SP-155066
(New)

SPECIAL PROVISIONS
FOR
ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING

Des Moines County
EDP-0977(653)--7Y-29

Effective Date
June 15, 2021

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

155066.01 DESCRIPTION.

A. Summary.

1. Section Includes: All steel components of the shade structure are to be fabricated and erected as Architecturally Exposed Structural Steel (AESS).

2. Related Requirements: Special Provisions for Structural Steel Framing for fabrication and finishing requirements.

B. Definitions.

AESS: Structural steel designated as "architecturally exposed structural steel" or "AESS" in the contract documents.

C. Quality Assurance.

1. Shop Painting: Paint topcoats and other coatings to be applied over shop primers shall be compatible with shop primers.

Visual Samples: Provide a mock-up showing to establish weld quality appearance standard, member alignment and finishing. Mock up shall include typical beam to beam and beam to column connections and a typical splice, as indicated on plans for typical locations.

D. Delivery, Storage, and Handling.

1. Use special care in handling to prevent twisting, warping, nicking, and other damage. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

2. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

E. Field Conditions.
Where AESS is indicated to fit against other construction, verify actual dimensions by field measurements before fabrication.

155066.02 MATERIAL.

A. Filler.
Polyester filler intended for use in repairing dents in automobile bodies.

B. Fabrication.

1. Shop fabricate and assemble AESS to the maximum extent possible. Locate field joints at concealed locations if possible. Detail assemblies to minimize handling and to expedite erection.

In addition to special care used to handle and fabricate AESS, comply with the following:

a. Fabricate AESS in conformance with AISC Designated AESS Category 2 and the following.

All connections shall be welded.

b. Fabricate with exposed surfaces smooth, square, and free of surface blemishes including pitting, rust, scale, and roughness.

Grind sheared, punched, and flame-cut edges of AESS to remove burrs and provide smooth surfaces and edges.

Fabricate AESS with exposed surfaces free of mill marks, including rolled trade names and stamped or raised identification.

Fabricate AESS with exposed surfaces free of seams to maximum extent possible. HSS weld seams shall be located on the top of horizontal sections.

Remove blemishes by filling or grinding or by welding and grinding, before cleaning, treating, and galvanizing.

Fabricate with piece marks fully hidden in the completed structure or made with media that permits full removal after erection.

Fabricate AESS to the tolerances specified in AISC 303 for steel that is designated AESS.

Seal-weld open ends of hollow structural sections with 3/8-inchclosure plates for AESS.

2. Coping, Blocking, and Joint Gaps: Maintain uniform gaps of 1/8 inch with a tolerance of 1/32 inch for AESS.

3. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.

4. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel members.

155066.03 CONSTRUCTION.

A. Examination.

1. Verify, with steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.

2. Examine AESS for twists, kinks, warping, gouges, and other imperfections before erecting.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Preparation.

1. Provide temporary shores, guys, braces, and other supports during erection to keep AESS secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

2. If possible, locate welded tabs for attaching temporary bracing and safety cabling where they will be concealed from view in the completed Work.

3. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

C. Erection.

1. Set AESS accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.

2. Do not use thermal cutting during erection.

D. Repairs and Protection.
Remove welded tabs that were used for attaching temporary bracing and safety cabling and that are exposed to view in the completed Work. Grind steel smooth.

155066.04 METHOD OF MEASUREMENT.
Architecturally Exposed Structural Steel will not be measured for payment.

155066.05 BASIS OF PAYMENT.
Payment for this item will be incidental to line item Shade Structure.