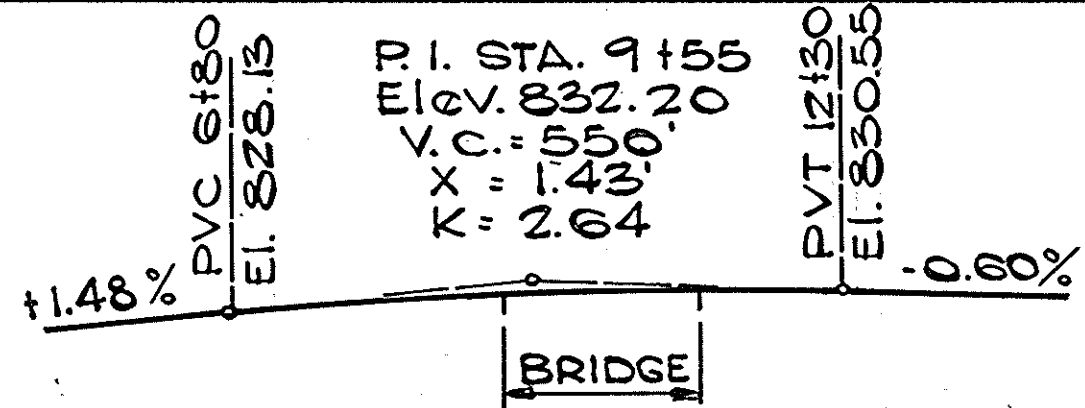


EXISTING STRUCTURE: No. 019-0012
A two span (2 @ 58'-0") reinf. concrete deck on steel wide flange beams with 26' roadway with bituminous wearing surface and concrete rail, on R.C. closed abutments and solid conc. pier. Skewed 42°-37' Right Ahead. Built 1941 as sec. 125-B. Contractor to remove existing deck and beams and pier stem down to footing, utilizing stage construction.

BENCH MARK: R.R. spike in 24" tree
49' left of Sta. 12+71 Elev. 824.17



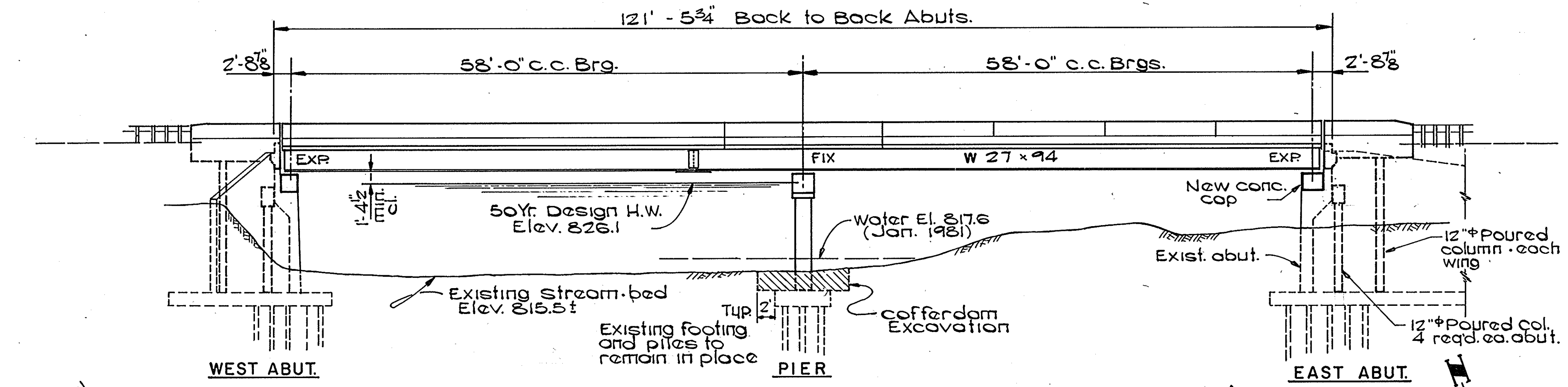
STATION 10+00.21
BUILT 198 BY
STATE OF ILLINOIS
F.A. RTE. 17 SEC. 125-BR
F.A. PROJECT BR-F-17(64)
LOADING HS 20
STR NO. 019-0012

F.A. RTE. NO.	SECTION	TOTAL SHEETS	SHEET NO.
17	125-BR	23	6
ILLINOIS PROJECT BR-F-17(64)			
BRIDGE SHEET 1 OF 13			

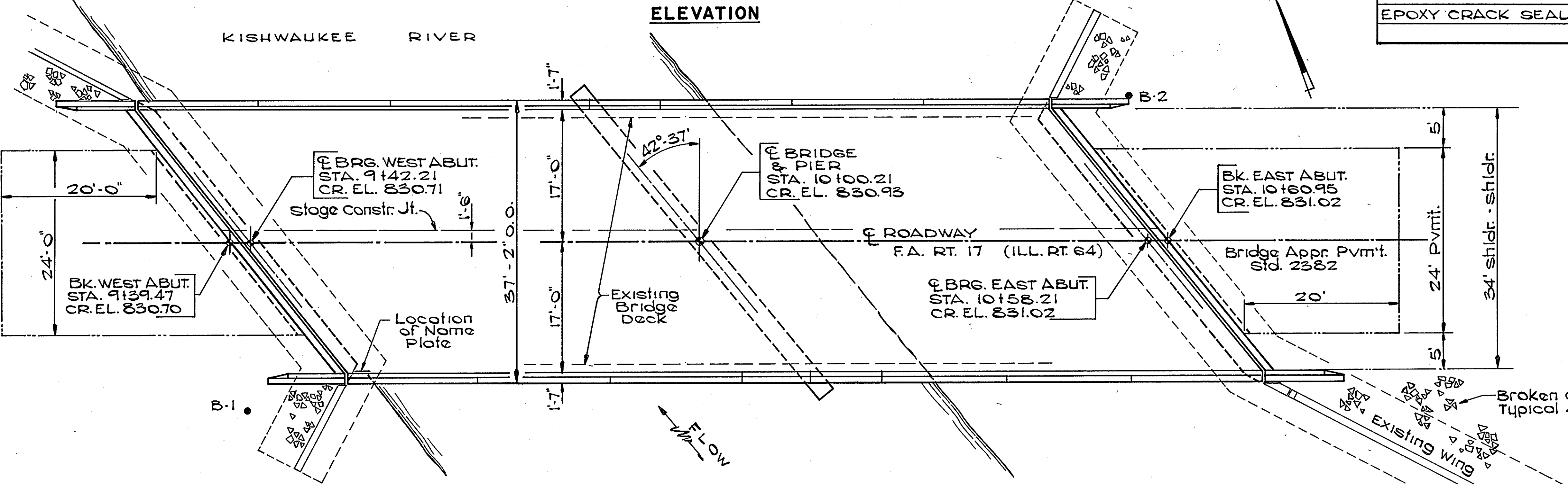
NAME PLATE LETTERING
See Std. 2113

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUB.	SUPER.	TOTAL
REMOVAL OF EXISTING SUPERSTRUCTURES	EACH		1	1
STRUCTURE EXCAVATION	CU. YD.	16		16
COFFERDAM EXCAVATION	CU. YD.	20.75		20.75
COFFERDAMS	EACH	1		1
PROTECTIVE COAT	SQ. YD.		115	115
CLASS X CONCRETE	CU. YD.	82.9	135.6	218.5
STRUCTURAL STEEL	LUMP SUM		1	1
REINFORCEMENT BARS	POUND	7960	12,530	20,490
REINFORCEMENT BARS (EPOXY COATED)	POUND	780	18,320	19,100
NAMEPLATES	EACH		1	1
EXPANSION BOLTS - 3/4" X 12 INCH	EACH	250		250
FLOOR DRAINS	EACH		16	16
ELASTOMERIC BEARING ASSEMBLY - TYPE I	EACH	12		12
STUD SHEAR CONNECTORS	EACH		1692	1692
NEOPRENE EXPANSION JOINT - 2"	LIN. FT.		97	97
CONCRETE REMOVAL	CU. YD.	65.3		65.3
REPAIR CONCRETE STRUCTURES	SQ. FT.	23.4		23.4
EPOXY CRACK SEALING	LIN. FT.	83		83



ELEVATION



PLAN VIEW

- INDEX OF BRIDGE SHEETS
- 1 GENERAL PLAN & ELEVATION
 - 2 CONCRETE REPAIR & GENERAL NOTES
 - 3 STAGE CONSTRUCTION
 - 4-5 TOP OF SLAB ELEVATIONS
 - 6 DECK SLAB DETAILS
 - 7 SUPERSTRUCTURE DETAILS
 - 8 FLOOR DRAINS & NEOPRENE EXPANSION JOINT (2")
 - 9 STEEL FRAMING
 - 10 STRUCTURAL STEEL DETAILS & BEARINGS
 - 11 WEST ABUTMENT
 - 12 EAST ABUTMENT
 - 13 PIER DETAILS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

WATERWAY INFORMATION

DRAINAGE AREA = 94.7 SQ. MI. LOW GRADE = 825.2 @ STA. 3+72

FLOOD	FREQ. YR.	Q C.F.S.	OPENING S.F.	NAT. H.W.E.	HEAD - FT.	HEADWATER EL.
			EXIST. PROP.		EXIST. PROP.	EXIST. PROP.
DESIGN	50	3301	675	865	826.1	0.69 0.44 826.79 826.54
BASE	100	3746	709	904	826.5	0.36 0.38 826.86 826.88
OVERTOPPING	15	2549	650	777	824.8	0.50 825.30

BRIDGE TO BE CONSTRUCTED IN TWO STAGES. NORTH PORTION TO BE REMOVED AND BUILT AS STAGE I. REMAINDER TO BE REMOVED AND BUILT AS STAGE II. ONE LANE TO BE KEPT OPEN TO TRAFFIC AT ALL TIMES, SEE SHEET NO. 3.

NOTE
New construction designed in accordance with AASHTO specifications dated 1977 and interim specifications dated 1978 thru 1981.

LOADING HS 20-44
Includes allowance for 25 p.s.f. future wearing surface.

DESIGN STRESSES
f_y = 60,000 p.s.i. Reinf.
f_c = 3500 p.s.i. Conc.
f_y = 50,000 p.s.i. Struct. steel M-222

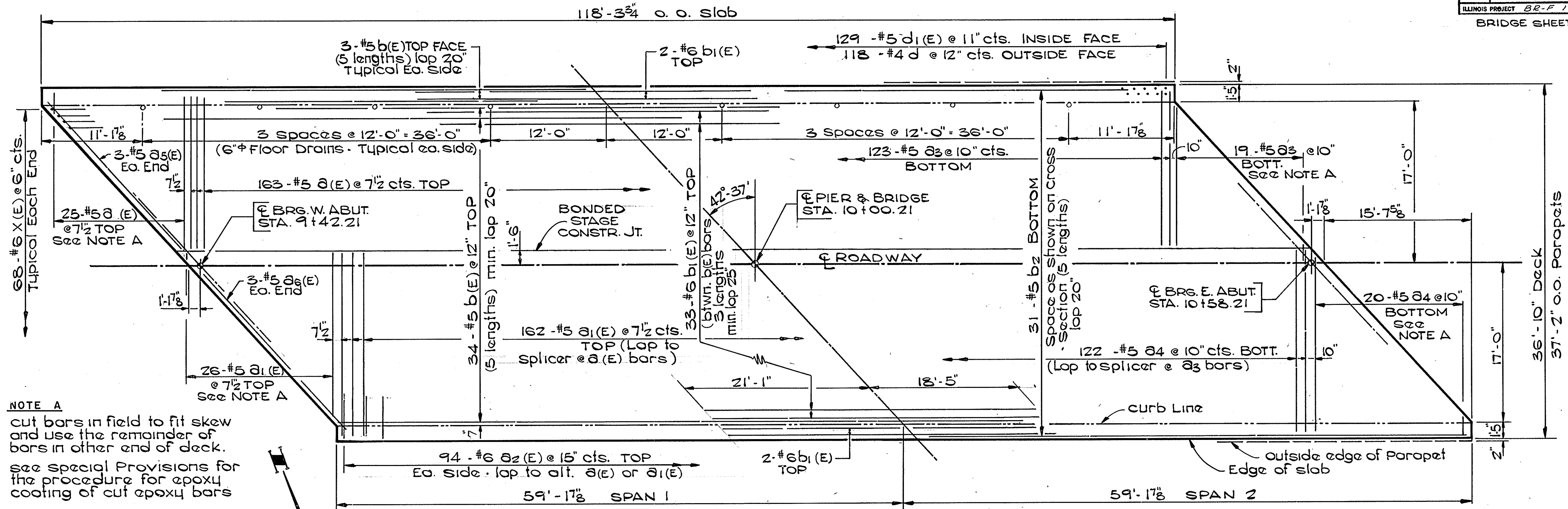
SECTION 125-BR
F.A. RTE. 17 ILL. RTE. 64
DE KALB COUNTY
STATION 10+00.21

GENERAL PLAN & ELEVATION

DESIGNED BY: M. E. EBT
DATE: FEB. 1982
DRAWN BY: R. R. HODS
DATE: MAR. 1982
CHECKED BY: S. THOMPSON
DATE: MAR. 1982
APPROVED BY: D. HUFFMAN
DATE: MAR. 1982

WILLET
HOFMANN &
ASSOCIATES, Inc.
Consulting Engineers

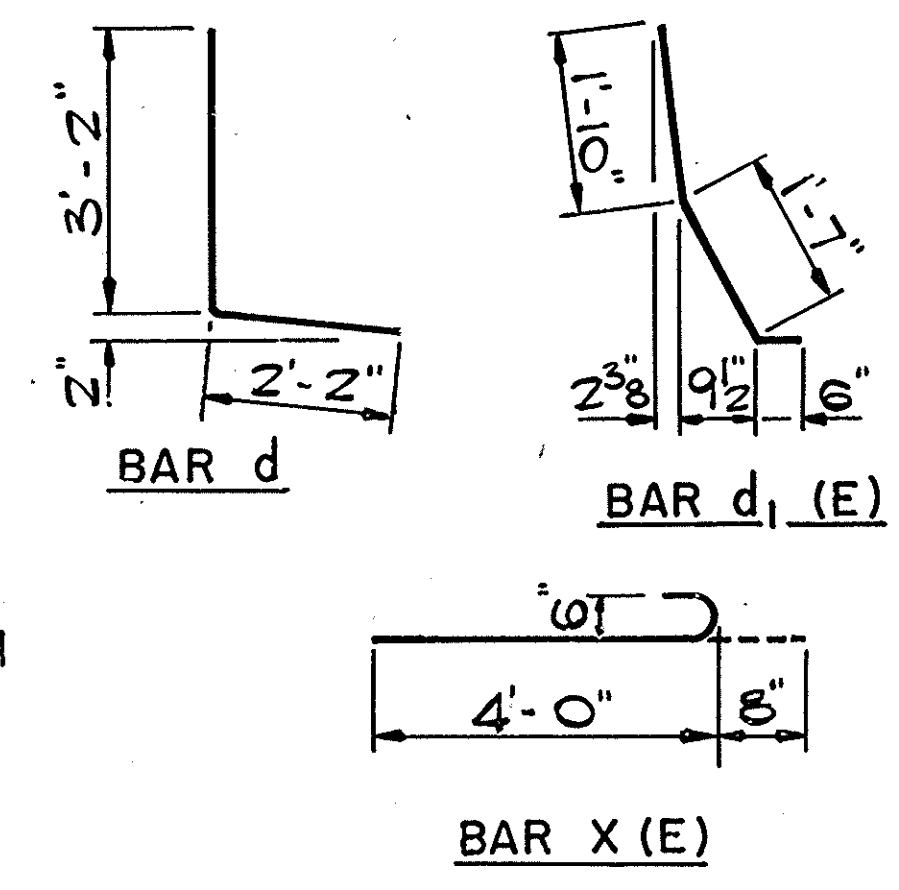
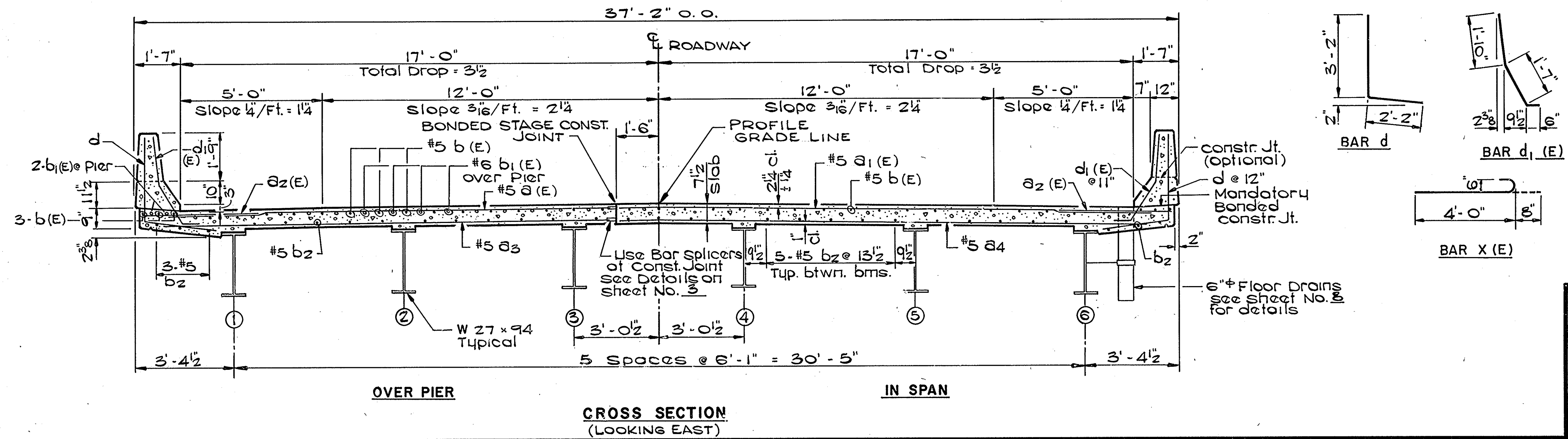
REGISTERED
STRUCTURAL
ENGINEER
ILLINOIS
No. 019-0012



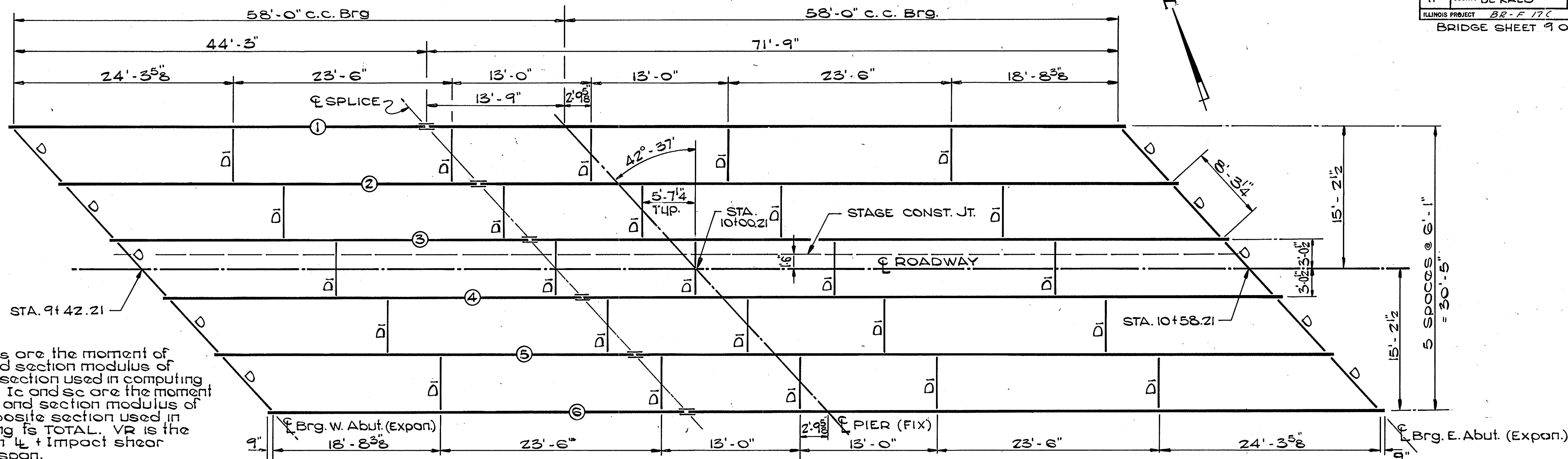
NOTE A
cut bars in field to fit skew and use the remainder of bars in other end of deck.
see special Provisions for the procedure for epoxy coating of cut epoxy bars

PLAN DECK

NOTES
Reinforcement bars designated (E) shall be epoxy coated see Special Provisions.
see sheet No. 3 for Bar Splicer details at stage construction Joint.



DECK SLAB DETAILS	
SECTION 125-BR F.A. RTE. 17 ILL. RTE. 64 DE KALB COUNTY	
WILLETT OFMANN & ASSOCIATES, Inc.	REVISIONS



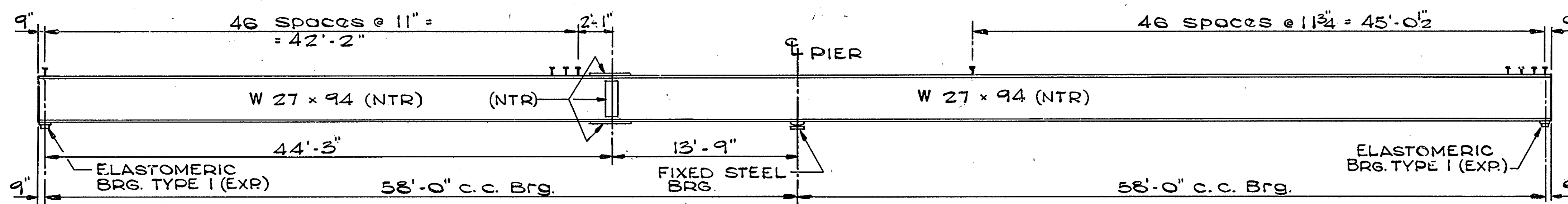
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs TOTAL. Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs TOTAL. VR is the maximum $\ell + \text{Impact}$ shear range in span.

INTERIOR BEAM REACTION TABLE			
		ABUTMENT	PIER
R _D	K	22.2	70.8
R _L	K	32.5	32.5
Imp	K	8.9	10.5
R _{TOTAL}	K	63.6	119.8

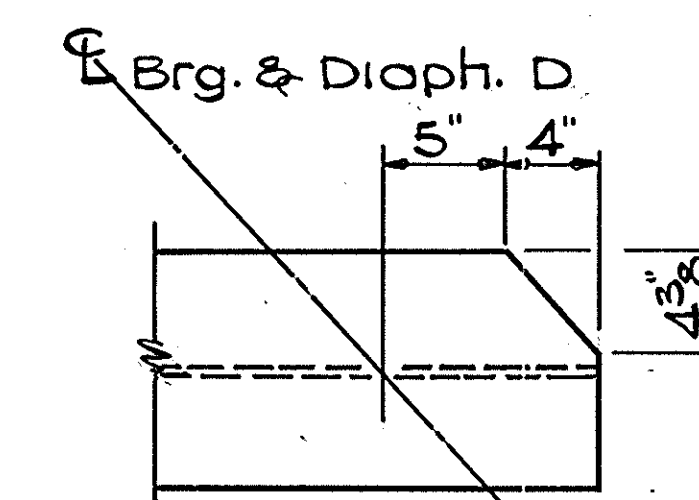
INTERIOR BEAM MOMENT TABLE		
	0.4 SP. 16.2	PIER
I _s	(in ⁴) 3270	3270
I _c	(in ⁴) 9177	
S _s	(in ³) 243	243
S _c	(in ³) 364	
D	(K/ft) 690	991
M _D	(K) 211.5	498.0
fs non-comp (ksi)	10.44	24.60
S _D	(K/ft) 301	
M _{s D}	(K) 111.3	
M _L	(K) 786.8	395.1
M _{imp}	(K) 214.8	108.1
TOTAL	(K) 1112.9	503.1
fs comp (ksi)	36.68	24.84
fs TOTAL (ksi)	47.12	49.44
VR	(K) 44.4 (t)	

The load factor (1.3) $[D + \frac{5}{8} (L + \text{Imp})]$ is used in computing moments and stresses.

FRAMING PLAN
ALL BEAMS W 27x94 (M222)

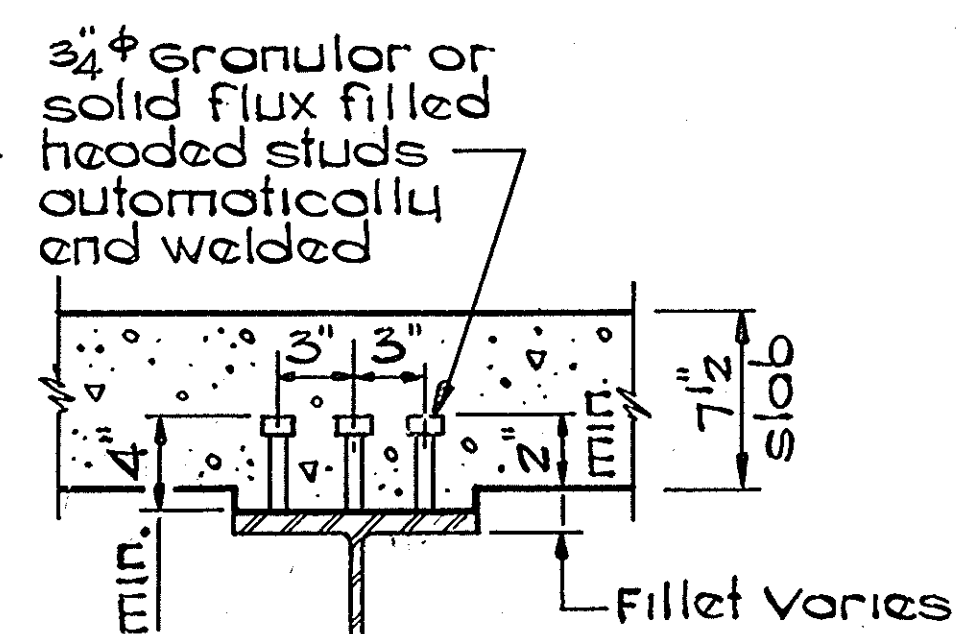


ELEVATION OF BEAM
(DIAPHRAGMS NOT SHOWN)



END OF BEAM DETAIL
(showing top & bottom flange clip. Typical all beams at each abutment.)

NOTE
(NTR) indicates that material which shall conform to the supplemental requirements for Notch Toughness Zone 2.



SHEAR STUDS
1692 REQUIRED

*** ELEVATIONS TOP OF BEAMS**

LOCATION	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6
EL BRG W. ABUT.	829.72	829.86	829.98	830.01	829.94	829.85
EL SPLICE	829.89	830.02	830.14	830.16	830.08	829.98
EL PIER	829.93	830.06	830.17	830.18	830.10	830.00
EL BRG E. ABUT.	830.09	830.21	830.31	830.31	830.22	830.11

* FOR FABRICATION USE ONLY

STEEL FRAMING

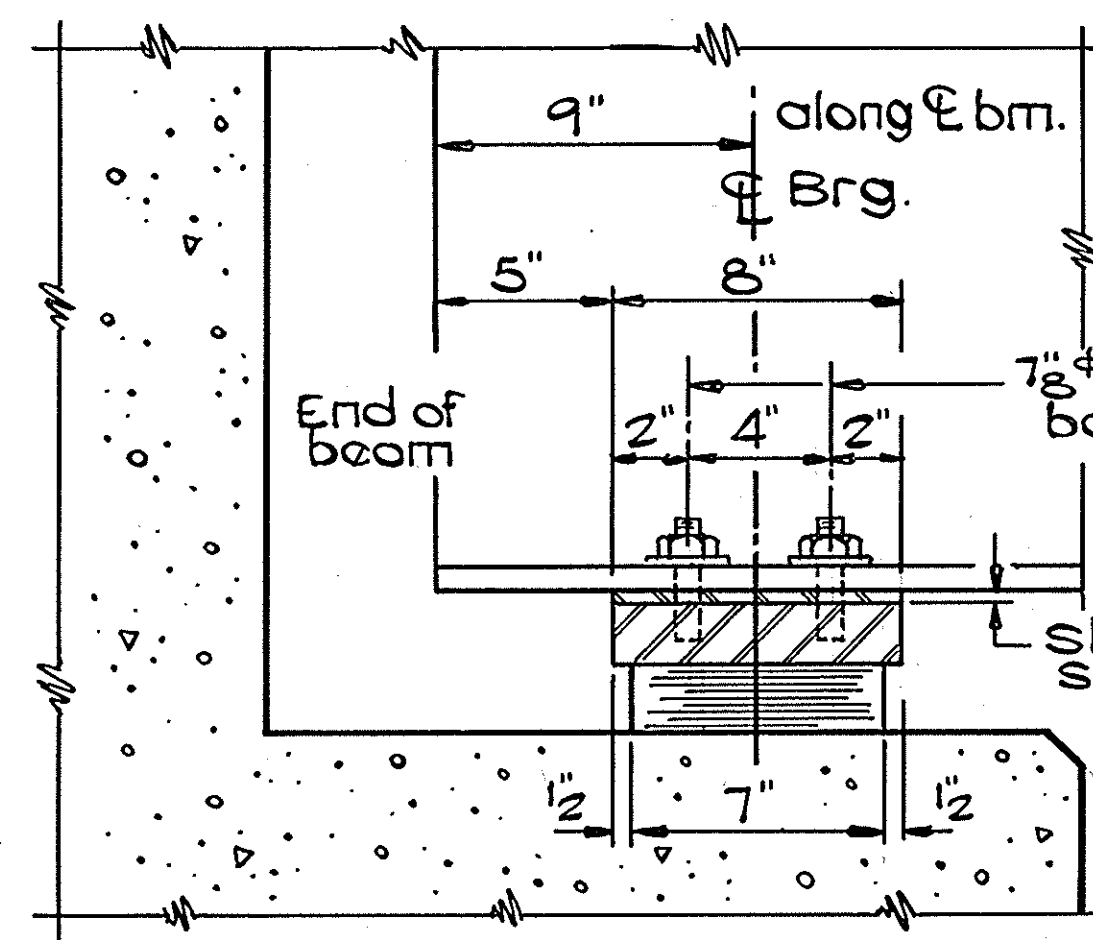
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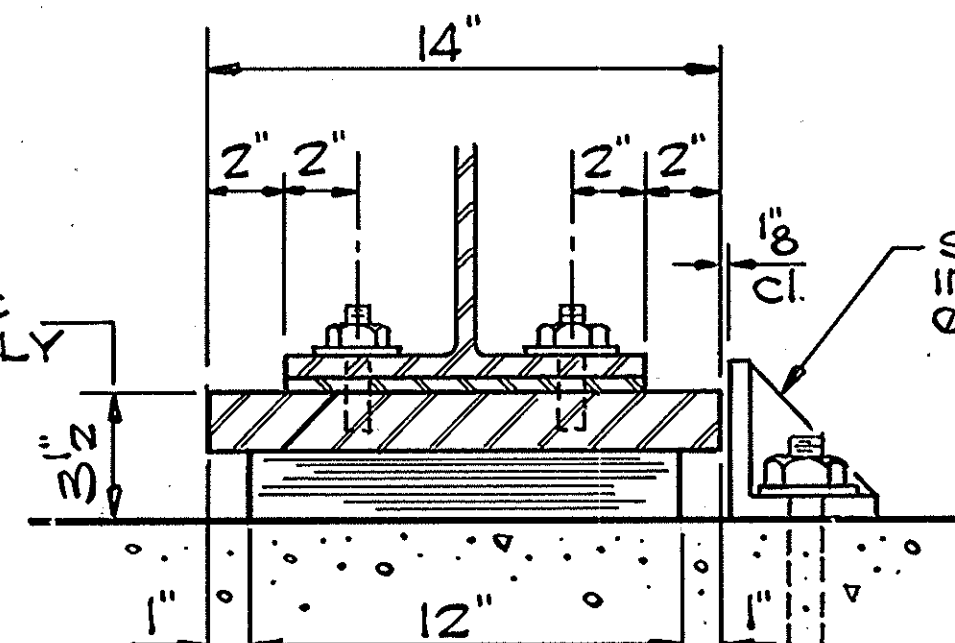
REVISIONS

TABLE OF SHIM PLATES	
LOCATION	SIZE
WEST ABUT. BEAM 4	3/8" x 8" x 14"
WEST ABUT. BEAM 5	1/4" x 8" x 14"
PIER BEAM 4	1/8" x 9" x 18 1/2"

DO NOT PLACE SHIM PLATES UNDER ELASTOMERIC BEARING ASSEMBLIES

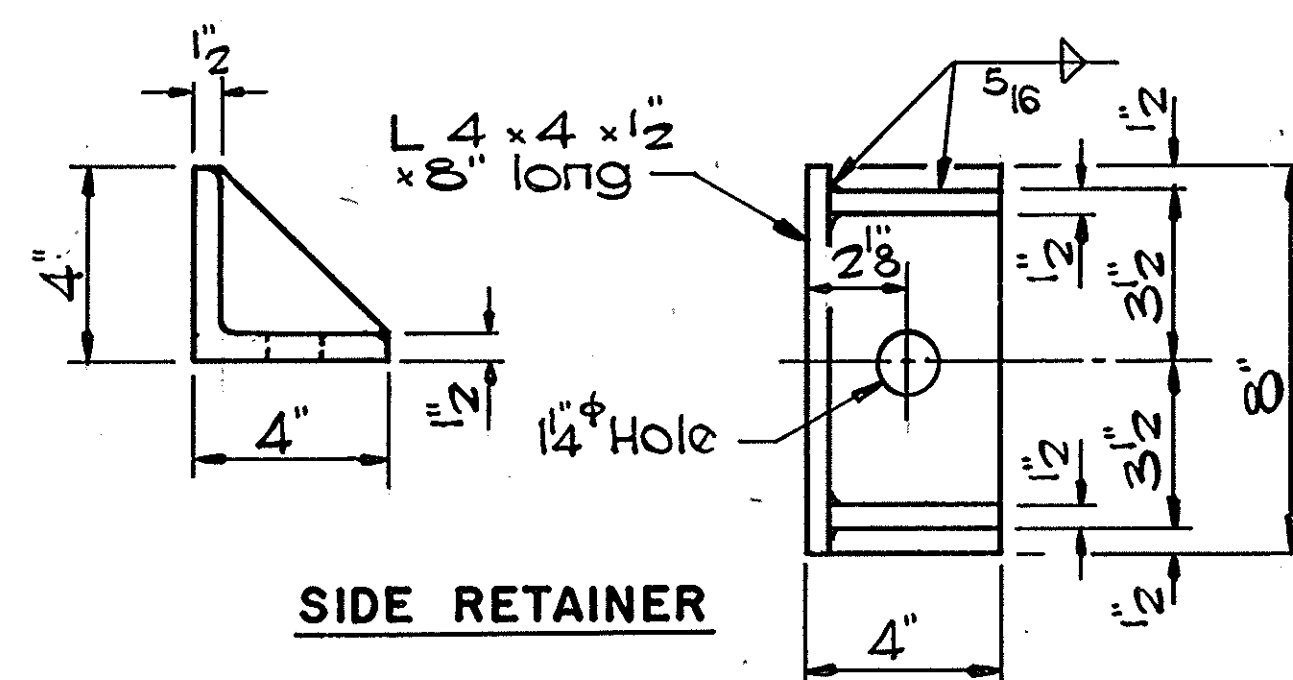


SIDE

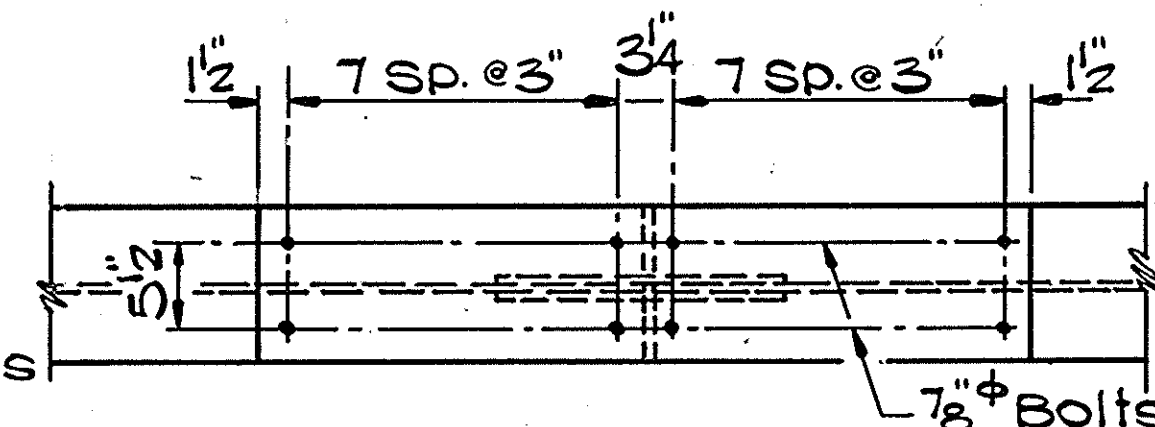


END VIEW

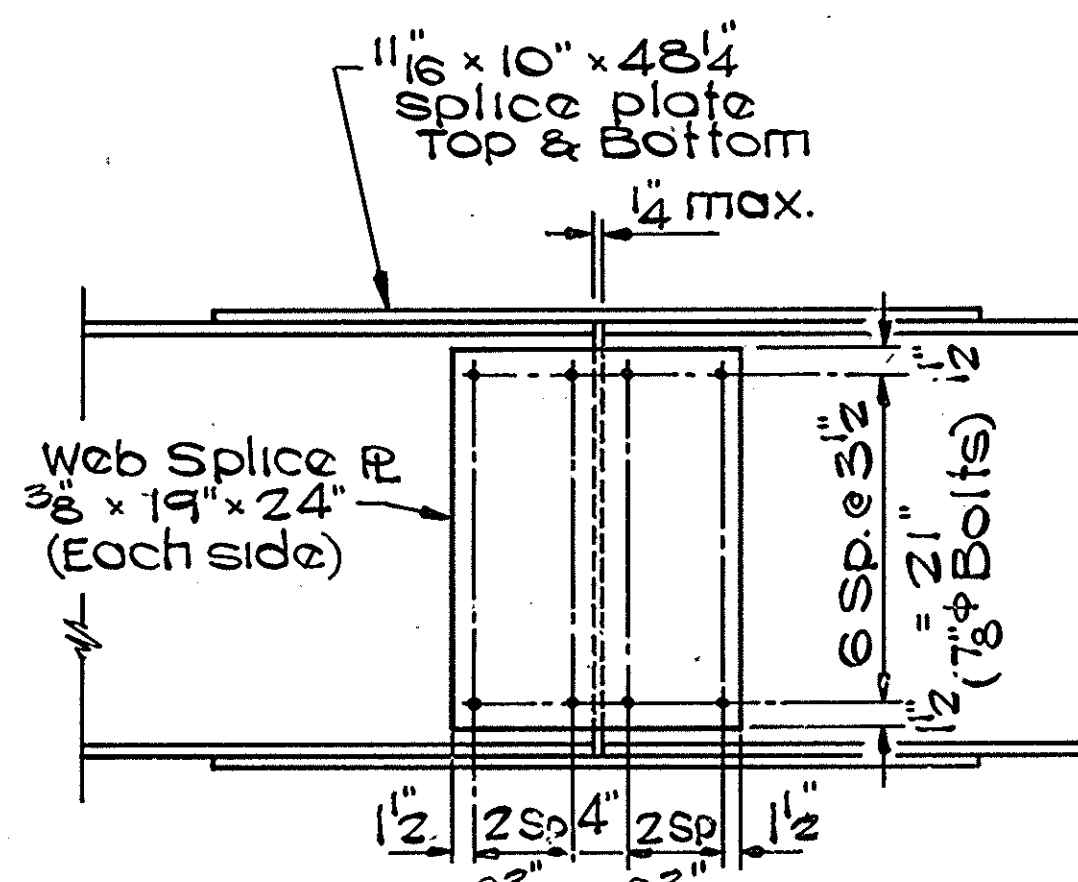
*NOTE
After beams have been erected, holes of expansion bearings shall be drilled and anchor bolts grouted in place.



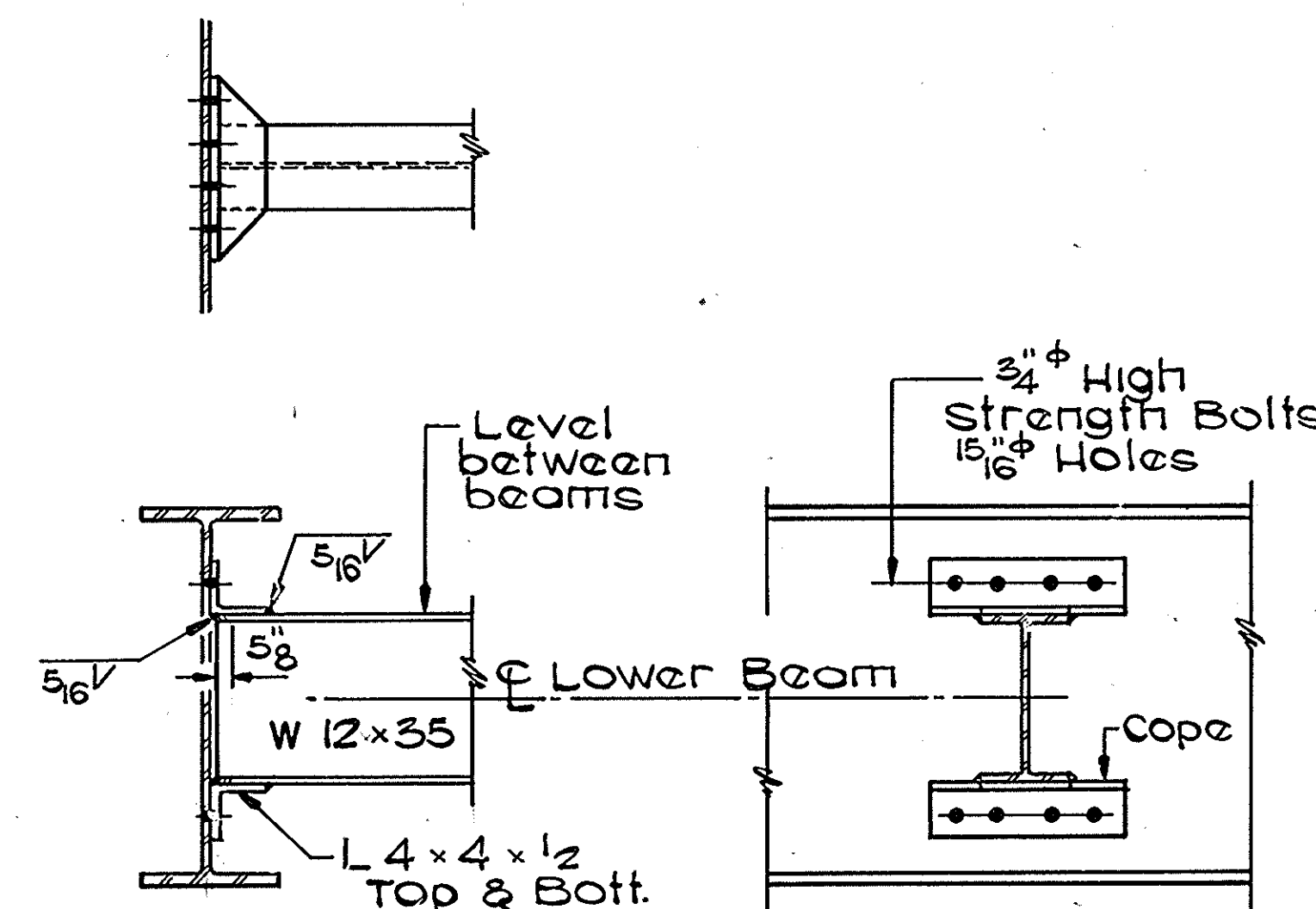
SIDE RETAINER



*1" x 12" Anchor Bolts with 2 1/2" x 2 1/2" x 5/16" R washers under nuts.

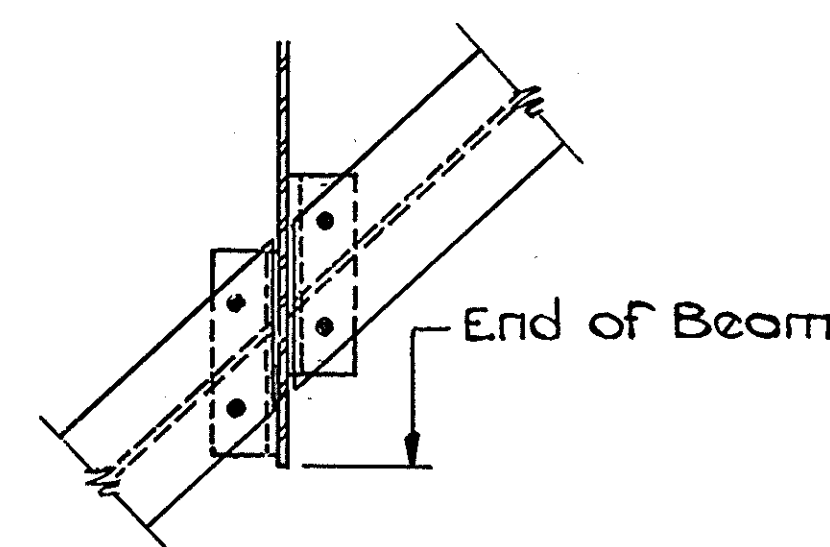


SPLICE DETAIL

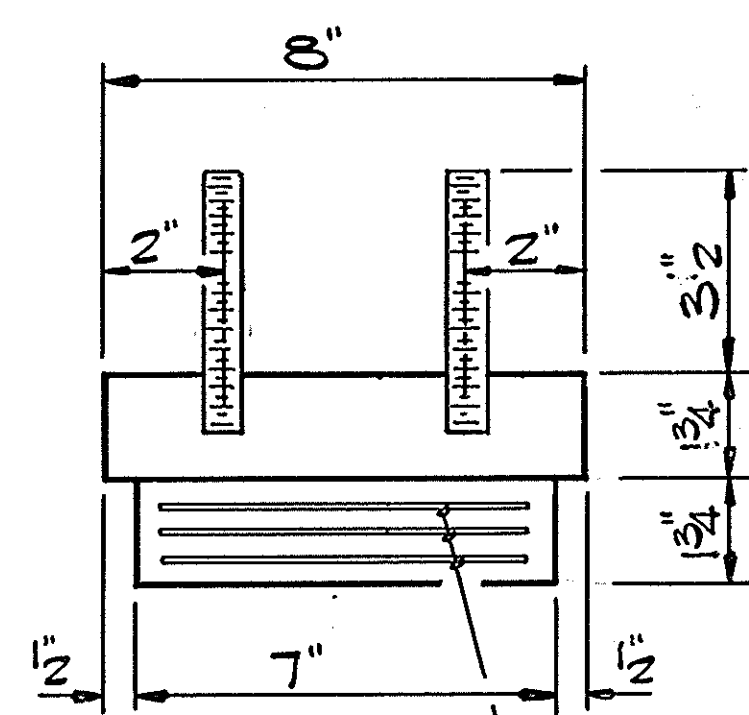


INTERIOR DIAPHRAGM D1
25 REQUIRED

NOTE
High strength bolts shall conform to AASHTO M 164 Type 3.
Hardened washers shall be used over all 5/16" holes in diaphragms.
All contact surfaces of the diaphragms shall be free of paint or lacquer.

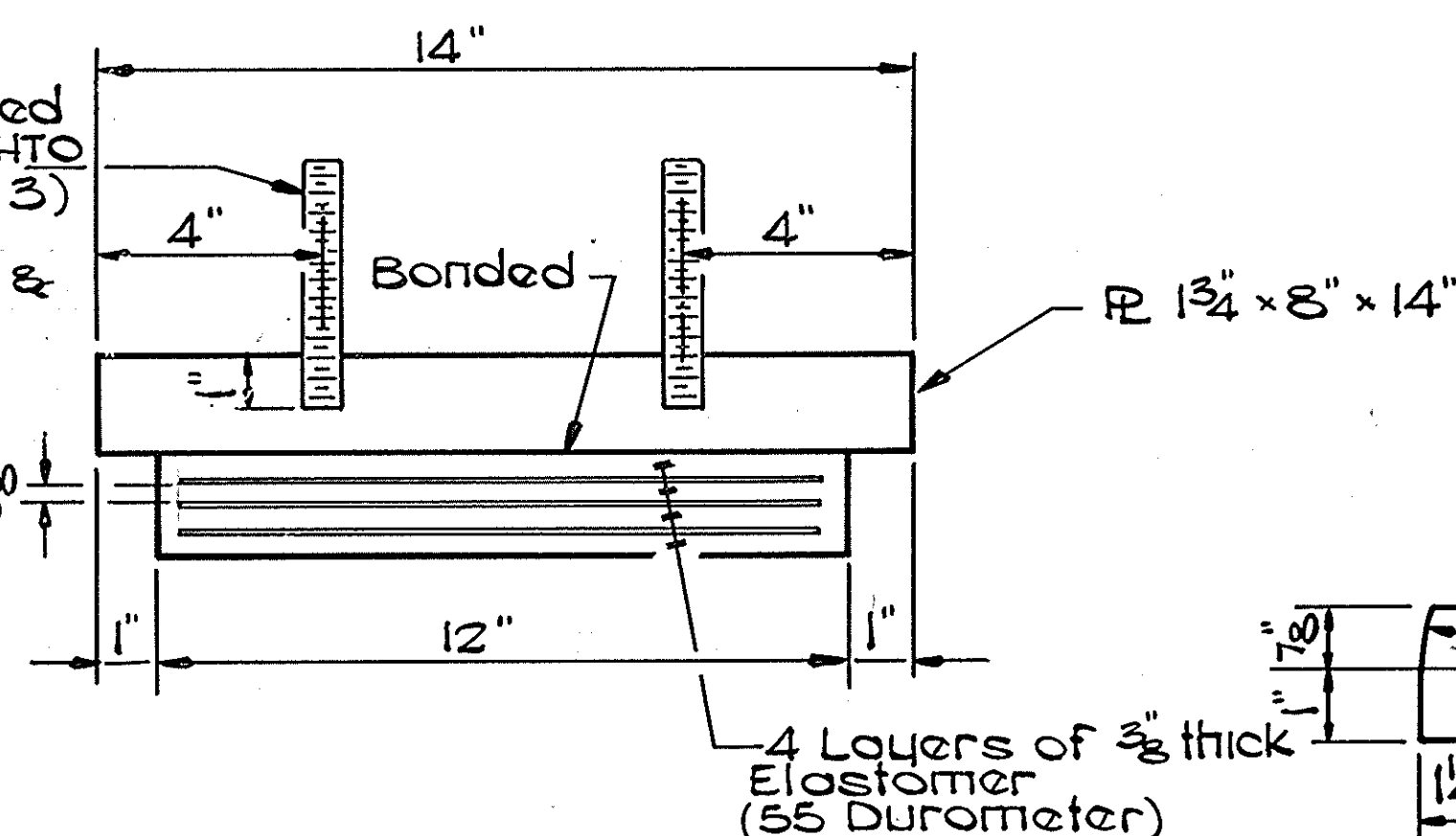


END DIAPHRAGM D
10 REQUIRED



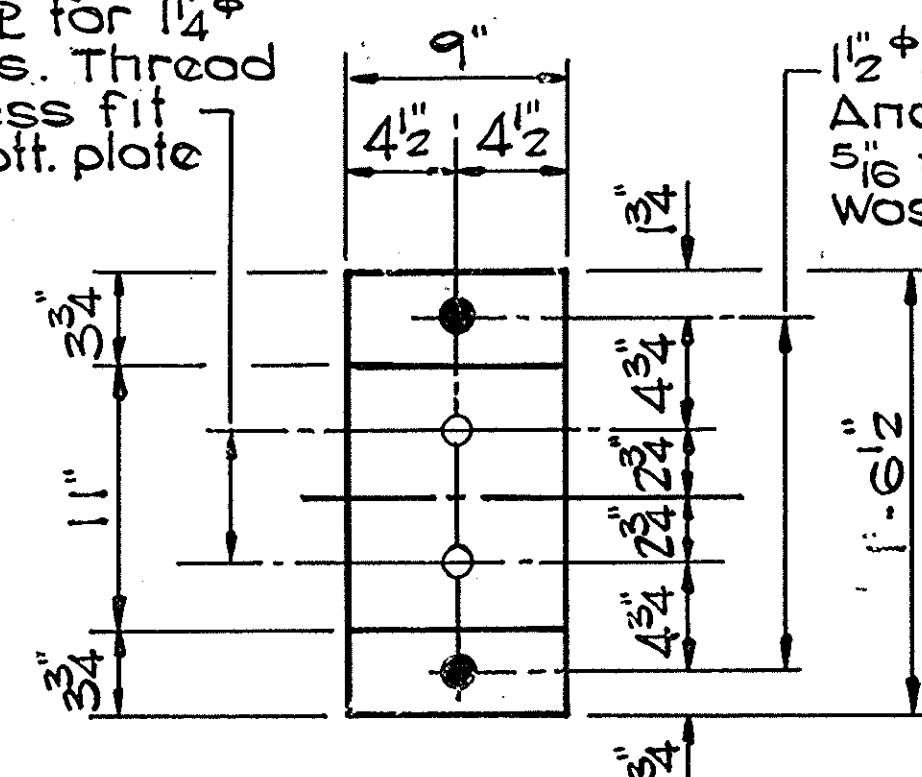
ELASTOMERIC BEARING AT ABUTMENTS

3/4" Threaded Studs (AASHTO M 164 Type 3) with flat washers & hex nuts

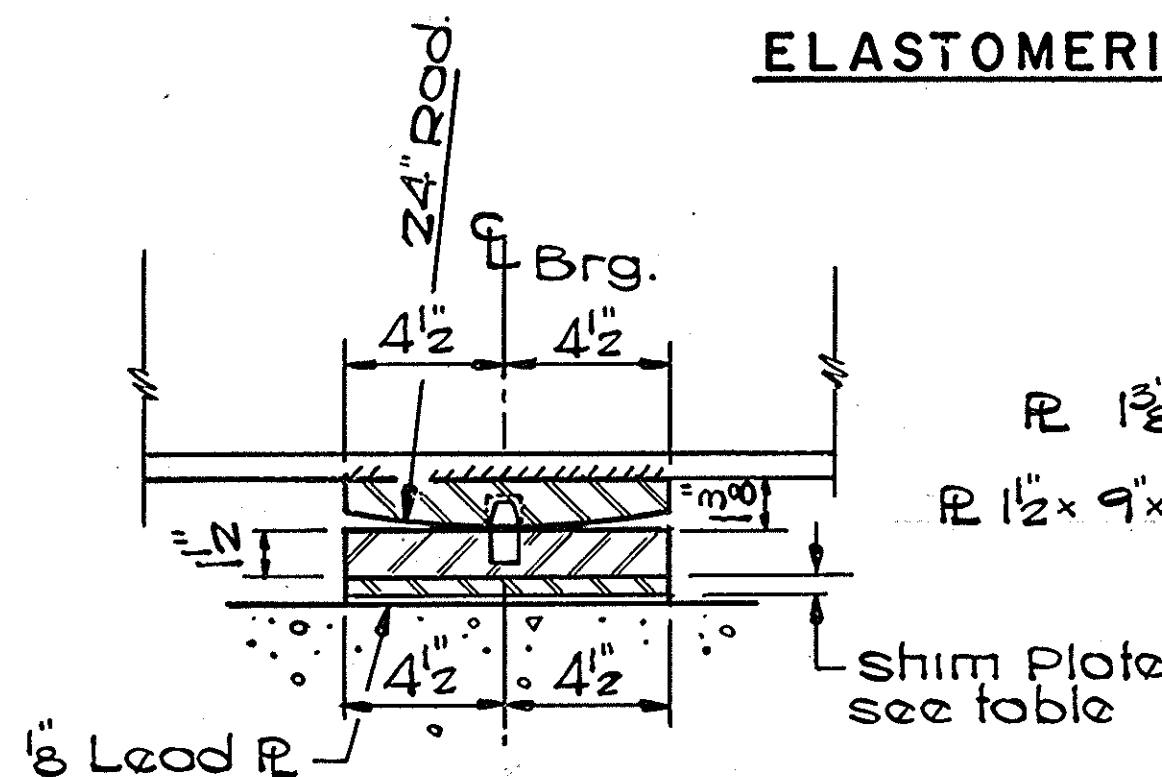


PINTLE

1 3/8" Holes 1" deep in top R for 1 1/4" Pintles. Thread or press fit into bott. plate



PLAN



BEARING DETAIL AT PIER

Anchor bolts to be grouted into drilled holes after beams are in place or built into Pier cap.

BILL OF MATERIAL - BEARINGS

ITEM	QUANT.
ELASTOMERIC BEARING ASSEMBLIES, TYPE I	EACH 12

STRUCTURAL STEEL DETAILS AND BEARINGS

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