

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED SECTIONS

- .1 Section 02 41 99 – Selective Demolition
- .2 Section 07 92 00 – Joint Sealing.

1.3 REFERENCES

- .1 Canadian Standards Association (CSA International).
 - .1 CSA A23.1/A23.2-09 (R2014), Concrete Materials and Methods of Concrete Construction/Methods of Tests and Standard Practices for Concrete.
 - .2 CSA A179-04 (R2014), Mortar and Grout for Unit Masonry.
 - .3 CSA-A370-04 (R2014), Connectors for Masonry.
 - .4 CSA A371-04 (R2014), Masonry Construction for Buildings.
 - .5 CAN3 A165 Series-04 (R2014), CSA Standards on Concrete Masonry Units.
 - .6 CSA S304.1-04 (R2014), Design of Masonry Structures.

1.4 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Product Data.
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
- .3 Samples.
 - .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit the following samples to the Departmental Representative:
 - .1 One of each type of masonry unit specified.
 - .2 As required for testing purposes.
- .3 Manufacturer's Instructions.
 - .1 Submit manufacturer's installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store, handle and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .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, indoors 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.

1.5 DELIVERY, STORAGE AND HANDLING (continued)

.3 (continued)

- .3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 74 21.
- .5 Packaging Waste Management: remove for reuse and return pallets, crates, padding, packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 – Construction / Demolition Waste Management and Disposal.

PART 2 - PRODUCTS

2.1 MASONRY UNITS

- .1 Standard concrete block units: to CAN/CSA-A165 Series (CAN/CSA-A165.1).
 - .1 Classification:
 - .1 Non-load bearing walls: H/15/A/M (hollow units) and S/12.5/C/M (solid units).
 - .2 Load bearing walls: H/20/A/M (hollow units) and S/12.5/A/M (solid units).
 - .2 Size: modular.
 - .3 Colour: "Natural Grey".
 - .4 Special shapes: provide bull-nosed units for exposed corners, and solid full bullnose for top courses of low height walls. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.

2.2 REINFORCEMENT AND CONNECTORS

- .1 Bar reinforcement: to CAN/CSA-A371, CSA G30.18, Grade 400.
- .2 Wire reinforcement: to CAN/CSA-A371, ASTM A496/A496M, truss type.
- .3 Connectors shall be corrosion resistant: to CAN/CSA-A370, CSA S304.1.

2.3 MORTAR AND GROUT

- .1 Use same brands of materials and source of aggregate for entire project.
- .2 Mortar and grout: in accordance with CSA A179.
- .3 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
- .4 Water: free of deleterious matter and acids or alkalis.
- .5 Mortar for exterior masonry above grade:
 - .1 Type S based on Proportion specifications.

2.3 MORTAR AND GROUT (continued)

- .6 Mortar for interior masonry.
 - .1 Loadbearing (gravity): type S based on Proportion specifications.
 - .2 Non-Loadbearing: type N based on Proportion specifications.
- .7 Parging mortar: type N based on Proportion specifications.
- .8 Following applies regardless of mortar types and uses specified above:
 - .1 Mortar for grouted reinforced masonry: type S based on Proportion specifications.
- .9 Non-Staining mortar: use non-staining masonry cement for cementitious portion of specified mortar type.
- .10 Grout: to CSA A179, Table 5.

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 and after receipt of written approval to proceed from Departmental Representative.

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 centred on adjacent stretchers above and below.
 - .2 Coursing height: 200 mm for one block and one joint.
 - .3 Jointing: tool where exposed or where paint or other finish coating is specified to provide smooth compressed concave surface.
- .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 Jointing.
 - .1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, joints true to line, compressed, uniformly concave joints where concave joints are indicated.
- .3 Building In.
 - .1 Build in items required to be built into masonry.
 - .2 Prevent displacement of built in items during construction. Check plumb, location and alignment frequently, as work progresses.
 - .3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.
- .4 Wetting of Concrete Masonry Units.
 - .1 Do not wet concrete masonry units prior to use.
- .5 Concrete block lintels:
 - .1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced lintels are not indicated.
 - .2 End bearing: not less than 200 mm.
- .6 Support of loads.
 - .1 Use 25 MPa concrete, Class "N" exposure, where concrete fill is used in lieu of solid units.
 - .2 Use grout to CSA A179 where grout is used in lieu of solid units.
 - .3 Install building paper below voids to be filled with concrete or grout; keep paper 25 mm back from faces of units.
- .7 Provision for movement.
 - .1 Leave 6 mm space below shelf angles.
 - .2 Leave 25 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.
- .8 Interface with other work:
 - .1 Cut openings in existing work as indicated.
 - .2 Openings in walls: approved by Departmental Representative.
 - .3 Make good existing work. Use materials to match existing.
- .9 Coordinate mechanical, electrical and food services conduit, wiring, and built-in support items with masonry reinforcement and grouting requirements. Conflicts to be coordinated and resolved to the satisfaction of the Departmental Representative.

3.4 REINFORCING AND CONNECTING

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

3.5 BONDING AND TYING

- .1 Bond walls of two or more wythes using metal connectors in accordance with CAN/CSA-A371, CSA S304.1 and as indicated.
- .2 Tie masonry veneer to backing in accordance with NBC, CAN/CSA-A371, CSA S304.1 and as indicated.

3.6 REINFORCED LINTELS AND BOND BEAMS

- .1 Reinforce masonry lintels and bond beams as indicated.
- .2 Place and grout reinforcement in accordance with CAN/CSA-A179, CAN/CSA-A371 and CSA S304.1.

3.7 GROUTING

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

3.8 ANCHORS

- .1 Supply and install metal anchors as indicated.

3.9 LATERAL SUPPORT AND ANCHORAGE

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

3.10 SITE TOLERANCES

- .1 Tolerances of CAN/CSA-A371 apply.

3.11 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning. 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 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.12 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 work of this Section.

END OF SECTION