

Part 1 General

1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN3 A165 SERIES-94(R2000), CSA Standards on Concrete Masonry Units covers: A165.1, A165.2, A165.3.
 - .2 CSA A179-94(R1999), Mortar and Grout for Unit Masonry.
 - .3 CSA-A370-94(C1999), Connectors for Masonry.
 - .4 CSA-A371-94(R1999), Masonry Construction for Buildings.
 - .5 CSA G30.14-M1983(R1998), Deformed Steel Wire For Concrete Reinforcement.
 - .6 CAN/CSA G30.18-M92, Billet-Steel Bars for Concrete Reinforcement.
 - .7 CSA-S304.1-94(R2001), Masonry Design for Buildings.
 - .8 CAN/CSA A82.1-M87(R1999), Burned Clay Brick (Solid Masonry Units Made From Clay or Shale).

1.2 SUBMITTALS

- .1 Submit samples in accordance with Sections 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Sections 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.
 - .2 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.
 - .1 Indicate VOC's for epoxy coatings and galvanized protective coatings and touch-up products.
 - .2 Indicate VOC's for mortar, grout, parging, colour additives and admixtures.
- .3 Shop Drawings :
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.
 - .2 Shop drawings consist of bar bending details, lists and placing drawings.
 - .3 On placing drawings, indicate sizes, spacing, location and quantities of reinforcement and connectors.

1.3 STORAGE AND HANDLING

- .1 Protect on site stored or installed material from moisture damage in accordance with manufacturer's printed instructions.

1.4 LEED REQUIREMENTS

- .1 See Section 01 35 21 - LEED Requirements.

- .2 LEED Submittals: Submit LEED supporting documentation in accordance with Section 01 35 21 - LEED Requirements.
- .3 Waste Management and Disposal: Dispose of packaging and waste materials in appropriate on-site bins for recycling and disposal in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .4 Resource Reuse: Salvage and reuse existing deconstructed materials in accordance with LEED Materials and Resources Credit MR 3.1 & 3.2 – Resource Reuse.
- .5 Recycled Content: Supply building materials with recycled materials (post consumer plus ½ post-industrial content) in accordance with LEED Materials and Resources Credits MR 4.1 & 4.2 – Recycled Content.
- .6 Regional Materials: Supply building materials that are regionally extracted, harvested, or recovered within 800km of the project location when shipped by truck, or within 2400km of the project location when shipped by rail, in accordance with LEED Materials and Resources Credit MR 5.1 & 5.2 – Regional Materials.
- .7 Indoor Environmental Quality Credit EQ 4 – Low - Emitting Materials.
 - .1 LEED Indoor Environmental Quality Credit EQ 4.1 – Low-Emitting Materials: Adhesives and Sealants.
 - .1 Low VOC complying with SCAQMD Rule #1168, Latest edition.
 - .2 LEED Indoor Environmental Quality Credit EQ 4.2 – Low-Emitting Materials: Paints and Coatings.
 - .1 Architectural paints, coatings and primers applied to interior walls and ceilings to Green Seal Standard GS-11, latest edition.
 - .2 Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates to Green Seal Standard GS-03, latest edition.
 - .3 Clear wood finishes, floor coatings, stains and shellacs applied to interior elements to SCAQMD Rule 1113, latest edition.

Part 2 Products

2.1 GENERAL

- .1 See the Structural Drawings for further information.
- .2 In any situation where the specifications do not agree with the specifications or intent of the Structural Drawings or the Geotechnical Report:
 - .1 The Structural Drawings and Geotechnical Report shall govern.
 - .2 The Consultant must be alerted, whom will then confirm requirements.

2.2 MASONRY UNITS

- .1 Salvage and reuse deconstructed concrete block for new work to extent possible. See Section 02 41 21 – Deconstruction of Structures.

- .1 Provide documentation to Contract Administrator stating quantity of material salvaged and reused. (LEED)
- .2 Standard concrete block units: to CAN3-A165 Series (CAN3-A165.1).
 - .1 Classification: Standard hollow masonry units or as indicated on Structural drawings.
 - .2 LEED Recycled Content: Portland Cement Reduction = 60%
 - .3 Regional Materials: Concrete block to meet LEED regional requirements.
 - .4 Size: modular.
 - .5 Special shapes: provide square units for exposed corners. Provide purpose-made shapes for lintels and bond beams. Provide additional special shapes as indicated.

2.3 REINFORCEMENT AND CONNECTORS

- .1 Bar reinforcement: to CSA-A371 and CAN/CSA G30.18, Grade 400 or as indicated in Structural drawings.
- .2 Wire reinforcement: to CSA-A371 and CSA G30.14, truss type.
- .3 Connectors shall be corrosion resistant: to CSA-A370 and CSA-S304.

2.4 MORTAR AND GROUT

- .1 Low VOC to LEED Requirements – See Section 01 35 21 – LEED Requirements.
- .2 Mortar: to CSA A179.
 - .1 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
 - .2 Colour: ground coloured natural aggregates or metallic oxide pigments.
- .3 Mortar Type: As indicated on Structural drawings.
- .4 Grout: to CSA A179, Table 3.

2.5 ACCESSORIES

- .1 Nailing Inserts: 0.5 mm minimum thickness, galvanized.
- .2 Bolts: 12 mm diameter x 150 mm long with ends bent 50 mm at 90 degrees.

Part 3 Execution

3.1 INSTALLATION

- .1 Do masonry work in accordance with 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.

3.2 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 Concrete block lintels:
 - .1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.
 - .2 End bearing: not less than 200 mm and as indicated on structural drawings.
- .4 Support of loads:
 - .1 Use grout to CSA A179 where grout is used in lieu of solid units.
 - .2 Install building paper below voids to be filled with concrete grout; keep paper 25 mm back from faces of units.
- .5 Provision for movement:
 - .1 Leave 3 mm 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.
- .6 Interface with other work:
 - .1 Cut openings in existing work as indicated.
 - .2 Openings in walls: approved Contract Administrator.
 - .3 Make good existing work. Use materials to match existing.

3.3 REINFORCING AND CONNECTING

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

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- .2 Prior to placing grout, obtain Contract Administrator's approval of placement of reinforcement and connectors.

3.4 BONDING AND TYING

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

3.5 REINFORCED LINTELS AND BOND BEAMS

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

3.6 GROUTING

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

3.7 ANCHORS

- .1 Supply and install metal anchors as indicated.

3.8 LATERAL SUPPORT AND ANCHORAGE

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

3.9 SITE TOLERANCES

- .1 Tolerances in notes to Clause 5.3 of CSA-A371 apply.

3.10 FIELD QUALITY CONTROL

- .1 Inspection and testing will be carried out by Testing Laboratory designated by Contract Administrator.

3.11 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.12 PROTECTION

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

END OF SECTION