When negative haunch occurs, the design depth of the bridge deck is reduced where the bottom of the deck meets the supporting steel beam flange: this causes the deck at this location to be weaker than it should be (see attached sketch on page 2).

During installation of bridge deck forms, inspection personnel are to check the design depth of the bridge deck over the supporting steel beam flange to insure that negative haunch does not occur.

Any instance of negative haunch is to be brought to the attention of the RE before the reinforcement steel is installed. The RE will notify the Project Manager (PM) of the issue. The PM will contact the Designer for direction on how to correct the issue.

Depending on the degree of disparity, the situation may be corrected either by reinstalling the forms if there was an error in layout or by adjusting finish grade. A change in finish grade is a change in design. Any change in design needs to be approved by the PM. See CPH Section IV Subsection A. Do not allow deck placement to occur until the issue has been resolved to the Department’s satisfaction.
Reduced Depth of Deck (Weak Area)

Design Depth of Deck Finished Grade

NEGATIVE HAUNCH (Not Desirable)

Channel Welded to the Beam Flange

Positive Haunch

POSITIVE HAUNCH (Desirable)

Steel Beam

Bottom of Corrugated Stay in Place Form

Effective bottom of Deck

Effective bottom of Deck

Bottom of Corrugated Stay in Place Form

Finished Grade