

AS-BUILT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY
PROJECT IR-74-6 () 184

PREPARED BY:
TODD W. HORTON

ROUTE	SECTION	COUNTY	TOTAL SHEETS
FAI 74	*	CHAMPAIGN	144
P-95-035-86			1
C-95-168-89			

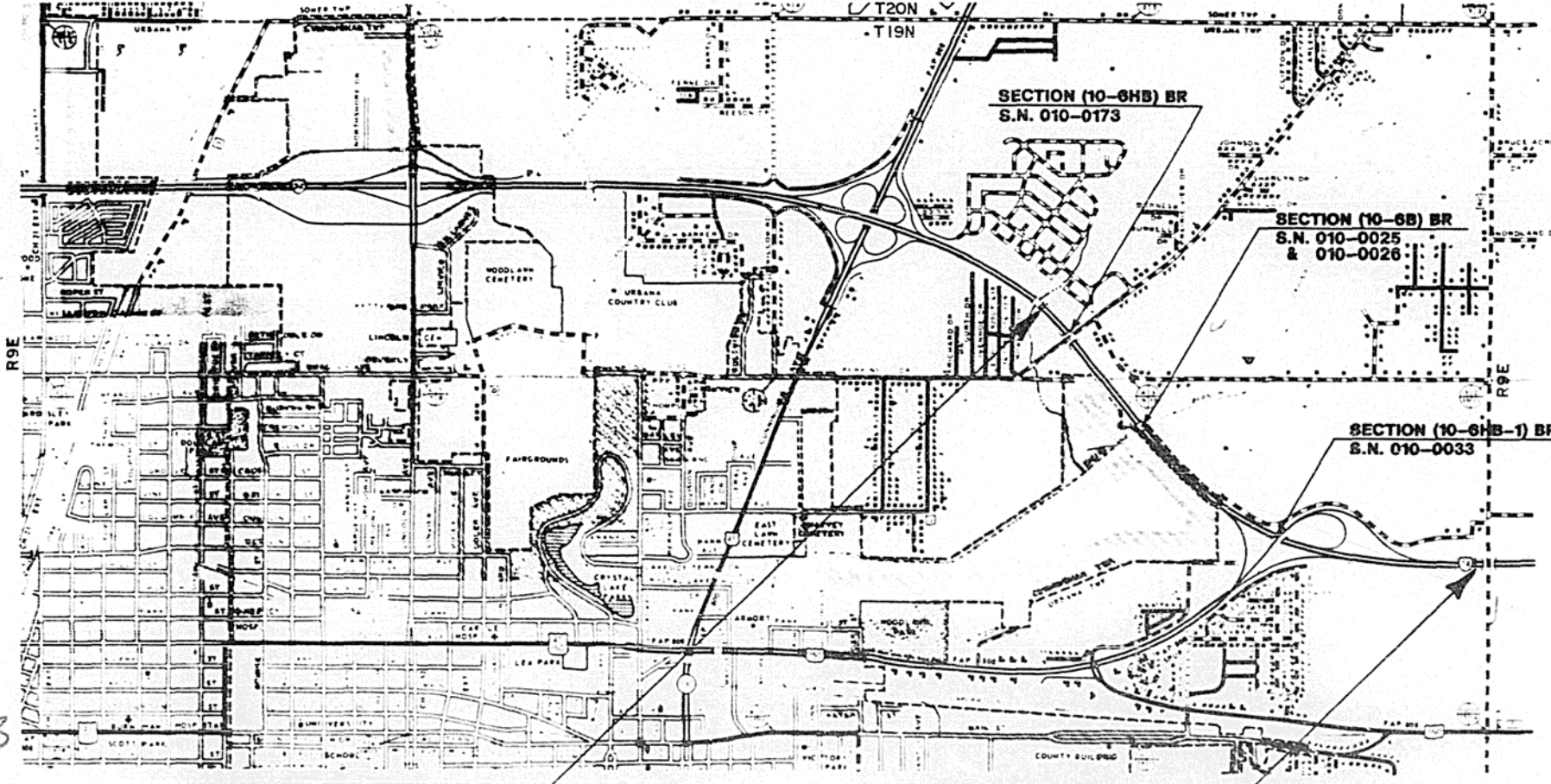
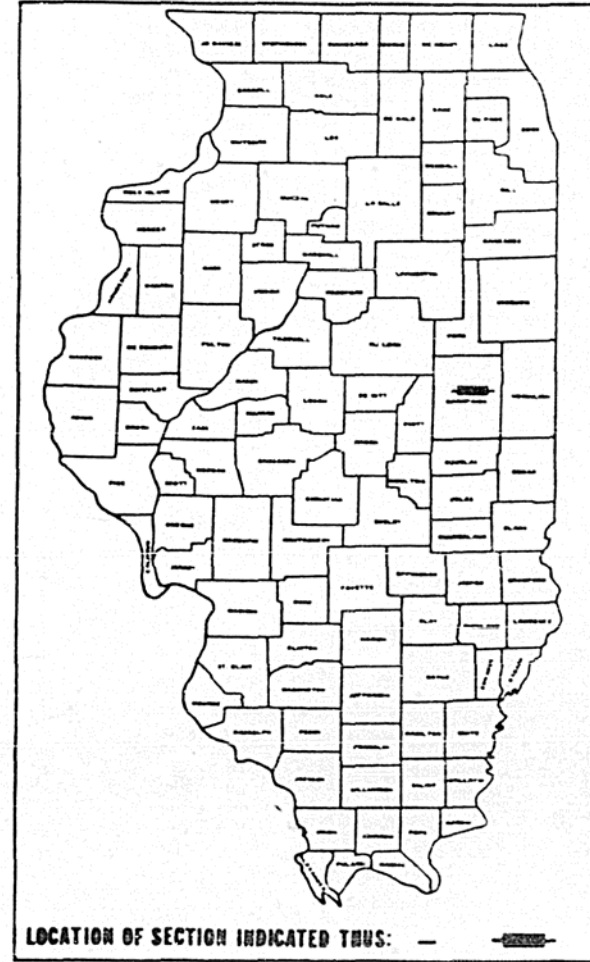
CONTRACTOR:
UNIVERSITY ASPHALT &
CHAMPAIGN ASPHALT - JOINT VENTURE

FOR INDEX OF SHEETS, SEE SHEET NO. 7
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5

RESIDENT ENGINEER:
GERRY W. MILLER

F.A.I. ROUTE 74, SECTION 10(6RS-1,6B-BR,
CHAMPAIGN COUNTY 6HB-BR,6HB-1-BR)
INTERSTATE RESURFACING
BRIDGE REHABILITATION
PROJECT IR-74-6(130)184

SCALES { PLAN 1" = 50'
PROFILE HOR. 1" = 50'
PROFILE VERT. 1" = 5'
CROSS-SECTIONS 1" = 10'H, 1" = 5'V



S.N. 010-0173 BROWNFIELD RD.
THE EXISTING BRIDGE HAS FOUR SPANS WITH 36 INCH PRESTRESSED PRECAST CONCRETE I BEAMS AND A 7 INCH THICK CONCRETE DECK. THE PRESENT DECK CARRIES TWO LANES IN A 26 FOOT WIDE SECTION PLUS 3'-3" WIDE RAISED PARAPET AREAS ON EACH SIDE. THE PROPOSED IMPROVEMENT WILL REMOVE AND REPLACE THE CONCRETE DECK AT A HIGHER ELEVATION TO PROVIDE AT LEAST 16.25 FEET OF VERTICAL CLEARANCE BELOW. IN ADDITION ALL PIERS AND ABUTMENTS WILL BE WIDENED AND REHABILITATED. THE NEW DECK WILL CARRY TWO 12 FOOT LANES AND TWO 8 FOOT SHOULDERS PLUS PARAPETS LEFT AND RIGHT.

S.N. 010-0025/0026 SALINE EAST
THE EXISTING DUAL RIVER CROSSINGS HAVE THREE SPANS WITH 44 INCH PRESTRESSED PRECAST CONCRETE I BEAMS AND A 7 INCH THICK CONCRETE DECK. EACH PRESENT DECK CARRIES TWO LANES IN A 30 FOOT WIDTH PLUS 3'-3" WIDE RAISED PARAPET AREAS ON EACH SIDE. THE PROPOSED IMPROVEMENT WILL WIDEN AND REHABILITATE ALL PIERS AND ABUTMENTS WHILE THE DECKS WILL BE REMOVED AND REPLACED IN KIND. THE NEW WIDENED DECKS WILL EACH CARRY TWO 24 FOOT LANES AS WELL AS 10 FOOT SHOULDERS ON THE OUTSIDE AND 6 FOOT SHOULDERS ON THE INSIDE.

S.N. 010-0033 URBANA SPUR
THE EXISTING BRIDGE HAS FOUR SPANS WITH 48 INCH PRESTRESSED PRECAST CONCRETE I BEAMS AND A 7 INCH THICK CONCRETE DECK. THE PRESENT DECK CARRIES TWO SINGLE LANES EACH 15 FEET WIDE SEPARATED BY A 6 FOOT RAISED CONCRETE MEDIAN PLUS TWO RAISED 3 FOOT WIDE PARAPET AREAS AT THE SIDES. THE PROPOSED IMPROVEMENT WILL REMOVE AND REPLACE THE CONCRETE DECK AT A HIGHER ELEVATION TO PROVIDE AT LEAST 16.25 FEET OF VERTICAL CLEARANCE BELOW. IN ADDITION ALL PIERS AND ABUTMENTS WILL BE WIDENED AND REHABILITATED. THE NEW DECK WILL CARRY TWO 16 FOOT LANES WITH 8 FOOT WIDE SHOULDERS SEPARATED BY A 6 FOOT RAISED MEDIAN.

START DATE = 4 MAR 91
COMPLETION DATE = 4 JAN 93

STA. 1350+00.00
BEGIN SECTION (10-6) RS-1
BEGIN PROJECT IR-74-6 (130) 184

STA. 1429+00.00
END SECTION (10-6) RS-1
END PROJECT IR-74-6 (130) 184

DESIGN DESIGNATION
2675 (09) - TRUNK - 10.95 (COMP - 20)

TOLL FREE J.U.L.I.E. TELEPHONE NO.
1-800-892-0123
URBANA TOWNSHIP

TOTAL LENGTH OF SECTION (10-6) RS-1 * 7900.00 FT. * 1.496 MILES
NET LENGTH OF SECTION (10-6) RS-1 * 7900.00 FT. * 1.496 MILES
TOTAL LENGTH OF PROJECT IR-74-6 (130) 184 * 7900.00 FT. * 1.496 MILES
NET LENGTH OF PROJECT IR-74-6 (130) 184 * 7900.00 FT. * 1.496 MILES

Paul E. Weiss
Oct. 29, 1990

BRIGHTON ENGINEERING COMPANY
ARLINGTON HEIGHTS, ILLINOIS
708-640-0840

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: Nov. 1 1990
EXAMINED: 11/29 1990
PASSED: 11/29 1990
APPROVED: 11-2 1990

J. A. Jones DISTRICT ENGINEER
Gary D. Gould ENGINEER OF PLANS AND CONTRACTS
Ralph C. Weber ENGINEER OF DESIGN
DIRECTOR DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

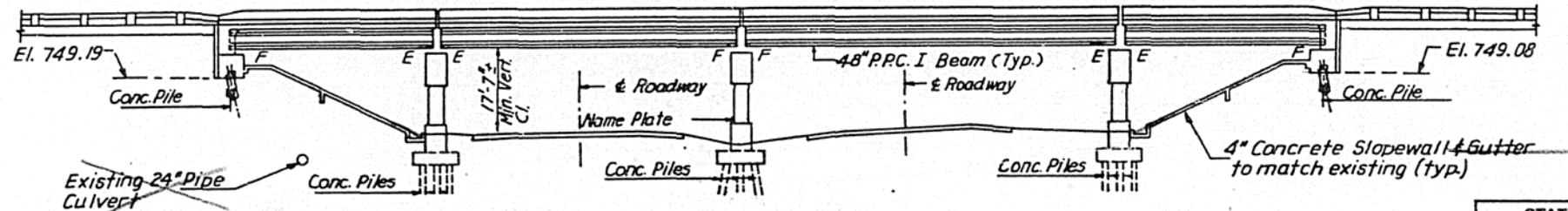
PROJECT ENGINEER: PAUL KOEHLER
SQUAD LEADER: GREG IDELMAN

Bench Mark:
Chiseled \square in Pier No. 2
El. 736.25

Existing Structure:
Existing Structure No. 010-0033 was built in 1959 and consists of four simple spans concrete superstructure supported by P.P.C.I. beams (two end spans of 40'-0" and two interior spans of 60'-0" & 74'-0") The overall width of the structure is 46'-6". The substructure consists of Pile Bent Abutments and Framed Column Piers.
The existing deck is to be removed and the substructure widened in Stages.
No Salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.I. 74	(10-6) RS-1	CHAMPAIGN	144	91	OF SHEETS 25
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT			



ELEVATION

STATION 399+80.13
BUILT 195 BY
STATE OF ILLINOIS
F.A.I. RTE. 5 SEC. 10-6HB-1
F.A. PROJ. 1-05-6(12)
LOADING 120-516

EXISTING NAME PLATE
(Relocate existing Name Plate next to the New Name plate, cost incidental to Name Plates.)

STATION 49+99.40
REBUILT 199 BY
STATE OF ILLINOIS
F.A. RT. SEC (10-6) RS-1
LOADING HS 20
STR. NO. 010-0033

NAME PLATE
SEE STD. 2113

TOTAL BILL OF MATERIAL

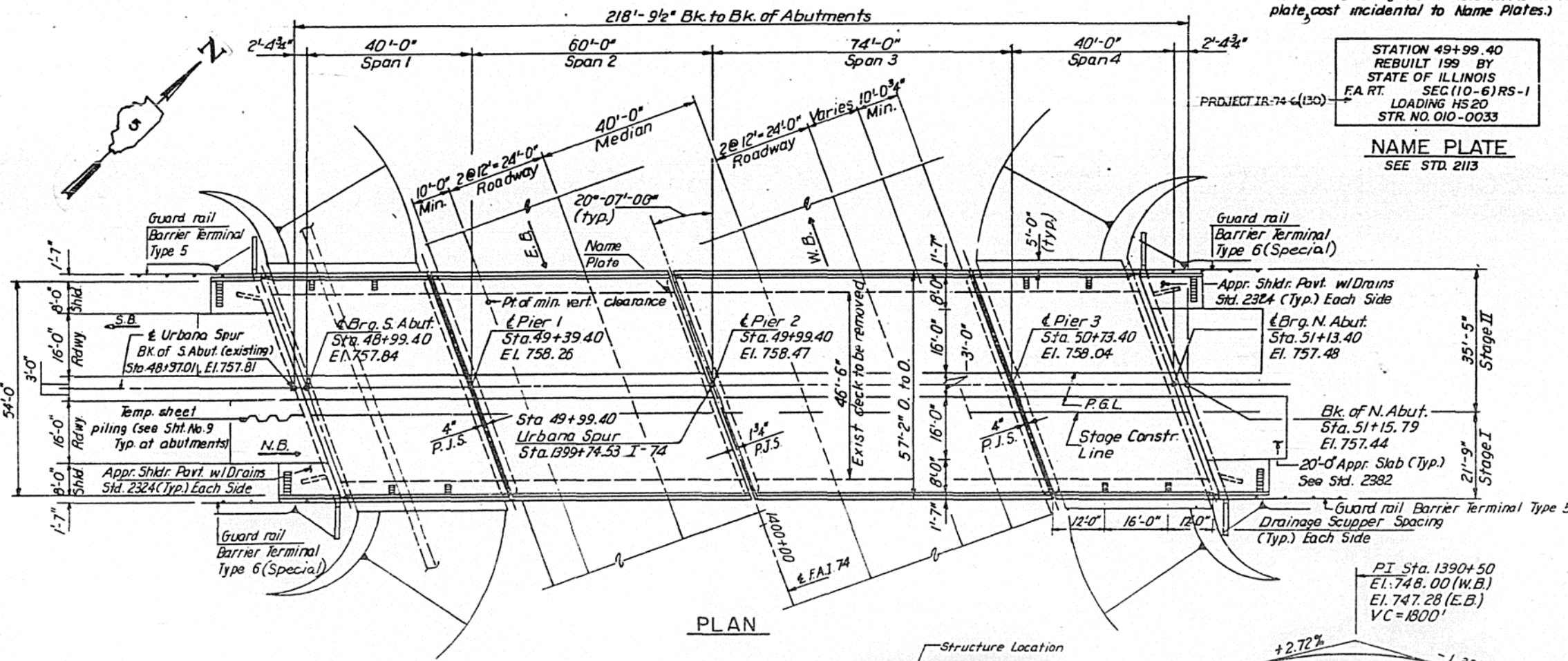
ITEMS	UNIT	SUPER	SUB	TOTAL
Concrete Removal	C.Y.	—	85.5	85.5
Expansion Bolts 3/4 Inch	Each	—	776	776
Removal of Existing Concrete Deck No. 3	L.S.	1	—	1
Structure Excavation	C.Y.	—	188	188
Preformed Joint Seal, 4"	LF	120	—	120
Preformed Joint Seal, 1 1/2"	LF	60	—	60
Class X Concrete Superstructure	C.Y.	420.6	—	420.6
Protective Coat	S.Y.	1485	—	1485
* Elastomeric Bearing Assembly, Type I	Each	—	40	40
Class X Concrete	C.Y.	—	243.3	243.3
Furnishing & Erecting P.P.C.I. Beams, 48"	L.F.	—	425	425
Furnishing & Erecting Structural Steel	Lbs.	6520	5640	12160
Reinforcement Bars	Lbs.	—	1680	1680
Reinforcement Bars, Epoxy Coated	Lbs.	88110	22390	110500
Furnishing Concrete Piles	L.F.	—	1301	1301
Driving Concrete Piles	L.F.	—	1301	1301
Test Pile Concrete	Each	—	1	1
Name Plates	Each	—	1	1
Slopedwall 4 Inch	S.Y.	—	176	176
Temporary Concrete Barrier	L.F.	219	—	219
Drainage Scupper	Each	—	8	8
Temporary Sheet Piling	Sq. Ft.	—	315	315
*** Bridge Seat Sealer	L.S.	—	39	39
Jacking and Cribbing Location 1	L.S.	—	1	1
Protective Shield	S.Y.	—	1034	1034

* Includes deck area.
** Cost of removal and disposal of existing bearings shall be included in the cost of Elastomeric Bearing Assembly, type I.
*** Calculated Bridge Seat Sealer = 1190 Sq. Ft.

DESIGN NOTES

DESIGN SPECIFICATION

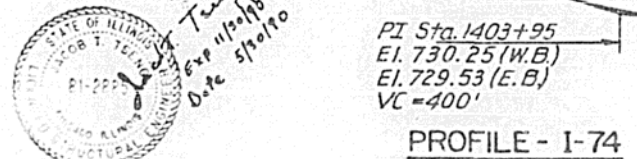
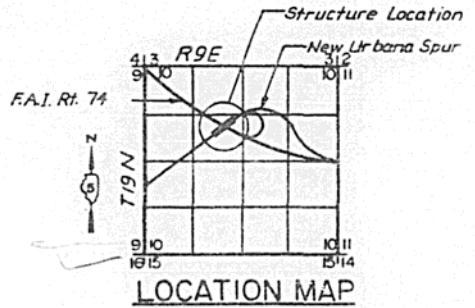
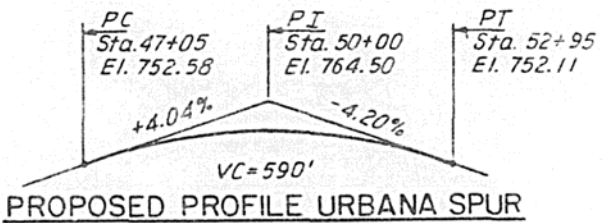
A.A.S.H.T.O. 1989 Standard Specifications for Highway Bridges.
LOADING:
Live Load: HS 20-44
Allow 25 p.s.f. for future surface.
DESIGN STRESSES:
Concrete
f'c = 3500 psi - Superstructure
f'c = 1400 psi - Substructure
f'e = 1000 psi - With Earth Pressure
f'v = 56 psi
REINFORCING STEEL:
fy = 60,000 psi (A.A.S.H.T.O. M-31, M-42 or M-53 Grade 60)
STRUCTURAL STEEL:
fy = 36,000 psi (M183)
P.P.C.I. BEAMS: (New Beams only)
f'c = 5000 psi - Concrete Strengths
f'ci = 4000 psi
f's = 270,000 psi - Prestressed Steel 1/2" Strands.
f'si = 189,000 psi



PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James K. Wood
Licensed Structural Engineer



DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

P.O. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

GENERAL PLAN & ELEVATION
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
SN. 010-0033

SCALE: VERT. HORIZ.
DATE

GENERAL NOTES

Slope wall shall be reinforced with welded wire fabric, 6"x6"-W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

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

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

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

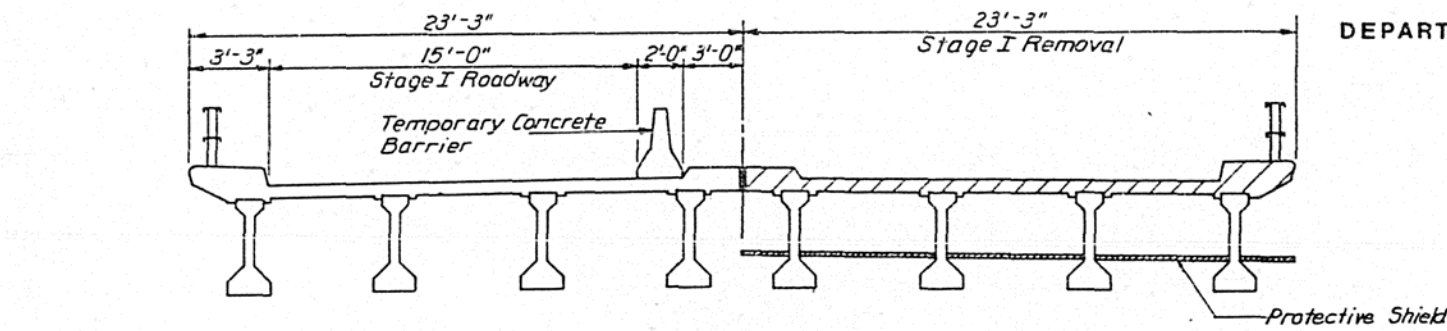
Expansion bolts shall consist of approved expansion bolts, providing minimum certified proof load = 4,080 lbs and 3/4" x 12" hooked bolts.

The Contractor shall drive one concrete test pile in a permanent location at South abutment as directed by the Engineer before ordering the remainders of piles.

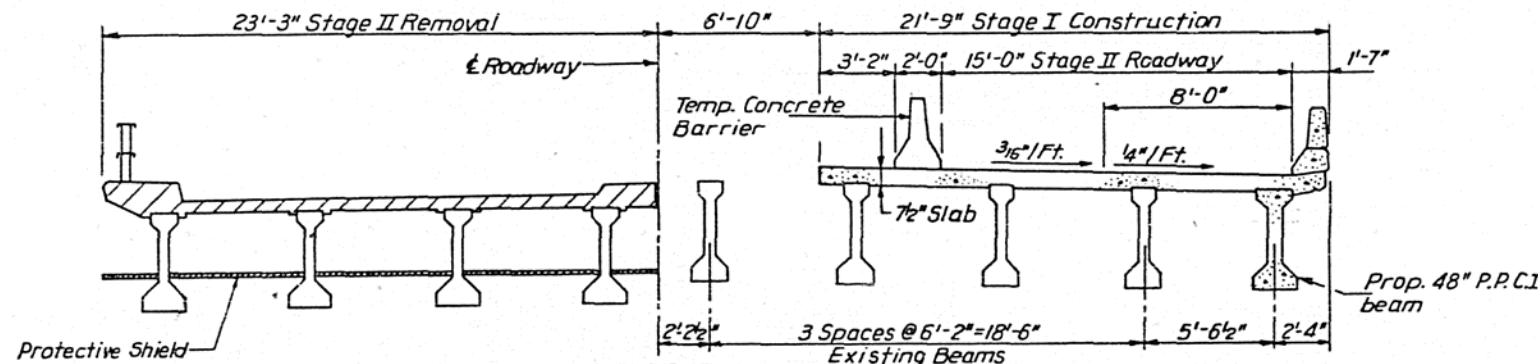
All barricades, signs and other traffic control devices and their placement installed for the purpose of temporarily maintaining traffic during construction shall be in full conformance with the Illinois State Manual on Uniform Traffic Control Devices unless otherwise noted. The Contractor shall procure, install and remove all temporary pavement markings as per the traffic phasing shown on the plans or as directed by the Engineer.

See Proposal for Boring Data.

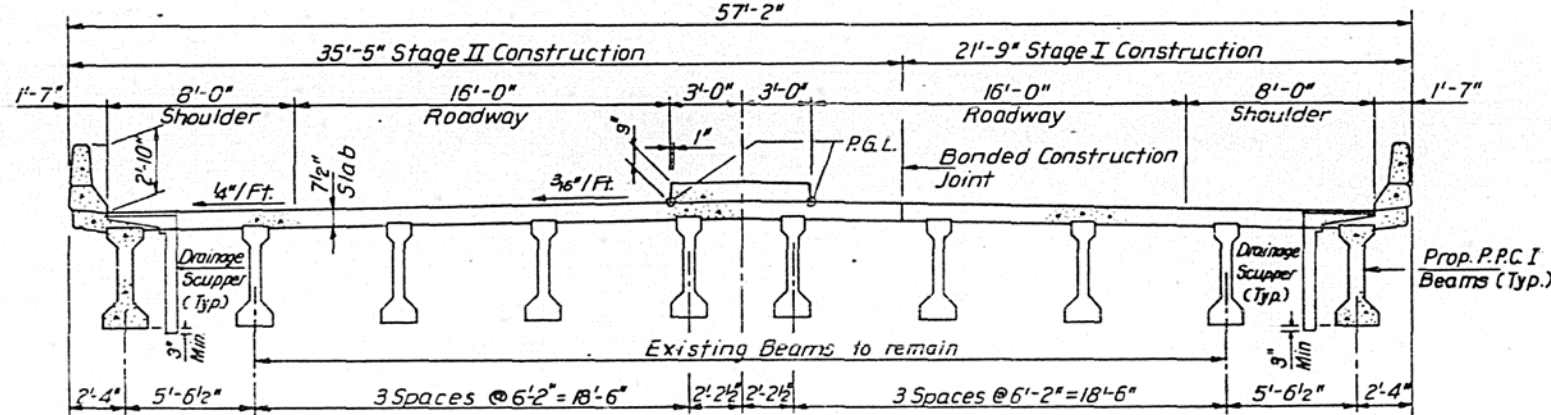
All structural steel shall be shop painted with the zinc-silicate and vinyl paint system. The color of the vinyl finish coats shall be Munsell No. 10Y7/1 light grey.



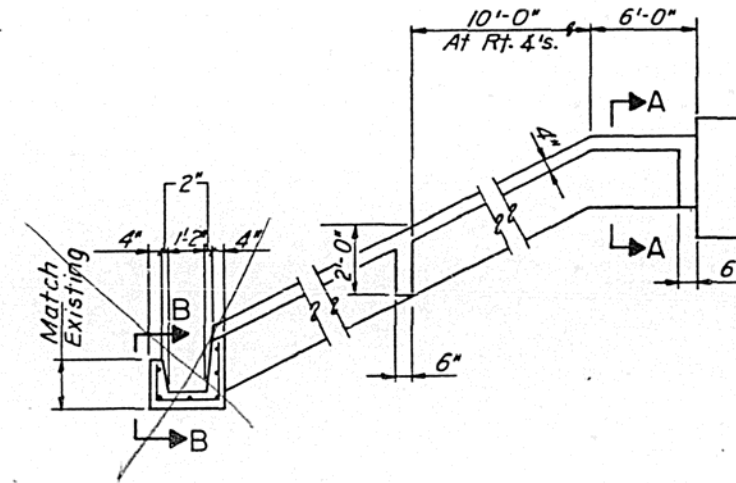
STAGE I



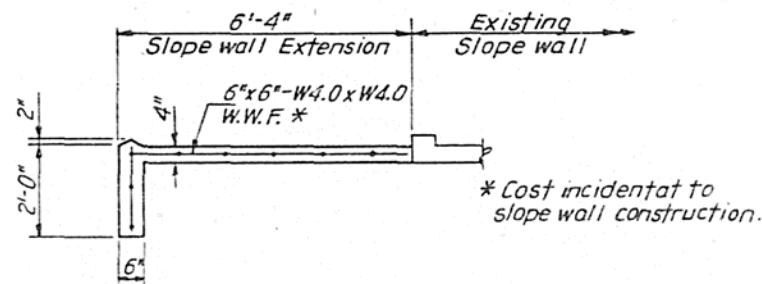
STAGE II



TYPICAL CROSS SECTION

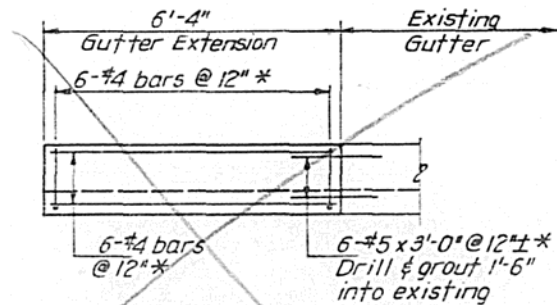


SECTION THRU SLOPE WALL



SECTION A-A

* Cost incidental to slope wall construction.



SECTION B-B

Note: Gutter extension required on North side of bridge only.

no existing gutter

STAGING NOTES

- Stage I Removal & Construction**
1. Install temporary concrete barriers in Southbound Roadway to maintain one traffic lane.
 2. Remove Northbound deck and portions of pier caps and abutments as shown after installation of temporary shoring.
 3. Reconstruct Northbound portion of structure as shown.

- Stage II Removal & Construction**
1. Relocate temporary concrete barriers to reconstructed Northbound deck.
 2. Remove Southbound deck and portions of pier caps and abutments as shown.
 3. Reconstruct remaining portion of structure.

Note: Remove all diaphragms during respective stage removal and replace them at supports only.

Legend: Indicates concrete removal.

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

STAGING DETAILS & GENERAL NOTES

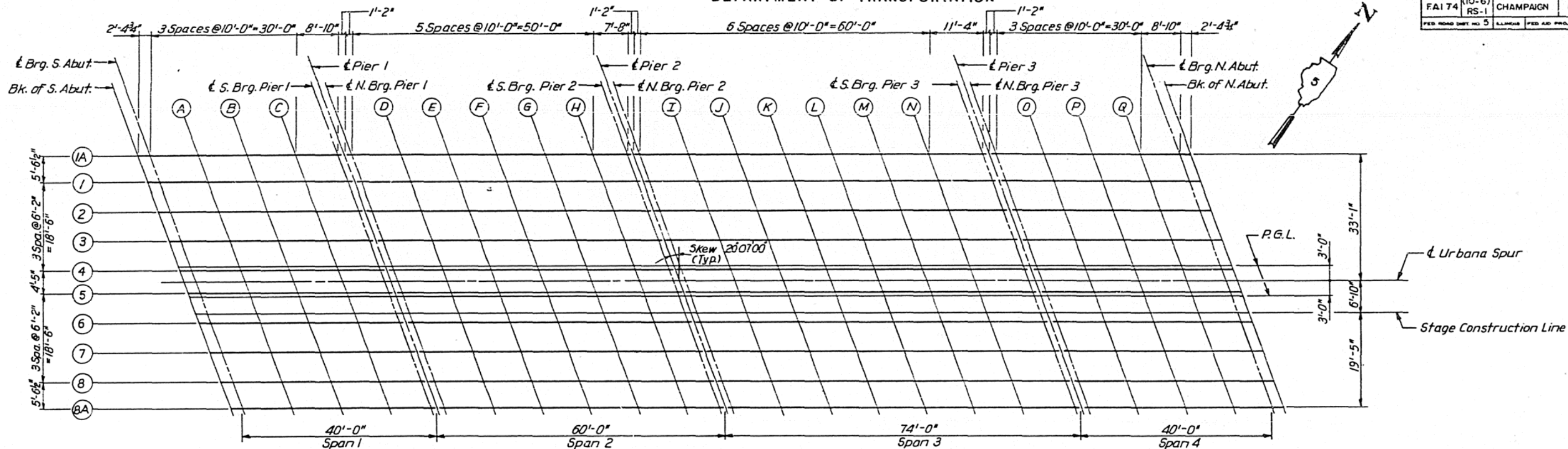
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT. 1/2" = 1'-0"
DATE

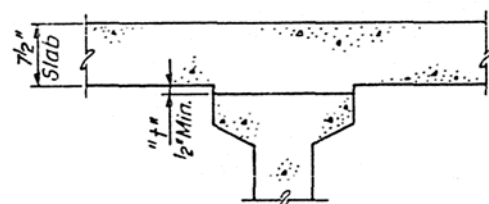
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(10-6) RS-1	CHAMPAIGN	144	93
FED. ROAD DIST. NO. 5	ALIGNMENT	FED. AID PROJECT		

SHEET NO. 3
SHEETS 25

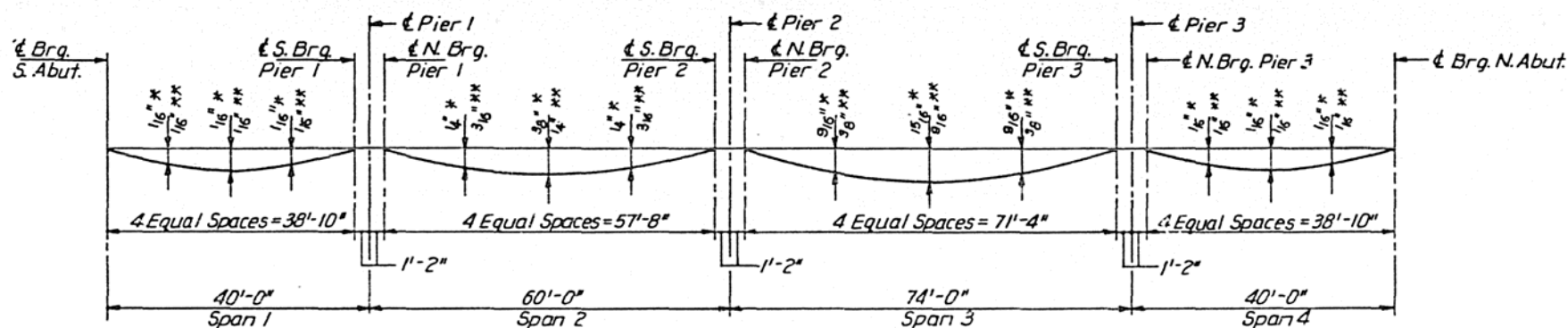


PLAN



STANDARD FILLET DETAIL

To determine t^* : After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on the plan above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" minus slab thickness, equals the fillet heights t^* above top flanges of beams.



DEAD LOAD DEFLECTION DIAGRAM

(Due to weight of Concrete Slab Only)

Note:
The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown.

* Indicates existing beam deflection.
** Indicates new beam deflection.

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

TOP OF SLAB ELEVATIONS - I
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS - 1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT
HORIZ
DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(10-6) RS-1	CHAMPAIGN	144	94
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
SHEETS 25

BEAM - 1A

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4887.390	+26.250	757.227	757.227
CLB. S.A.	4889.780	+26.250	757.262	757.262
A	4899.780	+26.250	757.401	757.404
B	4909.780	+26.250	757.526	757.531
C	4919.780	+26.250	757.637	757.640
S.CLB.P-1	4928.620	+26.250	757.724	757.724
CL.P-1	4929.780	+26.250	757.734	757.734
N.CLB.P-1	4930.950	+26.250	757.745	757.745
D	4940.950	+26.250	757.826	757.837
E	4950.950	+26.250	757.894	757.911
F	4960.950	+26.250	757.947	757.967
G	4970.950	+26.250	757.987	758.003
H	4980.950	+26.250	758.012	758.021
S.CLB.P-2	4988.620	+26.250	758.023	758.023
CL.P-2	4989.780	+26.250	758.024	758.024
N.CLB.P-2	4990.950	+26.250	758.024	758.024
I	5000.950	+26.250	758.022	758.042
J	5010.950	+26.250	758.005	758.042
K	5020.950	+26.250	757.975	758.021
L	5030.950	+26.250	757.931	757.977
M	5040.950	+26.250	757.873	757.911
N	5050.950	+26.250	757.801	757.824
S.CLB.P-3	5062.620	+26.250	757.699	757.699
CL.P-3	5063.780	+26.250	757.688	757.688
N.CLB.P-3	5064.950	+26.250	757.676	757.676
O	5074.950	+26.250	757.573	757.573
P	5084.950	+26.250	757.451	757.455
Q	5094.950	+26.250	757.317	757.320
CLB. N.A.	5103.780	+26.250	757.187	757.187
BK. N.A.	5106.180	+26.250	757.150	757.150

BEAM - 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4889.420	+20.708	757.373	757.373
CLB. S.A.	4891.810	+20.708	757.407	757.407
A	4901.810	+20.708	757.543	757.546
B	4911.810	+20.708	757.665	757.669
C	4921.810	+20.708	757.774	757.776
S.CLB.P-1	4930.650	+20.708	757.858	757.858
CL.P-1	4931.810	+20.708	757.868	757.868
N.CLB.P-1	4932.980	+20.708	757.878	757.878
D	4942.980	+20.708	757.957	757.967
E	4952.980	+20.708	758.021	758.039
F	4962.980	+20.708	758.072	758.092
G	4972.980	+20.708	758.109	758.125
H	4982.980	+20.708	758.131	758.139
S.CLB.P-2	4990.650	+20.708	758.139	758.139
CL.P-2	4991.810	+20.708	758.140	758.140
N.CLB.P-2	4992.980	+20.708	758.140	758.140
I	5002.980	+20.708	758.135	758.155
J	5012.980	+20.708	758.116	758.152
K	5022.980	+20.708	758.083	758.128
L	5032.980	+20.708	758.036	758.082
M	5042.980	+20.708	757.975	758.013
N	5052.980	+20.708	757.899	757.923
S.CLB.P-3	5064.650	+20.708	757.794	757.794
CL.P-3	5065.810	+20.708	757.783	757.783
N.CLB.P-3	5066.980	+20.708	757.771	757.771
O	5076.980	+20.708	757.663	757.666
P	5086.980	+20.708	757.544	757.544
Q	5096.980	+20.708	757.404	757.406
CLB. N.A.	5105.810	+20.708	757.271	757.271
BK. N.A.	5108.210	+20.708	757.234	757.234

BEAM - 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4891.680	+14.542	757.510	757.510
CLB. S.A.	4894.070	+14.542	757.544	757.544
A	4904.070	+14.542	757.677	757.680
B	4914.070	+14.542	757.796	757.800
C	4924.070	+14.542	757.901	757.904
S.CLB.P-1	4932.900	+14.542	757.982	757.982
CL.P-1	4934.070	+14.542	757.992	757.992
N.CLB.P-1	4935.240	+14.542	758.002	758.002
D	4945.240	+14.542	758.077	758.088
E	4955.240	+14.542	758.139	758.156
F	4965.240	+14.542	758.186	758.206
G	4975.240	+14.542	758.220	758.236
H	4985.240	+14.542	758.239	758.248
S.CLB.P-2	4992.900	+14.542	758.245	758.245
CL.P-2	4994.070	+14.542	758.245	758.245
N.CLB.P-2	4995.240	+14.542	758.245	758.245
I	5005.240	+14.542	758.237	758.257
J	5015.240	+14.542	758.215	758.251
K	5025.240	+14.542	758.178	758.224
L	5035.240	+14.542	758.128	758.174
M	5045.240	+14.542	758.064	758.102
N	5055.240	+14.542	757.986	758.009
S.CLB.P-3	5066.900	+14.542	757.877	757.877
CL.P-3	5068.070	+14.542	757.865	757.865
N.CLB.P-3	5069.240	+14.542	757.853	757.853
O	5079.240	+14.542	757.741	757.744
P	5089.240	+14.542	757.615	757.619
Q	5099.240	+14.542	757.476	757.478
CLB. N.A.	5108.070	+14.542	757.341	757.341
BK. N.A.	5110.460	+14.542	757.302	757.302

* PGL ELEVATIONS RAISED 0.10'

BEAM - 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4893.940	+8.375	757.638	757.638
CLB. S.A.	4896.330	+8.375	757.671	757.671
A	4906.330	+8.375	757.801	757.804
B	4916.330	+8.375	757.917	757.921
C	4926.330	+8.375	758.019	758.022
S.CLB.P-1	4935.160	+8.375	758.097	758.097
CL.P-1	4936.330	+8.375	758.107	758.107
N.CLB.P-1	4937.500	+8.375	758.116	758.116
D	4947.500	+8.375	758.189	758.199
E	4957.500	+8.375	758.247	758.264
F	4967.500	+8.375	758.291	758.311
G	4977.500	+8.375	758.322	758.338
H	4987.500	+8.375	758.338	758.346
S.CLB.P-2	4995.160	+8.375	758.341	758.341
CL.P-2	4996.330	+8.375	758.341	758.341
N.CLB.P-2	4997.500	+8.375	758.341	758.341
I	5007.500	+8.375	758.329	758.349
J	5017.500	+8.375	758.304	758.340
K	5027.500	+8.375	758.264	758.310
L	5037.500	+8.375	758.211	758.257
M	5047.500	+8.375	758.144	758.182
N	5057.500	+8.375	758.062	758.086
S.CLB.P-3	5069.160	+8.375	757.950	757.950
CL.P-3	5070.330	+8.375	757.937	757.937
N.CLB.P-3	5071.500	+8.375	757.925	757.925
O	5081.500	+8.375	757.813	757.813
P	5091.500	+8.375	757.681	757.685
Q	5101.500	+8.375	757.539	757.541
CLB. N.A.	5110.330	+8.375	757.401	757.401
BK. N.A.	5112.720	+8.375	757.362	757.362

WEST P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4895.910	+3.000	757.750	757.750
CLB. S.A.	4898.300	+3.000	757.782	757.782
A	4908.300	+3.000	757.909	757.912
B	4918.300	+3.000	758.022	758.026
C	4928.300	+3.000	758.121	758.124
S.CLB.P-1	4937.130	+3.000	758.197	758.197
CL.P-1	4938.300	+3.000	758.207	758.207
N.CLB.P-1	4939.470	+3.000	758.216	758.216
D	4949.470	+3.000	758.285	758.295
E	4959.470	+3.000	758.341	758.358
F	4969.470	+3.000	758.382	758.402
G	4979.470	+3.000	758.410	758.426
H	4989.470	+3.000	758.424	758.432
S.CLB.P-2	4997.130	+3.000	758.425	758.425
CL.P-2	4998.300	+3.000	758.424	758.424
N.CLB.P-2	4999.470	+3.000	758.423	758.423
I	5009.470	+3.000	758.409	758.430
J	5019.470	+3.000	758.381	758.417
K	5029.470	+3.000	758.339	758.384
L	5039.470	+3.000	758.283	758.329
M	5049.470	+3.000	758.213	758.251
N	5059.470	+3.000	758.128	758.152
S.CLB.P-3	5071.130	+3.000	758.013	758.013
CL.P-3	5072.300	+3.000	758.000	758.000
N.CLB.P-3	5073.470	+3.000	757.987	757.987
O	5083.470	+3.000	757.870	757.873
P	5093.470	+3.000	757.738	757.742
Q	5103.470	+3.000	757.593	757.595
CLB. N.A.	5112.300	+3.000	757.453	757.453
BK. N.A.	5114.690	+3.000	757.413	757.413

BEAM - 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4896.200	+2.208	757.766	757.766
CLB. S.A.	4898.590	+2.208	757.798	757.798
A	4908.590	+2.208	757.925	757.928
B	4918.590	+2.208	758.038	758.042
C	4928.590	+2.208	758.136	758.139
S.CLB.P-1	4937.420	+2.208	758.212	758.212
CL.P-1	4938.590	+2.208	758.221	758.221
N.CLB.P-1	4939.760	+2.208	758.230	758.230
D	4949.760	+2.208	758.299	758.310
E	4959.760	+2.208	758.354	758.372
F	4969.760	+2.208	758.396	758.415
G	4979.760	+2.208	758.423	758.439
H	4989.760	+2.208	758.436	758.444
S.CLB.P-2	4997.420	+2.208	758.436	758.436
CL.P-2	4998.590	+2.208	758.436	758.436
N.CLB.P-2	4999.760	+2.208	758.436	758.436
I	5009.760	+2.208	758.421	758.441
J	5019.760	+2.208	758.392	758.429
K	5029.760	+2.208	758.350	758.396
L	5039.760	+2.208	758.293	758.340
M	5049.760	+2.208	758.223	758.261
N	5059.760	+2.208	758.138	758.162
S.CLB.P-3	5071.420	+2.208	758.022	758.022
CL.P-3	5072.590	+2.208	758.009	758.009
N.CLB.P-3	5073.760	+2.208	757.997	757.997
O	5083.760	+2.208	757.879	757.882
P	5093.760	+2.208	757.747	757.751
Q	5103.760	+2.208	757.601	757.603
CLB. N.A.	5112.590	+2.208	757.460	757.460
BK. N.A.	5114.980	+2.208	757.420	757.420

URBANA SPUR

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4897.010	+0.000	757.812	757.812
CLB. S.A.	4899.400	+0.000	757.844	757.844
A	4909.400	+0.000	757.969	757.972
B	4919.400	+0.000	758.08	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 SHEETS 25
F.A.I. 74	(10-6) RS-1	CHAMPAIGN	144	95	
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT		

BEAM - 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4897.810	-2.208	757.788	757.788
CLB. S.A.	4900.210	-2.208	757.820	757.820
A	4910.210	-2.208	757.944	757.947
B	4920.210	-2.208	758.055	758.059
C	4930.210	-2.208	758.151	758.154
S.CLB.P-1	4939.040	-2.208	758.225	758.225
CL.P-1	4940.210	-2.208	758.234	758.234
N.CLB.P-1	4941.370	-2.208	758.242	758.242
D	4951.370	-2.208	758.309	758.320
E	4951.370	-2.208	758.362	758.380
F	4971.370	-2.208	758.401	758.421
G	4981.370	-2.208	758.426	758.442
H	4991.370	-2.208	758.437	758.445
S.CLB.P-2	4999.040	-2.208	758.436	758.436
CL.P-2	5000.210	-2.208	758.435	758.435
N.CLB.P-2	5001.370	-2.208	758.434	758.434
I	5011.370	-2.208	758.417	758.438
J	5021.370	-2.208	758.386	758.423
K	5031.370	-2.208	758.342	758.387
L	5041.370	-2.208	758.283	758.329
M	5051.370	-2.208	758.210	758.249
N	5061.370	-2.208	758.123	758.147
S.CLB.P-3	5073.040	-2.208	758.004	758.004
CL.P-3	5074.210	-2.208	757.992	757.992
N.CLB.P-3	5075.370	-2.208	757.978	757.978
O	5085.370	-2.208	757.850	757.861
P	5095.370	-2.208	757.724	757.728
Q	5105.370	-2.208	757.576	757.578
CLB. N.A.	5114.210	-2.208	757.433	757.433
BK. N.A.	5116.600	-2.208	757.393	757.393

EAST P.G.L.

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4898.100	-3.000	757.780	757.780
CLB. S.A.	4900.500	-3.000	757.811	757.811
A	4910.500	-3.000	757.935	757.938
B	4920.500	-3.000	758.045	758.049
C	4930.500	-3.000	758.141	758.144
S.CLB.P-1	4939.330	-3.000	758.215	758.215
CL.P-1	4940.500	-3.000	758.223	758.223
N.CLB.P-1	4941.660	-3.000	758.232	758.232
D	4951.660	-3.000	758.299	758.309
E	4961.660	-3.000	758.351	758.369
F	4971.660	-3.000	758.390	758.409
G	4981.660	-3.000	758.414	758.430
H	4991.660	-3.000	758.425	758.433
S.CLB.P-2	4999.330	-3.000	758.424	758.424
CL.P-2	5000.500	-3.000	758.423	758.423
N.CLB.P-2	5001.660	-3.000	758.421	758.421
I	5011.660	-3.000	758.404	758.425
J	5021.660	-3.000	758.373	758.409
K	5031.660	-3.000	758.328	758.373
L	5041.660	-3.000	758.268	758.315
M	5051.660	-3.000	758.195	758.234
N	5061.660	-3.000	758.108	758.132
S.CLB.P-3	5073.330	-3.000	757.989	757.989
CL.P-3	5074.500	-3.000	757.976	757.976
N.CLB.P-3	5075.660	-3.000	757.963	757.963
O	5085.660	-3.000	757.842	757.845
P	5095.660	-3.000	757.707	757.712
Q	5105.660	-3.000	757.559	757.562
CLB. N.A.	5114.500	-3.000	757.416	757.416
BK. N.A.	5116.890	-3.000	757.375	757.375

STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4899.510	-6.833	757.738	757.738
CLB. S.A.	4901.900	-6.833	757.770	757.770
A	4911.900	-6.833	757.892	757.895
B	4921.900	-6.833	758.000	758.004
C	4931.900	-6.833	758.094	758.096
S.CLB.P-1	4940.730	-6.833	758.165	758.165
CL.P-1	4941.900	-6.833	758.174	758.174
N.CLB.P-1	4943.070	-6.833	758.182	758.182
D	4953.070	-6.833	758.247	758.257
E	4963.070	-6.833	758.297	758.315
F	4973.070	-6.833	758.334	758.354
G	4983.070	-6.833	758.357	758.373
H	4993.070	-6.833	758.365	758.373
S.CLB.P-2	5000.730	-6.833	758.362	758.362
CL.P-2	5001.900	-6.833	758.361	758.361
N.CLB.P-2	5003.070	-6.833	758.360	758.360
I	5013.070	-6.833	758.341	758.361
J	5023.070	-6.833	758.308	758.344
K	5033.070	-6.833	758.260	758.306
L	5043.070	-6.833	758.199	758.246
M	5053.070	-6.833	758.124	758.163
N	5063.070	-6.833	758.035	758.058
S.CLB.P-3	5074.730	-6.833	757.913	757.913
CL.P-3	5075.900	-6.833	757.900	757.900
N.CLB.P-3	5077.070	-6.833	757.887	757.887
O	5087.070	-6.833	757.764	757.767
P	5097.070	-6.833	757.628	757.632
Q	5107.070	-6.833	757.477	757.480
CLB. N.A.	5115.900	-6.833	757.332	757.332
BK. N.A.	5118.290	-6.833	757.291	757.291

BEAM - 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4900.070	-8.375	757.722	757.722
CLB. S.A.	4902.470	-8.375	757.753	757.753
A	4912.470	-8.375	757.874	757.877
B	4922.470	-8.375	757.981	757.985
C	4932.470	-8.375	758.075	758.077
S.CLB.P-1	4941.300	-8.375	758.145	758.145
CL.P-1	4942.470	-8.375	758.154	758.154
N.CLB.P-1	4943.630	-8.375	758.162	758.162
D	4953.630	-8.375	758.226	758.236
E	4963.630	-8.375	758.276	758.293
F	4973.630	-8.375	758.312	758.331
G	4983.630	-8.375	758.333	758.350
H	4993.630	-8.375	758.341	758.349
S.CLB.P-2	5001.300	-8.375	758.338	758.338
CL.P-2	5002.470	-8.375	758.337	758.337
N.CLB.P-2	5003.630	-8.375	758.335	758.335
I	5013.630	-8.375	758.315	758.336
J	5023.630	-8.375	758.281	758.318
K	5033.630	-8.375	758.233	758.279
L	5043.630	-8.375	758.171	758.218
M	5053.630	-8.375	758.095	758.134
N	5063.630	-8.375	758.005	758.029
S.CLB.P-3	5075.300	-8.375	757.883	757.883
CL.P-3	5076.470	-8.375	757.870	757.870
N.CLB.P-3	5077.630	-8.375	757.856	757.856
O	5087.630	-8.375	757.733	757.736
P	5097.630	-8.375	757.595	757.599
Q	5107.630	-8.375	757.444	757.447
CLB. N.A.	5116.470	-8.375	757.299	757.299
BK. N.A.	5118.860	-8.375	757.258	757.258

BEAM - 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4902.330	-14.542	757.655	757.655
CLB. S.A.	4904.720	-14.542	757.685	757.685
A	4914.720	-14.542	757.803	757.806
B	4924.720	-14.542	757.907	757.911
C	4934.720	-14.542	757.998	758.000
S.CLB.P-1	4943.560	-14.542	758.066	758.066
CL.P-1	4944.720	-14.542	758.074	758.074
N.CLB.P-1	4945.890	-14.542	758.082	758.082
D	4955.890	-14.542	758.142	758.153
E	4965.890	-14.542	758.189	758.207
F	4975.890	-14.542	758.222	758.241
G	4985.890	-14.542	758.240	758.257
H	4995.890	-14.542	758.245	758.253
S.CLB.P-2	5003.560	-14.542	758.239	758.239
CL.P-2	5004.720	-14.542	758.238	758.238
N.CLB.P-2	5005.890	-14.542	758.236	758.236
I	5015.890	-14.542	758.212	758.233
J	5025.890	-14.542	758.175	758.212
K	5035.890	-14.542	758.124	758.170
L	5045.890	-14.542	758.059	758.106
M	5055.890	-14.542	757.980	758.019
N	5065.890	-14.542	757.887	757.910
S.CLB.P-3	5077.560	-14.542	757.761	757.761
CL.P-3	5078.720	-14.542	757.747	757.747
N.CLB.P-3	5079.890	-14.542	757.733	757.733
O	5089.890	-14.542	757.607	757.610
P	5099.890	-14.542	757.466	757.470
Q	5109.890	-14.542	757.312	757.314
CLB. N.A.	5116.720	-14.542	757.164	757.164
BK. N.A.	5121.120	-14.542	757.122	757.122

BEAM - 8

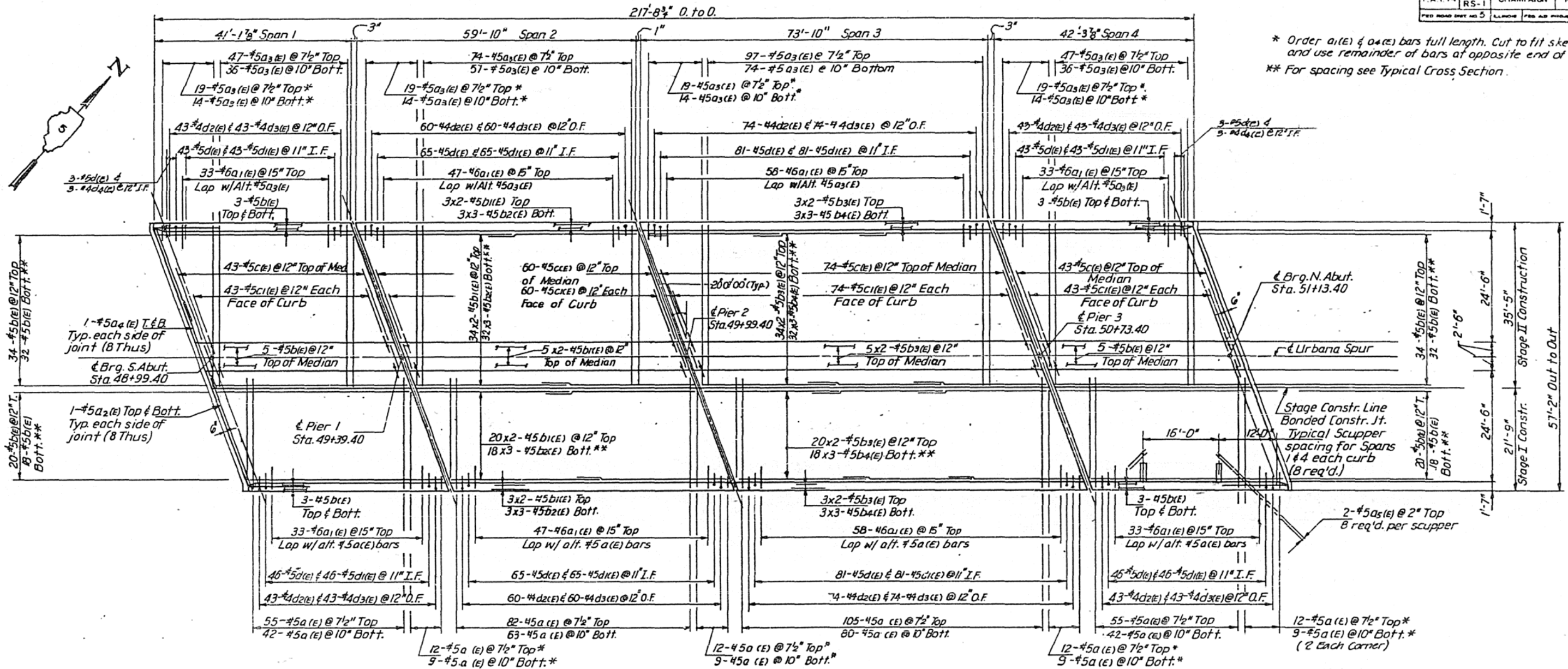
LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4904.590	-20.708	757.579	757.579
CLB. S.A.	4906.980	-20.708	757.608	757.608
A	4916.980	-20.708	757.723	757.726
B	4926.980	-20.708	757.824	757.828
C	4936.980	-20.708	757.911	757.914
S.CLB.P-1	4945.820	-20.708	757.976	757.976
CL.P-1	4946.980	-20.708	757.984	757.984
N.CLB.P-1	4948.150	-20.708	757.992	757.992
D	4958.150	-20.708	758.049	758.059
E	4968.150	-20.708	758.093	758.110
F	4978.150	-20.708	758.122	758.142
G	4988.150	-20.708	758.138	758.154
H	4998.150	-20.708	758.139	758.147
S.CLB.P-2	5005.820	-20.708	758.131	758.131
CL.P-2	5006.980	-20.708	758.129	758.129
N.CLB.P-2	5008.150	-20.708	758.127	758.127
I	5018.150	-20.708	758.100	758.121
J	5028.150	-20.708	758.060	758.097
K	5038.150	-20.708	758.006	758.052
L	5048.150	-20.708	757.937	757.984
M	5058.150	-20.708	757.855	757.894
N	5068.150	-20.708	757.759	757.782
S.CLB.P-3	5079.820	-20.708	757.629	757.629
CL.P-3	5080.980	-20.708	757.615	757.615
N.CLB.P-3	5082.150	-20.708	757.601	757.601
O	5092.150	-20.708	757.471	757.474
P	5102.150	-20.708	757.328	757.332
Q	5112.150	-20.708	757.170	757.173
CLB. N.A.	5120.980	-20.708	757.019	757.019
BK. N.A.	5123.380	-20.708	756.976	756.976

BEAM - 8A

LOCATION	STATION	OFFSET	THEORETICAL GRADE	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION
BK. S.A.	4906.620	-26.250	757.488	757.488
CLB. S.A.	4909.010	-26.250	757.517	757.517
A	4919.010	-26.250	757.629	757.632
B	4929.010	-26.250	757.728	757.732
C	4939.010	-26.250	757.812	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
F.A. 174	(10-6) RS-1	CHAMPAIGN	144	96	SHEETS 25
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT			

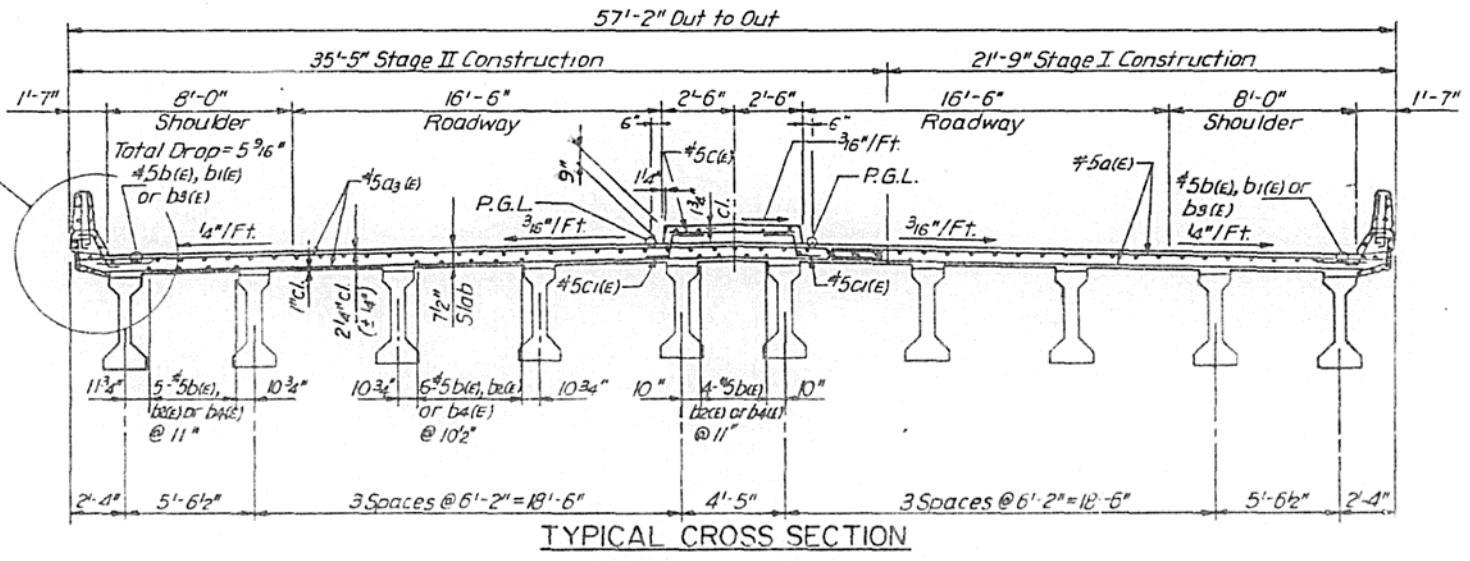


* Order a₁(E) & a₄(E) bars full length. Cut to fit skew and use remainder of bars at opposite end of span.
** For spacing see Typical Cross Section.

PLAN

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x2-#5 etc. indicates 20 lines of bars with 2 lengths per line.
For Detail A, Parapet Details and Bill of Materials see Sht. No. 7
For Diaphragm and Joint Details see Sht. No. 8 & 9
Min. bar lap for #5 bars in longitudinal direction = 1'-8"
Min. bar lap for #5 bars in transverse direction = 2'-2"

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.



TYPICAL CROSS SECTION

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60608

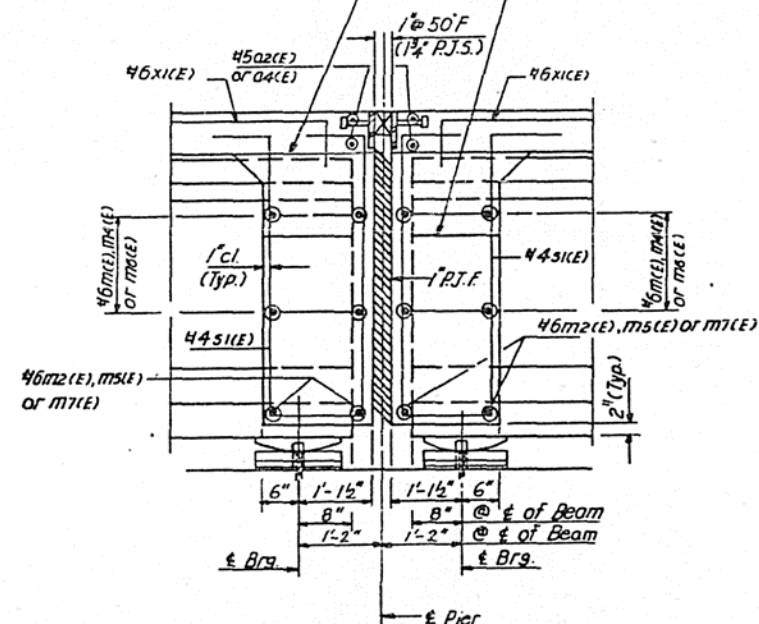
DECK DETAILS
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS - 1
CHAMPAIGN COUNTY
STA. 49+99.40
SN. OIO-0033

REVISIONS	
NAME	DATE

SCALE VERT. HORIZ.
DATE

Pour diaphragm flush with bottom of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

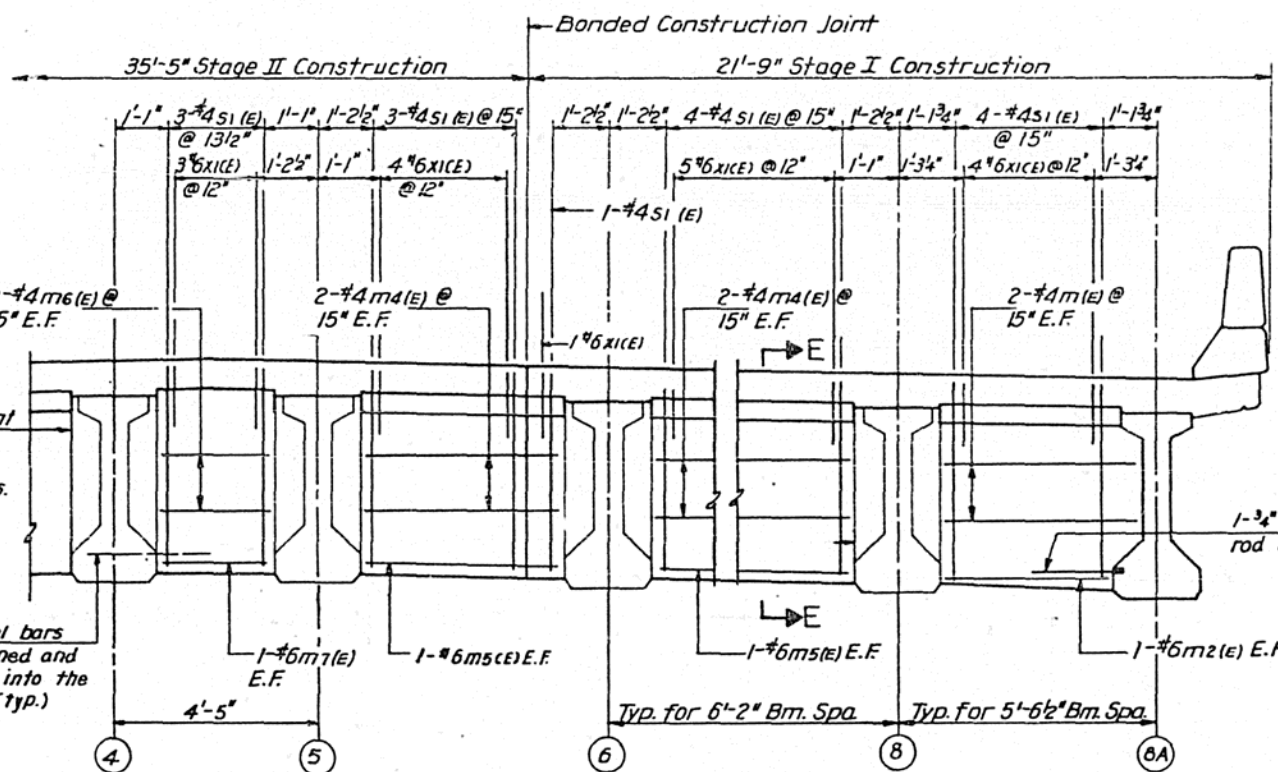
Roofing felt shall be bonded to side of beam embedded into diaphragm. (Typ. New Beams only)



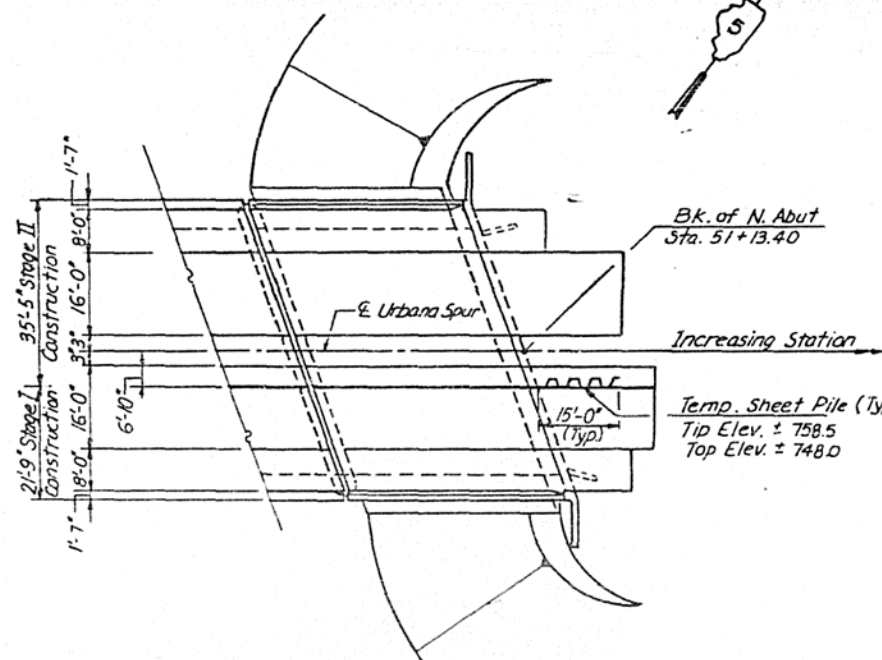
SECTION E-E

Bonded Construction Joint in accordance with art. 504.13(a)(2) of the Standard Specifications. (Typ. @ existing beams)

Existing dowel bars shall be cleaned and incorporated into the new section (typ.)



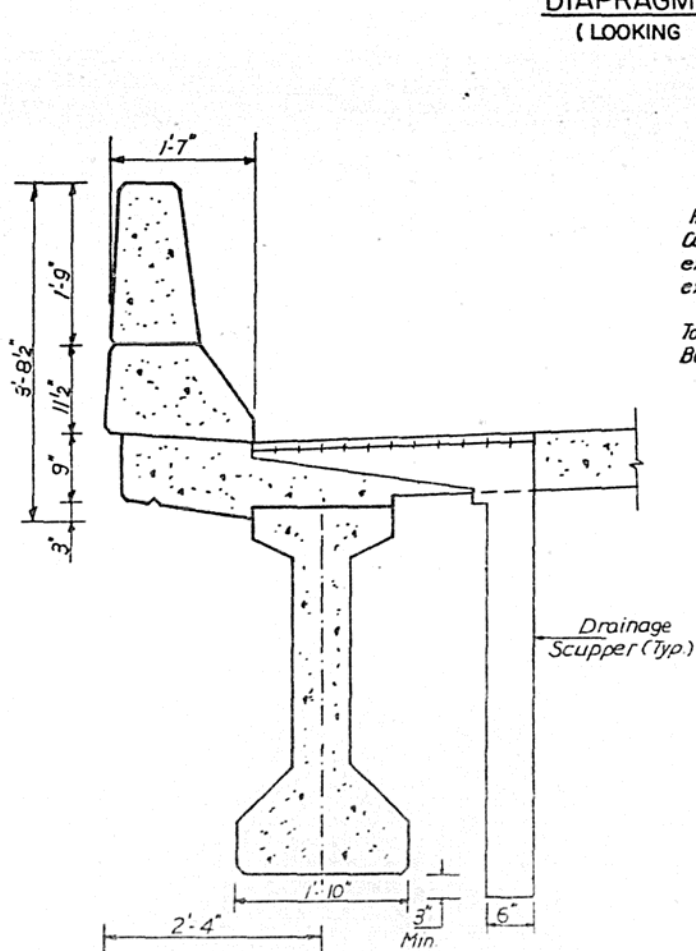
DIAPHRAGM AT PIER 2
(LOOKING EAST)



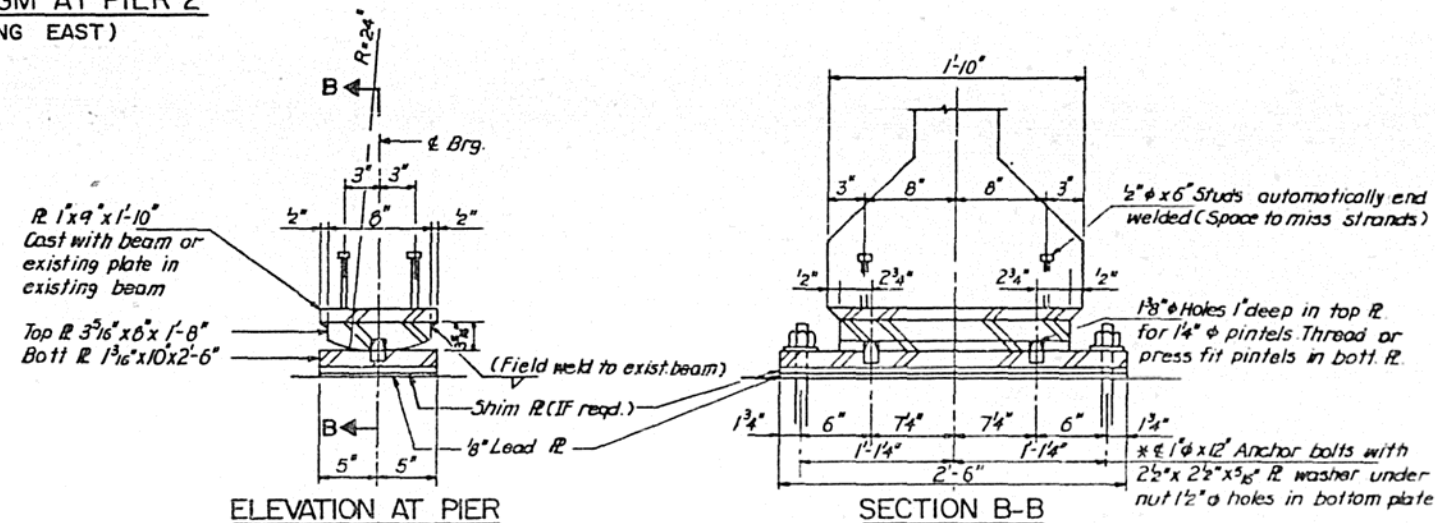
TEMPORARY SHEET PILING LAYOUT
(North Abutment Shown, South Abutment Similar)

The information shown for the Temporary Sheet Piling is estimated. It is the Contractor responsibility to provide a design and computations of the Temporary Sheet Piling and associated members, if required, subject to the approval of the Engineer.

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C. / V.B.P.
CHECKED	R.V.P.



(For details of Drainage Scupper see sheet nos. 21, 22)

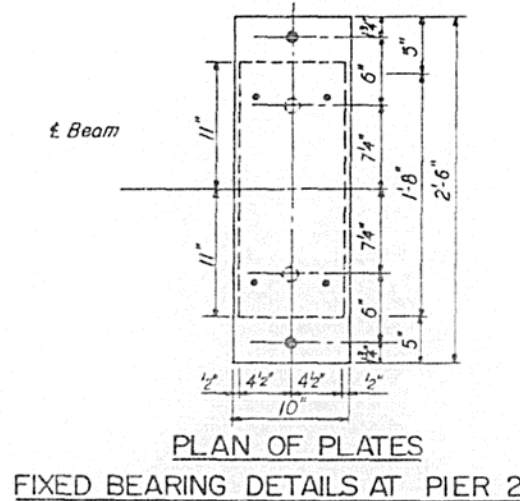


ELEVATION AT PIER

SECTION B-B

* Anchor bolts may be built into the masonry or drilled and grouted in place after all beams have been erected

NOTE: For Pintle details see Sheet No. 13



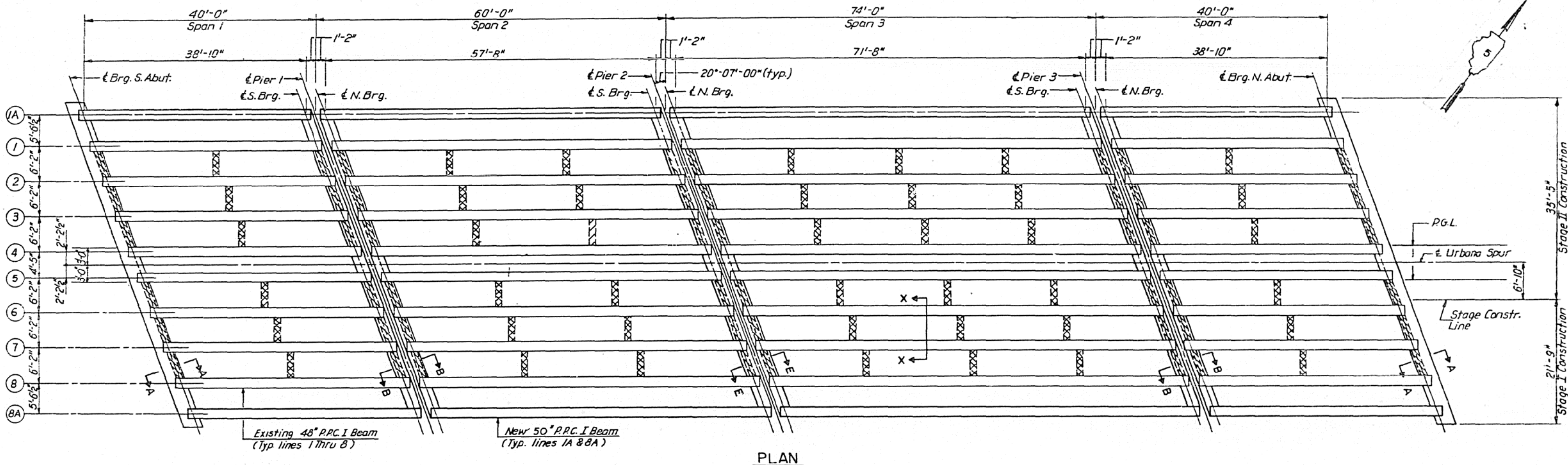
FIXED BEARING DETAILS AT PIER 2

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

DIAPHRAGM DETAILS-II
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
SN. 010-0033

REVISIONS	
NAME	DATE

SCALE VERT. HORIZ.
DATE

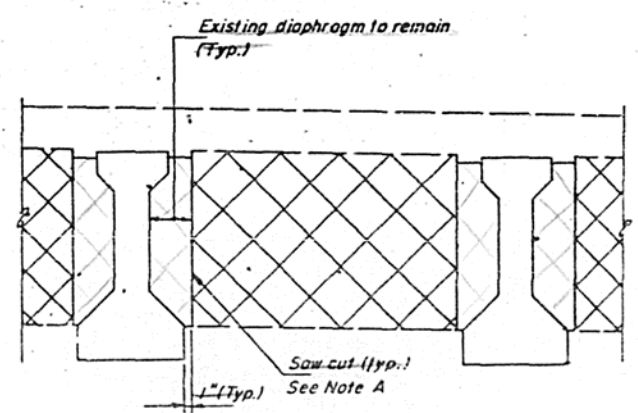


LEGEND

Indicates diaphragm removal. Reinforcement extending into removed area shall be cleaned and incorporated into the New Construction.

Indicates diaphragm and reinforcement removal. Existing beams shall be patched as required with epoxy mortar.

NOTE:
See sheet no. 8 for Section A-A and B-B
See sheet no. 9 for Section E-E



Note A
Patch end-of-diaphragm as required with epoxy mortar.

SECTION X-X
(Typical intermediate diaphragm removal)

NOTE: diaphragms fell off of beams; only bond was @ bottom flange.

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C./V.B.P.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

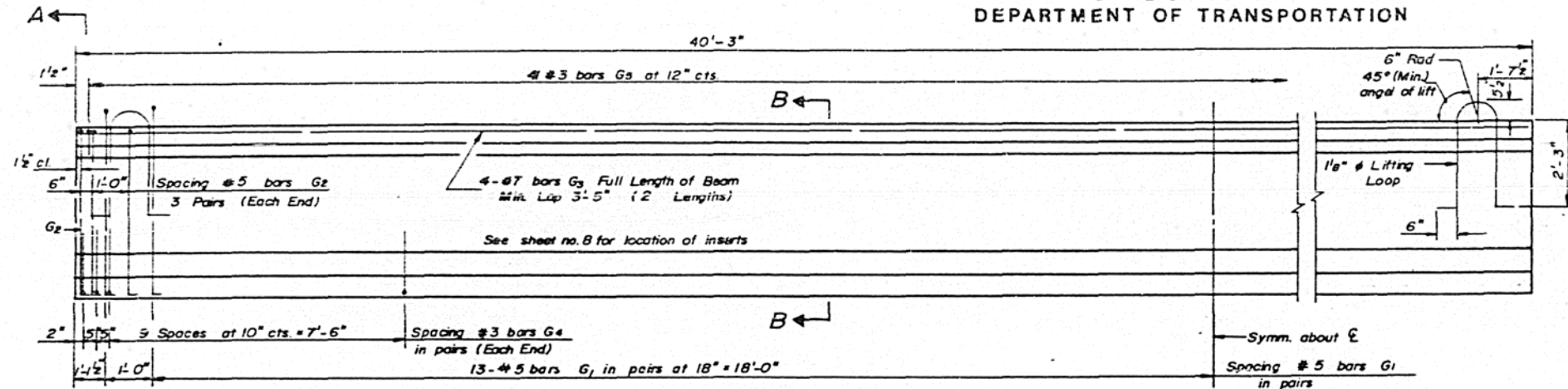
P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

FRAMING PLAN
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

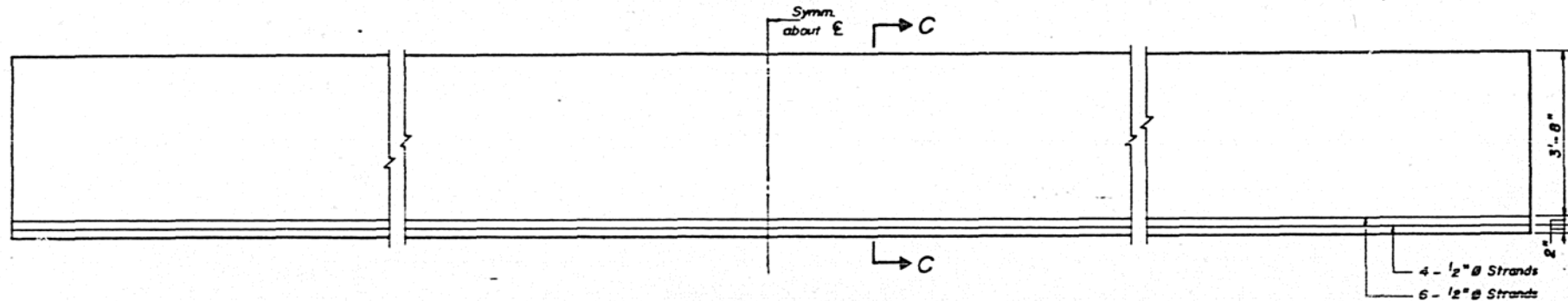
SCALE: VERT. HORIZ.
DATE:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

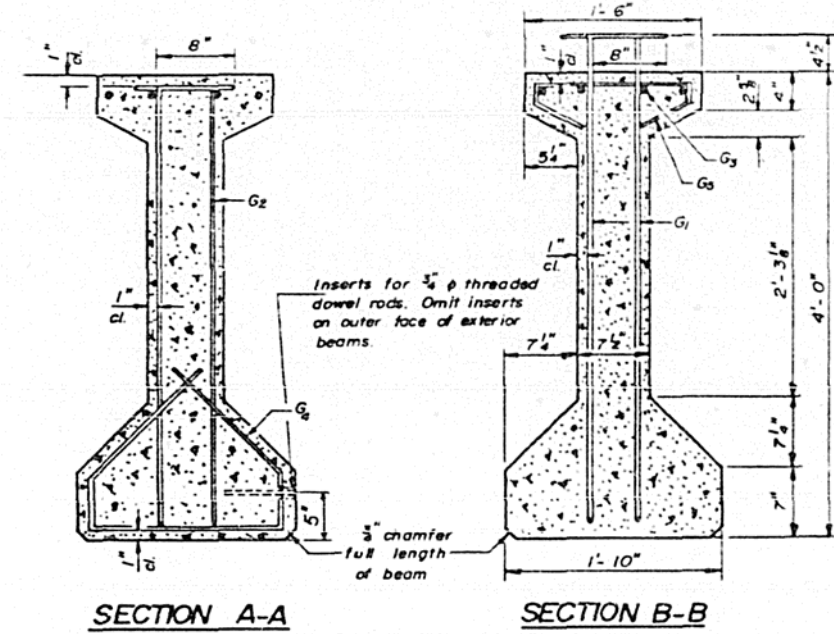
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
F.A.I. 74	(10-6) RS-1	CHAMPAIGN	144	101	SHEETS 25
FED. ROAD DIST. NO. 3	LINE AND PROJECT				



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

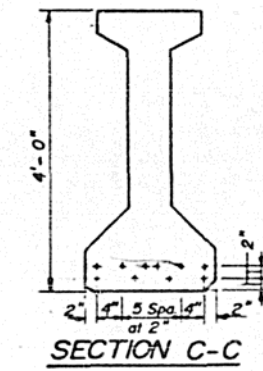


ELEVATION OF BEAM
(Showing Prestressing Steel)

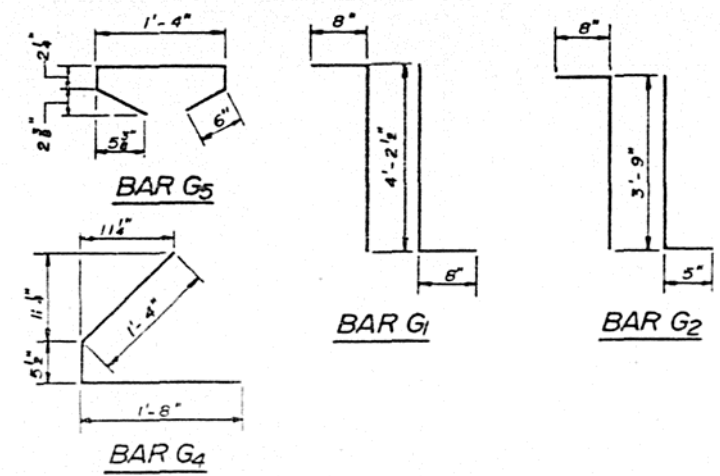


SECTION A-A

SECTION B-B



SECTION C-C



***BAR LIST**

Bar	No.	Size	Length	Shape
G1	56	#5	5'-6 1/2"	7L
G2	12	#5	4'-10"	7L
G3	8	#7	21'-9"	—
G4	48	#3	3'-5 1/2"	∠
G5	41	#3	2'-8 1/2"	∩

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	161

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 in".
Insert for 3/4" threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.
The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
Non-prestressing steel shall conform to A.A.S.H.T.O. designation M-31, M-42 or M-53 Grade 60.
Steel for lifting loops shall be non-deformed bars f_y = 40,000 psi.
Required release strength, f_{cl}, shall be 4000 psi.

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD
CHICAGO ILLINOIS, 60606

PPC.I BEAM DETAIL SPAN I & 4
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

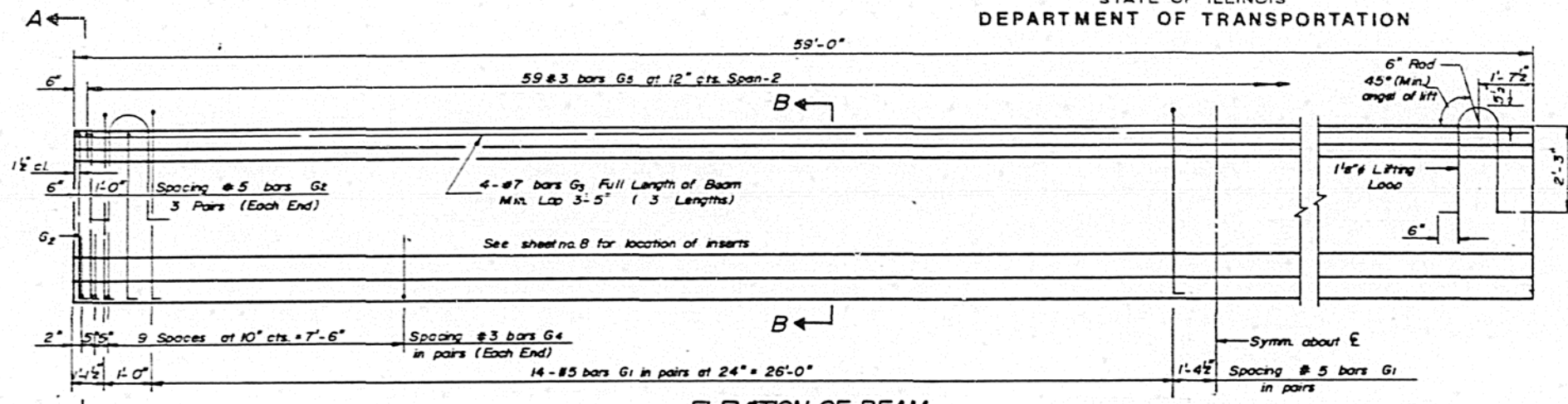
SCALE VERT
HORIZ
DATE

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	V.B.P.
CHECKED	R.V.P.

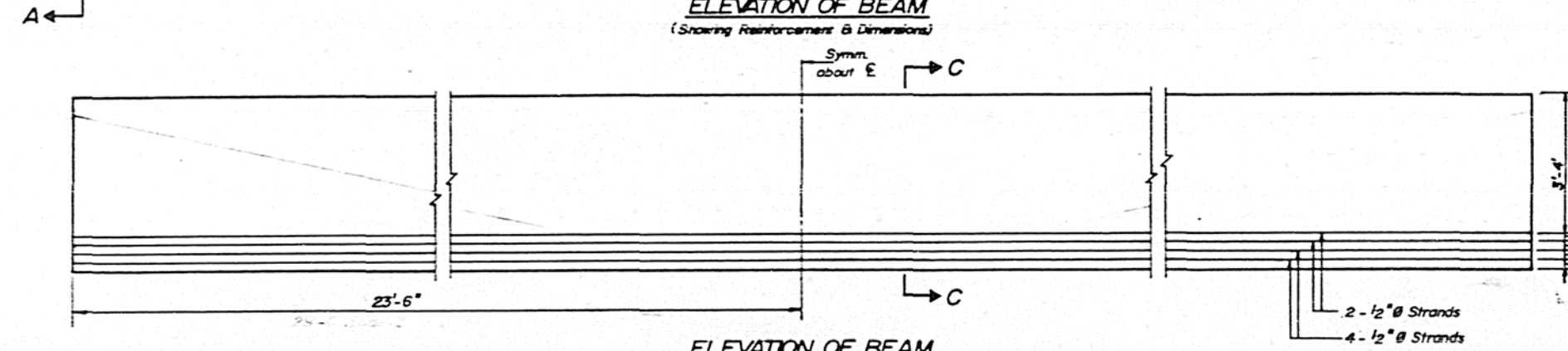
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	(10-6) RS-1	CHAMPAIGN	144	101-A
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

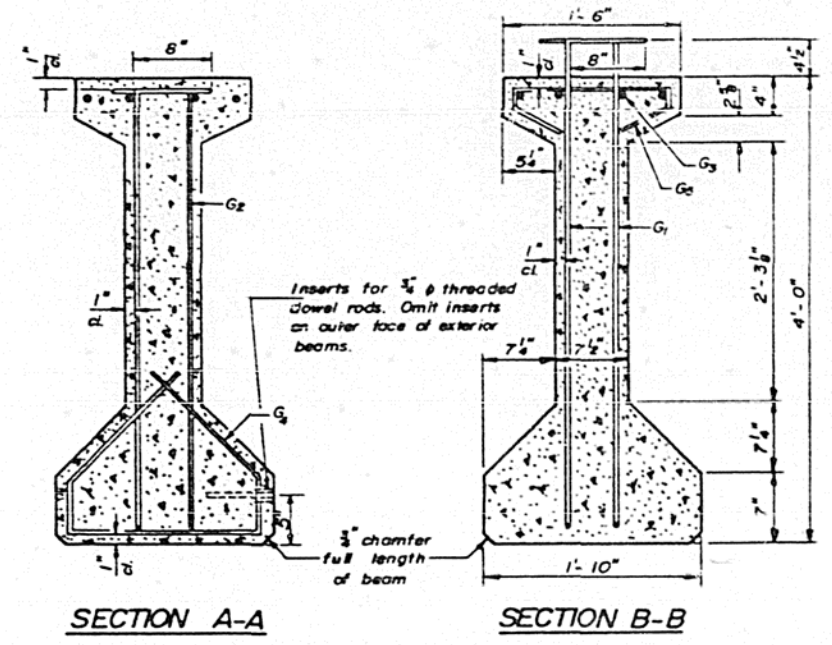
SHEET NO. 12
SHEETS 25



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

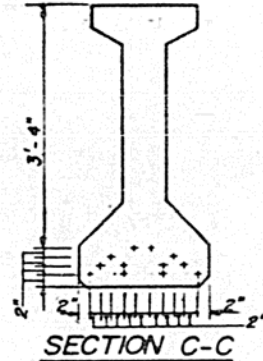


ELEVATION OF BEAM
(Showing Prestressing Steel)

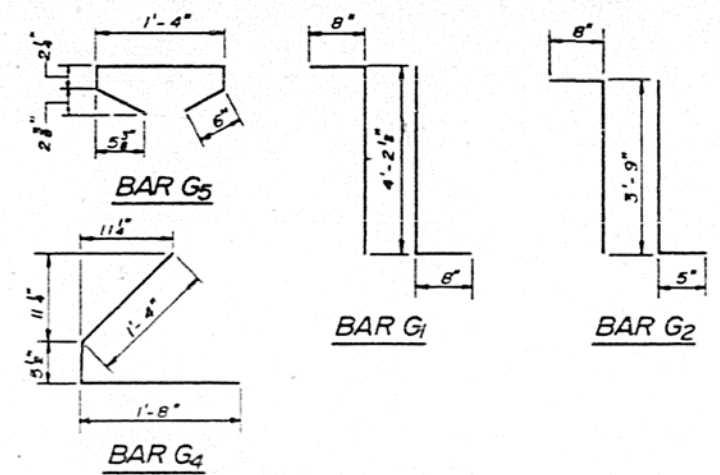


SECTION A-A

SECTION B-B



SECTION C-C



* BAR LIST

Bar	No.	Size	Length	Shape
G1	60	#5	5'-6 1/2"	7L
G2	12	#5	4'-10"	7L
G3	12	#7	21'-11"	
G4	48	#3	3'-5 1/2"	∟
G5	59	#3	2'-8 1/2"	∩

* For one beam only

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	118

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lined foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 in."

Insert for 3/4" threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be non-palvanized high strength, stress-relieved 7-wire strand, Grade 270.

The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq in.

Non-prestressing steel shall conform to A.A.S.H.T.O. designation M-31, M-42 or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars, fy = 40,000 psi. Required release strength, f'cl, shall be 4000 psi.

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

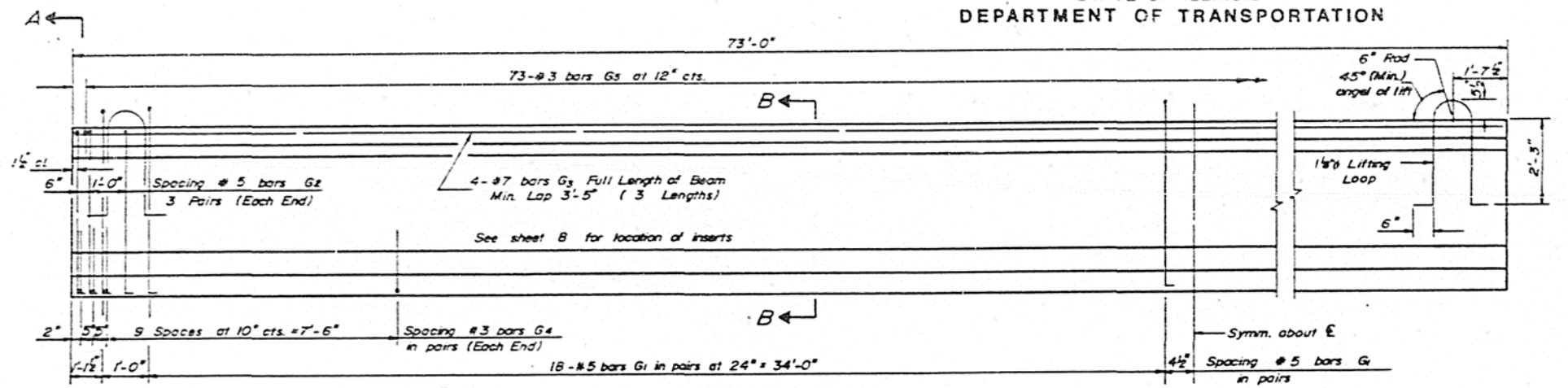
P.P.C. I BEAM DETAIL SPAN 2
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N.OIO-0033

SCALE VERT. HORIZ.
DATE

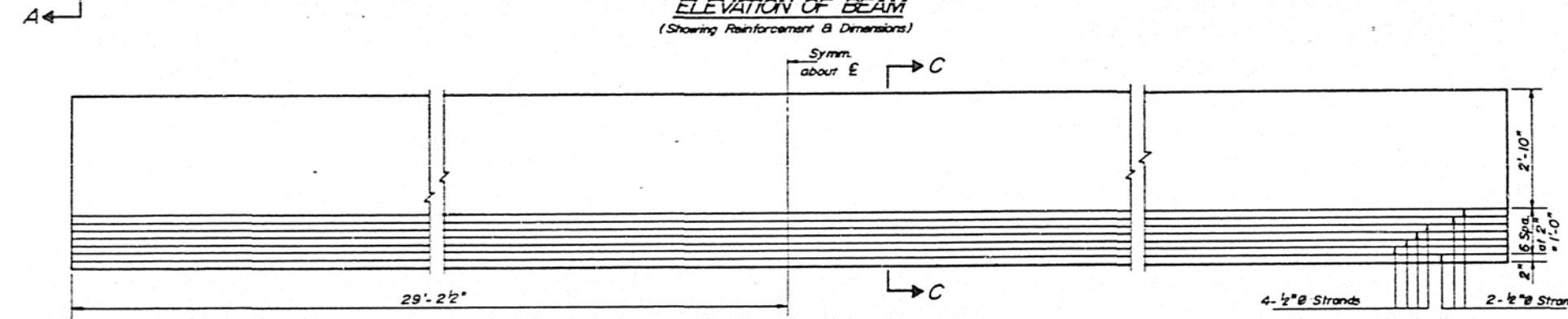
DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	V.B.P.
CHECKED	R.V.P.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

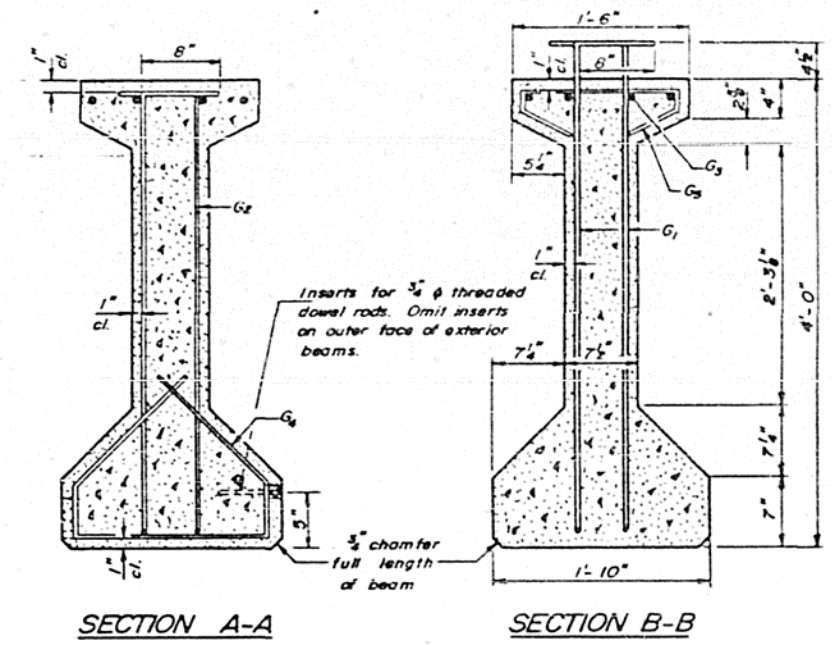
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 SHEETS 25
FAL 74	(10-6) RS-1	CHAMPAIGN	144	101-B	
FED ROAD DIST NO. 5	ILLINOIS	FED AID PROJECT			



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

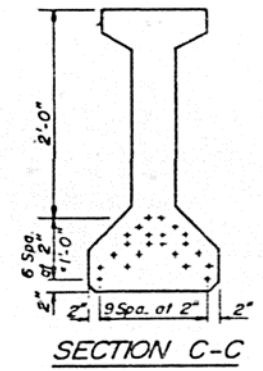


ELEVATION OF BEAM
(Showing Prestressing Steel)

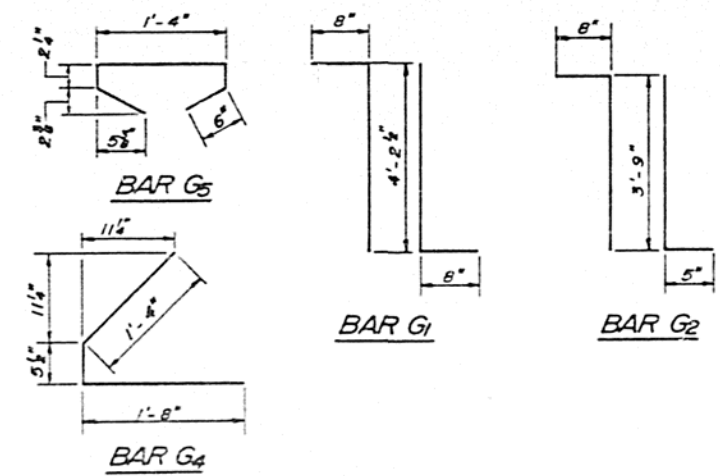


SECTION A-A

SECTION B-B



SECTION C-C



*** BAR LIST**

Bar No.	Size	Length	Shape
G1	#5	5'-6 1/2"	7L
G2	#5	4'-10"	7L
G3	#7	26'-7"	—
G4	#3	3'-5 1/2"	∟
G5	#3	2'-8 1/2"	∩

* For one beam only

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	146

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48 in."

Insert for 3/4" threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.

The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq in.

Non-prestressing steel shall conform to A.S.H.T.O. designation M-31, M-42 or M-53 Grade 60.

Steel for lifting wops shall be non-deformed bars f'y = 40,000 psi. Required release strength, f'cl, shall be _____ psi.

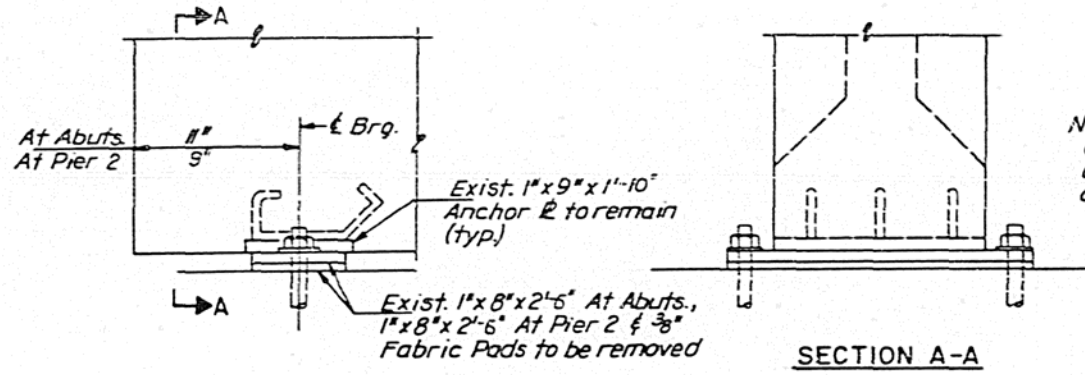
REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS 60606

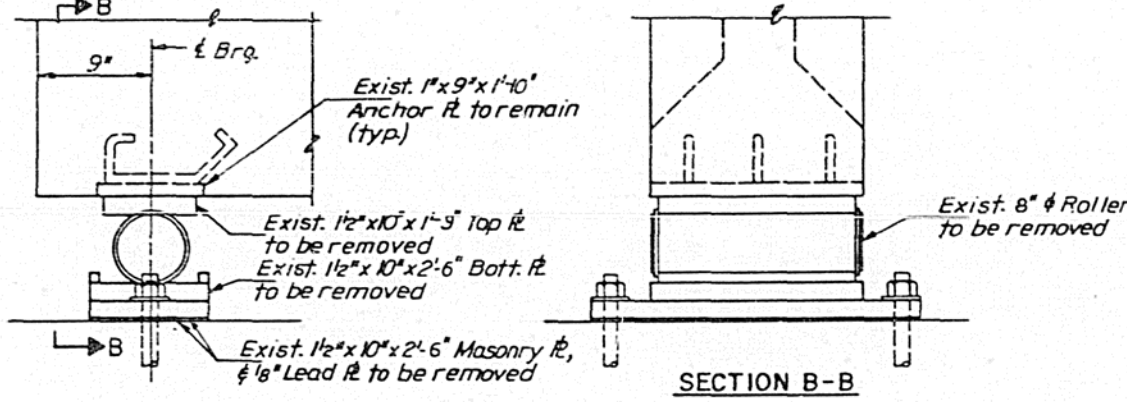
P.P.C. I BEAM DETAIL SPAN 3
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT
HORIZ
DATE

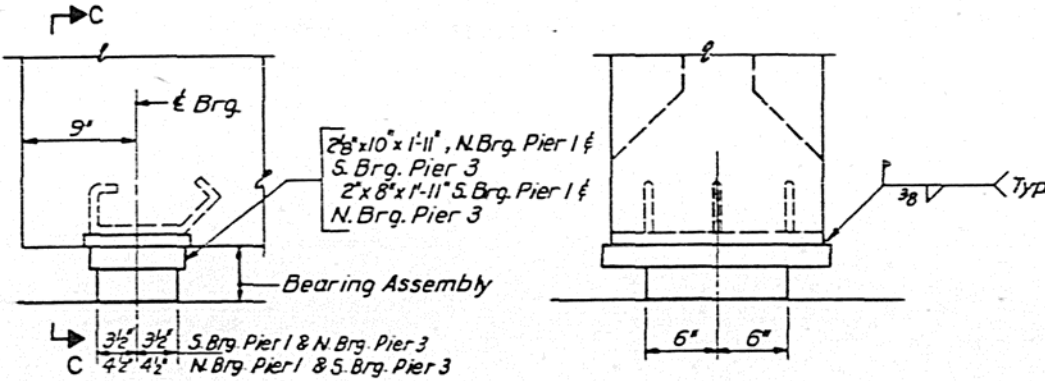
DESIGNED R.V.P.
CHECKED J.M.P.
DRAWN D.C.P.
CHECKED R.V.P.



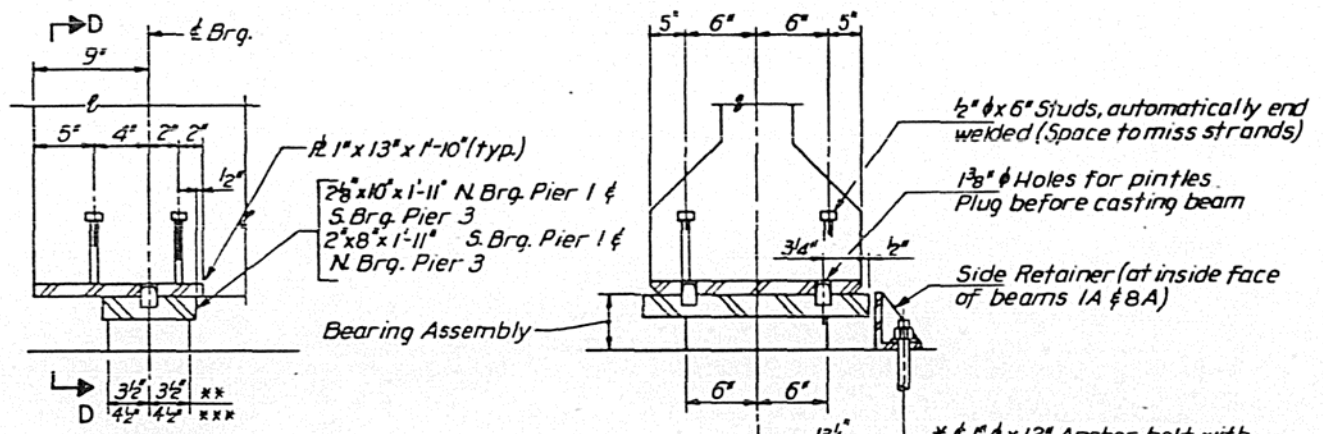
ELEVATION
SECTION A-A
EXISTING FIXED BEARINGS AT ABUTMENTS AND PIER 2



ELEVATION
SECTION B-B
EXISTING EXPANSION BEARINGS AT PIERS 1 & 3



ELEVATION
SECTION C-C
TYPE I ELASTOMERIC EXPANSION BEARINGS AT PIERS 1 & 3
(FOR EXISTING BEAMS 1 THRU 8)

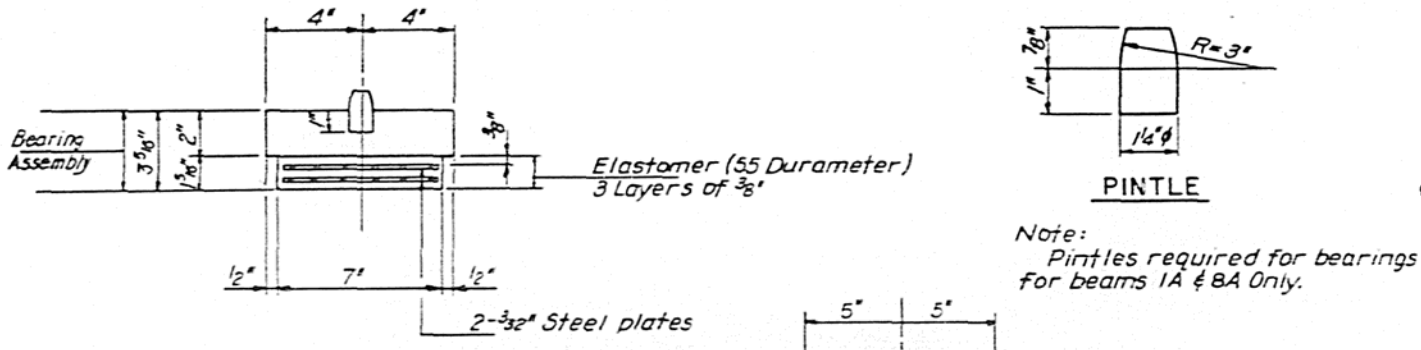


ELEVATION
SECTION D-D
TYPE I ELASTOMERIC EXPANSION BEARINGS AT PIERS 1 & 3
(FOR NEW BEAMS 1A & 8A)

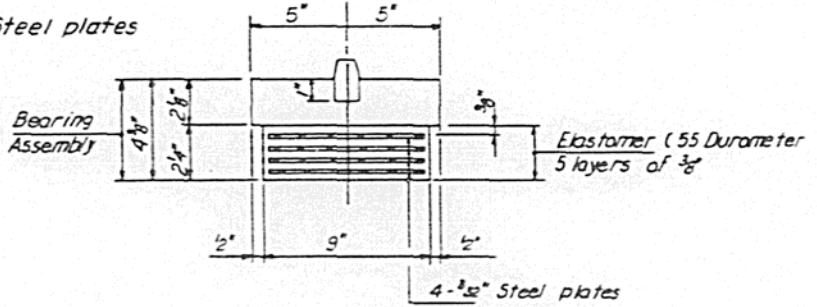
*Note:
After beams have been erected holes of expansion bearings shall be drilled and anchor bolts grouted in place.

For new fixed bearing details see sheet no. 9

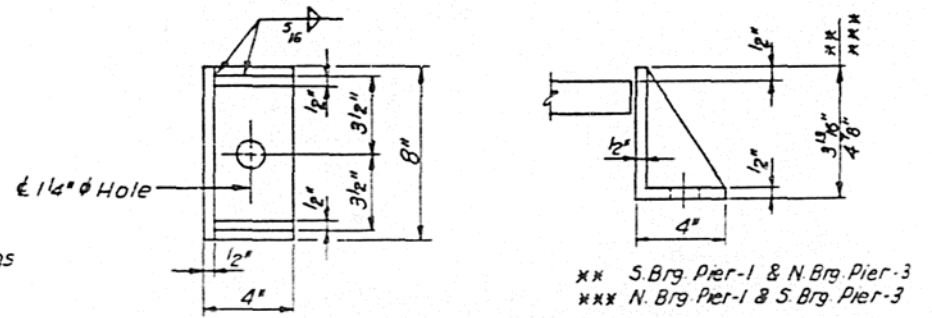
Cost of removal and disposal of existing bearings shall be included in the cost of Elastomeric Bearing Assembly, Type I.



BEARING ASSEMBLY
(S.Brg Pier 1 & N.Brg Pier 3)



BEARING ASSEMBLY
(N.Brg Pier 1 & S.Brg Pier 3)



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

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	40

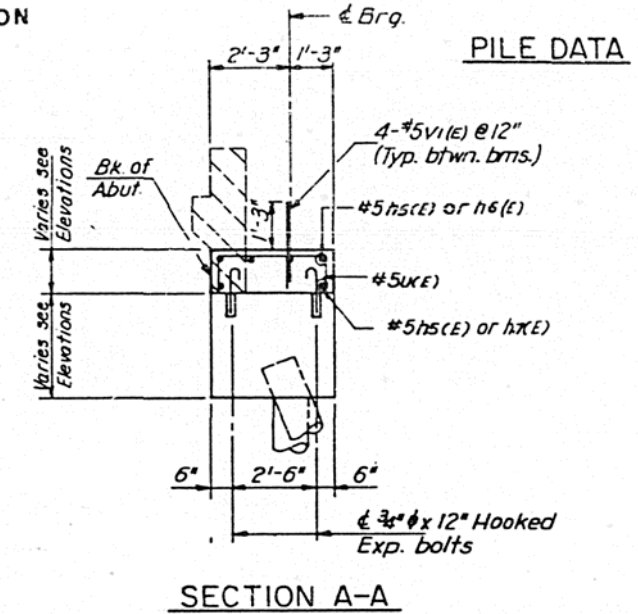
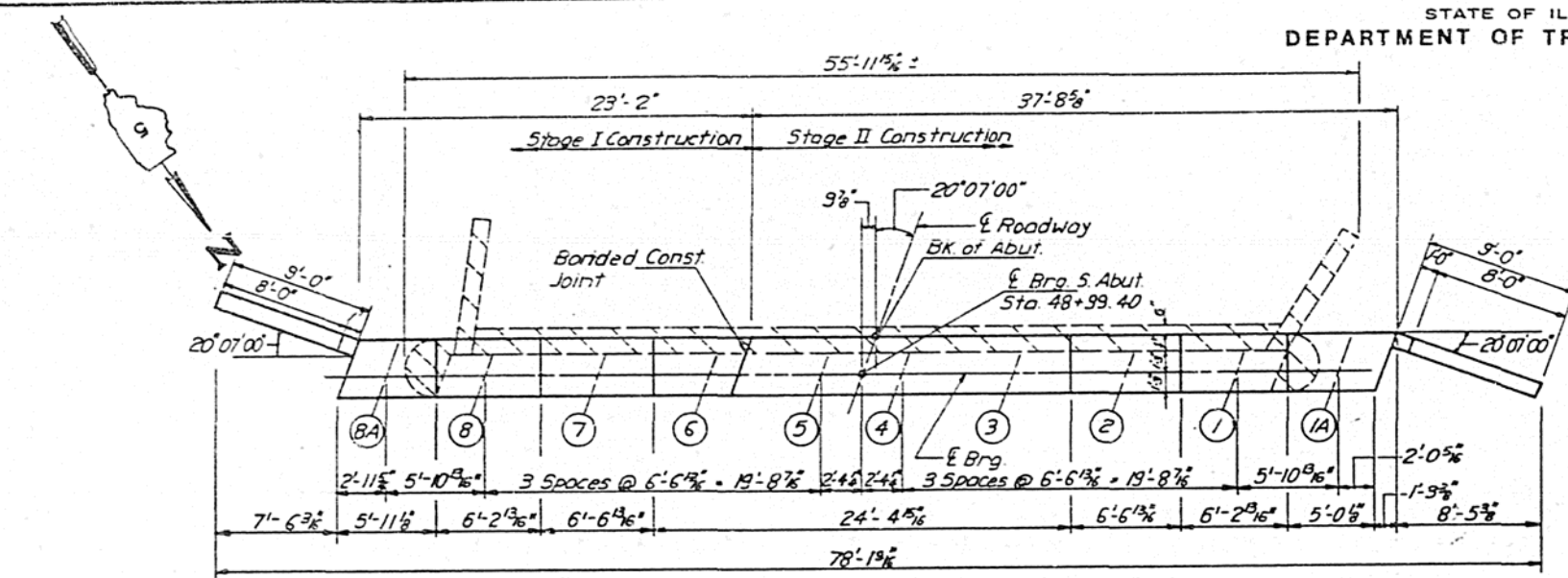
DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	V.B.P.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS 60606

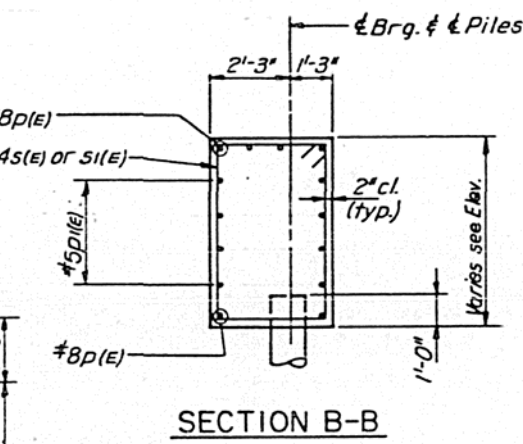
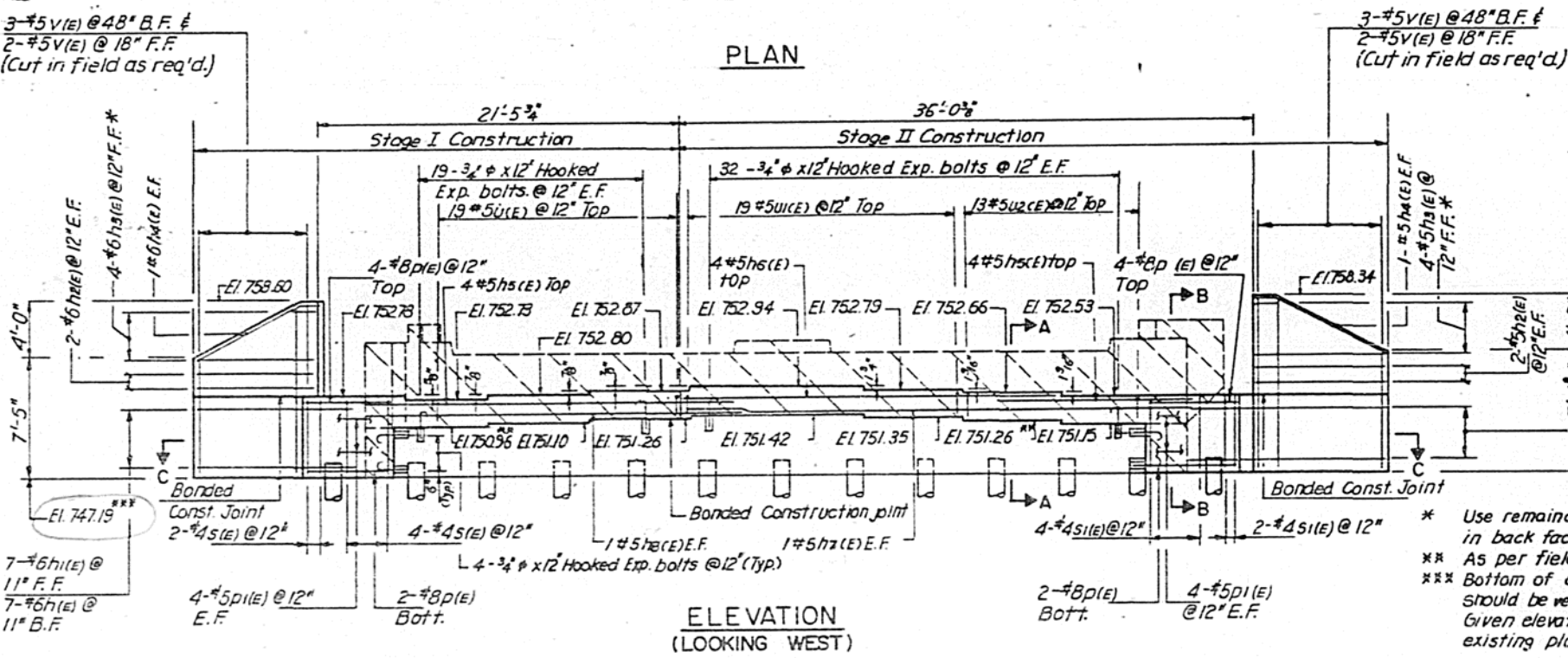
BEARING DETAILS
URBANA SPUR OVER FA.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT
HORIZ
DATE



BILL OF MATERIAL

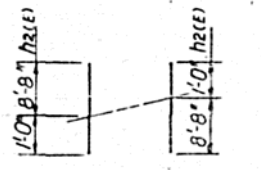
BAR	TOTAL NO.	CONSTR. STAGE		SIZE	LENGTH	SHAPE
		I	II			
h1(E)	14	7	7	#6	11'-8"	—
h2(E)	8	4	4	#5	8'-8"	—
h3(E)	4	2	2	#5	9'-4"	—
h4(E)	3	4	4	#5	19'-6"	—
h5(E)	4	—	4	#5	25'-8"	—
h6(E)	2	—	2	#5	34'-8"	—
h7(E)	2	—	—	#5	22'-6"	—
h8(E)	12	6	6	#8	5'-4"	—
h9(E)	16	8	8	#5	5'-4"	—
S(E)	6	6	—	#4	17'-7"	□
S1(E)	6	—	6	#4	17'-1"	□
U(E)	19	19	—	#5	5'-10"	□
U1(E)	19	—	19	#5	5'-6"	□
U2(E)	13	—	13	#5	5'-2"	□
V(E)	10	5	5	#5	11'-1"	—
V1(E)	29	13	16	#5	2'-6"	—
ITEM	UNIT	TOTAL	CONSTR. STAGE			
Reinforcement Bars (Epoxy Coated)	Lbs.	1880	840	1040		
Class X Concrete	Cu. Yds.	23.90	11.0	12.9		
Concrete Removal	Cu Yds.	16.40	6.10	10.30		
Structure Excavation	Cu. Yds.	22.80	11.40	11.40		
Furnishing Conc. Piles	L.F.	37	—	37		
Driving Concrete Piles	L.F.	37	—	37		
Test pile Concrete	Each	1	1	—		
Expansion bolts 3/4" φ	Each	118	46	72		



SECTION B-B

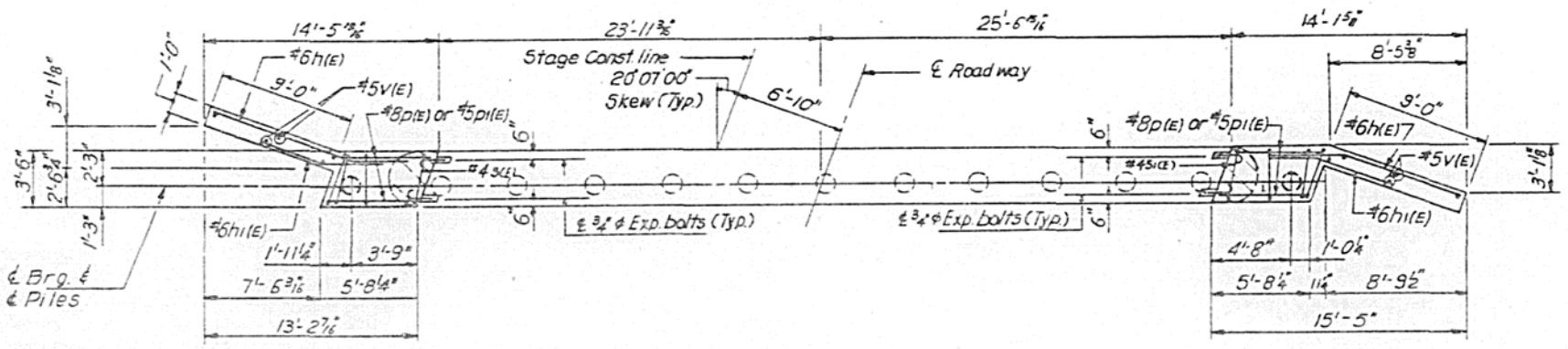
CUTTING DIAGRAM

BAR	A	B
U1(E)	3'-2"	1'-4"
U1(E)	3'-2"	1'-2"
U2(E)	3'-2"	1'-0"



CUTTING DIAGRAM

Notes
Reinforcement bars designated (E) shall be epoxy coated.
Bridged construction joint shall be in accordance with Art. 504.13(a)(2) of the Standard Specifications



SECTION C-C

LEGEND
BAR h4(E)
BARS h(E) & h1(E)
Indicates concrete removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

PILE DATA:
Type : Concrete
Capacity : 30 Tons
Est. Length : 37 L.F.
No. Req'd. : 2 (Includes 1 test pile)

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

*** Stg 1 = 747.02
Stg 2 = 746.95

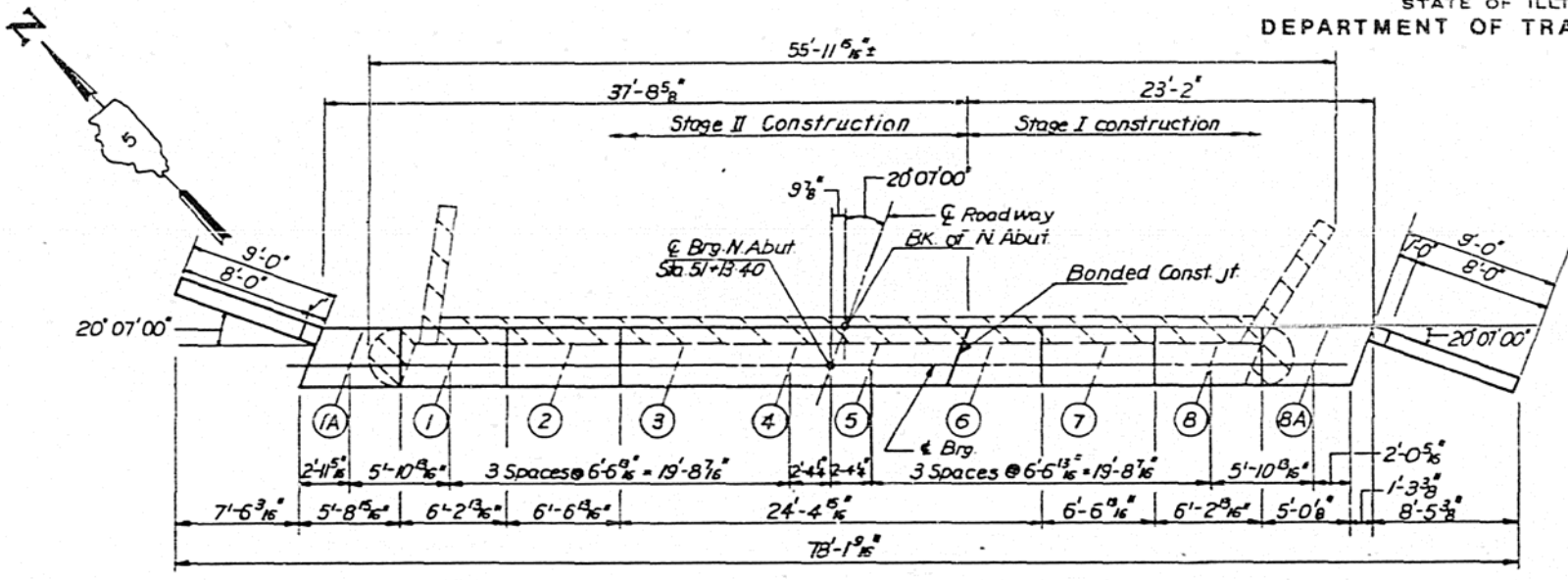
REVISIONS

NAME	DATE

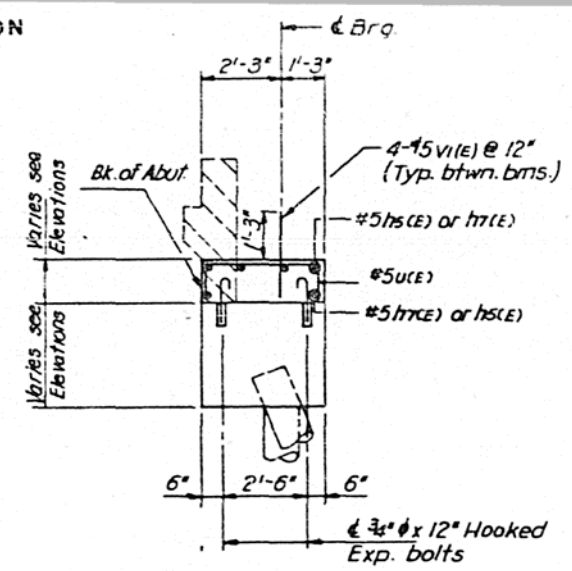
P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

SOUTH ABUTMENT DETAILS
URBANA SPUR OVER FA. I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

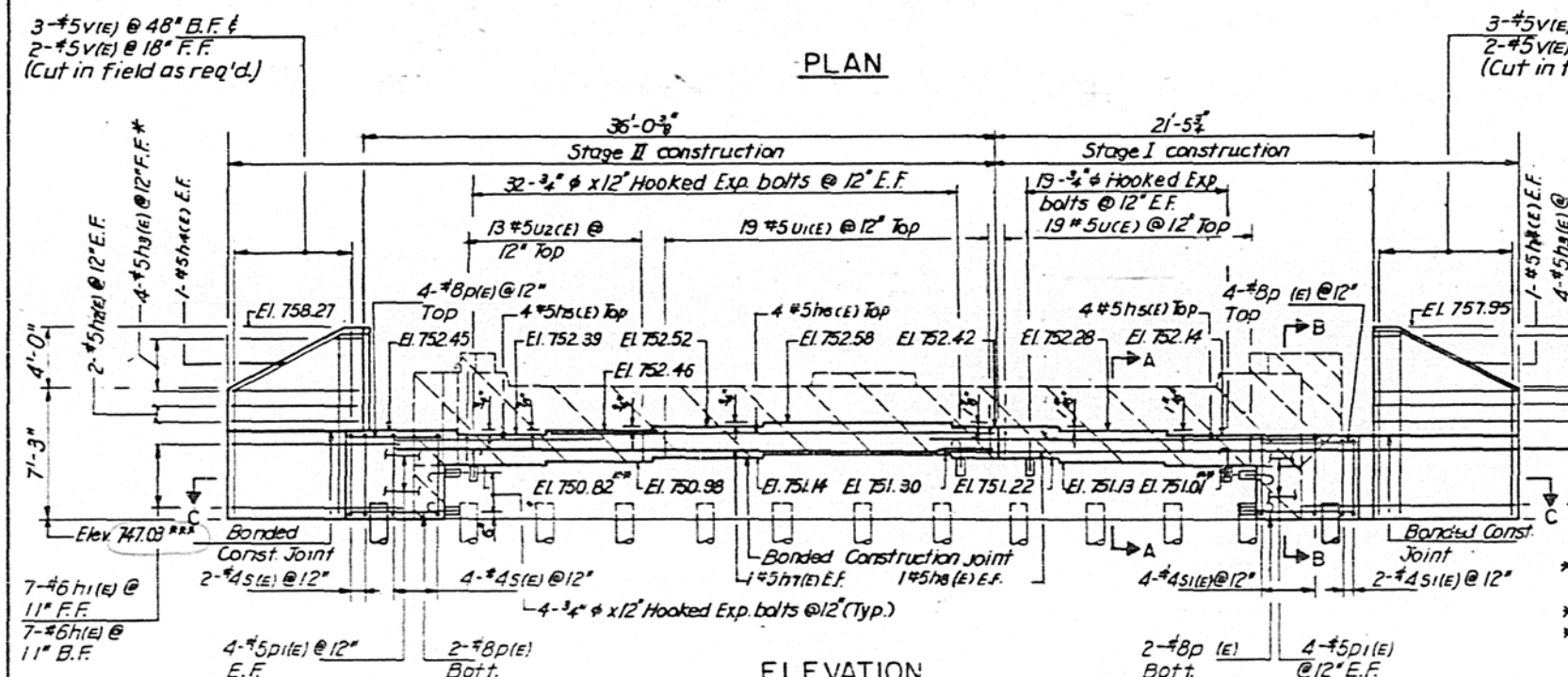
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DATE: _____



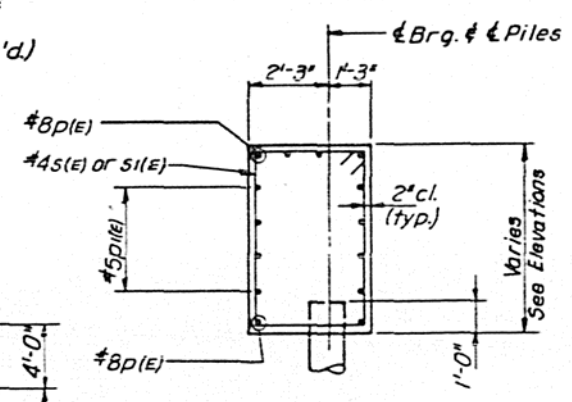
PLAN



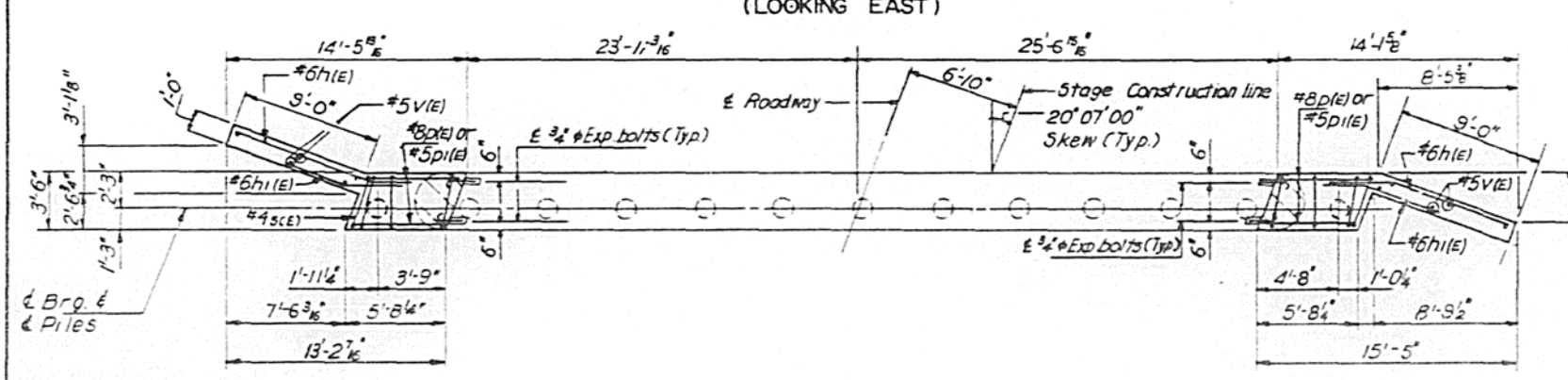
SECTION A-A



ELEVATION (LOOKING EAST)

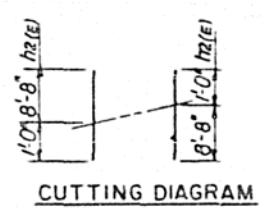


SECTION B-B



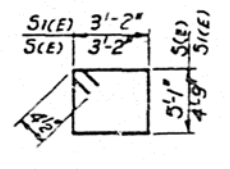
SECTION C-C

BILL OF MATERIAL						
BAR	TOTAL NO.	CONSTR. STAGE		SIZE	LENGTH	SHAPE
		I	II			
h1(e)	14	7	7	#6	11'-8"	—
h1(e)	14	7	7	#6	8'-0"	—
h2(e)	8	4	4	#5	8'-8"	—
h3(e)	8	4	4	#5	10'-2"	—
h4(e)	4	2	2	#5	9'-4"	—
h5(e)	8	4	4	#5	19'-6"	—
h6(e)	4	—	4	#5	25'-8"	—
h7(e)	2	—	2	#5	34'-8"	—
h8(e)	2	2	—	#5	22'-6"	—
p1(e)	12	6	6	#8	5'-4"	—
p1(e)	16	8	8	#5	5'-4"	—
S1(e)	6	—	6	#4	17'-3"	□
S1(e)	6	6	—	#4	16'-7"	□
U1(e)	19	19	—	#5	4'-10"	□
U1(e)	19	—	19	#5	5'-2"	□
U2(e)	13	—	13	#5	5'-6"	□
V1(e)	10	5	5	#5	11'-1"	—
V1(e)	29	13	16	#5	2'-6"	—
ITEM	UNIT	TOTAL	CONSTR. STAGE			
Reinforcement Bars (Epoxy Coated)	Lbs.	1860	I II			
Class X Concrete	Cu.Yds.	22.20		9.5	12.7	
Concrete Removal	Cu.Yds.	16.40		6.70	9.7	
Structure Excavation	Cu.Yds.	22.80		11.40	11.4	
Furnishing Conc. Piles	L.F.	88		44	44	
Driving Conc. Piles	L.F.	88		44	44	
Expansion bolts, 3/4"	Each	118		46	72	

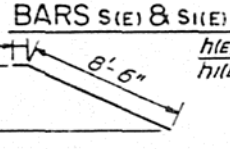


CUTTING DIAGRAM

- * Use remainder of bars in Back Face
- ** As per field survey
- *** Bottom of the cap elev. should be verified in the field. Given elev. is as per existing plan.



BAR	A	B
U1(e)	3'-2"	0'-10"
U1(e)	3'-2"	1'-0"
U2(e)	3'-2"	1'-2"



LEGEND BAR h4(e)

BARS h(e) & h1(e)

Indicates concrete removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

PILE DATA

Type : Concrete
Capacity : 30 tons
Est. length : 44 L.F.
No. Req'd : 2

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C./V.B.P.
CHECKED	R.V.P.

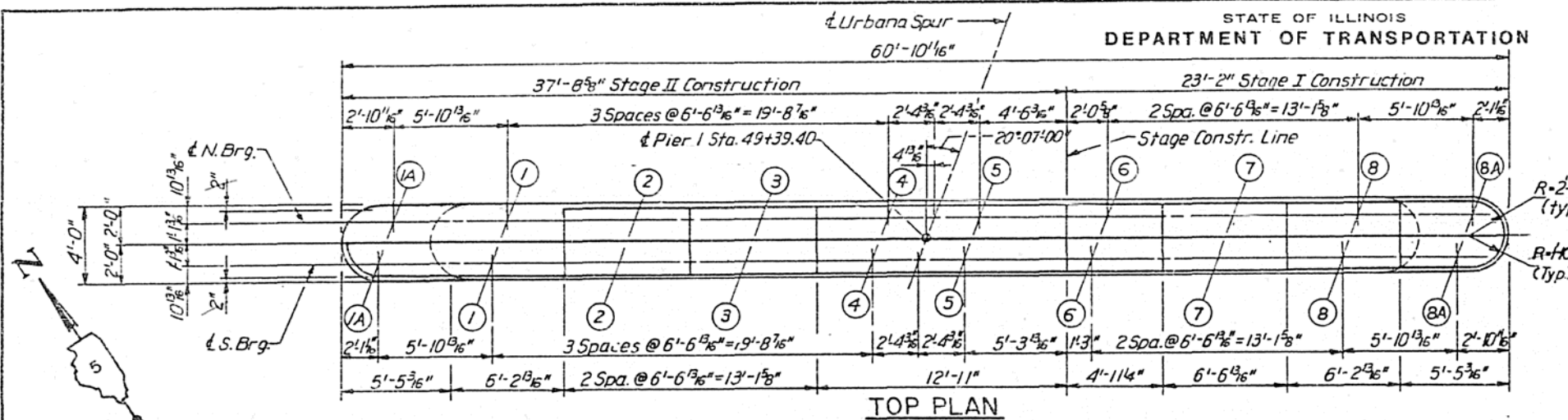
*** Stg 1 = 746.02
Stg 2 = 746.59

REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

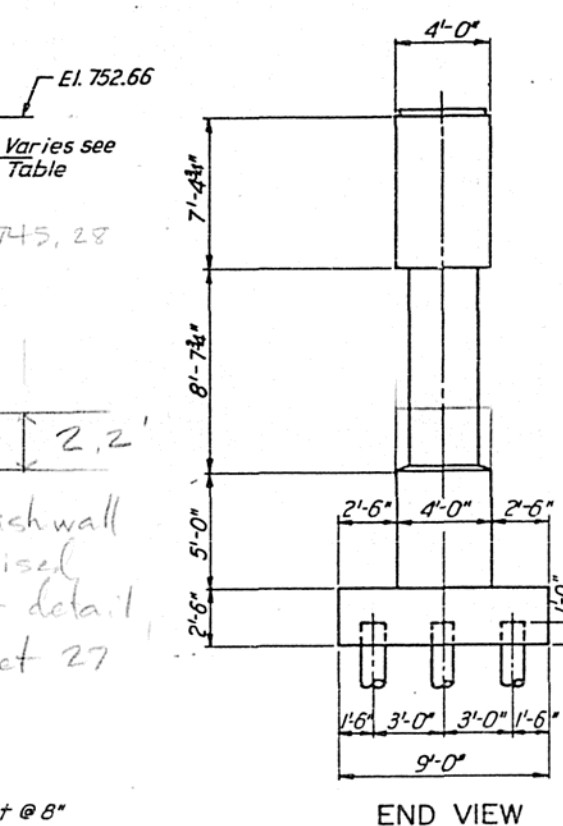
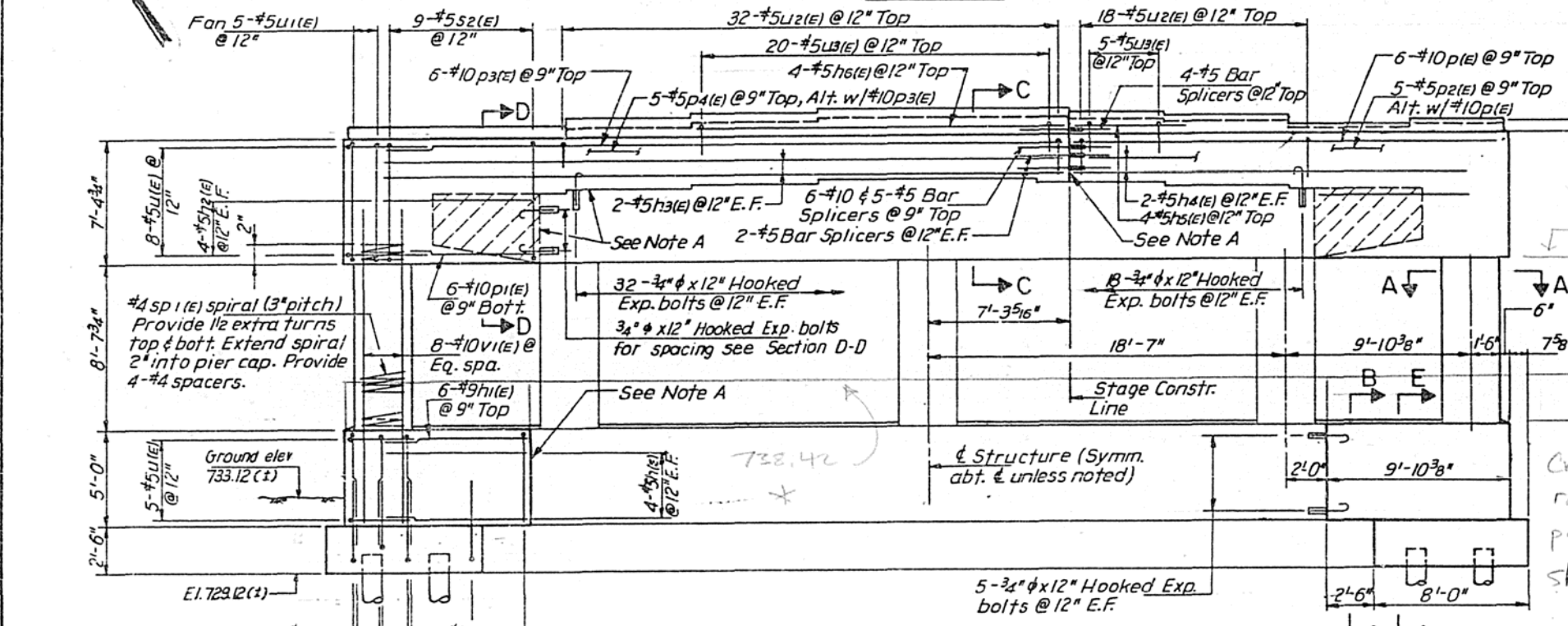
NORTH ABUTMENT DETAILS
URBANA SPUR OVER FA. I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
SN OIO-0033

SCALE VERT
HORIZ
DATE



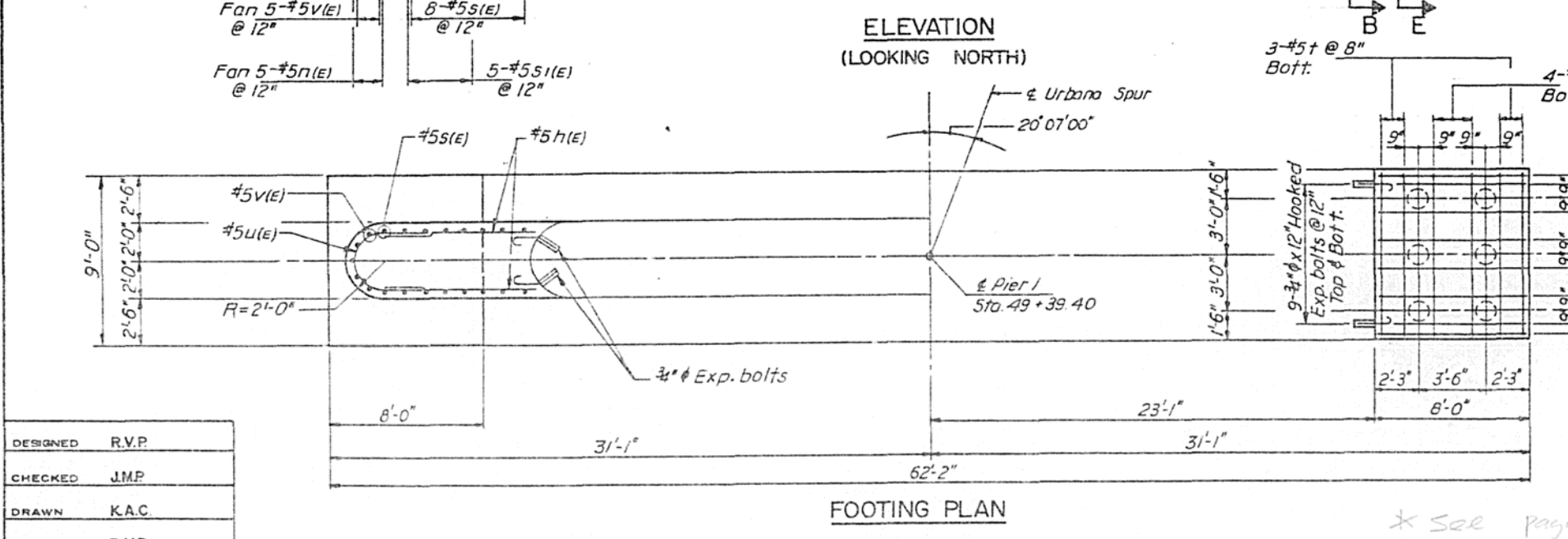
LOCATION	BEAM NO.									
	1A	1	2	3	4	5	6	7	8	8A
NORTH BRG. SEAT ELEVATION	752.66	752.66	752.78	752.90	753.01	753.01	752.94	752.86	752.77	752.82
NORTH BRG. SEAT HEIGHT			1 3/8"	2 1/8"	4 1/4"	4 1/4"	3 3/8"	2 3/8"	1 3/8"	1 1/8"
SOUTH BRG. SEAT ELEVATION	752.76	752.76	752.87	752.98	753.10	753.10	753.03	752.95	752.86	752.91
SOUTH BRG. SEAT HEIGHT	1 1/4"	1 1/4"	2 1/2"	3 1/8"	5 1/4"	5 1/4"	4 3/8"	2 1/2"	2 3/8"	3"

Note A
Bonded construction joint shall be in accordance to Art. 504.13(c)(2) of the Standard Specifications.



LEGEND
 [Hatched Area] Indicates concrete removal, reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

PILE DATA
 Type: Concrete
 Capacity: 30 tons
 Est. Length: 30 L.F.
 No. Req'd: 12



DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

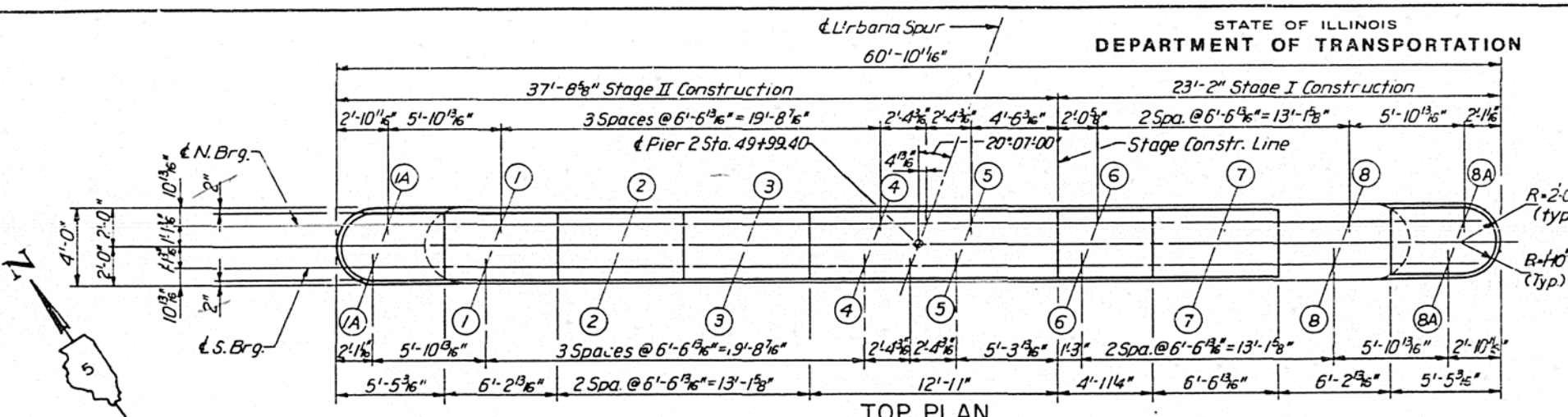
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
 600 WEST JACKSON BLVD.
 CHICAGO ILLINOIS 60606

PIER 1
 URBANA SPUR OVER F.A.I. RT. 74
 SECTION (10-6) RS-1
 CHAMPAIGN COUNTY
 STA. 49+99.40
 S.N. 010-0033

SCALE: VERT. HORIZ.
 DATE:

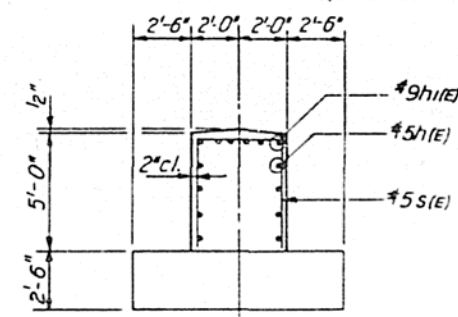
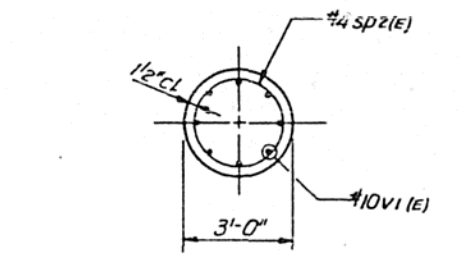
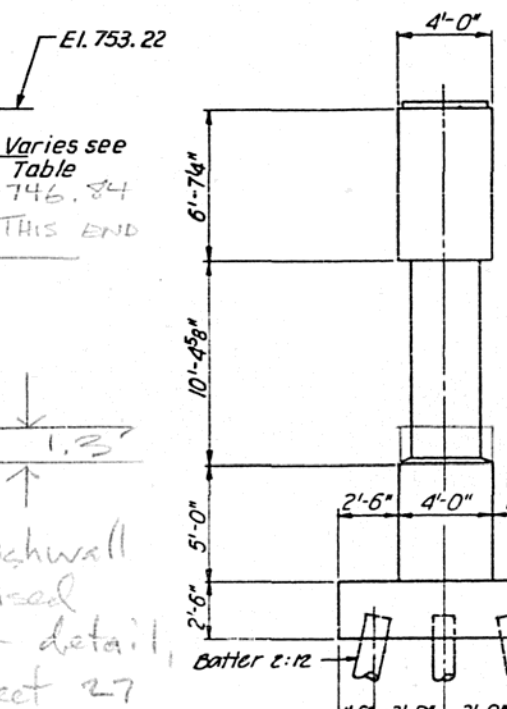
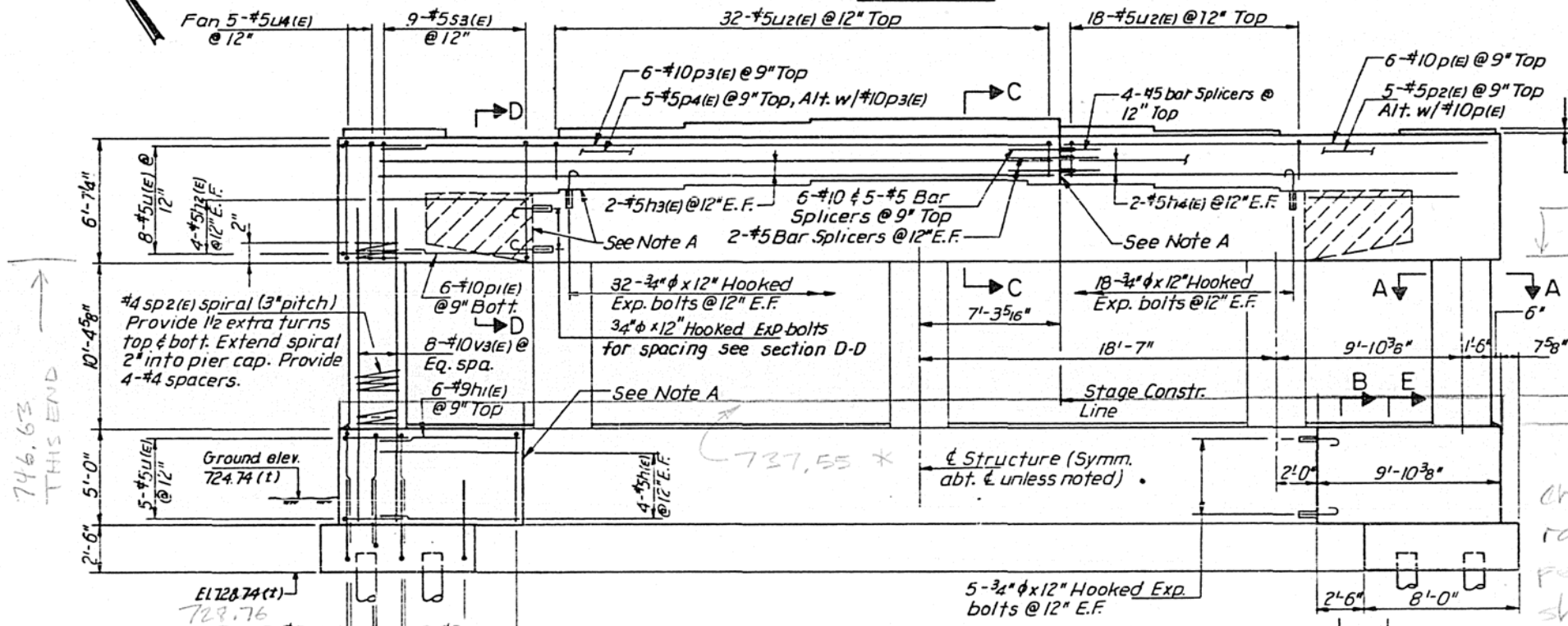
* See page 27 for detail.



SEAT ELEVATIONS

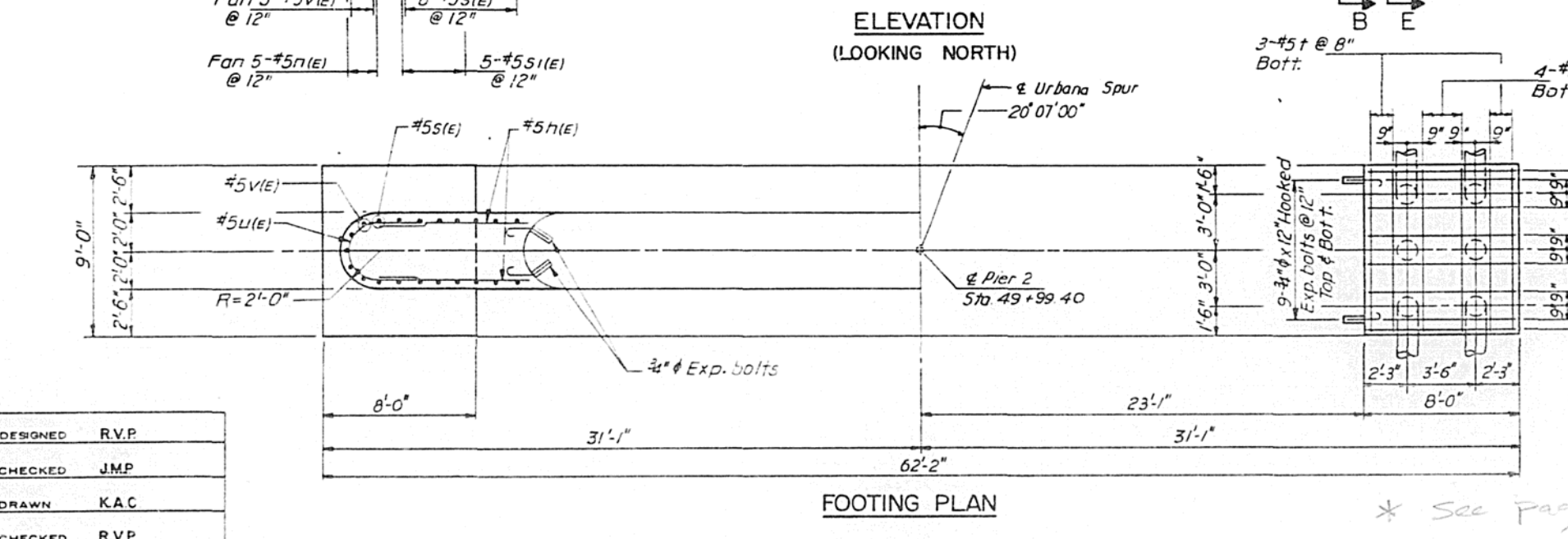
LOCATION	BEAM NO.	SEAT ELEVATIONS									
		1A	1	2	3	4	5	6	7	8	8A
NORTH BRG. SEAT ELEVATION		752.91	752.90	753.00	753.10	753.19	753.18	753.09	752.99	752.88	752.69
SOUTH BRG. SEAT ELEVATION		752.94	752.90	753.00	753.10	753.19	753.18	753.09	752.99	752.88	752.92
NORTH BRG. SEAT HEIGHT		34"	—	12"	258"	334"	334"	258"	12"	—	58"
SOUTH BRG. SEAT HEIGHT		—	—	—	—	—	—	—	—	—	—

Note A
Bonded construction joint shall be in accordance to Art. 504.13(a)(2) of the Standard Specifications.



LEGEND
[Hatched Area] Indicates concrete removal, reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

PILE DATA
Type: Concrete
Capacity: 30 Tons
Est. Length: 27 L.F.
No. Req'd: 12



DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

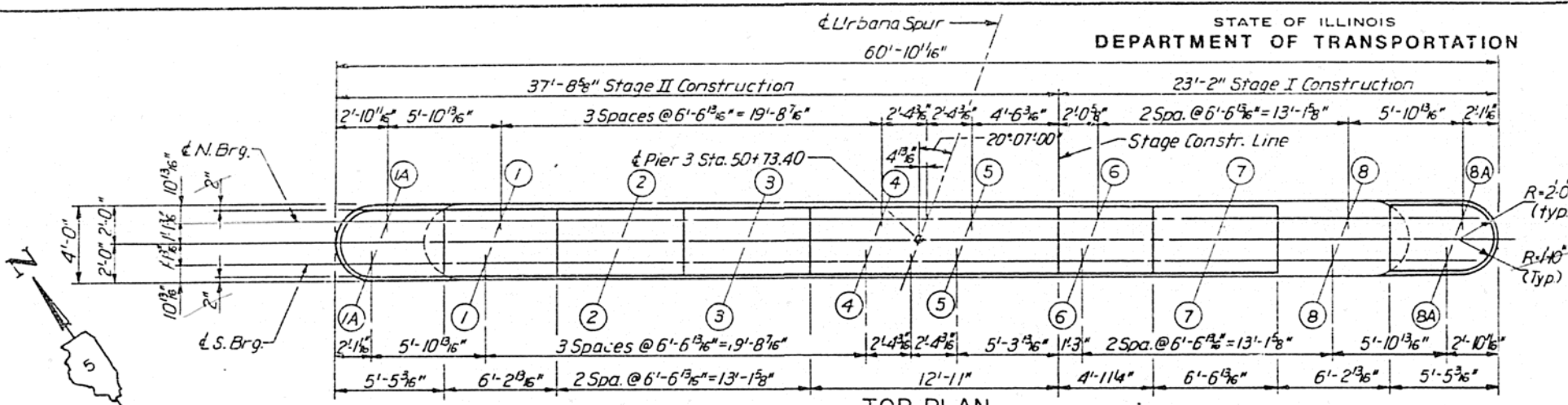
REVISIONS	
NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

PIER 2
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT
HORIZ
DATE

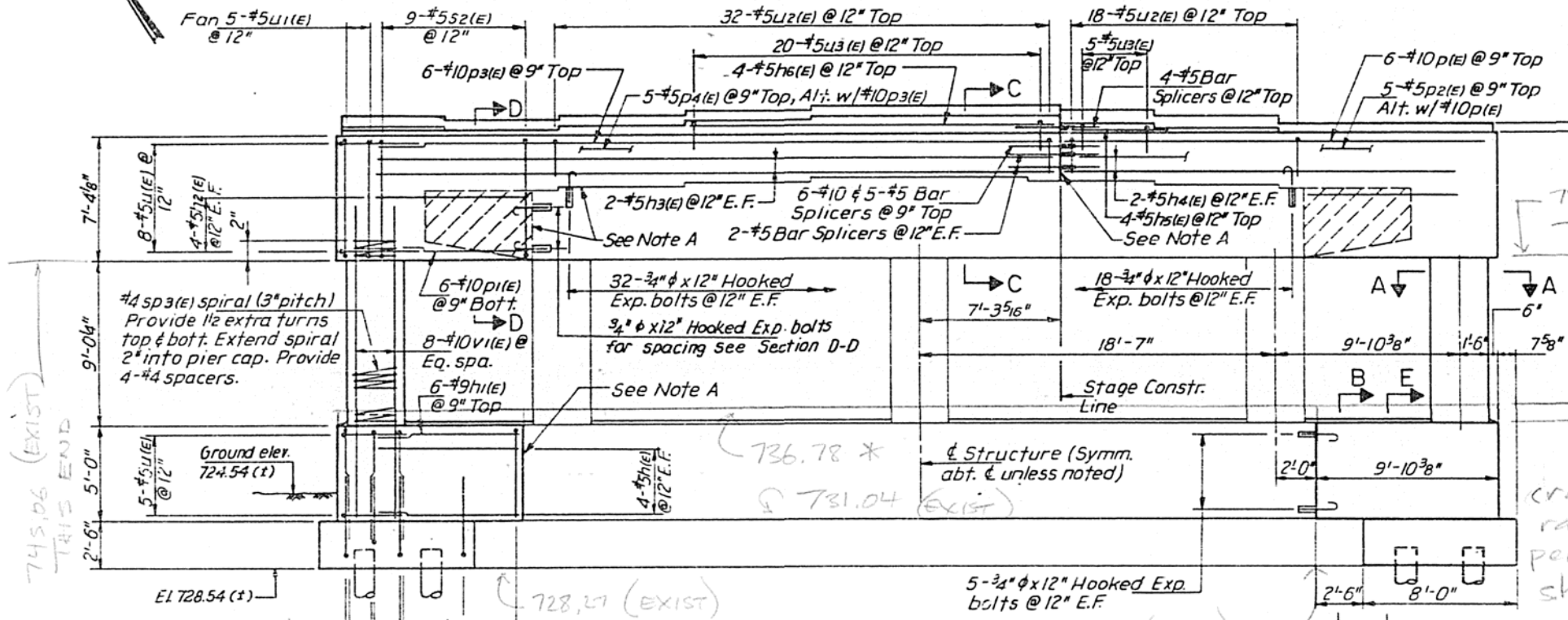
* See page 27 for detail.



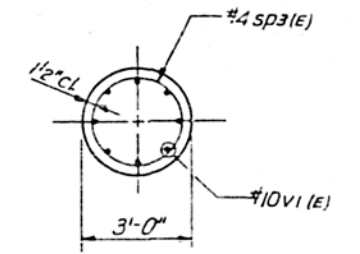
TOP PLAN

LOCATION	BEAM NO.									
	1A	1	2	3	4	5	6	7	8	8A
NORTH BRG. SEAT ELEVATION	752.71	752.66	752.74	752.81	752.86	752.86	752.74	752.62	752.49	752.49
NORTH BRG. SEAT HEIGHT	3 ⁵ / ₈ "	3"	4"	4 ⁷ / ₈ "	5 ¹ / ₂ "	5 ¹ / ₂ "	4 ¹ / ₈ "	2 ⁵ / ₈ "	1"	1"
SOUTH BRG. SEAT ELEVATION	752.61	752.57	752.65	752.72	752.79	752.79	752.65	752.53	752.40	752.40
SOUTH BRG. SEAT HEIGHT	2 ⁸ / ₈ "	2"	3"	3 ⁷ / ₈ "	4 ¹ / ₂ "	4 ¹ / ₂ "	3 ¹ / ₈ "	1 ⁵ / ₈ "	---	---

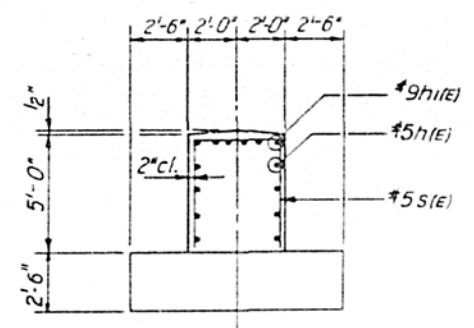
Note A
Bonded construction joint shall be in accordance to Art. 504.13(a)(2) of the Standard Specifications.



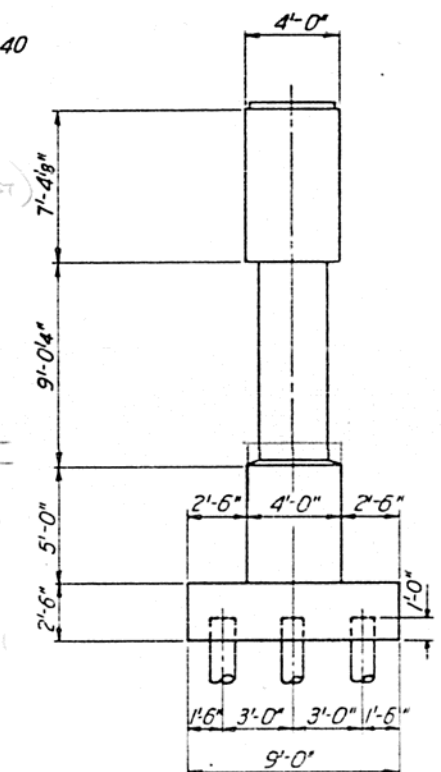
ELEVATION
(LOOKING NORTH)



SECTION A-A



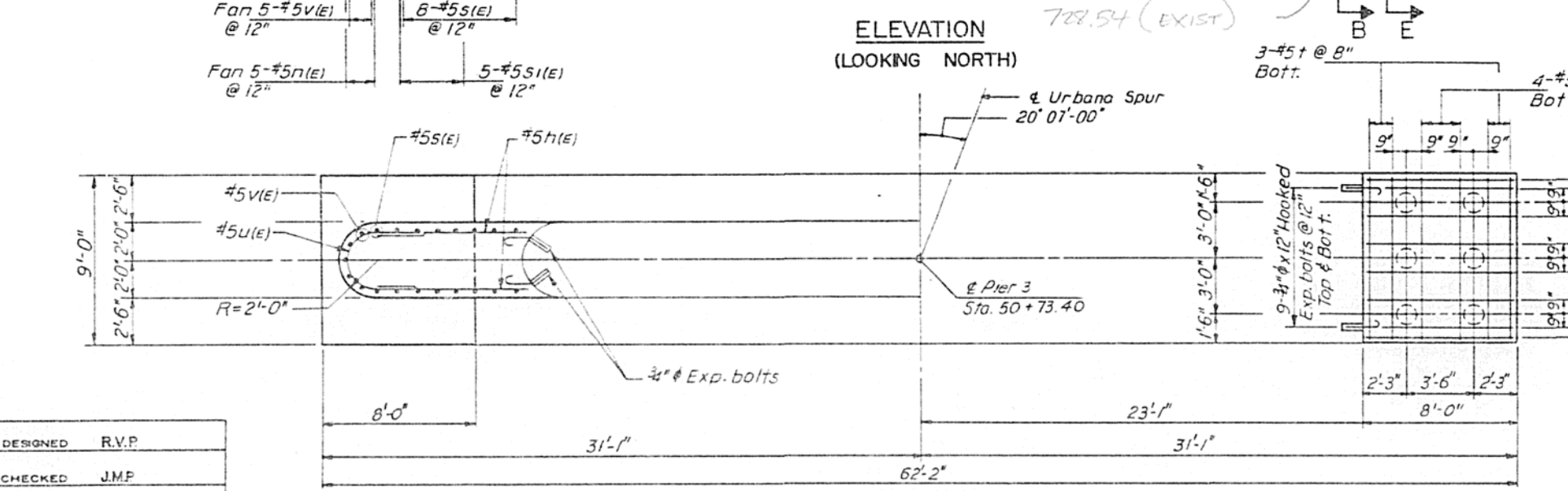
SECTION B-B



END VIEW

LEGEND
[Symbol] Indicates concrete removal, reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

PILE DATA
Type: Concrete
Capacity: 30 Tons
Est. Length: 41 L.F.
No. Req'd: 12



FOOTING PLAN

* SEE PAGE 27 FOR DETAIL.

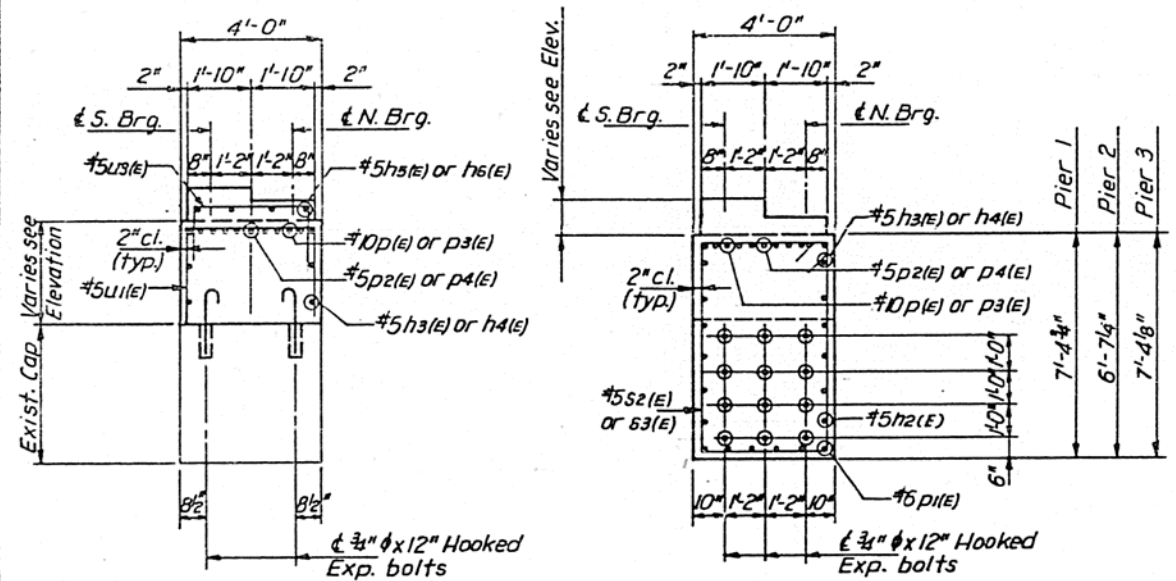
DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

NAME	DATE

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS 60606

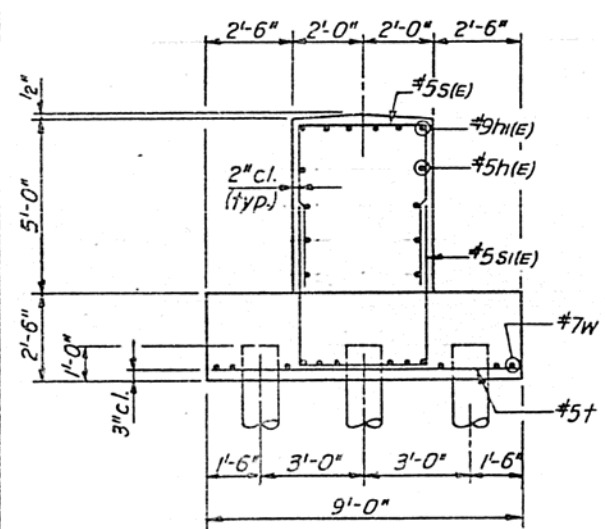
PIER 3
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

SCALE VERT: 1"=4'-0"
HORIZ: 1"=10'-0"
DATE:

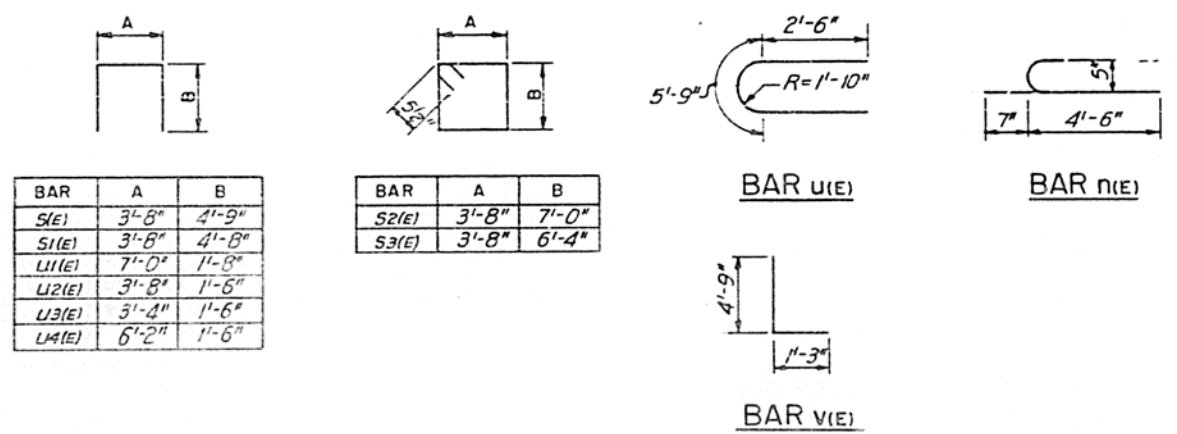


SECTION C-C

SECTION D-D



SECTION E-E



BAR	A	B
S(E)	3'-8"	4'-9"
S1(E)	3'-8"	4'-8"
U1(E)	7'-0"	1'-8"
U2(E)	3'-8"	1'-6"
U3(E)	3'-4"	1'-6"
U4(E)	6'-2"	1'-6"

BAR	A	B
S2(E)	3'-8"	7'-0"
S3(E)	3'-8"	6'-4"

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	K.A.C.
CHECKED	R.V.P.

PIER 1 BILL OF MATERIALS						
BAR	TOTAL NO.	CONSTR. STAGE		SIZE	LENGTH	SHAPE
		I	II			
h(E)	16	8	8	#5	7'-9"	—
h1(E)	12	6	6	#9	7'-9"	—
h2(E)	16	8	8	#5	8'-2"	—
h3(E)	4	—	4	#5	35'-6"	—
h4(E)	4	—	4	#5	21'-0"	—
h5(E)	4	4	—	#5	7'-0"	—
h6(E)	4	—	4	#5	21'-6"	—
p(E)	6	6	—	#10	21'-0"	—
p1(E)	12	6	6	#10	8'-2"	—
p2(E)	5	5	—	#5	21'-0"	—
p3(E)	6	—	6	#10	35'-6"	—
p4(E)	5	—	5	#5	35'-6"	—
s(E)	16	8	8	#5	13'-2"	□
s1(E)	10	5	5	#5	13'-0"	□
s2(E)	18	9	9	#5	22'-3"	□
sp1(E)	2	1	1	#4	321'-0"	—
t	20	10	10	#5	8'-9"	—
u(E)	26	13	13	#5	10'-9"	C
u1(E)	10	5	5	#5	10'-4"	□
u2(E)	50	18	32	#5	6'-8"	□
u3(E)	25	5	20	#5	6'-4"	□
v(E)	10	5	5	#5	6'-0"	L
v1(E)	16	8	8	#10	19'-0"	—
w	24	12	12	#7	7'-9"	—
n(E)	10	5	5	#5	5'-1"	C
ITEM	UNIT	TOTAL	CONSTR. STAGE			
			I	II		
Reinforcement Bars (Epoxy Coated)	Lbs.	6050	2340	3710		
Reinforcement Bars	Lbs.	560	280	280		
Class X Concrete	Cu. Yds.	65.70	31.30	34.40		
3/4" Exp. Bolts	Each	176	74	102		
Furnishing Conc. Piles	Lin. Ft.	360	180	180		
Driving Conc. Piles	Lin. Ft.	360	160	160		
Test Pile	Each	—	—	—		
Concrete Removal	Cu. Yds.	6.50	3.10	3.40		
Struct. Excavation	Cu. Yds.	47.60	23.80	23.80		

PIER 2 BILL OF MATERIALS						
BAR	TOTAL NO.	CONSTR. STAGE		SIZE	LENGTH	SHAPE
		I	II			
h(E)	16	8	8	#5	7'-9"	—
h1(E)	12	6	6	#9	7'-9"	—
h2(E)	16	8	8	#5	8'-2"	—
h3(E)	4	—	4	#5	35'-6"	—
h4(E)	4	—	4	#5	21'-0"	—
p(E)	6	6	—	#10	21'-0"	—
p1(E)	12	6	6	#10	8'-2"	—
p2(E)	5	5	—	#5	21'-0"	—
p3(E)	6	—	6	#10	35'-6"	—
p4(E)	5	—	5	#5	35'-6"	—
s(E)	16	8	8	#5	13'-2"	□
s1(E)	10	5	5	#5	13'-0"	□
s3(E)	18	9	9	#5	20'-11"	□
sp2(E)	2	1	1	#4	379'-0"	—
t	20	10	10	#5	8'-9"	—
u(E)	26	13	13	#5	10'-9"	C
u1(E)	10	5	5	#5	10'-4"	□
u2(E)	50	18	32	#5	6'-8"	□
u4(E)	10	5	5	#5	9'-6"	□
v(E)	10	5	5	#5	6'-0"	L
v2(E)	16	8	8	#10	20'-9"	—
w	24	12	12	#7	7'-9"	—
n(E)	10	5	5	#5	5'-1"	C
ITEM	UNIT	TOTAL	CONSTR. STAGE			
			I	II		
Reinforcement Bars (Epoxy Coated)	Lbs.	6530	2960	3570		
Reinforcement Bars	Lbs.	560	280	280		
Class X Concrete	Cu. Yds.	63.90	29.90	34.00		
3/4" Exp. Bolts	Each	176	74	102		
Furnishing Conc. Piles	Lin. Ft.	324	162	162		
Driving Conc. Piles	Lin. Ft.	324	162	162		
Test Pile	Each	—	—	—		
Concrete Removal	Cu. Yds.	5.90	2.90	3.00		
Struct. Excavation	Cu. Yds.	47.60	23.80	23.80		

PIER 3 BILL OF MATERIALS						
BAR	TOTAL NO.	CONSTR. STAGE		SIZE	LENGTH	SHAPE
		I	II			
h(E)	16	8	8	#5	7'-9"	—
h1(E)	12	6	6	#9	7'-9"	—
h2(E)	16	8	8	#5	8'-2"	—
h3(E)	4	—	4	#5	35'-6"	—
h4(E)	4	—	4	#5	21'-0"	—
h5(E)	4	4	—	#5	7'-0"	—
h6(E)	4	—	4	#5	21'-6"	—
p(E)	6	6	—	#10	21'-0"	—
p1(E)	12	6	6	#10	8'-2"	—
p2(E)	5	5	—	#5	21'-0"	—
p3(E)	6	—	6	#10	35'-6"	—
p4(E)	5	—	5	#5	35'-6"	—
s(E)	16	8	8	#5	13'-2"	□
s1(E)	10	5	5	#5	13'-0"	□
s2(E)	18	9	9	#5	22'-3"	□
sp3(E)	2	1	1	#4	333'-0"	—
t	20	10	10	#5	8'-9"	—
u(E)	26	13	13	#5	10'-9"	C
u1(E)	10	5	5	#5	10'-4"	□
u2(E)	50	18	32	#5	6'-8"	□
u3(E)	25	5	20	#5	6'-4"	□
v(E)	10	5	5	#5	6'-0"	L
v3(E)	16	8	8	#10	19'-5"	—
w	24	12	12	#7	7'-9"	—
n(E)	10	5	5	#5	5'-1"	C
ITEM	UNIT	TOTAL	CONSTR. STAGE			
			I	II		
Reinforcement Bars (Epoxy Coated)	Lbs.	6070	2360	3710		
Reinforcement Bars	Lbs.	560	280	280		
Class X Concrete	Cu. Yds.	67.60	31.50	36.10		
3/4" Exp. Bolts	Each	176	74	102		
Furnishing Conc. Piles	Lin. Ft.	492	246	246		
Driving Conc. Piles	Lin. Ft.	492	246	246		
Test Pile	Each	—	—	—		
Concrete Removal	Cu. Yds.	6.20	3.10	3.10		
Struct. Excavation	Cu. Yds.	47.60	23.80	23.80		

P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

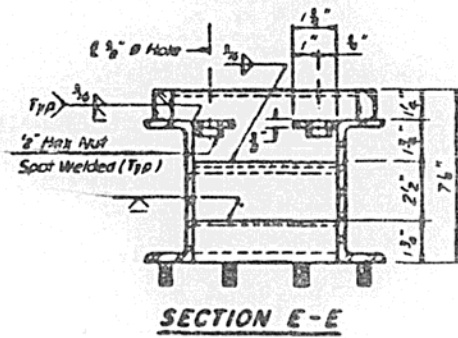
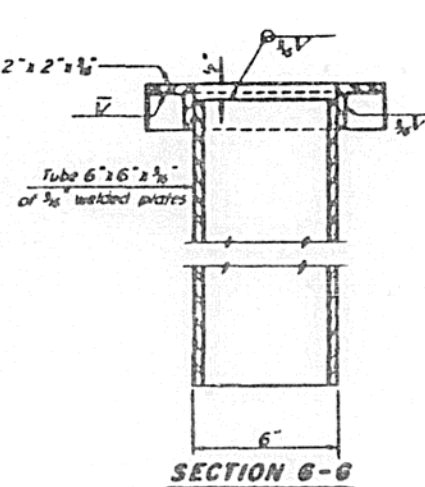
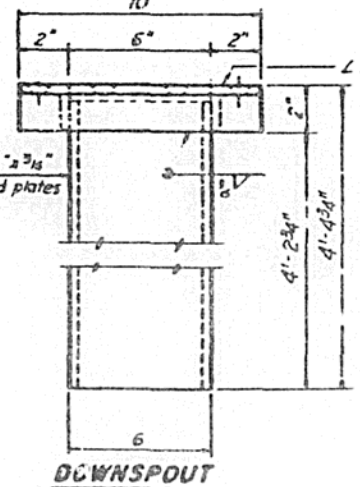
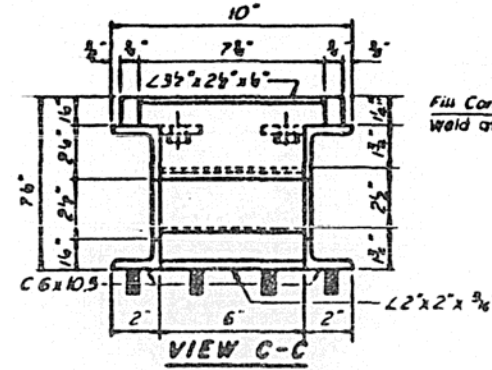
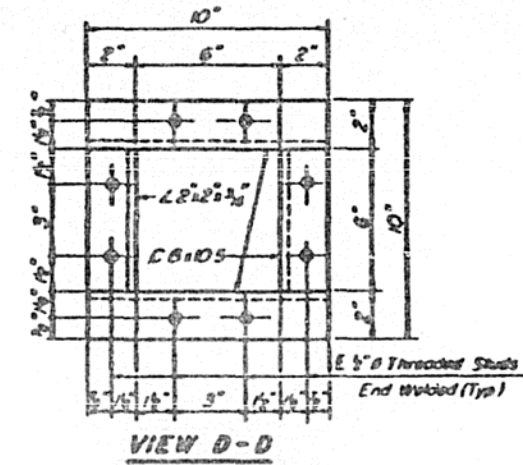
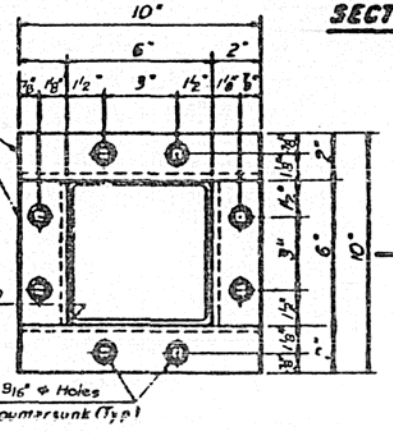
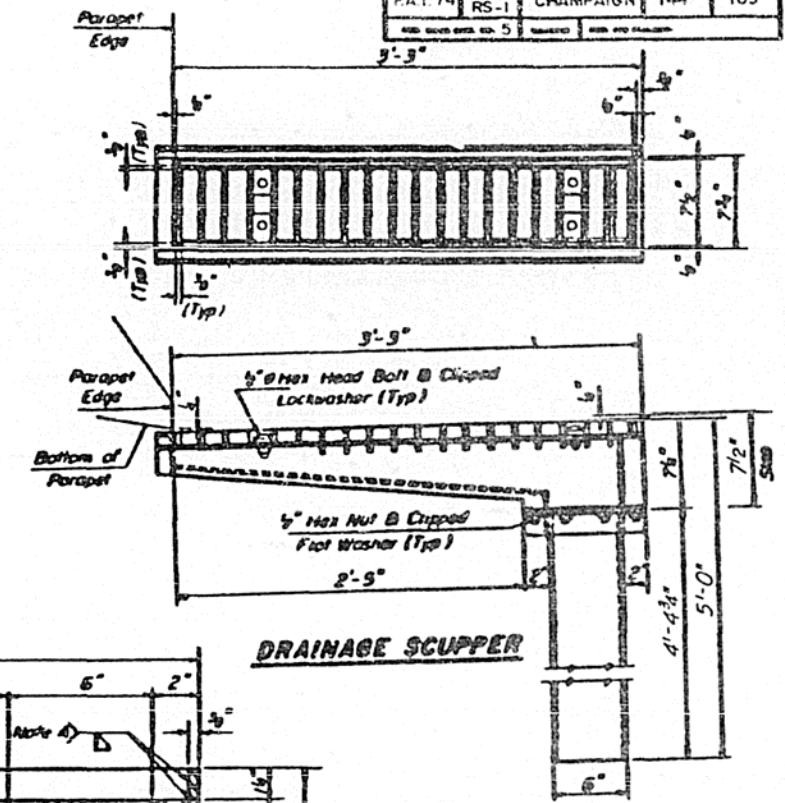
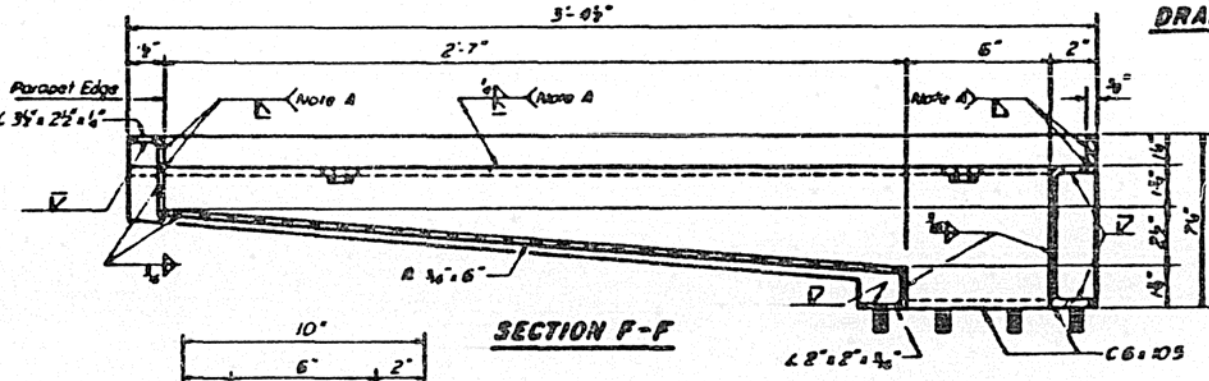
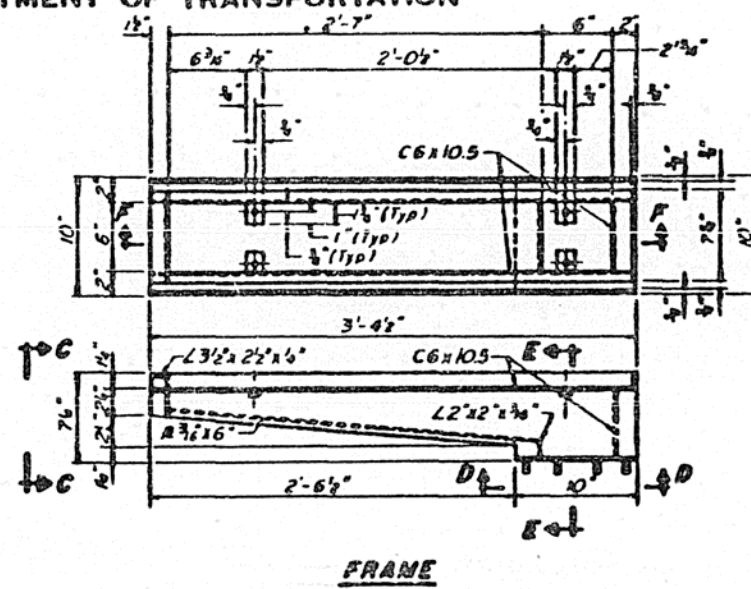
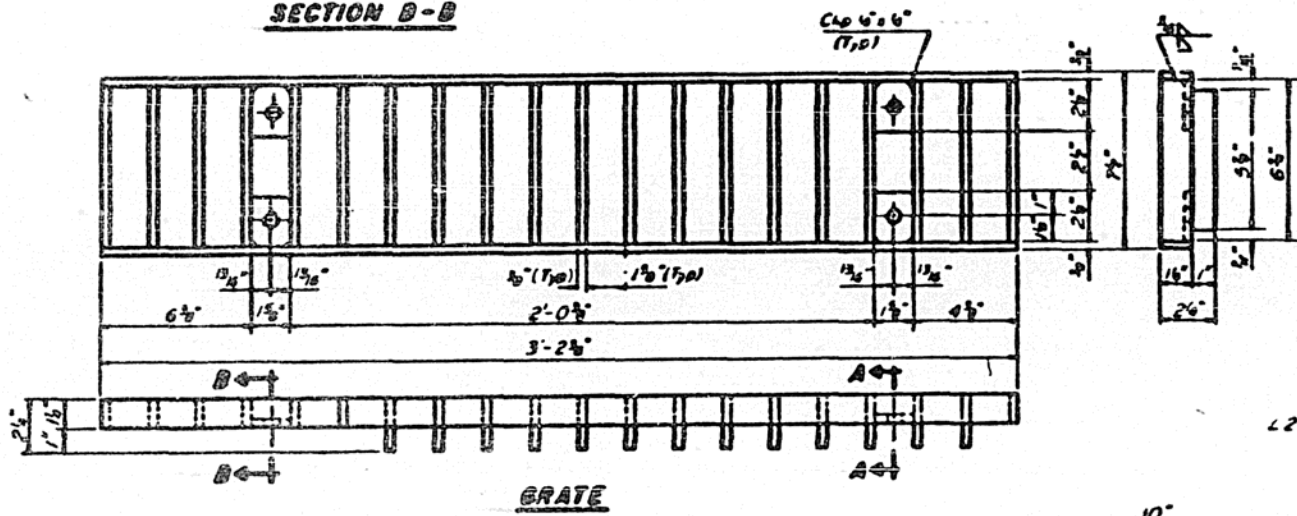
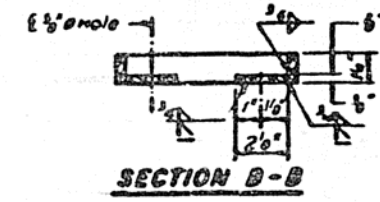
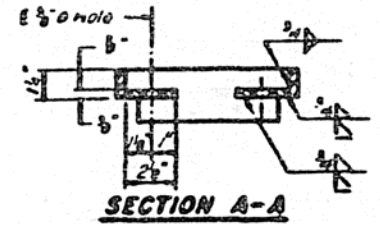
PIER DETAILS
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

REVISIONS	
NAME	DATE

SCALE VERT. HORIZ.
DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DESIGN NO.	SECTION	SHEET NO.	TOTAL SHEETS
FA I 74	(10-6) RS-1	CHAMPAIGN	144	109
REV. NO.	REV. DATE	BY	CHKD	APP'D
5				



Note A Surface of welds shall be recessed 1/8" Max or placed flush with inside face of bars to provide clearance for Grate

Notes
Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B or A-501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. M-183.
Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M. A-307
The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 & A.S.T.M. A-385
All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O. M-232
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS."

DESIGNED	R.V.P.
CHECKED	J.M.P.
PA	A.S.R.
DRAWN	A.S.R.
CHECKED	R.V.P.

DS-3 12-1-83 (W T to inside of exterior stringer flange shall not be > 3'-11")

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
DRAINAGE SCUPPERS	EACH	8

STEEL DRAINAGE SCUPPER
P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS 60606

DRAINAGE SCUPPER
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS - 1
CHAMPAIGN COUNTY
STA. 49+99.40
SN OIO-0033

REVISIONS

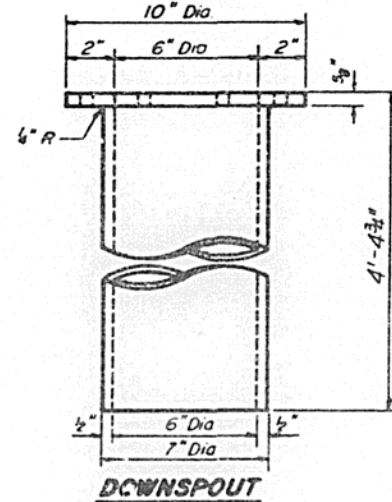
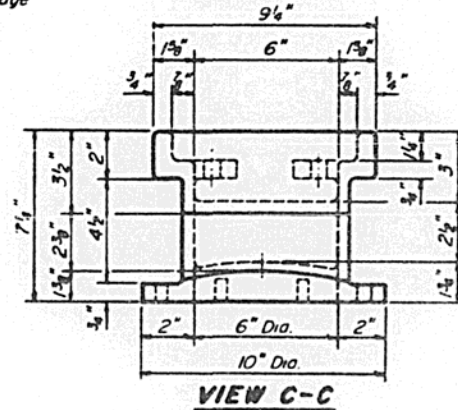
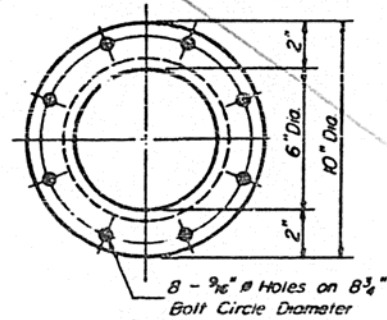
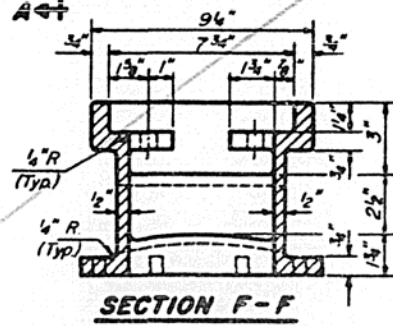
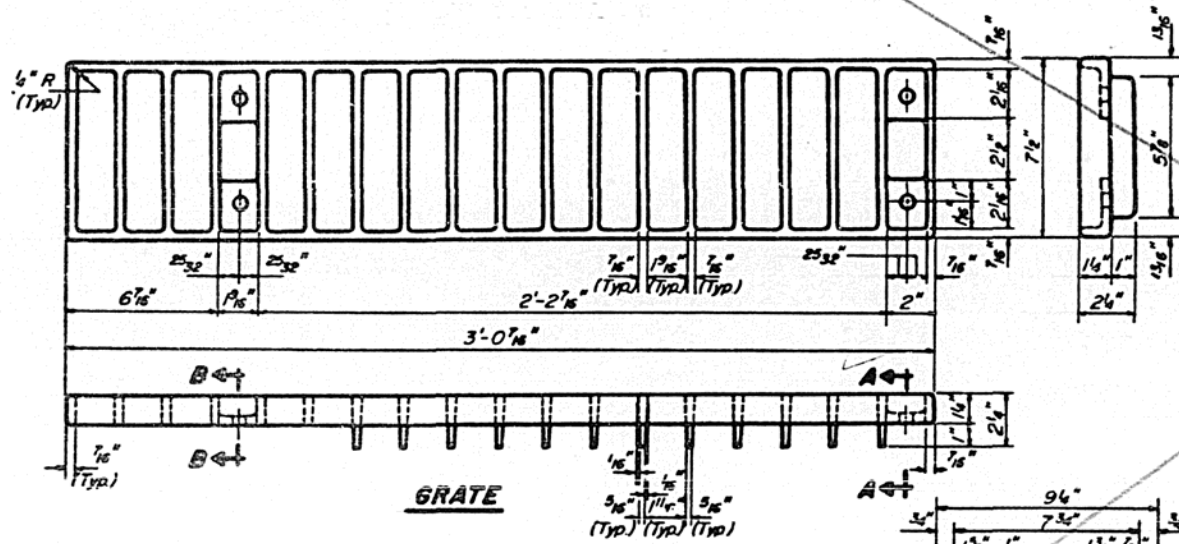
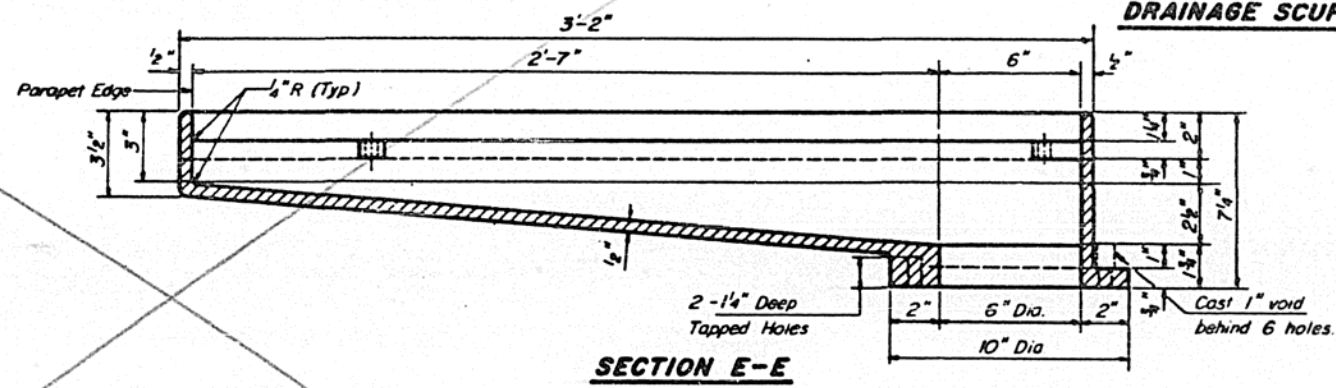
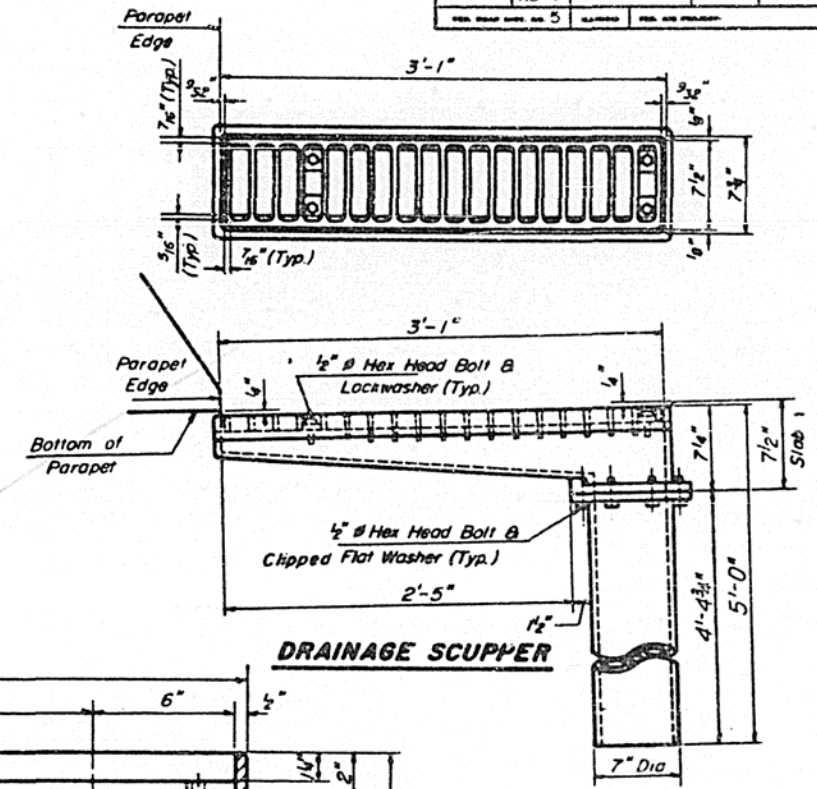
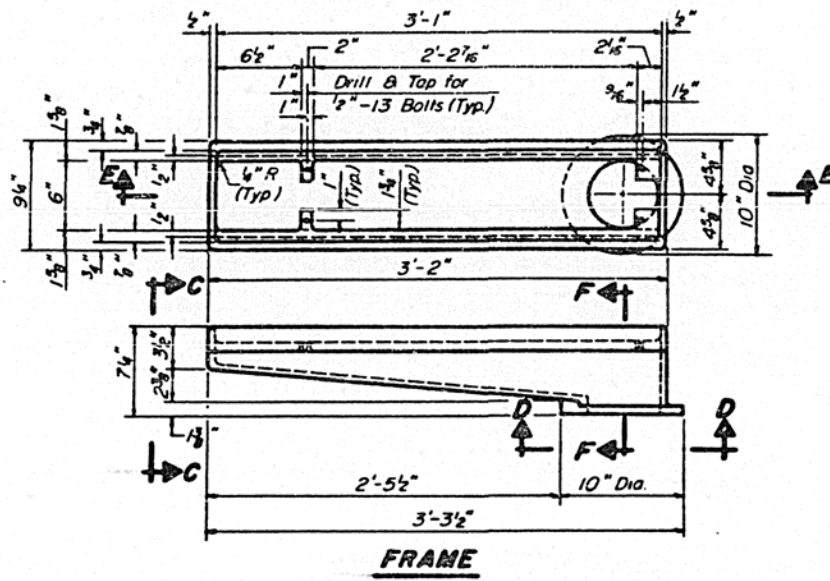
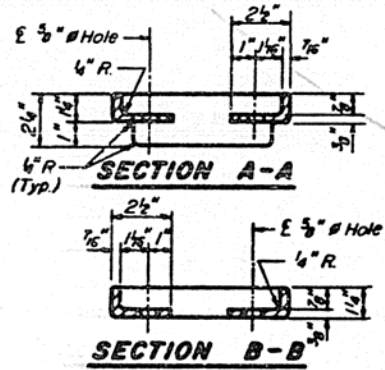
NAME	DATE

SCALE: VERT. HORIZ. DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	SHEET	TOTAL SHEETS	DATE
FAL 74	(10-6) RS-1	CHAMPAIGN	144	110
REV. SHEET NO.	5	REV. SHEET NO.		

SHEET NO. 22
OF 25



not used

Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO: M-105, Class 30.
Bolts and washers shall conform to the requirements of A.S.T.M.: A-307.
All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O.: M-232.
As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M.: A-193, Type 304.
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
DRAINAGE SCUPPERS	EACH	8

ALTERNATE CAST IRON
DRAINAGE SCUPPER

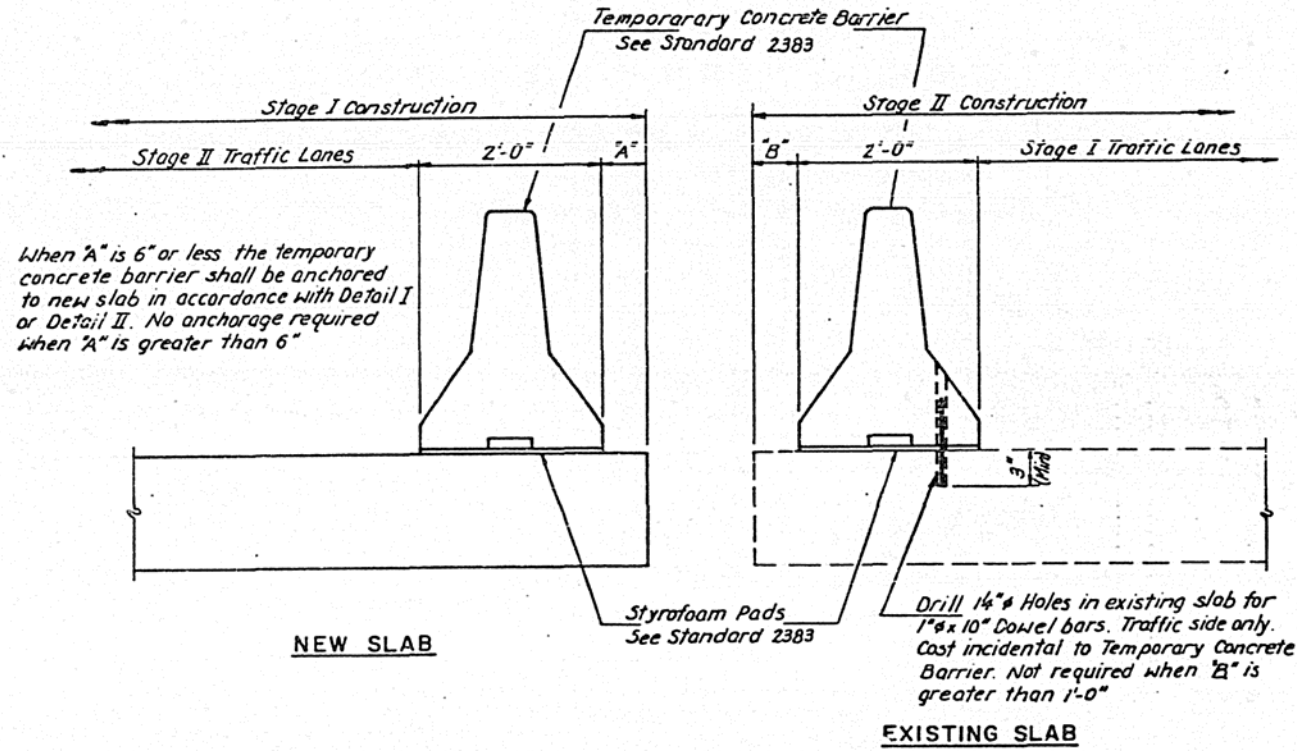
P.G. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD
CHICAGO ILLINOIS, 60606

DRAINAGE SCUPPER
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
SN. 010-0033

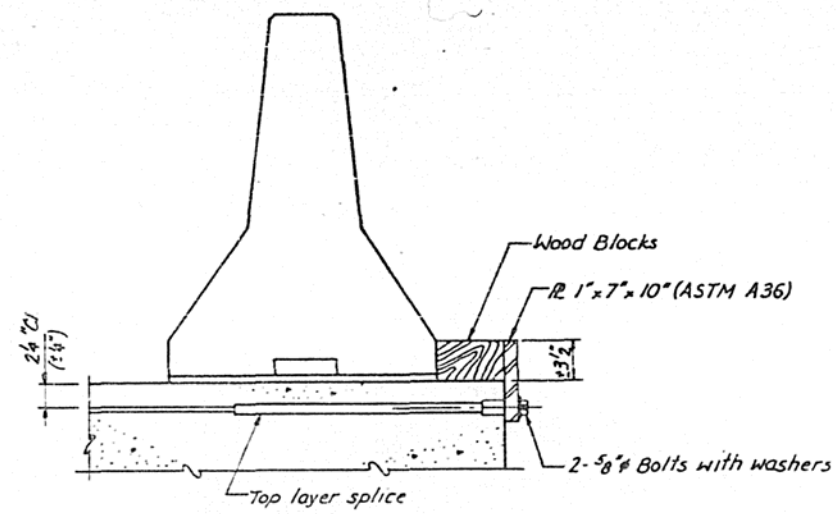
REVISIONS	
NAME	DATE

SCALE: VERT.
HORIZ.
DATE

DESIGNED	R.V.P.
CHECKED	J.M.P.
PA DRAWN	V.B.P.
CHECKED	R.V.P.

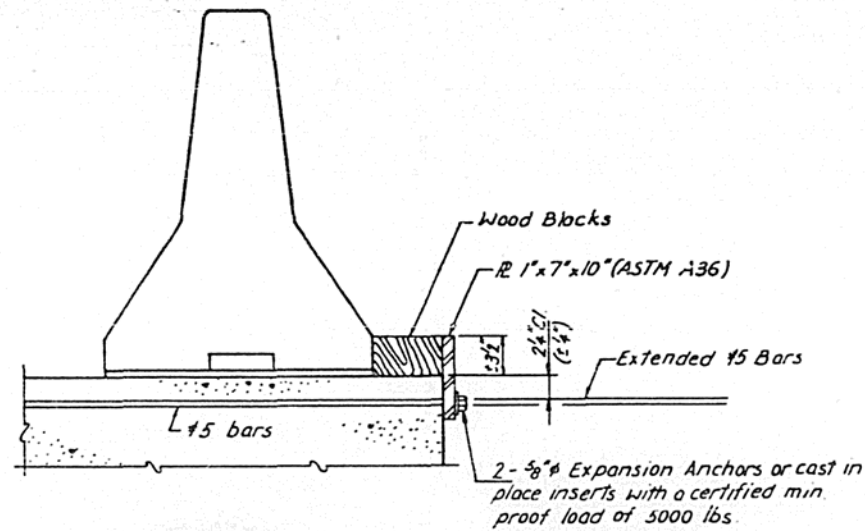


SECTIONS THRU SLAB



DETAIL I

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place

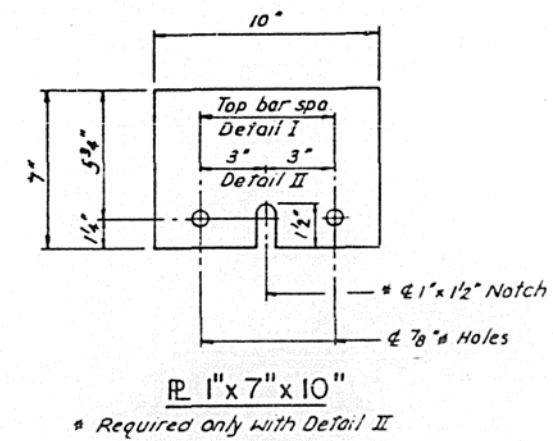


DETAIL II

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are placed and the concrete is ready to be placed.

NOTES:

- Detail I - With Bar Splicer or Couplers
Connect one (1) 1" x 7" x 10" steel R to the top layer of couplers with 2-5/8" bolts screwed to coupler at approximate $\frac{1}{2}$ of each 10'-0" barrier panel.
- Detail II - With Extended Reinforcement Bars
Connect one (1) 1" x 7" x 10" steel R to the concrete slab with 2-5/8" Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate $\frac{1}{2}$ of each 10'-0" barrier panel.
- Cost of anchorage is incidental to Temporary Concrete Barrier.



BILL OF MATERIAL

Item	Unit	Total
Temporary Concrete Barrier	Lin. Ft.	219

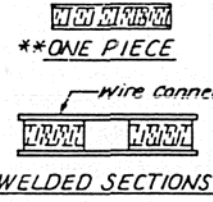
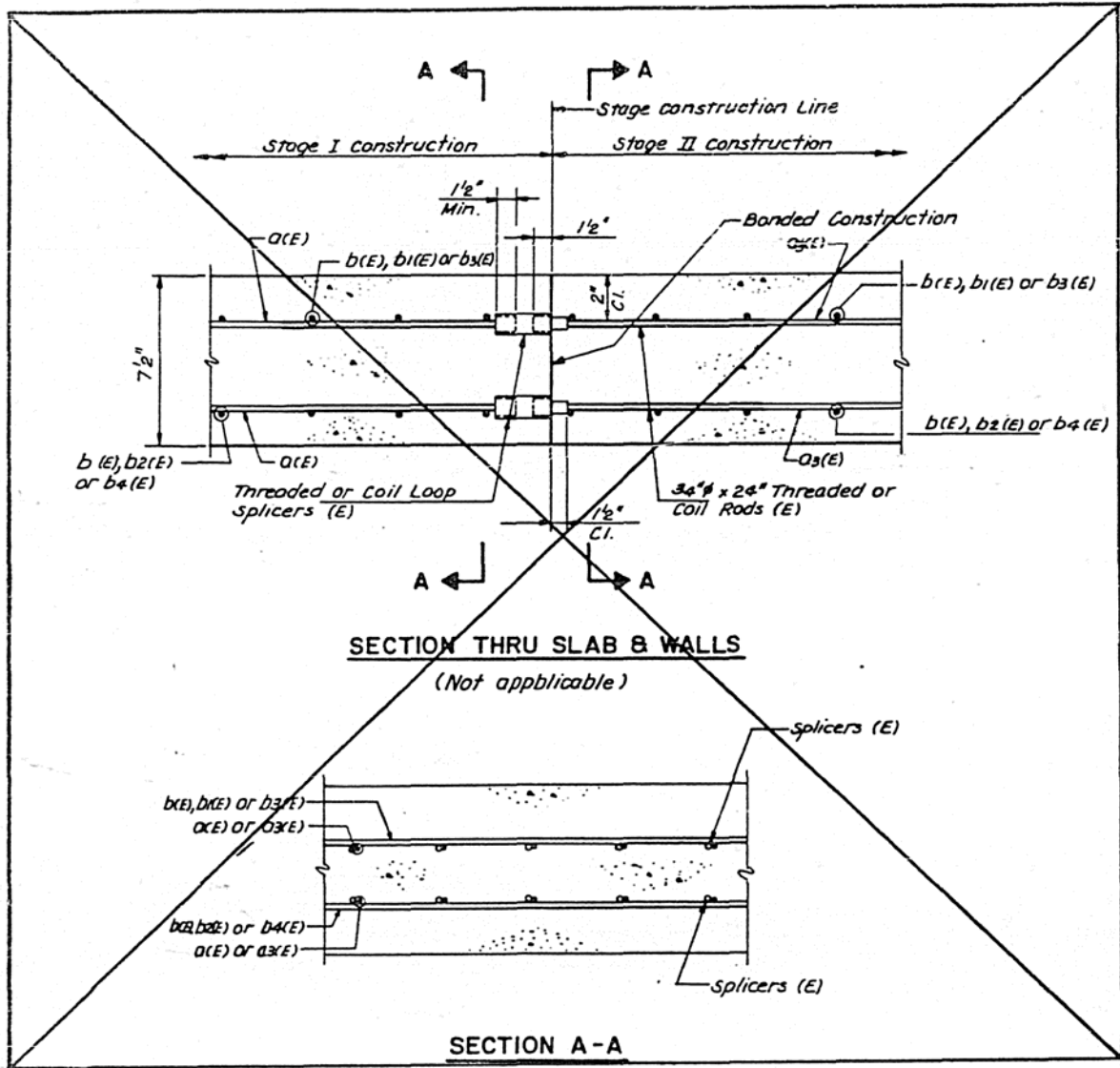
P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD
CHICAGO ILLINOIS, 60606

TEMPORARY CONCRETE BARRIER
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS - 1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

REVISIONS	
NAME	DATE

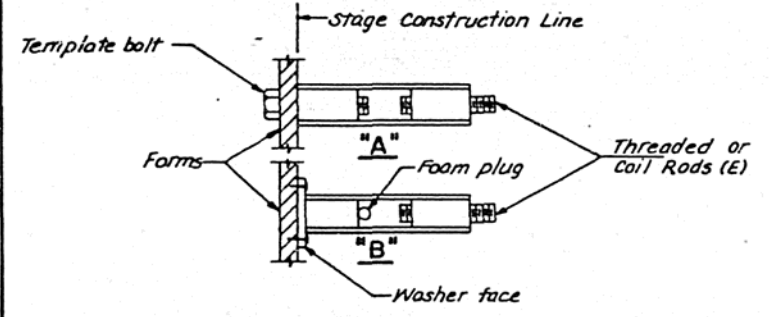
SCALE VERT
HORIZ
DATE

DESIGNED R.V.P.
CHECKED I.M.R.
DRAWN A.S.R.
CHECKED R.V.P.



SPLICER ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

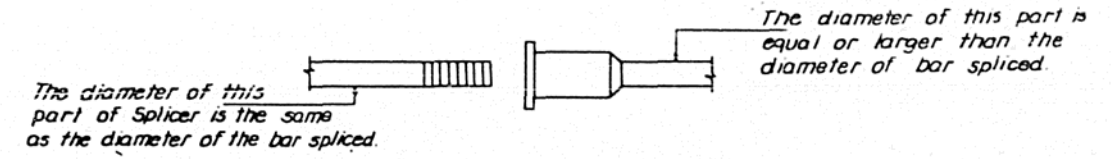
Steel splicer (coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars
Steel splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.
All reinforcement bars shall be lapped and tied to the splicer rods.
Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval.
Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements.

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in Kips)
 - ② Minimum * Pull-out Strength = $1.25 \times f_{allow} \times A_t$
(Tension in Kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi
 f_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service load)
 A_t = Tensile stress area of lapped reinforcement bars
* = 28 day concrete

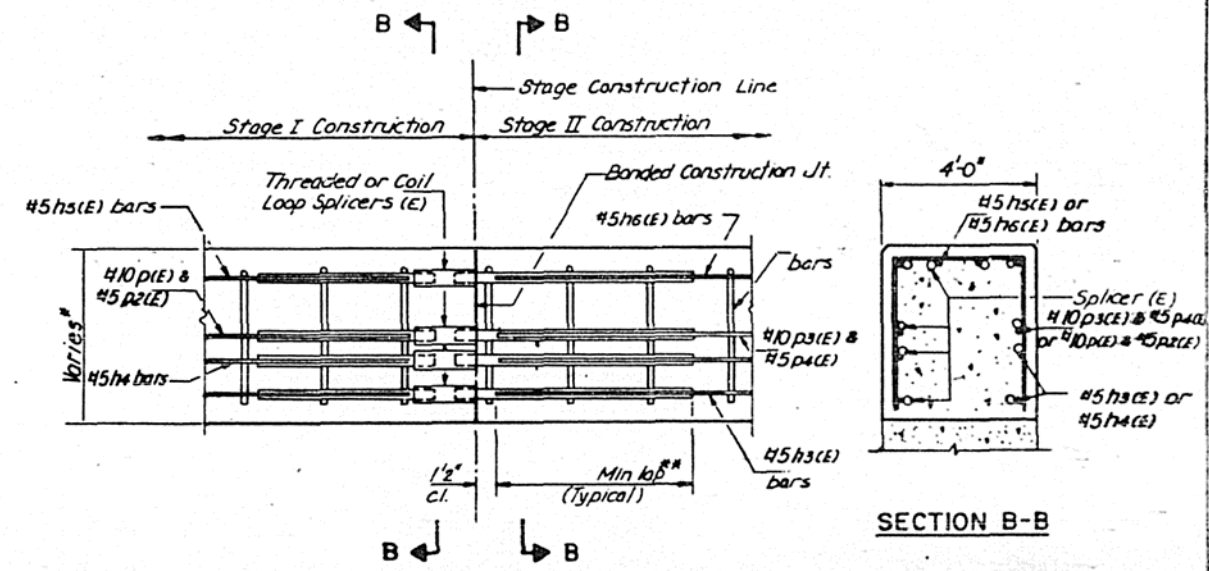
Typical Splicer (coupler) Assembly Sizes		
In Substructure	#5 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 23.0 Kips-tension Minimum Pull-Out Strength = 9.2 Kips-tension
	#10 bar lap with 1 1/8" Splicer (Coupler) x 7'-3" Splicer Rods	Minimum Capacity = 95.0 Kips-tension Minimum Pull-Out Strength = 38.0 Kips-tension

Sections are shown for two layers of reinforcement bar; for single layer, detail is similar to Section shown.
Cost of steel splicer shall be incidental to reinforcement bars (Epoxy coated)

DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	D.C.P.
CHECKED	R.V.P.



ROLLED THREAD DOWEL BAR



SECTION THRU PIERS

- * See Sheet No. 17, 18, 19
- ** #5 bars - 2'-2"
- #10 bars - 7'-3"

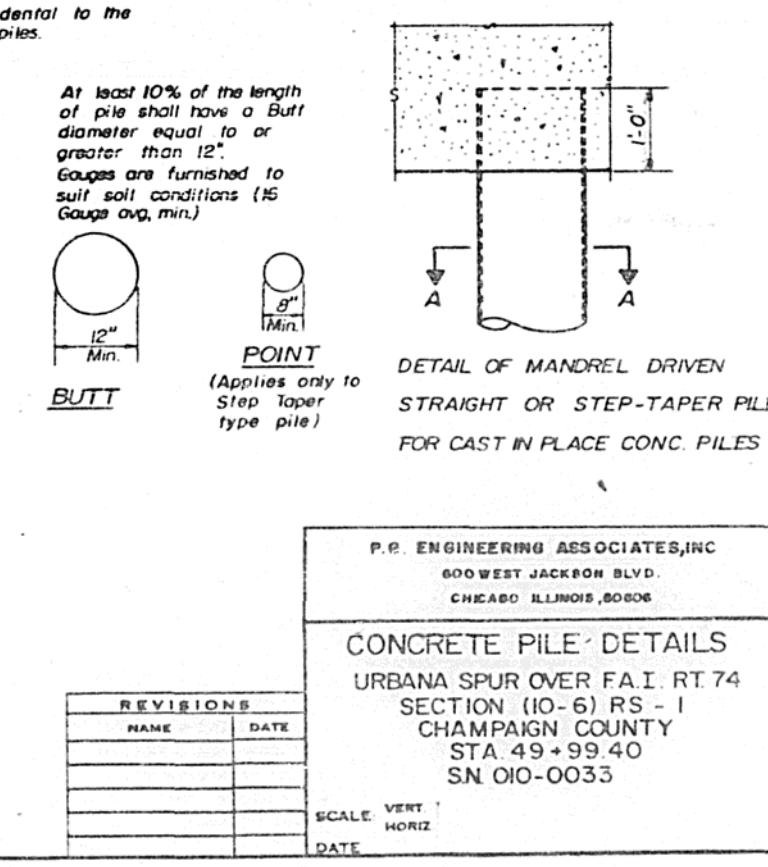
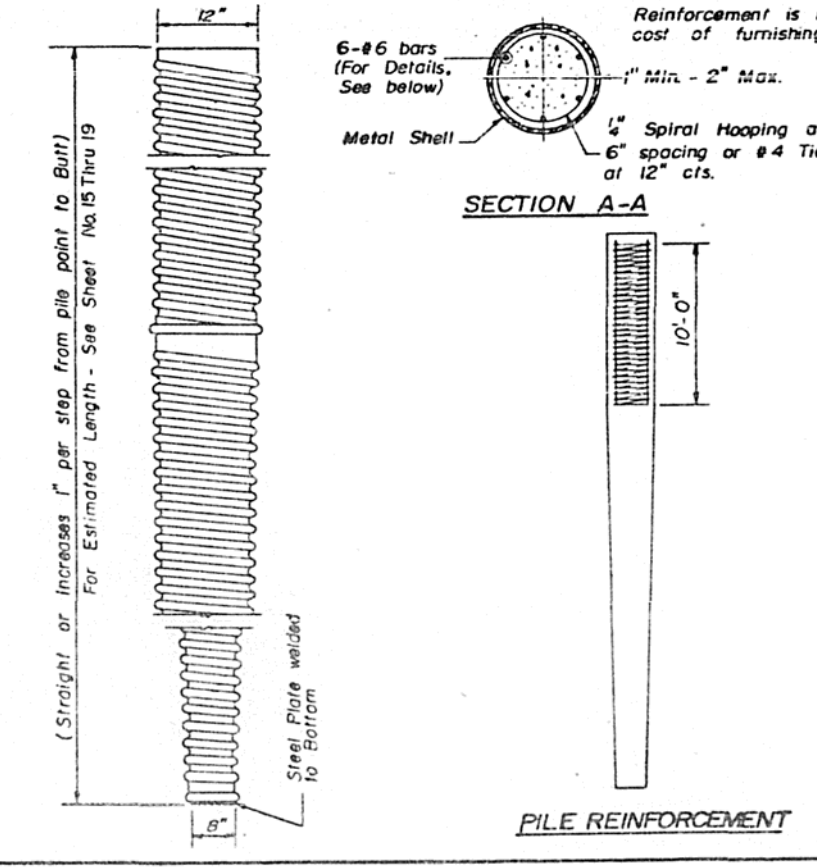
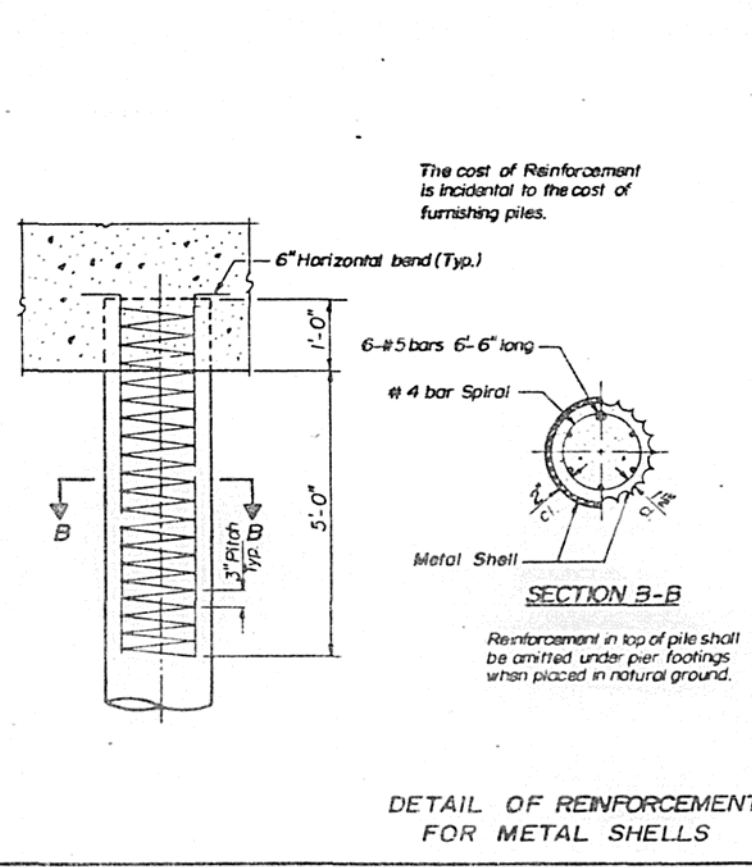
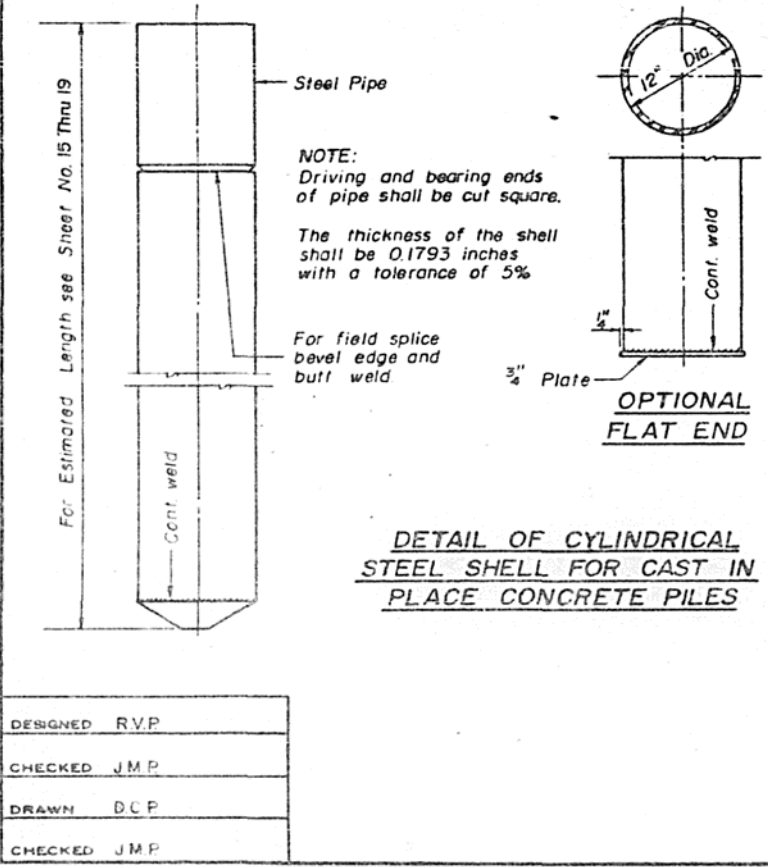
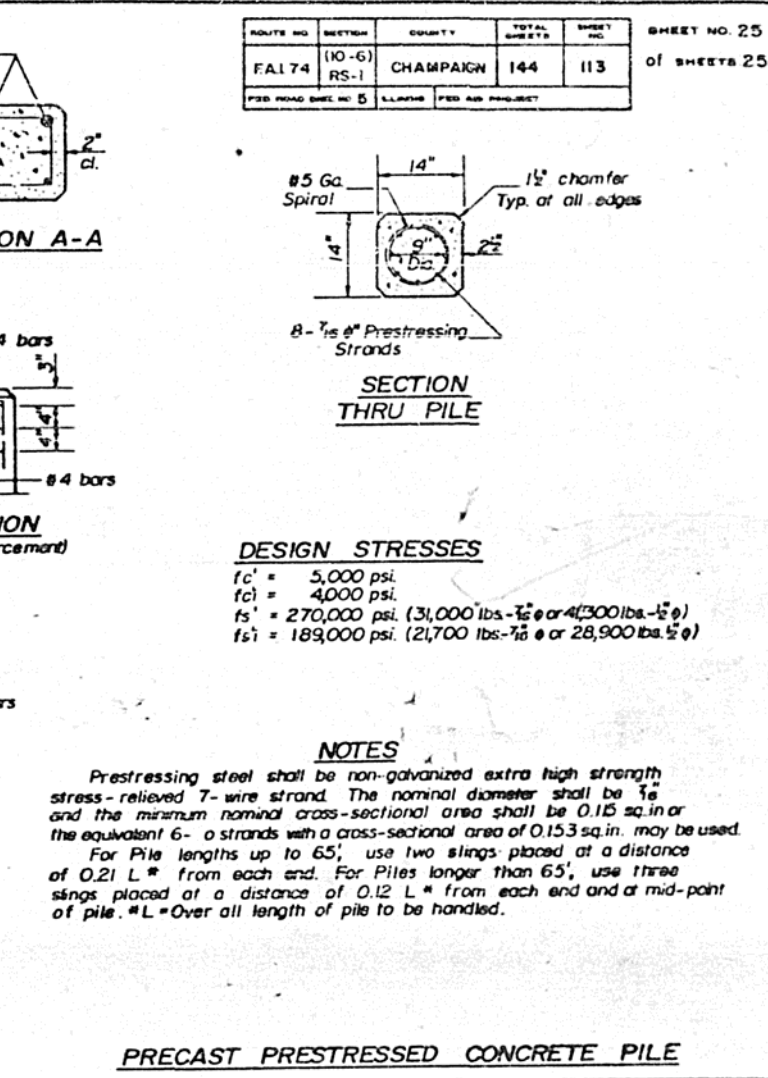
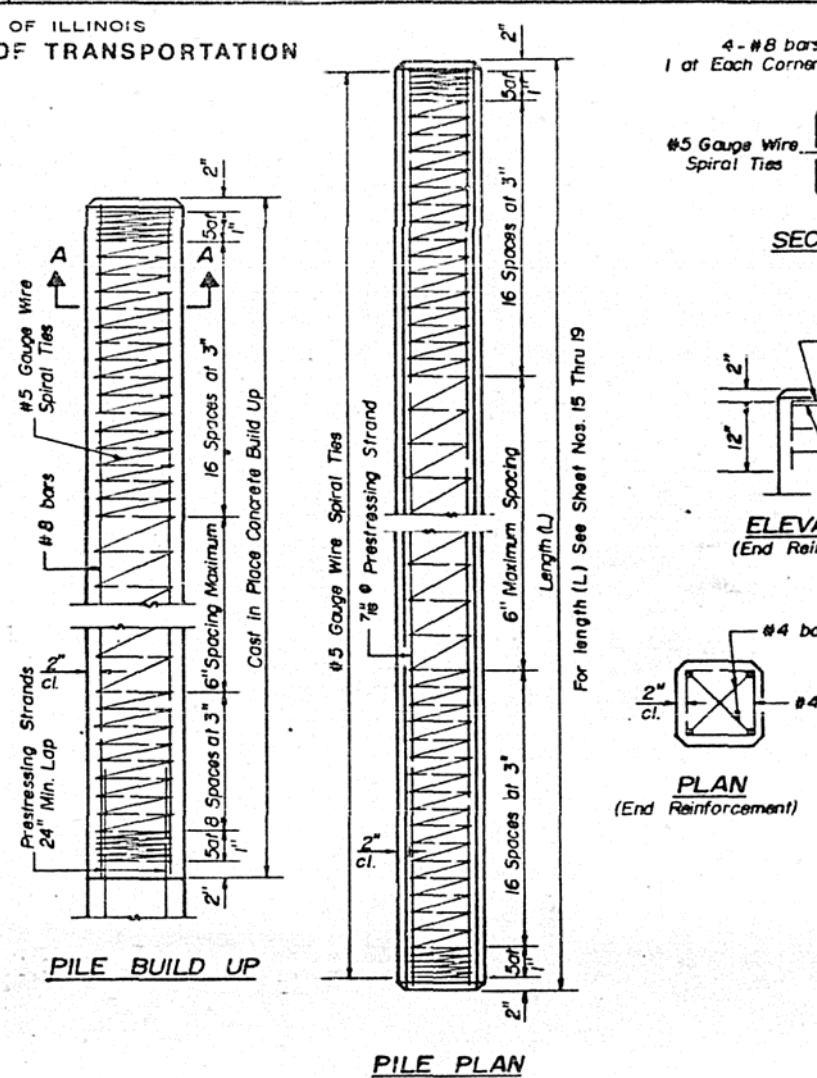
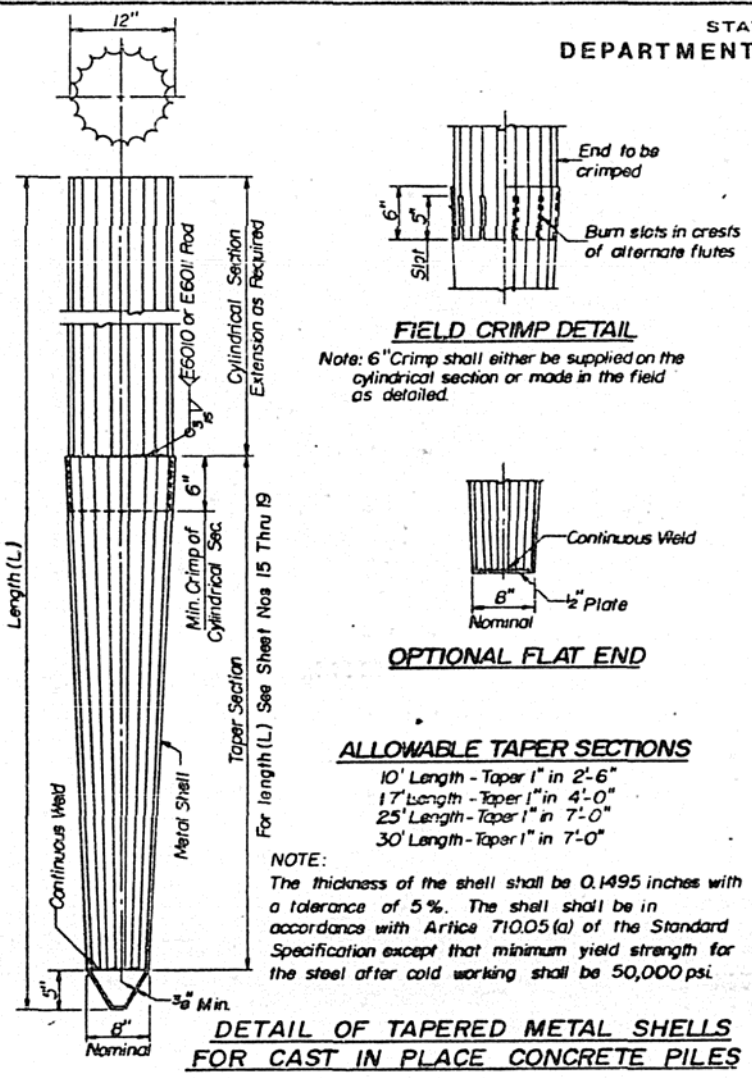
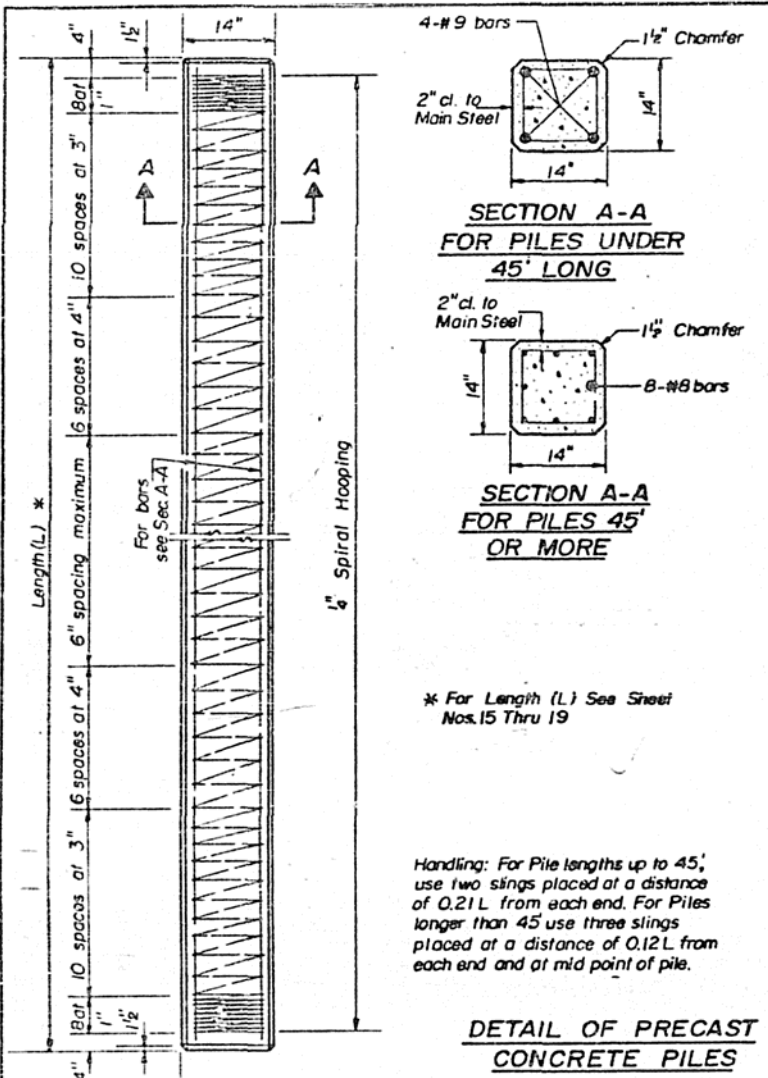
SIZE	NO REQUIRED
3/4" φ	39
1 1/8" φ	18

P.G. ENGINEERING ASSOCIATES, INC.
800 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

SPLICER DETAILS
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
S.N. 010-0033

REVISIONS	
NAME	DATE

SCALE VERT
HORIZ
DATE



DESIGNED	R.V.P.
CHECKED	J.M.P.
DRAWN	D.C.P.
CHECKED	J.M.P.

REVISIONS	
NAME	DATE

P.E. ENGINEERING ASSOCIATES, INC.
600 WEST JACKSON BLVD.
CHICAGO ILLINOIS, 60606

CONCRETE PILE DETAILS
URBANA SPUR OVER F.A.I. RT. 74
SECTION (10-6) RS-1
CHAMPAIGN COUNTY
STA. 49+99.40
SN. 010-0033

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HORIZ. _____
DATE _____