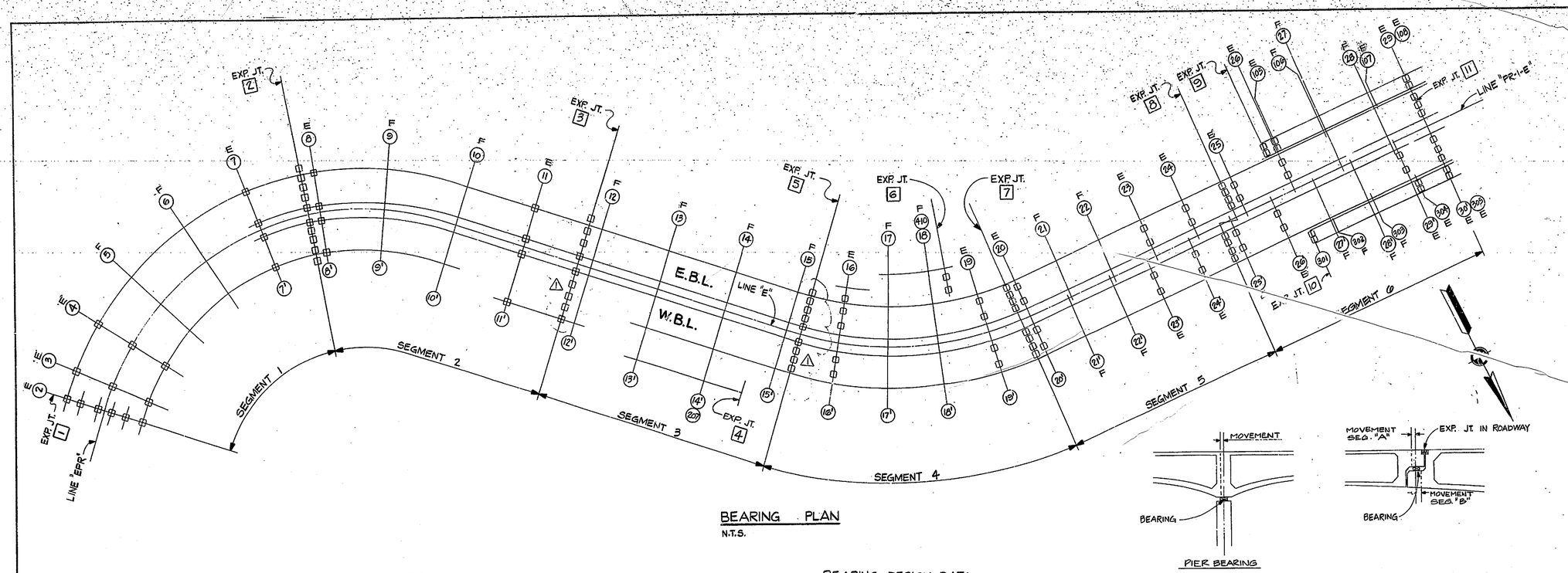

BEARING PLAN

N.T.S.

BEARING DESIGN DATA

LOCATION	E.B.L	W.B.L	NUMBER OF BEARINGS	AXIAL LOAD KIPS/BRG.	LATERAL FORCE KIPS/BRG	MOVEMENT (IN) TOTAL	MOVEMENT (IN) @ 6 MONTHS	REMARKS
EXP. JT. 1	X	X	6	250	20	+0.5, -2.1	+6.2, -2.1	——
PIER No. 3	X	X	3	2580	60	+8.1, -1.7	——	——
PIER No. 4	X	X	3	3160	70	+5.5, -1.1	——	——
PIER No. 7, 7'	X	X	4	3290	80	+7.3, -1.3	——	——
EXP. JT. 2	X	X	8	400	20	+11.8, -3.0	+7.5, -2.0	FORCES @ INTERIOR MOVEMENT SEG. 1
EXP. JT. 2	X	X	2	800	20	+8.0, -3.0	+5.5, -1.4	FORCES @ EXTERIOR MOVEMENT SEG 2
PIER No. 8, 8'	X	X	4	3400	90	+8.0, -1.3	——	——
PIER No 11	X		2	3780	100	+8.5, -1.7	——	——
PIER No 11'		X	2	4470	100	+8.5, -1.7	——	——
EXP. JT. 3	X	X	4	350	20	+13.4, -3.0	+8.2, -2.2	FORCES @ INTERIOR MOVEMENT. SEG. 2
EXP. JT. 3	X	X	5	700	20	+11.5, -3.0	+5.4, -1.6	FORCES @ EXTERIOR MOVEMENT. SEG. 3
EXP. JT. 4		X	2	800	20	+7.0, -1.5 +10.4, -2.9	+4.5, -1.5 +6.8, -2.8	MOVEMENT. SEG. 3 MOVEMENT RAMP
EXP. JT. 5	X	X	4	400	20	+8.8, -1.6	+5.9, -1.6	FORCES @ INTERIOR MOVEMENT. SEG. 3
EXP. JT. 5	X	X	5	800	20	+8.4, -1.7	+5.5, -1.7	FORCES @ EXTERIOR MOVEMENT. SEG. 4
PIER No 16	X	X	5	2600	100	+4.0, -1.0	——	——
PIER No. 19	X	X	4	2300	100	+4.2, -1.1	——	——

BEARING DESIGN DATA

LOCATION	E.B.L	W.B.L	NUMBER OF BEARINGS	AXIAL LOAD KIPS/BRG.	LATERAL FORCE KIPS/BRG.	MOVEMENT (IN.) TOTAL	MOVEMENT (IN.) @ 6 MO.	REMARKS
EXP. JT. 6	X		2	800	20	+2.0, -0.2 +0.3, -1.2	+1.7, -0.5 +4.2, -1.4	MOVEMENT SEG. 4 MOVEMENT RAMP C
EXP. JT. 7	X	X	4	400	20	+6.0, -1.7	+4.5, -1.7	FORCES @ INTERIOR MOVEMENT. SEG. 4
EXP. JT. 7	X	X	4	800	20	+4.4, -1.2	+2.9, -1.2	FORCES @ EXTERIOR MOVEMENT SEG. 5
PIER No 20	X	X	4	2400	100	+3.0, -1.0	——	——
PIER No 23	X	X	4	2400	70	+3.5, -1.0	——	——
PIER No 24	X	X	4	2600	70	+6.2, -1.6	——	——
EXP. JT. 8	X	X	4	400	20	+8.0, -2.2	+6.1, -2.2	FORCES @ INTERIOR MOVEMENT. SEG. 5
EXP. JT. 8	X	X	4	800	20	+8.9, -2.0	+5.8, -2.0	FORCES @ EXTERIOR MOVEMENT. SEG. 6
PIER No 25	X	X	4	2660	70	+8.8, -1.8	——	——
PIER No 26	X	X	4	2890	70	+4.8, -1.1	——	——
PIER No 29'		X	2	2480	70	+3.7, -1.0	——	——
EXP. JT. 9	X		2	450	20	+5.7, -1.3 +6.5, -1.2	+4.2, -1.3 +4.2, -1.2	MOVEMENT SEG. 6 MOVEMENT RAMP D
EXP. JT. 10		X	—	—	—	+2.2, -0.7	+1.7, -0.7	SEE 301
PIER No. 105	X		2	1500	70	+5.2, -1.1	——	——
PIER No. 301		X	2	400	20	+2.2, -0.7	+1.7, -0.7	——
PIER No. 304		X	2	1300	70	+4.1, -0.9	——	——
EXP. JT. 11	X	X	10	700	20	+5.5, -2.0	+3.7, -2.0	——

NOTES:

1. SUPPORT CONDITIONS ARE INDICATED BY E FOR EXPANSION BEARING LOCATION AND BY F FOR FIXED MONOLITHIC CONDITION.
2. MOVEMENT INDICATED USES THE SIGN CONVENTION + FOR CONTRACTION AND − FOR EXPANSION.
3. EXPANSION JOINTS SHALL BE INSTALLED A MINIMUM SIX (6) MONTHS AFTER COMPLETION OF POST-TENSIONING.
4. BEARING PROPERTIES
   a. DISPLACEMENT RESTRAINED IN TRANSVERSE DIRECTION
   b. MINIMUM ROTATION ± 0.015 RADIANS
   c. MAXIMUM COEFFICIENT FRICTION ≤ 0.03
5. SUBMIT DETAILS OF BEARING SOLE PLATE AND MASONRY PLATE ANCHORAGE TO BOX GIRDER AND PIER COLUMNS FOR APPROVAL BEFORE COMMENCING WORK.
6. SOLE PLATES SHALL BE LOCATED TO COVER BEARING AT ALL MOVEMENTS, WITH A MINIMUM TWO INCH OVER SIZE AT PERIMETER PROVIDED FOR SAFE PERFORMANCE.
7. $\phi = 3.00$ FOR CALCULATION OF MOVEMENT
8. PROVIDE GAP AT EXPANSION JOINTS AT TIME OF CONSTRUCTION TO ALLOW FOR TEMPERATURE EFFECTS.

APPROVED FOR CONSTRUCTION

J. D. MATTIS
Engineer of Bridge Plans

9-7-82

1	BRG. QUANTITIES	OCT '81
NO.	REVISION	DATE

N. | REVISION | DATE

T. Y. LIN INTERNATIONAL
STRUCTURAL ENGINEERS

REID, QUEBE, ALLISON, WILCOX AND ASSOCIATES INC.
CONSULTING ENGINEERS

WALSH CONSTRUCTION COMPANY
A DIVISION OF GUY F. ATKINSON CO.
DARIEN, CONNECTICUT

SHEET TITLE

BEARING PLAN AND DESIGN DATA

CLINE AVENUE EXTENSION OVER INDIANA HARBOR CANAL
BRIDGE FILE: 912-45-2548 CONTRACT NO. 8-11612
INDIANA STATE HIGHWAY COMMISSION

SHEET N.

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