Part 1 General

1.1 REFERENCES

1. ASTM International
   .1 ASTM A1064/A1064M-17, Standard Specification for Steel Wire, Deformed, for Concrete Reinforcement.

2. CSA International
   .1 CSA A165 SERIES-14, CSA Standards on Concrete Masonry Units covers: A165.1, A165.2, A165.3.
   .2 CAN/CSA-A179-14, Mortar and Grout for Unit Masonry.
   .3 CAN/CSA-A370-14, Connectors for Masonry.
   .4 CAN/CSA-A371-14, Masonry Construction for Buildings.
   .5 CSA S304.1-14, Design of Masonry Structures.

3. Health Canada/Workplace Hazardous Materials Information System (WHMIS)
   .1 Material Safety Data Sheets (MSDS).

4. South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
   .1 SCAQMD Rule 1113-A2016, Architectural Coatings.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

1. Submit in accordance with Section 01 33 00.

2. Product Data:
   .1 Submit manufacturer's instructions, printed product literature and data sheets for masonry products and include product characteristics, performance criteria, physical size, finish and limitations.
   .2 Submit 2 copies of WHMIS MSDS.
      .1 Indicate VOC's in g/L for epoxy coatings and galvanized protective coatings and touch-up products to be applied within building envelope.

1.3 DELIVERY, STORAGE AND HANDLING

1. Deliver, store and handle materials in accordance with Section 01 61 00 and with manufacturer's written instructions.

2. Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

3. Storage and Handling Requirements:
   .1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
   .2 Store and protect masonry products from nicks, scratches, and blemishes.
   .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 MASONRY UNITS

1. Standard concrete block units: to CSA A165 Series (CSA A165.1).
   .1 Classification: H/15/A/M.
   .2 Size: modular, CCMPA size code 15.
   .3 Special shapes: provide square units for exposed corners. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.
   .4 Special shapes: provide square units for exposed corners. Provide purpose-made shapes for lintels and bond beams.

2.2 REINFORCEMENT AND CONNECTORS

1. Wire reinforcement: to CAN/CSA-A371 and ASTM A496/A496M, truss type, minimum 30% recycled content.

2. Connectors shall be corrosion resistant: to CAN/CSA-A370 and CSA S304.1.

2.3 MORTAR AND GROUT

1. Mortar: to CAN/CSA-A179.
   .1 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
   .2 Colour: natural colour aggregates.

2. Mortar Type: S based on property specifications,

3. Mortar for foundation walls, manholes, sewers, pavements, walks, patios and other exterior masonry at or below grade: type M based on specifications.

4. Following applies regardless of mortar types and uses specified above:
   .1 Mortar for grouted reinforced masonry: type S based on specifications.

5. Grout: to CAN/CSA-A179, Table 3.

2.4 ACCESSORIES

1. Weep hole vents: purpose-made galvanized steel.

2. Nailing Inserts: 0.5 mm minimum thickness, galvanized.

3. Bolts: 12 mm diameter x 150 mm long with ends bent 50 mm at 90 degrees.

4. Primers, Paints, and Coatings: VOC limit 50 g/L maximum to SCAQMD Rule 1113.

Part 3 Execution

3.1 EXAMINATION

1. Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.
   .1 Visually inspect substrate in presence of Departmental Representative.
   .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
   .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 INSTALLATION

1. Do masonry work in accordance with CAN/CSA-A371 except where specified otherwise.
   .1 Bond: running stretcher bond with vertical joints in perpendicular alignment and centered on adjacent stretchers above and below.
   .2 Coursing height: 200 mm for one block and one joint.
   .3 Jointing: cut joints flush.

2. Build masonry plumb, level, and true to line, with vertical joints in alignment.

3. Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.3 CONSTRUCTION

1. Exposed masonry:
   .1 Remove chipped, cracked, and otherwise damaged units, in exposed masonry and replace with undamaged units.
   .2 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects. Make cuts straight, clean, and free from uneven edges.

2. Building-in:
   .1 Install masonry connectors and reinforcement where indicated on drawings.
   .2 Build in items required to be built into masonry.
   .3 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.
   .4 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.
   .5 Install loose steel lintels over openings where indicated.

3. Provision for movement:
   .1 Leave 3mm space below shelf angles.

   .2 Leave 6 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges.
   .3 Built masonry to tie in with stabilizers, with provision for vertical movement.

4. Interface with other work:

   .1 Cut openings in existing work as indicated.
   .2 Openings in walls: approved Departmental Representative.
   .3 Make good existing work. Use materials to match existing.

5. Install weep hole vents in vertical joints immediately over flashings, in exterior wythes of cavity wall and masonry veneer wall construction, at maximum horizontal spacing of 600 mm on centre.

3.4 REINFORCING AND CONNECTING

1. Install masonry connectors and reinforcement in accordance with CAN/CSA-A370, CAN/CSA-A371 and CSA S304.1 unless indicated otherwise.

2. Prior to placing grout, obtain Departmental Representative's approval of placement of reinforcement and connectors.

3.5 GROUTING

1. Grout masonry in accordance with CAN/CSA-A179, CAN/CSA-A371 and CSA S304.1 and as indicated.

3.6 ANCHORS

1. Supply and install metal anchors as indicated.

3.7 LATERAL SUPPORT AND ANCHORAGE

1. Supply and install lateral support and anchorage in accordance with CSA S304.1 and as indicated.

3.8 SITE TOLERANCES

1. Tolerances of CAN/CSA-A371 apply.

3.9 FIELD QUALITY CONTROL

1. Inspection will be carried out by designated Departmental Representative.

3.10 CLEANING

1. Progress Cleaning: clean in accordance with Section 01 74 11.
   .1 Leave Work area clean at end of each day.

2. Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11.

3. Waste Management: separate waste materials for reuse and recycling in accordance with

Section 01 74 20.
.1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.11 PROTECTION

1. Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

2. Repair damage to adjacent materials caused by masonry products installation.