

or field fabrication shall be detailed on shop drawings by the Contractor or Fabricator in accordance with AASHTO "Standard Specifications for Highway Bridges" and the Ohio "Supplement" to the AASHTO specifications in effect with the contract.

The Contractor shall submit to OSE, 14 days before the pre-fabrication meeting, 863.081, written acceptance and four copies of these drawings, unless additional copies are requested. The written acceptance from the Contractor shall document review and acceptance of the shop drawings. All shop drawings shall be stamped and dated as accepted by a registered professional engineer representing the Contractor. All drawings shall incorporate the engineer's stamp and acceptance date. All drawings shall show detailer's initials. The Contractor shall furnish the fabricator's QCFS with one(1) record set of the checked and Contractor accepted shop drawings. This set will be furnished the QCFS on or before the pre-fabrication meeting.

By submission of shop drawings, the Contractor represents to ODOT that all materials, field measurements, construction requirements, contract requirements, performance criteria and similar data have been verified. By submission, the Contractor further represents that the shop drawings have been coordinated and verified with the details of the work to be performed by other fabricators and entities on the project. No allowance for additional cost or delays will be made to the Contractor for incorrect fabrication as a result of failure to coordinate or perform these verifications.

The prints shall be made from tracings, neatly and accurately drawn on sheets 559 mm x 864 mm (22 x 34 inches).

Shop drawings shall show details, dimensions, size of materials, match mark diagrams for field connections, and other information necessary for the complete fabrication and erection of the metal work. These drawings shall also show a diagram identifying, by some unique mark, each area of a welded splice to be covered by a single radiograph.

The shop drawings for all multiple span beam and girder bridges shall include an overall layout with dimensions showing the relative unloaded vertical and horizontal position of beam or girder segments with respect to a full length base or work line; camber and horizontal curvature of the beams or girders and the effect of deck surface profile shall be accounted for in this relationship. Required offsets for horizontal curvature shall be shown for each 3.0 m (10 feet) of length. Required offsets for vertical curvature shall be shown for each 1/4 of span length, at field splices and bearing points.

Shop drawings shall specifically identify each piece of steel as to grade (ASTM designation), CVN, Fracture Critical or any special testing requirements. Pieces made of different grades of steel shall not be given the same assembling or erecting mark, even though they may be of identical dimensions and detail.

When changes on submitted drawings are requested by the Department, or the Contractor makes changes in addition to those expressly requested, the shop drawings shall be submitted to identify the changes with revision marks, stamped for Contractor acceptance and dated.

Deviation from the contract plans or accepted shop drawings will not be permitted without the written order or consent of the Engineer. Requests for such deviation or change shall be submitted in writing to the Engineer. For changes in location, addition or elimination of splices, acceptance shall be obtained prior to acceptance of shop drawings. After acceptance by the Engineer, such plans shall be taken as supplemental to, but in no sense a substitute for, the contract. The QCFS shall be responsible for having documentation of any revised drawings or changes listed above.

The shop drawings shall indicate the welding procedure (WPS number) to be used for each joint. Locations and identification numbers of all radiographs taken shall be detailed on the shop drawings.

After all fabrication is completed, the Contractor shall have the Fabricator furnish a 35-millimeter microfilm copy of each shop drawing mounted on an aperture card in accordance with Supplement 1002 on file in the Department. If the details shown on a drawing apply to more than one bridge, an aperture card for that drawing shall be furnished for each bridge to which it applies, each card bearing the applicable bridge number. For structures carrying railroad traffic, an additional set of aperture card-mounted films or, at the option of the railroad, a set of full-size drawings on mylar shall be furnished for each railway company involved.

**863.081 Pre-Fabrication Meeting.** A pre-fabrication meeting shall be held at the fabricator's facilities, or another location agreeable to all parties, for review of any fabrication issues, including information on shop drawings, inspection, hold or witness points, unique fabrication items, special processes, etc. for the project. Attendance at the meeting shall include the fabricator, the QCFS, the QCPS, the Contractor, or designated representative, and OSE's QA inspector. The meeting will be conducted by the QCFS, who will also be responsible for distribution of minutes of the meeting documenting all issues discussed.

The time of the meeting shall be agreeable to all parties but no earlier than 14 days after submittal of Contractor approved shop drawings, 863.08. OSE can waive the Pre-fabrication meeting if accepted by the Fabricator and the Contractor.

**863.09 Material.** Structural steel and other structure metals shall conform to CMS section 711 except that steel bar stock utilized for end dams and scuppers may be any weldable grade of low or mild carbon steel commercially available. Welded stud shear connectors shall conform to the AASHTO/AWS Bridge Welding Code, as amended by Supplement 1011. Steel plates for main and secondary members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile or compressive stresses.

The Contractor shall submit to OSE, at least 14 days prior to member shipment, written acceptance that test data for all structural steel, except bar stock enumerated above, cast steel,