

Part 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 04 05 12 – Masonry Mortar and Grout.
- .2 Section 04 22 00 – Concrete Unit Masonry.
- .3 Section 05 50 00 – Metal Fabrications.
- .4 Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

- .1 CSA Group.
 - .1 CSA-A165-14, CSA standards on Concrete Masonry Units.
 - .2 CSA-A179-14, Mortar and Grout for Unit Masonry.
 - .3 CSA-A371-14, Masonry Construction for Buildings.
- .2 National Building Code – 2010.
- .3 Institut de maçonnerie du Québec, "Maçonnerie-Info" documents.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Manufacturer's Reports:
 - .1 Provide manufacturer's installation instructions.

1.4 SCOPE

- .1 Provide materials, scaffolding, tools and personnel required to complete work under this specification section.

1.5 QUALITY ASSURANCE

- .1 Test Reports:
 - .1 Submit test reports certifying physical characteristics and performance criteria.
 - .2 Submit reports of laboratory tests certifying masonry components and mortar constituents comply with requirements.
- .2 Certificates: submit documents signed by manufacturer certifying physical characteristics and performance criteria of products and materials.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver materials to work site dry.
- .3 Storage and protection:
 - .1 Keep materials dry until use.
 - .2 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.7 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Cold weather requirements:
 - .1 Supplementary provision to CAN/CSA-A371 with following requirements.

- .2 Maintain temperature of mortar between 5 degrees C and 50 degrees C until batch is used or becomes stable.
- .3 Protect from windchill and weather.
- .4 Install temporary protection and heating. Maintain and operate to maintain temperature within allowed limits.
- .2 Hot weather requirements:
 - .1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.
 - .2 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until masonry work is completed and protected by flashings or other permanent construction.

Part 2 PRODUCTS

2.1 MATERIALS

- .1 Masonry materials are specified elsewhere in related Sections.

Part 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written specifications, including technical data sheets and instructions in product catalogues and on packaging.

3.2 PREPARATION

- .1 Temporarily support masonry work during and after work, until permanent lateral support is put in place.
- .2 Obtain approval of bracing from Departmental Representative.
- .3 Protect adjacent materials from damage and disfiguration.

3.3 INSTALLATION

- .1 Do masonry work in accordance with CAN/CSA-A371 except where specified otherwise.
- .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.

3.4 CONSTRUCTION

- .1 Exposed masonry:
 - .1 Remove chipped, cracked, and otherwise damaged units, in accordance with CAN/CSA-A165, in exposed masonry and replace with undamaged units.
- .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.
 - .2 Strike flush joints concealed in walls and joints in walls to receive plaster, tile, insulation, or other applied material except paint or similar thin finish coating.
- .3 Cutting:
 - .1 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects.
 - .2 Make cuts straight, clean, and free from uneven edges.
- .4 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.
- .5 Support of loads:
 - .1 Use 25 MPa concrete to Section 03 30 00 - Cast-in-Place Concrete, where concrete fill is used in lieu of solid units.
 - .2 Use grout to CAN/CSA-A179 where grout is used in lieu of solid units.
 - .3 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units.
- .6 Provision for movement:
 - .1 Leave 10 mm space below shelf angles.
 - .2 Leave 16 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.
- .7 Loose steel lintels:
 - .1 Install loose steel lintels. Center over opening width.
- .8 Control joints:
 - .1 Construct continuous control joints as indicated.
 - .2 Leave ± 20 mm space between blocks, stone and bricks to insert backing foam as indicated in Section 04 05 23. Seal as indicated in Section 07 92 10.
 - .3 Space to ensure both parts are completely independent.

3.5 SITE TOLERANCES

- .1 Tolerances in notes to CAN/CSA-A371 apply.

3.6 FIELD QUALITY CONTROL

- .1 A test laboratory designated by the Departmental Representative will conduct inspections and tests.

3.7 CLEANING

- .1 Upon completion of work, remove accumulated construction and environmental dirt and debris from work site.
- .2 Upon completion of work and performance tests, remove surplus materials, waste, tools and safety barriers from site.

3.8 PROTECTION

- .1 Protect masonry and other work from marks and/or other damage.
- .2 Protect work from mortar drips.
- .3 Use non-staining tarps.

END OF SECTION

Part 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 04 05 00 – Common Work Results for Masonry.
- .2 Section 04 05 23 – Masonry Accessories.
- .3 Section 04 22 00 – Concrete Unit Masonry.

1.2 REFERENCES

- .1 CSA Group.
 - .1 CSA-A179-14, Mortar and Grout for Unit Masonry.
 - .2 CSA-A3000-13, Cementitious materials compendium.
- .2 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM C207-06, Standard Specification for Hydrated Lime for Masonry Purposes.
 - .2 ASTM C979-16, Standard Specification for Pigments for Integrally Colored Concrete.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit manufacturer's instructions, printed product literature and data sheets for masonry mortar and grout and include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Manufacturers' Instructions:
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Sort and recycle waste in accordance with Section 01 74 21 – Construction/Demolition Management and Disposal.
- .2 Remove packaging waste from work site and ship to appropriate recycling centres.

Part 2 PRODUCTS

2.1 MATERIALS

- .1 Mortar and grout: to CSA-A179.
- .2 For joints 6 mm thick, use granulate passing through 1.18 mm screen size.
- .3 Aggregate: to CSA-A179.
- .4 Sand: clean, to CSA-A179.
- .5 Water: potable, to CSA A179.
- .6 Cement: Portland type 10, to CSA-A3000.
- .7 Lime: Type S hydrated lime, to ASTM C-207.

- .8 Colour additives: metal oxide pigments, to ASTM C979.
- .9 Admixtures in mortar mixtures is not allowed.
- .10 Masonry cements not allowed for use in mortars.

2.2 MORTAR MIXES

- .1 Mortar for interior masonry:
 - .1 Non-Load Bearing: Type S, factory processed, calibrated hydraulic cement and sand to CSA A179.
 - .1 Compressive strength: 7 days 10 Mpa
28 days 15 Mpa
 - .2 Density: 1,700 kg / m³

2.3 GROUT MIXES

- .1 Cellular grout:
 - .1 Portland cement, fine sand and additives:
 - .1 Compressive strength at 28 days: 15 Mpa.
 - .2 Tensile strength at 28 days: 1.1 Mpa
 - .3 Density: 1,870 kg / m³.

2.4 SOURCE

- .1 Use materials of same brand and aggregates from same source for all work.

Part 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 CONSTRUCTION

- .1 Do masonry mortar and grout work in accordance with CSA-A179 except where specified otherwise.
- .2 Use clean mixing machine.

3.3 CLEANING

- .1 Upon completion remove surplus materials, rubbish, tools, equipment and security barriers.

END OF SECTION

Part 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 04 05 00 – Common Work Results for Masonry.
- .2 Section 04 05 12 – Masonry Mortar and Grout.
- .3 Section 04 22 00 – Concrete Unit Masonry.
- .4 Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

- .1 CSA Group.
 - .1 CSA-A23.1/A23.2-14, Concrete materials and methods of concrete construction / Test methods and standard practices for concrete.
 - .2 CSA-A179-14, Mortar and grout for unit masonry.
 - .3 CSA A370, Connectors for masonry.
 - .4 CSA-A371-14, Masonry Construction for Buildings.
 - .5 CSA-S304-14, Design of Masonry Structures.
 - .6 CSA G30.18-09 (R2014), Carbon Steel Bars for Concrete Reinforcement.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 MANUFACTURER'S INSTRUCTIONS

- .1 Submit manufacturer's installation instructions.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Sort and recycle waste in accordance with Section 01 74 21 – Construction/Demolition Management and Disposal.
- .2 Remove packaging waste from work site and ship to appropriate recycling centres.

Part 2 Products

2.1 MATERIALS

- .1 Vertical reinforcing:
 - .1 Reinforcing bards: to CSA-A371 and CSA G30.18.
- .2 Horizontal reinforcing:
 - .1 Welded steel wire fabric, hot-dipped, 3.7 mm diameter, to CSA-A371.
- .3 Concrete block anchors:
 - .1 Steel plates, hot dipped, 19 mm wide x 125 mm long x 2.7 mm thick, bent for wire and designed to anchor to building.
 - .2 Trapezoidal reinforcing wire, hot-dipped, 5 mm in diameter.
- .4 Sealants: to Section 07 92 00 – Joint Sealants.

Part 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 GENERAL

- .1 Provide and install reinforcing and anchors in accordance with requirements of CSA-A370, CSA-A371, CAN/CSA-A23.1/23.2 and CSA-S304, unless indicated otherwise.
- .2 Obtain approval of Professional concerning location of reinforcing and anchors prior to placing concrete.

3.3 INTERIOR MASONRY ANCHORS

- .1 Provide and install anchors at junction of structural components and other surfaces.
- .2 Install masonry anchors every two rows.
- .3 Space mechanically attached anchors to adjust metallic wire in masonry joints.

3.4 VERTICAL REINFORCEMENT AND GROUT INJECTION

- .1 Install vertical reinforcement and inject grout in masonry in accordance with CSA-S304, CSA-A371 and CSA-A179 and as indicated.

3.5 HORIZONTAL REINFORCEMENT

- .1 Install horizontal reinforcement every two rows.
- .2 Lap reinforcing fabric minimum 300 mm.

3.6 CLEANING

- .1 Upon completion remove surplus materials, rubbish, tools and equipment and security barriers.

END OF SECTION

Part 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 04 05 00 – Common Work Results for Masonry.
- .2 Section 04 05 12 – Masonry Mortar and Grout.
- .3 Section 04 05 23 – Masonry Anchorage and Reinforcing.
- .4 Section 05 50 00 – Metal Fabrications.
- .5 Section 07 92 00 – Joint Sealants.
- .6 Section 08 11 00 – Metal Doors and Frames.

1.2 REFERENCES

- .1 CSA Group.
 - .1 CSA-A165-14, CSA Standards on Concrete Masonry Units.
 - .2 CSA-A371-14, Masonry Construction for Buildings.

1.3 EXISTING CONDITIONS

- .1 Examine work for prior repairs, cracks, moisture, and report any problems to the Departmental Representative before undertaking work.
- .2 Study joint models and method for reproducing them. Submit samples for approval prior to undertaking joint work.

1.4 DELIVERY AND HANDLING

- .1 Ensure offloading materials and packaging does not discolour masonry surfaces.
- .2 Store masonry units off ground and not in contact with other materials to avoid staining.
- .3 Use slings and fork lifts of sufficient length that will not damage masonry units during handling.
- .4 Protect corners from damage.

1.5 STORAGE

- .1 Stack masonry units on wood supports or pallets minimum 75 mm off ground.
- .2 Protect masonry units from staining during storage.
- .3 Do not use salt to melt ice accumulated on masonry units.

1.6 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Samples:
 - .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit one sample of each masonry component type.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Sort and recycle waste in accordance with Section 01 74 21 – Construction/Demolition Management and Disposal.
- .2 Remove packaging waste from work site and ship to appropriate recycling centres.

- .3 Divert unused masonry materials from landfill to metal recycling facility as approved by Departmental Representative.

Part 2 GENERAL

2.1 MATERIALS

- .1 Concrete block units for interior: to CAN/CSA-A165.
 - .1 Cellular concrete units :
 - .1 Classification: H/15/A/O.
 - .2 Compressive strength : 15 MPa (14 days)
 - .3 Density (14 days) : 2160 kg/m³ min.
 - .4 Tolerance : 2mm (height), 3mm (length) et 2mm (width)
 - .5 Dimensions: modular metric as indicated on drawings.
 - .6 Fire resistant characteristics as indicated on drawings.
 - .2 Special shapes: adapted to purpose, for lintels, as indicated.

Part 3 EXECUTION

3.1 PREPARATION

- .1 Place security devices and signposting around work one, as indicted.
- .2 Install props and supports as necessary.
- .3 Install freestanding scaffolding.
- .4 Remove scaffolding when no longer needed.
- .5 Upon completion of work, remove security devices and signposting.

3.2 INSTALLATION – INTERIOR MASONRY

- .1 Installer les éléments de maçonnerie en conformité avec la norme CSA-A371.
- .2 Concrete block units for interior:
 - .1 Bond: running, stack.
 - .2 Coursing height: 200 mm one row and one joint.
 - .3 Jointing: concave where exposed or where paint or other finish coating is specified.
- .3 Concrete masonry 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 as indicated on drawings.
- .4 Cleaning:
 - .1 Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block.

END OF SECTION