

PART 1 - GENERAL

1.1 References

- .1 ASTM International (ASTM).
  - .1 ASTM E96/E96M-13, Standard Test Methods for Water Vapor Transmission of Materials.
- .2 Canadian Standards Association (CSA)
  - .1 CSA A82-14, Fired Masonry Brick Made From Clay or Shale.
  - .2 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 S304-14, Design of Masonry Structures.

1.2 Quality Assurance

- .1 Masonry design: to CSA S304-M.
- .2 Masonry construction: to CAN/CSA A371.
- .3 National Building Code of Canada 2010.
- .4 Local ordinances and bylaws.
- .5 Where the provision of Codes and Standards conflict with the requirements of this specification, the more stringent requirements shall govern.
- .6 Perform work using qualified masons under direction of an experienced foreman.

1.3 Delivery, Storage and Handling

- .1 Deliver materials to job site in dry condition.
- .2 Keep materials dry until use.
- .3 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.4 Cold Weather Protection

- .1 Cold weather protection shall conform to CAN/CSA A371.
- .2 Provide and maintain cold weather protection requirements for enclosure and heating of walls.

- .3 Provide sufficient heat and enclosure for storage and mixing of mortar materials to maintain specified temperatures.
- 1.5 Hot Weather Requirements
  - .1 Protect freshly laid masonry from drying too rapidly by means of waterproof, nonstaining coverings.
- 1.6 Protection
  - .1 Keep masonry dry using waterproof, nonstaining 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.
  - .2 Protect masonry and other work from marking and other damage. Protect windows and other completed work from mortar droppings. Use nonstaining coverings.
  - .3 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

## PART 2 - PRODUCTS

- 2.1 Mortar and Grout
  - .1 Mortar and grout: CSA A179.
    - .1 Mortar: based on Proportion specifications.
      - .1 Veneer: Type N.
    - .2 Colour match mortar to match existing weathered mortar.
    - .3 Grout: fine grout, to CSA A179, Table 5.
  - .2 Use same brands of materials and source of aggregates for entire project.
- 2.2 Thru-Wall flashing
  - .1 Thru wall flashing membrane: SBS modified asphalt with cross laminated polyethylene face; designed specifically for thru-wall flashing and incorporating thicker polyethylene face.
    - .1 Water vapour permeance: 2.8 ng/Pa.m<sup>2</sup>.s (0.05 perms) when tested in accordance with ASTM E96/E96M.
    - .2 Water absorption: maximum 1%.

- .3 Acceptable Materials: Perma-Barrier Wall Flashing by W.R. Grace, Blueskin TWF by Henry Company, Aquabarrier TWF by IKO, Sopraseal WFM by Soprema.
  - .2 Accessories:
    - .1 Primer: emulsion type primer as recommended by air barrier manufacturer.
    - .2 Sealant: of type recommended by air/vapour retarder manufacturer.
- 2.3 Masonry Accessories
  - .1 Weep holes:
    - .1 Cellular plastic: honeycomb design, modular sizing; colour as selected by Departmental Representative.
      - .1 Acceptable Materials: Cell Vent by Blok-Lok, QV - Quadro Vent by Hohmann & Bernard, Inc.
- 2.4 Reinforcement
  - .1 Connectors: to CAN/CSA A370 and CSA S304.1.
    - .1 Ties: adjustable type, 1.5 mm thick plate complete with fastener to suit backup and 4.76 mm Ø wire tie.
      - .1 Acceptable Materials: BL 407 by Blok-Lok; BL 407 by Hohmann & Bernard, Inc.
  - .2 Corrosion protection: to CSA S304.1, galvanized in accordance with CSA S304.1 and CAN/CSA A370.
- 2.5 Masonry Units
  - .1 Face brick: Burned clay brick to CAN/CSA A82.1.
    - .1 Appearance classification: Type X
    - .2 Durability classification: Grade - EG (exterior grade).
    - .3 Size: modular, to match existing.
    - .4 Colour and texture: to match existing.

### PART 3 - EXECUTION

- 3.1 Preparation
  - .1 Accurately lay out work. Prepare items to build-in as the work proceeds, either supplied and installed by Others or installed under this section.

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- .2 Coordinate work of this section with Others, such as electrical trades, miscellaneous metal suppliers, etc.
- 3.2 Mortar and Grout Work
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- .1 Mortar mixing:
- .1 Thoroughly mix mortar using paddle type mixer in good condition.
  - .2 Thoroughly dry-mix sand and cement before adding water. Mix minimum four minutes after all ingredients are added.
  - .3 Use mortar within 2 hours of mixing at temperatures over 25°C, within 3 hours under 25°C.
  - .4 Retempering is permitted within 2 hours of mixing to replace water lost by evaporation.
- 3.3 Reinforcement
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- .1 Install ties in brick at 400 mm o.c. vertically.
- 3.4 Thru-Wall Flashing Installation
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- .1 Install materials in accordance with manufacturer's instructions.
- .2 Thru-wall flashing:
- .1 Check top of existing construction for projections which might puncture flashing material.
  - .2 Install flashings under exterior masonry bearing on existing construction, slabs, shelf angles, steel angles over openings, and elsewhere as indicated. Install flashings under weep hole courses.
  - .3 Carry flashings from front edge of masonry, under outer wythe, then up backing not less than 200 mm.
  - .4 Lap joints 50 mm.
  - .5 Seal joint at top of membrane with sealant.

3.5 Accessory Installation	.1	Install weep hole units in head joints in the first course immediately above all flashing. Space at 600 mm o.c. Keep free of mortar droppings.
3.6 Laying BRICK	.1	Bond: to match existing.
	.2	Coursing height: to match existing.
	.3	Jointing: concave.
3.7 Cutting and Fitting	.1	Do cutting, fitting, drilling, patching and making good for other trades in masonry work.
3.8 Lintels and Built-in Work	.1	Build in loose and miscellaneous items of steel, and other appurtenances into the masonry work in their proper position as the work proceeds, and set plumb, level, rigid and secure. Take care so as not to damage items being built in.
3.9 CLEANING	.1	Perform cleaning as soon as possible after installation to remove construction and accumulated environmental dirt.
	.2	Clean brick: Protect windows, sills, doors, trim and other work, and clean brick masonry as follows. .1 Remove large particles with wood paddles without damaging surface. Saturate masonry with clean water and flush off loose mortar and dirt. .2 Scrub with solution of 25 mL trisodium phosphate and 25 mL household detergent dissolved in 1 L of clean water using stiff fibre brushes, then clean off immediately with clean water using hose. Alternatively, use proprietary compound recommended by brick masonry manufacturer in accordance with manufacturer's directions.

- .3 Repeat cleaning process as often as necessary to remove mortar and other stains.
- .4 Use acid solution treatment for difficult to clean masonry as described in Technical Note No.20 by the Brick Industry Association.

END OF SECTION

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