78046

1-16-09 Letting, Item 108

FRANKLIN I&R

#108

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	28-(1,1-1,1-2,2,2-1,3,3S)RS-1	FRANKLIN	52	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78046		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
INTERSTATE HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57)
SECTION 28-(1,1-1,1-2,2,2-1,3,3S)RS-1
PROJECT : IM-057-2(147)080
FRANKLIN COUNTY
C-99-029-08

100%
7-14-09

028-0011 & -0012

FOR INDEX OF SHEETS, SEE SHEET NO. 3

TRAFFIC DATA

I-57 TRAFFIC DATA
(NORTHBOUND LANES ONLY)
2007 ADT = 16,000 WITH 36% TRUCKS
2008 ADT = 16,400 WITH 36% TRUCKS
2028 ADT = 26,870 WITH 36% TRUCKS

TOWNSHIPS

BROWNING
BENTON
EWING

PROJECT BEGINS - NB LANES
JEFFERSON/FRANKLIN COUNTY LINE
STA. 7+20

SN 028-0055
STA. 9+78.11
(COUNTY LINE RD. OVERPASS)

SN 028-0059
STA. 176+52.10
(IL 154 OVERPASS)

OMISSION - GUN CREEK BRIDGE AREA
SN 028-0013
STA. 101+81.3 TO STA. 103+60

DOUBLE BOX CULVERT
SN 028-2006
STA. 151+58

SN 028-0053
STA. 283+35.75
(MARCUM BRANCH RD. OVERPASS)

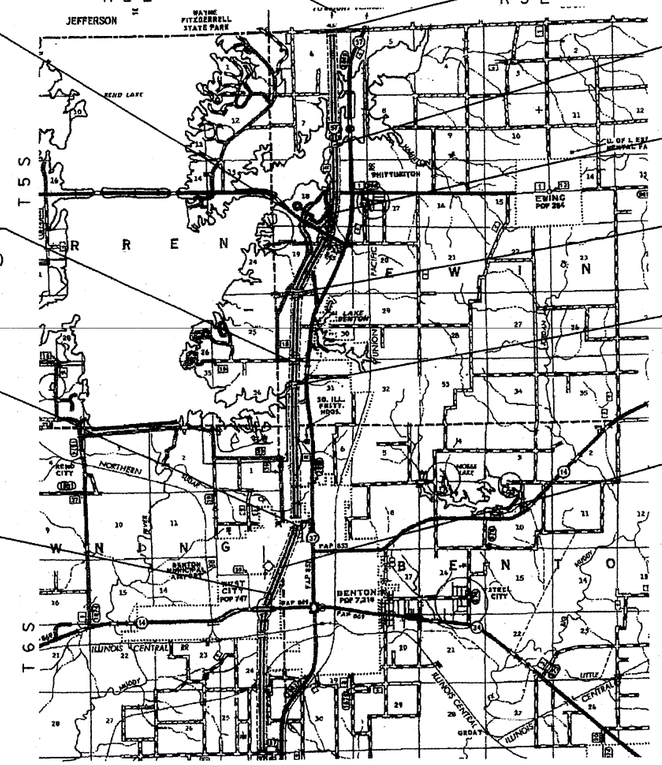
SN 028-0056
STA. 229+54.50
(FRANKLIN CEMETERY RD. OVERPASS)

OMISSION - MARCUM BRANCH BRIDGE AREA
SN 028-0012
STA. 303+14 TO STA. 304+79

SN 028-0057
STA. 415+71.58
(PETROFF RD. OVERPASS)

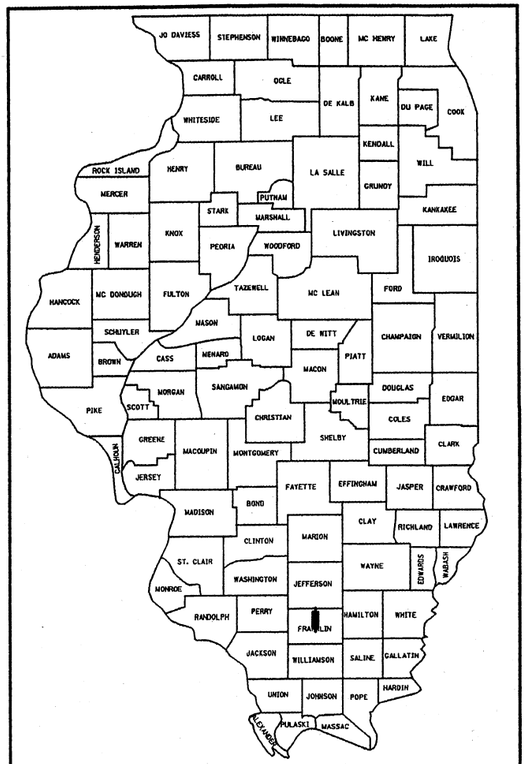
SN 028-0064
STA. 444+50
(DU QUOIN ST. OVERPASS)

PROJECT ENDS - NB LANES
STA. 469+00



GROSS LENGTH OF PROJECT = 46,180 FT = 8.75 MILES (NB)
NET LENGTH OF PROJECT = 45,836.3 FT = 8.68 MILES (NB)

D-99-019-08



LOCATION OF SECTION INDICATED THUS: –

100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

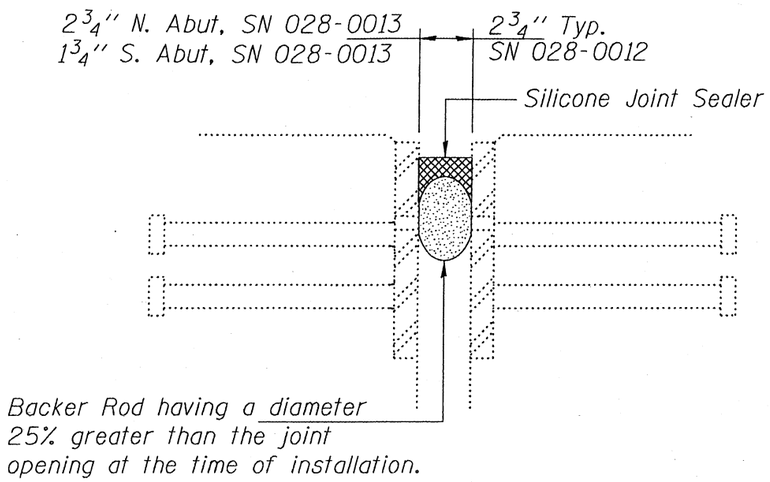
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct 14 20 08
Mary C. Lonnie
DEPUTY DIRECTOR OF HIGHWAYS, REGION V ENGINEER
December 5, 20 08
Eric E. Harm
Interim ENGINEER OF DESIGN AND ENVIRONMENT
December 5, 20 08
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: CHARLES STEIN
DESIGNER: MELISSA COLE

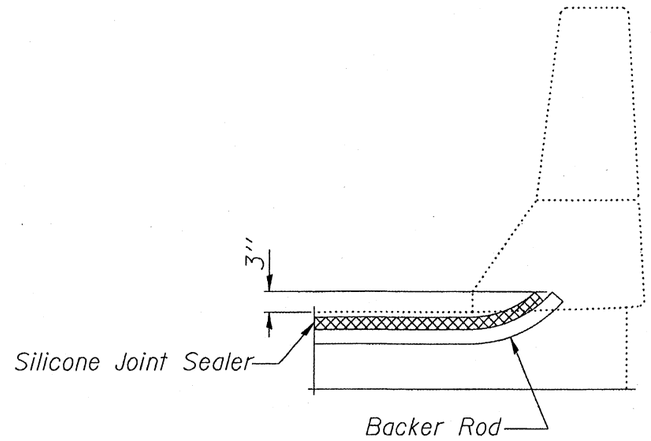
CONTRACT NO. 78046 028-0011 & -0012

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



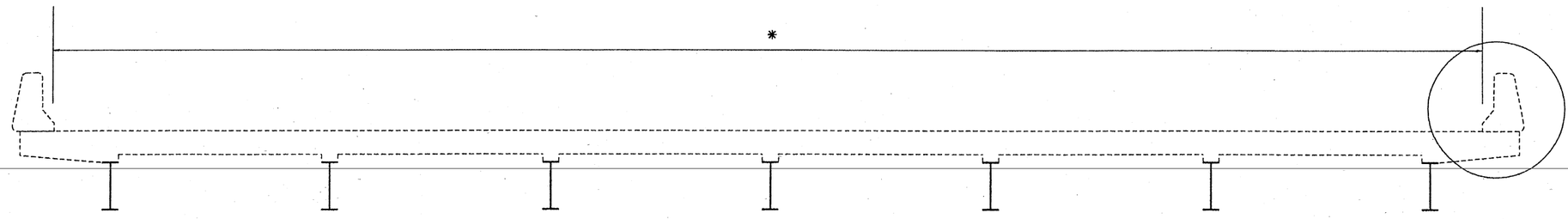
SILICONE JOINT SEALER DETAIL

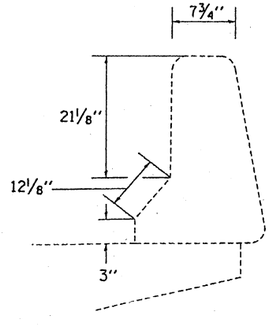
Cost of removing the existing PJS is included with the cost of Silicone Joint Sealer.



END OF SEAL TREATMENT

PARAPET DETAIL





* SEE SCHEDULE ON SHEET 16 FOR WIDTH

SN 028-0012 & 028-0013

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SILICONE JOINT SEALER AND PARAPET DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	•	Franklin	52	51
		CONTRACT NO. 78046		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

28-(1,1-1,1-2,2,2-1,3,3S)RS-1

~~10-1-93~~ ~~E-25~~ FRANKLIN I&R Copy 28(5B-1,5B,2B,1B)D-1; 28(5VB,3VB-1)I-1

99.9%
1-11-95

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

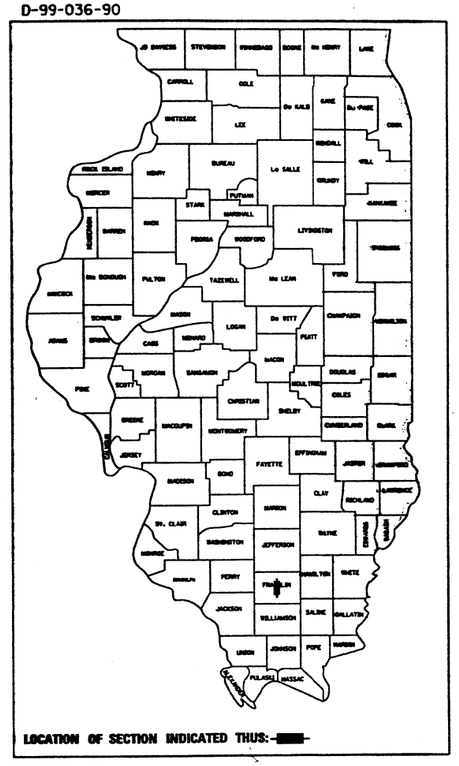
F.A.I. ROUTE 57
SECTION 28(5B–1,5B,2B,1B)D–1; 28(5VB,3VB–1)I–1
FRANKLIN COUNTY
PROJECT NO. IM–57–2(133)63
C–99–007–91

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	145	1

F.A.S. RTE. | ILLINOIS PROJECT STP-57-2(133)63

* 28(5B-1,5B,2B,1B)D-1;28(5VB,3VB-1)I-1

D-99-036-90

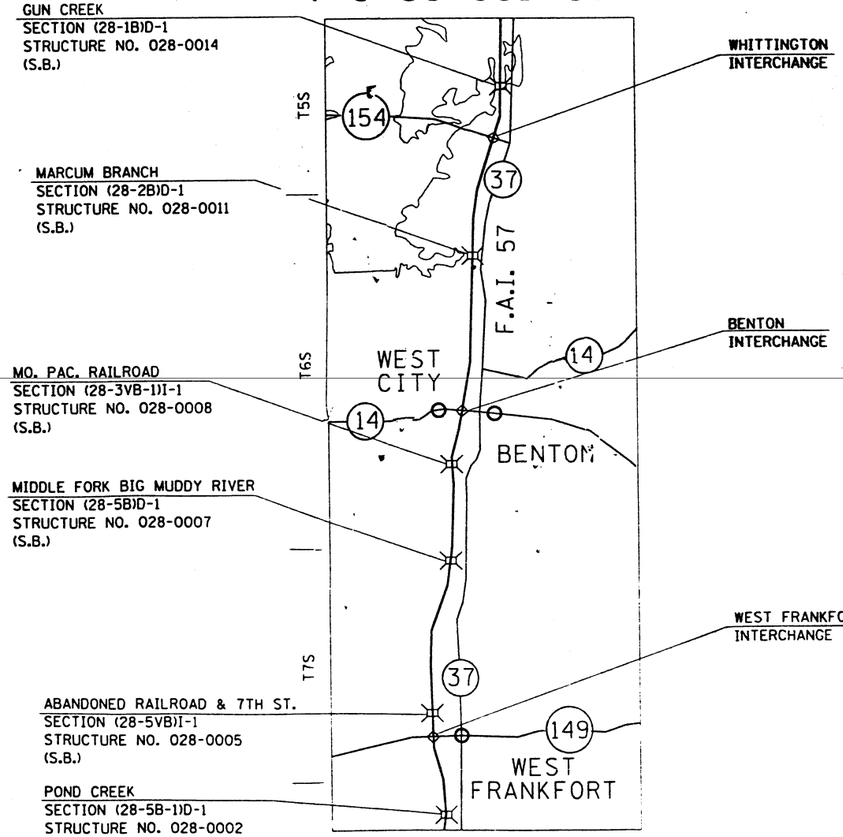


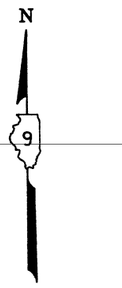
LOCATION OF SECTION INDICATED THUS:-■-

FOR INDEX OF SHEETS, SEE SHEET NO.2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO.3–4

SCALE IN FEET

PLAN	50′	0	25′	50′
PROFILES HORIZ.	50′	0	25′	50′
PROFILES VERT.	5′	0	2.5′	5′
CROSS SECTIONS	5′	0	2.5′	5′





SCALE
2 MI. 0 2 MI.
APPROX.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 25 19 93
W. Bartkowiak
DISTRICT ENGINEER

EXAMINED _____ 19 ____

ENGINEER OF PLANS AND CONTRACTS

PASSED JUNE 4 19 93
Gary Hauld
ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED JUNE 4 19 93
Ralph C. Wehner
DIRECTOR, DIVISION OF HIGHWAYS

JULIE 1-800-892-0123

PROJECT ENGINEER: ED SI:
SQUAD LEADER: CENTREX ?.

CONTRACT NO. 98149

Sheets 1 Thru 105 (Set 1 of 2)

COUNTY: FRANKLIN SECTION: 28(5B-1,5B,2B,1B)D-1; 28(5VB,3VB-1)I-1 ROUTE: F.A.I. RTE. 57

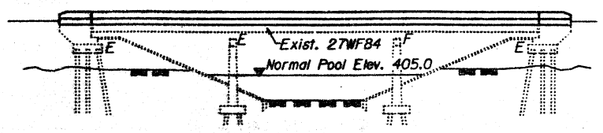
028-0011 & -0012

9-145

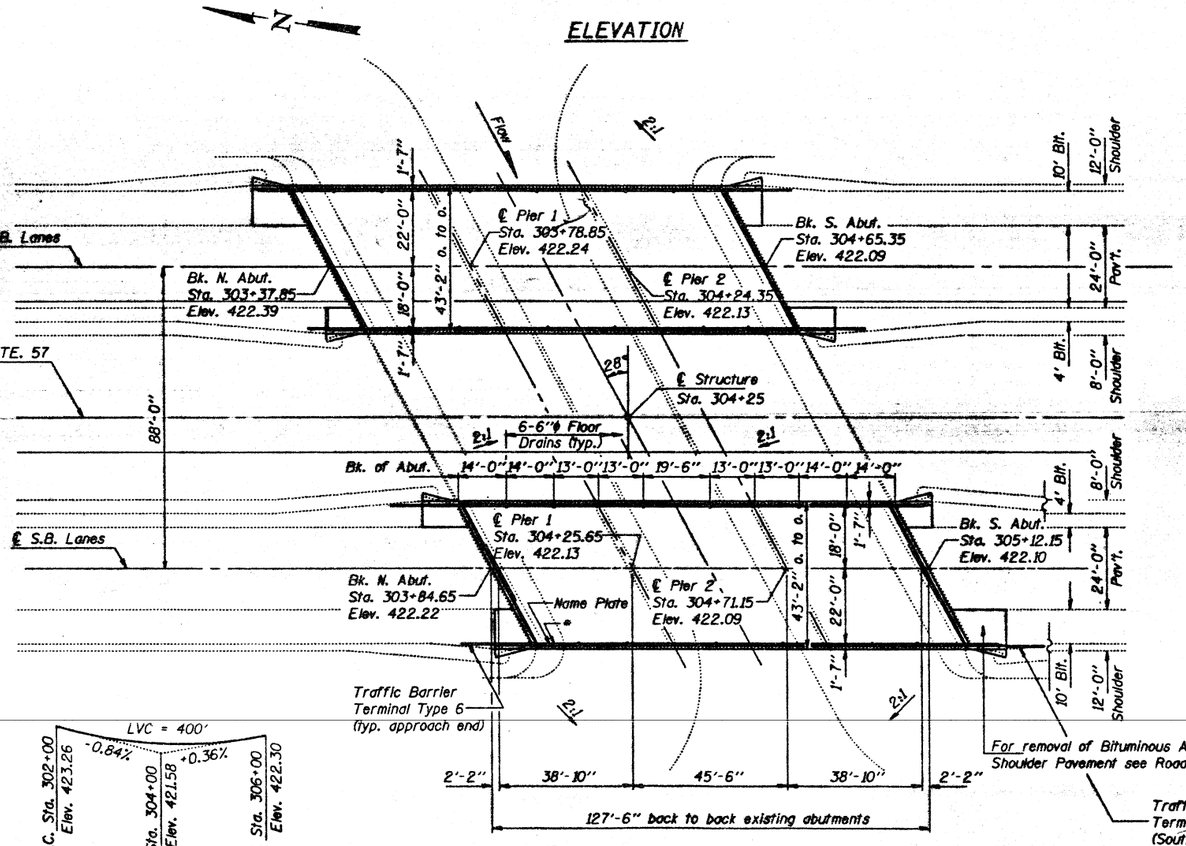
Existing Structures: #028-0011 (S.B.) & #028-0012 (N.B.) are each 127'-6" long and 42'-0" wide. Built as F.A.I. Rte. 57, Section 28-2B at Sta. 304+25 in 1962 consists of RC Deck supported on 3 span continuous wide flange beams.
Temporary median crossovers shall be utilized to divert traffic over adjacent bridge during reconstruction.
Bench Mark: "□" Cut on top of N.E. end of West handrail of Southbound Lane of bridge over Marcum Branch. Elevation 424.81.
No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE SEC. NO.	SECTION	COUNTY		SHEET NO.
F.A.I. '57	28B-2(2)D-1	FRANKLIN		50
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		55 SHEETS



ELEVATION



PLAN

Note: Only the Southbound structure is included in this contract.

PROFILE GRADE

F.A. Route 57 (along ℄ pavement)

STATION 304+25.00
REBUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (28-2B)D-1
F.A. PROJECT: IM-57-3(133)65
LOADING HS20 & ALT.
STR. NO. 028-0011

NAME PLATE

See Std. 2113

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$"ø, open holes $\frac{15}{16}$"ø, unless otherwise noted.

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

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

Plan dimensions and details relative to existing structure have been taken from existing plans and field survey 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.

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 the top plate shall be provided and placed as detailed.

The Contractor will be required to mark, on top of the concrete deck, the locations of the top flange of all the steel beams, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam flanges is not permitted.

Bearing seat surfaces of the abutments shall receive Bridge Seat Sealer.

The zinc-silicate primer shall be used for shop painting of new structural steel.

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale and all other foreign material shall be removed from the embedded portions of flanges of stringers. The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP-3 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be incidental to "Removal of Existing Concrete Deck."

For cantilever forming brackets see Special Provisions.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Concrete Removal	Cu. Yd.		9	9
	Structure Excavation	Cu. Yd.		22	22
**	Removal of Existing Concrete Deck	Each	1		1
	Floor Drains	Each	12		12
	Preformed Joint Seal 2½"	Lin. Ft.	49		49
	Preformed Joint Seal 4"	Lin. Ft.	49		49
	Class X Concrete Superstructure	Cu. Yd.	177.6		177.6
***	Protective Coat	Sq. Yd.	672		672
	Elastomeric Bearing Assembly, Type I	Each	14		14
	Elastomeric Bearing Assembly, Type II	Each	7		7
	Structural Steel	Lbs.	9230		9230
	Stud Shear Connectors	Each	3255		3255
	Reinforcement Bars, Epoxy Coated	Pound	38060	3600	41660
	Name Plates	Each	1		1
	Bridge Seat Sealer	Sq. Ft.		189	189
	Jack and Remove Existing Bearings	Each	28		28
	Bridge Deck Grooving	Sq. Yd.	527		527

** Includes the removal of existing steel railing.
*** Quantity includes bridge deck surface.

DESIGNED	John Ciccone
CHECKED	Anthony J. Voudouris
DRAWN	Paul W. Sweet RD
CHECKED	JLC AVV

May 20 1992

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson Engineer of Bridges and Structures

APPROVED Director of Highways

* Existing Name Plate to be cleaned and relocated. Cost incidental to "Name Plates".

DESIGN SPECIFICATIONS

1989 AASHTO, 1990 & 1991 Interim Specifications and Seismic Retrofitting Guidelines for Highway Bridges

LOADING HS 20-44 & Alt.

Allow 25#/ sq. ft. for future wearing surface.

DESIGN STRESSES

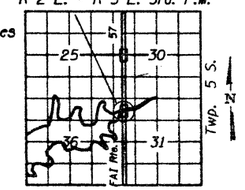
FIELD UNITS

New Construction

f'_c = 3,500 psi
f_y = 60,000 psi (Reinf.)
f_y = 36,000 psi (M270 Gr. 36)

Old Construction

f_s = 20,000 psi (Structural Steel)

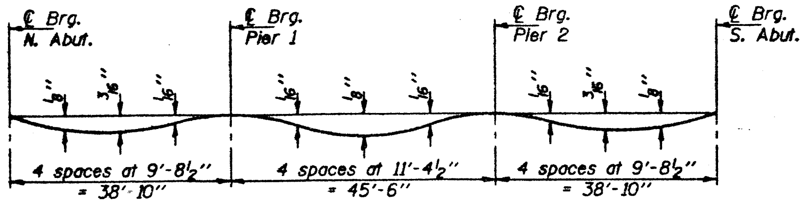


LOCATION SKETCH

GENERAL PLAN
F.A.I. ROUTE 57 OVER
MARCUM BRANCH
F.A.I. ROUTE 57 SECTION (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00
STRUCTURE NUMBER 028-0011 (S.B.)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

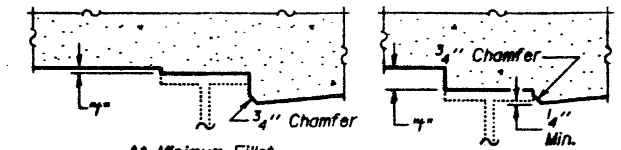
SHEET NO. 2 — 16 SHEETS — 51



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete 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 below.



At Minimum Fillet — At Maximum Fillet

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

FILLET HEIGHTS

℄ BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30375.611	-17.000	422.018	422.018
℄ Brg. N. Abut.	30377.778	-17.000	422.012	422.012
A	30387.778	-17.000	421.983	421.993
B	30397.778	-17.000	421.956	421.970
C	30407.778	-17.000	421.933	421.939
℄ Brg. Pier 1	30416.611	-17.000	421.915	421.915
D	30426.611	-17.000	421.898	421.902
E	30436.611	-17.000	421.883	421.892
F	30446.611	-17.000	421.872	421.879
G	30456.611	-17.000	421.863	421.866
℄ Brg. Pier 2	30462.111	-17.000	421.860	421.860
H	30472.111	-17.000	421.856	421.863
I	30482.111	-17.000	421.855	421.868
J	30492.111	-17.000	421.857	421.867
℄ Brg. S. Abut.	30500.944	-17.000	421.862	421.862
Bk. S. Abut.	30503.111	-17.000	421.863	421.863

EAST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30378.137	-12.250	422.109	422.109
℄ Brg. N. Abut.	30380.303	-12.250	422.103	422.103
A	30390.303	-12.250	422.074	422.085
B	30400.303	-12.250	422.049	422.062
C	30410.303	-12.250	422.027	422.033
℄ Brg. Pier 1	30419.137	-12.250	422.009	422.009
D	30429.137	-12.250	421.993	421.997
E	30439.137	-12.250	421.979	421.988
F	30449.137	-12.250	421.968	421.975
G	30459.137	-12.250	421.960	421.963
℄ Brg. Pier 2	30464.637	-12.250	421.957	421.957
H	30474.637	-12.250	421.954	421.961
I	30484.637	-12.250	421.954	421.967
J	30494.637	-12.250	421.957	421.967
℄ Brg. S. Abut.	30503.470	-12.250	421.962	421.962
Bk. S. Abut.	30505.637	-12.250	421.964	421.964

℄ BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30378.978	-10.667	422.138	422.138
℄ Brg. N. Abut.	30381.145	-10.667	422.132	422.132
A	30391.145	-10.667	422.104	422.114
B	30401.145	-10.667	422.078	422.092
C	30411.145	-10.667	422.056	422.062
℄ Brg. Pier 1	30419.978	-10.667	422.039	422.039
D	30429.978	-10.667	422.023	422.027
E	30439.978	-10.667	422.009	422.018
F	30449.978	-10.667	421.999	422.006
G	30459.978	-10.667	421.991	421.994
℄ Brg. Pier 2	30465.478	-10.667	421.988	421.988
H	30475.478	-10.667	421.986	421.992
I	30485.478	-10.667	421.986	421.999
J	30495.478	-10.667	421.989	421.999
℄ Brg. S. Abut.	30504.312	-10.667	421.994	421.994
Bk. S. Abut.	30506.478	-10.667	421.996	421.996

℄ BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30382.346	-4.333	422.211	422.211
℄ Brg. N. Abut.	30384.513	-4.333	422.204	422.204
A	30394.513	-4.333	422.177	422.188
B	30404.513	-4.333	422.153	422.166
C	30414.513	-4.333	422.132	422.138
℄ Brg. Pier 1	30423.346	-4.333	422.116	422.116
D	30433.346	-4.333	422.100	422.105
E	30443.346	-4.333	422.088	422.097
F	30453.346	-4.333	422.078	422.085
G	30463.346	-4.333	422.072	422.074
℄ Brg. Pier 2	30468.846	-4.333	422.069	422.069
H	30478.846	-4.333	422.068	422.075
I	30488.846	-4.333	422.069	422.082
J	30498.846	-4.333	422.073	422.083
℄ Brg. S. Abut.	30507.679	-4.333	422.079	422.079
Bk. S. Abut.	30509.846	-4.333	422.081	422.081

℄ ROADWAY AND P. G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30384.650	0.000	422.220	422.220
℄ Brg. N. Abut.	30386.817	0.000	422.214	422.214
A	30396.817	0.000	422.188	422.199
B	30406.817	0.000	422.164	422.178
C	30416.817	0.000	422.144	422.150
℄ Brg. Pier 1	30425.650	0.000	422.128	422.128
D	30435.650	0.000	422.114	422.118
E	30445.650	0.000	422.102	422.111
F	30455.650	0.000	422.093	422.100
G	30465.650	0.000	422.087	422.090
℄ Brg. Pier 2	30471.150	0.000	422.085	422.085
H	30481.150	0.000	422.084	422.091
I	30491.150	0.000	422.086	422.099
J	30501.150	0.000	422.091	422.100
℄ Brg. S. Abut.	30509.983	0.000	422.097	422.097
Bk. S. Abut.	30512.150	0.000	422.100	422.100

℄ BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30385.713	2.000	422.214	422.214
℄ Brg. N. Abut.	30387.880	2.000	422.208	422.208
A	30397.880	2.000	422.182	422.193
B	30407.880	2.000	422.159	422.172
C	30417.880	2.000	422.138	422.145
℄ Brg. Pier 1	30426.713	2.000	422.123	422.123
D	30436.713	2.000	422.109	422.113
E	30446.713	2.000	422.097	422.106
F	30456.713	2.000	422.089	422.096
G	30466.713	2.000	422.083	422.086
℄ Brg. Pier 2	30472.213	2.000	422.082	422.082
H	30482.213	2.000	422.081	422.088
I	30492.213	2.000	422.083	422.096
J	30502.213	2.000	422.088	422.098
℄ Brg. S. Abut.	30511.047	2.000	422.095	422.095
Bk. S. Abut.	30513.213	2.000	422.097	422.097

℄ BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30389.081	8.333	422.148	422.148
℄ Brg. N. Abut.	30391.248	8.333	422.142	422.142
A	30401.248	8.333	422.117	422.127
B	30411.248	8.333	422.095	422.108
C	30421.248	8.333	422.075	422.082
℄ Brg. Pier 1	30430.081	8.333	422.061	422.061
D	30440.081	8.333	422.048	422.052
E	30450.081	8.333	422.037	422.046
F	30460.081	8.333	422.030	422.037
G	30470.081	8.333	422.025	422.028
℄ Brg. Pier 2	30475.581	8.333	422.024	422.024
H	30485.581	8.333	422.024	422.031
I	30495.581	8.333	422.027	422.041
J	30505.581	8.333	422.033	422.043
℄ Brg. S. Abut.	30514.414	8.333	422.041	422.041
Bk. S. Abut.	30516.581	8.333	422.044	422.044

WEST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30391.030	12.000	422.077	422.077
℄ Brg. N. Abut.	30393.197	12.000	422.072	422.072
A	30403.197	12.000	422.047	422.058
B	30413.197	12.000	422.026	422.039
C	30423.197	12.000	422.007	422.013
℄ Brg. Pier 1	30432.030	12.000	421.993	421.993
D	30442.030	12.000	421.980	421.985
E	30452.030	12.000	421.970	421.979
F	30462.030	12.000	421.964	421.971
G	30472.030	12.000	421.960	421.962
℄ Brg. Pier 2	30477.530	12.000	421.959	421.959
H	30487.530	12.000	421.960	421.967
I	30497.530	12.000	421.963	421.977
J	30507.530	12.000	421.970	421.980
℄ Brg. S. Abut.	30516.364	12.000	421.979	421.979
Bk. S. Abut.	30518.530	12.000	421.981	421.981

℄ BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30392.448	14.667	422.018	422.018
℄ Brg. N. Abut.	30394.615	14.667	422.013	422.013
A	30404.615	14.667	421.988	421.999
B	30414.615	14.667	421.967	421.981
C	30424.615	14.667	421.949	421.955
℄ Brg. Pier 1	30433.448	14.667	421.936	421.936
D	30443.448	14.667	421.923	421.928
E	30453.448	14.667	421.914	421.923
F	30463.448	14.667	421.907	421.914
G	30473.448	14.667	421.904	421.906
℄ Brg. Pier 2	30478.948	14.667	421.903	421.903
H	30488.948	14.667	421.904	421.911
I	30498.948	14.667	421.909	421.922
J	30508.948	14.667	421.916	421.926
℄ Brg. S. Abut.	30517.782	14.667	421.925	421.925
Bk. S. Abut.	30519.948	14.667	421.927	421.927

℄ BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	30395.816	21.000	421.878	421.878
℄ Brg. N. Abut.	30397.983	21.000	421.872	421.872
A	30407.983	21.000	421.849	421.860
B	30417.983	21.000	421.829	421.842
C	30427.983	21.000	421.812	421.818
℄ Brg. Pier 1	30436.816	21.000	421.799	421.799
D	30446.816	21.000	421.788	421.793
E	30456.816	21.000	421.780	421.788
F	30466.816	21.000	421.774	421.781
G	30476.816	21.000	421.772	421.774
℄ Brg. Pier 2	30482.316	21.000	421.772	421.772
H	30492.316	21.000	421.774	421.781
I	30502.316	21.000	421.779	421.792
J	30512.316	21.000	421.787	421.797
℄ Brg. S. Abut.	30521.149	21.000	421.797	421.797
Bk. S. Abut.	30523.316	21.000	421.800	421.800

Note: Work this sheet with sheet #3 of 16.

DESIGNED	John Ciccone
CHECKED	Anthony J. Vinson
DRAWN	R. Doty
CHECKED	JLC, AYV

May 20 1993

EXAMINED: Kaspar — ENGINEER OF BRIDGE DESIGN

PASSED: Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES

APPROVED: ______ DIRECTOR OF HIGHWAYS

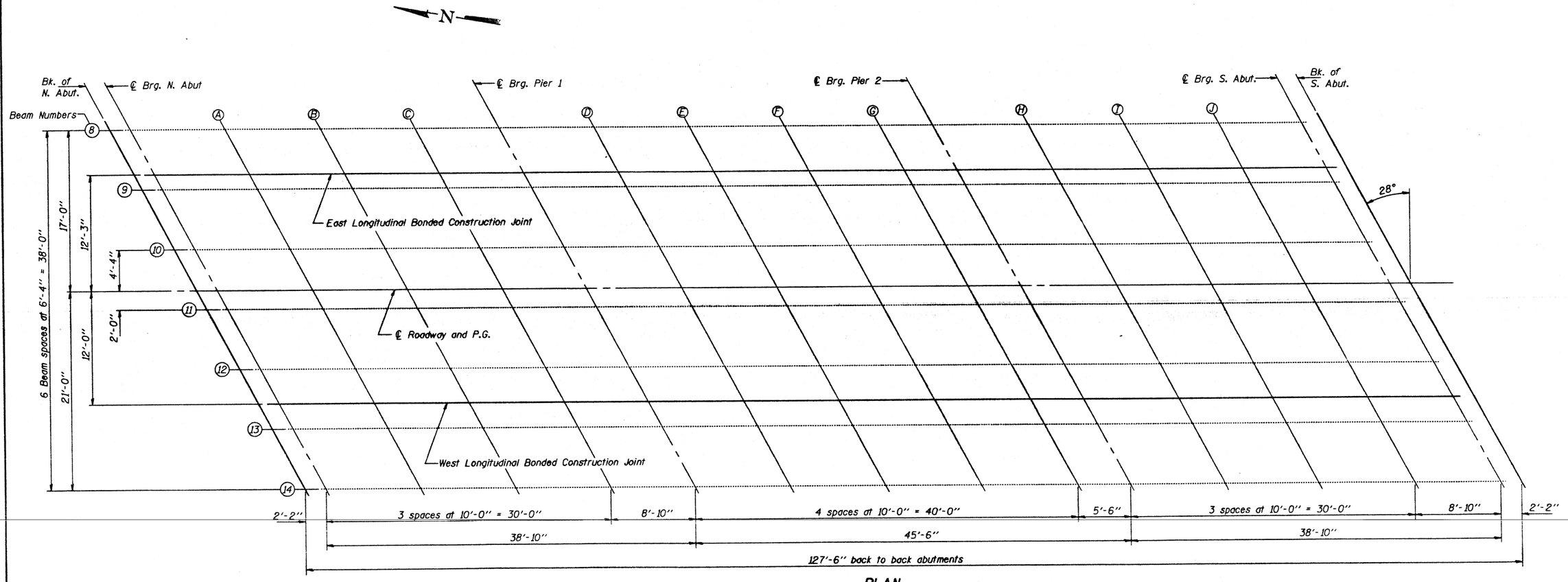
E-S 1-6-82

TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

ROUTE SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(28-2B)D-1	FRANKLIN	52	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

DESIGNED	John Cicero
CHECKED	Anthony J. Hermann
DRAWN	R. Doty
CHECKED	JCC, AJH, V.

May 20 1993

EXAMINED Siegfried L. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

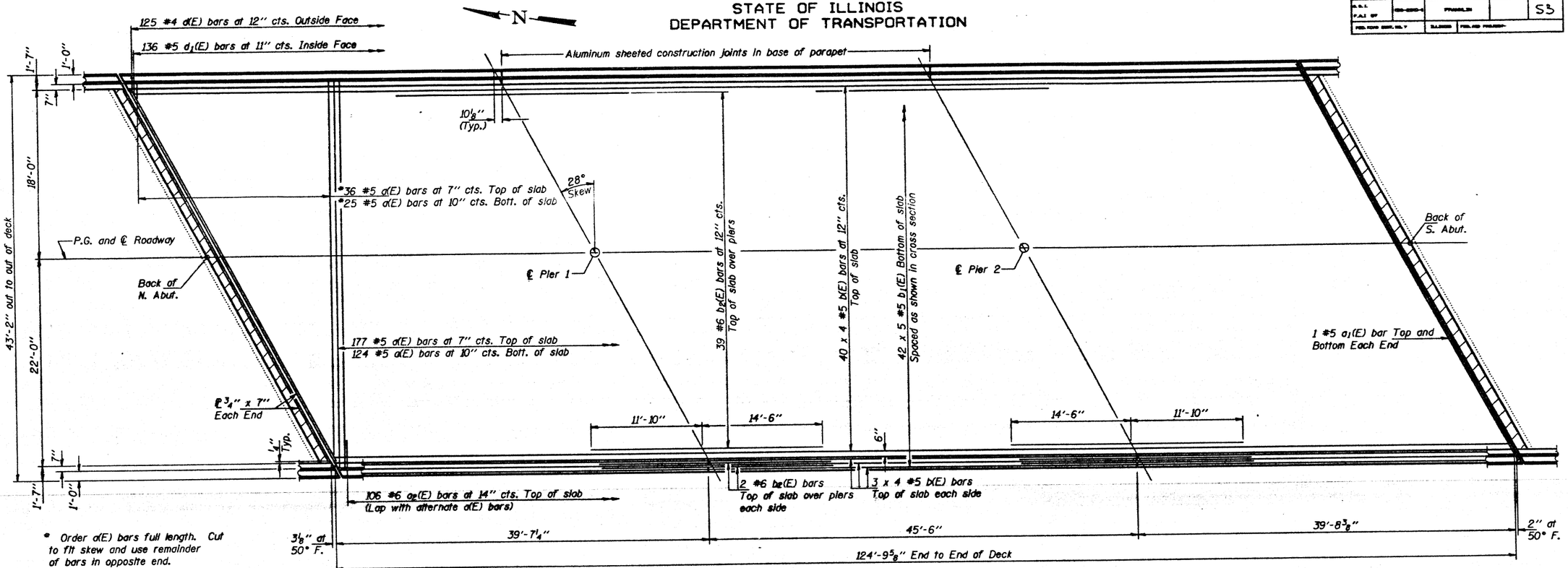
APPROVED
DIRECTOR OF HIGHWAYS

TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(28-2B)D-1	FRANKLIN		5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

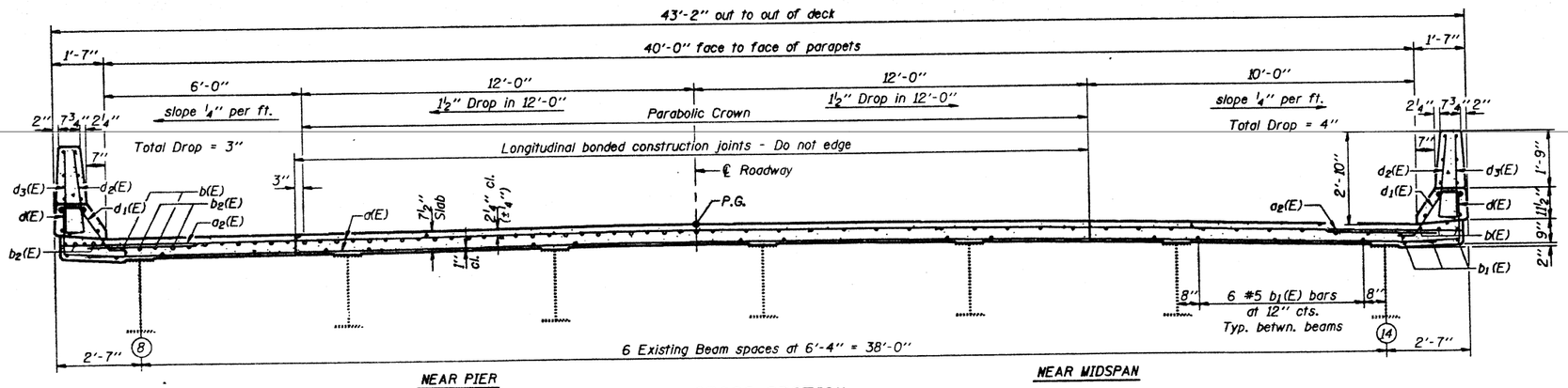
SHEET NO. 4
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* Order d(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN



CROSS SECTION
(Looking South)

Notes: See sheets #5 and #6 of 16 for superstructure details, parapet reinforcement and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Reinforcement bars indicated thus 40 x 4 #5 etc. indicates 40 lines of bars with 4 lengths per line.
See sheet #1 of 16 for drain locations and sheet #5 of 16 for details.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete to be included with Class X Concrete Superstructure.

MIN. BAR LAPS
#5 bars = 1'-8"

DESIGNED	John Cicone
CHECKED	Anthony J. Mistler
DRAWN	R. Doty
CHECKED	JLC, TJM, V

May 20 1993

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

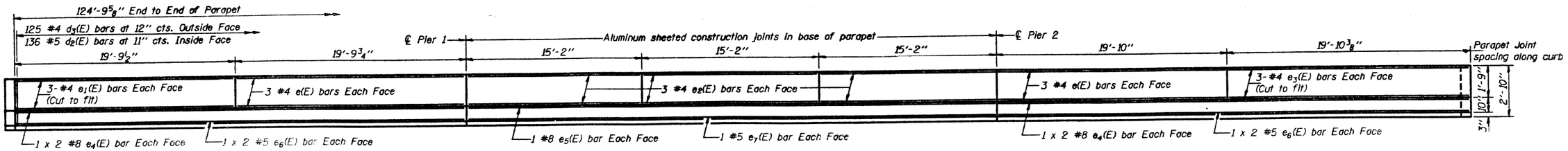
APPROVED
Director of Highways

SUPERSTRUCTURE
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

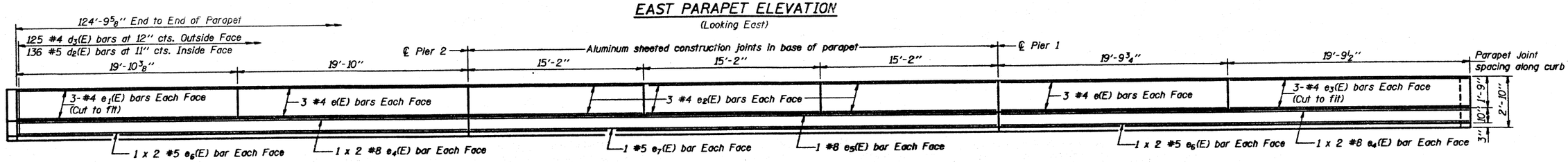
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	(28-2B)D-1	FRANKLIN		54
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
16 SHEETS

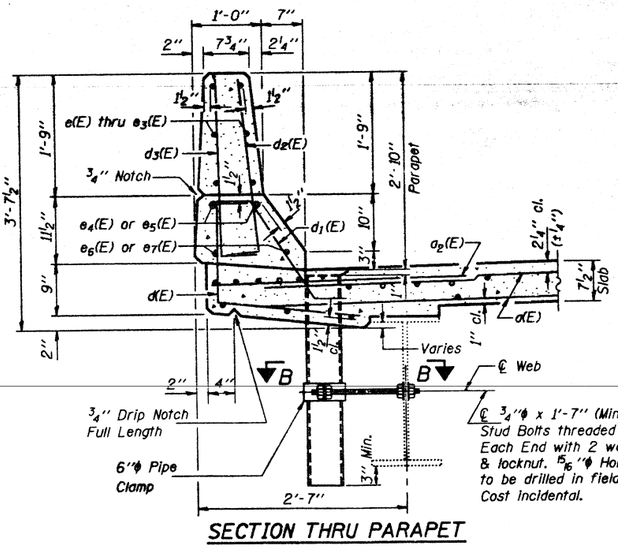
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



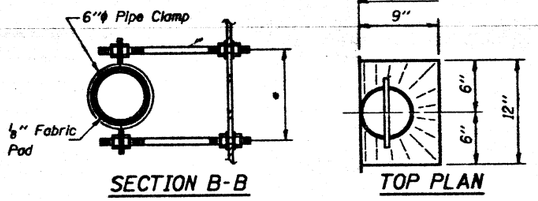
EAST PARAPET ELEVATION
(Looking East)



WEST PARAPET ELEVATION
(Looking West)



SECTION THRU PARAPET

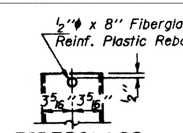


SECTION B-B

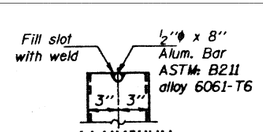
TOP PLAN

* Dimension as required by Pipe Clamp

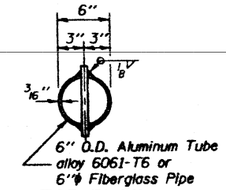
MIN. BAR LAPS
#5 bars = 2'-2"
#8 bars = 4'-6"



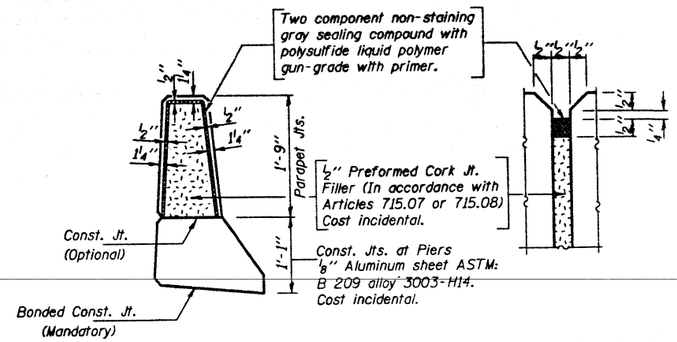
FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)



PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the Floor Drain shall be painted with the vinyl enamel paint as specified in the Standard Specs. The exterior surfaces of the drain shall be cleaned and given a washcoat pretreatment in accordance with Steel Structures Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting.

Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

DESIGNED	John Cicone
CHECKED	Anthony J. Vonasek
DRAWN	R. Doty
CHECKED	JCC, AJV.

May 20 1993

EXAMINED Engineer of Bridge Design

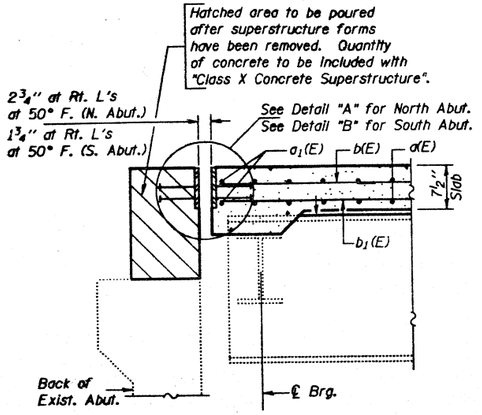
PASSED Ralph E. Anderson, Engineer of Bridges and Structures

APPROVED Director of Highways

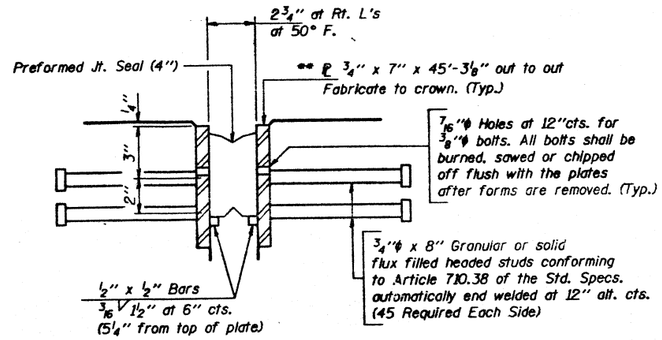
SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

				SHEET NO. 6
				16 SHEETS
		FRANKLIN		55

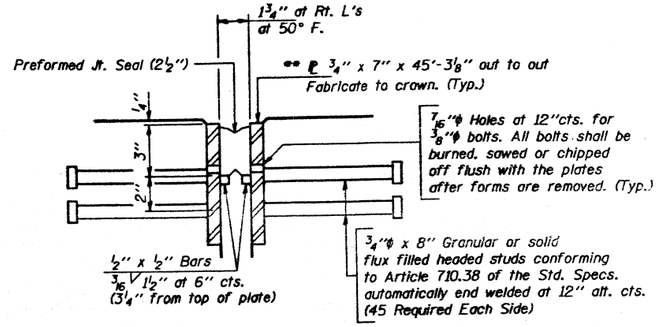
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION THRU ABUTMENTS
North Abut. Looking East
South Abut. Looking West



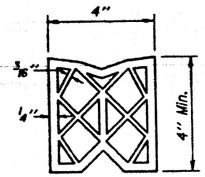
DETAIL "A"



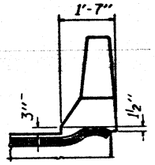
DETAIL "B"

** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.

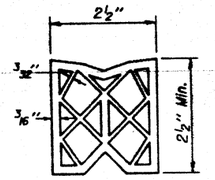
Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.



PREFORMED JOINT SEAL (4")



END TREATMENT
Typ. for (4") and (2½").



PREFORMED JOINT SEAL (2½")

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	362	#5	41'-2"	
a1(E)	4	#5	48'-2"	
a2(E)	212	#6	4'-0"	
b(E)	184	#5	32'-5"	
b1(E)	210	#5	26'-3"	
b2(E)	86	#6	26'-4"	
d(E)	250	#4	3'-8"	⊏
d1(E)	272	#5	2'-7"	⊐
d2(E)	272	#5	3'-0"	L
d3(E)	250	#4	3'-0"	L
e(E)	24	#4	19'-7"	
e1(E)	12	#4	20'-4"	
e2(E)	36	#4	14'-11"	
e3(E)	12	#4	19'-3"	
e4(E)	16	#8	22'-4"	
e5(E)	4	#8	45'-3"	
e6(E)	16	#5	21'-2"	
e7(E)	4	#5	45'-3"	
Reinforcement Bars, Epoxy Coated		Lbs.	38060	
Class X Concrete Superstructure		Cu. Yd.	177.6	

Reinforcement bars designated (E) shall be epoxy coated.

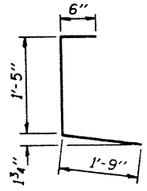
DESIGNED	John Cuccione
CHECKED	Anthony J. Nemec
DRAWN	R. Doty
CHECKED	JCC AJN

May 20 1993

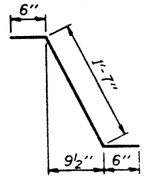
EXAMINED Greg D. Gaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

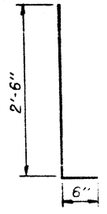
APPROVED
DIRECTOR OF HIGHWAYS



BAR d(E)



BAR d1(E)



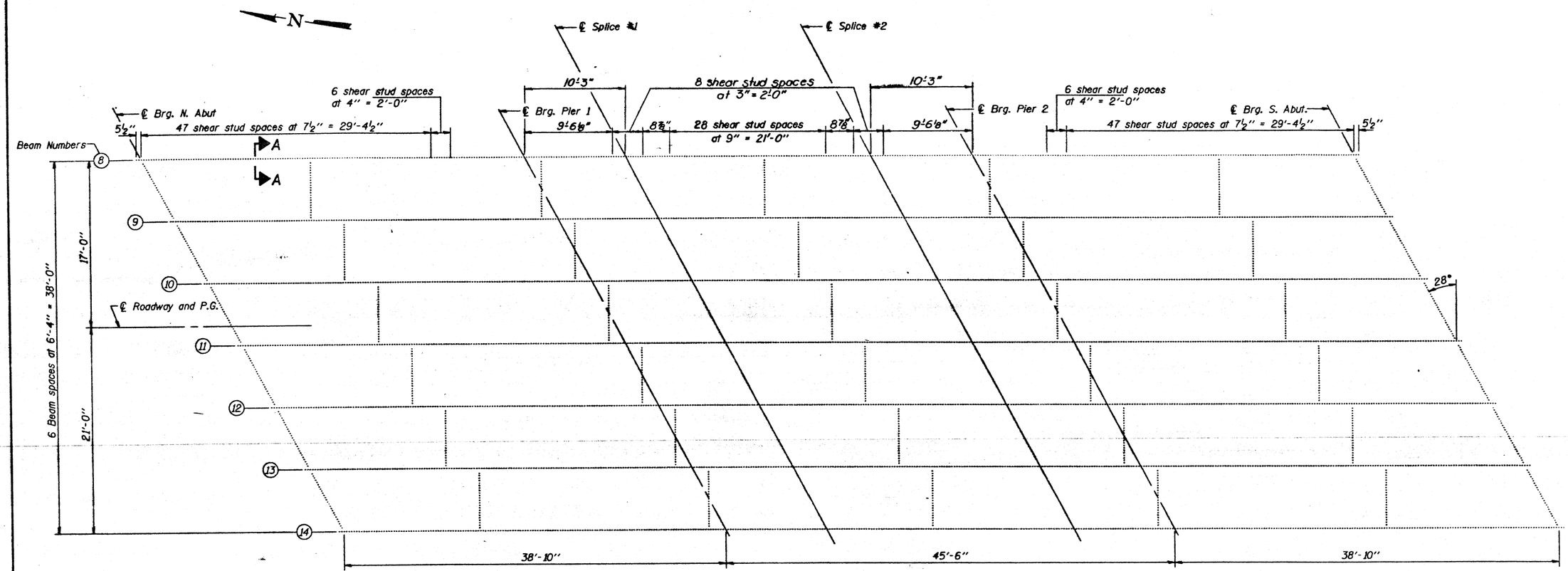
BARS d2(E) & d3(E)

SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

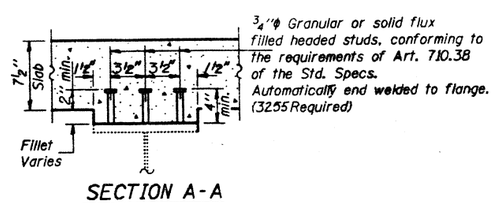
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-2B)D-1	FRANKLIN		56
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN
(Shear Studs Typ. All Beams)



SECTION A-A

DESIGNED	John Crimm
CHECKED	Anthony G. Vonasek
DRAWN	R. Doty
CHECKED	JLC, A.V.V.

May 20 1993

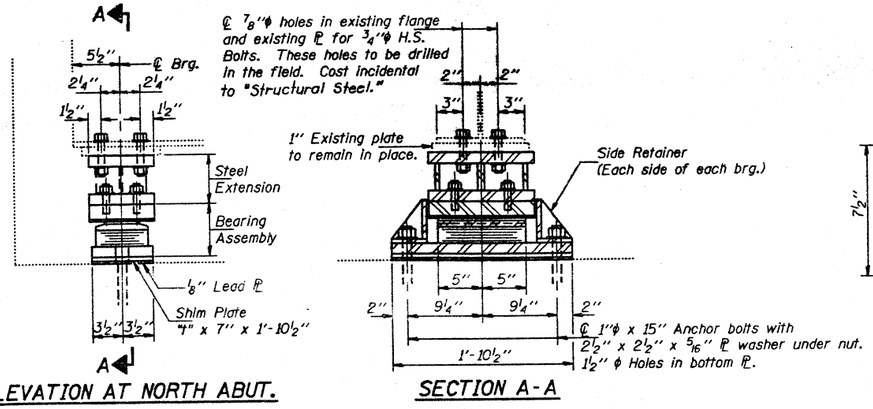
EXAMINED Engineer of Bridge Design
PASSED Ralph E. Anderson, Engineer of Bridges and Structures
APPROVED
Director of Highways

STRUCTURAL STEEL DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
(28-2B)D-1	FRANKLIN		57
ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
16 SHEETS

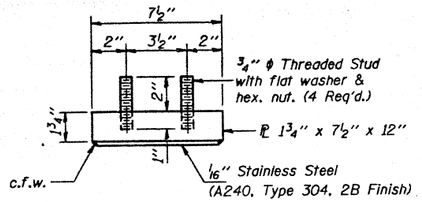
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



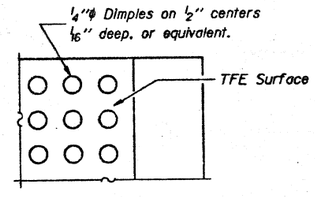
ELEVATION AT NORTH ABUT.

SECTION A-A

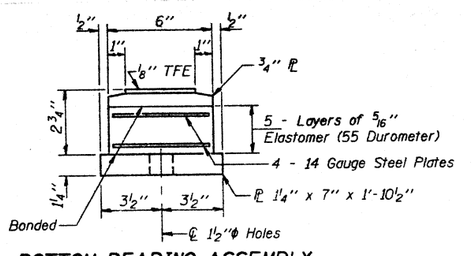
TYPE II TFE ELASTOMERIC EXP. BRG.



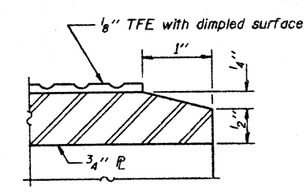
TOP BEARING ASSEMBLY



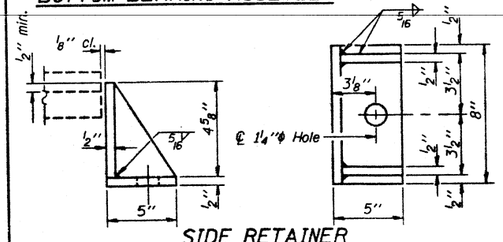
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE



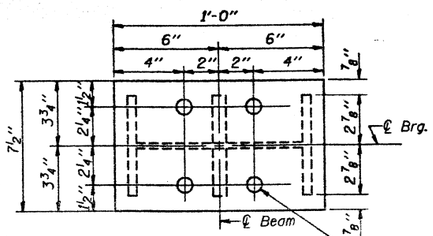
SIDE RETAINER

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

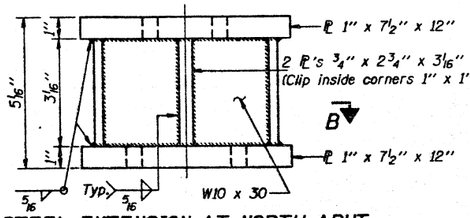
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding 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.

DESIGNED	John Cicone	EXAMINED	May 20 1993 Engr. D. Kaspar, ENGINEER OF BRIDGE DESIGN
CHECKED	Anthony J. Jurisson	PASSED	Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES
DRAWN	Joe Sutherland R.D.	APPROVED	DIRECTOR OF HIGHWAYS
CHECKED	JLC, HY.V		

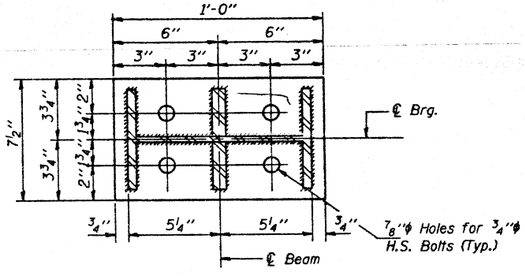


PLAN-TOP PLATE

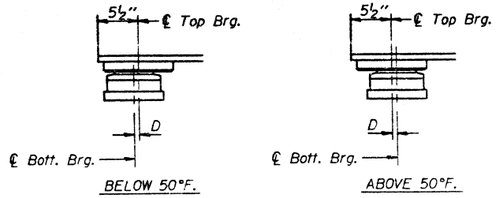


STEEL EXTENSION AT NORTH ABUT.

Equivalent welded plates will be allowed in lieu of W10x30 section.

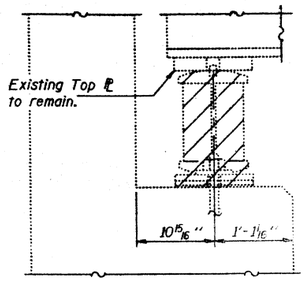


SECTION B-B

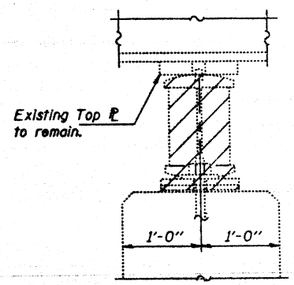


SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



AT ABUTMENT



AT PIER

JACK AND REMOVE EXISTING BEARING

Hatched areas indicate Removal of Existing Bearing.
See sheets #8, #9 & #10 of 16 for new brg. details.

JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work at the bearings. Dead Load = 3.0K at each beam at abutments and 6.0K at each beam at piers without concrete. Min. Jack Capacity at each beam shall be 5 Tons.
2. Jacking and removing existing bearings shall be done after deck removal is completed and before the new deck is poured.
3. All beams at one abutment or at one pier shall be lifted simultaneously.
4. Jacking shall be limited to a maximum of ¼".
5. Remove the existing anchor bolts flush with the concrete surface and grind smooth. The rockers and bottom plates shall be removed, leaving the existing top plate intact.
6. The new bearings and steel extensions shall be installed in place and the jacks shall be lowered before the new deck is poured.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in⁴)	2850	2850	2850
Ic (n=9)	(in⁴)	8361	——	8361
Ic (n=27)	(in⁴)	6285	——	6285
Ss	(in³)	213	213	213
Sc (n=9)	(in³)	326	——	326
Sc (n=27)	(in³)	296	——	296
w	(K/ft.)	.705	.980	.705
M℄	('K)	77.3	153	55.7
fs℄ non-comp. s.s.)		4.4	9.2	3.2
s℄	(K/in.)	.275	——	.275
Ms℄	('K)	34.8	——	33.9
** fs℄ (comp)	(k.s.i.)	1.4	——	1.4
M℄	('K)	213	110	219.7
M (Imp)	('K)	63.2	32.6	65.2
(Total)	('K)	276.2	142.6	284.9
fs (℄+I)	(k.s.i.)	10.2	8.0	10.5
fs (Total)	(k.s.i.)	16.0	17.2	15.1
VR	(K)	43.2	——	45.9

** For n = 27.

INTERIOR BEAM REACTION TABLE			
		Abuts.	Piers
Rℙ	(K)	10.5	33.0
R℄	(K)	30.3	37.3
Imp.	(K)	9.0	11.1
R (Total)	(K)	49.8	81.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total).
VR is the maximum live Load + Impact shear range in span.

Notes: For anchor bolt installation details see sheet #16 of 16.
For anchor bolt location see sheet #10 of 16.
For shim plate thickness see sheet #10 of 16.

BILL OF MATERIAL

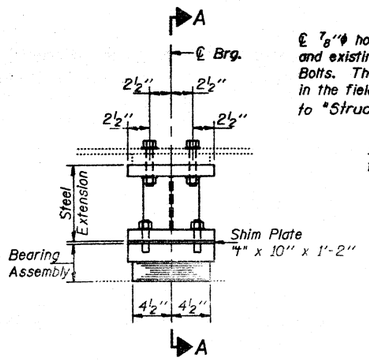
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	7
Jack and Remove Existing Bearings	Each	7

NORTH ABUTMENT BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

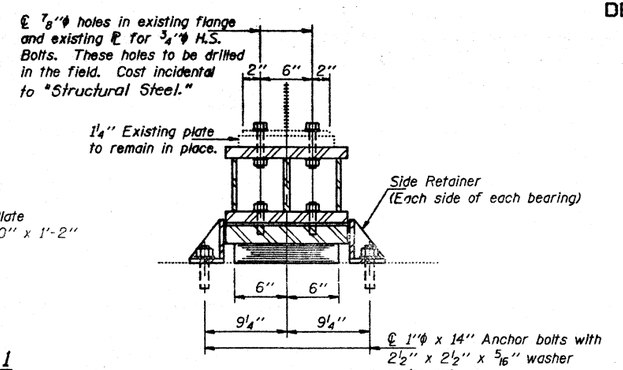
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-2B)D-1	FRANKLIN		58
PROJ. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 9
16 SHEETS

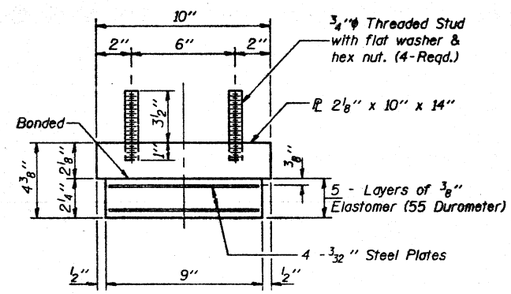


ELEVATION AT PIER 1

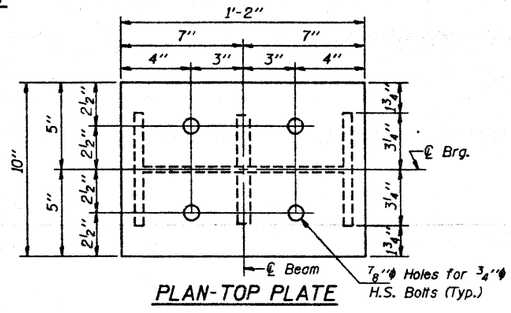


SECTION A-A

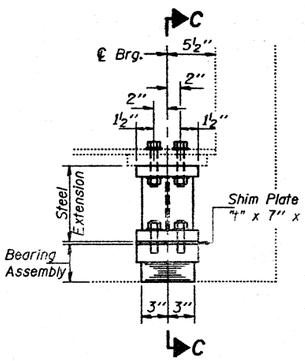
TYPE I ELASTOMERIC EXP. BRG.



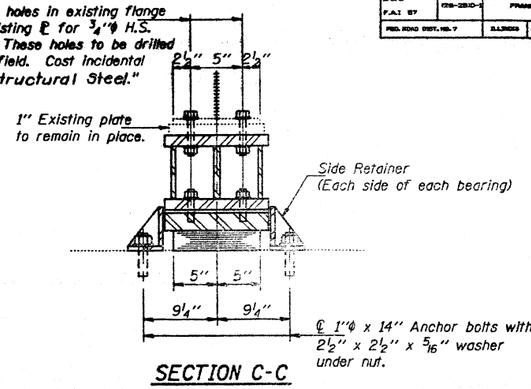
BEARING ASSEMBLY



PLAN-TOP PLATE

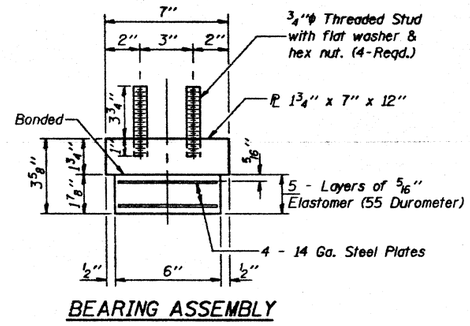


ELEVATION AT SOUTH ABUT.

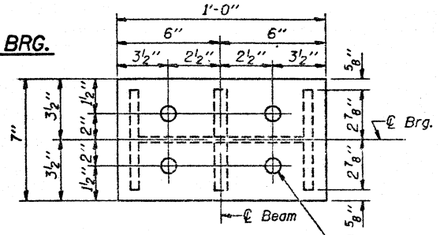


SECTION C-C

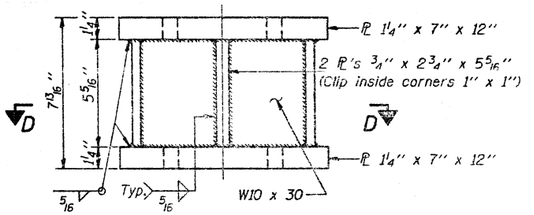
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

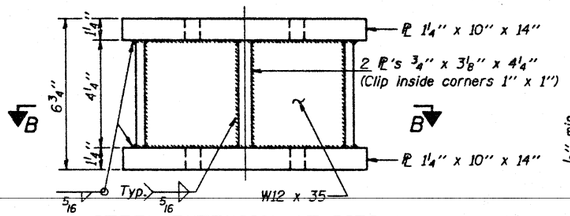


PLAN-TOP PLATE



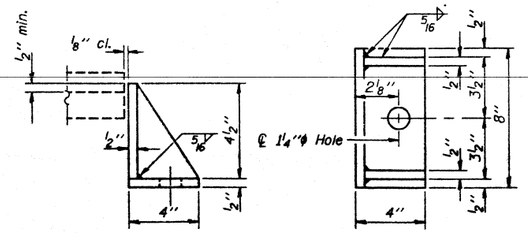
STEEL EXTENSION AT SOUTH ABUT.

Equivalent welded plates will be allowed in lieu of W10x30 section.



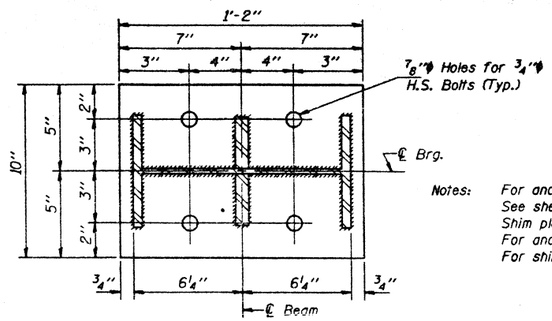
STEEL EXTENSION AT PIER 1

Equivalent welded plates will be allowed in lieu of W12 x 35 section.

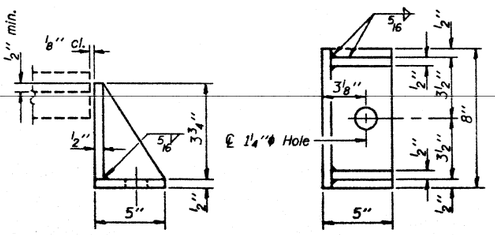


SIDE RETAINER

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

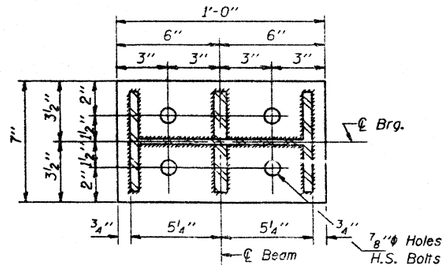


SECTION B-B



SIDE RETAINER

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



SECTION D-D

Notes:
For anchor bolt installation details see sheet #16 of 16.
See sheet #8 of 16 for Jack and Remove Existing Bearing Procedure.
Shim plates shall not be placed under Bearing Assembly.
For anchor bolt location see sheet #10 of 16.
For shim plate thickness see sheet #10 of 16.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Jack and Remove Existing Bearings	Each	14

DESIGNED	John Cicero
CHECKED	Anthony G. Venso
DRAWN	Joe Sutherland R.D.
CHECKED	JCC, AGV

May 20 1993

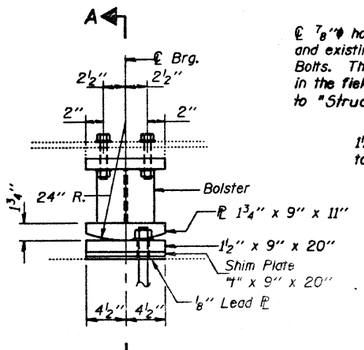
EXAMINED Engineer of Bridge Design
PASSED Engineer of Bridges and Structures
APPROVED Director of Highways

PIER 1 AND SOUTH ABUTMENT
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

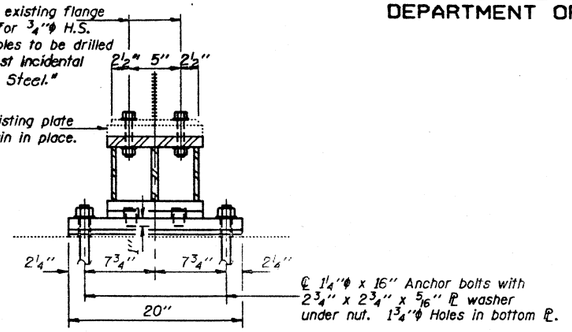
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
A.A.I. RT. 57	(28-2B)D-1	FRANKLIN		59
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
16 SHEETS

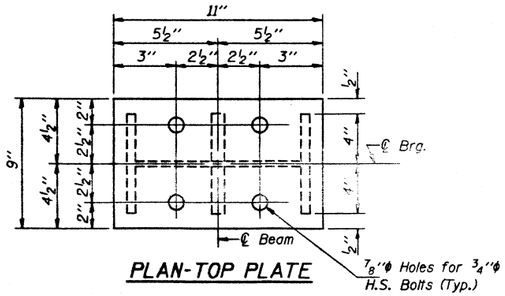
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT PIER 2

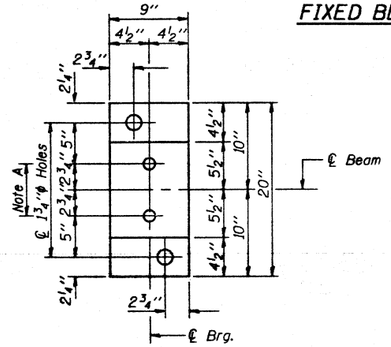


SECTION A-A

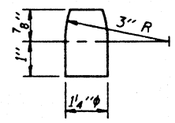


PLAN-TOP PLATE

FIXED BEARING

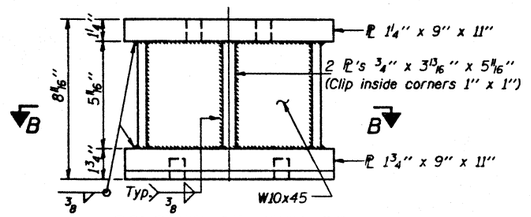


PLAN



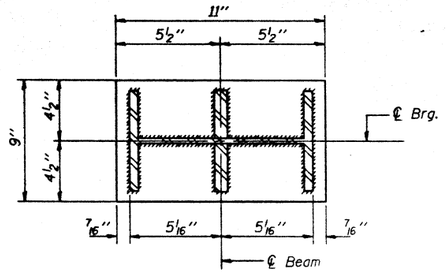
PINTLE

Note A:
1⅜"ϕ Holes-1" deep in bolster for 1¼"ϕ pintles. Thread or press fit in bottom ℄.



BOLSTER AT PIER #2

Equivalent welded plates will be allowed in lieu of W10x45 section.



SECTION B-B

* TABLE OF "t" DIMENSIONS

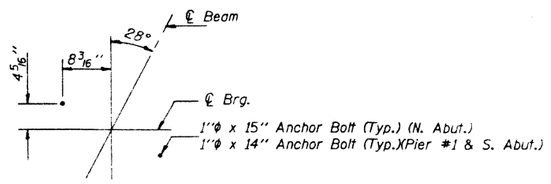
Location	N. Abut.	Pier #1	Pier #2	S. Abut.
Beam #8	½"	½"	½"	½"
Beam #9	13/16"	¾"	13/16"	⅞"
Beam #10	1"	⅞"	1"	15/16"
Beam #11	1⅛"	15/16"	1⅛"	1⅛"
Beam #12	1 1/16"	1⅛"	1¼"	1⅜"
Beam #13	1 1/16"	⅞"	1"	1 1/16"
Beam #14	1 5/16"	⅞"	1½"	1 3/16"

FIELD SURVEY SEAT ELEVATIONS

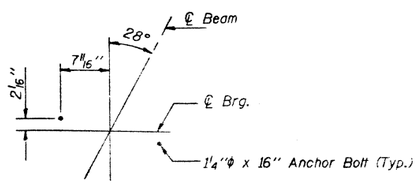
Location	N. Abut.	Pier #1	Pier #2	S. Abut.
Beam #8	418.08	417.91	417.92	417.89
Beam #9	418.17	418.01	418.02	417.99
Beam #10	418.23	418.08	418.09	418.07
Beam #11	418.22	418.08	418.09	418.07
Beam #12	418.13	418.00	418.02	418.00
Beam #13	418.02	417.90	417.92	417.91
Beam #14	417.87	417.76	417.78	417.77

* Based on the field survey seat elevations shown on this sheet. The Contractor shall verify these elevations in the field and make adjustments if necessary.

Notes: For anchor bolt installation details see sheet #16 of 16.
See sheet #8 of 16 for Jack and Remove Existing Bearing Procedure.



PLAN AT N. ABUT.
S. ABUT. & PIER #1



PLAN AT PIER #2

DESIGNED	John Cicero
CHECKED	Anthony J. Vinson
DRAWN	Joe Sutherland R.D.
CHECKED	J.C.C., M.V.V.

May 20 1993

EXAMINED Raj D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

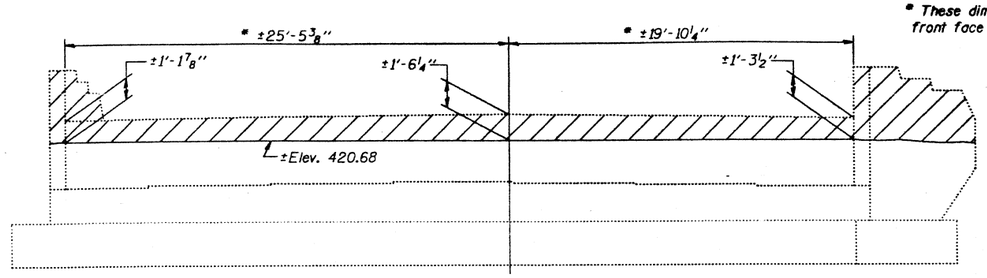
PIER 2
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	28B-2B)D-1	FRANKLIN		60
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

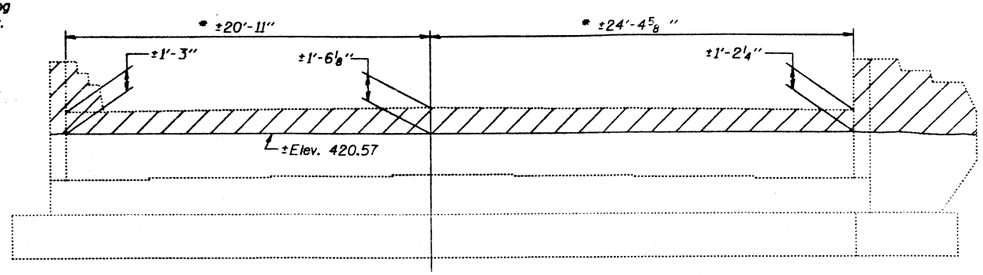
SHEET NO. 11
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

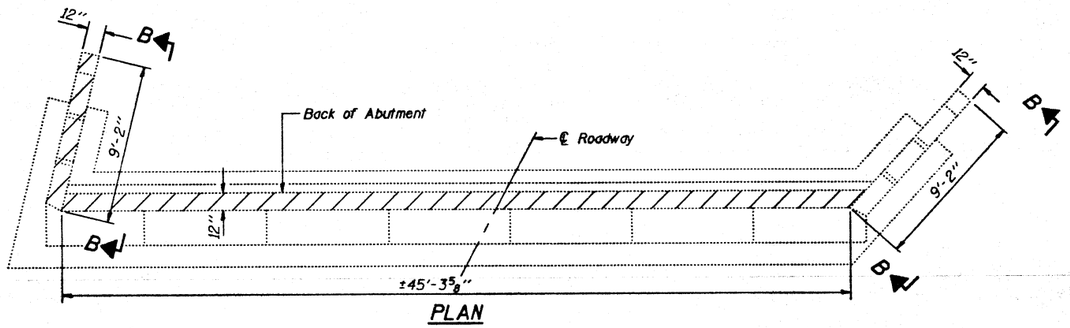
* These dimensions are along front face of hatched area.



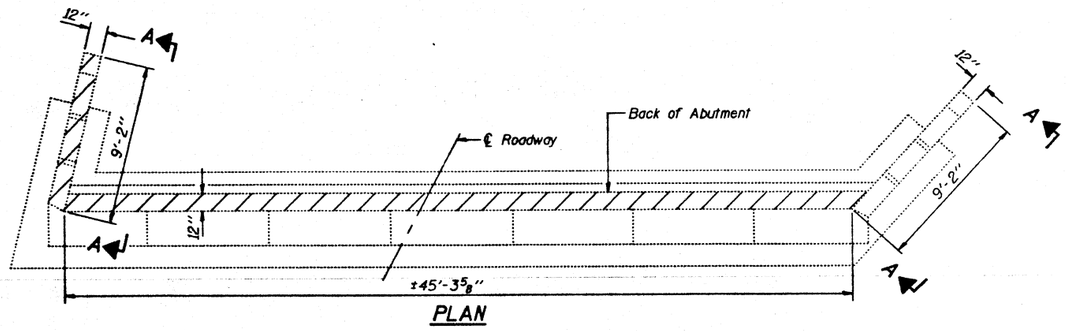
ELEVATION
(Looking North)



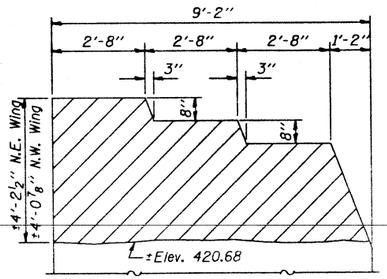
ELEVATION
(Looking South)



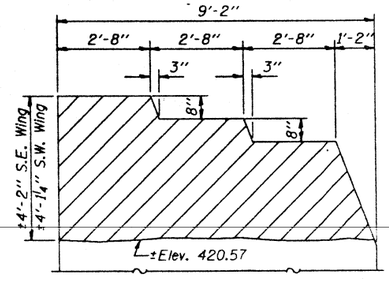
PLAN



PLAN



VIEW B-B



VIEW A-A

NORTH ABUTMENT DETAILS

SOUTH ABUTMENT DETAILS

Notes: Hatched area indicates Concrete Removal.
For existing shoulder pavement removal see Roadway Plans.
Existing reinforcement extending into removed area shall be cleaned, straightened and incorporated into the new construction.

TWO ABUTMENTS
BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	9

DESIGNED	John Cincone
CHECKED	Anthony J. Yuncker
DRAWN	R. Doty
CHECKED	JCC, TJY, VL

May 20 1993

EXAMINED Craig S. Kasper
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

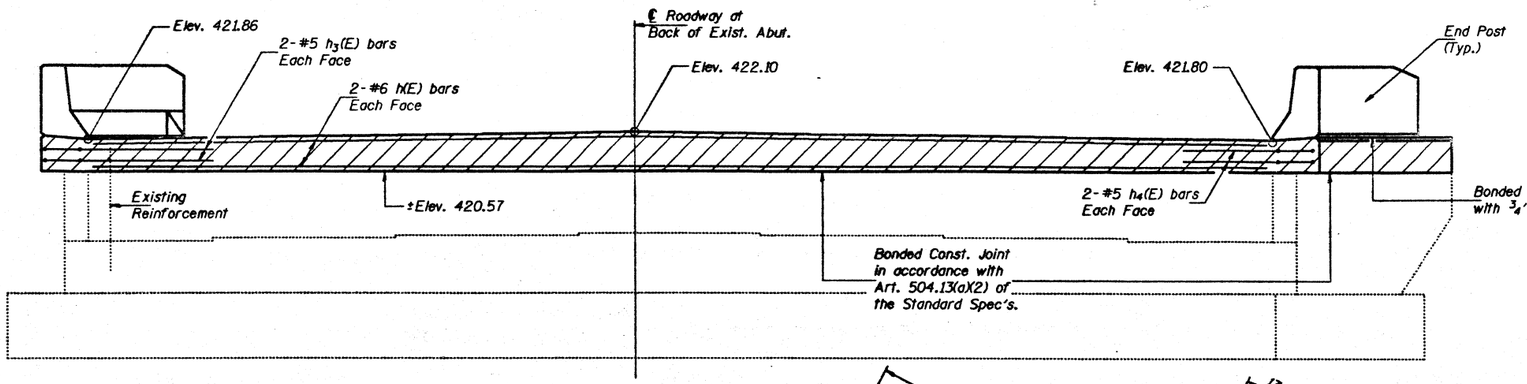
APPROVED
DIRECTOR OF HIGHWAYS

CONCRETE REMOVAL DETAILS
FOR EXISTING ABUTMENTS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

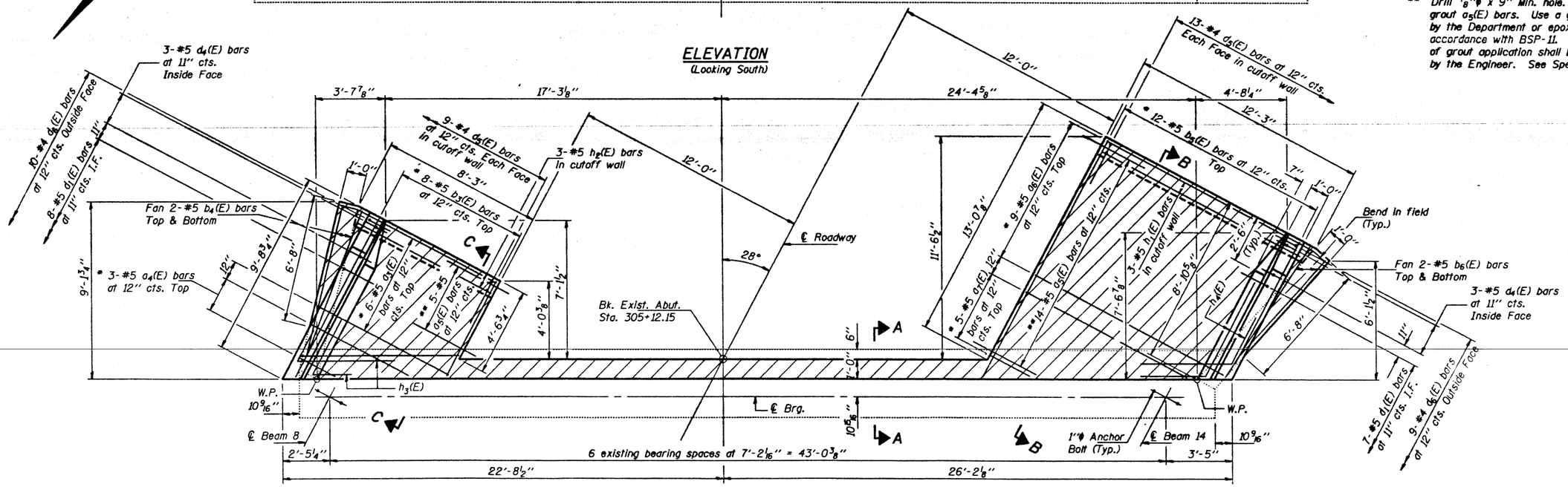
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	[illegible]	FRANKLIN	61	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
16 SHEETS



ELEVATION
(Looking South)



PLAN

* Order $a_3(E)$, $a_4(E)$, $a_6(E)$, $a_7(E)$, $b_3(E)$ and $b_5(E)$ bars full length. Cut to fit and use remainder of bars in bottom of slab.

** Drill 7/8"ø x 9" Min. hole. Epoxy grout $a_5(E)$ bars. Use a grout approved by the Department or epoxy grout in accordance with BSP-11. The method of grout application shall be approved by the Engineer. See Special Provisions.

Notes: Hatched area to be poured after superstructure forms have been removed.
Quantity of concrete for hatched area and end post is included with "Class X Concrete Superstructure" on sheet #6 of 16.
Existing reinforcement extending into removed area shall be cleaned, straightened and incorporated into the new construction.
Reinforcement bars designated (E) shall be epoxy coated.
For anchor bolt installation details see sheet #16 of 16.
For anchor bolt location detail see sheet #10 of 16.
All edges shall have standard 3/4" chamfer.
Work this sheet with sheet #13 of 16.

DESIGNED	John Cicero
CHECKED	Anthony G. Ulmer
DRAWN	R. Doty
CHECKED	JCC, AGU

May 20 1993

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

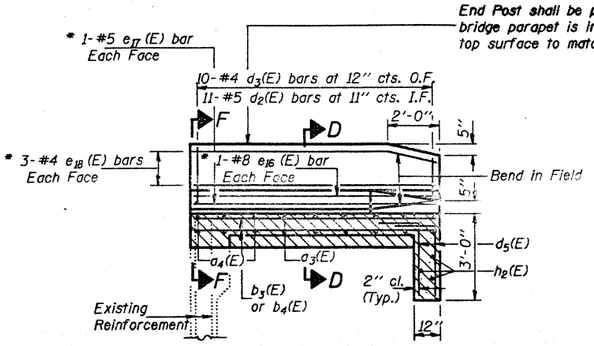
APPROVED
Director of Highways

SOUTH ABUTMENT
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

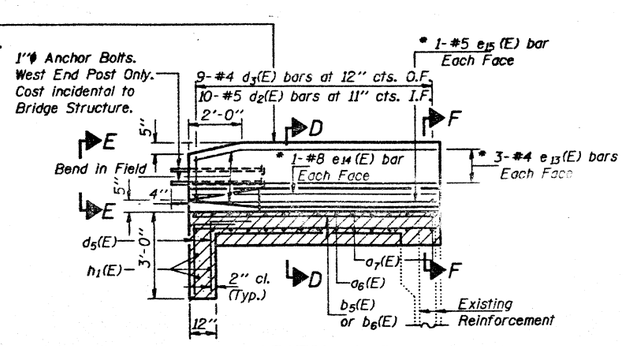
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A.I. 57	(28-2B)D-1	FRANKLIN		62
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
16 SHEETS

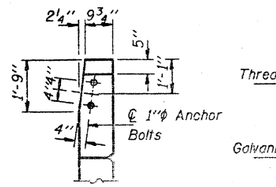
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



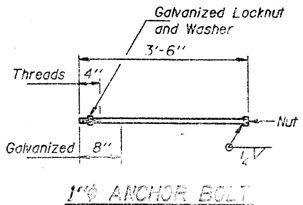
SECTION C-C



SECTION B-B

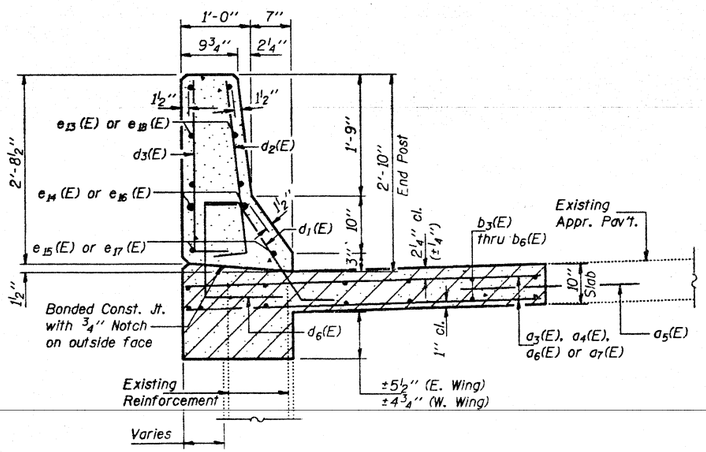


VIEW E-E

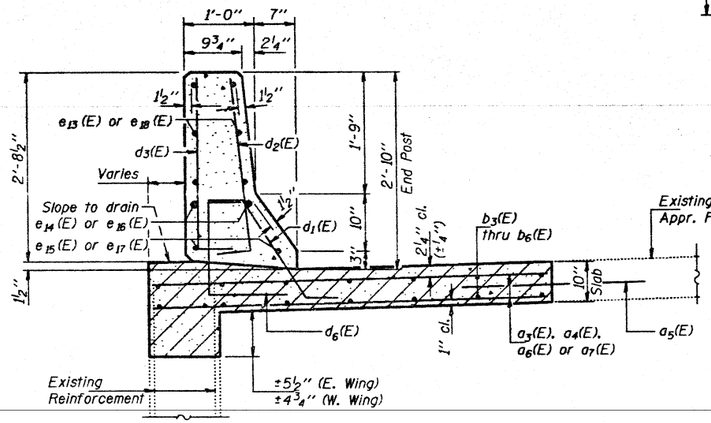


1"ϕ ANCHOR BOLT

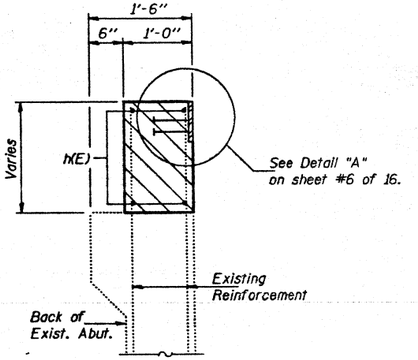
* Cut to fit. Cost incidental.



SECTION F-F



SECTION D-D



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3(E)	6	#5	16'-4"	
a4(E)	3	#5	7'-4"	
a5(E)	19	#5	3'-0"	
a6(E)	9	#5	24'-2"	
a7(E)	5	#5	10'-4"	
b3(E)	8	#5	14'-10"	
b4(E)	4	#5	8'-2"	
b5(E)	12	#5	21'-9"	
b6(E)	4	#5	7'-9"	
d1(E)	15	#5	2'-7"	
d2(E)	21	#5	3'-0"	
d3(E)	19	#4	3'-0"	
d4(E)	6	#5	2'-4"	
d5(E)	44	#4	4'-1"	
d6(E)	19	#4	4'-0"	
e13 (E)	6	#4	8'-3"	
e14 (E)	2	#8	8'-3"	
e15 (E)	2	#5	8'-6"	
e16 (E)	2	#8	9'-5"	
e17 (E)	2	#5	9'-5"	
e18 (E)	6	#4	9'-5"	
h(E)	4	#6	48'-7"	
h1(E)	3	#5	11'-9"	
h2(E)	3	#5	7'-9"	
h3(E)	4	#5	6'-6"	
h4(E)	4	#5	6'-6"	
Reinforcement Bars. Epoxy Coated			Lbs.	1870
Structure Excavation			Cu. Yd.	11

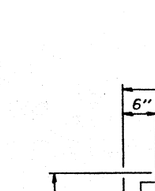
Reinforcement bars designated (E) shall be epoxy coated.

BAR d1(E)

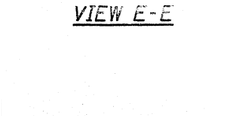
BARS d2(E) & d3(E)

BAR d4(E)

BAR d5(E)



BAR d6(E)



BAR h4(E)

BAR h3(E)

DESIGNED	John Cicero
CHECKED	Anthony J. Warren
DRAWN	R. Doty
CHECKED	JCC, RVV

May 20 1993

EXAMINED Iraj O. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

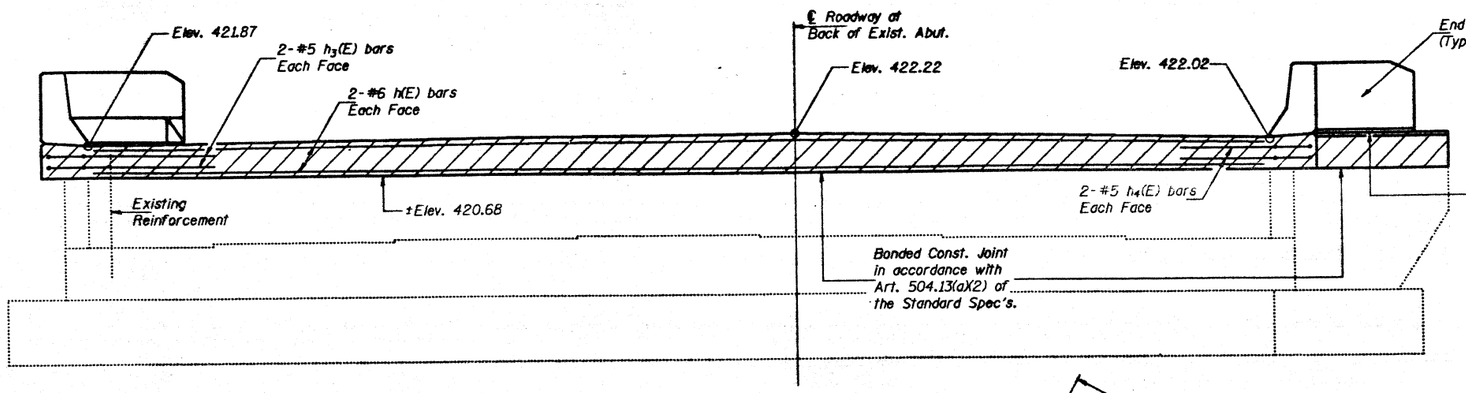
APPROVED
DIRECTOR OF HIGHWAYS

SOUTH ABUTMENT DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

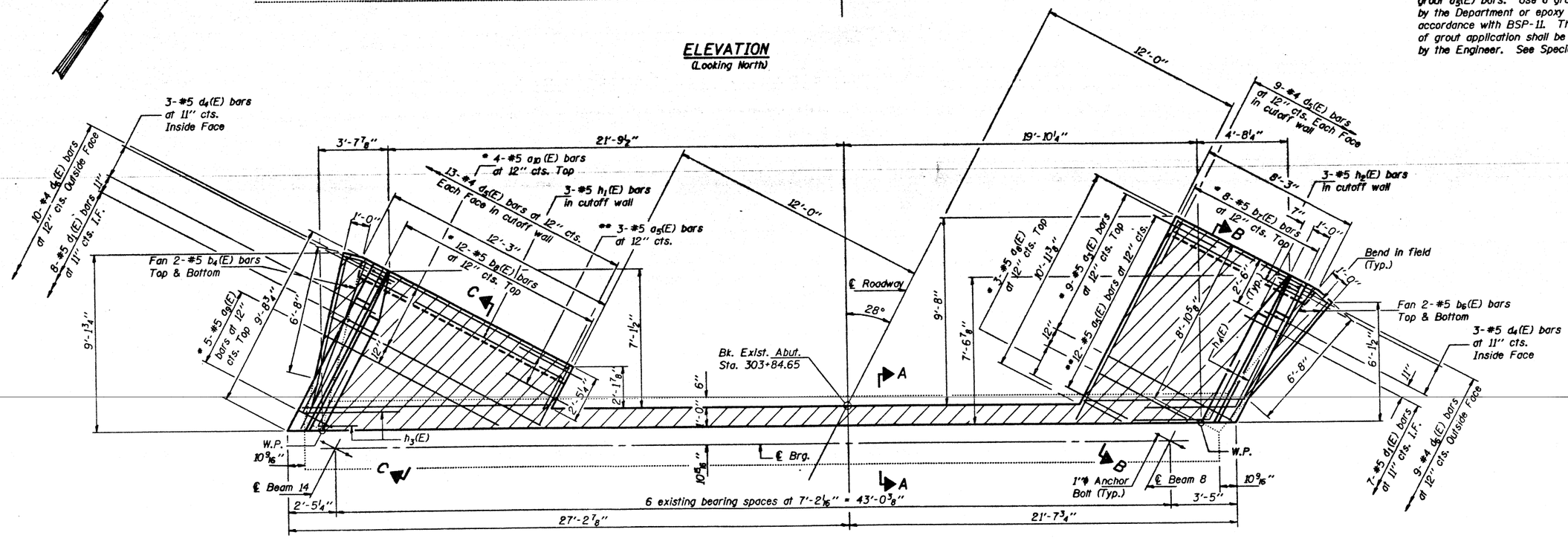
STATE OF ILLINOIS		COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57		FRANKLIN		63
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 14
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking North)



PLAN

* Order a_3(E), a_8(E), a_9(E), a_{10}(E), b_7(E) and b_8(E) bars full length. Cut to fit and use remainder of bars in bottom of slab.

** Drill ⅞"ø x 9" Min. hole. Epoxy grout a_5(E) bars. Use a grout approved by the Department or epoxy grout in accordance with BSP-11. The method of grout application shall be approved by the Engineer. See Special Provisions.

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete for hatched area and end post is included with "Class X Concrete Superstructure" on sheet #6 of 16.
Existing reinforcement extending into removed area shall be cleaned, straightened and incorporated into the new construction.
Reinforcement bars designated (E) shall be epoxy coated.
For anchor bolt installation details see sheet #16 of 16.
For anchor bolt location detail see sheet #10 of 16.
All edges shall have standard ¾" chamfer.
Work this sheet with sheet #15 of 16.

DESIGNED	John Ciccone
CHECKED	Anthony J. Unison
DRAWN	R. Doty
CHECKED	JCC, RVV

May 20 1993

EXAMINED Engineer of Bridge Design

PASSED Engineer of Bridges and Structures

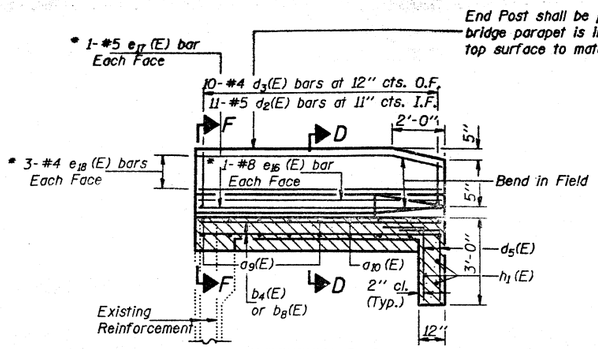
APPROVED Director of Highways

NORTH ABUTMENT
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

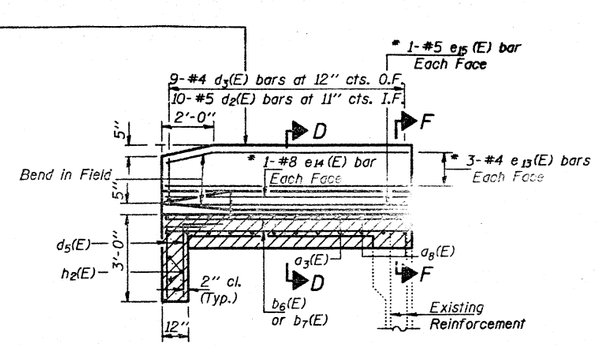
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. 1. F.A.I. 57	(28-2B)D-1	FRANKLIN		64
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

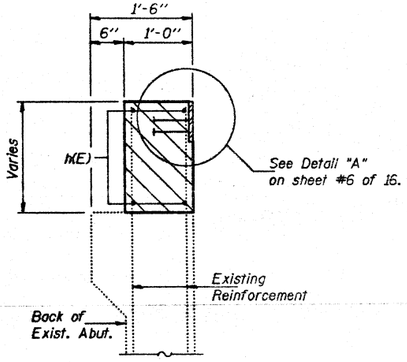


SECTION C-C

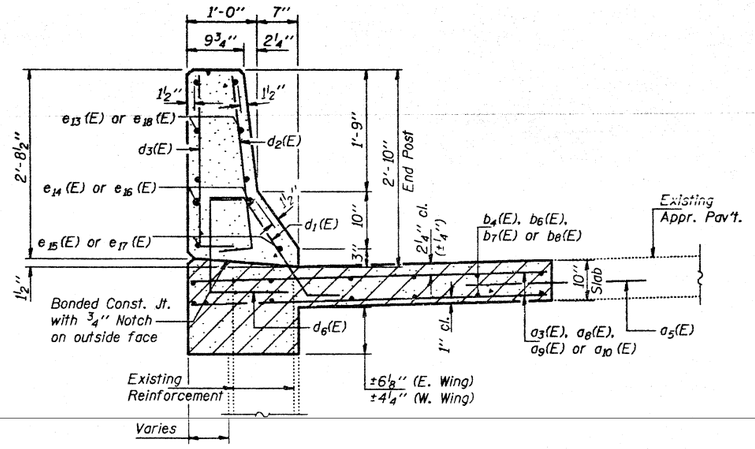


SECTION B-B

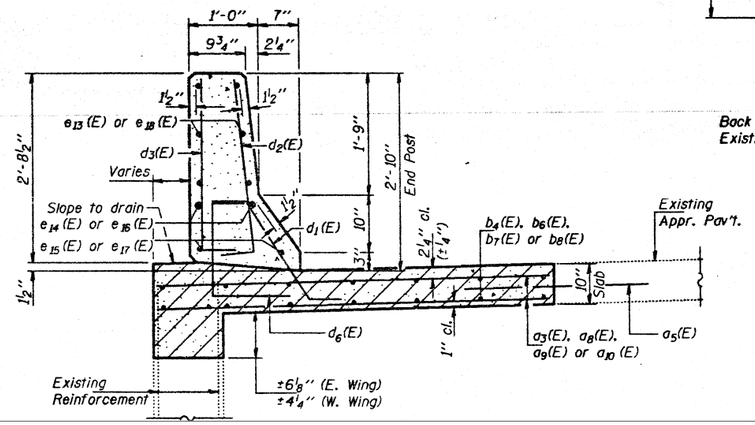
* Cut to fit. Cost incidental.



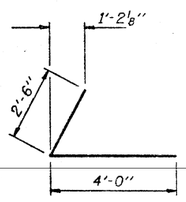
SECTION A-A



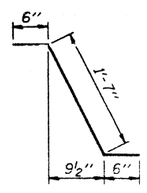
SECTION F-F



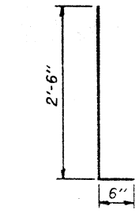
SECTION D-D



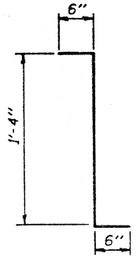
BAR h3(E)



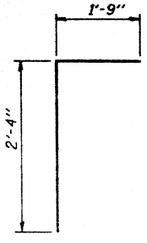
BAR d1(E)



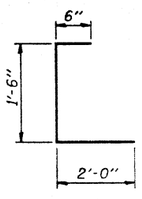
BARS d2(E) & d3(E)



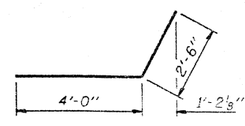
BAR d4(E)



BAR d5(E)



BAR d6(E)



BAR h4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3(E)	9	#5	16'-4"	——
a5(E)	15	#5	3'-0"	——
a8(E)	3	#5	7'-0"	——
a9(E)	5	#5	13'-6"	——
a10 (E)	4	#5	25'-2"	——
b4(E)	4	#5	8'-2"	——
b6(E)	4	#5	7'-9"	——
b7(E)	8	#5	19'-6"	——
b8(E)	12	#5	12'-9"	——
d1(E)	15	#5	2'-7"	L
d2(E)	21	#5	3'-0"	L
d3(E)	19	#4	3'-0"	L
d4(E)	6	#5	2'-4"	⊢
d5(E)	44	#4	4'-1"	⊢
d6(E)	19	#4	4'-0"	⊏
e13 (E)	6	#4	8'-3"	——
e14 (E)	2	#8	8'-3"	——
e15 (E)	2	#5	8'-6"	——
e16 (E)	2	#8	9'-5"	——
e17 (E)	2	#5	9'-5"	——
e18 (E)	6	#4	9'-5"	——
h(E)	4	#6	48'-7"	——
h1(E)	3	#5	11'-9"	——
h2(E)	3	#5	7'-9"	——
h3(E)	4	#5	6'-6"	L
h4(E)	4	#5	6'-6"	⌐
Reinforcement Bars, Epoxy Coated			Lbs.	1730
Structure Excavation			Cu. Yd.	11

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	John Ciccone
CHECKED	Anthony J. Vineyard
DRAWN	R. Doty
CHECKED	JLC, AJV

May 20 1993

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson, Engineer of Bridges and Structures

APPROVED Director of Highways

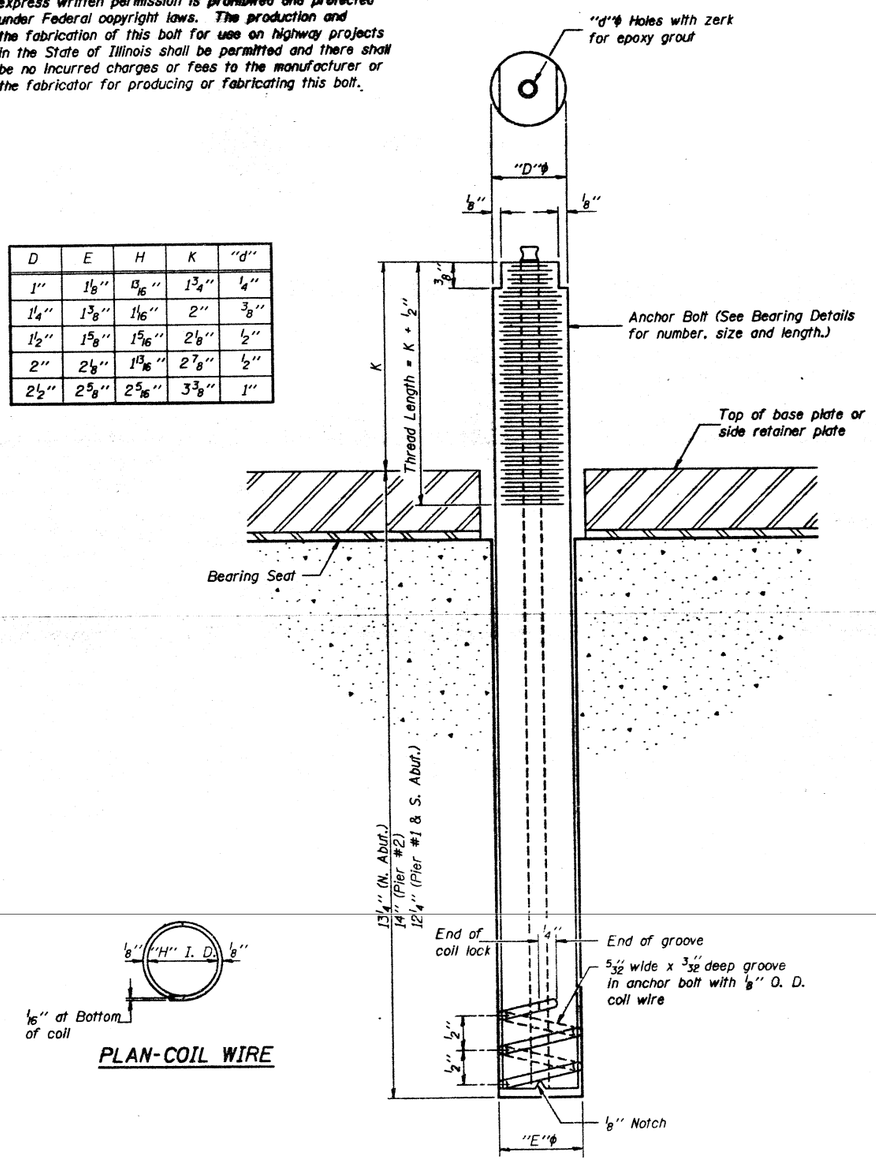
NORTH ABUTMENT DETAILS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT.	028-2B)D-1	FRANKLIN		65
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
16 SHEETS

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

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 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM 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 and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

DESIGNED	John Timms
CHECKED	Anthony G. Unus
DRAWN	R. Doty
CHECKED	JCC, HVV.

May 20 1983

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson, Engineer of Bridges and Structures

APPROVED Director of Highways

ABB-1 12-1-83

ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.I. RT. 57 SEC. (28-2B)D-1
FRANKLIN COUNTY
STATION 304+25.00

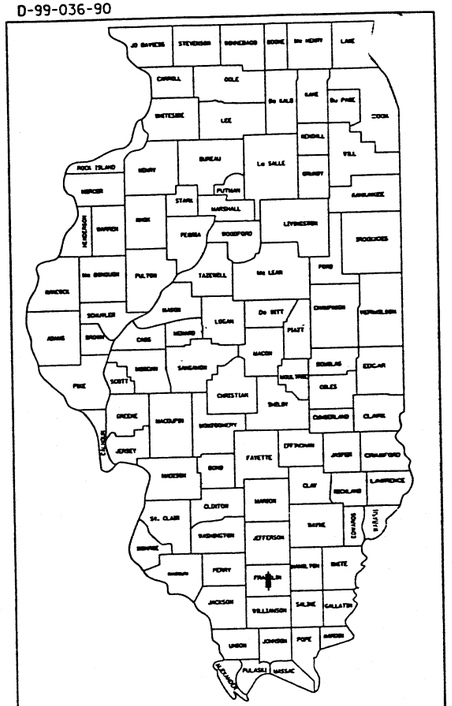
FRANKLIN 28(5B-1,5B,2B,1B)D; 28(5VB,3VB-1)I I:R copy 7-10-92

100% 9-17-93

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	155	1
F.A.P.R.A. REC.		ILLINOIS	PROJECT IM-57-2(132)63	

* 28(5B-1,5B,2B,1B)D;28(5VB,3VB-1)I

D-99-036-90



LOCATION OF SECTION INDICATED THUS:—■—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

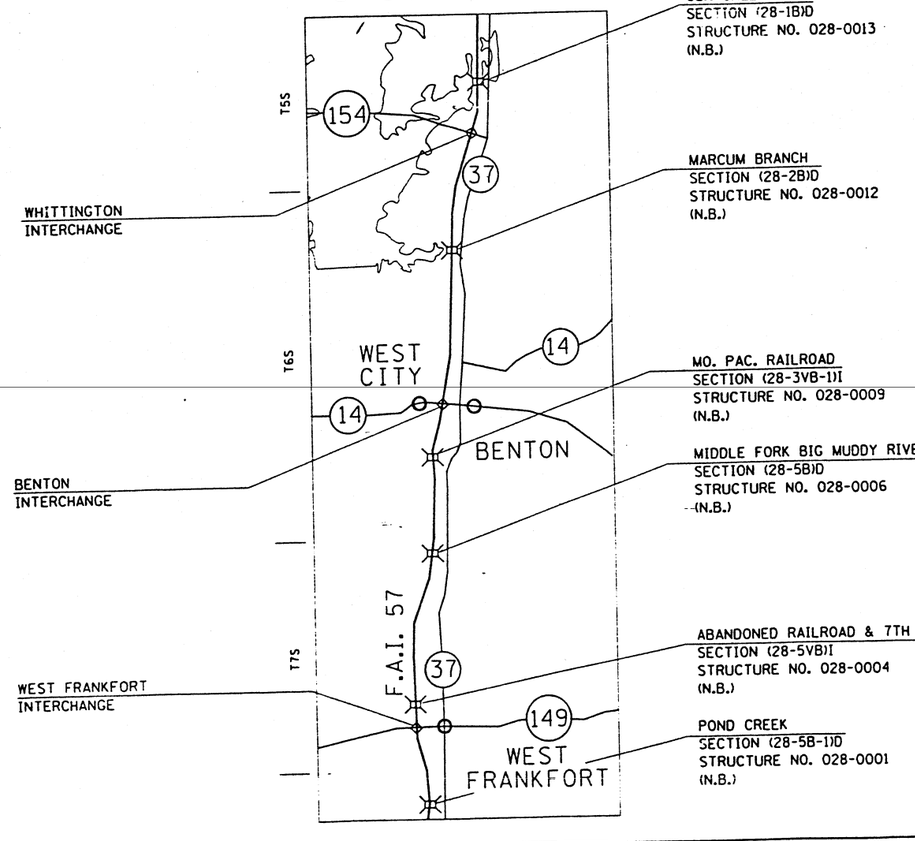
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

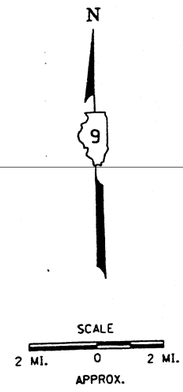
F.A.I. ROUTE 57
SECTION 28(5B–1,5B,2B,1B)D; 28(5VB,3VB–1)I
FRANKLIN COUNTY
PROJECT NO. IM-57–2(132)63
C–99–006–91

FOR INDEX OF SHEETS, SEE SHEET NO.2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO.3–4

SCALE IN FEET

PLAN	50′	0	25′	50′
PROFILES HORIZ.	50′	0	25′	50′
PROFILES VERT.	5′	0	2.5′	5′
CROSS SECTIONS	5′	0	2.5′	5′





STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 5/06 19 92
Karl L Bartelsmeyer
DISTRICT ENGINEER

EXAMINED 19
ENGINEER OF PLANS AND CONTRACTS

PASSED June 12 19 92
Gary D. Gould
ENGINEER OF DESIGN

APPROVED June 12 19 92
Ralph C Wehner
DIRECTOR DIVISION OF HIGHWAYS

JULIE 1-800-892-0123

PROJECT ENGINEER: JOSE RUIZ
SQUAD LEADER: ED SHAFER

IDOT 349-2171
CENTREX 782-4554

CONTRACT NO. 98148

9-141

COUNTY: FRANKLIN SECTION: 28(5B-1,5B,2B,1B)D ; 28(5VB,3VB-1)I ROUTE: F.A.I. RTE. 57

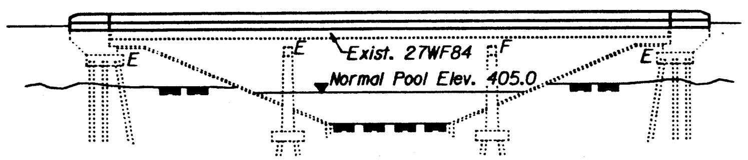
Sheets 1 Thru 100

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I 57	(28-2B)D	FRANKLIN	155	51
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structures: #028-0011 (S.B.) & #028-0012 (N.B.) are each 127'-6" long and 42'-0" wide. Built as F.A.I. Rte. 57, Section 28-2B at Sta. 304+25 in 1962 consists of RC Deck supported on 3 span continuous wide flange beams.
Temporary median crossovers shall be utilized to divert traffic over adjacent bridge during reconstruction.
Bench Mark: "□" Cut on top of N.E. end of West handrail of Southbound Lane of bridge over Marcum Branch. Elevation 424.81.
No Salvage.



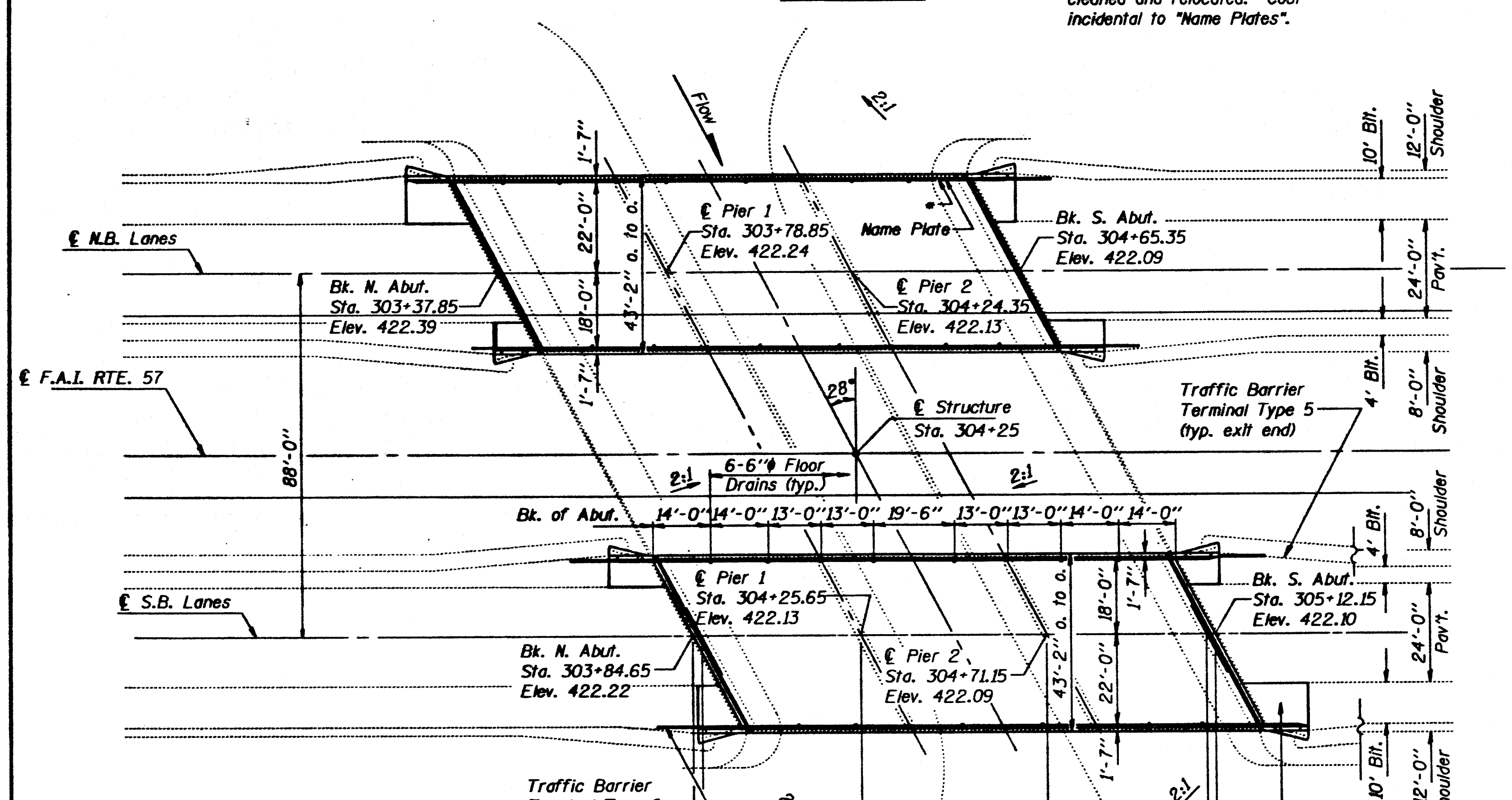
ELEVATION

* Existing Name Plate to be cleaned and relocated. Cost incidental to "Name Plates".

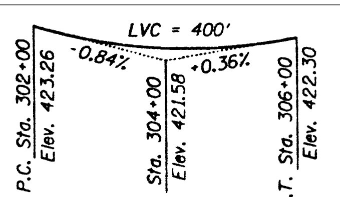
STATION 304+25.00
REBUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (28-2B)D
F.A. PROJECT: IM-57-2(82)63
LOADING HS20 & ALT.
STR. NO. 028-0012

NAME PLATE

See Std. 2113



PLAN



PROFILE GRADE

F.A. Route 57 (along ℄ pavement)

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$"ϕ, open holes $\frac{15}{16}$"ϕ, unless otherwise noted.

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

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

Plan dimensions and details relative to existing structure have been taken from existing plans and field survey 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.

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 the top plate shall be provided and placed as detailed.

The Contractor will be required to mark, on top of the concrete deck, the locations of the top flange of all the steel beams, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam flanges is not permitted.

All top surfaces of the abutments shall receive Bridge Seat Sealer. Estimated quantity = 189 Sq. Ft.

The first two coats of the Lead and Chromate free Alkyd Paint System shall be used for shop and field painting of new structural steel.

Structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting New Steel and Adjacent Areas of Existing Steel Structures".

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale and all other foreign material shall be removed from the embedded portions of flanges of stringers. The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP-11 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be incidental to "Concrete Removal".

For cantilever forming brackets see Special Provisions.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Concrete Removal	Cu. Yd.		9	9
	Structure Excavation	Cu. Yd.		22	22
**	Removal of Existing Concrete Deck	Each	1		1
	Floor Drains	Each	12		12
	Preformed Joint Seal 2½"	Lin. Ft.	49		49
	Preformed Joint Seal 4"	Lin. Ft.	49		49
	Class X Concrete Superstructure	Cu. Yd.	177.2		177.2
***	Protective Coat	Sq. Yd.	672		672
	Elastomeric Bearing Assembly, Type I	Each	14		14
	Elastomeric Bearing Assembly, Type II	Each	7		7
	Structural Steel	Lbs.	9190		9190
	Stud Shear Connectors	Each	3255		3255
	Reinforcement Bars, Epoxy Coated	Pound	37690	3540	41230
	Name Plates	Each	1		1
	Bridge Seat Sealer	L. Sum		0.25	0.25
	Jack and Remove Existing Bearings	Each	28		28
	Bridge Deck Grooving	Sq. Yd.	555		555

** Includes the removal of existing steel railing.
*** Quantity includes bridge deck surface.

DESIGN SPECIFICATIONS

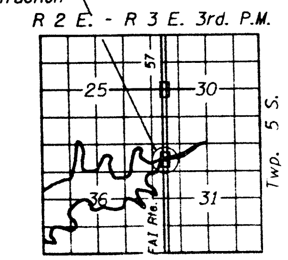
1989 AASHTO, 1990 & 1991 Interim Specifications

LOADING HS 20-44 & Alt.

Allow 25#/ sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
New Construction
f'_c = 3,500 psi
f_y = 60,000 psi (Reinf.)
Old Construction
f_s = 20,000 psi (Structural Steel)



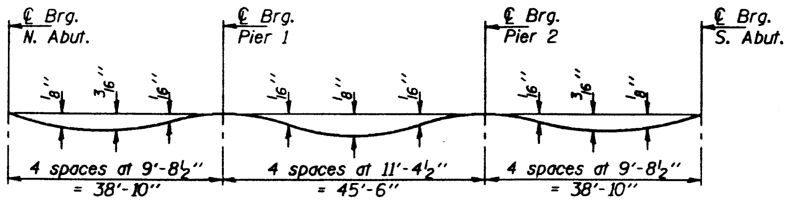
LOCATION SKETCH

GENERAL PLAN
F.A.I. ROUTE 57 OVER
MARCUM BRANCH
F.A.I. ROUTE 57 SECTION (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00
STRUCTURE NUMBER 028-0012 (N.B.)

Note: Only the Northbound structure is included in this contract.

DESIGNED	John Ciccone
CHECKED	[signature]
DRAWN	Paul W. Sweet JRS
CHECKED	[signature]

May 22 1992
EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

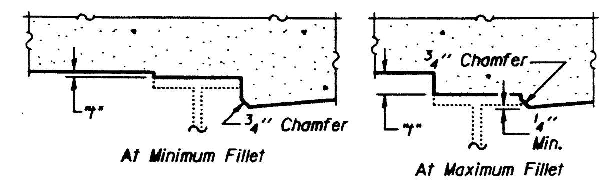


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete 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 below.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I 57	(28-2B)D	FRANKLIN	155	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
16 SHEETS

To determine "T": Elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "T" above top flange of beams.

FILLET HEIGHTS

℄ BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30326.684	-21.000	422.124	422.124
℄ Brg. N. Abut.	30328.851	-21.000	422.114	422.114
A	30338.851	-21.000	422.070	422.081
B	30348.851	-21.000	422.030	422.043
C	30358.851	-21.000	421.992	421.998
℄ Brg. Pier 1	30367.684	-21.000	421.961	421.961
D	30377.684	-21.000	421.929	421.933
E	30387.684	-21.000	421.899	421.908
F	30397.684	-21.000	421.873	421.880
G	30407.684	-21.000	421.850	421.853
℄ Brg. Pier 2	30413.184	-21.000	421.838	421.838
H	30423.184	-21.000	421.820	421.827
I	30433.184	-21.000	421.804	421.818
J	30443.184	-21.000	421.792	421.802
℄ Brg. S. Abut.	30452.017	-21.000	421.783	421.783
Bk. of S. Abut.	30454.184	-21.000	421.781	421.781

℄ BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30330.052	-14.667	422.241	422.241
℄ Brg. N. Abut.	30332.218	-14.667	422.231	422.231
A	30342.218	-14.667	422.188	422.199
B	30352.218	-14.667	422.148	422.161
C	30362.218	-14.667	422.111	422.117
℄ Brg. Pier 1	30371.052	-14.667	422.081	422.081
D	30381.052	-14.667	422.050	422.055
E	30391.052	-14.667	422.022	422.031
F	30401.052	-14.667	421.997	422.004
G	30411.052	-14.667	421.975	421.977
℄ Brg. Pier 2	30416.552	-14.667	421.964	421.964
H	30426.552	-14.667	421.946	421.953
I	30436.552	-14.667	421.932	421.945
J	30446.552	-14.667	421.920	421.930
℄ Brg. S. Abut.	30455.385	-14.667	421.912	421.912
Bk. of S. Abut.	30457.552	-14.667	421.911	421.911

EAST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30331.469	-12.000	422.290	422.290
℄ Brg. N. Abut.	30333.636	-12.000	422.280	422.280
A	30343.636	-12.000	422.238	422.248
B	30353.636	-12.000	422.198	422.211
C	30363.636	-12.000	422.162	422.168
℄ Brg. Pier 1	30372.469	-12.000	422.132	422.132
D	30382.469	-12.000	422.101	422.106
E	30392.469	-12.000	422.074	422.082
F	30402.469	-12.000	422.049	422.056
G	30412.469	-12.000	422.027	422.030
℄ Brg. Pier 2	30417.969	-12.000	422.016	422.016
H	30427.969	-12.000	421.999	422.006
I	30437.969	-12.000	421.985	421.999
J	30447.969	-12.000	421.974	421.984
℄ Brg. S. Abut.	30456.803	-12.000	421.967	421.967
Bk. of S. Abut.	30458.969	-12.000	421.965	421.965

℄ BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30333.419	-8.333	422.346	422.346
℄ Brg. N. Abut.	30335.586	-8.333	422.336	422.336
A	30345.586	-8.333	422.295	422.305
B	30355.586	-8.333	422.256	422.269
C	30365.586	-8.333	422.220	422.226
℄ Brg. Pier 1	30374.419	-8.333	422.191	422.191
D	30384.419	-8.333	422.161	422.165
E	30394.419	-8.333	422.133	422.142
F	30404.419	-8.333	422.109	422.116
G	30414.419	-8.333	422.088	422.091
℄ Brg. Pier 2	30419.919	-8.333	422.078	422.078
H	30429.919	-8.333	422.061	422.068
I	30439.919	-8.333	422.048	422.061
J	30449.919	-8.333	422.037	422.047
℄ Brg. S. Abut.	30458.752	-8.333	422.030	422.030
Bk. of S. Abut.	30460.919	-8.333	422.029	422.029

℄ BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30336.787	-2.000	422.388	422.388
℄ Brg. N. Abut.	30338.953	-2.000	422.379	422.379
A	30348.953	-2.000	422.338	422.349
B	30358.953	-2.000	422.300	422.314
C	30368.953	-2.000	422.266	422.272
℄ Brg. Pier 1	30377.787	-2.000	422.237	422.237
D	30387.787	-2.000	422.208	422.213
E	30397.787	-2.000	422.182	422.191
F	30407.787	-2.000	422.159	422.166
G	30417.787	-2.000	422.139	422.141
℄ Brg. Pier 2	30423.287	-2.000	422.129	422.129
H	30433.287	-2.000	422.113	422.120
I	30443.287	-2.000	422.101	422.114
J	30453.287	-2.000	422.091	422.101
℄ Brg. S. Abut.	30462.120	-2.000	422.085	422.085
Bk. of S. Abut.	30464.287	-2.000	422.084	422.084

℄ ROADWAY AND P. G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30337.850	0.000	422.387	422.387
℄ Brg. N. Abut.	30340.017	0.000	422.378	422.378
A	30350.017	0.000	422.337	422.348
B	30360.017	0.000	422.300	422.313
C	30370.017	0.000	422.265	422.272
℄ Brg. Pier 1	30378.850	0.000	422.237	422.237
D	30388.850	0.000	422.209	422.213
E	30398.850	0.000	422.183	422.192
F	30408.850	0.000	422.160	422.167
G	30418.850	0.000	422.140	422.143
℄ Brg. Pier 2	30424.350	0.000	422.130	422.130
H	30434.350	0.000	422.115	422.122
I	30444.350	0.000	422.103	422.116
J	30454.350	0.000	422.094	422.104
℄ Brg. S. Abut.	30463.183	0.000	422.088	422.088
Bk. of S. Abut.	30465.350	0.000	422.087	422.087

℄ BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30340.154	4.333	422.361	422.361
℄ Brg. N. Abut.	30342.321	4.333	422.352	422.352
A	30352.321	4.333	422.312	422.323
B	30362.321	4.333	422.275	422.288
C	30372.321	4.333	422.241	422.248
℄ Brg. Pier 1	30381.154	4.333	422.214	422.214
D	30391.154	4.333	422.186	422.191
E	30401.154	4.333	422.161	422.170
F	30411.154	4.333	422.139	422.146
G	30421.154	4.333	422.119	422.122
℄ Brg. Pier 2	30426.654	4.333	422.110	422.110
H	30436.654	4.333	422.096	422.103
I	30446.654	4.333	422.084	422.098
J	30456.654	4.333	422.076	422.085
℄ Brg. S. Abut.	30465.487	4.333	422.071	422.071
Bk. of S. Abut.	30467.654	4.333	422.070	422.070

℄ BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30343.522	10.667	422.265	422.265
℄ Brg. N. Abut.	30345.688	10.667	422.256	422.256
A	30355.688	10.667	422.217	422.228
B	30365.688	10.667	422.181	422.194
C	30375.688	10.667	422.148	422.155
℄ Brg. Pier 1	30384.522	10.667	422.122	422.122
D	30394.522	10.667	422.095	422.099
E	30404.522	10.667	422.071	422.080
F	30414.522	10.667	422.050	422.057
G	30424.522	10.667	422.031	422.034
℄ Brg. Pier 2	30430.022	10.667	422.023	422.023
H	30440.022	10.667	422.009	422.016
I	30450.022	10.667	421.999	422.012
J	30460.022	10.667	421.991	422.001
℄ Brg. S. Abut.	30468.855	10.667	421.987	421.987
Bk. of S. Abut.	30471.022	10.667	421.986	421.986

WEST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30344.363	12.250	422.230	422.230
℄ Brg. N. Abut.	30346.530	12.250	422.221	422.221
A	30356.530	12.250	422.182	422.193
B	30366.530	12.250	422.147	422.160
C	30376.530	12.250	422.114	422.120
℄ Brg. Pier 1	30385.363	12.250	422.088	422.088
D	30395.363	12.250	422.061	422.066
E	30405.363	12.250	422.037	422.046
F	30415.363	12.250	422.016	422.023
G	30425.363	12.250	421.999	422.001
℄ Brg. Pier 2	30430.863	12.250	421.990	421.990
H	30440.863	12.250	421.977	421.984
I	30450.863	12.250	421.966	421.980
J	30460.863	12.250	421.959	421.969
℄ Brg. S. Abut.	30469.697	12.250	421.955	421.955
Bk. of S. Abut.	30471.863	12.250	421.955	421.955

℄ BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Abut.	30346.889	17.000	422.121	422.121
℄ Brg. N. Abut.	30349.056	17.000	422.112	422.112
A	30359.056	17.000	422.074	422.085
B	30369.056	17.000	422.040	422.053
C	30379.056	17.000	422.008	422.014
℄ Brg. Pier 1	30387.889	17.000	421.982	421.982
D	30397.889	17.000	421.956	421.961
E	30407.889	17.000	421.933	421.942
F	30417.889	17.000	421.913	421.920
G	30427.889	17.000	421.896	421.898
℄ Brg. Pier 2	30433.389	17.000	421.888	421.888
H	30443.389	17.000	421.875	421.882
I	30453.389	17.000	421.866	421.879
J	30463.389	17.000	421.859	421.869
℄ Brg. S. Abut.	30472.222	17.000	421.856	421.856
Bk. of S. Abut.	30474.389	17.000	421.855	421.855

Note: Work this sheet with sheet #3 of 16.

DESIGNED	John Ciccone
CHECKED	[illegible]
DRAWN	Joe Sutherland
CHECKED	[illegible]

May 22 1992

EXAMINED Iraj I. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

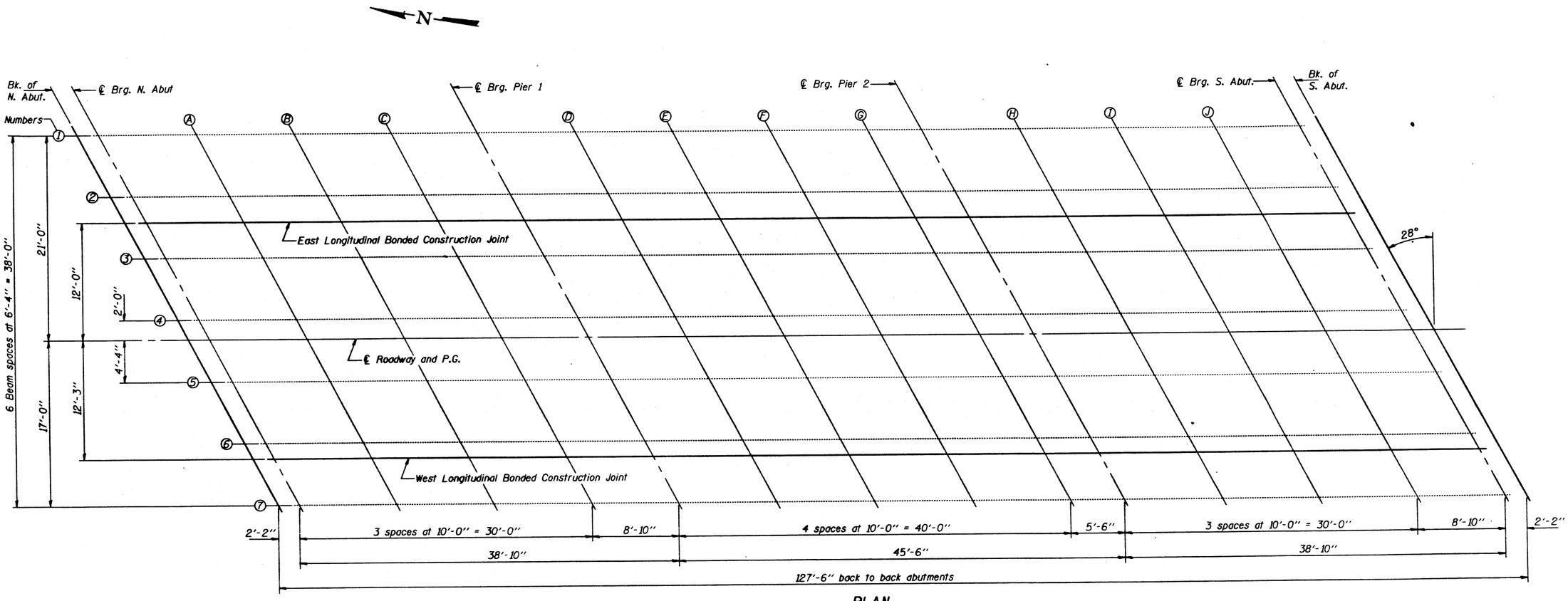
E-S 1-6-82

TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(28-2B)D	FRANKLIN	155	53
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

DESIGNED	John Ciccone
CHECKED	Patrick E. Clemens
DRAWN	Joe Sutherland
CHECKED	J.C. T.D.

May 22 1992

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

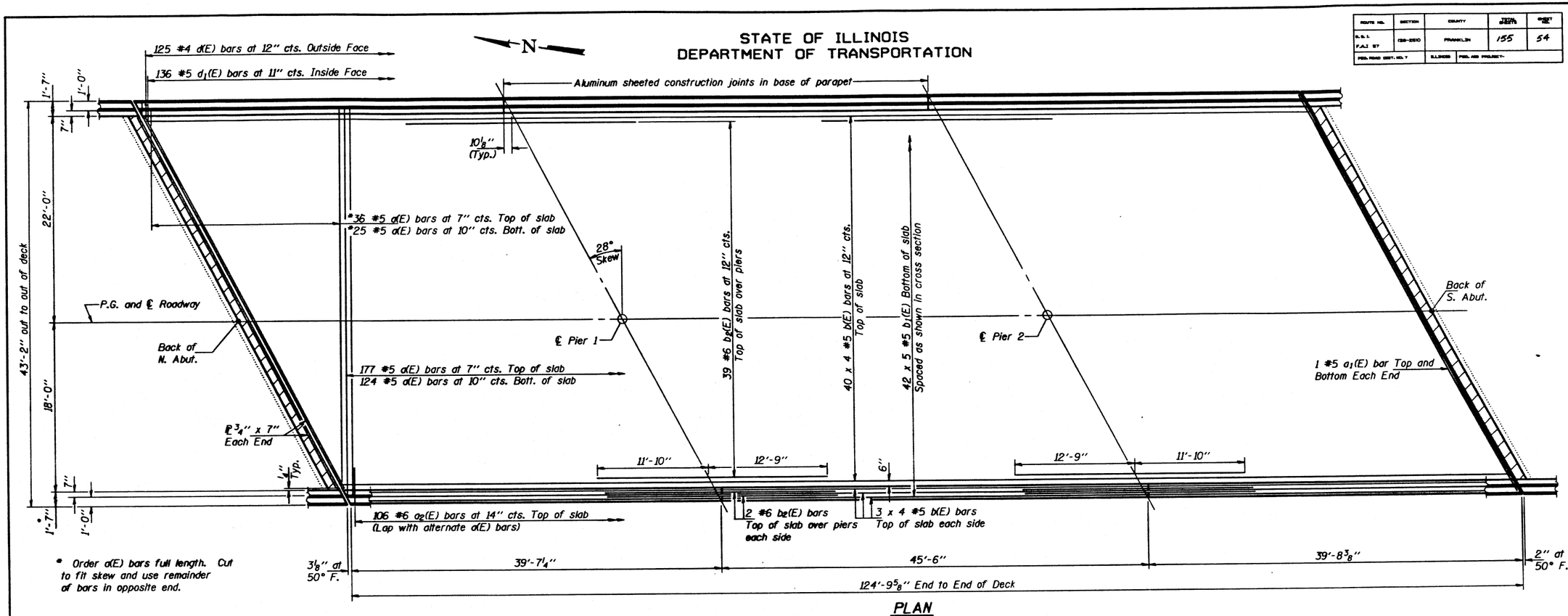
APPROVED
Director of Highways

TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	(28-2B)D	FRANKLIN	155	54
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

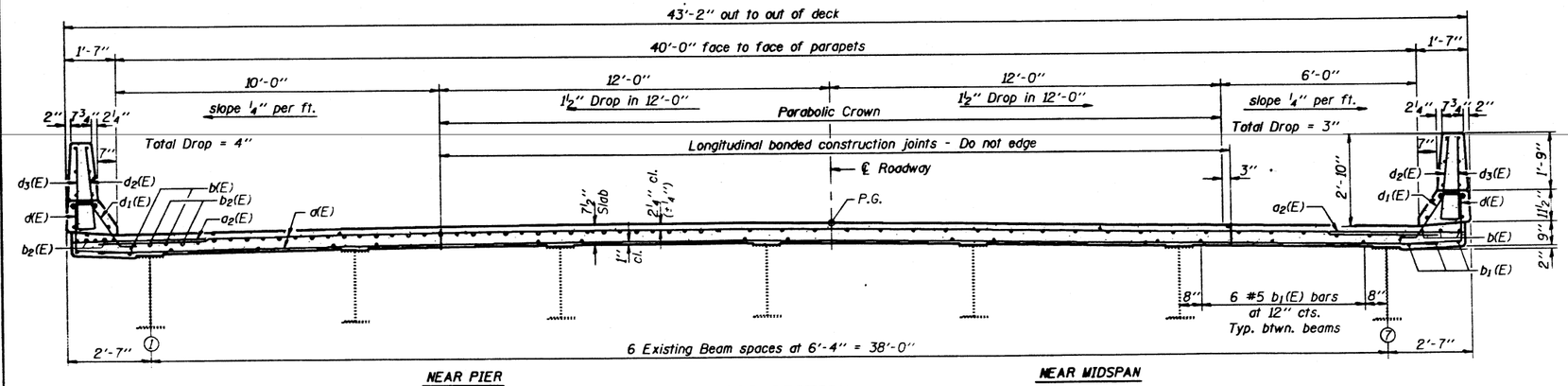
SHEET NO. 4
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* Order a(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN



NEAR PIER — NEAR MIDSPAN

CROSS SECTION
(Looking South)

Notes: See sheets #5 and #6 of 16 for superstructure details, parapet reinforcement and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Reinforcement bars indicated thus 40 x 4 #5 etc. indicates 40 lines of bars with 4 lengths per line.
See sheet #1 of 16 for drain locations and sheet #5 of 16 for details.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete to be included with Class X Concrete Superstructure.

MIN. BAR LAPS
#5 bars = 1'-8"

DESIGNED	John Cicero
CHECKED	Fatih Cimen
DRAWN	Joe Sutherland
CHECKED	JLC

May 22 1992

EXAMINED Raj D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

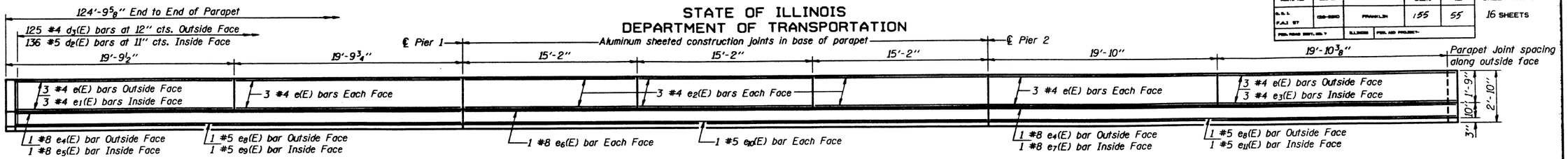
APPROVED
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

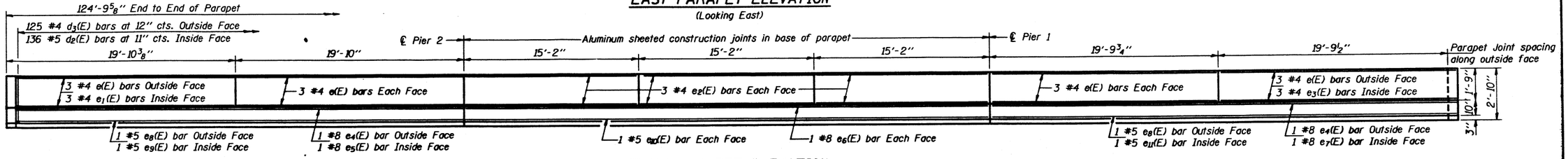
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT.	(28-2B)D	FRANKLIN	155	55
F.A.S. RT.				
PROJECT NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
16 SHEETS

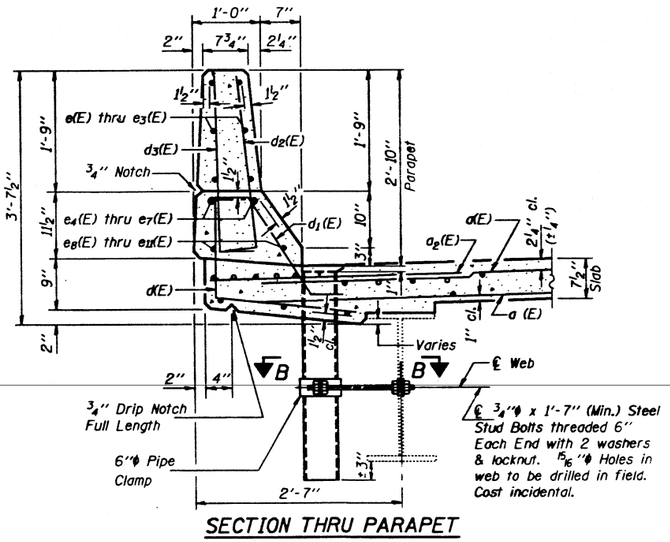
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



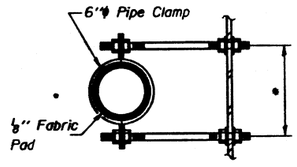
EAST PARAPET ELEVATION
(Looking East)



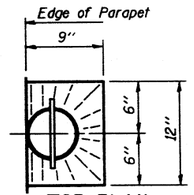
WEST PARAPET ELEVATION
(Looking West)



SECTION THRU PARAPET

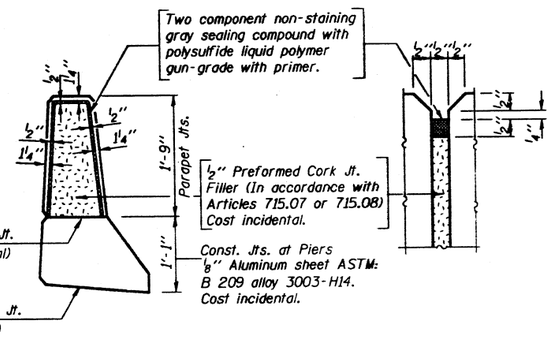


SECTION B-B

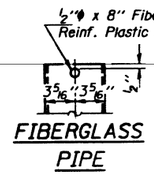


TOP PLAN

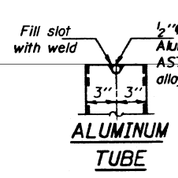
* Dimension as required by Pipe Clamp



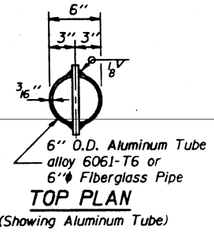
PARAPET JOINT DETAILS



FIBERGLASS PIPE



ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)

Notes:
The exterior surfaces of the Floor Drain shall be painted with the painting specified for Structural Steel. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structural Painting Council's Spec. SSPC-SP1 & SSPC-Paint 27 prior to painting. Fiberglass to have prewash as per MIL-P-15328 prior to painting.

Fiberglass pipe shall conform to ASTM: D2996. with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

DESIGNED	John Sievers
CHECKED	
DRAWN	Joe Sutherland
CHECKED	

May 22 1992

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

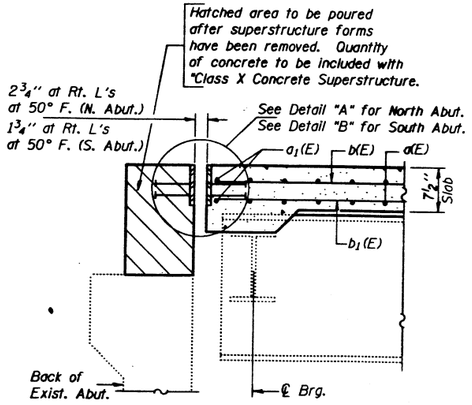
APPROVED
Director of Highways

SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

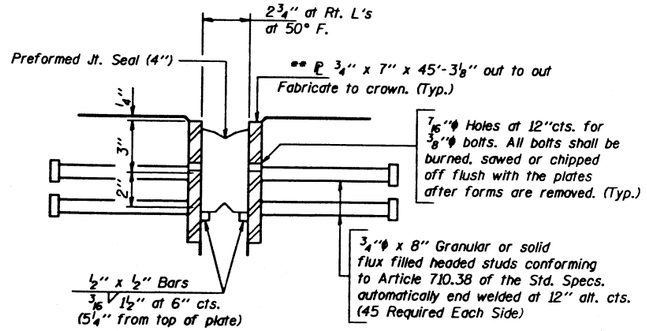
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A.I. 57	(28-2B)D	FRANKLIN	155	56
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
16 SHEETS

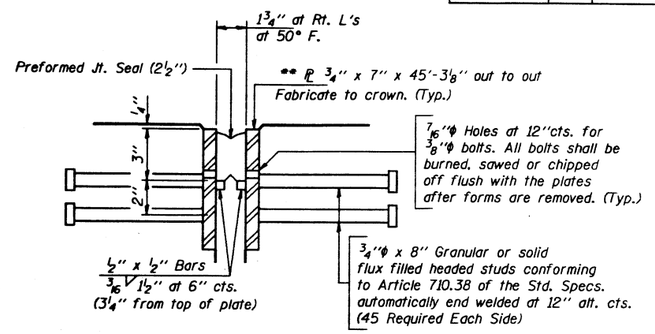


SECTION THRU ABUTMENTS

North Abut. Looking East
South Abut. Looking West

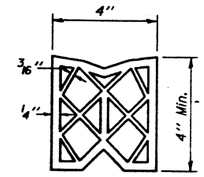


DETAIL "A"

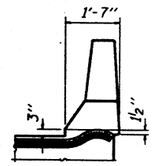


DETAIL "B"

** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 1/16". Seal space with Silicone Sealant suitable for Structural Steel.

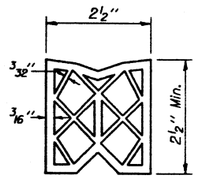


PREFORMED JOINT SEAL (4")



END TREATMENT

Typ. for (4") and (2 1/2").



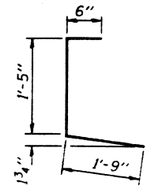
PREFORMED JOINT SEAL (2 1/2")

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

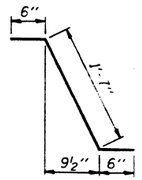
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	362	#5	41'-2"	——
a1(E)	4	#5	48'-2"	——
a2(E)	212	#6	4'-0"	——
b(E)	184	#5	32'-5"	——
b1(E)	210	#5	26'-3"	——
b2(E)	86	#6	24'-7"	——
d(E)	250	#4	3'-8"	⊏
d1(E)	272	#5	2'-7"	⌐
d2(E)	272	#5	3'-0"	L
d3(E)	250	#4	3'-0"	L
e(E)	36	#4	19'-7"	——
e1(E)	6	#4	18'-11"	——
e2(E)	36	#4	14'-11"	——
e3(E)	6	#4	20'-2"	——
e4(E)	4	#8	39'-5"	——
e5(E)	2	#8	38'-9"	——
e6(E)	4	#8	45'-3"	——
e7(E)	2	#8	40'-1"	——
e8(E)	4	#5	39'-5"	——
e9(E)	2	#5	38'-7"	——
e10(E)	4	#5	45'-3"	——
e11(E)	2	#5	40'-3"	——
Reinforcement Bars, Epoxy Coated		Lbs.	37690	
Class X Concrete Superstructure		Cu. Yd.	177.2	

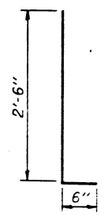
Reinforcement bars designated (E) shall be epoxy coated.



BAR d(E)



BAR d1(E)



BARS d2(E) & d3(E)

DESIGNED	John Sievers
CHECKED	Ystch S. Sievers
DRAWN	Joe Sutherland
CHECKED	JLC PDC

MAY 22 1992

EXAMINED Engr. D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

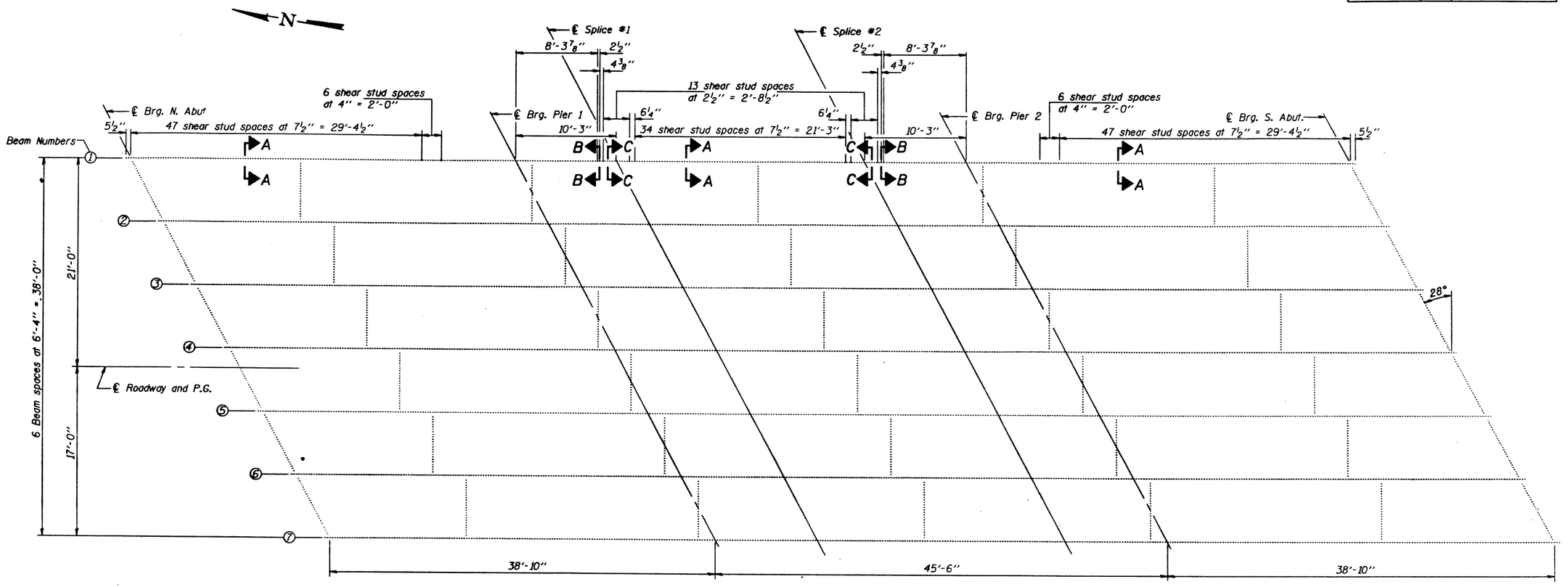
APPROVED
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

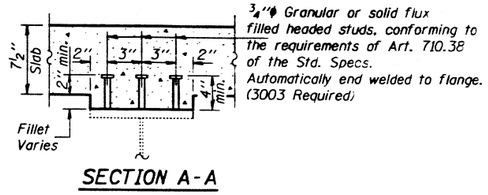
STATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT.	028-2B)D	FRANKLIN	155	57
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

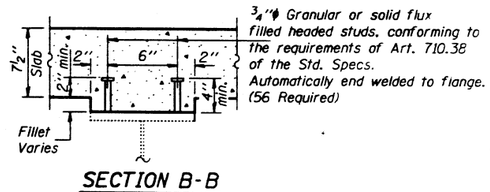


PLAN
(Shear Studs Typ. All Beams)



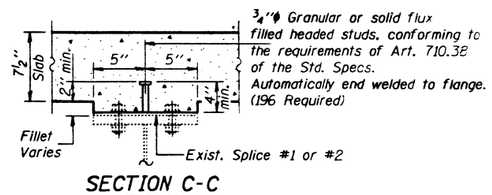
¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (3003 Required)

SECTION A-A



¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (56 Required)

SECTION B-B



¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (196 Required)

SECTION C-C

DESIGNED	John Cicone
CHECKED	
DRAWN	Joe Sutherland
CHECKED	

May 22 1992

EXAMINED Engineer of Bridge Design

PASSED Ralph E. Anderson
Engineer of Bridges and Structures

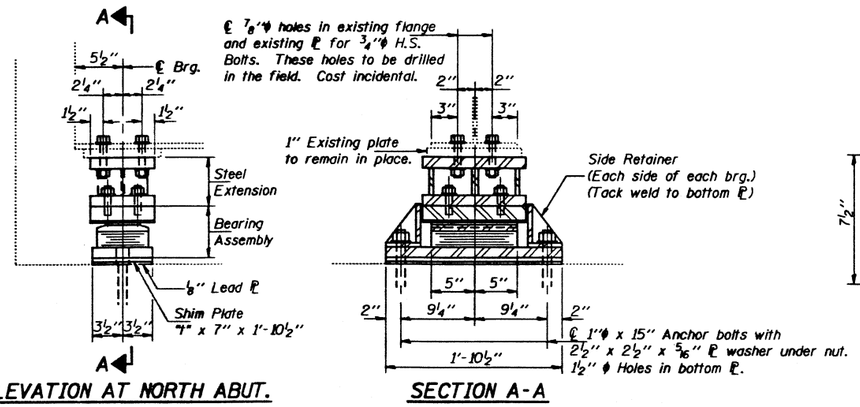
APPROVED
Director of Highways

STRUCTURAL STEEL DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

ROUTE NO.	SECTION	COUNTY	JOB NO.	SHEET NO.
S.B.I. F.A.I. 57	(28-2B)D	FRANKLIN	155	58
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
16 SHEETS

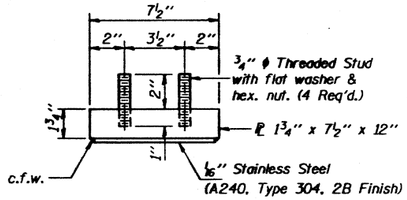
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



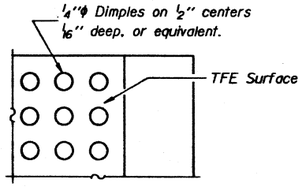
ELEVATION AT NORTH ABUT.

SECTION A-A

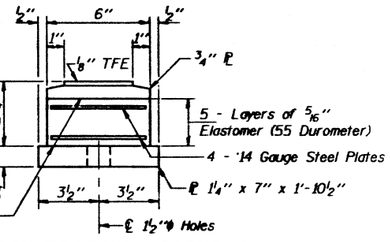
TYPE II TFE ELASTOMERIC EXP. BRG.



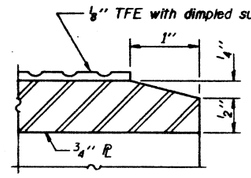
TOP BEARING ASSEMBLY



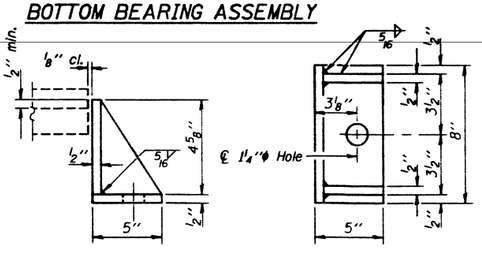
PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

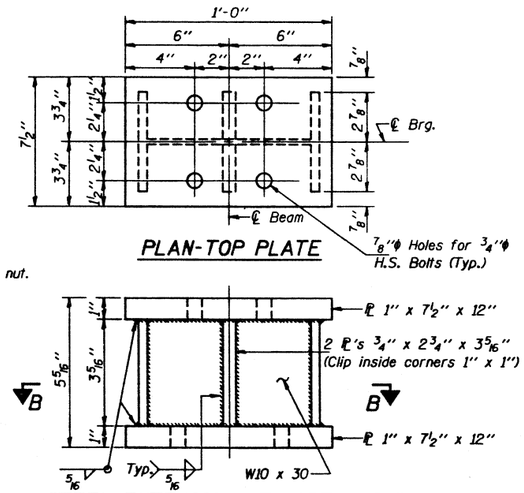


SIDE RETAINER

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

Note: The ⅛" 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.

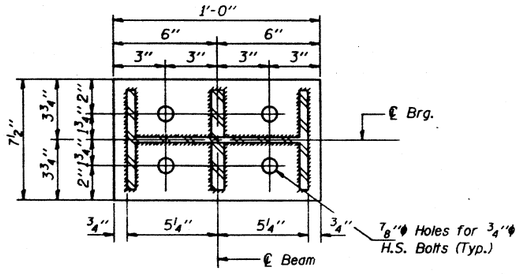
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



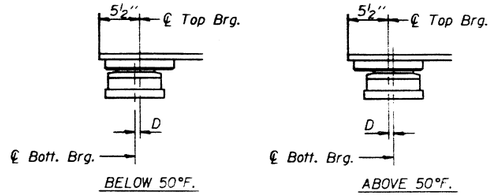
PLAN-TOP PLATE

STEEL EXTENSION AT NORTH ABUT.

Equivalent welded plates will be allowed in lieu of W10x30 section.

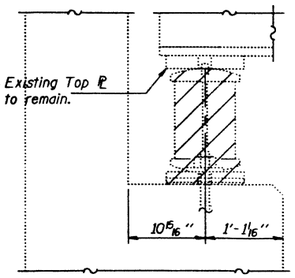


SECTION B-B

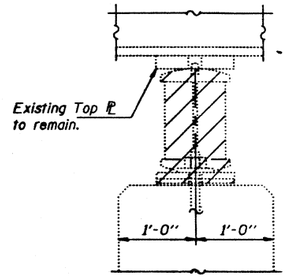


SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



AT ABUTMENT



AT PIER

JACK AND REMOVE EXISTING BEARING

Hatched areas indicate Removal of Existing Bearing.
See sheets #8, #9 & #10 of 16 for new brg. details.

JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work at the bearings. Dead Load = 3.0K at each beam at abutments and 6.0K at each beam at piers without concrete. Min. Jack Capacity at each beam shall be 5 Tons.
2. Jacking and removing existing bearings shall be done after deck removal is completed and before the new deck is poured.
3. All beams at one abutment or at one pier shall be lifted simultaneously.
4. Jacking shall be limited to a maximum of ¼".
5. Remove the existing anchor bolts flush with the concrete surface and grind smooth. The rockers and bottom plates shall be removed, leaving the existing top plate intact. The bottom flange area of the beam and existing top plate shall be cleaned and painted as specified for structural steel.
6. The new bearings and steel extensions shall be installed in place and the jacks shall be lowered before the new deck is poured.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in⁴)	2850	2850	2850
Ic (n=9)	(in⁴)	8361	———	8361
Ic (n=27)	(in⁴)	6285	———	6285
Ss	(in³)	213	213	213
Sc (n=9)	(in³)	326	———	326
Sc (n=27)	(in³)	296	———	296
D	(K/ft.)	.705	.980	.705
MD	('K)	77.3	163	56.7
fsD non-comp	(k.s.i.)	4.4	9.2	3.2
sD	(K/ft.)	.275	———	.275
MsD	('K)	34.8	———	33.9
** fsD (comp)	(k.s.i.)	1.4	———	1.4
ML	('K)	213	110	219.7
M (Imp)	('K)	63.2	32.6	65.2
(Total)	('K)	276.2	142.6	284.9
fs (L+I)	(k.s.i.)	10.2	8.0	10.5
fs (Total)	(k.s.i.)	16.0	17.2	15.1
VR	(K)	43.2	———	45.9

** For n = 27.

INTERIOR BEAM REACTION TABLE			
		Abuts.	Piers
RD	(K)	10.5	33.0
RL	(K)	30.3	37.3
Imp.	(K)	9.0	11.1
R (Total)	(K)	49.8	81.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total).
VR is the maximum live Load + Impact shear range in span.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	7
Jack and Remove Existing Bearings	Each	7

Notes: For anchor bolt installation details see sheet #16 of 16.
For anchor bolt location see sheet #10 of 16.
For shim plate thickness see sheet #10 of 15.

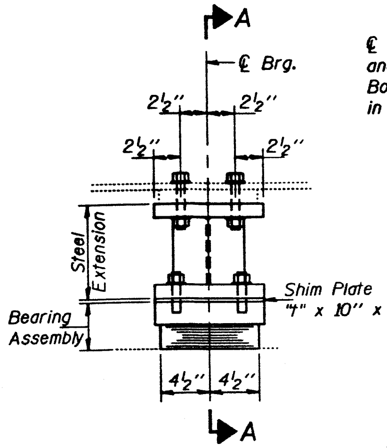
DESIGNED	John Cicero	May 22 1992
CHECKED	R.L.S. Crandall	EXAMINED Greg D. Kasper, ENGINEER OF BRIDGE DESIGN
DRAWN	Joe Sutherland	PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	JLC PDC	APPROVED, DIRECTOR OF HIGHWAYS

NORTH ABUTMENT BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

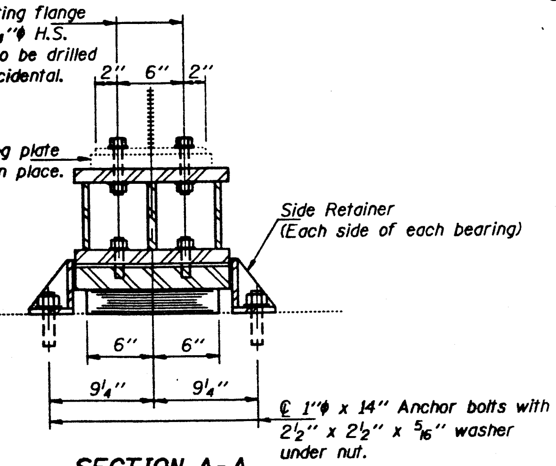
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	(28-2B)D	FRANKLIN	155	59
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
16 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

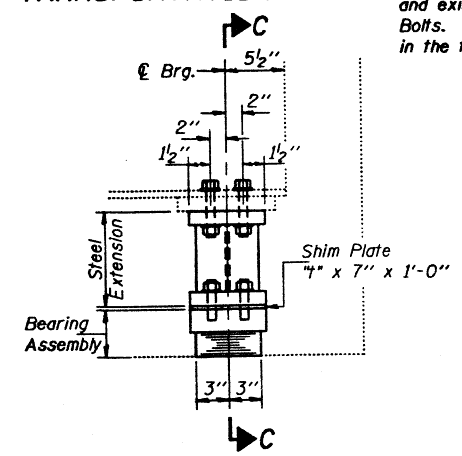


ELEVATION AT PIER 1

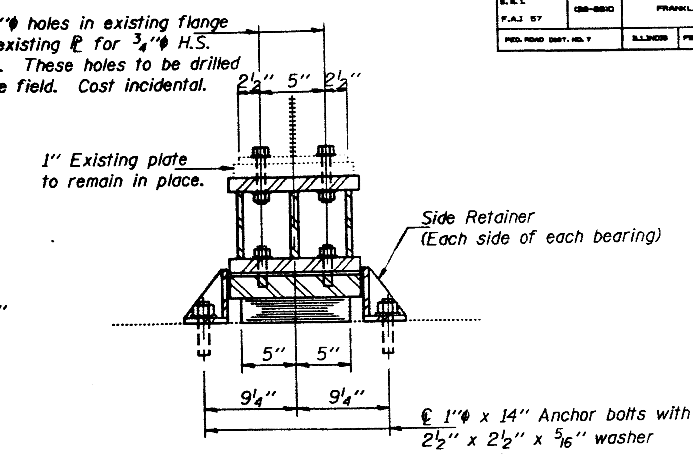


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

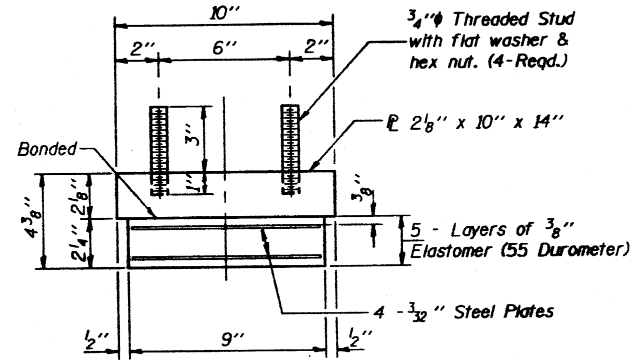


ELEVATION AT SOUTH ABUT.

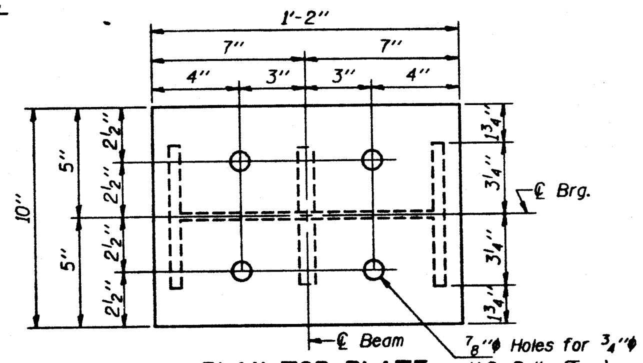


SECTION C-C

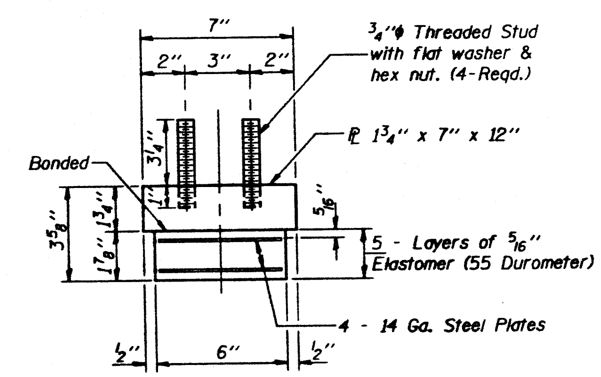
TYPE I ELASTOMERIC EXP. BRG.



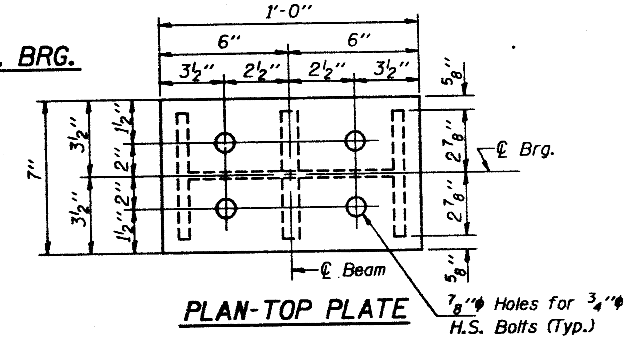
BEARING ASSEMBLY



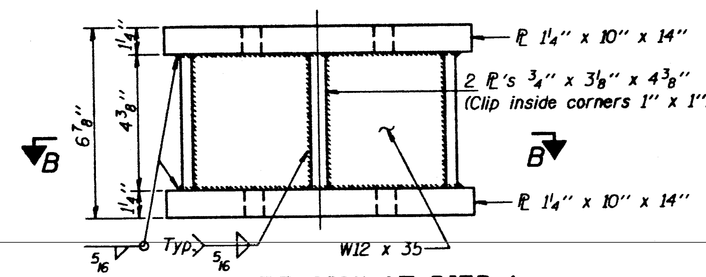
PLAN-TOP PLATE



BEARING ASSEMBLY

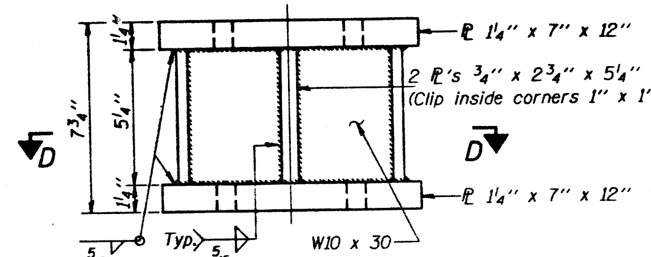


PLAN-TOP PLATE



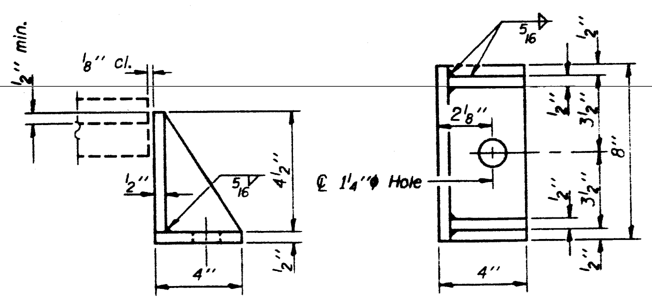
STEEL EXTENSION AT PIER 1

Equivalent welded plates will be allowed in lieu of W12 x 35 section.



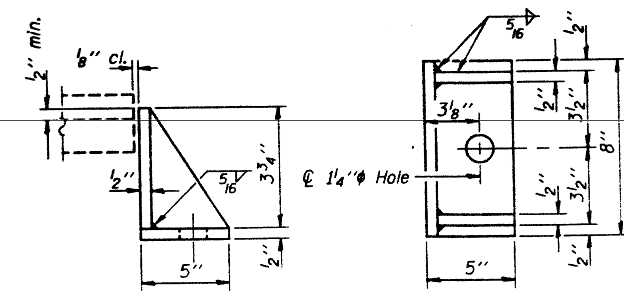
STEEL EXTENSION AT SOUTH ABUT.

Equivalent welded plates will be allowed in lieu of W10x30 section.



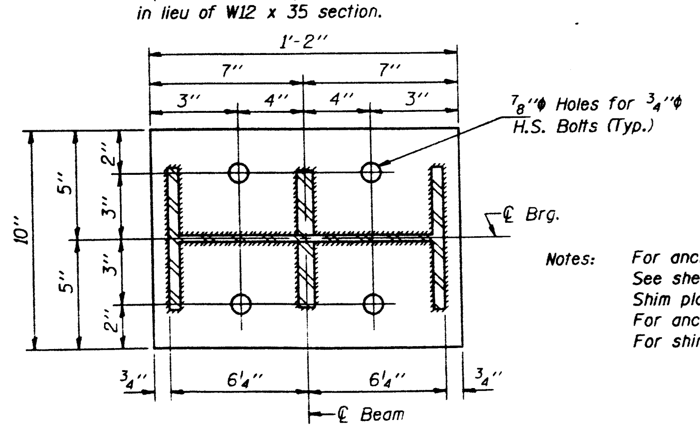
SIDE RETAINER

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

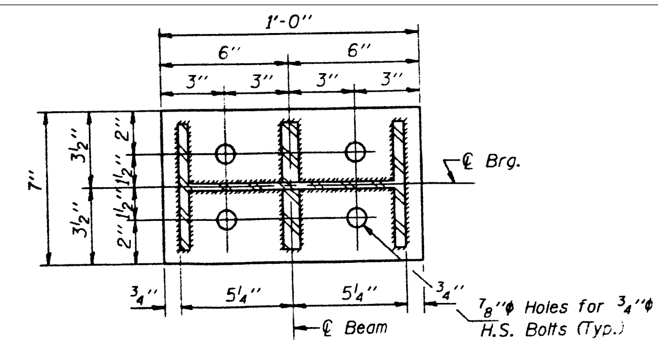


SIDE RETAINER

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



SECTION B-B



SECTION D-D

Notes:
- For anchor bolt installation details see sheet #16 of 16.
- See sheet #8 of 16 for Jack and Remove Existing Bearing Procedure.
- Shim plates shall not be placed under Bearing Assembly.
- For anchor bolt location see sheet #10 of 16.
- For shim plate thickness see sheet #10 of 16.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Jack and Remove Existing Bearings	Each	14

DESIGNED	John Ciccone
CHECKED	[illegible]
DRAWN	Joe Sutherland
CHECKED	JLC

May 22 1992

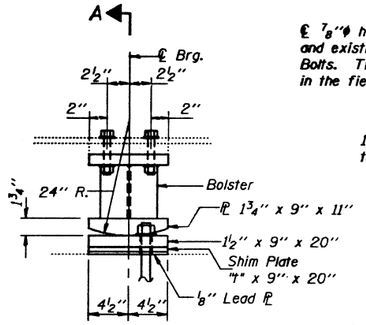
EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

PIER 1 AND SOUTH ABUTMENT
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

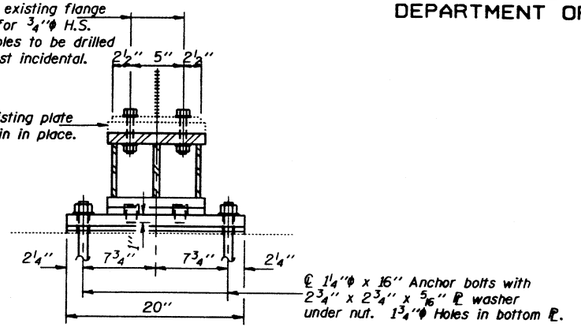
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	128-2B)D	FRANKLIN	155	60
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		

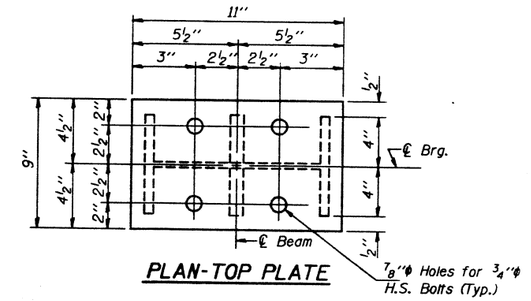
SHEET NO. 10
16 SHEETS



ELEVATION AT PIER 2

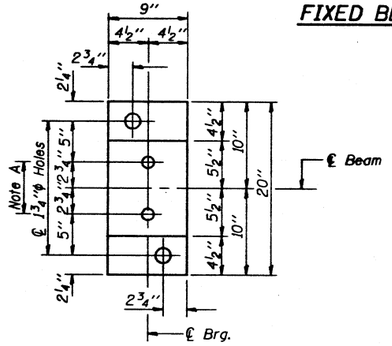


SECTION A-A

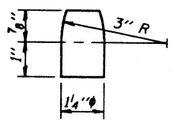


PLAN-TOP PLATE

FIXED BEARING

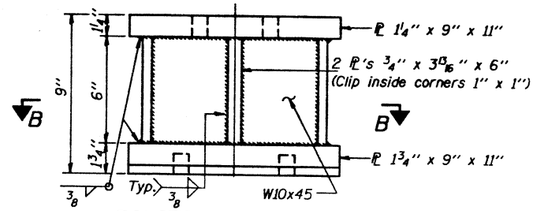


PLAN



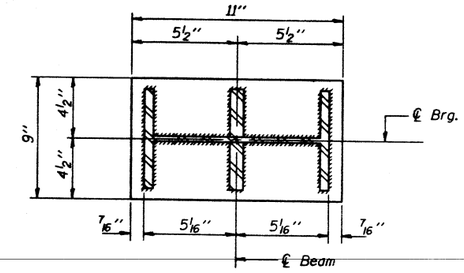
PINTLE

Note A:
$1\frac{3}{8}$"ϕ Holes-1" deep in bolster for 1¼"ϕ pintles. Thread or press fit in bottom ℄.



BOLSTER AT PIER #2

Equivalent welded plates will be allowed in lieu of W10x45 section.



SECTION B-B

* TABLE OF "t" DIMENSIONS

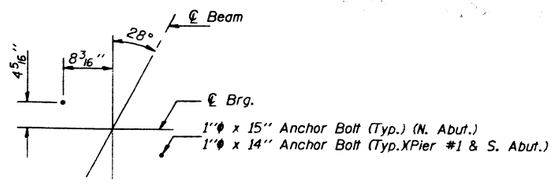
Location	N. Abut.	Pier #1	Pier #2	S. Abut.
Beam #1	½"	½"	½"	½"
Beam #2	9/16"	½"	9/16"	9/16"
Beam #3	⅞"	¾"	15/16"	15/16"
Beam #4	15/16"	9/16"	¾"	⅞"
Beam #5	1¼"	1"	1⅛"	1⅜"
Beam #6	1¼"	⅞"	1⅛"	1⅜"
Beam #7	1"	⅞"	15/16"	1¼"

* Based on the field survey seat elevations shown on this sheet. The Contractor shall verify these elevations in the field and make adjustments if necessary. Cost incidental.

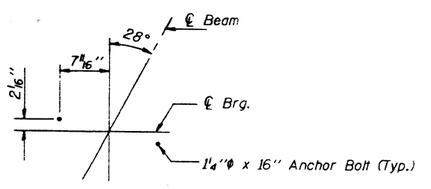
FIELD SURVEY SEAT ELEVATIONS

Location	N. Abut.	Pier #1	Pier #2	S. Abut.
Beam #1	418.16	417.95	417.88	417.82
Beam #2	418.27	418.07	418.00	417.94
Beam #3	418.35	418.16	418.09	418.03
Beam #4	418.40	418.22	418.15	418.09
Beam #5	418.33	418.16	418.09	418.03
Beam #6	418.24	418.08	418.01	417.95
Beam #7	418.11	417.96	417.89	417.83

N.A.



PLAN AT N. ABUT.
S. ABUT. & PIER #1



PLAN AT PIER #2

Notes: For anchor bolt installation details see sheet #16 of 16.
See sheet #8 of 16 for Jack and Remove Existing Bearing Procedure.

DESIGNED	John Ciccone
CHECKED	Faith E. Craven
DRAWN	Joe Sutherland
CHECKED	JLC

May 22 1992
EXAMINED Engineer of Bridge Design
PASSED Ralph E. Anderson Engineer of Bridges and Structures
APPROVED
Director of Highways

PIER 2
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-2B)D
FRANKLIN COUNTY
STATION 304+25.00

12

	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	28-2B	FRANKLIN	22	1
				I-57-2 (35) 73

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

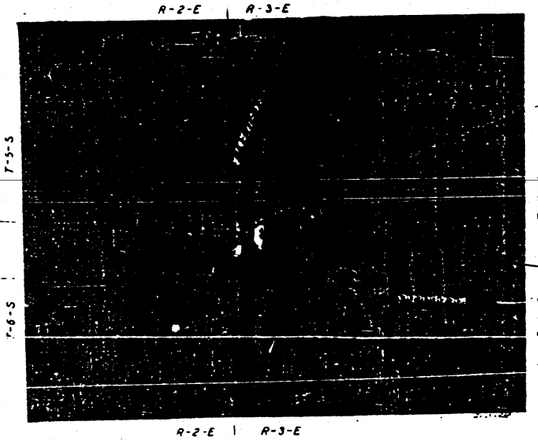
SCALES

PLAN	1 INCH	100 FT.
PROFILE, HOR.	1 INCH	100 FT.
PROFILE, VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	10 FT.

Index to Sheets on sheet 3

F.A.I. ROUTE 57 SECTION 28-2B
PROJECT I-57-2 (35)73
FRANKLIN COUNTY

LOCATION OF SECTION INDICATED THUS:—



PROJECT I-57-2 (35)73
DUAL BRIDGES SECTION 28-2B
MARCUM BRANCH STA. 304+25 (MEDIAN)
CONSIST OF 3 SPANS CONTINUOUS W-F BEAM
2 SPANS AT 38'-0", 1 SPANS AT 45'-6"
42' FC TO FC. BK TO BK ABT. 127'-6"

PROJECT I-57-2 (35)73
SECTION 28-2B
PROPOSED IMPROVEMENT BEGINS
STA. 303+61.25 ℄ MEDIAN
EAST LANES STA. 303+37.85 BK. OF ABT.
WEST LANES STA. 303+84.65 BK. OF ABT.

ERECT SIGN
STD 2153-2

PROJECT I-57-2 (35)73
SECTION 28-2B
PROPOSED IMPROVEMENT ENDS
STA. 304+88.75 ℄ MEDIAN
EAST LANES STA. 304+65.35 BK. OF ABT.
WEST LANES STA. 305+12.15 BK. OF ABT.

LAYOUT
APPROXIMATE SCALE 1" = 1 MILE

NET LENGTH ALONG TRANSITLINE

NET LENGTH		TO BE IMPROVED	
LIN FT.	MILES	LIN FT.	MILES
127.5	0.024	127.5	0.024

NET LENGTH OF PROJECT I-57-2(35)73 = 127.5 FT. = 0.024 MILES

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
Nov. 22, 64
April 19, 62
April 19, 62
April 19, 62
April 19, 62

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER — DATE

9-37

Job No. 22225

FRANKLIN COUNTY SECTION 28-2B F.A. ROUTE 57

INDEX OF SHEETS

SHEET NO.	
1	TITLE SHEET.
2	TYPICAL CROSS SECTION OF PROPOSED CONSTRUCTION FOR F.A.I. ROUTE 57.
3	INDEX OF SHEETS; GENERAL NOTES AND SUMMARY OF QUANTITIES; STANDARD NO. 1606-1.
4	PLAN AND PROFILE SHEET FOR F.A.I. ROUTE 57 STATION 288+00 TO 320+00.
5 TO 15	SPECIAL SHEETS FOR BRIDGE STRUCTURE.
16 TO 20	CROSS SECTIONS FOR F.A.I. ROUTE 57 STATION 300+50 TO 314+65.
21	STANDARD NO. 2153-2; 1971-3; 2114.
22	STANDARD NO. 1976; 2113;

GENERAL NOTES

NO OVERHAUL WILL BE ALLOWED FROM ANY SOURCE.

ALL PIPE CULVERTS SHOWN ON THE PLANS AS "TYPE 1A OR 2A (R.C.P. CL. III)" SHALL BE REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE (CLASS III) AND ALL PIPE CULVERTS SHOWN ON THE PLANS AS "TYPE 3A (R.C.P. CL. IV)" SHALL BE REINFORCED CONCRETE CULVERT, STORM DRAIN AND SEWER PIPE (CLASS IV).

CHANNEL EXCAVATION SHOWN ON PLANS RIGHT AND LEFT STATION 304+25 SHALL BE PLACED IN ROADWAY EMBANKMENTS. (SEE SPECIAL PROVISIONS)

REFERENCE AND PRESERVE LAND CORNERS AND UNITED STATES GOVERNMENT BENCH MARKS.

ONE (1) SIGN CONFORMING WITH STANDARD 2153-2 SHALL BE ERECTED AT THE R.O.W. OF ILL. ROUTE 37 AS SHOWN ON THE COVER SHEET.

WHEREVER IN THESE PLANS REFERENCE IS MADE TO THE "STANDARD SPECIFICATIONS", IT IS UNDERSTOOD TO INCLUDE THE "SUPPLEMENTAL SPECIFICATIONS", EFFECTIVE APRIL 2, 1962.

SUMMARY OF QUANTITIES

QUANTITY	UNIT	ITEM	CODE NUMBER
5.7	ACRES	TREE REMOVAL, ACRES	010005
27200	CU YD	EARTH EXCAVATION	011001
2190	CU YD	CHANNEL EXCAVATION	012001
7	UNIT	WATER APPLIED	016003
310	CU YD	CLASS A EXCAVATION FOR STRUCTURES	050001
590	CU YD	CLASS B EXCAVATION FOR STRUCTURES	050002
468.2	CU YD	CLASS A CONCRETE	052002
461.4	CU YD	CLASS X CONCRETE	052003
1.3	CU YD	CLASS X CONCRETE HEADWALL	052016
1242	SQ YD	PROTECTIVE COAT	052021
195440	POUND	FURNISHING AND ERECTING STRUCTURAL STEEL	054001
500	LIN FT	FURNISHING AND ERECTING METAL HANDRAIL	055001
60	LIN FT	PIPE CULVERT TYPE 1A, 18" RCP (CLASS III)	058074
96,330	POUND	REINFORCEMENT BARS	059001
480	LIN FT	FURNISHING CREOSOTED PILES UP TO 20 FEET	060004
480	LIN FT	DRIVING TIMBER PILES	060008
2108	LIN FT	FURNISHING STEEL PILES 12 BP 53	060024
2597	LIN FT	FURNISHING STEEL PILES 8 BP 36	060027
2	EACH	TEST PILE STEEL 12 BP 53	060033
2	EACH	TEST PILE STEEL 8 BP 36	060036
4705	LIN FT	DRIVING STEEL PILES	060037
2	EACH	NAME PLATES	061001
3050	SQ YD	SLOPE WALL 6 INCH	083003

PREPARED BY: DIST. DESIGN ENGINEER

EXAMINED BY: DIST. CONSTR. ENGINEER

EXAMINED BY: DIST. MAINT. ENGINEER

EXAMINED BY: DIST. TRAFFIC ENGINEER

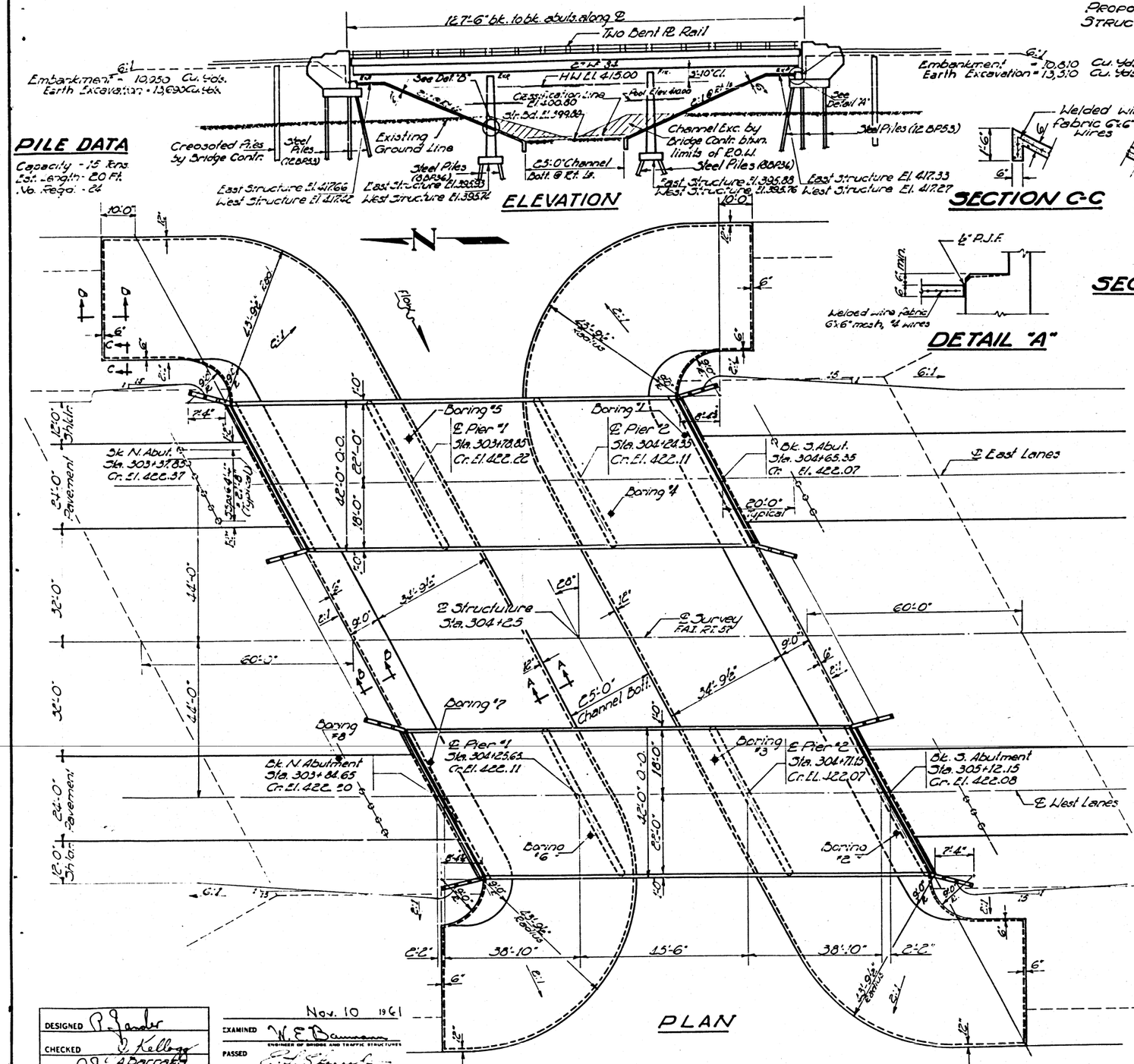
APPROVED: Nov. 22, 1961

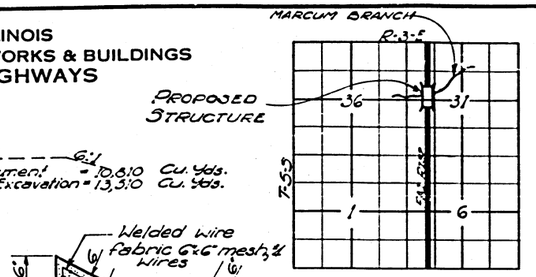
DISTRICT ENGINEER

B.M. Concrete Monument 150 Ft. Lt. Sta. 310+50
Elev. 412.80

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

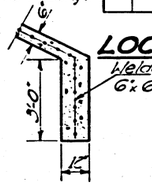
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S.B.I. F.A.I. 57	28-2B	FRANKLIN	22	5	SHEET NO 1 // SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: I-57-2(35)73			

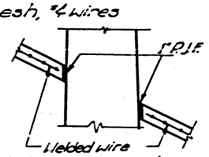




PILE DATA

Capacity - 15 Tons
Est. Length - 20 Ft.
No. Reqd. - 24



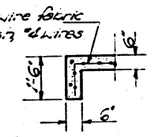


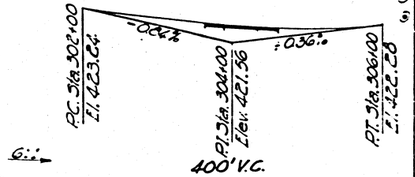
STATION 304+25
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 28-2B
F.A. PROJ. I-57-2(35)
LOADING H20-S16 & ALT.

NAME PLATE
See Std. 2113

WATERWAY INFORMATION

Drainage Area 2285 Acres
Character Rolling, wooded, cultivated
Required Opening: (50 yr. Fl.) 375 Sq. Ft.
Proposed Opening: 375 Sq. Ft. btwn. El. 410 & 415





GENERAL NOTES

Class X Concrete shall be used throughout except in piers.

The Concrete Floor Slab shall be finished in accordance with Art. 51.19 of the Standard Specifications.

The curb and slab outside of longitudinal construction joint, shown on cross section, shall be poured monolithically.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, #4 wires, weighing 58 lbs. per 100 sq. ft.

Layout of slope walls may be varied to suit ground conditions in the field, as directed by the Engineer.

All rivets shall be 7/8" unless noted.

All holes for splices shall be sub-punched 1/16" and reamed to proper size: 15/16" for 7/8" rivets; 1 5/16" for 1 1/8" rivets.

All rockers, bolsters, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel. Estimate weight of this steel is 13,520 Lbs.

Anchor bolts shall be set before riveting diaphragms over supports.

Expansion guards are included in quantity of Structural Steel. Estimate weight of this steel is 5,100 Lbs.

All structural steel and Metal Handrail shall be inspected by the Illinois Div. of Highways before painting.

Except as otherwise provided, all structural steel and metal handrail shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 507.10 thru 507.13 inclusive of the Standard Specifications.

All paint shall be furnished and applied by the Contractor.

Class A Concrete shall be used in piers.

The Contractor shall drive 4 test piles (one steel pile (12BP53) at North Abut. - East Structure, one steel pile (12BP53) at South Abut. - West Structure, one steel pile (8BP36) at Pier #2 - East Structure, one steel pile (8BP36) at Pier #1 - West Structure) in permanent locations as directed by the Engineer before ordering the remaining piles.

TOTAL BILL OF MATERIAL

ITEM		Super.	Sub.	Total
Channel Excavation	Cu. Yds.		2,190	2,190
Earth Excavation	Cu. Yds.		2,200	2,200
Class "A" Excavation	Cu. Yds.		310	310
Class "B" Excavation	Cu. Yds.		390	390
Class X Concrete	Cu. Yds.	2524	2070	4614
Structural Steel	Lbs.	192440		192440
Metal Handrail	Lin. Ft.	500		500
Reinforcement Bars	Lbs.	63210	32860	96070
Creosoted Piles	Lin. Ft.		480	480
Steel Piles (12BP53)	Lin. Ft.		2108	2108
Test Piles Steel (12BP53)	Ea.		2	2
Steel Piles (8BP36)	Lin. Ft.		2597	2597
Test Piles Steel (8BP36)	Ea.		2	2
Name Plates	Ea.	2		2
Slope Wall 6"	Sq. Yds.		3050	3050
Class A Concrete	Cu. Yds.		462.2	462.2
Protective Coat	Sq. Yds.	1242		1242

© Includes excavation for slopewall

DESIGN STRESSES

fc = 1400 psi. Super. & Sub.
vc = 75 psi Flgs.
fs = 20,000 psi Reinf.
Allowable ℄ Deflection 1/1000
n = 10

LOADING H20-S16-44 & ALTERNATE

DESIGNED	P. Jaeger	
CHECKED	D. Kellogg	
DRAWN	P.J. C. Abarrategui	

Nov. 10 1961

EXAMINED W.E. Bauman, ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED C.W. Stanley, ENGINEER OF DESIGN
APPROVED , CHIEF HIGHWAY ENGINEER

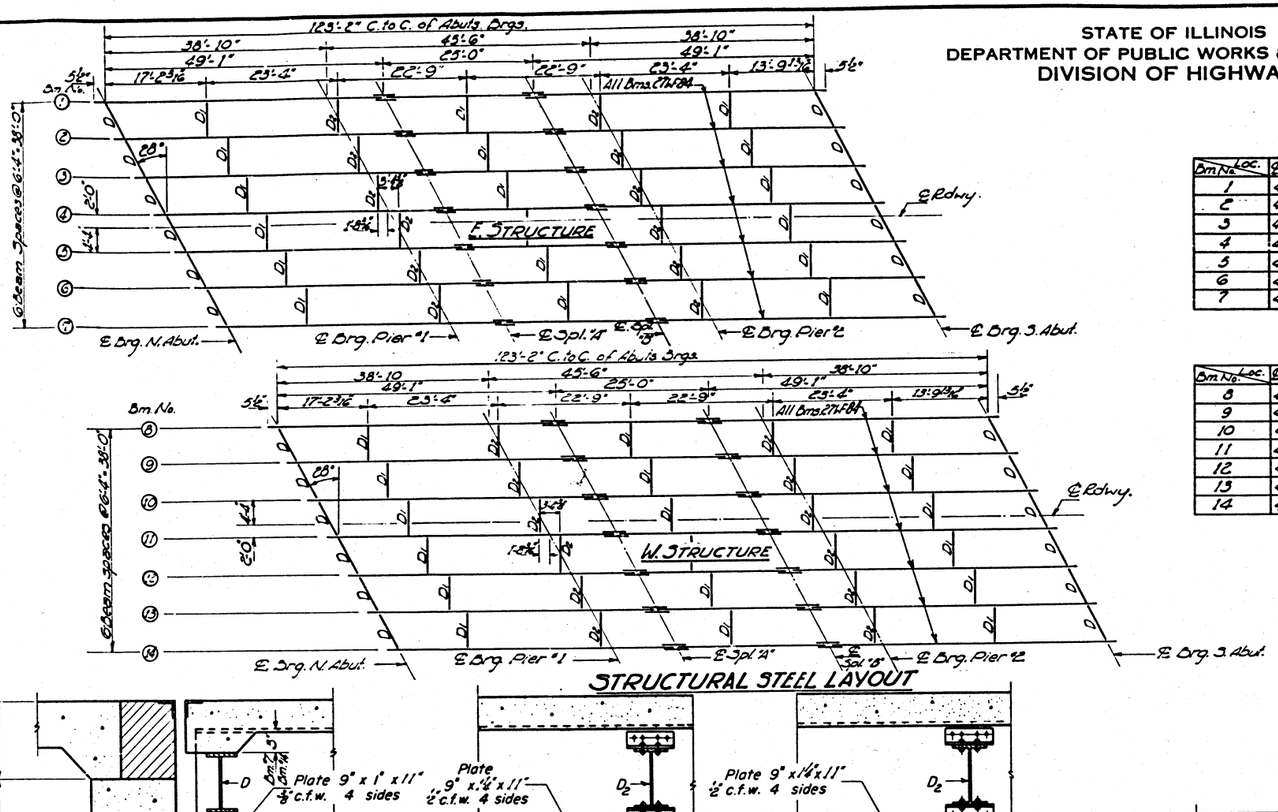
GENERAL PLAN & ELEVATION
PROJ. I-57-2(35)73
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY

Revised - 12-22-61 - W.M. In ELEVATION, at location of each abutment, and in TOTAL BILL OF MATERIAL, changed designation of "Borrow Excavation" to "Earth Excavation".
Revised - 2-28-62 R.A.C. In Total Bill of Mtls. quantity of Reinf. Bars changed from 59,280 to 63,210 (Super.) & from 91,120 to 96,070 (Sub. Total).

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-2B	FRANKLIN	22	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO 3
11 SHEETS



STRUCTURAL STEEL LAYOUT

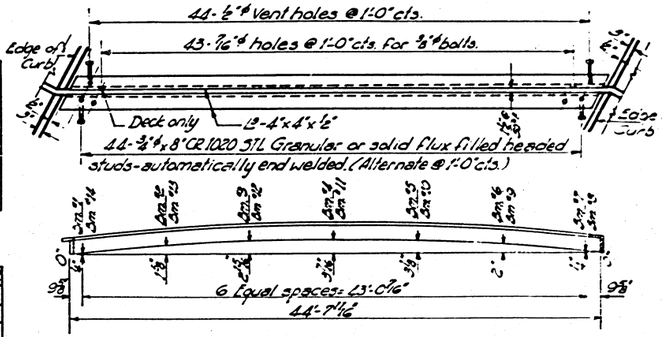
ELEVATION TOP OF BEAMS

EAST STRUCTURE

Bm. No. / Loc.	℄ Brg. N. Abut.	℄ Brg. Pier #1	℄ Spl. "A"	℄ Spl. "B"	℄ Brg. Pier #2	℄ Brg. S. Abut.
1	421.511	421.339	421.298	421.227	421.217	421.180
2	421.628	421.456	421.411	421.344	421.334	421.297
3	421.734	421.562	421.517	421.450	421.440	421.403
4	421.776	421.604	421.559	421.492	421.482	421.445
5	421.749	421.577	421.532	421.465	421.455	421.418
6	421.653	421.481	421.436	421.369	421.359	421.322
7	421.509	421.337	421.292	421.225	421.213	421.178

WEST STRUCTURE

Bm. No. / Loc.	℄ Brg. N. Abut.	℄ Brg. Pier #1	℄ Spl. "A"	℄ Spl. "B"	℄ Brg. Pier #2	℄ Brg. S. Abut.
8	421.409	421.293	421.263	421.233	421.238	421.258
9	421.529	421.413	421.383	421.353	421.358	421.378
10	421.601	421.485	421.455	421.425	421.430	421.450
11	421.605	421.489	421.459	421.429	421.434	421.454
12	421.539	421.423	421.393	421.363	421.368	421.388
13	421.410	421.294	421.264	421.234	421.239	421.259
14	421.269	421.153	421.123	421.093	421.098	421.118



EXPANSION GUARD DETAIL
4 Units Required

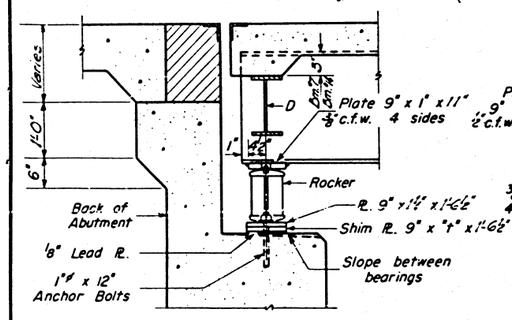
"L" DIMENSIONS

EAST STRUCTURE

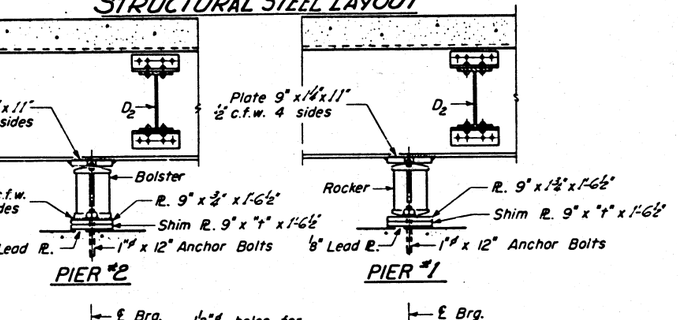
Bm. No. / Loc.	All Bearings
1	0"
2	0"
3	4"
4	0"
5	7/16"
6	5/16"
7	0"

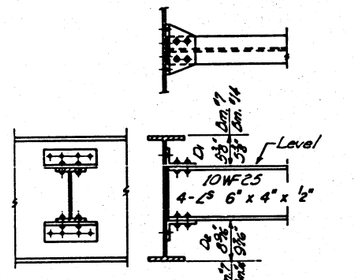
WEST STRUCTURE

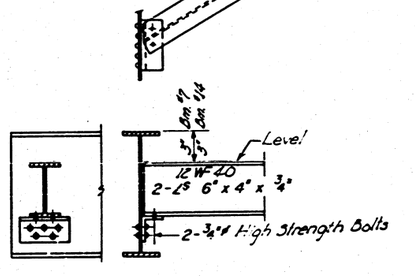
Bm. No. / Loc.	All Bearings
8	0"
9	4"
10	4"
11	5/16"
12	3/8"
13	0"
14	0"

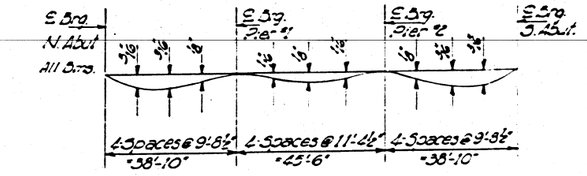


SECTION AT ABUTMENT

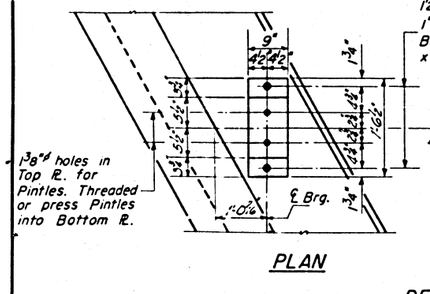


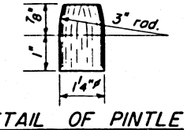


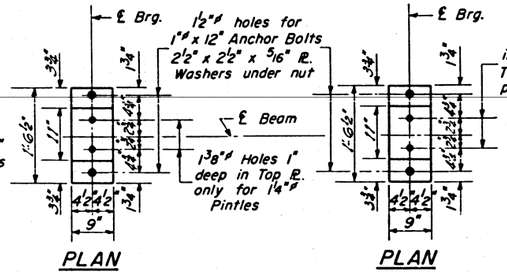


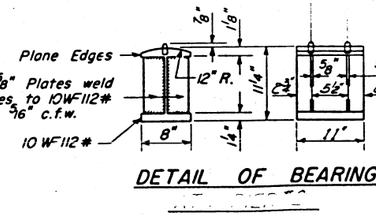


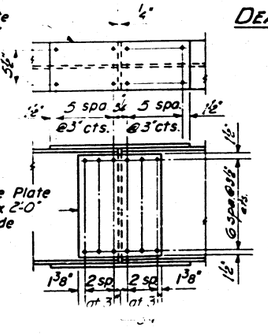
DEAD LOAD DEFLECTION DIAGRAM
Dead Load Deflection doesnot include weight of Structural Steel

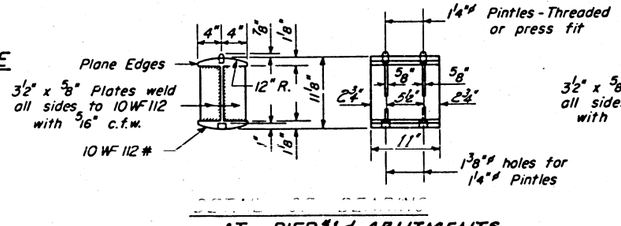












DESIGNED R. Sander
CHECKED J. Kelley
DRAWN J. Sarnecki, W. A. Sausaman
EXAMINED W. E. Bamman, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E. P. Smith, ENGINEER OF DESIGN
APPROVED M. M. Reed, DIRECTOR
Nov. 10 1961

I-2-R Re-drawn 9-23-59

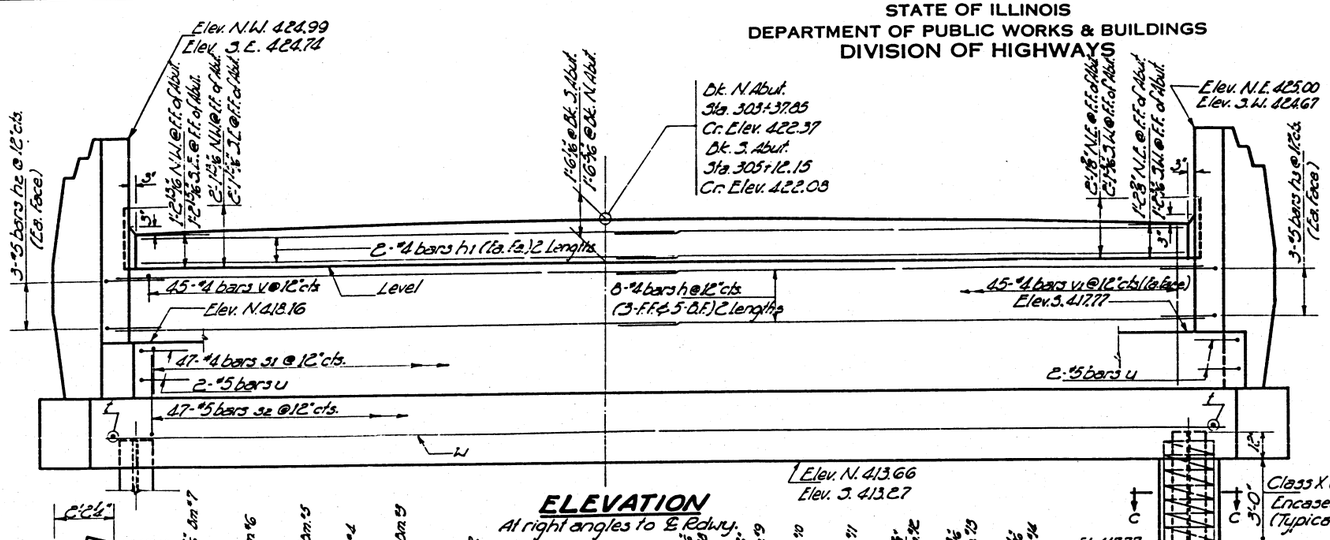
STRUCTURAL STEEL
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY, ILLINOIS
STA. 304+25

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 57	28-2B	FRANKLIN	22	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

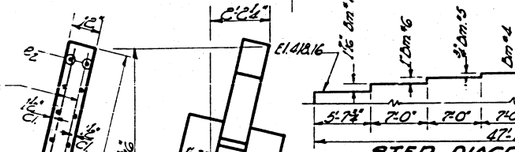
SHEET NO 5
11 SHEETS

NOTE: CROSS-HATCHED AREA TO BE POURED WITH WING WALL.

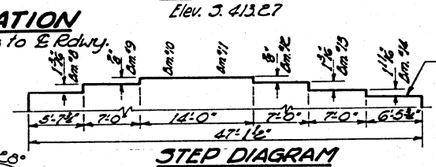


ELEVATION

At right angles to ℄ Rdwy.

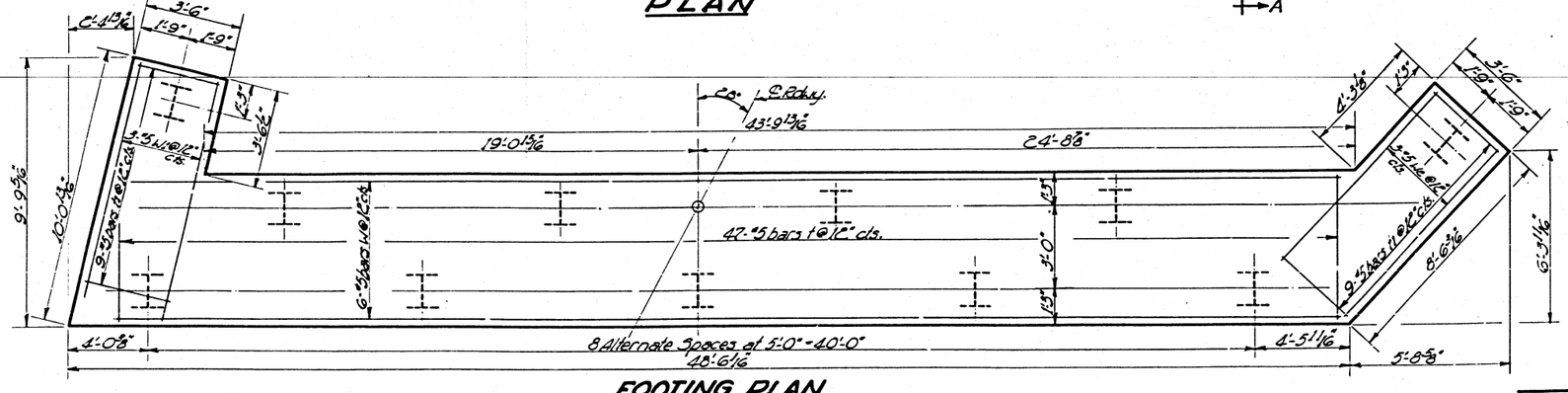


STEP DIAGRAM
NORTH ABUTMENT



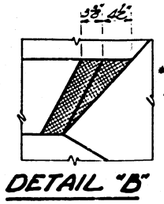
STEP DIAGRAM
SOUTH ABUTMENT

PLAN

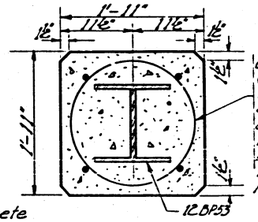


FOOTING PLAN

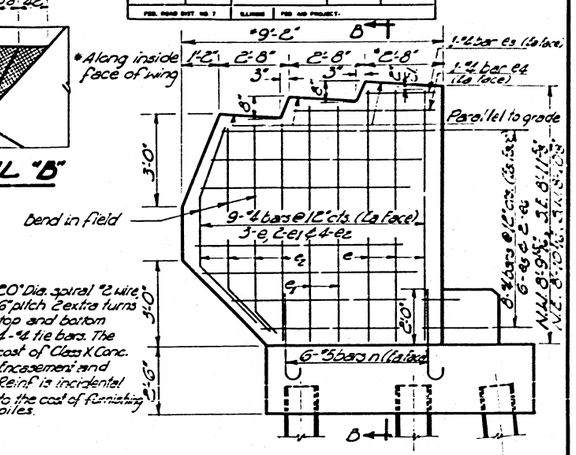
DETAIL "A"



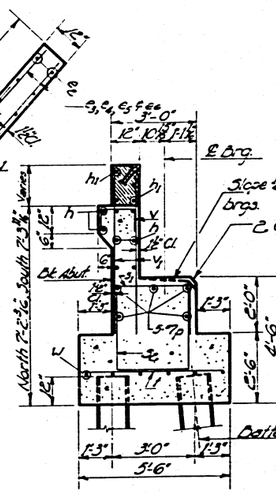
DETAIL "B"



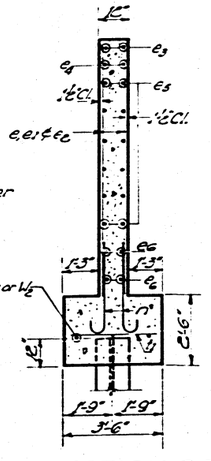
SECTION C-C



WING WALL ELEVATION



SECTION A-A



SECTION B-B

BILL OF MATERIAL - 2 ABUTMENTS

Bar	No.	Size	Length	Shape
e	24	#4	8'-6"	
e1	16	#4	3'-0"	
e2	32	#4	7'-3"	
e3	8	#4	2'-3"	
e4	8	#4	4'-9"	
e5	48	#4	7'-6"	
e6	16	#4	7'-9"	
h	32	#4	24'-0"	
h1	16	#4	22'-9"	
h2	12	#5	4'-9"	L
h3	12	#5	4'-9"	J
n	48	#5	4'-0"	
p	10	#7	46'-9"	
s1	94	#4	4'-7"	

Bar	No.	Size	Length	Shape
s2	94	#5	8'-9"	
t	94	#5	3'-0"	
u	36	#5	3'-0"	
u	8	#5	5'-8"	
V	90	#4	2'-9"	
V1	180	#4	5'-9"	
W	12	#5	46'-6"	
W1	6	#5	6'-9"	
W2	6	#5	8'-0"	

Class X Concrete	Cu. yds.	103.5
Reinforcement Bars	Lbs.	6,110
Steel Piles, 12 BP 53	Lin. ft.	920
Test Piles Steel (12BP53)	Ea.	2

NORTH ABUT. - EAST STRUCTURE
SOUTH ABUT. - WEST STRUCTURE
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY
STA. 304+25

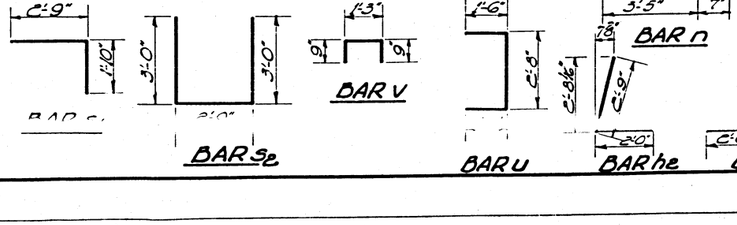
DESIGNED	P. Sander
CHECKED	J. Kelley
DRAWN	J. Barraza
CHECKED	CK

Nov. 10 1961

EXAMINED W. E. Bauman, ENGINEER BRIDGE AND TRAFFIC STRUCTURES
PASSED E. V. Sturts, ENGINEER OF DESIGN
APPROVED D. M. Bartholomew, DIRECTOR

PILE DATA

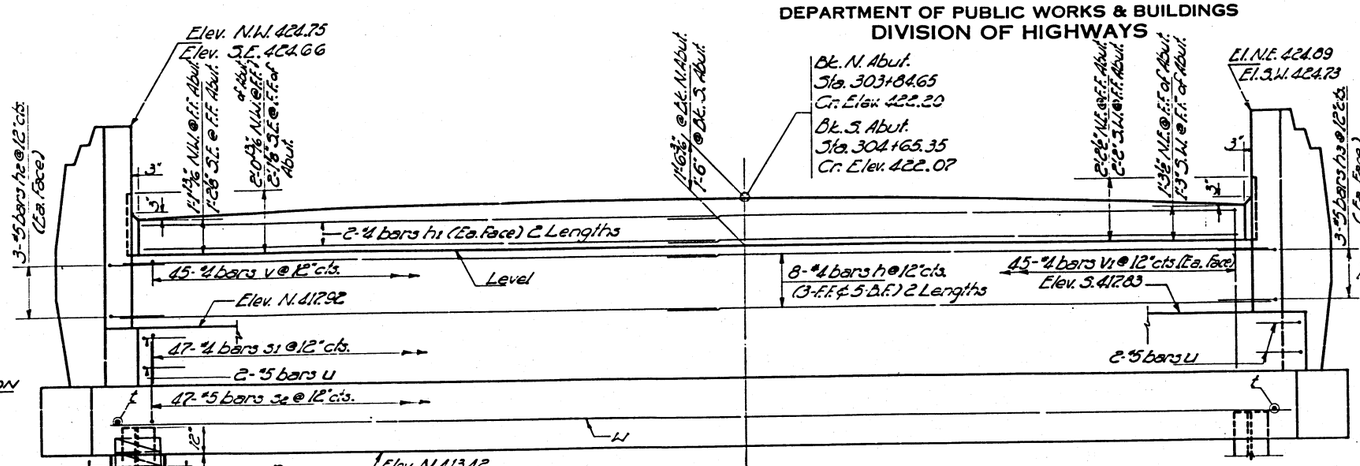
North Abutment	South Abutment
Type - Steel (12BP53)	Type - Steel (12BP53)
Capacity - 42 Tons.	Capacity - 42 Tons.
No. Req'd. - 11	No. Req'd. - 11
Test Pile - 1	Test Pile - 1



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	28-2B	FRANKLIN	22	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 6
11 SHEETS

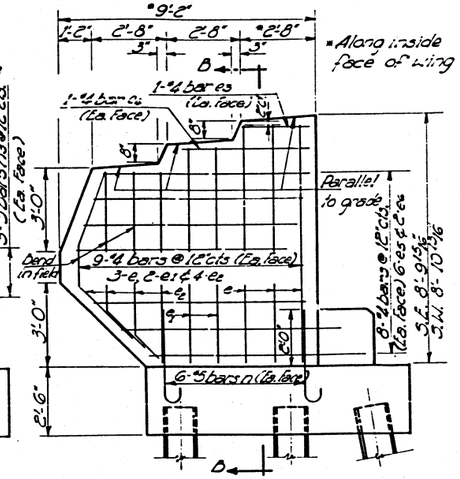


NOTE: FOR SECTION C-C SEE SHEET #5

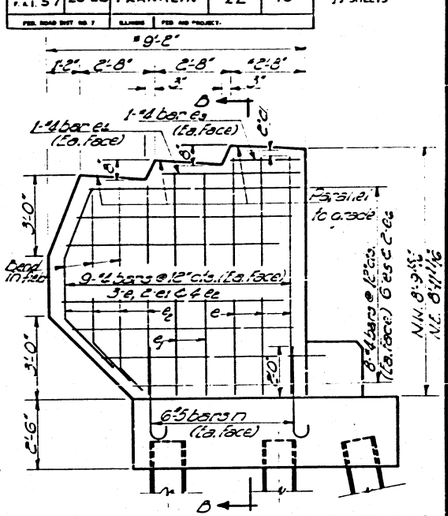
ELEVATION
At right angles to ℄ Rdwy.

STEP DIAGRAM
NORTH ABUTMENT

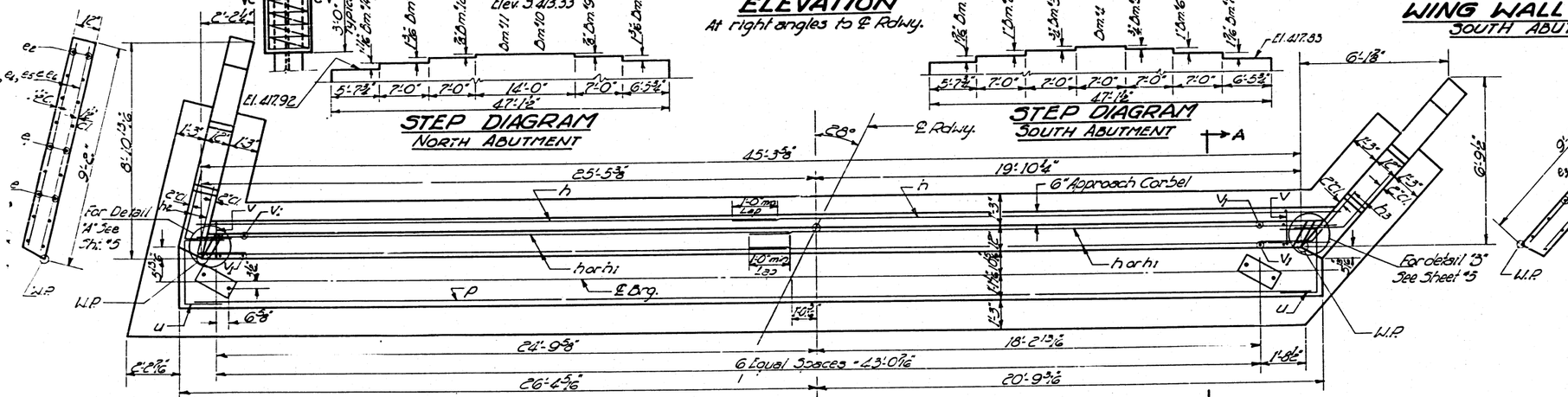
STEP DIAGRAM
SOUTH ABUTMENT



WING WALL ELEVATION
SOUTH ABUTMENT

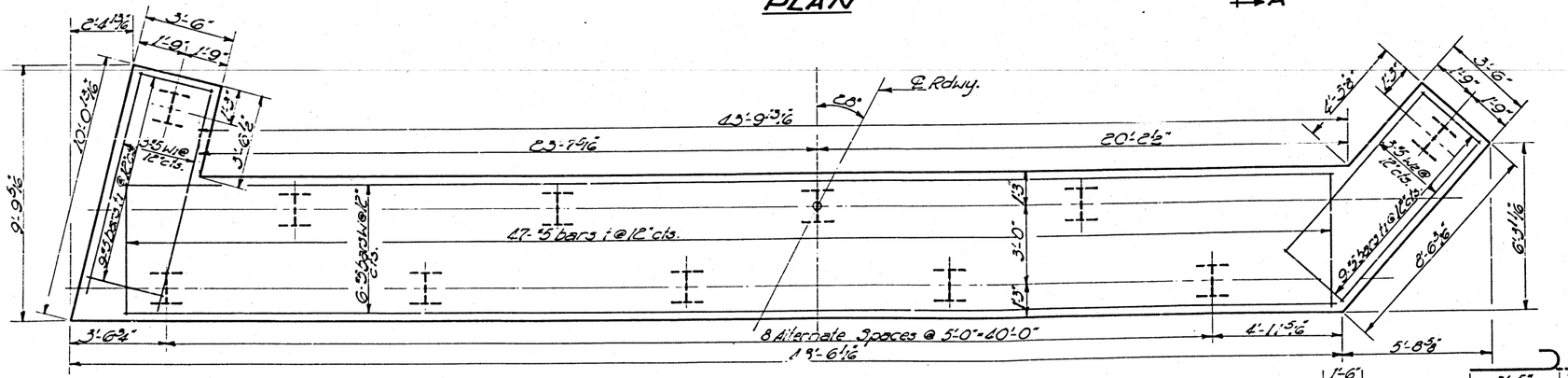


WING WALL ELEVATION
NORTH ABUTMENT



SECTION A-A

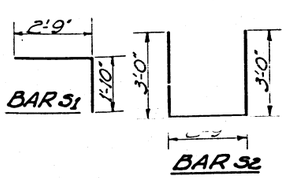
SECTION B-B

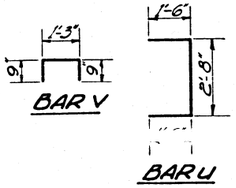


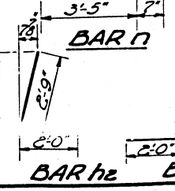
FOOTING PLAN

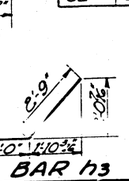
PILE DATA

	North Abutment	South Abutment
Type	Steel (12 BP 53)	Type - Steel (12 BP 53)
Capacity	42 Tons	Capacity - 42 Tons
Est. Length	49 ft.	Est. Length - 39 ft.
No. Req'd.	11	No. Req'd. - 11









BILL OF MATERIAL - 2 ABUTMENTS

Bar	No.	Size	Length	Shape
e	64	#4	8'-8"	——
e1	16	#4	8'-0"	——
e2	32	#4	7'-3"	——
e3	8	#4	2'-3"	——
e4	8	#4	4'-9"	——
e5	48	#4	7'-6"	——
e6	16	#4	7'-9"	——
h	32	#4	24'-0"	——
h1	16	#4	22'-9"	——
h2	12	#5	4'-9"	L
h3	12	#5	4'-9"	⌋
n	48	#5	4'-0"	⌒
p	10	#7	46'-9"	——
s1	94	#4	4'-7"	⊓
s2	94	#5	8'-9"	⊔

Bar	No.	Size	Length	Shape
1	94	#5	3'-0"	——
1i	36	#5	3'-0"	——
U	8	#5	5'-8"	⊔
V	90	#4	2'-9"	——
V1	180	#4	5'-9"	——
W	12	#5	46'-6"	——
W1	6	#5	8'-9"	——
W2	6	#5	8'-0"	——

Class X Concrete Cu. Yds. 193.5
Reinforcement Bars Lbs. 6,110
Steel Piles (12 BP 53) Lin. Ft. 1,188

DESIGNED	R. Sander
CHECKED	Kellogg
DRAWN	Aboribta

EXAMINED Nov. 10 1961
W. E. Bauman
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

SOUTH ABUT. - EAST STRUCTURE
NORTH ABUT. - WEST STRUCTURE
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY
STA. 304+25

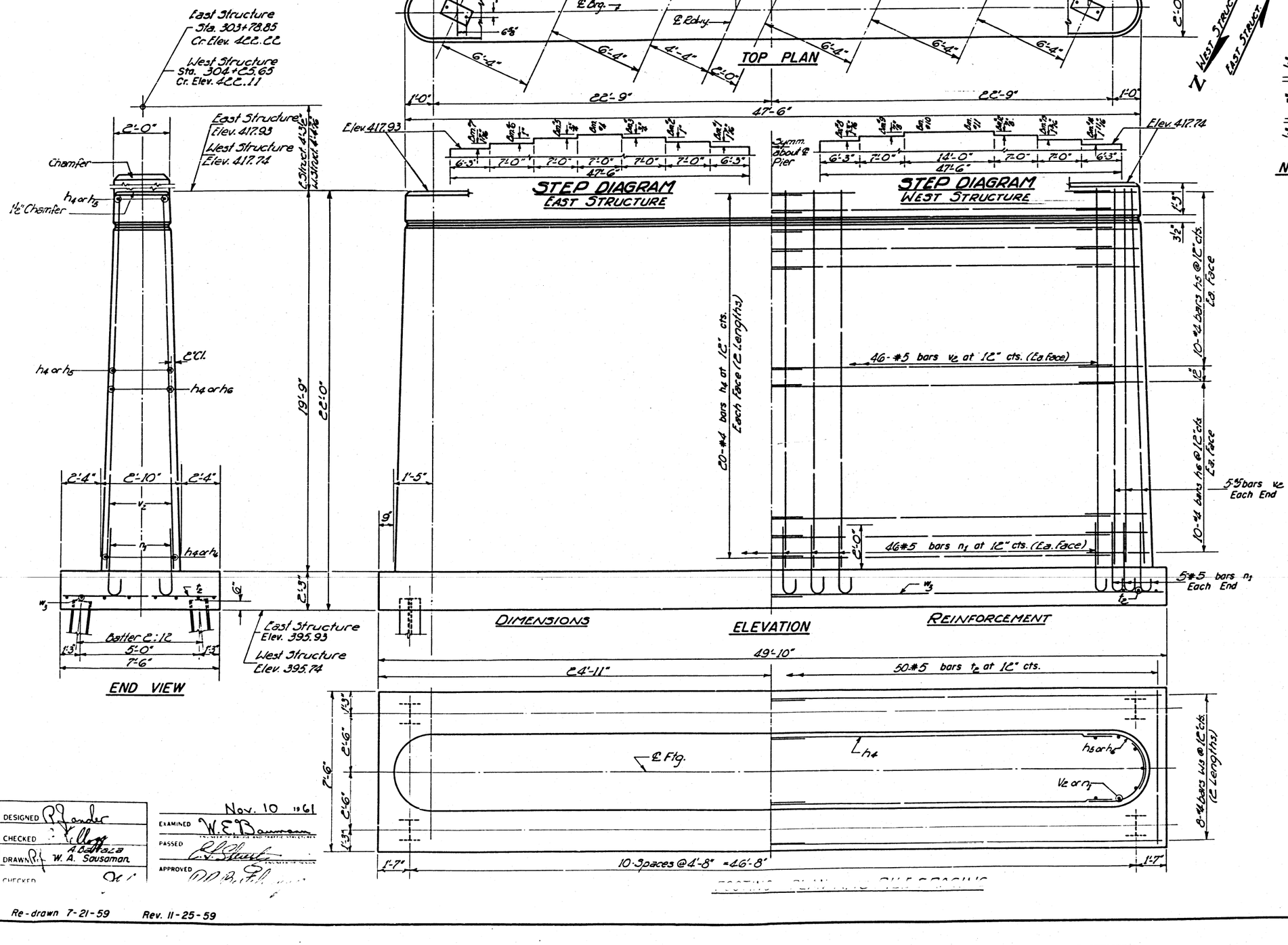
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	28-2B	FRANKLIN	22	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO 7
11 SHEETS

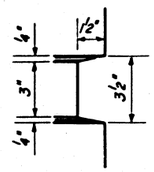
PILE DATA

EAST STRUCTURE	WEST STRUCTURE
Type - Steel (80BP36)	Type - Steel (80BP36)
Capacity - 25 Tons	Capacity - 25 Tons
Est. Length - 26 ft.	Est. Length - 30 ft.
No. Req'd. - 22	No. Req'd. - 22
	Test Pile - 1

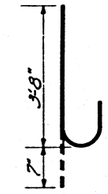


Bar	R	A
h5	10½"	2'-0"
h6	1'-1½"	2'-3"

DETAIL OF BARS
h5 & h6



NOTCH DETAIL



BAR n1

2 PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4	160	#4	23'-3"	——
h5	80	#4	3'-3"	⌒
h6	80	#4	3'-6"	⌒
n1	204	#5	4'-3"	⊂
t2	100	#5	7'-0"	——
ν2	204	#5	19'-6"	——
w3	32	#4	25'-3"	——
Class A Concrete			Cu. Yds.	231.1
Reinforcement Bars			Lbs.	9170
Steel Piles (80BP36)			Lin. ft	1,202
Test Pile Steel (80BP36)			Ea.	1

DESIGNED	R. Sander	Nov. 10 1961
CHECKED	A. Battala	EXAMINED W. E. Baumann
DRAWN	W. A. Sausaman	PASSED
CHECKED		APPROVED

P-1 Re-drawn 7-21-59 Rev. 11-25-59

PIER #1
EAST & WEST STRUCTURES
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
STA. 304+25

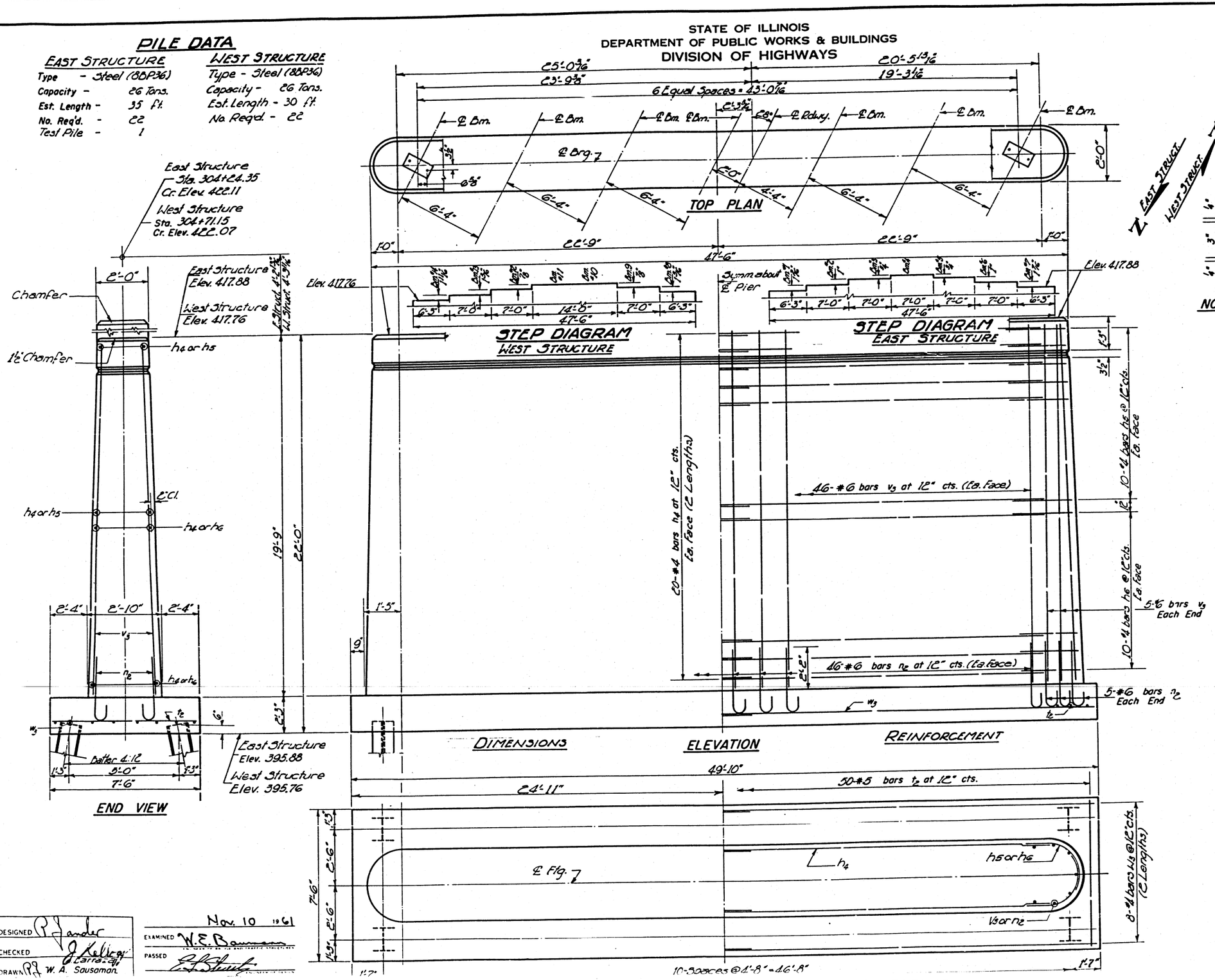
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. Rt. 57	28-2B	FRANKLIN	22	12
FED ROAD DIST NO 7	ILLINOIS	FED AID PROJECT		

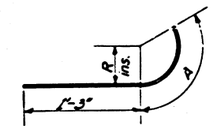
SHEET NO 8
11 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PILE DATA

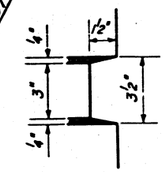
EAST STRUCTURE		WEST STRUCTURE	
Type	- Steel (BBP36)	Type	- Steel (BBP36)
Capacity	- 26 Tons.	Capacity	- 26 Tons.
Est. Length	- 35 ft.	Est. Length	- 30 ft.
No. Req'd.	- 22	No. Req'd.	- 22
Test Pile	- 1		





Bar	R	A
h_5	10½"	0'-0"
h_6	1'-1¼"	0'-3"

DETAIL OF BARS
h_5 & h_6



NOTCH DETAIL

BAR n_2

2 PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_4	160	#4	23'-3"	—
h_5	80	#4	3'-3"	⌒
h_6	80	#4	3'-6"	⌒
n_2	204	#6	4'-6"	⊂
t_2	100	#5	7'-0"	—
v_3	204	#6	19'-6"	—
w_3	32	#4	25'-3"	—
Class A Concrete			Cu. Yds.	23.1
Reinforcement Bars			Lbs.	11,470
Steel Piles (BBP36)			Lin. Ft.	1,395
Test Pile Steel (BBP36)			Ea.	1

DESIGNED	P. Sander	Nov. 10 1961
CHECKED	J. Kelley (Carrier-Air)	EXAMINED W. E. Bowman
DRAWN	W. A. Sausaman	PASSED
CHECKED		

P-1 Re-drawn 7-21-59 Rev. 11-25-59

PIER #2
EAST & WEST STRUCTURES
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY
STA. 304+25

F.A.I. 57	28-2B	FRANKLIN	22	13

SHEET NO 9
11 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

EAST STRUCTURE

LOCATION	BEAM No.	STATION	OFFSET	COLUMN A	COLUMN B
	1	30326.684	21.000	422.104	422.104
	2	30330.052	14.666	422.221	422.221
	3	30333.419	8.333	422.326	422.326
	4	30336.787	2.000	422.368	422.368
Back of North Abut.	℄ Rdwy.	30337.850 -	.000	422.367	422.367
	5	30340.154 -	4.333	422.341	422.341
	6	30343.522 -	10.666	422.245	422.245
	7	30346.889 -	17.000	422.101	422.101
1-Space @ 2'-2"					
		30328.851	21.000	422.094	422.094
		30332.218	14.666	422.211	422.211
		30335.586	8.333	422.317	422.317
		30338.953	2.000	422.359	422.359
℄ Brg. North Abut.		30340.017 -	.000	422.358	422.358
		30342.321 -	4.333	422.332	422.332
		30345.688 -	10.666	422.236	422.236
		30349.056 -	17.000	422.092	422.092
		30338.851	21.000	422.050	422.066
		30342.218	14.666	422.168	422.184
		30345.586	8.333	422.275	422.290
		30348.953	2.000	422.318	422.334
		30350.017 -	.000	422.317	422.333
		30352.321 -	4.333	422.292	422.308
		30355.688 -	10.666	422.197	422.213
		30359.056 -	17.000	422.054	422.070
		30348.851	21.000	422.018	422.025
		30352.218	14.666	422.128	422.144
		30355.586	8.333	422.236	422.251
		30358.953	2.000	422.280	422.296
3-Spaces @ 10'-0" = 30'-0"		30360.017 -	.000	422.280	422.295
		30362.321 -	4.333	422.255	422.271
		30365.688 -	10.666	422.161	422.177
		30369.056 -	17.000	422.019	422.035
		30358.851	21.000	421.972	421.981
		30362.218	14.666	422.092	422.101
		30365.586	8.333	422.200	422.210
		30368.953	2.000	422.245	422.255
		30370.017 -	.000	422.245	422.255
		30372.321 -	4.333	422.222	422.231
		30375.688 -	10.666	422.128	422.138
		30379.056 -	17.000	421.988	421.997
1-Space @ 8'-10"					
		30367.584	21.000	421.941	421.941
		30371.052	14.666	422.061	422.061
		30374.419	8.333	422.171	422.171
		30377.787	2.000	422.217	422.217
℄ Brg. Pier #1		30378.850 -	.000	422.217	422.217
		30381.154 -	4.333	422.194	422.194
		30384.522 -	10.666	422.102	422.102
		30387.889 -	17.000	421.962	421.962
		30377.684	21.000	421.909	421.913
		30381.052	14.666	422.030	422.035
		30384.419	8.333	422.141	422.145
		30387.787	2.000	422.188	422.193
		30388.850 -	.000	422.189	422.193
		30391.154 -	4.333	422.166	422.171
		30394.522 -	10.666	422.075	422.079
		30397.889 -	17.000	421.936	421.941
		30387.684	21.000	421.879	421.888
		30391.052	14.666	422.002	422.011
		30394.419	8.333	422.114	422.123
		30397.787	2.000	422.162	422.171
		30398.850 -	.000	422.163	422.172
		30401.154 -	4.333	422.141	422.150
		30404.522 -	10.666	422.051	422.060
		30407.889 -	17.000	421.913	421.922
4-Spaces @ 10'-0" = 40'-0"					
		30397.684	21.000	421.853	421.860
		30401.052	14.666	421.977	421.984
		30404.419	8.333	422.089	422.096
		30407.787	2.000	422.139	422.146
		30408.850 -	.000	422.140	422.147
		30411.154 -	4.333	422.119	422.126
		30414.522 -	10.666	422.030	422.037
		30417.889 -	17.000	421.893	421.900
		30407.684	21.000	421.830	421.832
		30411.052	14.666	421.955	421.957
		30414.419	8.333	422.068	422.071
		30417.787	2.000	422.119	422.121
		30418.850 -	.000	422.120	422.123
		30421.154 -	4.333	422.100	422.102
		30424.522 -	10.666	422.011	422.014
		30427.889 -	17.000	421.876	421.873

LOCATION	BEAM No.	STATION	OFFSET	COLUMN A	COLUMN B
1-Space @ 5'-6"					
	1	30413.184	21.000	421.818	421.818
	2	30416.552	14.666	421.944	421.944
	3	30419.919	8.333	422.058	422.058
	4	30423.287	2.000	422.109	422.109
℄ Brg. Pier #2	℄ Rdwy.	30424.350 -	.000	422.110	422.110
	5	30426.654 -	4.333	422.090	422.090
	6	30430.022 -	10.666	422.003	422.003
	7	30433.389 -	17.000	421.867	421.867
		30423.184	21.000	421.800	421.810
		30426.552	14.666	421.926	421.937
		30429.919	8.333	422.041	422.052
		30433.287	2.000	422.093	422.104
		30434.350 -	.000	422.095	422.106
		30436.654 -	4.333	422.076	422.086
		30440.022 -	10.666	421.989	422.000
		30443.389 -	17.000	421.855	421.865
		30433.184	21.000	421.784	421.800
		30436.552	14.666	421.912	421.927
		30439.919	8.333	422.028	422.043
		30443.287	2.000	422.081	422.096
3-Spaces @ 10'-0" = 30'-0"		30444.350 -	.000	422.083	422.099
		30446.654 -	4.333	422.064	422.080
		30450.022 -	10.666	421.979	421.994
		30453.389 -	17.000	421.845	421.861
		30443.184	21.000	421.772	421.786
		30446.552	14.666	421.900	421.914
		30449.919	8.333	422.017	422.032
		30453.287	2.000	422.071	422.085
		30454.350 -	.000	422.074	422.088
		30456.654 -	4.333	422.056	422.070
		30460.022 -	10.666	421.971	421.985
		30463.389 -	17.000	421.839	421.853
1-Space @ 8'-10"					
		30452.017	21.000	421.763	421.763
		30455.385	14.666	421.893	421.893
		30458.752	8.333	422.010	422.011
		30462.120	2.000	422.065	422.065
℄ Brg. South Abut.		30463.183 -	.000	422.068	422.068
		30465.487 -	4.333	422.051	422.051
		30468.855 -	10.666	421.967	421.967
		30472.222 -	17.000	421.836	421.836
1-Space @ 2'-2"					
		30454.184	21.000	421.761	421.761
		30457.552	14.666	421.891	421.891
		30460.919	8.333	422.009	422.009
		30464.287	2.000	422.064	422.064
Back of South Abut.		30465.350 -	.000	422.067	422.067
		30467.654 -	4.333	422.050	422.050
		30471.022 -	10.666	421.966	421.966
		30474.389 -	17.000	421.835	421.835

WEST STRUCTURE

LOCATION	BEAM No.	STATION	OFFSET	COLUMN A	COLUMN B
	8	30375.611	17.000	421.998	421.998
	9	30378.978	10.666	422.118	422.118
	10	30382.346	4.333	422.191	422.191
	℄ Rdwy.	30384.650	.000	422.200	422.200
Back of N. Abut.	11	30385.713 -	2.000	422.194	422.194
	12	30389.081 -	8.333	422.128	422.128
	13	30392.448 -	14.666	421.998	421.998
	14	30395.816 -	21.000	421.858	421.858
1-Space @ 2'-2"					
		30377.778	17.000	421.992	421.992
		30381.145	10.666	422.112	422.112
		30384.513	4.333	422.184	422.184
		30386.817	.000	422.194	422.194
℄ Brg. North Abut.		30387.880 -	2.000	422.188	422.188
		30391.248 -	8.333	422.122	422.122
		30394.615 -	14.666	421.993	421.993
		30397.983 -	21.000	421.852	421.852
		30387.778	17.000	421.962	421.978
		30391.145	10.666	422.084	422.099
		30394.513	4.333	422.157	422.173
		30396.817	.000	422.168	422.183
		30397.880 -	2.000	422.162	422.177
		30401.248 -	8.333	422.097	422.112
		30404.615 -	14.666	421.969	421.984
		30407.983 -	21.000	421.829	421.845
		30397.778	17.000	421.936	421.952
		30401.145	10.666	422.059	422.074
		30404.513	4.333	422.133	422.148
		30406.817	.000	422.144	422.160
3-Spaces @ 10'-0" = 30'-0"		30407.880 -	2.000	422.139	422.154
		30411.248 -	8.333	422.075	422.090
		30414.615 -	14.666	421.948	421.963
		30417.983 -	21.000	421.809	421.824
		30407.778	17.000	421.913	421.923
		30411.145	10.666	422.036	422.046
		30414.513	4.333	422.112	422.121
		30416.817	.000	422.124	422.133
		30417.880 -	2.000	422.119	422.128
		30421.248 -	8.333	422.055	422.065
		30424.615 -	14.666	421.929	421.939
		30427.983 -	21.000	421.792	421.802
1-Space @ 8'-10"					
		30416.611	17.000	421.895	421.895
		30419.978	10.666	422.019	422.019
		30423.346	4.333	422.096	422.096
		30425.650	.000	422.108	422.108
℄ Brg. Pier #1		30426.713 -	2.000	422.103	422.103
		30430.081 -	8.333	422.041	422.041
		30433.448 -	14.666	421.916	421.916
		30436.816 -	21.000	421.779	421.779
		30426.611	17.000	421.878	421.882
		30429.978	10.666	422.003	422.007
		30433.346	4.333	422.080	422.085
		30435.650	.000	422.094	422.098
		30436.713 -	2.000	422.089	422.093
		30440.081 -	8.333	422.028	422.032
		30443.448 -	14.666	421.903	421.908
		30446.816 -	21.000	421.768	421.773
		30436.611	17.000	421.863	421.872
		30439.978	10.666	421.989	421.998
		30443.346	4.333	422.068	422.077
		30445.650	.000	422.082	422.091
		30446.713 -	2.000	422.077	422.086
		30450.081 -	8.333	422.017	422.026
		30453.448 -	14.666	421.894	421.903
		30456.816 -	21.000	421.760	421.769
4-Spaces @ 10'-0" = 40'-0"					
		30446.611	17.000	421.852	421.859
		30449.978	10.666	421.979	421.986
		30453.346	4.333	422.058	422.065
		30455.650	.000	422.073	422.080
		30456.713 -	2.000	422.069	422.076
		30460.081 -	8.333	422.010	422.017
		30463.448 -	14.666	421.888	421.895
		30466.816 -	21.000	421.754	421.761
		30456.611	17.000	[illegible]	[illegible]
		30459.978	10.666	421.971	421.974
		30463.346	4.333	422.052	422.054
		30465.650	.000	422.067	422.070
		30466.713 -	2.000	422.063	422.066
		30470.081 -	8.333	422.005	422.008
		30473.448 -	14.666	421.884	421.887
		30476.816 -	21.000	421.752	421.754

LOCATION	BEAM No.	STATION	OFFSET	COLUMN A	COLUMN B
1-Space @ 5'-6"					
	8	30462.111	17.000	421.840	421.840
	9	30465.478	10.666	421.968	421.968
	10	30468.846	4.333	422.050	422.050
	℄ Rdwy.	30471.150	.000	422.065	422.065
℄ Brg. Pier #2	11	30472.213 -	2.000	422.061	422.061
	12	30475.581 -	8.333	422.004	422.004
	13	30478.948 -	14.666	421.883	421.883
	14	30482.316 -	21.000	421.752	421.752
		30472.111	17.000	421.836	421.846
		30475.478	10.666	421.966	421.976
		30478.846	4.333	422.048	422.058
		30481.150	.000	422.064	422.075
		30482.213 -	2.000	422.061	422.071
		30485.581 -	8.333	422.006	422.015
		30488.948 -	14.666	421.885	421.895
		30492.316 -	21.000	421.754	421.764
		30482.111	17.000	421.835	421.851
		30485.478	10.666	421.966	421.981
		30488.846	4.333	422.049	422.064
		30491.150	.000	422.066	422.081
3-Spaces @ 10'-0" = 30'-0"		30492.213 -	2.000	422.063	422.078
		30495.581 -	8.333	422.007	422.023
		30498.948 -	14.666	421.889	421.994
		30502.316 -	21.000	421.759	421.775
		30492.111	17.000	421.837	421.851
		30495.478	10.666	421.969	421.983
		30498.846	4.333	422.053	422.067
		30501.150	.000	422.071	422.085
		30502.213 -	2.000	422.068	422.082
		30505.581 -	8.333	422.014	422.028
		30508.948 -	14.666	421.896	421.910
		30512.316 -	21.000	421.767	421.781
1-Space @ 8'-10"					
		30500.944	17.000	421.841	421.841
		30504.312	10.666	421.974	421.974
		30507.679	4.333	422.059	422.059
		30509.983	.000	422.077	422.078
℄ Brg. South Abut.		30511.047 -	2.000	422.075	422.075
		30514.414 -	8.333	422.021	422.022
		30517.782 -	14.666	421.905	421.905
		30521.149 -	21.000	421.777	421.777
1-Space @ 2'-2"					
		30503.111	17.000	421.843	421.843
		30506.478	10.666	421.976	421.976
		30509.846	4.333	422.061	422.061
		30512.150	.000	422.080	422.080
Back of South Abut.		30513.213 -	2.000	422.077	422.077
		30516.581 -	8.333	422.024	422.024
		30519.948 -	14.666	421.907	421.907
		30523.316 -	21.000	421.780	421.780

COLUMN "A" - THEORETICAL GRADE ELEVATIONS
COLUMN "B" - THEORETICAL GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTION

DESIGNED Robert Jander
CHECKED JEK 4B
DRAWN RJ

Nov. 10 1961
EXAMINED W.E. Bauman
PASSED E.A. Stewart
APPROVED [illegible]

ELEVATION
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. 57	28-2B	FRANKLIN	22	14

SHEET NO 10
11 SHEETS

Boring No. 1
Station 306+39
Offset 55' Lt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
Ground Surface	405.8	0				
Medium and moist brown silty clay loam A-4(8)	405.3		Augered Sample			19
Medium and wet brown mottled grey silty clay loam A-6(9-10)			Augered Sample			24
	399.8	-5	2	0.4	B	27
Soft and wet brown mottled grey and black clay loam A-6(7-8)	397.3		16	0.6	S	18
Medium and wet grey mottled brown clay loam to clay A-6(11-12)	394.8	-10	5	0.6	B	18
Stiff and very moist grey mottled brown silty clay to clay A-6(12-13)	392.3		5	1.2	B	21
Medium and very moist grey mottled brown clay loam A-6(9)	389.8	-15	5	0.8	B	21
Medium and moist grey silty loam A-4(8)			5	0.9	B	23
	384.8	-20	4	0.9	B	21
Medium and moist grey clay loam A-6(7-8)	382.3		9	0.9	S	19
Medium and moist black silty clay A-6(9-10)	380.1	-25	9	0.9	B	27
Medium and wet grey sandy clay loam	379.8		-	-	-	26
Medium and moist grey silty clay A-6(11-12)	377.3		7	0.9	B	25
Stiff and moist grey clay loam A-6(4-5)		-30				
	374.3		12	1.7	S	20
Very stiff and wet grey sandy clay loam	371.3		35	2.50	P	20
Moist black very soft coal	369.8	-35	38	-	-	18
Very stiff and slightly moist grey clay - near clay shale	366.8		77	2.13	S	17
		-40				

Boring No. 1
Station 306+39
Offset 55' Lt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
		-40				
Medium and dry to slightly moist grey to dark grey clay shale			100 Blows in 4 inches			
	365.8	-45	100 Blows in 5 inches			
			100 Blows in 6 inches			
		-50	100 Blows in 6 inches			

Bottom of Hole = 50.0 feet

Entire hole augered to obtain samples. No washing procedure required.

During drilling operations, it appeared that free water was encountered at 13.5 feet

Surface Water El. None
Groundwater El. at Completion 396.8
After 24 Hours 401.8

Boring No. 2
Station 305+10
Offset 55 ft. Rt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
Ground Surface	405.9	0				
Medium and slightly moist brown silty clay loam A-6(8)	402.4		Augered Sample			25
Medium and wet brown silty clay loam A-6(8)	400.9	-5	Augered Sample			33
Soft and wet brown mottled grey sandy clay loam	398.9		3	0.1	S	30
Medium and very moist brown mottled grey clay loam A-6(5-6)	397.4		13	0.6	S	24
Medium and wet brown clay loam A-6(7-8)	394.9	-10	12	0.6	S	24
Medium and very moist grey mottled brown clay A-7-6(14)	388.9	-15	6	0.8	S	35
Medium and moist blue grey clay A-7-6(14)	385.9	-20	6	0.5	S	35
Soft and very moist blue grey clay loam A-6(6-7)	383.9		5	0.6	B	25
Medium and moist grey silty clay loam A-4(8)	380.4	-25	2	0.3	B	24
Medium and wet grey sandy clay loam	376.4		9	1.3	B	22
Very stiff and very moist grey streaked with black sandy clay loam	373.4	-30	12	0.7	P	23
Medium and slightly moist black soft coal	372.4		43	2.7	P	25
Very stiff and slightly moist grey clay - near clay shale	368.9	-35	97	-	-	18
Medium and slightly moist grey clay shale	365.9	-40	96	2.7	S	16
			100 Blows in 3 inches			
			100 Blows in 4 inches			

Bottom of Hole = 40.0 feet

Entire hole augered to obtain samples.
No washing procedure required.
During drilling operation, it appeared that free water was encountered at 6.5 feet

Surface Water El. None
Groundwater El. at Completion 400.9
After 24 Hours 401.9

Boring No. 3
Station 304+63
Offset 35' Rt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
Ground Surface	406.4	0				
Medium and moist brown silty clay loam A-4(8)			Augered Sample			
Medium and moist brown mottled grey clay loam A-6(6-7)	401.9	-5	14	0.8	S	20
Soft to medium and very moist to wet brown mottled grey clay loam A-6(6-7)	399.4		5	0.4	B	19
Stiff and very moist grey mottled brown silty clay A-6(11-12)	394.4	-10	8	0.6	B	20
Stiff and very moist blue to grey clay A-7-6(14-15)	388.9	-15	7	1.4	B	24
Soft and very moist to wet blue to grey clay A-7-6(14-15)	386.4	-20	8	1.4	S	26
Medium and moist blue to grey silty clay A-6(11-12)	382.9		9	1.4	S	27
Very loose and wet grey medium graded fine sand	377.9	-25	4	0.5	B	29
Medium and wet grey poorly graded coarse sand	375.4	-30	3	0.6	B	30
Very stiff and moist grey clay - near clay shale	372.4		5	0.8	B	9
Medium and dry to slightly moist grey clay shale	370.4	-35	5	0.9	B	24
	366.4	-40	Lost Sample			
			25	-	-	19
			55	2.7	S	18
			100 Blows in 1 inches			
			100 Blows in 4 inches			

Bottom of Hole = 40.0 feet

Entire hole augered to obtain samples. No washing procedure required.
During drilling operations, it appeared that free water was encountered at 9.5 feet

Surface Water El. None
Groundwater El. at Completion 398.4
After 24 Hours 401.4

Boring No. 4
Station 304+27
Offset 35' Lt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
Ground Surface	406.1	0				
Medium and moist brown silty clay loam A-4(8)	401.6		Augered Sample			21
Very soft and wet brown mottled grey clay loam A-6(7-8)	398.6	-5	2	0.2	B	24
Medium and very moist brown mottled grey clay loam A-6(7-8)	396.1	-10	8	0.7	S	20
Soft and wet grey clay loam to clay A-6(10-11)	394.6		5	0.4	S	21
Stiff and moist brown silty clay A-6(10)	391.1	-15	8	1.5	B	25
Medium and very moist grey silty clay A-6(10-11)	389.1			0.5	B	26
Stiff and moist brown mottled grey silty clay loam A-6(9-10)	387.6	-20	9	1.4	S	23
Medium and very moist blue grey clay loam A-6(7-8)	385.1		4	0.6	B	24
Medium and very moist blue grey clay A-7-6(14-15)	382.6	-25	2	0.5	B	30
Medium and very moist blue grey silty clay A-6(9-10)	380.1		3	0.5	B	25
Stiff and moist blue grey clay loam A-6(8-9)	377.6	-30	7	1.2	B	19
Very loose and wet grey poorly graded fine sand	375.1		3	-	-	21
Stiff and very moist grey sandy clay loam	371.6	-35	13	1.0	S	19
Medium and very moist grey poorly graded fine sand	370.1		31	0.8	P	21
Medium and slightly moist black soft coal	367.1	-40	100 Blows in 8 inches			
Very stiff and slightly moist grey clay - near clay shale			73	2.9	S	17
			100 Blows in 6 inches			

Boring No. 4
Station 304+27
Offset 35' Lt.

Elevation		N	Qu	T.V.F.	Type Failure	w (%)
		-40				
Medium and dry to slightly moist clay shale			100 Blows in 5 inches			
	361.1	-45	100 Blows in 7 inches			

Bottom of Hole = 45.0 feet

Entire hole augered to obtain samples.
No washing procedure required.

During drilling operations, it appeared, that free water was encountered at 6.0 feet

*Sides of the hole caved in and was unable to get water elevation at completion.

Surface Water El. None
Groundwater El. at Completion *
After 72 Hours 404.1

N= Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler with 140# hammer falling 30"
Qu= Unconfined Compressive Strength tsf
W= Water Content - percentage of oven dry weight %
Type Failure:
B= Bugle Failure
S= Shear Failure
P= Penetrometer value

DESIGNED	Robert Jaudes
CHECKED	J.E.K. A.O.
DRAWN	R.J.
CHECKED	J.E.K.

Nov. 10 1961

EXAMINED W.E. Bamman
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED E.A. Stevens
ENGINEER OF DESIGN
APPROVED M. Bartholomew
CHIEF HIGHWAY ENGINEER

BORING DATA
MARCUM BRANCH
F.A.I. RT. 57 SEC. 28-2B
FRANKLIN COUNTY
STA. 304+25

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SEC. NO.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-2B	FRANKLIN	22	15
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO //
//SHEETS

Boring No. 5
Station 303+78
Offset 55' Lt.

Elevation	N	Qu T/S.f.	Type Failure	w (%)
Ground Surface 406.7 0				
Medium and moist brown silty clay loam A-4(8)				
	20	Augered Sample		
402.7				
Medium and very moist brown silty loam A-4(8) 401.7 -5	20	Augered Sample		
Soft to medium and wet brown clay loam A-6(5-6)	6	0.4	P	18
397.7	6	0.5	S	19
Medium and very moist brown mottled grey clay loam A-6(9-10) -10				
395.2	6	0.5	B	24
Stiff and moist grey mottled brown and black silty clay A-6(11-12)				
	9	1.7	S	25
-15				
390.2	11	2.0	B	25
Medium and moist blue grey silty loam A-4(8)				
	5	0.8	B	23
-20				
386.2				
Soft and moist blue grey clay loam A-6(7-8)	3	0.5	B	22
383.7				
Stiff and moist grey silty clay A-6(9-10)	7	1.0	B	28
-25				
	6	1.1	B	-
377.7	10	1.1	B	21
Very loose and wet grey poorly graded fine sand -30				
374.7	3	-	-	27
Medium and wet white medium grained sandstone	100 Blows in 4 inches			
371.7 -35	100 Blows in 2 inches			
Medium and wet white to grey medium grained sandstone 370.7	100 Blows in 2 inches			
Bottom of Hole = 36.0 feet				

Entire hole augered to obtain samples. No washing procedure requirrd.

During drilling operations, it appeared that free water was encountered at 6.5 feet

Surface Water El. None
Groundwater El. at Completion 403.7
After 24 Hours 401.7

Boring No. 6
Station 304+29
Offset 55' Rt.

Elevation	N	Qu T/S.f.	Type Failure	w (%)
Ground Surface 406.0 0				
Medium and moist brown silty clay loam A-4(8)	17	Augered Sample		
4.4.0				
Medium and tan clay loam A-6(6-7)	16	Augered Sample		
401.5				
Stiff and moist brown mottled grey clay loam A-6(6-7) -5				
	12	1.4	P	17
397.5	9	1.0	B	15
Stiff and very moist brown mottled grey clay loam A-6(7-8) -10				
395.0	5	1.0	B	18
Stiff and moist grey mottled brown silty clay A-6(10-11)				
392.5	7	1.0	S	21
Stiff and moist grey mottled brown and black silty clay				
-15				
	6	1.3	B	22
388.0	7	-	-	-
Stiff and moist blue grey silty clay A-6(10-11) 387.5		1.3	B	22
Medium and moist blue grey clay A-7-6(14-15) -20				
385.0	4	0.8	B	28
Medium and moist blue grey silty clay A-6(11-12)				
382.5	4	0.7	S	23
Medium and moist grey silty clay A-6(11-12) -25				
	3	0.6	B	35
377.5	7	0.7	B	20
Loose and wet grey poorly poorly graded fine sand -30				
374.0	9	-	-	25
Medium to soft and slightly moist dark grey clay shale	100 Blows in 8 inches			
372.0				
Loose and wet grey poorly graded fine sand 371.0 -35				
Very soft and wet black soft coal 370.5	54	-	-	25
		-	-	16
Hard and slightly moist grey clay near clay shale				
368.5	100 Blows in 8 inches			
Medium and dry to slightly moist grey clay shale				
366.5	100 Blows in 4 inches			
Bottom of Hole = 39.5 feet -40				

During drilling operations, it appeared that free water was encountered at 11.0 feet

Hole was washed to obtain sample between 31.0 feet and 32.0 feet

Surface Water El. None
Groundwater El. at Completion 398.0
After 24 Hours 401.0

Boring No 7
Station 303+61
Offset 35' Rt.

Elevation	N	Qu T/S.f.	Type Failure	w (%)
Ground Surface 405.8 0				
Medium and moist brown silty clay loam A-4(8) 405.3	23	Augered Sample		
Medium and moist tan silty loam A-4(8)	22	Augered Sample		
401.3				
Medium and moist brown clay loam A-6(6-7) -5				
399.8	9	0.5	S	12
Soft and wet brown mottled grey clay loam A-6(10)				
398.3	4	0.4	B	20
Medium and very moist brown mottled grey silty clay A-6(11) 395.8 -10				
Medium and very moist grey mottled brown silty clay A-6(11-12)	5	0.4	S	26
	7	0.7	B	26
390.8 -15				
Medium and moist dark grey clay loam A-6(8-9)	6	0.6	B	20
388.3				
Medium and moist blue grey silty clay A-6(12-13)	5	1.0	B	26
385.8 -20				
Medium and moist dark grey clay A-7-6(14-15)	5	0.5	B	34
383.3				
Medium and moist dark grey silty clay A-6(12-13)	6	1.0	B	29
-25				
	4	0.6	B	19
378.3				
Very dense and wet grey poorly graded fine sand	66	-	-	21
376.8				
Medium and wet grey fine grained sandstone -30	100 Blows in 4 inches			
	100 Blows in 3 inches			
Medium and wet well graded medium fine sand 371.8				
370.8 -35				
Medium and wet black soft coal 370.3	41	-	-	27
		-	-	16
Stiff to very stiff and dry to slightly moist clay to clay shale				
	80	2.7	S	16
365.8 -40	100 Blows in 6 inches			
Bottom of Hole = 40.0 feet				

During drilling operations, it appeared that free water was encountered at 6.0 feet
Hole was washed to obtain sample between 28.5 feet and 29.5 feet

Surface Water El. None
Groundwater El. at Completion 400.8
After 24 Hours 403.8

Boring No. 8
Station 303+51
Offset 35' Rt.

Elevation	N	Qu T/S.f.	Type Failure	w (%)
Ground Surface 406.5 0				
Medium and slightly moist brown silty clay loam A-4(8) 406.0	Augered Sample			20
Medium and moist brown silty clay loam A-4(8)	Augered Sample			25
402.0				
Soft and wet brown sandy clay loam -5	1	0.2	P	23
398.0	10	0.4	B	19
Stiff and moist brown mottled grey and black silty clay A-6(10-11) -10				
395.5	9	1.1	B	26
Stiff and moist grey mottled brown silty clay A-6(10-11)				
	6	1.2	B	29
-15				
390.5	8	1.3	B	31
Soft and moist blue grey silty clay loam A-6(9-10)				
388.0	3	0.5	B	26
Medium and moist blue grey silty clay loam A-6(9-10) -20				
385.5	4	1.0	B	25
Medium and moist grey silty clay A-6(10-11)				
	5	0.6	B	22
-25				
381.0	52	-	-	-
Medium and moist blue poorly graded fine sand 380.0		0.8	P	18
Soft and moist light blue fine grained sandstone	100 Blows in 6 inches			
-30				
376.0				
Soft and moist grey fine sandstone with occasional soft coal seams				
-35				
371.0				
Bottom of Hole = 35.5 feet				

Except for coring, entire hole augered to obtain samples. No washing procedure required.

During drilling operations, it appeared that free water was encountered at 4.5 feet

*Filled hole upon corpletion of drilling operation.

Cored from 27.5 feet to 35.5 feet, 85% Recovery

Surface Water El. None
Groundwater El. at Completion 400.5
After - Hours *

DESIGNED	Robert Sander
CHECKED	J. Kellogg Jr.
DRAWN	RS
CHECKED	J.K.

Nov. 10 1961

EXAMINED W.E. Bauman — DIRECTOR OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E.S. Stucki — ENGINEER OF DESIGN
APPROVED A.A. Bartelsmeyer — CHIEF HIGHWAY ENGINEER

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