07-07-95 VERMILION I&R Copy 47(RS-9; HBR); (92-11HB-5)BR #63

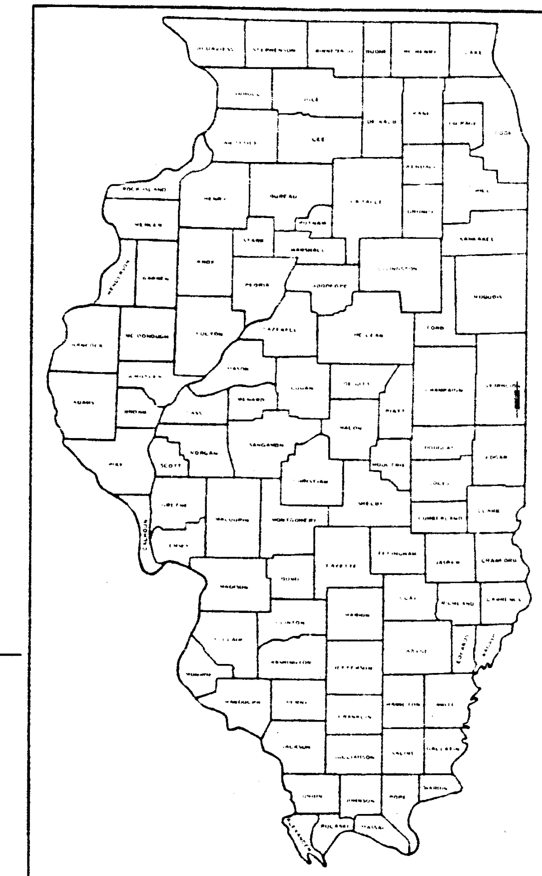
95%
6-14-97

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
332	47(RS-9; HBR) & (92-11HB-5)BR	VERMILION	119	1
F.HW A. REG.		ILLINOIS	PROJ. ACNHF-332(27)	

D-95-132-90



LOCATION OF SECTION INDICATED THUS: —

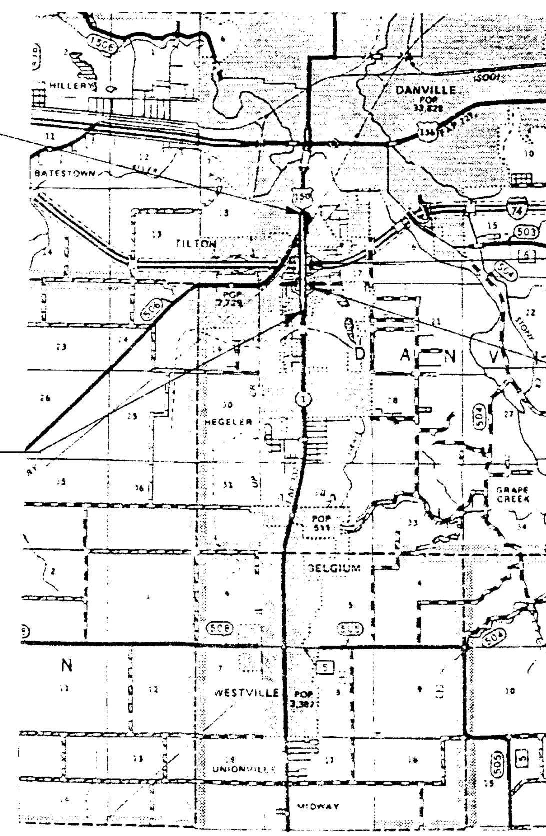
FOR INDEX OF SHEETS, SEE SHEET NO. 7
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 8

SCALES
PLAN 1" = 20'
PROFILE HORIZ. 1" = 20'
PROFILE VERT. 1" = 5'
CROSS SECTIONS 1" = 5' HORZ.
1" = 2' VERT.

F.A. ROUTE 332 (U.S. 150 & IL. 1)
SECTION 47(RS-9; HBR); (92-11HB-5)BR
PROJECT ACNHF-332(27)
VERMILION COUNTY
WIDENING, RESURFACING, AND BRIDGE DECK REPLACEMENTS
C-95-194-90

SEC. 47(RS-9; HBR)
& (92-11HB-5)BR AND
PROJECT ACNHF-332(27)
END STATION 3080+00

SEC. 47(RS-9; HBR)
& (92-11HB-5)BR AND
PROJECT ACNHF-332(27)
BEGIN STATION 3026+00



TOTAL AND NET LENGTH OF SECTION 47(RS-9, HBR)
AND (92-11HB-5)BR = 5400.00 FEET = 1.02 MILES

BY: Monte S. Meldenberg DATE: January 30, 1995
BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS
DRAWINGS: 1-58, 100-119

Expires 11/30/1996

BY: Ronald D. Williams DATE: January 13, 1995
BOYER ENGINEERING LTD.
(HSIONG ASSOCIATES LTD.)
DRAWINGS: 59-99

STRUCTURE NO. 092-0038
STATION 3053+15.63 TO 3056+06.31
REMOVE & REPLACE EXISTING DECK
AND PORTION OF WINGWALLS.

STRUCTURE NO. 092-0039
STATION 3042+00.41 TO 3043+40.66
REMOVE & REPLACE EXISTING DECK
AND PORTION OF WINGWALLS.

PLANS PREPARED BY:

BEAM, LONGEST & NEFF, INC.
Consulting Engineers
Indianapolis, Indiana (317)-849-5832
Champaign, Illinois
Schaumburg, Illinois

092-0038

CONSULTANT UNIT CONTACT: KEVIN L. KNOEP.

DESIGN DESIGNATION
3800(10) MAJOR
POLICY APPLICATION

CONTRACT NO. 90276

092-0038

N

AS BUILT

1" = 5000' (APPROX.)
0 5000 10000

FOR UTILITY LOCATION
CALL TOLL FREE J.U.L.I.E.
No. 1-800-892-0123
VERMILION COUNTY

5-177

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 3/03 19 95 — DISTRICT ENGINEER
EXAMINED 19 —
PASSED June 9 19 95 — ENGINEER OF PLANS AND CONTRACTS
APPROVED June 9 19 95 — ENGINEER OF DESIGN
DIRECTOR DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

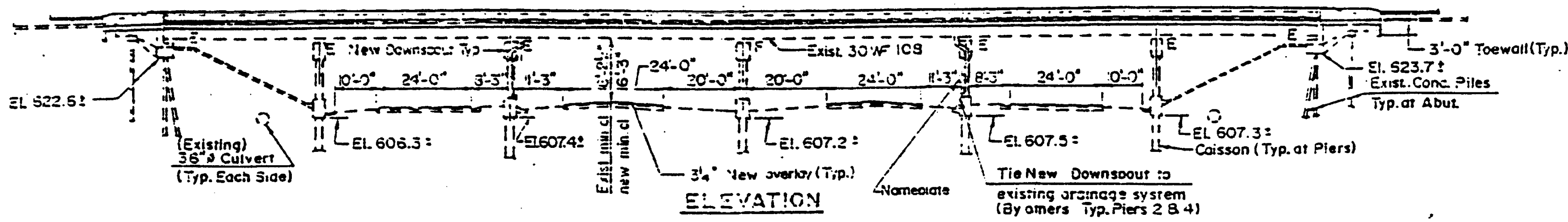
Bench Mark: "X" cut in top of NW bolt of the overhead sign "West 74 off ramp", east side of Rt. 1, elevation 633.50.

Exist. Structure: SN 092-0038, built in 1962, 6-Span Steel Beam, R.C. Deck: Total width out to out = 90'-0". Total length bk. to bk. abut. = 290'-8". R.C. Piers & Abuts. The existing deck and portions of the wingwalls to be removed and replaced. No salvage. Traffic to be maintained during Stage Construction. (See Cross-Sections Sheet 2 of 22.)

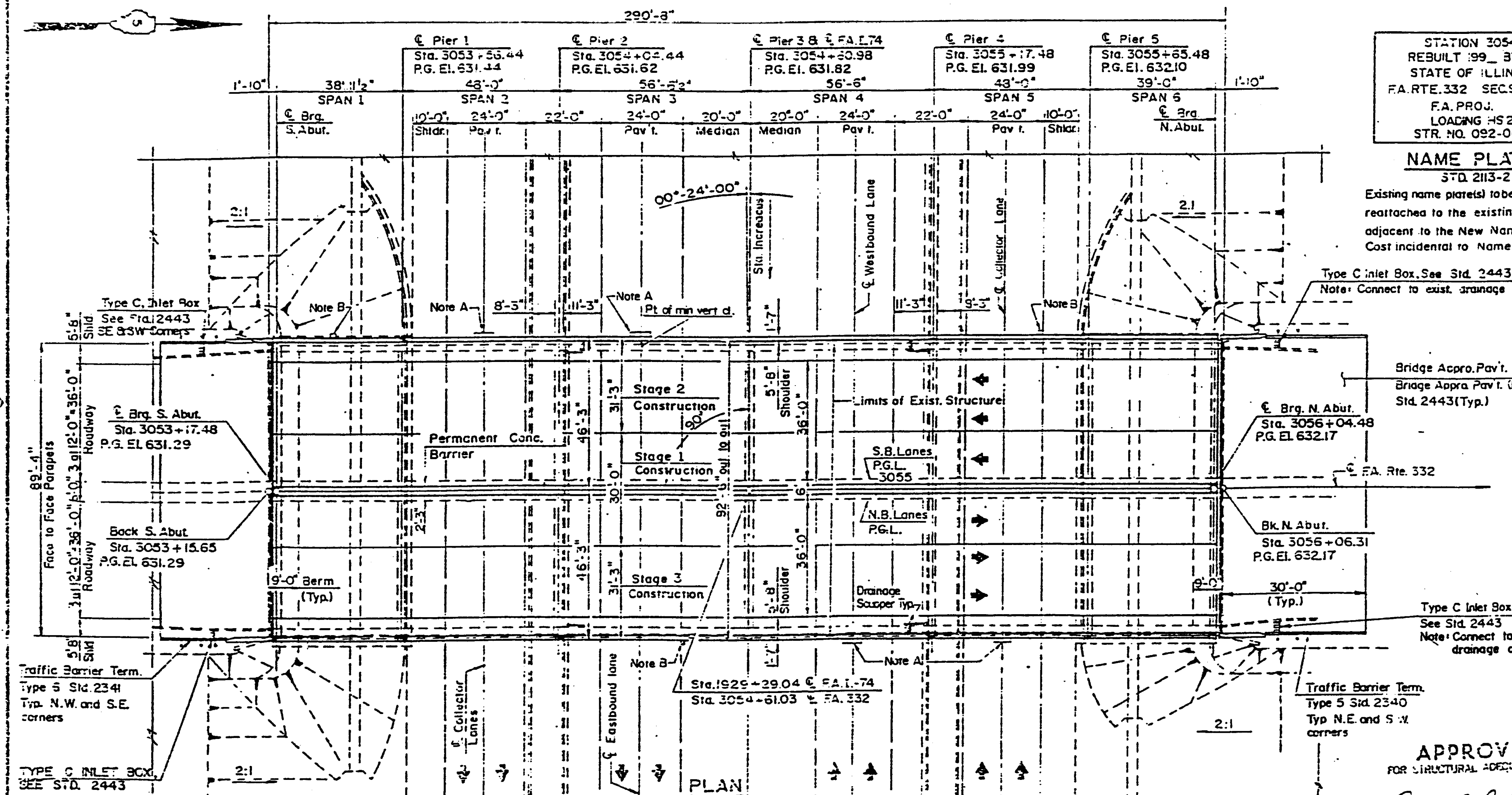
* (92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	59

SHEET 1 OF 22



ELEVATION



PLAN

STATION 3054+60.96
REBUILT 199_ BY
STATE OF ILLINOIS
F.A. RTE. 332 SEC. 92-11HB-5BR
F.A. PROJ.
LOADING HS 20
STR. NO. 092-0038

NAME PLATE
STD. 2113-2

Existing name plate(s) to be cleaned and reattached to the existing substructure adjacent to the New Name Plates. Cost incidental to Name Plates.

INDEX OF SHEETS

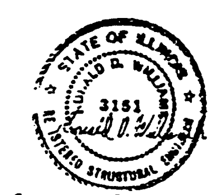
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	SUPER	TOTAL
Removal of Existing Concrete Deck N1	L.Sum	---	1	1
Concrete Removal	Cu. Yd.	23.6	---	23.6
Neoprene Expansion Joint, 2"	Foot	---	196	196
Concrete Superstructure	Cu. Yd.	---	775.5	775.5
(A) Protective Coat	Sq. Yd.	---	487.7	487.7
Elastomeric Bearing Assembly, Type I	Each	64	---	64
Elastomeric Bearing Assembly, Type III	Each	32	---	32
Concrete Structures	Cu. Yd.	---	18.2	18.2
Furnishing & Erecting Structural Steel	Lbs.	30340	---	30340
Reinforcement Bars, Epoxy Coated	Lbs.	7,380	$\boxed{174,690}$	$\boxed{182,070}$ 1
Name Plates	Each	1	---	1
Cleaning & Painting Steel Bridge N1	L.Sum	---	1	1
Power Tool Cleaning Residue Containment & Disposal N1	L.Sum	---	1	1
Blasting Residue Containment & Disposal N1	L.Sum	---	1	1
Jack & Remove Existing Bearings	Each	112	---	112
Drainage Scuppers	Each	---	4	4
Bridge Deck Grooving	Sq. Yd.	---	2790	2790
Stud Shear Connectors	Each	4032	---	4032
Drainage System	L.S.	1	---	1
Bar Splicers	Each	---	578	578

(A) The quantity of Protective Coat includes inside face of parapets, wingwalls and both faces of proposed median.

NOTES:
A. Highway signs to be re-attached to the new construction.
B. Place light standards at the same location as the exist. condition. (I.e. 2 on the west side, 1 on the east) (See Sheets 9 & 11 for Details.)

S.E.O.P. = South End of Pavement
N.E.O.P. = North End of Pavement



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Engineer of Bridges and Structures

Illinois Structural No. 3151 Expiration. Date. November 30, 1994

$\boxed{1}$ — REVISED R.O.W. 2/29/96

DESIGN STRESSES

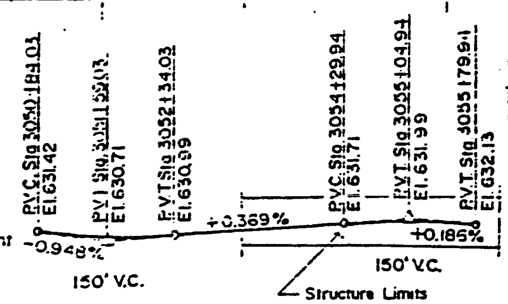
EXISTING STRUCTURES	NEW CONSTRUCTION
fc = 1400 psi	fc = 3500 psi
fs = 20,000 psi (Reinf.)	fy = 60,000 psi (Reinf.)
fs = 20,000 psi (Struct.)	fy = 36,000 psi (Struct.) (M270, Gr. 36)

SEISMIC DATA
S.P.C. ______ A
A ______ 0.0475
S ______ 1.2

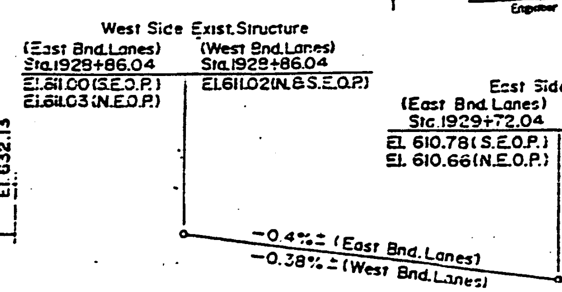
S.P.C. = Seismic Performance Category
A = Acceleration Coefficient
S = Soil Coefficient

LOADING HS20-44
Allow 25 #/sq.ft. for future wearing surface

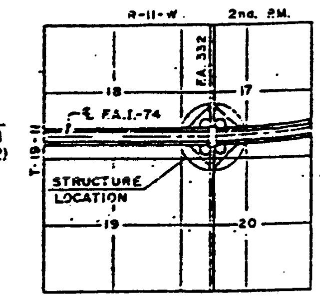
DESIGN SPECIFICATIONS
1992 AASHTO & Seismic Retrofitting Guidelines for Highway Bridges.



PROPOSED PROFILE F.A. ROUTE 332



PROFILE GRADE F.A.I.-74
(From Field Survey Elev. at Edge Median)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED M.M.A. CHECKED F.T.T.
DRAWN R.H.H. DATE 3-16-94 NO H-1349

AS BUILT

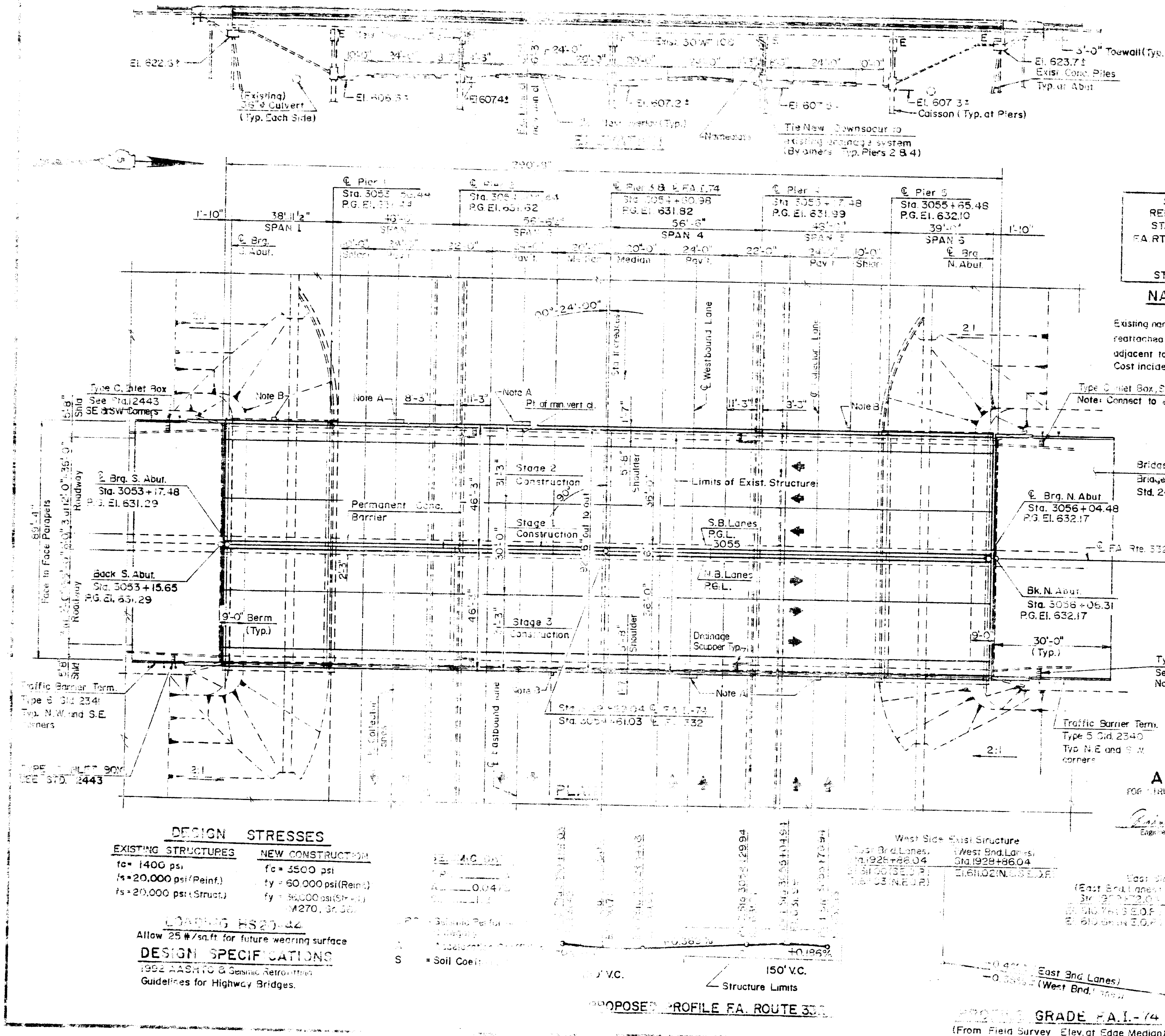
Bench Mark: "X" cut in top of NW bolt of the overhead sign "West 74 off ramp" east side of Rt. 1, elevation 633.50

Exist. Structure ... 092-0038, built in 1962. 6-Span Steel Beam, R.C. ... Total width ... out = 90'-0". Total length ... to bk. abut. = 290'-8". R.C. Piers ... Abuts ... existing deck and portions of the ... removed and replaced ... Traffic ... maintained during Stage Construction ... Sheet ... of 22.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA 332	*	VERMILION	119	59
FED ROAD DIST NO 7	ILLINOIS PROJECT			

* (92-11HB-5) BR

SHEET 1 OF 22



INDEX OF SHEETS

STATION 3054+60.96
REBUILT 199_ BY
STATE OF ILLINOIS
FA RTE. 332 SEC. 92-11HB-5BR
F.A. PROJ.
LOADING HS 20
STR. NO. 092-0032

NAME PLATE

STD. 2113-2

Existing name plate(s) to be cleaned and reattached to the existing substructure adjacent to the New Name Plates. Cost incidental to Name Plates.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
	Removal of Existing Concrete Deck NI	L.Sum	---	1	1
	Concrete Removal	Cu. Yd.	23.6	---	23.6
	Neoprene Expansion Joint 2"	Foot	---	196	196
	Concrete Superstructure	Cu. Yd.	---	775.5	775.5
Ⓐ	Protective Coat	Sq. Yd.	---	487.7	487.7
	Elastomeric Bearing Assembly, Type I	Each	64	---	64
	Elastomeric Bearing Assembly, Type II	Each	32	---	32
	Concrete Structures	Cu. Yd.	---	18.2	18.2
	Furnishing & Erecting Structural Steel	Lbs.	30340	---	30340
	Reinforcement Bars, Epoxy Coated	Lbs.	7,380	173,400	180,780
	Name Plates	Each	1	---	1
	Cleaning & Painting Steel Bridge NI	L.Sum	---	1	1
	Power Tool Cleaning Residue Containment & Disposal NI	L.Sum	---	1	1
	Blasting Residue Containment & Disposal NI	L.Sum	---	1	1
	Jack & Remove Existing Bearings	Each	112	---	112
	Drainage Scuppers	Each	---	4	4
	Bridge Deck Grooving	Sq. Yd.	---	2790	2790
	Stud Shear Connectors	Each	4032	---	4032
	Drainage System	L.S.	1	---	1
	Bar Splicers	Each	---	578	578

Ⓐ The quantity of Protective Coat includes inside face of parapets, wingwalls and both faces of proposed median.

NOTES:

A. Highway signs to be re-attached to the new construction.

B. Place light standards at the same location as the exist. condition. (ie. 2 on the west side, 1 on the east) (See Sheets 9 & 11 for Details.)

S.E.O.P. = South End of Pavement
N.E.O.P. = North End of Pavement

DESIGN STRESSES

EXISTING STRUCTURES
f'c = 1400 psi
fs = 20,000 psi (Reinf.)
fs = 20,000 psi (Struct.)

NEW CONSTRUCTION
f'c = 3500 psi
fy = 60,000 psi (Reinf.)
fy = 36,000 psi (Struct.) M270, Gr. 36

LOADING HS25-44

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

DESIGN SPECIFICATIONS

1992 AASHTO & Seismic Retrofitting Guidelines for Highway Bridges.

S = Soil Coef.

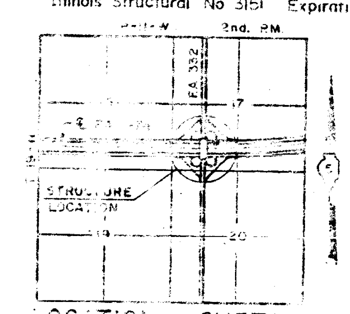
PROPOSED PROFILE F.A. ROUTE 332

PROFILE GRADE F.A.I.-74 (From Field Survey Elev. at Edge Median)

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Engineer of Bridges and Structures

Illinois Structural No. 3151 Expiration Date



LOCATION SKETCH

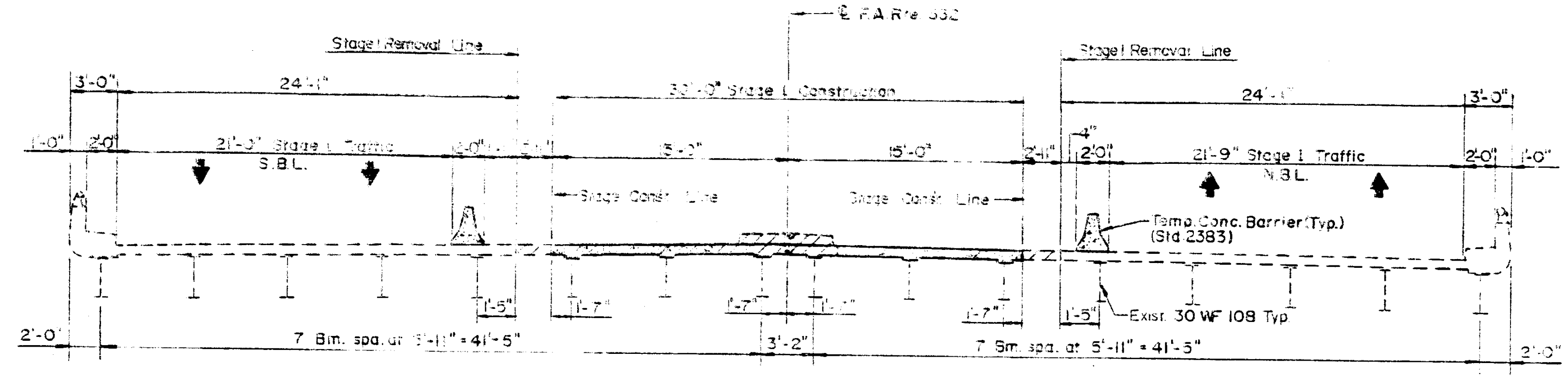
GENERAL PLAN & ELEVATION
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

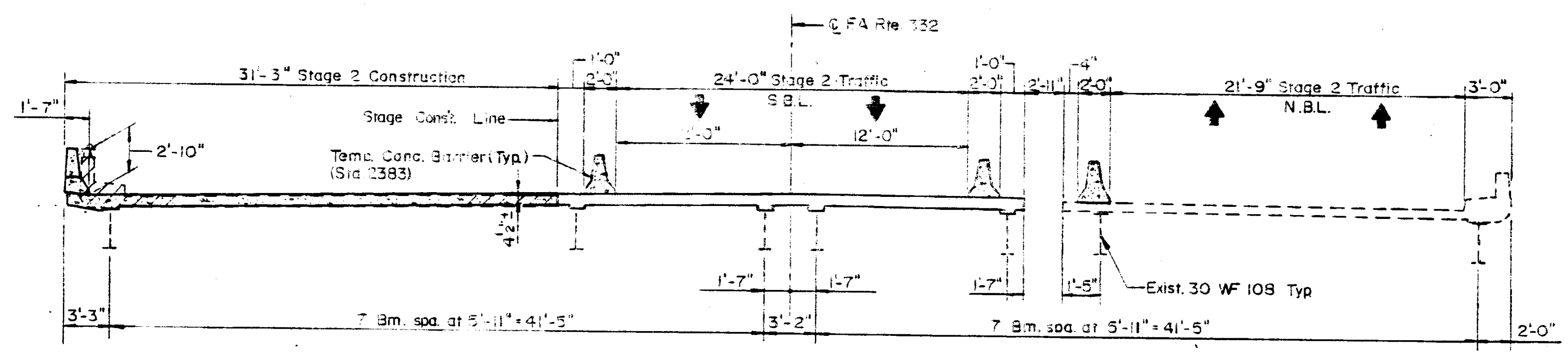
DESIGNED M.M.A. CHECKED E.T.T.
DRAWN R.H.H. DATE 3-16-94 NO. H-374B

* (92-11HB-5) BR

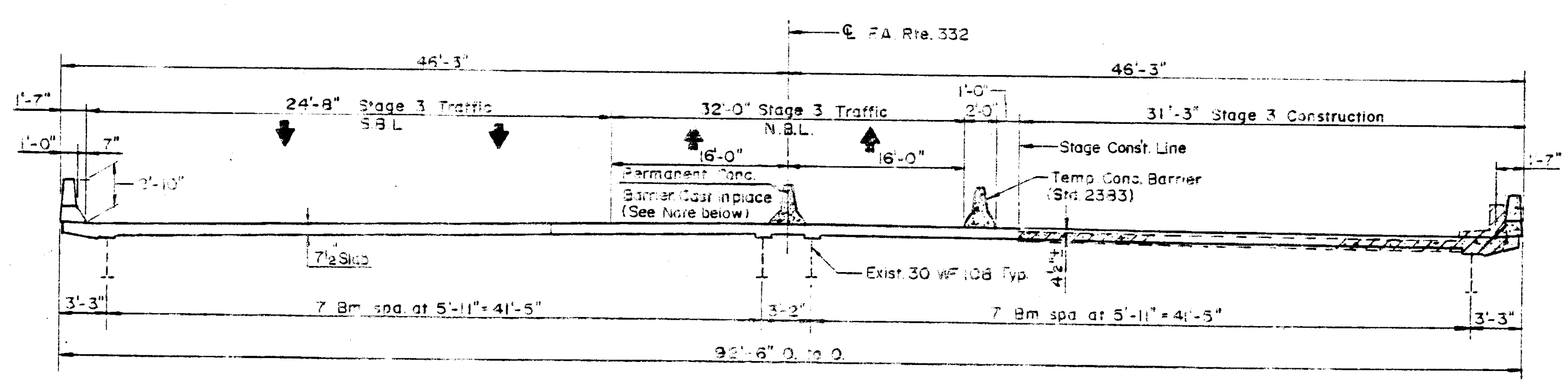
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET No.
FA. 332	*	VERMILION	119	60
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		
		SHEET 2 OF 22		



STAGE 1 CONSTRUCTION
(Looking North)



STAGE 2 CONSTRUCTION
(Looking North)



STAGE 3 CONSTRUCTION
(Looking North)

Note: North Bound Traffic shall be shifted to newly constructed Stage 3 for the construction of Cast-In-Place Permanent Concrete Barrier.

Removal of Existing Parapet Handrail is incidental to the Removal of Existing Concrete Deck.

For Quantity of Temp. Conc. Barrier see Roadway Plans.

Hatched area indicates Removal of Existing Concrete Deck.

GENERAL NOTES

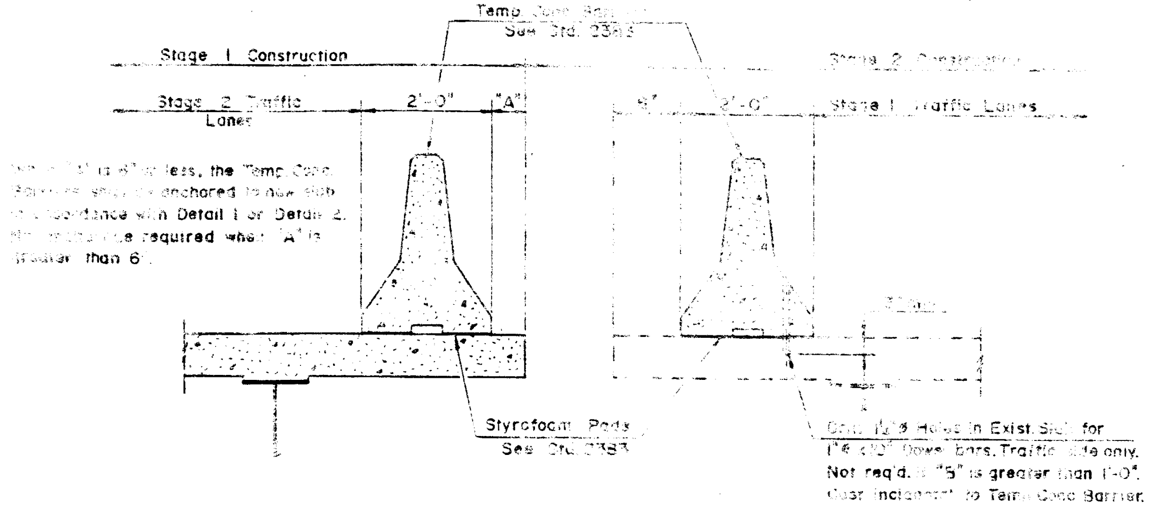
1. Fasteners shall be high strength bolts. Bolts ⅞" dia., open holes 15/16" dia. unless otherwise noted.
2. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
3. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
4. 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.
5. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Gr 36.
6. 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.
7. Anchor bolts shall be set before bolting diaphragms over supports.

8. Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing structural steel within 5 feet of either side of expansion joints shall be cleaned by Method 1. All remaining existing structural steel shall be cleaned by Method 2. The Lead and Chromate Free Alkyd Paint System shall be used for painting of existing structural steel. The prime and intermediate coats shall be applied as specified in the special provision followed by one complete final finish coat over all steel surfaces. The color of the final finish coat shall be light grey, (Munsell No. 10Y7/1), except the exterior surfaces of the exterior beams which shall be interstate green (Munsell Color Std. 7.5G 4/8).
The Zinc-Silicate /Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Light Grey, (Munsell color standard - 10Y7/1), except the exterior surfaces of the exterior beams which shall be interstate Green (Munsell Color Std. 7.5G4/8). See Special Provisions.
9. All contact surface of joints between the new diaphragms and the existing beams shall be free of paint or lacquer.

STAGE CONSTRUCTION DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A.	CHECKED: S.K.L.
DRAWN: R.H.H.	DATE: 3-16-94 NO. H-1348



PROPOSED SLAB

EXISTING SLAB

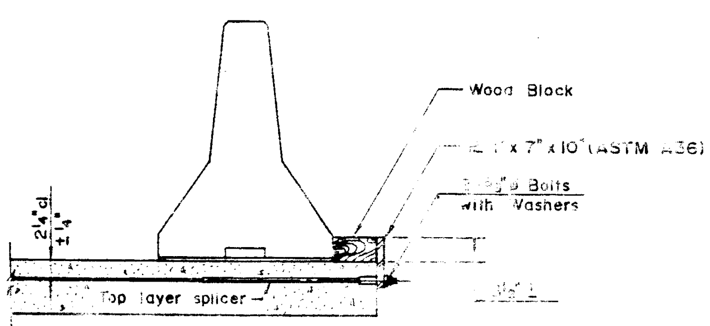
SECTION THRU SLAB

NOTES

Detail 1 with Bar Splicer or Couplers.
Connect one (1) 1" x 7" x 10" Steel ℞ to the top layer of couplers with 2-⅝" ø bolts screwed to coupler at approximate ℄ of each 10'-0" barrier panel.

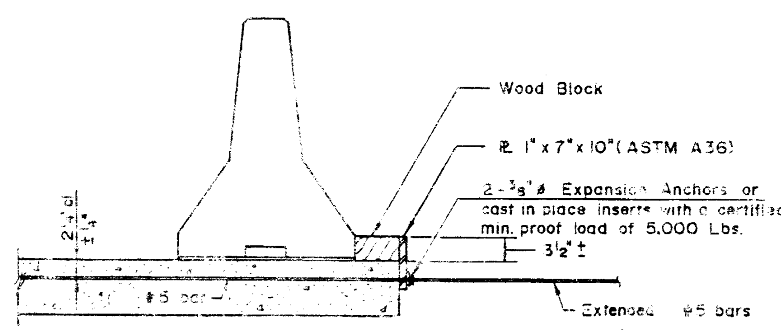
Detail 2 with Extended Reinforcement Bars.
Connect one (1) 1" x 7" x 10" Steel ℞ to the concrete slab with 2-⅝" ø Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each 10'-0" barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.



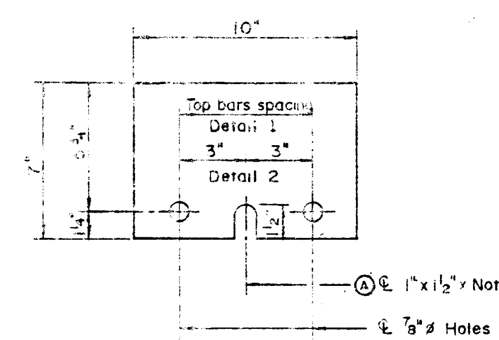
DETAIL 1

The 1" x 7" x 10" ℞ shall not be removed until Stage 2 Construction forms and reinforcement bars are in place.



DETAIL 2

The 1" x 7" x 10" ℞ shall not be removed until Stage 2 Construction forms and all reinforcement bars are in place and the conc. is ready to be placed.



℞ 1" x 7" x 10"

Ⓐ Required with Detail 2 only

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. 92-11HB-5/BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

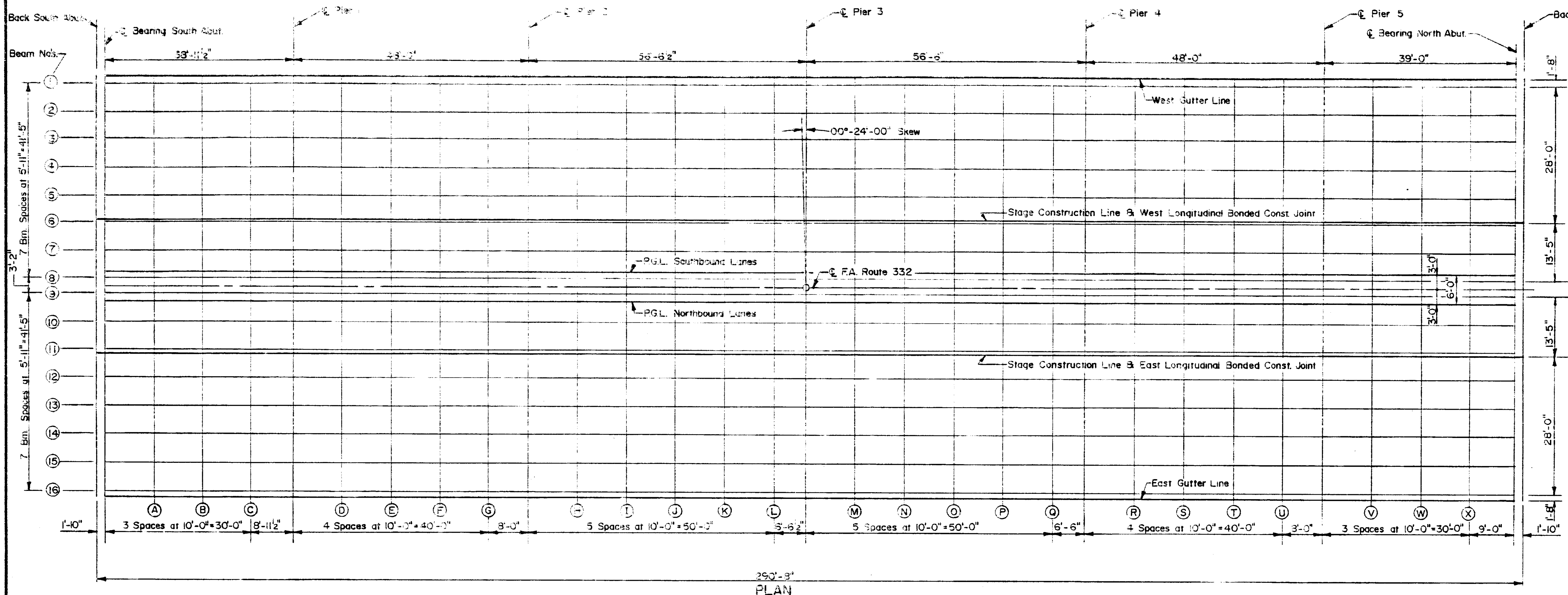
HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: F.T.T.
DRAWN: M.L.P. DATE: 5-16-94 NO. H-1246

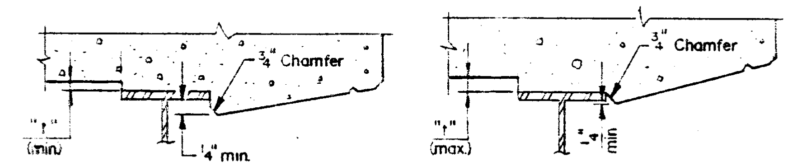
STANDARD

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	62
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT			
SHEET 4 OF 22				

*(92-11HB-5)BR



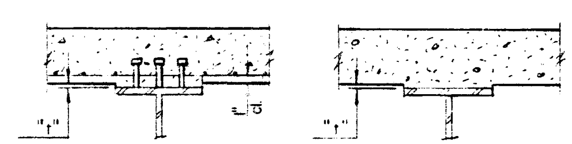
PLAN



AT MINIMUM FILLET

AT MAXIMUM FILLET

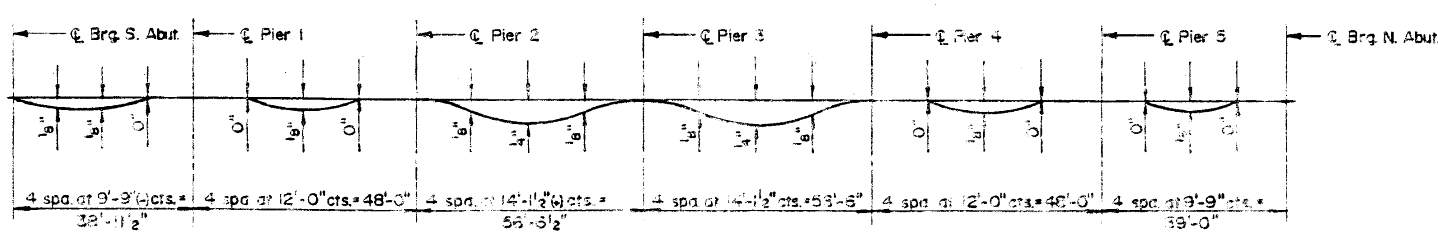
EXTERIOR BEAMS



COMPOSITE (Spans 3 & 4)

NON-COMPOSITE (Typical U.O.N.)

INTERIOR BEAMS



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 that are adjusted for dead load deflections as shown.

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

FILLET HEIGHTS

DECK ELEVATIONS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: F.T.T. CHECKED: S.K.L.
DRAWN: M.L.P. DATE: 3-16-94 NO. H1348

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	33

*(92-1HB-5)BR

SHEET 3 OF 2[illegible]

BEAM 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.93	-43.00	630.66	[illegible]
CL. BRG. S. ABUT.	3053+17.76	-43.00	630.67	[illegible]
A	3053+27.76	-43.00	630.71	[illegible]
B	3053+37.76	-43.00	630.74	[illegible]
C	3053+47.76	-43.00	630.78	[illegible]
CL. PIER 1	3053+56.72	-43.00	630.81	[illegible]
D	3053+66.72	-43.00	630.86	[illegible]
E	3053+76.72	-43.00	630.89	[illegible]
F	3053+86.72	-43.00	630.93	[illegible]
G	3053+96.72	-43.00	630.96	[illegible]
CL. PIER 2	3054+04.72	-43.00	630.99	[illegible]
H	3054+14.72	-43.00	631.03	[illegible]
I	3054+24.72	-43.00	631.07	631.16
J	3054+34.72	-43.00	631.10	[illegible]
K	3054+44.72	-43.00	631.14	[illegible]
L	3054+54.72	-43.00	631.17	[illegible]
CL. PIER 3	3054+61.26	-43.00	631.19	[illegible]
M	3054+71.26	-43.00	631.23	[illegible]
N	3054+81.26	-43.00	631.26	631.34
O	3054+91.26	-43.00	631.29	631.38
P	3055+01.26	-43.00	631.32	[illegible]
Q	3055+11.26	-43.00	631.34	[illegible]
CL. PIER 4	3055+17.76	-43.00	631.36	631.36
R	3055+27.76	-43.00	631.39	631.42
S	3055+37.76	-43.00	631.41	[illegible]
T	3055+47.76	-43.00	631.44	[illegible]
U	3055+57.76	-43.00	631.46	631.48
CL. PIER 5	3055+65.76	-43.00	631.47	631.47
V	3055+75.76	-43.00	631.49	631.51
W	3055+85.76	-43.00	631.51	[illegible]
X	3055+95.76	-43.00	631.53	[illegible]
CL. BRG. N. ABUT.	3056+04.76	-43.00	631.55	[illegible]
BK. OF N. ABUT.	3056+06.59	-43.00	631.55	631.55

BEAM 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.89	-37.08	630.76	630.76
CL. BRG. S. ABUT.	3053+17.72	-37.08	630.76	630.76
A	3053+27.72	-37.08	630.80	630.82
B	3053+37.72	-37.08	630.84	630.87
C	3053+47.72	-37.08	630.87	630.89
CL. PIER 1	3053+56.68	-37.08	[illegible]	630.91
D	3053+66.68	-37.08	630.94	630.97
E	[illegible]	-37.08	630.98	[illegible]
F	[illegible]	-37.08	631.02	631.07
G	3053+96.68	-37.08	631.05	631.08
CL. PIER 2	3054+04.68	-37.08	631.08	631.08
H	3054+14.68	-37.08	631.12	631.16
I	3054+24.68	-37.08	631.16	631.24
J	3054+34.68	-37.08	631.19	631.30
K	3054+44.68	-37.08	631.23	631.32
L	3054+54.68	-37.08	631.26	631.30
CL. PIER 3	3054+61.22	-37.08	631.29	631.29
M	3054+71.22	-37.08	631.32	631.36
N	3054+81.22	-37.08	631.35	631.43
O	3054+91.22	-37.08	631.38	631.48
P	3055+01.22	-37.08	631.41	631.50
Q	3055+11.22	-37.08	631.44	631.48
CL. PIER 4	3055+17.72	-37.08	631.45	631.45
R	3055+27.72	-37.08	631.48	631.51
S	3055+37.72	-37.08	631.50	631.55
T	3055+47.72	-37.08	631.53	631.58
U	3055+57.72	-37.08	631.55	631.58
CL. PIER 5	3055+65.72	-37.08	631.57	631.57
V	3055+75.72	-37.08	631.59	631.61
W	3055+85.72	-37.08	631.60	631.63
X	3055+95.72	-37.08	631.62	631.64
CL. BRG. N. ABUT.	3056+04.72	-37.08	631.64	631.64
BK. OF N. ABUT.	3056+06.55	-37.08	631.64	631.64

BEAM 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.84	-31.17	630.85	630.85
CL. BRG. S. ABUT.	3053+17.68	-31.17	630.86	630.86
A	3053+27.68	-31.17	630.90	630.91
B	3053+37.68	-31.17	630.93	630.96
C	3053+47.68	-31.17	630.97	630.99
CL. PIER 1	3053+56.64	-31.17	631.00	631.00
D	3053+66.64	-31.17	631.04	[illegible]
E	3053+76.64	-31.17	631.07	631.12
F	3053+86.64	-31.17	631.11	631.16
G	3053+96.64	-31.17	631.15	631.17
CL. PIER 2	3054+04.64	-31.17	631.18	631.18
H	3054+14.64	-31.17	631.2[illegible]	631.25
I	3054+24.64	-31.17	631.25	631.33
J	3054+34.64	-31.17	631.29	631.39
K	3054+44.64	-31.17	631.32	631.41
L	3054+54.64	-31.17	631.36	631.40
CL. PIER 3	3054+61.18	-31.17	631.38	631.38
M	3054+71.18	-31.17	631.41	631.45
N	3054+81.18	-31.17	631.44	631.52
O	3054+91.18	-31.17	631.47	631.58
P	3055+01.18	-31.17	631.50	631.59
Q	3055+11.18	-31.17	631.53	631.57
CL. PIER 4	3055+17.68	-31.17	631.55	631.55
R	3055+27.68	-31.17	631.57	631.60
S	3055+37.68	-31.17	631.60	631.65
T	3055+47.68	-31.17	631.62	631.67
U	3055+57.68	-31.17	631.64	631.67
CL. PIER 5	3055+65.68	-31.17	631.66	631.66
V	3055+75.68	-31.17	631.68	631.70
W	3055+85.68	-31.17	631.70	631.73
X	3055+95.68	-31.17	631.71	631.74
CL. BRG. N. ABUT.	3056+04.68	-31.17	631.73	631.73
BK. OF N. ABUT.	3056+06.51	-31.17	631.73	631.73

BEAM 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.80	-25.25	630.94	630.94
CL. BRG. S. ABUT.	3053+17.64	-25.25	630.95	630.95
A	3053+27.64	-25.25	630.98	631.00
B	3053+37.64	-25.25	631.02	631.05
C	3053+47.64	-25.25	631.06	631.08
CL. PIER 1	3053+56.59	-25.25	631.09	631.09
D	3053+66.59	-25.25	631.13	631.16
E	3053+76.59	-25.25	631.17	631.22
F	3053+86.59	-25.25	631.20	631.25
G	3053+96.59	-25.25	631.24	631.27
CL. PIER 2	3054+04.59	-25.25	631.27	631.27
H	3054+14.59	-25.25	631.31	631.35
I	3054+24.59	-25.25	631.34	631.42
J	3054+34.59	-25.25	631.38	631.48
K	3054+44.59	-25.25	631.42	631.51
L	3054+54.59	-25.25	631.45	631.49
CL. PIER 3	3054+61.14	-25.25	631.47	631.47
M	3054+71.14	-25.25	631.50	631.54
N	3054+81.14	-25.25	631.54	631.62
O	3054+91.14	-25.25	631.57	631.67
P	3055+01.14	-25.25	631.59	631.68
Q	3055+11.14	-25.25	631.62	631.66
CL. PIER 4	3055+17.64	-25.25	631.64	631.64
R	3055+27.64	-25.25	631.66	631.69
S	3055+37.64	-25.25	631.69	631.74
T	3055+47.64	-25.25	631.71	631.76
U	3055+57.64	-25.25	631.73	631.76
CL. PIER 5	3055+65.64	-25.25	631.75	631.75
V	3055+75.64	-25.25	631.77	631.79
W	3055+85.64	-25.25	631.79	631.82
X	3055+95.64	-25.25	631.81	631.83
CL. BRG. N. ABUT.	3056+04.64	-25.25	631.82	631.82
BK. OF N. ABUT.	3056+06.47	-25.25	631.83	631.83

BEAM 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.76	-19.33	631.03	631.03
CL. BRG. S. ABUT.	3053+17.59	-19.33	631.04	[illegible]
A	3053+27.59	-19.33	631.08	[illegible]
B	3053+37.59	-19.33	631.11	631.14
C	3053+47.59	-19.33	631.15	[illegible]
CL. PIER 1	3053+56.55	-19.33	631.18	[illegible]
D	3053+66.55	-19.33	631.22	[illegible]
E	3053+76.55	-19.33	631.26	[illegible]
F	3053+86.55	-19.33	631.29	631.34
G	3053+96.55	-19.33	631.33	[illegible]
CL. PIER 2	3054+04.55	-19.33	631.36	[illegible]
H	3054+14.55	-19.33	631.40	[illegible]
I	3054+24.55	-19.33	631.43	[illegible]
J	3054+34.55	-19.33	631.47	[illegible]
K	3054+44.55	-19.33	631.51	[illegible]
L	3054+54.55	-19.33	631.54	[illegible]
CL. PIER 3	3054+61.09	-19.33	631.56	[illegible]
M	3054+71.09	-19.33	631.60	[illegible]
N	3054+81.09	-19.33	631.63	[illegible]
O	3054+91.09	-19.33	631.66	[illegible]
P	3055+01.09	-19.33	631.69	[illegible]
Q	3055+11.09	-19.33	631.71	[illegible]
CL. PIER 4	3055+17.59	-19.33	631.73	[illegible]
R	3055+27.59	-19.33	[illegible]	[illegible]
S	3055+37.59	-19.33	[illegible]	[illegible]
T	3055+47.59	-19.33	631.80	[illegible]
U	3055+57.59	-19.33	631.83	[illegible]
CL. PIER 5	3055+65.59	-19.33	631.84	[illegible]
V	3055+75.59	-19.33	[illegible]	631.88
W	3055+85.59	-19.33	[illegible]	631.91
X	3055+95.59	-19.33	[illegible]	[illegible]
CL. BRG. N. ABUT.	3056+04.59	-19.33	[illegible]	631.92
BK. OF N. ABUT.	3056+06.43	-19.33	631.92	631.92

BEAM 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.72	-13.42	631.13	631.13
CL. BRG. S. ABUT.	3053+17.55	-13.42	631.13	[illegible]
A	3053+27.55	-13.42	631.17	631.19
B	3053+37.55	-13.42	631.21	631.24
C	3053+47.55	-13.42	631.24	631.26
CL. PIER 1	3053+56.51	-13.42	631.28	631.28
D	3053+66.51	-13.42	631.31	631.34
E	3053+76.51	-13.42	631.35	631.40
F	3053+86.51	-13.42	631.39	631.44
G	3053+96.51	-13.42	631.42	631.45
CL. PIER 2	3054+04.51	-13.42	631.45	631.45
H	3054+14.51	-13.42	631.49	631.53
I	3054+24.51	-13.42	631.53	631.61
J	3054+34.51	-13.42	631.56	631.67
K	[illegible]	-13.42	631.60	[illegible]
L	3054+54.51	-13.42	631.63	631.67
CL. PIER 3	3054+61.05	-13.42	631.66	631.66
M	[illegible]	-13.42	[illegible]	631.73
N	[illegible]	-13.42	[illegible]	631.80
O	[illegible]	-13.42	[illegible]	[illegible]
P	[illegible]	-13.42	[illegible]	[illegible]
Q	[illegible]	-13.42	[illegible]	[illegible]
CL. PIER 4	[illegible]	-13.42	[illegible]	[illegible]
R	[illegible]	-13.42	[illegible]	631.82
S	[illegible]	-13.42	[illegible]	631.92
T	[illegible]	[illegible]	[illegible]	[illegible]
U	[illegible]	[illegible]	[illegible]	[illegible]
CL. PIER 5	3055+65.55	-13.42	631.94	631.94
V	3055+75.55	-13.42	[illegible]	[illegible]
W	3055+85.55	-13.42	631.97	632.00
X	3055+95.55	-13.42	631.99	632.01
CL. BRG. N. ABUT.	3056+04.55	-13.42	632.01	[illegible]
BK. OF N. ABUT.	[illegible]	-13.42	[illegible]	632.01

BEAM 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.68	-7.50	631.22	631.22
CL. BRG. S. ABUT.	3053+17.51	-7.50	631.22	631.22
A	3053+27.51	-7.50	631.26	631.28
B	3053+37.51	-7.50	631.30	[illegible]
C	3053+47.51	-7.50	631.34	[illegible]
CL. PIER 1	3053+56.47	-7.50	631.37	631.37
D	3053+66.47	-7.50	631.41	631.44
E	3053+76.47	-7.50	631.44	631.49
F	3053+86.47	-7.50	631.48	[illegible]
G	3053+96.47	-7.50	631.52	631.54
CL. PIER 2	3054+04.47	-7.50	631.55	631.55
H	3054+14.47	-7.50	631.59	[illegible]
I	3054+24.47	-7.50	631.62	[illegible]
J	3054+34.47	-7.50	631.66	[illegible]
K	3054+44.47	-7.50	631.69	631.79
L	3054+54.47	-7.50	631.73	631.77
CL. PIER 3	3054+61.01	-7.50	631.75	631.75
M	3054+71.01	-7.50	631.78	631.82
N	[illegible]	-7.50	631.81	631.89
O	[illegible]	-7.50	631.84	631.95
P	3055+01.01	-7.50	631.87	631.96
Q	[illegible]	-7.50	631.90	[illegible]
CL. PIER 4	[illegible]	-7.50	631.92	631.92
R	[illegible]	-7.50	631.94	[illegible]
S	3055+37.51	-7.50	631.97	[illegible]
T	3055+47.51	-7.50	631.99	[illegible]
U	[illegible]	[illegible]	632.01	[illegible]
CL. PIER 5	3055+65.51	-7.50	632.03	632.03
V	[illegible]	[illegible]	632.05	632.07
W	3055+85.51	-7.50	632.07	632.10
X	3055+95.51	-7.50	632.08	632.10
CL. BRG. N. ABUT.	3056+04.51	-7.50	632.10	632.10
BK. OF N. ABUT.	3056+06.35	-7.50	632.10	632.10

DECK ELEVATIONS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. 92-1(HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: F.T.T. CHECKED: S.K.L.
DRAWN: M.L.P. DATE: 3-16-94 NO. H-1349

*(92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	64
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		
		SHEET 6 OF 22		

BEAM 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.64	-1.58	631.31	631.31
CL. BRG. S. ABUT.	3053+17.47	-1.58	631.32	631.32
A	3053+27.47	-1.58	631.35	631.37
B	3053+37.47	-1.58	631.39	631.42
C	3053+47.47	-1.58	631.43	631.45
CL. PIER 1	3053+56.43	-1.58	631.46	631.46
D	3053+66.43	-1.58	631.50	631.53
E	3053+76.43	-1.58	631.53	631.58
F	3053+86.43	-1.58	631.57	631.62
G	3053+96.43	-1.58	631.61	631.64
CL. PIER 2	3054+04.43	-1.58	631.64	631.64
H	3054+14.43	-1.58	631.67	631.71
I	3054+24.43	-1.58	631.71	631.79
J	3054+34.43	-1.58	631.75	631.85
K	3054+44.43	-1.58	631.78	631.87
L	3054+54.43	-1.58	631.82	631.86
CL. PIER 3	3054+60.97	-1.58	631.84	631.84
M	3054+70.97	-1.58	631.87	631.91
N	3054+80.97	-1.58	631.90	631.98
O	3054+90.97	-1.58	631.93	632.04
P	3055+00.97	-1.58	631.96	632.05
Q	3055+10.97	-1.58	631.99	632.03
CL. PIER 4	3055+17.47	-1.58	632.01	632.01
R	3055+27.47	-1.58	632.03	632.06
S	3055+37.47	-1.58	632.06	632.11
T	3055+47.47	-1.58	632.08	632.13
U	3055+57.47	-1.58	632.10	632.13
CL. PIER 5	3055+65.47	-1.58	632.12	632.12
V	3055+75.47	-1.58	632.14	632.16
W	3055+85.47	-1.58	632.16	632.19
X	3055+95.47	-1.58	632.18	632.20
CL. BRG. N. ABUT.	3056+04.47	-1.58	632.19	632.19
BK. OF N. ABUT.	3056+06.30	-1.58	632.20	632.20

SOUTH BOUND PROFILE GRADE LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.65	-3.00	631.29	631.29
CL. BRG. S. ABUT.	3053+17.48	-3.00	631.29	631.29
A	3053+27.48	-3.00	631.33	631.35
B	3053+37.48	-3.00	631.37	631.40
C	3053+47.48	-3.00	631.41	631.43
CL. PIER 1	3053+56.44	-3.00	631.44	631.44
D	3053+66.44	-3.00	631.48	631.51
E	3053+76.44	-3.00	631.51	631.56
F	3053+86.44	-3.00	631.55	631.60
G	3053+96.44	-3.00	631.59	631.61
CL. PIER 2	3054+04.44	-3.00	631.62	631.62
H	3054+14.44	-3.00	631.65	631.69
I	3054+24.44	-3.00	631.69	631.77
J	3054+34.44	-3.00	631.73	631.83
K	3054+44.44	-3.00	631.76	631.85
L	3054+54.44	-3.00	631.80	631.84
CL. PIER 3	3054+60.98	-3.00	631.82	631.82
M	3054+70.98	-3.00	631.85	631.89
N	3054+80.98	-3.00	631.88	631.96
O	3054+90.98	-3.00	631.91	632.02
P	3055+00.98	-3.00	631.94	632.03
Q	3055+10.98	-3.00	631.97	632.01
CL. PIER 4	3055+17.48	-3.00	631.99	631.99
R	3055+27.48	-3.00	632.01	632.04
S	3055+37.48	-3.00	632.04	632.09
T	3055+47.48	-3.00	632.06	632.11
U	3055+57.48	-3.00	632.08	632.11
CL. PIER 5	3055+65.48	-3.00	632.10	632.10
V	3055+75.48	-3.00	632.12	632.14
W	3055+85.48	-3.00	632.14	632.17
X	3055+95.48	-3.00	632.15	632.17
CL. BRG. N. ABUT.	3056+04.48	-3.00	632.17	632.17
BK. OF N. ABUT.	3056+06.31	-3.00	632.17	632.17

WEST GUTTER LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.94	-44.67	630.64	630.64
CL. BRG. S. ABUT.	3053+17.77	-44.67	630.64	630.64
A	3053+27.77	-44.67	630.68	630.70
B	3053+37.77	-44.67	630.72	630.75
C	3053+47.77	-44.67	630.76	630.78
CL. PIER 1	3053+56.73	-44.67	630.79	630.79
D	3053+66.73	-44.67	630.83	630.86
E	3053+76.73	-44.67	630.86	630.91
F	3053+86.73	-44.67	630.90	630.95
G	3053+96.73	-44.67	630.94	630.96
CL. PIER 2	3054+04.73	-44.67	630.97	630.97
H	3054+14.73	-44.67	631.00	631.04
I	3054+24.73	-44.67	631.04	631.12
J	3054+34.73	-44.67	631.08	631.18
K	3054+44.73	-44.67	631.11	631.20
L	3054+54.73	-44.67	631.15	631.19
CL. PIER 3	3054+61.27	-44.67	631.17	631.17
M	3054+71.27	-44.67	631.20	631.24
N	3054+81.27	-44.67	631.23	631.31
O	3054+91.27	-44.67	631.26	631.37
P	3055+01.27	-44.67	631.29	631.38
Q	3055+11.27	-44.67	631.32	631.36
CL. PIER 4	3055+17.77	-44.67	631.34	631.34
R	3055+27.77	-44.67	631.36	631.39
S	3055+37.77	-44.67	631.39	631.44
T	3055+47.77	-44.67	631.41	631.46
U	3055+57.77	-44.67	631.43	631.46
CL. PIER 5	3055+65.77	-44.67	631.45	631.45
V	3055+75.77	-44.67	631.47	631.49
W	3055+85.77	-44.67	631.48	631.51
X	3055+95.77	-44.67	631.50	631.52
CL. BRG. N. ABUT.	3056+04.77	-44.67	631.52	631.52
BK. OF N. ABUT.	3056+06.61	-44.67	631.52	631.52

SOUTH BOUND STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.73	-15.00	631.10	631.10
CL. BRG. S. ABUT.	3053+17.56	-15.00	631.11	631.11
A	3053+27.56	-15.00	631.14	631.16
B	3053+37.56	-15.00	631.18	631.21
C	3053+47.56	-15.00	631.22	631.24
CL. PIER 1	3053+56.52	-15.00	631.25	631.25
D	3053+66.52	-15.00	631.29	631.32
E	3053+76.52	-15.00	631.33	631.38
F	3053+86.52	-15.00	631.36	631.41
G	3053+96.52	-15.00	631.40	631.43
CL. PIER 2	3054+04.52	-15.00	631.43	631.43
H	3054+14.52	-15.00	631.47	631.51
I	3054+24.52	-15.00	631.50	631.55
J	3054+34.52	-15.00	631.54	631.64
K	3054+44.52	-15.00	631.58	631.67
L	3054+54.52	-15.00	631.61	631.65
CL. PIER 3	3054+61.06	-15.00	631.63	631.63
M	3054+71.06	-15.00	631.66	631.70
N	3054+81.06	-15.00	631.70	631.78
O	3054+91.06	-15.00	631.73	631.83
P	3055+01.06	-15.00	631.75	631.84
Q	3055+11.06	-15.00	631.78	631.82
CL. PIER 4	3055+17.56	-15.00	631.80	631.80
R	3055+27.56	-15.00	631.82	631.85
S	3055+37.56	-15.00	631.85	631.90
T	3055+47.56	-15.00	631.87	631.92
U	3055+57.56	-15.00	631.89	631.92
CL. PIER 5	3055+65.56	-15.00	631.91	631.91
V	3055+75.56	-15.00	631.93	631.95
W	3055+85.56	-15.00	631.95	631.98
X	3055+95.56	-15.00	631.97	631.99
CL. BRG. N. ABUT.	3056+04.56	-15.00	631.98	631.98
BK. OF N. ABUT.	3056+06.40	-15.00	631.99	631.99

NORTH BOUND STAGE CONSTRUCTION LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.52	15.00	631.10	631.10
CL. BRG. S. ABUT.	3053+17.36	15.00	631.11	631.11
			-495.28	
A	3053+27.36	15.00	631.14	631.16
B	3053+37.36	15.00	631.18	631.21
C	3053+47.36	15.00	631.22	631.24
CL. PIER 1	3053+56.31	15.00	631.25	631.25
D	3053+66.31	15.00	631.29	631.32
E	3053+76.31	15.00	631.32	631.37
F	3053+86.31	15.00	631.36	631.41
G	3053+96.31	15.00	631.40	631.43
CL. PIER 2	3054+04.31	15.00	631.43	631.43
H	3054+14.31	15.00	631.46	631.50
I	3054+24.31	15.00	631.50	631.58
J	3054+34.31	15.00	631.54	631.64
K	3054+44.31	15.00	631.57	631.66
L	3054+54.31	15.00	631.61	631.65
CL. PIER 3	3054+60.86	15.00	631.63	631.63
M	3054+70.86	15.00	631.66	631.70
N	3054+80.86	15.00	631.69	631.77
O	3054+90.86	15.00	631.72	631.83
P	3055+00.86	15.00	631.75	631.84
Q	3055+10.86	15.00	631.78	631.82
CL. PIER 4	3055+17.36	15.00	631.80	631.80
R	3055+27.36	15.00	631.82	631.85
S	3055+37.36	15.00	631.85	631.90
T	3055+47.36	15.00	631.87	631.92
U	3055+57.36	15.00	631.89	631.92
CL. PIER 5	3055+65.36	15.00	631.91	631.91
V	3055+75.36	15.00	631.93	631.95
W	3055+85.36	15.00	631.95	631.98
X	3055+95.36	15.00	631.97	631.99
CL. BRG. N. ABUT.	3056+04.36	15.00	631.98	631.98
BK. OF N. ABUT.	3056+06.19	15.00	631.99	631.99

BEAM 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.62	1.58	631.31	631.31
CL. BRG. S. ABUT.	3053+17.45	1.58	631.32	631.32
A	3053+27.45	1.58	631.35	631.37
B	3053+37.45	1.58	631.39	631.42
C	3053+47.45	1.58	631.43	631.45
CL. PIER 1	3053+56.41	1.58	631.46	631.46
D	3053+66.41	1.58	631.50	631.53
E	3053+76.41	1.58	631.53	631.58
F	3053+86.41	1.58	631.57	631.62
G	3053+96.41	1.58	631.61	631.64
CL. PIER 2	3054+04.41	1.58	631.64	631.64
H	3054+14.41	1.58	631.67	631.71
I	3054+24.41	1.58	631.71	631.79
J	3054+34.41	1.58	631.75	631.85
K	3054+44.41	1.58	631.78	631.87
L	3054+54.41	1.58	631.82	631.86
CL. PIER 3	3054+60.95	1.58	631.84	631.84
M	3054+70.95	1.58	631.87	631.91
N	3054+80.95	1.58	631.90	631.98
O	3054+90.95	1.58	631.93	632.04
P	3055+00.95	1.58	631.95	632.05
Q	3055+10.95	1.58	631.99	632.03
CL. PIER 4	3055+17.45	1.58	632.01	632.01
R	3055+27.45	1.58	632.03	632.06
S	3055+37.45	1.58	632.06	632.11
T	3055+47.45	1.58	632.08	632.13
U	3055+57.45	1.58	632.10	632.13
CL. PIER 5	3055+65.45	1.58	632.12	632.12
V	3055+75.45	1.58	632.14	632.16
W	3055+85.45	1.58	632.16	632.19
X	3055+95.45	1.58	632.18	632.20
CL. BRG. N. ABUT.	3056+04.45	1.58	632.19	632.19
BK. OF N. ABUT.	3056+06.28	1.58	632.20	632.20

BEAM 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.57	7.50	631.22	631.22
CL. BRG. S. ABUT.	3053+17.41	7.50	631.22	631.22
A	3053+27.41	7.50	631.26	631.28
B	3053+37.41	7.50	631.30	631.33
C	3053+47.41	7.50	631.34	631.36
CL. PIER 1	3053+56.37	7.50	631.37	631.37
D	3053+66.37	7.50	631.41	631.44
E	3053+76.37	7.50	631.44	631.49
F	3053+86.37	7.50	631.48	631.53
G	3053+96.37	7.50	631.52	631.54
CL. PIER 2	3054+04.37	7.50	631.55	631.55
H	3054+14.37	7.50	631.58	631.62
I	3054+24.37	7.50	631.62	631.70
J	3054+34.37	7.50	631.66	631.76
K	3054+44.37	7.50	631.69	631.78
L	3054+54.37	7.50	631.73	631.77
CL. PIER 3	3054+60.91	7.50	631.75	631.75
M	3054+70.91	7.50	631.78	631.82
N	3054+80.91	7.50	631.81	631.89
O	3054+90.91	7.50	631.84	631.95
P	3055+00.91	7.50	631.87	631.96
Q	3055+10.91	7.50	631.90	631.94
CL. PIER 4	3055+17.41	7.50	631.92	631.92
R	3055+27.41	7.50	631.94	631.97
S	3055+37.41	7.50	631.97	632.02
T	3055+47.41	7.50	631.99	632.04
U	3055+57.41	7.50	632.01	632.04
CL. PIER 5	3055+65.41	7.50	632.03	632.03
V	3055+75.41	7.50	632.05	632.07
W	3055+85.41	7.50	632.06	632.09
X	3055+95.41	7.50	632.08	632.10
CL. BRG. N. ABUT.	3056+04.41	7.50	632.10	632.10
BK. OF N. ABUT.	3056+06.24	7.50	632.10	632.10

DECK ELEVATIONS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: F.T.T. CHECKED: S.K.L.
DRAWN: M.L.P. DATE: 3-16-94 NO. H-1348

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA332	*	VERMILION	110	65

X(92-1HB-5)BR

FED. ROAD DIST. NO. 7 | ILLINOIS PROJECT

SHEET 7 OF 22

BEAM 11

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.53	13.42	631.12	631.12
CL. BRG. S. ABUT.	3053+17.37	13.42	631.13	631.13
A	3053+27.37	13.42	631.17	[illegible]
B	3053+37.37	13.42	631.21	[illegible]
C	3053+47.37	13.42	631.24	[illegible]
CL. PIER 1	3053+56.32	13.42	631.28	[illegible]
D	3053+66.32	13.42	631.31	[illegible]
E	3053+76.32	13.42	[illegible]	[illegible]
F	3053+86.32	13.42	631.39	[illegible]
G	3053+96.32	13.42	631.42	631.45
CL. PIER 2	3054+04.32	13.42	631.45	631.45
H	3054+14.32	13.42	631.49	[illegible]
I	3054+24.32	13.42	631.53	[illegible]
J	3054+34.32	13.42	631.56	631.67
K	3054+44.32	13.42	631.60	[illegible]
L	3054+54.32	13.42	631.63	631.67
CL. PIER 3	3054+60.87	13.42	631.66	[illegible]
M	3054+70.87	13.42	631.69	631.73
N	3054+80.87	13.42	631.72	631.80
O	3054+90.87	13.42	631.75	631.85
P	3055+00.87	13.42	631.78	631.87
Q	3055+10.87	13.42	631.81	[illegible]
CL. PIER 4	3055+17.37	13.42	631.82	[illegible]
R	3055+27.37	13.42	631.85	631.88
S	3055+37.37	13.42	631.87	631.92
T	3055+47.37	13.42	631.90	631.95
U	3055+57.37	13.42	[illegible]	[illegible]
CL. PIER 5	3055+65.37	13.42	631.94	631.94
V	3055+75.37	13.42	631.95	631.97
W	3055+85.37	13.42	631.97	632.00
X	3055+95.37	13.42	631.99	632.01
CL. BRG. N. ABUT.	3056+04.37	13.42	632.01	[illegible]
BK. OF N. ABUT.	3056+06.20	13.42	632.01	632.01

BEAM 12

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.49	19.33	631.03	631.03
CL. BRG. S. ABUT.	3053+17.33	19.33	631.04	631.04
A	3053+27.33	19.33	631.08	631.10
B	3053+37.33	19.33	631.11	631.14
C	3053+47.33	19.33	631.15	631.17
CL. PIER 1	3053+56.28	19.33	631.18	631.18
D	3053+66.28	19.33	631.22	631.25
E	3053+76.28	19.33	631.26	631.31
F	3053+86.28	19.33	631.29	631.34
G	3053+96.28	19.33	631.33	631.36
CL. PIER 2	3054+04.28	19.33	631.36	631.36
H	3054+14.28	19.33	631.40	631.44
I	3054+24.28	19.33	631.43	631.51
J	3054+34.28	19.33	631.47	631.57
K	3054+44.28	19.33	631.51	631.60
L	3054+54.28	19.33	631.54	631.58
CL. PIER 3	3054+60.83	19.33	631.56	631.56
M	3054+70.83	19.33	631.60	631.64
N	3054+80.83	19.33	631.63	631.71
O	3054+90.83	19.33	631.66	631.76
P	3055+00.83	19.33	631.69	631.78
Q	3055+10.83	19.33	631.71	631.75
CL. PIER 4	3055+17.33	19.33	631.73	631.73
R	3055+27.33	19.33	631.76	631.79
S	3055+37.33	19.33	631.78	631.83
T	3055+47.33	19.33	631.80	631.85
U	3055+57.33	19.33	631.83	631.85
CL. PIER 5	3055+65.33	19.33	631.84	631.84
V	3055+75.33	19.33	631.86	631.88
W	3055+85.33	19.33	631.88	631.91
X	3055+95.33	19.33	631.90	631.92
CL. BRG. N. ABUT.	3056+04.33	19.33	631.92	631.92
BK. OF N. ABUT.	3056+06.16	19.33	631.92	631.92

BEAM 13

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.45	25.25	630.94	630.94
CL. BRG. S. ABUT.	3053+17.28	25.25	630.95	630.95
A	3053+27.28	25.25	630.98	631.00
B	3053+37.28	25.25	631.02	631.05
C	3053+47.28	25.25	631.06	631.08
CL. PIER 1	3053+56.24	25.25	631.09	631.09
D	3053+66.24	25.25	631.13	631.13
E	3053+76.24	25.25	631.16	631.21
F	3053+86.24	25.25	631.20	631.25
G	3053+96.24	25.25	631.24	631.27
CL. PIER 2	3054+04.24	25.25	631.27	631.27
H	3054+14.24	25.25	631.30	631.34
I	3054+24.24	25.25	631.34	631.42
J	3054+34.24	25.25	631.39	631.48
K	3054+44.24	25.25	631.41	631.50
L	3054+54.24	25.25	631.45	631.49
CL. PIER 3	3054+60.78	25.25	631.47	631.47
M	3054+70.78	25.25	631.50	631.54
N	3054+80.79	25.25	631.53	631.61
O	3054+90.78	25.25	631.56	631.67
P	3055+00.78	25.25	631.59	631.68
Q	3055+10.78	25.25	631.62	631.66
CL. PIER 4	3055+17.28	25.25	631.64	631.64
R	3055+27.28	25.25	631.66	631.69
S	3055+37.28	25.25	631.69	631.74
T	3055+47.28	25.25	631.71	631.76
U	3055+57.28	25.25	631.73	631.76
CL. PIER 5	3055+65.28	25.25	631.75	631.75
V	3055+75.28	25.25	631.77	631.79
W	3055+85.28	25.25	631.79	631.82
X	3055+95.28	25.25	631.81	631.83
CL. BRG. N. ABUT.	3056+04.28	25.25	631.82	631.82
BK. OF N. ABUT.	3056+06.12	25.25	631.83	631.83

BEAM 14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.41	31.17	630.85	630.85
CL. BRG. S. ABUT.	3053+17.24	31.17	630.85	630.85
A	3053+27.24	31.17	630.89	630.91
B	3053+37.24	31.17	630.93	630.96
C	3053+47.24	31.17	630.96	630.99
CL. PIER 1	3053+56.20	31.17	631.00	631.00
D	3053+66.20	31.17	631.03	631.06
E	3053+76.20	31.17	631.07	631.12
F	3053+86.20	31.17	631.11	631.16
G	3053+96.20	31.17	631.15	631.17
CL. PIER 2	3054+04.20	31.17	631.17	631.17
H	3054+14.20	31.17	631.21	631.25
I	3054+24.20	31.17	631.25	631.32
J	3054+34.20	31.17	631.29	631.39
K	3054+44.20	31.17	631.32	631.41
L	3054+54.20	31.17	631.36	631.40
CL. PIER 3	3054+60.74	31.17	631.38	631.38
M	3054+70.74	31.17	631.41	631.45
N	3054+80.74	31.17	631.44	631.52
O	3054+90.74	31.17	631.47	631.58
P	3055+00.74	31.17	631.50	631.58
Q	3055+10.74	31.17	631.53	631.57
CL. PIER 4	3055+17.24	31.17	631.55	631.55
R	3055+27.24	31.17	631.57	631.60
S	3055+37.24	31.17	631.60	631.65
T	3055+47.24	31.17	631.62	631.67
U	3055+57.24	31.17	631.64	631.67
CL. PIER 5	3055+65.24	31.17	631.66	631.66
V	3055+75.24	31.17	631.68	631.70
W	3055+85.24	31.17	631.69	631.72
X	3055+95.24	31.17	631.71	631.73
CL. BRG. N. ABUT.	3056+04.24	31.17	631.73	631.73
BK. OF N. ABUT.	3056+06.08	31.17	631.73	631.73

BEAM 15

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.37	37.08	630.75	630.75
CL. BRG. S. ABUT.	3053+17.20	37.08	630.76	630.76
A	3053+27.20	37.08	630.80	630.82
B	3053+37.20	37.08	630.84	630.87
C	3053+47.20	37.08	630.87	630.89
CL. PIER 1	3053+56.16	37.08	630.91	630.91
D	3053+66.16	37.08	630.94	630.97
E	3053+76.16	37.08	630.98	[illegible]
F	3053+86.16	37.08	631.02	[illegible]
G	3053+96.16	37.08	631.05	631.06
CL. PIER 2	3054+04.16	37.08	631.08	631.08
H	3054+14.16	37.08	631.12	631.16
I	3054+24.16	37.08	631.16	[illegible]
J	3054+34.16	37.08	631.19	[illegible]
K	3054+44.16	37.08	631.22	[illegible]
L	3054+54.16	37.08	631.26	[illegible]
CL. PIER 3	3054+60.70	37.08	631.29	[illegible]
M	3054+70.70	37.08	631.32	[illegible]
N	3054+80.70	37.08	631.35	[illegible]
O	3054+90.70	37.08	631.38	[illegible]
P	3055+00.70	37.08	631.41	[illegible]
Q	3055+10.70	37.08	631.44	[illegible]
CL. PIER 4	3055+17.20	37.08	631.45	[illegible]
R	3055+27.20	37.08	631.48	[illegible]
S	3055+37.20	37.08	631.50	[illegible]
T	3055+47.20	37.08	631.53	[illegible]
U	3055+57.20	37.08	631.55	[illegible]
CL. PIER 5	3055+65.20	37.08	631.55	[illegible]
V	3055+75.20	37.08	631.58	[illegible]
W	3055+85.20	37.08	631.60	631.63
X	3055+95.20	37.08	631.62	631.64
CL. BRG. N. ABUT.	3056+04.2	37.08	631.64	631.64
BK. OF N. ABUT.	3056+06.03	37.08	631.64	631.64

BEAM 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.33	43.00	630.66	630.66
CL. BRG. S. ABUT.	3053+17.16	43.00	630.67	630.67
A	3053+27.16	43.00	630.71	630.73
B	3053+37.16	43.00	630.74	630.77
C	3053+47.16	43.00	630.78	630.80
CL. PIER 1	3053+56.12	43.00	630.81	630.81
D	3053+66.12	43.00	630.85	630.88
E	3053+76.12	43.00	630.88	[illegible]
F	3053+86.12	43.00	630.92	630.97
G	3053+96.12	43.00	630.96	630.99
CL. PIER 2	3054+04.12	43.00	630.99	630.99
H	3054+14.12	43.00	631.03	631.07
I	3054+24.12	43.00	631.06	631.14
J	3054+34.12	43.00	631.10	[illegible]
K	3054+44.12	43.00	631.14	631.23
L	3054+54.12	43.00	631.17	631.21
CL. PIER 3	3054+60.66	43.00	631.19	631.19
M	3054+70.66	43.00	[illegible]	631.27
N	3054+80.66	43.00	[illegible]	[illegible]
O	3054+90.66	43.00	[illegible]	[illegible]
P	3055+00.66	43.00	631.32	[illegible]
Q	3055+10.66	43.00	631.34	631.38
CL. PIER 4	[illegible]	[illegible]	[illegible]	[illegible]
R	[illegible]	[illegible]	[illegible]	[illegible]
S	[illegible]	[illegible]	[illegible]	[illegible]
T	[illegible]	[illegible]	[illegible]	[illegible]
U	[illegible]	[illegible]	[illegible]	[illegible]
CL. PIER 5	[illegible]	[illegible]	[illegible]	[illegible]
V	3055+75.16	43.00	[illegible]	[illegible]
W	3055+85.16	43.00	631.51	631.54
X	3055+95.16	43.00	631.53	631.55
CL. BRG. N. ABUT.	3056+04.16	43.00	631.54	[illegible]
BK. OF N. ABUT.	3056+05.99	43.00	631.55	[illegible]

NORTH BOUND PROFILE GRADE LINE

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV'S ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.61	3.00	631.29	631.29
CL. BRG. S. ABUT.	3053+17.44	3.00	631.29	631.29
A	3053+27.44	3.00	631.33	631.35
B	3053+37.44	3.00	631.37	631.40
C	3053+47.44	3.00	631.41	631.43
CL. PIER 1	3053+56.40	3.00	631.44	631.44
D	3053+66.40	3.00	631.48	631.51
E	3053+76.40	3.00	631.51	631.56
F	3053+86.40	3.00	631.55	631.60
G	3053+96.40	3.00	631.59	631.61
CL. PIER 2	3054+04.40	3.00	631.62	631.62
H	3054+14.40	3.00	631.65	631.69
I	3054+24.40	3.00	631.69	631.77
J	3054+34.40	3.00	631.72	[illegible]
K	3054+44.40	3.00	631.76	631.85
L	3054+54.40	3.00	631.80	631.84
CL. PIER 3	3054+60.94	3.00	631.82	631.82
M	3054+70.94	3.00	631.85	631.89
N	3054+80.94	3.00	631.88	631.96
O	3054+90.94	3.00	631.91	632.02
P	3055+00.94	3.00	631.94	632.03
Q	3055+10.94	3.00	631.97	632.01
CL. PIER 4	3055+17.44	3.00	631.99	631.99
R	3055+27.44	3.00	632.01	632.04
S	3055+37.44	3.00	632.04	[illegible]
T	3055+47.44	3.00	632.06	[illegible]
U	3055+57.44	3.00	632.08	632.11
CL. PIER 5	3055+65.44	3.00	632.10	632.10
V	3055+75.44	3.00	632.12	632.14
W	3055+85.44	3.00	632.14	632.17
X	3055+95.44	3.00	632.15	632.17
CL. BRG. N. ABUT.	3056+04.44	3.00	632.17	632.17
BK. OF N. ABUT.	3056+06.27	3.00	632.17	632.17

DECK ELEVATIONS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-1HB-5)BR
STA. 3054+60.86
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: H.T.T. CHECKED: S.K.L.
DRAWN: M.L.P. DATE 3-16-94 NO. H-1348

*(92-11HB-5)BR

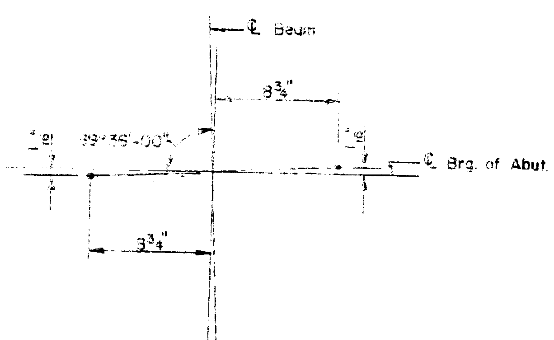
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	66

FED. ROAD DIST. NO. 7 | ILLINOIS | PROJECT

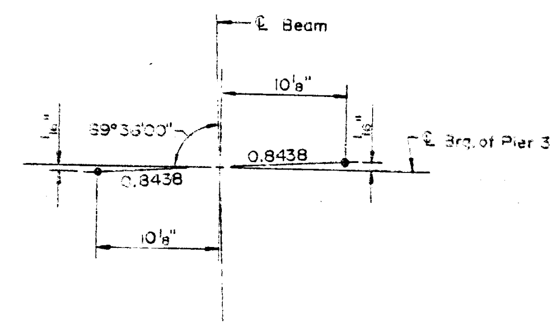
SHEET 3 OF 22

EAST GUTTER LINE

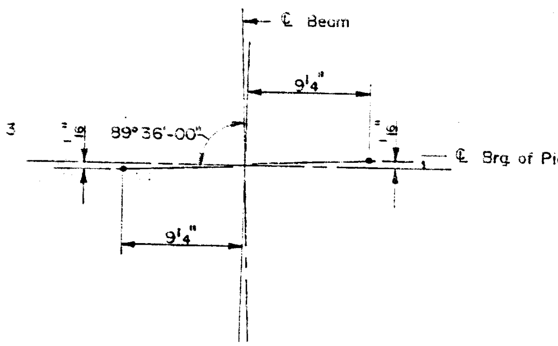
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJ. FOR D.L. DEFLECTION
BK. S. ABUT.	3053+15.31	44.67	630.64	630.64
CL. BRG. S. ABUT.	3053+17.15	44.67	630.64	630.64
A	3053+27.15	44.67	630.68	630.70
B	3053+37.15	44.67	630.72	630.75
C	3053+47.15	44.67	630.75	630.77
CL. PIER 1	3053+56.11	44.67	630.79	630.79
D	3053+66.11	44.67	630.82	630.85
E	3053+76.11	44.67	630.86	630.91
F	3053+86.11	44.67	630.90	630.95
G	3053+96.11	44.67	630.93	630.96
CL. PIER 2	3054+04.11	44.67	630.96	630.96
H	3054+14.11	44.67	631.00	631.04
I	3054+24.11	44.67	631.04	631.12
J	3054+34.11	44.67	631.07	631.15
K	3054+44.11	44.67	631.11	631.20
L	3054+54.11	44.67	631.14	631.16
CL. PIER 3	3054+60.65	44.67	631.17	631.17
M	3054+70.65	44.67	631.20	631.24
N	3054+80.65	44.67	631.23	631.31
O	3054+90.65	44.67	631.26	631.36
P	3055+00.65	44.67	631.29	631.34
Q	3055+10.65	44.67	631.32	631.33
CL. PIER 4	3055+17.15	44.67	631.33	631.33
R	3055+27.15	44.67	631.36	631.39
S	3055+37.15	44.67	631.38	631.43
T	3055+47.15	44.67	631.41	631.46
U	3055+57.15	44.67	631.43	631.46
CL. PIER 5	3055+65.15	44.67	631.45	631.45
V	3055+75.15	44.67	631.47	631.49
W	3055+85.15	44.67	631.48	631.51
X	3055+95.15	44.67	631.50	631.52
CL. BRG. N. ABUT.	3056+04.15	44.67	631.52	631.52
BK. OF N. ABUT.	3056+05.98	44.67	631.52	631.52



N. & S. ABUT.



PIER 3



PIERS 1 & 5 - PIERS 2 & 4

ANCHOR BOLT LOCATION

Work this Sheet with Sheets 15 & 16 of 22.

DECK ELEVATION & MISC. DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

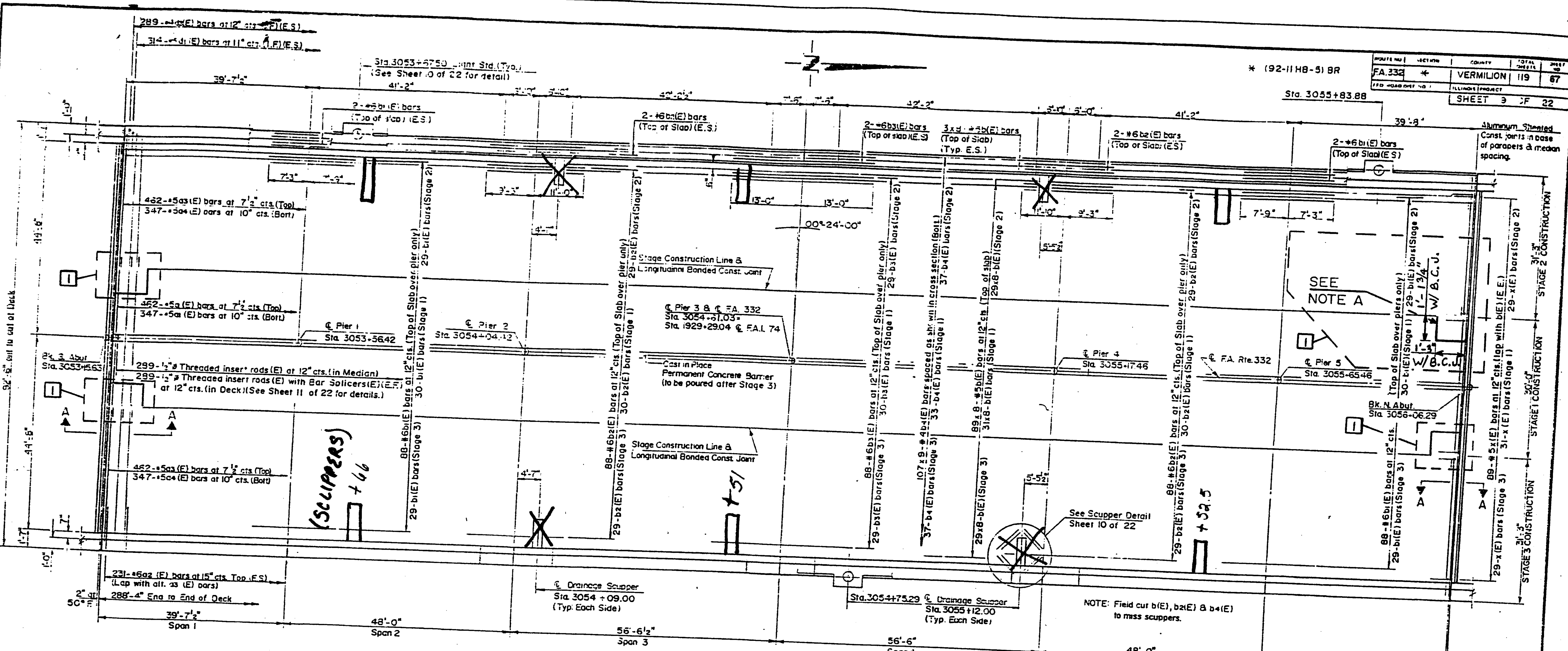
HSIONG ASSOCIATES LTD.

DESIGNED: F.T.T. | CHECKED: S.K.L.
DRAWN: M.L.P. | DATE: 3-16-94 | NO. H-1348

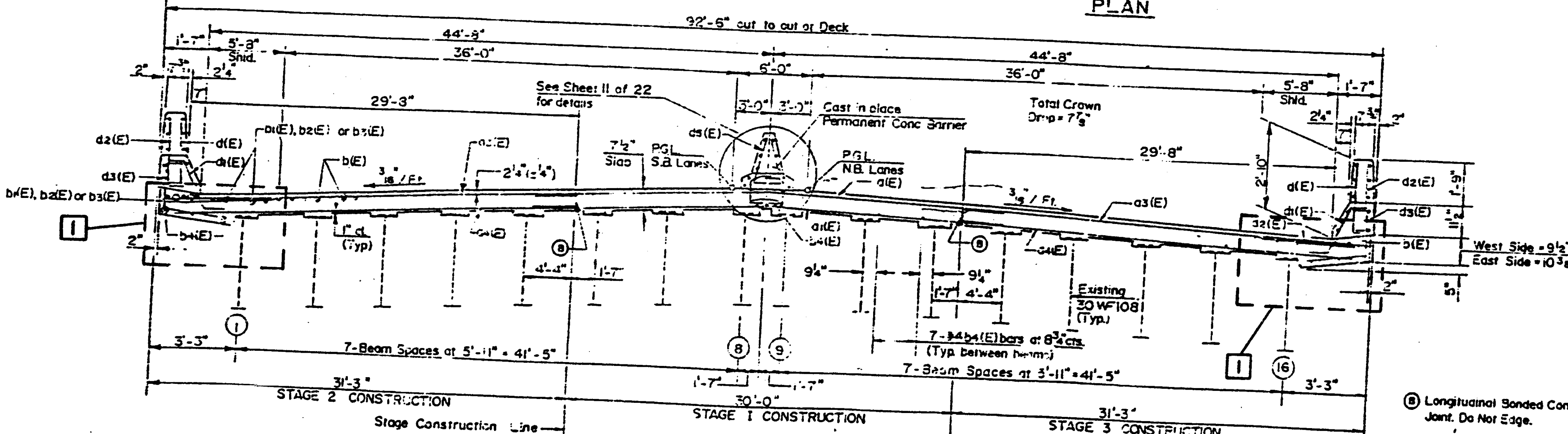
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 332	*	VERMILION	119	87

SHEET 9 OF 22

* (92-11 HB-5) BR



PLAN



TYPICAL CROSS SECTION (Looking North)

Ⓑ Longitudinal Bonded Construction Joint. Do Not Edge.

MIN. BAR LAP

- #4 — 1'-8"
- #5 — 2'-2"
- #6 — 2'-7"

NOTE A:
Provide temp. (1'-3") x (1'-1 3/4") blockout. Typical each corner of slab for Stage I Const.. Place remainder of concrete, with bonded construction joint, during Stages 2 & 3. Extend reinforcement into blockout.

NOTES: See Sheet 10 of 22 for Sec. A-A.
Reinforcement Bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 10 of 22 for Parapet reinforcement or Median Horizontal reinforcement.
See Sheet 13 of 22 for fillet reinforcement.

1 — REVISED R.O.W. 2/29/96

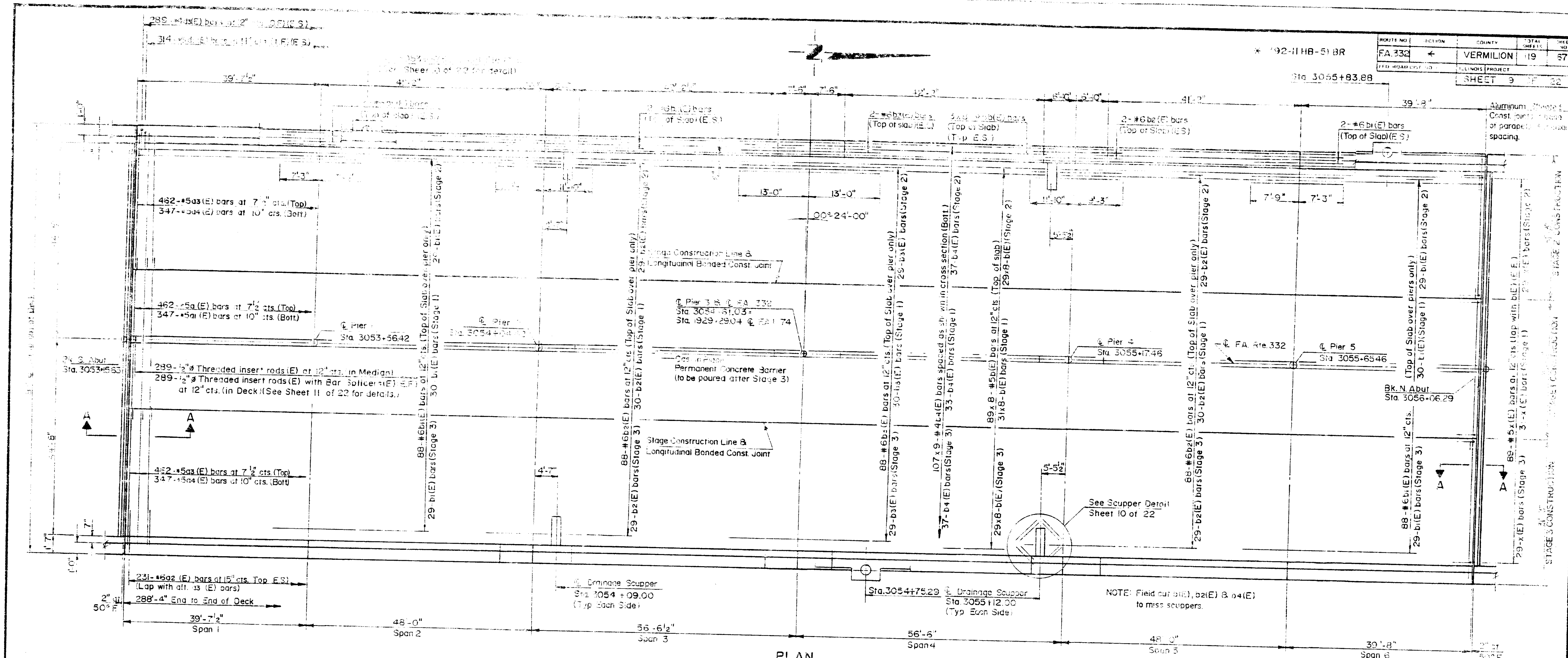
SUPERSTRUCTURE
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

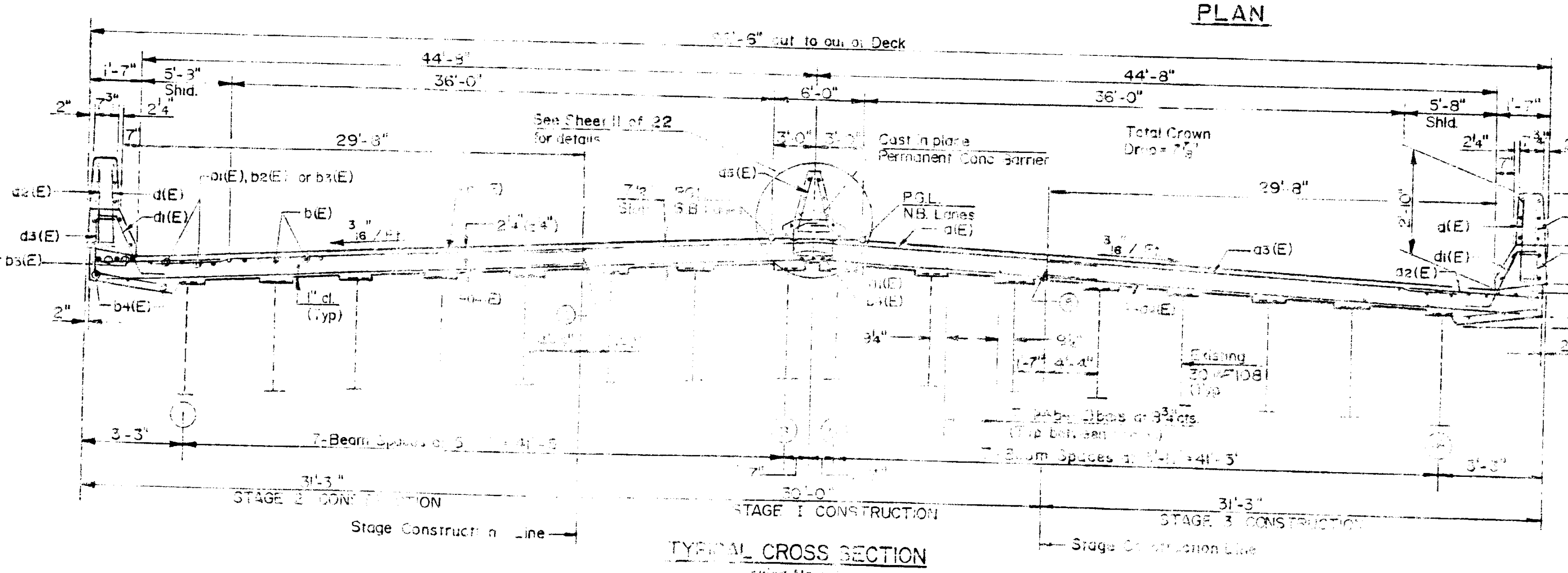
DESIGNED: M.M.A.	CHECKED: F.T.T.	
DRAWN: M.L.P.	DATE: 3-16-94	NO. H1348

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A. 332	✱	VERMILION	119	67
		SHEET 9 OF 22		

✱ (92-1 HB-5) BR



PLAN



TYPICAL CROSS SECTION
(Looking North)

MIN. BAR LAP

#4	1'-8"
#5	2'-2"
#6	2'-7"

NOTES: See Sheet 10 of 22 for Sec. A-A.
Reinforcement Bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 10 of 22 for Parapet reinforcement & Median Horizontal reinforcement.
See Sheet 13 of 22 for fillet reinforcement.

Ⓑ Longitudinal Bonded Construction Joint. Do Not Edge

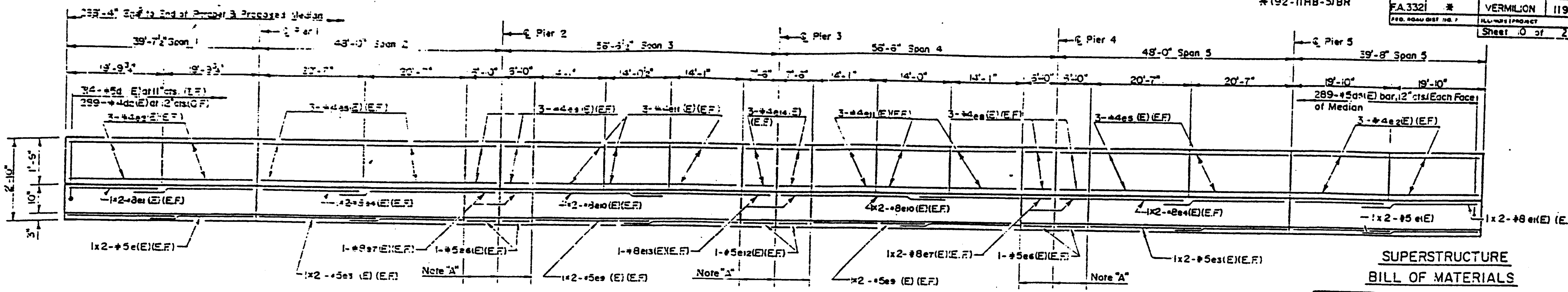
SUPERSTRUCTURE
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-1 HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD

DESIGNED MMA	CHECKED F.T.T.	
DRAWN ML.P.	DATE 5-16-94	NO. H1548

*(92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 332I	*	VERMILION	119	68
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT	Sheet 10 of 22		



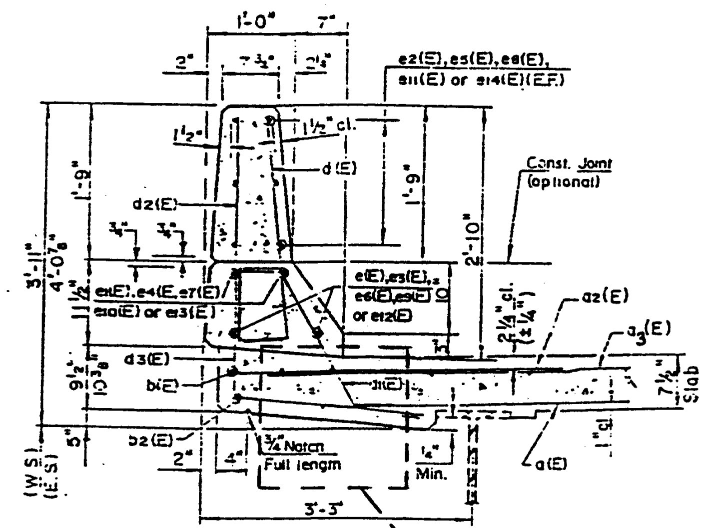
INSIDE ELEVATION OF PARAPET & PROPOSED MEDIAN

West Sides Shown
East Sides Similar

For Vertical Reinforcement in Median See Sheet 9 of 22

Bars indicated thus 20x3-#5 etc. indicates 20 Lines of bars with 3 lengths per line. Reinforcement Bars designated (E) shall be epoxy coated.

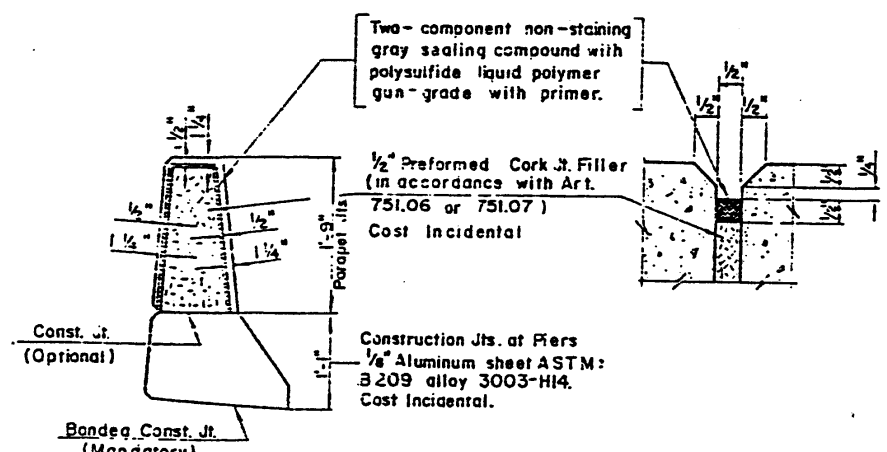
NOTE "A": Aluminum sheeted construction joint in the base of the Parapets.



SECTION THRU PARAPET

LEGEND

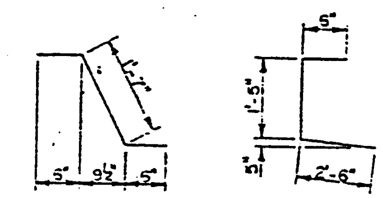
(W.S.) = West Side
(E.S.) = East Side



PARAPET JOINT DETAILS

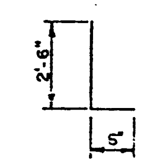
MIN. BAR LAP

#5 — 2'-2"
#8 — 4'-6"

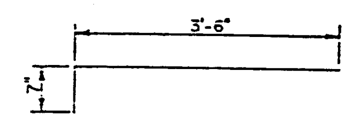


BAR d1(E)

BAR d3(E)



BARS d(E) & d2(E)

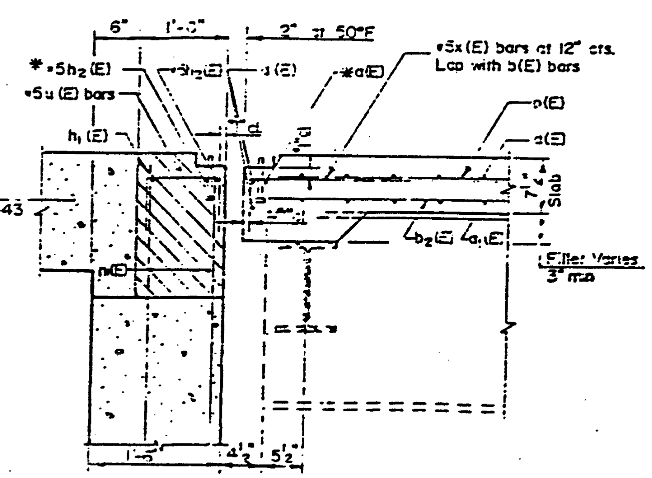


BAR x(E)

SUPERSTRUCTURE BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	462	#5	34'-3"	
a1 (E)	347	#5	34'-5"	
a2 (E)	462	#6	3'-0"	
a3 (E)	924	#5	30'-7"	
a4 (E)	694	#5	30'-1"	
a5 (E)	32	#5	2'-0"	
b (E)	760	#5	37'-11"	
b1 (E)	184	#6	15'-0"	
b2 (E)	184	#6	21'-1"	
b3 (E)	92	#6	26'-0"	
b4 (E)	963	#4	33'-5"	
b5 (E)	52	#4	25'-0"	
b6 (E)	10	#4	15'-3"	
b7 (E)	6	#4	7'-6"	
b8 (E)	2	#4	19'-5"	
d (E)	628	#5	3'-0"	
d1 (E)	628	#5	2'-7"	
d2 (E)	578	#4	3'-0"	
d3 (E)	578	#4	4'-5"	
d5 (E)	578	#4	3'-4"	
d7 (E)	9	#6	4'-5"	
d8 (E)	15	#6	8'-11"	
e (E)	32	#5	20'-9"	
e1 (E)	32	#8	21'-11"	
e2 (E)	36	#4	19'-7"	
e3 (E)	32	#5	21'-6"	
e4 (E)	32	#8	22'-8"	
e5 (E)	96	#4	20'-4"	
e6 (E)	32	#5	5'-7"	
e7 (E)	32	#8	5'-7"	
e8 (E)	96	#4	5'-7"	
e9 (E)	32	#5	22'-0"	
e10 (E)	32	#8	23'-3"	
e11 (E)	144	#4	13'-3"	
e12 (E)	16	#5	7'-3"	
e13 (E)	16	#8	7'-3"	
e14 (E)	48	#4	7'-3"	
u1 (E)	1,131	#4	3'-1"	
x (E)	178	#5	4'-1"	

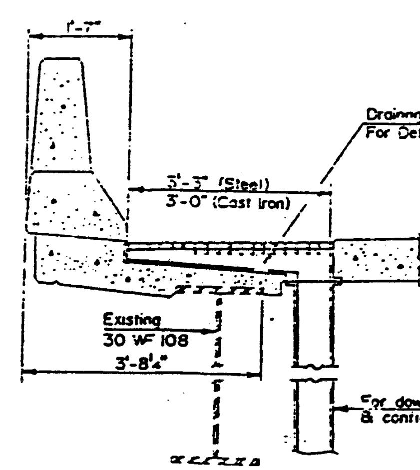
ITEM	UNITS	QTY
Concrete Superstructure	Cu. Yds.	775.5
Reinforcement Bars Epoxy Coated	Lbs.	174,690
Bar Splicers	Each	578



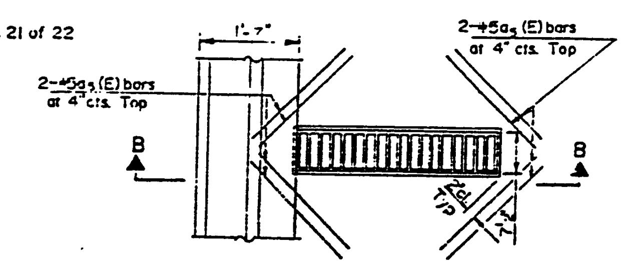
※ Place a(E) and h2(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-½"). Anchor bolts should be tied to a(E) and h2(E) bars.

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

SECTION A-A



SECTION B-B



PLAN

SCUPPER DETAILS

[I] – REVISED R.O.W. 2/29/96

For bars a5(E), d7(E) & d8(E) Details see Sheet 11 of 22
For bar u1(E) Details see Sheet 13 of 22.

PARAPET DETAILS [I]

U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

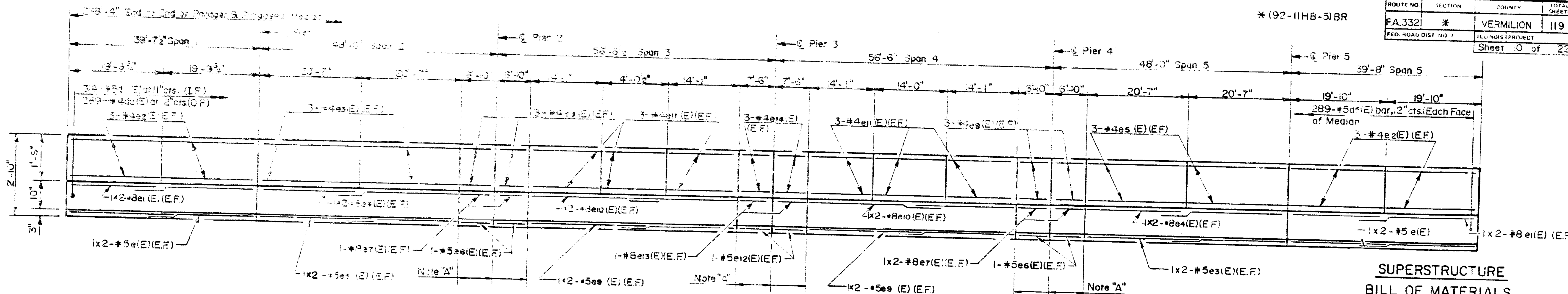
HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: F.T.T.
DRAWN: M.L.P. DATE: 3-16-94 NO. H1348

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 332	*	VERMILION	119	68

Sheet 10 of 22

*(92-11HB-5)BR



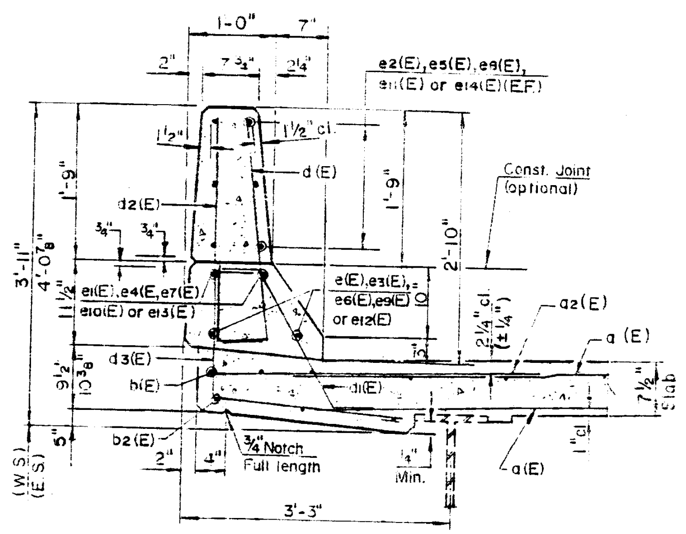
INSIDE ELEVATION OF PARAPET & PROPOSED MEDIAN

West Sides Shown
East Sides Similar

For Vertical Reinforcement in Median See Sheet 9 of 22

Bars indicated thus 20x3-#5 etc. indicates 20 Lines of bars with 3 lengths per line. Reinforcement Bars designated (E) shall be epoxy coated.

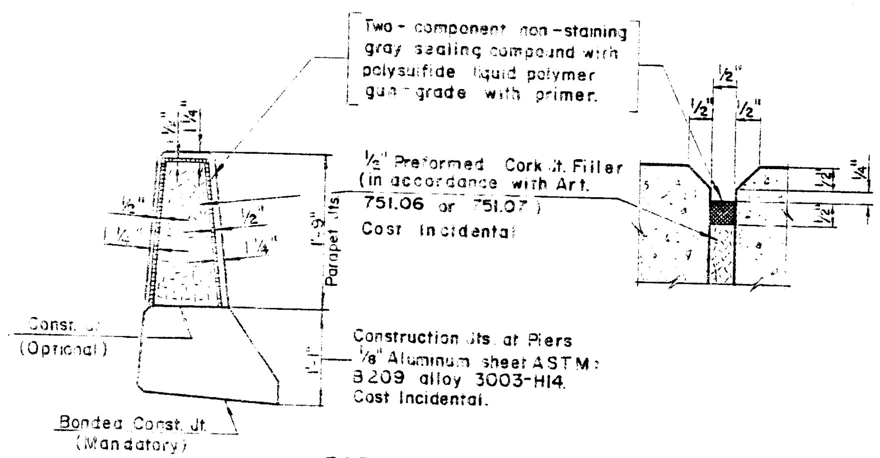
NOTE "A": Aluminum sheeted construction joint in the base of the Parapets.



SECTION THRU PARAPET

LEGEND

(WS) = West Side
(E.S) = East Side



Two-component non-staining gray sealing compound with polysulfide liquid polymer gun-grade with primer.

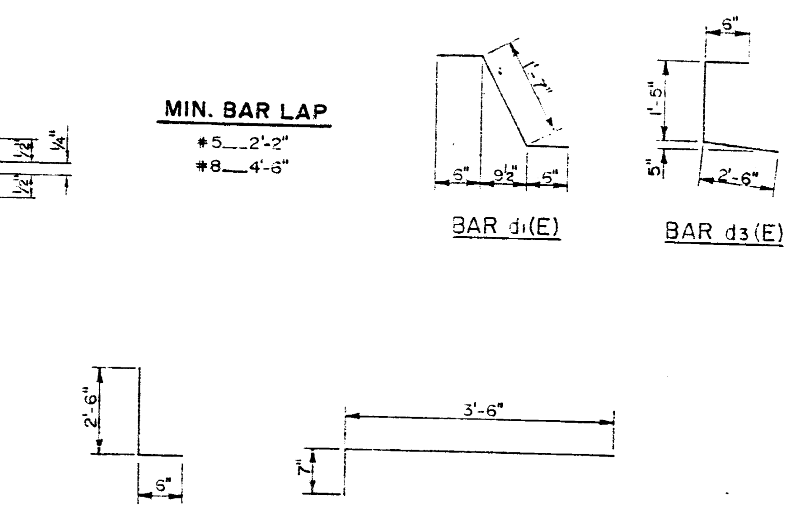
1/2" Preformed Cork Jt. Filler (in accordance with Art. 751.06 or 751.07) Cost Incidental

Construction Jts. at Piers 1/8" Aluminum sheet ASTM: B209 alloy 3003-H14. Cost Incidental.

PARAPET JOINT DETAILS

MIN. BAR LAP

#5 ___ 2'-2"
#8 ___ 4'-6"



BAR d1(E)

BAR d3(E)

BARS d(E) & d2(E)

BAR x(E)

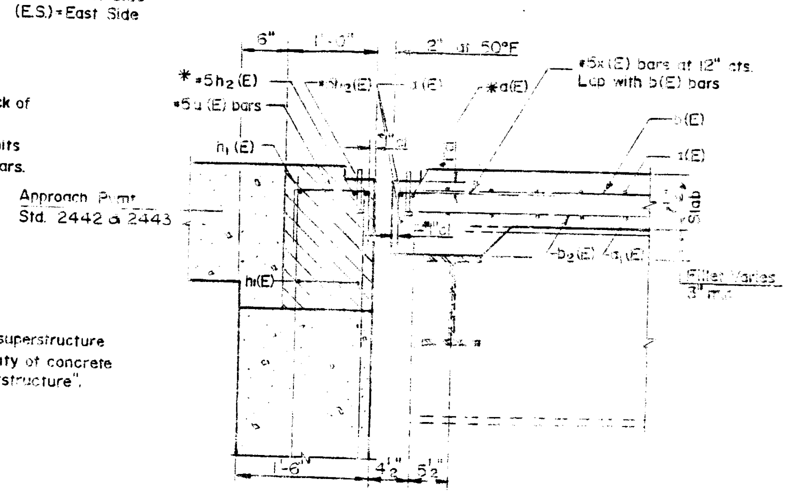
SUPERSTRUCTURE BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	462	#5	34'-4"	
a1 (E)	347	#5	34-4"	
a2 (E)	462	#5	4'-0"	
a3 (E)	924	#5	29'-3"	
a4 (E)	694	#5	30'-1"	
a5 (E)	32	#5	2'-0"	
b (E)	760	#5	37'-11"	
b1 (E)	184	#6	15'-0"	
b2 (E)	184	#6	21'-1"	
b3 (E)	92	#6	26'-0"	
b4 (E)	963	#4	33'-6"	
b5 (E)	62	#4	35'-0"	
b6 (E)	10	#4	15'-3"	
b7 (E)	6	#4	7'-6"	
b8 (E)	2	#4	19'-6"	
d (E)	628	#5	3'-0"	
d1 (E)	628	#5	2'-7"	
d2 (E)	578	#4	3'-0"	
d3 (E)	578	#4	4'-5"	
d5 (E)	578	#4	3'-4"	
d7 (E)	9	#6	4'-5"	
d8 (E)	15	#6	8'-11"	
e (E)	32	#5	20'-9"	
e1 (E)	32	#8	21'-11"	
e2 (E)	96	#4	19'-7"	
e3 (E)	32	#5	21'-6"	
e4 (E)	32	#8	22'-8"	
e5 (E)	96	#4	20'-4"	
e6 (E)	32	#5	6'-7"	
e7 (E)	32	#8	6'-7"	
e8 (E)	96	#4	6'-7"	
e9 (E)	32	#5	22'-0"	
e10 (E)	32	#8	23'-3"	
e11 (E)	144	#4	13'-9"	
e12 (E)	16	#5	7'-3"	
e13 (E)	16	#8	7'-3"	
e14 (E)	48	#4	7'-3"	
u1 (E)	1,131	#4	3'-1"	
x (E)	178	#5	4'-1"	

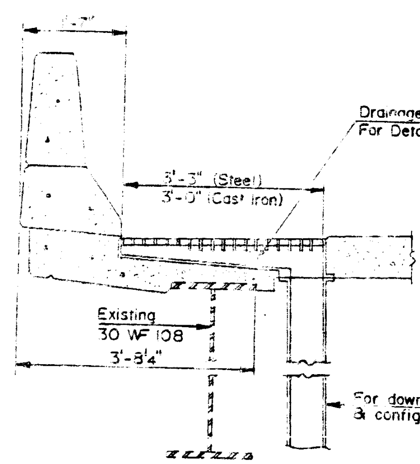
ITEM	UNITS	QTY.
Concrete Superstructure	Cu. Yds.	775.6
Reinforcement Bars Epoxy Coated	Lbs.	173,400
Bar Splicers	Each	578

* Place a(E) and h2(E) bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/4"). Anchor bolts should be tied to a(E) and h2(E) bars.

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



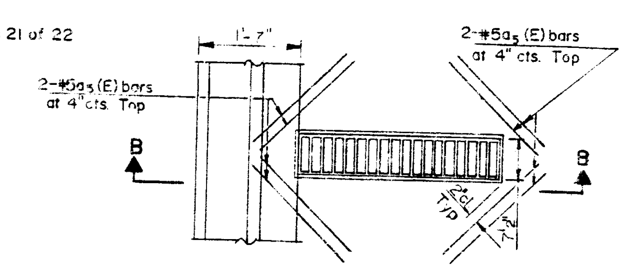
SECTION A-A



Drainage Scupper For Details, See Sheets 20 & 21 of 22

For downspout locations & configuration see sheet 11 of 22.

SECTION B-B



PLAN

SCUPPER DETAILS

For bars d5(E), d7(E) & d8(E) Details see Sheet 11 of 22
For bar u1(E) Details see Sheet 13 of 22.

PARAPET DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: F.T.T.
DRAWN: M.L.P. DATE: 3-16-94 NO. H134B

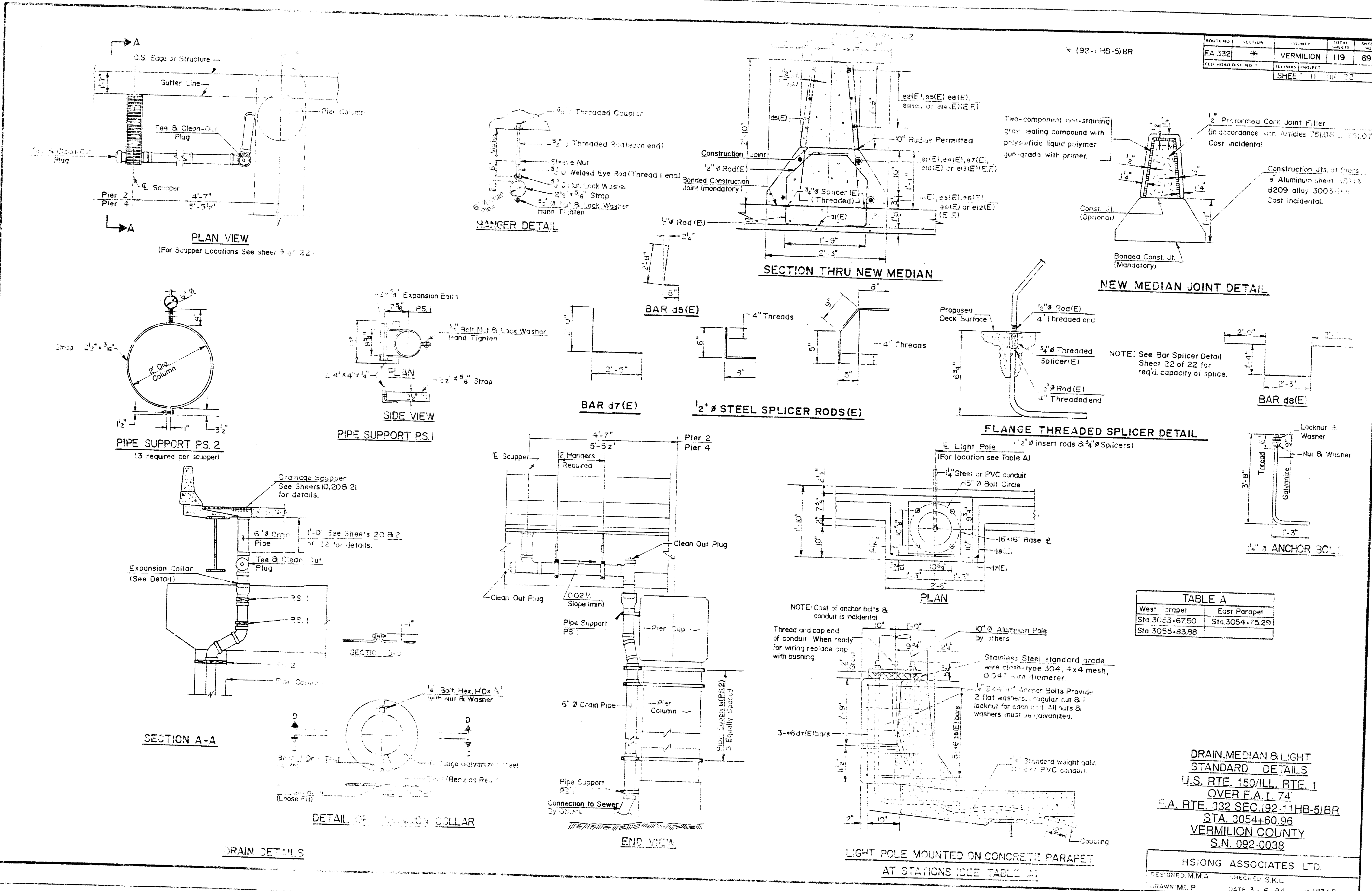


TABLE A

West Parapet	East Parapet
Sta. 3053+67.50	Sta. 3054+75.29
Sta. 3055+83.88	

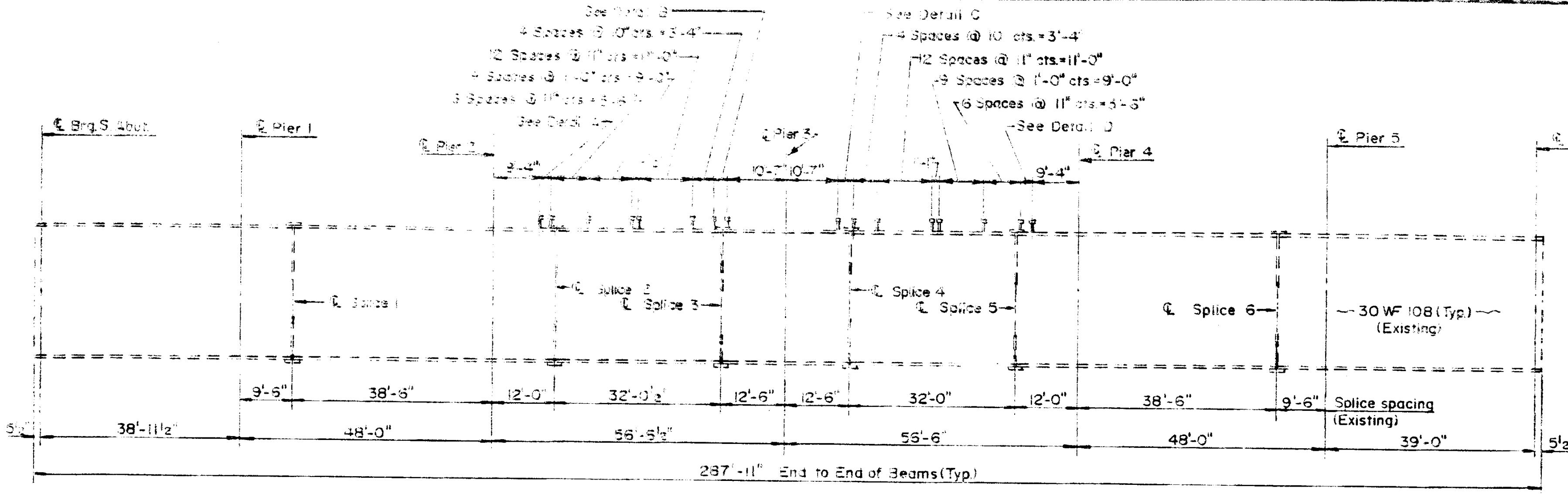
DRAIN, MEDIAN & LIGHT STANDARD DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.
DESIGNED M.M.A. CHECKED S.K.L.
DRAWN M.L.P. DATE 3-16-94 JO H1348

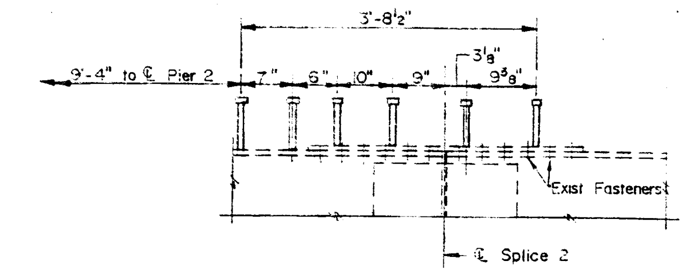
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	70

*(92-11HB-5)BR

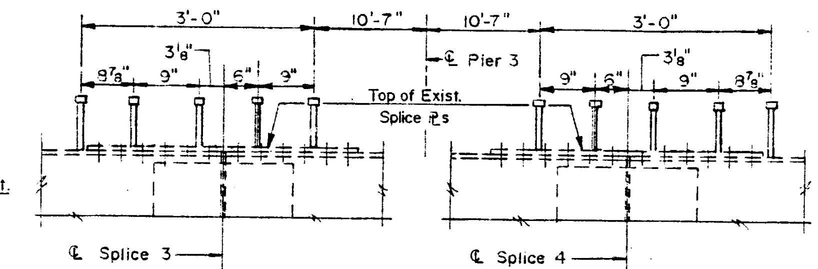
SHEET 2 OF 22



ELEVATION OF EXIST. BEAM
(Showing New Stud Shear Connector Spacing)

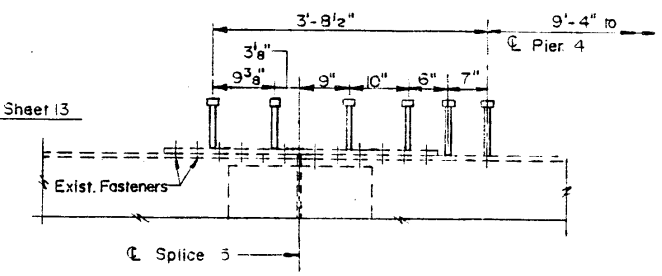


DETAIL A

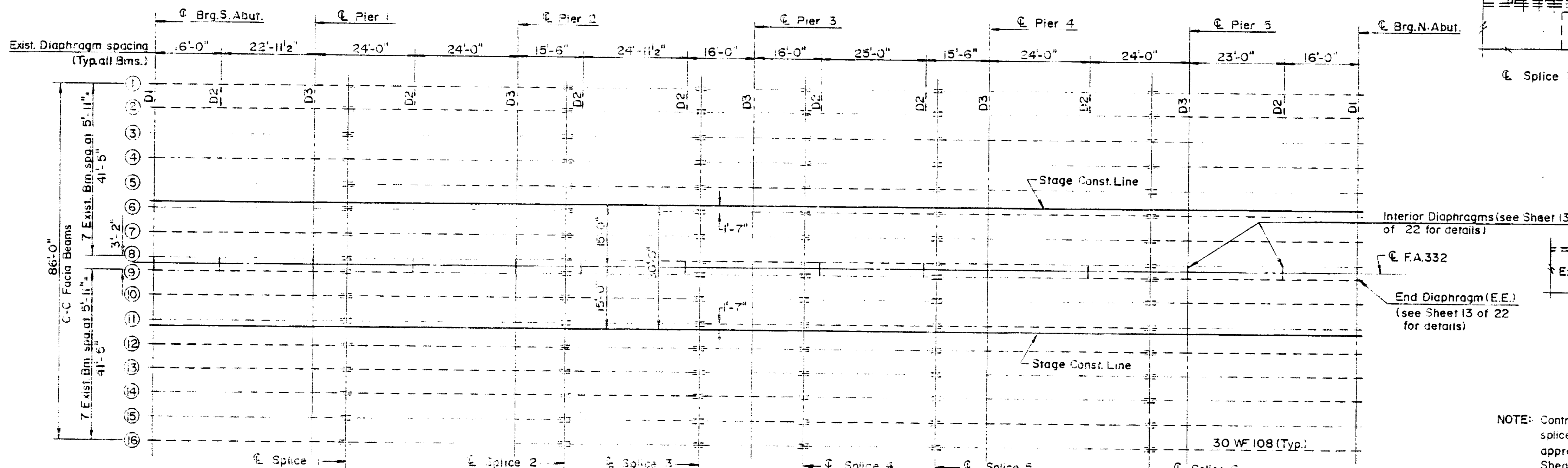


DETAIL B

DETAIL C



DETAIL D



EXIST. FRAMING PLAN

NEW STUD LOCATION

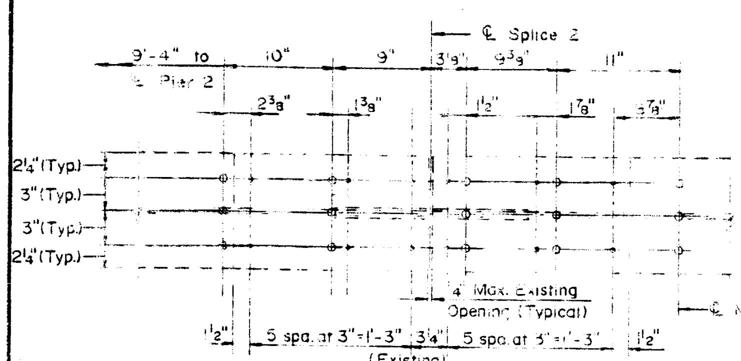
NOTE: Contractor may vary the spacing of shear connector by 1" near the field splice to avoid interference with the $\frac{7}{8}$"⌀ fasteners in flange subject to the approval of the Engineer. See Art. 706.32 of the Std. Spec. Stud Shear Connectors shall not be located over the ℄ of splice.

For location and Stud Shear Detail see Sheet 13 of 22.

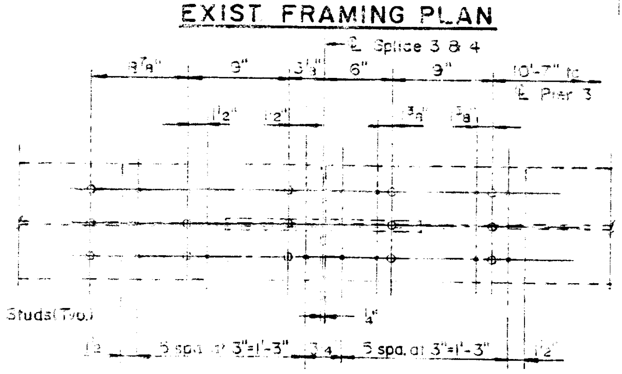
BILL OF MATERIAL

ITEM	UNIT	QUANT.
Stud Shear Connectors	Each	4032

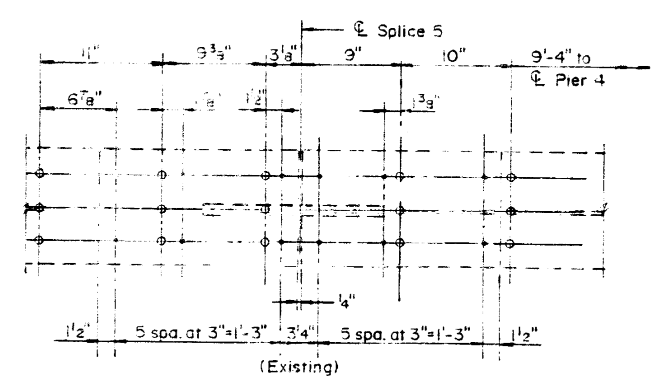
Work this Sheet with Sheet 13 of 22.



PLAN-DETAIL A



PLAN-DETAILS B & C
(Detail B shown; reverse for Detail C)



PLAN-DETAIL D

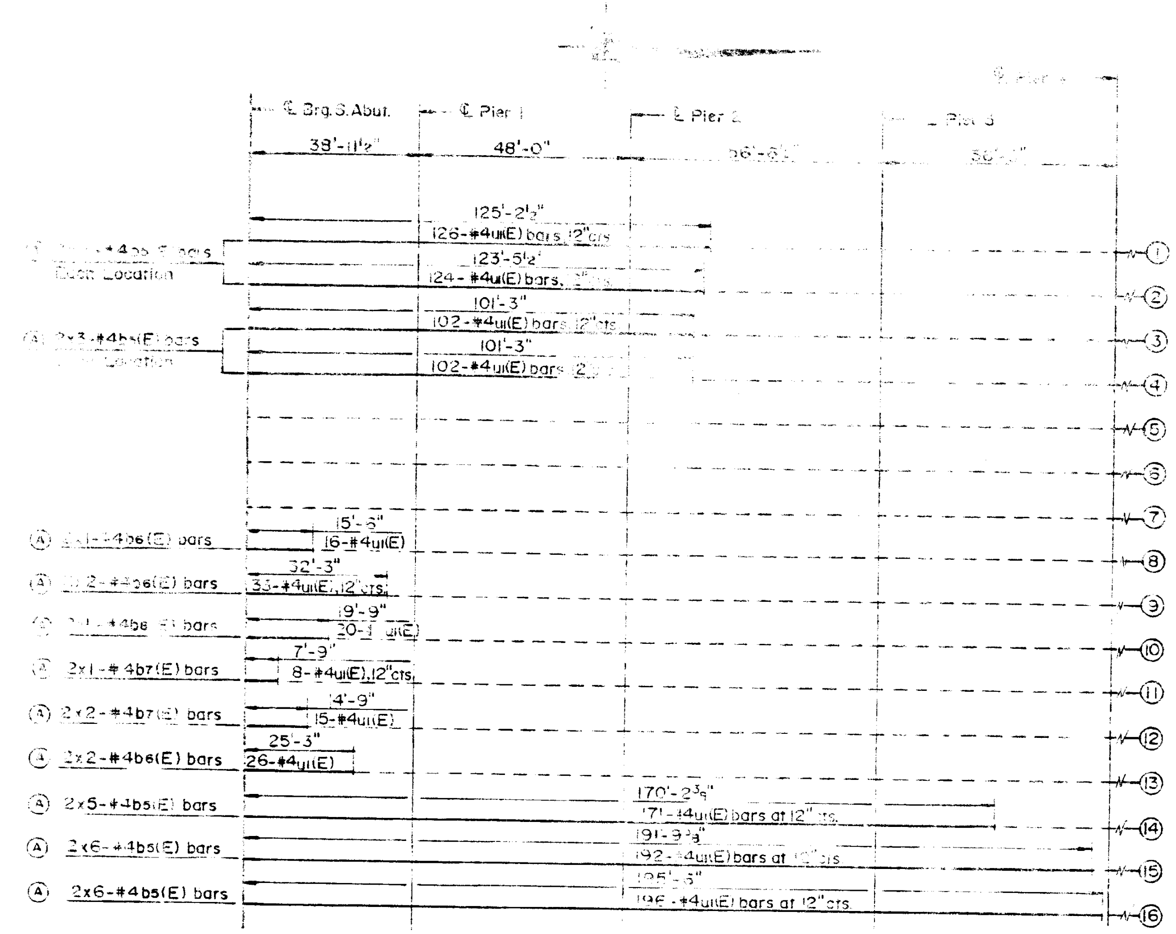
• Existing $\frac{7}{8}$"⌀ fasteners

o New $\frac{3}{4}$"⌀ Shear Connectors

STUD SHEAR CONNECTORS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

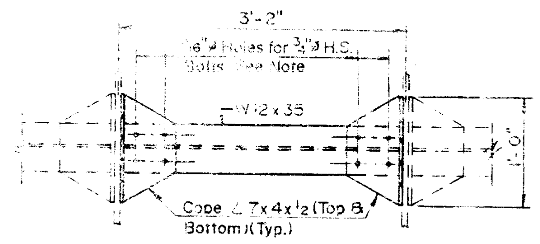
DESIGNED M.M.A. CHECKED S.K.L.
DRAWN R.H.H. DATE 3-16-94 NO. H-1348



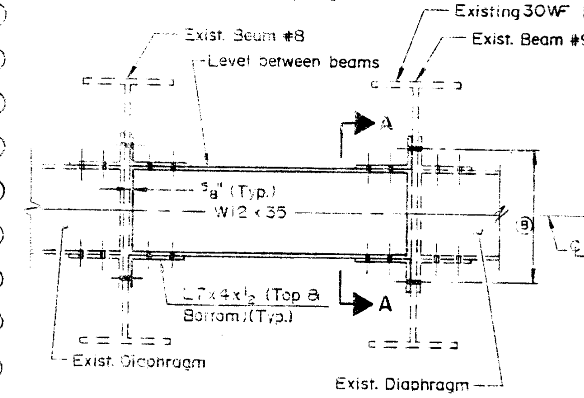
Ⓐ For location & spacing of b5(E) thru b8(E) see Shear Stud Detail.

Reinforcement bars indicated thus 2x5-#4 etc., indicates 2 lines of bars with 5 length of bars per line.

PLAN-LOCATION OF 4" FILLET & GREATER



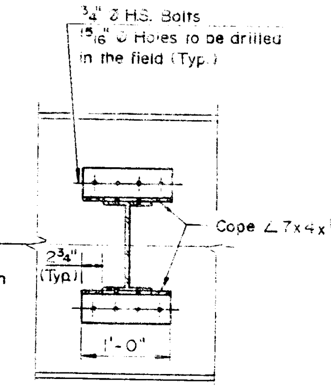
TOP VIEW
(Interior Diaphragm)



INTERIOR DIAPHRAGM
(13 Required)
(Looking North)

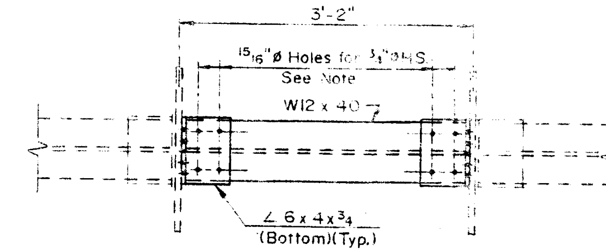
NOTE: Two hardened washers shall be required over all holes in diaphragm.

Ⓑ Remove existing bolts in existing beams. Field drill 15/16" Ø holes in new angles using holes in existing beams as a template. Existing bolts are to be replaced with ¾" Ø H.S. Bolts. Cost of Bolt Removal and Field Drilling is incidental to "Structural Steel".

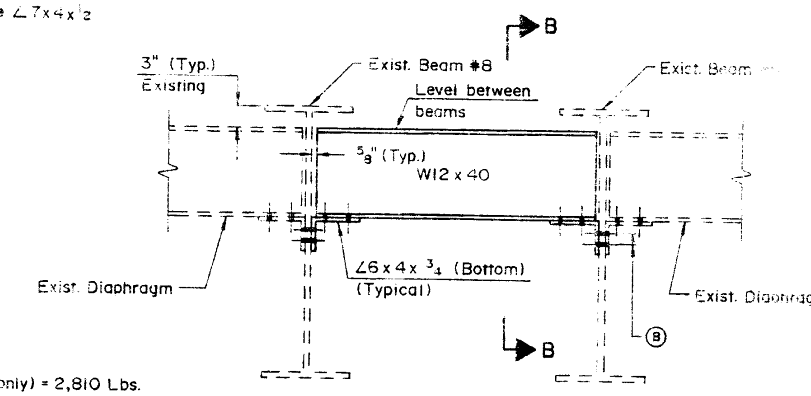


SECTION A-A
(Interior Diaphragm)

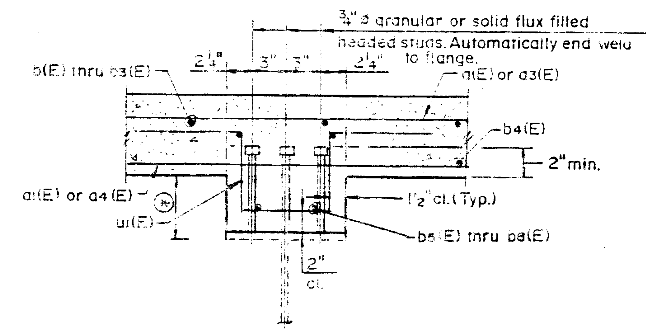
Weight of Steel (Diaphragms only) = 2,810 Lbs.



BOTTOM VIEW
(End Diaphragm)

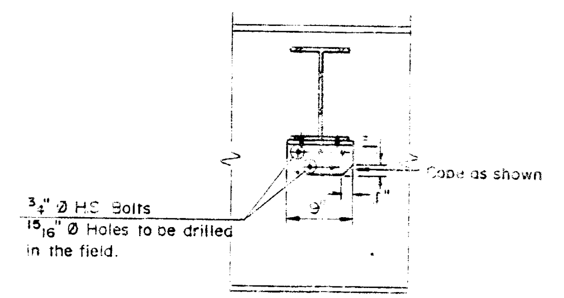


END DIAPHRAGM
(2 Required)
(Looking North)

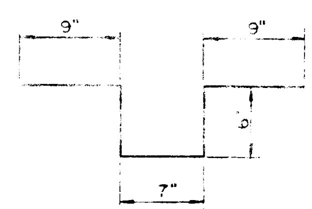


Ⓐ Detail for fillets ≥ 4"

SHEAR STUD DETAIL



SECTION B-B
(End Diaphragm)



BAR u(E)

INTERIOR BEAM REACTION TABLE

	Abut.	Piers 1 or 5	Piers 2 or 4	Pier 3
RDL (k)	14.0	44.5	49.3	54.9
RLL (k)	27.8	35.2	35.6	35.9
Imp. (k)	8.3	10.6	10.3	9.9
R Total (k)	50.	90.3	95.2	100.7

SYMMETRICAL NON-COMPOSITE 4 SPANS
INTERIOR BEAM MOMENT TABLE
(Spans 1 & 2; Spans 5 & 6)

	0.4 span 1 or 6	Piers 1 or 5	0.5 Span 2 or 5	Piers 2 or 4
Is (in4)	4470	4470	4470	4470
DL (k/')	.943	.943	.943	.943
MDL (k')	103.3	171.3	79.4	212.2
MLL (k')	186.3	152.2	191.6	161.9
Imp (k')	55.5	45.6	55.5	47.0
M total (k')	345.3	369.	326.5	421.1
fs (ksi)	13.9	14.8	13.1	16.9

SYMMETRICAL COMPOSITE 2 SPANS
INTERIOR BEAM MOMENT TABLE
(Spans 3 & 4)

	0.5 SPAN 3 OR 4	PIER 3
Is (in4)	4470	4470
Ic(n) in4	12329	---
Ic(3n) in4	9028	----
Ss (in 3)	300.0	300.0
Sc(n) in3	450.1	----
Sc(3n) in3	405.5	...
DL (k/')	.713	.943
MDL (k')	101.5	202.7
fs non-comp (ksi)	4.1	8.1
sDL (k/')	.230	----
MsDL (k')	39.7	55.6
fs comp (ksi)	1.18	[illegible]
MLL (k')	284.9	166
M Imp (k')	78.3	45
fs (LL + Imp)	9.89	8.48
fs Total (ksi)	15.17	[illegible]
VR (k)	45.6	----

LEGEND FOR BEAM MOMENT TABLE

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total.)

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

VR is the maximum LL + Impact shear range in span.

MDL - Moment due to Dead Load on non Composite Section.

MsDL - Moment due to Dead Load on Composite Section

MLL - Moment due to Live Load on non Composite Section or Composite Section

Imp - Live Load impact.

Work this Sheet with Sheet 12 of 22.

FILLET REINFORCEMENT
BEAM REACTION MOMENT TABLE &
DIAPHRAGM DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

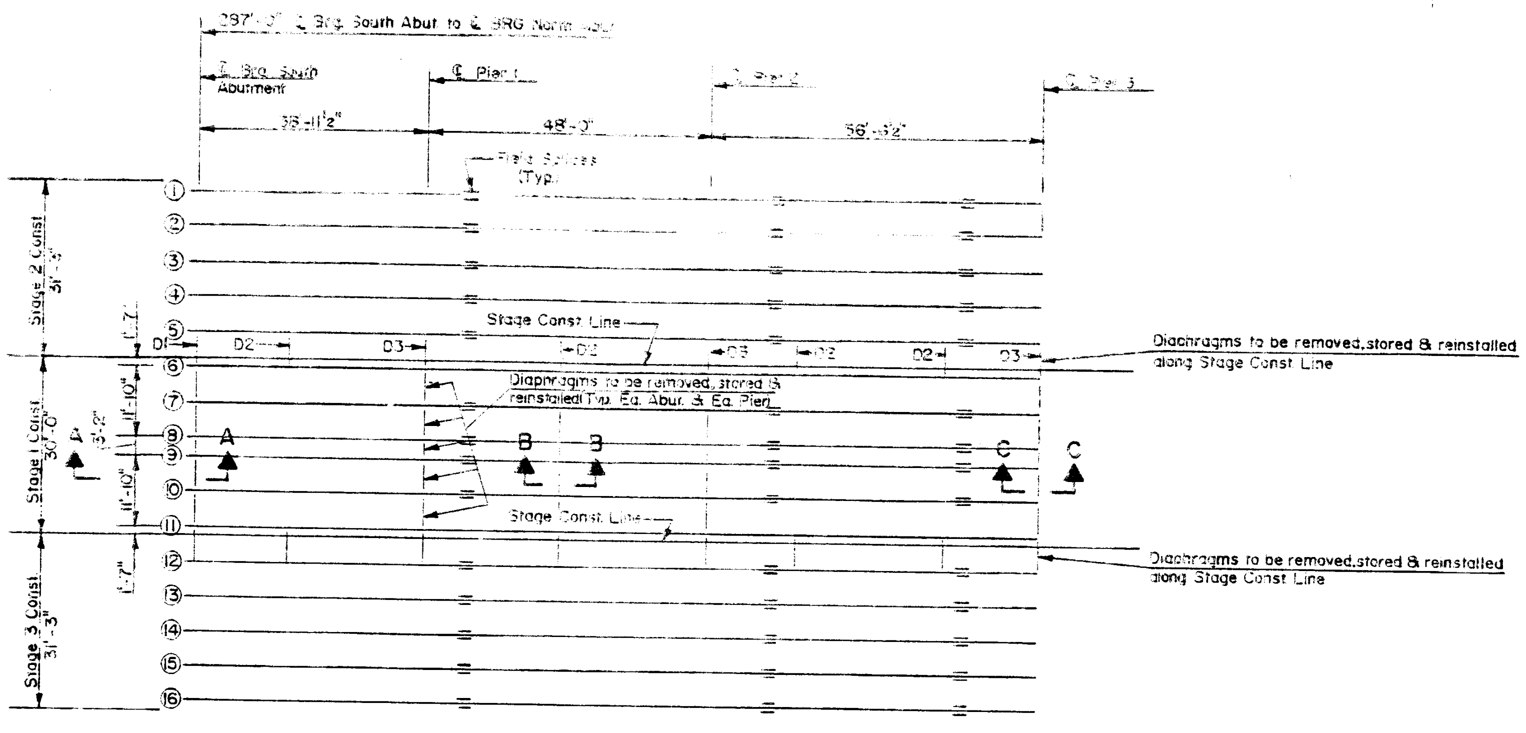
HSIONG ASSOCIATES LTD.

DESIGNED M.M.A. CHECKED S.K.L.
DRAWN M.B.C. DATE 3-16-94 NO. H-1348

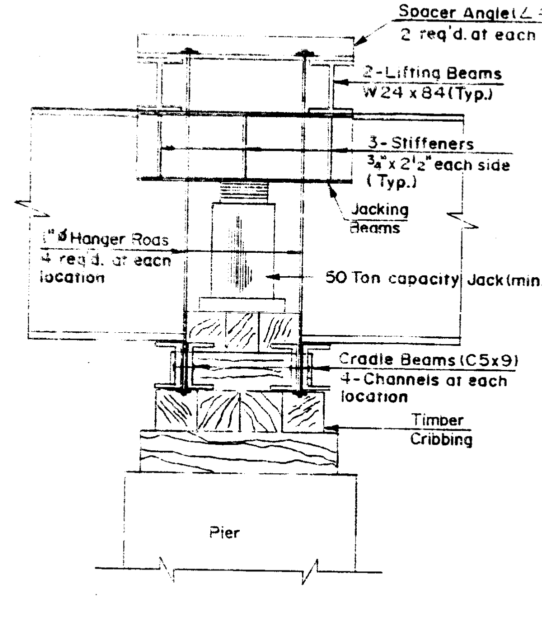
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	72

FED ROAD DIST NO 7 — ILLINOIS PROJECT — SHEET 4 OF 22

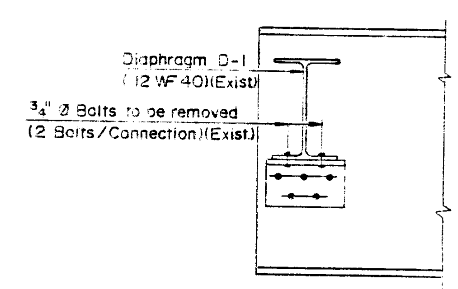
* (92-11HB-5)BR



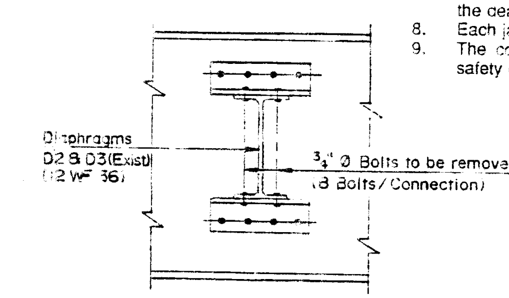
EXISTING BEAM PLAN



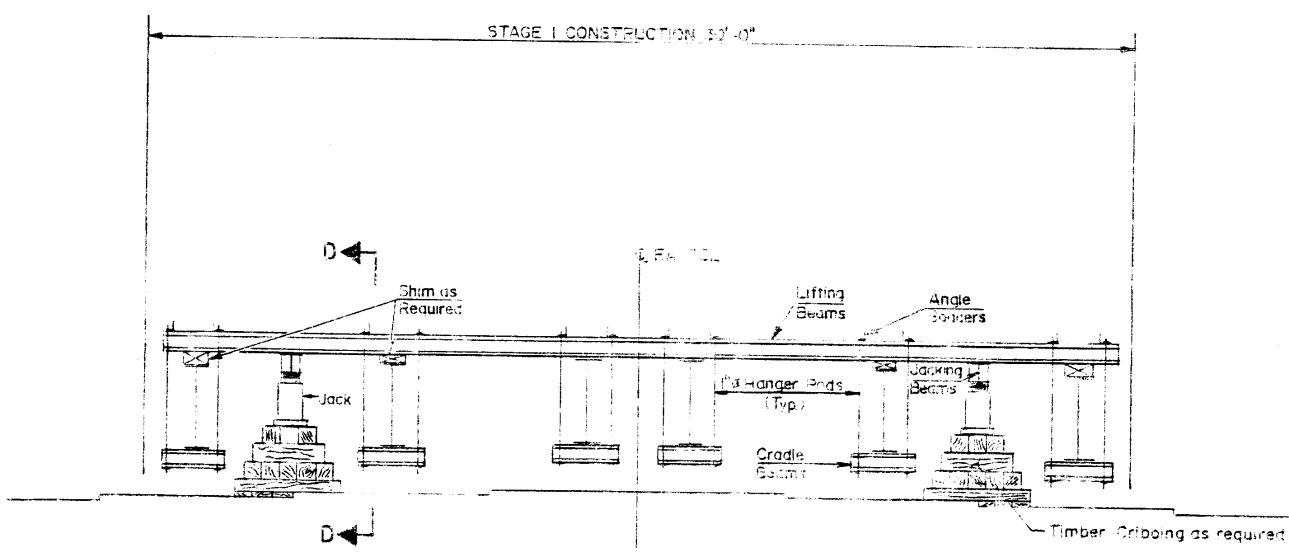
SECTION D-D



SECTION A-A



SECTION B-B & C-C



Possible Jacking Scheme
See Section D-D for Member sizes & Jacking capacity
Existing Bearing Not Shown For Clarity

ELEVATION
(Stage 1 shown, stage 2 & 3 similar)

BEARING INSTALLATION SEQUENCE

Typical for each Construction Stage

1.) Remove existing concrete deck.
2.) Determine the top flange elevation for all the beams at each bearing location.
3.) Remove the existing diaphragms between construction stages and the diaphragms located at the abutments and the diaphragms located at the Piers. (See Plan)
4.) Install lifting beam apparatus and jacks.
5.) Uniformly raise the entire steel superstructure to a sufficient height to remove the old bearings and install the proposed Bearings/Bolster assembly. Provide cribbing or other means to support the superstructure during the bearing removal & replacement.
6.) Remove the existing bearings and cut off the anchor bolts flush with concrete. Drill and grout the new anchor bolts, field drill holes in bottom flange of stringers and place the new Bearing/Bolster assembly into position. Check top of bearing elevation and shim as required.
7.) Uniformly lower the entire superstructure onto the new bearings. Check the top of flange elevations for each beam at each bearing location.
8.) Remove the lifting beam apparatus and jacks and re-install the diaphragms at the abutments and piers. Install the diaphragms located between construction stages after stage 2 & 3 are complete.
9.) Complete stage construction.

JACKING NOTES

1. In order to provide additional vertical clearance, the existing structural steel shall be raised by 4-1/4". The structural steel must be temporarily raised to a height sufficient to remove the existing bearings and install the new bearing/bolster assembly over the new anchor bolts. The contractor is responsible for designing and furnishing a complete jacking system (See Special Provisions).
2. During the jacking operation, the entire structural steel superstructure within the construction stage limits shall be uniformly raised or lowered and the elevation of each beam continuously monitored during this operation.
3. The height difference between adjacent beams shall not exceed 1/8" transversely or 1/4" between adjacent supports.
4. The structure shall be raised or lowered in intervals not greater than 4 inches and shall be blocked in position after each interval.
5. Once the existing structural steel is raised to the required height, it shall be secured against any movement during removal and installation of the bearing assemblies.
6. The contractor is responsible for establishing and monitoring line and grade and provide the engineer with top flange elevations before and after the jacking operation.
7. The dead load reactions per beam, including a 10 psf allowance for the dead load of the protective shield is shown in Table I.
8. Each jack shall have a minimum factor of safety of 2.
9. The contractor is solely responsible for the stability, strength and safety of the jacking operation.

TOP FLANGE ELEVATIONS

After removal of the concrete deck, the elevation of the top flange of all the floorbeams at each bearing location shall be determined. During the jacking operation, the floorbeams shall be uniformly raised by 4-1/4". The final elevation of the top flange shall be the sum of 0.35 foot (4-1/4") plus the initial elevation, ±1/8". After the superstructure is lowered onto the new bearings, the top flange elevations shall be determined to ensure that the final floorbeam elevation is within the specified tolerance.

TABLE I
DEAD LOAD REACTIONS PER BEAM (LBS)

S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	N. Abut.
3,500	10,000	11,000	12,000	11,000	10,000	3,500

NOTE:
Reactions include the weight of the steel stringers & diaphragms and an allowance of 10psf for the protective shield.

(INFORMATION ONLY)
BILL OF MATERIALS

Item	Unit	No.
Jack & Remove exist Bearings	EA.	112

Item	Min. Section Modulus in³
Spacer Angles	2.81
Lifting Beams	196
Cradle Beams	3.56

Note: All lifting beams, shapes, plates and rods shall be A-36.

SUGGESTED JACKING PROCEDURE
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

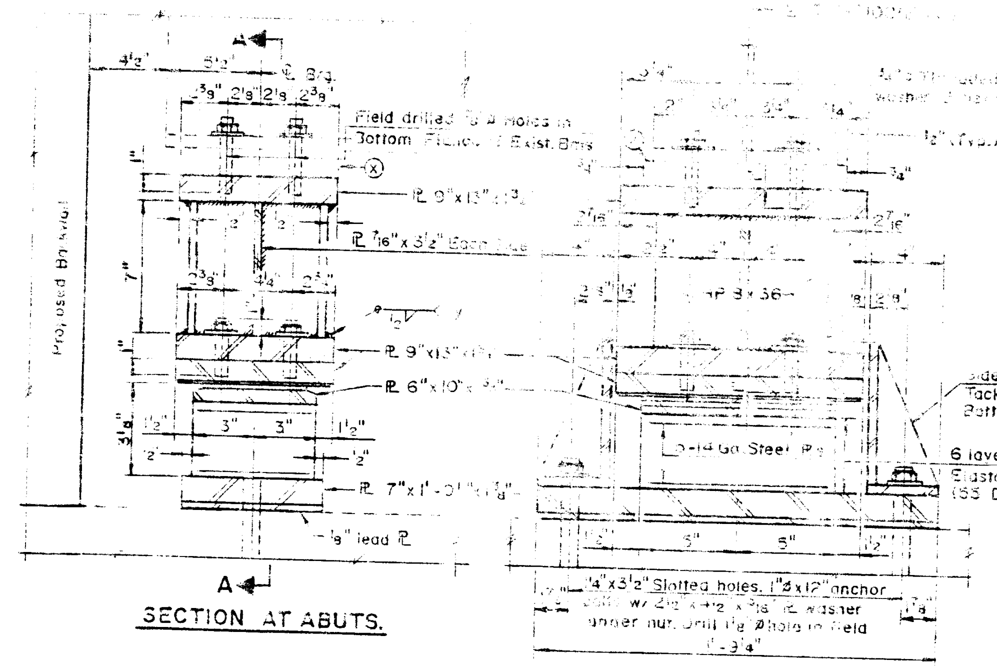
HSIONG ASSOCIATES LTD.

DESIGNED C.M.H. — CHECKED M.M.A.
DRAWN M.L.P. — DATE 3-16-94 NO. H-1348

* (92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	73

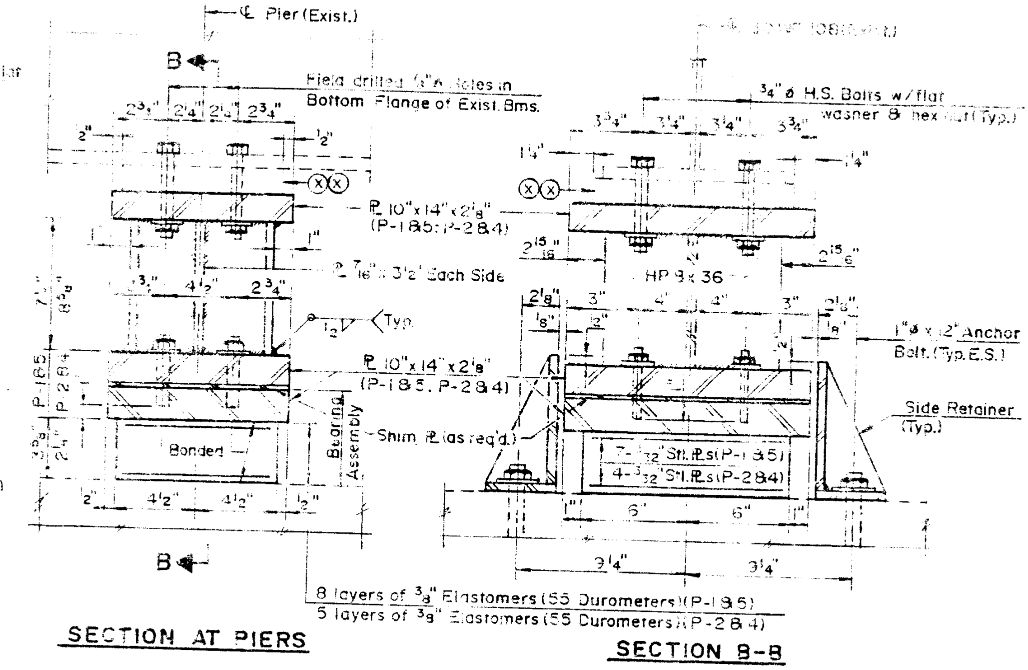
SHEET 15 OF 22



SECTION AT ABUTS.

SECTION A-A

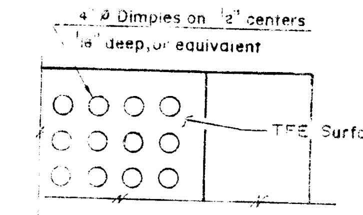
TYPE II TFE ELASTOMERIC EXP. BRG.
(For North & South Abutments)



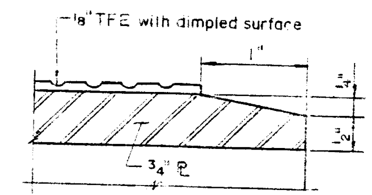
SECTION AT PIERS

SECTION B-B

TYPE I ELASTOMERIC EXPANSION BEARING
(For Piers 1 & 5 - Piers 2 & 4)



PLAN - TFE SURFACE



SECTION THRU TFE

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.

NOTES.

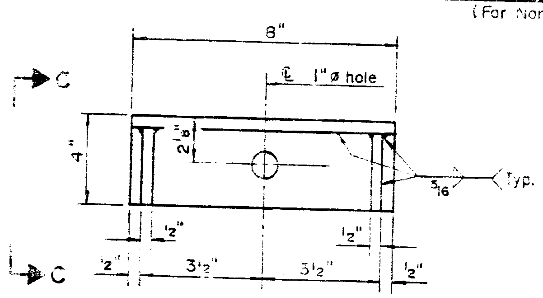
See Sheet 8 of 22 for Anchor Bolt installation and location.

All steel in bearings shall be AASHTO M270 Grade 36 steel.

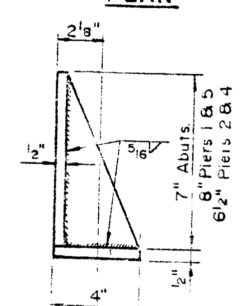
Before installing the new bearings, burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost is incidental to "Furnishing and Erecting Structural Steel."

Locate anchor bolts to miss existing reinforcement bars.

The cost for all field drilled holes is incidental to "Furnishing and Erecting Structural Steel".



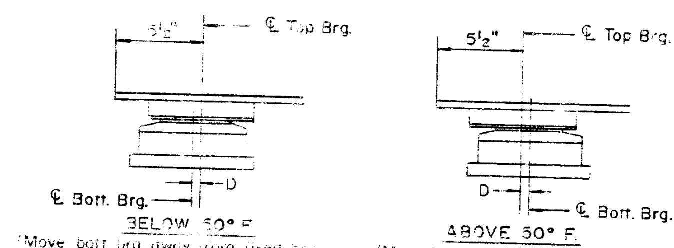
PLAN



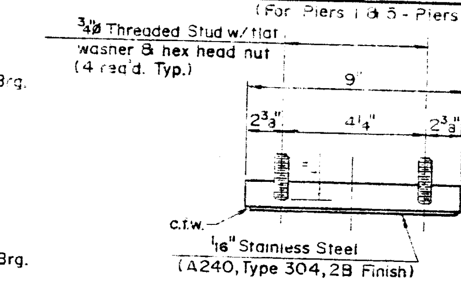
VIEW C-C

SIDE RETAINER DETAIL

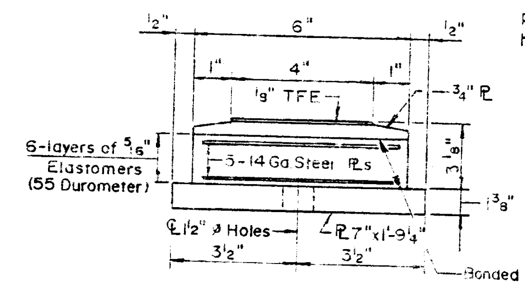
64 Req'd. included in Structural Steel (Abutments)
128 Req'd. included in Structural Steel (Piers)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates



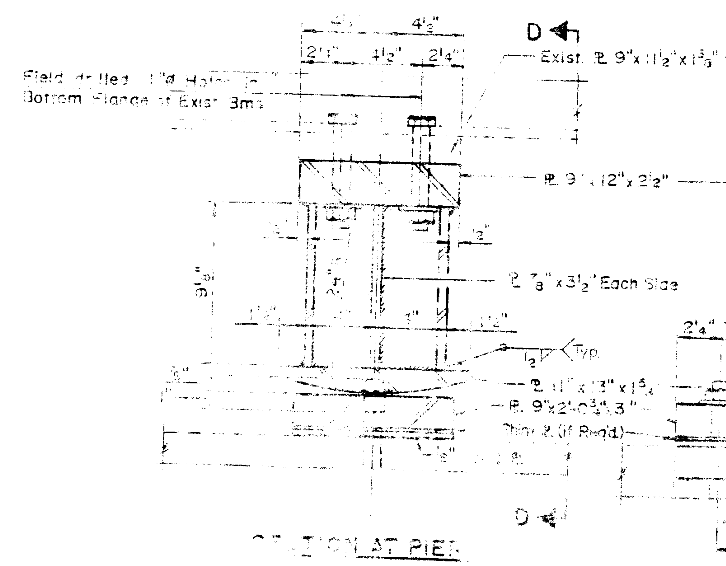
SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/2" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F



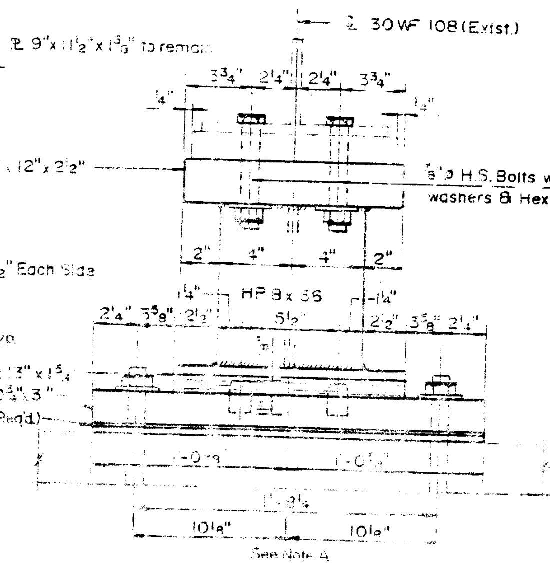
TOP BRG. ASSEMBLY



BOTT. BRG. ASSEMBLY
(For Both Abutments)

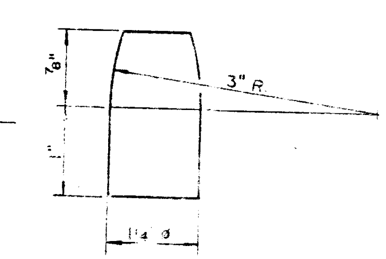


SECTION AT PIER



VIEW D-D

FIXED BEARING AT PIER 3



PINTLE
(Threaded or Press Fit)

NOTE A: 4 1/2" x 3 1/2" Slotted holes for 1 1/2" x 1'-6" anchor bolts with 2 1/2" x 4 1/2" x 1/2" ℞ washer under nut. Drill 1 5/8" ø hole in washer. Use AASHTO M164 Bolts for all Anchor bolts.

BILL OF MATERIAL

	Item	Unit	Total
	Elastomeric Bearing Assembly Type I	Each	64
	Elastomeric Bearing Assembly Type II	Each	32
*	Furnishing & Erecting Structural Steel	Lbs.	30,340

* Includes weight of Diaphragms.

BEARING DETAILS

U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGN D.S.K.L. CHECKED M.M.A.
DRAWN R.H.H. DATE 3-16-94 NO. H-1348

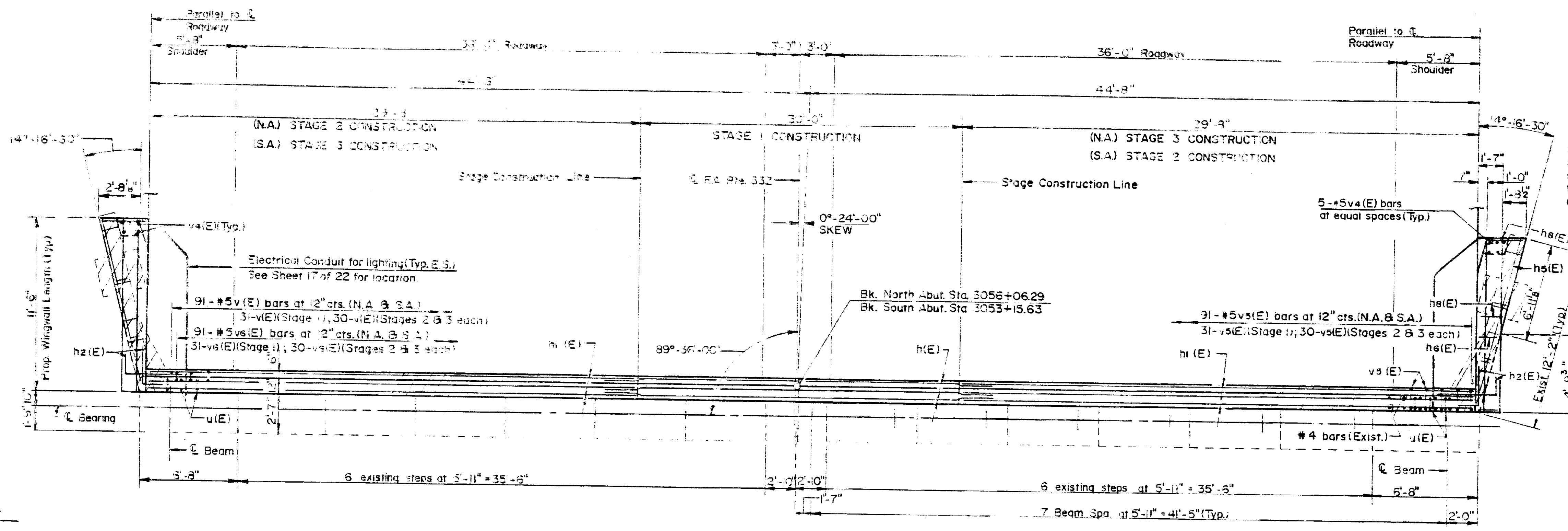
*(92-11HB-5)BR

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA 332	*	VERMILION	119	74
FED ROAD DIST NO 7		ILLINOIS PROJECT		

SHEET 16 OF 22

NOTES

1. Hatched area indicates Concrete Removal.
2. Epoxy grout #5V7 (E) bars in 7/8" ɸ x 12" minimum drilled holes. Use grout approved by the Department. The method of grout application shall be approved by the Engineer.
3. Hatched area of backwall to be poured after deck is in place. See Section Thru Abutment Sheet 17 of 22.
4. End post shall be poured after bridge parapet is in place. Form top surface to match Profile Grade.
5. Existing vertical reinforcement bars to remain, cleaned straightened and incorporated into new construction. Cost incidental to Concrete Removal.
6. Locate V7 (E) bars to miss existing reinforcement bars.



ABUTMENT PLAN
North Abutment shown
South Abutment similar

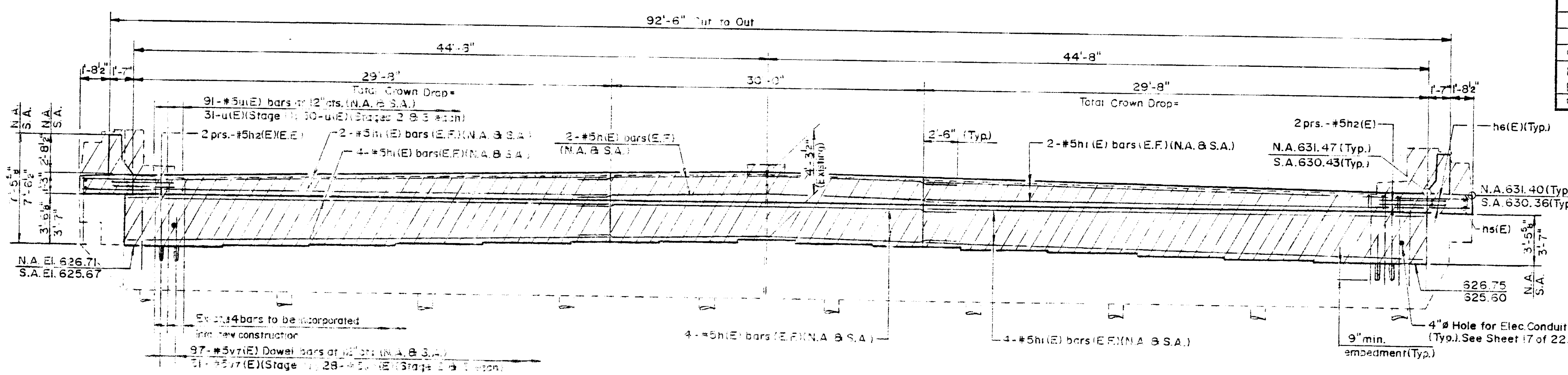
NORTH & SOUTH ABUTMENT BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
h (E)	24	#5	34'-4"	
h1 (E)	48	#5	31'-1"	
h2 (E)	16	#5	3'-9"	
h3 (E)	20	#4	11'-3"	
h4 (E)	4	#4	11'-3"	
h5 (E)	40	#5	11'-3"	
h6 (E)	40	#5	1'-4"	
h7 (E)	24	#5	1'-4"	
h8 (E)	24	#5	4'-7"	
h9 (E)	44	#5	2'-0"	
u (E)	182	#5	2'-3"	
v (E)	182	#5	2'-10"	
v1 (E)	36	#6	5'-3"	
v2 (E)	48	#6	5'-2"	
v3 (E)	12	#6	3'-10"	
v4 (E)	20	#5	2'-9"	
v5 (E)	182	#5	6'-9"	
v6 (E)	182	#5	2'-7"	
v7 (E)	174	#5	3'-0"	
v8 (E)	48	#5	1'-9"	

ITEM	UNIT	
Concrete Removal	Cu.Yds.	23.6
Reinforcement Bars Epoxy Coated	Lbs.	7,380
Concrete Structure	Cu. Yds.	18.2

See Sheet 17 of 22 for Details of h2(E), h4(E), u(E), v1(E), v2(E), v3(E), v6(E) and v7(E).

MIN. LAP LENGTH	
#5	2'-2"
#6	2'-7"



ABUTMENT ELEVATION
North Abutment Shown
South Abutment Similar

NOTE: See Sheet 8 of 22 for Anchor Bolt locations.

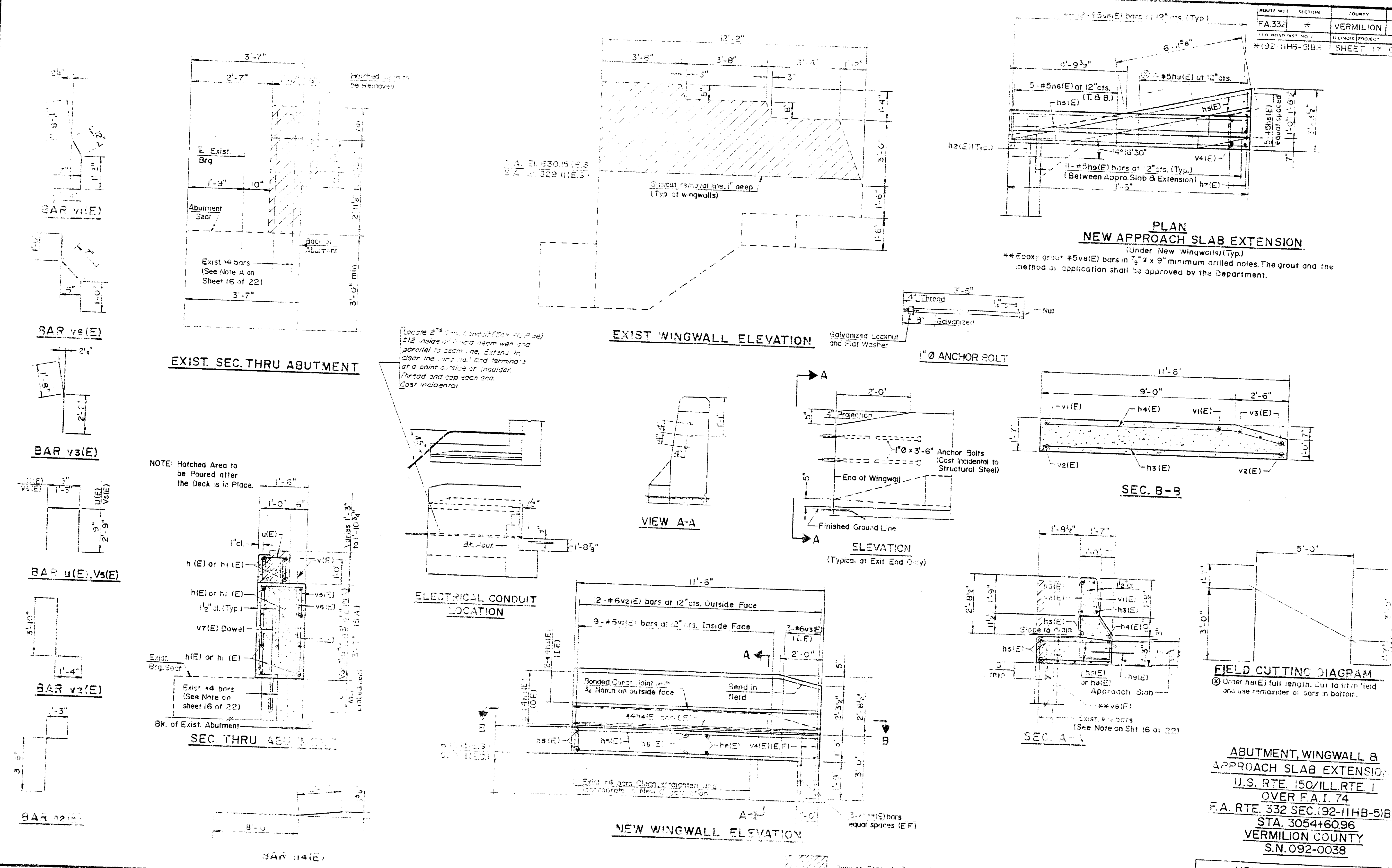
Denotes Concrete Removal

Work this Sheet with Sheet 17 of 22

ABUTMENT DETAILS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: S.K.L.
DRAWN: M.L.P. DATE: 3-16-94 NO. H1348



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 332	*	VERMILION	119	75
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		
*(92-11HB-5)BR		SHEET 17 OF 22		

ABUTMENT, WINGWALL & APPROACH SLAB EXTENSION
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: C.K.L.
DRAWN: R.H.H. DATE: 3-16-94 NO. H-1348

Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1½" min
2½	2½"	1¾" min
4	3"	2½" min

INSTALLATION NOTES

① Install sponge mandrels into positions shown to form flap convolution.

② Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).

③ Install continuous seal in roadway.

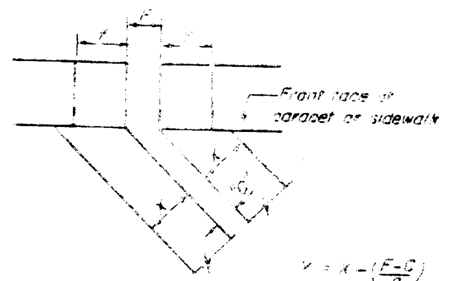
④ Install anchor blocks as indicated.

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

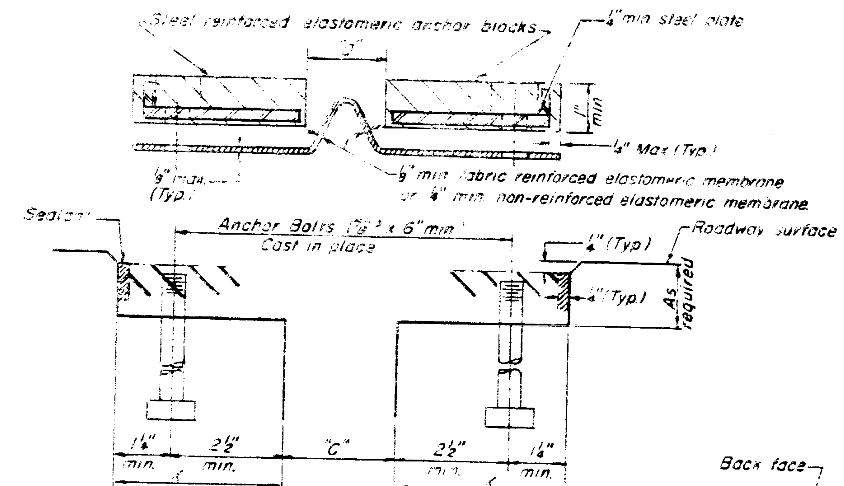
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

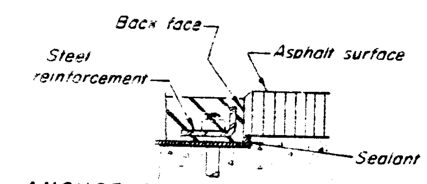
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts



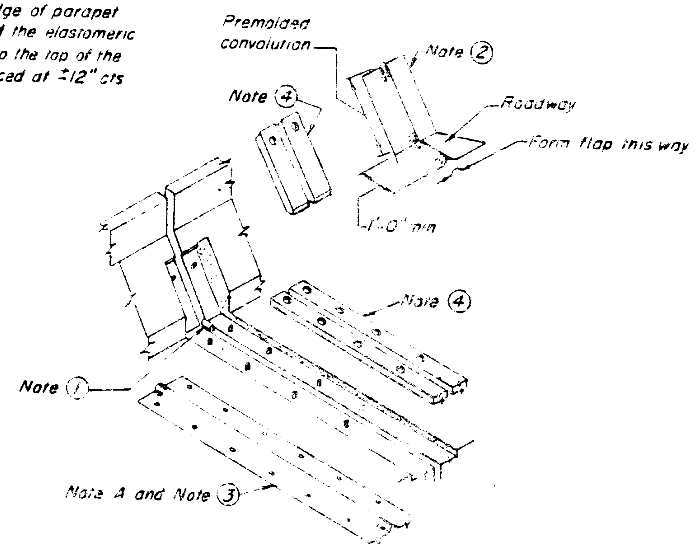
FORMING BLOCKOUT SKETCH



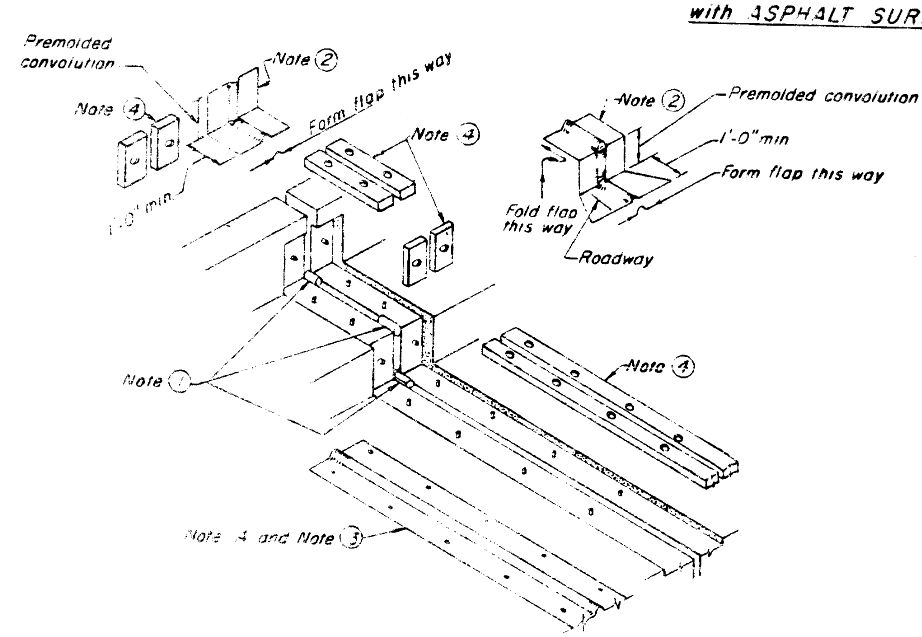
CROSS SECTION



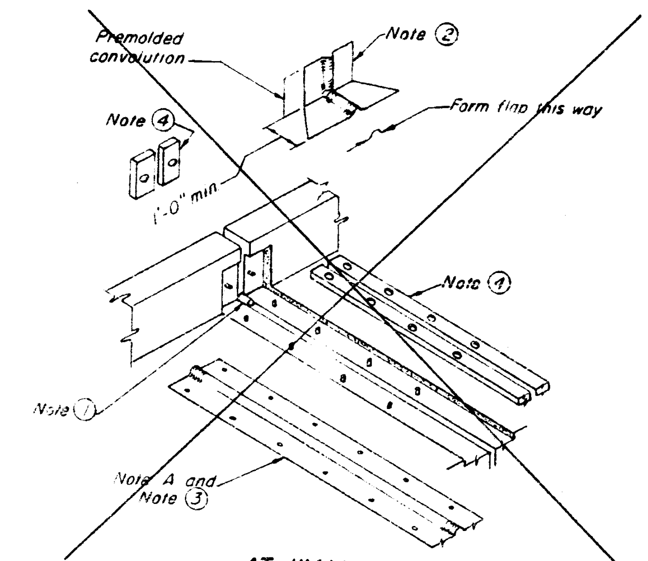
ANCHOR BLOCK REINFORCEMENT with ASPHALT SURFACE



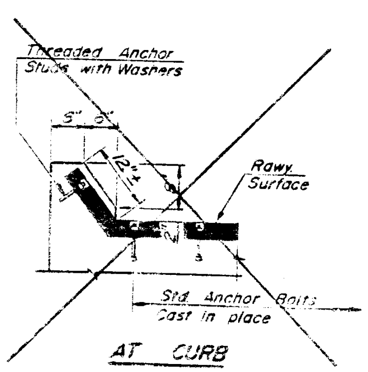
AT PARAPET



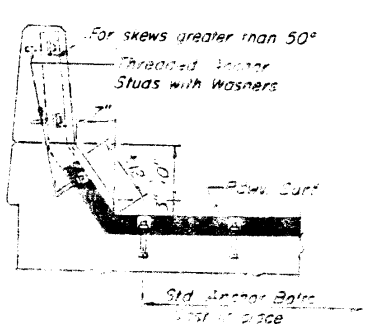
AT SIDEWALK or MEDIAN



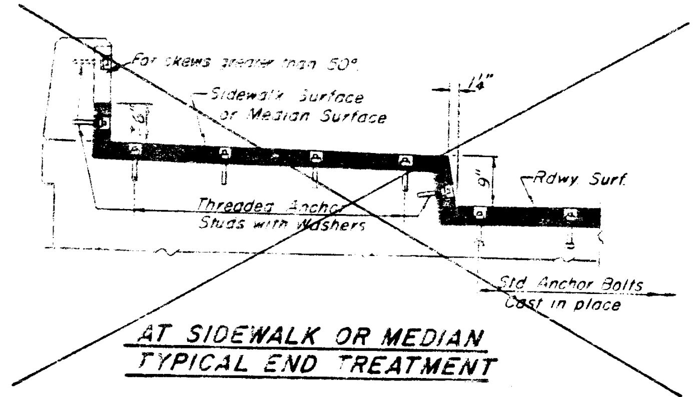
AT WALL



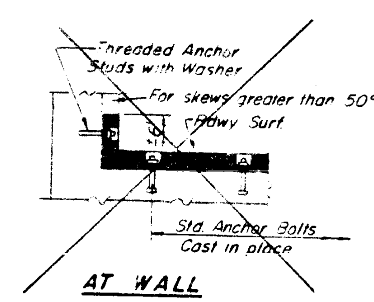
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENT



AT WALL

✱ (92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 332	✱	VERMILION	19	76
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

SHEET 18 OF 22

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

2" NEOPRENE EXPANSION JOINT
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

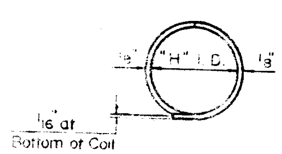
HSIONG ASSOCIATES LTD.

DESIGNED: F.T.T.	CHECKED: M.M.A.
DRAWN: M.L.P.	DATE: 3-16-94

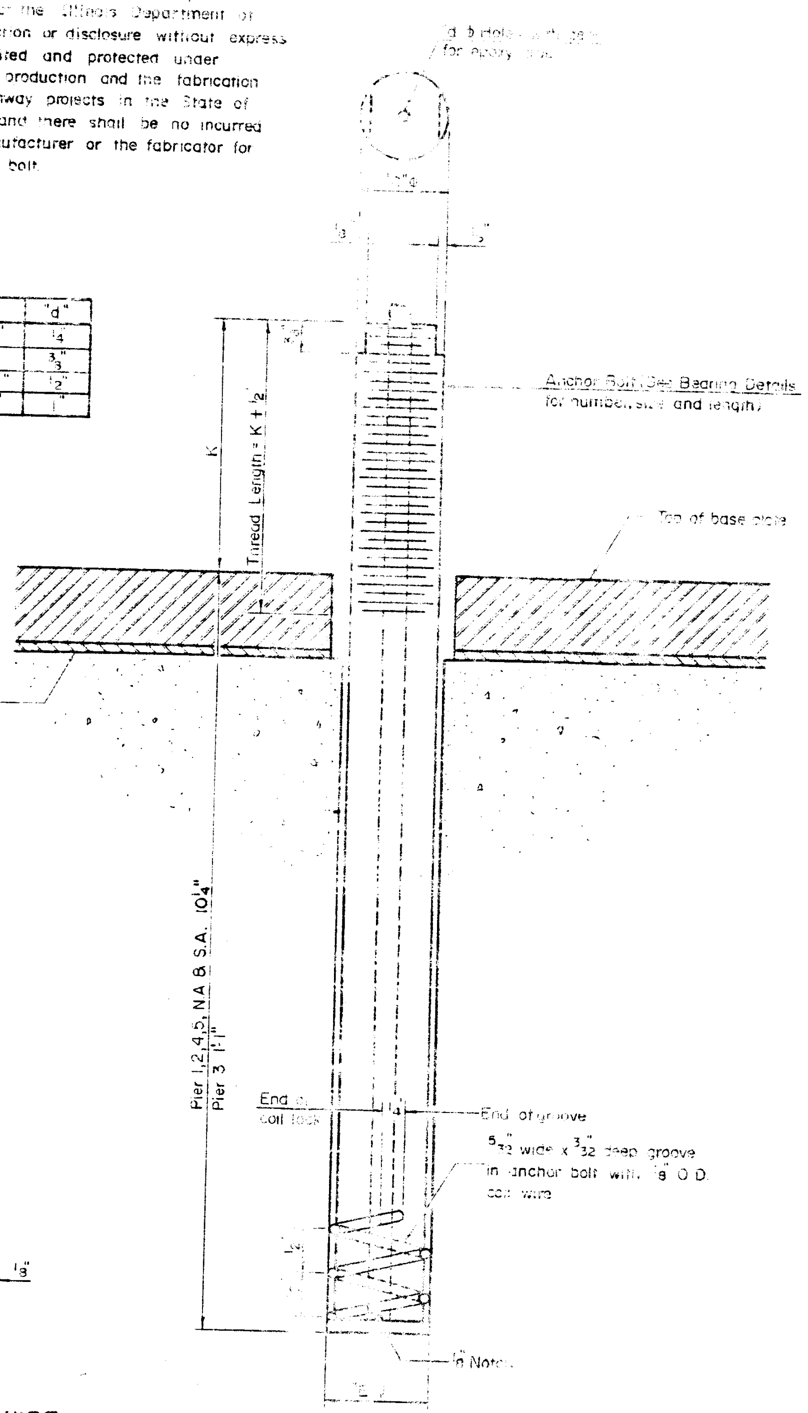
NO. H-134B

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

	E	H	K	"d"
[illegible]	1/8"	13/16	1 3/4"	1/4"
[illegible]	1 3/8"	1 1/16	2"	3/8"
2"	2 1/8	1 3/16"	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

*(92-11HB-5)BR

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	77
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT			
		SHEET 19 OF 22		

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature 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 & washer conforming to AASHTO M164.
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 & ERECTING STRUCTURAL STEEL."

ANCHOR BOLT DETAILS
FOR BEARINGS
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

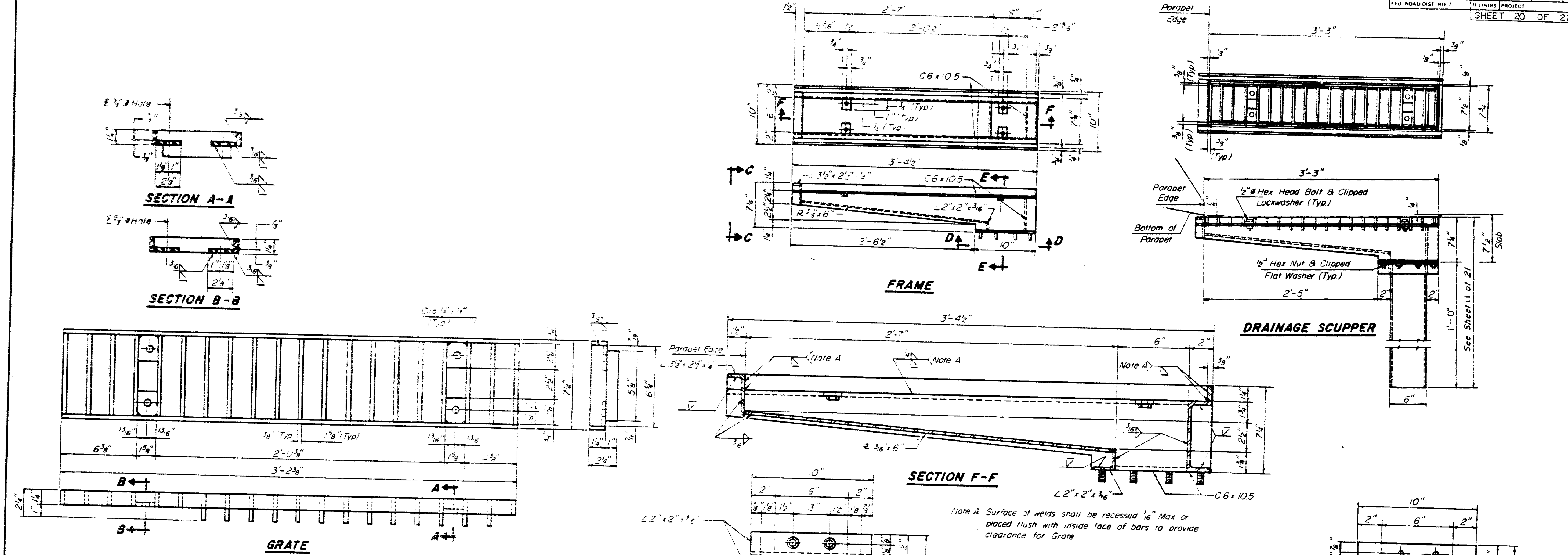
HSIONG ASSOCIATES LTD

DESIGNED M.M.A.	CHECKED S.P.L.
DRAWN M.L.P.	DATE 3-16-94 NO. H-134 B

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	78
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT			

SHEET 20 OF 22

* (92-11HB-5)BR



Notes:

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing

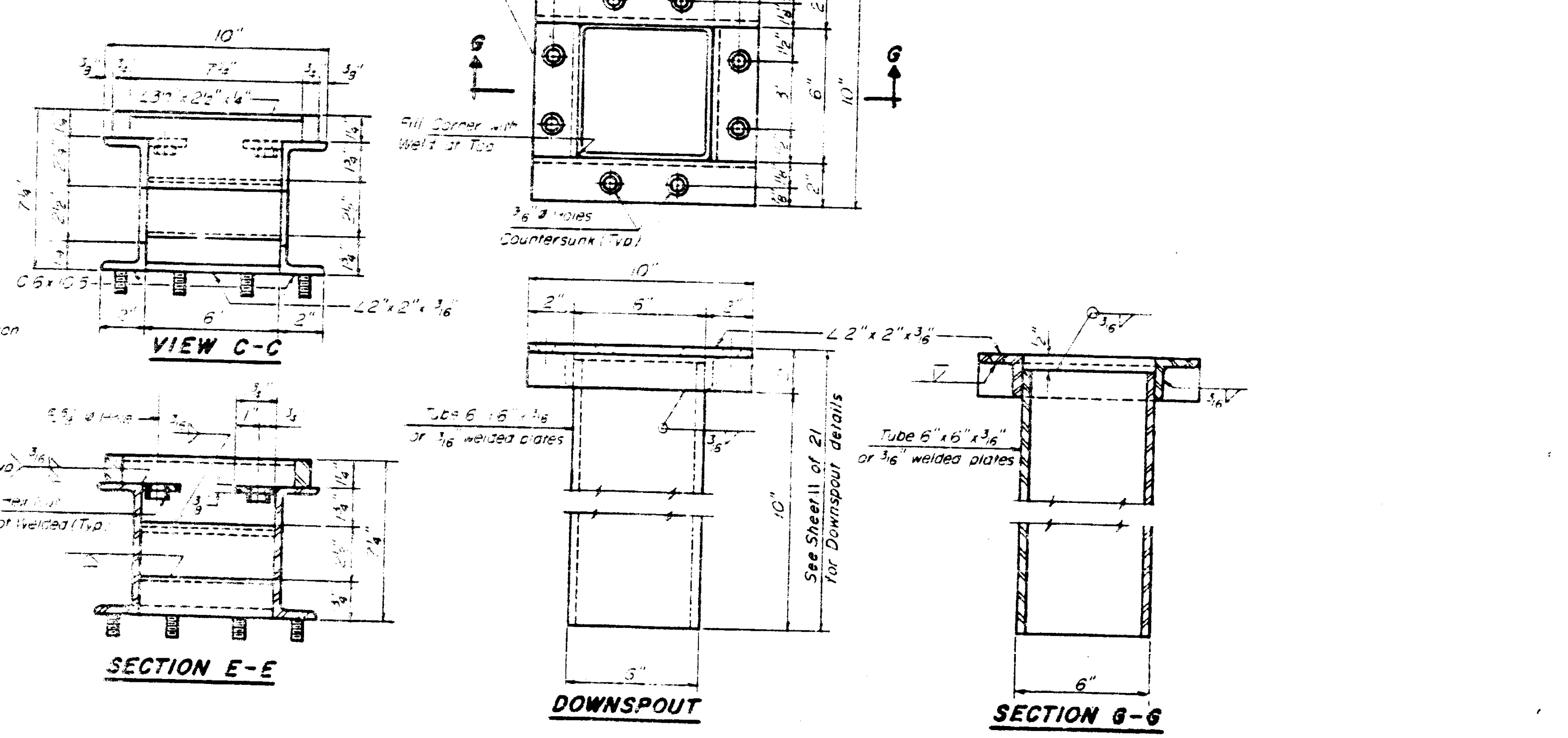
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. M 183

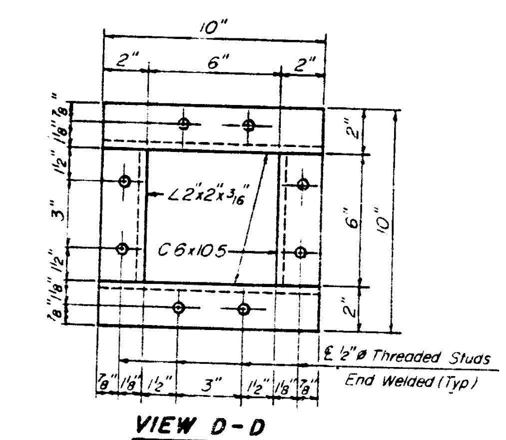
Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M. A-307

The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 & A.S.T.M. A-385

All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O. M 232

Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price each for "Drainage Scuppers".





STEEL DRAINAGE SCUPPER
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

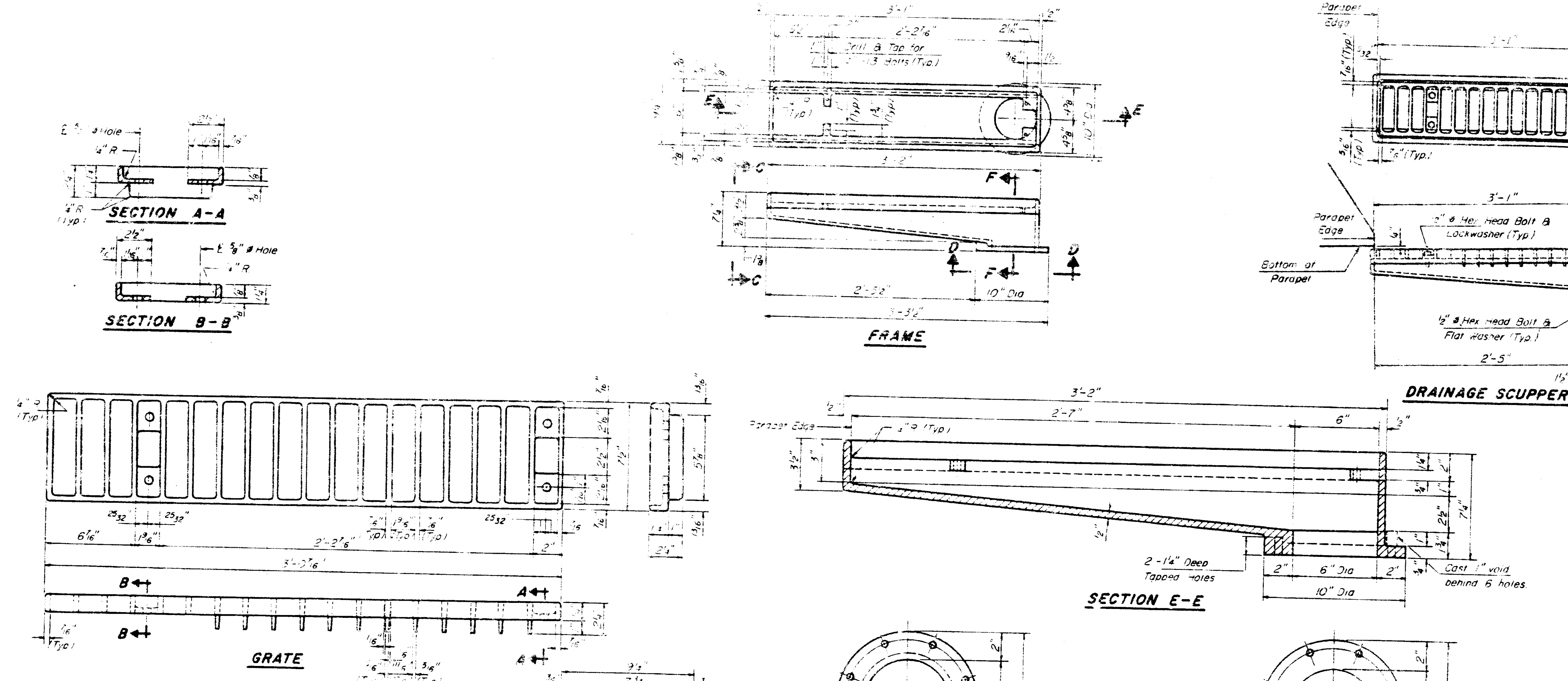
HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: F.T.T
DRAWN: M.L.P DATE: 3-16-94 NO. H-1348

DS-3

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A. 332	*	VERMILION	119	79
FED ROAD DIST NO. 7		ILLINOIS PROJECT		
		SHEET 21 OF 22		

* (92-11HB-5)BR



Notes

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M-105, Class 30

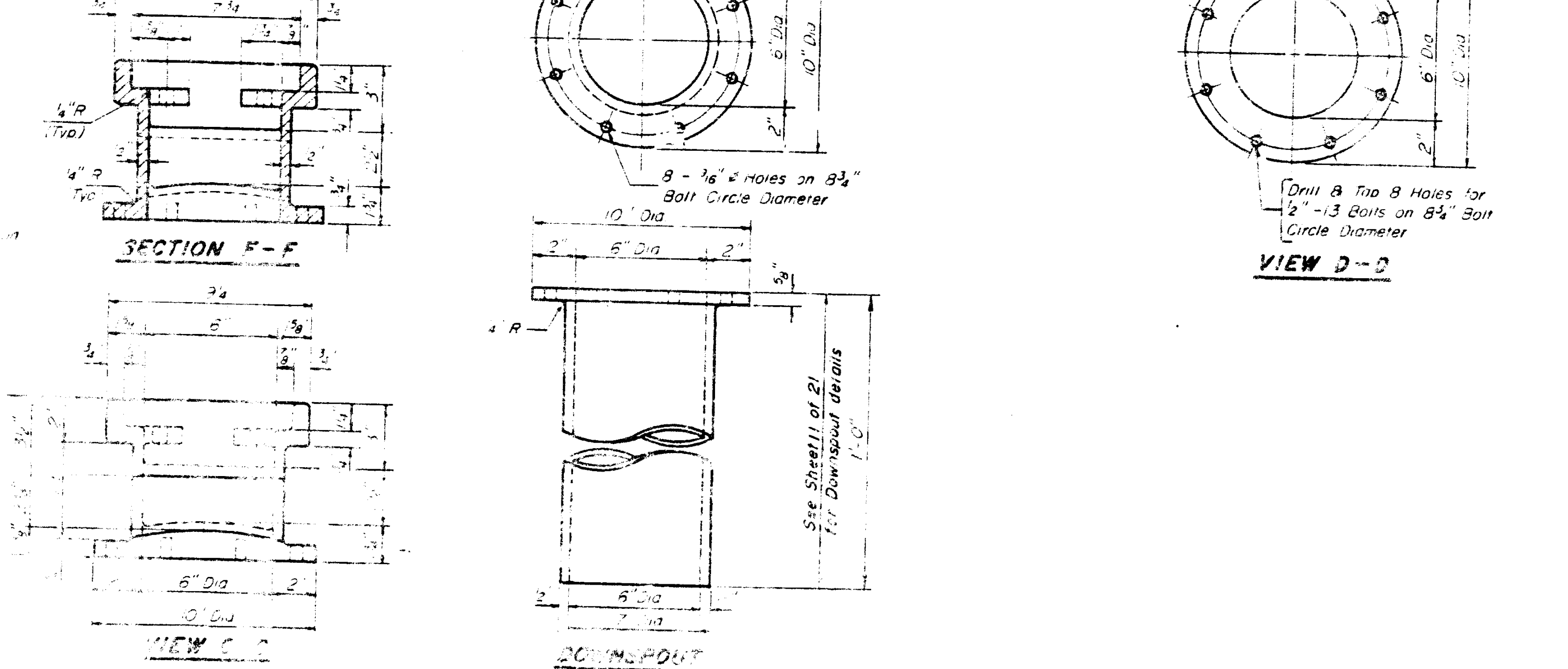
Bolts and washers shall conform to the requirements of A.S.T.M. A-307.

All bolts and washers shall be galvanized in accordance with AASHTO M-232

As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M. A-193 Type 304

Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price each for "Drainage Scuppers."

The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers



ALTERNATE CAST IRON
DRAINAGE SCUPPER
U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC.(92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

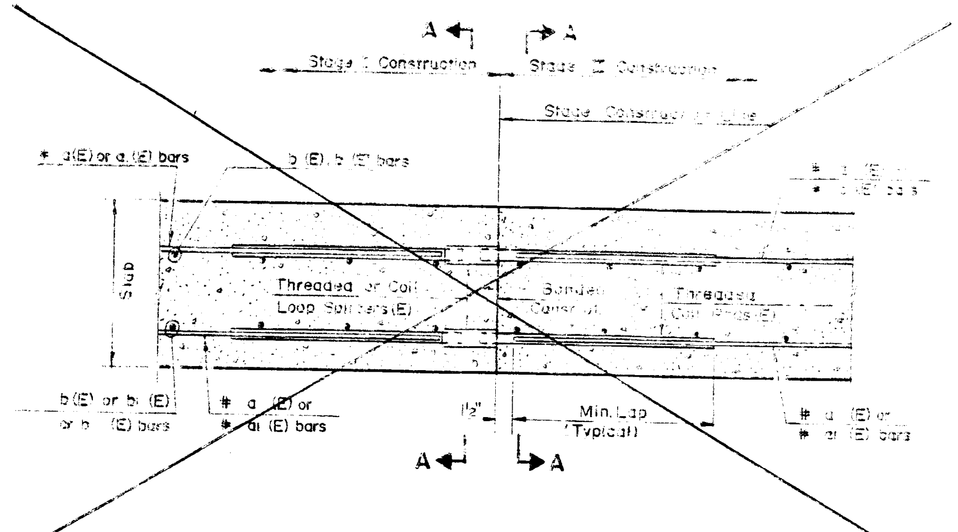
DESIGNED: M.M.A.	CHECKED: F.T.T.
DRAWN: M.L.P.	DATE: 3-16-94 NO. H-1348

STANDARD DS-4

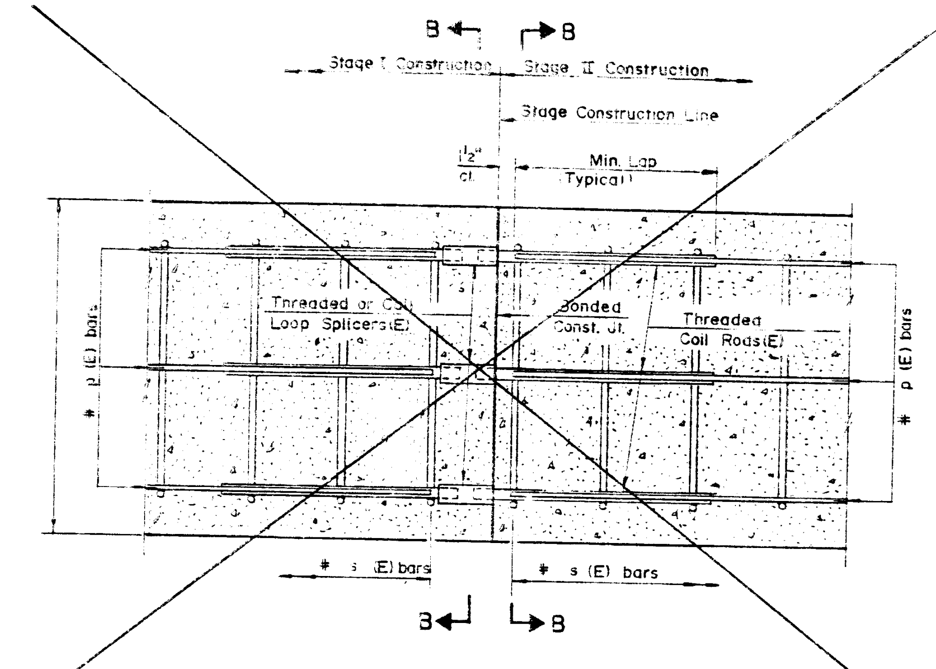
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 332	*	VERMILION	119	30
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* (92-11HB-5)BR

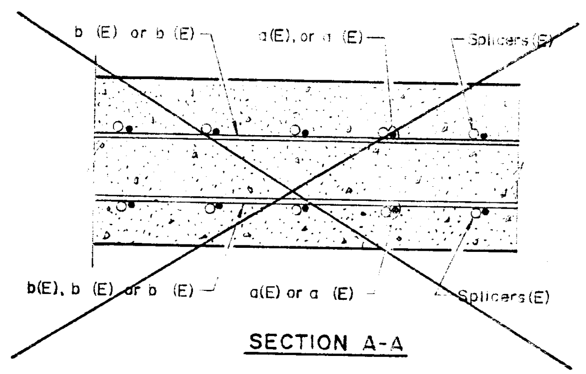
SHEET 22 OF 22



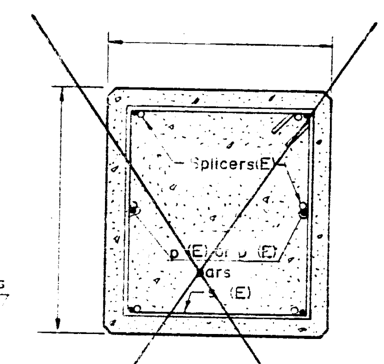
SECTION THRU SLAB



SECTION THRU ABUTMENTS
DETAILS FOR PIERS SIMILAR



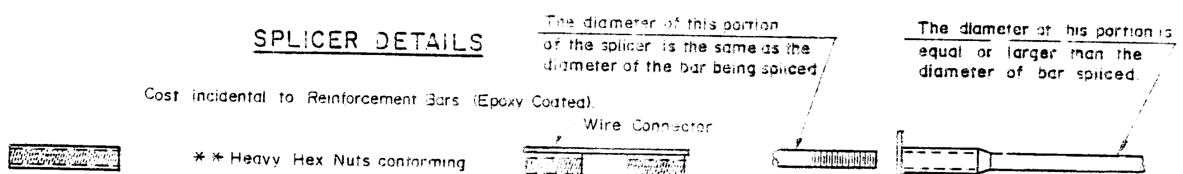
SECTION A-A



SECTION B-B

SPLICER DETAILS

Cost incidental to Reinforcement Bars (Epoxy Coated).



** ONE PIECE

** Heavy Hex Nuts conforming to ASTM A563, Grade C, D or DH may be used.

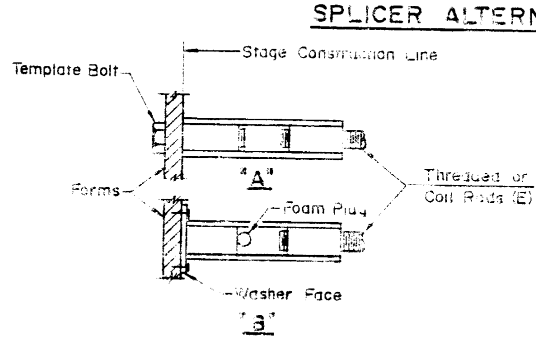
WELDED SECTIONS

ROLLED THREAD DOWEL BAR

SPLICER ALTERNATIVES

SPLICER DETAILS

Cost incidental to Reinforcement Bars (Epoxy Coated).



INSTALLATION AND SETTING METHODS

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

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi. yield strength, threaded or coiled full length

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

1. Minimum Capacity = $1.25 \times f_y \times A_t$ (Tension in kips)
2. Minimum * Pull-out Strength = $1.25 \times fs_{allow} \times A_t$ (Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in k.s.i.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load).
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

	Assembly	Requirements
in Slabs	#5 bar lap with $\frac{3}{4}$"ø Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension; Minimum Pull-out Strength = 9.2 kips-tension
in Sub-Structure	#6 bar lap with $\frac{7}{8}$"ø Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension; Minimum Pull-out Strength = 13.3 kips-tension
	#7 bar lap with 1"ø Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension; Minimum Pull-out Strength = 18.0 kips-tension
	#8 bar lap with $1\frac{1}{4}$"ø Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 56.9 kips-tension; Minimum Pull-out Strength = 23.6 kip-tension

A_t = Tensile stress area of lapped reinforcement bars.

NOTE: Bar splicers shall be in accordance with Section 508 of the Standard Specifications, except as noted and will be paid for at the contract unit price each for "Bar Splicers."

BAR SPLICER (COUPLER) DETAILS

U.S. RTE. 150/ILL. RTE. 1
OVER F.A.I. 74
F.A. RTE. 332 SEC. (92-11HB-5)BR
STA. 3054+60.96
VERMILION COUNTY
S.N. 092-0038

HSIONG ASSOCIATES LTD.

DESIGNED: M.M.A. CHECKED: S.K.L.
DRAWN: R.R.H. DATE: 3-16-94 NO. H-1348

VERMILION 92(11,12,12-1)RS... I&R copy ~~4-9-93~~

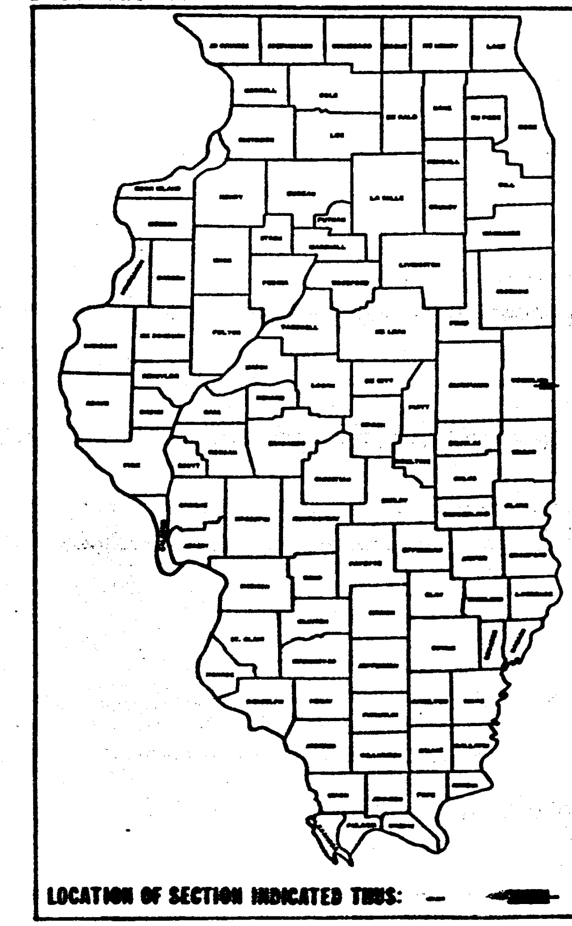
95%
7-16-94

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	*	VERMILION	361	1
F.HW.A. REG.		ILLINOIS PROJECT		

* 92(11,12,12-1)RS & (92-12HB-2)BRK

D-95-026-89

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY



LOCATION OF SECTION INDICATED THUS:

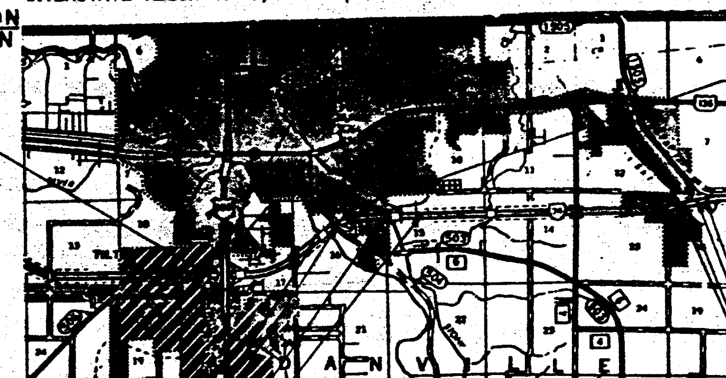
FOR INDEX OF SHEETS, SEE SHEET NO. 26-27
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 31-39

SCALES
- PLAN 1" = 20', 40', 50', 100'
- PROFILE HOR. 1" = 20'
- PROFILE VERT. 1" = 2'
- CROSS-SECTIONS HORIZ. 1" = 5', 1" = 10'; VERT. 2', 5'

F.A.I. ROUTE 74
SECTION 92(11,12,12-1)RS & (92-12 HB-2)BRK
VERMILION COUNTY
PROJECT IM-74-6 (138) 215

C-95-126-90

INTERSTATE RESURFACING, BRIDGE & INTERCHANGE RECONSTRUCTION



SECTION (92-12 HB-2) BRK
STATION 2010+38.49

RROJECT IM-74-6 (138)215 AND
SECTION 92(11,12,12-1)RS & (92-12HB-2)BRK
BEGINS STATION 1908+00

PROJECT IM-74-6 (138) 215 AND
SECTION 92(11,12,12-1)RS & (92-12HB-2)BRK
ENDS STATION 2231+53.37

OMISSIONS FROM RESURFACING & SECTION:

SECTION (92-12VB-1)BR
STATION 2201+52.71 TO STATION 2205+23.71

SECTION (92-12HB-6)BR
STATION 2212+53.09 TO STATION 2215+10.94

SECTION (92-12HB-4, B-1)BR
STATION 2029+35 TO STATION 2052+65

SECTION (92-12B)BR
STATION 1988+60 TO STATION 2001+95

0 5,000 10,000
SCALE: FEET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 23 1992
J.D. Burress — DISTRICT ENGINEER
EXAMINED ______ 19__
PASSED Jan. 29 1993 — ENGINEER OF PLANS AND CONTRACTS
Gary Gould — ENGINEER OF DESIGN
APPROVED Jan. 29 1993
Ralph C. Wehner — DIRECTOR DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

DESIGN DESIGNATION
3140 (93) INTERSTATE - 7.08 (COMP-6)
1775 (93) INTERSTATE - 6.28 (COMP-6)

CONTRACT NO. 90216

TOTAL LENGTH OF SECTION 92(11,12,12-1)RS & (92-12HB-2)BRK = 32,353.37 FEET = 6.128 MILES
NET LENGTH OF SECTION 92(11,12,12-1)RS & (92-12HB-2)BRK = 28,059.52 FEET = 5.314 MILES

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

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: DAVID L. PIPER
SQUAD LEADER: SCOTT LACKEY

Sheets: 1 Thru 100 (Set 1 of 4)

FOR INDEX OF SHEETS– SEE SHEET 3

FOR SUMMARY OF QUANTITIES–SEE SHEET 3

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

SCALES

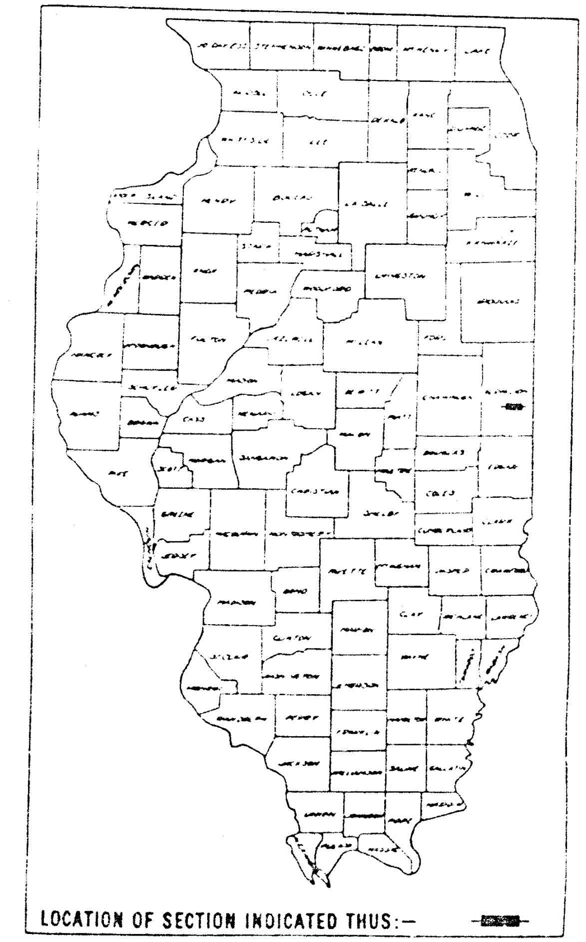
F.A.I. ROUTE 74, SECTION 92-11HB-5, VERMILION COUNTY

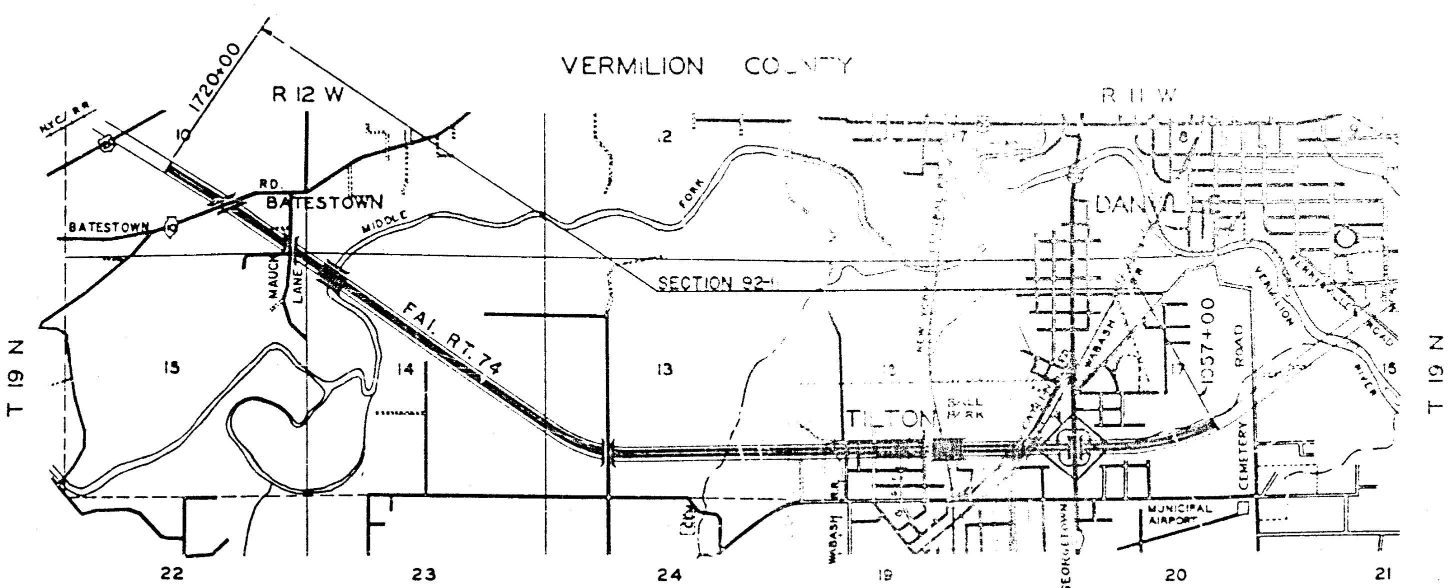
PROJECT I-UI-74-6(63)216

N

SECTION 92-11HB-5 INCLUDES ONE 6 SPAN STEEL
BEAM GRADE SEPARATION STRUCTURE, SPANS ...
43'-0", 2@56'-6", 43'-0", 30'-0"; WITH ...
30'-0" REINFORCED CONCRETE ROADWAYS ...
MEDIAN; AND 2 - 2'-0" SAFETY WALKS ...
CONCRETE PIERS AND ABUTMENTS AT STATION
1920+29.04

DESIGN CLASSIFICATION
1350-7-70





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

SUBMITTED ... 19...

APPROVED April 23 1963 A.W. Van Dusen(?) ENGINEER OF ROAD PLANS AND CONTRACTS

PASSED April 23 1963 ENGINEER OF DESIGN

APPROVED April 23 1963 ENGINEER

APPROVED April 23 1963 Francis Lorenz

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED

DIVISION ENGINEER DATE

PLANS PREPARED BY
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
360 EAST GRAND AVE.
CHICAGO, ILL.

NET LENGTH OF SECTION = ... FEET = ... MILES
NET LENGTH OF PROJECT = ... FEET = ... MILES

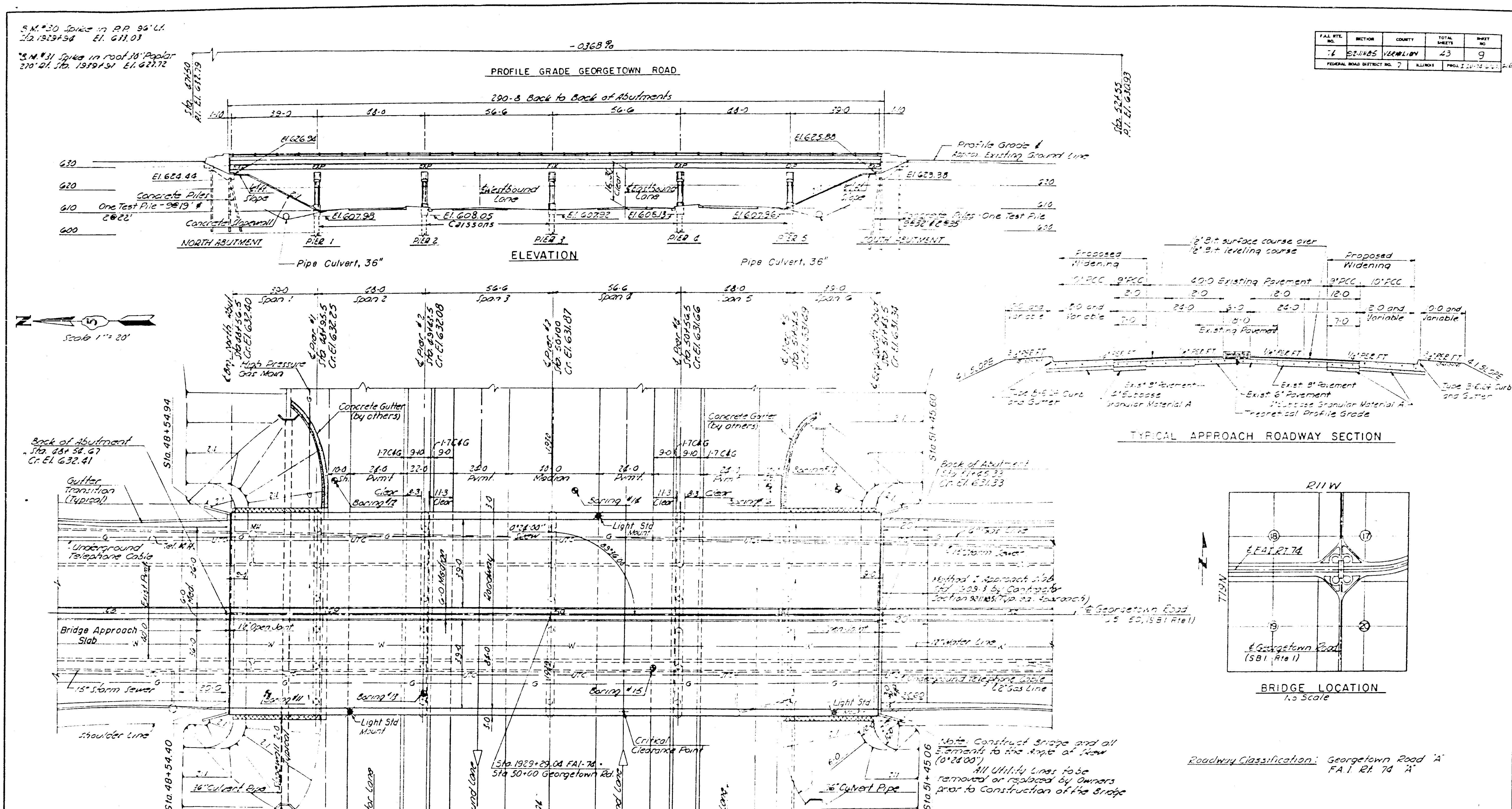
REEL
5-37

092-0038

Job No 23054

FAI ROUTE 74 . SECTION 92-11 HB-5 VERMILION COUNTY.

VERMILION COUNTY SECTION 92-11HB-5 F.A.I. ROUTE 74



F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11HB5	VERMILION	43	9

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI-74
FAI-74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+29.04

GENERAL PLAN AND LOCATION

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RBS	RBS	WES	JWH LDB	HSM	7-18-62	

5-6-63 Rev. Removed Pier footings, Added Caissons. B.C.

℄ Brg. N. Abut. Sta. 48+86.5 | ℄ Pier #1 Sta. 48+93.5 | ℄ Pier #2 Sta. 49+23.5 | ℄ Pier #3 Sta. 50+00 | ℄ Pier #4 Sta. 50+56.5 | ℄ Pier #5 Sta. 5[illegible] | ℄ Brg. S. Abut. Sta. 5[illegible]+63.5

49 50 51

#11 #13

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11HB-5	VERMILION	43	10

FEDERAL ROAD DISTRICT NO. 7 | ILLINOIS | PROJ.

BORING NO. 11
DATE: 4-24/26-58
GROUND ELEVATION: +632.5'

GROUND SURFACE +632.5'

E	S	PR	QU	R	CLASSIFICATION
31.5–30.5	1	7	-	0.3	BLACK SANDY TOP SOIL-LOOSE (M)
29.5–28.5	2	12	-	0.3	WATER LEVEL: +628.5' 1 HR. AFTER BORING
27.5–26.5	3	22	2.3	0.4	SILT-SOME SAND & CLAY-TRACE OF GRAVEL-BROWN-MED. DENSE (M)
25.5–24.5	4	26	3.8	0.4	
21.5	5	70	3.3	0.5	SILT-SOME CLAY & SAND TRACE OF GRAVEL-BROWN & GRAY-VERY DENSE (M)
19.0	6	87	4.5	0.4	
	7	93	6.0	0.8	
	8	64	6.3	0.6	SILT-SOME CLAY & SAND TR. OF GRAVEL-GRAY-VERY DENSE (M)
11.0	9	169	-	0.5	FINE TO MED. SAND-SOME SILT-GRAY-VERY DENSE (M) (PRESENCE OF COAL
	10	147	-	0.4	WATER LEVEL: +613.5' 24 HRS. AFTER BORING
07.5	11	130/6"	-	0.2	FINE TO COARSE SAND-SOME SILT-TRACE OF GRAVEL-& CLAY-BROWN-VERY DENSE (M)
	12	100/4"	-	0.1	
02.5	13	166	3.8	0.3	
599.5	14	174/10"	-	0.1	
97.5	15	100/4"	-	0.1	SILT-SOME CLAY & SAND GRAY-VERY DENSE (D)
95.0	16	100/4"	-	0.1	
92.5	17	100/2"	-	0.1	
90.0	18	100/4"	-	0.1	
87.5	19	100/2"	-	0.1	
85.0	20	100/2"	-	0.1	
82.4	21	100/	-	0.1	

END OF BORING

BORING NO. 12
DATE: 4-22/24-58
GROUND ELEVATION: +632.0'

GROUND SURFACE +632.0'

E	S	PR	QU	R	CLASSIFICATION
31.0–30.0	1	31	-	0.5	MISC. FILL-RED-DENSE (D)
	2	19	-	0.3	SILT-SOME SAND & CLAY-TRACE OF GRAVEL-BROWN-MED. DENSE (M)
27.0–26.0	3	40	3.3	0.8	
25.0–23.5	4	43	3.6	1.0	SILT-SOME SAND & CLAY-TRACE OF GRAVEL-BROWN-DENSE (M)
21.0–20.0	5	42	3.3	0.9	
18.5	6	56	5.8	0.8	
16.0–15.0	7	109	3.4	0.3	SILT & SAND-SOME CLAY TRACE OF GRAVEL-GRAY-VERY DENSE (M)
13.5	8	127	2.9	0.5	
	9	172	1.5	0.4	FINE SAND & SILT-GRAY VERY DENSE (M)
	10	175	1.5	0.4	
	11	200	-	0.5	
04.5	12	107/6"	-	-	
02.0–00.0	13	125	-	0.7	SILT-SOME CLAY & FINE SAND-TRACE OF GRAVEL-GRAY-VERY DENSE (M)
599.5–97.5	14	175	-	0.6	
97.0–95.0	15	110	6.3	0.7	WATER LEVEL: +595.0' AFTER CASING REMOVAL & 24 HRS. AFTER BORING
					VOID DRILLING WATER LOST FROM THIS POINT TO END OF BORING
92.0–90.0	16	18	-	0.5	SILT-SOME CLAY & FINE SAND-GRAY-MED. DENSE (D)
	17	15	-	0.7	
86.0	18	15	-	0.7	
83.5–82.5	19	27	-	0.6	SILT-SOME CLAY & FINE SAND-GRAY-MED. DENSE (M)
81.0–80.0	20	15	-	0.7	
77.5	21	17	-	0.5	
76.0–75.0	22	19	-	0.5	
73.5	23	25	-	0.5	
70.0–69.5	24	79	-	0.6	SILT-SOME CLAY & SAND TRACE OF GRAVEL-GRAY VERY DENSE (M) (PRESENCE OF COAL)

END OF BORING
30' NX CASING

BORING NO. 13
DATE: 4-28/29-58
GROUND ELEVATION: +631.8'

GROUND SURFACE +631.8

E	S	PR	QU	R	CLASSIFICATION
31.5					ASPHALT PAVING
	1	10	-	0.7	SILT-SOME CLAY & SAND TRACE OF GRAVEL-BROWN-MED. DENSE (M)
28.3–27.3	2	11	-	0.8	
26.8–25.8	3	15	-	0.8	WATER LEVEL: +625.5' 24 HRS. AFTER BORING
	4	10	-	0.8	FINE TO MED. SAND & SILT SOME CLAY-GRAY & BR. MED. DENSE (W)
20.8–19.8	5	55	3.9	0.5	WATER LEVEL: +623.8' AFTER CASING REMOVAL
18.3–16.8	6	52	4.5	0.8	SILT-SOME SAND & CLAY TRACE OF GRAVEL-BROWN & GRAY-DENSE (M)
15.8–14.8	7	60	5.6	0.5	
13.3	8	44	5.1	0.6	
11.8–10.8	9	64	5.1	0.7	
09.3–07.3	10	115	-	0.5	SILT-SOME CLAY-TRACE OF SAND-GRAY-VERY DENSE (M)
06.8–05.8	11	70	-	0.5	
03.3–02.3	12	99	7.3	0.3	
01.8	13	200	-	0.3	
	14	205/4"	-	0.2	
96.3	15	200/4"	-	0.3	
94.3–94.0	16	200/4"	-	0.2	SILT-SOME CLAY & SAND GRAY-VERY DENSE (D)
91.8–91.5	17	200/4"	-	0.2	
89.3–89.0	18	200/4"	-	0.2	
86.8–86.5	19	200/4"	-	0.2	
84.3–84.1	20	200/3"	-	0.2	
81.8–81.7	-	200+/1"	-	-	SAMPLE LOST

END OF BORING
20' NX CASING

BORING	STATION (US 150)	OFFSET
11	48+73.5	35' RT.
12	49+04.5	60' LT.
13	49+43.5	35' RT.

GENERAL NOTES

1950 CHICAGO BUILDING CODE SOIL CLASSIFICATIONS ARE USED

E : ELEVATION
S : SAMPLE NUMBERS
PR : PENETRATION IN BLOWS PER FOOT OF 140 POUNDS HAMMER FALLING 30 INCHES
QU : UNCONFINED COMPRESSIVE STRENGTH-T/SQ.FT.
R : RECOVERY IN FEET
SS : SPLIT SPOON-SIZE: 2" O.D. SIZE: 1 3/8" I.D.
M : MOIST
D : DRY
W : WET

*LOGS PREPARED BY
SOIL TESTING SERVICES, INC.
1827 N. HARLEM AVE.
CHICAGO 35, ILL.

WATER LEVELS INDICATED ON THE BORING LOGS ARE THE LEVELS MEASURED IN THE BORING AT THE TIMES INDICATED. IN PERVIOUS SOILS, THE INDICATED ELEVATIONS ARE CONSIDERED RELIABLE GROUND WATER LEVELS. IN IMPERVIOUS SOILS, THE ACCURATE DETERMINATION OF GROUND WATER ELEVATIONS IS NOT POSSIBLE IN EVEN SEVERAL DAYS OBSERVATION, AND ADDITIONAL EVIDENCE ON GROUND WATER ELEVATIONS MUST BE SOUGHT.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN RD OVER FAI RT 74
FAI 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+2904

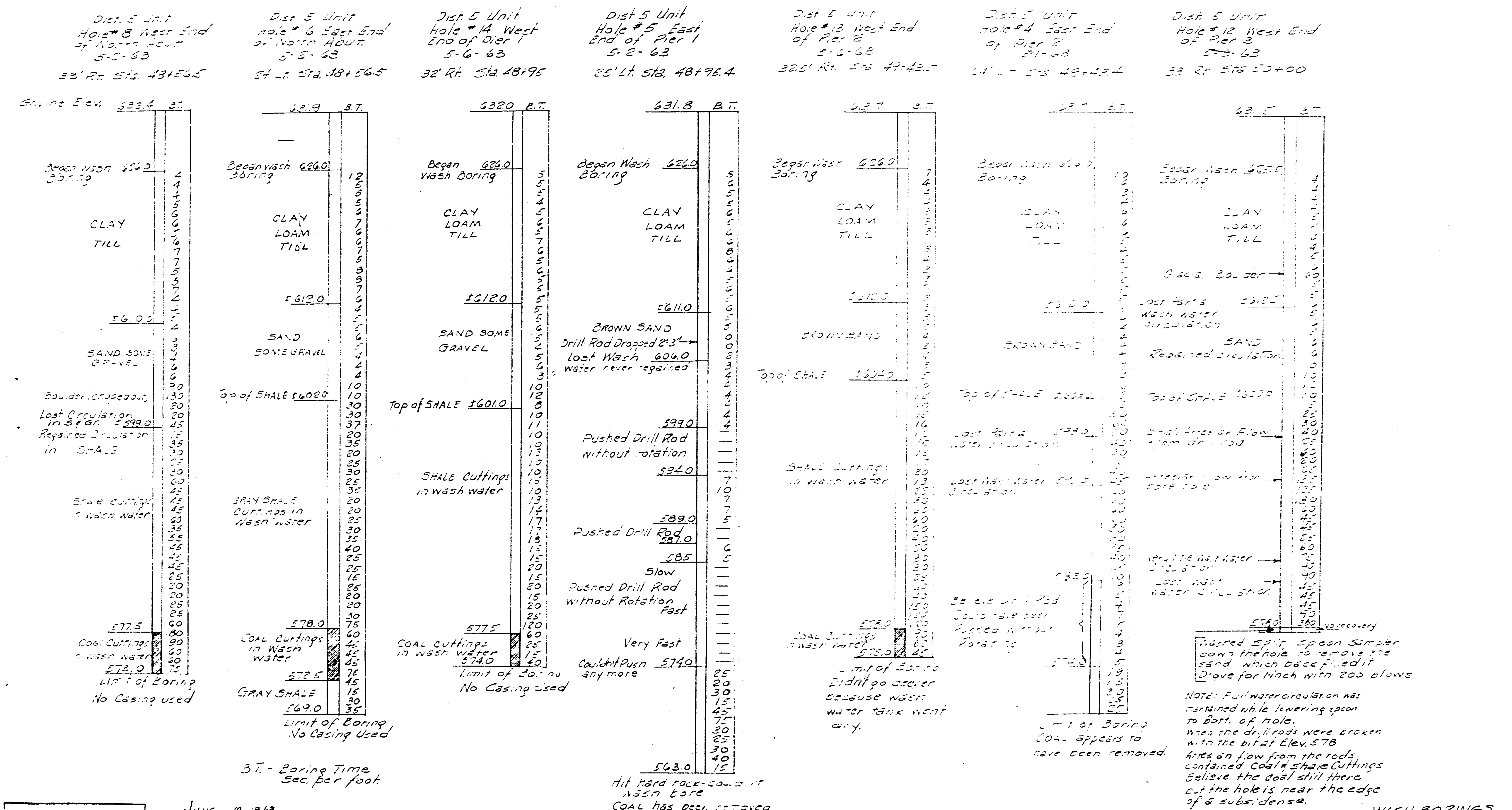
BORING LOGS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			LDB	HSM	10/28/59	

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

FAI 74	92-11 HB-5	Vermilion	43	10A

SHEET NO. 10A

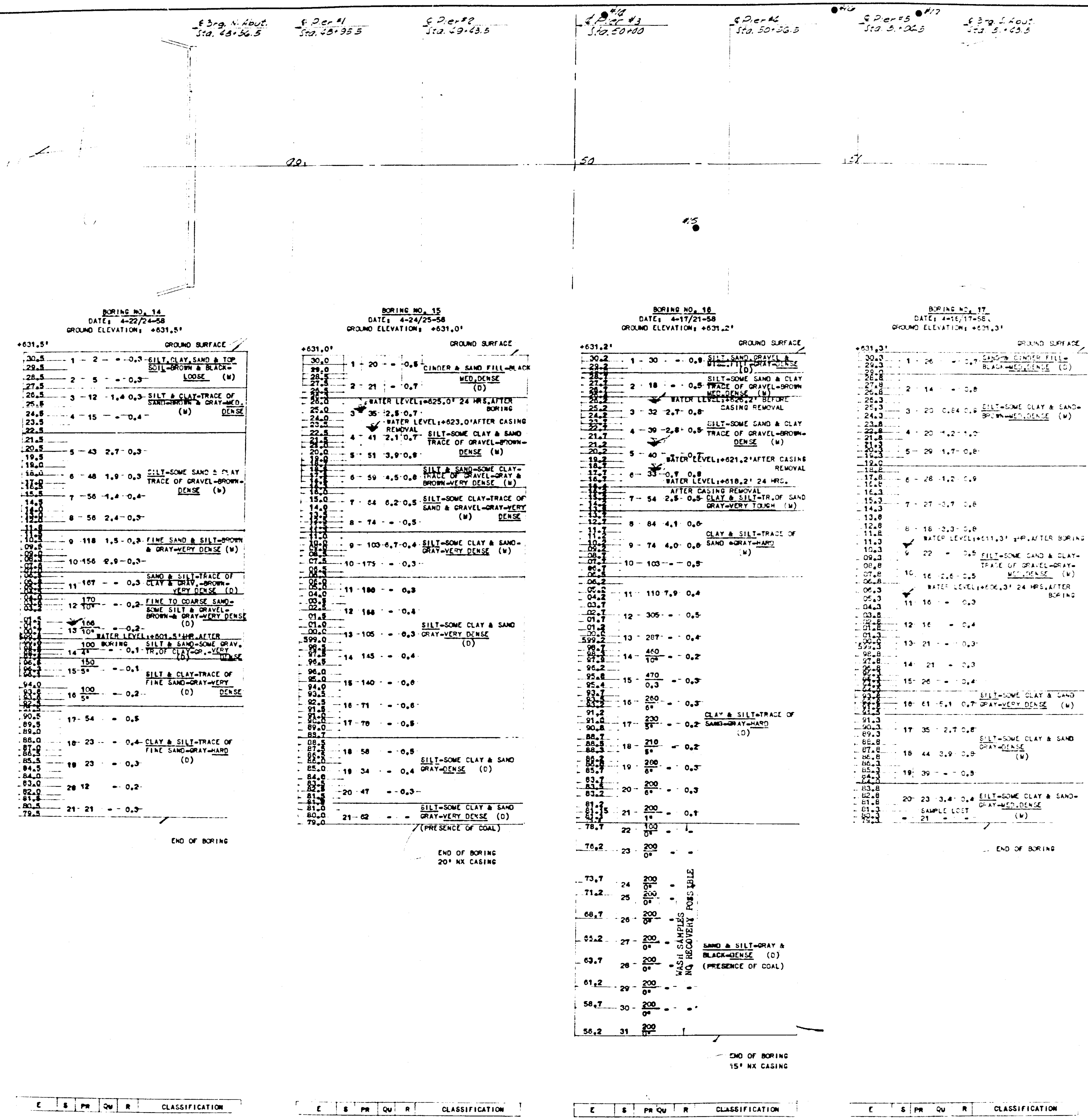


DRAWN	F.M.
CHECKED	J.T.R.

JUNE 10 1963
EXAMINED W E Baumann
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

WASH BORINGS
PROJ. I-74-6(63)216
F.A.I. 74 SEC. 92-11 HB-5
VERMILION COUNTY

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-HB5	VERMILION	43	11
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



BORING	STATION (US-55)	OFFSET
14	50+10.0	55' LT.
15	50+45.0	25.7 RT.
16	50+95.5	57' LT.
17	51+26.5	55' LT.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS

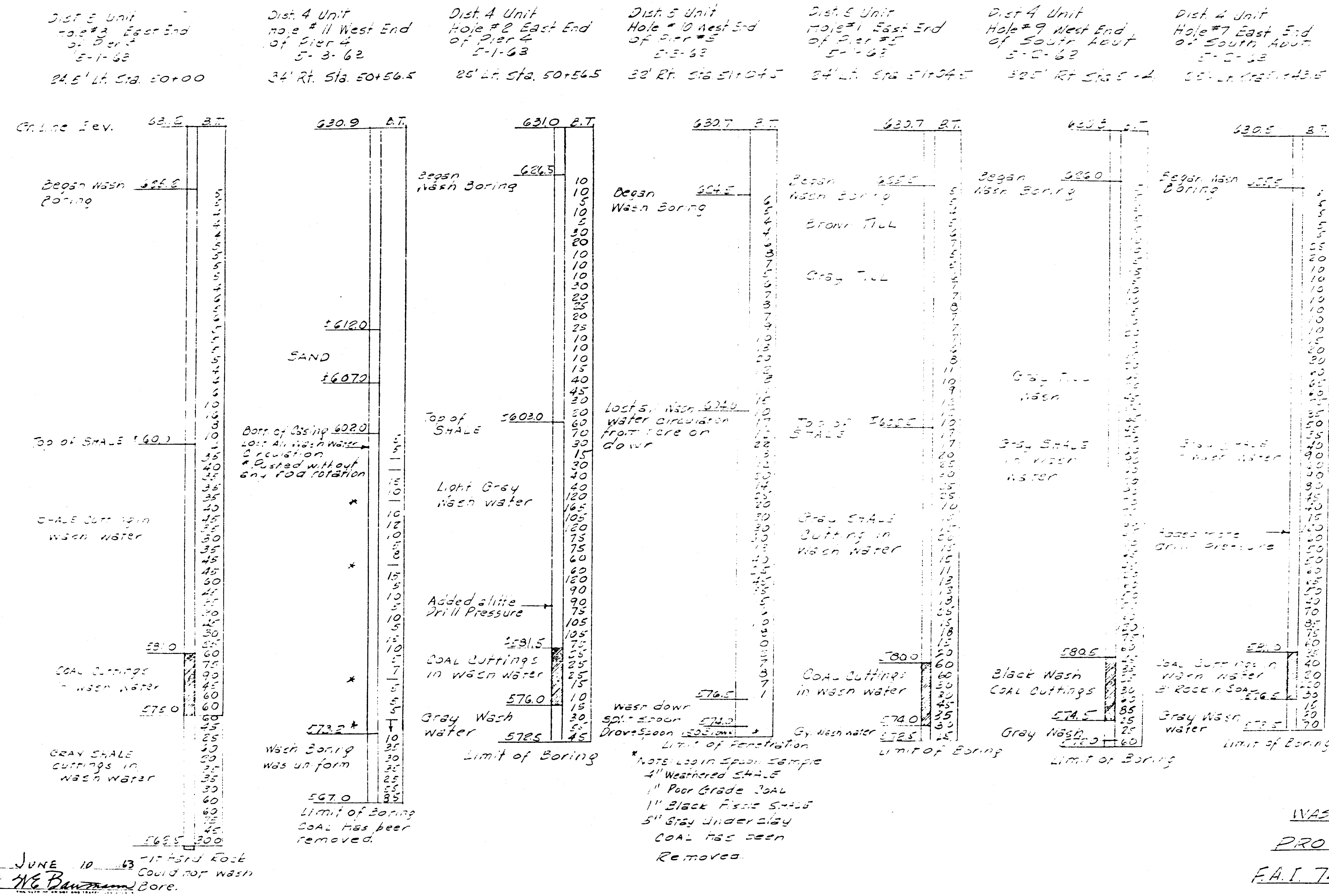
GEORGETOWN RD OVER FAI RT 74
FAI 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+29 04

BORING LOGS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
			LDB	HSM	10/28/59	

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

FAI 74	92-11 HB-5	Vermilion	43	11A



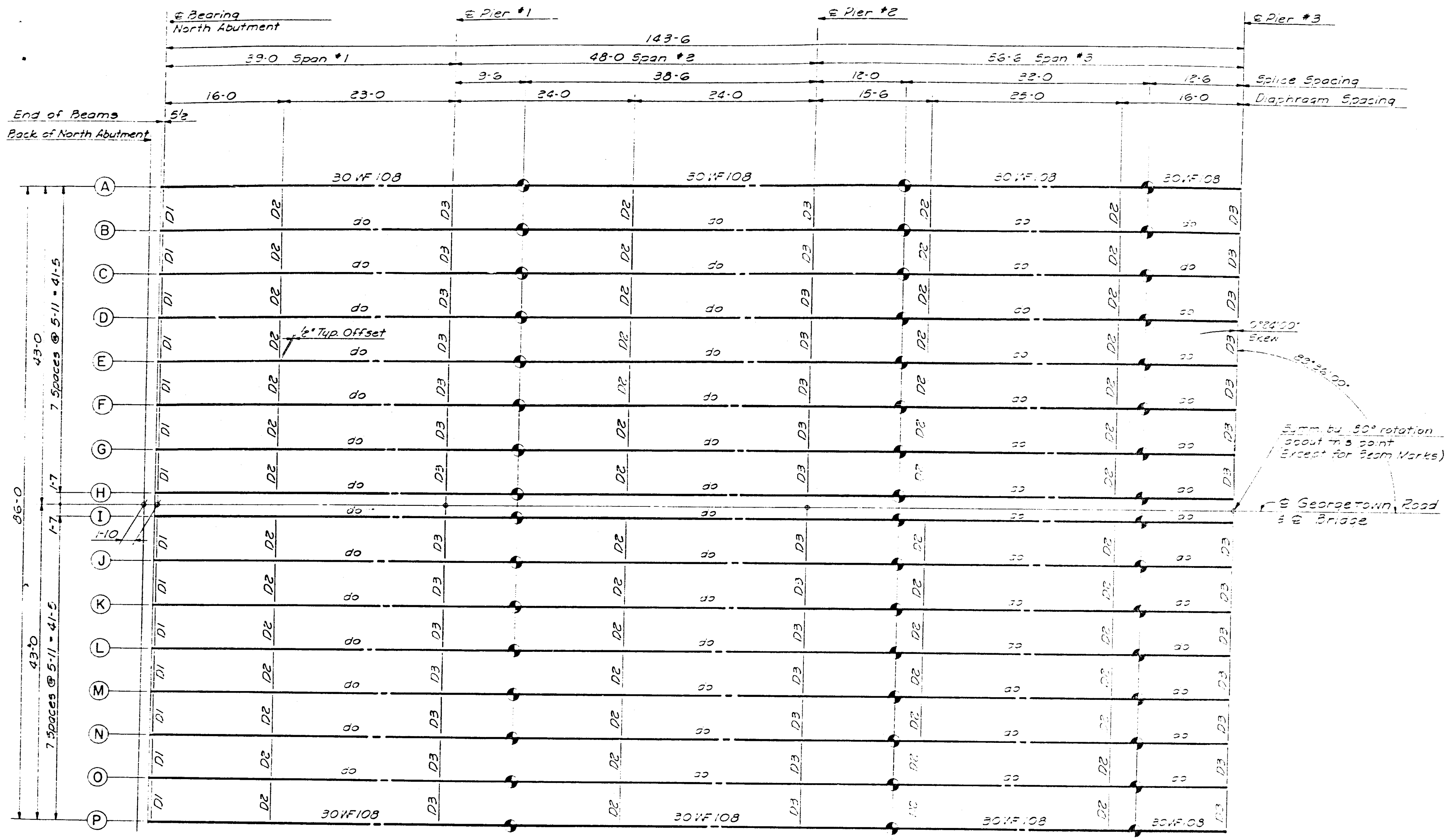
*Note: Log in Spoon Sample
4" Weathered SHALE
1" Poor Grade COAL
1" Black Fissile SHALE
5" Gray Underclay
COAL Has Been Removed

JUNE 10 63
W.E. Baumann

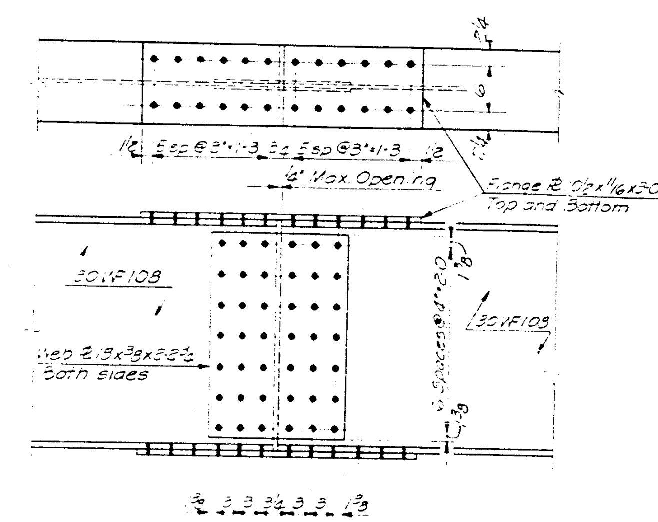
F.M.
J.T.R.

WASH BORINGS
PROJ. I-74-6(63)216
F.A.I. 74 SEC. 92-11HB-5
VERMILION COUNTY

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11 HB5	VERMILION	43	17
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



HALF FRAMING PLAN



FIELD SPLICE DETAILS

96 REQUIRED

NOTE: All rivet holes to be reamed with all parts assembled to grade and all parts match marked. 3/4" Rivets in all web splices. 7/8" Rivets in all flange splices.

TABLE OF ELEVATIONS — TOP OF STEEL BEAMS (*)

BEAM	NORTH ABUT.	PIER No. 1	SPAN No 2 SPLICE	PIER No. 2	SPAN No 3 SPLICE	SPAN No 3 SPLICE	PIER No. 3	SPAN No. 4 SPLICE	SPAN No 4 SPLICE	PIER No. 4	SPAN No 5 SPLICE	PIER No. 5	SOUTH ABUT.
A	631.058	630.915	630.880	630.738	630.694	630.576	630.530	630.484	630.369	630.322	630.181	630.146	630.033
B	631.163	631.019	630.984	630.843	630.798	630.681	630.635	630.589	630.473	630.427	630.285	630.250	630.1[illegible]
C	631.283	631.139	631.104	630.962	630.918	630.801	630.755	630.708	630.593	630.547	630.405	630.370	630.237
D	631.403	631.264	631.229	631.088	631.044	630.926	630.880	630.834	630.7[illegible]	630.671	630.530	630.495	630.3[illegible]
E	631.533	631.389	631.354	631.213	631.169	631.051	631.005	630.959	630.843	630.797	630.655	630.620	630.4[illegible]
F	631.637	631.494	631.459	631.317	631.273	631.155	631.109	631.063	630.947	630.901	630.760	630.725	630.551
G	631.700	631.556	631.521	631.380	631.336	631.218	631.172	631.126	631.010	630.964	630.822	630.787	630.644
H	631.763	631.619	631.584	631.443	631.398	631.281	631.235	631.189	631.073	631.027	630.885	630.850	630.7[illegible]
I	631.763	631.619	631.584	631.443	631.398	631.281	631.235	631.189	631.073	631.027	630.885	630.850	630.737
J	631.700	631.557	631.522	631.380	631.336	631.218	631.172	631.126	631.010	630.964	630.823	630.788	630.644
K	631.635	631.495	631.459	631.318	631.274	631.156	631.110	631.064	630.948	630.902	630.760	630.725	630.532
L	631.534	631.390	631.355	631.214	631.170	631.052	631.006	630.960	630.844	630.798	630.656	630.621	630.4[illegible]
M	631.409	631.266	631.231	631.089	631.045	630.927	630.881	630.835	630.719	630.673	630.532	630.497	630.353
N	631.284	631.141	631.106	630.964	630.920	630.802	630.756	630.710	630.594	630.548	630.407	630.372	630.228
O	631.165	631.021	630.986	630.845	630.800	630.683	630.637	630.591	630.475	630.429	630.287	630.252	630.1[illegible]
P	631.061	630.917	630.882	630.740	630.696	630.579	630.533	630.487	630.371	630.325	630.183	630.148	630.0[illegible]

* Top of Beam flange without Splice Plates

NOTE: For fabrication use only, does not include deflection.

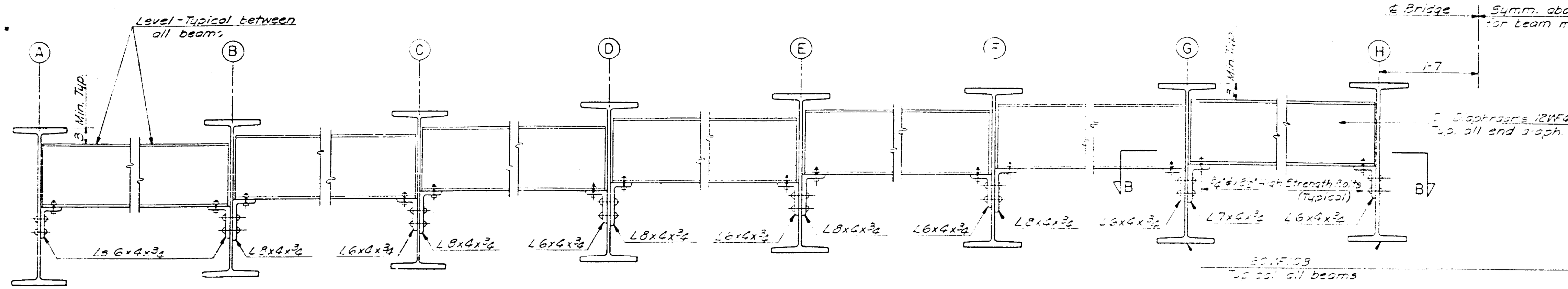
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS — CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY — STA. 1929 + 29.04

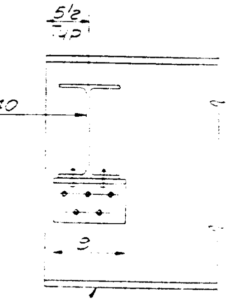
STRUCTURAL STEEL FRAMING PLAN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	RBS	JMG	RBS LDB	HSM	7-18-62	

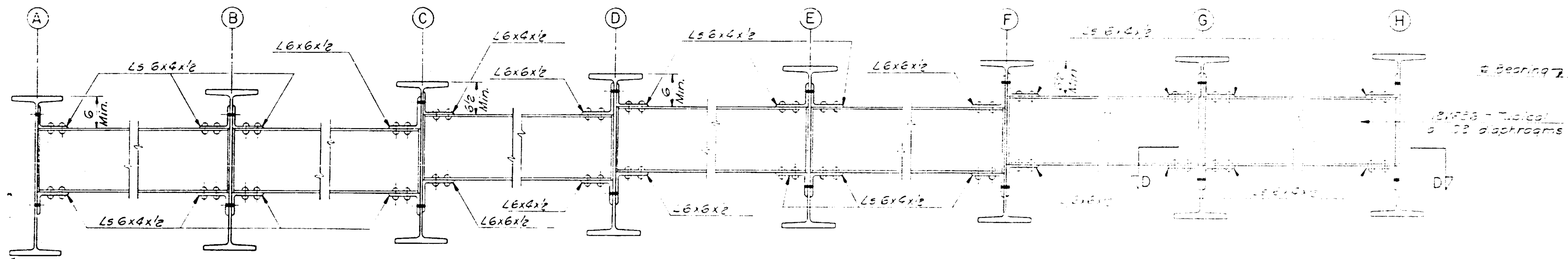
F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11HB-5	VERMILION	43	18
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



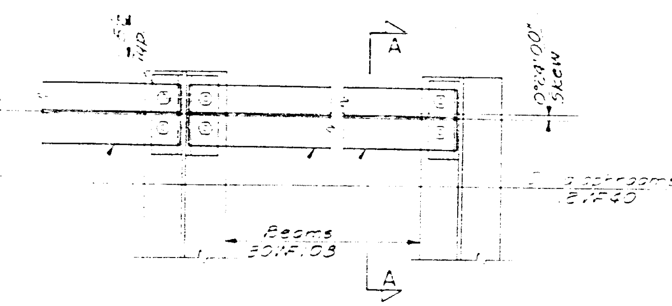
END DIAPHRAGMS - NORTH & SOUTH ABUTMENTS
28-D1 DIAPHRAGMS REQUIRED



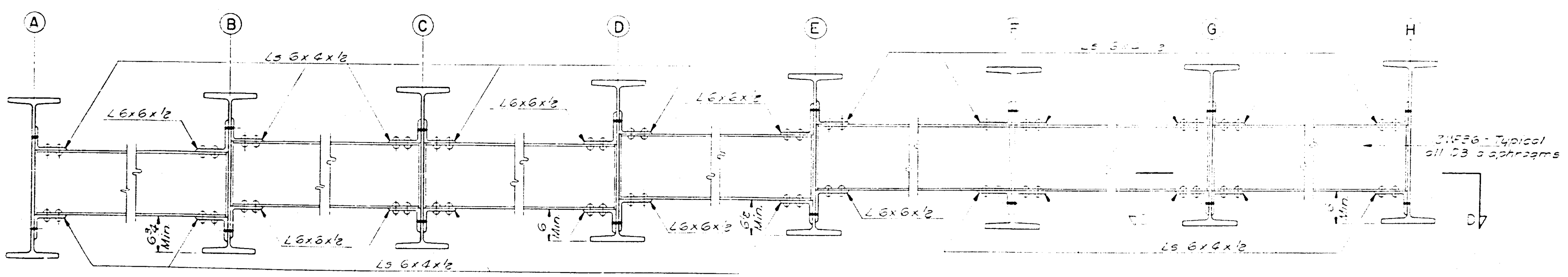
SECTION A-A



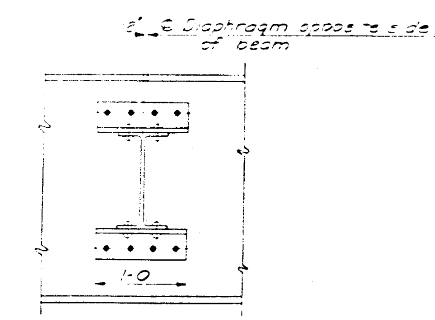
INTERMEDIATE DIAPHRAGMS FOR POSITIVE MOMENT AREAS
112 - D2 DIAPHRAGMS REQUIRED



SECTION B - B

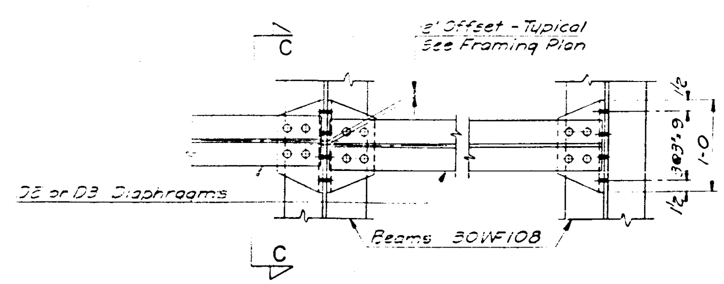


INTERMEDIATE DIAPHRAGMS FOR NEGATIVE MOMENT AREAS
70 - D3 DIAPHRAGMS REQUIRED



SECTION C-C

TOTAL COMPUTED WEIGHT OF FRAMING STEEL
STRUCTURAL STEEL 588,320 LBS.



SECTION D-D

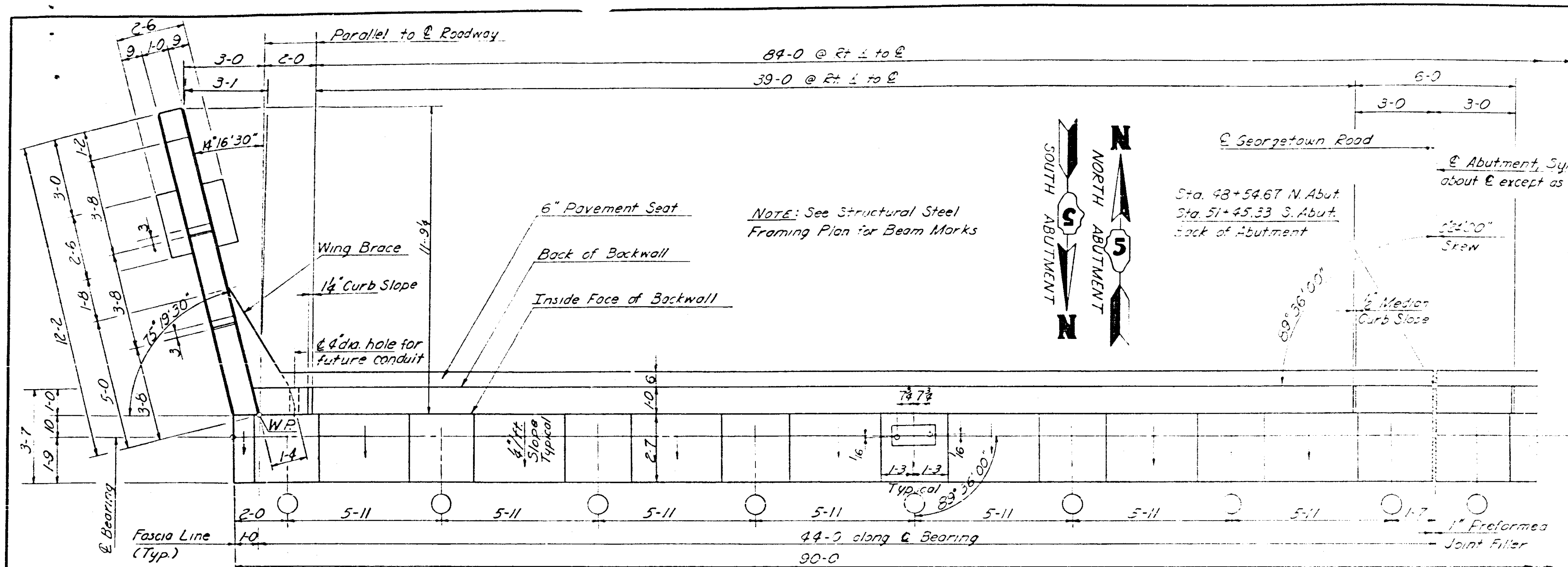
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI-74
FAI-74 SECTION 92-11 HB-5
VERMILION COUNTY STA.1929+29.04

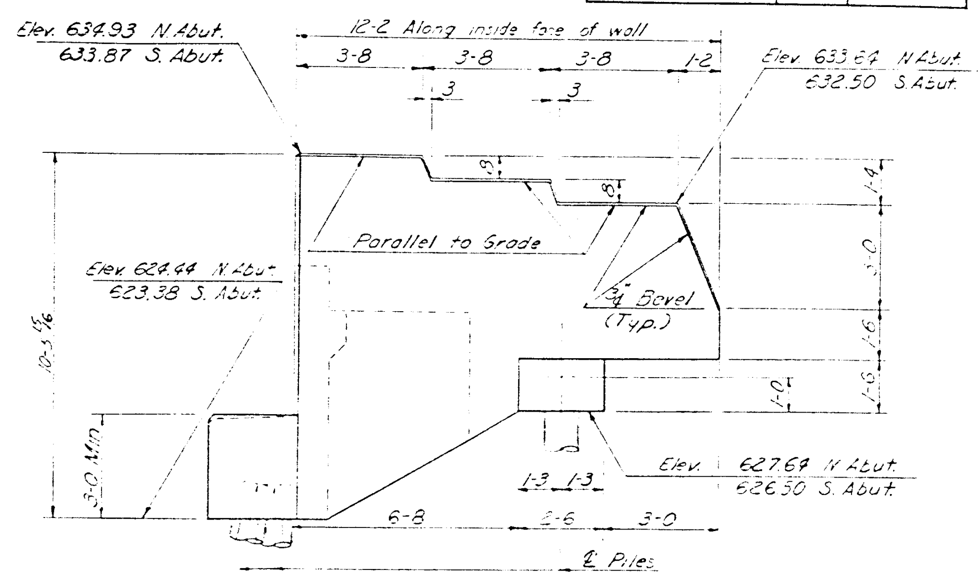
STRUCTURAL STEEL DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	RBS	JMG	RBS LDB	HSM	7-18-62	

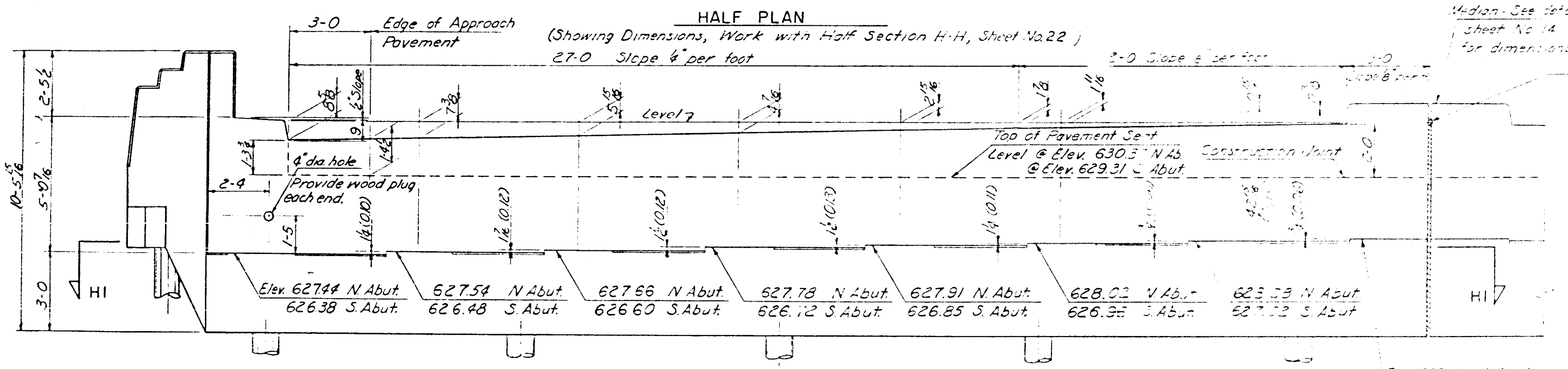
F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-HB-5	VERMILION	43	21
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



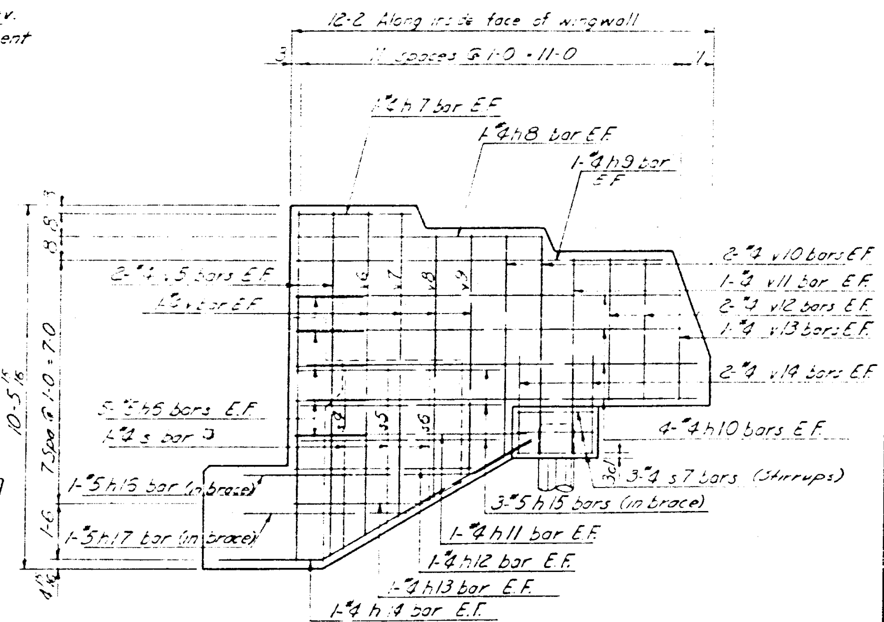
HALF PLAN
(Showing Dimensions, Work with Half Section H-H, Sheet No. 22)



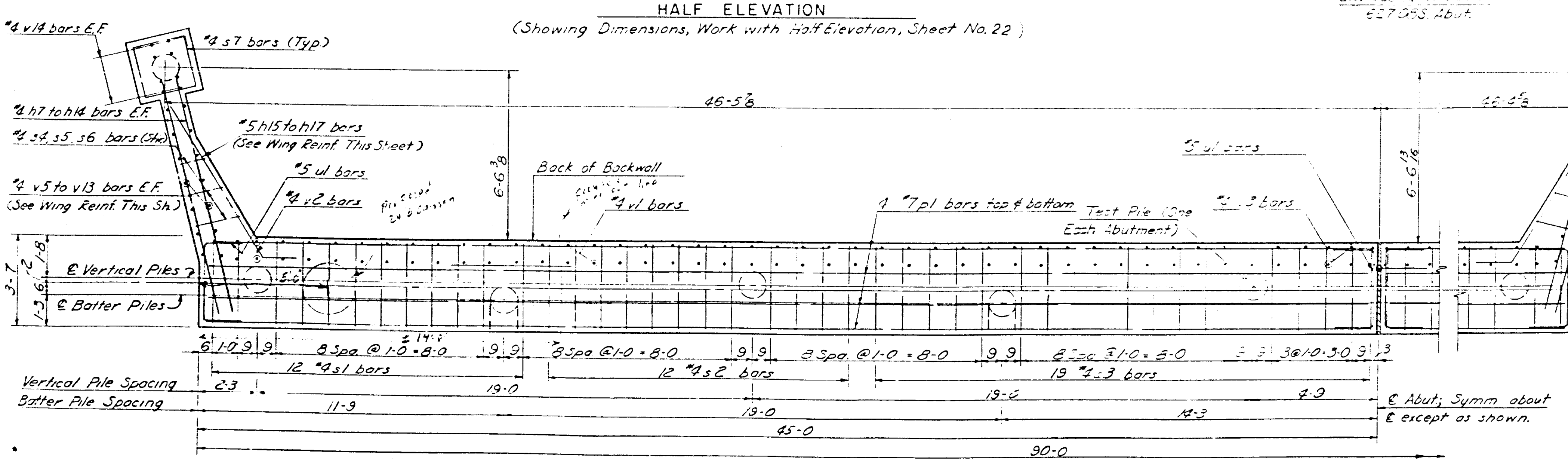
WINGWALL ELEVATION
(Showing Typical Dimensions)



HALF ELEVATION
(Showing Dimensions, Work with Half Elevation, Sheet No. 22)



TYPICAL WINGWALL REINFORCEMENT



HALF SECTION H1-H1
(Showing Typical Reinforcement - Work with Half Section H-H, Sheet No. 23)

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

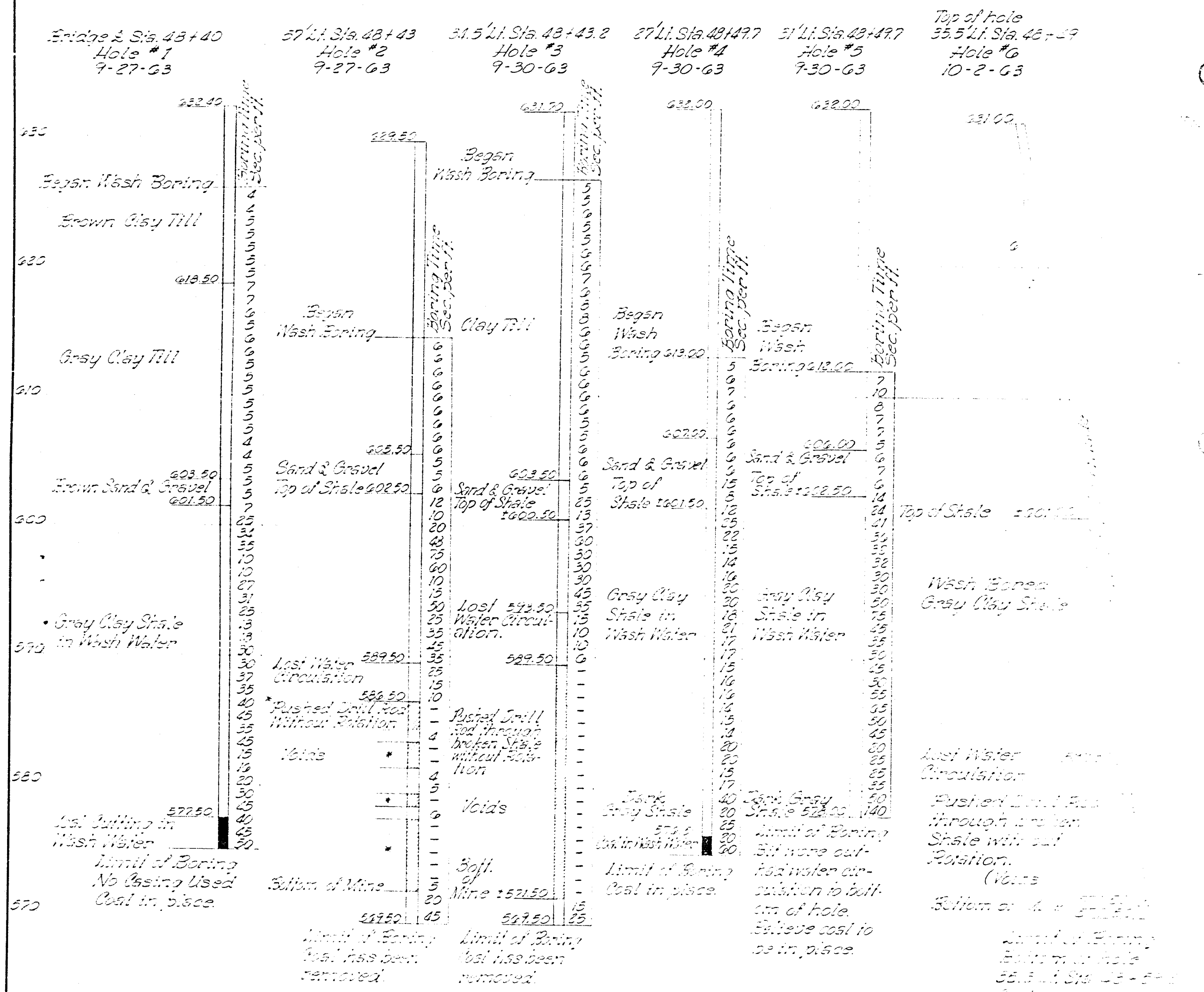
ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+29.04

ABUTMENTS

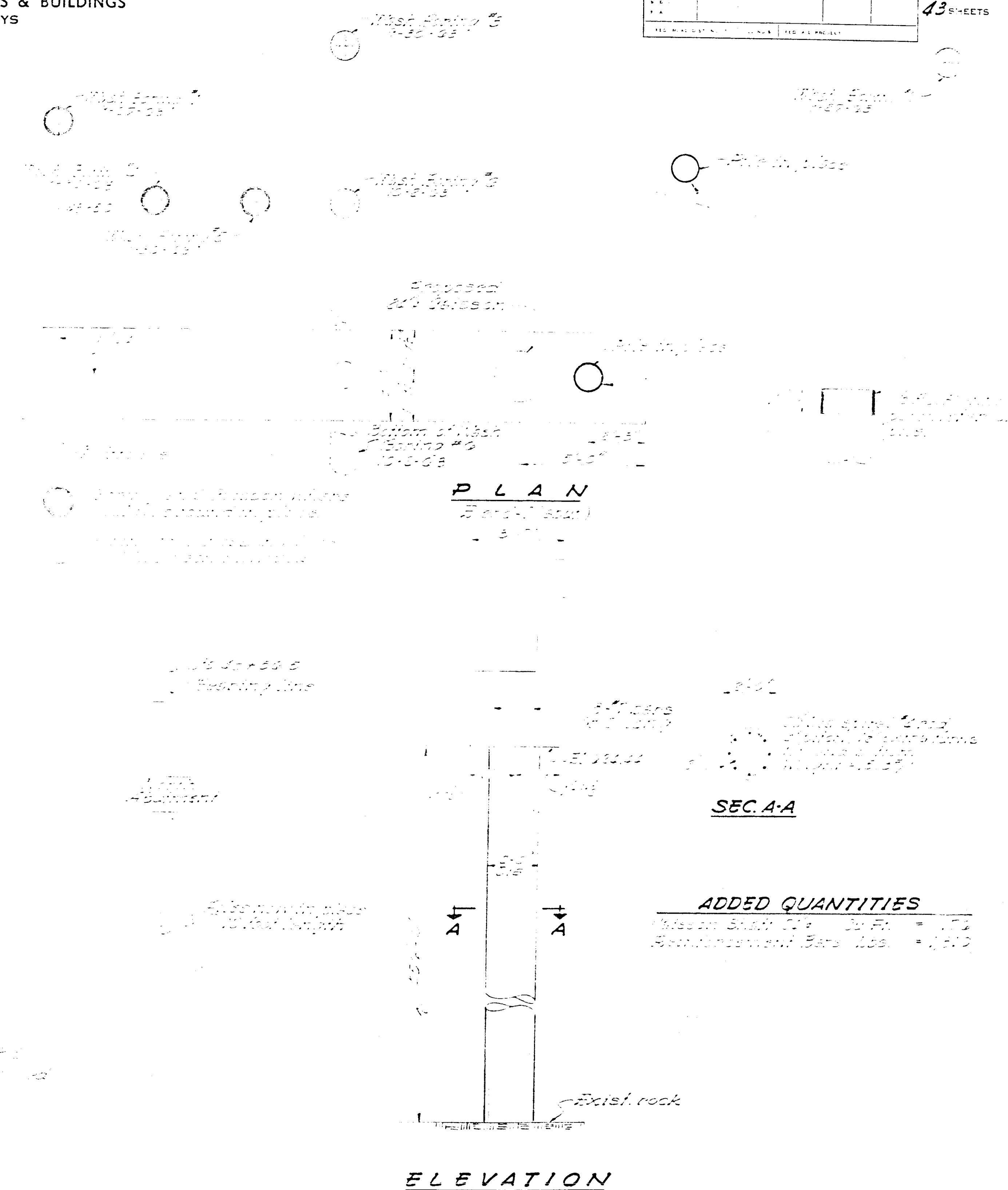
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	SMH	SMH	RBS LDB	HSM	7-18-62	

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

SHEET NO. 21a
43 SHEETS



Special investigation to determine if the coal had been removed from under the North Abutment by means of Wash Borings.



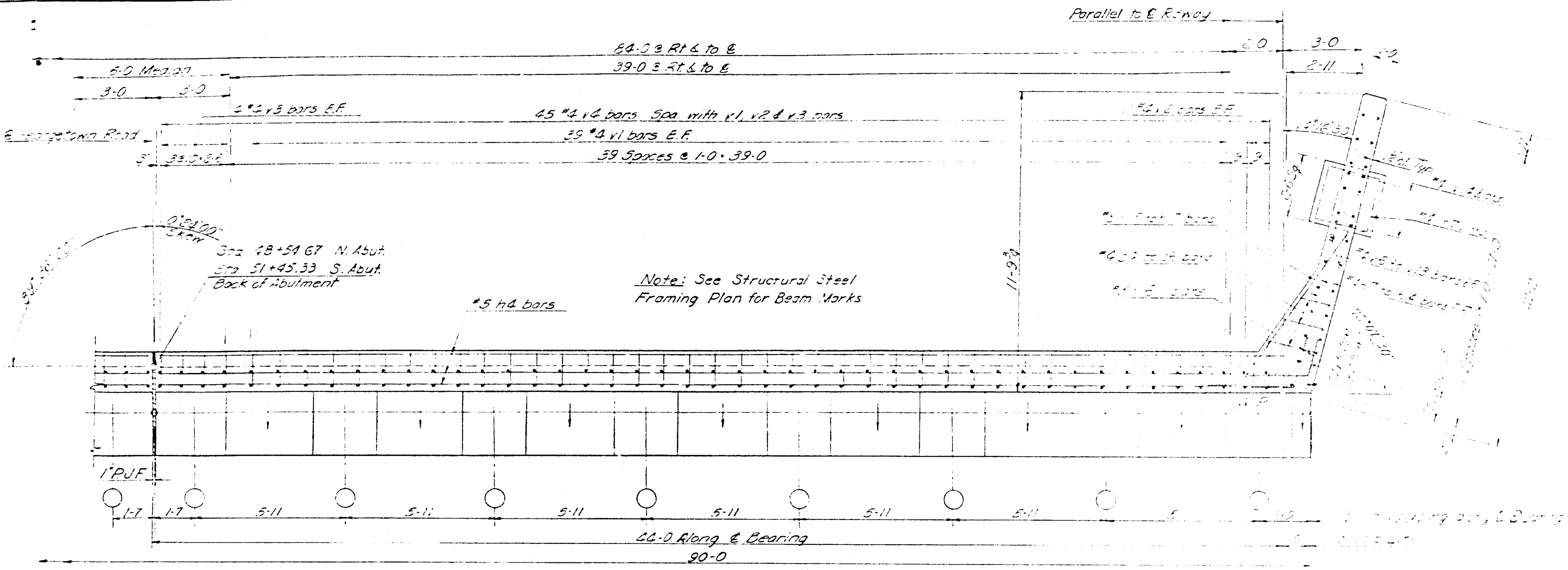
DESIGNED	
CHECKED	
DRAWN	J. Mullenix
CHECKED	

EXAMINED 19
PASSED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
APPROVED — ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

REVISION NORTH ABUTMENT
F.A.I. ROUTE 74
SECTION 92-11 HB 5
VERMILION COUNTY

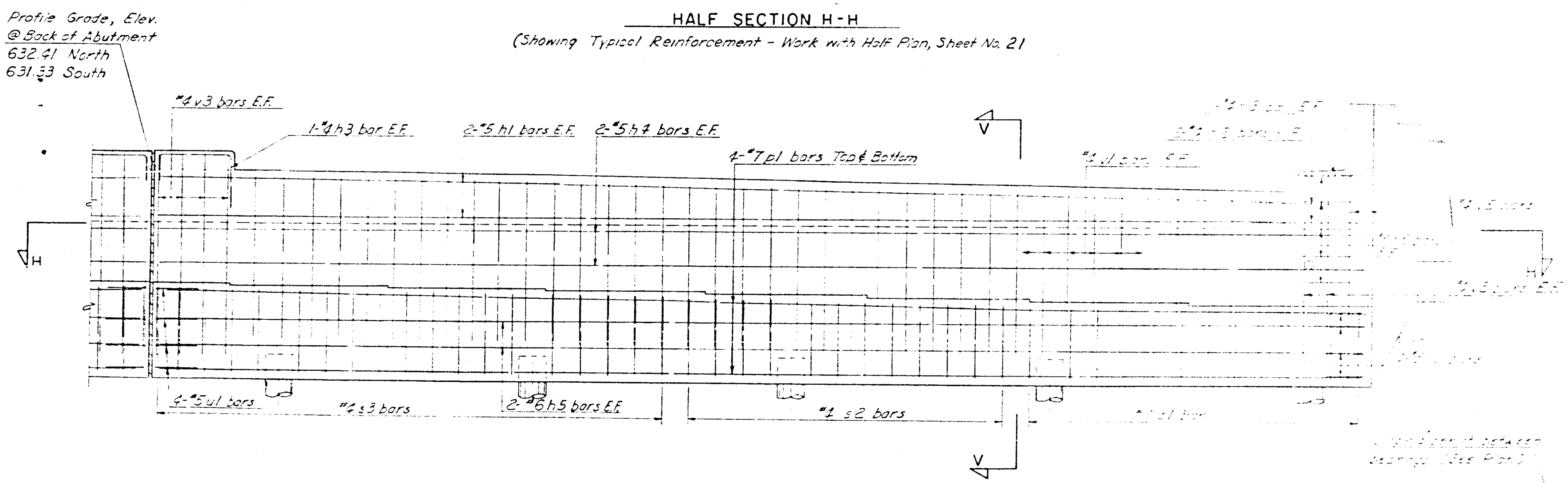
Oct. 8, 1963

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11HB-5	VERMILION	43	22
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



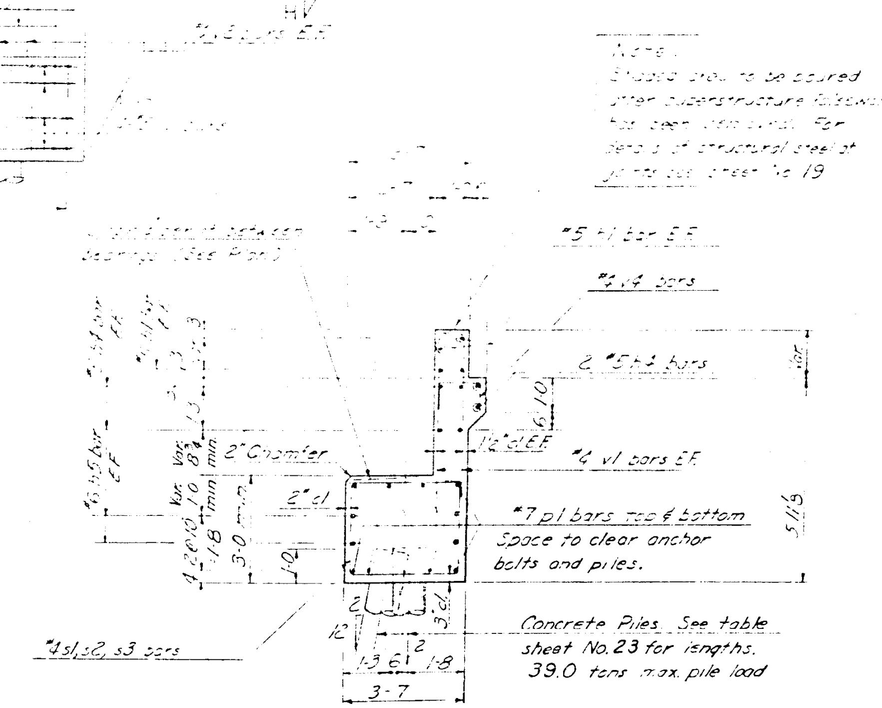
HALF SECTION H-H

(Showing Typical Reinforcement - Work with Half Plan, Sheet No. 21)



HALF ELEVATION

(Showing Typical Reinforcement)
(Work with Half Elevation, Sheet No. 21)



SECTION V-V

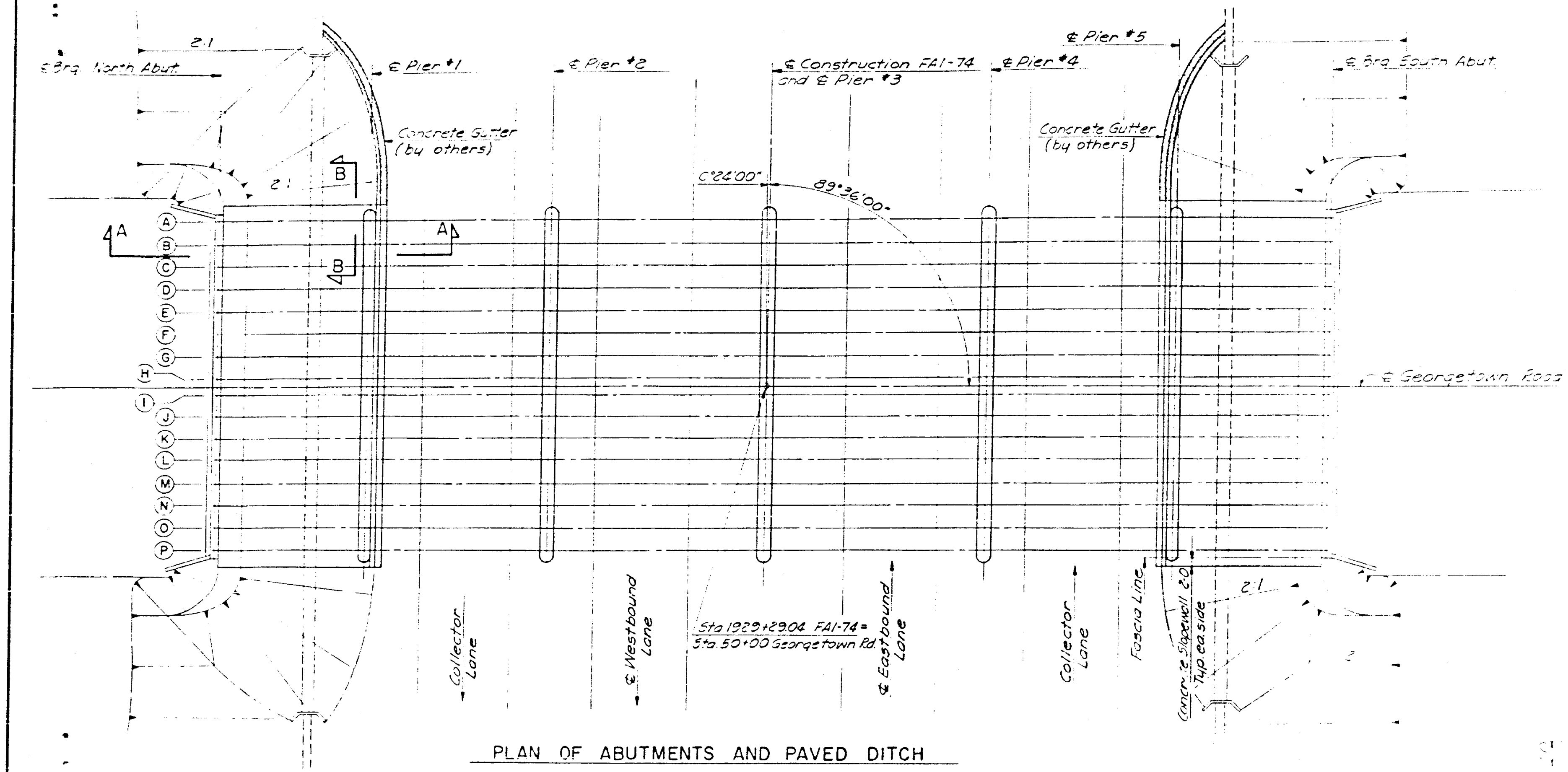
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+29.04

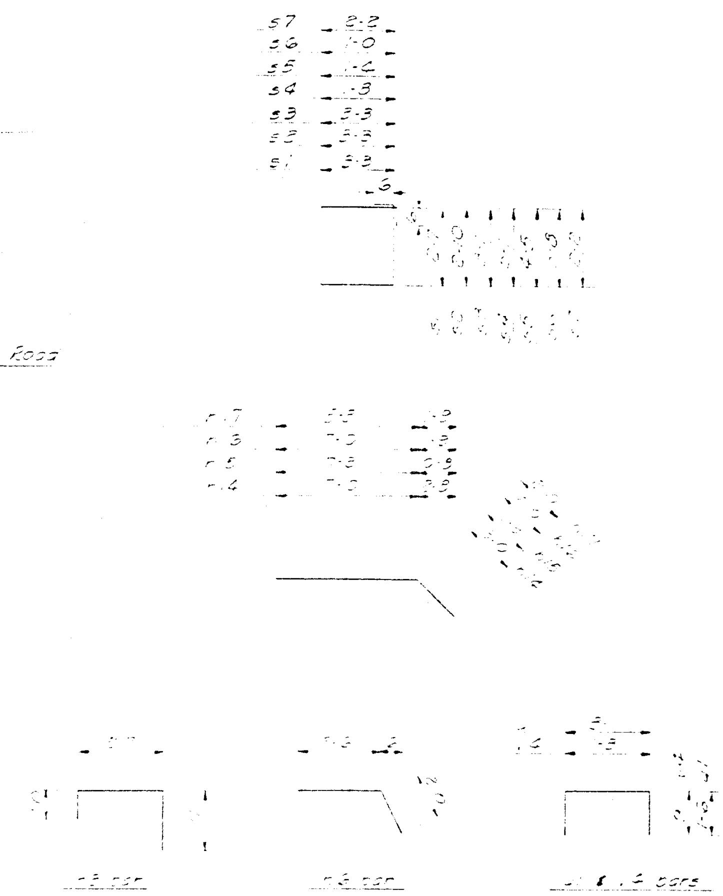
ABUTMENTS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	SMH	SMH	RBS LDB	HSM	7-18-62	

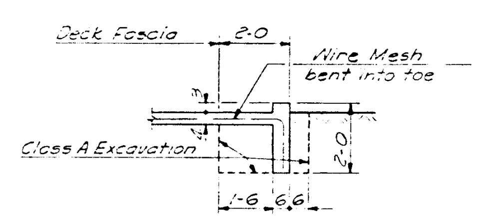
F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	[illegible]	VERMILION	43	23
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		



PLAN OF ABUTMENTS AND PAVED DITCH

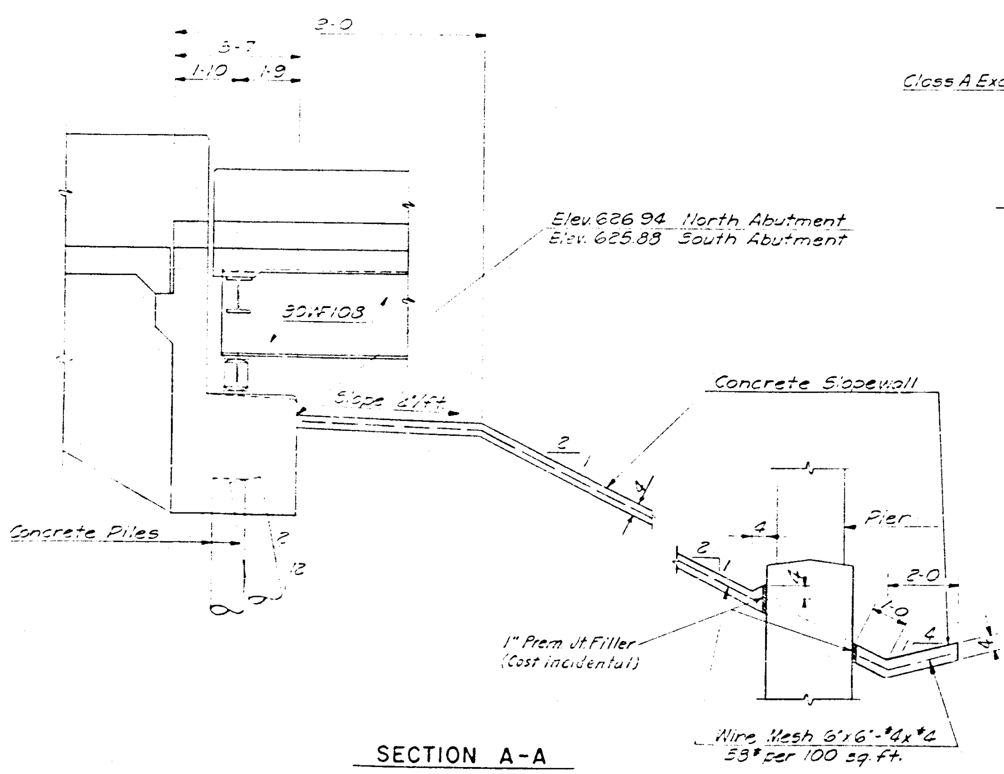


BENDING DIAGRAMS



SECTION B-B

EDGE OF SLOPEWALL



SECTION A-A

BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
[illegible]	13	5	41-8	As Shown	
[illegible]	16	4	4-3	As Shown	
[illegible]	6	4	5-6	As Shown	
[illegible]	[illegible]	5	44-6	As Shown	
[illegible]	[illegible]	6	44-6	[illegible]	
[illegible]	40	5	4-6	[illegible]	
[illegible]	8	4	3-0	As Shown	
[illegible]	[illegible]	4	[illegible]	As Shown	
[illegible]	[illegible]	4	10-4	As Shown	
[illegible]	32	4	11-0	1-0	
[illegible]	8	4	6-9	[illegible]	
[illegible]	8	4	5-3	1-0	
[illegible]	[illegible]	4	4-0	1-0	
[illegible]	8	4	10-0	As Shown	
[illegible]	2	5	8-6	1-0	
[illegible]	4	5	9-0	As Shown	
[illegible]	4	5	7-3	As Shown	
[illegible]	32	[illegible]	44-6	As Shown	
[illegible]	48	4	12-9	1-0	
[illegible]	48	4	13-2	1-0	
[illegible]	76	4	13-9	1-0	
[illegible]	4	4	[illegible]-6	As Shown	
[illegible]	4	4	12-6	1-3	
[illegible]	4	4	10-4	1-3	
[illegible]	2	4	9-8	0-6	
[illegible]	32	5	[illegible]	As Shown	
[illegible]	312	4	6-0	1-0	
[illegible]	16	4	6-9	0-9	
[illegible]	32	4	7-0	1-0	
[illegible]	80	4	2-9	1-0	
[illegible]	16	4	10-0	1-0	
[illegible]	8	4	[illegible]	1-0	
[illegible]	8	4	[illegible]	1-0	
[illegible]	8	4	7-6	1-0	
[illegible]	8	4	7-0	1-0	
[illegible]	16	4	6-4	1-0	
[illegible]	8	4	5-8	1-0	
[illegible]	16	4	4-2	1-0	
[illegible]	8	4	3-0	1-0	
[illegible]	16	4	2-6	As Shown	

SUMMARY OF ABUTMENT QUANTITIES					
LOCATION	ITEM				
	Class "X" Conc. Cu. Yds.	Reinf. Bars Lbs.	Slope Wall Sq. Yds.	Class "A" Exc. Cu. Yds.	Concrete Piles * Lin. Ft.
North Abut.	64.4	5,450	467	135	9@19' & 2@22' = 215'
South Abut.	64.4	5,450	463	135	9@32' & 2@35' = 358'
TOTAL	128.8	10,900	930	270	573'

* One test pile North Abut. and one test pile South Abut.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

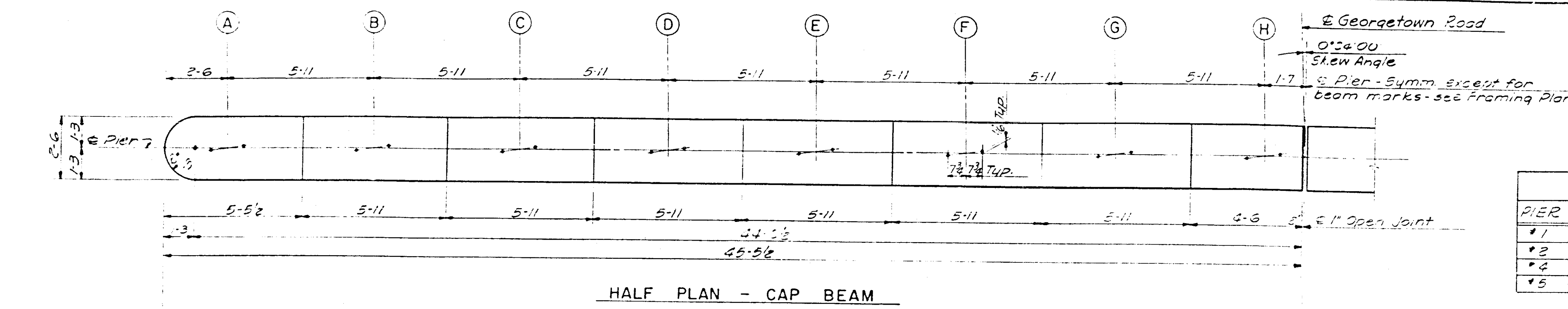
ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929+29.04

ABUTMENT DETAILS

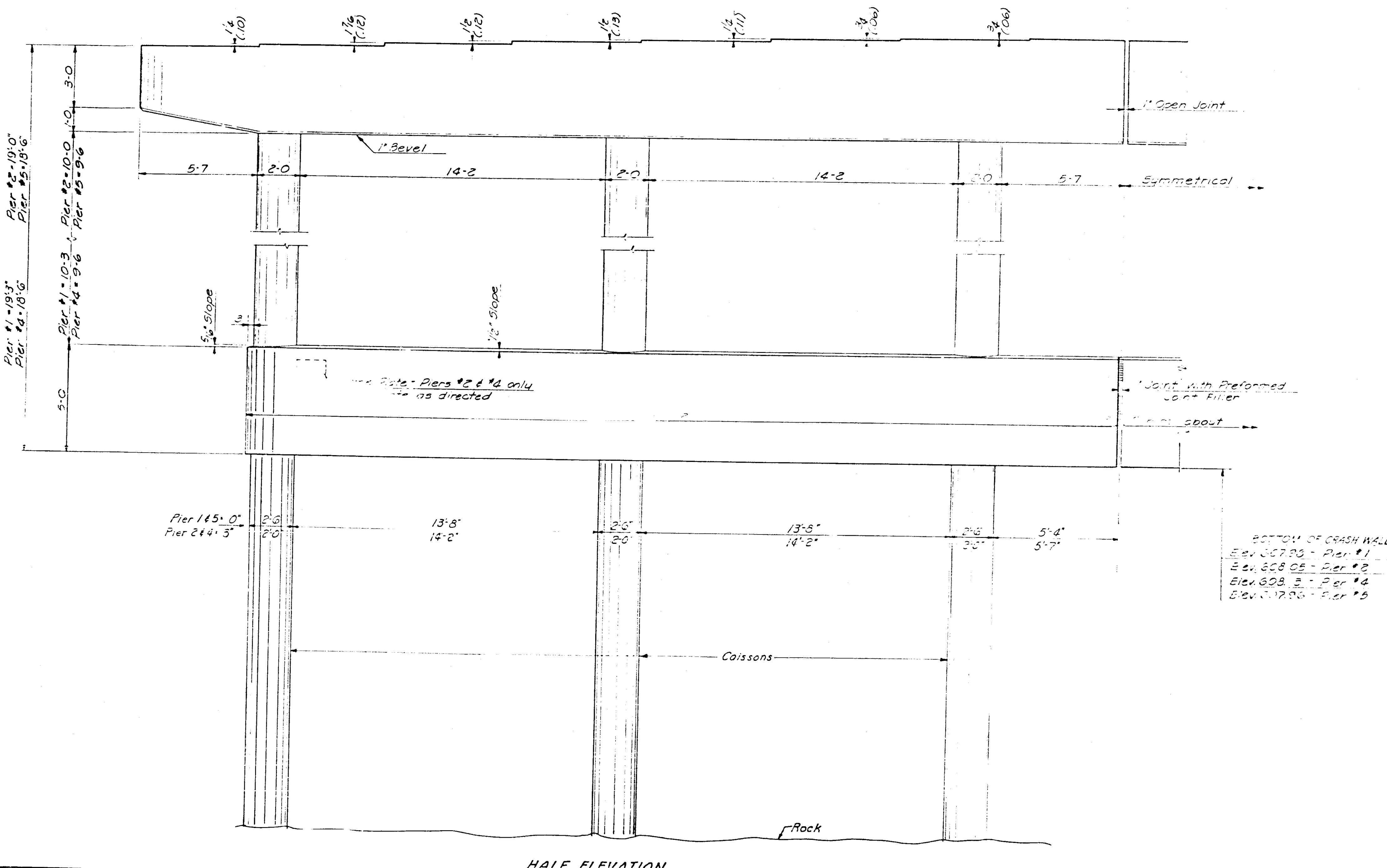
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EVH	SMH	JMG	RBS LDB	HSM	7-18-62	

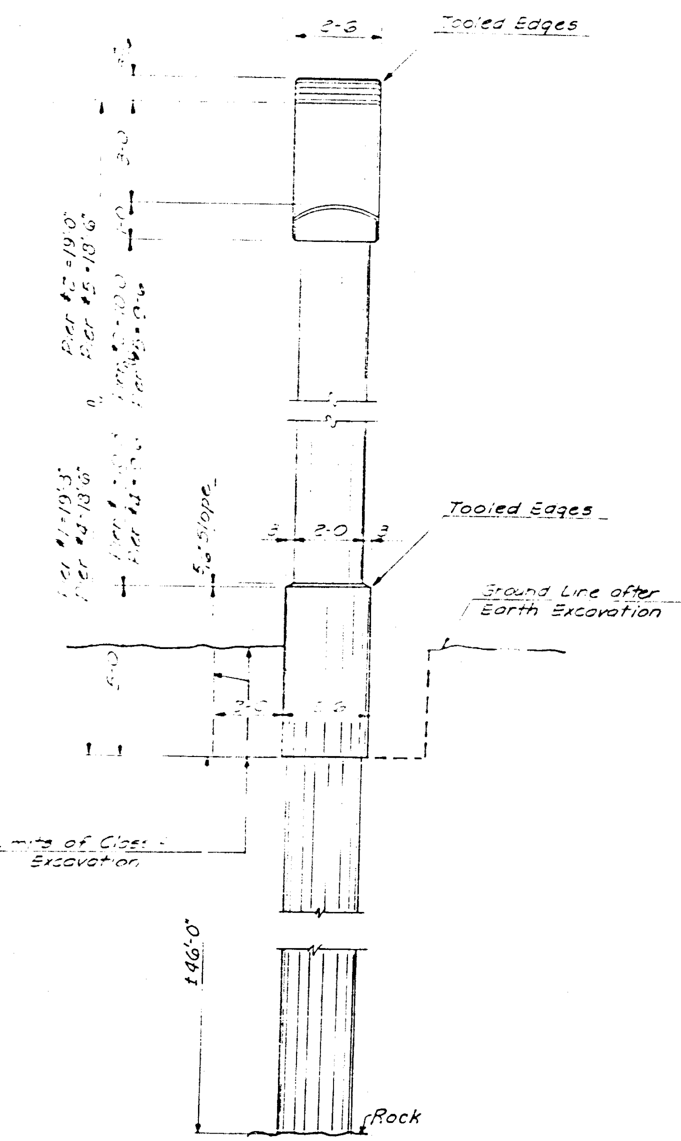
Rev. 4-11-63 VOS Added 1" PJF Cost incidental.

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
74	92-11 HB-5	VERMILION	43	24
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



BEAM BEARING ELEVATIONS - TOP OF CONCRETE								
PIER	A	B	C	D	E	F	G	H
#1	627.23	627.33	627.45	627.57	627.70	627.81	627.87	627.93
#2	627.05	[illegible]	627.27	627.39	627.52	627.63	627.69	627.75
#4	626.33	626.75	626.85	626.97	627.10	627.21	627.27	627.33
#5	626.46	626.56	626.68	626.80	626.93	627.04	627.10	627.16





5-6-63 Rev. Removed Ftg. Added caissons, changed limit of Class A Excavations. B.C.

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

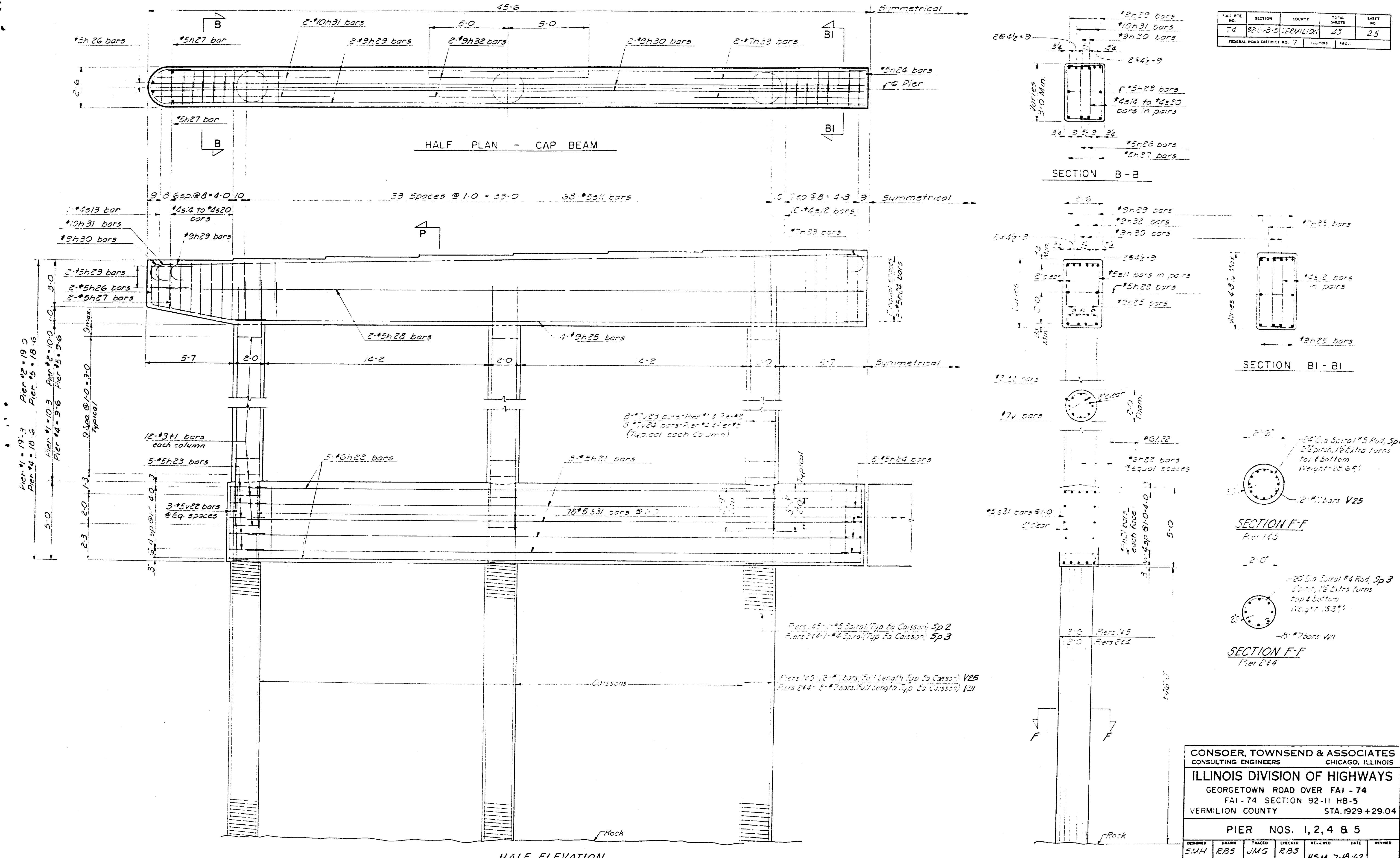
ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929 + 29.04

PIER NOS. 1, 2, 4 & 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	RBS	JMG	RBS LDB	HSM	7-18-62	

revised 6/7/63

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
74	92-11-HB-5	VERMILION	43	25
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		



3-6-63 Rev. Removed Ftg., Added caissons, Added reinf. in crash wall 9 C

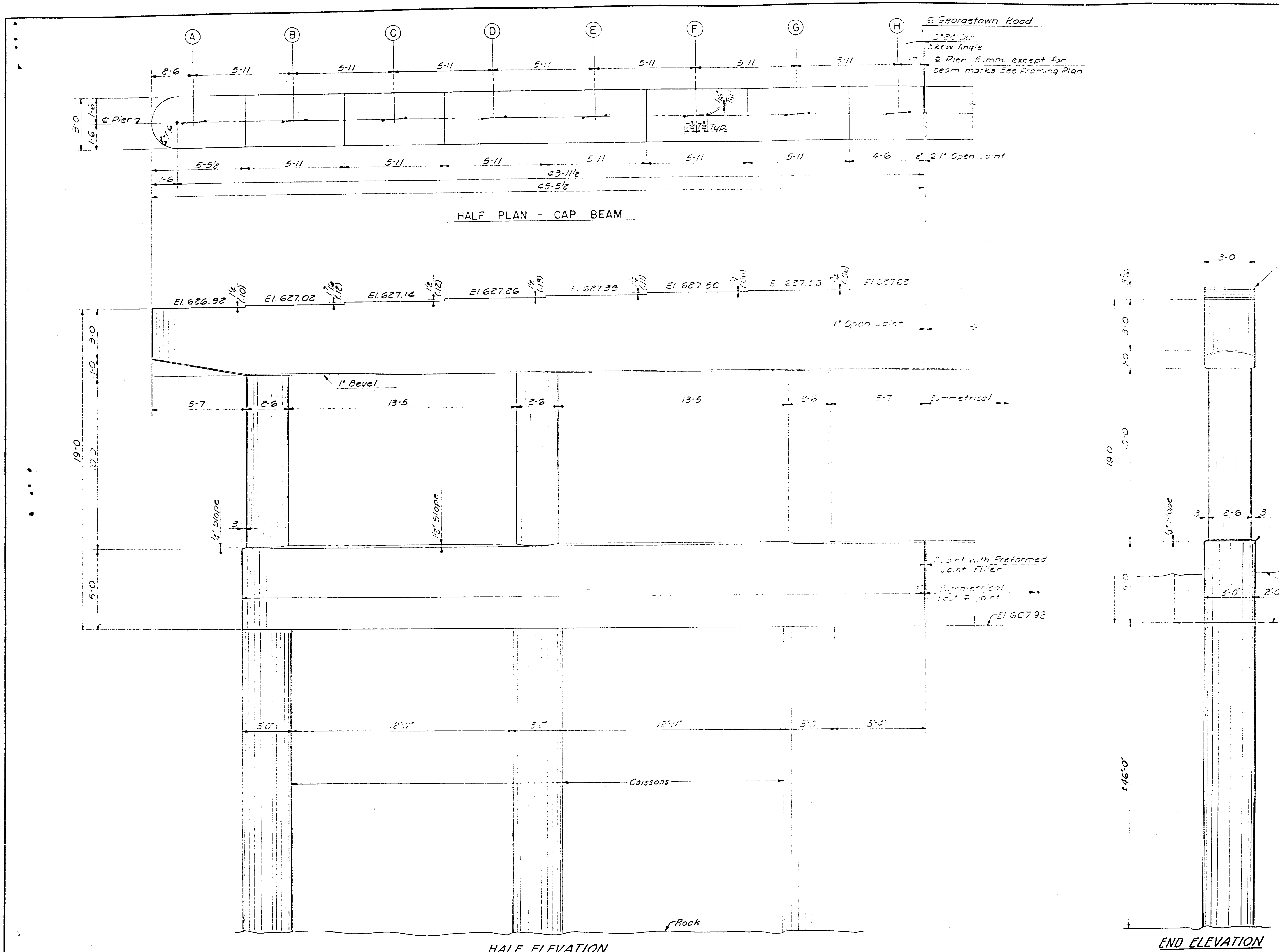
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929 + 29.04

PIER NOS. 1, 2, 4 & 5

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	RBS	JMG	RBS LDB	HSM	7-18-62	

revised 6/7/63



F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11 HB-5	VERMILION	43	26
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS

GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929 +29.04

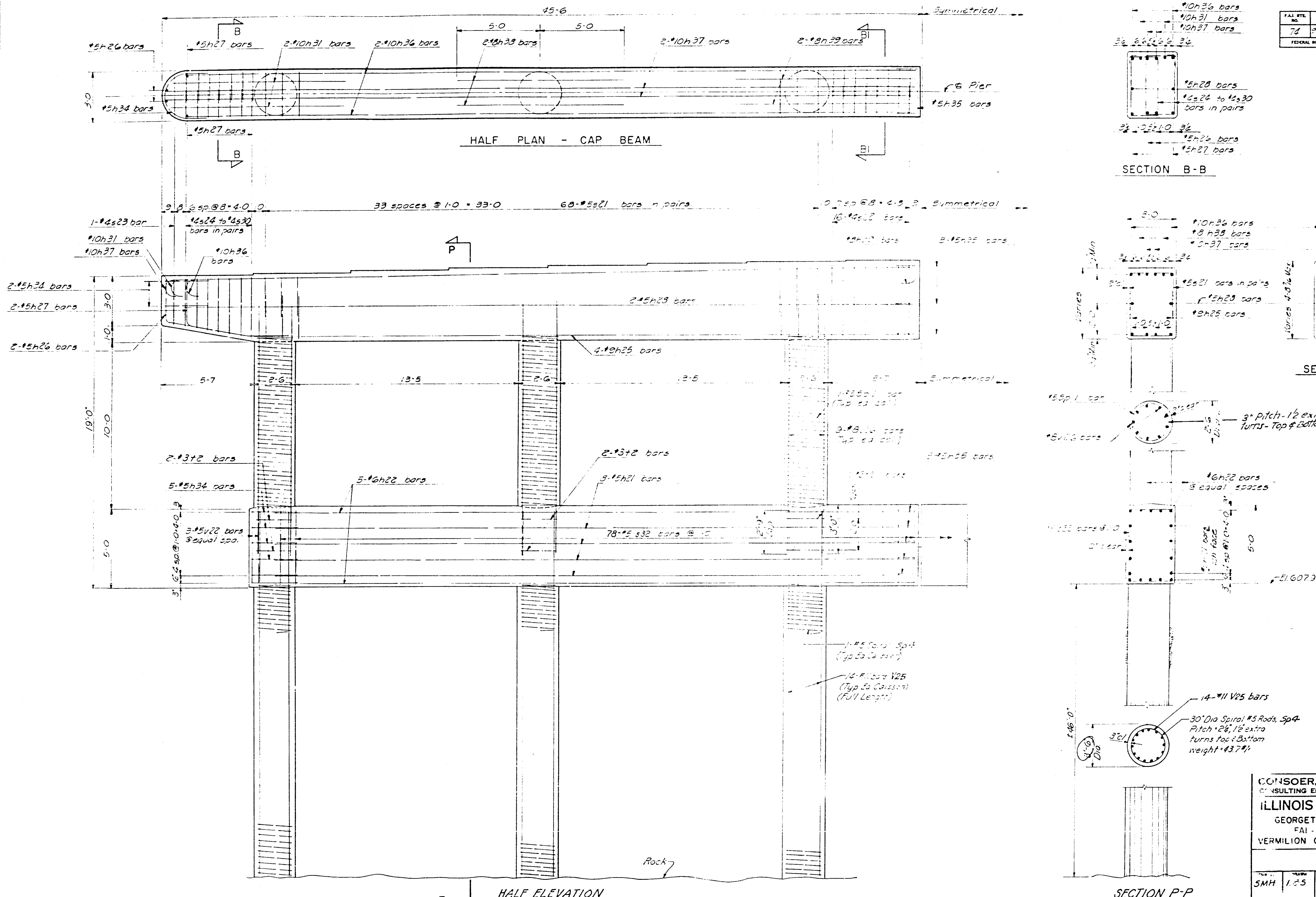
PIER NO. 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	RBS	JMG	RBS LDB	HSM	7-18-62	

revised 6/7/63

5-6-63 Rev. Removed ftg., Added caissons, changed limits of Class A Excavations. B.C.

F.A.I. RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-11-HB-5	VERMILION	43	27
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	PROJ.	



CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS

GEORGETOWN ROAD OVER FAI - 74
FAI - 74 SECTION 92-11 HB-5
VERMILION COUNTY STA. 1929 + 29.04

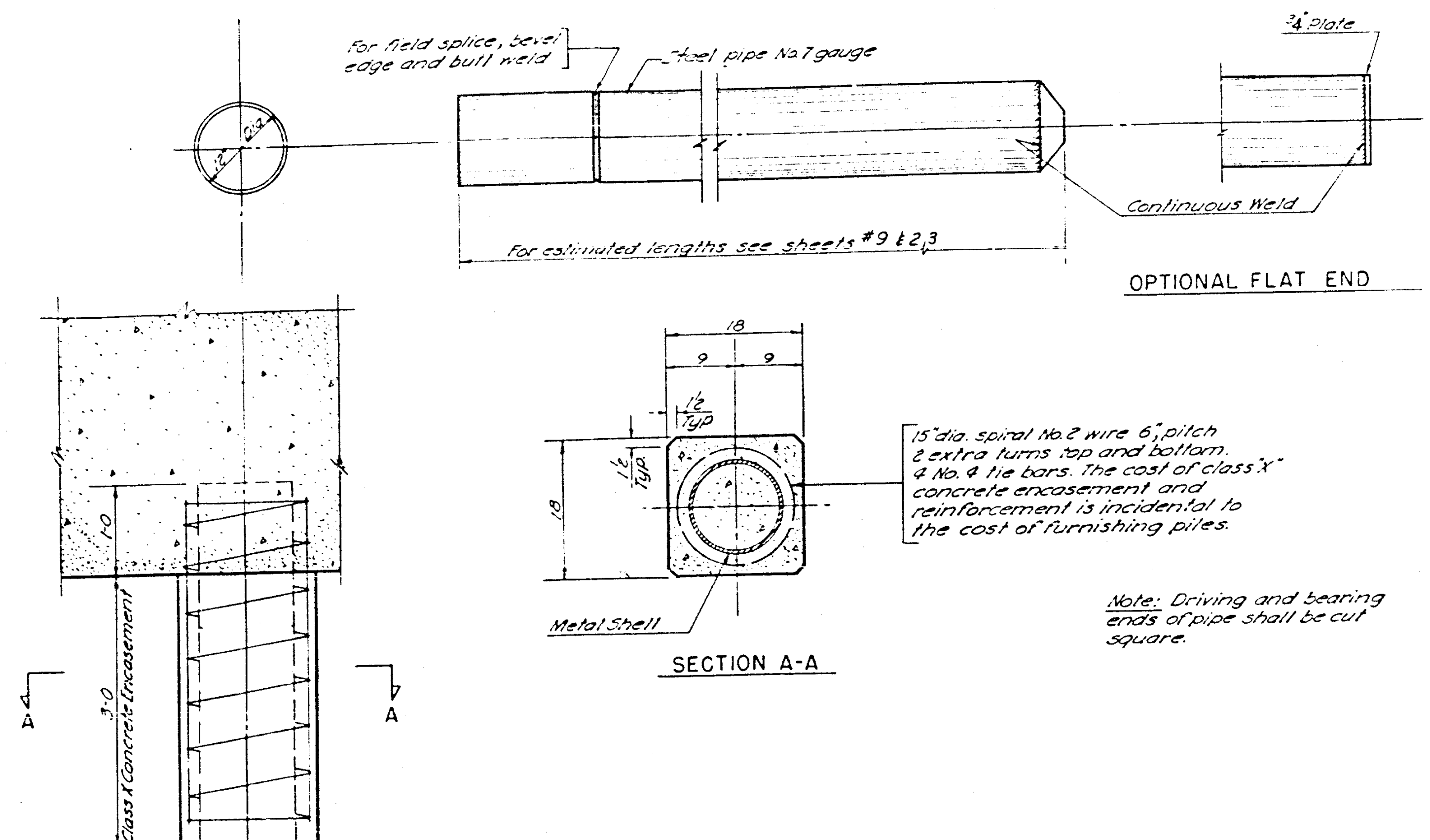
PIER NO. 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SMH	LBS	JMG	RBS LOB	HSM	7-18-62	

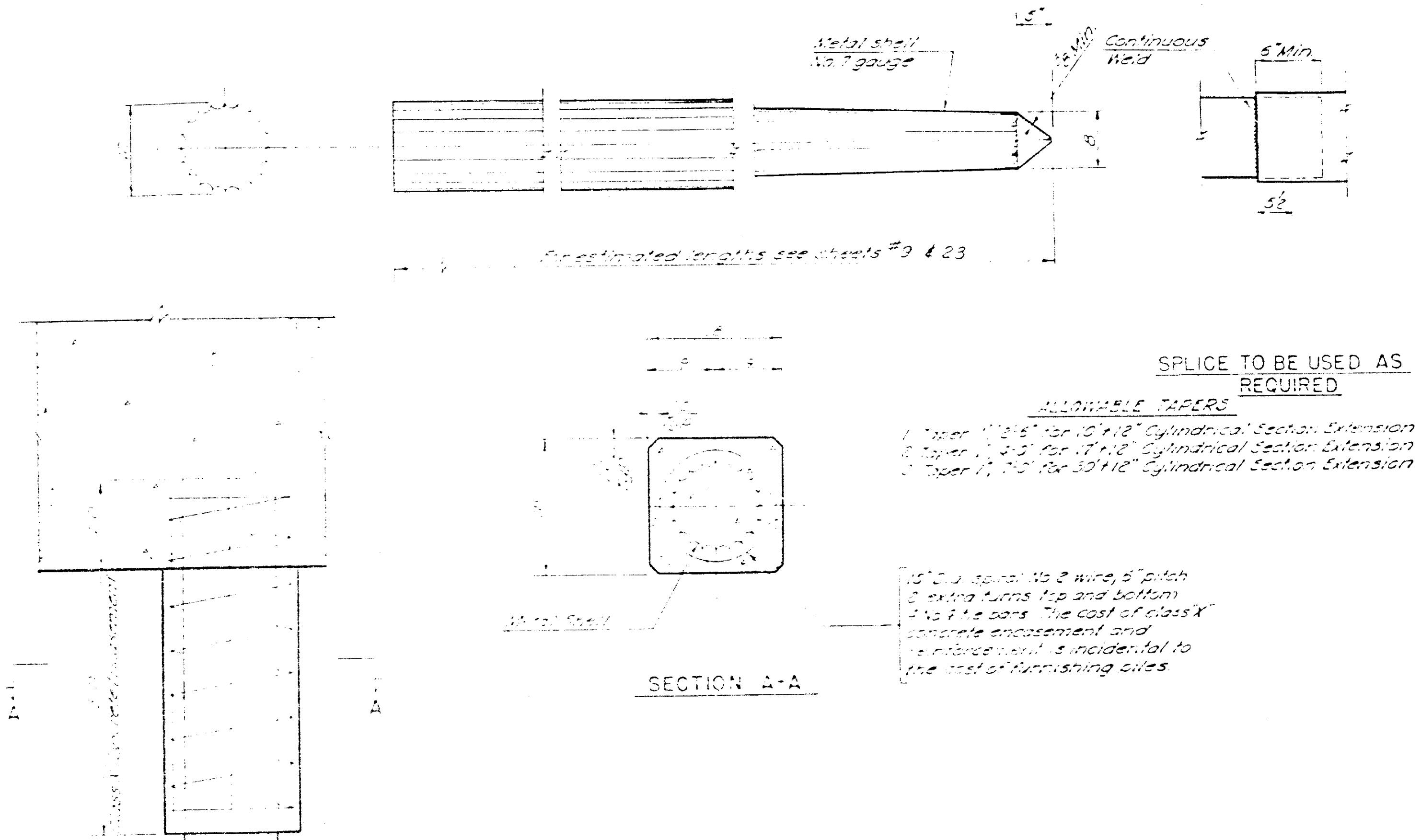
revised 6/7/63

5-6-63 Rev. Removed Ftg. Added caissons
Added reinf. in crash wall. R.C.

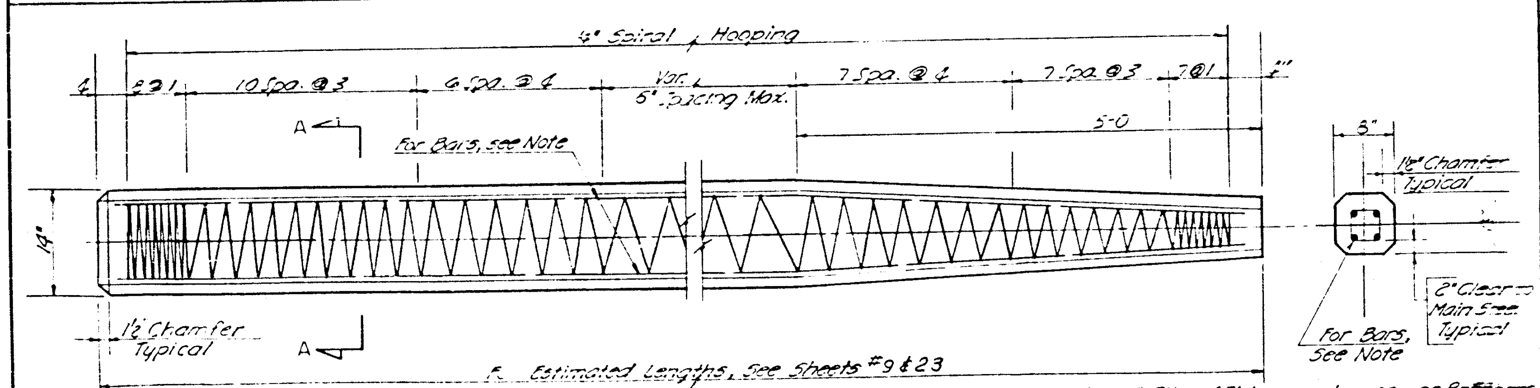
F.A.I. RTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
74	92-11-HB-5	VERMILION	43	29
FEDERAL ROAD DISTRICT NO. 7	ILLINOIS	PROJ.		



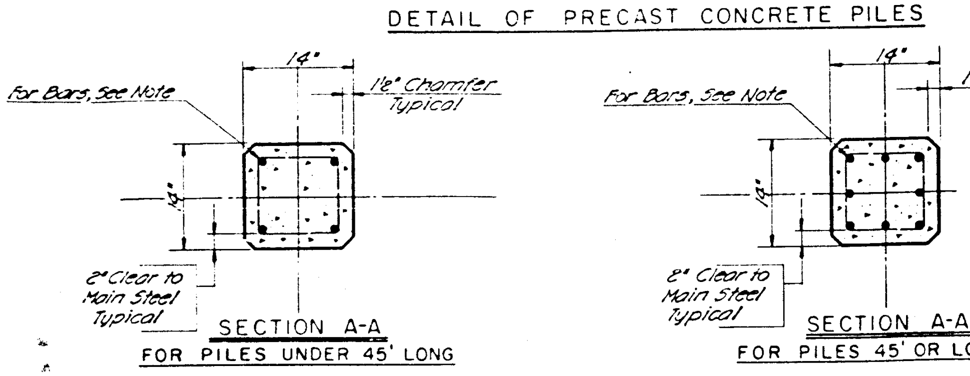
DETAIL OF CYLINDRICAL STEEL SHELL
FOR CAST IN PLACE CONCRETE PILES



DETAIL OF TAPERED METAL SHELL FOR
CAST IN PLACE CONCRETE PILES



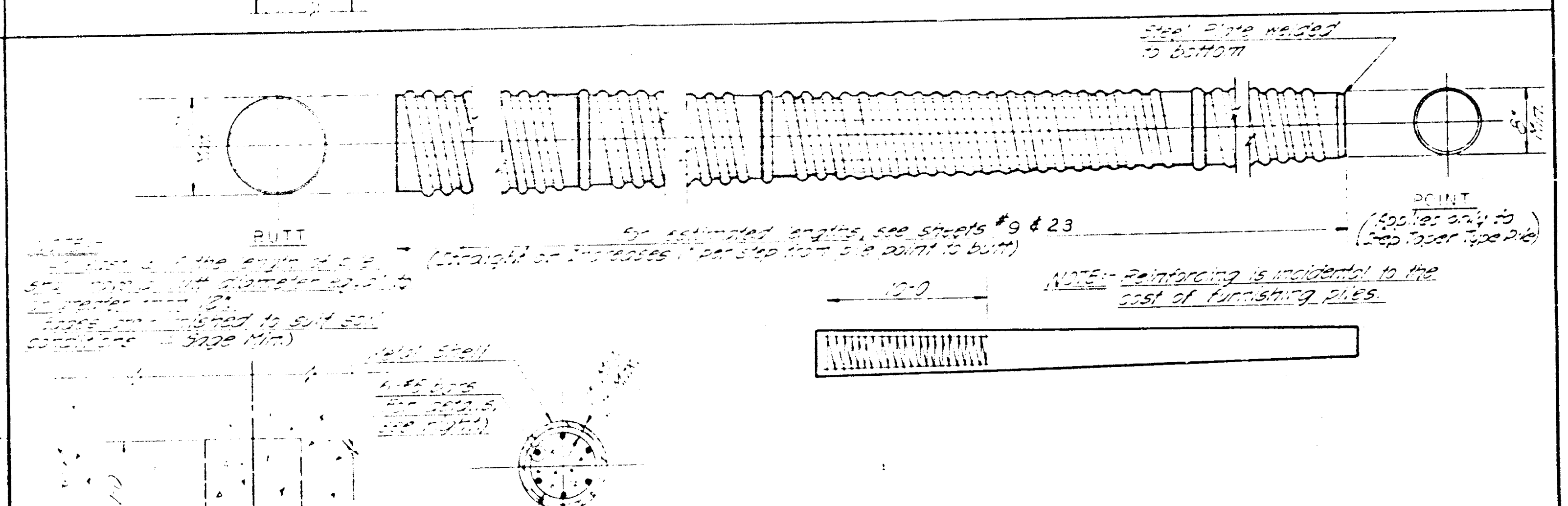
DETAIL OF PRECAST CONCRETE PILES

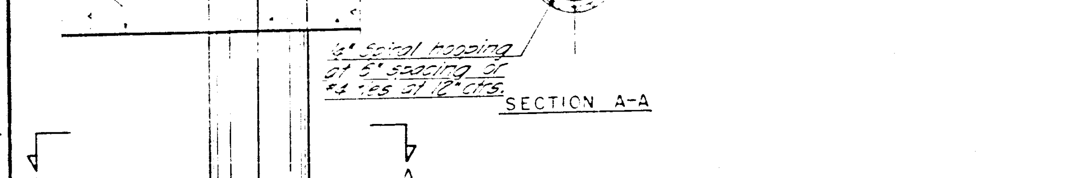


Note: For 14" Piles 45' long or longer, use 8-#9 bars (4 for the full length & 4 to the point of bevel).
For 14" Piles under 45' long, use 4-#9 bars for the full length.

Handling: For pile lengths up to 45 ft. use two slings placed at a distance of 0.21L* from each end.
For pile lengths longer than 45 ft. use three slings placed at a distance of 0.12L* from each end and at midpoint of pile.

* L = Overall length of pile to be handled.





DETAIL OF MANDREL DRIVEN
STRAIGHT OR STEP-TAPER PILES
FOR CAST IN PLACE CONCRETE PILES

CONSOER, TOWNSEND & ASSOCIATES CONSULTING ENGINEERS — CHICAGO, ILLINOIS						
ILLINOIS DIVISION OF HIGHWAYS GEORGETOWN ROAD OVER FAI-74 FAI-74 SECTION 92-11 HB-5 VERMILION COUNTY — STA. 1929+29.04						
PILE DETAILS						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWH	JWH	DS	RBS LDB	HSM	7-18-62	

Rev. 4-11-63 VDS Rev. Welding (Tapered Metal Shell)