F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	145	1
F.A.R.A. REG.	ILLINOIS	PROJECT ACIM-57-2(133)63		

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

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 ACIM–57–2(133)63
C–99–007–91

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

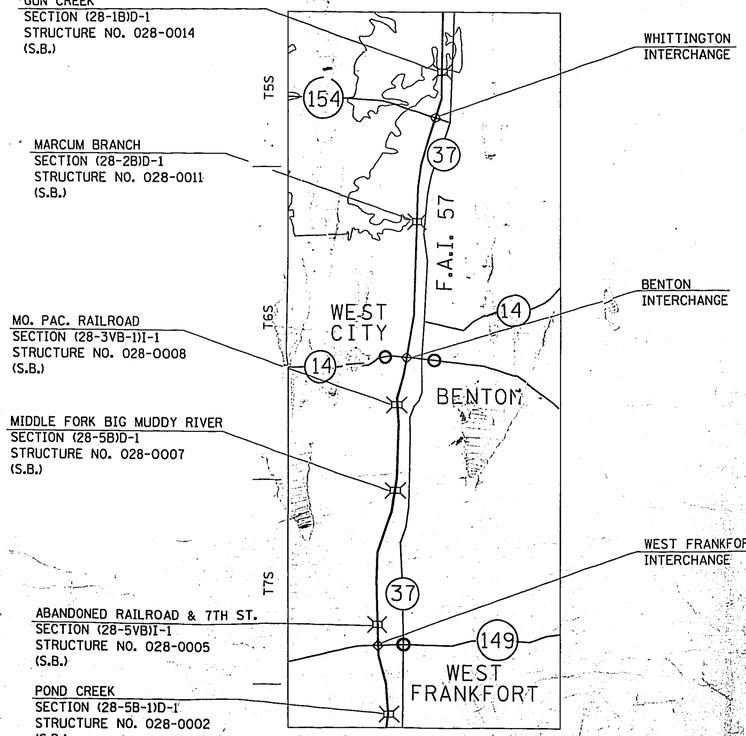
SCALE IN FEET

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′



JULIE 1-800-892-0123

CENTREX ?

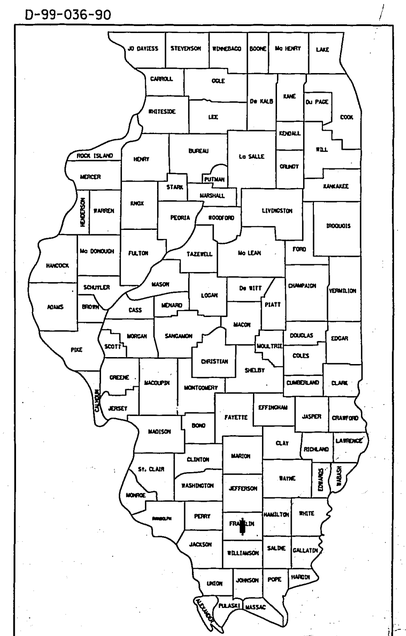
PROJECT ENGINEER: ED SIS.
SQUAD LEADER:

CONTRACT NO. 98149

Sheets 1 Thru 100 (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

D-99-036-90



LOCATION OF SECTION INDICATED THUS:

SCALE
2 MI. 0 2 MI.
APPROX.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 25 19 93
Hal Batchelor
DISTRICT ENGINEER

EXAMINED _____ 19 _____

ENGINEER OF PLANS AND CONTRACTS

PASSED June 4 19 93
Gary Hall
ENGINEER OF DESIGN AND ENVIRONMENT

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

D C B A 0 A B C D

TAMERAN

PARKER

Bench Mark: "□" Cut in S.W. corner of East hubguard of Pond Creek Bridge - Northbound Lane, Sta. 212+50 - Elevation 399.40

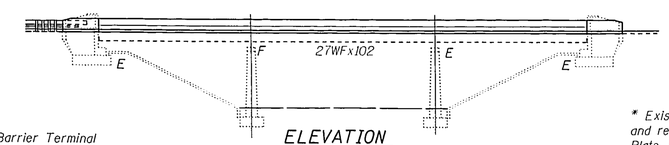
Existing Structure: 028-0002 (S.B.) Built as FAI Route 57, Sec. 28-5B-1 in 1961. Superstructure consists of R.C. deck supported on a 3 span continuous W.F. beams. Temporary median cross-overs shall be utilized to divert traffic over adjacent bridge 028-0001 (N.B.) during reconstruction.

No Salvage

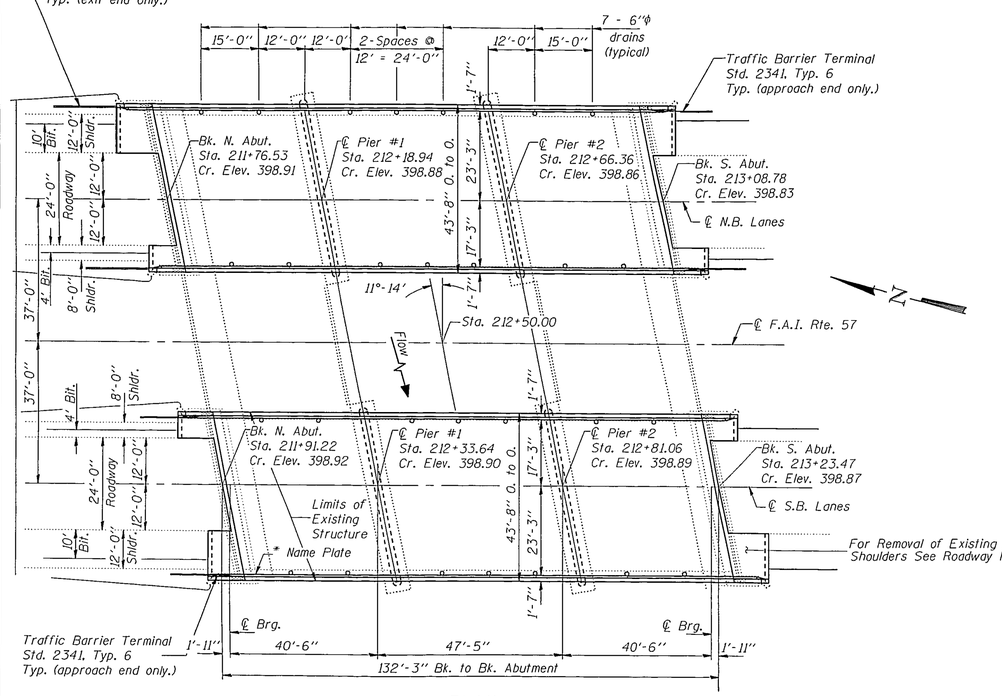
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B. I. F.A.I. 57	128-5B-1 D-1	FRANKLIN		127
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
16 SHEETS



ELEVATION



PLAN

* Existing Name Plate to be cleaned and relocated next to new Name Plate, Cost incidental.

STATION 212+50.00
REBUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
F.A. PROJECT: IM-57-2(133)67
LOADING HS20 & ALT.
STR. NO. 028-0002

NAME PLATE
See Std. 2113

GENERAL NOTES

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.

For cantilever forming bracket, See Special Provisions.

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.

All beams shall be lowered 2⅛" from original position. (See Sht. #8 of 16)

Two ⅛" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.

The Contractor 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.

The zinc-silicate primer shall be used for shop painting of new Structural Steel.

Prior to Welding Studs and 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".

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
	Concrete Removal	Cu. Yd.		9	9
**	Removal of Existing Concrete Deck	Each	1		1
	Floor Drains	Each	14		14
	Preformed Joint Seal 2½"	Lin. Ft.	44		44
	Preformed Joint Seal 4"	Lin. Ft.	44		44
	Class X Concrete Superstructure	Cu. Yd.	187.1		187.1
***	Protective Coat	Sq. Yd.	690		690
	Elastomeric Bearing Assembly, Type I	Each	14		14
	Elastomeric Bearing Assembly, Type II	Each	7		7
	Structural Steel	Lbs.	9,530		9,530
	Stud Shear Connectors	Each	3,150		3,150
	Reinforcement Bars, Epoxy Coated	Pound	44,150		44,150
	Name Plates	Each	1		1
	Bridge Seat Sealer	Sq. Ft.	177		177
	Jack and Remove Existing Bearings	Each	28		28
	Bridge Deck Grooving	Sq. Yd.	555		555
	Structure Excavation	Cu. Yd.		22.0	22.0

** Cost includes removal of existing railing.
*** Quantity includes bridge deck surface.

-0.0378% (SB)

Sta. 211+91.22 Elev. 398.92 — Sta. 213+23.47 Elev. 398.87

PROFILE GRADE

F.A. Route 57 (along ℄ pavement) (South Bound Structure)

Note: Only the South bound structure is included in this contract. North bound structure shown for information only.

DESIGNED	Richard J. Chaput
CHECKED	James P. Davidsmeier
DRAWN	Paul W. Sweet
CHECKED	RJC RTB DGV

May 20 1993

EXAMINED Orrin D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

DESIGN SPECIFICATIONS

1989 AASHTO with 1990 & 1991 Interims & Seismic Retrofitting Guidelines for Highway Bridges.

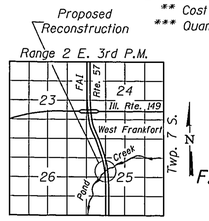
LOADING HS 20-44 & Alt.

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

DESIGN STRESSES

FIELD UNITS
New Construction

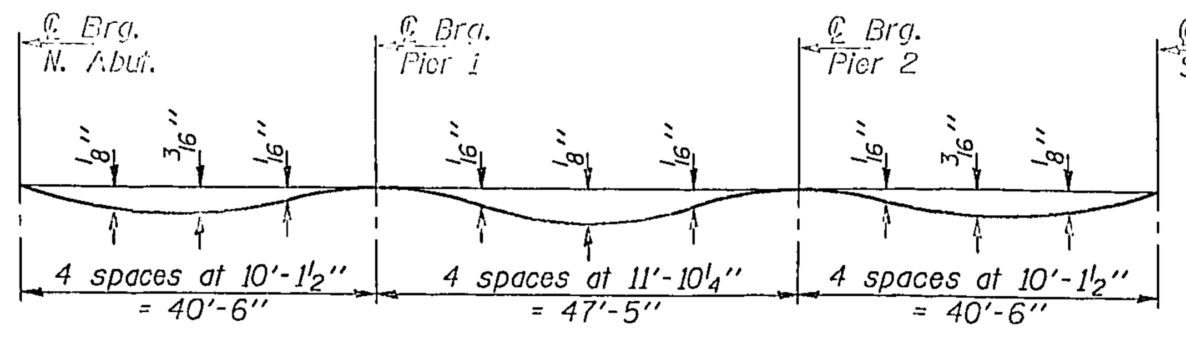
f'_c = 3,500 psi
f_y = 60,000 psi (Reinf.)
f_y = 33,000 psi (Existing Structural Steel)
f_y = 36,000 psi (New Structural Steel)



LOCATION SKETCH

GENERAL PLAN
F.A.I. ROUTE 57 OVER
POND CREEK
F.A.I. ROUTE 57 SECTION (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00
STRUCTURE NUMBER 028-0002 (S.B.)

D C B A 0 A B C D
TAMERAN

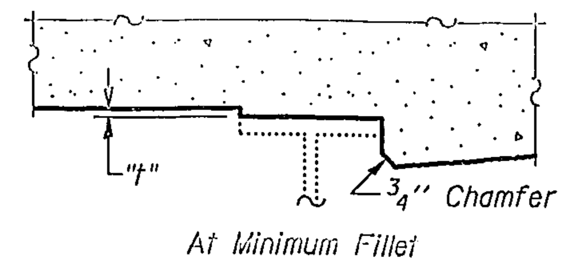


DEAD LOAD DEFLECTION DIAGRAM

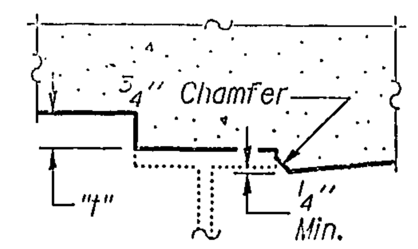
(Includes weight of concrete only)

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



At Minimum Fillet



At Maximum Fillet

F.A.I. 57 · FRANKLIN · 128 · SHEET NO. 2 · 16 SHEETS

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 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21187.868	-16.875	398.695	398.695
℄ BRG. N. ABUT.	21189.785	-16.875	398.694	398.694
A	21199.785	-16.875	398.690	398.702
B	21209.785	-16.875	398.687	398.701
C	21219.785	-16.875	398.683	398.690
℄ BRG. PIER 1	21230.285	-16.875	398.679	398.679
D	21240.285	-16.875	398.675	398.680
E	21250.285	-16.875	398.671	398.681
F	21260.285	-16.875	398.667	398.676
G	21270.285	-16.875	398.664	398.668
℄ BRG. PIER 2	21277.702	-16.875	398.661	398.661
H	21287.702	-16.875	398.657	398.664
I	21297.702	-16.875	398.653	398.668
J	21307.702	-16.875	398.650	398.661
℄ BRG. S. ABUT.	21318.202	-16.875	398.646	398.646
BK. OF S. ABUT.	21320.119	-16.875	398.645	398.645

EAST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21188.837	-12.000	398.796	398.796
℄ BRG. N. ABUT.	21190.754	-12.000	398.795	398.795
A	21200.754	-12.000	398.791	398.803
B	21210.754	-12.000	398.788	398.802
C	21220.754	-12.000	398.784	398.791
℄ BRG. PIER 1	21231.254	-12.000	398.780	398.780
D	21241.254	-12.000	398.776	398.781
E	21251.254	-12.000	398.772	398.782
F	21261.254	-12.000	398.769	398.777
G	21271.254	-12.000	398.765	398.769
℄ BRG. PIER 2	21278.671	-12.000	398.762	398.762
H	21288.671	-12.000	398.758	398.765
I	21298.671	-12.000	398.754	398.769
J	21308.671	-12.000	398.751	398.762
℄ BRG. S. ABUT.	21319.171	-12.000	398.747	398.747
BK. OF S. ABUT.	21321.088	-12.000	398.746	398.746

℄ BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21189.184	-10.250	398.830	398.830
℄ BRG. N. ABUT.	21191.101	-10.250	398.829	398.829
A	21201.101	-10.250	398.825	398.836
B	21211.101	-10.250	398.821	398.836
C	21221.101	-10.250	398.818	398.825
℄ BRG. PIER 1	21231.601	-10.250	398.814	398.814
D	21241.601	-10.250	398.810	398.815
E	21251.601	-10.250	398.806	398.815
F	21261.601	-10.250	398.802	398.811
G	21271.601	-10.250	398.798	398.802
℄ BRG. PIER 2	21279.018	-10.250	398.796	398.796
H	21289.018	-10.250	398.792	398.799
I	21299.018	-10.250	398.788	398.802
J	21309.018	-10.250	398.784	398.796
℄ BRG. S. ABUT.	21319.518	-10.250	398.780	398.780
BK. OF S. ABUT.	21321.435	-10.250	398.780	398.780

℄ BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21190.500	-3.625	398.909	398.909
℄ BRG. N. ABUT.	21192.417	-3.625	398.908	398.908
A	21202.417	-3.625	398.904	398.916
B	21212.417	-3.625	398.901	398.915
C	21222.417	-3.625	398.897	398.904
℄ BRG. PIER 1	21232.917	-3.625	398.893	398.893
D	21242.917	-3.625	398.889	398.894
E	21252.917	-3.625	398.885	398.895
F	21262.917	-3.625	398.881	398.890
G	21272.917	-3.625	398.878	398.882
℄ BRG. PIER 2	21280.334	-3.625	398.875	398.875
H	21290.334	-3.625	398.871	398.878
I	21300.334	-3.625	398.867	398.882
J	21310.334	-3.625	398.864	398.875
℄ BRG. S. ABUT.	21320.834	-3.625	398.860	398.860
BK. OF S. ABUT.	21322.751	-3.625	398.859	398.859

℄ ROADWAY AND P. G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21191.220	0.000	398.920	398.920
℄ BRG. N. ABUT.	21193.137	0.000	398.919	398.919
A	21203.137	0.000	398.915	398.927
B	21213.137	0.000	398.912	398.926
C	21223.137	0.000	398.908	398.915
℄ BRG. PIER 1	21233.637	0.000	398.904	398.904
D	21243.637	0.000	398.900	398.905
E	21253.637	0.000	398.896	398.906
F	21263.637	0.000	398.893	398.901
G	21273.637	0.000	398.889	398.893
℄ BRG. PIER 2	21281.054	0.000	398.886	398.886
H	21291.054	0.000	398.882	398.889
I	21301.054	0.000	398.878	398.893
J	21311.054	0.000	398.875	398.886
℄ BRG. S. ABUT.	21321.554	0.000	398.871	398.871
BK. OF S. ABUT.	21323.471	0.000	398.870	398.870

℄ BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21191.816	3.000	398.912	398.912
℄ BRG. N. ABUT.	21193.733	3.000	398.911	398.911
A	21203.733	3.000	398.907	398.919
B	21213.733	3.000	398.904	398.918
C	21223.733	3.000	398.900	398.907
℄ BRG. PIER 1	21234.233	3.000	398.896	398.896
D	21244.233	3.000	398.892	398.897
E	21254.233	3.000	398.888	398.898
F	21264.233	3.000	398.885	398.893
G	21274.233	3.000	398.881	398.885
℄ BRG. PIER 2	21281.650	3.000	398.878	398.878
H	21291.650	3.000	398.874	398.881
I	21301.650	3.000	398.870	398.885
J	21311.650	3.000	398.867	398.878
℄ BRG. S. ABUT.	21322.150	3.000	398.863	398.863
BK. OF S. ABUT.	21324.067	3.000	398.862	398.862

℄ BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21193.132	9.625	398.839	398.839
℄ BRG. N. ABUT.	21195.049	9.625	398.838	398.838
A	21205.049	9.625	398.834	398.846
B	21215.049	9.625	398.831	398.845
C	21225.049	9.625	398.827	398.834
℄ BRG. PIER 1	21235.549	9.625	398.823	398.823
D	21245.549	9.625	398.819	398.824
E	21255.549	9.625	398.815	398.825
F	21265.549	9.625	398.811	398.820
G	21275.549	9.625	398.808	398.812
℄ BRG. PIER 2	21282.966	9.625	398.805	398.805
H	21292.966	9.625	398.801	398.808
I	21302.966	9.625	398.797	398.811
J	21312.966	9.625	398.794	398.805
℄ BRG. S. ABUT.	21323.466	9.625	398.790	398.790
BK. OF S. ABUT.	21325.383	9.625	398.789	398.789

WEST LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21193.603	12.000	398.794	398.794
℄ BRG. N. ABUT.	21195.520	12.000	398.793	398.793
A	21205.520	12.000	398.790	398.801
B	21215.520	12.000	398.786	398.800
C	21225.520	12.000	398.782	398.789
℄ BRG. PIER 1	21236.020	12.000	398.778	398.778
D	21246.020	12.000	398.774	398.779
E	21256.020	12.000	398.771	398.780
F	21266.020	12.000	398.767	398.775
G	21276.020	12.000	398.763	398.767
℄ BRG. PIER 2	21283.437	12.000	398.760	398.760
H	21293.437	12.000	398.756	398.763
I	21303.437	12.000	398.753	398.767
J	21313.437	12.000	398.749	398.760
℄ BRG. S. ABUT.	21323.937	12.000	398.745	398.745
BK. OF S. ABUT.	21325.854	12.000	398.744	398.744

℄ BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21194.447	16.250	398.705	398.705
℄ BRG. N. ABUT.	21196.364	16.250	398.705	398.705
A	21206.364	16.250	398.701	398.712
B	21216.364	16.250	398.697	398.711
C	21226.364	16.250	398.693	398.701
℄ BRG. PIER 1	21236.864	16.250	398.689	398.689
D	21246.864	16.250	398.686	398.691
E	21256.864	16.250	398.682	398.691
F	21266.864	16.250	398.678	398.686
G	21276.864	16.250	398.674	398.678
℄ BRG. PIER 2	21284.281	16.250	398.671	398.671
H	21294.281	16.250	398.668	398.675
I	21304.281	16.250	398.664	398.678
J	21314.281	16.250	398.660	398.672
℄ BRG. S. ABUT.	21324.781	16.250	398.656	398.656
BK. OF S. ABUT.	21326.698	16.250	398.655	398.655

℄ BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT.	21195.763	22.875	398.567	398.567
℄ BRG. N. ABUT.	21197.680	22.875	398.566	398.566
A	21207.680	22.875	398.563	398.574
B	21217.680	22.875	398.559	398.573
C	21227.680	22.875	398.555	398.562
℄ BRG. PIER 1	21238.180	22.875	398.551	398.551
D	21248.180	22.875	398.547	398.552
E	21258.180	22.875	398.543	398.553
F	21268.180	22.875	398.540	398.548
G	21278.180	22.875	398.536	398.540
℄ BRG. PIER 2	21285.597	22.875	398.533	398.533
H	21295.597	22.875	398.529	398.536
I	21305.597	22.875	398.526	398.540
J	21315.597	22.875	398.522	398.533
℄ BRG. S. ABUT.	21326.097	22.875	398.518	398.518
BK. OF S. ABUT.	21328.014	22.875	398.517	398.517

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

DESIGNED Derek Verhulst
CHECKED Richard J. Chaput
DRAWN Paul W. Sweet
CHECKED RJL DGV RTB

May 20 1993
EXAMINED Iraj Q. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

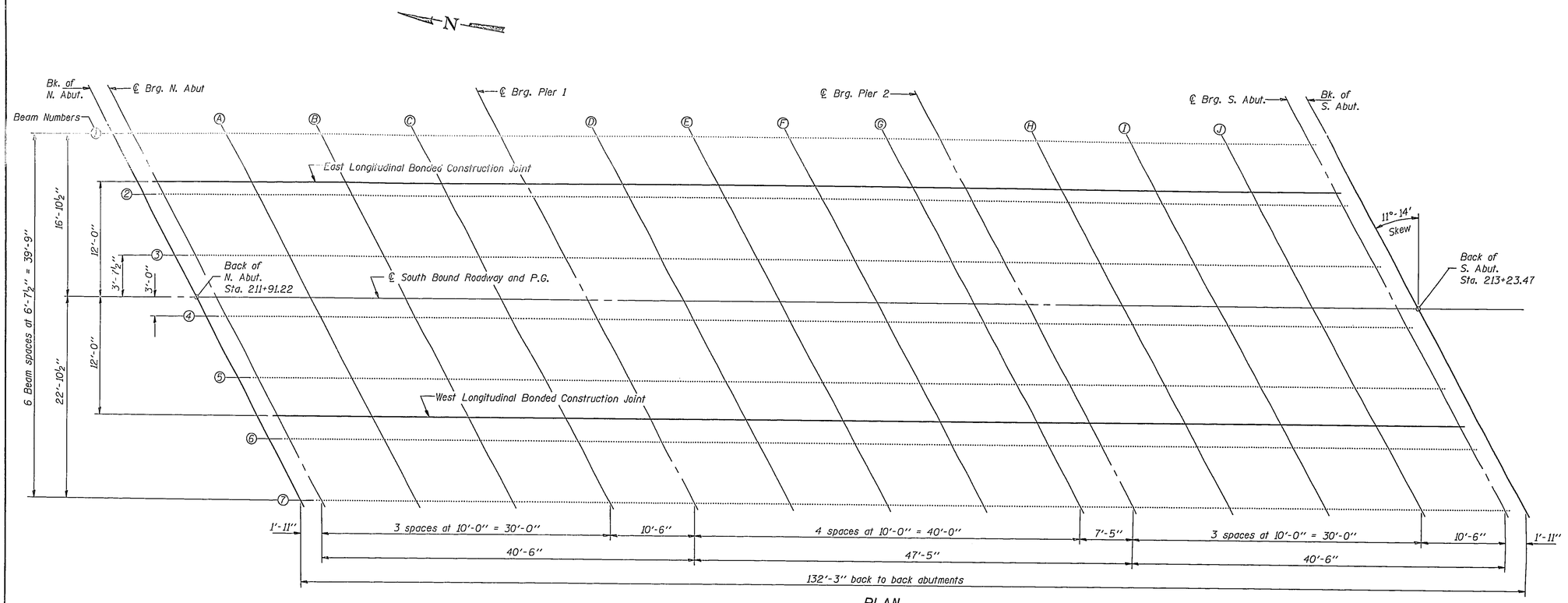
E-S 1-6-82

TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(28-5B-1) D-1	FRANKLIN	129	SHEET NO. 3
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		16 SHEETS



PLAN

Work this sheet with sheet #2 of 16.

DESIGNED	Richard J. Chaput
CHECKED	Firuz P. Vasiliwala
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993

EXAMINED Engineer of Bridge Design

PASSED Robert E. Anderson
Engineer of Bridges and Structures

APPROVED
Director of Highways

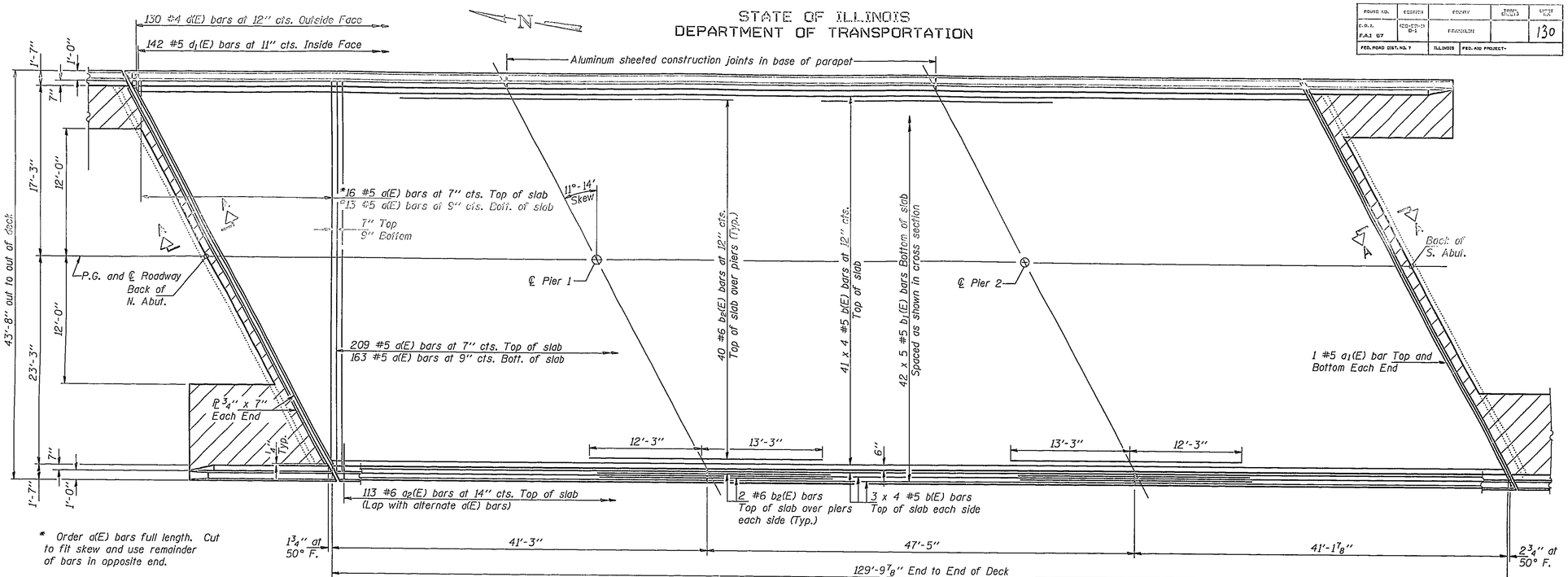
TOP OF SLAB ELEVATIONS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

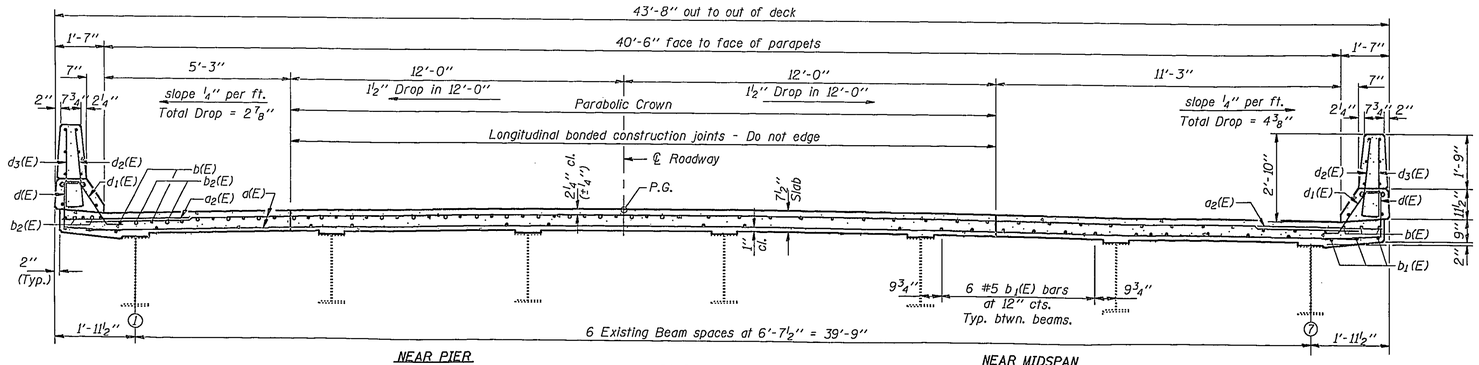
FOLIO NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.D.I. F.A.I 57	102-EB-1) D-1	FRANKLIN	130	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
16 SHEETS



* Order d(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.
See sheets #13 & 15 of 16 for Approach shoulder details.

MIN. BAR LAPS
#5 bars = 1'-9"

DESIGNED	Richard J. Chaput
CHECKED	Thomas R. Vanderlaan
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993
EXAMINED Greg D. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

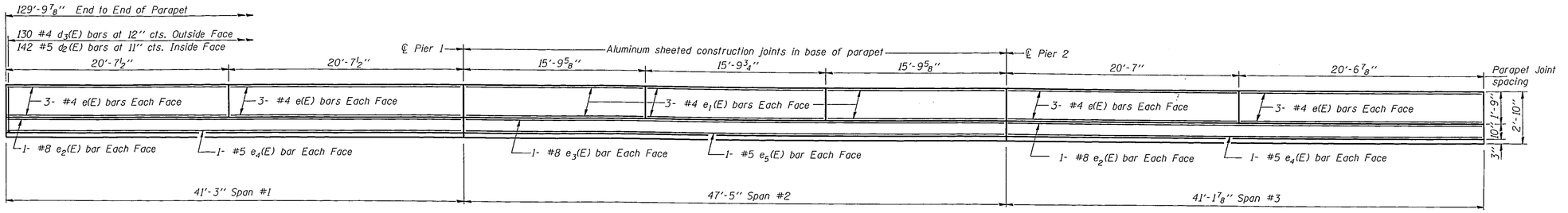
SUPERSTRUCTURE
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

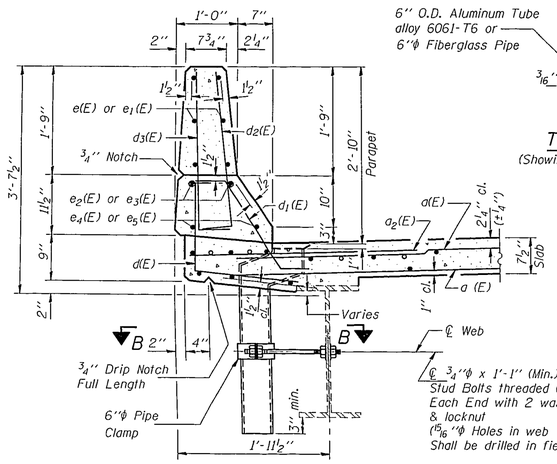
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A.I. 57	(28)-5B-1) D-1	FRANKLIN		131
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
16 SHEETS

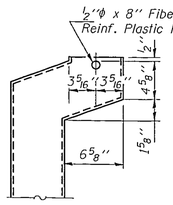


INSIDE PARAPET ELEVATION
(Looking East)

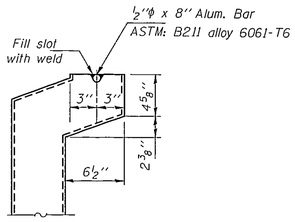


SECTION THRU PARAPET

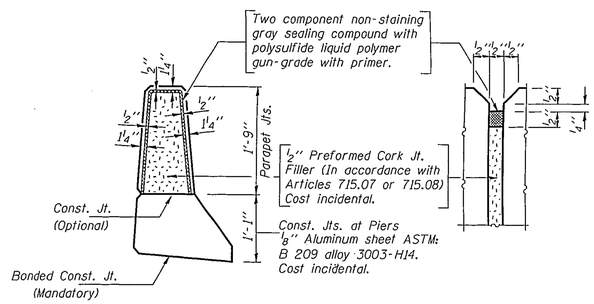
TOP PLAN
(Showing Aluminum Tube)



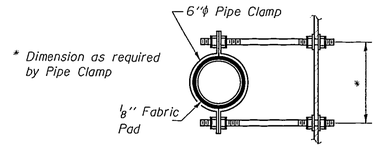
FIBERGLASS PIPE



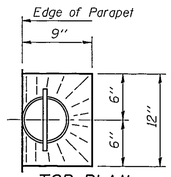
ALUMINUM PIPE



PARAPET JOINT DETAILS



SECTION B-B



TOP PLAN

Notes:
The exterior surfaces of the floor drain shall be painted with the vinyl enamel paint as specified in the Standard Specifications. 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	Richard L. Chaput
CHECKED	Thomas P. Daniewicz
DRAWN	Paul W. Sweet
CHECKED	RSC RTB DGV

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. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

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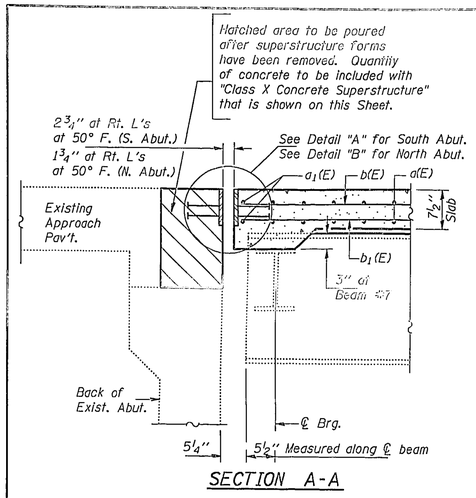
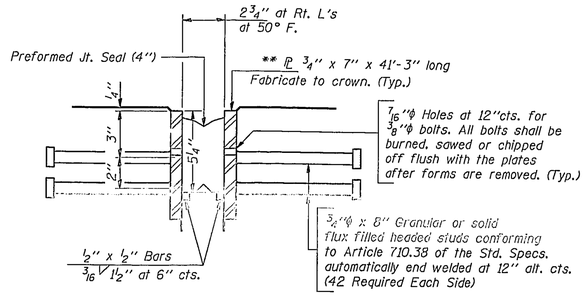
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

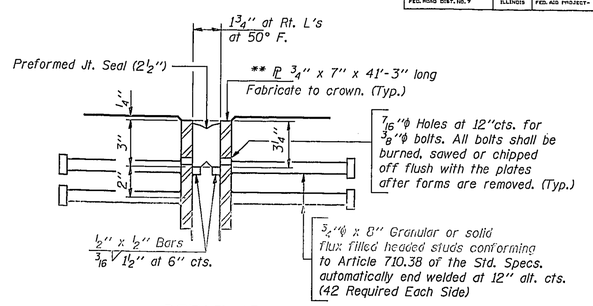
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-5B-1)D-1	FRANKLIN	132	SHEET NO. 6
				16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



SECTION A-A

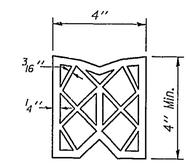


DETAIL "A"

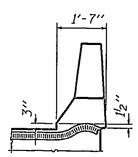


DETAIL "B"

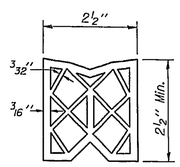
** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel. After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for New Structural Steel. No field painting required.



PREFORMED JOINT SEAL (4")



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

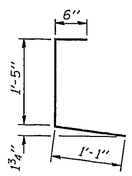


PREFORMED JOINT SEAL (2 1/2")

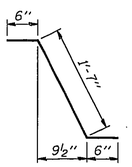
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	401	#5	41'-8"	
a1(E)	4	#5	42'-6"	
a2(E)	226	#6	4'-0"	
b(E)	188	#5	33'-8"	
b1(E)	210	#5	27'-3"	
b2(E)	88	#6	25'-6"	
d(E)	260	#4	3'-0"	⊏
d1(E)	284	#5	2'-7"	⌝
d2(E)	284	#5	3'-0"	L
d3(E)	260	#4	3'-0"	L
e(E)	48	#4	20'-4"	
e1(E)	36	#4	15'-6"	
e2(E)	8	#8	40'-10"	
e3(E)	4	#8	47'-1"	
e4(E)	8	#5	40'-10"	
e5(E)	4	#5	47'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	40,540	
Class X Concrete Superstructure		Cu. Yd.	187.1	

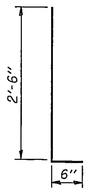
Reinforcement bars designated (E) shall be epoxy coated.



BAR d(E)



BAR d1(E)



BARS d2(E) & d3(E)

DESIGNED	Richard J. Christ
CHECKED	James P. Daidakatis
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993

EXAMINED Draj D Kasper
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

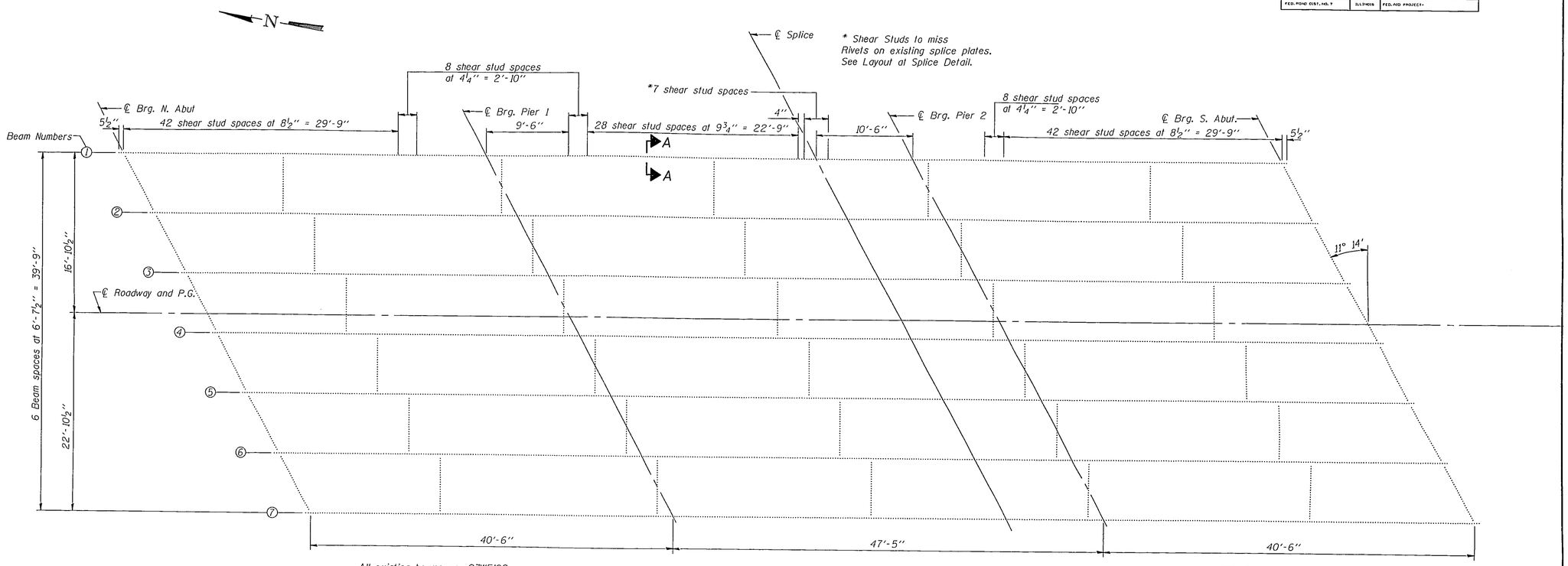
SUPERSTRUCTURE DETAILS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I.	(28-5B-1) D-1	FRANKLIN		133
F.A.I. 57				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 7
16 SHEETS



All existing beams are 27WF102

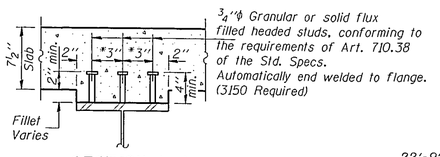
PLAN

INTERIOR BEAM REACTION TABLE			
		Abuts.	Piers
R℄	(K)	15.9	49.0
R℄	(K)	32.2	39.3
Imp.	(K)	9.7	11.6
R (Total)	(K)	57.8	99.9

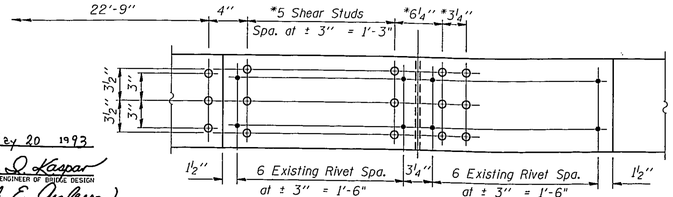
Is and Ss are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload).
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment) = 1.3 [M℄ + Ms℄ + $\frac{5}{3}$(M℄ + I)]
fs (Overload) is the sum of the stresses due to to [M℄ + Ms℄ + $\frac{5}{3}$(M℄ + I)]
fs (Total) is the sum of the stresses due to 1.3 [M℄ + Ms℄ + $\frac{5}{3}$(M℄ + I)]. at unbraced. Non-compact. section.
M℄ - Moment due to dead load on non-composite section.
Ms℄ - Moment due to dead load on composite section.
M℄ - Moment due to live load on non-composite section.
I - Live load impact.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in⁴)	3604	3604	3604
Ic (n=9)	(in⁴)	10448	———	10448
Ic (n=27)	(in⁴)	7732	———	7732
Ss	(in³)	266	266	266
Sc (n=9)	(in³)	405	———	405
Sc (n=27)	(in³)	367	———	367
I℄	(K/ft.)	.748	1.01	.748
M℄	('K)	89.3	183.6	65.3
fs℄ non-comp	(k.s.i.)	4.0	8.3	2.9
s℄	(K/ft.)	.262	———	.262
Ms℄	('K)	36.1	———	34.9
** fs℄ (comp)	(k.s.i.)	1.2	———	1.1
M℄	('K)	237.3	122.9	245.1
M (Imp)	('K)	71.2	36.2	70.8
$\frac{5}{3}$ (M℄ + I)	('K)	514.2	265.2	526.5
fs $\frac{5}{3}$(℄ + I)	(k.s.i.)	15.2	11.9	15.6
Ma	('K)	831.0	583.0	815.0
fs (Overload)	(k.s.i.)	20.4	20.2	19.6
fs (Total)	(k.s.i.)	26.5	26.3	25.5
VR	(K)	45.4	———	48.5

** For n = 27.



SECTION A-A



LAYOUT AT SPLICE

DESIGNED	Richard J. Chant
CHECKED	Thomas P. Nicholson
DRAWN	Paul W. Sweet
CHECKED	RJC RTB DSV

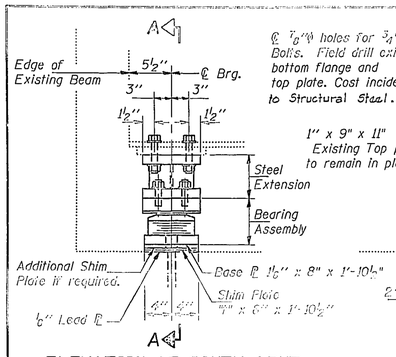
May 20 1993
EXAMINED Greg D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL DETAILS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

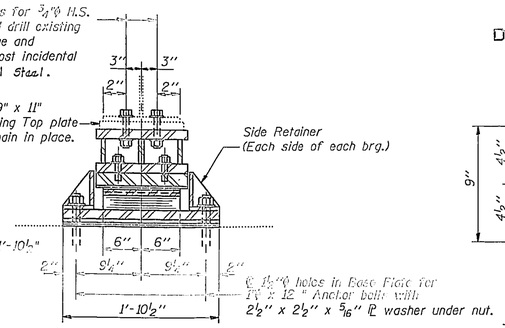
D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	163-5B-1D-1	FRANKLIN	134	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		16 SHEETS

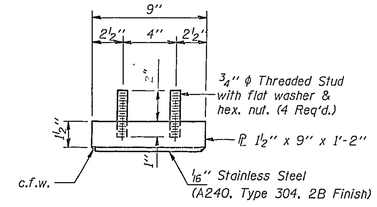


ELEVATION AT SOUTH ABUT.

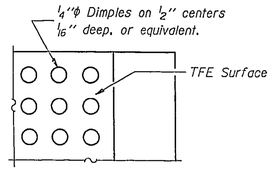


SECTION A-A

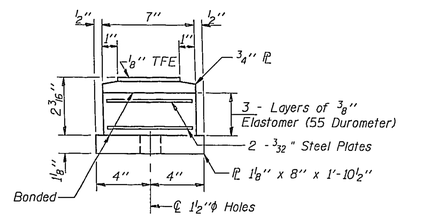
TYPE II TFE ELASTOMERIC EXP. BRG.



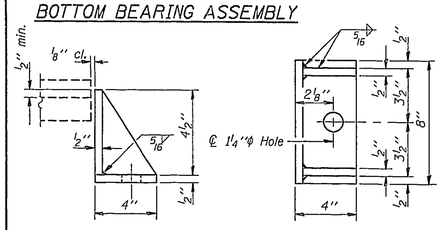
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE

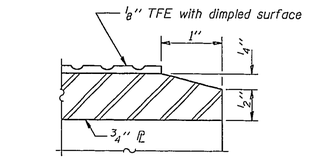


BOTTOM BEARING ASSEMBLY



SIDE RETAINER

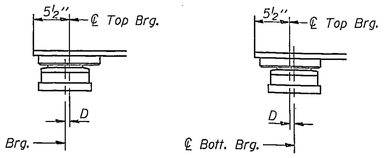
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SECTION THRU TFE

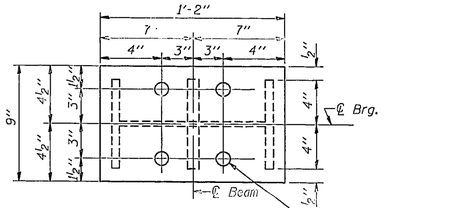
Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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.

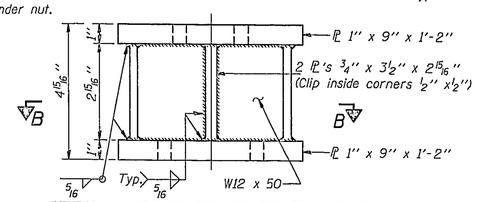


SETTING ANCHOR BOLTS AT EXP. BRG.

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

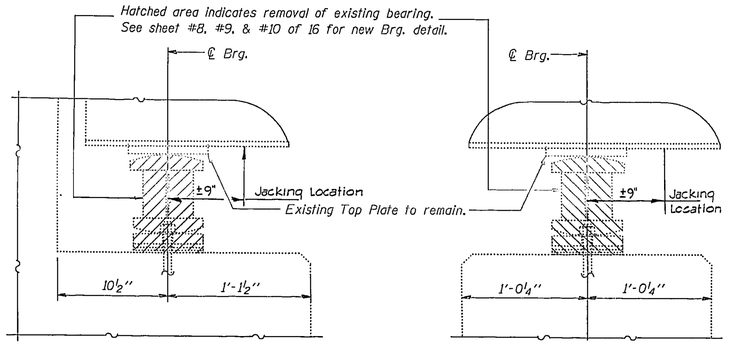


PLAN OF PLATE



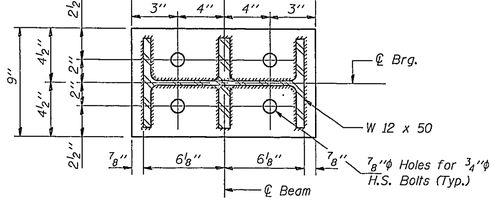
STEEL EXTENSION AT SOUTH ABUT.

Equivalent welded plates will be allowed in lieu of W12 x 50 section.



JACK AND REMOVE EXISTING BEARING

(Dimension are at Rt. L's)



SECTION B-B

JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The Contractor shall submit for approval by the Engineer. plans for jacking & cribbing prior to commencing any work at the bearings..
2. Jacking and removing existing bearings shall be done after deck removal is completed and before the new deck is poured.
3. All beams. all locations shall be lifted simultaneously.
4. Jacking shall be limited to a maximum of ¼" lift to remove the existing bearing assembly, utilizing a jack or series of jacks. The max. dead load reaction at each beam with the deck removed is 6.0K at Piers and 1.9K at Abutments. The Minimum Jack Capacity for each beam is 5 Ton at Piers and 2 Ton at Abutments. Set jacks so that beams can be lowered approximately 2⅛" from original position.
5. Remove the existing anchor bolts flush with the concrete surface and grind smooth. The rocker and bottom plates shall be removed leaving the existing top plate intact.
6. The new bearings and steel extensions shall be in place and the jacks shall be lowered before the new deck is poured. Lower all Beams simultaneously in ¼" increments.

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 table of Shim Plate "t" Dimensions see sheet #10 of 16.
Anchor Bolts, Side Retainers, Shim Plates, Lead Plates, and Steel Extension Assemblies are included in the "Structural Steel" Quantity.
See sheet #12 of 16 for anchor bolt layout at South Abutment.

DESIGNED	Richard J. Chaplet	
CHECKED	~~Amir P. Daiwala~~	
DRAWN	Paul W. Sweet	
CHECKED	RJC DGV RWB	

May 20 1993

EXAMINED Jaji D. Kasper
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

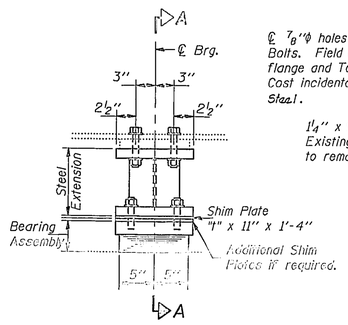
APPROVED
DIRECTOR OF HIGHWAYS

SOUTH ABUTMENT
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

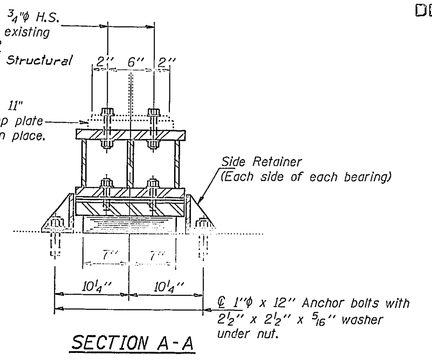
D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-5B-1)D-1	FRANKLIN	135	9
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		16 CONTRACT

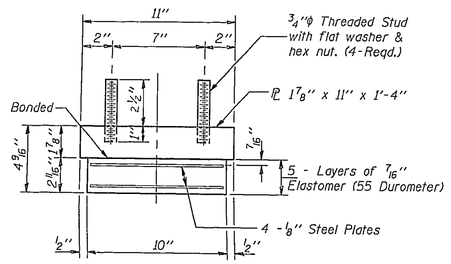


ELEVATION AT PIER 2

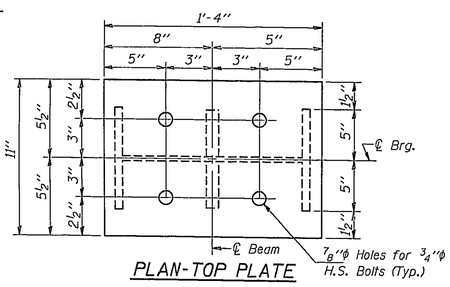


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

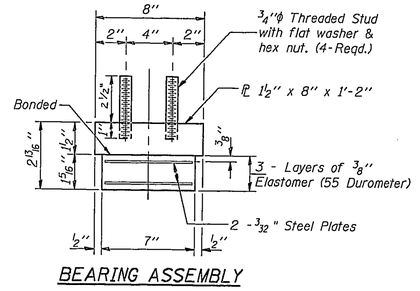


PLAN-TOP PLATE

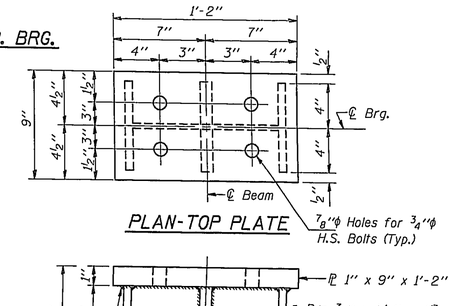
SECTION C-C

ELEVATION AT NORTH ABUT.

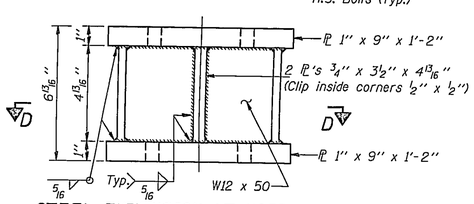
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

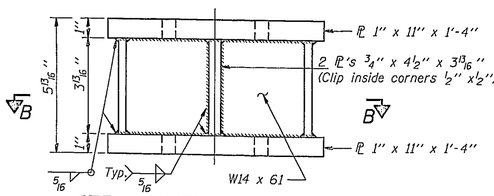


PLAN-TOP PLATE



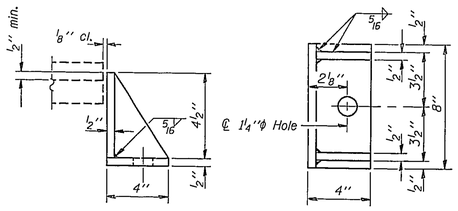
STEEL EXTENSION AT NORTH ABUT.

Equivalent welded plates will be allowed in lieu of W12x50 section.



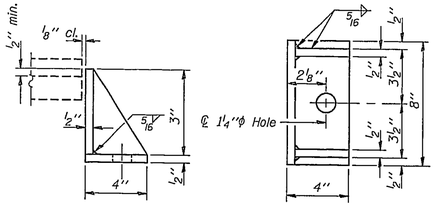
STEEL EXTENSION AT PIER 2

Equivalent welded plates will be allowed in lieu of W14 x 61 section.



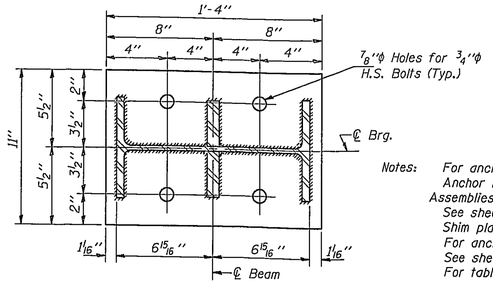
SIDE RETAINER

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

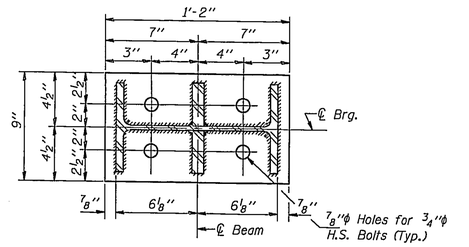


SIDE RETAINER

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.
- Anchor bolts, Side Retainers, Shim plates, Lead Plates, and Steel Extension Assemblies included in "Structural Steel" Quantity.
- 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 at Pier #2 See sheet #10 of 16.
- See sheet #14 of 16 for anchor bolt layout at North Abutment.
- For table of Shim Plate "t" Dimensions 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	Richard J. Chard
CHECKED	Steven P. Daniels, Jr.
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993

EXAMINED Greg D. Krapac, ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

APPROVED DIRECTOR OF HIGHWAYS

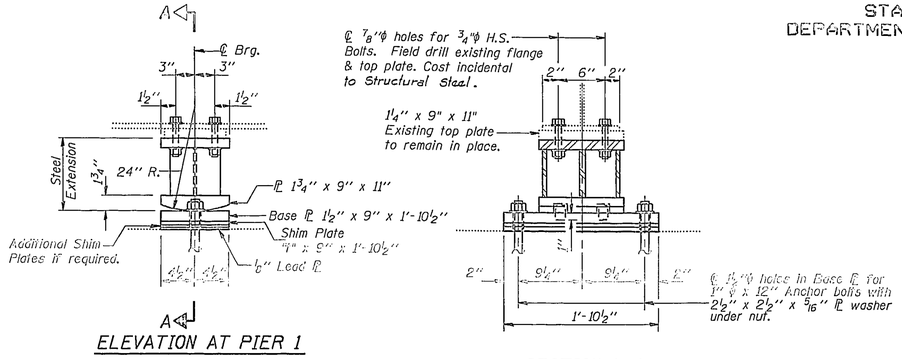
PIER 2 AND NORTH ABUTMENT BEARING DETAILS

F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

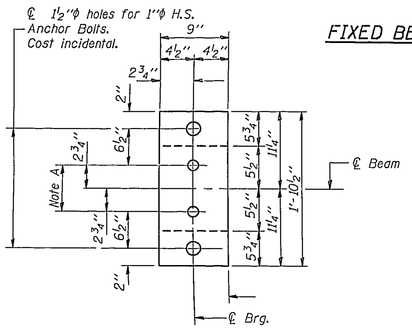
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-5B-1) D-1	FRANKLIN	136	SHEET NO. 10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		16 SHEETS



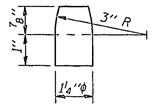
ELEVATION AT PIER 1

SECTION A-A

FIXED BEARING

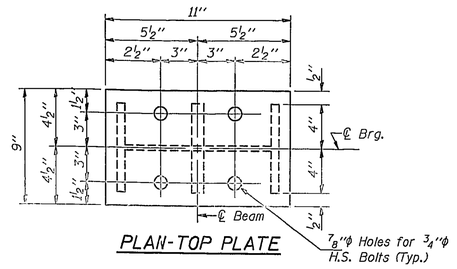


PLAN-BASE PLATE

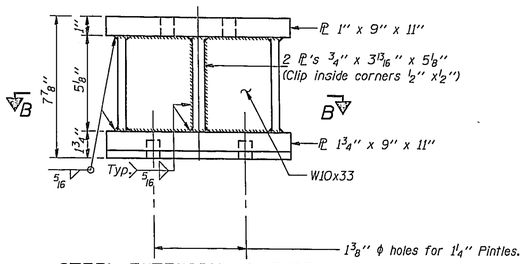


PINTLE

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

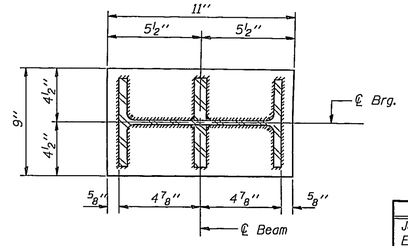


PLAN-TOP PLATE



STEEL EXTENSION AT PIER #1

Equivalent welded plates will be allowed in lieu of W10x33 section.



SECTION B-B

* TABLE OF "t" DIMENSIONS

Location	N. Abut.	Pier #1	Pier #2	S. Abut.
Beam #1	2 3/8"	2⅛"	2⅛"	2"
Beam #2	¾"	½"	½"	½"
Beam #3	1¾"	1⅜"	1¼"	1½"
Beam #4	1⅝"	1⅜"	1¼"	1⅝"
Beam #5	½"	1"	¾"	½"
Beam #6	2¼"	2⅝"	2⅜"	2¼"
Beam #7	⅝"	⅞"	⅝"	⅝"

* Dimensions are based on Field survey. The contractor shall verify & make adjustments as necessary.

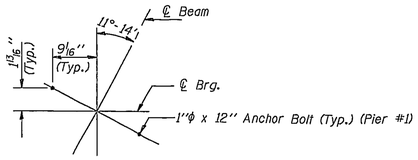
BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	7

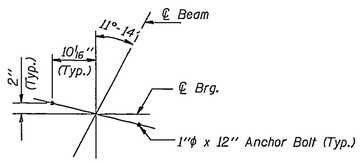
Notes: For anchor bolt installation details see sheet #16 of 16.
See sheet #8 of 16 for Jack and Removal Existing Bearing Procedure.

DESIGNED Richard T. Chapin
CHECKED Thomas P. Davidson
DRAWN Paul W. Sweet
CHECKED RJC DGV RTB

May 20 1993
EXAMINED Raj D. Kaspar ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS



ANCHOR BOLT SETTING DETAILS (PIER #1 ONLY)



ANCHOR BOLT SETTING DETAIL (PIER #2 ONLY)

PIER 1
BEARING DETAILS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

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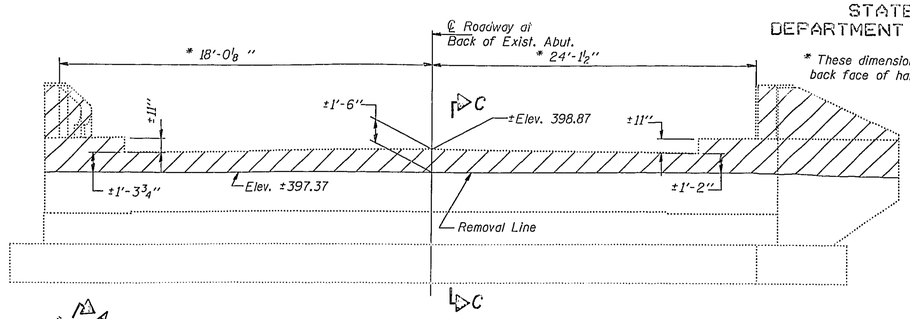
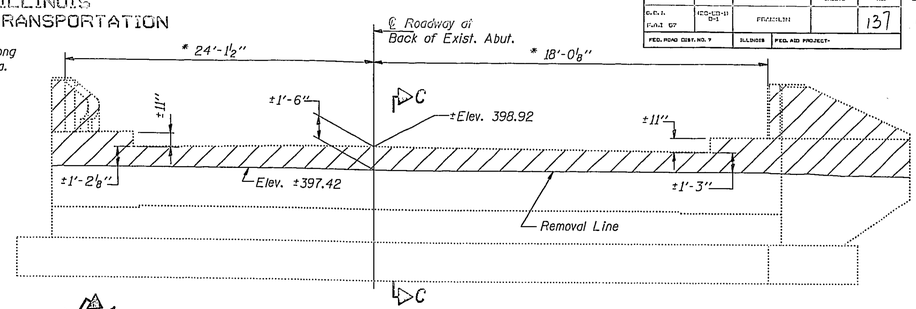
TAMERAN

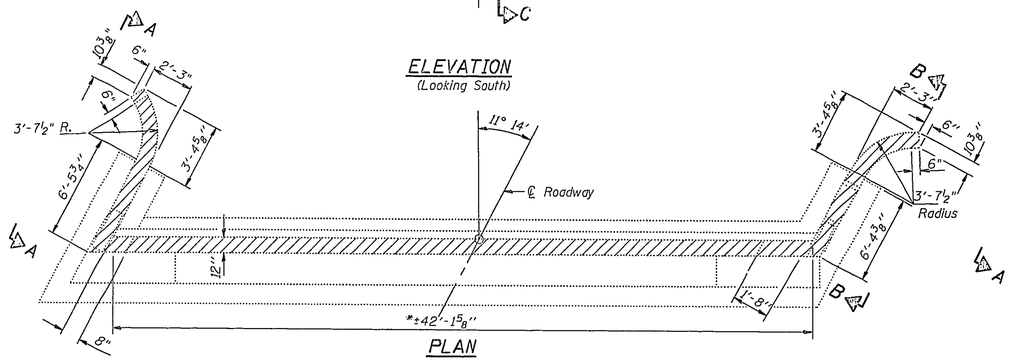
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.R.S. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	(28-5B-1)D-1	FRANKLIN	137	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



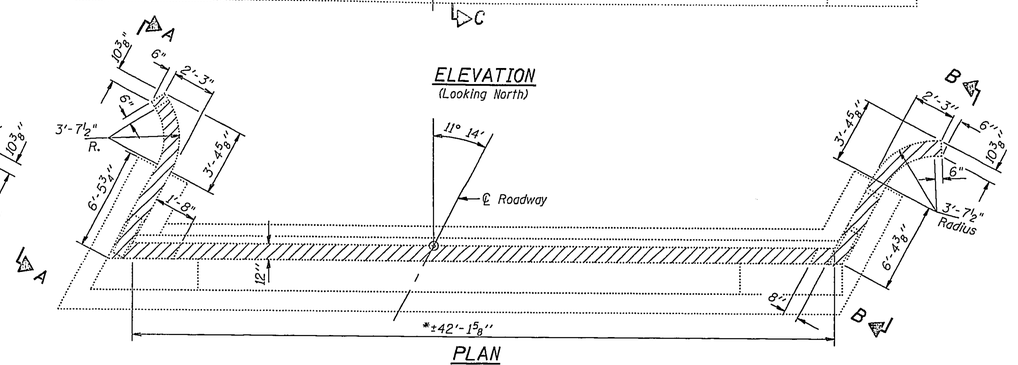
* These dimensions are along back face of hatched area.





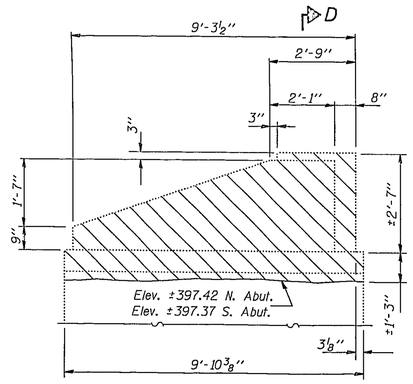
ELEVATION
(Looking South)

PLAN
SOUTH ABUTMENT

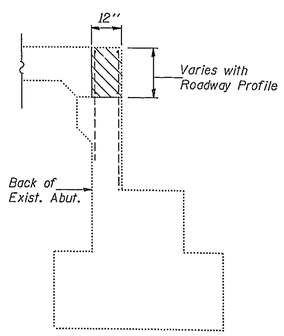


ELEVATION
(Looking North)

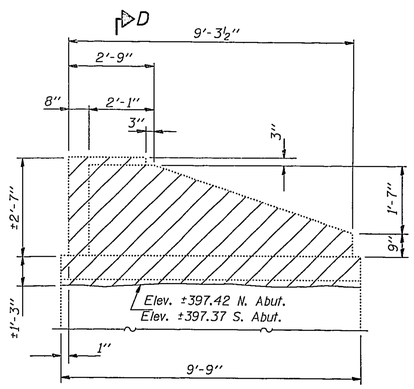
PLAN
NORTH ABUTMENT



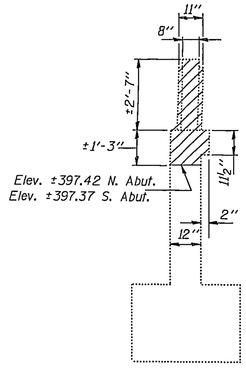
VIEW A-A



SECTION C-C



VIEW B-B



SECTION D-D

DESIGNED	Richard T. Chipoletti
CHECKED	Steven P. Danielewicz
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993

EXAMINED Joseph D. Kaspar
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

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

TWO ABUTMENTS
BILL OF MATERIAL

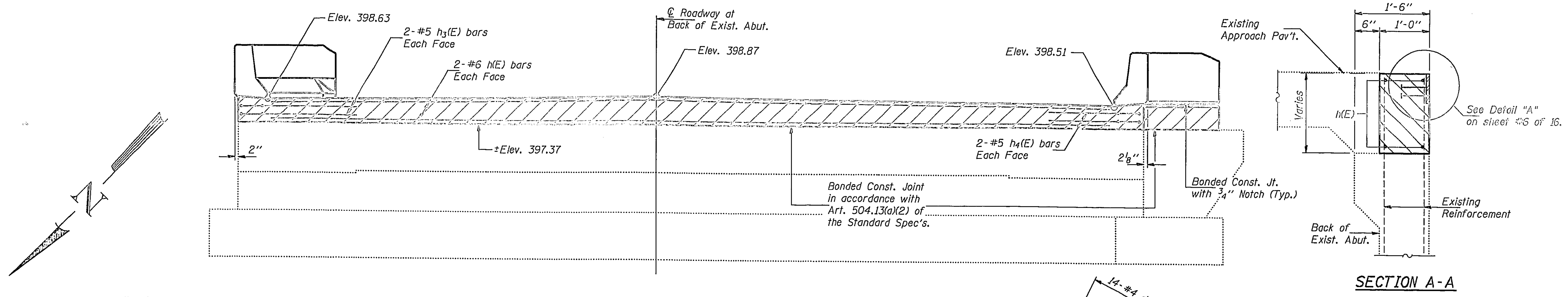
Item	Unit	Total
Concrete Removal	Cu. Yd.	9

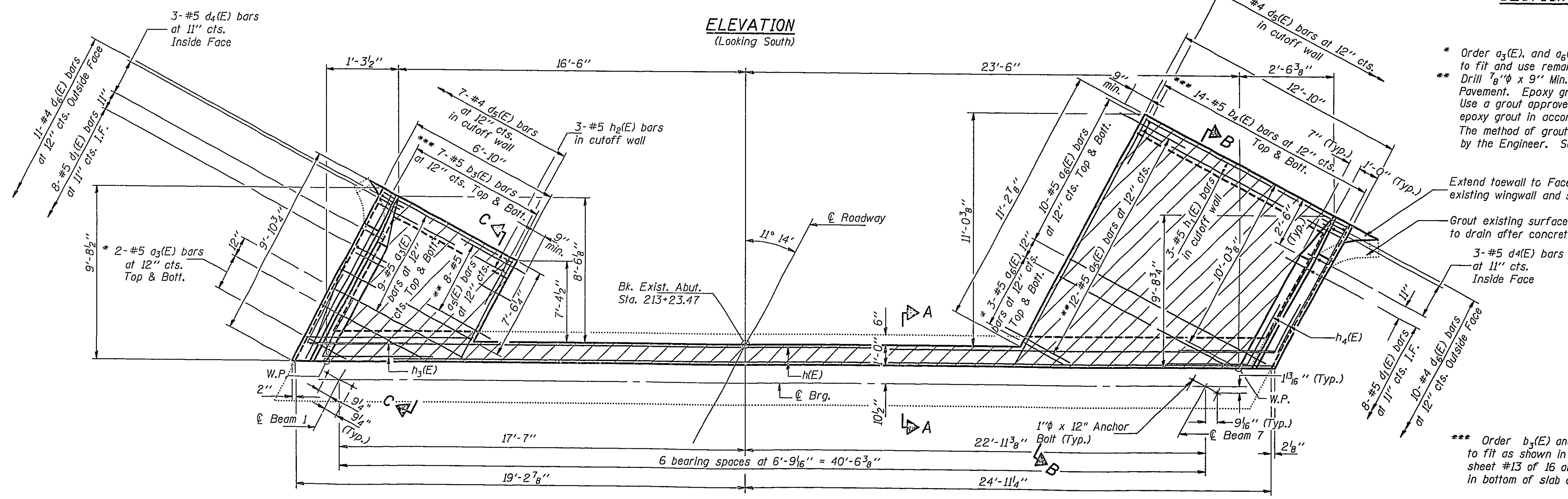
CONCRETE REMOVAL DETAILS
FOR EXISTING ABUTMENTS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
F.A.I. 57	(28-5B-1)D-1	FRANKLIN		138	SHEET NO. 12 / 16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			





* Order a_3(E). and a_6(E). bars full length. Cut to fit and use remainder of bars in bottom of slab.

** Drill $\frac{7}{8}$"ϕ x 9" Min. hole in existing approach Pavement. 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.

Extend toewall to Face of existing wingwall and slope to drain. (Typ.)

Grout existing surface smooth and slope to drain after concrete removal. (Typ.)

*** Order b_3(E) and b_4(E) bars full length. Cut to fit as shown in Field Cutting Diagram on sheet #13 of 16 and use remainder of bars in bottom of slab directly below top bars.

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with "Class X Concrete Superstructure" on sheet #6 of 16.
Existing reinforcement extending into new construction 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.
Concrete Quantity for End Posts is included in "Class X Concrete Superstructutre".
All edges shall have standard $\frac{3}{4}$" chamfer. Except as Noted.

DESIGNED	Richard J. [signature]
CHECKED	[signature]
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RJB

May 20 1993

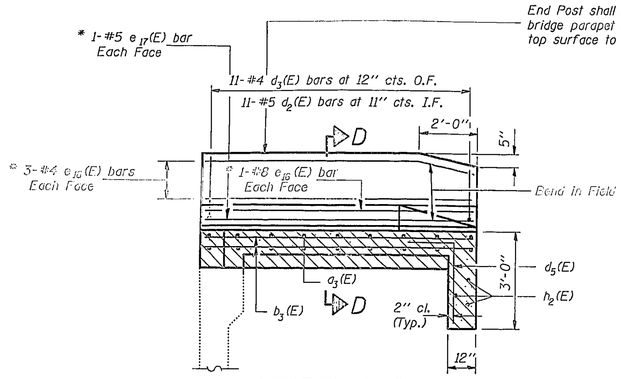
EXAMINED [signature] — ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

SOUTH ABUTMENT
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

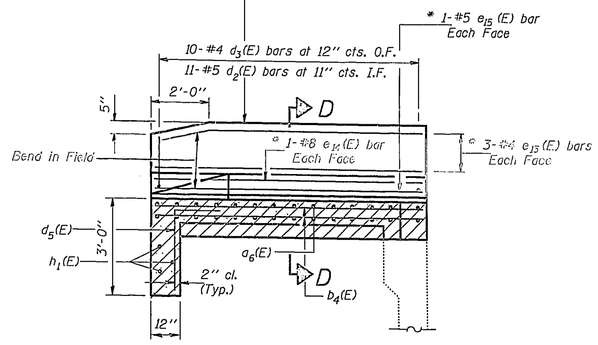
D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY		SHEET NO.
F.A.I. 57	(28-5B-1)D-1	FRANKLIN		139
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		16 SHEETS

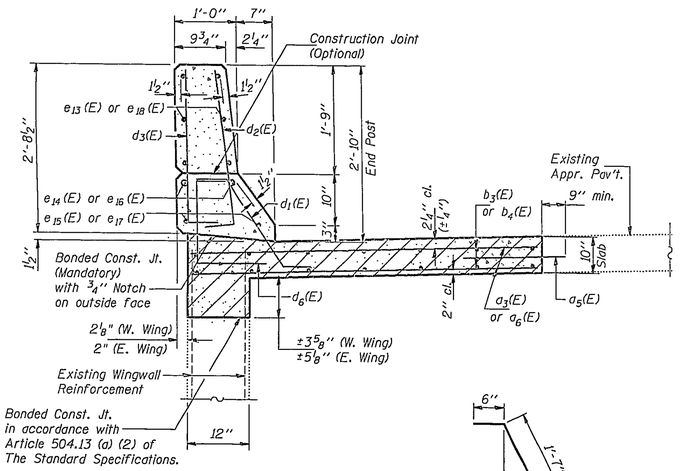


SECTION C-C

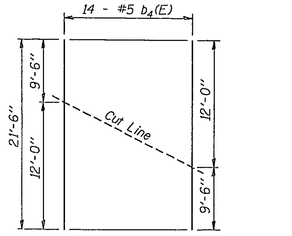


SECTION B-B

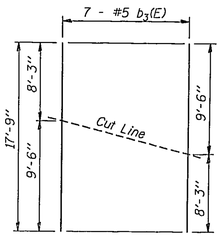
* Order End Post $e_{13}(E)$ thru $e_{18}(E)$ bars full length, cut to fit skew in the field.



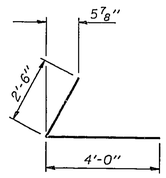
SECTION D-D



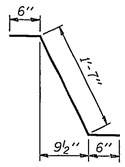
FIELD CUTTING DIAGRAM
BAR $b_4(E)$



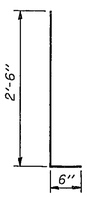
FIELD CUTTING DIAGRAM
BAR $b_3(E)$



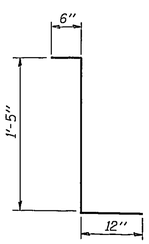
BAR $h_3(E)$



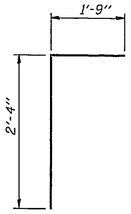
BAR $d_1(E)$



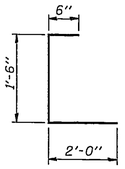
BARS $d_2(E)$ & $d_3(E)$



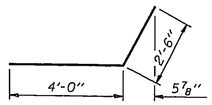
BAR $d_4(E)$



BAR $d_5(E)$



BAR $d_6(E)$



BAR $h_4(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_3(E)$	20	#5	6'-7"	
$a_5(E)$	20	#5	3'-0"	
$a_6(E)$	23	#5	12'-7"	
$b_3(E)$	7	#5	17'-9"	
$b_4(E)$	14	#5	21'-6"	
$d_1(E)$	16	#5	2'-7"	
$d_2(E)$	22	#5	3'-0"	
$d_3(E)$	21	#4	3'-0"	
$d_4(E)$	6	#5	2'-11"	
$d_5(E)$	21	#4	4'-1"	
$d_6(E)$	21	#4	4'-0"	
$e_{13}(E)$	6	#4	9'-9"	
$e_{14}(E)$	2	#8	9'-9"	
$e_{15}(E)$	2	#5	9'-9"	
$e_{16}(E)$	2	#8	9'-7"	
$e_{17}(E)$	2	#5	9'-7"	
$e_{18}(E)$	6	#4	9'-7"	
$h(E)$	4	#6	43'-6"	
$h_1(E)$	3	#5	12'-7"	
$h_2(E)$	3	#5	6'-7"	
$h_3(E)$	4	#5	6'-6"	
$h_4(E)$	4	#5	6'-6"	
Reinforcement Bars, Epoxy Coated			Lbs.	1,870
Structure Excavation			Cu. Yd.	11.0

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	Richard J. Chapin
CHECKED	Thomas P. Navickas
DRAWN	Paul W. Sweet
CHECKED	RSC DGV RTB

May 20 1993

EXAMINED Raj D. Kaspar — ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES

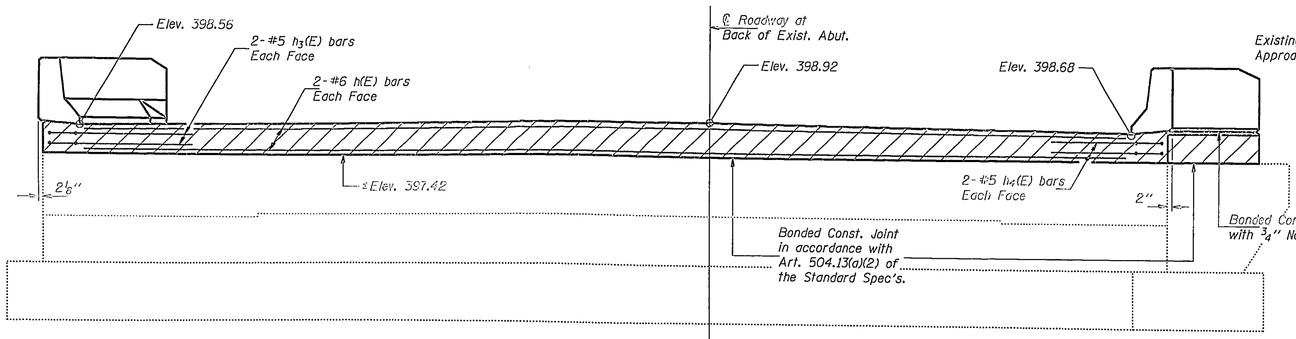
APPROVED — DIRECTOR OF HIGHWAYS

SOUTH ABUTMENT DETAILS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

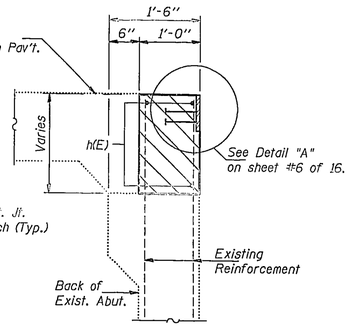
D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

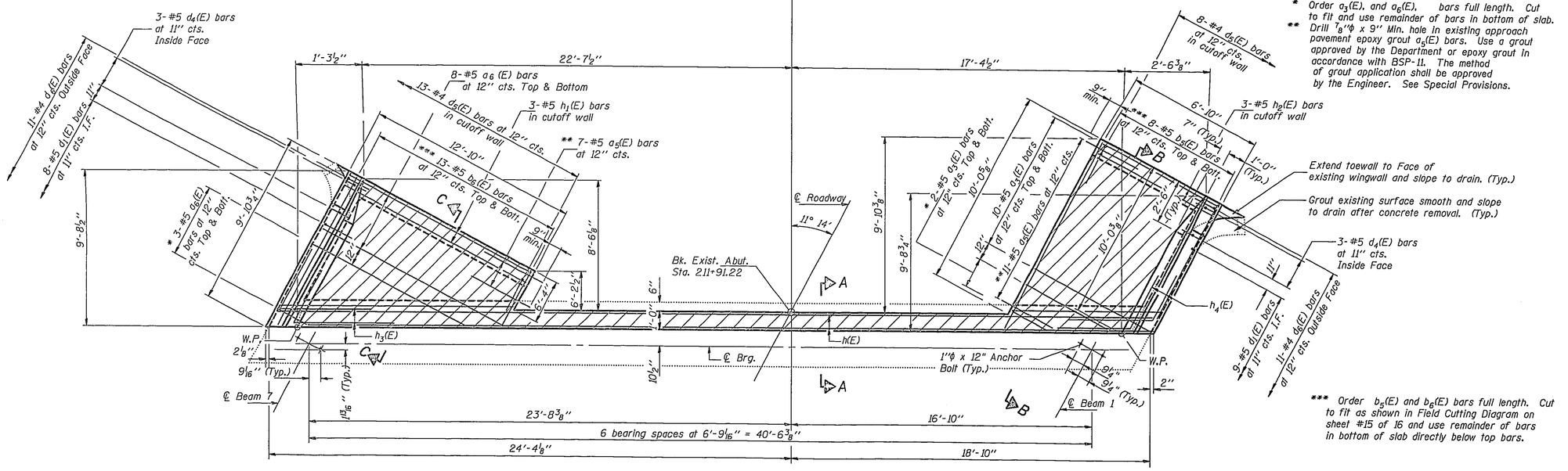
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-5B-1)D-1	FRANKLIN	140	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		16 SHEETS



ELEVATION
(Looking North)



SECTION A-A



PLAN

* Order $a_3(E)$, and $a_6(E)$, bars full length. Cut to fit and use remainder of bars in bottom of slab.
** Drill ⅞"ϕ x 9" Min. hole in existing approach pavement 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.

*** Order $b_5(E)$ and $b_6(E)$ bars full length. Cut to fit as shown in Field Cutting Diagram on sheet #15 of 16 and use remainder of bars in bottom of slab directly below top bars.

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete 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.
Concrete Quantity for End Posts is included in "Class X Concrete Superstructutre".
All edges shall have standard ¾" chamfer.

DESIGNED	Richard J. Dippt
CHECKED	Shirish P. Navichwala
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993
EXAMINED Engineer of Bridge Design
PASSED Ralph E. Anderson Engineer of Bridges and Structures
APPROVED
Director of Highways

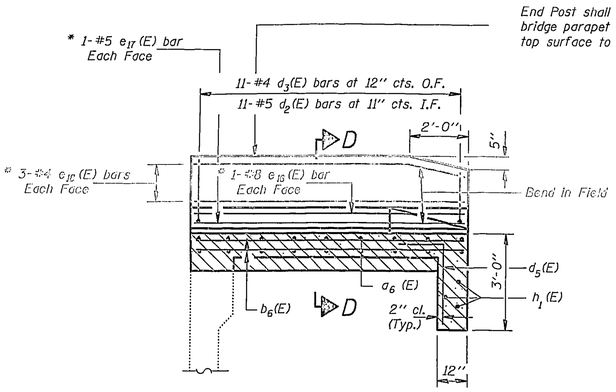
NORTH ABUTMENT
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

D C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

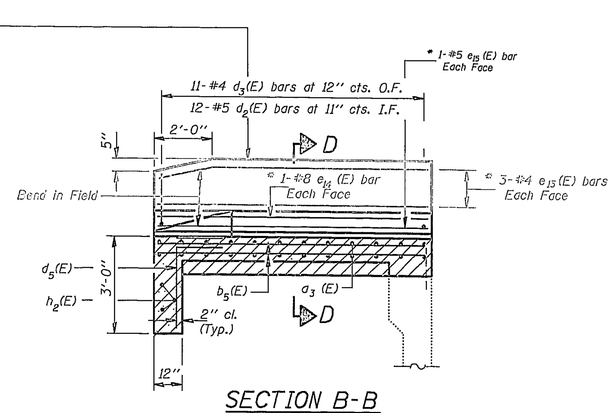
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	(28-5B-1) D-1	FRANKLIN	141	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
16 SHEETS



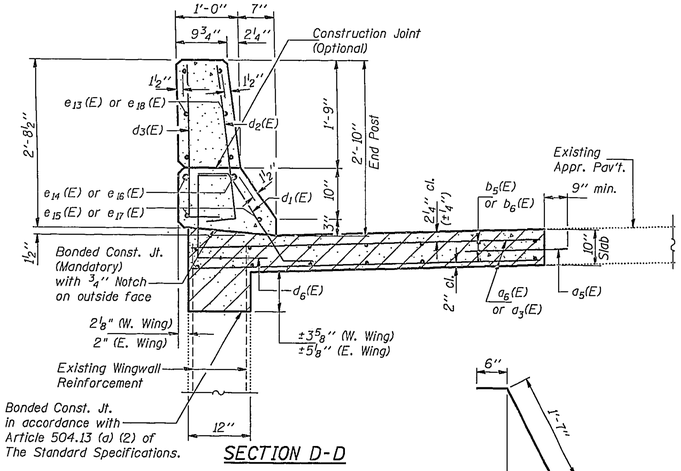
SECTION C-C

End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.

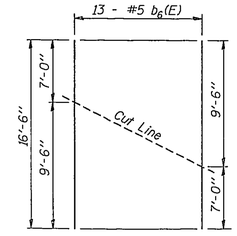


SECTION B-B

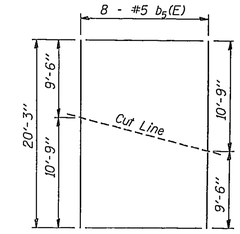
* Order End Post e_{13}(E) thru e_{18}(E) bars full length, cut to fit skew in the field.



SECTION D-D

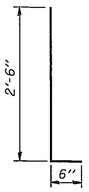


FIELD CUTTING DIAGRAM
BAR b_6(E)

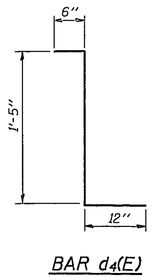


FIELD CUTTING DIAGRAM
BAR b_5(E)

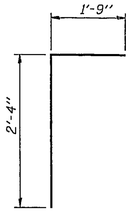
BAR d_1(E)



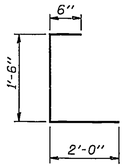
BARS d_2(E) & d_3(E)



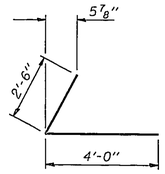
BAR d_4(E)



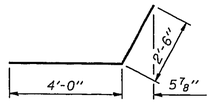
BAR d_5(E)



BAR d_6(E)



BAR h_3(E)



BAR h_4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_3(E)	22	#5	6'-7"	
a_5(E)	18	#5	3'-0"	
a_6(E)	19	#5	12'-7"	
b_5(E)	8	#5	20'-3"	
b_6(E)	13	#5	16'-6"	
d_1(E)	17	#5	2'-7"	
d_2(E)	23	#5	3'-0"	L
d_3(E)	22	#4	3'-0"	L
d_4(E)	6	#5	2'-11"	
d_5(E)	21	#4	4'-1"	
d_6(E)	22	#4	4'-0"	
e_{13}(E)	6	#4	9'-9"	
e_{14}(E)	2	#8	9'-9"	
e_{15}(E)	2	#5	9'-9"	
e_{16}(E)	2	#8	9'-7"	
e_{17}(E)	2	#5	9'-7"	
e_{18}(E)	6	#4	9'-7"	
h(E)	4	#6	43'-6"	
h_1(E)	3	#5	12'-7"	
h_2(E)	3	#5	6'-7"	
h_3(E)	4	#5	6'-6"	L
h_4(E)	4	#5	6'-6"	
Reinforcement Bars, Epoxy Coated		Lbs.	1,740	
Structure Excavation		Cu. Yd.	11.0	

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	Richard J. Chaput
CHECKED	Thomas P. Wnukowski
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RTB

May 20 1993

EXAMINED Raj. D. Kasper
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. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

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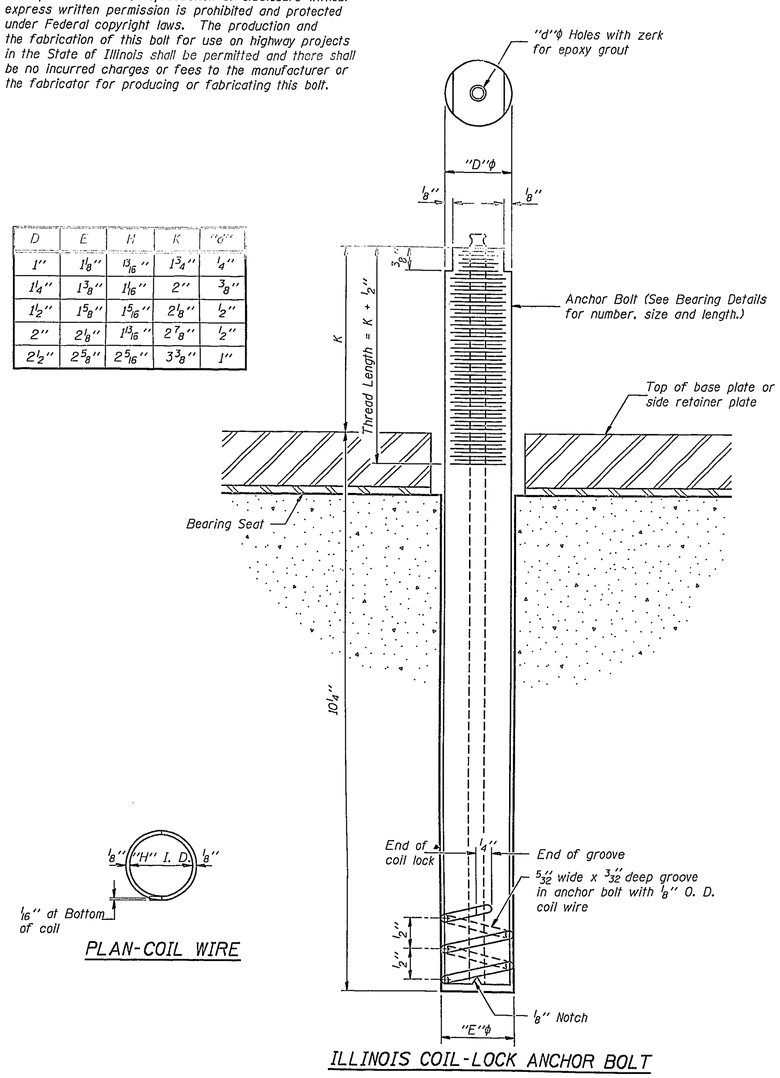
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	120-CO-1 D-1	FRANKLIN	142	16 SHEETS
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	



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"

PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

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	Richard A. Chaput
CHECKED	Steven P. Navickonis
DRAWN	Paul W. Sweet
CHECKED	RJC DGV RAB

ABB-1 12-1-83

May 20 1993

EXAMINED Joseph D. Kasper
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.I. RT. 57 SEC. (28-5B-1)D-1
FRANKLIN COUNTY
STATION 212+50.00

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TAMERAN