

SPECIFICATIONS:

Design stresses for the following materials are in accordance with AASHTO Standard Specifications for Highway Bridges, Series of 1977, and Interim Specifications for 1978, 1979, 1980, 1981 and 1982.

Structural steel in accordance with Section 1.7.52, ASTM A36, $f_y = 36,000$ psi, ASTM A572 and A588, $f_y = 50,000$ psi.

Reinforcing steel in accordance with Section 1.5.30, $f_y = 60,000$ psi.

Concrete in accordance with Section 1.5.30, $f'_c = 3,500$ psi.

Construction: Standard Specifications of the Iowa Dept. of Transportation Series of 1977, plus current Special Provisions and current Supplemental Specifications.

Welding shall be in accordance with Art. 2408.15.

SUPERSTRUCTURE NOTES:

This bridge is designed HS20-44 and alternate military loading with allowance of 15 lbs. per sq. ft. of future wearing surface.

See Special Provisions for Charpy V-notch (CVN) impact test and preheating for flame cutting requirements.

Girder splices shall be sub-punched or sub-drilled and reamed. Before reaming, all girders shall be assembled for inspection. After inspection, holes shall be reamed and all parts match marked.

All field connections are to be bolted with "High Tensile Strength Bolts" conforming with ASTM A325. The estimated structural steel weight for these connections is based on "High Tensile Strength Bolts." Unless otherwise noted, all open holes are to be 1/8" and all bolts are to be 1/2" φ.

Bearing surfaces of rockers shall be faced in accordance with Article 2408.24 of Standard Specifications. Masonry plates shall be set on 1/2" lead sheet.

Bearing surfaces of unfinished plates shall be flat and true.

Forms for slab and curbs to be supported by the girders.

Shop painting shall be in accordance with Article 2408.33 of the Standard Specifications.

For shear stud spacing on girders, see Girder Elevation Sheets. Stringers are non-composite.

Stud shear connectors shall be welded in the shop or in the field at the locations shown on the design plans or on approved shop drawings. Weight of shear connectors is included in the structural steel quantities. There shall be no shear connector groups located at the L Bearing Abutments, at the L of piers or at L Expansion Joints.

The design drawings indicate AWS pre-qualified welded joints, shop splices and web-to-flange welds shall be welded by submerged arc process. Alternate joint details may be submitted for approval.

Fill thickness shown on plans are based on the nominal girder dimensions. These thicknesses are to be verified or adjusted during fabrication to secure a close fit. Each fill plate shall fit to the nearest 1/8-inch in thickness and single plates are required at any fill location. Girders are to be truly square at splice points and reaction points with flanges perpendicular to webs.

Magnetic particle inspection of welds, in accordance with Article 2408.15 of the Standard Specifications will be required for the bearing stiffener welds of the girders and for the web-to-flange welds of the girder.

An "RT" shown on the girder elevations indicates the location of a welded flange butt splice in a tension or reversal stress area. All welded flange or web butt splices, in tension or reversal stress areas, shall be inspected according to Art. 6.7.1 of the Supplemental Specifications No. 888. All other unmarked welded flange or web butt splices shall be tested according to Art. 6.7.2. At the contractor's option negative moment girder flange plates may be extended to eliminate intervening butt welds. Pay weight in any case will be based upon materials shown in these design plans.

For intermediate and bearing stiffener details see sheet 89. Shop laydown for stringers is not required.

Unless otherwise noted, all structural steel shall be A36. The bid weight for A36 shall include all material not specified to be bid as A572 or A572.

Slab top transverse reinforcing steel shall be parallel to and 2 1/4" clear below top of slab. Slab bottom transverse reinforcing steel shall be parallel to and 1 1/4" clear above bottom of slab. Top and bottom reinforcing steel is to be supported by individual metal bar chairs spaced no more than 3'-0" centers longitudinally and transversely or continuous type bar chairs at 4'-0" centers.

Minimum clear distance, from edge of reinforcing bar to face of concrete shall be 2" unless otherwise noted or shown.

CURVE DATA
P. I. Sta. 69+14.85
Δ = 33°31'48.3"
D = 5°30'00.0"
T = 313.83
L = 609.64
E = 46.24
R = 1041.74

Note:
All stringers shall be heat curved.

Revised (12-8-83) Camber diagram for Girder E & bearing stiffeners @ Exp. Jt. 2 corrected as marked by Δ.

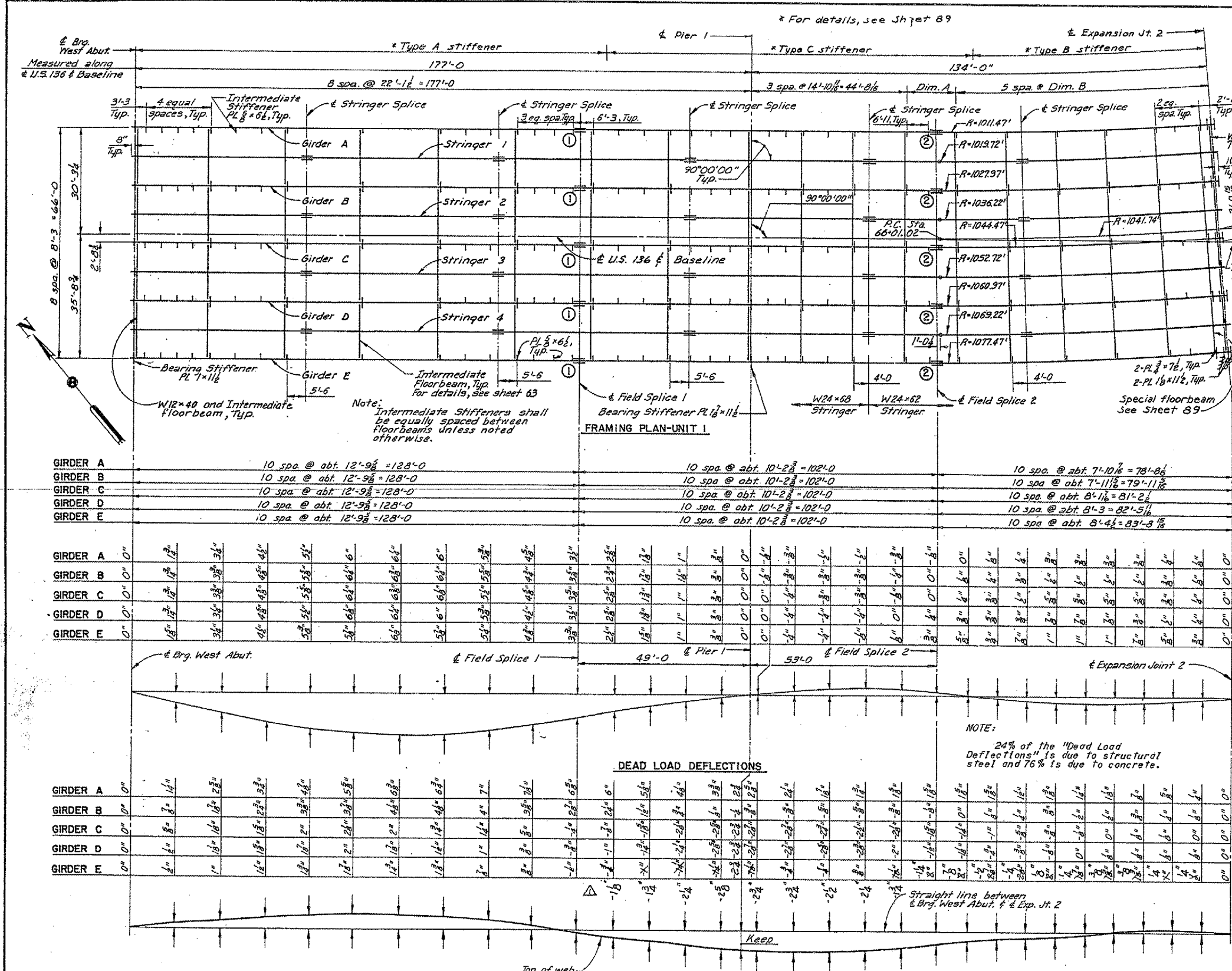
MISSISSIPPI RIVER BRIDGE
KEOKUK, IOWA - HAMILTON, ILLINOIS

STEEL ALTERNATE
DESIGN FOR 0° SKEW
3340' x 64' CONTINUOUS WELDED
PLATE GIRDER BRIDGE
FRAMING PLAN AND DEFLECTIONS
UNIT I

STA. 30+00.00
RIVER MILE 363.9
LEE COUNTY, IOWA

PROJECT NO. BR-19-(13)-38-56
HANCOCK COUNTY, ILLINOIS

DESIGN SHEET 62 OF



Note:
Offsets are given at 1/10 points between & brg. West Abutment and Field Splice 1, between Field Splice 1 and 2, and between Field Splice 2 and & Brg. Exp. Jt. 2.
For girders as fabricated and erected diagram, negative values are below the line and positive values are above the line.

GIRDERS AS FABRICATED AND ERECTED DIAGRAM

Notes:
① denotes type of field splice to be used.
For girder field splice details, see Sheet 63.
For stringer field splice details, see Sheet 66.

TABLE OF DIMENSIONS		
GIRDER	DIM. A	DIM. B
A	14'-8 3/8"	14'-5 1/2"
B	14'-9 1/8"	14'-8 3/8"
C	14'-10 1/8"	14'-11 1/8"
D	14'-11 1/8"	15'-1 1/8"
E	15'-0 1/8"	15'-4 1/8"

FOR INFORMATION ONLY