## PART 1 - GENERAL

### 1.1 GENERAL REQUIREMENT

.1 Comply with the applicable requirements of Division 1.

### 1.2 RELATED WORK

| | | |
|---|---|---|
| .1 | Concrete formwork | Section 03 10 00 |
| .2 | Cast-in-place concrete | Section 03 30 00 |

### 1.3 WORK FURNISHED BUT NOT INSTALLED

.1 Reinforcement bars to masonry trade.

### 1.4 CODES AND STANDARDS

.1 Do reinforcing work in accordance with the Ontario Building Code 2012 designated editions of CAN/CSA-A23.1 and testing in accordance with CAN/CSA-A23.2, and the Manual of Standard Practice of Reinforcing Steel Institute of Canada.

### 1.5 TEST REPORTS

.1 Upon request, provide Consultant with certified copy of mill test report of steel supplied, showing physical and chemical analysis, at least 2 weeks prior to commencing reinforcing work.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

.1 Reinforcing steel: Billet steel, grade 400, deformed bars to CSA G30.12, unless indicated otherwise.

.2 Cold-drawn annealed steel wire ties: to CSA G30.3.

.3 Deformed steel wire fabric for concrete reinforcement: to CSA G30.14.

.4 Welded steel wire fabric: to CSA G30.5. Provide in flat sheets only.

.5 Welded deformed steel wire fabric: to CSA G30.15. Provide in flat sheets only.

.6 Chairs, bolsters, bar supports, spacers: to CAN/CSA-A23.1 and adequate for strength and conditions.

.7 Mechanical splices: subject to approval of Consultant.

### 2.2 FABRICATION

.1 Fabricate reinforcing to CAN/CSA-A23.1.

.2 Fabrication tolerances for reinforcing steel to RSIO Manual of Standard Practice.

.3 Obtain Consultant's approval for locations of reinforcement splices other than shown on steel placing drawings.

.4 Do not bend or weld epoxy coated bars after coating.

.5 Ship bundles of bar reinforcement clearly identified in accordance with bar list.

## PART 3 - EXECUTION

### 3.1 HANDLING AND FIELD BENDING

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

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

.3 Replace bars which develop cracks or splits.

### 3.2 WORKMANSHIP

.1 Comply with the requirements of CAN/CSA-A23.1 and the specific requirements of the Contract.

.2 Comply with the requirement of CSA-S413 for all work in the underground parking slabs and ground floor at parking areas and drive ways.

.3 Ensure that reinforcement and inserts are not disturbed during concrete placement.

### 3.3 PLACEMENT OF REINFORCING

.1 Store reinforcement on racks or skids so that it will be protected from dirt and maintained in its fabricated form.

.2 Use only approved shop drawings and the Structural Drawings for placing of reinforcement. Report discrepancies to the Architect before proceeding.

.3 Bend all bars cold. No field bending or tack welding is allowed.

.4 Before placing, remove all loose scale, dirt, oil or other coatings which would reduce bond. Place reinforcement within the specified tolerances and secure in position by the use of chairs, spacers and hangers. Tie securely together using annealed wire to prevent displacement during concrete placing and vibrating. Use non-corrosive tie wire for architectural concrete. Turn the ends of ties towards the interior of the concrete.

.5 Position reinforcing for exposed concrete using snap-on plastic positioners and chairs with plastic tipped legs of the same color as the concrete. Use concrete chairs for slabs on grade and footings.

.6 No splicing of reinforcement is permitted other than shown on the Structural Drawings. Do not cut reinforcement to permit placing of embedded items.

.7 Lap end cross wires of welded wire mesh at least 200 mm.

.8 Do not cut reinforcement, either before or after concrete is placed.

.9 Do not cut or displace bars that interfere with sleeves or other openings without the approval of the Consultant.

## 3.4 INSPECTION AND TESTING

.1 Consultant will appoint an independent inspection and testing agency to undertake inspection of reinforcement steel.

.2 This inspection shall be paid for from the Cash Allowance, as directed by the Consultant.

**END OF SECTION**