

PART I – GENERAL**WORK SPECIFIED HEREIN**

All labor, materials, equipment and services necessary to provide the Cast-In-Place Concrete work as indicated or specified including:

- Concrete, reinforcement and formwork for foundations, pilasters, slabs, sidewalks, stairs, etc.
- Installation of anchor bolts for steel columns, posts and other anchored work as may be required.
- Grouting of column bases.
- All embedded anchors, anchor slots, sleeves and other inserts as required.
- Vapor barrier and granular subbase beneath slabs on grade.
- All dowels from concrete into masonry walls or pilasters.
- All other items required to make the work of this Section.

RELATED WORK

- Section 03100: Concrete Formwork
- Section 03300: Cast-In-Place Concrete
- Section 03320: Interior Concrete Slabs on Grade
- Section 08363: Sectional Overhead Doors

REFERENCE STANDARDS

- Supply and install concrete reinforcement in conformance with CAN/CSA-A23.1-04 unless specified otherwise.
- CAN/CSA G30.18-M1992 (R2007) Billet Steel Bars for Concrete Reinforcement.
- Reinforcing Steel Institute of Ontario manual of standard practice.

QUALITY ASSURANCE

- Source quality control: Upon Consultant's request, submit mill test reports to verify that reinforcement supplied to project by Canadian mills conforms to specified requirements.
- Conduct and pay for tests of non-Canadian and unidentified products as instructed by Consultant.

SUBMITTALS

- Submit bar lists and placing drawings.
- Prepare shop drawings in accordance with "Reinforcing Steel Manual of Standard Practice" by the Reinforcing Steel Institute of Ontario.
- Design and detail lap lengths and bar development lengths to CSA A23.3-04, unless otherwise indicated.
- Detail placement of reinforcing where special conditions occur.

UNIT PRICES

- Unit prices for concrete work, requested as part of the Bid, shall include detailing, listing, materials, bending, placing and cleaning

PART II – PRODUCTS**MATERIALS**

- Reinforcing steel: to CAN/CSA-G30.18-M1992 (R2007) with grade identification by permanent rolled indentations in bars; Canadian produced; of types indicated on Drawings; billet steel; deformed.
- Tie wires: 1.6 mm (16 ga SWG) or heavier, cold-drawn annealed wire to CSA G30.3-M1983 (R1998) or proprietary system as approved by Consultant.
- Chairs: to CSA A23.1/A23.2-94; plastic or concrete where concrete surfaces at base of chairs are exposed to view; plastic or concrete for slabs on grade and steel or concrete in other locations.
- Welded steel wire fabric: to CSA G30.5-M1983 (R1998); supply in flat mats only.
- Weld bars: use of weld bars must be approved by Consultant.
- Epoxy coated reinforcing steel where indicated on the Drawings to meet Ontario Provincial Specification 1442.
- Plastic ties and/or plastic coated wires shall be used for epoxy coated reinforcement.

FABRICATION

- Shop fabricate reinforcing steel to CSA A23.1/A23.2-04.
- Ship bundles of bar reinforcement, clearly identified in accordance with bar list.

PART III – EXECUTION**EXAMINATION**

Examine supporting formwork to ensure that it has been completed and adequately braced in place before commencing to place reinforcement.

PLACING

Place reinforcement in accordance with CSA A23.1/A23.2-04 and of sizes, at spacing and in locations as shown on approved placing drawings.

Install spacers and chairs as required.

Weld bars to CSA G30.5-M1983 (R1998) using bars to CAN/CSA-G30.18-M1992 (R2007).

Do not field bend reinforcement except where indicated or authorized by Consultant.

When field bending is authorized, bend without heat, applying a slow and steady pressure.

Replace bars which develop cracks or splits.

Paint portion of dowel intended to move within set concrete with one coat of lead or asphalt paint. When paint is dry, apply a thick even film of mineral lubricating grease.

Use plastic coated tire wire for epoxy coated reinforcing steel.

Provide minimum concrete cover over reinforcing steel to CSA A23.1/A23.2-04 and as indicated on drawings.

Coordinate location of reinforcing bars with location of vehicle loop detector, at service centre.

FIELD QUALITY CONTROL

The Owner may engage an inspection and testing company to inspect work of this Section as directed by Consultant.

ADJUSTMENT AND CLEANING

Adjust reinforcement immediately before concrete is poured to ensure that bars are in correct position and are securely tied to maintain position.

Remove loose rust, scale and any other materials from surfaces of reinforcement and accessories that would reduce their bond.

END OF SECTION