

Construction Specification 734—Steel Reinforcement

1. Scope

The work shall consist of furnishing and placing steel reinforcement for reinforced concrete.

2. Material

All reinforcement shall be free from loose rust, concrete, oil, grease, paint, or other deleterious matter.

Reinforcing steel shall be deformed bars manufactured specifically for concrete reinforcement and shall be a minimum of Grade 40 or as shown on the drawings.

3. Storage

Steel reinforcement stored at the work site shall be placed on platforms, skids, or other supports. This is done so that contact with the ground is avoided and the material is protected from mechanical damage and/or corrosion.

4. Placement

Reinforcement shall be accurately placed and secured in position to prevent its displacement during placement of concrete. Holding steel reinforcement in position with temporary supports is not permitted. Tack welding bars is not permitted. Reinforcing steel shall not be heated to facilitate bending or cutting.

In structural members, metal chairs, metal hangers, metal spacers, high density or structural plastic rebar accessories or concrete blocks may be used to support reinforcing steel. Metal hangers, spacers and ties shall be placed in such a manner that they are not exposed in the finished concrete surface. The legs of metal chairs or side form spacers that may be exposed on any face of slabs, walls, beams or other concrete surfaces shall be stainless steel or shall have a protective coating or finish. The coating or finish can be hot dip galvanizing, epoxy coating or plastic coating. Metal chairs and spacers not stainless steel or fully covered by a protective coating or finish shall have a minimum cover of 0.75 inch of concrete over the unprotected metal part. The exception is that those with plastic coatings may have a minimum cover of 0.5 inch of concrete over the unprotected metal part. Precast concrete chairs shall be clean and moist at the time concrete is placed.

In slabs, steel shall be supported by precast concrete bricks, corrosion resistant metal chairs or plastic chairs.

Reinforcing steel shall not be placed until the prepared site has been inspected and approved by the NRCS representative. After placement of the reinforcement, concrete shall not be placed until the reinforcement has been inspected and approved by the NRCS representative.

Splices of reinforcement shall be made only at locations shown on the drawings and provided by the steel schedule, unless approved by the engineer. Unless otherwise indicated on the drawings, splices of reinforcing bars shall provide a lap of not less than 30 diameters of the larger bar but not less than 12 inches. Bars will not be spliced by welding. Welded fabric shall be lapped at least one mesh width plus 2 inches.