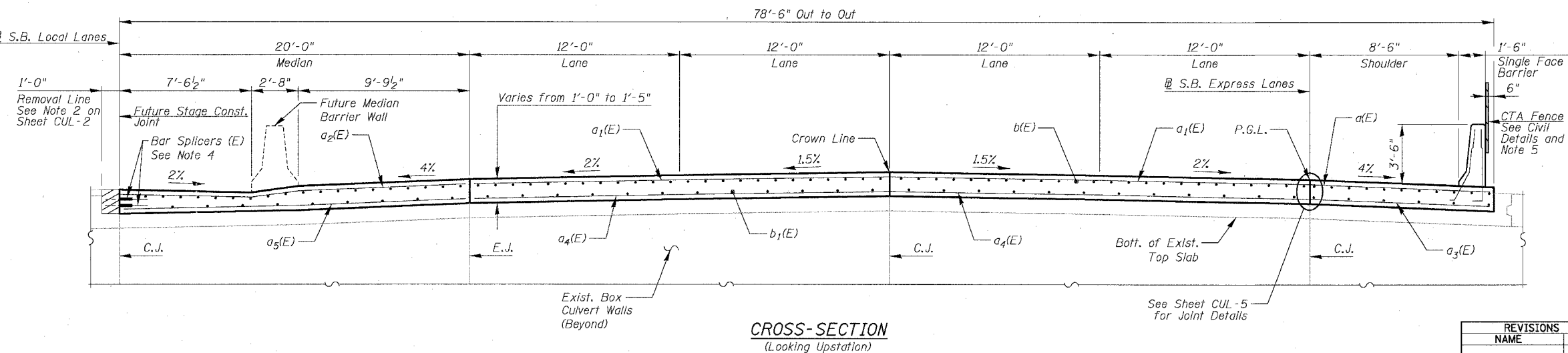
Additional reinforcement shall not be measured for payment but shall be included in the cost of "Reinforcement Bars, Epoxy Coated".

**NOTES**

1. Reinforcement Bars designated (E) shall be epoxy coated.
2. See Sheet CUL-5 for Top Slab Details and Bill of Material.
3. See Sheet CUL-8 for Bar Splicer Details.
4. Contractor shall provide bar splicers as shown here and on Sheet CUL-6. Install Stage I portion and provide Stage II portion to the Engineer. Plug threaded coupler with plastic nipple or H.S. Bolt for protection. Cost included with "Bar Splicers".
5. Provide terminal posts and fence "expansion" joint at end of Approach Pavement. Space fence posts to miss barrier joints.

**ABBREVIATIONS**

E.J. = Expansion Joint  
C.J. = Construction Joint



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REVISIONS	
NAME	DATE

SHEET CUL-4 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
TOP SLAB PLAN  
SCALE: N.T.S. DRAWN BY: MTR  
DATE: 07/07/05 CHECKED BY: BLU

12/25/08 FM  
5/24/2005

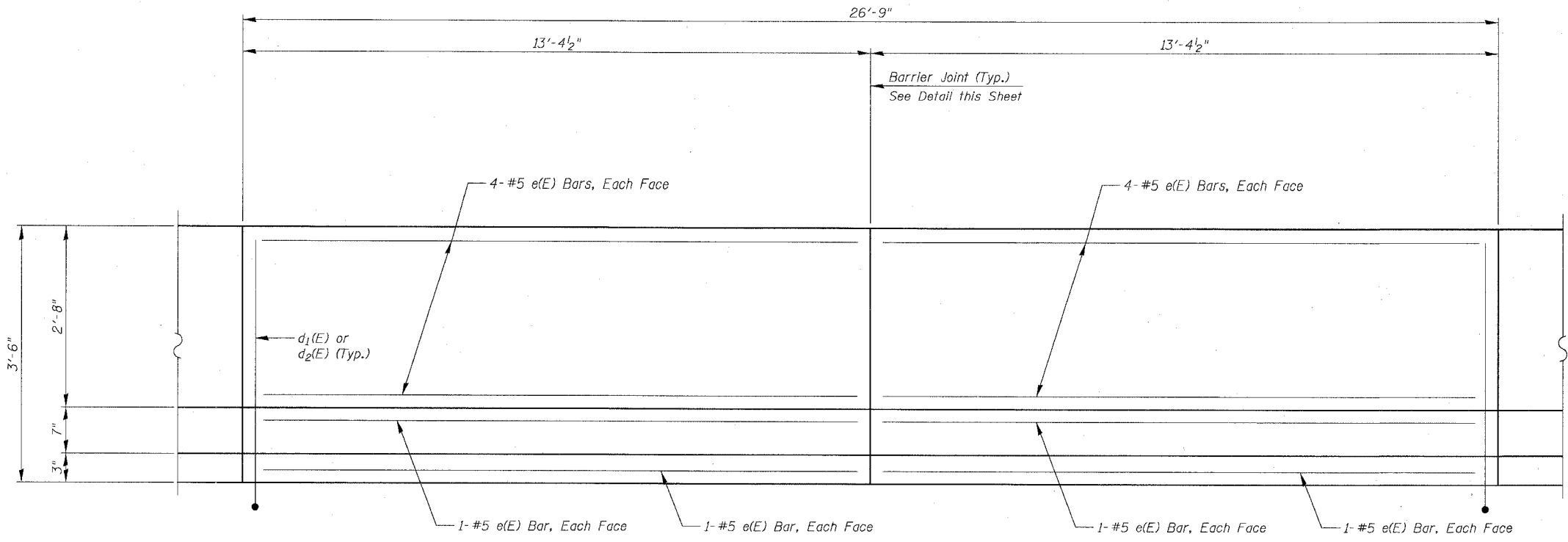


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	479
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	*1818, ETC. 2324.6-1PIR-9			

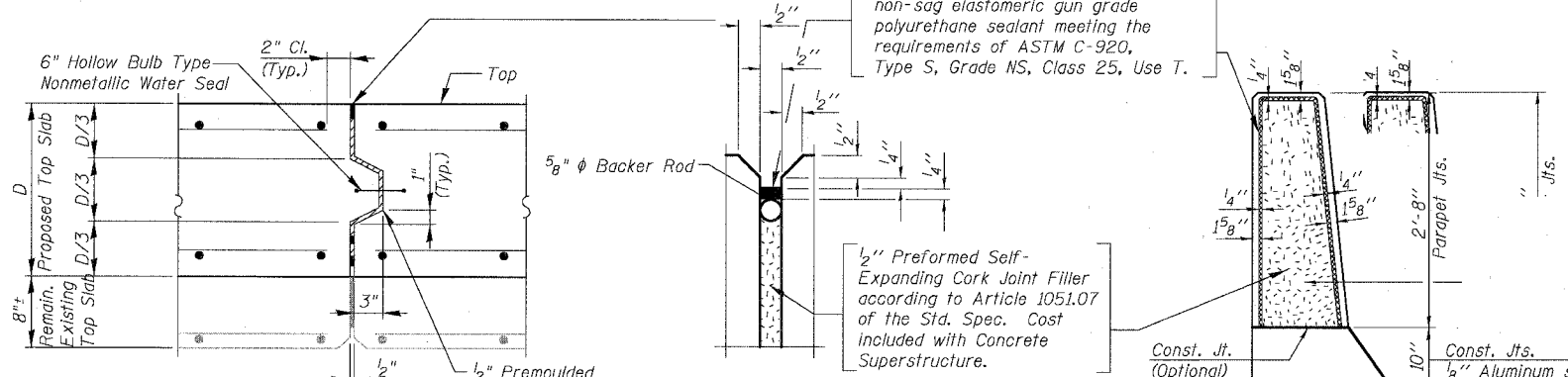
**TOP SLAB  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	27	#5	10'-2"	—
a <sub>1</sub> (E)	27	#5	23'-8"	—
a <sub>2</sub> (E)	27	#5	21'-10"	—
a <sub>3</sub> (E)	29	#5	10'-2"	—
a <sub>4</sub> (E)	29	#5	23'-8"	—
a <sub>5</sub> (E)	29	#5	19'-8"	—
a <sub>6</sub> (E)	27	#6	4'-6"	—
b(E)	79	#7	26'-5"	—
b <sub>1</sub> (E)	79	#7	8'-0"	—
b <sub>2</sub> (E)	157	#7	28'-1"	—
b <sub>3</sub> (E)	79	#7	4'-0"	—
b <sub>4</sub> (E)	5	#5	26'-5"	—
d <sub>1</sub> (E)	27	#6	5'-7"	L
d <sub>2</sub> (E)	27	#5	5'-9"	L
e(E)	24	#5	13'-0"	—
Concrete Superstructure		Cu. Yd.	104.1	
Bridge Deck Grooving		Sq. Yd.	212	
Protective Coat		Sq. Yd.	232	
Reinforcement Bars, Epoxy Coated		Pound	19,260	
Bar Splicers		Each	133	
CTA Fence		Foot	27	

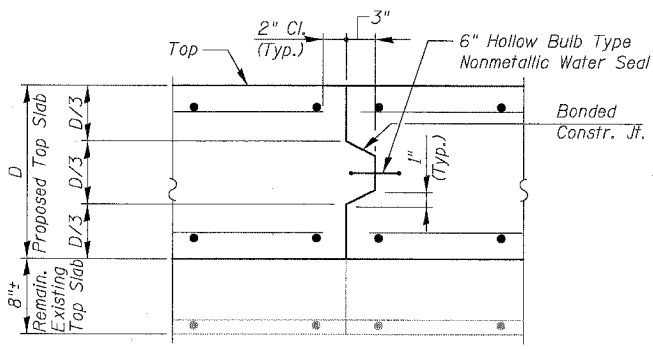
Reinforcement bars designated (E) shall be epoxy coated.  
CTA Fence not shown for clarity. See Roadway Plans for fence details.  
Cost of water seal, P.J.F. and Sealant included in the cost of Concrete Superstructure.



**INSIDE ELEVATION OF SINGLE FACE BARRIER**

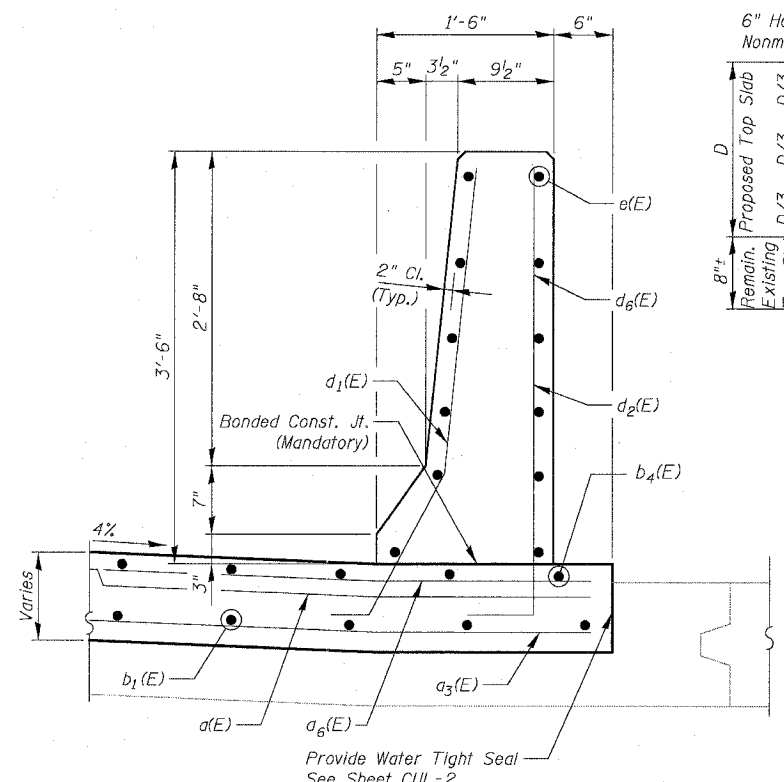
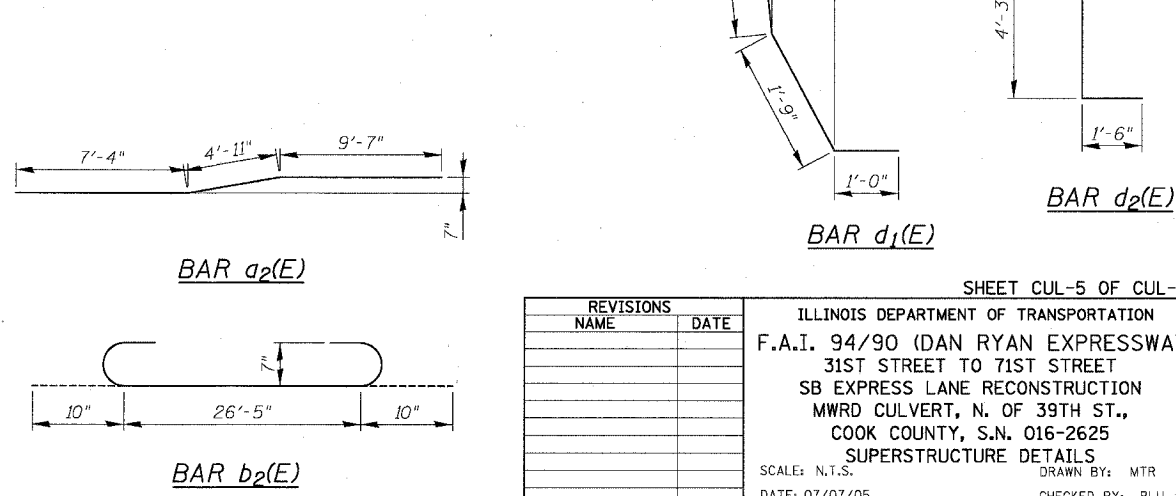


**CULVERT EXPANSION JOINT**  
Do not seal until after grooving operations



**CULVERT CONSTRUCTION JOINT**

**BARRIER JOINT DETAILS**



**SECTION THRU SINGLE FACE BARRIER**

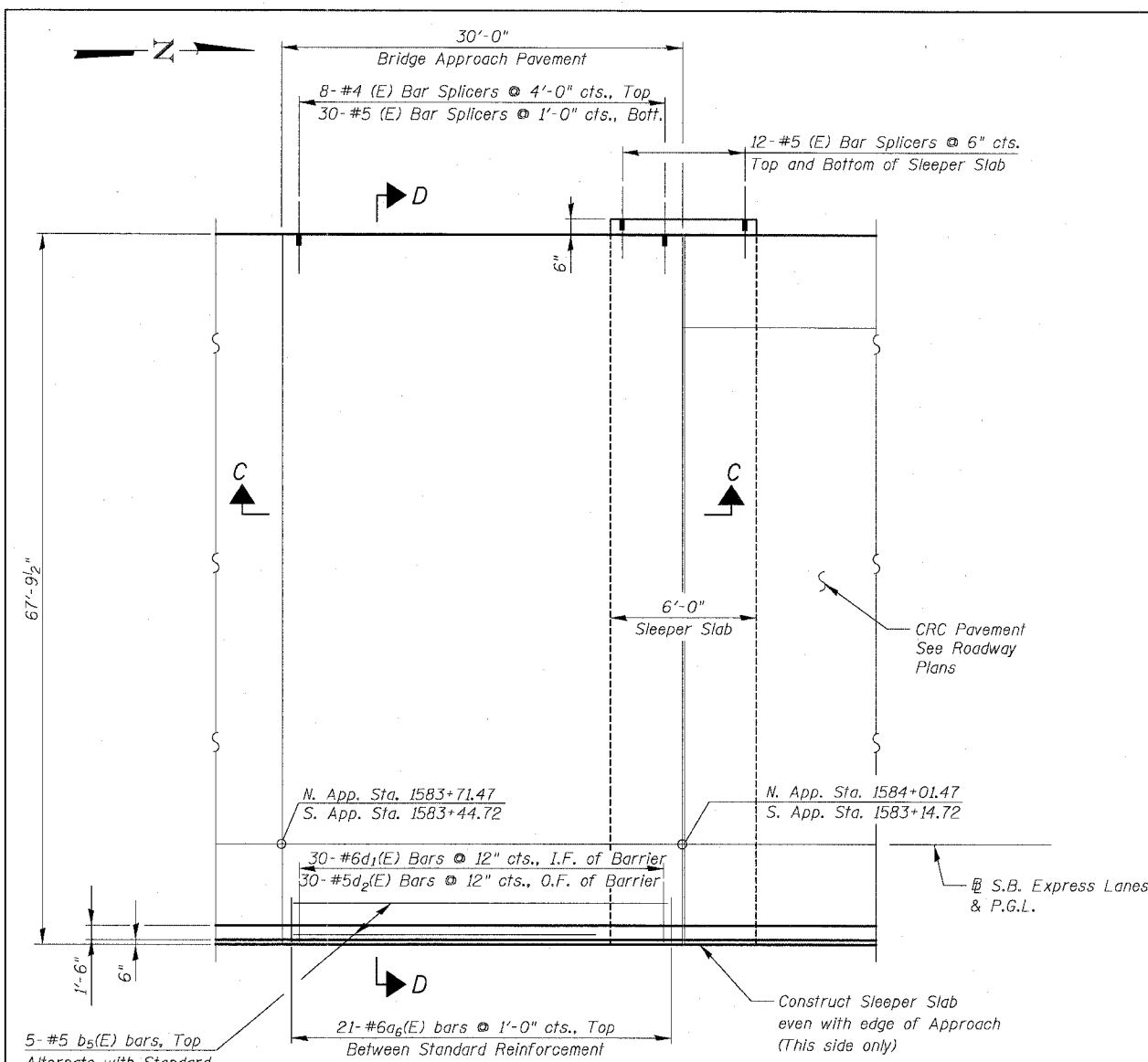
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REVISIONS	NAME	DATE

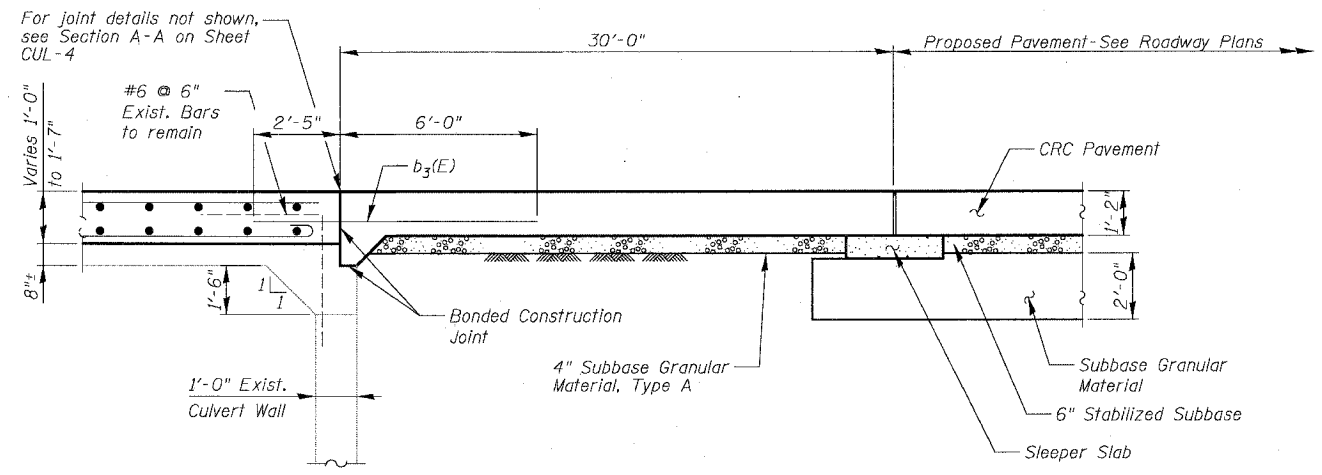
SHEET CUL-5 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
SUPERSTRUCTURE DETAILS  
SCALE: N.T.S. DRAWN BY: MTR  
DATE: 07/07/05 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	480
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	*181B, ETC. 2324.6-1PIR-9			



**PARTIAL PLAN**  
North Approach Shown  
South Approach Similar

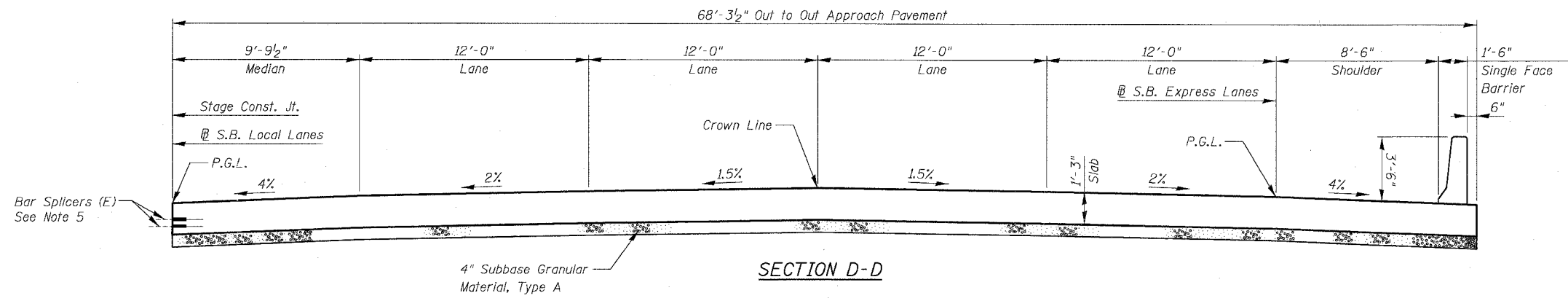


**SECTION C-C**

**NOTES:**

1. See IDOT Standard 420401 for typical approach pavement reinforcing and details
2. Reinforcement Bars designated (E) shall be epoxy coated.
3. See Sheet CUL-7 for CTA Barrier Details.
4. See Sheet CUL-7 for Bill of Materials.
5. Contractor shall provide bar splicers as shown here and on Sheet CUL-4. Install Stage I portion and provide Stage II to the Engineer. Plug threaded coupler with plastic nipple or H.S. Bolt for protection. Cost included with "Bar Splicers".

I.F. = Inside Face  
O.F. = Outside Face



**SECTION D-D**

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SHEET CUL-6 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
APPROACH SLAB DETAILS 1  
SCALE: N.T.S. DRAWN BY: MTR  
DATE: 07/07/05 CHECKED BY: BLU

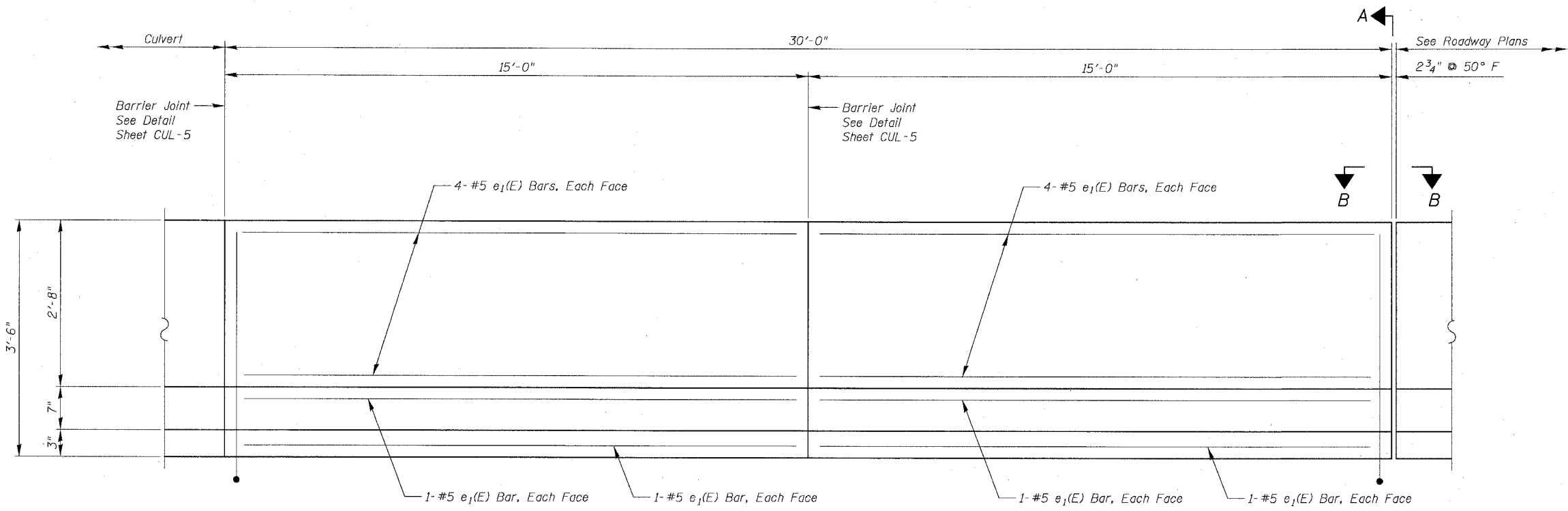
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	481
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302		*1818, ETC, 2324.6-1PIR-9		

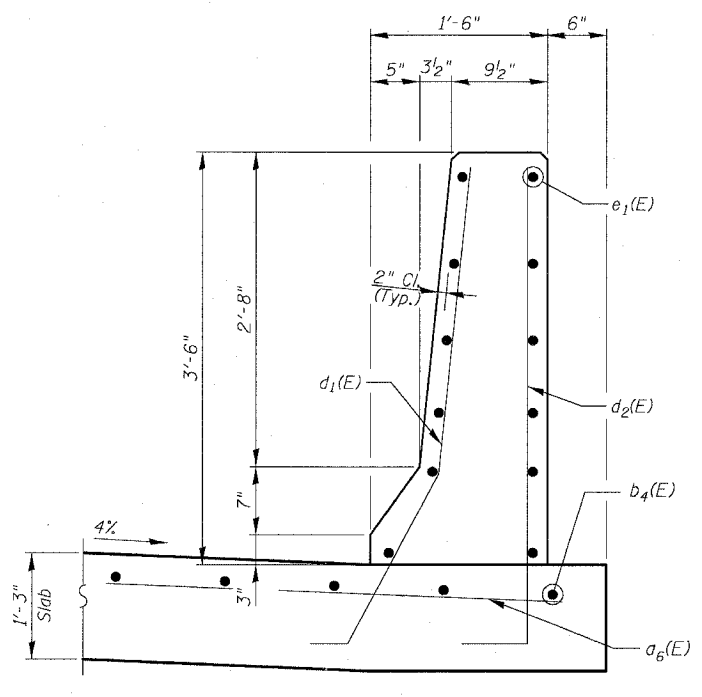
**APPROACH PAVEMENT  
BILL OF MATERIAL  
TOTAL FOR 2 APPROACH SLABS**

Bar	No.	Size	Length	Shape
a <sub>6</sub> (E)	42	#6	4'-6"	—
b <sub>5</sub> (E)	10	#5	29'-6"	—
d <sub>1</sub> (E)	60	#6	5'-7"	L
d <sub>2</sub> (E)	60	#5	5'-9"	L
e(E)	48	#5	14'-8"	—
Bridge Approach Pavement		Sq. Yd.	452	
Concrete Superstructure		Cu. Yd.	8.1	
Protective Coat		Sq. Yd.	25	
Reinforcement Bars, Epoxy Coated		Pound	2,190	
Bar Splicers		Each	124	
CTA Fence		Foot	60	

See IDOT Standard 420401 for typical approach pavement reinforcing and details.  
Additional reinforcement bars, bar splicers, and concrete for single face barrier not shown on Sid. 420401 shall be paid for as Reinforcement Bars, Epoxy Coated, Bar Splicers, and Concrete Superstructure.  
Reinforcement bars designated (E) shall be epoxy coated.  
CTA Fence not shown for clarity. See Roadway Plans for fence details.  
See Sheet CUL-4 for treatment of Approach Slab/Culvert Slab joint.  
Apply Protective Coat to top and inside face of single face barrier.

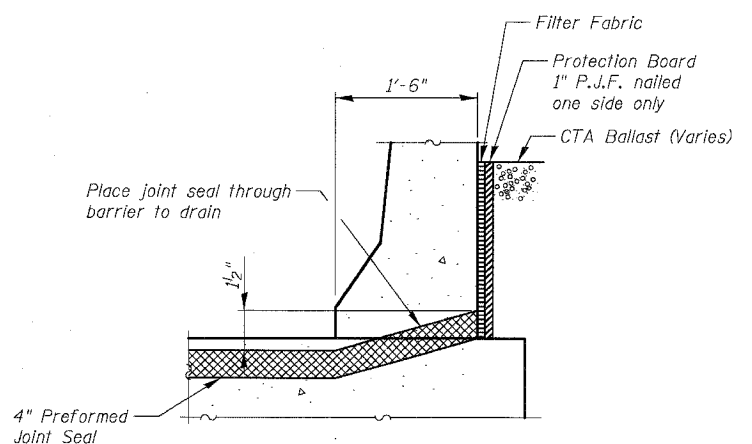


**INSIDE ELEVATION OF SINGLE FACE BARRIER ON APPROACH PAVEMENT**

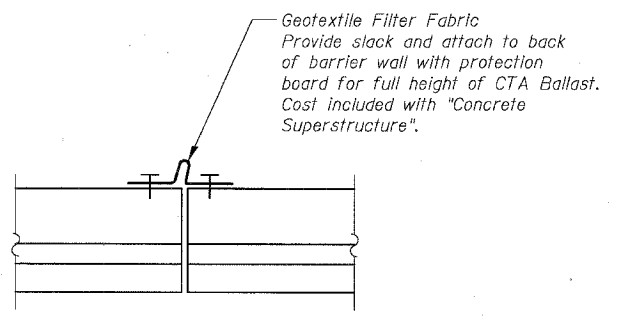


**SECTION THRU SINGLE FACE BARRIER**

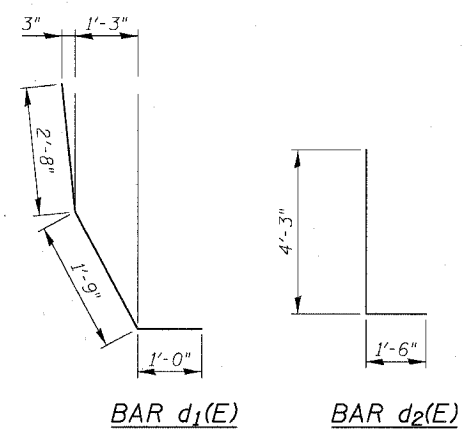
Note: Standard Approach Pavement reinforcement not shown for clarity



**SECTION A-A**



**VIEW B-B**



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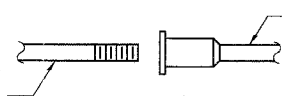
REVISIONS	
NAME	DATE

SHEET CUL-7 OF CUL-14

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
APPROACH SLAB DETAILS 2

SCALE: N.T.S. DRAWN BY: MTR  
DATE: 07/07/05 CHECKED BY: BLU

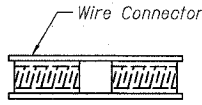
The diameter of this part is the same as the diameter of the bar spliced.



**ROLLED THREAD DOWEL BAR**



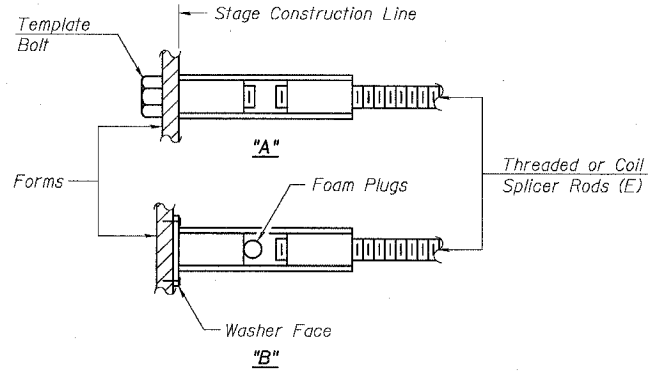
**\*\* ONE PIECE**



**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**

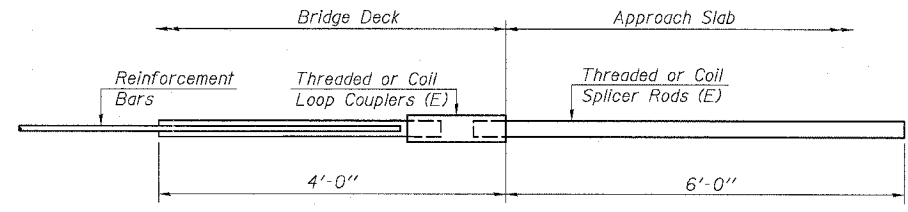
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to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

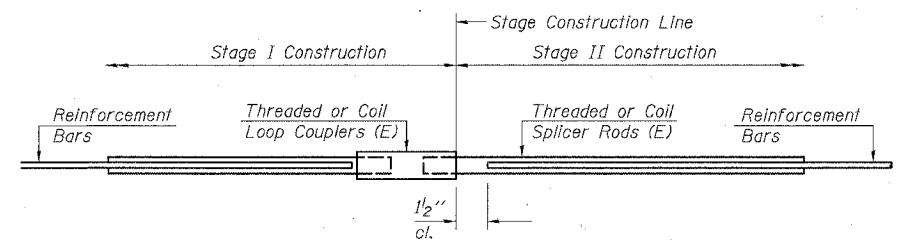
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."



**FOR BOX CULVERT**

Bar Splicer for #7 bar
Min. Capacity = 45.1 kips - tension
Min. Pull-out Strength = 18.0 kips - tension
No. Required = 79



**STANDARD**

Bar Size	No. Assemblies Required	Location
#5	133	Culvert Slab
#4	16	Approach Slab
#5	60	Approach Slab
#5	24	Approach Sleeper Slab

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.  
 COOK COUNTY, S.N. 016-2625  
**BAR SPLICER DETAILS**  
 SCALE: N.T.S. DRAWN BY: MTR  
 DATE: 07/07/05 CHECKED BY: BLU

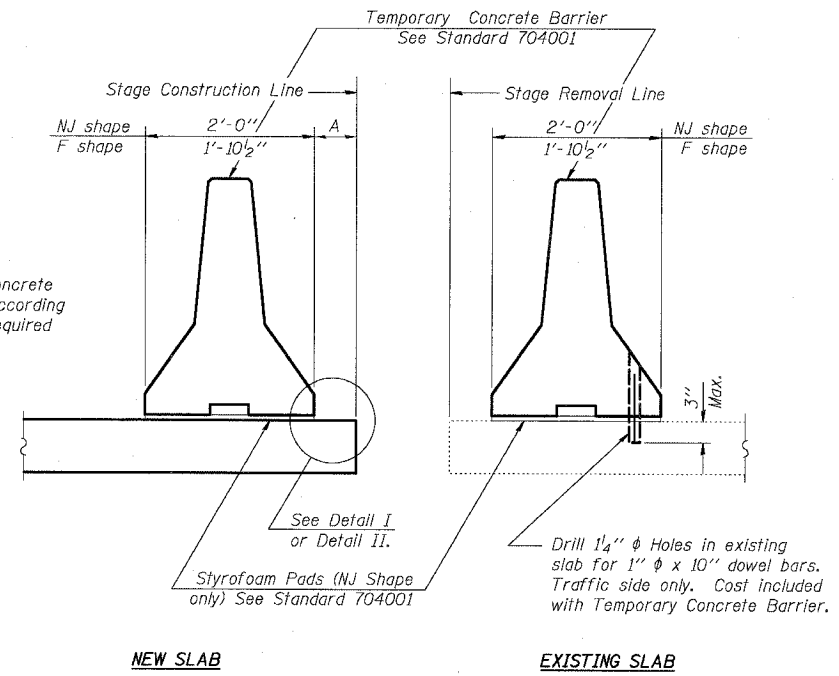
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BSD-1 9-01-03

12/24/2005 12:05:15 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	483
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	*1818, ETC, 2324.6-1PIR-9			

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



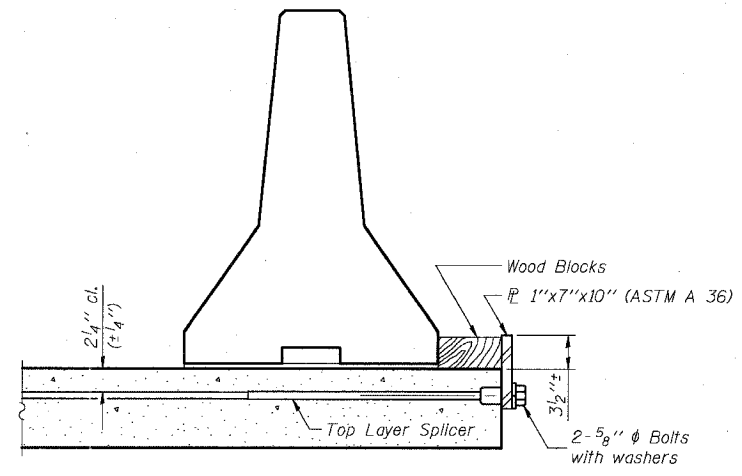
SECTIONS THRU SLAB

NOTES

**Detail I - With Bar Splicer or Couplers:**  
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" phi bolts screwed to coupler at approximate CL of each barrier panel.

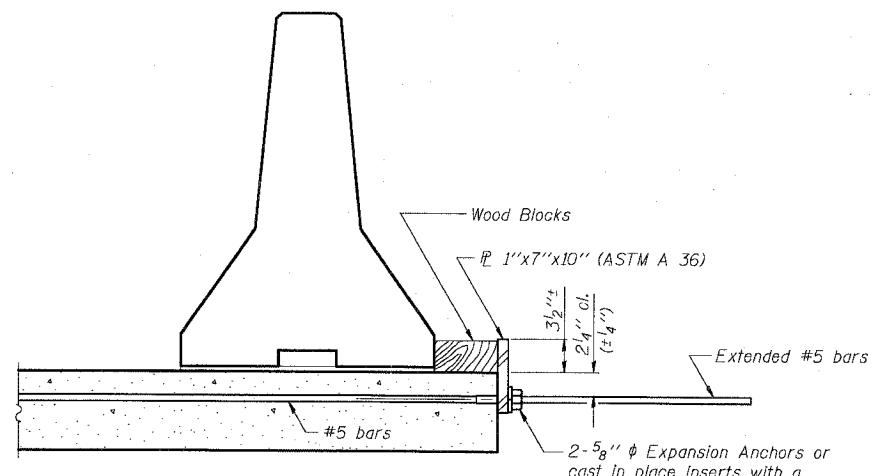
**Detail II - With Extended Reinforcement Bars:**  
Connect one (1) 1"x7"x10" steel PL to the concrete slab with 2-5/8" phi Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate CL of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



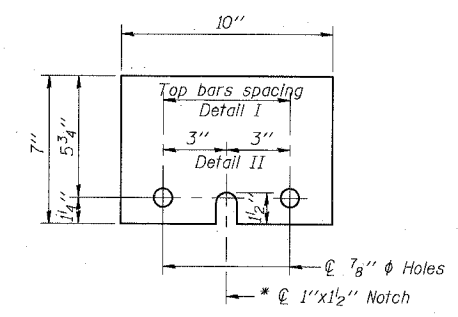
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1"x7"x10"

\* Required only with Detail II

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REVISIONS	
NAME	DATE

SHEET CUL-9 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, S.N. 016-2625  
TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
SCALE: N.T.S. DRAWN BY: MTR  
DATE: 07/07/05 CHECKED BY: BLU

12/8/07 PM 6/24/2005

Everest Engineering Company  
STRUCTURE BORING LOG

Page 1 of 1  
Date 6/3/03

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	484
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62302		*1818, ETC, 2324.6-1P1R-9		

ROUTE FAI 90/94 DESCRIPTION DAN RYAN EXPRESSWAY  
SECT. 31ST STREET TO 47TH STREET STRUCT. NO. DRILLED BY PATRICK DRILLING INC.  
COUNTY COOK LOCATION CULVERT S. , TWP. 39 N , RNG. 14 E

Boring No.	Station	Offset	Surface Elev.	D E P T H	B L O W S	Qu tsf	W %	Surface Water Elev.	D E P T H	B L O W S	Qu tsf	W %
CB-1	3583+66 (SB LOCAL)	15.0ft RT. OF SB LOCAL	-2.80 ft									
ASPHALT PAVEMENT				-3.05				END OF BORING				
CONCRETE				-4.30								
CRUSHED STONE						15	4					
some- sand						10						
						9						
						10	5					
FILL				-8.30								
Medium Stiff to Stiff, Gray						4						
SILTY CLAY						5						
trace- sand and gravel												
						2	0.5	23				
						2	P					
						3						
						1	0.9	21				
						2	B					
						2						
						1	0.7	23				
						1	B					
						2						
						1	0.4	24				
						1	B					
						1						
						2	1.24	19				
						3	B					
						4						
Very Stiff to Hard, Gray				-21.30								
SILTY CLAY LOAM						2	2.8	15				
trace- sand and gravel						3	B					
						3						
						24	4.5+	10				
						26	P					
						26						
						50/5'	4.5+	10				
							P					

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test  
Stations, Depths, Offset, and Elevations are in Feet

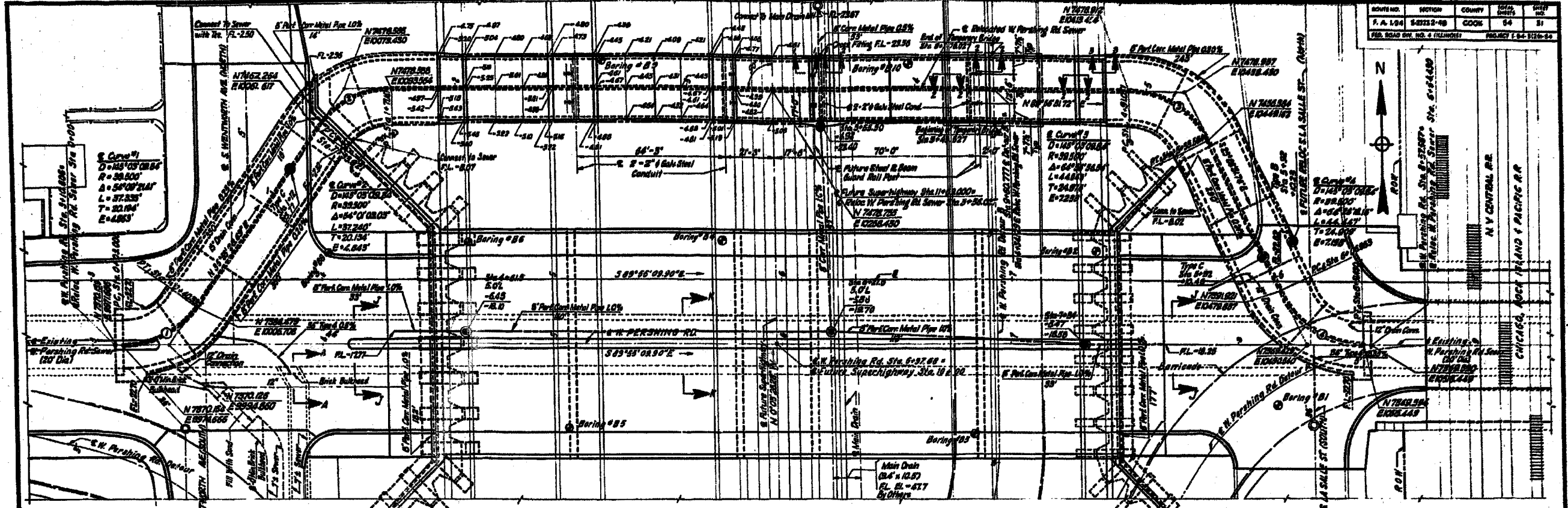
BORING CB-1

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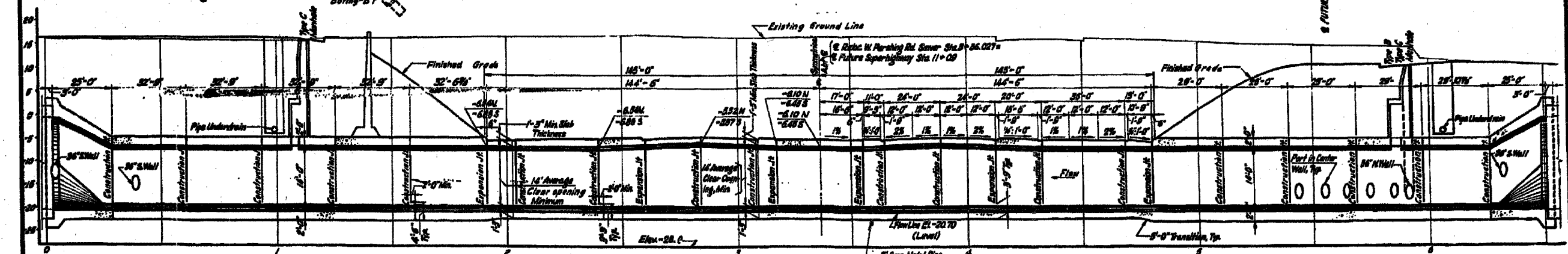
REVISIONS	
NAME	DATE

SHEET CUL-10 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.  
COOK COUNTY, S.N. 016-2625  
SOIL BORINGS  
SCALE: N.T.S. DRAWN BY: DJM  
DATE: 07/07/05 CHECKED BY: BLU

6/24/2005 12:24 PM



**PLAN**  
SCALE: 1\"/>



**PROFILE**  
SCALE: HORIZONTAL 1\"/>

**GENERAL NOTES**  
 Design Specifications: AASHTO 1987 Modified AREA 1988 Modified State of Illinois Division of Highways 1988.  
 Design Lane Loading: AASHTO HS20-44 or Alternate designated in PPM 20-4, Sec 4c; and Chicago Transit Authority, April 22, 1982.

**NOTES**  
 1. Sewer flow shall be 1+0.00 to 4+0.00 ft/s will be a maximum of 1.00 cfs.

2. For Stone Trench Backfill use std 3-4.

3. For Soil Boring Data, see also S-1 & S-4.

**CITY OF CHICAGO**  
**DEPARTMENT OF PUBLIC WORKS**  
**BUREAU OF ENGINEERING**  
**SOUTH ROUTE SUPERHIGHWAY**

SHEET CUL-11 OF CUL-14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.,  
 COOK COUNTY, S.N. 016-2625  
 EXISTING PLAN AND ELEVATION

SCALE: NTS  
 DATE: 07/07/05  
 DRAWN BY: BDC  
 CHECKED BY: BLU

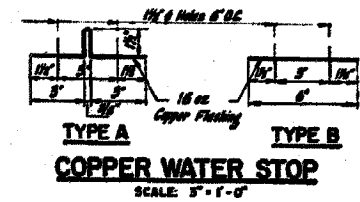
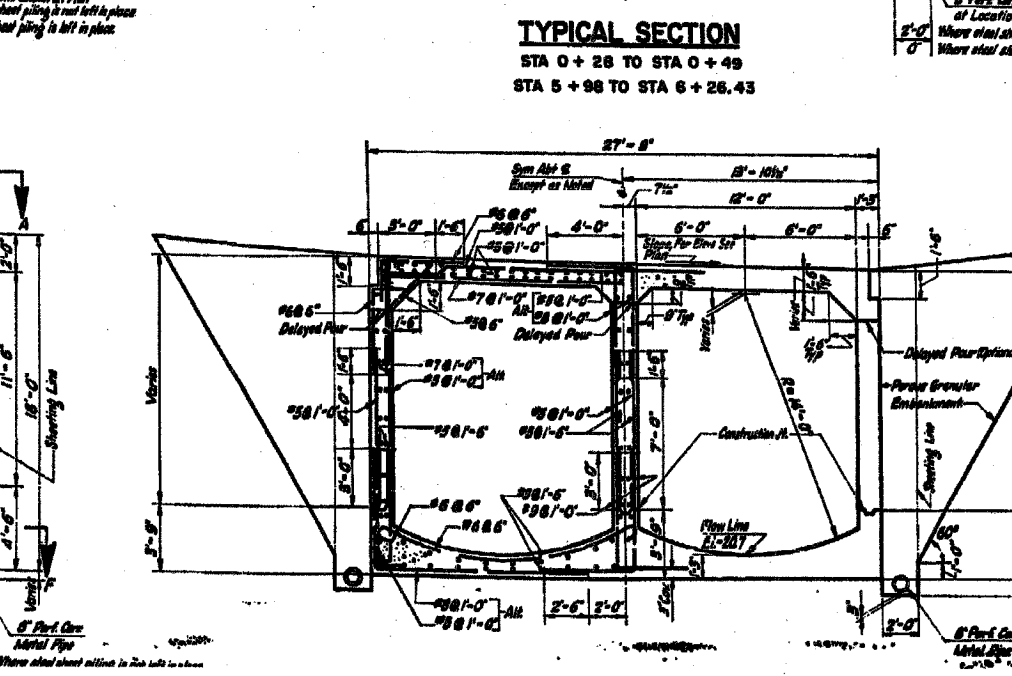
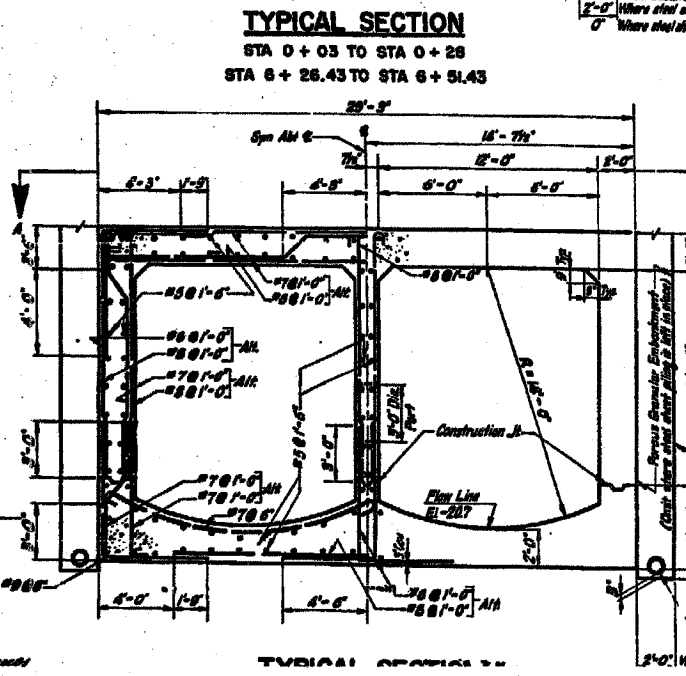
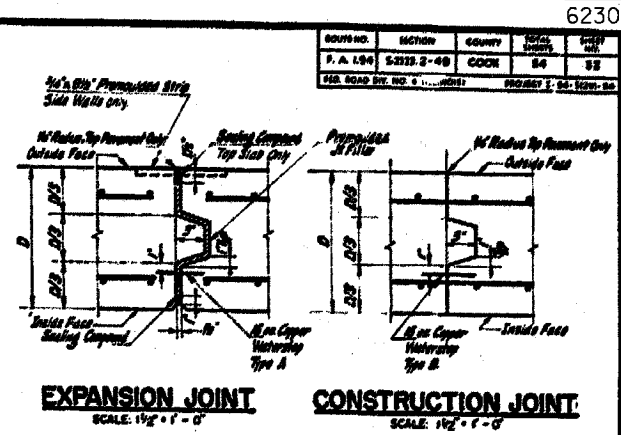
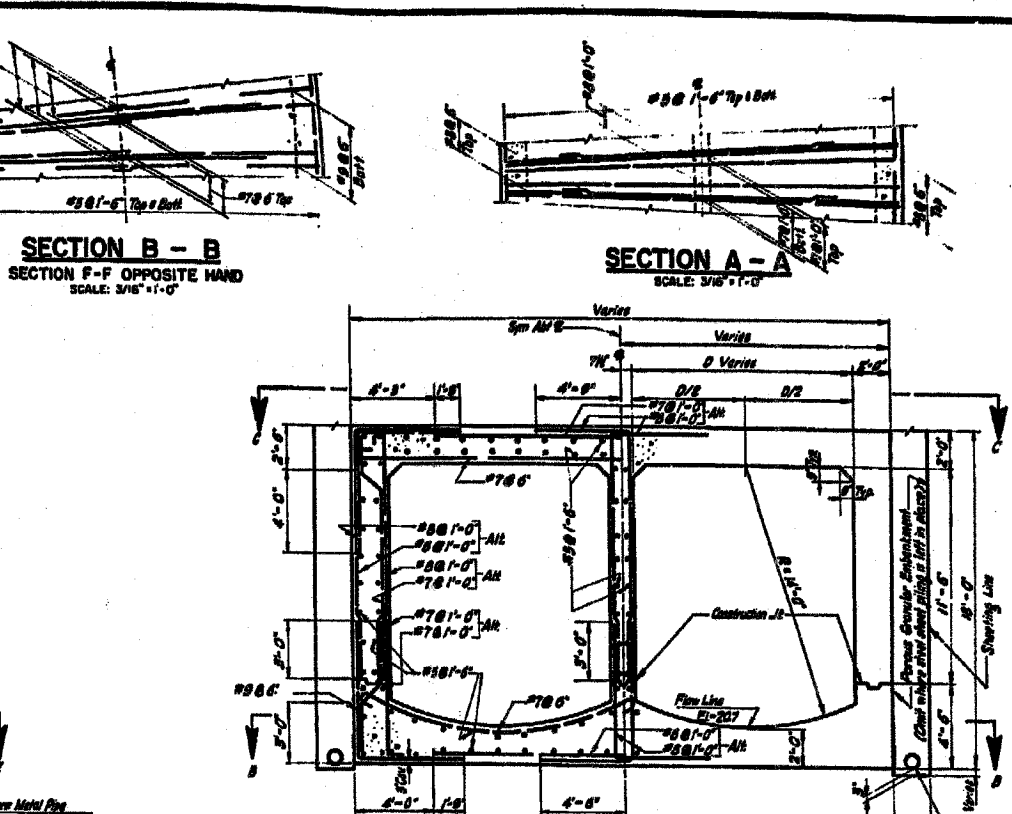
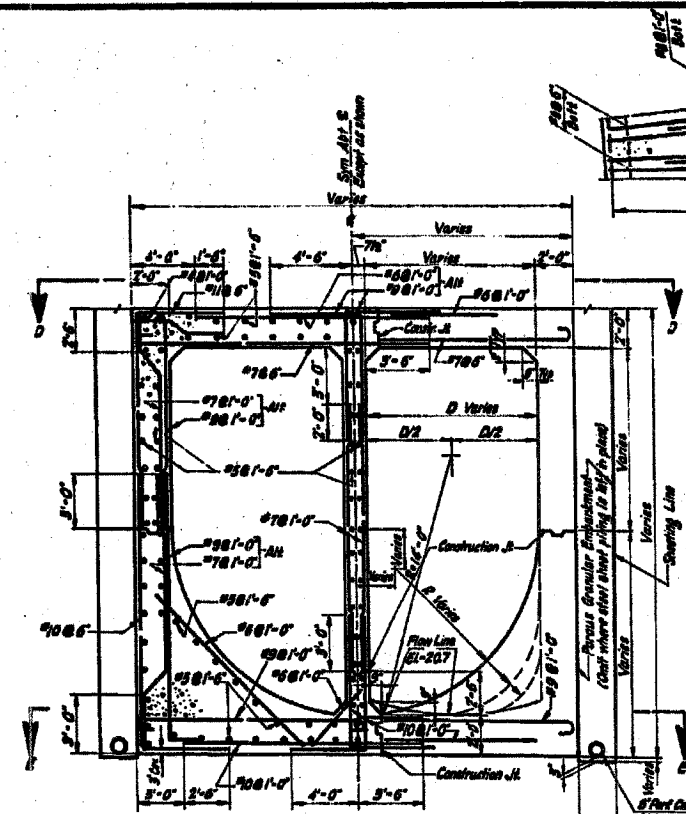
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62302-45  
 02/24/2005

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	598	486
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	*1818, ETC, 2324.6-1PR-9			

OWNER NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	2324.2-4B	COOK	54	53
FED. ROAD DIST. NO.	PROJECT: 94-1001-05			



- NOTES**
1. Minimum required bearing pressure = 5,000 psf.
  2. Foundation Soils which are wet, disturbed, or which do not satisfy the minimum required bearing pressure shall be removed and the excavation backfilled with Class X Concrete as directed by the Engineer.
  3. Cover = 2'; except as noted.
  4. Continuous reinforcement shall be Lapped 24" Dia minimum, except as noted.
  5. For Sections C-C, D-D & E-E, see sht S-2.
  6. Where a delayed pour is shown there shall be a 2 hour maximum delay between the pouring of the walls and the top slab.
  7. Cast Expansion Joints in bottom slab.
  8. For Part Details see sht S-2.
  9. For Excavation & Backfill Limits, and Cofferdam Limits see sht S-3.

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION 5-2324.2-4B  
W. PERSHING ROAD BRIDGE  
**SEWER TYPICAL SECTIONS**

SHEET CUL-12 OF CUL-14

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MRWD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
EXISTING TYPICAL SECTIONS

SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BOC  
CHECKED BY: BLU

FOR INFORMATION ONLY

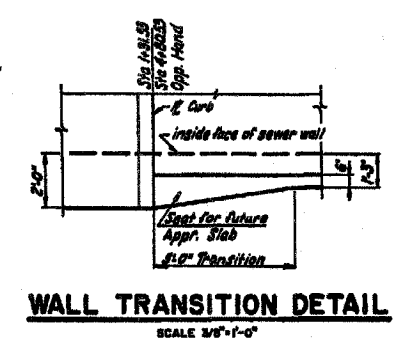
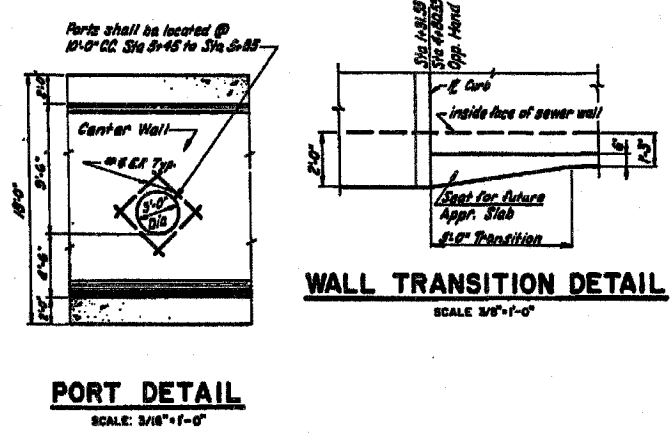
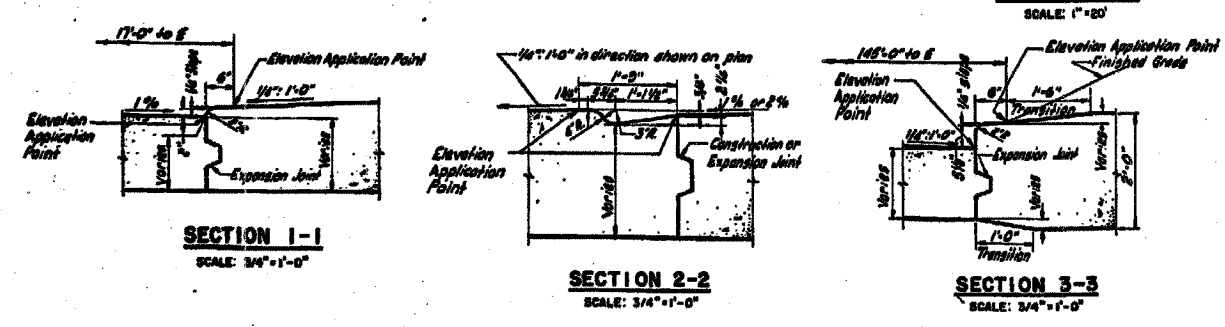
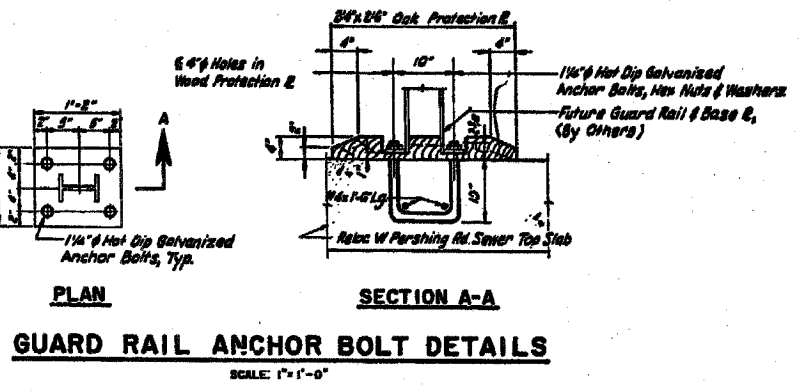
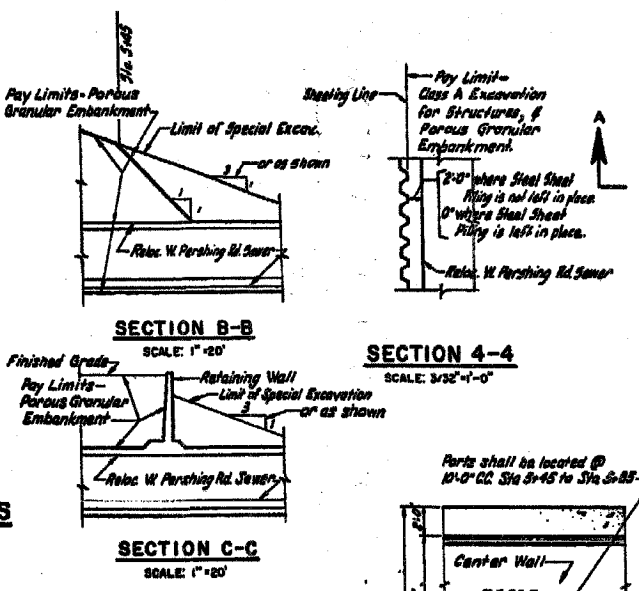
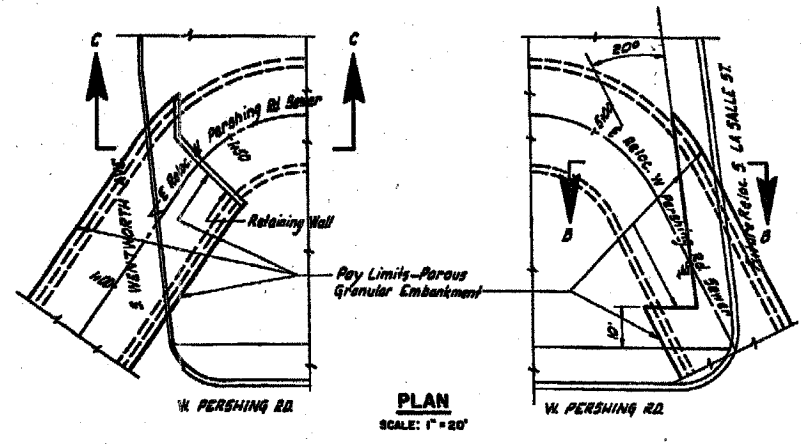
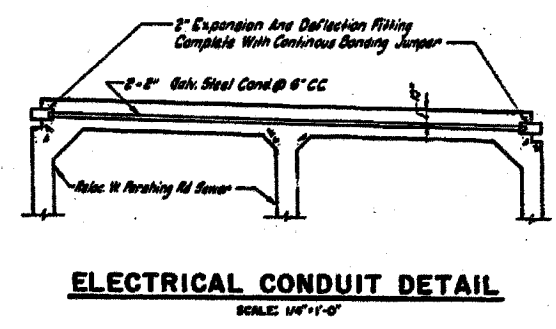
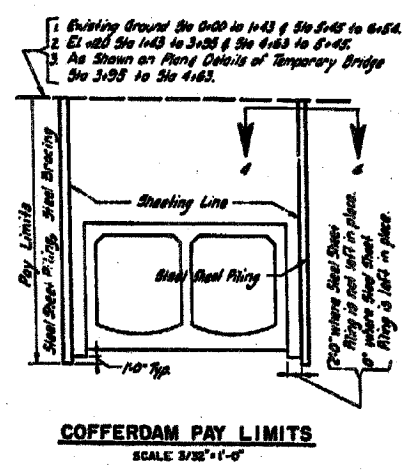
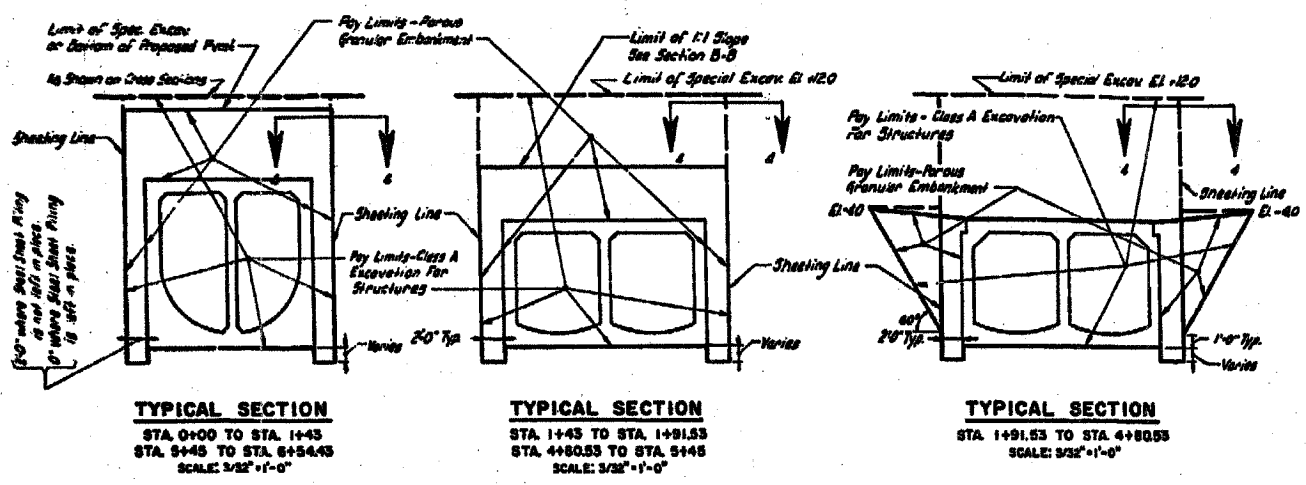
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
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6/24/2005 12:29:03 PM



F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	487
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
62302		*1816, ETC, 2324.6-1PIR-9		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 194	5-2322-48	COOK	54	54
FED. ROAD DIST. NO. 4 ILLINOIS PROJECT 1-20-1120-24				



- NOTES:**
1. For Location of Sections 1-1, 2-2, 3-3, see sheet S-5
  2. For Details of Construction & Expansion Joints, see sheet S-6.
  3. For Location of Electrical Conduit & Guard Rail Anchor Bolts, see sheet S-6.

**CITY OF CHICAGO**  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING

**SOUTH ROUTE SUPERHIGHWAY**  
SECTION 5-2322-48  
W PERSHING ROAD BRIDGE  
**SEWER MISCELLANEOUS**  
DETAILS

SHEET CUL-13 OF CUL-14

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
EXISTING GENERAL DETAILS

SCALE: NTS  
DATE: 07/07/05

DRAWN BY: BDC  
CHECKED BY: BLU

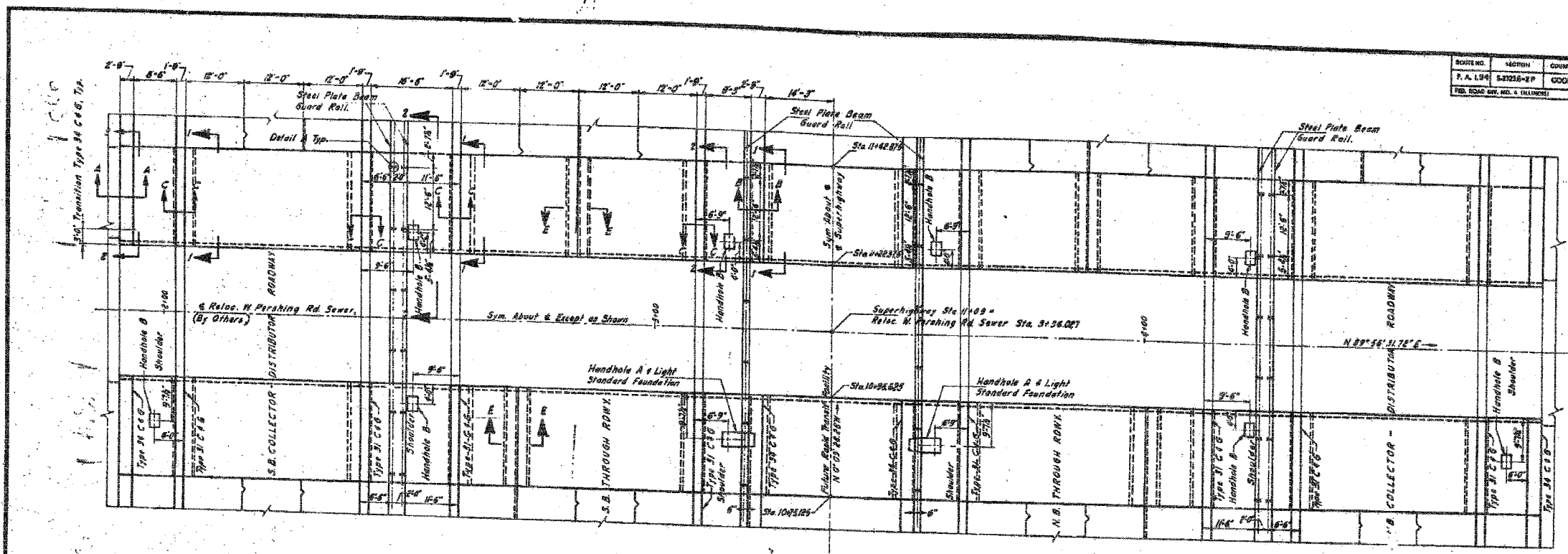
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CONSULTING ENGINEERS  
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312.228.0100  
www.bbadaire.com

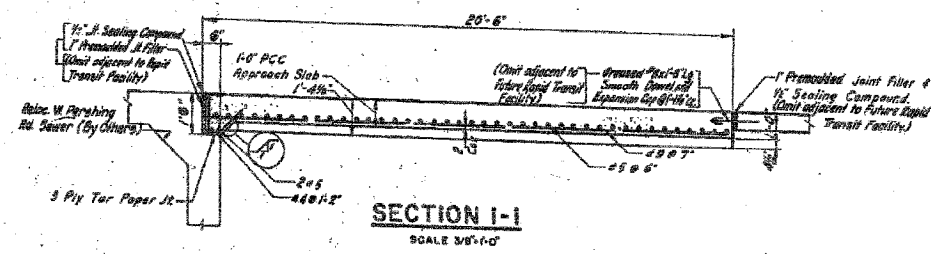
ANSI Z39-18-1997 PERMANENT PAPER 12/28/02 5/24/2005

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62302		*1818, ETC., 2324.6-1PIR-9		

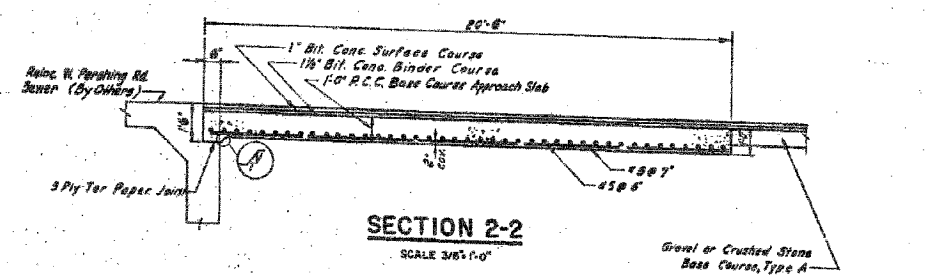
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FED. ROAD DIST. NO. 4 (ILLINOIS) PROJECT 1-94-2324-94				



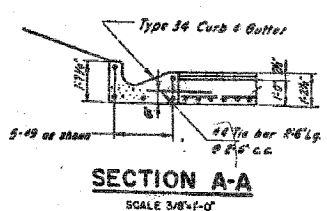
**APPROACH SLAB PLAN**  
SCALE 1"=10'



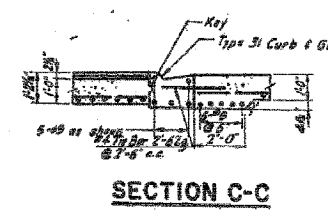
**SECTION 1-1**  
SCALE 3/8"=1'-0"



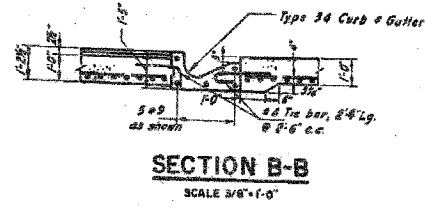
**SECTION 2-2**  
SCALE 3/8"=1'-0"



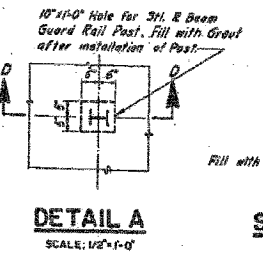
**SECTION A-A**  
SCALE 3/8"=1'-0"



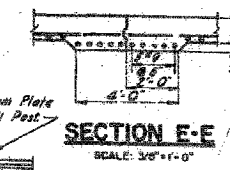
**SECTION C-C**  
SCALE 3/8"=1'-0"



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

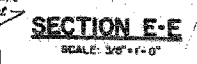


**DETAIL A**  
SCALE 1/2"=1'-0"



**SECTION D-D**  
SCALE 1/2"=1'-0"

- NOTES**
1. Reinforcement bar cover = 2" except as noted.
  2. For Details of Type 31 & Type 34 Curb & Gutter, see Sheet 6-77.
  3. For Details of Construction Joint, see Sheet 6-81.
  4. For Details of Handhole A & B, and Light Standard Foundation, see Sheet 6-8.



**SECTION E-E**  
SCALE 3/8"=1'-0"

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION 5-222B-2P  
GRADING, PAVING & DRAINAGE, W. PERSHING RD. TO W. 35TH ST.  
**APPROACH SLAB**  
GOODKIND & O'DEA, INC.  
CONSULTING ENGINEERS, CHICAGO, ILL.  
SCALE AS NOTED  
SEPTEMBER 1961  
SHEET NO. 6-77 OF 112 SHEETS

Drawn by: [Signature]  
Checked by: [Signature]  
Approved by: [Signature]

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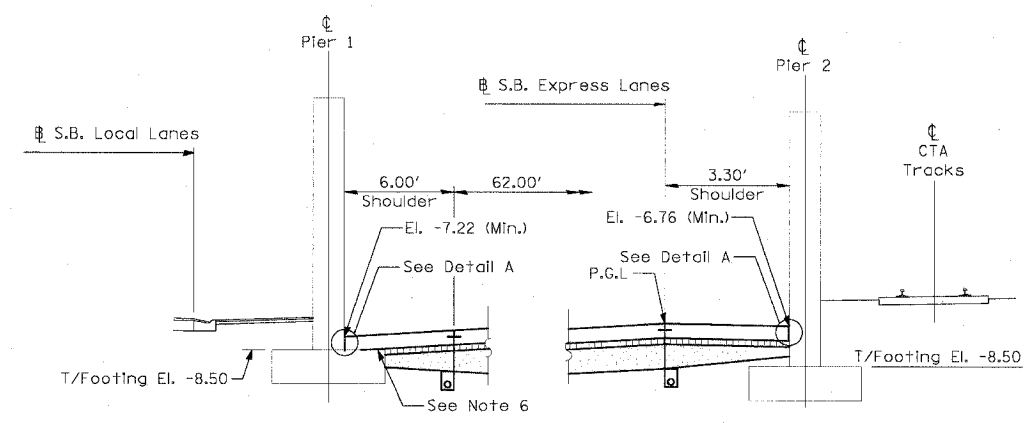
FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

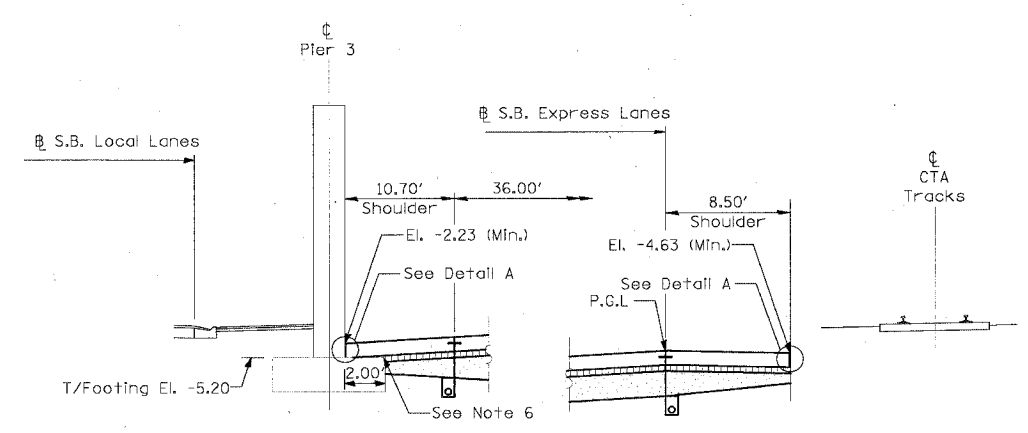
SHEET CUL-14 OF CUL-14  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
31ST STREET TO 71ST STREET  
SB EXPRESS LANE RECONSTRUCTION  
MWRD CULVERT, N. OF 39TH ST.,  
COOK COUNTY, S.N. 016-2625  
EXISTING APPROACH SLAB DETAILS  
SCALE: NTS  
DATE: 07/07/05  
DRAWN BY: BDC  
CHECKED BY: BLU

ANSI Z39-18-1997 PERMANENT PAPER 12/29/05 6/24/2005

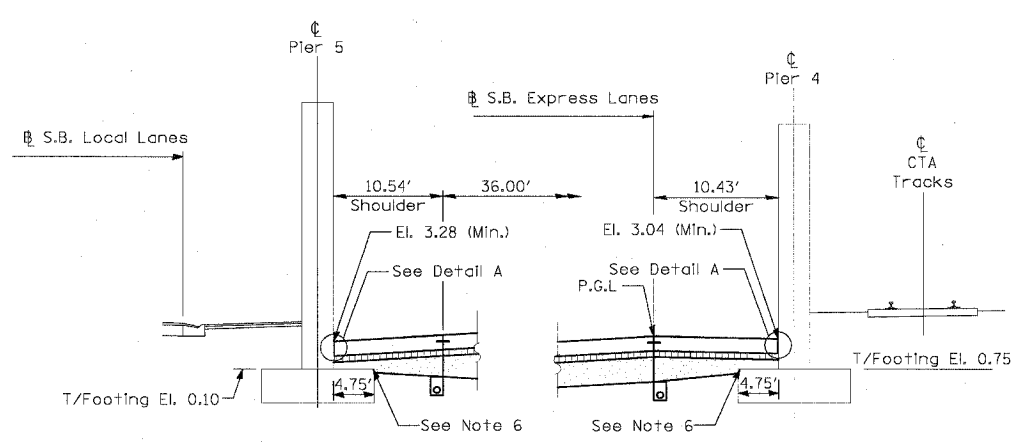
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	1818, ETC, 2324.6-1P1R-9			



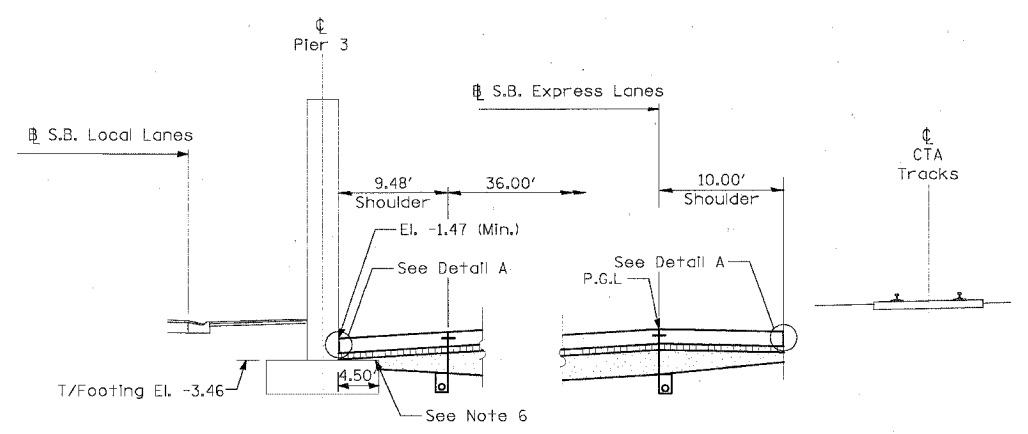
SHOULDER DETAIL AT 69th STREET (S.N. 016-0189)



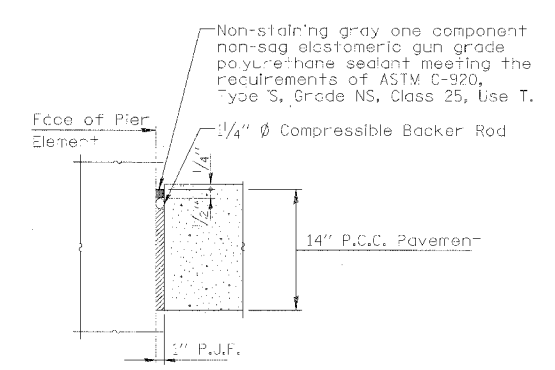
SHOULDER DETAIL AT WENTWORTH AVENUE



SHOULDER DETAIL AT CONRAIL RAILROAD

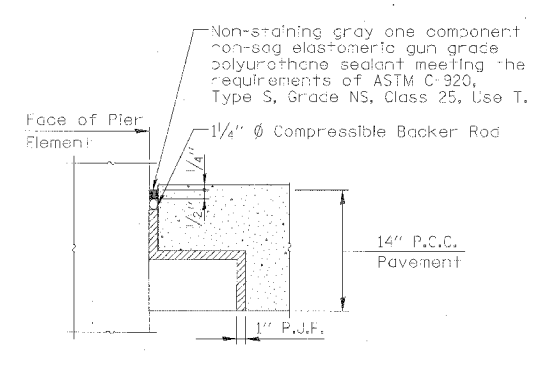


SHOULDER DETAIL AT ROCK ISLAND RAILROAD



DETAIL A

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder



DETAIL B

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder

Notes:

1. See Typical Sections for Composition of Exist. & Prop. Pavement.
2. All views looking North.
3. Contractor shall use caution during pavement removal and excavation operations around existing overhead bridge foundations.
4. Top of Rock El. at Root Street is approx. El. -12.0
5. All dimensions at right angles to Expressway.
6. Provide 10ml polyethylene bond breaker and pour shoulder pavement directly on pier footing.

SHEET SDET-1 OF SDET-4

REVISIONS	NAME	DATE

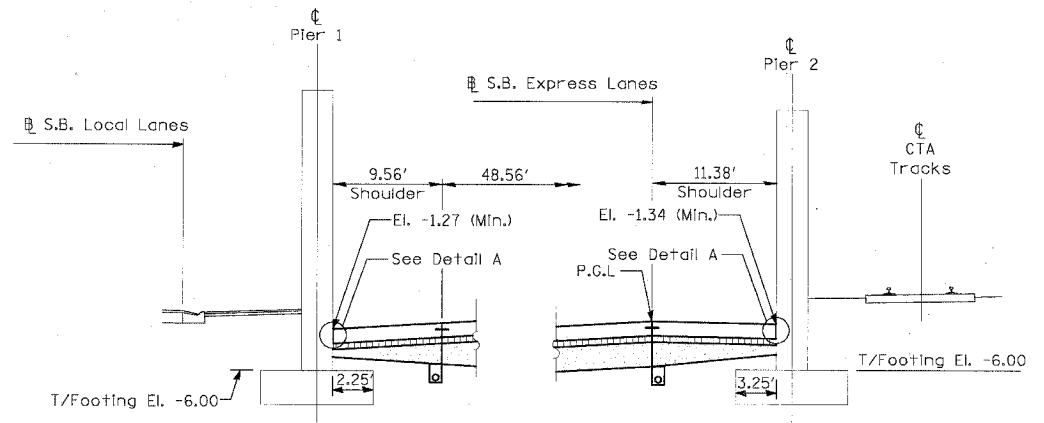
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 PAVEMENT DETAILS AT  
 CROSS STREET BRIDGES

SCALE: NONE  
 DATE: 7/7/05  
 DRAWN BY: MJP  
 CHECKED BY: TAI

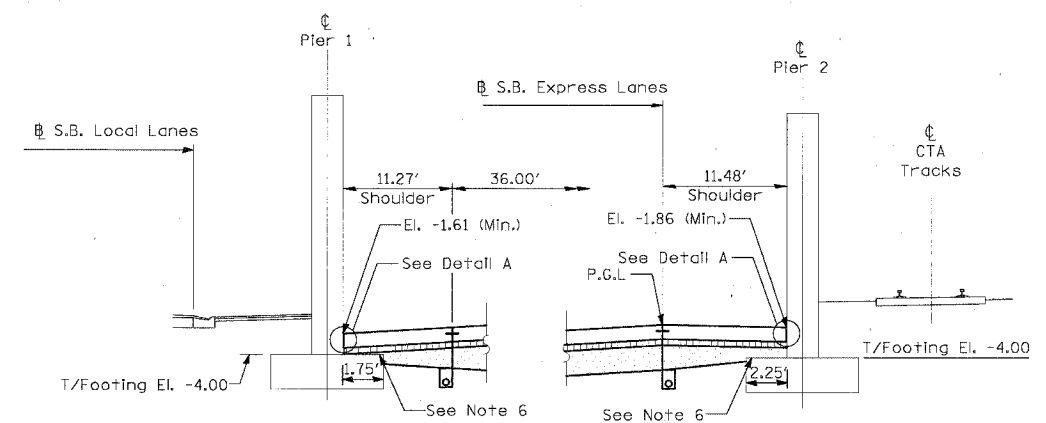
**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
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 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

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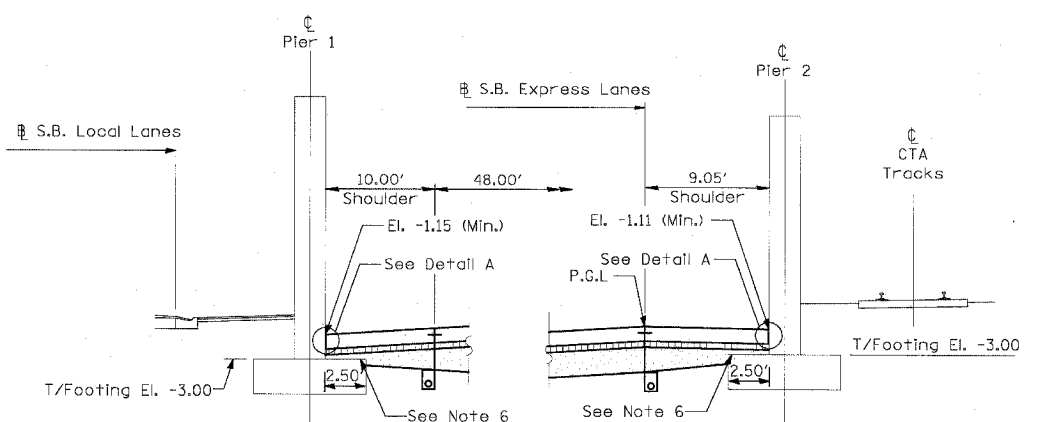
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STA.		TO STA.		
62302		1818, ETC, 2324.6-1PR-9		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



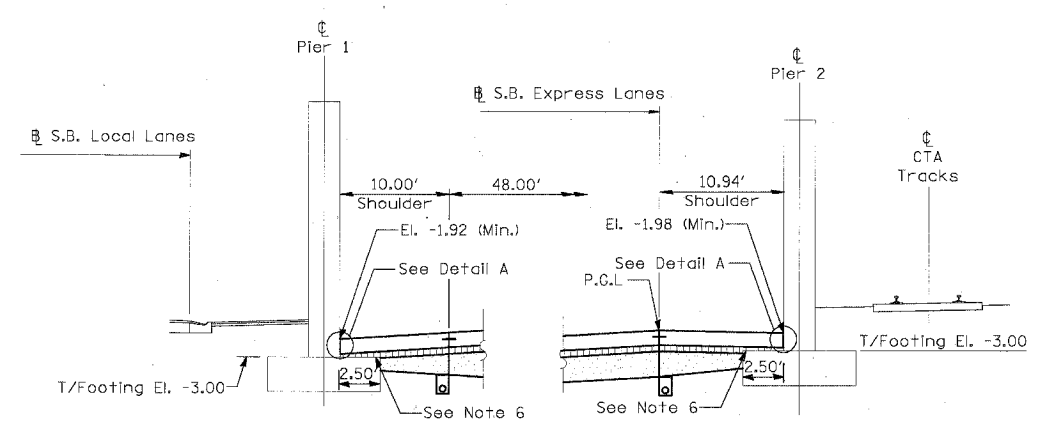
SHOULDER DETAIL AT 57th STREET (S.N. 016-1151)



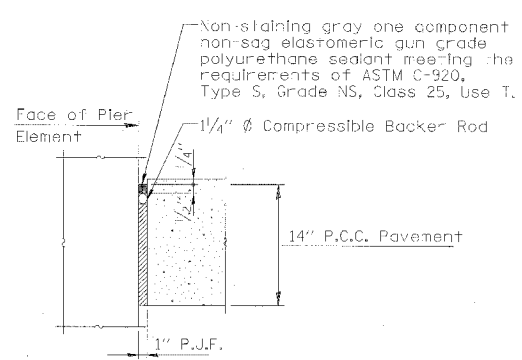
SHOULDER DETAIL AT 59th STREET (S.N. 016-1150)



SHOULDER DETAIL AT 55th STREET (NORTH) (S.N. 016-1153)

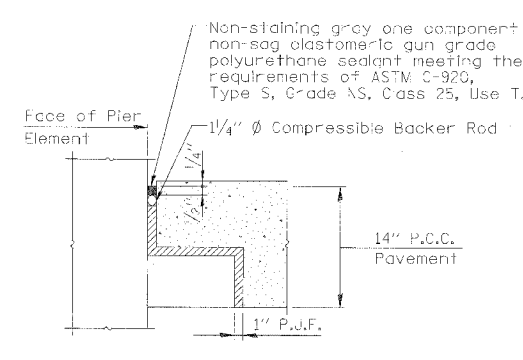


SHOULDER DETAIL AT 55th STREET (SOUTH) (S.N. 016-1152)



DETAIL A

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder



DETAIL B

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder

Notes:

1. See Typical Sections for Composition of Exist. & Prop. Pavement.
2. All views looking North.
3. Contractor shall use caution during pavement removal and excavation operations around existing overhead bridge foundations.
4. Top of Rock El. at Root Street is approx. El. -12.0
5. All dimensions at right angles to Expressway.
6. Provide 10ml polyethylene bond breaker and pour shoulder pavement directly on pier footing.

SHEET SDET-2 OF SDET-4

REVISIONS	
NAME	DATE

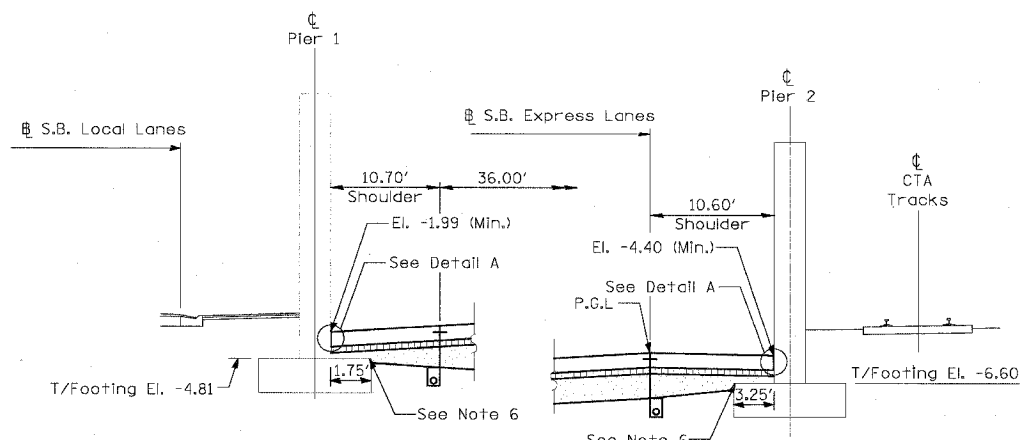
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 PAVEMENT DETAILS AT  
 CROSS STREET BRIDGES

SCALE: NONE  
 DATE: 7/7/05  
 DRAWN BY: MJP  
 CHECKED BY: TAI

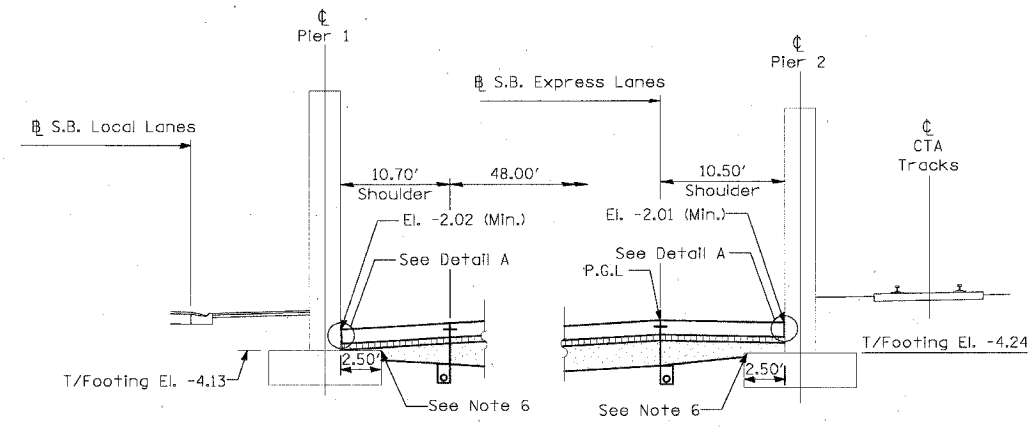
**Edwards AND Kelcey**  
 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
 PHONE: (312) 251-3000  
 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

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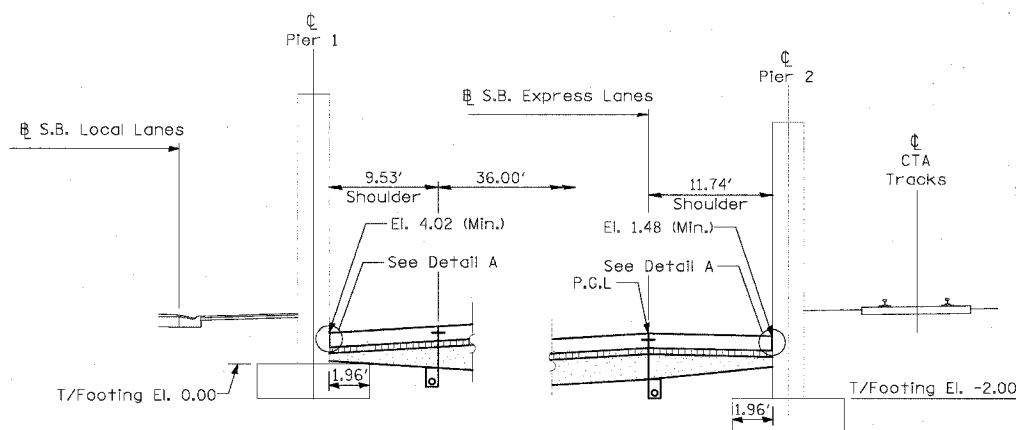
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94/90		COOK	598	491
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62302	1818, ETC, 2324.6-IPR-9			



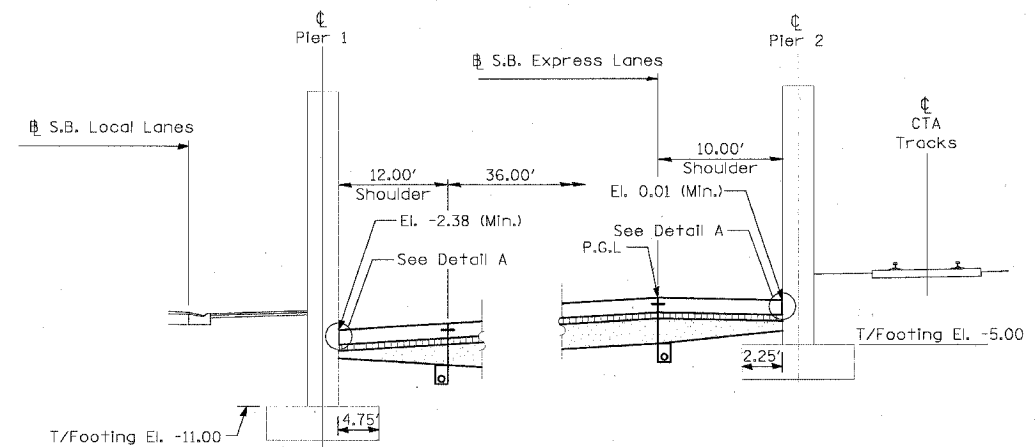
SHOULDER DETAIL AT 47th STREET (S.N. 016-1156)



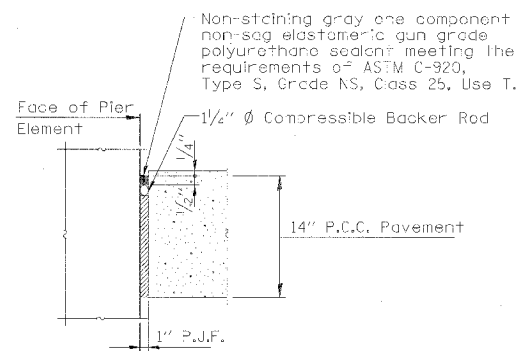
SHOULDER DETAIL AT 51st STREET (S.N. 016-1157)



SHOULDER DETAIL AT 63rd STREET

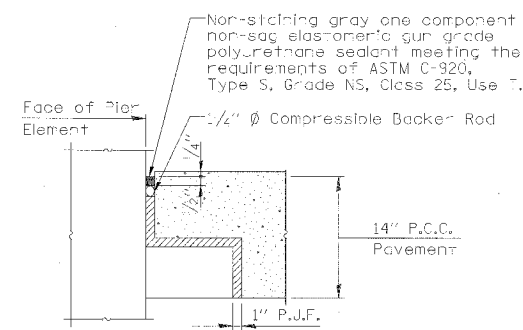


SHOULDER DETAIL AT 67th STREET (S.N. 016-1147)



DETAIL A

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder



DETAIL B

Cost of P.J.F., Backer Rod and sealing compound included with PCC Shoulder

Notes:

1. See Typical Sections for Composition of Exist. & Prop. Pavement.
2. All views looking North.
3. Contractor shall use caution during pavement removal and excavation operations around existing overhead bridge foundations.
4. Top of Rock El. at Root Street is approx. El. -12.0
5. All dimensions at right angles to Expressway.
6. Provide 10mil polyethylene bond breaker and pour shoulder pavement directly on pier footing.

SHEET SDET-3 OF SDET-4

REVISIONS	
NAME	DATE

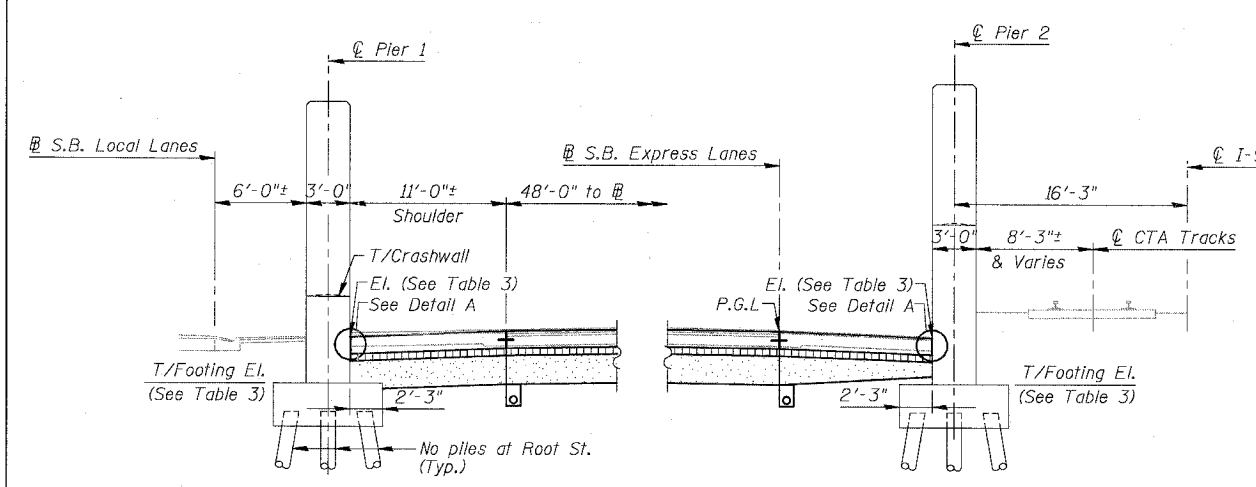
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 PAVEMENT DETAILS AT  
 CROSS STREET BRIDGES

SCALE: NONE  
 DATE: 7/7/05

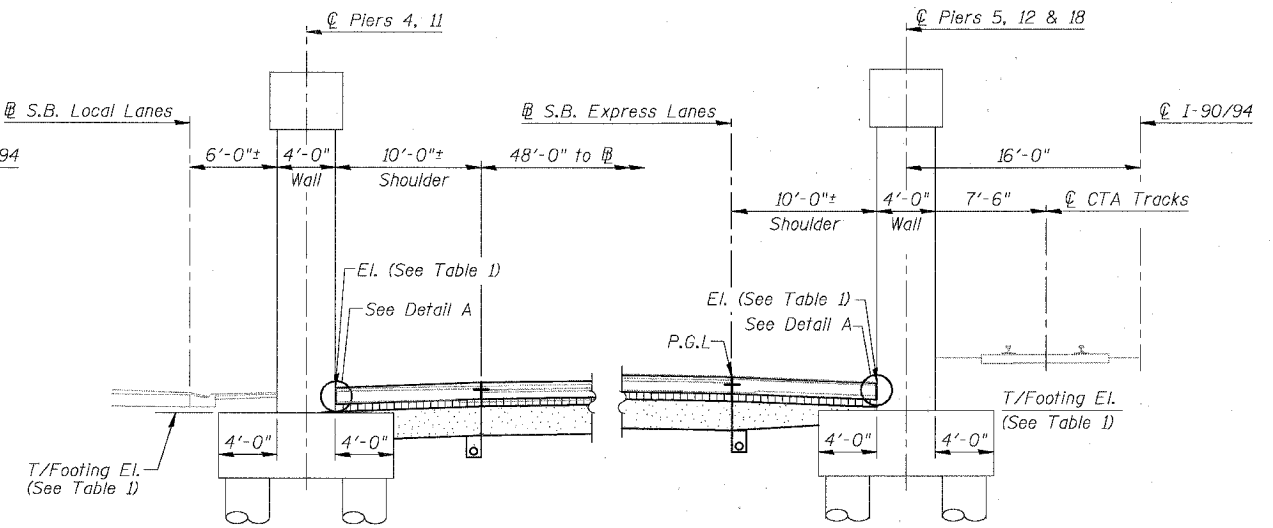
DRAWN BY: MJP  
 CHECKED BY: TAI

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 ONE NORTH FRANKLIN  
 CHICAGO, IL 60606  
 PHONE: (312) 251-3000  
 FAX: (312) 251-3015  
 WEB: WWW.EKCORP.COM

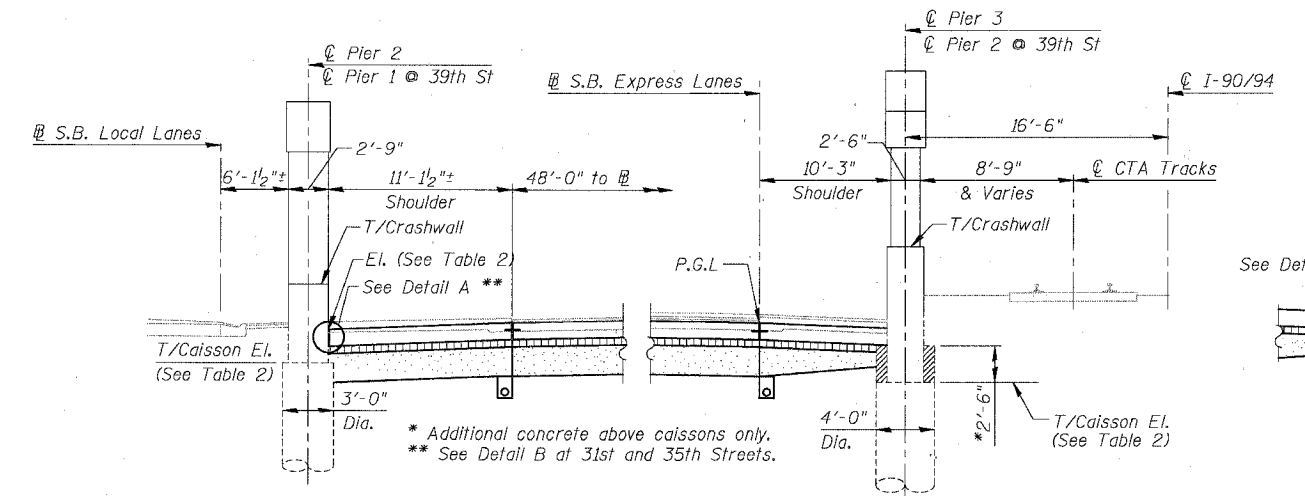
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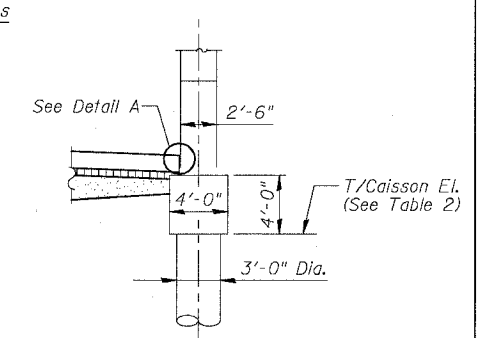
**SHOULDER DETAIL AT 43rd STREET (S.N. 016-1155)**  
 Root Street (S.N. 016-1154) Similar as noted



**SHOULDER DETAIL AT OVERHEAD RAILROAD**  
 Near 40th Street (S.N.'s 016-0138, 0139 & 0140)



**SHOULDER DETAIL AT OVERHEAD BRIDGES**  
 For 31st Street (S.N. 016-1159)  
 33rd Street (S.N. 016-1158)  
 35th Street (S.N. 016-1160)  
 39th Street (S.N. 016-0398) (Similar as noted)



**DETAIL AT 39th STREET**  
 For Piers 1 & 2

**TABLE 1**

PIER	T/FOOTING EL.	T/SHOULDER EL.	
		MAX.	MIN.
4	-1.13	1.24	0.84
5	-0.93	1.24	1.07
11	-1.09	1.71	1.51
12	-0.43	1.72	1.51
18	-1.61	0.83	0.60

**TABLE 2**

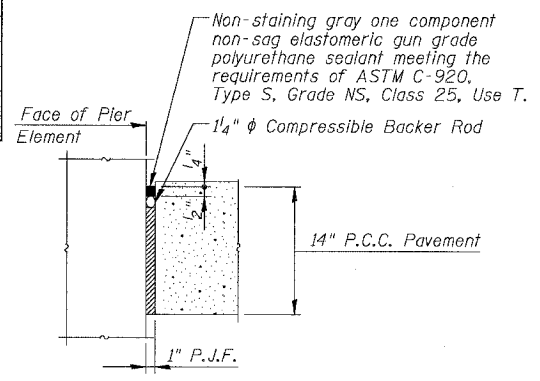
LOCATION	PIER	T/CAISSON EL.	T/SHOULDER EL.	
			MAX.	MIN.
31st St.	2	-6.44	-4.28	-4.53
33rd St.	2	-5.36	-2.23	-2.38
35th St.	2	-6.26	-2.18	-2.35
	3	-4.71	-0.75	-1.27
39th St.	1	-11.30	-5.28	-5.79
	2	-11.30	-5.25	-5.75

**TABLE 3**

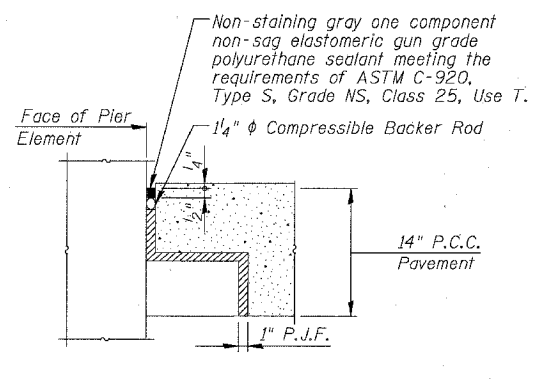
LOCATION	PIER	T/FOOTING EL.	T/SHOULDER EL.	
			MAX.	MIN.
Root St.	1	-9.5	-3.4	-3.5
	2	-9.5	-2.7	-3.5
43rd St.	1	-7.0	-3.4	-3.9
	2	-7.0	-3.4	-3.9

**LEGEND**

- Concrete Pavement
- Stabilized Sub-base
- Sub-base Granular material



**DETAIL A**  
 Cost of P.J.F., Backer Rod and sealant included with PCC Shoulder



**DETAIL B**  
 Cost of P.J.F., Backer Rod and sealant included with PCC Shoulder

- Notes:**
- See Typical Sections for Composition of Exist. & Prop. Pavement.
  - All views looking North.
  - Contractor shall use caution during pavement removal and excavation operations around existing overhead bridge foundations.
  - Top of Rock El. at Root Street is approx. El. -12.0
  - All dimensions at right angles to Expressway.

**REVISIONS**

NAME	DATE

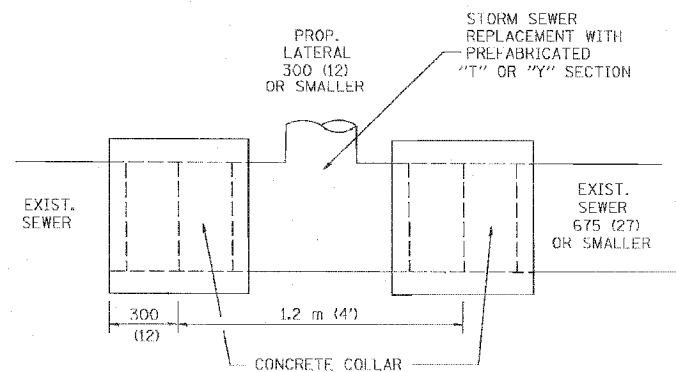
**SHEET SDET-4 OF SDET-4**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**F.A.I. 94/90 (DAN RYAN EXPRESSWAY)**  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 PAVEMENT DETAILS AT  
 CROSS STREET BRIDGES

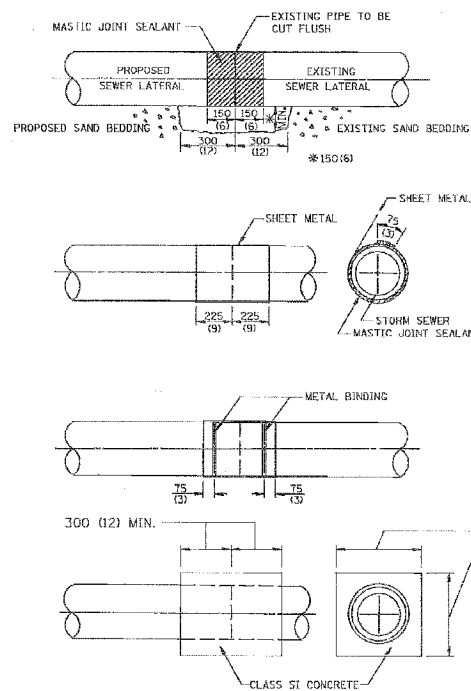
SCALE: N.T.S. DRAWN BY: MTR  
 DATE: 07/07/05 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
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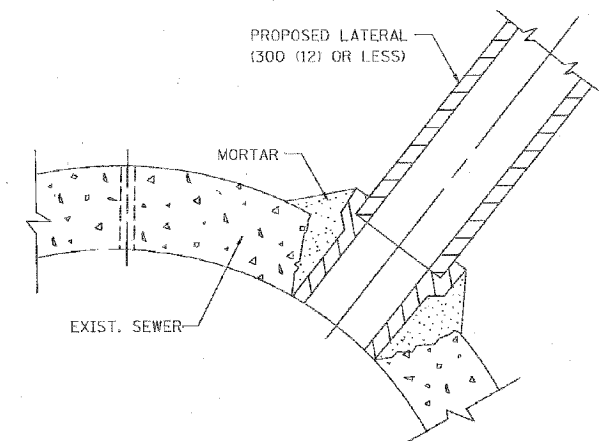
F.A. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			598	493
STA.		TO STA.		
FULL DRAW UNIT, NO.	BLINDS	FEEL AND PROJECT		



DETAIL "A"  
LATERAL CONNECTION TO EXISTING SEWER  
OF 675 (27) OR SMALLER



DETAIL "B"  
CLASS SI CONCRETE COLLAR



DETAIL "C"  
PROPOSED LATERAL  
CONNECTION TO EXISTING SEWER  
OF 750 (30) OR LARGER

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 150 (6) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 300 x 150 (12 x 6) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 450 (18) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 75 (3) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 225 (9) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 75 (3) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- I THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- II CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
  - A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 675 (27) OR SMALLER SEE DETAIL "A" AND "B".
  - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 750 (30) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DETAIL OF STORM SEWER  
CONNECTION TO EXISTING SEWER

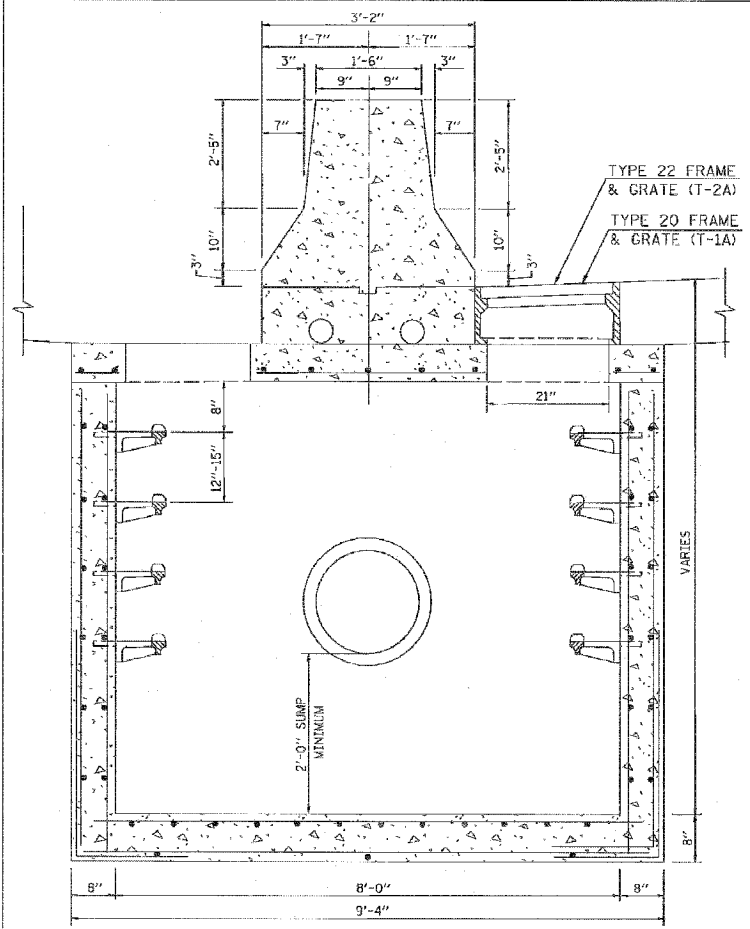
REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

SCALE: NONE  
DATE 10/18/2002

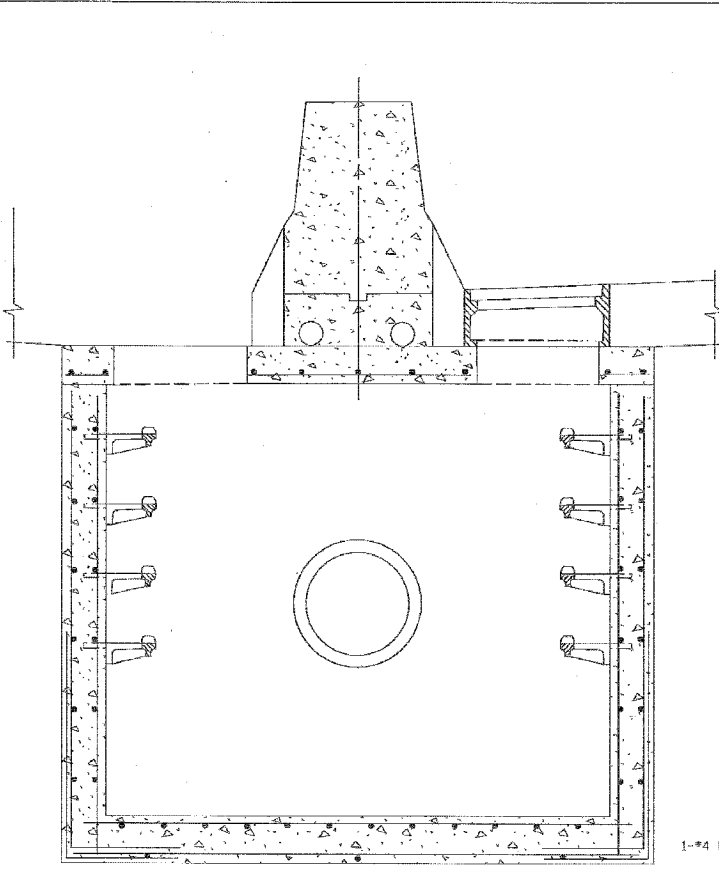
DRAWN BY CADD  
CHECKED BY

BD500-01 (BD-7)

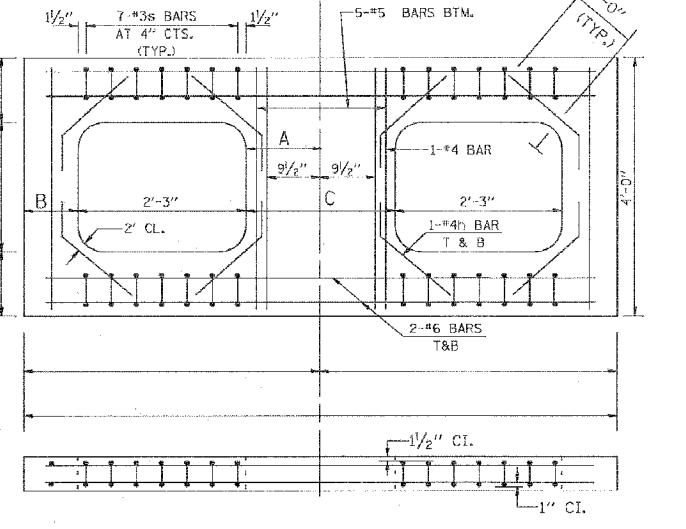
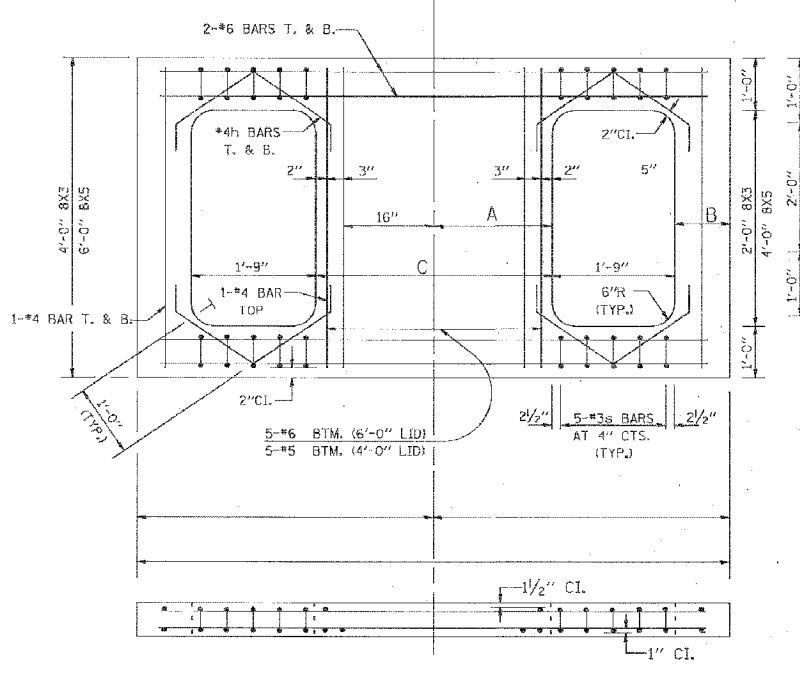
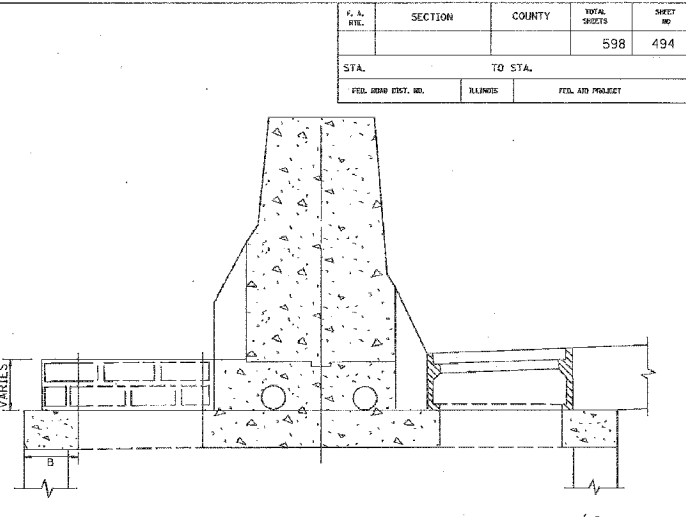
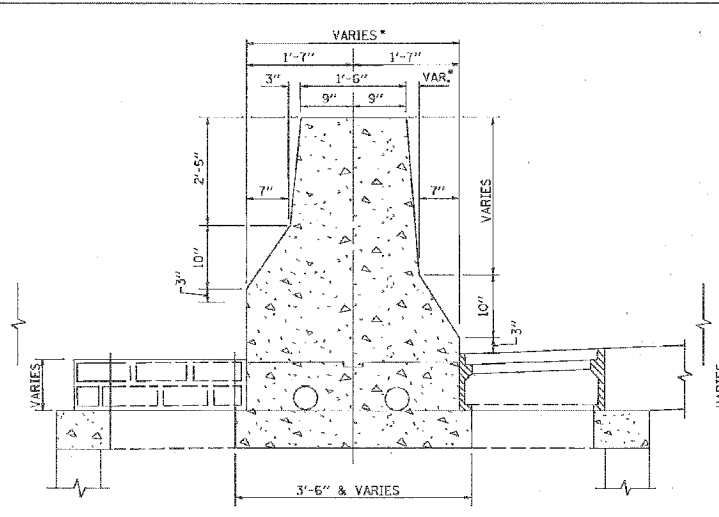
REVISION DATE: 06/12/96



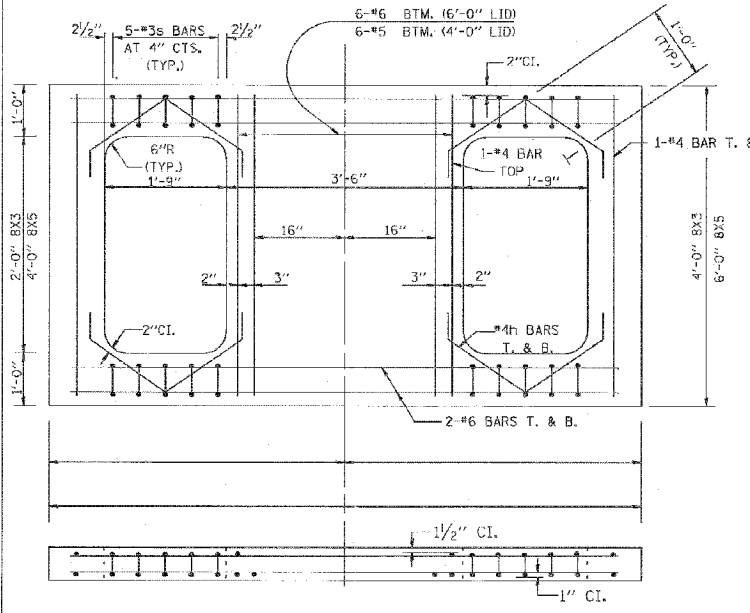
CATCH BASIN 8x5 AND 8x3



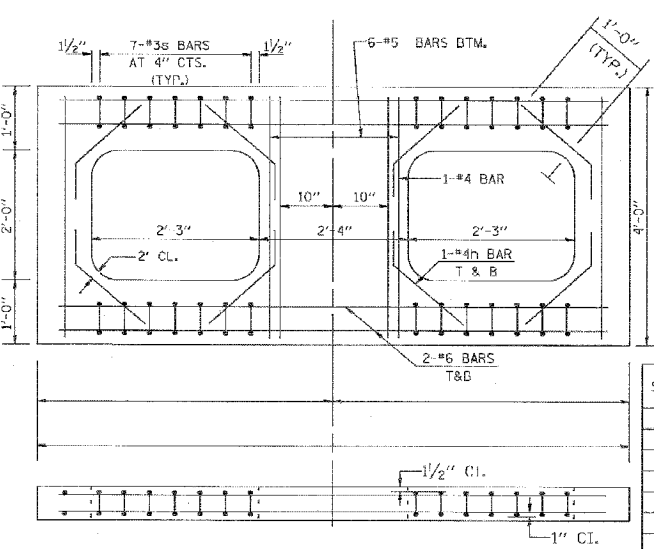
CATCH BASIN 8x3



A PGL (+1)	DIM. A	DIM. B	DIM. C
1	1'-3 1/4"	1'-4 1/4"	
2	1'-4 1/2"	1'-3 1/2"	
3	2'-5 1/4"	1'-2 1/4"	
4	1'-2"	1'-1"	
5	2'-8 1/4"	0'-11 1/4"	
6	2'-9 1/2"	0'-10 1/2"	



REINFORCED LID FOR TYPE 20 & 22 FRAME & GRATE



REINFORCED LID FOR TYPE 21 FRAME & GRATE

NOTE:  
DRAINAGE STRUCTURES SHALL CONFORM TO I.D.O.T. STANDARD 2364 EXCEPT AS NOTED IN THIS DETAIL.

STA. AND OFFSET	TYPE OF LID	A PGL	DIM. A	DIM. B	DIM. C	STA. AND OFFSET	TYPE OF LID	A PGL	BTM. A	DIM. B	DIM. C

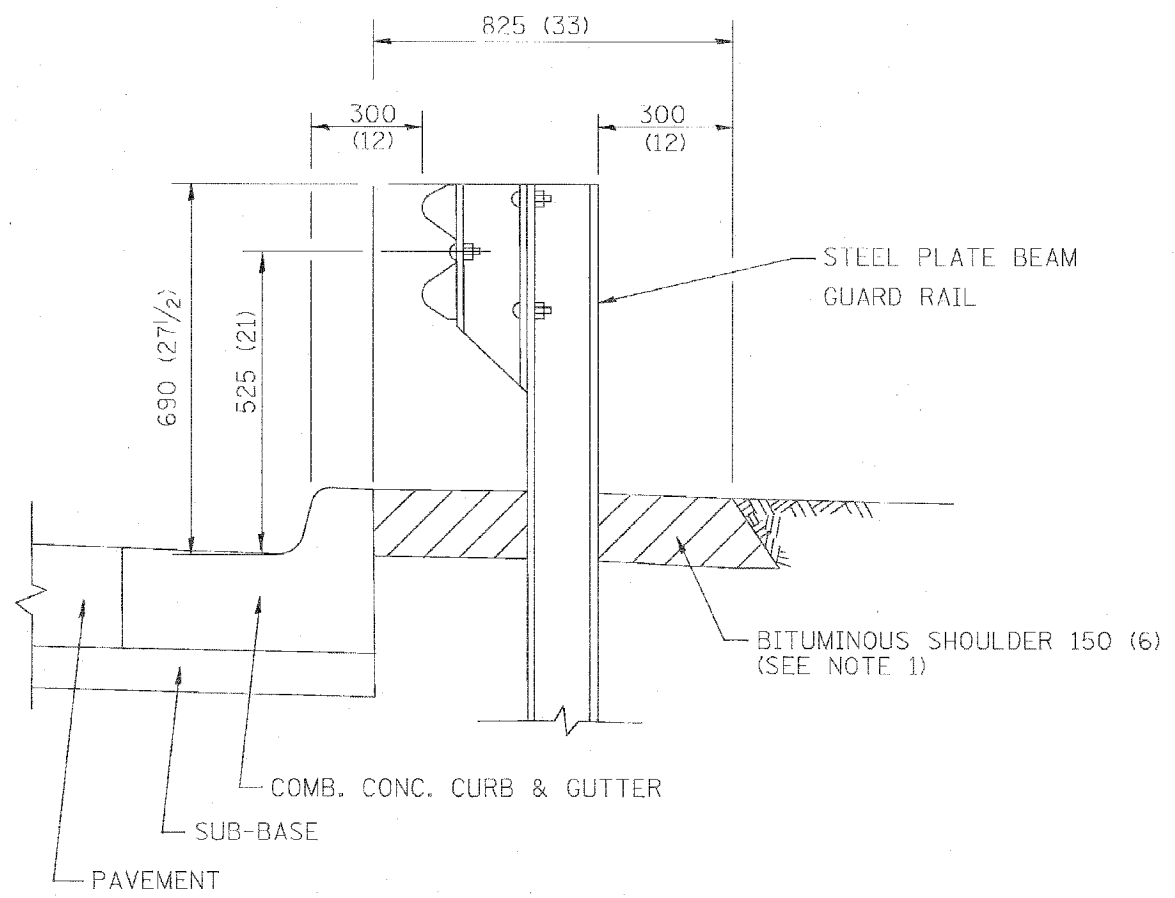
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DRAINAGE STRUCTURES  
TYPE 1A, 2A AND 3A  
TYPE 1A (SPECIAL), 2A (SPECIAL)  
AND 3A (SPECIAL)

SCALE: NONE  
DATE: 10/18/2002  
DRAWN BY: JKM  
CHECKED BY: BDECO-10 (BD-31)  
REVISION DATE:



F. & S. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			598	495
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

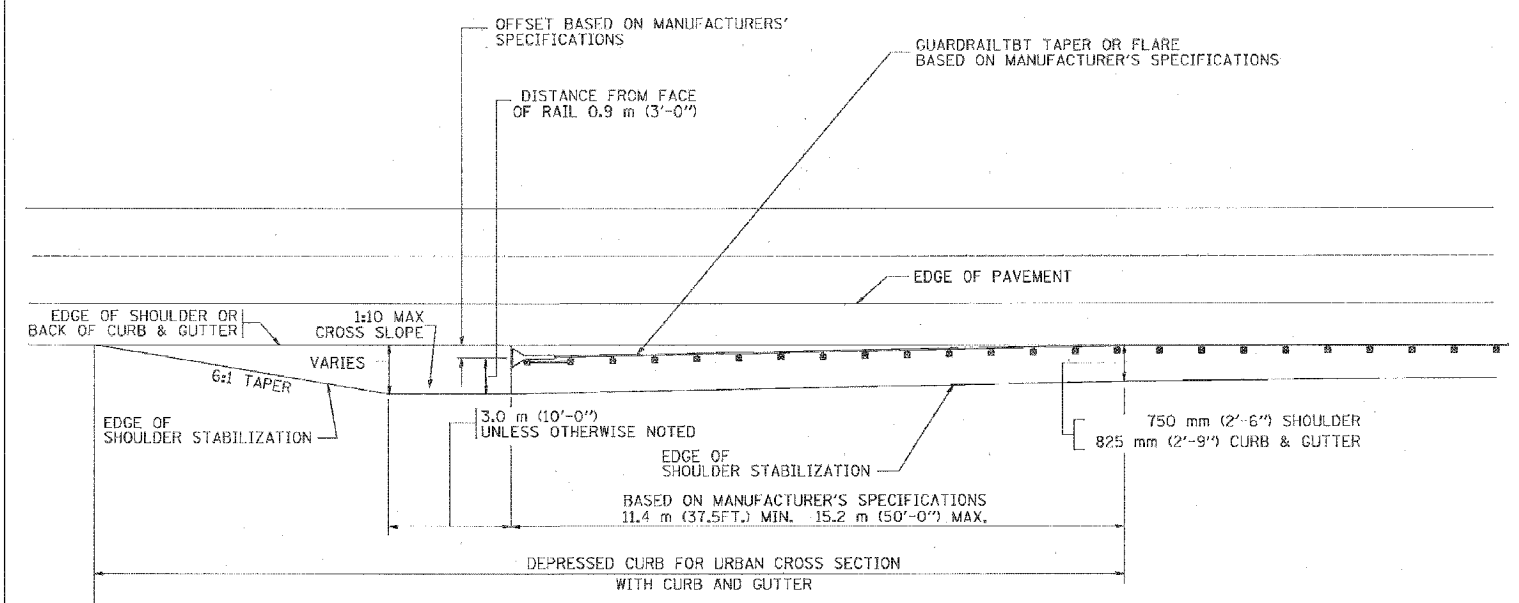


- NOTES: 1. THE BITUMINOUS SHOULDER SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL
2. GUARD RAIL MAY BE PLACED AT THE BACK OF CURB WHEN DIRECTED BY THE ENGINEER.

BASIS OF PAYMENT: BITUMINOUS SHOULDER 150 (6) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER m<sup>2</sup> (sq. yd.) AS "BITUMINOUS SHOULDER 150 (6)."

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER [FOR ROADWAY SPEED 60 kmh (35 MPH) TO 70 kmh (45 MPH)]



STABILIZATION AT TBT TY. 1 SPL.

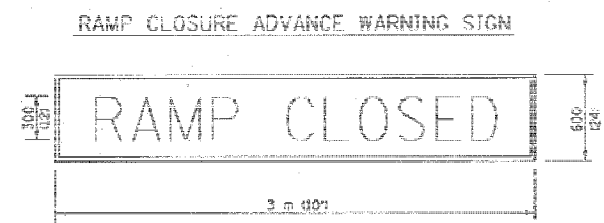
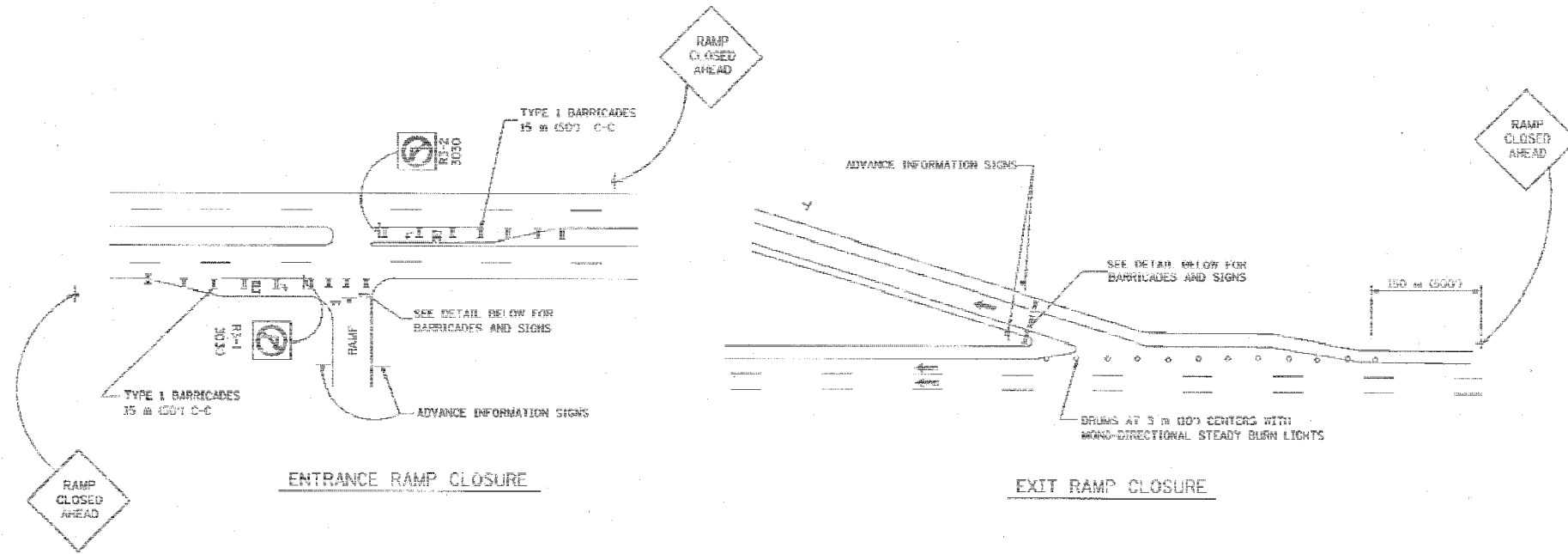
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 DETAILS FOR  
 STEEL PLATE BEAM GUARD RAIL  
 ADJACENT TO CURB AND GUTTER  
 STABILIZATION AT TBT TY 1 SPL.

REVISIONS		
NAME	DATE	
M. DE YONG	09-22-90	
M. DE YONG	07-14-92	
R. SHAH	09/09/94	
R. SHAH	10/25/94	
R. SHAH	02/23/95	
A. ABBAS	03/21/97	
E. GOMEZ	08/28/00	

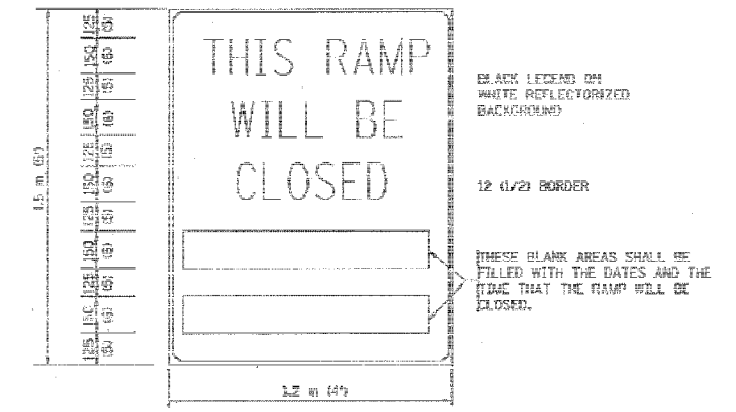
SCALE: NONE  
 DATE: 10/18/2002  
 DRAWN BY: jls  
 CHECKED BY:  
 BD600-10 (BD 34)

F. & R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			598	496
STA. 10 STA.				
FIB. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



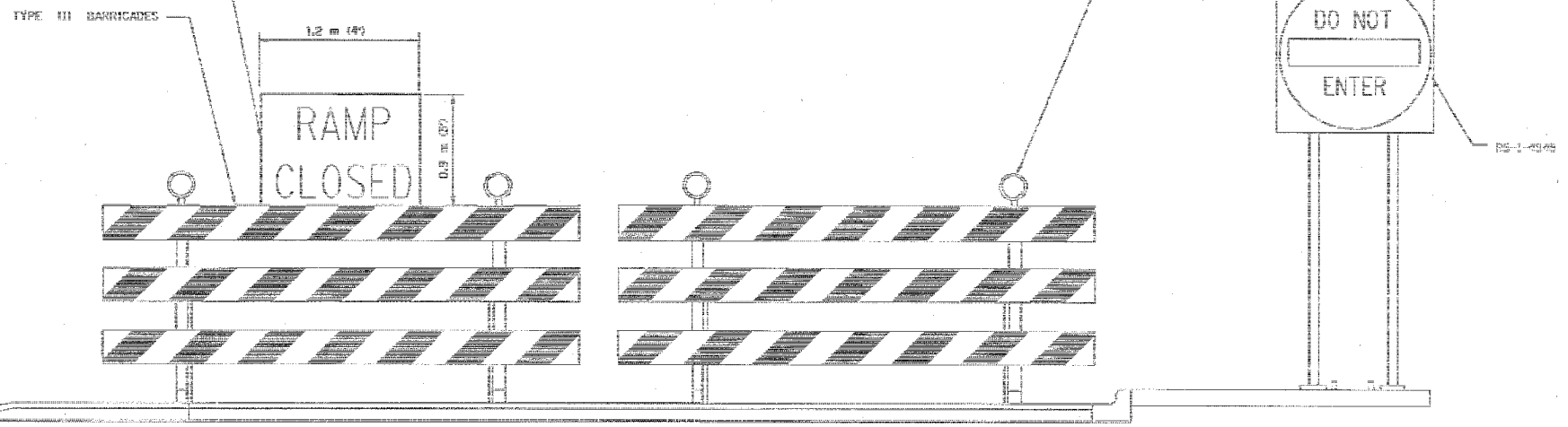
BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND  
25 (1) BORDER  
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR THE CLOSED EXIT RAMPS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, A MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THE "RAMP CLOSED" SIGN SHALL BE D/W WITH 300 (10) CAPS. 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.



DETAIL FOR REQUIRED BARRICADES & SIGNS

- 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 FLASHER 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 POINTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE LOCATED.
  - THE SIGNING AND BARRICADE 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.

- 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.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

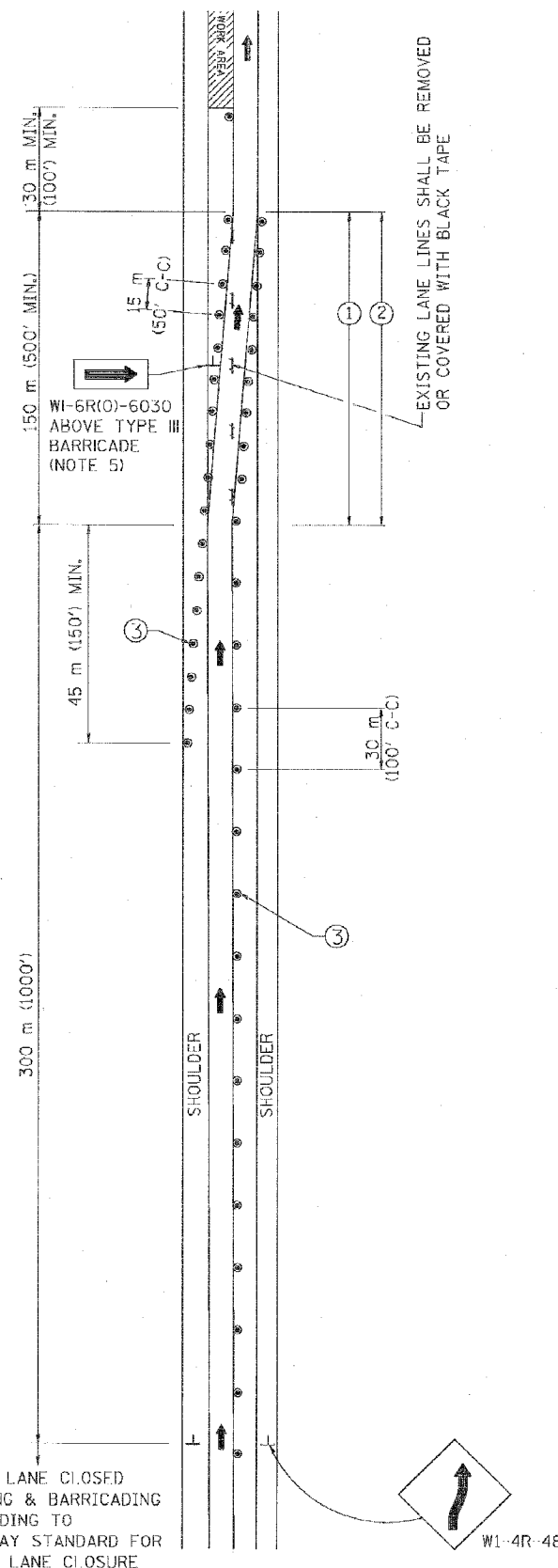
**FREWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS**

SCALE: NONE  
DATE: 05/06/2003

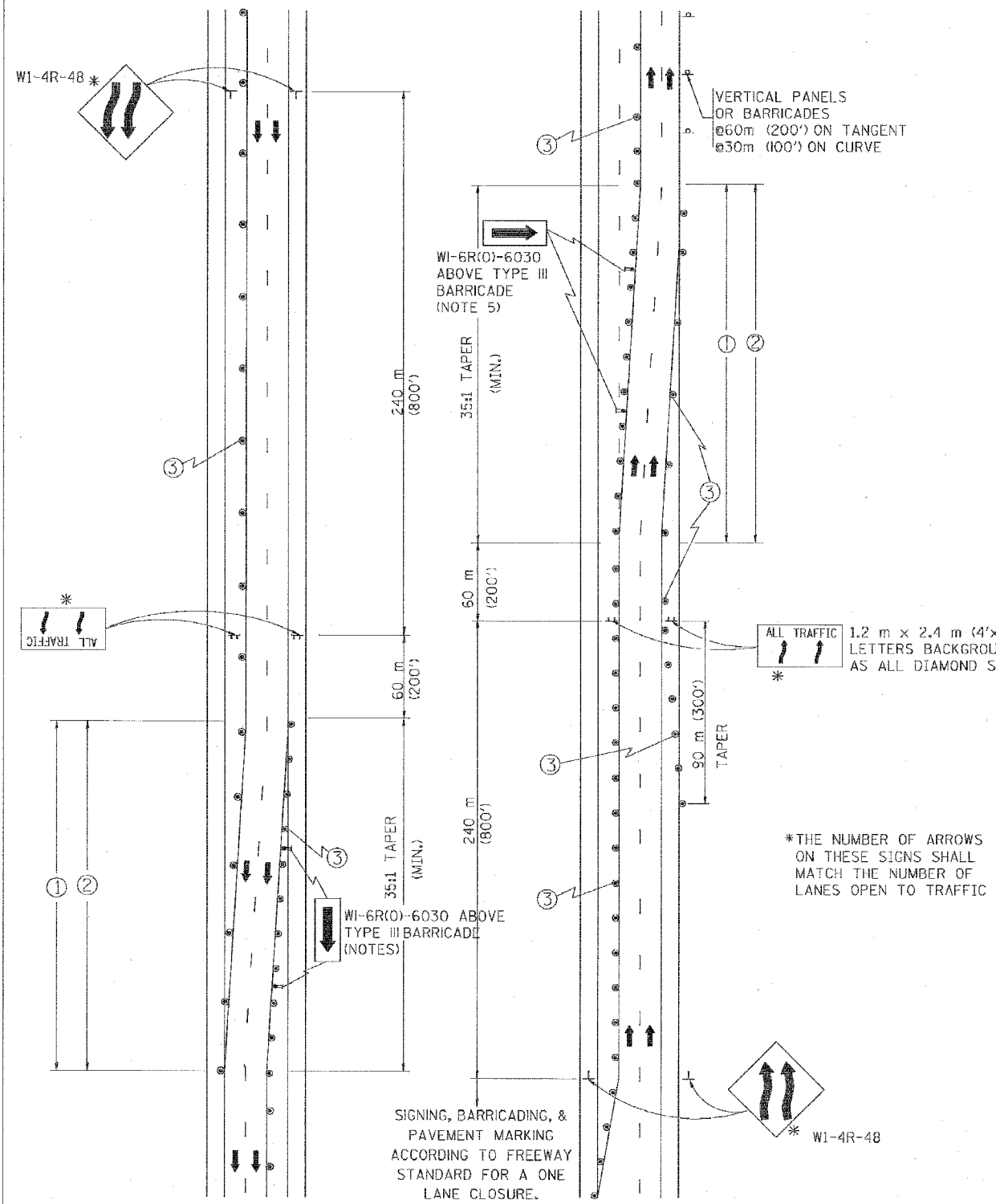
DRAWN BY: \_\_\_\_\_  
CHECKED BY: TC-B  
REVISION DATE: 04/05/03

REVISIONS	
NAME	DATE
DWS	2/83
DWS	1/90
DWS	4/94
DWS	3/2/94
DWS/JAP	12/02
Revise devices to meet NCHRP 350	4/03

# 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

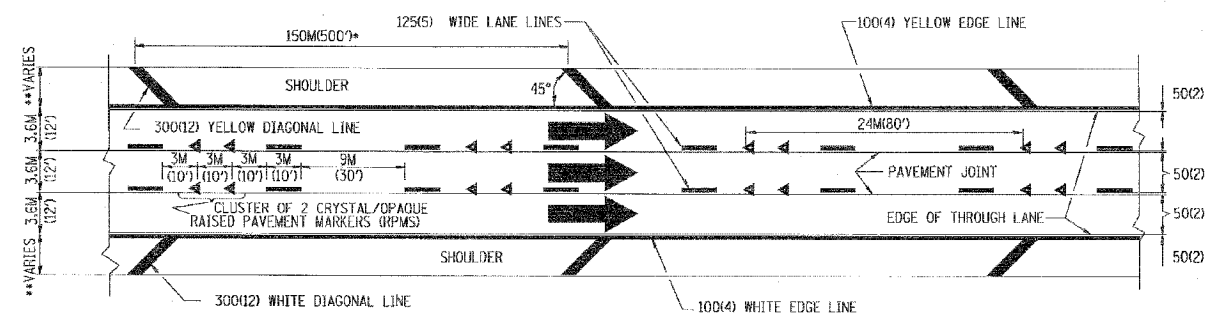
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL DETAILS**  
 FOR FREEWAY  
 SINGLE & MULTI-LANE WEAVE

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

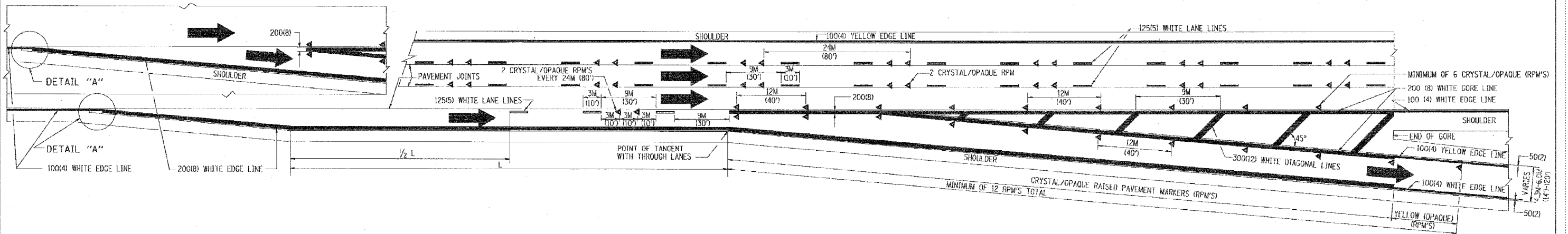
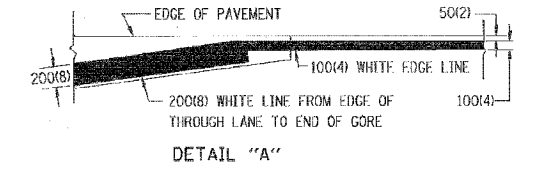
F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			598	498
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

- 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

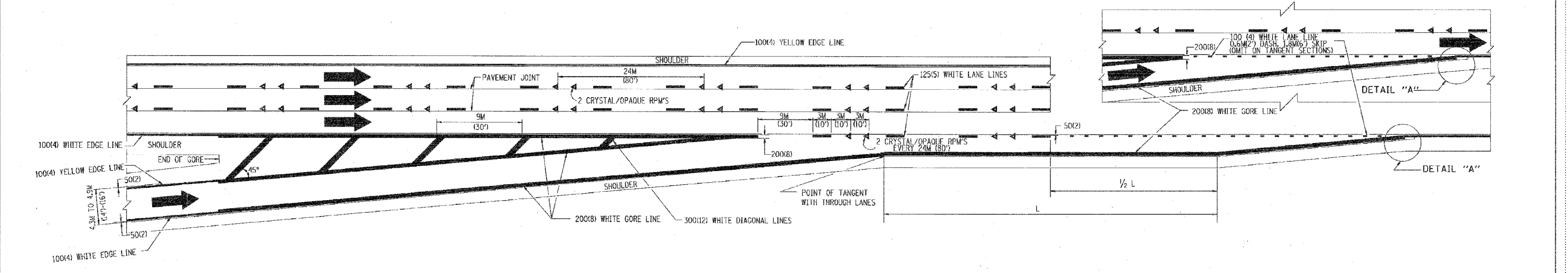


TYPICAL EDGE LINES & LANE LINES

- NOTES:
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 EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91
AH	3/96
DWS	7/96

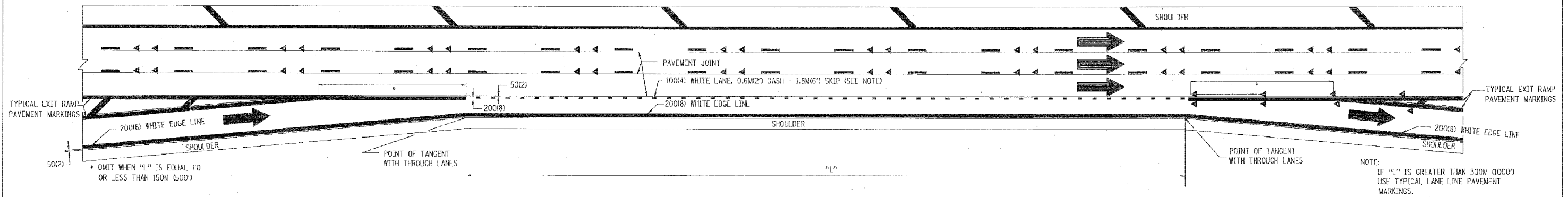
ILLINOIS DEPARTMENT OF TRANSPORTATION

**MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS**

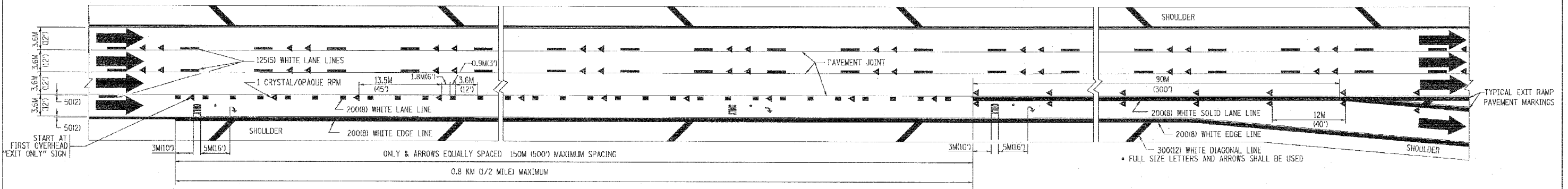
SCALE: NONE  
DATE: 10/18/2002

DRAWN BY C.A.D.D.  
CHECKED BY  
TC12 SHEET 1 OF 2  
REVISION DATE: 01/01/96

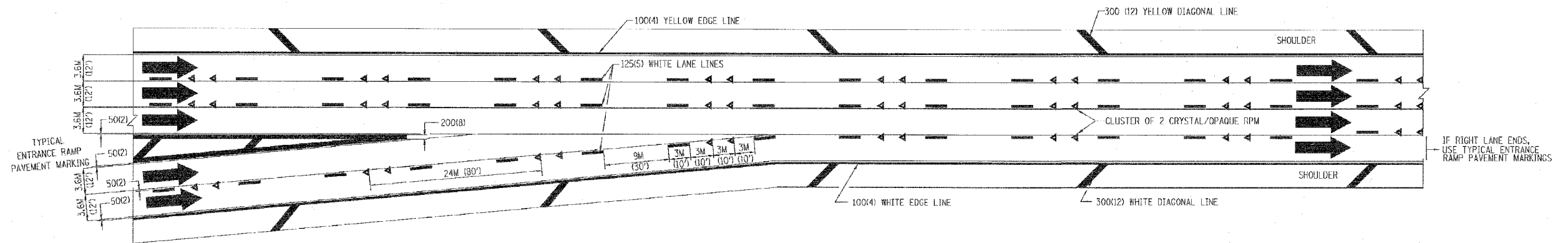
P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			598	499
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.		



**TYPICAL ENTRANCE/EXIT RAMP COMBINATION PAVEMENT MARKINGS**



**TYPICAL EXIT ONLY LANE PAVEMENT MARKINGS**



**TYPICAL TWO LANE ENTRANCE RAMP PAVEMENT MARKINGS**

REVISIONS	
NAME	DATE
DWS	1/90
DWS	5/91

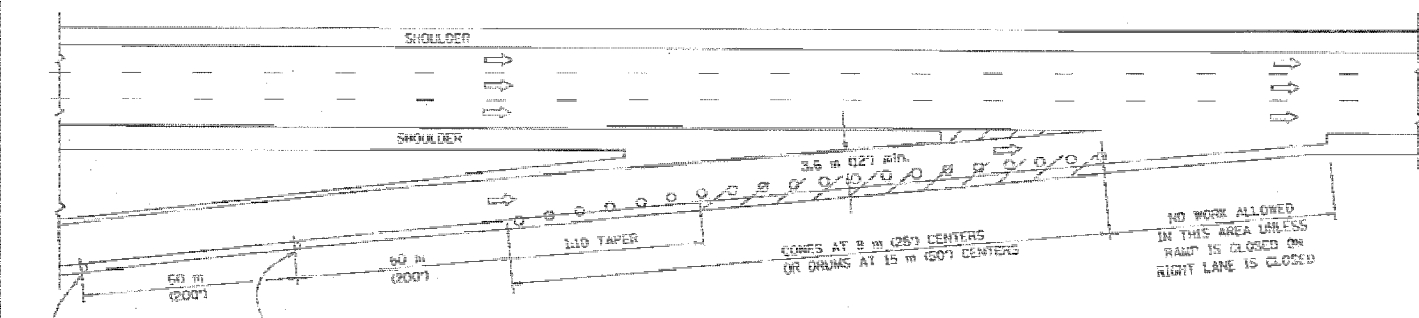
ILLINOIS DEPARTMENT OF TRANSPORTATION

**MULTI-LANE FREEWAY  
PAVEMENT MARKING  
DETAILS**

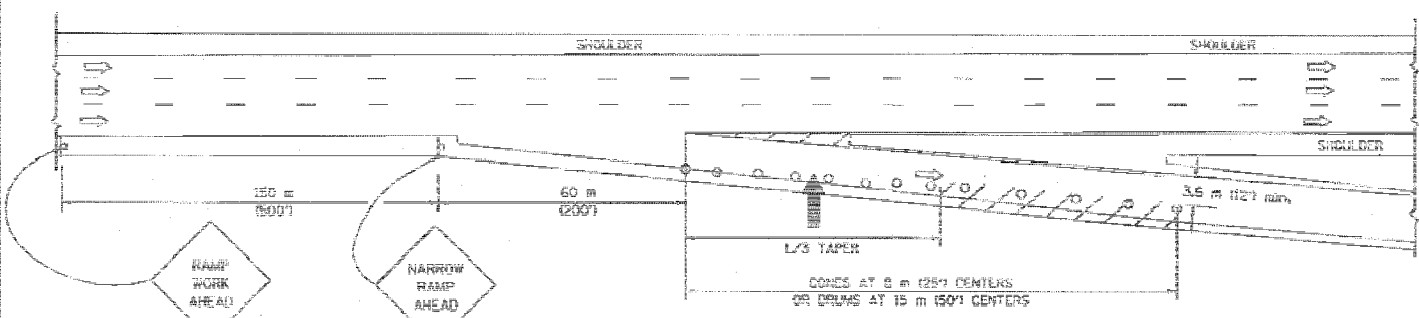
SCALE: NONE  
DATE: 10/18/2002

DRAWN BY C.A.D.D.  
CHECKED BY

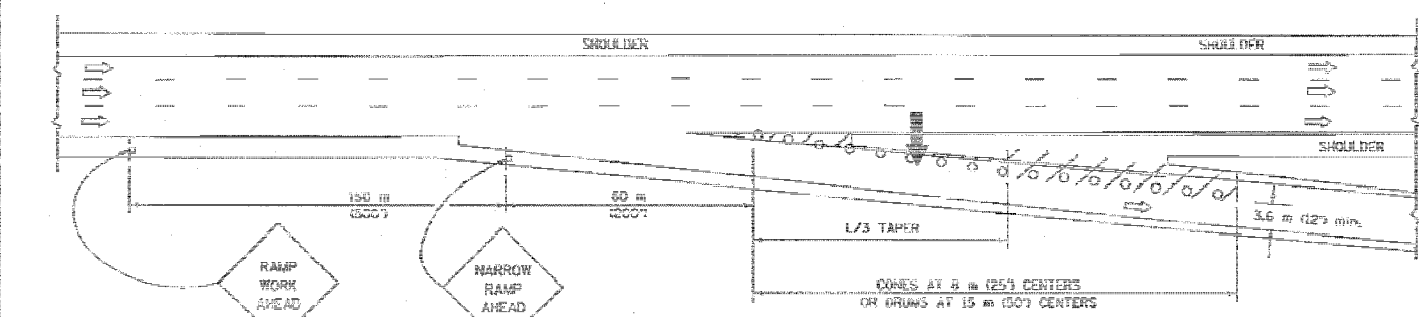
### PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

**SYMBOLS**

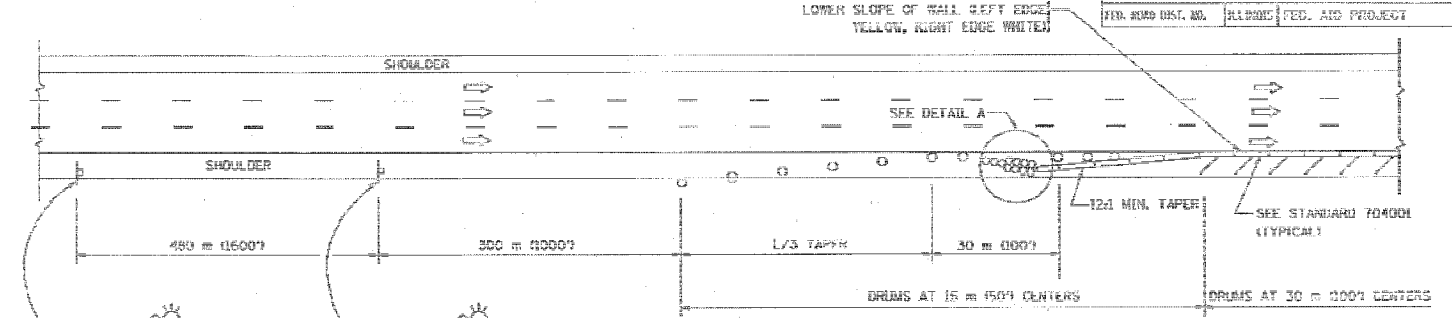
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- ENDLIT WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- CONES - 700 (28") IN HEIGHT

**GENERAL NOTES**

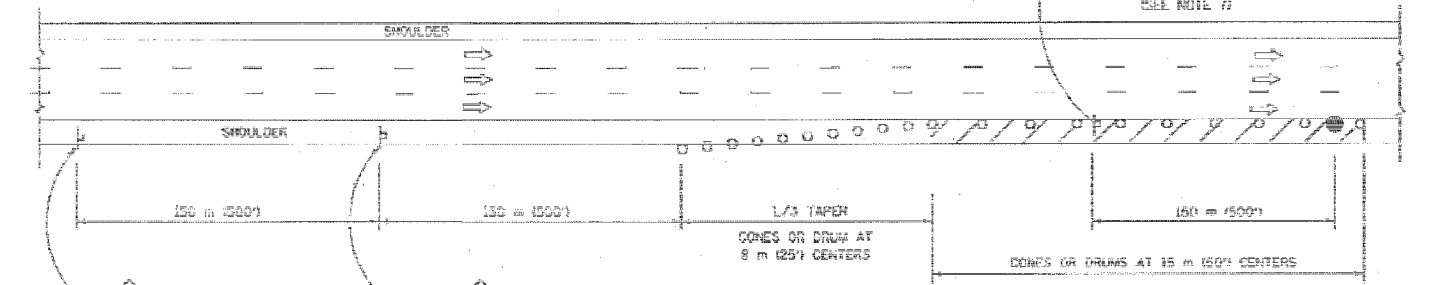
1. THE "L" DISTANCE EQUALS:
 

SPEED LIMIT	FORMULAS
30 km/h (19 mph) OR GREATER:	METRIC: $L = 0.85WS$ ENGLISH: $L = WS$
	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

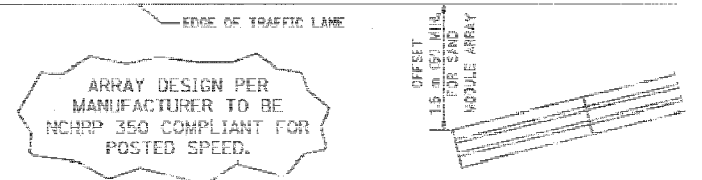


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCOACH IN AN AREA CLOSER THAN 4.5 m (15') TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.

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 ENCOACHMENT 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

**TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES**

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 300	04/03

SCALE: NONE  
 DATE: 05/05/2003  
 DRAWN BY: DWS  
 DESIGNED BY: DWS  
 CHECKED BY: TC 17