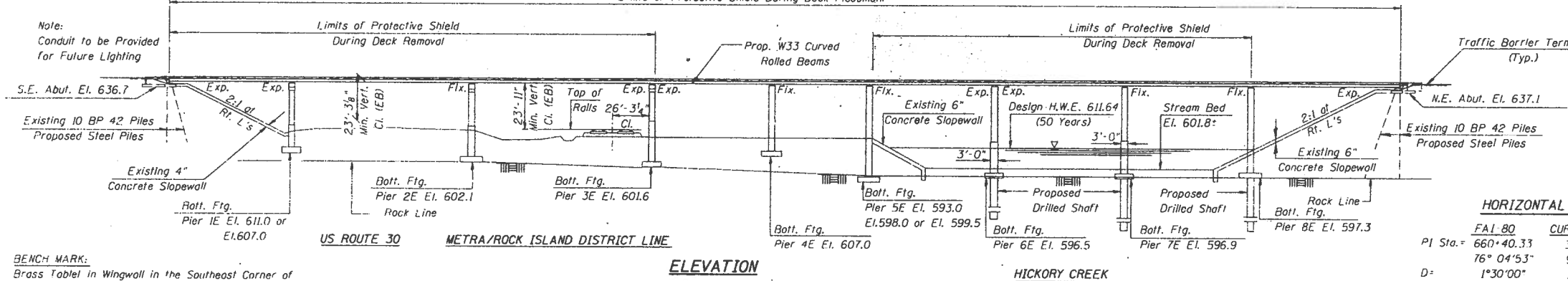


2948-IIa (1B)

P.L. NO.	SECTION	COUNTY	TITLE	SHEET NO.
80		WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.		BLKNO.	FED. AID PROJECT	

*SECTION 99 (5.5-1.5VB) R & 99-4-IVB-1-BR

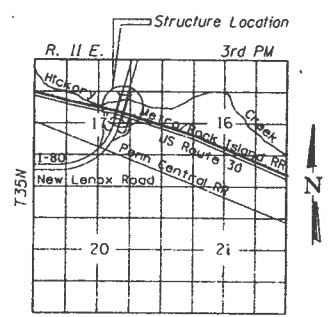


BENCH MARK:
Brass Tablet in Wingwall in the Southeast Corner of Eastbound FAI-80 Bridge over US Route 30, Metro/Rock Island District Line and Hickory Creek El. 649.12

EXISTING STRUCTURE
Sta. 673+37.46 FAI-80, Built under Section 99-4-IVB-1 in 1964. Structure No.: 099-0069 (Eastbound) & 099-0068 (Westbound).
Superstructure: Reinforced Concrete Deck Supported by Rolled Steel Beams. Substructure: Pile Bent Abutments & Multiple Column (3-Eastbound) & (2-Westbound) Piers Supported on Spread Footings & Piles. Length is 632'-1 1/16" (Eastbound) & 614'-5 1/2" (Westbound) back to back of Abutments along the Existing P.G.L. Deck width varies from 38'-1 1/4" to 53'-8 5/8" (Eastbound) & 36'-0" to 42'-4 1/16" (Westbound) out to out.
Existing Superstructure to be Removed and Substructure to be Repaired & Widened. Traffic to be Maintained on Westbound FAI-80 while Constructing Existing Eastbound Structure.

HORIZONTAL CURVE DATA

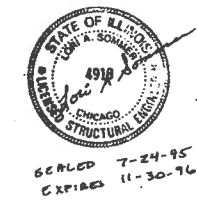
FAI-80	CURVE BD-2
PI Sta. = 660+40.33	38+39.55
76° 04' 53"	9° 37' 48"
D = 1° 30' 00"	1° 28' 26"
R = 3819.72'	3887.72'
T = 2988.66'	327.49'
L = 5072.09'	653.43'
E = 1030.27'	13.77'
S.E. = 0.037'/'	0.037'/'
PC Sta. = 630+51.67	35+12.07
PT Sta. = 681+23.76	41+65.49



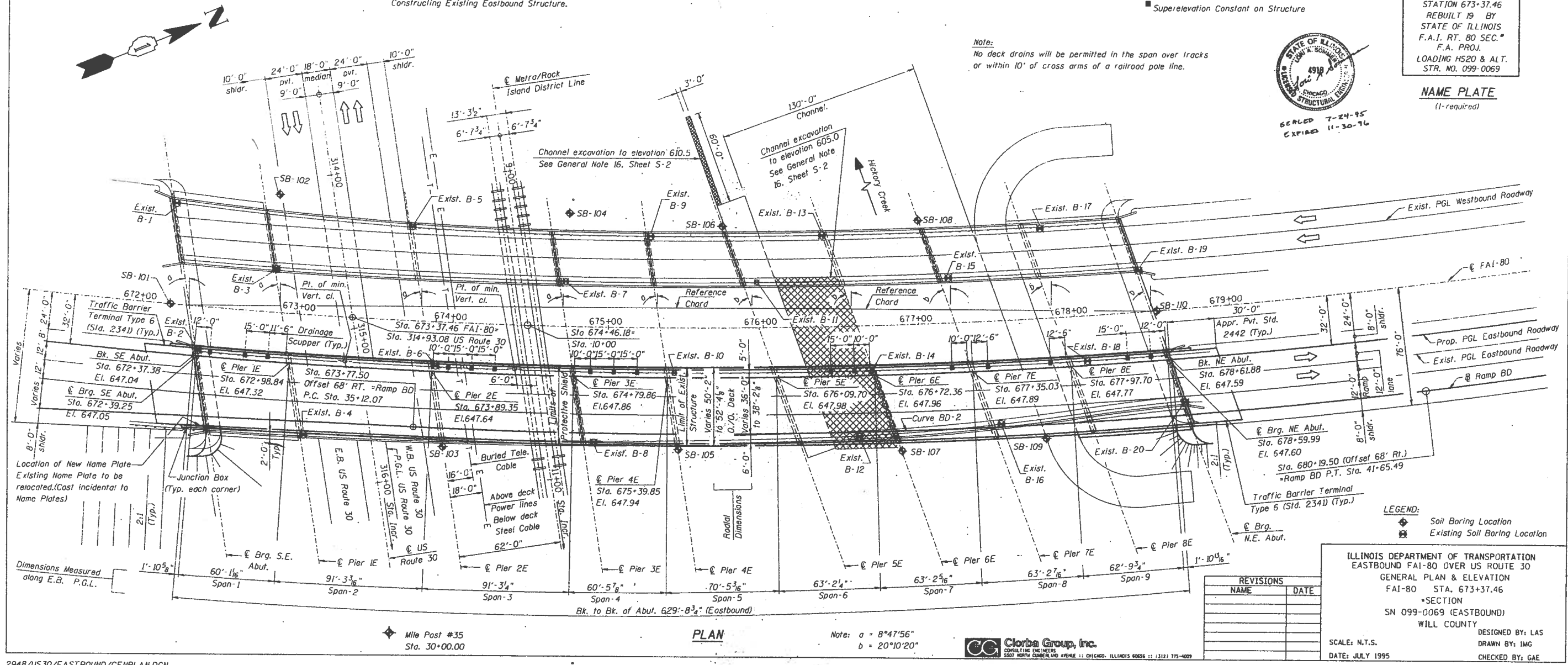
LOCATION SKETCH

STATION 673+37.46
REBUILT BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC. #
F.A. PROJ.
LOADING HS20 & ALT.
STR. NO. 099-0069

NAME PLATE
(1-required)



Note:
No deck drains will be permitted in the span over tracks or within 10' of cross arms of a railroad pole line.



Location of New Name Plate
Existing Name Plate to be relocated. (Cost incidental to Name Plates)

Dimensions Measured along E.B. P.G.L.

Mile Post #35
Sta. 30+00.00

PLAN

Note: a = 8°47'56"
b = 20°10'20"



REVISIONS

NAME	DATE

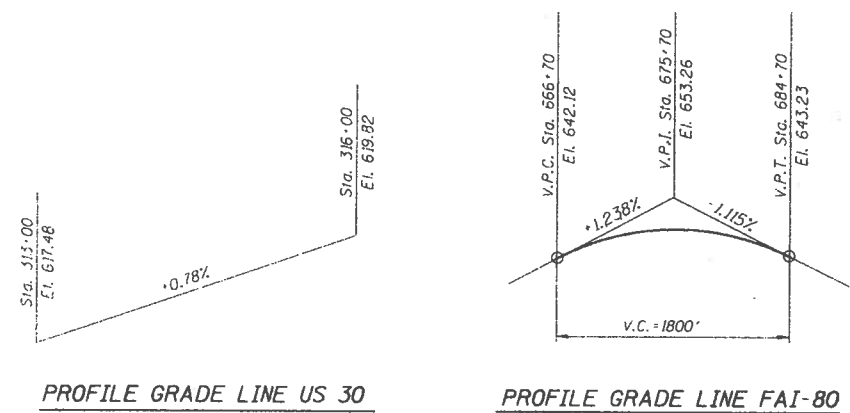
ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
GENERAL PLAN & ELEVATION
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: JULY 1995

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

F. A. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL			
STA.		TO STA.		
FED. ROAD DIST. NO.		BLDG. NO.		FED. AID PROJECT

SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.	162.3		162.3
Slope Wall Removal	Sq. Yd.	12		12
Structure Excavation	Cu. Yd.	200		200
Neoprene Expansion Joint 2"	Foot	197		197
Concrete Structures	Cu. Yd.	375.3		375.3
Concrete Superstructures	Cu. Yd.	885.0		885.0
Bridge Deck Grooving	Sq. Yd.	3142		3142
Protective Coat	Sq. Yd.	516		516
Elastomeric Bearing Assembly, Type I	Each	48		48
Elastomeric Bearing Assembly, Type III	Each	8		8
Formed Concrete Repair (Depth < 5")	Sq. Ft.	451		451
Furnishing & Erecting Structural Steel	L.S.	1		1
Stud Shear Connectors	Each	16533		16533
Reinforcement Bars, Epoxy Coated	Pound	224680	70260	294940
Slope Wall 4"	Sq. Yd.	4		4
Slope Wall 6"	Sq. Yd.	110		110
Furnishing Steel Piles HP 10 x 42	Foot	330		330
Driving Steel Piles	Foot	330		330
Test Pile Steel HP 10 x 42	Each	2		2
Name Plates	Each	1		1
Bridge Seal Sealer	Sq. Ft.	500		500
Epoxy Crack Sealing	Foot	340		340
Caisson Shafts 30"	Cu. Ft.	80		80
Caisson Shafts 36"	Cu. Ft.	64		64
Drainage Scuppers	Each	16		16
Protective Shield	Sq. Yd.			6350
Channel Excavation	Cu. Yd.			50

**Quantity includes top & inside face of parapets only.

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts $T_b \phi$, open holes $1\frac{1}{8} \phi$, unless otherwise noted.
- Calculated weight of Structural Steel = 980,300 Pounds (M270, Grade 36).
- The zinc-silicate/acrylic/acrylic paint system shall be used for shop and field painting of structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green Munsell No. 7.5 G4/B for the exterior beams and Light Grey Munsell No. 10 Y 7/1 for the interior beams. See Special Provisions for "Cleaning and Painting Metal Structures."
- Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one fourth the span length each way from the pier supports except at Pier 3E and Pier 6E. Field welding in the other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, or M-53 Grade 60.
- Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0x W4.0, weighing 58 lbs. per 100 sq. ft.
- Plan dimensions and details relative 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 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.
- Bearing seal surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.
- The Contractor shall drive 1 steel HP10 x 42 test pile in a permanent location at each abutment as directed by the engineer before ordering the remainder of piles.
- Bridge Seal Sealer shall be applied to the seal area of the Abutments, Pier 3 E and Pier 6E.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- For details of electric conduits see sheets S-13 through S-21 and Electrical Drawings. For Bill of Material, details and locations of under deck lighting see Electrical Drawings.
- Calculated area of Protective Shield during deck removal is 2,625 Sq. Yd. and during deck placement is 3,725 Sq. Yd.
- The Engineer shall verify that there is 41 Cu. Yd. of Channel Excavation available between piers 5 & 6 and 9 Cu. Yd. of Channel Excavation available northwest of Pier 5W. Channel Excavation shall be as directed by the Engineer and in accordance with the Standard Specifications Section 203.

DESIGN SPECIFICATIONS

1992 AASHTO and 1993 & 1994 Interim, 1993 AASHTO Guide Specifications for Horizontally Curved Highway Bridges.

LOADING HS20-44 & ALT.

Allow 25 psf for future wearing surface.

DESIGN STRESSES

$f_c = 3,500$ psi
 $f_y = 40,000$ psi (Exist. Reinf. Steel)
 $f_y = 60,000$ psi (Prop. Reinf. Steel)
 $f_r = 36,000$ psi (Struct. Steel M270 Grade 36)

SEISMIC DATA

S.P.C. = A
 $A = 0.04$
 $S = 1.0$

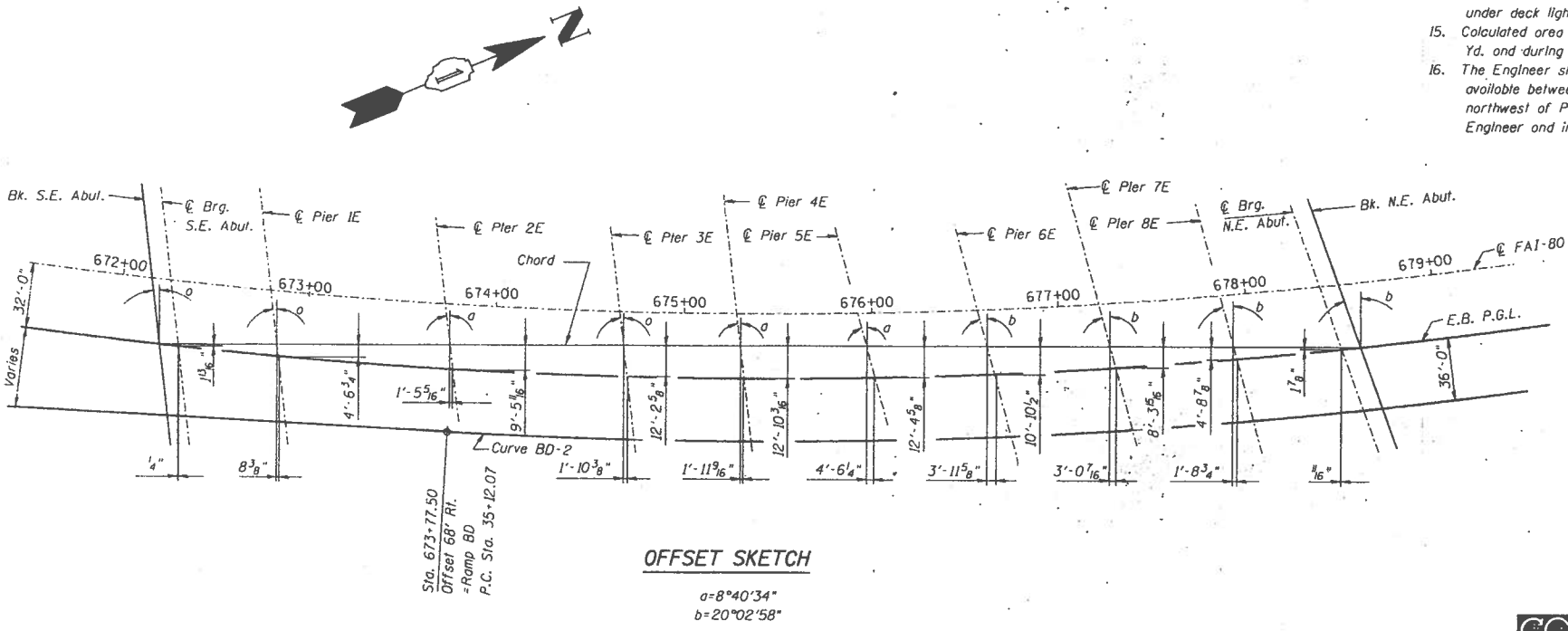
TOP OF TRACK ELEVATIONS

STATION	NORTH TRACK		SOUTH TRACK	
	LEFT	RIGHT	LEFT	RIGHT
8+00	618.78	618.79	618.99	619.01
9+00	619.24	619.24	619.42	619.42
10+00	619.76	619.77	619.87	619.90
11+00	620.35	620.36	620.45	620.46
12+00	620.97	620.98	621.00	620.99

WATERWAY INFORMATION

Drainage Area = $8\frac{1}{4}$ Sq. Mile Low Grade Elev. 633.43 @ Sta. 658+39.74

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater Et.
			Exist.	Prop.	Exist.	Prop.
Design	50	7400	1414	1414	611.64	0 611.64
Base	100	8600	1494	1494	612.09	0 612.09
Overlapping						
Max. Calc.	500	11200	1652	1652	612.93	0.03 612.96



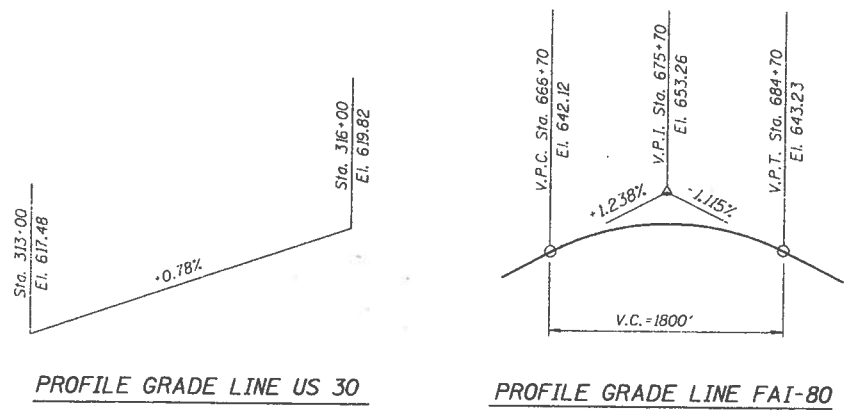
OFFSET SKETCH

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FAI-80 OVER US ROUTE 30
 TOTAL BILL OF MATERIAL & GENERAL NOTES
 FAI-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 SCALE: N.T.S.
 DATE: JULY 1995
 CHECKED BY: GAE

F.A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80		WILL	345	103
STA.		TO STA.		
FED. ROAD DIST. NO.	ALTERN.	FED. AID PROJECT		

*SECTION 99 (5,5-1,5VB) R& 99-4-1VB-1-BR



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1	—	1
Concrete Removal	Cu. Yd.	—	162.3	162.3
Slope Wall Removal	Sq. Yd.	—	12	12
Structure Excavation	Cu. Yd.	—	200	200
Neoprene Expansion Joint 2"	Foot	197	—	197
Concrete Structures	Cu. Yd.	—	375.3	375.3
Concrete Superstructures	Cu. Yd.	885.0	—	885.0
Bridge Deck Grooving	Sq. Yd.	3142	—	3142
Protective Coat	Sq. Yd.	516	—	516
Elastomeric Bearing Assembly, Type I	Each	48	—	48
Elastomeric Bearing Assembly, Type III	Each	8	—	8
Formed Concrete Repair (Depth < 5")	Sq. Ft.	—	451	451
Furnishing & Erecting Structural Steel	L.S.	1	—	1
Stud Shear Connectors	Each	16533	—	16533
Reinforcement Bars, Epoxy Coated	Pound	224680	63420	288100
Slopewall 4"	Sq. Yd.	—	4	4
Slopewall 6"	Sq. Yd.	—	110	110
Furnishing Steel Piles HP 10 x 42	Foot	—	330	330
Driving Steel Piles	Foot	—	330	330
Test Pile Steel HP 10 x 42	Each	—	2	2
Name Plates	Each	1	—	1
Bridge Seat Sealer	Sq. Ft.	—	500	500
Epoxy Crack Sealing	Foot	—	340	340
Calsson Shafts 30"	Cu. Ft.	—	80	80
Calsson Shafts 36"	Cu. Ft.	—	64	64
Drainage Scuppers	Each	16	—	16
Protective Shield	Sq. Yd.	2010	—	2010

**Quantity Includes top & inside face of parapets only.

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts $\frac{1}{2}$ " ϕ , open holes $\frac{5}{16}$ " ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 980,300 Pounds (M270, Grade 36).
- The zinc silicate/Epoxy/Poly-urethane paint system shall be used for shop and field painting of structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green Munsell No. 7.5 G4/8 for the exterior beams and Light Grey Munsell No. 10 Y 7/1 for the interior beams. See Special Provisions for "Cleaning and Painting Metal Structures."
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- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, or M-53 Grade 60.
- Slope wall shall be reinforced with welded wire fabric, 6" X 6" - W4.0x W4.0, weighing 58 lbs. per 100 sq. ft.
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- Bearing seal surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.
- The Contractor shall drive 1 steel HP10 x 42 test pile in a permanent location at each abutment as directed by the engineer before ordering the remainder of piles.
- Bridge Seat Sealer shall be applied to the seat area of the Abutments, Pier 3 E and Pier 6E.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- For details of electric conduits see sheets S-13 through S-21 and Electrical Drawings. For Bill of Material, details and locations of under deck lighting see Electrical Drawings.
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DESIGN SPECIFICATIONS

1992 AASHTO and 1993 & 1994 Interim, 1993 AASHTO Guide Specifications for Horizontally Curved Highway Bridges.

LOADING HS20-44 & ALT.

Allow 25 psf for future wearing surface.

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 40,000$ psi (Exist. Reinf. Steel)
 $f_y = 60,000$ psi (Prop. Reinf. Steel)
 $f_y = 36,000$ psi (Struct. Steel - M270 Grade 36)

SEISMIC DATA

S.P.C. = A
 A = 0.04
 S = 1.0

TOP OF TRACK ELEVATIONS

STATION	NORTH TRACK		SOUTH TRACK	
	LEFT	RIGHT	LEFT	RIGHT
8+00	618.78	618.79	618.99	619.01
9+00	619.24	619.24	619.42	619.42
10+00	619.76	619.77	619.87	619.90
11+00	620.35	620.36	620.45	620.46
12+00	620.97	620.98	621.00	620.99

WATERWAY INFORMATION

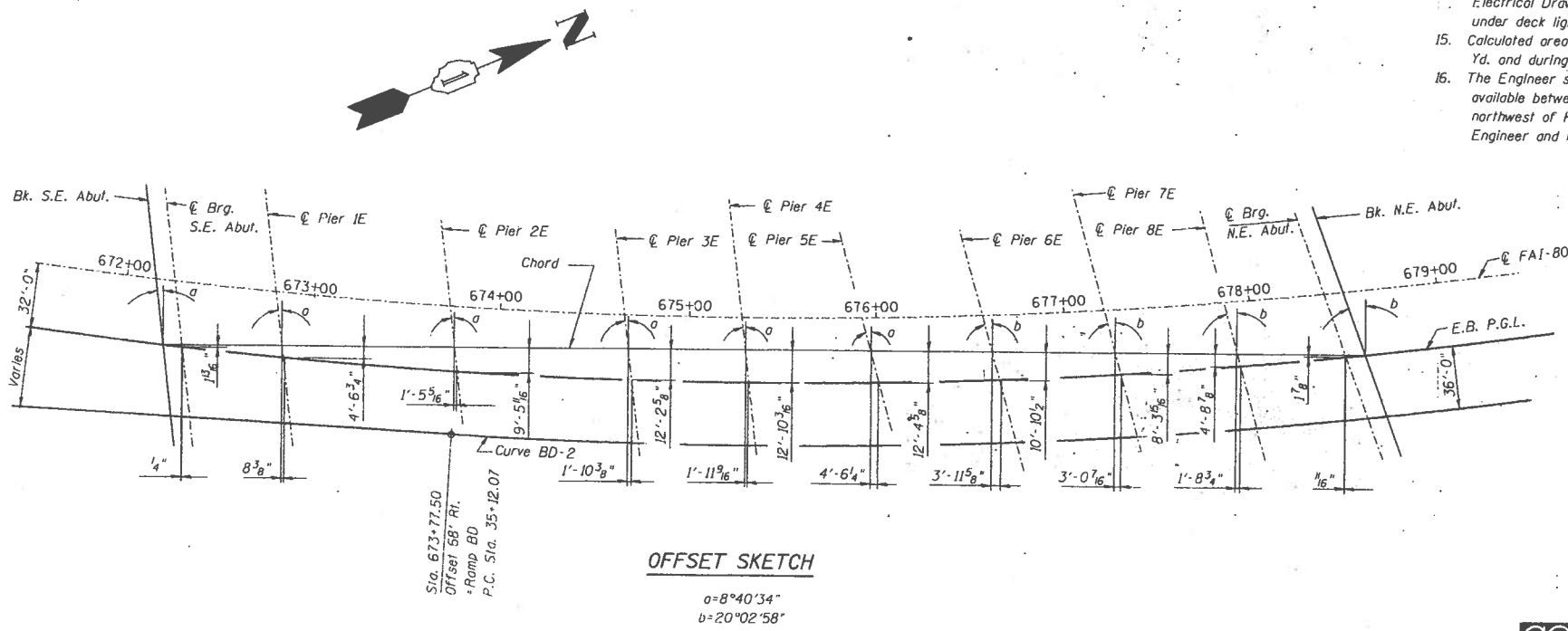
Drainage Area = 8 1/4 Sq. Mile Low Grade Elev. 633.43 @ Sta. 658+39.74									
Flood	Freq. Yr.	C.F.S.	Opening	Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.	Exist.	Prop.
Design	50	7400	1414	1414	611.64	0	611.64	611.64	611.64
Base	100	8600	1494	1494	612.09	0	612.09	612.09	612.09
Overtopping									
Max. Calc.	500	11200	1652	1652	612.93	0.03	612.96	612.96	612.96

REVISIONS	
NAME	DATE
IMG	11-6-1996

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOTAL BILL OF MATERIAL & GENERAL NOTES
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

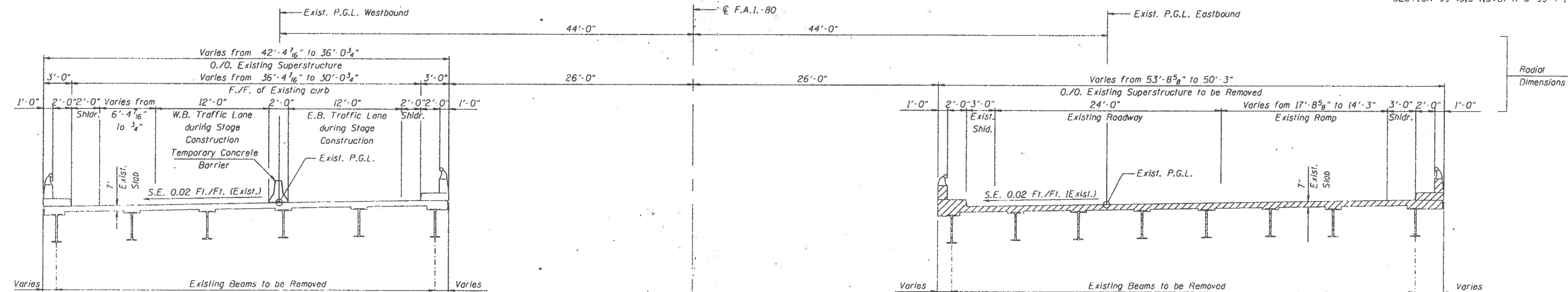


REVISED JUNE 11, 1996



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.	FED. AID PROJECT	

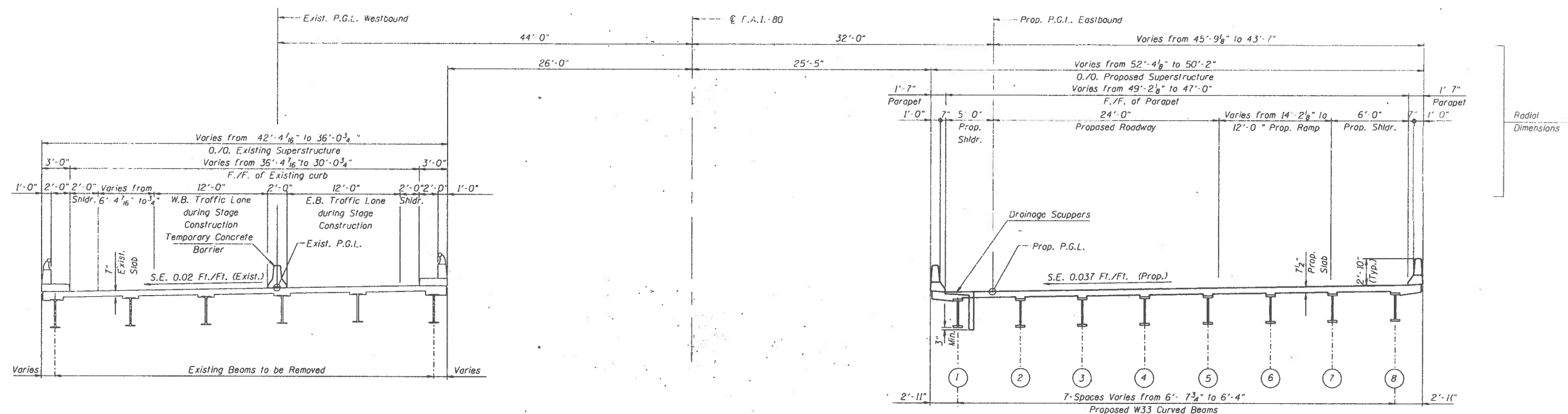
*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



WESTBOUND

STAGE I REMOVAL
LOOKING UPSTATION

EASTBOUND



WESTBOUND

STAGE I CONSTRUCTION
LOOKING UPSTATION

EASTBOUND

Notes:
 Hatched Area Indicates removal of existing concrete deck.
 Cost of Removal of Existing Aluminum Handrail and existing wearing surface is incidental "Removal of Existing Superstructures".
 Pay item for temporary concrete barrier is included in the Roadway Plans.
 For details of temporary concrete barrier see Sheet S-61.

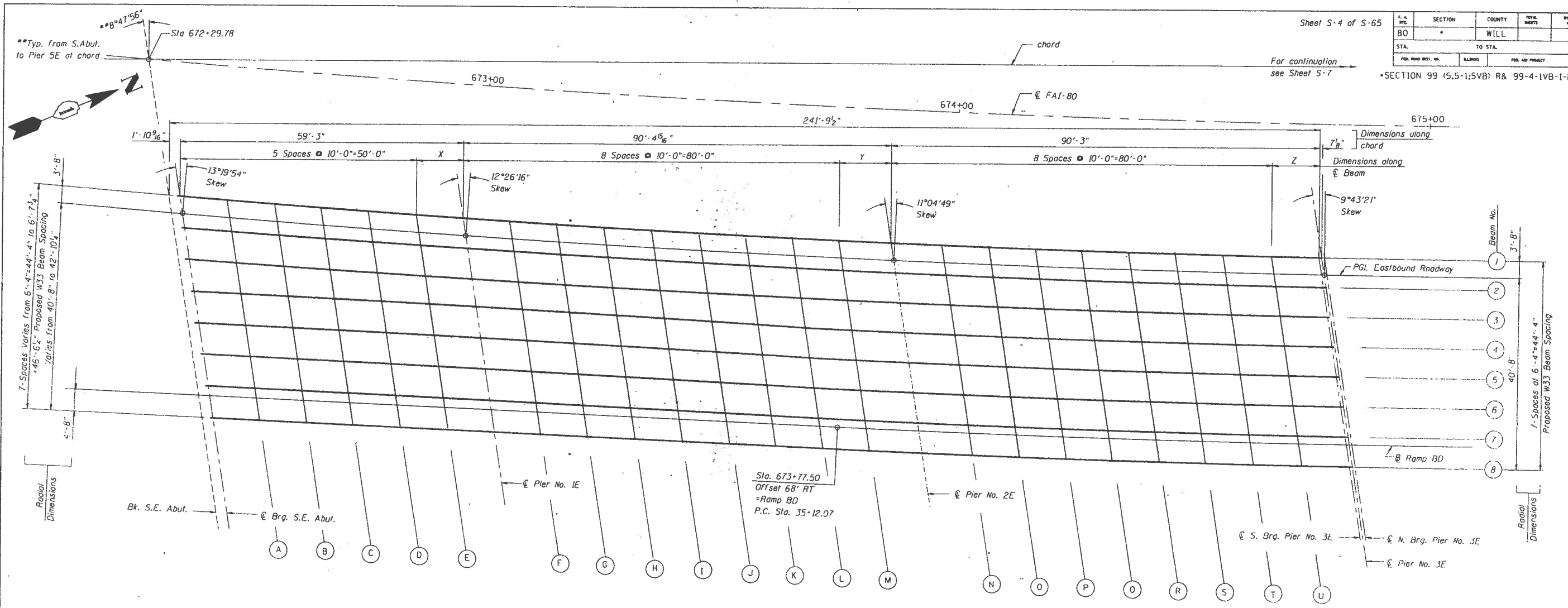
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 CONSTRUCTION STAGES
 FAI -80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE: N.T.S.
 DATE: JULY 1995
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE



F.A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
P.L. ROAD DIST. NO.	BLINDS	P.L. ROAD PROJECT		

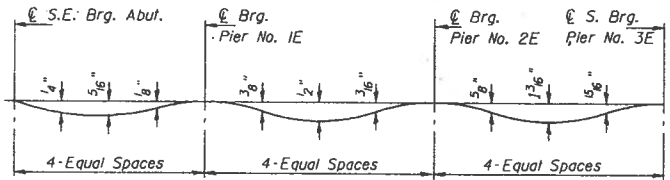
*SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR



PLAN
SPAN 1 THRU SPAN 3

X, Y & Z DIMENSIONS

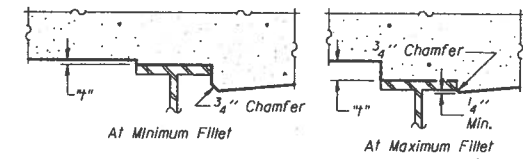
Beam	X	Y	Z
1	10'-1 1/8"	11'-3 1/16"	10'-8 1/16"
2	10'-0 1/16"	11'-2 7/8"	10'-8 1/8"
3	9'-11 1/16"	11'-2 3/8"	10'-8 1/8"
4	9'-11 1/16"	11'-2 1/4"	10'-8"
5	9'-10 3/16"	11'-1 15/16"	10'-7 5/8"
6	9'-9 5/16"	11'-1 1/16"	10'-7 5/8"
7	9'-9 1/16"	11'-1 1/8"	10'-7 1/8"
8	9'-8 1/16"	11'-1 1/16"	10'-7 1/16"



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface).

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted For Dead Load Deflections as shown on Sheet S-5 and S-6



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet S-5 and S-6, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

DECK NOTES:
For Top of Slab Elevations see Sheets S-5 and S-6.
All Elevations are at top of concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE
SCALE: N.T.S.
DATE: JULY 1995



P.L. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL			
STA.		TO STA.		
P.L. ROAD DIST. NO.		DAMES		PER. AND PROJECT

*SECTION 99 (5,5-1:5VB) R & 99-4-1VB-1-BR

BEAM 1					PGL EASTBOUND					BEAM 2				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67236.52	28.333	646.901	646.901	BK. S. ABUT	67237.38	32.000	647.041	647.041	BK. S. ABUT	67238.08	34.986	647.155	647.155
CL. BRG. S. ABUT	67238.39	28.333	646.910	646.910	CL. BRG. S. ABUT	67239.25	32.000	647.050	647.050	CL. BRG. S. ABUT	67239.95	34.977	647.164	647.164
A	67248.31	28.333	646.959	646.977	A	67249.17	32.000	647.099	647.117	A	67249.86	34.931	647.210	647.228
B	67258.24	28.333	647.006	647.033	B	67259.08	32.000	647.146	647.173	B	67259.77	34.889	647.256	647.283
C	67268.17	28.333	647.052	647.078	C	67269.00	32.000	647.191	647.217	C	67269.68	34.851	647.300	647.326
D	67278.09	28.333	647.097	647.113	D	67278.92	32.000	647.236	647.252	D	67279.59	34.817	647.343	647.359
E	67288.02	28.333	647.140	647.145	E	67288.84	32.000	647.279	647.284	E	67289.50	34.786	647.385	647.390
PIER 1	67298.04	28.333	647.182	647.182	PIER 1	67298.84	32.000	647.321	647.321	PIER 1	67299.45	34.758	647.426	647.426
F	67307.97	28.333	647.223	647.232	F	67308.76	32.000	647.362	647.371	F	67309.35	34.734	647.466	647.475
G	67317.89	28.333	647.263	647.288	G	67318.68	32.000	647.401	647.426	G	67319.26	34.714	647.504	647.529
H	67327.82	28.333	647.301	647.340	H	67328.59	32.000	647.439	647.478	H	67329.17	34.697	647.541	647.580
I	67337.74	28.333	647.338	647.383	I	67338.51	32.000	647.476	647.521	I	67339.08	34.684	647.578	647.623
J	67347.67	28.333	647.373	647.415	J	67348.43	32.000	647.512	647.554	J	67348.99	34.675	647.613	647.655
K	67357.60	28.333	647.408	647.439	K	67358.34	32.000	647.546	647.577	K	67358.90	34.669	647.646	647.677
L	67367.52	28.333	647.441	647.457	L	67368.26	32.000	647.579	647.595	L	67368.81	34.667	647.679	647.695
M	67377.45	28.333	647.472	647.474	M	67378.18	32.000	647.610	647.612	M	67378.73	34.667	647.711	647.713
PIER 2	67388.63	28.333	647.507	647.507	PIER 2	67389.35	32.000	647.644	647.644	PIER 2	67389.86	34.667	647.745	647.745
N	67398.56	28.333	647.536	647.554	N	67399.26	32.000	647.673	647.691	N	67399.77	34.667	647.773	647.791
O	67408.49	28.333	647.563	647.608	O	67409.18	32.000	647.701	647.746	O	67409.69	34.667	647.801	647.846
P	67418.41	28.333	647.590	647.663	P	67419.10	32.000	647.727	647.800	P	67419.60	34.667	647.827	647.900
Q	67428.34	28.333	647.615	647.709	Q	67429.02	32.000	647.752	647.846	Q	67429.51	34.667	647.852	647.946
R	67438.27	28.333	647.639	647.742	R	67438.93	32.000	647.776	647.879	R	67439.42	34.667	647.876	647.979
S	67448.19	28.333	647.661	647.758	S	67448.85	32.000	647.798	647.895	S	67449.33	34.667	647.898	647.995
T	67458.12	28.333	647.682	647.758	T	67458.77	32.000	647.819	647.895	T	67459.24	34.667	647.919	647.995
U	67468.05	28.333	647.702	647.745	U	67468.68	32.000	647.839	647.882	U	67469.15	34.667	647.939	647.982
CL. BRG. PIER 3	67478.65	28.333	647.722	647.722	CL. BRG. PIER 3	67479.28	32.000	647.859	647.859	CL. BRG. PIER 3	67479.73	34.667	647.959	647.959

BEAM 3					BEAM 4				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67239.65	41.645	647.409	647.409	BK. S. ABUT	67241.20	48.300	647.663	647.663
CL. BRG. S. ABUT	67241.51	41.626	647.418	647.418	CL. BRG. S. ABUT	67243.06	48.273	647.671	647.671
A	67251.40	41.535	647.462	647.480	A	67252.93	48.135	647.714	647.732
B	67261.29	41.450	647.506	647.533	B	67262.81	48.008	647.755	647.782
C	67271.18	41.373	647.548	647.574	C	67272.68	47.892	647.796	647.822
D	67281.08	41.303	647.590	647.606	D	67282.56	47.787	647.836	647.852
E	67290.97	41.240	647.630	647.635	E	67292.43	47.693	647.875	647.880
PIER 1	67300.85	41.185	647.670	647.670	PIER 1	67302.24	47.610	647.913	647.913
F	67310.74	41.136	647.708	647.717	F	67312.12	47.538	647.950	647.959
G	67320.63	41.095	647.745	647.770	G	67322.00	47.477	647.987	648.012
H	67330.53	41.062	647.782	647.821	H	67331.87	47.426	648.022	648.061
I	67340.42	41.035	647.817	647.862	I	67341.75	47.386	648.057	648.102
J	67350.31	41.016	647.852	647.894	J	67351.63	47.358	648.091	648.133
K	67360.21	41.005	647.885	647.916	K	67361.51	47.340	648.124	648.155
L	67370.10	41.000	647.918	647.934	L	67371.38	47.333	648.156	648.172
M	67380.00	41.000	647.949	647.951	M	67381.26	47.333	648.187	648.189
PIER 2	67391.09	41.000	647.983	647.983	PIER 2	67392.31	47.333	648.220	648.220
N	67400.98	41.000	648.011	648.029	N	67402.19	47.333	648.249	648.267
O	67410.88	41.000	648.038	648.083	O	67412.07	47.333	648.276	648.321
P	67420.77	41.000	648.064	648.137	P	67421.95	47.333	648.302	648.375
Q	67430.67	41.000	648.089	648.183	Q	67431.82	47.333	648.326	648.420
R	67440.56	41.000	648.113	648.216	R	67441.70	47.333	648.350	648.453
S	67450.45	41.000	648.135	648.232	S	67451.58	47.333	648.372	648.469
T	67460.35	41.000	648.156	648.232	T	67461.46	47.333	648.392	648.468
U	67470.24	41.000	648.175	648.218	U	67471.33	47.333	648.412	648.455
CL. BRG. PIER 3	67480.80	41.000	648.195	648.195	CL. BRG. PIER 3	67481.87	47.333	648.431	648.431

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 1-3
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: MS
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BO	WILL		
STA.	TO STA.		
FILE NO. (SEE PLAN)	BLANKET	FILE AND PROJECT	

*SECTION 99 (5.5-1;5VB) R & 99 4-1VB-1 BR

BEAM 5

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67242.76	54.954	647.917	647.917
CL. BRG. S. ABUT	67244.60	54.918	647.925	647.925
A	67254.46	54.735	647.965	647.983
B	67264.32	54.566	648.005	648.032
C	67274.18	54.411	648.044	648.070
D	67284.04	54.271	648.082	648.098
E	67293.89	54.146	648.120	648.125
PIER 1	67303.63	54.036	648.157	648.157
F	67313.49	53.939	648.193	648.202
G	67323.35	53.858	648.228	648.253
H	67333.22	53.790	648.263	648.302
I	67343.08	53.738	648.297	648.342
J	67352.94	53.699	648.330	648.372
K	67362.80	53.676	648.363	648.394
L	67372.66	53.667	648.395	648.411
M	67382.52	53.667	648.425	648.427
PIER 2	67393.33	53.667	648.458	648.458
N	67403.39	53.667	648.487	648.505
O	67413.25	53.667	648.513	648.558
P	67423.12	53.667	648.539	648.612
Q	67432.98	53.667	648.563	648.657
R	67442.84	53.667	648.587	648.690
S	67452.70	53.667	648.608	648.705
T	67462.56	53.667	648.629	648.705
U	67472.42	53.667	648.648	648.691
CL. BRG. PIER 3	67482.94	53.667	648.667	648.667

BEAM 6

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67244.30	61.610	648.171	648.171
CL. BRG. S. ABUT	67246.14	61.565	648.178	648.178
A	67255.98	61.335	648.217	648.235
B	67265.82	61.124	648.255	648.282
C	67275.66	60.930	648.292	648.318
D	67285.51	60.755	648.329	648.345
E	67295.35	60.598	648.365	648.370
PIER 1	67305.02	60.462	648.400	648.400
F	67314.86	60.341	648.435	648.444
G	67324.71	60.239	648.469	648.494
H	67334.55	60.154	648.503	648.542
I	67344.40	60.089	648.537	648.582
J	67354.24	60.041	648.569	648.611
K	67364.09	60.011	648.601	648.632
L	67373.93	60.000	648.633	648.649
M	67383.78	60.000	648.664	648.666
PIER 2	67394.75	60.000	648.696	648.696
N	67404.59	60.000	648.724	648.742
O	67414.44	60.000	648.751	648.796
P	67424.28	60.000	648.776	648.849
Q	67434.13	60.000	648.801	648.895
R	67443.97	60.000	648.823	648.926
S	67453.82	60.000	648.845	648.942
T	67463.66	60.000	648.865	648.941
U	67473.51	60.000	648.885	648.928
CL. BRG. PIER 3	67484.00	60.000	648.904	648.904

BEAM 7

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67245.84	68.268	648.425	648.425
CL. BRG. S. ABUT	67247.68	68.214	648.431	648.431
A	67257.50	67.938	648.468	648.486
B	67267.32	67.683	648.504	648.531
C	67277.15	67.451	648.540	648.566
D	67286.97	67.240	648.575	648.591
E	67296.80	67.052	648.610	648.615
PIER 1	67306.40	66.889	648.643	648.643
F	67316.23	66.743	648.677	648.686
G	67326.06	66.620	648.711	648.736
H	67335.89	66.519	648.744	648.783
I	67345.71	66.440	648.776	648.821
J	67355.54	66.382	648.808	648.850
K	67365.37	66.347	648.840	648.871
L	67375.20	66.333	648.871	648.887
M	67385.03	66.333	648.902	648.904
PIER 2	67395.96	66.333	648.934	648.934
N	67405.78	66.333	648.962	648.980
O	67415.61	66.333	648.988	649.033
P	67425.44	66.333	649.014	649.087
Q	67435.27	66.333	649.038	649.132
R	67445.10	66.333	649.060	649.163
S	67454.93	66.333	649.082	649.179
T	67464.76	66.333	649.102	649.178
U	67474.59	66.333	649.121	649.164
CL. BRG. PIER 3	67485.06	66.333	649.140	649.140

BEAM 8

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
BK. S. ABUT	67247.38	74.928	648.678	648.678
CL. BRG. S. ABUT	67249.21	74.864	648.685	648.685
A	67259.01	74.541	648.719	648.737
B	67268.82	74.244	648.754	648.781
C	67278.62	73.972	648.788	648.814
D	67288.43	73.726	648.821	648.837
E	67298.24	73.506	648.855	648.860
PIER 1	67307.78	73.316	648.887	648.887
F	67317.59	73.146	648.920	648.929
G	67327.40	73.002	648.952	648.977
H	67337.21	72.884	648.984	649.023
I	67347.03	72.791	649.016	649.061
J	67356.84	72.724	649.047	649.089
K	67366.65	72.682	649.079	649.110
L	67376.47	72.667	649.110	649.126
M	67386.28	72.667	649.140	649.142
PIER 2	67397.16	72.667	649.172	649.172
N	67406.97	72.667	649.199	649.217
O	67416.79	72.667	649.226	649.271
P	67426.60	72.667	649.251	649.324
Q	67436.41	72.667	649.275	649.369
R	67446.23	72.667	649.297	649.400
S	67456.04	72.667	649.318	649.415
T	67465.85	72.667	649.338	649.414
U	67475.67	72.667	649.357	649.400
CL. BRG. PIER 3	67486.12	72.667	649.376	649.376

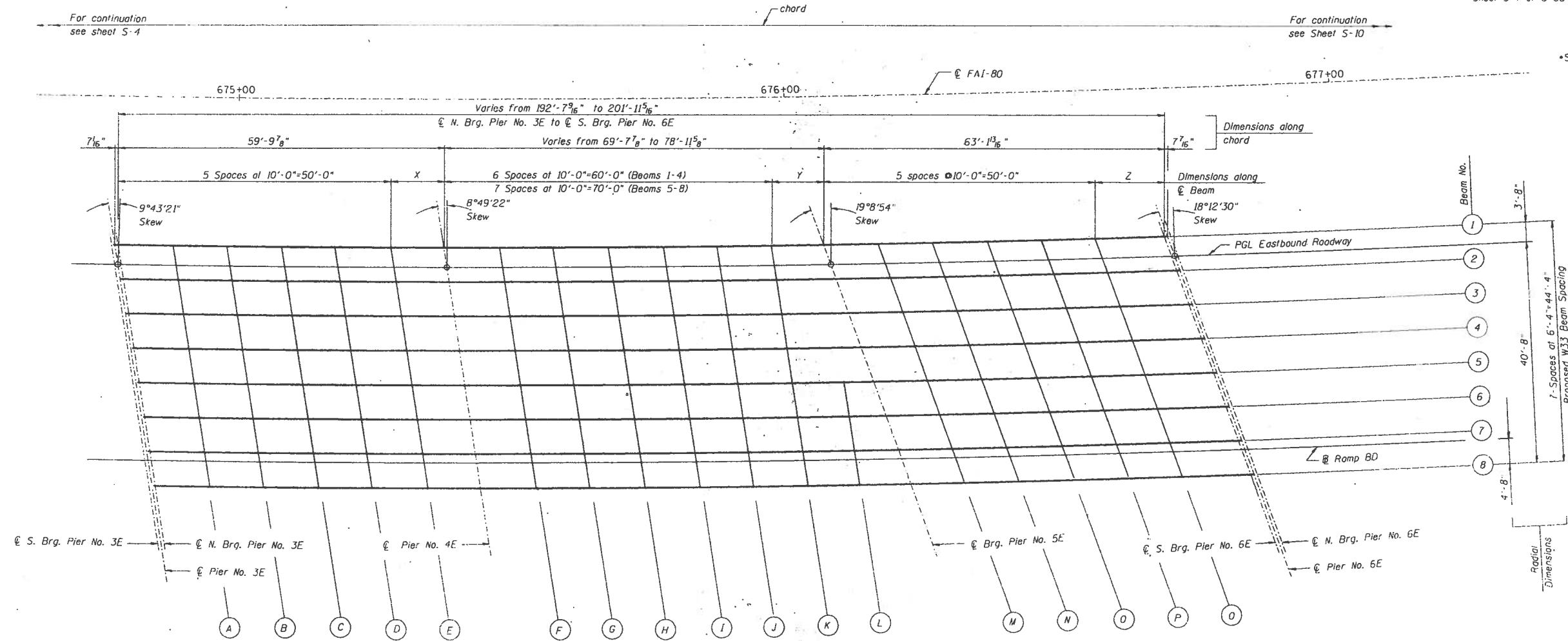
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 1-3
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: MS
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

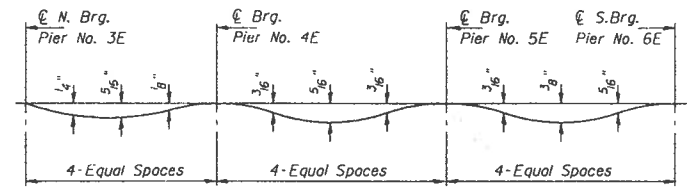
*SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR



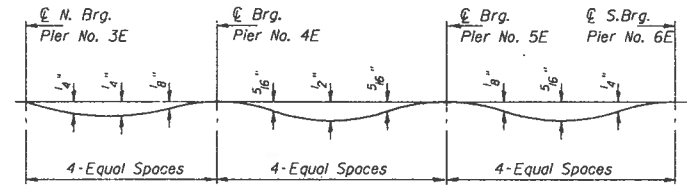
PLAN
SPAN 4 THRU SPAN 6

X, Y & Z DIMENSIONS

Beam	X	Y	Z
1	9'-10 ³ / ₈ "	9'-7 ⁵ / ₈ "	12'-6 ⁵ / ₈ "
2	9'-10 ³ / ₄ "	10'-11 ⁵ / ₈ "	12'-6 ⁵ / ₈ "
3	9'-10 ³ / ₄ "	12'-3 ⁷ / ₈ "	12'-6 ⁵ / ₈ "
4	9'-10 ¹ / ₈ "	13'-7 ⁷ / ₈ "	12'-6 ⁵ / ₈ "
5	9'-10 ¹ / ₈ "	4'-11 ⁵ / ₈ "	12'-6 ⁵ / ₈ "
6	9'-10 ⁵ / ₈ "	6'-3 ³ / ₈ "	12'-6 ¹ / ₈ "
7	9'-10 ⁵ / ₈ "	7'-7 ³ / ₄ "	12'-6 ¹ / ₈ "
8	9'-10 ³ / ₈ "	8'-11 ¹ / ₈ "	12'-6"

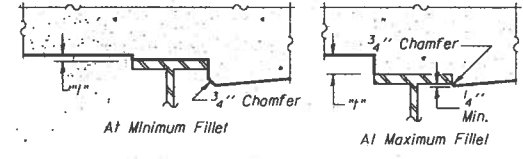


DEAD LOAD DEFLECTION DIAGRAM
BEAMS 1 THRU 4



DEAD LOAD DEFLECTION DIAGRAM
BEAMS 5 THRU 8

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface.)
Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on Sheet S-8 and S-9.



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet S-8 and S-9, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

DECK NOTES:
For Top of Slab Elevations see Sheets S-8 and S-9.
All Elevations are of top of concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: PWP
DRAWN BY: IMG
CHECKED BY: LAS
SCALE: N.T.S.
DATE: JULY 1995



P. & S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BO	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	BLDG.	FED. AID PROJECT		

*SECTION 99 (5,5-1:5VB) R & 99 -4-1VB-1-BR

BEAM 1					PCL EASTBOUND					BEAM 2				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.
CL. BRG. PIER 3	67479.83	28.333	647.723	647.723	CL. BRG. PIER 3	67480.45	32.000	647.860	647.860	CL. BRG. PIER 3	67480.90	34.667	647.959	647.959
A	67489.75	28.333	647.740	647.755	A	67490.37	32.000	647.877	647.892	A	67490.81	34.667	647.976	647.991
B	67499.68	28.333	647.756	647.781	B	67500.28	32.000	647.893	647.918	B	67500.72	34.667	647.992	648.017
C	67509.60	28.333	647.771	647.796	C	67510.20	32.000	647.907	647.932	C	67510.63	34.667	648.007	648.032
D	67519.53	28.333	647.784	647.801	D	67520.12	32.000	647.920	647.937	D	67520.54	34.667	648.020	648.037
E	67529.46	28.333	647.796	647.802	E	67530.03	32.000	647.932	647.938	E	67530.45	34.667	648.032	648.038
CL. BRG. PIER 4	67539.28	28.333	647.807	647.807	CL. BRG. PIER 4	67539.85	32.000	647.943	647.943	CL. BRG. PIER 4	67540.26	34.667	648.042	648.042
F	67549.21	28.333	647.816	647.822	F	67549.77	32.000	647.952	647.958	F	67550.17	34.667	648.051	648.057
G	67559.14	28.333	647.824	647.841	G	67559.68	32.000	647.960	647.977	G	67560.08	34.667	648.059	648.076
H	67569.06	28.333	647.831	647.856	H	67569.60	32.000	647.967	647.992	H	67569.99	34.667	648.066	648.091
I	67578.99	28.333	647.837	647.862	I	67579.52	32.000	647.973	647.998	I	67579.90	34.667	648.072	648.097
J	67588.92	28.333	647.841	647.859	J	67589.43	32.000	647.977	647.995	J	67589.81	34.667	648.076	648.094
K	67598.84	28.333	647.844	647.851	K	67599.35	32.000	647.980	647.987	K	67599.72	34.667	648.079	648.086
CL. BRG. PIER 5	67608.43	28.333	647.846	647.846	CL. BRG. PIER 5	67609.70	32.000	647.982	647.982	CL. BRG. PIER 5	67610.61	34.667	648.080	648.080
M	67618.36	28.333	647.846	647.854	M	67619.61	32.000	647.982	647.990	M	67620.52	34.667	648.081	648.089
N	67628.29	28.333	647.846	647.867	N	67629.53	32.000	647.981	648.002	N	67630.43	34.667	648.080	648.101
O	67638.21	28.333	647.843	647.873	O	67639.45	32.000	647.979	648.009	O	67640.34	34.667	648.077	648.107
P	67648.14	28.333	647.840	647.871	P	67649.36	32.000	647.975	648.006	P	67650.25	34.667	648.074	648.105
Q	67658.06	28.333	647.835	647.857	Q	67659.28	32.000	647.970	647.992	Q	67660.16	34.667	648.069	648.091
CL. BRG. PIER 6	67670.55	28.333	647.828	647.828	CL. BRG. PIER 6	67671.75	32.000	647.963	647.963	CL. BRG. PIER 6	67672.62	34.667	648.061	648.061

BEAM 3					BEAM 4				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.
CL. BRG. PIER 3	67481.97	41.000	648.196	648.196	CL. BRG. PIER 3	67483.04	47.333	648.432	648.432
A	67491.87	41.000	648.212	648.227	A	67492.92	47.333	648.448	648.463
B	67501.76	41.000	648.228	648.253	B	67502.80	47.333	648.464	648.489
C	67511.65	41.000	648.242	648.267	C	67512.67	47.333	648.478	648.503
D	67521.55	41.000	648.255	648.272	D	67522.55	47.333	648.491	648.508
E	67531.44	41.000	648.267	648.273	E	67532.43	47.333	648.502	648.508
CL. BRG. PIER 4	67541.23	41.000	648.277	648.277	CL. BRG. PIER 4	67542.20	47.333	648.513	648.513
F	67551.13	41.000	648.287	648.293	F	67552.08	47.333	648.522	648.528
G	67561.02	41.000	648.294	648.311	G	67561.96	47.333	648.529	648.546
H	67570.91	41.000	648.301	648.326	H	67571.83	47.333	648.536	648.561
I	67580.81	41.000	648.306	648.331	I	67581.71	47.333	648.541	648.566
J	67590.70	41.000	648.310	648.328	J	67591.59	47.333	648.545	648.563
K	67600.59	41.000	648.313	648.320	K	67601.47	47.333	648.548	648.555
CL. BRG. PIER 5	67612.79	41.000	648.315	648.315	CL. BRG. PIER 5	67614.95	47.333	648.549	648.549
M	67622.68	41.000	648.315	648.323	M	67624.83	47.333	648.549	648.557
N	67632.58	41.000	648.314	648.335	N	67634.71	47.333	648.547	648.568
O	67642.47	41.000	648.311	648.341	O	67644.59	47.333	648.544	648.574
P	67652.36	41.000	648.307	648.338	P	67654.46	47.333	648.540	648.571
Q	67662.26	41.000	648.302	648.324	Q	67664.34	47.333	648.535	648.557
CL. BRG. PIER 6	67674.68	41.000	648.293	648.293	CL. BRG. PIER 6	67676.73	47.333	648.526	648.526

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 4-6
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: PWP
 DRAWN BY: MS
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995



F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	BLINDS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR

BEAM 5					BEAM 6					BEAM 7				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.
CL. BRG. PIER 3	67484.11	53.667	648.668	648.668	CL. BRG. PIER 3	67485.17	60.000	648.904	648.904	CL. BRG. PIER 3	67486.22	66.333	649.140	649.140
A	67493.97	53.667	648.685	648.699	A	67495.01	60.000	648.921	648.935	A	67496.05	66.333	649.157	649.171
B	67503.83	53.667	648.700	648.722	B	67504.86	60.000	648.936	648.958	B	67505.88	66.333	649.171	649.193
C	67513.69	53.667	648.714	648.735	C	67514.70	60.000	648.949	648.970	C	67515.71	66.333	649.185	649.206
D	67523.55	53.667	648.726	648.740	D	67524.55	60.000	648.962	648.976	D	67525.54	66.333	649.198	649.212
E	67533.41	53.667	648.738	648.742	E	67534.39	60.000	648.973	648.977	E	67535.37	66.333	649.209	649.213
CL. BRG. PIER 4	67543.17	53.667	648.748	648.748	CL. BRG. PIER 4	67544.13	60.000	648.983	648.983	CL. BRG. PIER 4	67545.09	66.333	649.218	649.218
F	67553.03	53.667	648.757	648.767	F	67553.97	60.000	648.992	649.002	F	67554.92	66.333	649.227	649.237
G	67562.89	53.667	648.764	648.790	G	67563.82	60.000	648.999	649.025	G	67564.75	66.333	649.234	649.260
H	67572.75	53.667	648.771	648.809	H	67573.66	60.000	649.006	649.044	H	67574.57	66.333	649.241	649.279
I	67582.61	53.667	648.776	648.818	I	67583.51	60.000	649.011	649.053	I	67584.40	66.333	649.245	649.287
J	67592.47	53.667	648.780	648.815	J	67593.35	60.000	649.014	649.049	J	67594.23	66.333	649.249	649.284
K	67602.33	53.667	648.782	648.802	K	67603.20	60.000	649.017	649.037	K	67604.06	66.333	649.251	649.271
L	67612.20	53.667	648.784	648.789	L	67613.05	60.000	649.018	649.023	L	67613.89	66.333	649.252	649.257
CL. BRG. PIER 5	67617.11	53.667	648.784	648.784	CL. BRG. PIER 5	67619.26	60.000	649.018	649.018	CL. BRG. PIER 5	67621.41	66.333	649.252	649.252
M	67626.97	53.667	648.783	648.788	M	67629.11	60.000	649.017	649.022	M	67631.24	66.333	649.251	649.256
N	67636.84	53.667	648.781	648.798	N	67638.95	60.000	649.015	649.032	N	67641.07	66.333	649.249	649.266
O	67646.70	53.667	648.778	648.804	O	67648.80	60.000	649.012	649.038	O	67650.90	66.333	649.245	649.271
P	67656.56	53.667	648.774	648.802	P	67658.65	60.000	649.007	649.035	P	67660.73	66.333	649.240	649.268
Q	67666.42	53.667	648.768	648.788	Q	67668.49	60.000	649.001	649.021	Q	67670.55	66.333	649.234	649.254
CL. BRG. PIER 6	67678.78	53.667	648.759	648.759	CL. BRG. PIER 6	67680.82	60.000	648.992	648.992	CL. BRG. PIER 6	67682.85	66.333	649.224	649.224

BEAM 8				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL. DEFL.
CL. BRG. PIER 3	67487.28	72.667	649.376	649.376
A	67497.09	72.667	649.392	649.406
B	67506.91	72.667	649.407	649.429
C	67516.72	72.667	649.421	649.442
D	67526.53	72.667	649.433	649.447
E	67536.35	72.667	649.444	649.448
CL. BRG. PIER 4	67546.04	72.667	649.454	649.454
F	67555.86	72.667	649.462	649.472
G	67565.67	72.667	649.469	649.495
H	67575.48	72.667	649.475	649.513
I	67585.30	72.667	649.480	649.522
J	67595.11	72.667	649.484	649.519
K	67604.92	72.667	649.486	649.506
L	67614.74	72.667	649.487	649.492
CL. BRG. PIER 5	67623.54	72.667	649.486	649.486
M	67633.36	72.667	649.485	649.490
N	67643.17	72.667	649.482	649.499
O	67652.98	72.667	649.478	649.504
P	67662.80	72.667	649.473	649.501
Q	67672.61	72.667	649.467	649.487
CL. BRG. PIER 6	67684.88	72.667	649.457	649.457

REVISIONS	
NAME	DATE

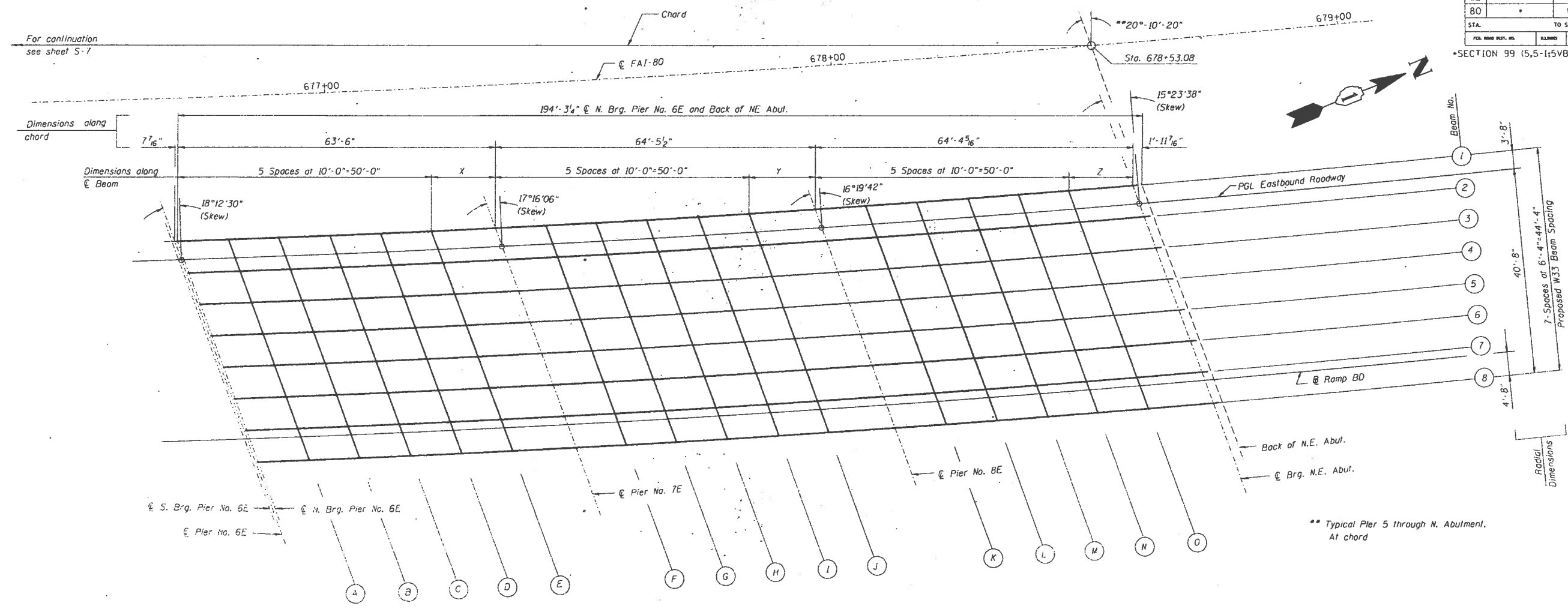
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 4-6
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: PWP
 DRAWN BY: MMS
 CHECKED BY: LAS

SCALE: N.T.S.
 DATE: JULY 1995



F.A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BO	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGNED	PUB. AIR PROJECT		

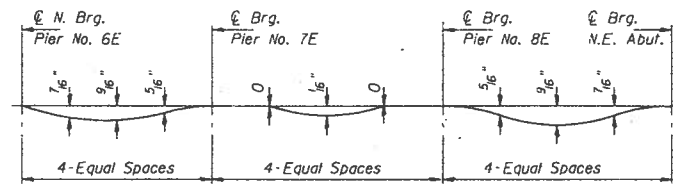
*SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR



PLAN
SPAN 7 THRU SPAN 9

X, Y & Z DIMENSIONS

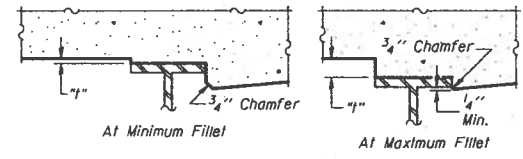
Beam	X	Y	Z
1	12'-7"	13'-2 1/2"	12'-9 3/4"
2	12'-6 7/8"	13'-2 3/8"	12'-9 1/16"
3	12'-6 3/4"	13'-2 3/16"	12'-9 9/16"
4	12'-6 5/8"	13'-2 3/16"	12'-9 1/2"
5	12'-6 1/2"	13'-2 1/16"	12'-9 3/8"
6	12'-6 3/8"	13'-1 9/16"	12'-9 1/8"
7	12'-6 1/4"	13'-1 9/16"	12'-9 3/16"
8	12'-6 1/8"	13'-1 3/4"	12'-9 1/16"



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surfaces.)

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations adjusted for Dead Load Deflections as shown on Sheets S-11 and S-12.



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets S-11 and S-12, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

DECK NOTES:
For Top of Slab Elevations see Sheets S-11 and S-12.
All Elevations are at top of concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: JULY 1995
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

CC **Clorbe Group, Inc.**
CONSULTING ENGINEERS
3507 NORTH CUMBERLAND AVENUE, 11 CHICAGO, ILLINOIS 60634, 11 13121 113-0009

P.A. SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ALIGNMENT	FED. AID PROJECT		

*SECTION 99 (5,5-1:5VB) R & 99 4-1VB-1-BR

BEAM 1					PGL EASTBOUND					BEAM 2				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67671.77	28.333	647.828	647.828	CL. BRG. PIER 6	67672.97	32.000	647.963	647.963	CL. BRG. PIER 6	67673.83	34.667	648.061	648.061
A	67681.70	28.333	647.821	647.849	A	67682.88	32.000	647.955	647.983	A	67683.74	34.667	648.053	648.081
B	67691.62	28.333	647.812	647.858	B	67692.80	32.000	647.946	647.992	B	67693.65	34.667	648.044	648.090
C	67701.55	28.333	647.801	647.851	C	67702.72	32.000	647.936	647.986	C	67703.56	34.667	648.033	648.083
D	67711.48	28.333	647.790	647.830	D	67712.63	32.000	647.924	647.964	D	67713.47	34.667	648.021	648.061
E	67721.40	28.333	647.777	647.798	E	67722.55	32.000	647.911	647.932	E	67723.38	34.667	648.008	648.029
PIER 7	67733.89	28.333	647.759	647.759	PIER 7	67735.03	32.000	647.893	647.893	PIER 7	67735.84	34.667	647.990	647.990
F	67743.82	28.333	647.743	647.741	F	67744.94	32.000	647.877	647.875	F	67745.75	34.667	647.974	647.972
G	67753.75	28.333	647.726	647.729	G	67754.86	32.000	647.860	647.863	G	67755.66	34.667	647.957	647.960
H	67763.67	28.333	647.707	647.714	H	67764.78	32.000	647.841	647.848	H	67765.57	34.667	647.938	647.945
I	67773.60	28.333	647.688	647.693	I	67774.69	32.000	647.821	647.826	I	67775.48	34.667	647.918	647.923
J	67783.52	28.333	647.667	647.666	J	67784.61	32.000	647.800	647.799	J	67785.39	34.667	647.897	647.896
PIER 8	67796.64	28.333	647.637	647.637	PIER 8	67797.70	32.000	647.771	647.771	PIER 8	67798.48	34.667	647.867	647.867
K	67806.56	28.333	647.613	647.629	K	67807.62	32.000	647.746	647.762	K	67808.39	34.667	647.843	647.859
L	67816.49	28.333	647.588	647.625	L	67817.54	32.000	647.721	647.758	L	67818.30	34.667	647.818	647.855
M	67826.42	28.333	647.562	647.612	M	67827.45	32.000	647.695	647.745	M	67828.21	34.667	647.791	647.841
N	67836.34	28.333	647.534	647.583	N	67837.37	32.000	647.667	647.716	N	67838.12	34.667	647.763	647.812
O	67846.27	28.333	647.505	647.540	O	67847.29	32.000	647.637	647.672	O	67848.03	34.667	647.734	647.769
CL. BRG. N. ABUT	67858.99	28.333	647.466	647.466	CL. BRG. N. ABUT	67859.99	32.000	647.598	647.598	CL. BRG. N. ABUT	67860.72	34.667	647.694	647.694
BK. N. ABUT	67860.88	28.333	647.460	647.460	BK. N. ABUT	67861.88	32.000	647.592	647.592	BK. N. ABUT	67862.60	34.667	647.689	647.689

BEAM 3					BEAM 4				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67675.89	41.000	648.294	648.294	CL. BRG. PIER 6	67677.94	47.333	648.527	648.527
A	67685.79	41.000	648.286	648.314	A	67687.82	47.333	648.518	648.546
B	67695.68	41.000	648.276	648.322	B	67697.70	47.333	648.508	648.554
C	67705.58	41.000	648.265	648.315	C	67707.58	47.333	648.497	648.547
D	67715.47	41.000	648.253	648.293	D	67717.45	47.333	648.485	648.525
E	67725.36	41.000	648.240	648.261	E	67727.33	47.333	648.471	648.492
PIER 7	67737.79	41.000	648.221	648.221	PIER 7	67739.73	47.333	648.453	648.453
F	67747.69	41.000	648.205	648.203	F	67749.61	47.333	648.436	648.434
G	67757.58	41.000	648.188	648.191	G	67759.49	47.333	648.418	648.421
H	67767.47	41.000	648.169	648.176	H	67769.36	47.333	648.399	648.406
I	67777.37	41.000	648.149	648.154	I	67779.24	47.333	648.379	648.384
J	67787.26	41.000	648.127	648.126	J	67789.12	47.333	648.358	648.357
PIER 8	67800.31	41.000	648.097	648.097	PIER 8	67802.14	47.333	648.327	648.327
K	67810.21	41.000	648.073	648.089	K	67812.02	47.333	648.303	648.319
L	67820.10	41.000	648.047	648.084	L	67821.89	47.333	648.277	648.314
M	67829.99	41.000	648.021	648.071	M	67831.77	47.333	648.250	648.300
N	67839.89	41.000	647.992	648.041	N	67841.65	47.333	648.221	648.270
O	67849.78	41.000	647.963	647.998	O	67851.53	47.333	648.192	648.227
CL. BRG. N. ABUT	67862.44	41.000	647.923	647.923	CL. BRG. N. ABUT	67864.16	47.333	648.152	648.152
BK. N. ABUT	67864.32	41.000	647.917	647.917	BK. N. ABUT	67866.04	47.333	648.146	648.146

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: MS
 CHECKED BY: LAS



SCALE: N.T.S.
 DATE: JULY 1995

P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGN	FED. AID PROJECT		

*SECTION 99 (5.5-1;5VB) R & 99-4-1VB-1-BR

BEAM 5					BEAM 6					BEAM 7				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL	LOCATION	STATION	OFFSET	THEO. GRADE DEFL	THEO GRADE ELEV ADJ FOR DL ELEV.	LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67679.99	53.667	648.759	648.759	CL. BRG. PIER 6	67682.03	60.000	648.992	648.992	CL. BRG. PIER 6	67684.06	66.333	649.225	649.225
A	67689.85	53.667	648.750	648.778	A	67691.87	60.000	648.983	649.011	A	67693.89	66.333	649.215	649.243
B	67699.71	53.667	648.740	648.786	B	67701.72	60.000	648.973	649.019	B	67703.71	66.333	649.205	649.251
C	67709.57	53.667	648.729	648.779	C	67711.56	60.000	648.961	649.011	C	67713.54	66.333	649.193	649.243
D	67719.43	53.667	648.717	648.757	D	67721.41	60.000	648.949	648.989	D	67723.37	66.333	649.180	649.220
E	67729.29	53.667	648.703	648.724	E	67731.25	60.000	648.934	648.955	E	67733.20	66.333	649.166	649.187
PIER 7	67741.66	53.667	648.684	648.684	PIER 7	67743.59	60.000	648.915	648.915	PIER 7	67745.51	66.333	649.146	649.146
F	67751.52	53.667	648.667	648.665	F	67753.44	60.000	648.898	648.896	F	67755.34	66.333	649.129	649.127
G	67761.39	53.667	648.649	648.652	G	67763.28	60.000	648.880	648.883	G	67765.17	66.333	649.111	649.114
H	67771.25	53.667	648.630	648.637	H	67773.13	60.000	648.861	648.868	H	67775.00	66.333	649.091	649.098
I	67781.11	53.667	648.609	648.614	I	67782.97	60.000	648.840	648.845	I	67784.83	66.333	649.070	649.075
J	67790.97	53.667	648.588	648.587	J	67792.82	60.000	648.818	648.817	J	67794.66	66.333	649.048	649.047
PIER 8	67803.96	53.667	648.557	648.557	PIER 8	67805.78	60.000	648.787	648.787	PIER 8	67807.59	66.333	649.017	649.017
K	67813.82	53.667	648.532	648.548	K	67815.62	60.000	648.762	648.778	K	67817.41	66.333	648.992	649.008
L	67823.68	53.667	648.506	648.543	L	67825.47	60.000	648.736	648.773	L	67827.24	66.333	648.965	649.002
M	67833.54	53.667	648.479	648.529	M	67835.31	60.000	648.709	648.759	M	67837.07	66.333	648.938	648.988
N	67843.41	53.667	648.450	648.499	N	67845.16	60.000	648.680	648.729	N	67846.90	66.333	648.909	648.958
O	67853.27	53.667	648.421	648.456	O	67855.00	60.000	648.650	648.685	O	67856.73	66.333	648.879	648.914
CL. BRG. N. ABUT	67865.87	53.667	648.381	648.381	CL. BRG. N. ABUT	67867.58	60.000	648.610	648.610	CL. BRG. N. ABUT	67869.28	66.333	648.838	648.838
BK. N. ABUT	67867.75	53.667	648.375	648.375	BK. N. ABUT	67869.45	60.000	648.604	648.604	BK. N. ABUT	67871.15	66.333	648.832	648.832

BEAM 8				
LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67686.08	72.667	649.457	649.457
A	67695.89	72.667	649.447	649.475
B	67705.70	72.667	649.437	649.483
C	67715.52	72.667	649.425	649.475
O	67725.33	72.667	649.412	649.452
E	67735.14	72.667	649.397	649.418
PIER 7	67747.42	72.667	649.377	649.377
F	67757.24	72.667	649.360	649.358
G	67767.05	72.667	649.341	649.344
H	67776.86	72.667	649.321	649.328
I	67786.68	72.667	649.300	649.305
J	67796.49	72.667	649.278	649.277
PIER 8	67809.39	72.667	649.246	649.246
K	67819.20	72.667	649.221	649.237
L	67829.01	72.667	649.195	649.232
M	67838.83	72.667	649.167	649.217
N	67848.64	72.667	649.138	649.187
O	67858.45	72.667	649.107	649.142
CL. BRG. N. ABUT	67870.97	72.667	649.067	649.067
BK. N. ABUT	67872.84	72.667	649.061	649.061

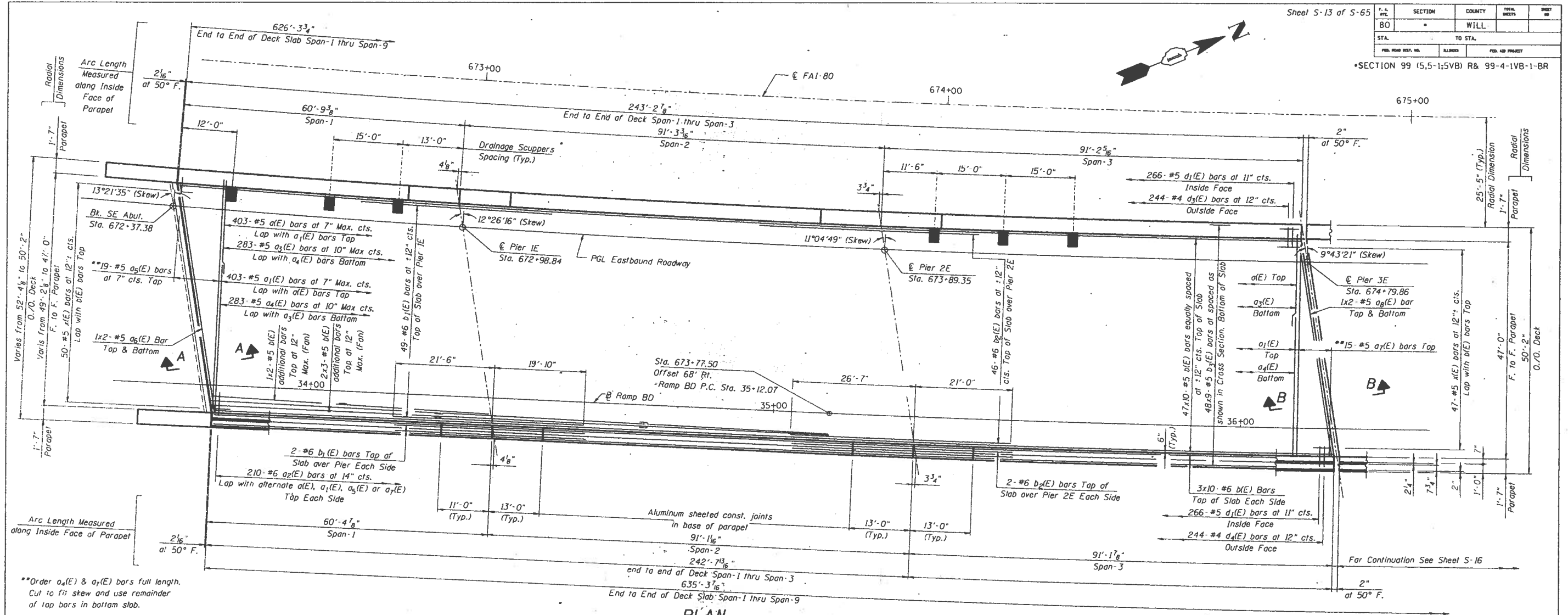
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TOP OF SLAB ELEVATIONS SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY.
 DESIGNED BY: GAE
 DRAWN BY: MS
 CHECKED BY: LAS

SCALE: N.T.S.
 DATE: JULY 1995

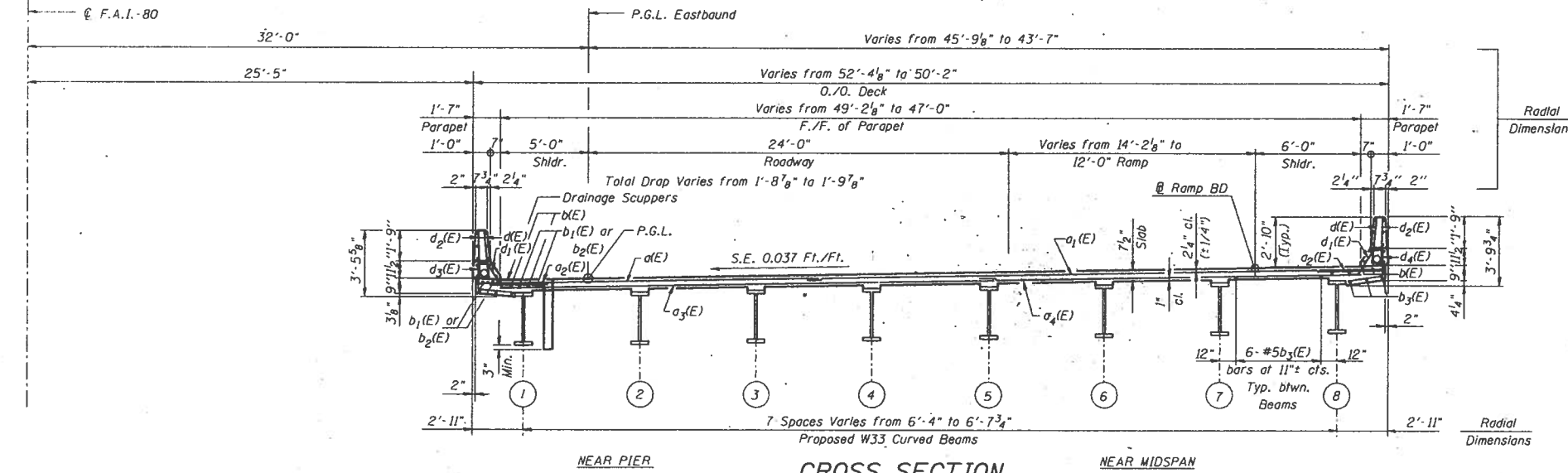


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
673+00	675+00		
SECTION 99 (5.5-1:5VB) R& 99-4-1VB-1-BR			



**Order a₄(E) & a₇(E) bars full length. Cut to fit skew and use remainder of top bars in bottom slab.

PLAN
SPAN-1 THRU SPAN-3



CROSS SECTION
SPAN 1 THRU SPAN 3 (LOOKING UPSTATION)

NOTES:
See Sheet S-15 for Superstructure Details.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-14 for parapet Elevation & Bill of Material.
The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers. Minimum lap splice shall be 2'-2" for #5 bars.
For Drainage Scupper Details See Sheet S-15, S-58 and S-59.
For Section A-A & Section B-B See Sheet S-15.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
DECK PLAN & CROSS SECTION SPAN 1-3
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: IMG
SCALE: N.T.S.
DATE: JULY 1995
CHECKED BY: PWP



F.A. No.	SECTION	COUNTY	ROYAL SHEETS	SHEET NO.
80	"	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	RAVINE	FED. AID PROJECT		

*SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR

**SUPERSTRUCTURE
SPAN 1-3
BILL OF MATERIAL**

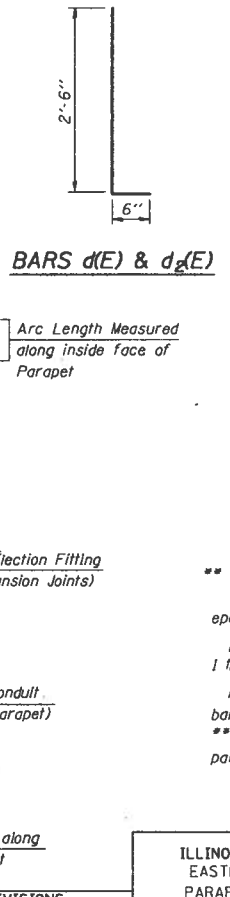
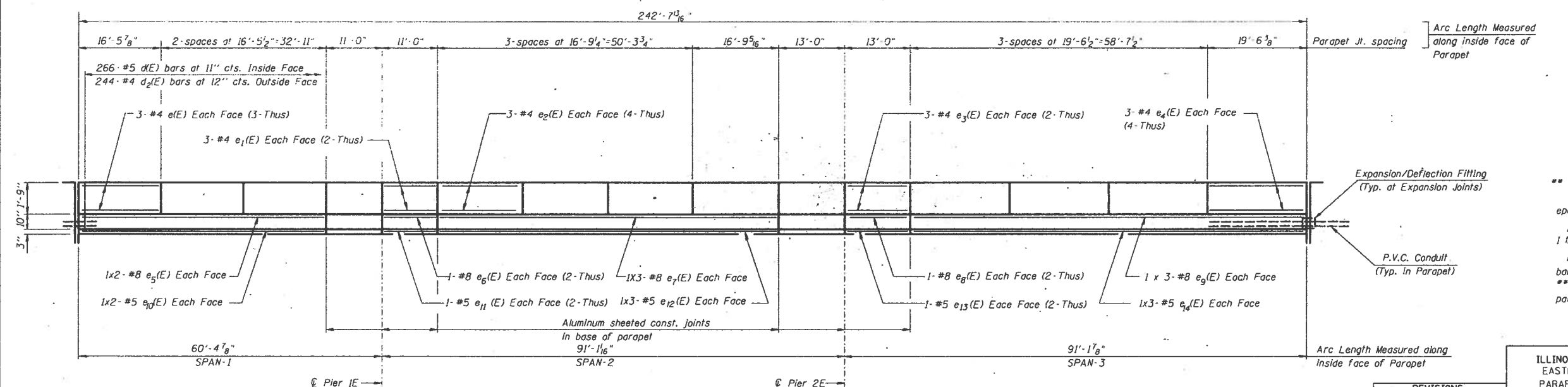
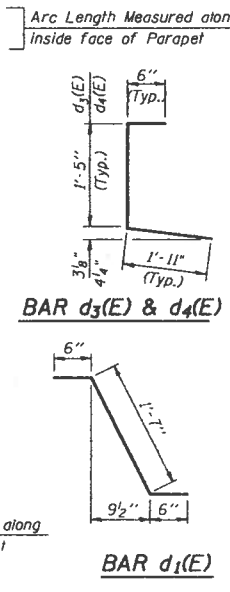
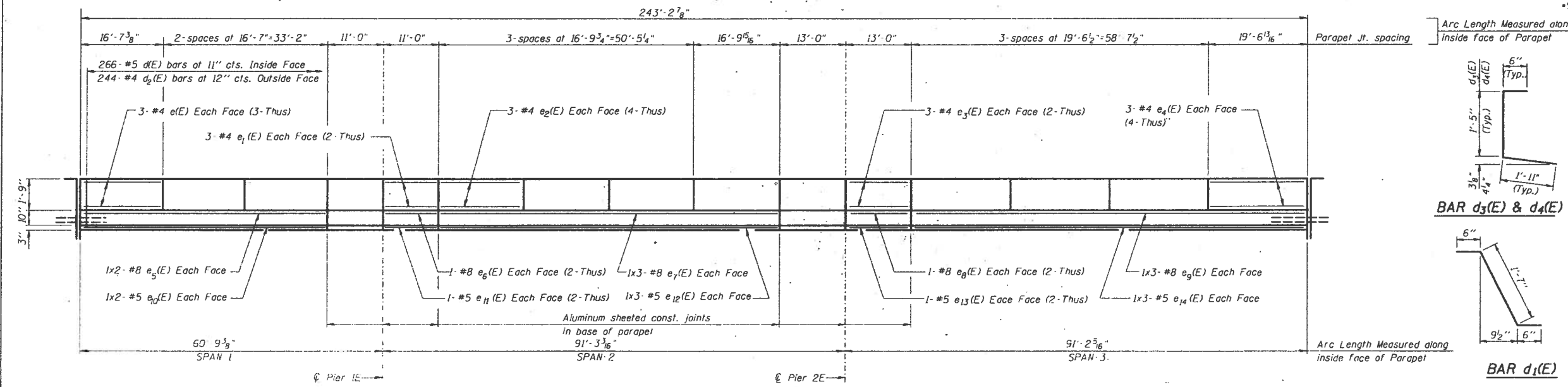
Bar	No.	Size	Length	Shape
a(E)	403	#5	20'-4"	
a ₁ (E)	403	#5	33'-0"	
a ₂ (E)	420	#6	4'-0"	
a ₃ (E)	283	#5	28'-6"	
a ₄ (E)	283	#5	23'-0"	
a ₅ (E)	19	#5	50'-5"	
a ₆ (E)	4	#5	27'-0"	
a ₇ (E)	15	#5	48'-2"	
a ₈ (E)	4	#5	26'-0"	
a ₉ (E)	48	#5	2'-0"	
b(E)	538	#5	26'-4"	
b ₁ (E)	53	#6	41'-4"	
b ₂ (E)	50	#6	47'-7"	
b ₃ (E)	432	#5	29'-0"	
d(E)	532	#5	3'-0"	
d ₁ (E)	532	#5	2'-7"	
d ₂ (E)	488	#4	3'-0"	
d ₃ (E)	244	#4	3'-10"	C
d ₄ (E)	244	#4	3'-10"	C
e(E)	36	#4	16'-2"	
e ₁ (E)	24	#4	10'-9"	
e ₂ (E)	48	#4	16'-6"	
e ₃ (E)	24	#4	12'-9"	
e ₄ (E)	48	#4	19'-3"	
e ₅ (E)	8	#8	27'-0"	
e ₆ (E)	8	#8	10'-9"	
e ₇ (E)	12	#8	25'-4"	
e ₈ (E)	8	#8	12'-9"	
e ₉ (E)	12	#8	29'-0"	
e ₁₀ (E)	8	#5	25'-10"	
e ₁₁ (E)	8	#5	10'-9"	
e ₁₂ (E)	12	#5	23'-10"	
e ₁₃ (E)	8	#5	12'-9"	
e ₁₄ (E)	12	#5	27'-5"	
x(E)	97	#5	4'-1"	

Reinforcement Bars, Epoxy Coated	Lbs.	88,450
Concrete Superstructure	Cu. Yds.	345
Bridge Deck Grooving	Sq. Yds.	1218
Neoprene Expansion Joint (2")	Foot	99
Protective Coat	Sq. Yds.	199

Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 1 x 3-#5 etc. Indicates 1 line of bars with 3 lengths per line.
 Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.
 **Quantity includes top & inside face of parapet only.

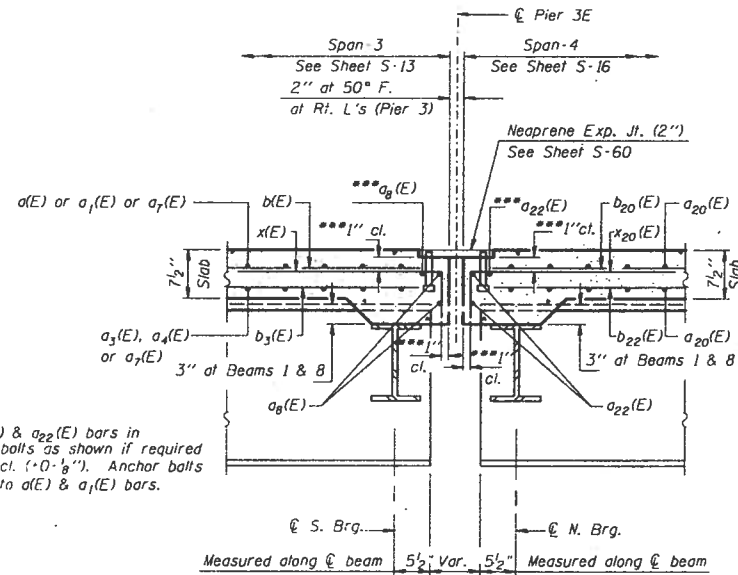
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PARAPET ELEVATION & DETAILS SPAN 1-3
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

REVISIONS	
NAME	DATE



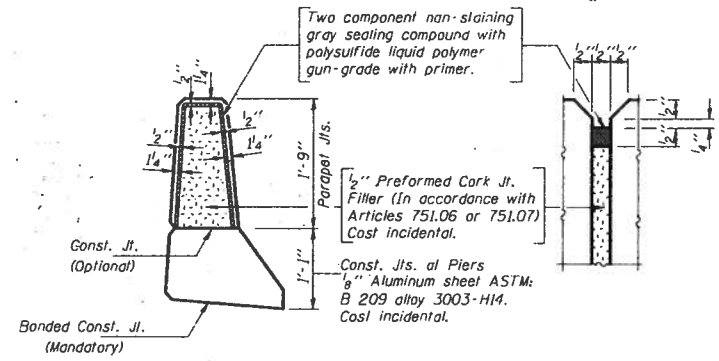
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

*SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR

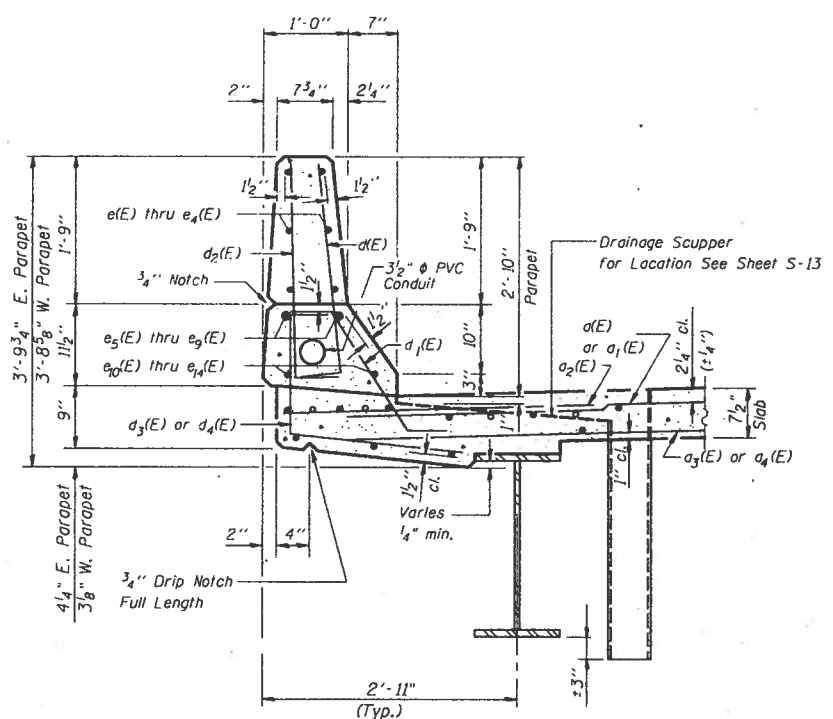


***Place $a_8(E)$ & $a_{22}(E)$ bars in back of anchor bolts as shown if required to maintain 1" cl. (+0- $\frac{1}{8}$ "). Anchor bolts should be tied to $a(E)$ & $a_1(E)$ bars.

SECTION B-B

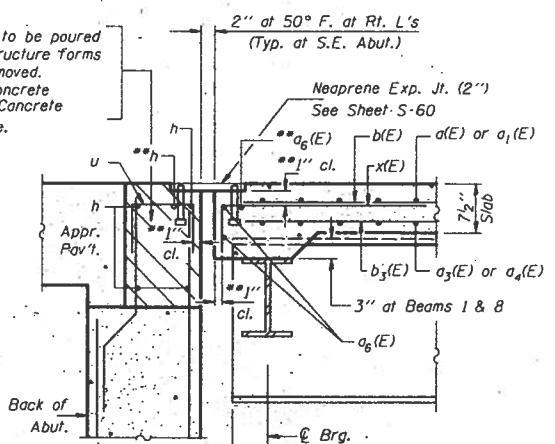


PARAPET JOINT DETAILS



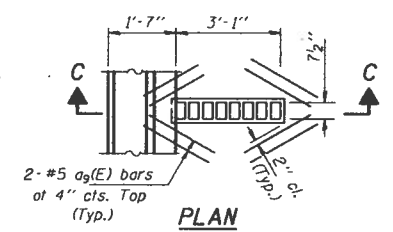
SECTION THRU PARAPET

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



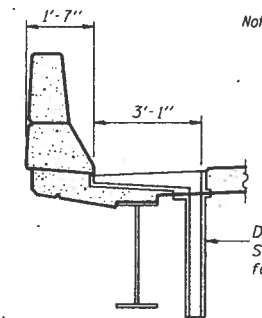
**Place $a_6(E)$ and h bars in back of anchor bolts as shown if required to maintain 1" cl. (+0- $\frac{1}{8}$ "). Anchor bolts should be tied to $a_6(E)$ and h bars.

SECTION A-A



PLAN

Note: Cut longitudinal reinforcement to clear drainage scuppers.



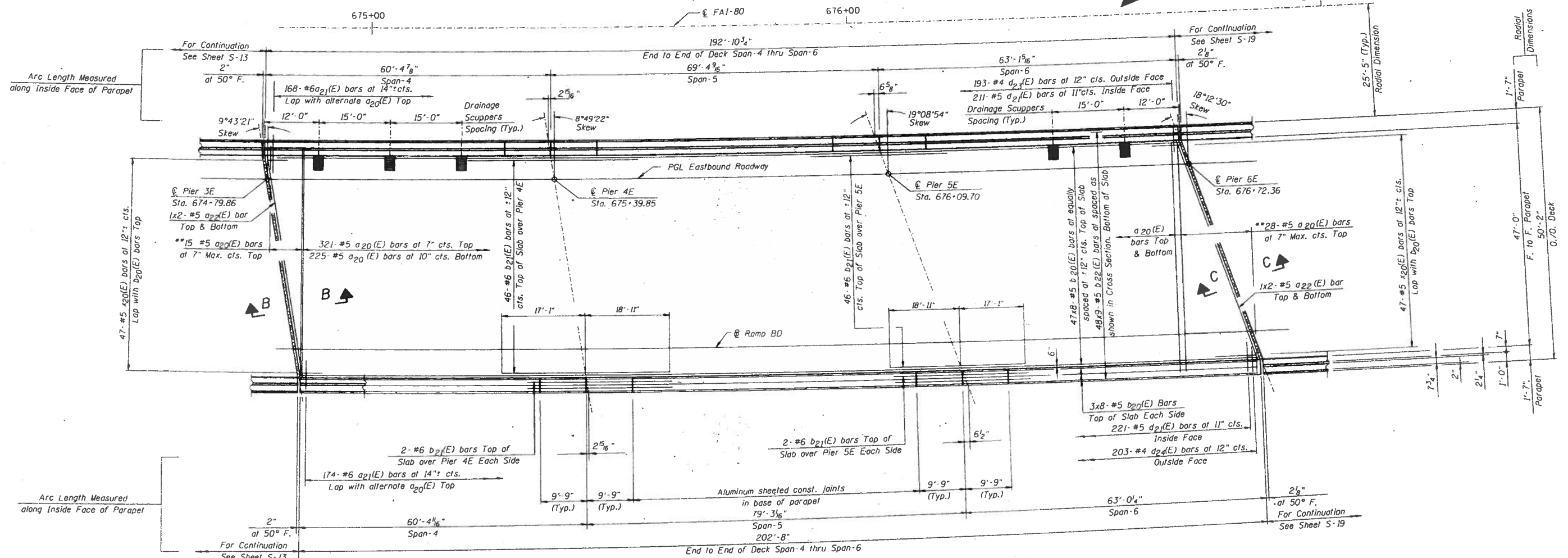
SECTION C-C

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SUPERSTRUCTURE DETAILS SPAN 1-3
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
	FED. ROAD DIST. NO.		
	ILL. DIST.		
	FED. AID PROJECT		

*SECTION 99 (5.5-1.5VB) R& 99-4-1VB-1-BR

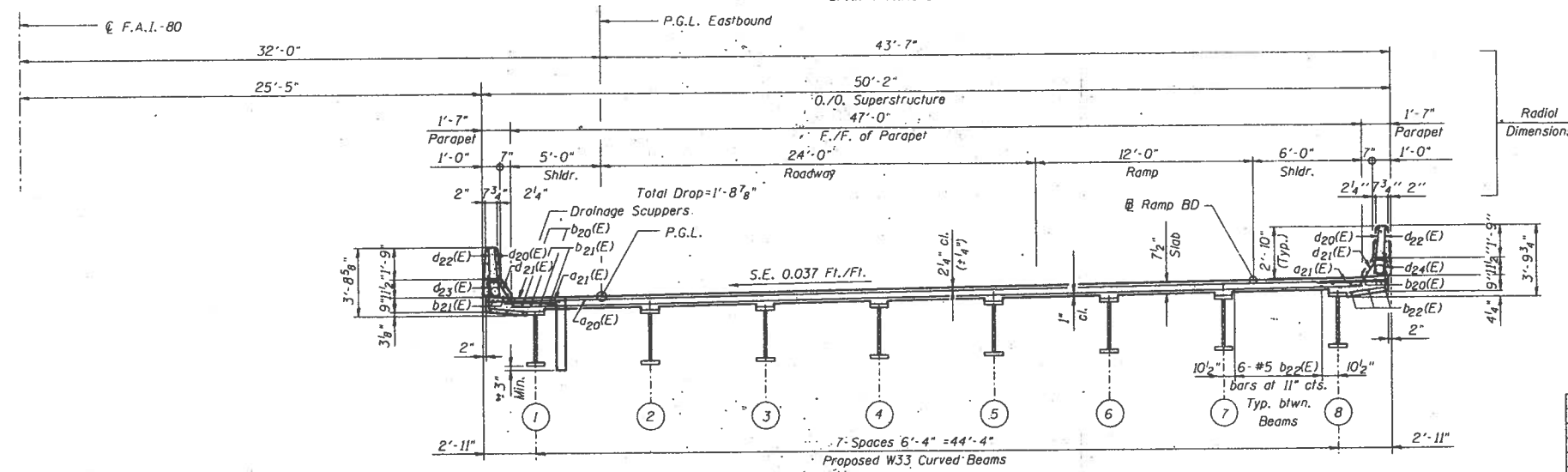


Arc Length Measured along Inside Face of Parapet

Arc Length Measured along Inside Face of Parapet

**Order a20(E) bars full length. Cut to fit skew and use remainder of bars in bottom slab.

PLAN
SPAN 4 THRU SPAN 6



CROSS SECTION
SPAN 4 THRU SPAN 6 (LOOKING UPSTATION)

NOTES:
See Sheet S-18 for Superstructure Details.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-17 for parapet elevation & Bill of Material.
The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers.
Minimum lap splice shall be 2'-2" for #5 bars.
For Drainage Scupper Details See Sheet S-18, S-58 and S-59.
For Section B-B & C-C See Sheet S-18.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
DECK PLAN & CROSS SECTION SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY DESIGNED BY: PWP
DRAWN BY: INC
CHECKED BY: LAS
SCALE: N.T.S.
DATE: JULY 1995

Clorba Group, Inc.
ENGINEERS
3507 NORTH CLAMBERLAND AVENUE • CHICAGO, ILLINOIS 60656 • (312) 775-0009

F.A. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL			
STA.		TO STA.		
FED. ROAD DIST. NO.		FED. AID PROJECT		

SECTION 99 (5.5-1.5VB) R& 99-4-1VB-1-BR

**SUPERSTRUCTURE
SPAN 4-6**

BILL OF MATERIAL

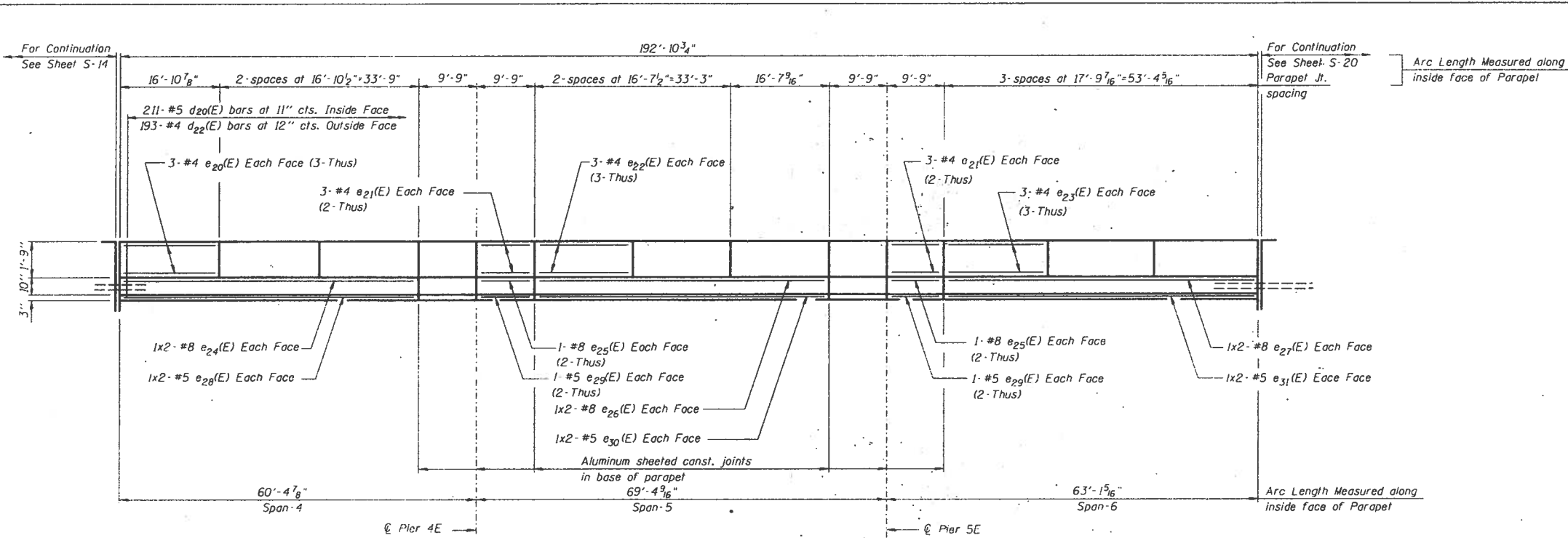
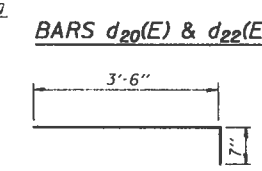
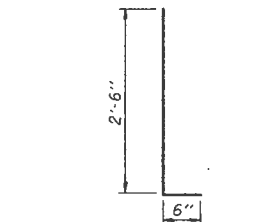
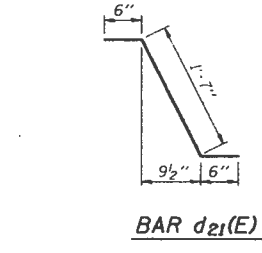
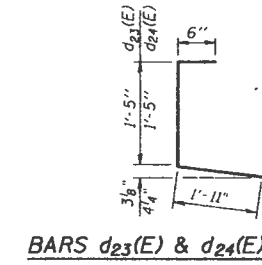
Bar	No.	Size	Length	Shape
d20(E)	589	#5	48'-11"	
d21(E)	342	#6	4'-0"	
d22(E)	8	#5	26'-4"	
d23(E)	40	#5	2'-0"	
b20(E)	424	#5	27'-3"	
b21(E)	100	#6	36'-0"	
b22(E)	432	#5	24'-5"	
d20(E)	432	#5	3'-0"	
d21(E)	432	#5	2'-7"	
d22(E)	396	#4	3'-0"	
d23(E)	193	#4	3'-10"	
d24(E)	203	#4	3'-10"	
e20(E)	36	#4	16'-7"	
e21(E)	48	#4	9'-6"	
e22(E)	18	#4	16'-4"	
e23(E)	36	#4	17'-6"	
e24(E)	8	#8	27'-6"	
e25(E)	16	#8	9'-6"	
e26(E)	4	#8	27'-1"	
e27(E)	8	#8	28'-10"	
e28(E)	8	#5	26'-4"	
e29(E)	16	#5	9'-6"	
e30(E)	4	#5	25'-11"	
e31(E)	8	#5	27'-8"	
e32(E)	18	#4	19'-8"	
e33(E)	4	#8	32'-0"	
e34(E)	4	#5	30'-10"	
x20(E)	94	#5	4'-1"	
Reinforcement Bars, Epoxy Coated	Lbs.	70240		
Concrete Superstructure	Cu. Yds.	275.1		
Bridge Deck Grooving	Sq. Yds.	982		
Protective Coat	Sq. Yds.	162		

Reinforcement bars designated (E) shall be epoxy coated.

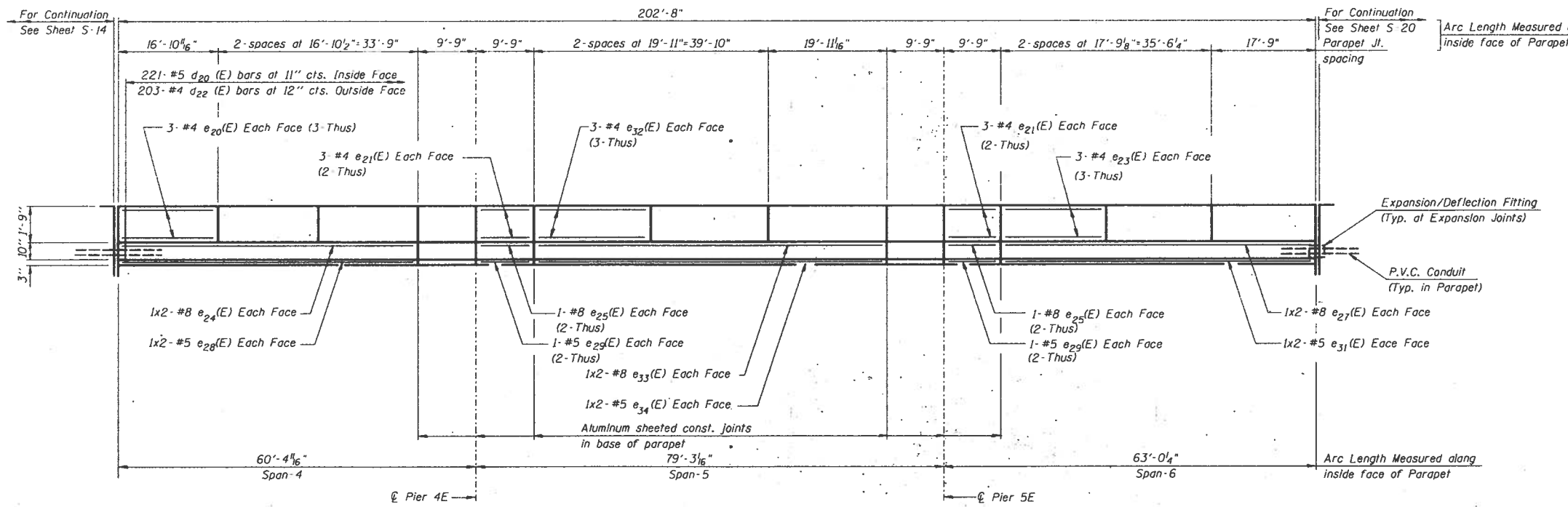
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.

**Quantity includes top & inside face of parapet only.



**INSIDE ELEVATION OF WEST PARAPET
SPAN-4 THRU SPAN-6**



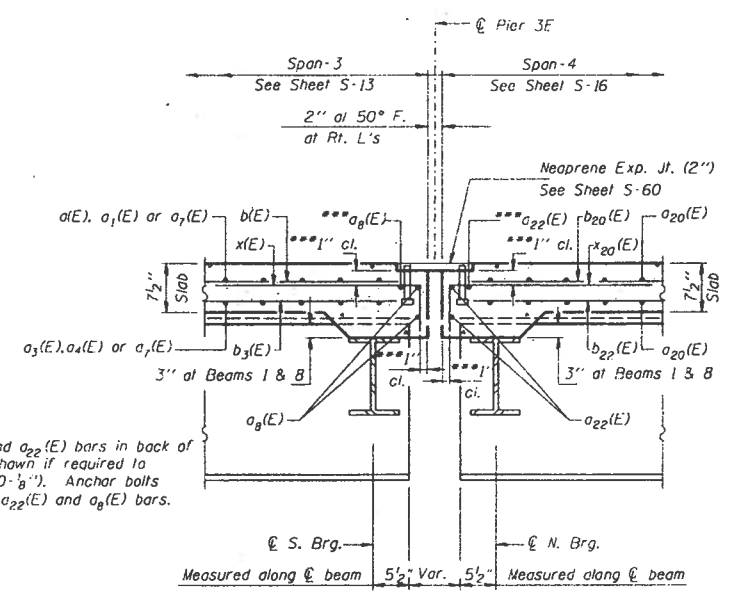
**INSIDE ELEVATION OF EAST PARAPET
SPAN-4 THRU SPAN-6**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PARAPET ELEVATION & DETAILS SPANS 4-6
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: PWP
DRAWN BY: IMG
CHECKED BY: LAS
SCALE: N.T.S.
DATE: JULY 1995

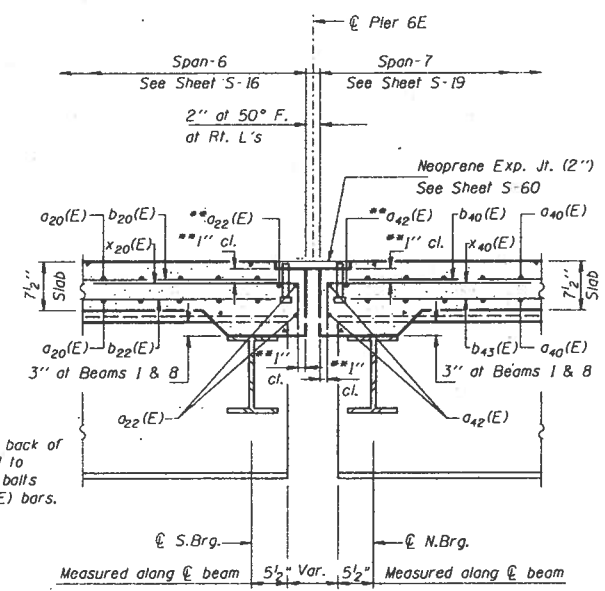


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.	ADDRESS	FED. AID PROJECT	
		SECTION 99 (S,5-1;SVB) R& 99-4-1VB-1-BR	



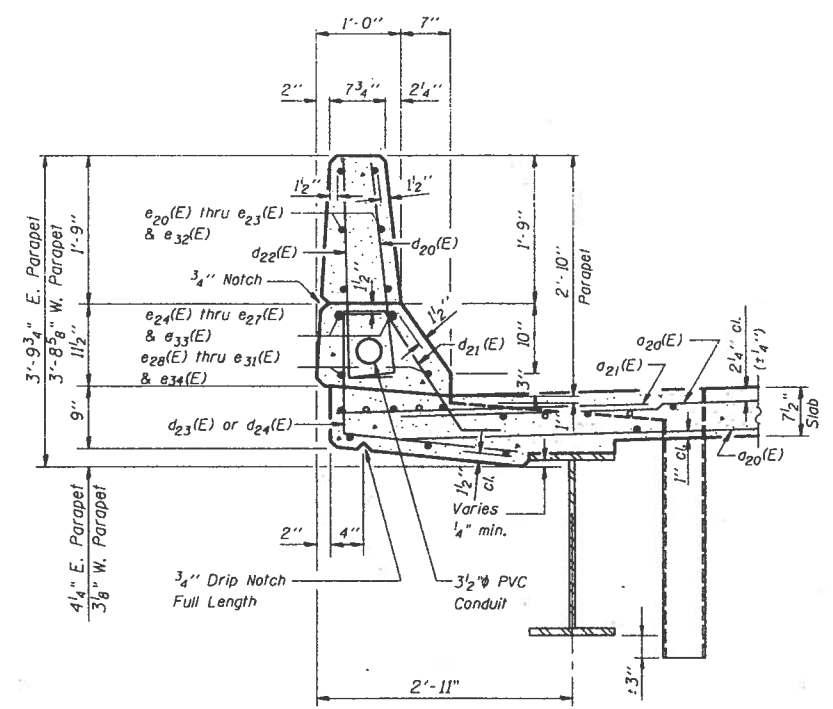
***Place $a_8(E)$ and $a_{22}(E)$ bars in back of anchor bolts as shown if required to maintain 1" cl. (+0 $\frac{1}{8}$ "). Anchor bolts should be tied to $a_{22}(E)$ and $a_8(E)$ bars.

SECTION B-B

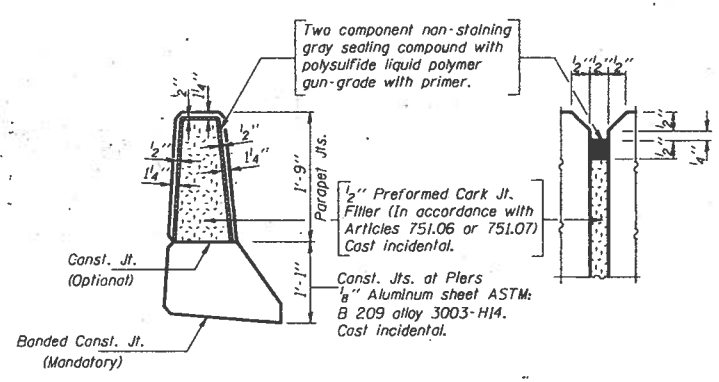


***Place $a_{22}(E)$ and $a_{42}(E)$ bars in back of anchor bolts as shown if required to maintain 1" cl. (+0 $\frac{1}{8}$ "). Anchor bolts should be tied to $a_{22}(E)$ and $a_{42}(E)$ bars.

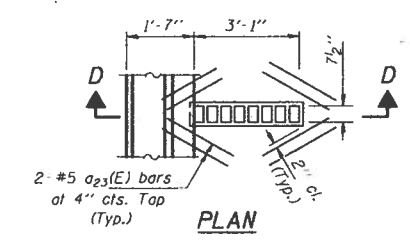
SECTION C-C



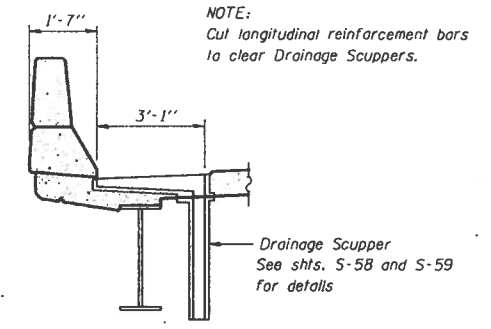
SECTION THRU PARAPET



PARAPET JOINT DETAILS



PLAN



SECTION D-D

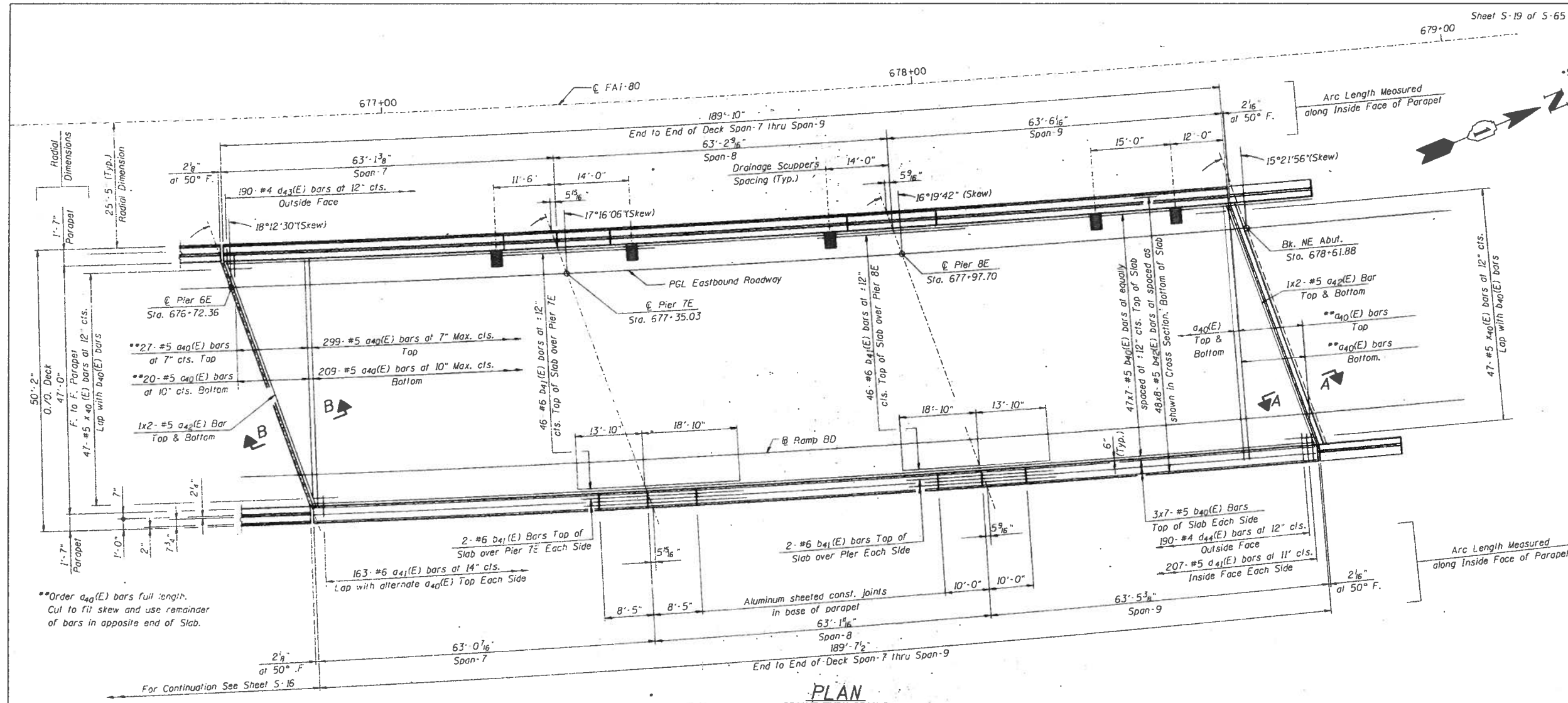
NOTE:
Cut longitudinal reinforcement bars to clear Drainage Scuppers.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SUPERSTRUCTURE DETAILS SPAN 4-6
 FAI-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: PWP
 DRAWN BY: IMG
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995

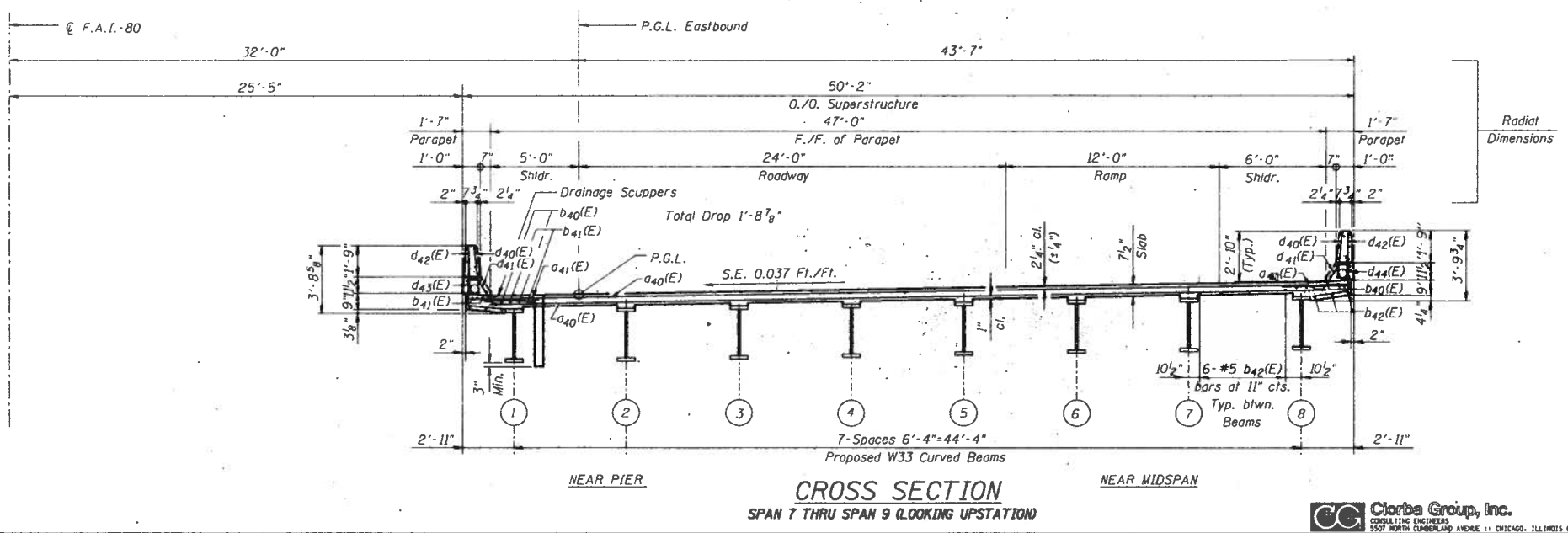
F.A. PRE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80		WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	BLINDS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR



**Order $a_{40}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end of Slab.

For Continuation See Sheet S-16



NOTES:
 See Sheet S-21 for Superstructure Details.
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 See Sheet S-20 for parapet reinforcement & Bill of Material.
 The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers.
 Minimum top splice shall be 2'-2" for #5 bars and 2'-7" for #6 bars.
 For Drainage Scupper Details See Sheet S-21, S-58 and S-59
 For Section A-A & B-B See Sheet S-21.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 DECK PLAN & CROSS SECTION SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995



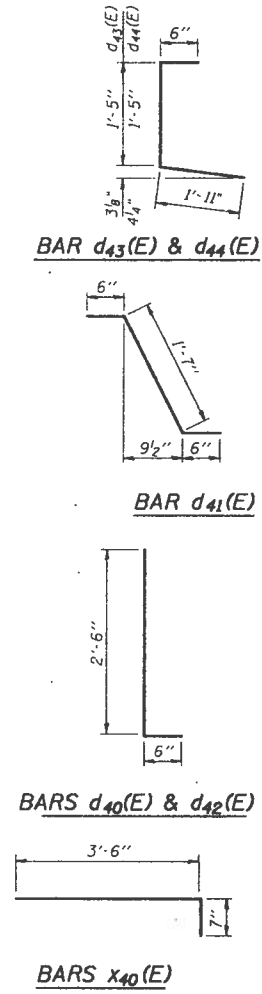
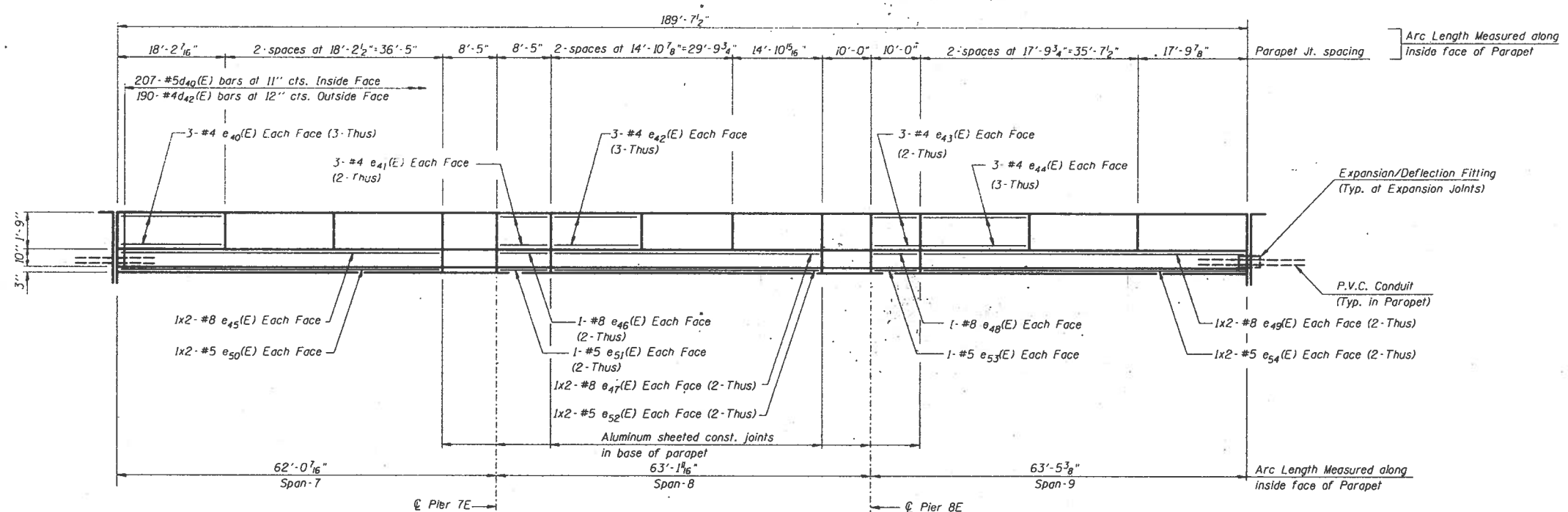
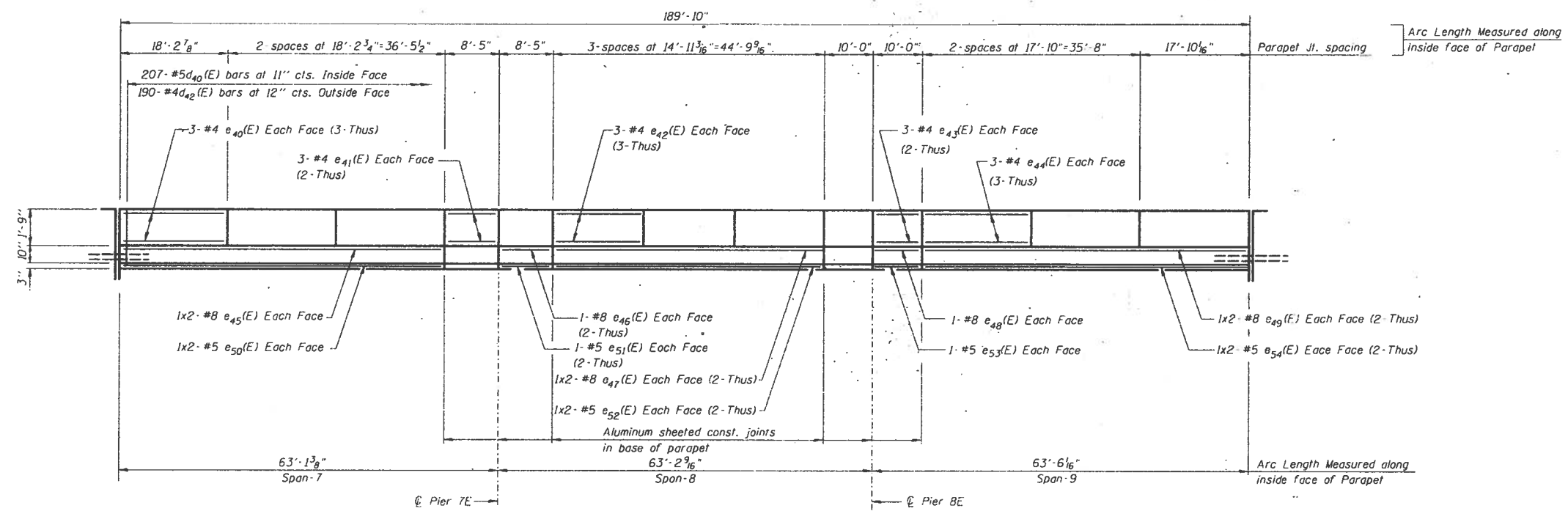
P.L. NO.	SECTION	COUNTY	SPR. SHEETS	SHEET NO.
80		WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	HAZARDS	FED. AID PROJECT		

*SECTION 99 (5.5-1.5VB) R& 99-4-1VB-1-BR

**SUPERSTRUCTURE
SPAN 7-9
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d40(E)	555	#5	48'-11"	
d41(E)	326	#6	4'-0"	
d42(E)	8	#5	26'-4"	
d43(E)	40	#5	2'-0"	
b40(E)	371	#5	29'-0"	
b41(E)	100	#6	32'-8"	
b42(E)	384	#5	25'-8"	
d40(E)	414	#5	3'-0"	
d41(E)	414	#5	2'-7"	
d42(E)	380	#4	3'-0"	
d43(E)	190	#4	3'-10"	
d44(E)	190	#4	3'-10"	
e40(E)	36	#4	17'-11"	
e41(E)	24	#4	8'-2"	
e42(E)	36	#4	14'-7"	
e43(E)	24	#4	9'-9"	
e44(E)	36	#4	17'-7"	
e45(E)	8	#8	29'-5"	
e46(E)	8	#8	8'-2"	
e47(E)	8	#8	24'-6"	
e48(E)	8	#8	9'-9"	
e49(E)	8	#8	29'-0"	
e50(E)	8	#5	28'-4"	
e51(E)	8	#5	8'-2"	
e52(E)	8	#5	23'-5"	
e53(E)	8	#5	9'-9"	
e54(E)	8	#5	27'-9"	
x40(E)	94	#5	4'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	65,990	
Concrete Superstructure		Cu. Yds.	264.9	
Bridge Deck Grooving		Sq. Yds.	942	
Neoprene Expansion Joint (2")		Foot	98	
Protective Coat		Sq. Yds.	155	

Reinforcement bars designated (E) shall be epoxy coated.
 Bars Indicated thus 1 x 3-#5 etc. Indicates 1 line of bars with 3 lengths per line.
 Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.
 **Quantity includes top & inside face of parapet only.



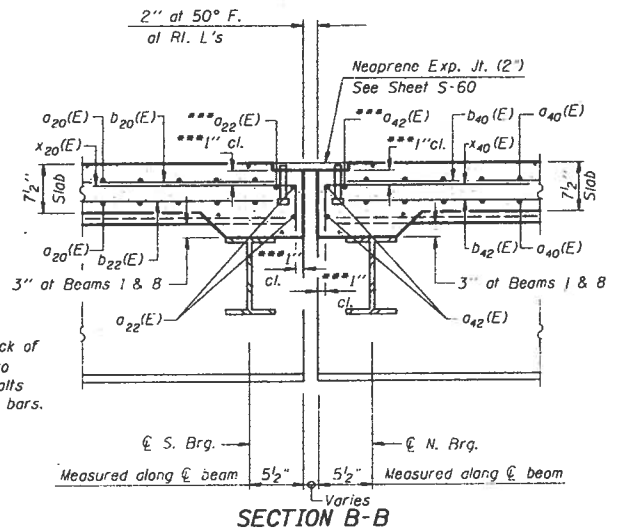
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PARAPET ELEVATION & DETAILS SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995



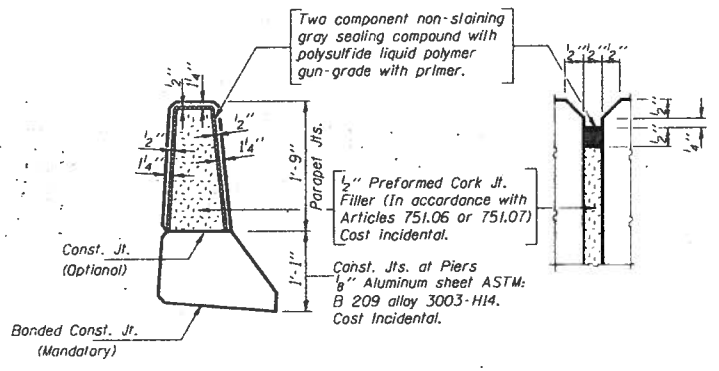
F. & A. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	•	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	BUILDING	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR

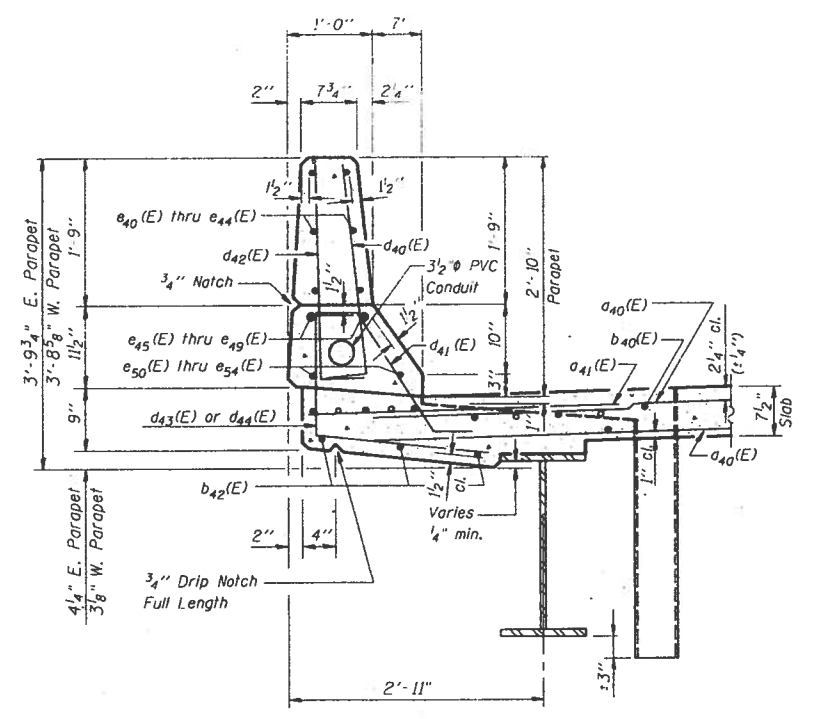


***Place $a_{22}(E)$ and $a_{42}(E)$ bars in back of anchor balls as shown if required to maintain 1" cl. ($\pm 0-\frac{1}{8}$ "). Anchor balls should be tied to $a_{22}(E)$ and $a_{42}(E)$ bars.

SECTION B-B

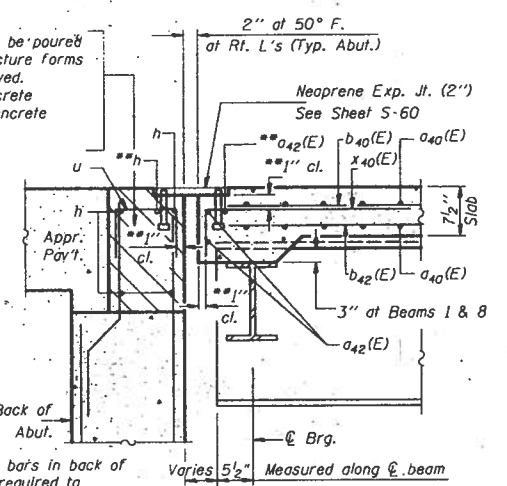


PARAPET JOINT DETAILS



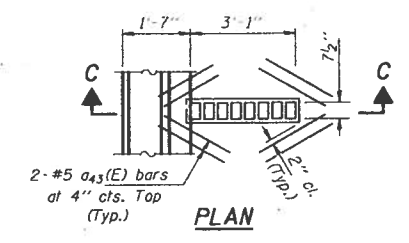
SECTION THRU PARAPET

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

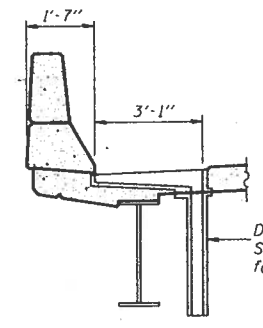


SECTION A-A

***Place $a_{42}(E)$ and h bars in back of anchor balls as shown if required to maintain 1" cl. ($\pm 0-\frac{1}{8}$ "). Anchor balls should be tied to $a_{42}(E)$ and h bars.



PLAN



SECTION C-C

Drainage Scupper See Sheets S-58 and S-59 for details.

NOTE: Cut longitudinal reinforcement to clear drainage scuppers.

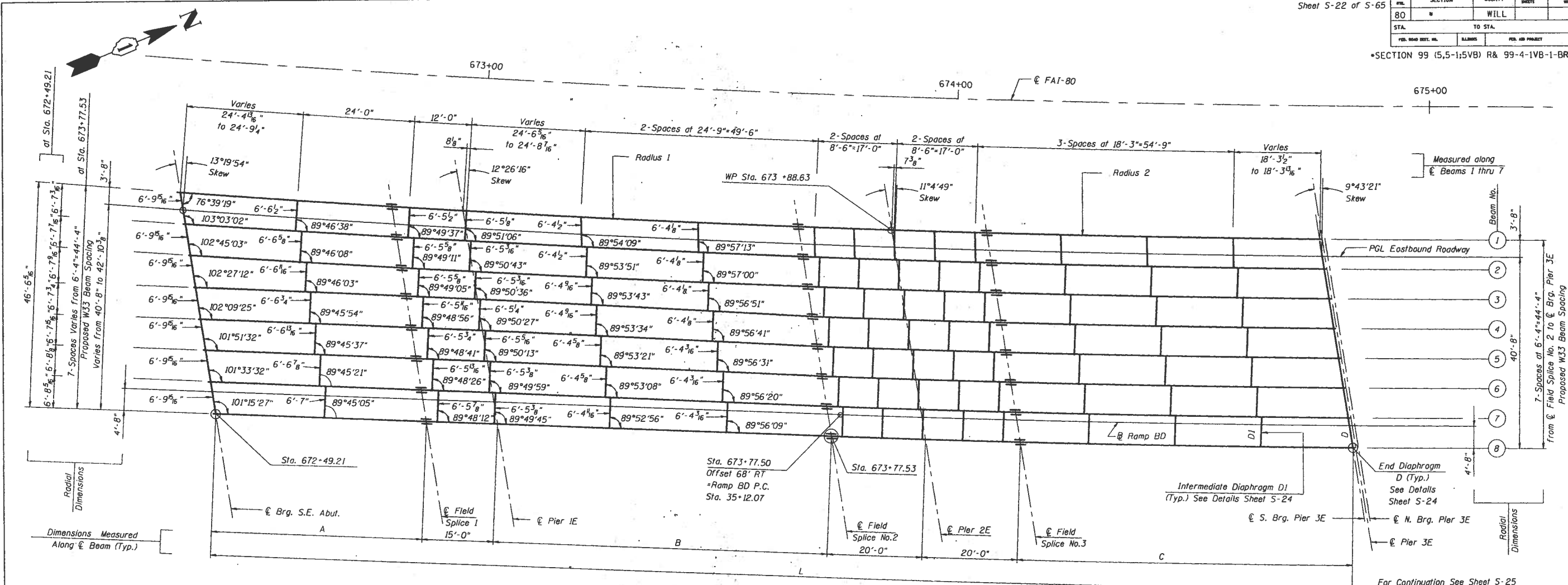
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SUPERSTRUCTURE DETAILS SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
PER. ROAD DIST. NO.	ALIGNED	PER. AD. PRODUCT	

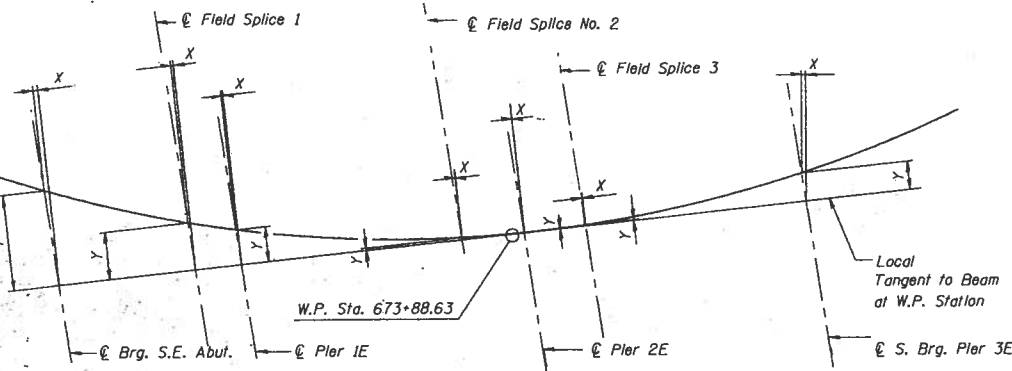
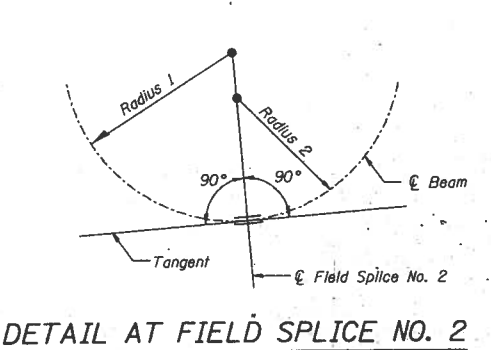
*SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR



FRAMING PLAN
SPAN 1 THRU SPAN 3

BEAM DIMENSIONS (in feet)

BEAM	A	B	C	L	RADIUS 1	RADIUS 2
1	45'-1 1/8"	71'-3 3/8"	70'-8 3/8"	242'-0 1/2"	3848.053	3848.053
2	45'-0 1/8"	71'-2 1/8"	70'-8 1/8"	241'-11 1/8"	4475.0	3854.387
3	44'-11 1/8"	71'-2 1/8"	70'-8 1/8"	241'-10 1/8"	5370.0	3860.720
4	44'-11 1/8"	71'-2 1/8"	70'-8 1/8"	241'-9 1/8"	6700.0	3867.053
5	44'-10 3/8"	71'-1 5/8"	70'-7 5/8"	241'-8 1/8"	8900.0	3873.387
6	44'-9 5/8"	71'-1 1/8"	70'-7 1/8"	241'-7 1/8"	13300.0	3879.72
7	44'-9 1/8"	71'-1 1/8"	70'-7 1/8"	241'-6 1/8"	26500.0	3886.053
8	44'-8 1/8"	71'-1 1/8"	70'-7 1/8"	241'-5 1/8"	Straight	3892.387



LAYOUT DIMENSIONS (in feet)

BEAM	@ Brg. S.E. Abut.		@ Field Splice #1		@ Brg. Pier IE		@ Field Splice #2		@ Brg. Pier 2E		@ Field Splice #3		@ S. Brg. Pier 3E	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	7"	2'-11 1/8"	3 7/8"	1'-5 5/8"	2 9/16"	1'-1"	1/8"	5/8"	0	0	1/8"	5/8"	2 1/2"	1'-0 1/8"
2	6 1/8"	2'-7 1/8"	3"	1'-3 3/8"	2 1/4"	11 1/2"	1/8"	9/16"	0	0	1/8"	1/2"	2 5/8"	1'-1 1/8"
3	5 1/4"	2'-2 1/8"	2 5/8"	1'-1 1/2"	1 5/8"	10"	1/8"	2"	0	0	1/8"	7/8"	2 1/8"	1'-1 1/8"
4	4 3/8"	1'-10 1/8"	2 1/4"	11 1/8"	1 3/8"	8 3/8"	1/8"	1 1/2"	0	0	1/8"	7/8"	2 1/8"	1'-1 1/8"
5	3 1/2"	1'-6"	1 3/8"	9 3/8"	1 1/8"	7 1/8"	1/8"	3/8"	0	1/8"	3/8"	1 1/8"	2 3/8"	1'-2 3/8"
6	2 5/8"	1'-1 5/8"	1 1/8"	7 3/8"	1 1/8"	5 3/8"	1/8"	3/8"	0	1/8"	3/8"	1 1/8"	2 1/8"	1'-2 1/8"
7	1 5/8"	9 3/8"	1"	5 1/4"	1 1/8"	4 1/8"	1/8"	4"	0	1/8"	3/8"	1 3/8"	2 1/8"	1'-2 1/8"
8	5/8"	4 3/4"	5/8"	3 3/8"	1/2"	2 1/8"	0	1/8"	0	1/8"	1/4"	1 1/4"	2 5/8"	1'-3 1/8"

LOCATION OF FIELD SPLICE NO. 2

BEAM	STATION	OFFSET
1	673+68.78	28.333
2	673+70.04	34.667
3	673+71.30	41.000
4	673+72.56	47.333
5	673+73.81	53.667
6	673+75.05	60.000
7	673+76.30	66.333
8	673+77.53	72.667

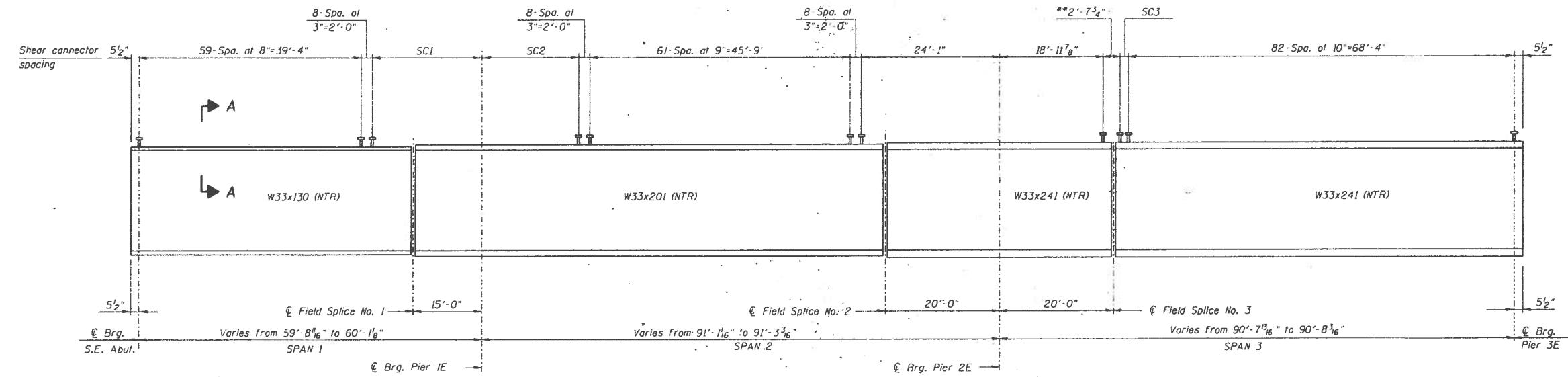
NOTES:
All intermediate diaphragms shall be placed at right angles to the beam with the smaller radius. Angles given at beam with larger radius are given to the tangent to the beam at the diaphragm. Diaphragm distances are given from centerline to centerline of beams.
For end and intermediate diaphragms details See Sheet S-24
For Beam Elevation See Sheet S-23
Radius 1 extends from the end of the beam at the SE Abutment to Field Splice 2. Radius 2 extends from Field Splice 2 to the end of the beam at the N.E. Abutment.
All dimensions are horizontal. End of beams shall be vertical.

REVISIONS	
NAME	DATE
IMC	8/29/1995

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
FRAMING PLAN SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE
SCALE: N.T.S.
DATE: JULY 1995



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	
SECTION 99 (5.5-1.5VB) R & 99-4-1VB-1-BR			



INTERIOR BEAM MOMENT TABLE

	0.4 Sp. 1	Pier 1E	0.5 Sp. 2	Pier 2E	0.6 Sp. 3
Is (in ⁴)	6710	11500	11500	14200	14200
Ic (in ⁴)	19102		27511		31948
Ic (3n) (in ⁴)	13793		19627		22785
Ss (in ³)	406	683	683	831	831
Sc (in ³)	622		962		1146
Sc (3n) (in ³)	558		859		1020
Sbi (in ³)	18.9	47.5	47.5	58.7	58.7
Q (K/ft.)	.812	1.128	.877	1.164	.915
M _Q (K)	171	606	272	1023	561
s _Q (K/ft.)	0.256		0.251		0.249
M _{sQ} (K)	67		99		164
M _t (K)	409	318	585	412	696
M (Imp) (K)	111	79	135	96	162
S ₃ (M _t + I) (K)	867	662	1200	847	1430
M _a (K)	1428	1648	2042	2431	2802
M _{b1} (K)	7	8	10	1	7
f _{sQ} (non-comp) (k.s.i.)	5.1	10.6	4.8	14.8	8.1
f _{sQ} (comp) (k.s.i.)	1.3		1.4		1.9
f _s ⁵ (M _a + M[Imp]) (k.s.i.)	16.7	11.6	15.0	12.2	15.0
f _w (k.s.i.)	4.4	2.0	2.4	0.3	1.5
f _s + f _w (Overload) (k.s.i.)	26.5	23.7	23	27.2	26.1
f _s (Total) (k.s.i.)	30.0	28.9	27.6	35.1	32.5
f _s (Total) + f _w (k.s.i.)					
VR (K)	48.7		41.5		49.4
F _b (k.s.i.)	36.0	31.2	36.0	35.4	36.0

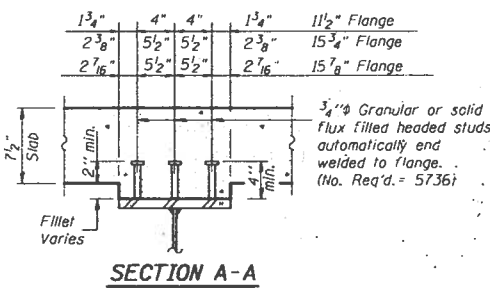
INTERIOR BEAM REACTION TABLE

	S.E. Abut.	Pier 1E	Pier 2E	Pier 3E
R _P (K)	22.3	90.5	120.8	41.5
R _L (K)	34.0	48.8	54.5	37.2
Imp. (K)	9.2	12.2	12.6	8.6
R (Total) (K)	65.5	151.6	187.9	87.3

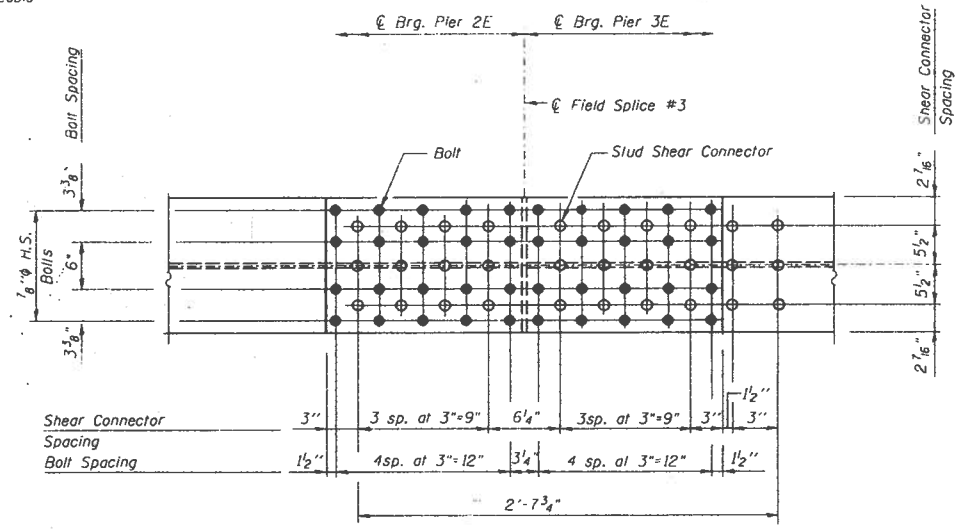
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 Ic (n) and Sc (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 Ic (3n) and Sc (3n) are the moment of inertia and section modulus of the composite section used in computing the stresses due to superimposed dead load.
 VR is the maximum Live Load + Impact shear range in span.
 M_a (Applied Moment) = 1.3(M_Q + M_{sQ} + S₃(M_t + I)).
 f_s + f_w (Overload) is the sum of the stresses due to M_Q + M_{sQ} + S₃(M_t + I) + M_{b1} / 1.3.
 f_s (Total) is the sum of the stresses due to 1.3(M_Q + M_{sQ} + S₃(M_t + I)).
 Sbi is the section modulus for one flange plate for lateral flange bending.
 M_{b1} is the lateral bending moment for the flange plate (factored).
 f_w is the calculated normal stress at the edge of the flange due to lateral bending (factored).
 F_b is the maximum allowable stress F_{bu} or F_{by} computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.

BEAM ELEVATION

*NTR denotes beams to which notch toughness requirements are applicable
 **See shear connector spacing at Field Splice #3 Detail.



3/4" Granular or solid flux filled headed studs automatically end welded to flange.
 (No. Req'd. = 5736)



SHEAR CONNECTOR SPACING AT FIELD SPLICE #3 DETAIL

BILL OF MATERIAL
SPAN 1 THRU 3

Item	Unit	Quantity
Stud Shear Connectors	Each	5736

SHEAR CONNECTOR SPACING

BEAM	SC1	SC2	SC3
1	18'-9 9/16"	17'-5 1/16"	8 9/16"
2	18'-8 7/16"	17'-4 9/16"	8 1/2"
3	18'-7 3/16"	17'-4 9/16"	8 7/16"
4	18'-7 1/16"	17'-4 1/4"	8 3/8"
5	18'-6 9/16"	17'-3 9/16"	8 5/16"
6	18'-5 15/16"	17'-3 1/16"	8 1/16"
7	18'-5 1/16"	17'-3 3/8"	8 1/4"
8	18'-4 1/16"	17'-3 1/16"	8 1/16"

TOP OF BEAM ELEVATIONS

BEAM NO.	S.E. ABUTMENT	SPLICE 1	PIER 1	SPLICE 2	PIER 2	SPLICE 3	PIER 3
1	646.243	646.370	646.450	646.711	646.805	646.879	647.055
2	646.497	646.615	646.693	646.949	647.043	647.117	647.292
3	646.751	646.861	646.938	647.188	647.281	647.354	647.528
4	646.004	647.106	647.182	647.426	647.519	647.592	647.764
5	647.258	647.352	647.427	647.664	647.757	647.829	648.000
6	647.511	647.597	647.670	647.902	647.995	648.067	648.237
7	647.764	647.843	647.915	648.141	648.233	648.304	648.473
8	648.018	648.088	648.159	648.379	648.471	648.542	648.709

***For fabrication only
 ■ Elevation at top of W33x130
 ■ Elevation at top of W33x201

NOTES:
 For Field Splice & Diaphragm Details See Sheet S-24

REVISIONS

NAME	DATE

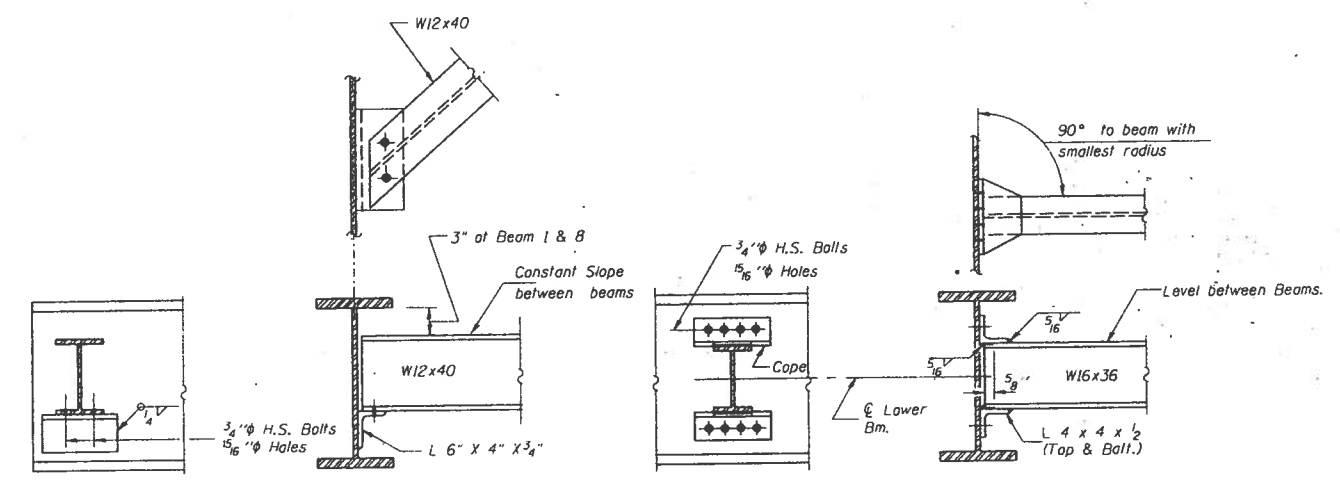
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 BEAM ELEVATION & DETAILS SPAN 1-3
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

SCALE: N.T.S.
 DATE: JULY 1995

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE

F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BO		WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ALDERS	FED. AID PROJECT		

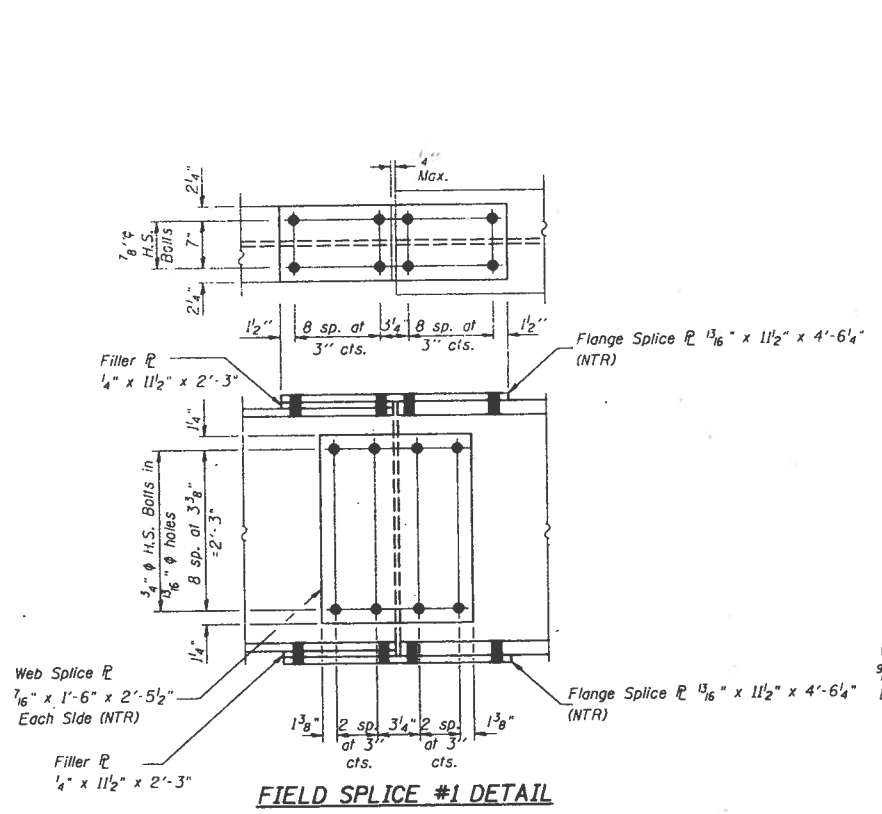
*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



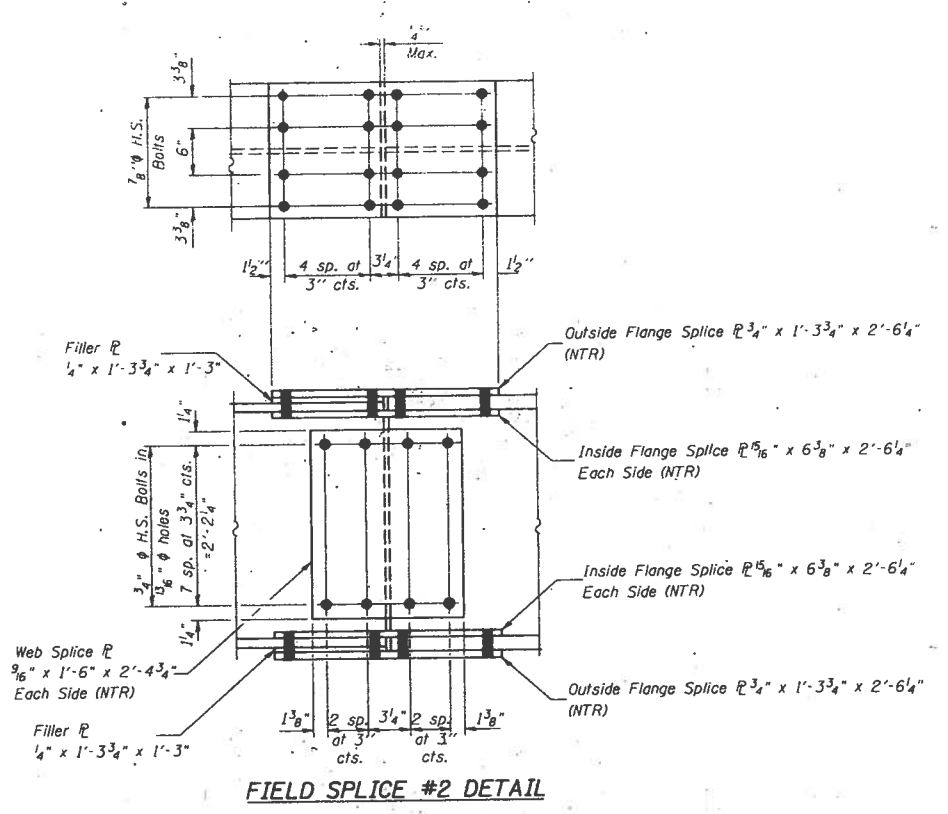
END DIAPHRAGM D
14 Required

INTERMEDIATE DIAPHRAGM D1
91 Required

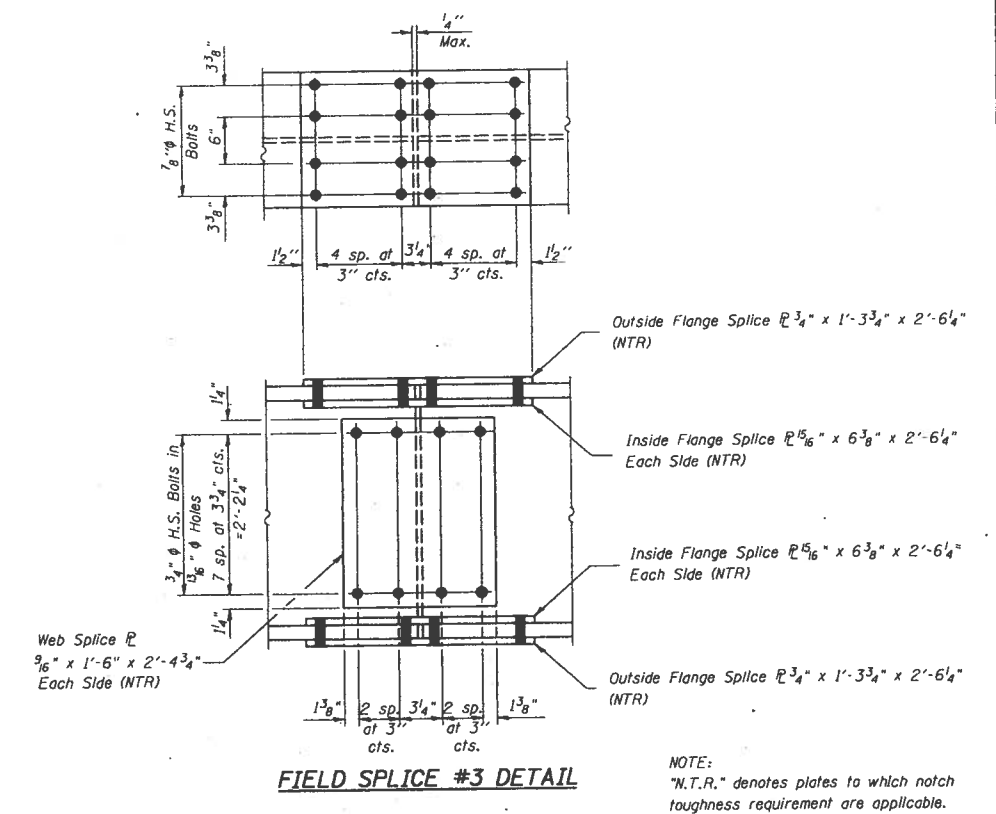
Note: Two hardened washers shall be required over all oversize holes for diaphragms.



FIELD SPLICE #1 DETAIL



FIELD SPLICE #2 DETAIL



FIELD SPLICE #3 DETAIL

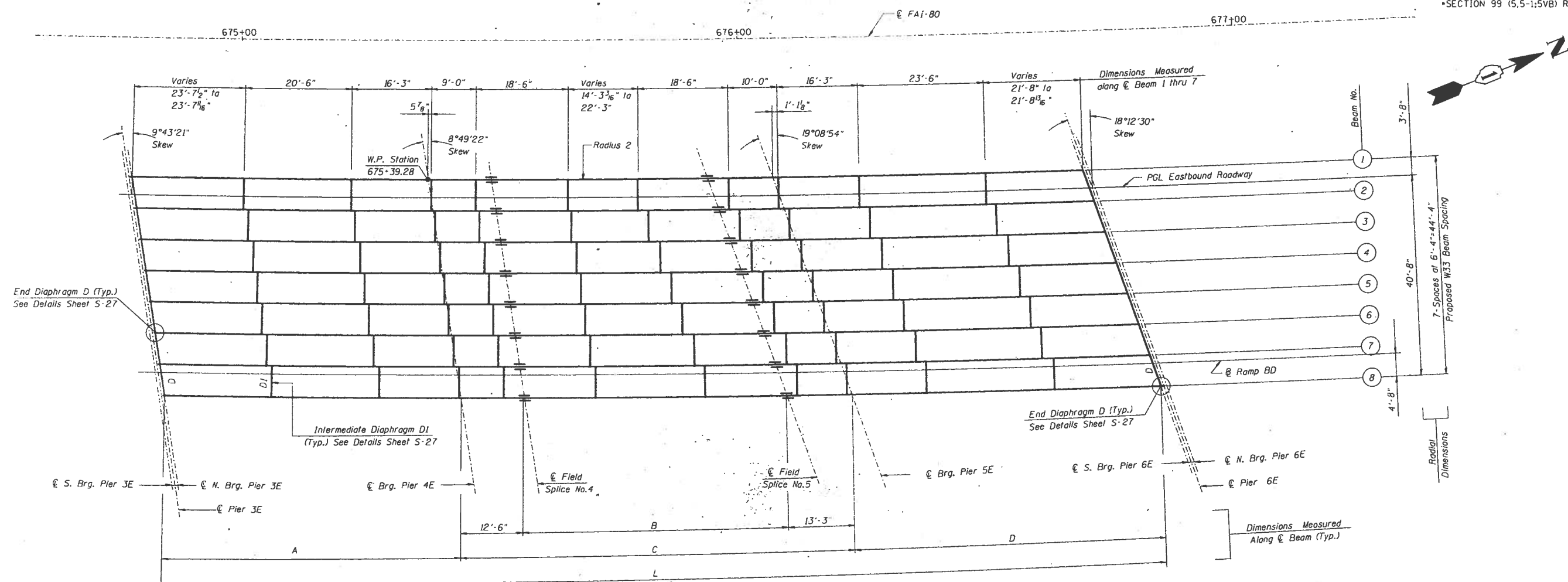
NOTE: "N.T.R." denotes plates to which notch toughness requirement are applicable.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
STEEL DIAPHRAGM & DETAILS SPAN 1-3
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE
SCALE: N.T.S.
DATE: JULY 1995

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

*SECTION 99 (5,5-1:5VB) R& 99-4-1VB-1-BR



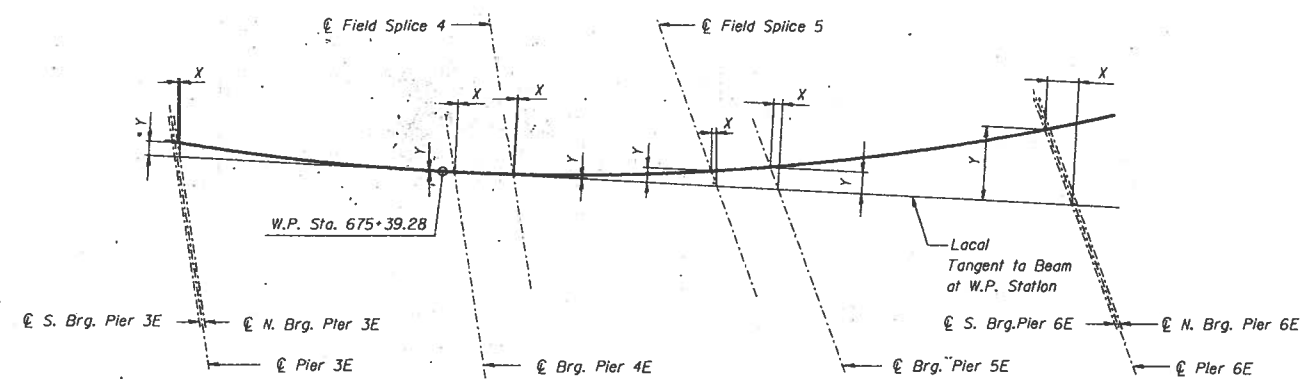
PLAN
SPAN 4 THRU SPAN 6

BEAM DIMENSIONS (In feet)

BEAM	A	B	C	D	L	RADIUS 2
1	59'-10 ¹ / ₁₆ "	43'-10 ⁵ / ₁₆ "	69'-7 ⁵ / ₁₆ "	62'-6 ⁵ / ₁₆ "	192'-1 ¹ / ₁₆ "	3848.053
2	59'-10 ³ / ₁₆ "	45'-2 ⁵ / ₁₆ "	70'-11 ⁵ / ₁₆ "	62'-6 ¹ / ₁₆ "	193'-5 ¹ / ₂ "	3854.387
3	59'-10 ³ / ₁₆ "	46'-6 ¹ / ₁₆ "	72'-3 ¹ / ₈ "	62'-6 ¹ / ₁₆ "	194'-9 ⁵ / ₁₆ "	3860.720
4	59'-10 ¹ / ₁₆ "	47'-10 ¹ / ₁₆ "	73'-7 ¹ / ₁₆ "	62'-6 ³ / ₁₆ "	196'-1 ¹ / ₁₆ "	3867.053
5	59'-10 ¹ / ₁₆ "	49'-2 ¹ / ₁₆ "	74'-11 ¹ / ₁₆ "	62'-6 ³ / ₁₆ "	197'-4 ¹ / ₁₆ "	3873.387
6	59'-10 ³ / ₁₆ "	50'-6 ¹ / ₁₆ "	76'-3 ¹ / ₈ "	62'-6 ¹ / ₁₆ "	198'-8 ¹ / ₁₆ "	3879.720
7	59'-10 ⁵ / ₁₆ "	51'-10 ¹ / ₁₆ "	77'-7 ¹ / ₁₆ "	62'-6 ¹ / ₁₆ "	200'-0 ¹ / ₂ "	3886.053
8	59'-10 ¹ / ₁₆ "	53'-2 ¹ / ₁₆ "	78'-11 ¹ / ₁₆ "	62'-6"	201'-4 ¹ / ₁₆ "	3892.387

LAYOUT DIMENSIONS (In feet)

BEAM	€ N. Brg. Pier 3E		€ Brg. Pier 4E		€ Splice 4		€ Splice 5		€ Brg. Pier 5E		€ S. Brg. Pier 6E	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	7 ¹ / ₈ "	5 ⁵ / ₈ "	0	0	0	1 ¹ / ₁₆ "	4 ⁵ / ₁₆ "	2 ³ / ₁₆ "	7 ⁹ / ₁₆ "	10"	2'-3 ¹ / ₄ "	
2	4 ¹ / ₁₆ "	5 ³ / ₈ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	1 ⁵ / ₁₆ "	5 ³ / ₁₆ "	2 ⁵ / ₁₆ "	8 ¹ / ₁₆ "	10 ³ / ₁₆ "	2'-4 ³ / ₁₆ "
3	4 ¹ / ₁₆ "	5 ³ / ₁₆ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	2 ¹ / ₁₆ "	5 ¹ / ₁₆ "	3 ¹ / ₁₆ "	8 ¹ / ₁₆ "	10 ¹ / ₁₆ "	2'-5 ¹ / ₁₆ "
4	4 ¹ / ₁₆ "	5"	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	2 ¹ / ₁₆ "	6 ¹ / ₁₆ "	3 ¹ / ₁₆ "	9 ¹ / ₁₆ "	11 ¹ / ₁₆ "	2'-6 ¹ / ₁₆ "
5	4 ¹ / ₁₆ "	4 ¹ / ₁₆ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	2 ¹ / ₁₆ "	6 ¹ / ₁₆ "	3 ¹ / ₁₆ "	9 ¹ / ₁₆ "	11 ¹ / ₁₆ "	2'-7"
6	4 ¹ / ₁₆ "	4 ¹ / ₁₆ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	2 ¹ / ₁₆ "	7 ¹ / ₁₆ "	3 ¹ / ₁₆ "	10 ³ / ₁₆ "	11 ¹ / ₁₆ "	2'-7 ⁵ / ₁₆ "
7	4 ¹ / ₁₆ "	4 ¹ / ₁₆ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	2 ¹ / ₁₆ "	7 ¹ / ₁₆ "	3 ¹ / ₁₆ "	10 ³ / ₁₆ "	11 ¹ / ₁₆ "	2'-7 ⁵ / ₁₆ "
8	4 ¹ / ₁₆ "	4 ¹ / ₁₆ "	0	0	1 ¹ / ₁₆ "	5 ¹ / ₁₆ "	3"	8 ¹ / ₁₆ "	4 ¹ / ₁₆ "	11 ¹ / ₁₆ "	1'-0 ¹ / ₁₆ "	2'-9 ⁵ / ₁₆ "



BEAM LAYOUT DIAGRAM

NOTES:
 All intermediate diaphragms to be normal to center of beams.
 For end and intermediate diaphragms details See Sheet S-27.
 For Beam Elevation See Sheet S-26.
 For Beams Details See Sheet S-26.
 All dimensions are horizontal.
 Ends of beams shall be vertical.

REVISIONS	
NAME	DATE

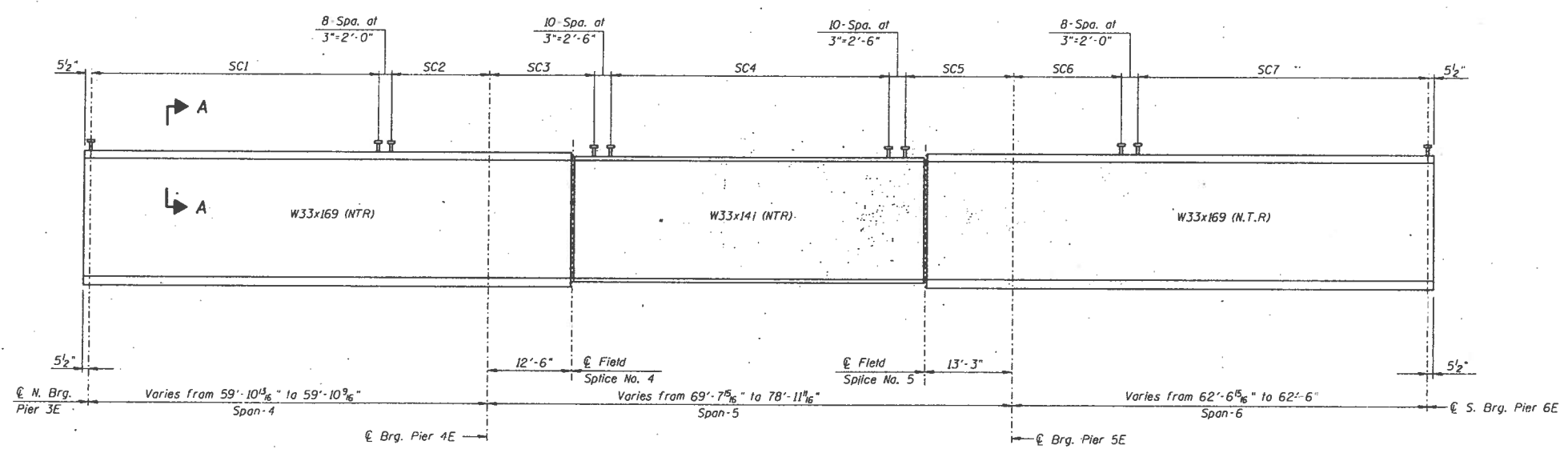
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 FRAMING PLAN SPAN 4-6
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

SCALE: N.T.S.
 DATE: JULY 1995
 DESIGNED BY: PWP
 DRAWN BY: IMG
 CHECKED BY: LAS

Clorba Group, Inc.
 CONSULTING ENGINEERS
 2527 NORTH CLARK ROAD AVENUE 11 CHICAGO, ILLINOIS 60656 11 (312) 775-4009

F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. HIGH. DIST. NO.	BRIDGE	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



	0.4 Sp. 4	Pier No. 4E	0.5 Sp. 5	Pier No. 5E	0.6 Sp. 6
Is (in ⁴)	9290	9290	7450	9290	9290
Ic (n) (in ⁴)	23854		20345		23854
Ic (3n) (in ⁴)	16988		14576		16988
Ss (in ³)	549	549	447	549	549
Sc (n) (in ³)	805		674		805
Sc (3n) (in ³)	717		603		717
Spl (in ³)	26.9	26.9	21.3	26.9	26.9
Q (K/ft.)	0.820	1.069	0.786	1.069	0.820
M _Q (K)	192	514	202	536	214
s _{EQ} (K/ft.)	0.249		0.249		0.249
M _{sEQ} (K)	64		83		71
M _L (K)	400	263	458	268	422
M (Imp) (K)	108	68	119	70	114
S ₂ (M _L +I) (K)	847	552	962	563	893
M _a (K)	1434	1386	1621	1429	1531
M _{bi} (K)	6	3	6	3	6
f _{sEQ non-comp} (k.s.i.)	4.2	11.2	5.4	11.7	4.7
f _{sEQ (comp)} (k.s.i.)	1.1		1.7		1.2
f _{sEQ (M_L+I) (k.s.i.)}	12.6	12.1	17.1	12.3	13.3
f _w (k.s.i.)	2.7	1.3	3.4	1.3	2.7
f _{s+f_w (Overload)} (k.s.i.)	20.0	24.3	26.8	25.0	21.3
f _{s (Total)} (k.s.i.)	23.3	30.3	31.9	31.2	25.0
f _{s (Total)+f_w (k.s.i.)}					
VR (K)	46.0		38.9		46.4
F _b (k.s.i.)	36.0	32.1	36.0	32.1	36.0

BEAM ELEVATION
 "N.T.R." denotes beams to which notch toughness requirements are applicable.

****TOP OF BEAM ELEVATION**

BEAM	PIER 3E	PIER 4E	***SPlice 4	***SPlice 5	PIER 5E	PIER 6E
1	647.057	647.079	647.084	647.109	647.118	647.162
2	647.293	647.314	647.319	647.344	647.353	647.395
3	647.530	647.530	647.555	647.579	647.587	647.627
4	647.766	647.786	647.790	647.813	647.821	647.860
5	648.002	648.025	648.030	648.055	648.061	648.093
6	648.238	648.260	648.265	648.290	648.296	648.326
7	648.474	648.495	648.500	648.524	648.530	648.558
8	648.710	648.730	648.735	648.759	648.764	648.791

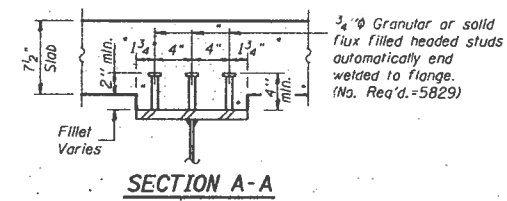
**For Fabrication only
 ***Elevations shown at top of W33x169

	Pier No. 3E	Pier No. 4E	Pier No. 5E	Pier No. 6E
RR (K)	24.8	81.6	83.6	26.0
R _t (K)	32.5	44.2	44.6	33.2
Imp. (K)	8.8	11.5	11.6	8.6
R (Total) (K)	66.1	137.3	139.8	67.8

BILL OF MATERIAL
SPAN 4 THRU 6

ITEM	UNIT	QUANTITY
Stud Shear Connectors	Each	5829

Is and Ss are the moment of inertia and section modulus of the steel section used in computing Is (Total & Overload).
 Ic (n) and Sc (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 Ic (3n) and Sc (3n) are the moment of inertia and section modulus of the composite section used in computing the stresses due to superimposed dead load.
 VR is the maximum Live Load + Impact shear range in span.
 M_a (Applied Moment) = 1.3[M_Q + M_{sEQ} + S₂(M_L + I)].
 f_{s+f_w (Overload)} is the sum of the stresses due to M_Q + M_{sEQ} + S₂(M_L + I) + M_{bi}/1.3.
 f_{s (Total)} is the sum of the stresses due to 1.3[M_Q + M_{sEQ} + S₂(M_L + I)].
 S_{bi} is the section modulus for one flange plate for lateral flange bending.
 M_{bi} is the lateral bending moment for flange plate (factored).
 f_w is the calculated normal stress at the edge of flange due to lateral bending (factored).
 F_b is the maximum allowable stress F_{bu} or F_{by} computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.



SHEAR CONNECTOR SPACING

BEAM	SC1	SC2	SC3	SC4	SC5	SC6	SC7
1	79-Spa. at 7'-46'-1"	11'-9 1/8"	15'-3 1/2"	50-Spa. at 8'-33'-4"	16'-0 1/8"	12'-6 5/8"	72-Spa. at 8'-48'-0"
2	78-Spa. at 7'-45'-6"	12'-4 3/8"	15'-3 9/16"	52-Spa. at 8'-34'-8"	16'-0 3/8"	12'-6 5/8"	72-Spa. at 8'-48'-0"
3	78-Spa. at 7'-45'-6"	12'-4 3/8"	15'-3 3/4"	54-Spa. at 8'-36'-0"	16'-0 1/8"	13'-2 1/8"	71-Spa. at 8'-47'-4"
4	77-Spa. at 7'-44'-11"	12'-11 1/8"	15'-3 3/4"	56-Spa. at 8'-37'-4"	16'-0 1/8"	13'-2 9/16"	71-Spa. at 8'-47'-4"
5	76-Spa. at 7'-44'-4"	13'-6 1/8"	15'-3 1/8"	58-Spa. at 8'-38'-8"	16'-0 1/8"	13'-10 1/8"	70-Spa. at 8'-46'-8"
6	76-Spa. at 7'-44'-4"	13'-6 5/8"	15'-8 1/8"	59-Spa. at 8'-39'-4"	16'-3 3/4"	13'-10 1/4"	70-Spa. at 8'-46'-8"
7	75-Spa. at 7'-43'-9"	14'-1 5/8"	15'-8 1/4"	61-Spa. at 8'-40'-8"	16'-3 1/2"	14'-6 1/8"	69-Spa. at 8'-46'-0"
8	75-Spa. at 7'-43'-9"	14'-1 9/16"	15'-7 1/8"	63-Spa. at 8'-42'-0"	16'-4 1/4"	14'-6"	69-Spa. at 8'-46'-0"

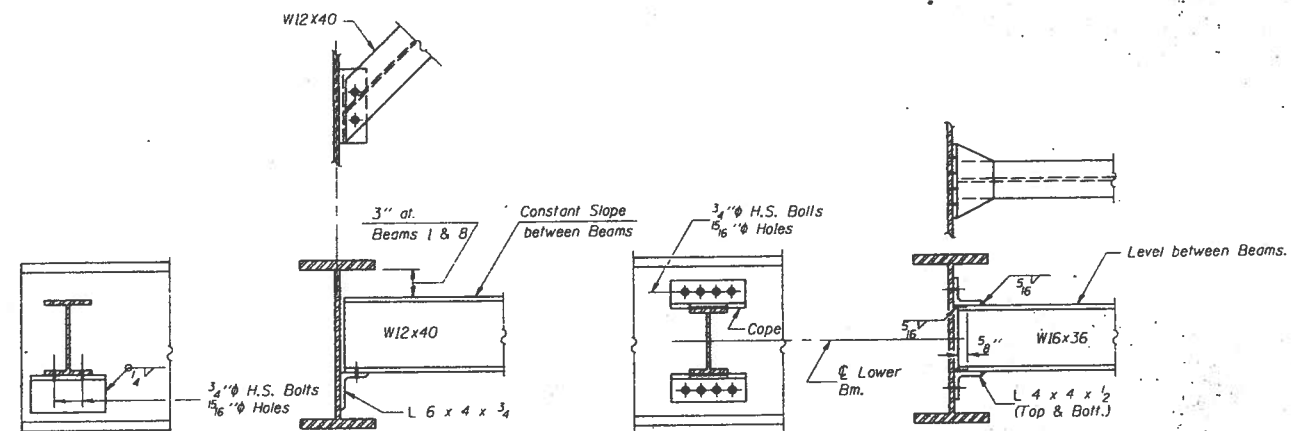
NOTES:
 For Field Splice & Diaphragm Details See Sheet S-27

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 BEAM ELEVATION & DETAILS SPAN 4-6
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: PWP
 DRAWN BY: IMG
 CHECKED BY: LAS

P.C.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



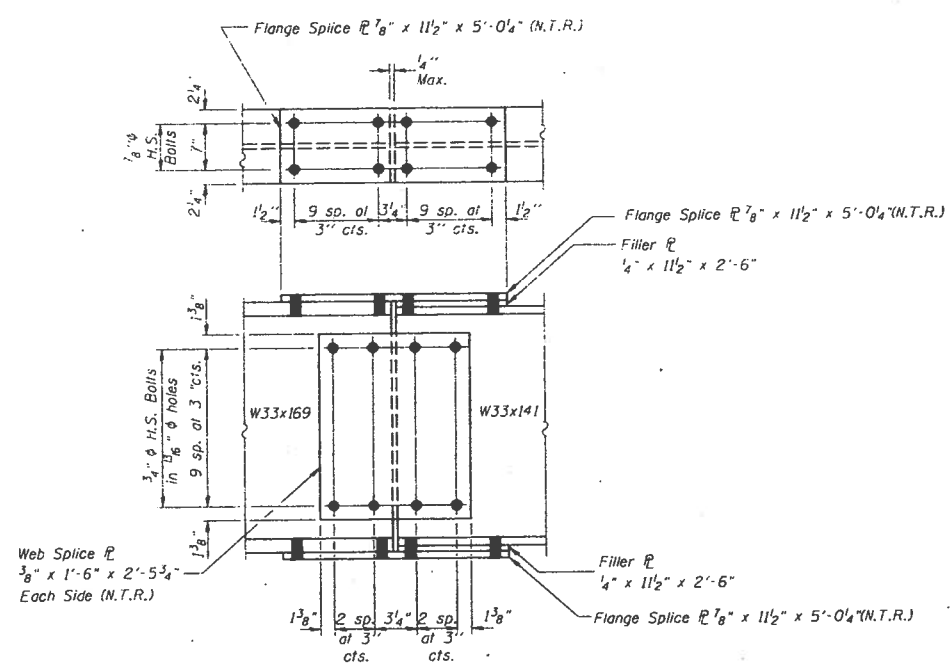
END DIAPHRAGM D

14 Required

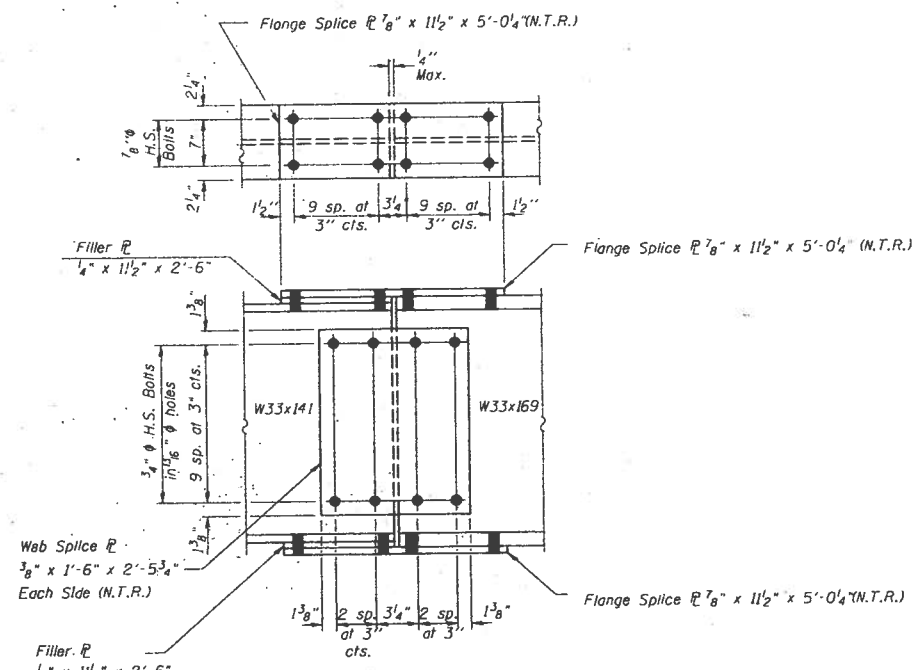
INTERMEDIATE DIAPHRAGM D1

70 Required

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



FIELD SPLICE #4 DETAIL



FIELD SPLICE #5 DETAIL

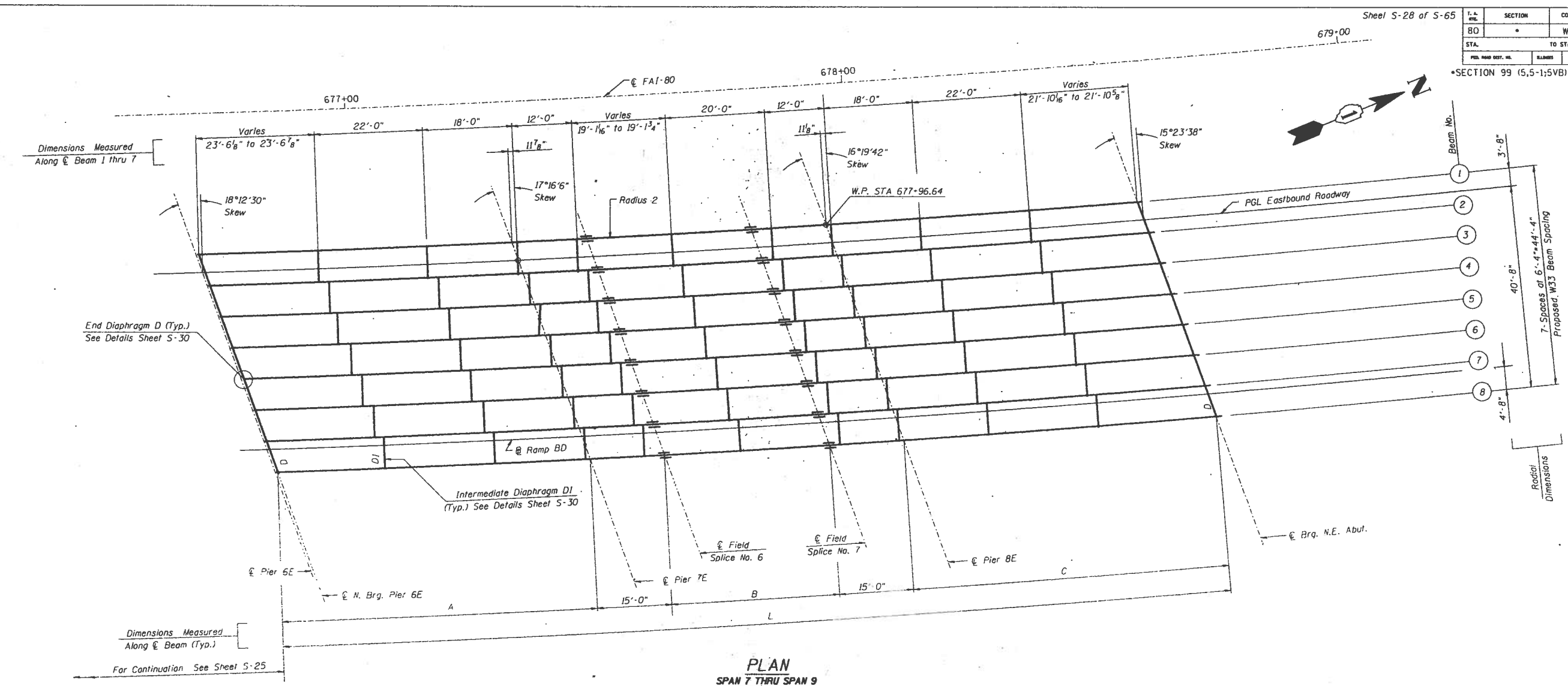
NOTE:
"N.T.R." denotes plates to which notch toughness requirements are applicable.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 STEEL DIAPHRAGM & DETAILS SPAN 4-6
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: PWP
 DRAWN BY: IMC
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BO	WILL		
STA.	TO STA.		
POL. ROAD DIST. NO.	BLDG. NO.	POL. AID PROJECT	

*SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR



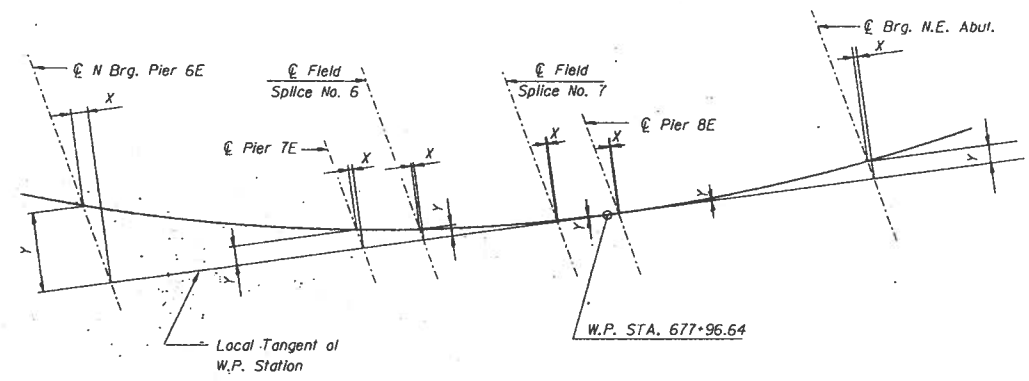
PLAN
SPAN 7 THRU SPAN 9

BEAM DIMENSIONS (in feet)

BEAM	A	B	C	L	RADIUS 2
1	62'-7"	33'-2 1/2"	62'-9 3/4"	188'-7 1/4"	3848.053'
2	62'-6 1/8"	33'-2 3/8"	62'-9 1/8"	188'-6 5/8"	3854.387'
3	62'-6 3/4"	33'-2 3/8"	62'-9 1/8"	188'-6 5/8"	3860.720'
4	62'-6 5/8"	33'-2 3/8"	62'-9 1/2"	188'-6 3/8"	3867.053'
5	62'-6 1/2"	33'-2 1/8"	62'-9 3/4"	188'-5 1/8"	3873.387'
6	62'-6 3/8"	33'-1 5/8"	62'-9 1/4"	188'-5 9/16"	3879.720'
7	62'-6 1/4"	33'-1 1/8"	62'-9 3/16"	188'-5 1/4"	3886.053'
8	62'-6 1/8"	33'-1 3/4"	62'-9 1/16"	188'-4 1/16"	3892.387'

LAYOUT DIMENSIONS (in feet)

BEAM	N. Brg. Pier 6E		PIER 7E		Field Splice #6		Field Splice #7		PIER BE		Brg. N.E. Abut.	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	7 1/4"	2'-0 1/16"	1 1/8"	6 1/4"	1 1/8"	3 5/8"	1 1/8"	3 5/8"	0	0	1 1/8"	6 1/4"
2	7"	1'-11 1/8"	1 1/8"	5 1/8"	1 1/8"	3 5/8"	1 1/8"	3 5/8"	0	0	1 1/8"	6 1/4"
3	6 3/4"	1'-11 1/8"	1 1/8"	5 1/8"	1 1/8"	3 5/8"	1 1/8"	3 5/8"	0	0	2"	6 1/4"
4	6 3/8"	1'-10 3/8"	1 1/8"	5 1/8"	1 1/8"	2 1/2"	0	0	1 1/8"	0	2 1/8"	7 1/4"
5	6 3/8"	1'-9 1/8"	1 1/8"	4 1/8"	1 1/8"	2 9/16"	0	0	1 1/8"	0	2 1/4"	7 5/8"
6	6 1/8"	1'-8 5/8"	1 1/8"	4 1/8"	1 1/8"	2 9/16"	0	0	1 1/8"	0	2 1/8"	8"
7	5 9/16"	1'-8 1/4"	1 1/8"	4 1/8"	1 1/8"	2 9/16"	0	0	1 1/8"	0	2 1/8"	8 1/16"
8	5 3/4"	1'-7 3/8"	1 1/8"	3 1/8"	1 1/8"	1 1/8"	0	0	1 1/8"	0	2 9/16"	8 1/8"



BEAM LAYOUT DIAGRAM

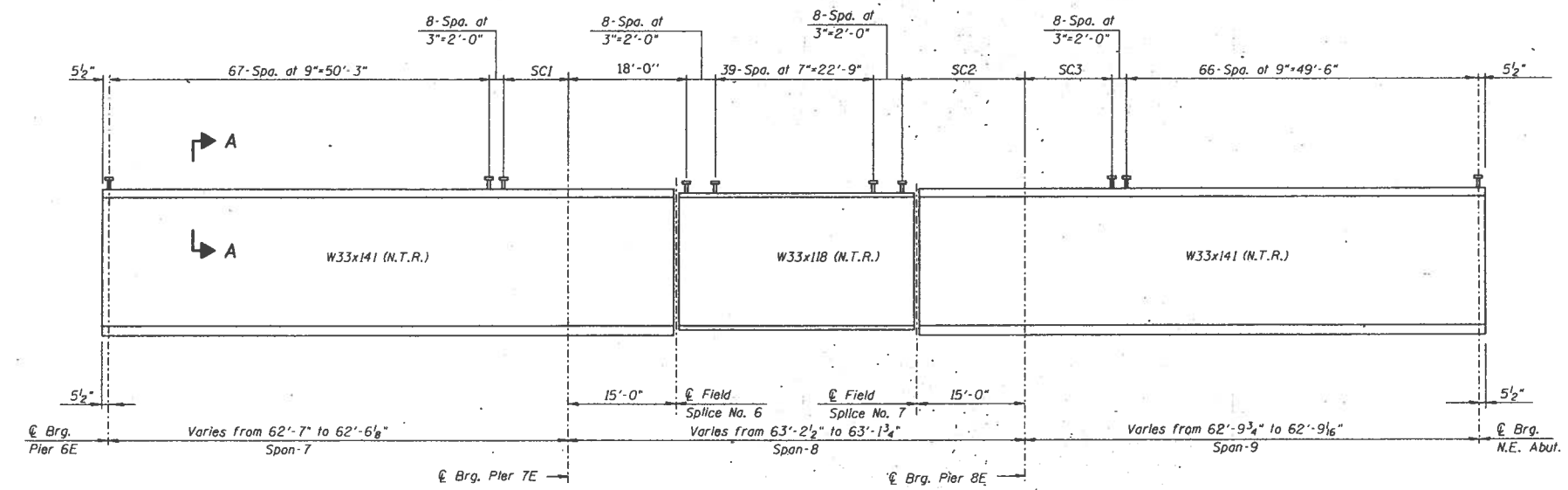
NOTES:
 .All intermediate diaphragms to be normal to center of beams.
 For end and intermediate diaphragms details See Sheet S-30.
 For Beam details See Sheet S-29.
 For Beam Elevation See Sheet S-29.
 All dimensions are horizontal.
 End of beams shall be vertical.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 FRAMING PLAN & DETAILS SPAN 7-9
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995

P.L. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGNED	FED. AID PROJECT		

SECTION 99 (5.5-1;5VB) R & 99-4-1VB-1-BR



BEAM ELEVATION

"N.T.R." Denotes Beams to which notch toughness requirements are applicable.

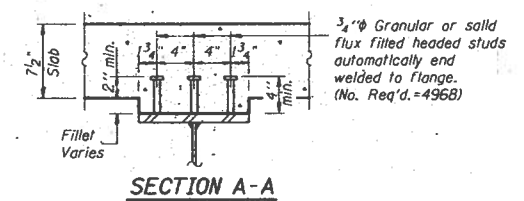
	0.4 Sp. 7	Pier No. 7E	0.5 Sp. 8	Pier No. 8E	0.6 Sp. 9
I_s (in ⁴)	7450	7450	5900	7450	7450
I_c (in ⁴)	20314		17231		20314
I_c (3n) (in ⁴)	14558		12459		14558
S_s (in ³)	448	448	359	448	448
S_c (in ³)	674		560		674
S_c (3n) (in ³)	603		502		603
S_{bi} (in ³)	21.3	21.3	16.3	21.3	21.3
ϕ (K/ft.)	0.787	1.036	0.760	1.036	0.787
$M\phi$ (K)	236	393	71	396	246
$M_s\phi$ (K/ft.)	0.249		0.249		0.249
$M_s\phi$ (K)	82		40		83
M_t (K)	415	208	341	209	416
M (Imp) (K)	110	55	91	56	111
$S_3(M_t \cdot I)$ (K)	875	438	720	442	878
M_a (K)	1551	1080	1080	1089	1569
M_{bi} (K)	7	3	3	3	7
$f_s \phi$ non-comp (k.s.i.)	6.3	10.5	2.4	10.6	6.6
$f_s \phi$ (comp) (k.s.i.)	1.6		1.0		1.7
$f_s \phi$ (M _a / M _{imp}) (k.s.i.)	15.6	11.7	15.4	11.8	15.6
f_w (k.s.i.)	3.9	1.7	2.2	1.7	3.9
$f_s \cdot f_w$ (Overload) (k.s.i.)	26.5	23.5	20.5	23.7	26.9
f_s (Total) (k.s.i.)	30.6	28.9	24.4	29.1	31.1
f_s (Total) + f_w (k.s.i.)					
V_R (K)	46		36		45
F_b (k.s.i.)	36.0	31.2	36.0	31.2	36.0

	Pier No. 6E	Pier No. 7E	Pier No. 8E	N.E. Abut.
R_P (K)	26.2	71.0	71.2	26.3
R_I (K)	32.8	41.3	41.4	31.7
$Imp.$ (K)	8.7	11.0	11.0	8.4
R (Total) (K)	67.7	123.3	123.6	66.4

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 I_c (n) and S_c (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 I_c (3n) and S_c (3n) are the moment of inertia and section modulus of the composite section used in computing the stresses due to superimposed dead load.
 V_R is the maximum Live Load + Impact shear range in span.
 M_a (Applied Moment) = $1.3(M\phi + M_s\phi + S_3(M_t \cdot I))$.
 $f_s \cdot f_w$ (Overload) is the sum of the stresses due to $M\phi + M_s\phi + S_3(M_t \cdot I) + M_{bi}/1.3$.
 f_s (Total) is the sum of the stresses due to $1.3(M\phi + M_s\phi + S_3(M_t \cdot I))$.
 S_{bi} is the section modulus for one flange plate for lateral flange bending.
 M_{bi} is the lateral bending moment for the flange plate (factored).
 f_w is the calculated normal stress at the edge of the flange due to lateral bending (factored).
 F_b is the maximum allowable stress F_{bu} or F_{by} computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.

SHEAR CONNECTOR SPACING

BEAM	SC 1	SC 2	SC 3
1	10'-4"	18'-5 1/2"	11'-3 3/4"
2	10'-3 7/8"	18'-5 3/8"	11'-3 1/8"
3	10'-3 3/4"	18'-5 5/16"	11'-3 9/16"
4	10'-3 5/8"	18'-5 3/16"	11'-3 5/8"
5	10'-3 1/2"	18'-5 1/16"	11'-3 1/2"
6	10'-3 3/8"	18'-4 9/16"	11'-3 1/4"
7	10'-3 1/4"	18'-4 1/8"	11'-3 1/8"
8	10'-3 1/8"	18'-4 3/4"	11'-3 1/8"



****TOP OF BEAM ELEVATION**

BEAM	PIER 6E	PIER 7E	***SPlice 6	***SPlice 7	PIER 8E	NORTH ABUTMENT
1	647.161	647.040	647.012	646.947	646.919	646.799
2	647.394	647.271	647.242	647.177	647.148	646.027
3	647.627	647.503	647.474	647.407	647.378	647.256
4	647.860	647.734	647.704	647.638	647.609	647.485
5	648.092	647.965	647.935	647.868	647.839	647.714
6	648.325	648.196	648.166	648.098	648.069	647.943
7	648.558	648.428	648.397	648.328	648.298	648.171
8	648.790	648.659	648.628	648.558	648.528	648.400

**For Fabrication only
 ***Elevations shown for top of W33x141

BILL OF MATERIAL
SPAN 7 THRU 9

Item	Unit	Total
Stud Shear Connectors	Each	4968

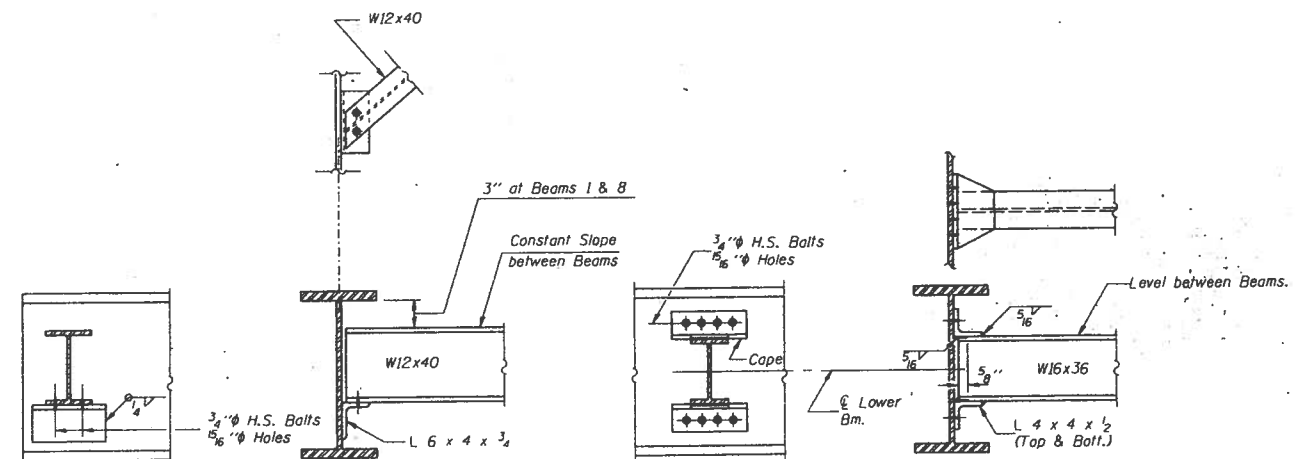
NOTES:
 For field Splice & Diaphragm Details See Sheet S-30

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 BEAM ELEVATION & DETAILS SPAN 7-9
 FAI-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE: N.T.S.
 DATE: JULY 1995
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS

F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FILE NO. DIST. NO.	NAME	FILE NO. PROJECT		

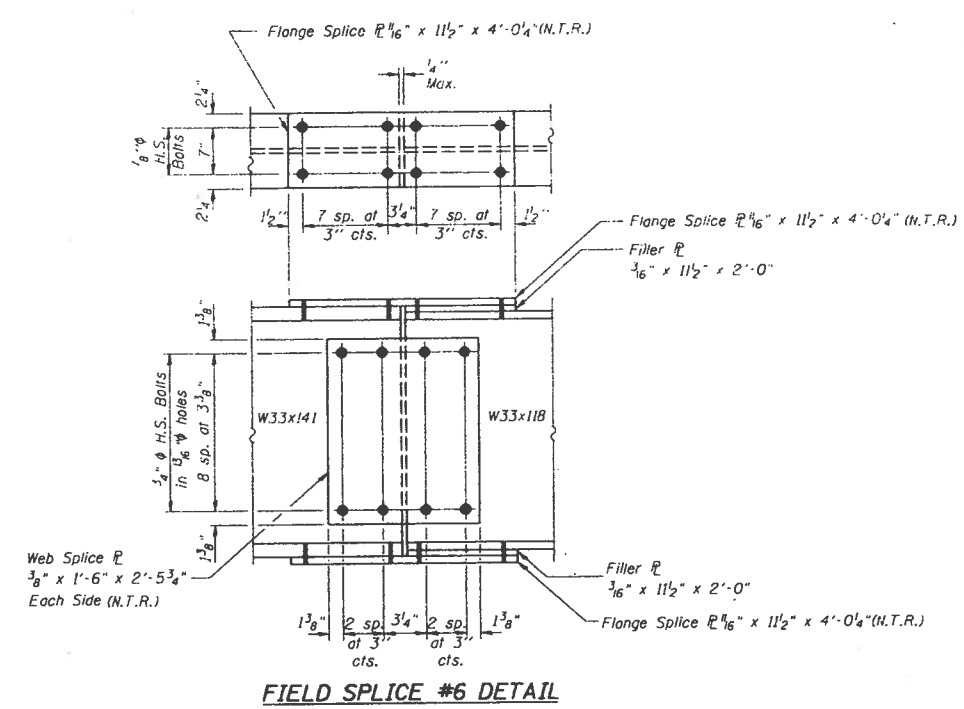
*SECTION 99 (5,5-1 ; 5VB) R & 99-4-1VB-1-BR



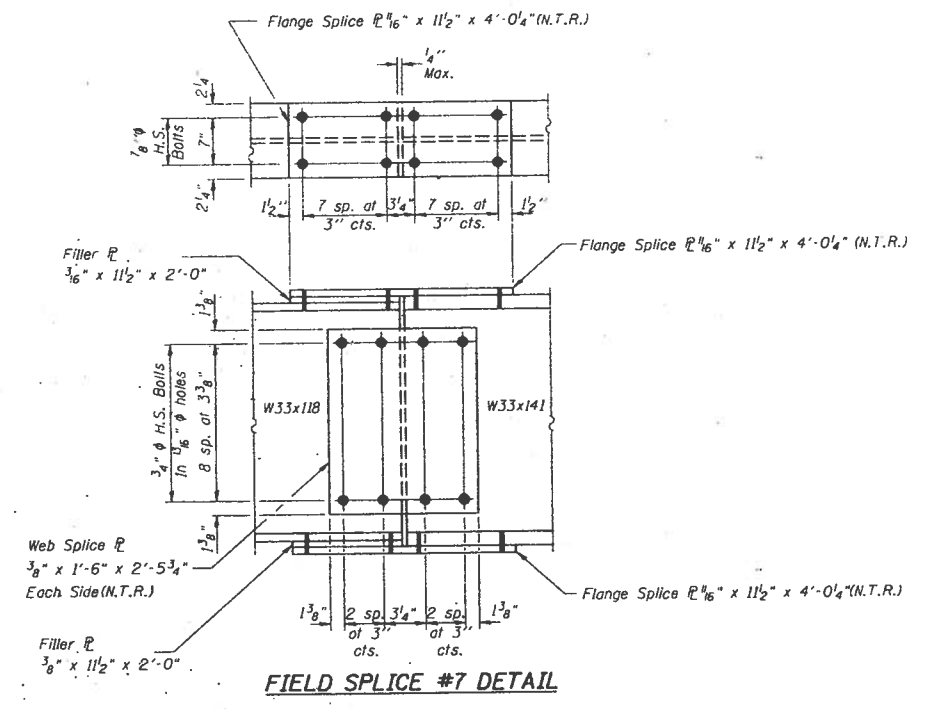
END DIAPHRAGM D
14 Required

INTERMEDIATE DIAPHRAGM D1
63 Required

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



FIELD SPLICE #6 DETAIL



FIELD SPLICE #7 DETAIL

NOTE:
"N.T.R." denotes plates to which notch toughness requirement are applicable.

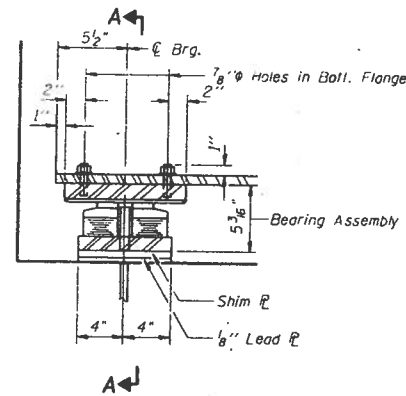
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
STEEL DIAPHRAGM & DETAILS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS
SCALE: N.T.S.
DATE: JULY 1995

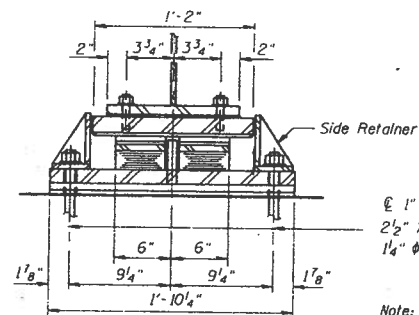


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.		FED. AID PROJECT	
FED. ROAD EST. NO.		ILLINOIS	

*SECTION 99 (5.5-1.5VB) R & 99-4-1VB-1-BR



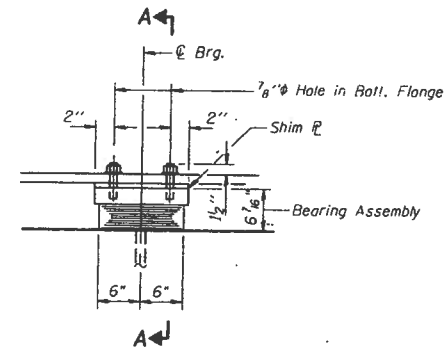
ELEVATION AT S.E. ABUT.
TYPE III ELASTOMERIC EXP. BRG.



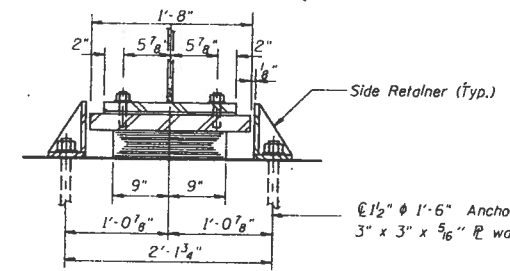
SECTION A-A

1" ϕ x 1'-0" Anchor bolts with
2 1/2" x 2 1/2" x 5/16" P washer under nut
1 1/4" ϕ Hole in bottom P

Note:
See sheet S-57 for Anchor Bolt installation.



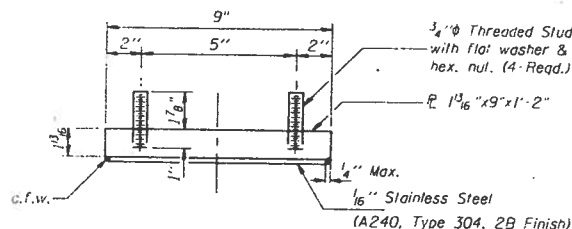
ELEVATION AT PIER 1E



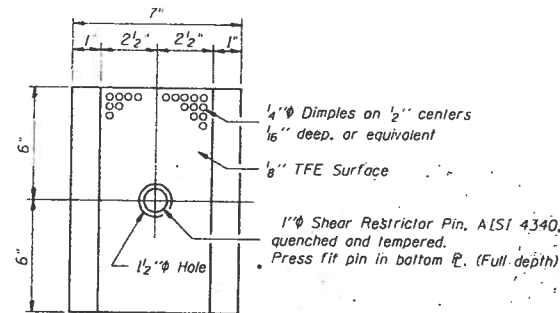
SECTION A-A

1 1/2" ϕ 1'-6" Anchor bolts with
3" x 3" x 5/16" P washer under nut

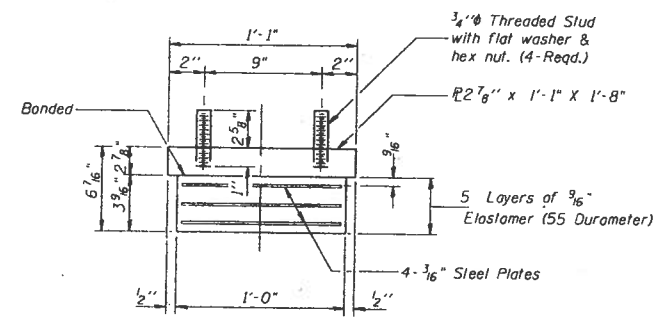
TYPE I ELASTOMERIC EXP. BRG.



TOP BEARING ASSEMBLY

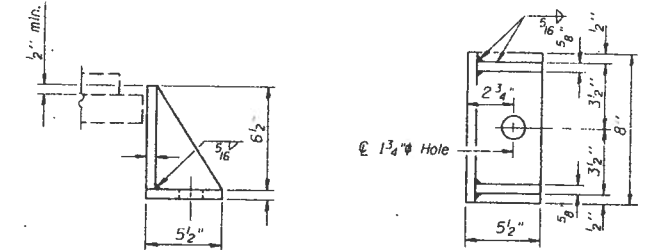


PLAN-TFE ELASTOMERIC BRG.



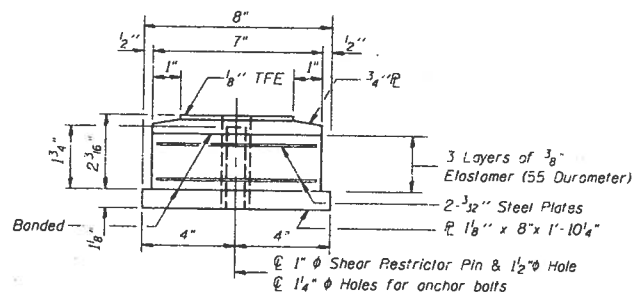
BEARING ASSEMBLY

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

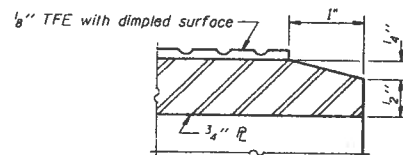


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



BOTTOM BEARING ASSEMBLY



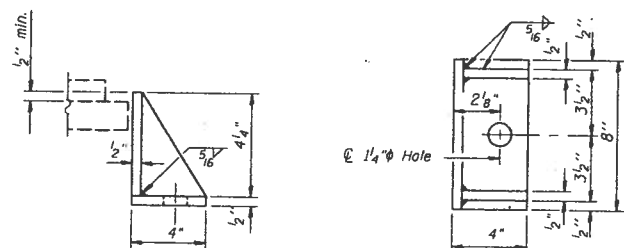
SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Banding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

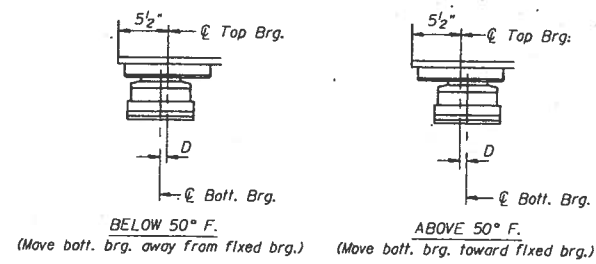
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8
Elastomeric Bearing Assembly Type III	Each	8



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight Included with Structural Steel.



SETTING ANCHOR BOLTS AT EXP. BRG.

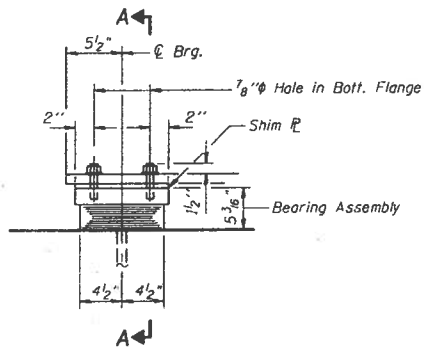
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

REVISIONS	
NAME	DATE

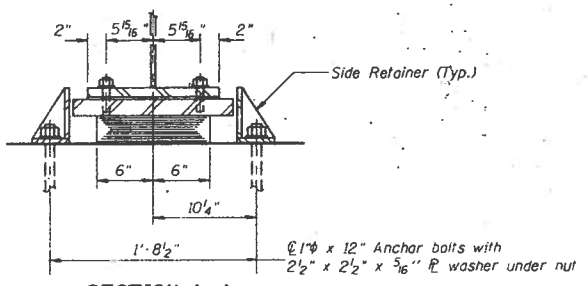
ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
BEARING ASSEMBLY
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: MS
CHECKED BY: GAE
SCALE: N.T.S.
DATE: JULY 1995

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

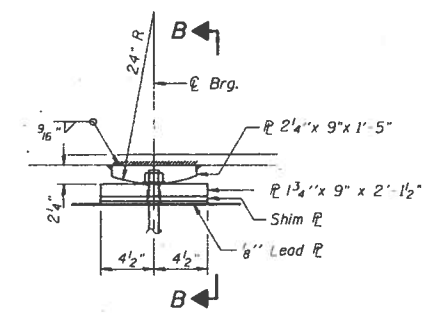
*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



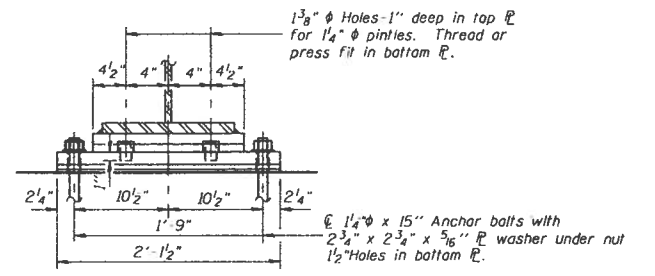
ELEVATION AT PIER 3E (SPAN-3)



SECTION A-A



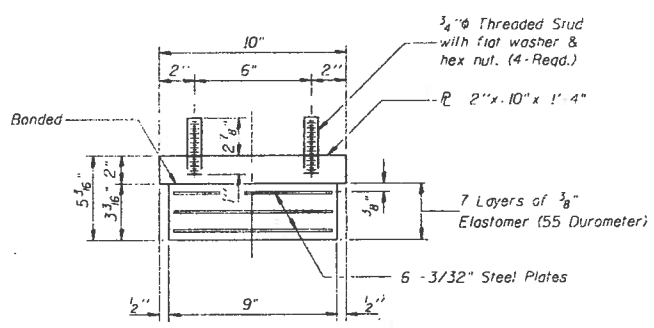
ELEVATION AT PIER 2E



SECTION B-B

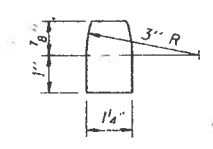
TYPE I ELASTOMERIC EXP. BRG.

Notes: Anchor bolts at fixed bearings may be built into the masonry. See sheet S-57 for Anchor Bolt installation.

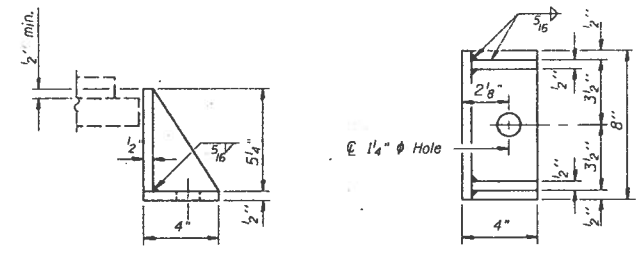


BEARING ASSEMBLY

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



PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight Included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8

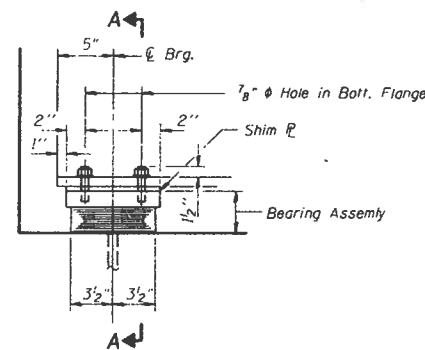
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 BEARING ASSEMBLY
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: MS
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

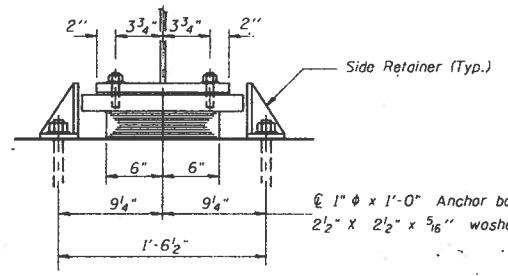


1.4 EVE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	RAISED	FED. AID PROJECT		

*SECTION 99 (5.5-1:5VB) R & 99-4-1VB-1-BR

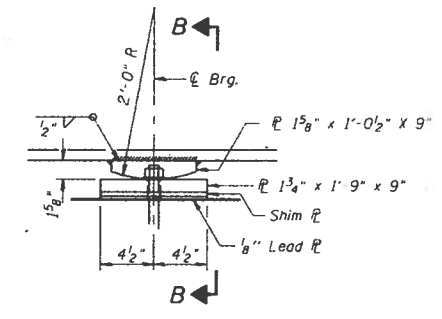


ELEVATION AT N. ABUT. PIER 3E (Span-4) AND PIER 6E (SPAN-6 & 7)
(Elevation shown at N.E. Abut. Piers are similar)



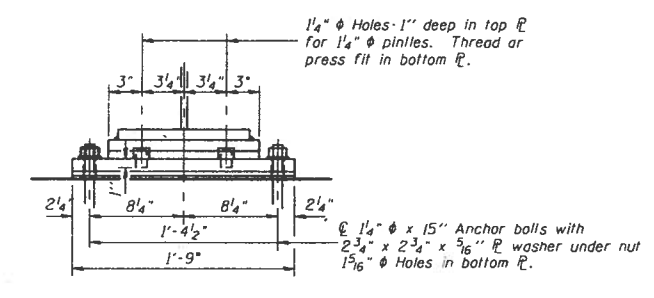
SECTION A-A

1" ϕ x 1'-0" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" washer under nut



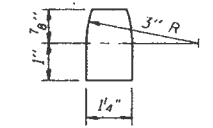
ELEVATION AT PIER 4E, 5E, 7E AND 8E

FIXED BEARING

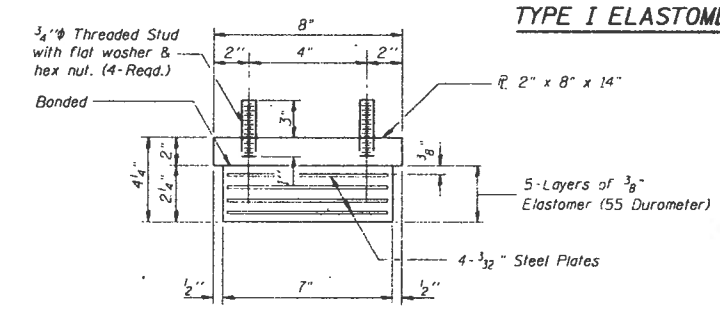


SECTION B-B

Notes: Anchor bolts of fixed bearings may be built into the masonry. See sheet #57 for Anchor Bolt installation. Place 1/2" x 8" x 1'-2" Plate above bearing assembly on Pier 6E (Span-7).



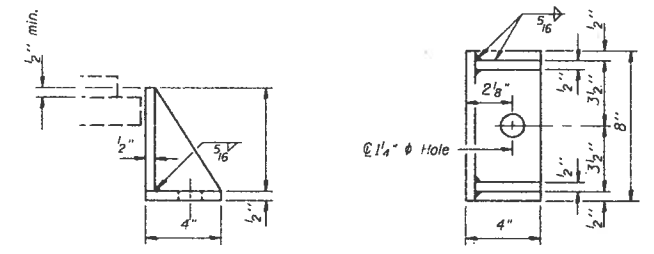
PINTLE



TYPE I ELASTOMERIC EXP. BRG.

BEARING ASSEMBLY

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



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	32

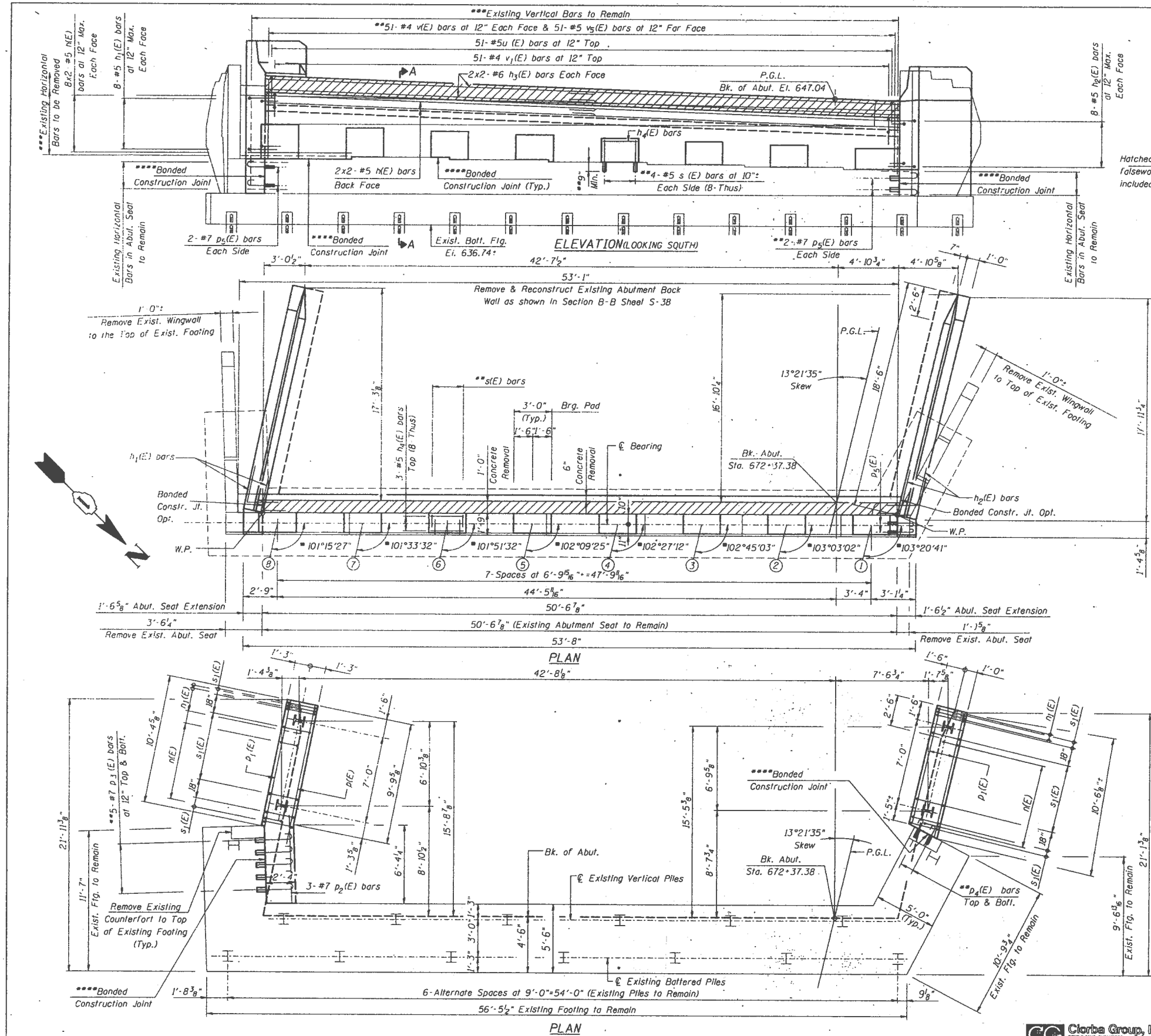
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
BEARING ASSEMBLY
FAI-80 STA. 673+37.46
*SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: GAE
DRAWN BY: MS
CHECKED BY: LAS

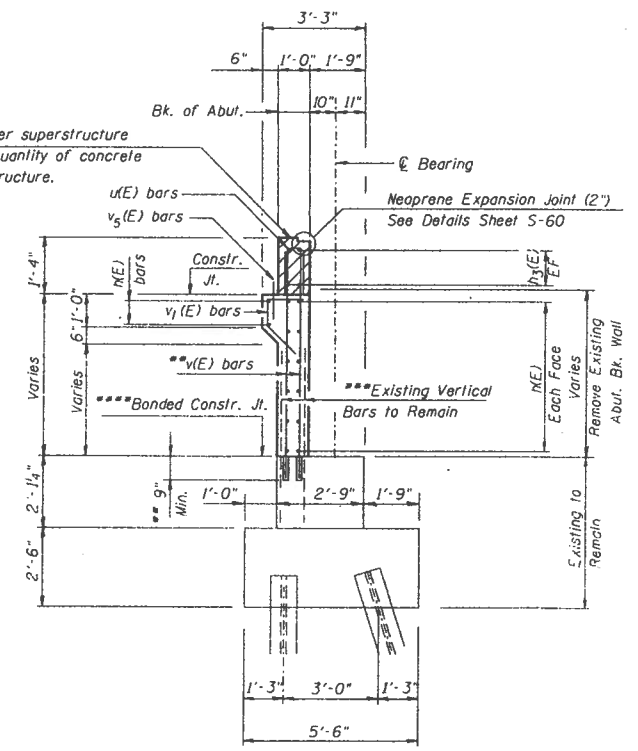
Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CHICAGO AVENUE • CHICAGO, ILLINOIS 60630 • (312) 775-0029

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
FDL ROAD DIST. NO.	DISTRICT	FDL JOB PROJECT	

SECTION 99 (5,5-1:5VB) R & 99-4-1VB-1-BR



Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.



SECTION A-A

TOP OF PROPOSED CONCRETE PAD ELEVATION

Beam No.	Top of Pad Elevation
1	643.04
2	643.30
3	643.55
4	643.80
5	644.06
6	644.31
7	644.56
8	644.82

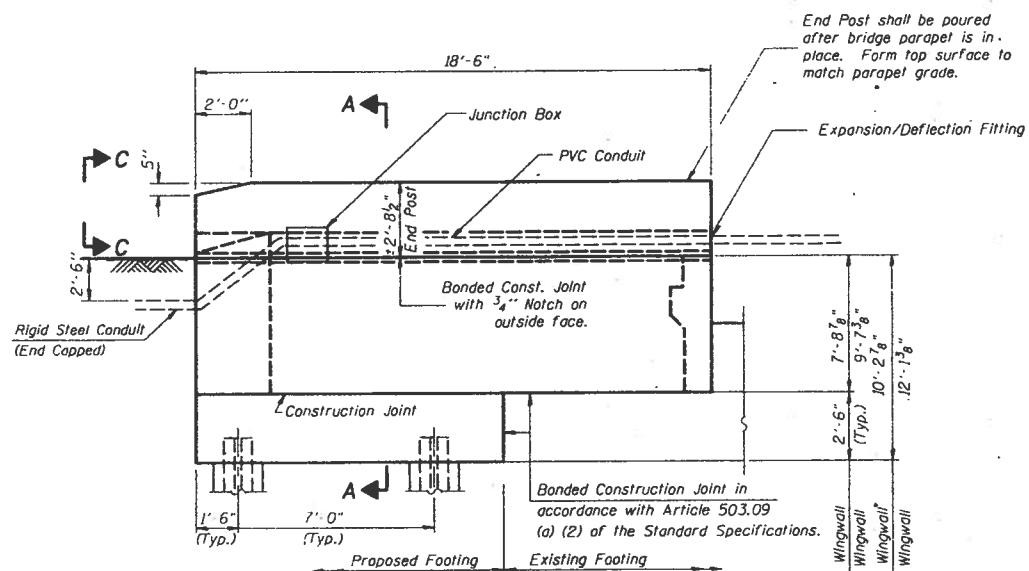
NOTES:
 **Epoxy grout s(E) bars in a 7/8" hole. p₂(E), p₄(E) & p₅(E) bars in a 1 1/8" hole & v(E) bars in 3/4" hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.
 *** Existing vertical bars to remain in place, blast cleaned, straightened and lapped with new vertical bars. Horizontal bars shall be removed.
 ****Banded Construction Joint in accordance with Article 503.09 (a) (2) of Standard Specifications. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 2x2-#5 etc. indicates 2 lines of bars with 2 lengths per line. Space reinforcement in concrete pad to miss anchor bolts. All exposed edges shall have standard 3/4" chamfers except as noted.
 For Bill of Material, Sections and Details See Sheet S-35. For Existing Abutment Repair and Concrete Removal See Sheet S-38.
 * Angle shown is angle between the centerline of beam and the centerline of bearing along the abutment. For the angle and details used to place the Bearing Anchor Bolts See Sheet S-35. Minimum lap splices shall be 2'-2" for #5 bars & 2'-7" for #6 bars.

Pile Data
 Type: HP 10x42 Steel Piles
 Capacity: Driven to Refusal
 Est. Length: 30'
 No. Required: 4 (Includes 1 Test Pile)

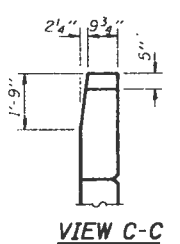
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SOUTHEAST ABUTMENT PLAN & ELEVATION
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE: N.T.S.
 DATE: JULY 1995
 DRAWN BY: IMG
 CHECKED BY: GAE

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.		PER. AND PROJECT	
SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR			

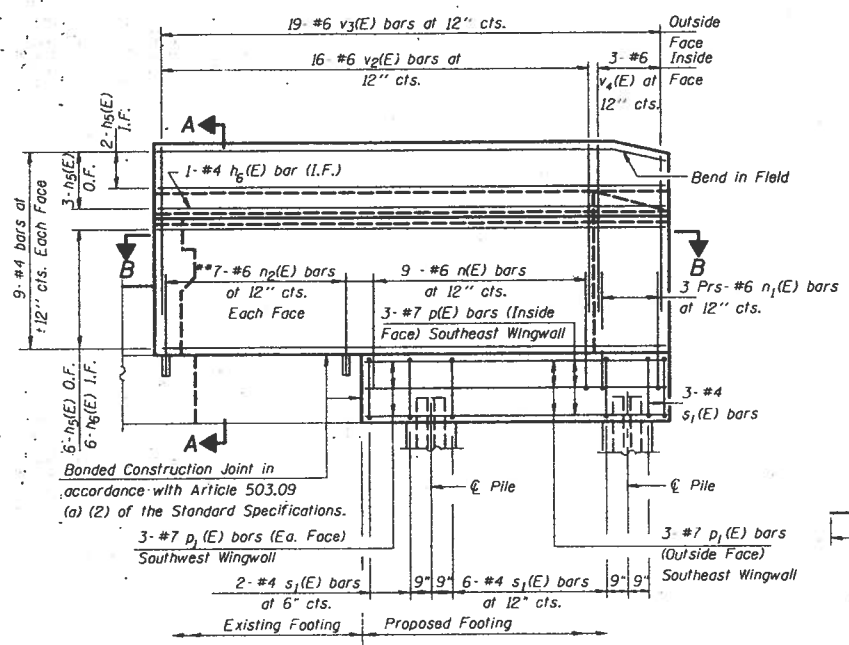
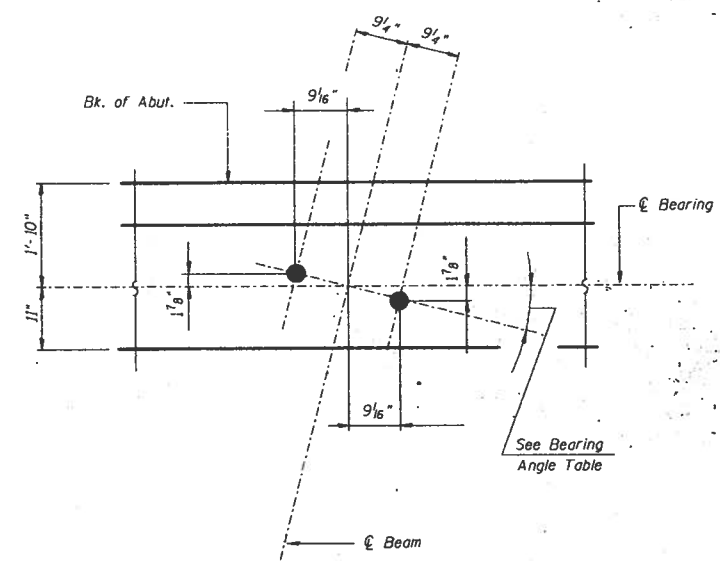
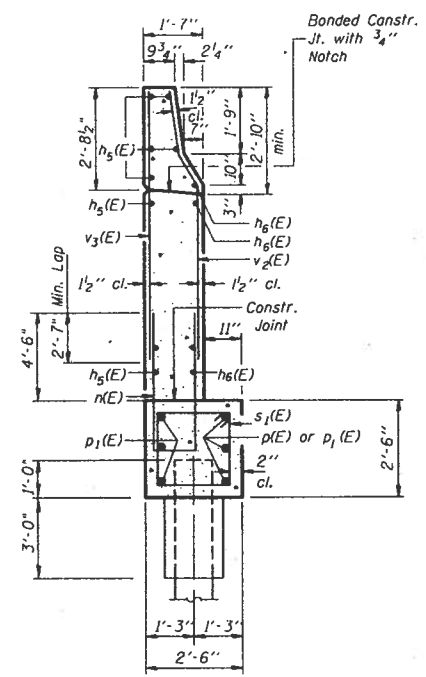


WING WALL ELEVATION

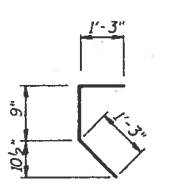
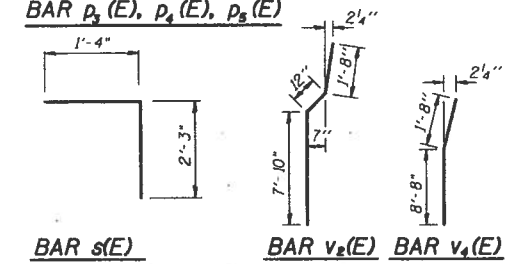
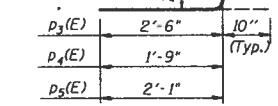
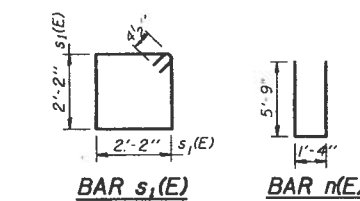
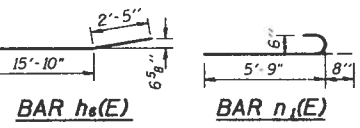
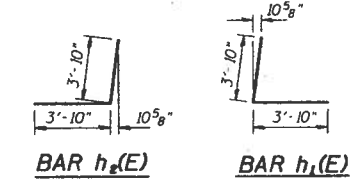
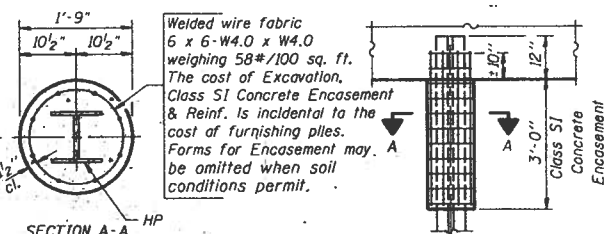
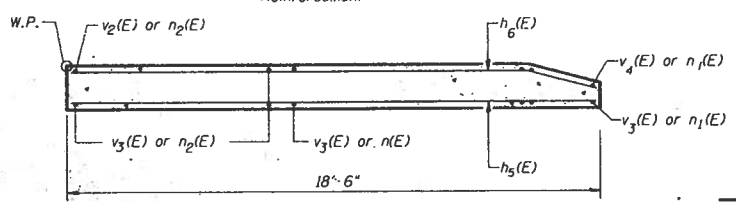


BEARING ANGLE TABLE

Beam	Bearing Angle
1	12°13'04"
2	12°04'46"
3	11°56'19"
4	11°47'56"
5	11°39'35"
6	11°31'11"
7	11°22'45"
8	11°14'17"



WING WALL ELEVATION Reinforcement



SOUTHEAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	36	#5	26'-5"	
h ₁ (E)	16	#5	7'-8"	
h ₂ (E)	16	#5	7'-8"	
h ₃ (E)	8	#6	26'-8"	
h ₄ (E)	24	#5	2'-8"	
h ₅ (E)	22	#4	18'-3"	
h ₆ (E)	14	#4	18'-3"	
n ₁ (E)	18	#6	12'-10"	
n ₂ (E)	12	#6	6'-5"	
n ₃ (E)	28	#6	5'-3"	
p(E)	3	#7	10'-10"	
p ₁ (E)	9	#7	9'-7"	
p ₂ (E)	3	#7	7'-0"	
p ₃ (E)	10	#7	3'-4"	
p ₄ (E)	4	#7	2'-7"	
p ₅ (E)	8	#7	2'-11"	
s(E)	64	#5	3'-7"	
s ₁ (E)	22	#4	9'-5"	
u(E)	51	#5	1'-11"	
v(E)	102	#4	5'-2"	
v ₁ (E)	51	#4	3'-3"	
v ₂ (E)	32	#6	10'-6"	
v ₃ (E)	38	#6	10'-4"	
v ₄ (E)	6	#6	10'-4"	
v ₅ (E)	51	#5	2'-6"	
Structure Excavation	Cu. Yd.	115		
Concrete Structures	Cu. Yd.	46.9		
Reinforcement Bars (Epoxy Coated)	Lbs.	5450		
Furnishing Steel Piles HP 10x42	Foot	90		
Driving Steel Piles HP 10x42	Foot	90		
Test Pile Steel HP 10x42	Each	1		

Reinforcement Bars designated (E) shall be epoxy coated.

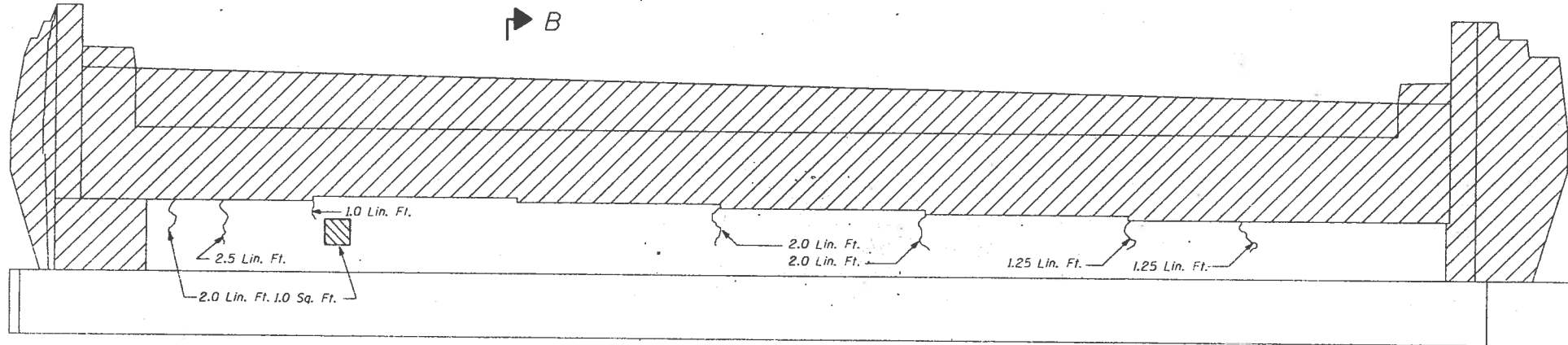
Note: Epoxy grout n₂(E) bars in a 1" hole. Holes shall be drilled a minimum 9" deep. The grout and the method of application shall be approved by the Department.

REVISIONS	
NAME	DATE

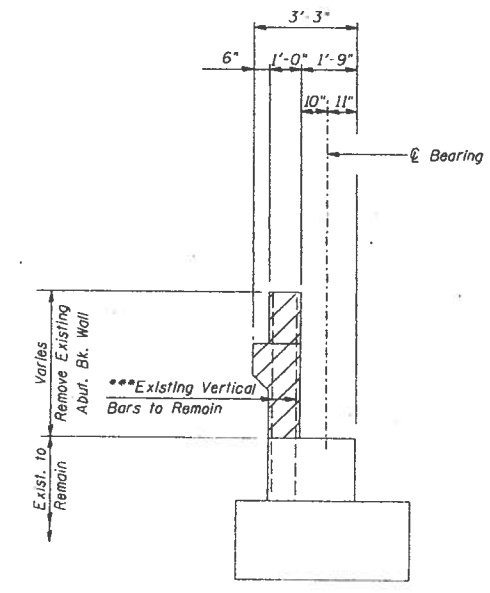
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SOUTHEAST ABUTMENT SECTIONS & DETAILS
 FAI-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

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

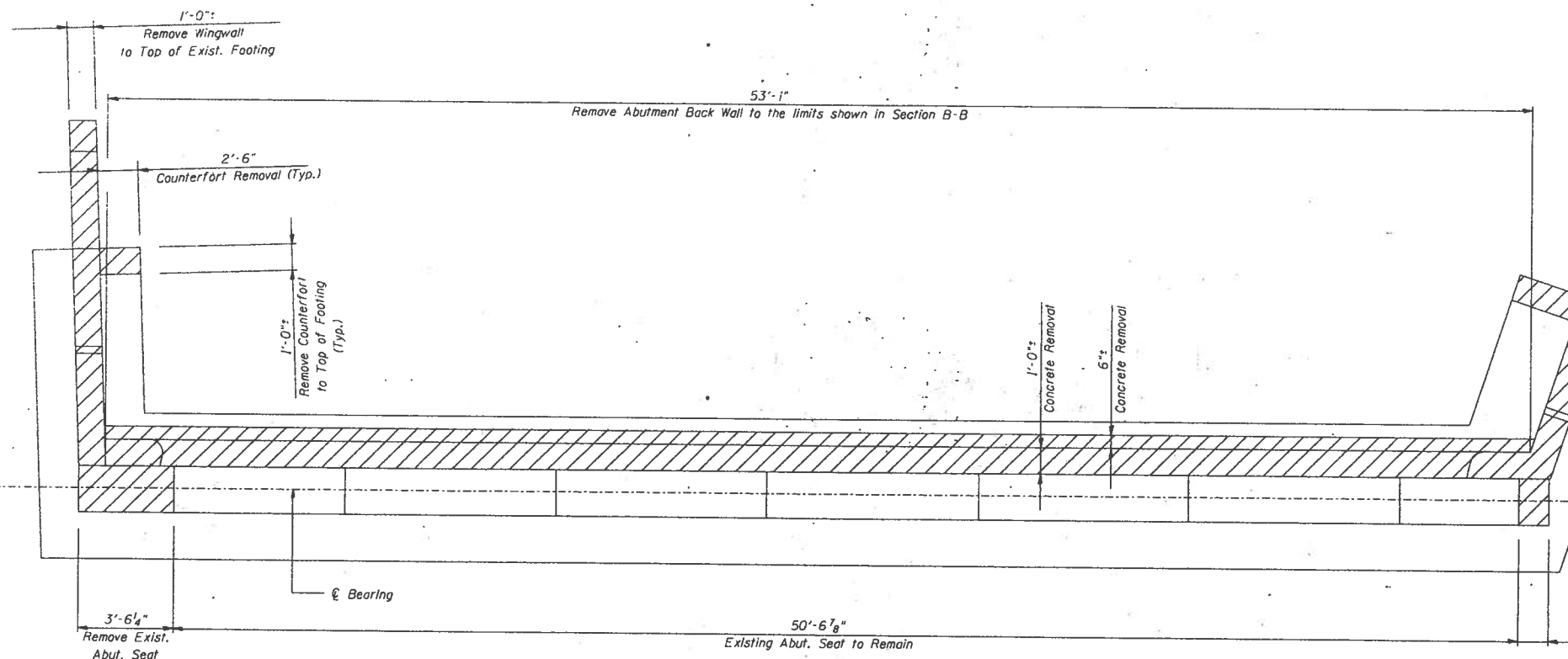
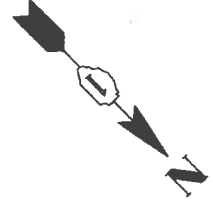
*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



ELEVATION
(LOOKING SOUTH)



SECTION B-B



PLAN

- LEGEND:**
- Formed Concrete Repair (Depth < 5")
 - Concrete Removal
 - Epoxy Crack Sealing

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5")	Sq. Ft.	1
Epoxy Crack Sealing	Foot	12
Concrete Removal	Cu. Yd.	20.2

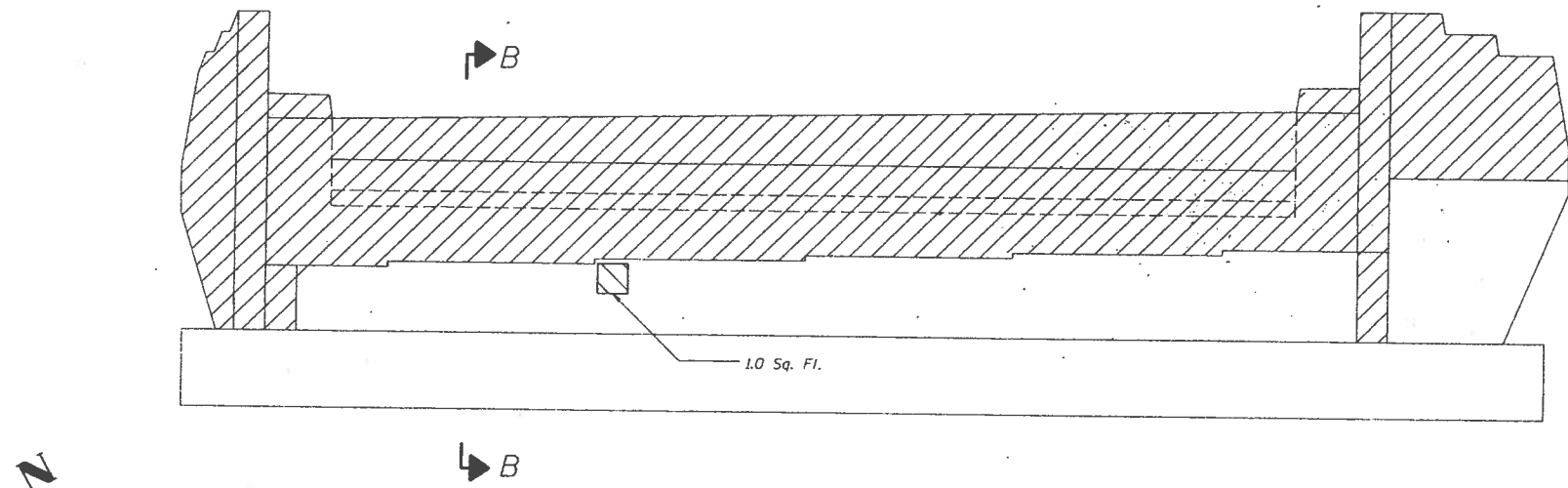
Note: Epoxy crack sealing and Formed Concrete Repair (Depth < 5") quantities are approximate and must be verified in the field.
 ***Existing Vertical Bars to Remain in place, blast cleaned and incorporated into new concrete.

REVISIONS	
NAME	DATE

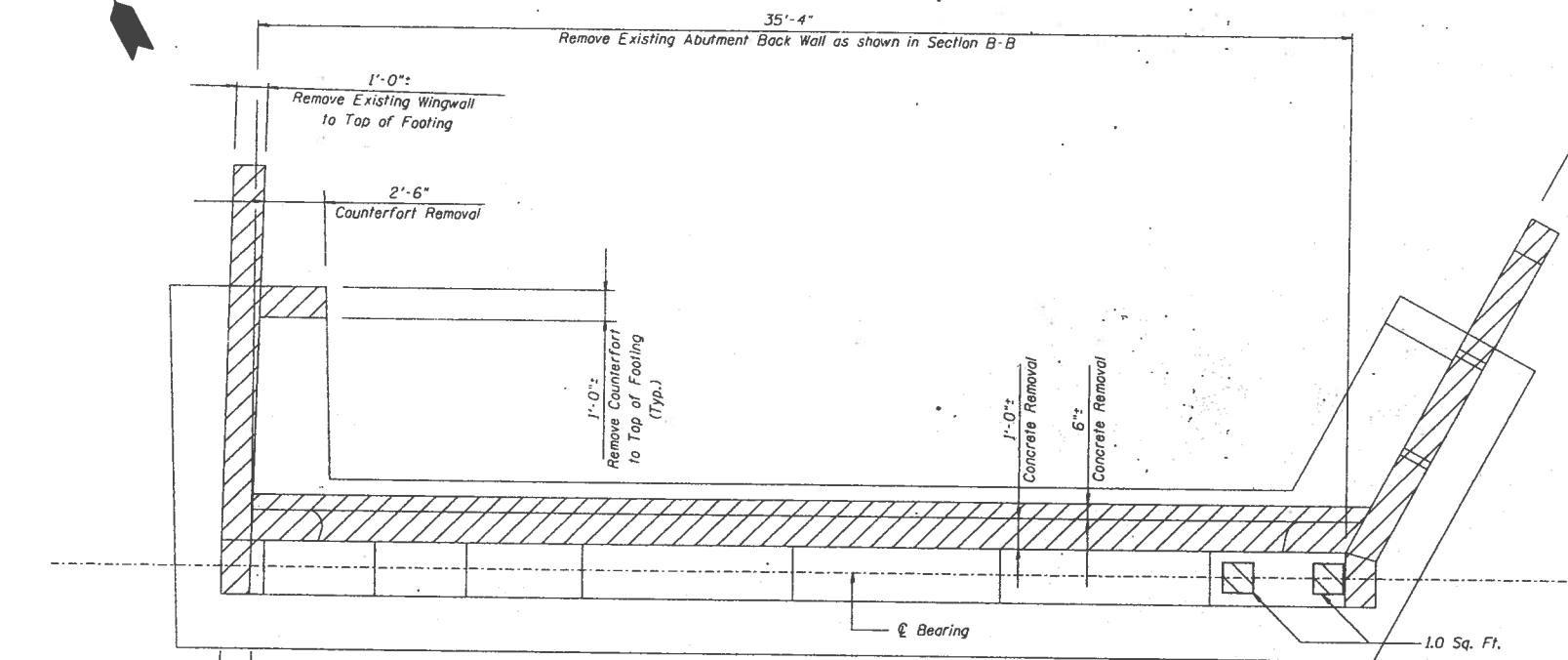
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SOUTHEAST ABUTMENT REPAIR
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY DESIGNED BY: LAS
 SCALE: N.T.S. DRAWN BY: IMG
 DATE: JULY 1995 CHECKED BY: GAE

F.A. EYE	SECTION	COUNTY	TYP. SHEETS	SHEET NO.
BO	*	WILL.		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

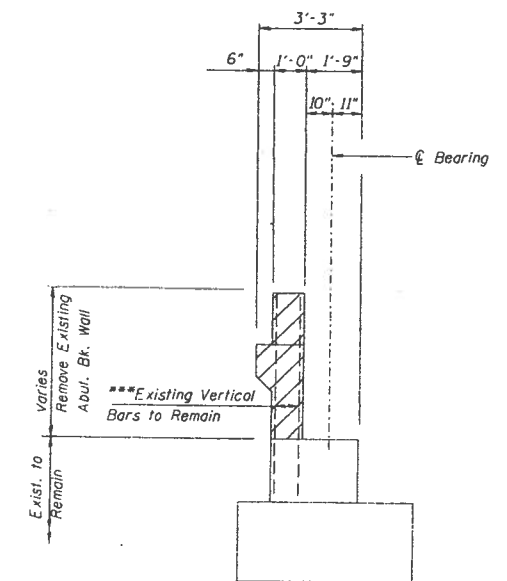
*SECTION 99 (5,5-1.5VB) R & 99-4-1VB-1-BR



ELEVATION
(LOOKING NORTH)



PLAN



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5')	Sq. Ft.	3
Concrete Removal	Cu. Yd.	13.4

Note: Epoxy crack sealing and Formed Concrete repair (Depth < 5') quantities are approximate and must be verified in the field.
 ***Existing vertical bars to remain in place, blast cleaned and incorporated into new concrete.

- LEGEND:**
- Formed Concrete Repair (Depth < 5')
 - Concrete Removal
 - Epoxy Crack Sealing

REVISIONS	
NAME	DATE

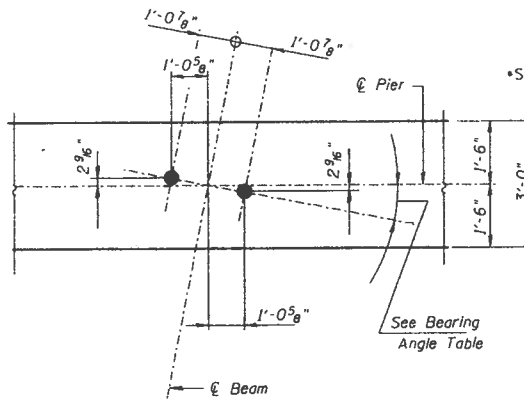
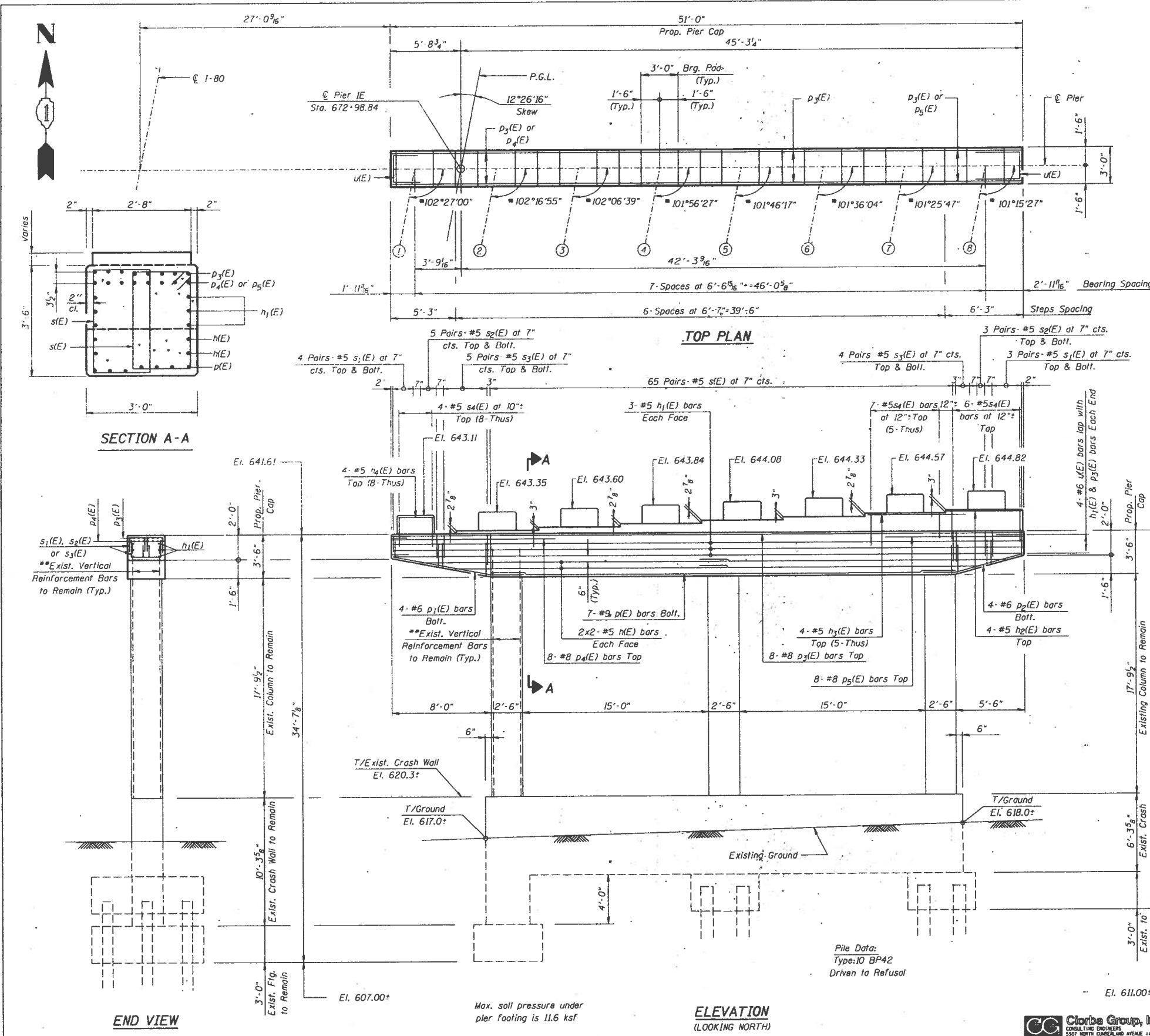
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 NORTHEAST ABUTMENT REPAIR
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE

SCALE: N.T.S.
 DATE: JULY 1995

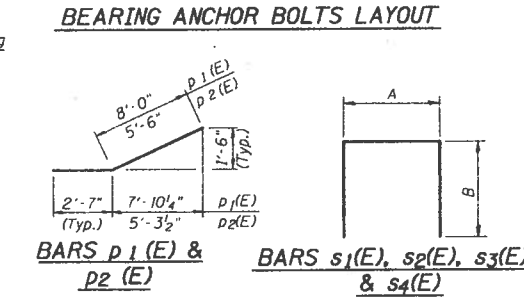
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.		BLANKED	FED. AID PROJECT

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



BEARING ANCHOR BOLTS LAYOUT

Beam No.	Bearing Angle
1	11°46'13"
2	11°41'36"
3	11°36'54"
4	11°32'14"
5	11°27'35"
6	11°22'55"
7	11°18'13"
8	11°13'30"

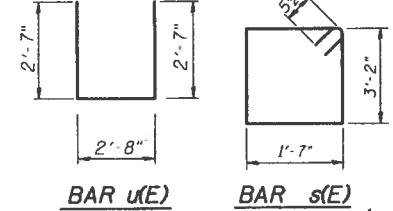


PIER 1E BILL OF MATERIAL

Bar No.	Size	Length	Shape
h1(E)	#8	25'-10"	
h2(E)	#5	50'-8"	
h3(E)	#5	6'-0"	
h4(E)	#5	8'-7"	
h5(E)	#5	2'-8"	
p1(E)	#9	37'-3"	
p2(E)	#6	10'-7"	
p3(E)	#8	8'-1"	
p4(E)	#8	50'-8"	
p5(E)	#8	13'-0"	
p6(E)	#8	11'-0"	
s1(E)	#5	10'-5"	
s2(E)	#5	4'-11"	
s3(E)	#5	5'-11"	
s4(E)	#5	6'-11"	
s5(E)	#5	10'-0"	
u(E)	#6	7'-10"	
Concrete Structures	Cu. Yd.	27.6	
Reinforcement Bars, Epoxy Coated	Lbs.	6290	

A & B DIMENSIONS

Bar	A	B
s1(E)	1'-7"	1'-8"
s2(E)	1'-7"	2'-2"
s3(E)	1'-7"	2'-8"
s4(E)	2'-4"	3'-10"



BAR u(E) BAR s(E)

NOTES:

- Space Reinforcement in cap to miss anchor bolts.
- All edges shall have standard 3/4" chamfer except as noted.
- Pour steps monolithically with cap.
- **Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
- *Angle shown is angle between the C of beam and the C of the pier. For the angle and details used to place the Bearing Anchor Bolts, See Bearing Anchor Bolts Layout this Sheet. Minimum Lap shall be 2'-2" for #5 bars & 2'-7" for #6 bars. Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line.
- For Pier Repair & Cap Removal Details see Sheet S-48.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER 1E DETAILS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE
 SCALE: N.T.S.
 DATE: JULY 1995

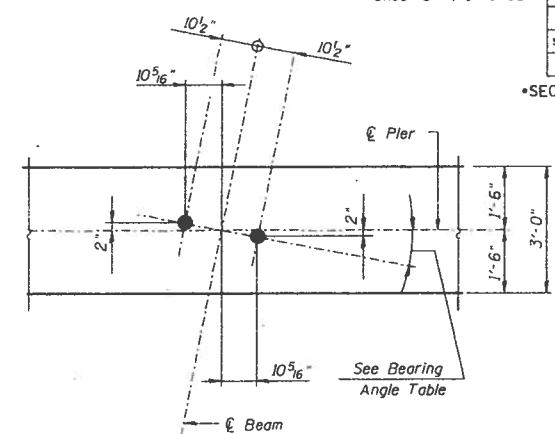


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.		FED. ROAD DIST. NO.	
		FED. PROJ. NO.	

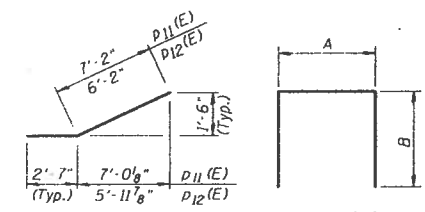
SECTION 99 (5.5-1;5VB) R & 99-4-1VB-1-BR

BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	11°05'27"
2	11°04'21"
3	11°03'15"
4	11°02'09"
5	11°01'03"
6	10°59'57"
7	10°58'52"
8	10°57'47"



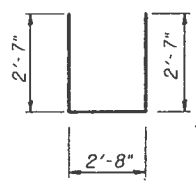
BEARING ANCHOR BOLTS LAYOUT



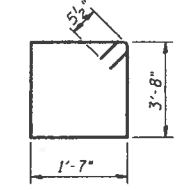
BARS p11(E) & p12(E)

A & B DIMENSIONS

Bar	A	B
s11(E)	1'-7"	2'-2"
s12(E)	1'-7"	2'-8"
s13(E)	1'-7"	3'-0"
s14(E)	2'-4"	4'-0"
s15(E)	2'-4"	3'-6"



BAR u10(E)



BAR s10(E)

**PIER 2E
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h10(E)	8	#5	25'-7"	
h11(E)	6	#5	49'-10"	
h12(E)	4	#5	5'-4"	
h13(E)	20	#5	8'-6"	
h14(E)	32	#5	2'-8"	
p10(E)	8	#9	36'-9"	
p11(E)	4	#6	9'-9"	
p12(E)	4	#6	8'-9"	
p13(E)	6	#9	49'-10"	
p14(E)	5	#9	12'-6"	
p15(E)	5	#9	11'-6"	
s10(E)	112	#5	11'-5"	
s11(E)	20	#5	5'-11"	
s12(E)	20	#5	6'-11"	
s13(E)	40	#5	7'-7"	
s14(E)	32	#5	10'-4"	
s15(E)	41	#5	9'-4"	
u10(E)	8	#6	7'-10"	

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

- Space Reinforcement in cap to miss anchor bolts.
- All edges shall have standard 3/4" chamfer except as noted.
- Pour steps monolithically with cap.
- Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
- Angle shown is angle between the centerline of beam and the centerline of the pier. For the angle and details used to place the Bearing Anchor Bolts, See Bearing Anchor Bolts Layout this Sheet.
- Minimum Lap shall be 2'-2" for #5 bars & 2'-7" for #6 bars.
- Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line.
- For Pier Repair & Cap Removal Details see Sheet S-49.

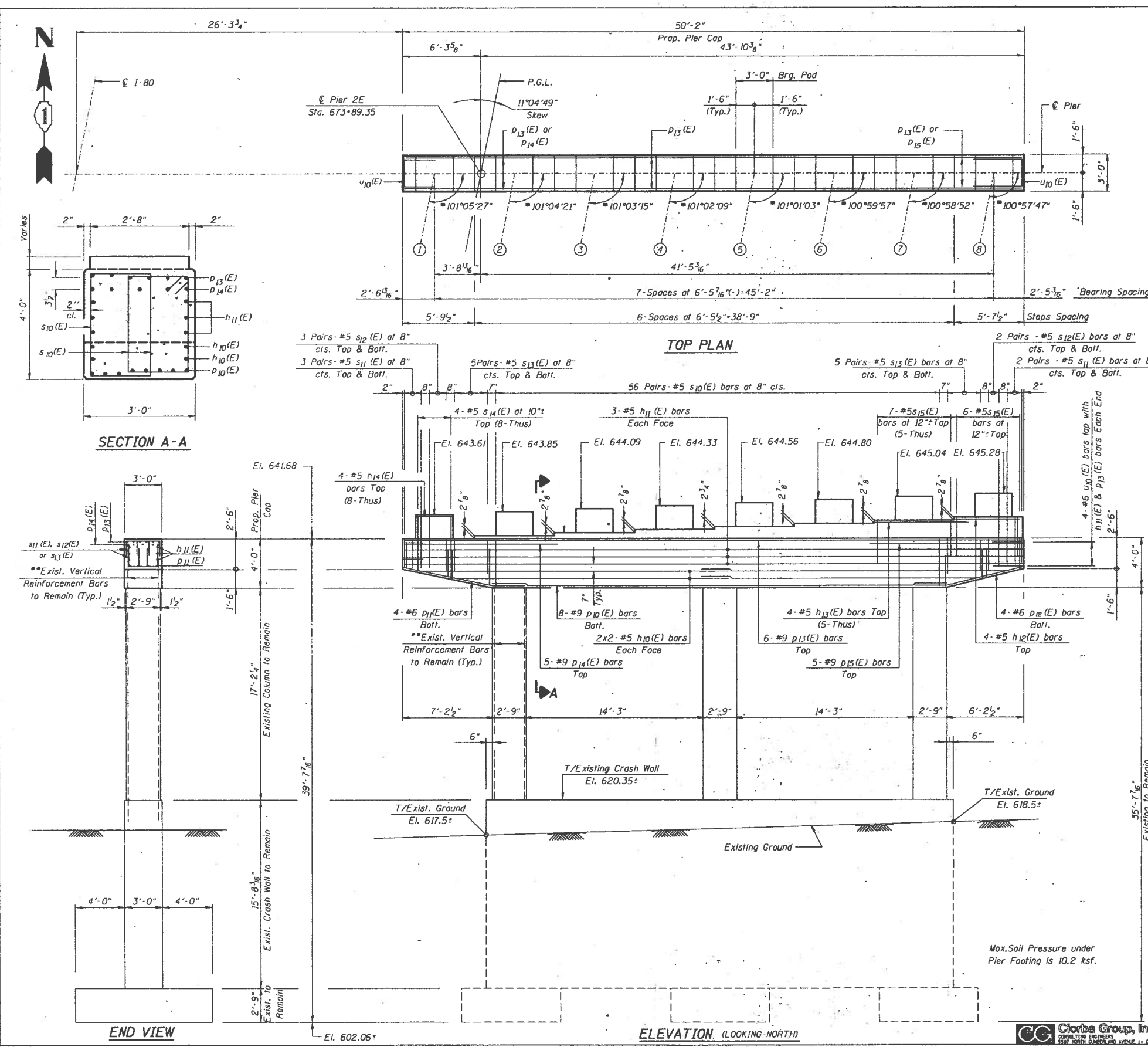
ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PIER 2E DETAILS
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: JULY 1995

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

REVISIONS	
NAME	DATE

Clorbe Group, Inc.
SPECIALTY ENGINEERS
3707 NORTH DUNSMUIR AVENUE, CHICAGO, ILLINOIS 60654-1113 (773) 775-1000



SECTION A-A

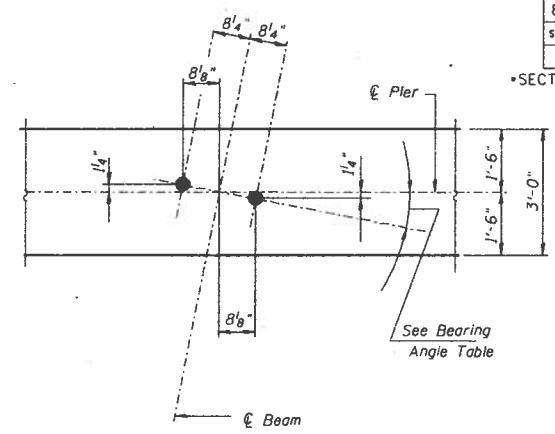
TOP PLAN

ELEVATION (LOOKING NORTH)

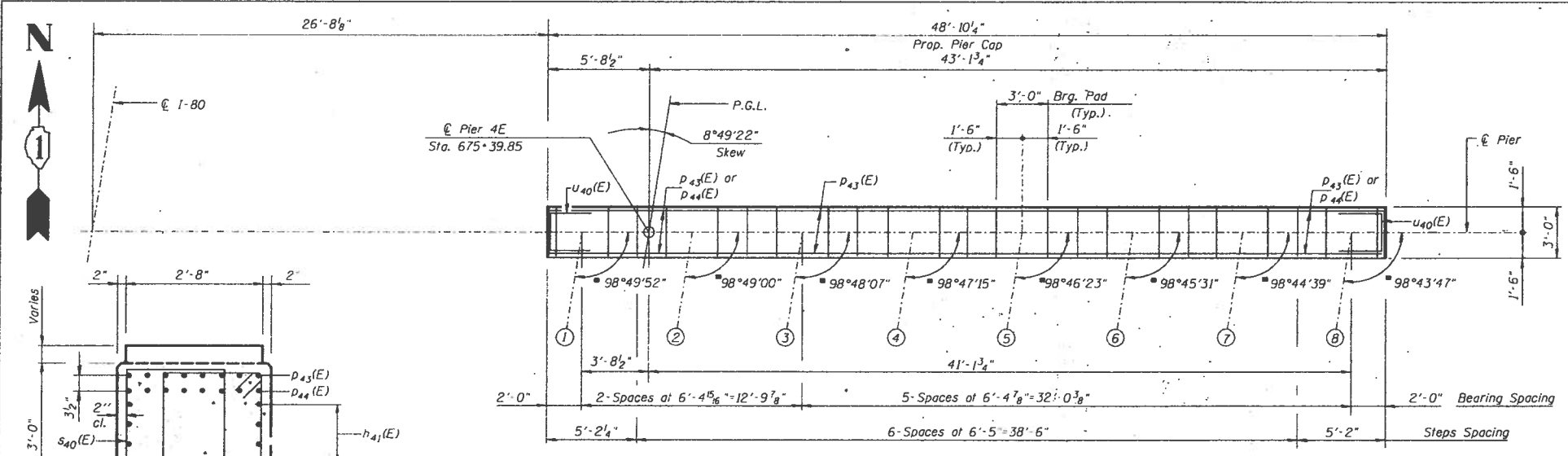
P.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
SECTION 99 (5.5-1;5VB) R & 99-4-1VB-1-BR				

BEARING ANGLE TABLE

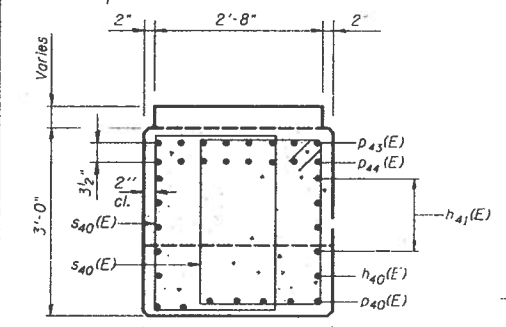
Beam No.	Bearing Angle
1	8°49'52"
2	8°49'00"
3	8°48'07"
4	8°47'15"
5	8°46'23"
6	8°45'31"
7	8°44'39"
8	8°43'47"



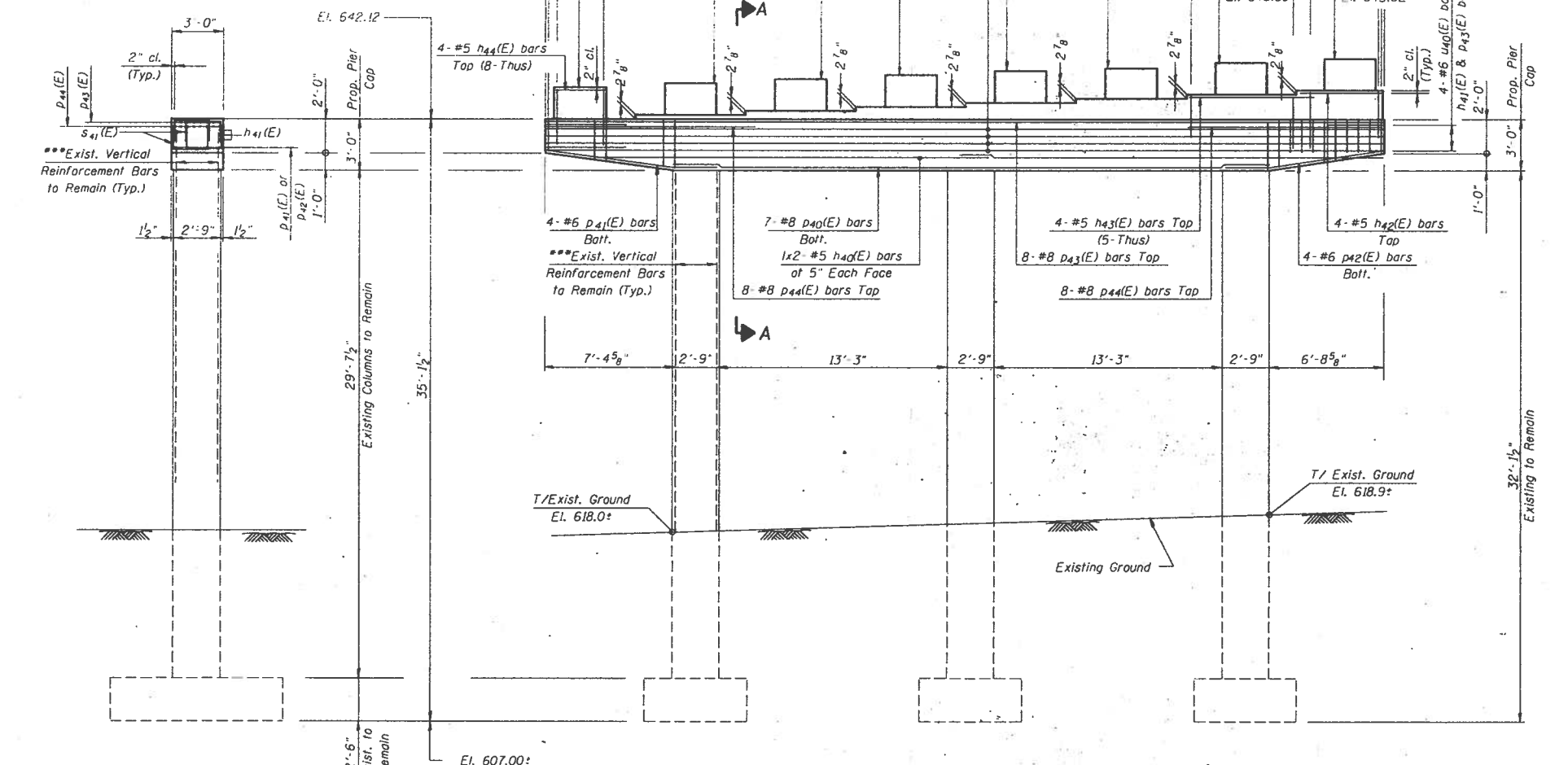
BEARING ANCHOR BOLTS LAYOUT



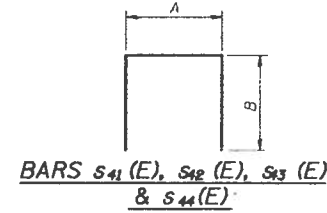
TOP PLAN



SECTION A-A



ELEVATION (LOOKING NORTH)



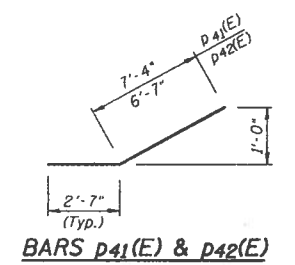
BARS s41(E), s42(E), & s44(E)

PIER 4E BILL OF MATERIAL

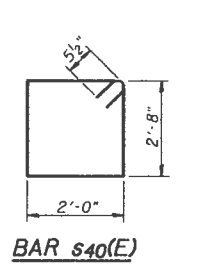
Bar	No.	Size	Length	Shape
h40(E)	4	#5	22'-5"	
h41(E)	8	#5	48'-6"	
h42(E)	4	#5	4'-10"	
h43(E)	20	#5	7'-7"	
h44(E)	32	#5	2'-8"	
D40(E)	7	#8	34'-9"	
D41(E)	4	#6	9'-11"	
D42(E)	4	#6	9'-2"	
D43(E)	8	#8	48'-6"	
D44(E)	16	#8	12'-0"	
s40(E)	106	#5	10'-3"	□
s41(E)	40	#5	5'-4"	□
s42(E)	44	#5	6'-2"	□
s43(E)	32	#5	9'-4"	□
s44(E)	41	#5	8'-4"	□
u40(E)	8	#6	7'-8"	□

Bar	A	B
s41(E)	2'-0"	1'-8"
s42(E)	2'-0"	2'-1"
s43(E)	2'-4"	3'-6"
s44(E)	2'-4"	3'-0"

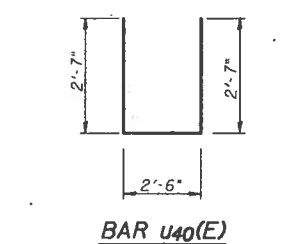
A & B DIMENSIONS



BARS p41(E) & p42(E)



BAR s40(E)



BAR u40(E)

NOTES:

Space Reinforcement in cap to miss anchor bolts. All edges shall have standard 3/4" chamfer except as noted. Pour steps monolithically with cap. Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete. Angle shown is angle between the ϕ of beam and the ϕ of the pier. For the angle and details used to place the Bearing Anchor Bolts see Bearing Anchor Bolts Layout this Sheet. Minimum Lap should be 2'-2" for #5 bars & 2'-7" for #6 bars. Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line. For Pier Repair & Cap Removal Details See Sheet S-51.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PIER 4E DETAILS
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: JULY 1995
DESIGNED BY: PWP
DRAWN BY: IMG
CHECKED BY: LAS

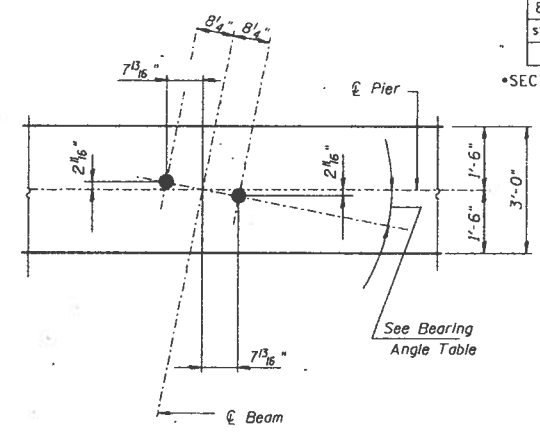


SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA.	TO STA.		
FD. ROAD DIST. NO.	BLISS	FD. ROAD PROJECT	

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR

BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	19°10'02"
2	19°08'05"
3	19°06'07"
4	19°04'10"
5	19°02'14"
6	19°00'17"
7	18°58'22"
8	18°56'26"



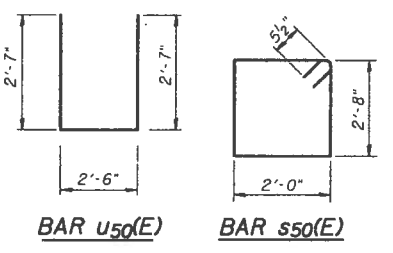
BEARING ANCHOR BOLTS LAYOUT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₅₀ (E)	4	#5	23'-6"	—
h ₅₁ (E)	8	#5	50'-7"	—
h ₅₂ (E)	4	#5	5'-0"	—
h ₅₃ (E)	20	#5	7'-11"	—
h ₅₄ (E)	32	#5	2'-8"	—
p ₅₀ (E)	6	#9	36'-9"	—
p ₅₁ (E)	4	#6	9'-7"	—
p ₅₂ (E)	4	#6	9'-6"	—
p ₅₃ (E)	8	#8	50'-7"	—
p ₅₄ (E)	16	#8	12'-0"	—
s ₅₀ (E)	110	#5	10'-3"	□
s ₅₁ (E)	40	#5	5'-4"	□
s ₅₂ (E)	48	#5	6'-2"	□
s ₅₃ (E)	32	#5	9'-4"	□
s ₅₄ (E)	41	#5	8'-4"	□
u ₅₀ (E)	8	#6	7'-8"	□
Concrete Structures		Cu. Yd.	25.8	
Reinforcement Bars, Epoxy Coated		Lbs.	5720	

A & B DIMENSIONS

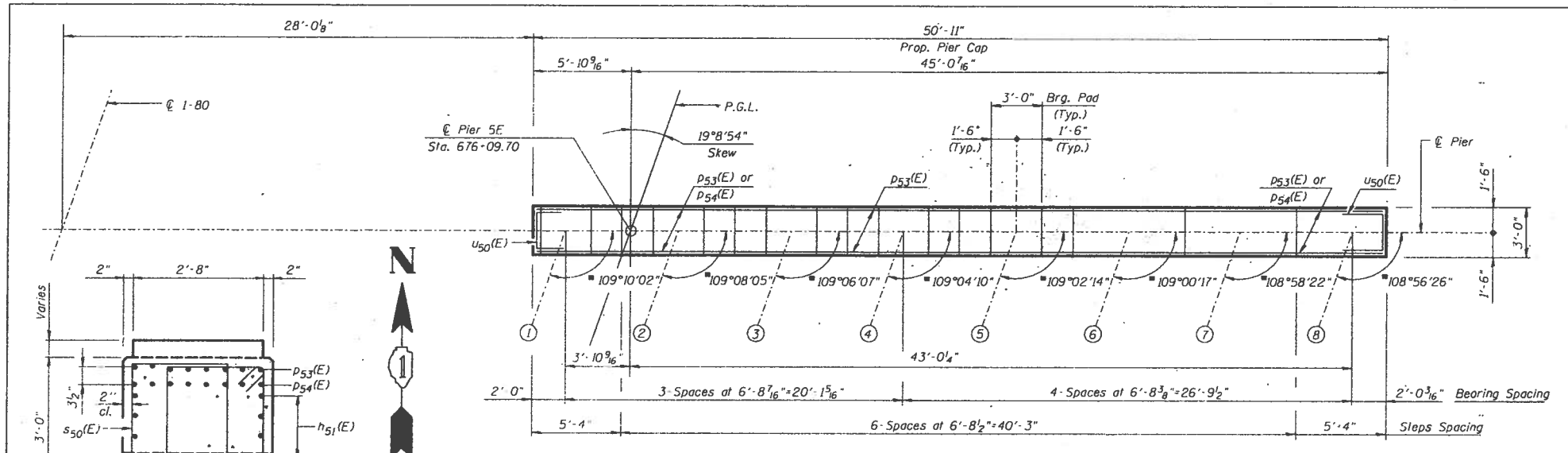
Bar	A	B
s ₅₁ (E)	2'-0"	1'-8"
s ₅₂ (E)	2'-0"	2'-1"
s ₅₃ (E)	2'-4"	3'-6"
s ₅₄ (E)	2'-4"	3'-0"



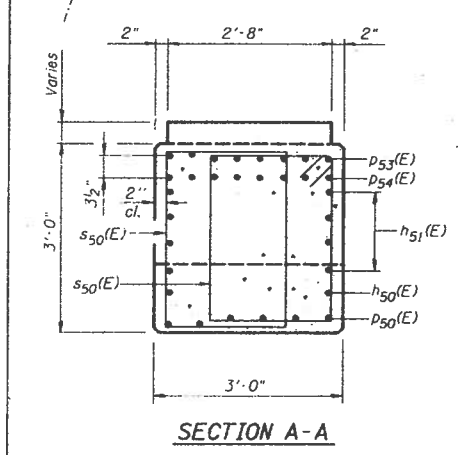
BAR u₅₀(E) BAR s₅₀(E)

NOTES:

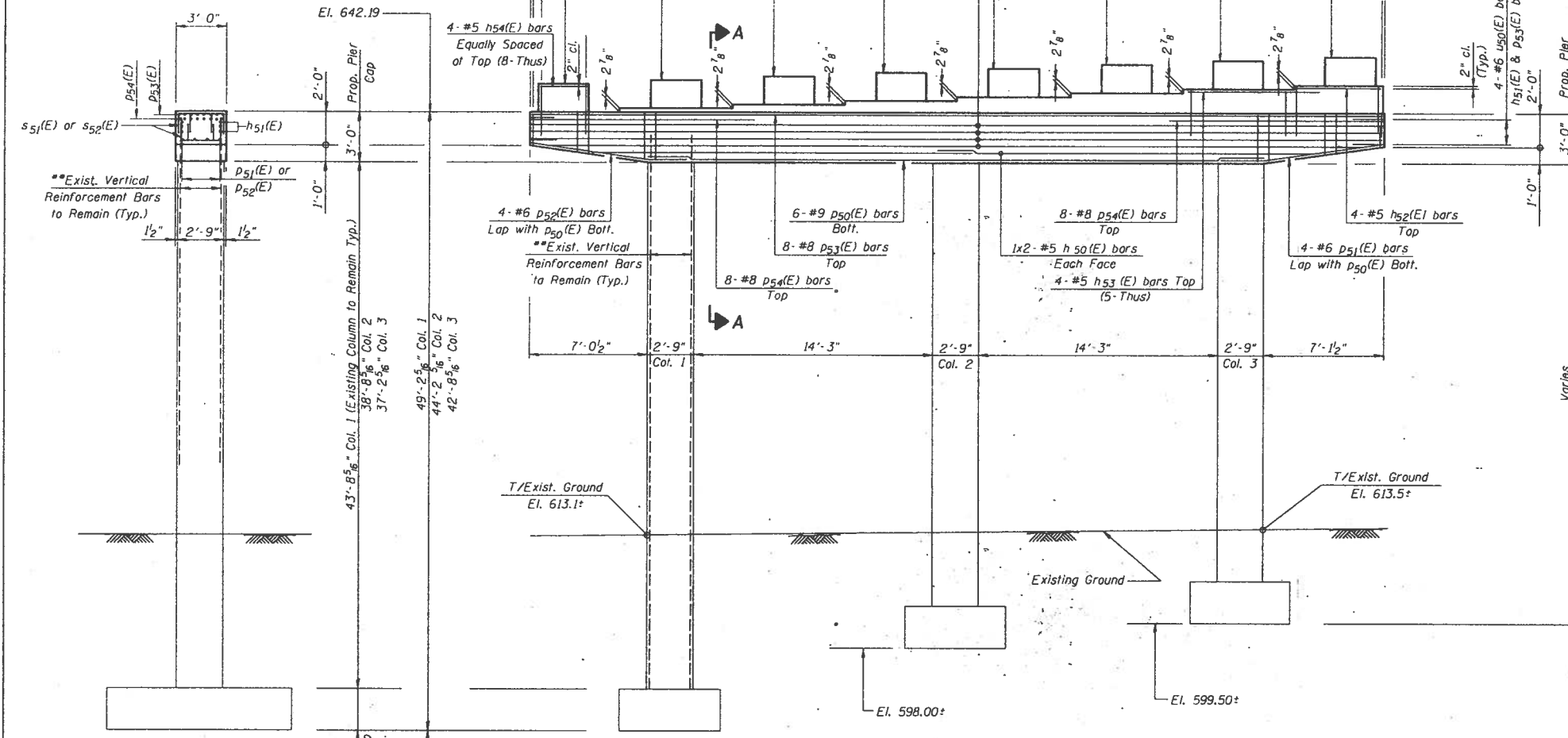
- Space Reinforcement in cap to miss anchor bolts. All edges shall have standard 3/4" chamfer except as noted. Pour steps monolithically with cap.
- Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
- Angle shown is angle between the ϵ of beam and the ϵ of the pier. For the angle and details used to place the Bearing Anchor Bolts see Bearing Anchor Bolts Layout this Sheet. Minimum Lap 2'-2" for #5 bars & 2'-7" for #6 bars. Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line.
- For Pier Repair & Cap Removal Details See Sheet S-52.



TOP PLAN



SECTION A-A



ELEVATION (LOOKING NORTH)

END VIEW

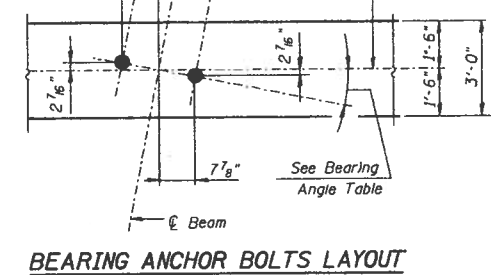
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PIER 5E DETAILS
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY
DESIGNED BY: PWP
DRAWN BY: IMG
CHECKED BY: LAS
SCALE: N.T.S.
DATE: JULY 1995



BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	17°17'08"
2	17°15'22"
3	17°13'37"
4	17°11'52"
5	17°10'08"
6	17°08'24"
7	17°06'40"
8	17°04'57"



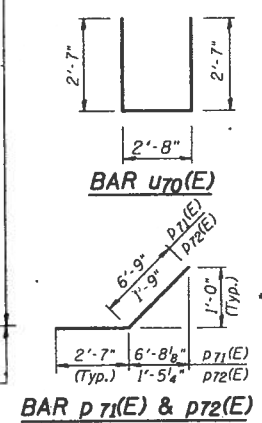
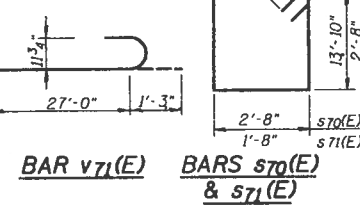
**PIER 7E
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h70(E)	36	#5	7'-6"	—
h71(E)	60	#5	2'-11"	—
h72(E)	20	#5	26'-4"	—
h73(E)	4	#5	5'-3"	—
h74(E)	20	#5	8'-7"	—
h75(E)	32	#5	2'-8"	—
p70(E)	6	#9	42'-2"	—
p71(E)	4	#6	9'-4"	—
p72(E)	4	#6	4'-4"	—
p73(E)	5	#11	50'-4"	—
p74(E)	4	#11	12'-0"	—
s70(E)	8	#5	33'-11"	□
s71(E)	104	#5	9'-7"	□
s72(E)	24	#5	5'-0"	□
s73(E)	16	#5	6'-2"	□
s74(E)	41	#5	9'-10"	□
s75(E)	32	#5	9'-0"	□
sp70(E)	1	#5	2653'-7"	—
u70(E)	8	#6	7'-10"	—
v70(E)	12	#9	29'-6"	—
v71(E)	12	#9	28'-3"	—
Concrete Structures			Cu. Yd.	49.6
Reinforcement Bars, Epoxy Coated			Lbs.	11330
Caisson Shafts 30"			Cu. Ft.	40

BARS s72(E), s73(E), s74(E) & s75(E)

A & B DIMENSIONS

Bar	A	B
s72(E)	1'-8"	1'-8"
s73(E)	1'-8"	2'-3"
s74(E)	2'-4"	3'-9"
s75(E)	2'-4"	3'-4"

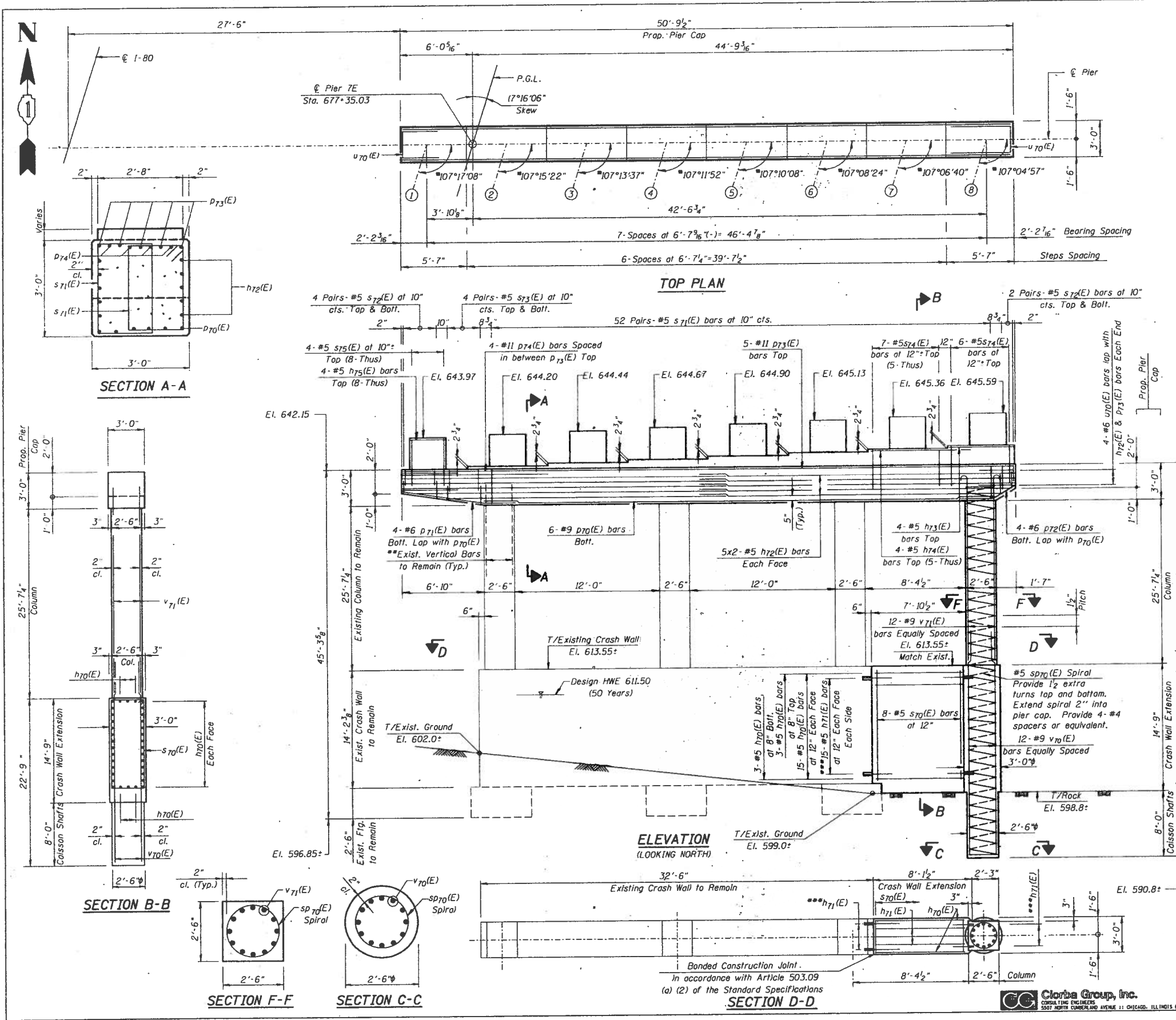


NOTES:
 Space Reinforcement in cap to miss anchor bolts. All edges shall have standard 1/4" chamfer except as noted. Four steps monolithically with cap.
 Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
 Angle shown is angle between the centerline of beam and the centerline of the pier. For the angle and details used to place the Bearing Anchor Bolts see Anchor Bolts Layout this Sheet. Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 5'-9" for #9 bars. Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line.
 Epoxy grout h72(E) in a 7/8" hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584. For Pier Repair & Cap Removal Details see Sheet S-54.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER 7E DETAILS
 FAI-80 STA. 673+37.46
 SECTION 99-4-1VB-1-BR
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMG
 CHECKED BY: LAS

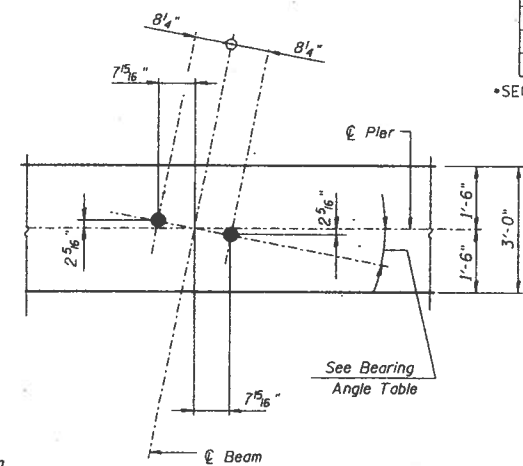
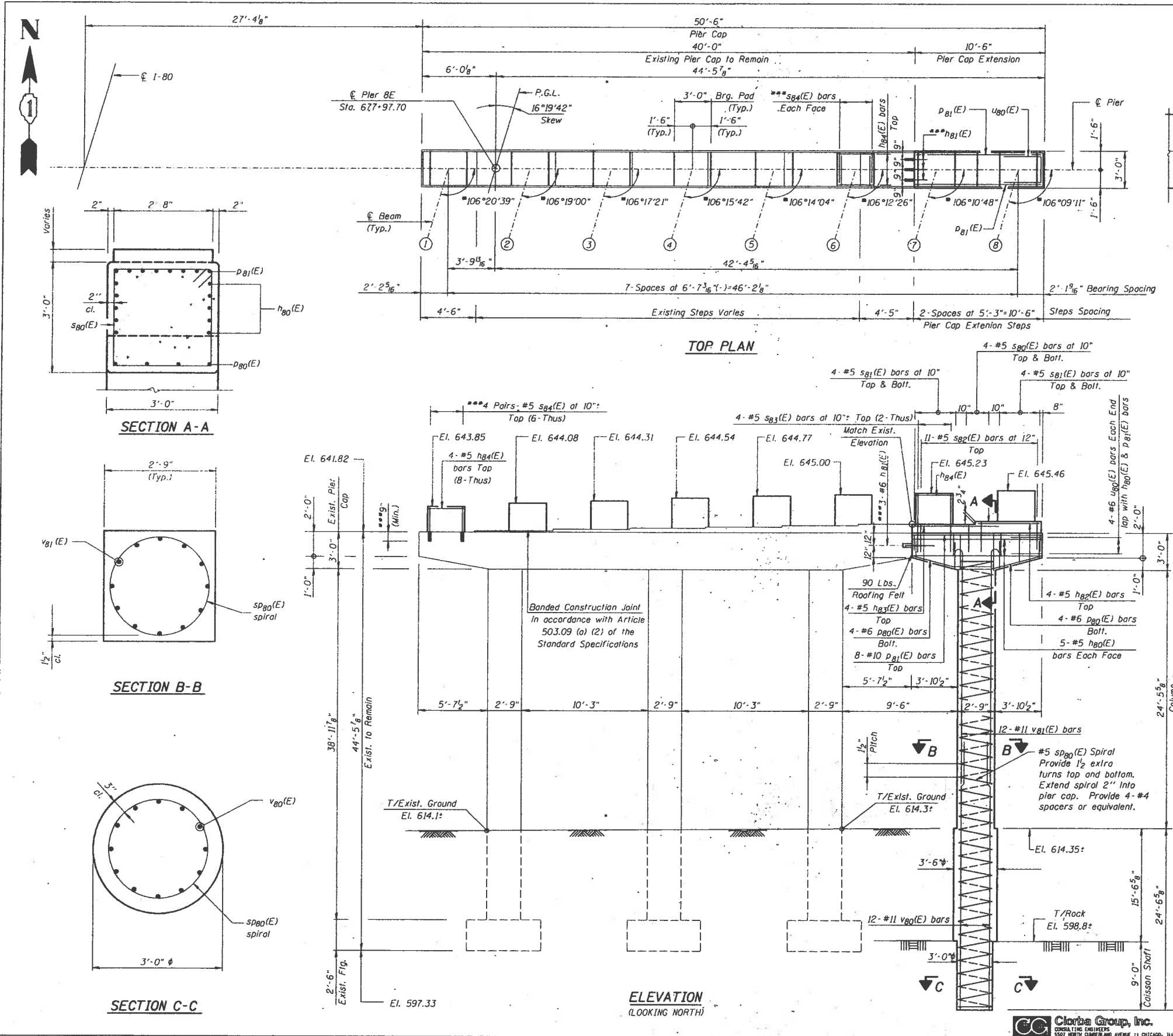
REVISIONS

NAME	DATE



F.A. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80		WILL		
STA.	TO STA.			
PER. ROAD DIST. NO.	BLADES	PER. AID PROJECT		

*SECTION 99 (5.5-1;5VB) R & 99-4-1VB-1-BR

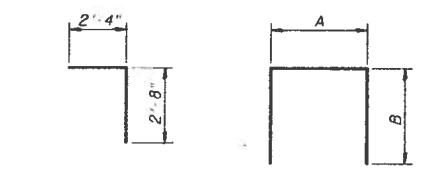


BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	16°20'39"
2	16°19'00"
3	16°17'21"
4	16°15'42"
5	16°14'04"
6	16°12'26"
7	16°10'48"
8	16°09'11"

BEARING ANCHOR BOLTS LAYOUT



BAR S84(E) BARS S81(E), S82(E) & S83(E)

A & B DIMENSIONS

Bar	A	B
S81(E)	2'-8"	1'-8"
S82(E)	2'-4"	2'-5"
S83(E)	2'-4"	4'-6"

BILL OF MATERIAL

Bar No.	Size	Length	Shape
h80(E)	#5	10'-2"	—
h81(E)	#6	3'-4"	—
h82(E)	#5	5'-0"	—
h83(E)	#5	7'-3"	—
h84(E)	#5	2'-8"	—
pg0(E)	#6	6'-6"	—
pb1(E)	#10	10'-2"	—
sg0(E)	#5	11'-9"	□
sg1(E)	#5	6'-0"	□
sg2(E)	#5	7'-2"	□
sg3(E)	#5	11'-4"	□
sg4(E)	#5	5'-0"	□
sp80(E)	#5	3103'-8"	—
u80(E)	#6	7'-10"	—
v80(E)	#11	34'-0"	—
vb1(E)	#11	27'-8"	—
Concrete Structures	Cu. Yd.	22.6	
Reinforcement Bars, Epoxy Coated	Lbs.	8530	
Coisson Shaft 36"	Cu. Ft.	64	

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

*** Epoxy grout sg4(E) in 7/8" φ holes & h81(E) bars a 1" φ holes. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.
 Space Reinforcement in cap to miss anchor bolts. All edges shall have standard 3/4" chamfer except as noted. Pour steps monolithically with cap.
 Angle shown is angle between the centerline of beam and the centerline of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet. Min. lap is 9'-0" for #11 bar.

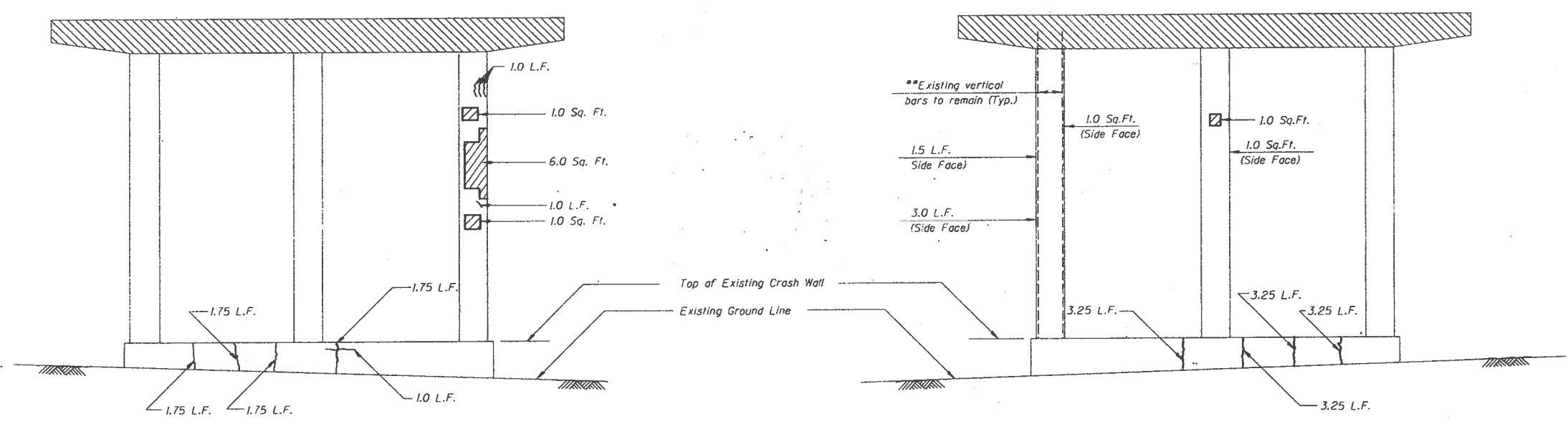
REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER BE DETAILS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: GAE
 DRAWN BY: IMC
 CHECKED BY: LAS
 SCALE: N.T.S.
 DATE: JULY 1995

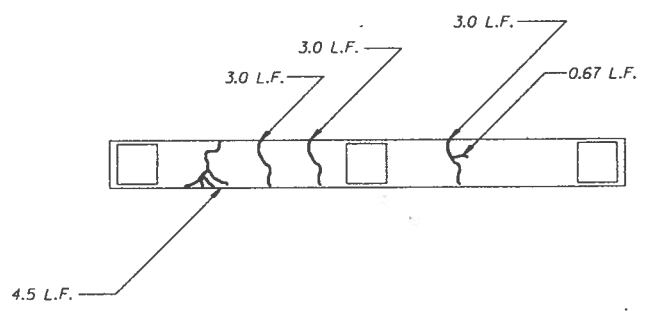
F.A. R/L.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
PUB. ROAD DIST. NO.		ILLINOIS	PUB. AID PROJECT	

*SECTION 99(5,5-1;5VB) R & 99-4-1VB-1-BR



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth < 5')
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5')	Sq. Ft.	11
Epoxy Crack Sealing	Foot	44
Concrete Removal	Cu.Yd.	19.9

Note: Epoxy crack sealing and Formed Concrete Repair (Depth < 5') quantities are approximate and must be verified in the field.
 **Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.

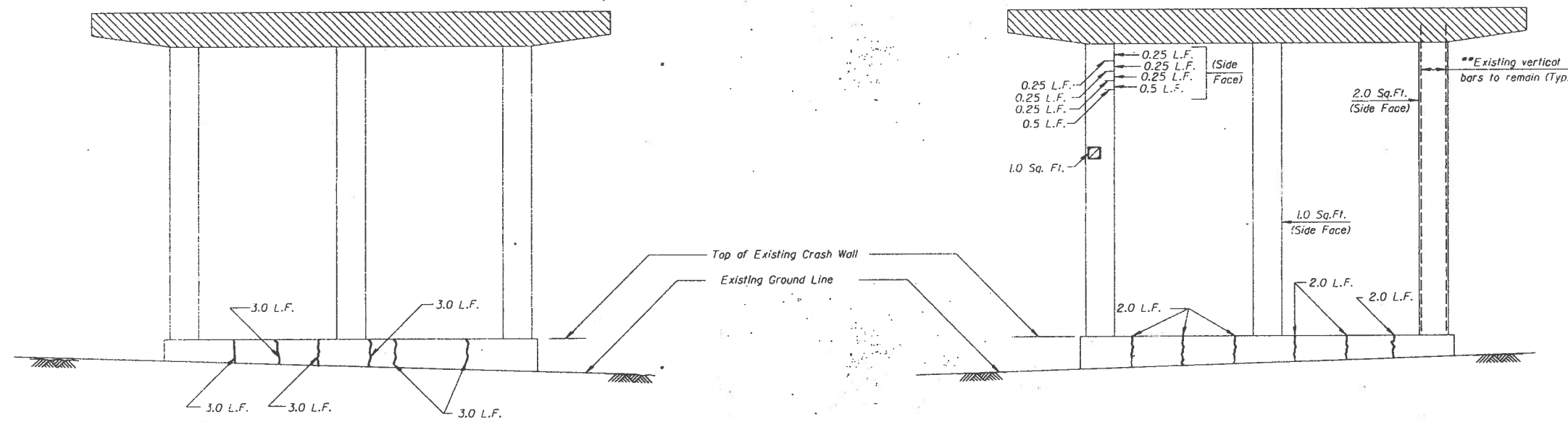
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER NO. 1E REPAIR
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE: N.T.S. DESIGNED BY: LAS
 DATE: JULY 1995 DRAWN BY: IMG
 CHECKED BY: GAE

Sheet S-49 of S-65

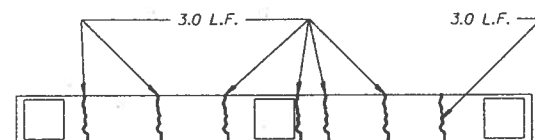
S. & S.L.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	BLDG.	FED. AID PROJECT		

*SECTION 99(5.5-1; 5VB) R & 99-4-1VB-1-BR



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

- LEGEND:**
- Epoxy Crack Sealing
 - Formed Concrete Repair (Depth < 5")
 - Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5")	Sq. Ft.	4
Epoxy Crack Sealing	Foot	54
Concrete Removal	Cu. Yd.	22.5

Note: Epoxy crack sealing and Formed Concrete Repair (Depth < 5") quantities are approximate and must be verified in the field.
 **Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.

REVISIONS	
NAME	DATE

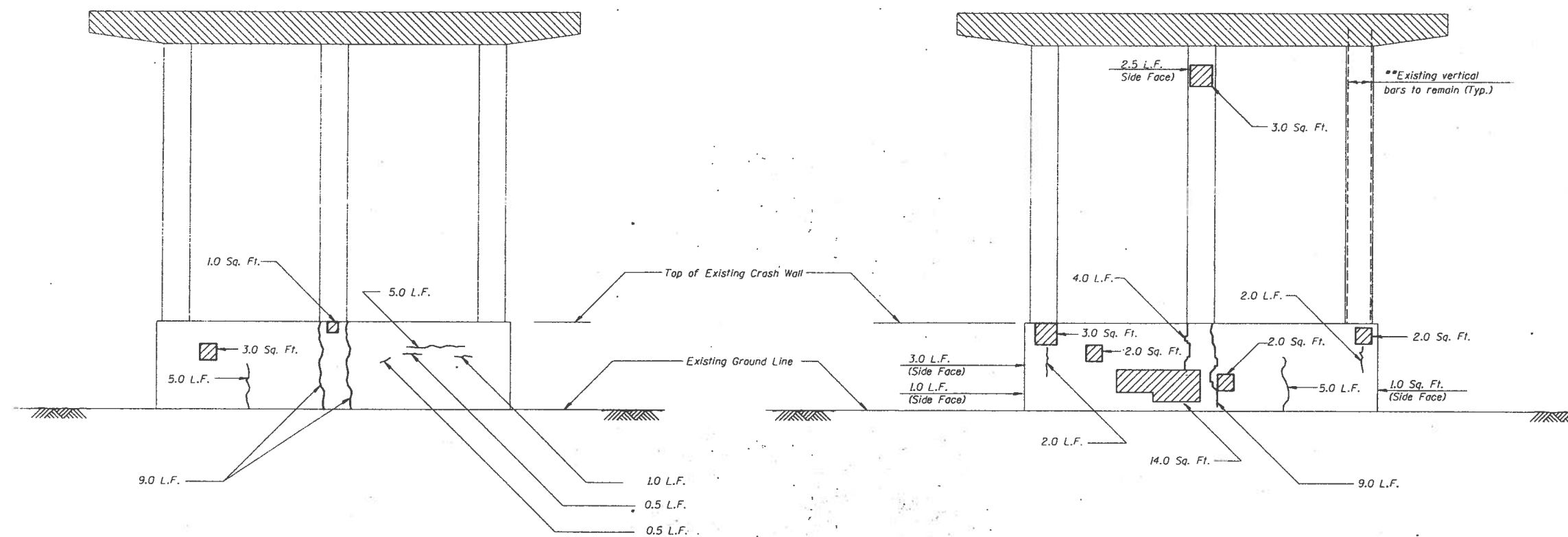
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER NO. 2E REPAIR
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY DESIGNED BY: LAS

SCALE: N.T.S. DRAWN BY: IMG
 DATE: JULY 1995 CHECKED BY: GAE

Clorbe Group, Inc.
 CONSULTING ENGINEERS
 5907 NORTH COLUMBIAN AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

P.A. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL.		
STA.		TO STA.		
FED. ROAD DIST. NO.	BLK.	FED. AID PROJECT		

*SECTION 99(5.5-1; 5VB) R & 99-4-1VB-1-BR



- LEGEND:**
- Epoxy Crack Sealing
 - Formed Concrete Repair (Depth < 5')
 - Concrete Removal

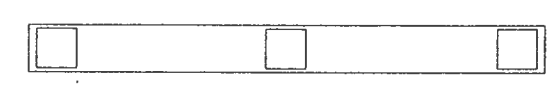
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5')	Sq. Ft.	31
Epoxy Crack Sealing	Foot	59
Concrete Removal	Cu.Yd.	19.9

Note: Epoxy crack sealing and Formed Concrete Repair quantities (Depth < 5') are approximate and must be verified in the field.
 **Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.

ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER NO. 3E REPAIR
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY DESIGNED BY: LAS
 SCALE: N.T.S. DRAWN BY: IMG
 DATE: JULY 1995 CHECKED BY: GAE






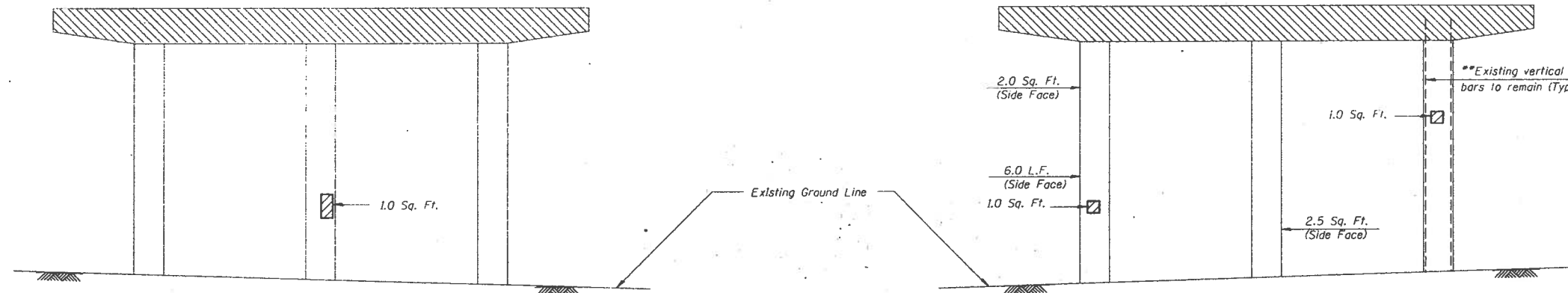
Sheet S-51 of S-65

P.L. R/L	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	"	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ALIGNED	P.L. AND PROJECT		

*SECTION 99 (5, 5-1; 5VB) R & 99-4-1VB-1-1BR

Legend:

-  Epoxy Crack Sealing
-  Formed Concrete Repair (Depth ≤ 5")
-  Concrete Removal



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	8
Epoxy Crack Sealing	Foot	6
Concrete Removal	Cu. Yd.	16.4

Note: Epoxy crack sealing and Formed Concrete Repair (Depth ≤ 5") quantities are approximate and must be verified in the field.

**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 4E REPAIR
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY DESIGNED BY: LAS

SCALE: N.T.S.
DATE: JULY 1995




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CHECKED BY: GAE

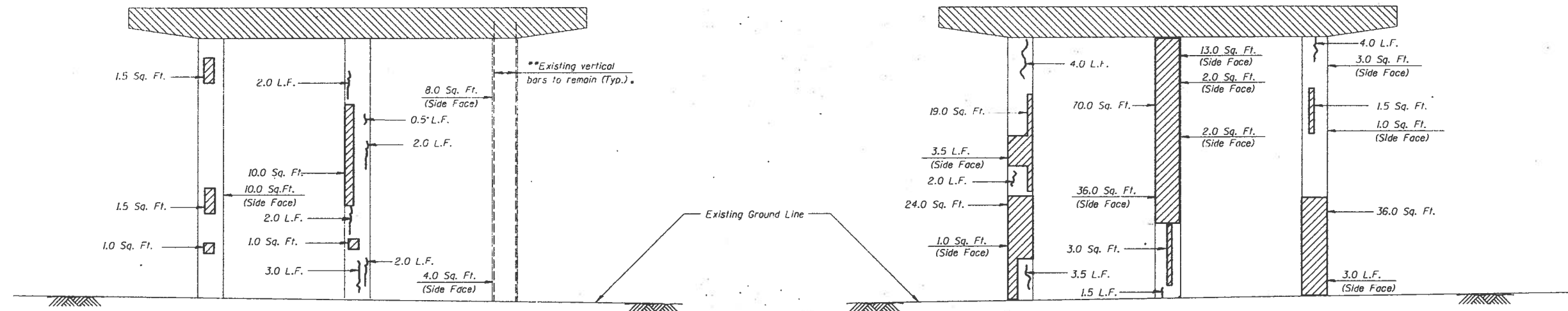
CG Clorbe Group, Inc.
CONSULTING ENGINEERS
2307 NORTH CUMBERLAND AVENUE • CHICAGO, ILLINOIS 60634 • (312) 775-4000

F. & S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. AID DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (S, 5-1; 5VB) R & 99-4-1VB-1-1BR

LEGEND:

-  Epoxy Crack Sealing
-  Formed Concrete Repair (Depth < 5")
-  Concrete Removal



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5")	Sq. Ft.	249
Epoxy Crack Sealing	Lin. Ft.	33
Concrete Removal	Cu.Yd.	16.9

Note: Epoxy crack sealing and Formed Concrete Repair (Depth < 5") quantities are approximate and must be verified in the field.

**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 5E REPAIR
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY DESIGNED BY: LAS

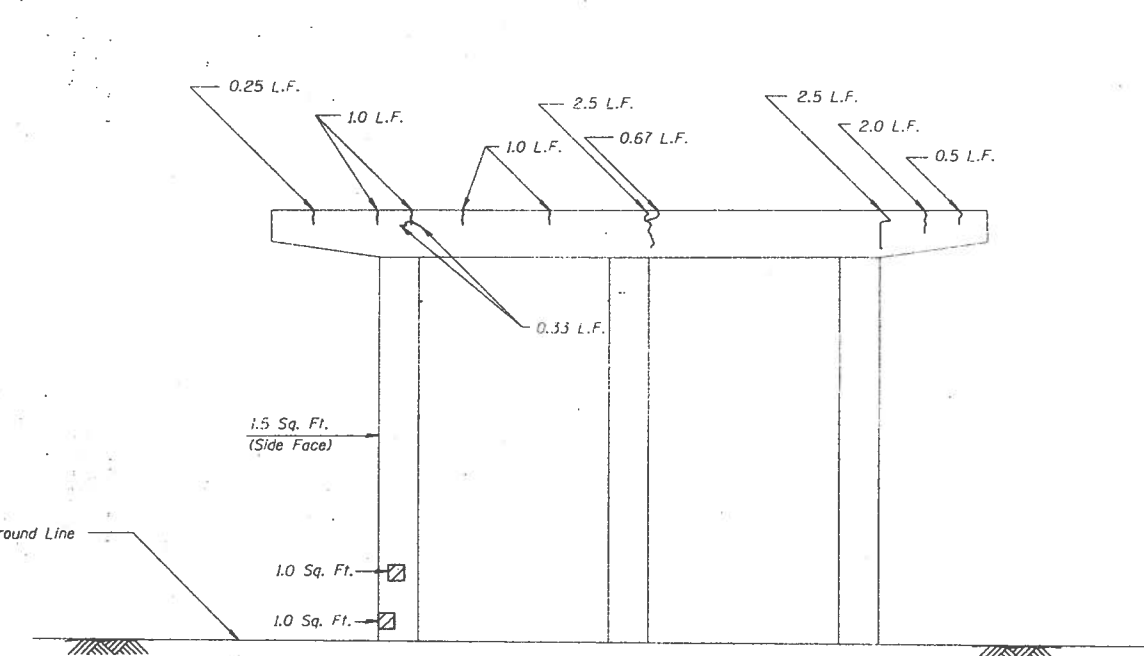
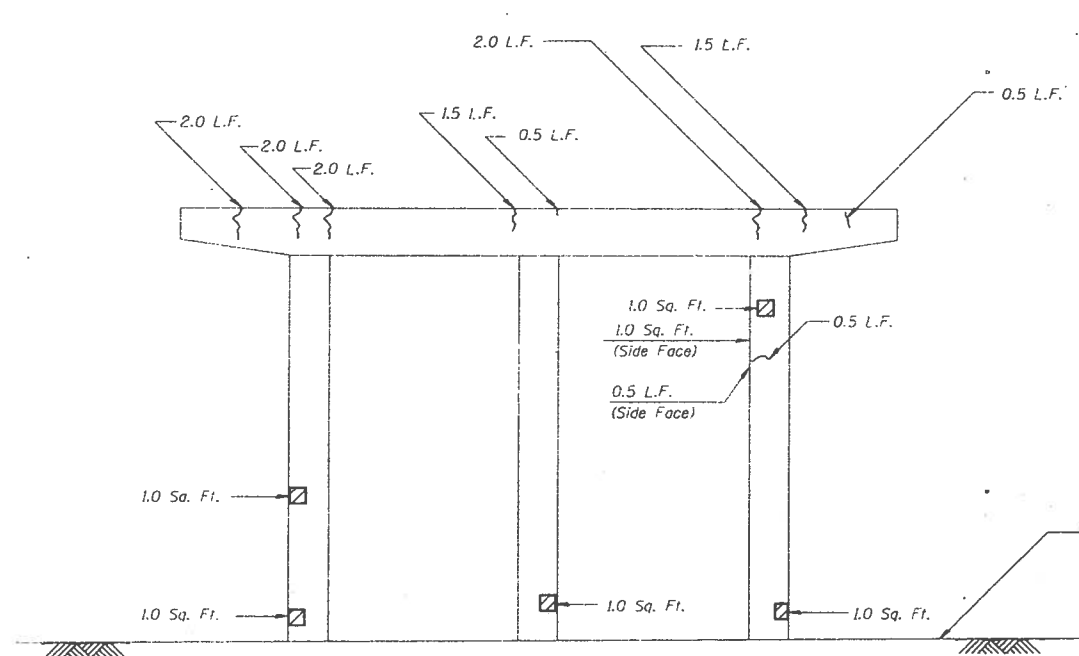
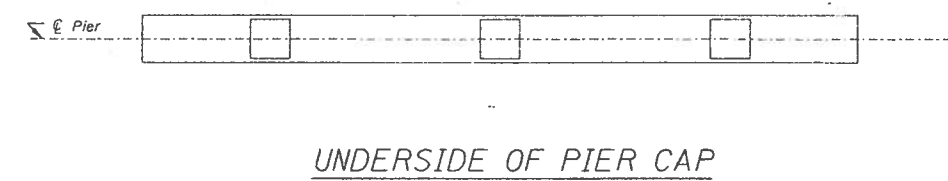
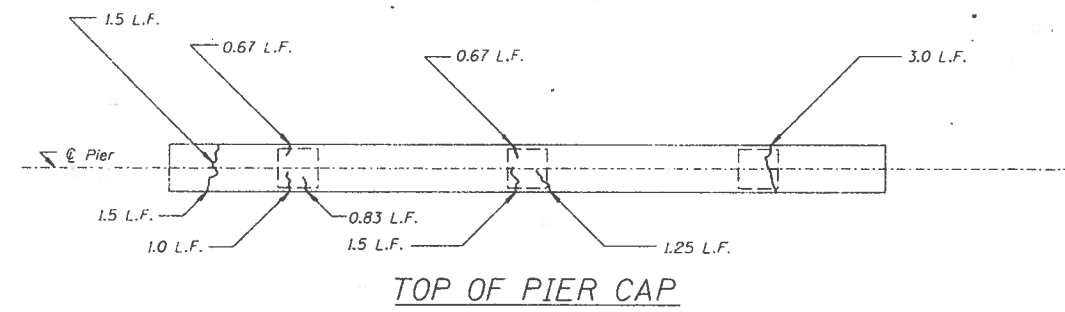
SCALE: N.T.S.
DATE: JULY 1995

DRAWN BY: IMG
CHECKED BY: GAE



F.A. DIST.	SECTION	COUNTY	TYPICAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5, 5-1; 5VB) R & 99-4-1VB-1-1BR



LEGEND:
 Epoxy Crack Sealing
 Formed Concrete Repair (Depth < 5'')

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth < 5'')	Sq. Ft.	10
Epoxy Crack Sealing	Foot	38

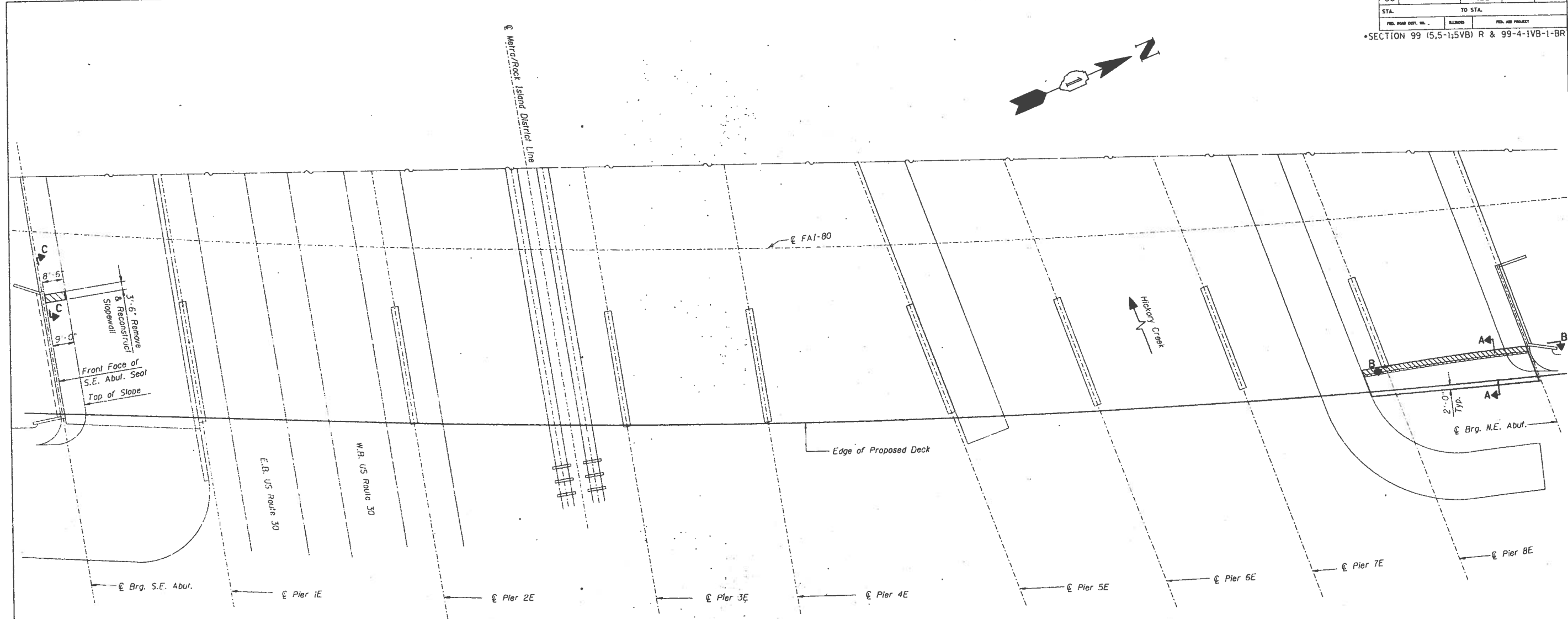
Note: Epoxy crack sealing and Formed Concrete Repair (Depth < 5'') quantities are approximate and must be verified in the field.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 PIER NO. BE REPAIR
 FAI-80 STA. 673+35.88
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 DESIGNED BY: LAS
 DRAWN BY: IMG
 SCALE: N.T.S.
 DATE: JULY 1995
 CHECKED BY: GAE

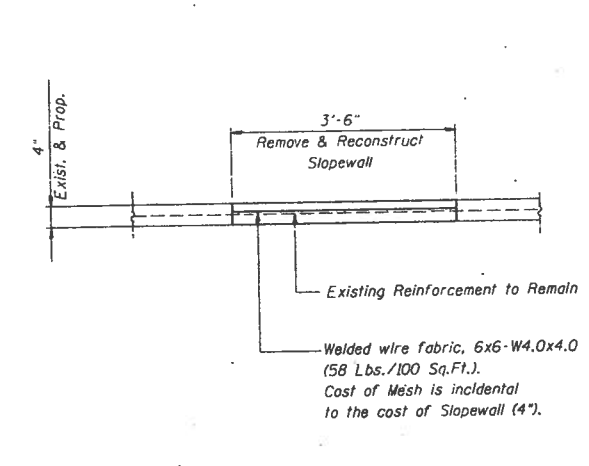
F. & B. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL			
STA.	TO STA.			
FED. ROAD DIST. NO.	REVISION	FED. AID PROJECT		

*SECTION 99 (5,5-1:5VB) R & 99-4-1VB-1-BR

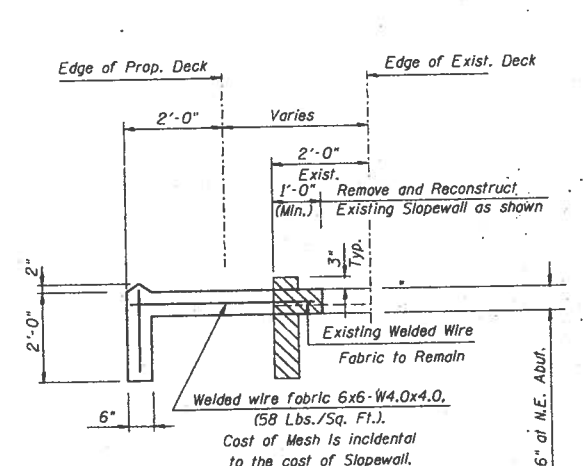


PLAN

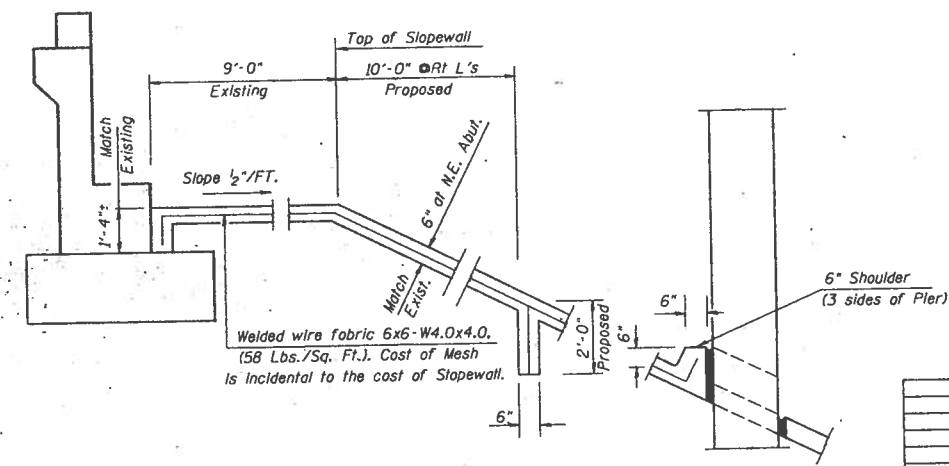
Legend:
 Slope Wall Removal



SECTION C-C



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	12
Slope Wall (4')	Sq. Yd.	4
Slope Wall (6')	Sq. Yd.	110

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SLOPEWALL REPAIR DETAILS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

SCALE: N.T.S.
 DATE: JULY 1995

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: GAE

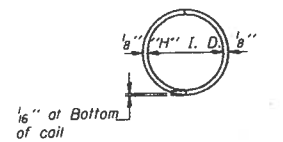
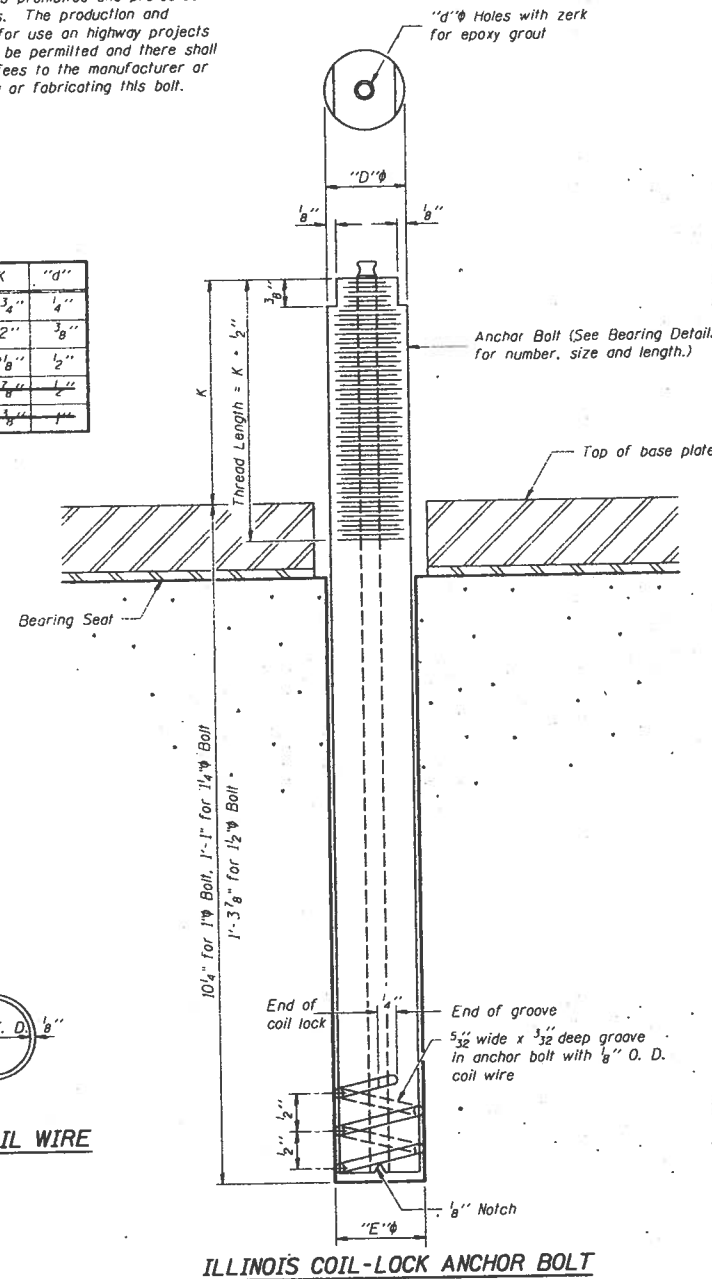
CG **Clorba Group, Inc.**
 CONSULTING ENGINEERS
 2507 NORTH CLAMOR AND AVENUE, CHICAGO, ILLINOIS 60654, TEL: (312) 775-4000

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.			
ILLINOIS			
FED. AID PROJECT			

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR

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

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



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature of installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

- With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
- Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer conforming to ASTM A307.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

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

ANCHOR BOLT DETAILS FOR BEARINGS

REVISIONS	
NAME	DATE

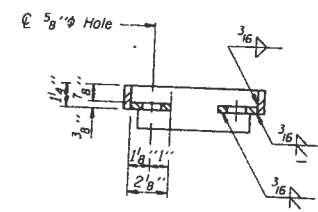
ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 ANCHOR BOLT DETAILS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY DESIGNED BY: LAS
 SCALE: N.T.S. DRAWN BY: IMG
 DATE: JULY 1995 CHECKED BY: PWP

CG Clorba Group, Inc.
 CONSULTING ENGINEERS
 5507 NORTH CLAMOND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 475-0091

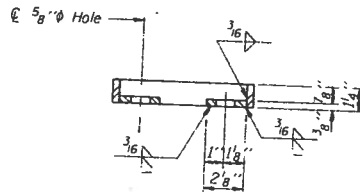
ABB-1 7-1-91

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.		ALIBERT	FED. AID PROJECT

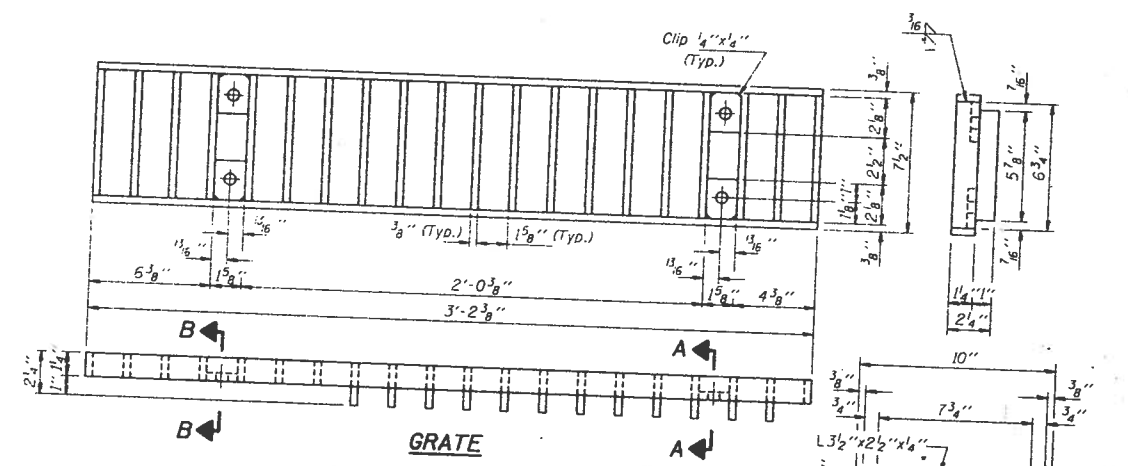
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SECTION A-A

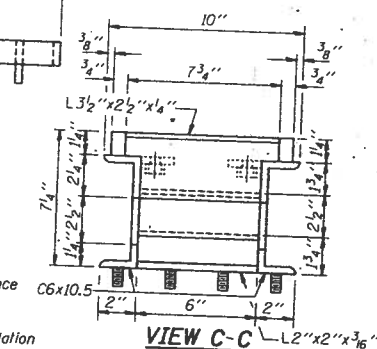


SECTION B-B

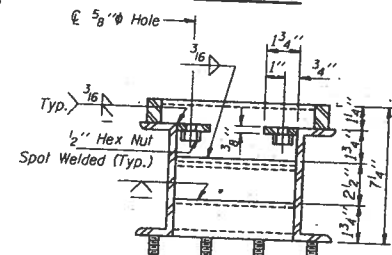


GRATE

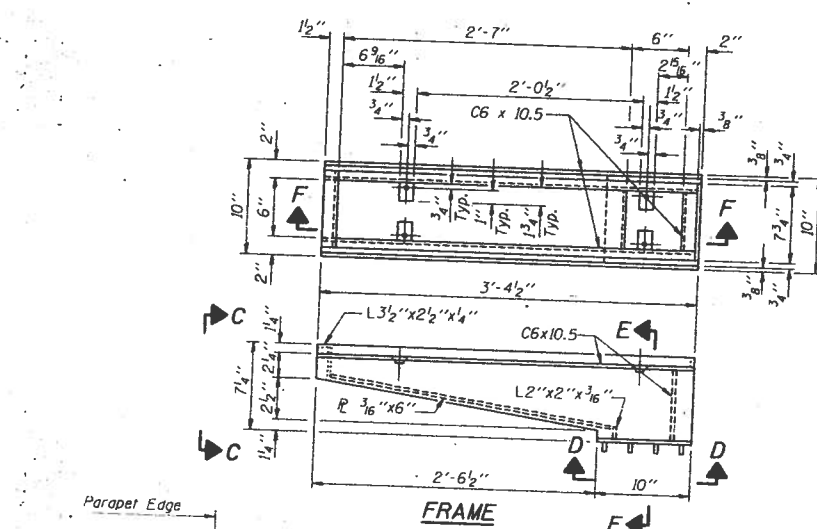
Notes:
 Hollow structural steel tubing shall conform to the requirements of ASTM designation A500 Grade B, or A501 Structural Steel Tubing.
 All other shapes, plates and bars shall conform to the requirements of AASHTO M183.
 Bolts, studs, washers and nuts shall conform to the requirements of ASTM A307.
 The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M111 & ASTM A385.
 All bolts, washers and nuts shall be galvanized in accordance with AASHTO M232.
 Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."



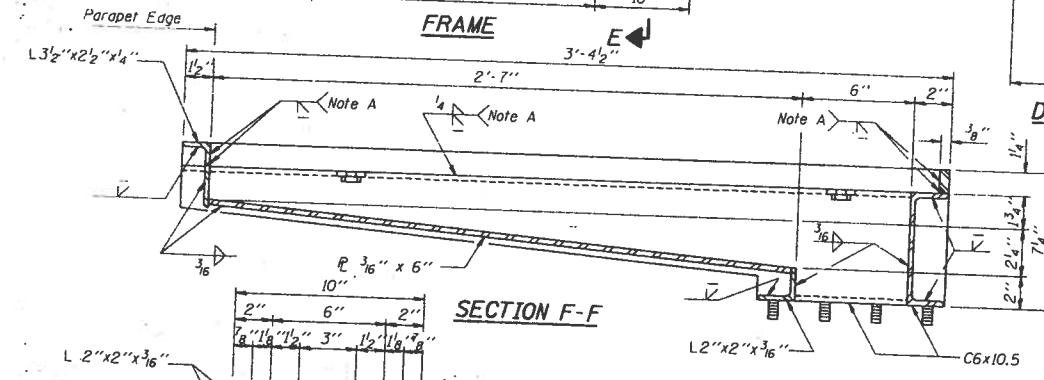
VIEW C-C



SECTION E-E

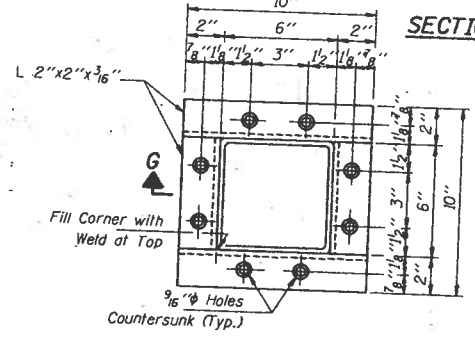


FRAME

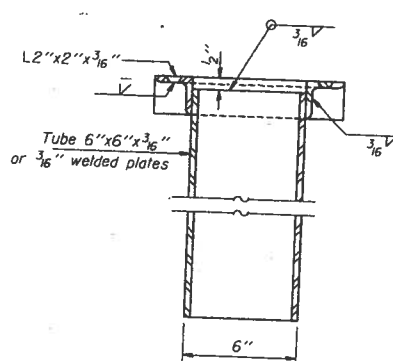


SECTION F-F

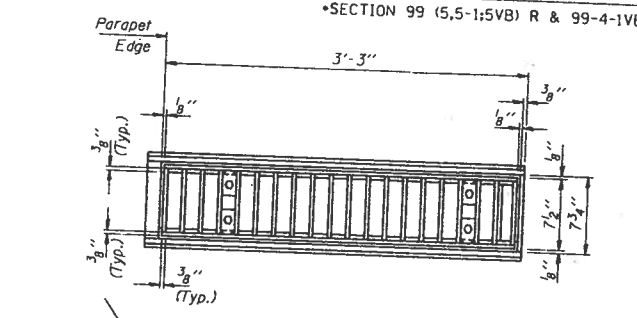
Note A: Surface of welds shall be recessed 1/16" Max. or placed flush with inside face of bars to provide clearance for Grate.



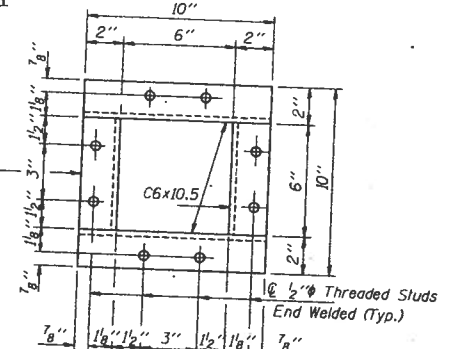
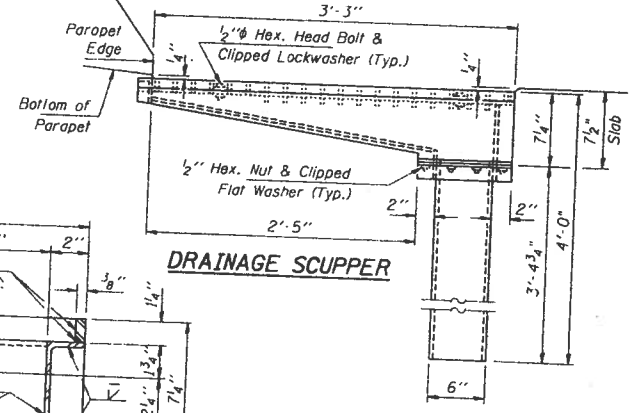
DOWNSPOUT



SECTION G-G



DRAINAGE SCUPPER



VIEW D-D

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	16

(Sheet 1 of 2)

STEEL DRAINAGE SCUPPER

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 STEEL DRAINAGE SCUPPER
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

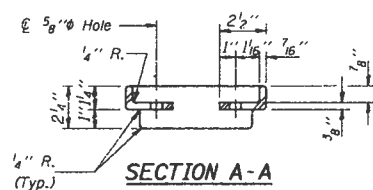
SCALE: N.T.S.
 DATE: JULY 1995

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: PWP

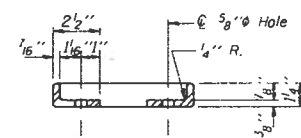
REVISIONS	
NAME	DATE

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	WILL		
STA. TO STA.			
FED. ROAD DIST. NO.		FED. AID PROJECT	

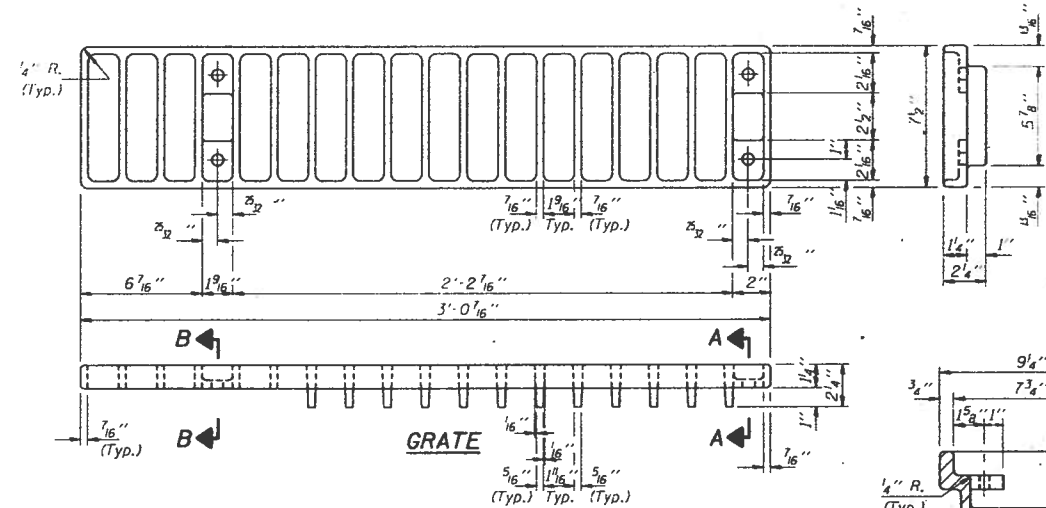
*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR



SECTION A-A



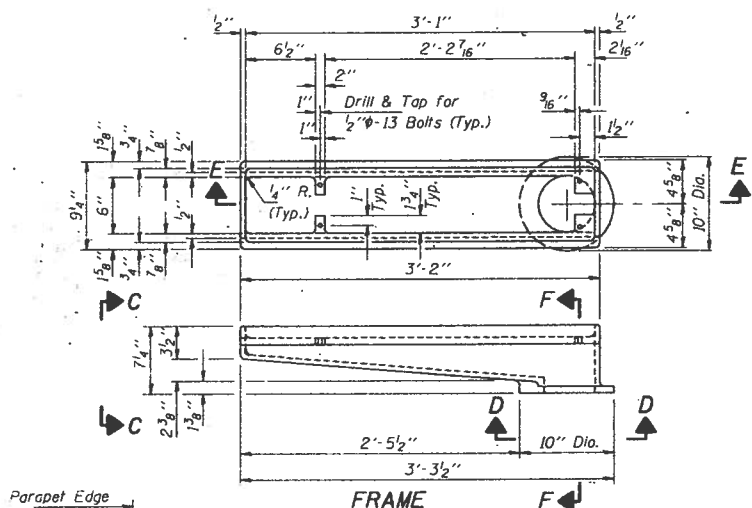
SECTION B-B



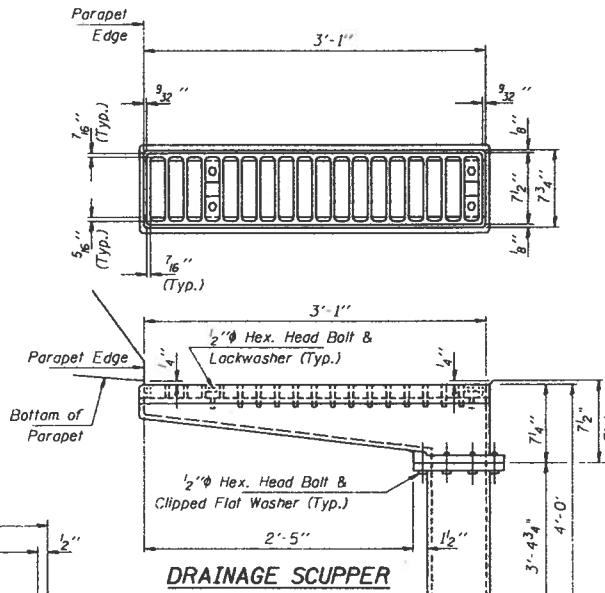
GRATE

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.
 Bolts and washers shall conform to the requirements of ASTM A307.
 All bolts and washers shall be galvanized in accordance with AASHTO M232.
 As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193, Type 304.
 Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."
 The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

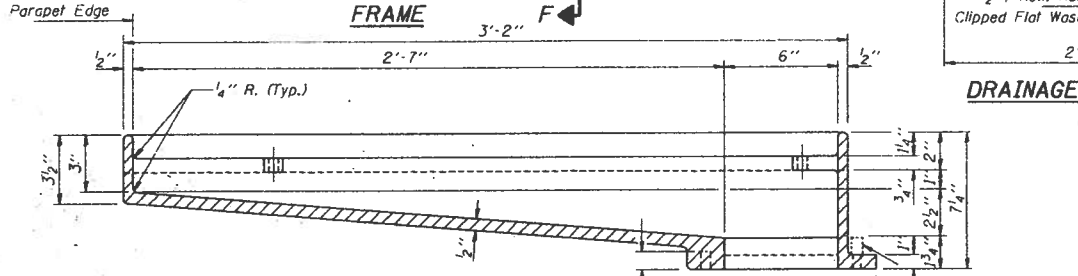
DS-4 2-26-93 (W.T. to inside of exterior stringer flange shall not be >3'-11")



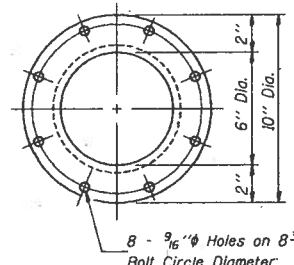
FRAME



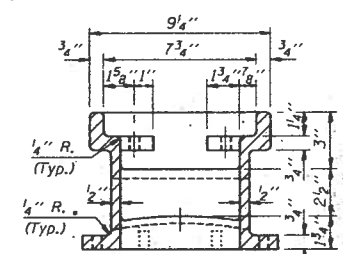
DRAINAGE SCUPPER



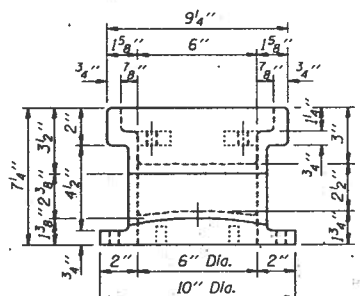
SECTION E-E



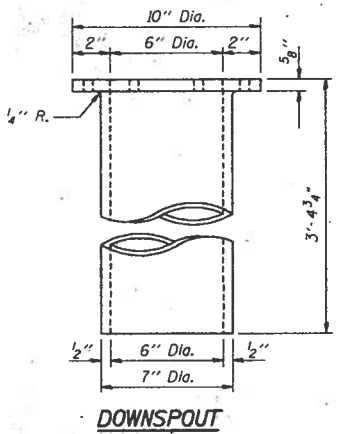
VIEW D-D



SECTION F-F



VIEW C-C



DOWNSPOUT

(Sheet 2 of 2)
**ALTERNATE - CAST IRON
 DRAINAGE SCUPPER**

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 ALTERNATE-CAST IRON DRAINAGE SCUPPER
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: PWP

REVISIONS	
NAME	DATE

Clorba Group, Inc.
 CONSULTING ENGINEERS
 5507 NORTH CUMBERLAND AVENUE, CHICAGO, ILLINOIS 60630

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

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR

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

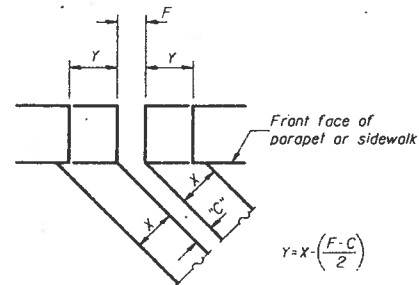
INSTALLATION NOTES

- 1 Install sponge mandrels into positions shown to form flap convolution.
- 2 Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- 3 Install continuous seal in roadway.
- 4 Install anchor blocks as indicated.

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

SKREW LIMITATIONS

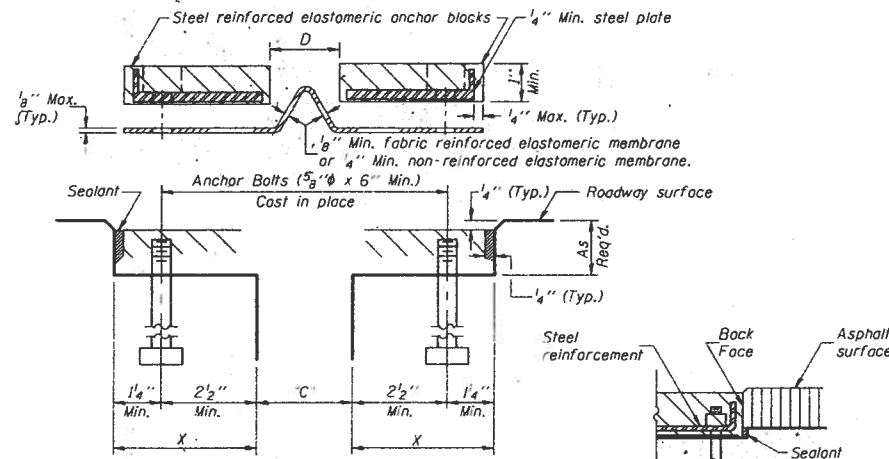
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from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



FORMING BLOCKOUT SKETCH

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

For dimension "F" see sheets S-13, S-16 and S-19.

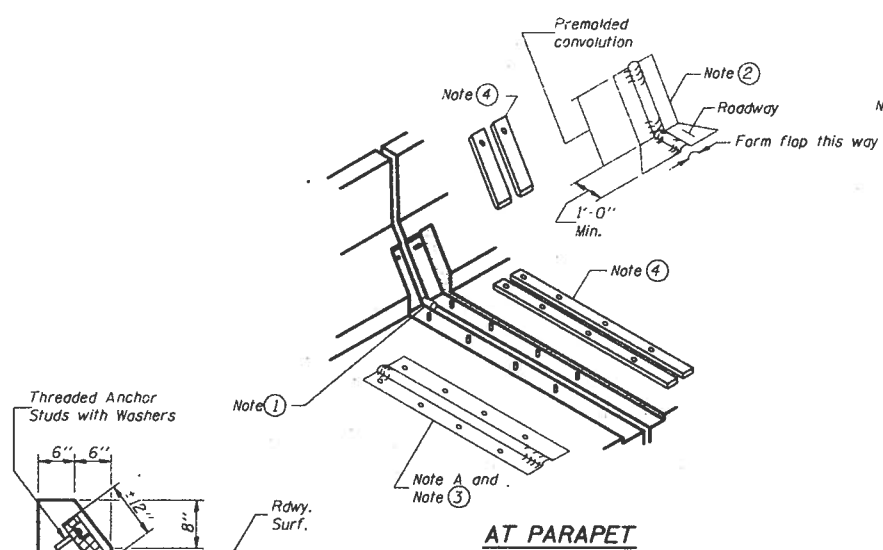


CROSS SECTION

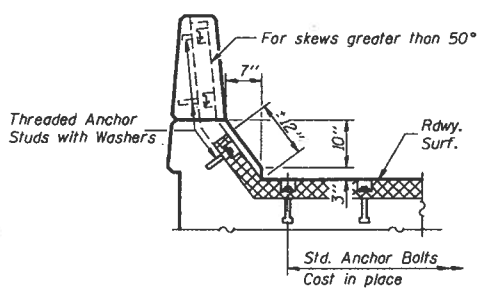
ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

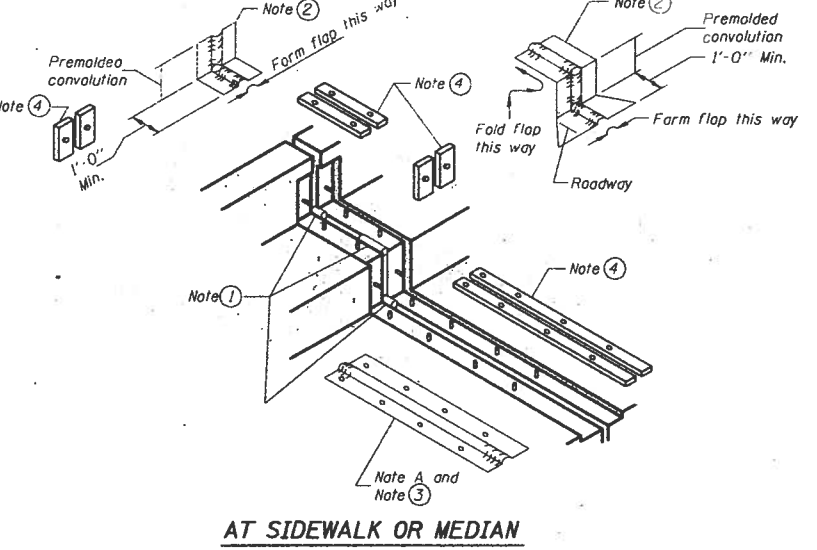
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. The elastomeric membrane shall be preformed with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure. The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout. The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed. Joint openings shall be adjusted in accordance with Article 503.10 (c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F. The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



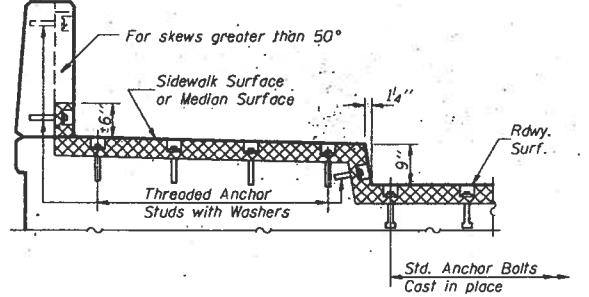
AT CURB



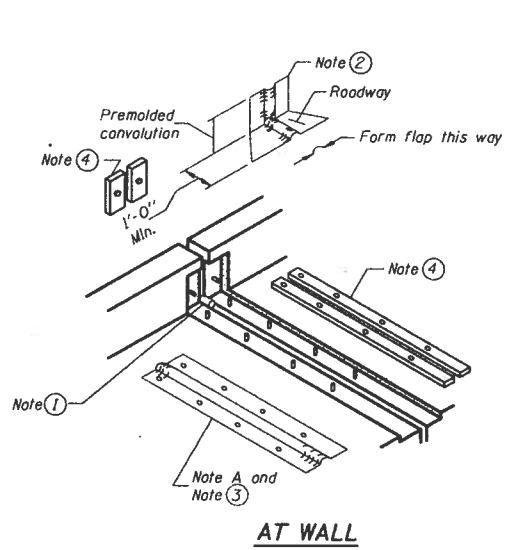
AT PARAPET



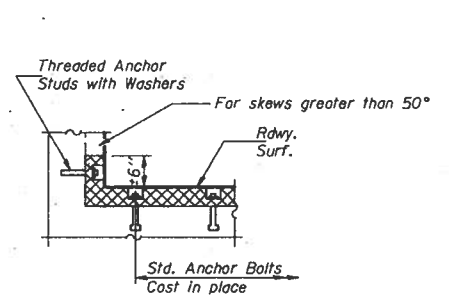
AT SIDEWALK OR MEDIAN



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL



AT WALL

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement

ILLINOIS DEPARTMENT OF TRANSPORTATION
EASTBOUND FAI-80 OVER US ROUTE 30
NEOPRENE EXPANSION JOINTS
FAI-80 STA. 673+37.46
SECTION
SN 099-0069 (EASTBOUND)
WILL COUNTY

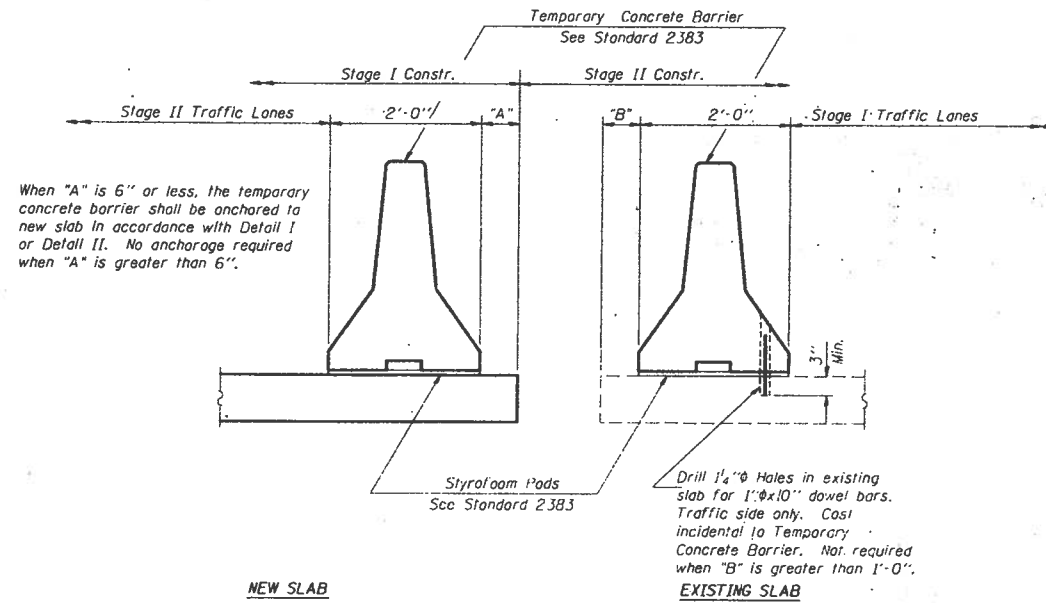
REVISIONS	
NAME	DATE

SCALE: N.T.S.
DATE: JULY 1995
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: PWP

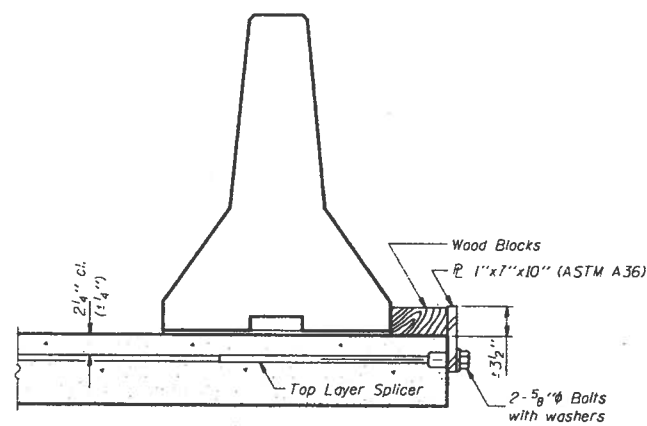
CC **Clorbe Group, Inc.**
CONSULTING ENGINEERS
5501 NORTH CLARK ROAD, AVENUE 11, CHICAGO, ILLINOIS 60656 TEL: (312) 775-4009

F.A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80		WILL		
STA.		TO STA.		
FED. HIGH. DIST. NO.	RAISED	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R & 99-4-1VB-1-BR

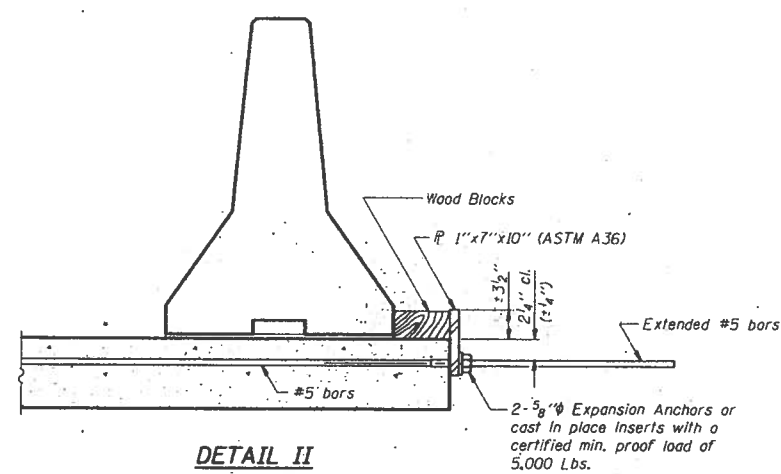


SECTIONS THRU SLAB



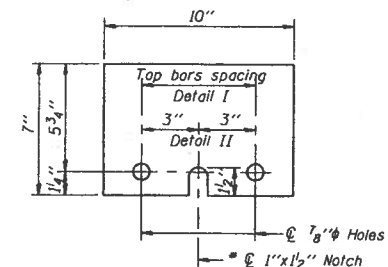
DETAIL I

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" x 7" x 10"

* Required only with Detail II

NOTES

- Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel P to the top layer of couplers with 2-5/8" bolts screwed to coupler at approximate C of each 10'-0" barrier panel.
 - Detail II - With Extended Reinforcement Bars: Connect one (1) 1"x7"x10" steel P to the concrete slab with 2-5/8" Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each 10'-0" barrier panel.
- Cast of anchorage is incidental to Temporary Concrete Barrier.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 TEMPORARY CONCRETE BARRIER
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE: N.T.S.
 DATE: JULY 1995

DESIGNED BY: LAS
 DRAWN BY: IMG
 CHECKED BY: PWP

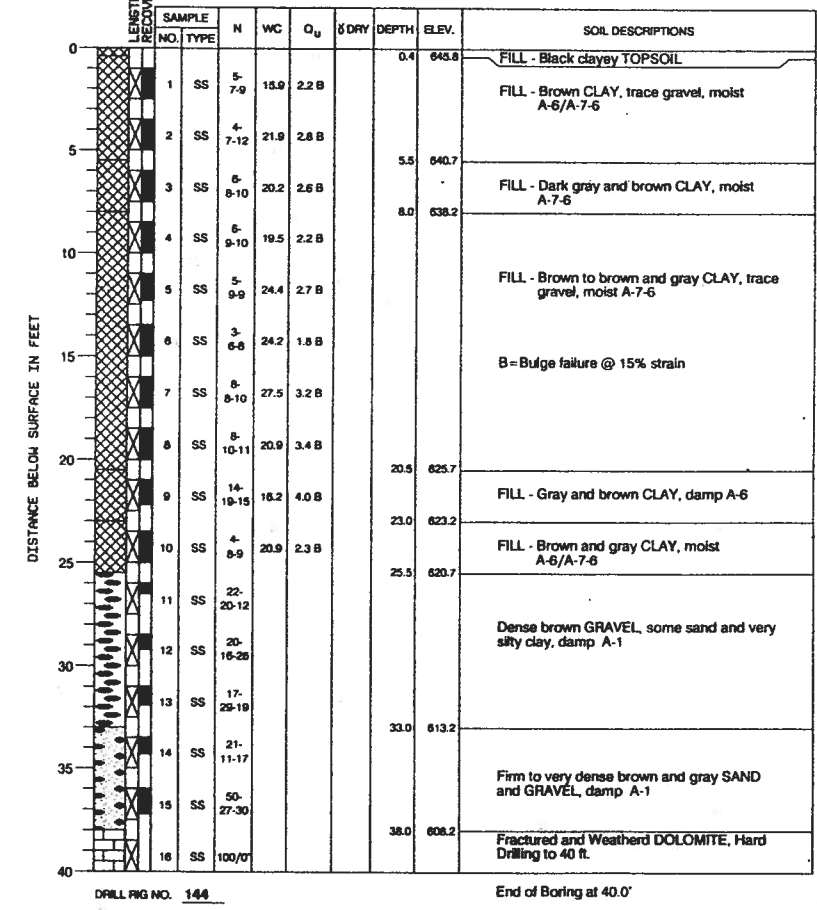
SECTION	NO.	DATE	BY
80	*	WILL	

* SECTION 99 (5.5-1;5VB) R& 99-4-1VB41-B

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-101 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 846.2 WHILE DRILLING DRY
 END OF BORING 606.2 AT END OF BORING DRY
 24 HOURS

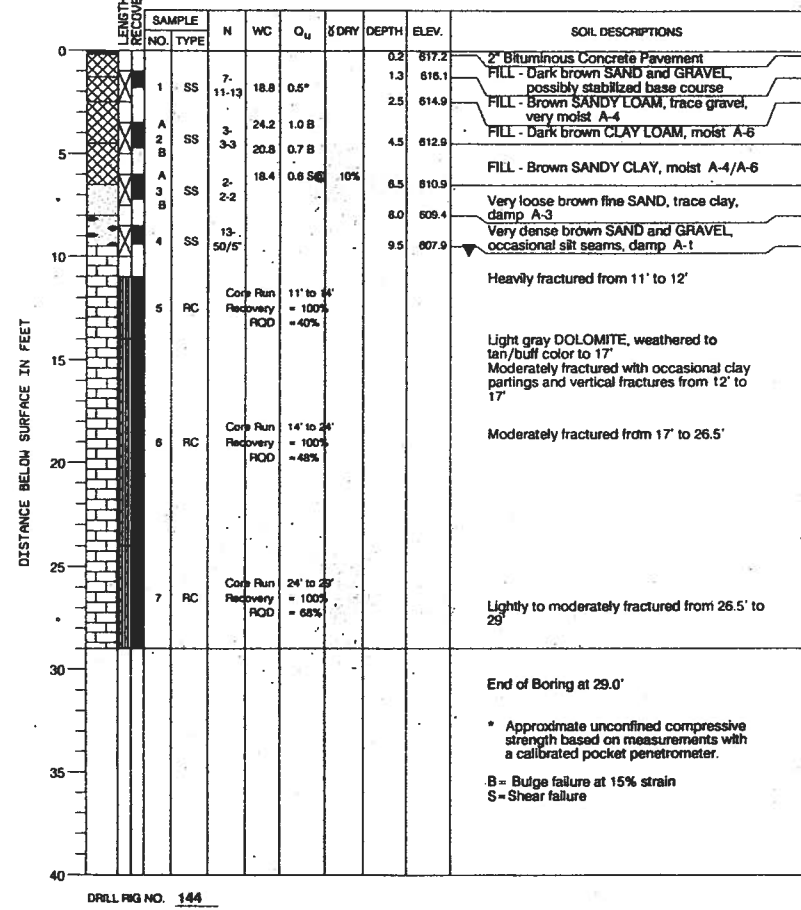


DRILL RIG NO. 144 End of Boring at 40.0'

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-102 DATE STARTED 12-16-94 DATE COMPLETED 12-16-94 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 817.4 WHILE DRILLING 10.0'
 END OF BORING 589.4 AT END OF BORING Rotary Wash Drill
 24 HOURS

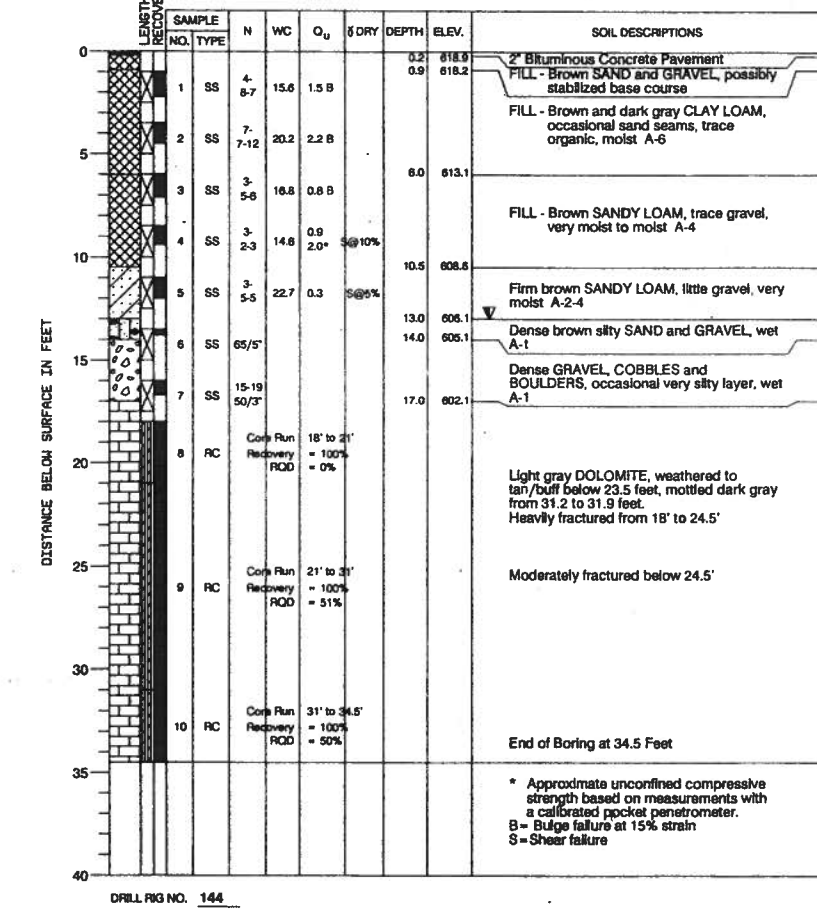


DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-103 DATE STARTED 12-14-94 DATE COMPLETED 12-14-94 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 819.1 WHILE DRILLING 13.0'
 END OF BORING 584.8 AT END OF BORING Rotary Wash Drill
 24 HOURS



DRILL RIG NO. 144

REVISIONS	
NAME	DATE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 EASTBOUND I-80 OVER US ROUTE 30
 SOIL BORINGS
 I-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

SCALE N.T.S. DRAWN BY GET
 DATE MARCH 1995 DESIGNED BY LAS
 CHECKED BY GAE

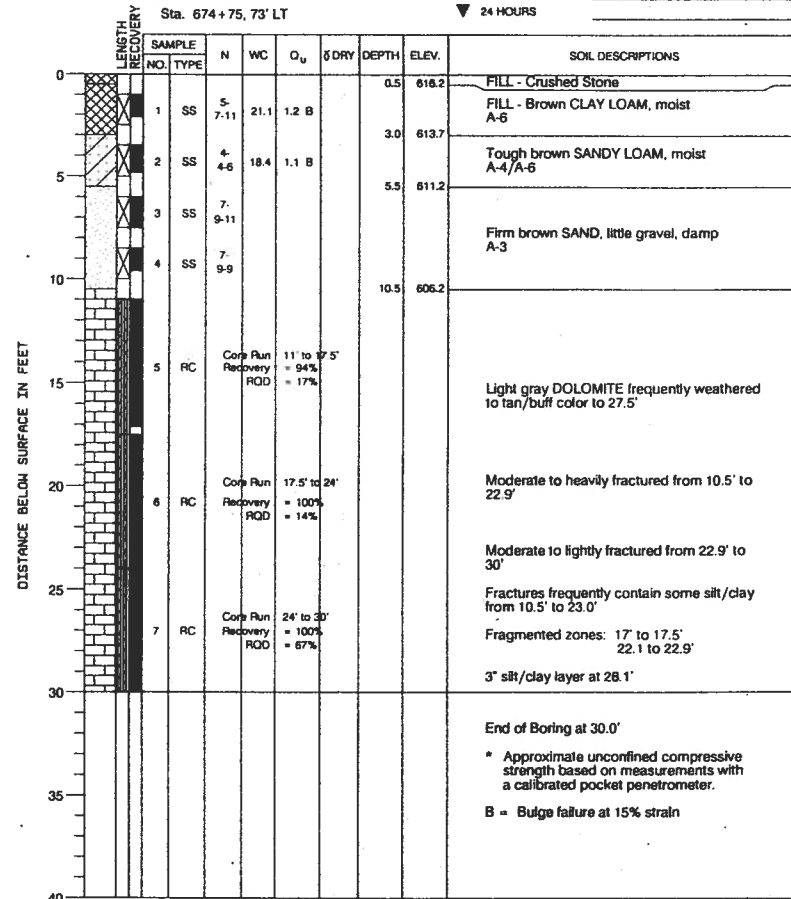


PROJECT	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
* SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR				

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-104 DATE STARTED 1-17-95 DATE COMPLETED 1-17-95 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 816.7 WHILE DRILLING Dry to 10.5'
 END OF BORING 586.7 AT END OF BORING Rotary Wash Drill
 24 HOURS

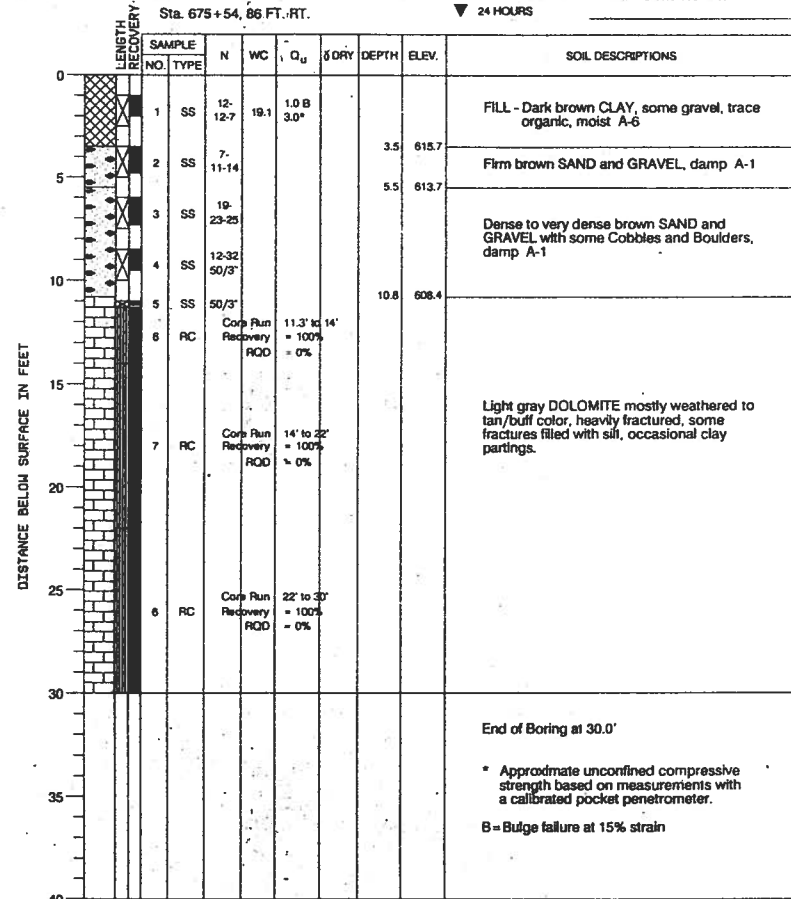


DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-105 DATE STARTED 12-12-94 DATE COMPLETED 12-12-94 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 619.2 WHILE DRILLING Dry to 11.0'
 END OF BORING 589.2 AT END OF BORING Rotary Wash Drill
 24 HOURS

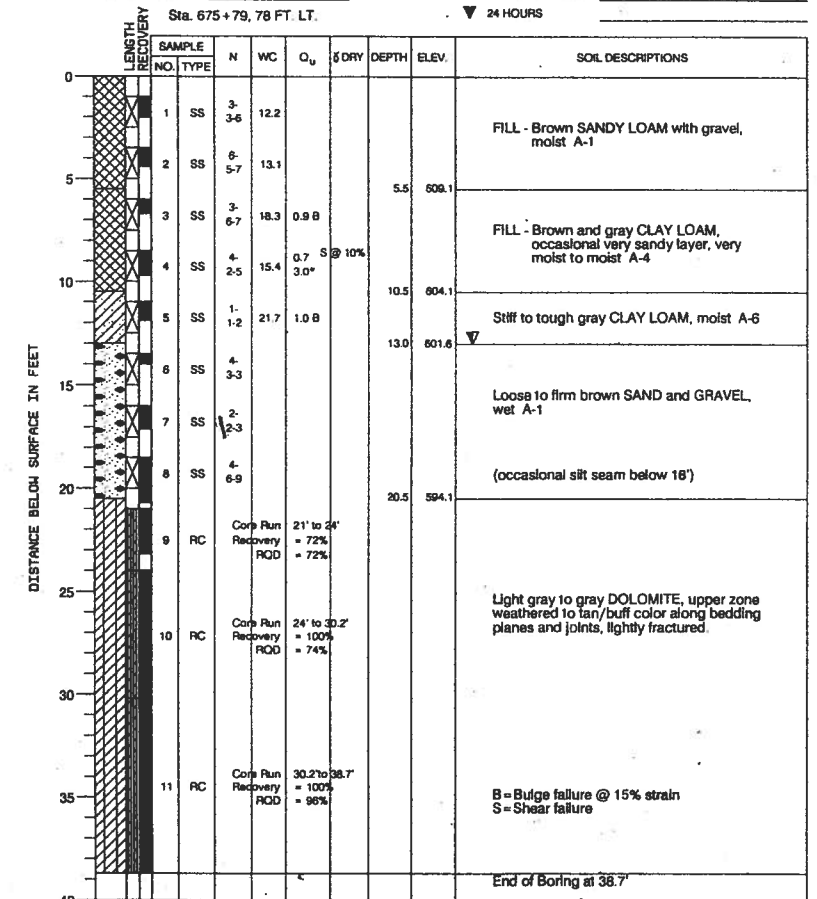


DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-106 DATE STARTED 12-13-94 DATE COMPLETED 12-13-94 JOB L-36,554



ELEVATIONS WATER TABLE
 GROUND SURFACE 814.6 WHILE DRILLING 13.0'
 END OF BORING 576.9 AT END OF BORING Rotary Wash Drill
 24 HOURS



DRILL RIG NO. 144

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SOIL BORINGS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

REVISIONS	
NAME	DATE

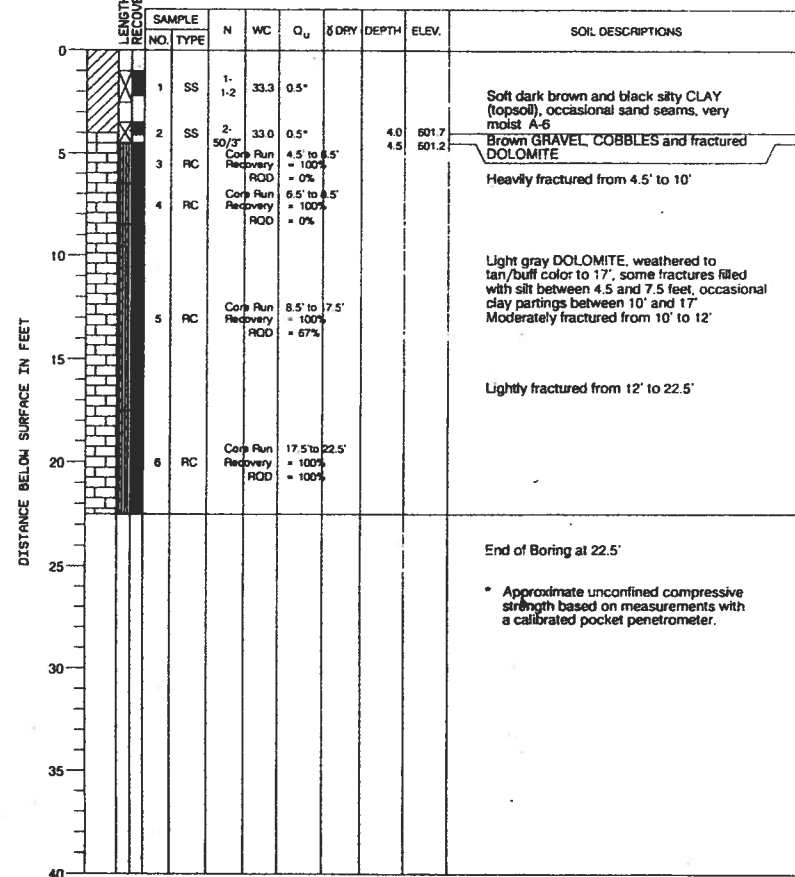


SCALE N.T.S.
 DATE MARCH 1995
 DRAWN BY GET
 DESIGNED BY LAS
 CHECKED BY GAE

PROJECT	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
DATE				
JOB NO. & PROJECT				

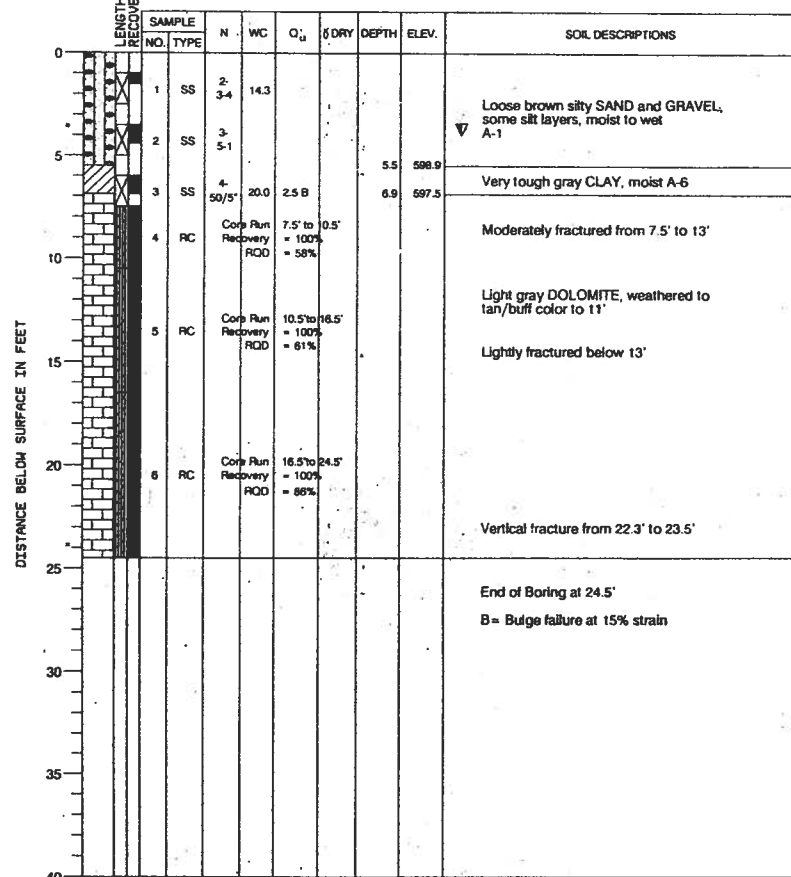
* SECTION 99 (5,5-1;5VB) R& 99-4-1VB-1-BR

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-107 DATE STARTED 12-20-94 DATE COMPLETED 12-20-94 JOB L-36,554
 ELEVATIONS WATER TABLE
 GROUND SURFACE 605.7 WHILE DRILLING Dry to 4.0'
 END OF BORING 583.2 AT END OF BORING Rotary Wash Drill
 Sta. 676+85, 85 FT. RT. 24 HOURS



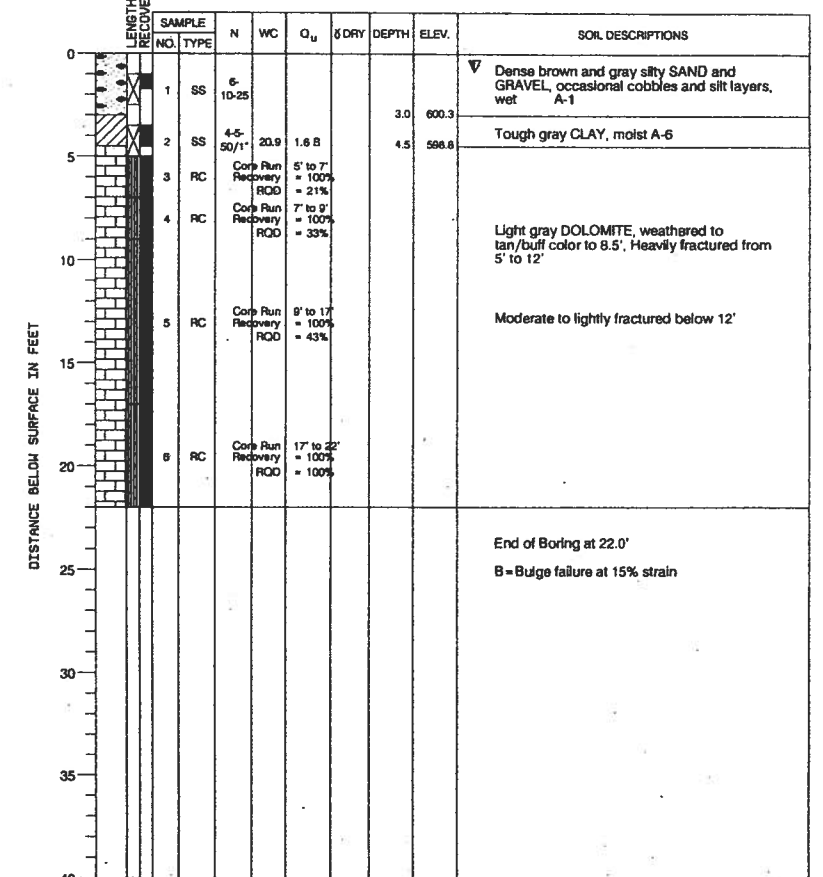
DRILL RIG NO. 127

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-108 DATE STARTED 12-21-94 DATE COMPLETED 12-21-94 JOB L-36,554
 ELEVATIONS WATER TABLE
 GROUND SURFACE 604.4 WHILE DRILLING 4.0'
 END OF BORING 579.9 AT END OF BORING Rotary Wash Drill
 Sta. 677+04, 72 FT. LT. 24 HOURS



DRILL RIG NO. 127

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-109 DATE STARTED 12-21-94 DATE COMPLETED 12-21-94 JOB L-36,554
 ELEVATIONS WATER TABLE
 GROUND SURFACE 603.3 WHILE DRILLING 0.9'
 END OF BORING 581.3 AT END OF BORING Rotary Wash Drill
 Sta. 677+63, 35 FT. RT. 24 HOURS



DRILL RIG NO. 127

REVISIONS	
NAME	DATE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 EASTBOUND FAI-80 OVER US ROUTE 30
 SOIL BORINGS
 FAI-80 STA. 673+37.46
 *SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY

SCALE N.T.S.
 DATE MARCH 1995

DRAWN BY GET
 DESIGNED BY LAS
 CHECKED BY GAE



SECTION	CORNER	TOTAL QUANTITY	SHEET NO.
80	*	WILL	
STA.		TO EXP.	
FED. ROAD DIST. NO. 1		ILLINOIS	
FURNISH FOR PROJECT			

* SECTION 99 (5.5-1;5VB) R& 99-4-1VB-1-BR

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-110 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554
 ELEVATIONS WATER TABLE
 GROUND SURFACE 648.2 WHILE DRILLING 43.0'
 END OF BORING 598.2 AT END OF BORING 43.0'
 Sta. 678+62 at Centerline 24 HOURS



DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	O _u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.8	645.4	Black clayey TOPSOIL
1		1	SS	4-4.6	19.7	1.3 B				
2		2	SS	4-6.9	20.9	1.5 B				FILL - Brown CLAY, trace gravel, moist A-6
3		3	SS	7-8-11	20.4	2.3 B				
4		4	SS	7-8-9	19.6	2.1 B		8.0	638.2	FILL - Dark gray and gray CLAY, trace organic, moist A-7-6
5		5	SS	6-9-11	17.7	2.5 B		9.5	636.7	
6		6	SS	11-12-13	20.8	2.2 B				FILL - Brown CLAY, trace gravel, moist A-6/A-7-6
7		7	SS	11-13-23	20.4	2.0 B				
8		8	SS	7-6-7	15.5	1.2 B		18.0	628.2	FILL - Dark gray and brown CLAY LOAM, trace organic, moist A-6
9		9	SS	7-11-13	20.0	2.4 B		20.5	625.7	
10		10	SS	7-9-15	19.4	1.8 B				FILL - Brown and gray CLAY, trace gravel, moist A-6
11		11	SS	7-9-11	18.9	2.0 B				
12		12	SS	20-23-25				28.0	618.2	FILL - Brown SAND and GRAVEL, occasional cobbles, damp A-1
13		13	SS	16-18-15	15.0	1.9 B		30.5	615.7	
14		14	SS	8-11-14	20.3	2.3 B		33.0	613.2	FILL - Brown CLAY, trace gravel, moist A-6
15		15	SS	8-11-12	21.0	3.4 B		35.5	610.7	FILL - Dark gray and black silty CLAY, trace organic, trace gravel, moist A-7-6
16		16	SS	8-9-13	24.7	2.0 B		38.0	608.2	FILL - Brown and gray CLAY, moist A-7-6
17		17	SS	11-8-10	22.3	2.1 B				Tough to very tough brown CLAY, moist A-7-6

DRILL RIG NO. 144

Page 1 of 2

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
 CLIENT Illinois Department of Transportation, Schaumburg, Illinois
 BORING SB-110 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554
 ELEVATIONS WATER TABLE
 GROUND SURFACE 648.2 WHILE DRILLING 43.0'
 END OF BORING 598.2 AT END OF BORING 43.0'
 Sta. 678+62 at Centerline 24 HOURS



DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	TYPE	N	WC	O _u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
43.0		17	SS	11-8-10	22.3	2.1 B			603.2	Very tough brown CLAY, moist A-6/A-7-6
45.5		18	SS	2-3-4					600.7	Loose brown silty SAND, trace gravel, wet A-2-4
48.0		19	SS	11-13-15					598.2	Firm brown silty SAND and GRAVEL, wet A-1
50.0		20	SS	100/3'						Fractured and Weathered DOLOMITE, hard drilling to 50 feet
50.0										End of Boring at 50.0'
										B = Bulge failure at 15% strain

DRILL RIG NO. 144

Page 2 of 2

REVISIONS	
NAME	DATE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 EASTBOUND I-80 OVER US ROUTE 30
 SOIL BORINGS
 I-80 STA. 673+37.46
 SECTION
 SN 099-0069 (EASTBOUND)
 WILL COUNTY
 SCALE N.T.S.
 DATE MARCH 1995
 DRAWN BY GET
 DESIGNED BY LAS
 CHECKED BY GAE

