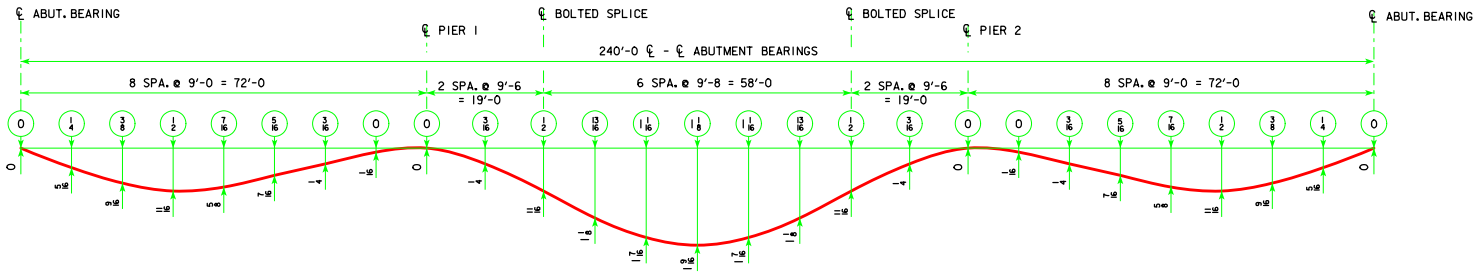

DEAD LOAD DEFLECTION DIAGRAM

NOTES:

1. ENCIRCLED NUMBERS INDICATE ANTICIPATED DEFLECTION DUE TO CONCRETE ONLY.
2. DEFLECTIONS ARE IN INCHES.

MOMENT AND REACTION TABLE

MOMENT - foot-kips | REACTION - kips

LOAD NAME		LOAD - k/ft		POSITIVE MOMENT				NEGATIVE MOMENT		REACTION			
				0.4 PT. END SPAN		0.5 PT. CENTER SPAN		PIER	PIER	ABUTMENT	ABUTMENT	PIER	PIER
		INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR	INTERIOR	EXTERIOR
DC1		0.74*	0.72*	322	301	401	374	698	653	26	24	90	85
DC2		0.14	0.14	53	52	75	74	89	90	4	4	13	13
DW		0.15	0.15	55	55	78	77	93	93	4	4	14	14
LIVE LOAD +IMPACT HL-93	DISTRIBUTION FACTOR	MOMENT	MOMENT	943	1035	1077	1277	735	847	-	-	-	-
		0.620	0.681										
		REACTION	REACTION	-	-	-	-	-	-	79	70	128	113
		0.772	0.681										
TOTAL				-	-	-	-	1615	1683	113	102	245	225

* LOAD VALUES DO NOT INCLUDE GIRDER WEIGHT.
MOMENT AND REACTION VALUES DO INCLUDE GIRDER WEIGHT.
MOMENTS AND REACTIONS SHOWN ARE UNFACTORED.

04-2014
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

BEAM DEFLECTIONS
240'-0 BRIDGE

RS40-065-10

REVISED 04-2014 - MOVED THE REACTION LIVE LOAD IMPACT COLUMN NUMBERS IN THE MOMENT ROW TO THE REACTION ROW.