

1. GENERAL

1.1 Work Included

- .1 Reinforcing steel bars for cast-in-place concrete complete with tie wire.
- .2 Support chairs, bolsters, bar supports, and spacers for reinforcing.

1.2 Design Standards, Code Requirements

- .1 Perform concrete reinforcing work in accordance with the National Building Code of Canada and CSA-A23.1 except where otherwise specified.

1.3 Test Reports

- .1 If requested by the Contract Administrator, submit certified copies of mill test report of reinforcement supplied, indicating physical and chemical analysis.

1.4 Placement Drawings

- .1 Placement drawings for concrete reinforcement are to be submitted to the Contract Administrator for review prior to fabrication in accordance with Section 01300.
- .2 Clearly indicate bar sizes, spacing, location and quantities of reinforcement, mesh, chairs, spacers and hangers with identifying code marks to permit correct placement without reference to structural drawings; to ACI Manual of Standard Practice for Detailing Reinforced Concrete Structures.
- .3 Detail placement of reinforcing where special conditions occur.
- .4 Indicate on Placement Drawing the location of anchor bolts set in accordance with base plate and anchor bolt setting.
- .5 Detail lap lengths and bar development lengths to CSA-A23.3, unless otherwise shown on the Drawings.

1.5 Delivery/Storage

- .1 Deliver, handle, and store concrete reinforcement in a manner so as to prevent damage and contamination.

2. PRODUCTS

2.1 Materials

- .1 Reinforcing Steel: 400 MPa yield grade; deformed billet steel bars conforming to CSA G30.18, plain finish.

2.2 Accessory Materials

- .1 Tie Wire: Minimum 1.6 mm annealed type or patented system approved by the Contract Administrator.
- .2 Chairs, Bolsters, Bar Supports, Spacers: Adequately sized for strength and support of reinforcing steel during construction. Broken concrete blocks and wood supports are not acceptable.
- .3 Special Chairs, Bolsters, Bar Supports, Spacers: Where adjacent to exposed concrete surfaces, plastic coated type.

2.3 Fabrication

- .1 Fabricate reinforcing steel in accordance with CSA-A23.1 and Drawings.
- .2 Locate reinforcing splices not indicated on the Drawings at points of minimum stress. Unless otherwise noted, provide tension lap splices, Class B.
- .3 All bars to be bent cold in the shop.
- .4 Field bending of reinforcing bars will not be permitted.
- .5 Fabricate within the following tolerances:
 - .1 Sheared Length: plus 0, minus 25 mm
 - .2 Stirrups and Ties; plus 0, minus 10 mm
 - .3 Other Bends: plus 0, minus 25 mm.
- .6 Welding or heating of reinforcement is not permitted.

3. EXECUTION

3.1 Installation

- .1 Place reinforcing steel in accordance with reviewed placing drawings and CSA-A23.1.
- .2 Adequately support reinforcing and secure against displacement within the tolerances permitted.
- .3 Protect steel reinforcement by the thickness of concrete indicated on the Drawings. Where not otherwise shown, provide concrete cover of 50 mm.

- .4 Maintain alignment as follows:

| ITEM | TOLERANCE +/- |
|-----------------------|-------------------------|
| Structural Members: | 10 mm |
| Rebar Bends and Ends: | 15 mm |

3.2 Construction Review

- .1 Notify the Contract Administrator when steel installation is complete and before the forms are closed.

3.3 Cleaning

- .1 Ensure all loose scale, loose rust, and other deleterious matter from surfaces of reinforcing is removed in a manner that is acceptable to the Contract Administrator.

END OF SECTION