1. **GIRDER TEMPERATURE REQUIREMENTS FOR FIXED SHOE WELDING (Revised 6‑4-09)**

Description. Weld the sole plates of the fixed shoes as specified to reduce thermal stresses at fixed bents. Do not place deck concrete until after completing all girder-to-shoe welds on the bridge.

Construction Requirements. Weld each girder composing spans \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ to its shoes only when the average temperature of each girder has been determined to be between \_\_\_\_ and \_\_\_\_\_ degrees \_\_\_\_\_\_\_\_. Complete the welding of the shoes at both ends of each girder so that the temperature of the girder, as measured by the method provided herein, does not change between the times the welds are placed. Align and center both plates of the fixed shoes on the anchor bolts and center the girder between bearings when the welds are placed at the fixed shoes. Correct girder or plate location as necessary.

Temperature Measurements. Measure girder temperature by surface thermometer, non-contact infrared or other method approved by the Project Manager. Calculate the average temperature from two or more readings taken near the bents at each end of the spans. Take the readings on shaded portions of the members and follow the recommendations of the thermometer manufacturer.

Basis of Payment. Consider all costs associated with this provision incidental to the construction of the bridge. Include the cost in the cost of other items.