PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures.

.2 Section 01 45 00 - Quality Control.

.3 Section 03 30 00 - Cast-in-Place Concrete.

.4 Section 04 05 12 – Masonry Mortar and Grout.

.5 Section 04 05 19 - Masonry Anchorage and Reinforcing.

.6 Section 04 05 23 - Masonry Accessories.

.7 Section 04 22 00 - Concrete Unit Masonry.

.8 Section 05 50 00 - Metal Fabrications.

.9 Section 07 21 13 - Board Insulation.

.10 Section 07 92 10 - Joint Sealing.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian Standards Association (CSA International).
- .1 CSA-A165, Standards on Concrete Masonry Units.
- .2 CSA A179, Mortar and Grout for Unit Masonry.
- .3 CSA-A371, Masonry Construction for Buildings.

1.3 SUBMITTALS

.1 Product Data.
- .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

.2 Samples.
- .1 If requested, submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit samples.
  - .1 Two of each type of masonry unit specified.
  - .2 One of each type of masonry accessory specified.
  - .3 One of each type of masonry reinforcement, tie and connector proposed for use.

.3 Manufacturer's Instructions.
- .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

.1 Mock-ups.
- .1 Construct mock-ups in accordance with Section 01 45 00 - Quality Control.
- .2 Construct mock-up panel of exterior masonry wall construction 1200 x 1800 mm showing masonry colours and textures, use of reinforcement, flashing, jointing, coursing, mortar and workmanship.
- .3 Mock-up will be used:
  - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
- .4 Construct mock-up where approved.
- .5 Allow 24 hours for inspection of mock-up by Contract Administrator before proceeding with work.
- .6 When accepted by Contract Administrator, mock-up will demonstrate minimum standard for this work. Mock-up may remain as part of finished work.

.2 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

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

.2 Deliver materials to job site in dry condition.

.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.

1.6 SITE CONDITIONS

.1 Site Environmental Requirements.
- .1 Cold weather requirements.
  - .1 Supplement Clause 5.15.2 of CSA-A371 with following requirements.
    - .1 Maintain temperature of mortar between 5 degrees C and 50 degrees C until batch is used or becomes stable.
    - .2 Maintain ambient temperature between 5 degrees C and 50 degrees C and protect site from wind chill.
  - .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 in Related Sections.

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 PREPARATION

.1 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

3.3 INSTALLATION

.1 Do masonry work in accordance with 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 CSA A-165, Clause 82.1, 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 Provide clean, fully flush joints where flush joints are indicated.

.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 Wetting of bricks.
.1 Except in cold weather, wet bricks having an initial rate of absorption exceeding 1 g/minute/1000 mm^2: wet to uniform degree of saturation, 3 to 24 hours before laying, and do not lay until surface dry.
.2 Wet tops of walls built of bricks qualifying for wetting, when recommencing work on such walls.

.6 Support of loads.
.1 Use 35 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 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 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.

.8 Control joints.
.1 Construct continuous control joints as indicated.

.9 Expansion joints.
.1 Build-in continuous expansion joints as indicated.

.10 Interface with other work.
.1 Cut openings in existing work as indicated.
.2 Openings in walls: approved by Contract Administrator.
.3 Make good existing work. Use materials to match existing.

11 Sealant.
.1 Seal masonry and joints as per Section 09 91 23 – Interior Painting.

3.5 SITE TOLERANCES

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

3.6 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.

3.7 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

PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 04 05 10 - Common Work Results for Masonry.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian Standards Association (CSA International).

.1 CSA A179, Mortar and Grout for Unit Masonry.

1.3 QUALITY ASSURANCE

.1 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Use same brands of materials and source of aggregate for entire project.

.2 Mortar: CSA A179.

.3 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.

.4 Colour: ground coloured natural aggregates or metallic oxide pigments.

.5 Mortar for exterior masonry above grade:

.1 Loadbearing: type N based on Proportion specifications.

.2 Non-Loadbearing: type N based on Proportion specifications.

.6 Following applies regardless of mortar types and uses specified above:

.1 Mortar for calcium silicate brick and concrete brick: type O based on Proportion specifications.

.2 Mortar for grouted reinforced masonry: type S based on Proportion specifications.

.7 Coloured mortar: use colouring admixture not exceeding 10% of cement content by mass, or integrally coloured masonry cement, to produce coloured mortar to match approved sample.

.8 Non-Staining mortar: use non-staining masonry cement for cementitious portion of specified mortar type.

.9 Grout: to CSA A179, Table 3.

2.2 MIXES

.1 Colour: mix grout to semi-fluid consistency.

.2 Coloured mortars: incorporate colour into mixes in accordance with manufacturer's instructions. Refer to drawings for mortar colours and locations.

.1 Use clean mixer for coloured mortar.

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.

3.3 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

End of Section

PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 04 05 10 - Common Work Results for Masonry.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian Standards Association (CSA International).

- .1 CAN/CSA-A23.1/A23.2, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
- .2 CSA-A370, Connectors for Masonry.
- .3 CSA-A371, Masonry Construction for Buildings.
- .4 CSA-S304.1, Masonry Design for Buildings.
- .5 CSA A179, Mortar and Grout For Unit Masonry.

1.3 SUBMITTALS

.1 Shop Drawings:

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .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.

.2 Manufacturer's Instructions:

- .1 Submit manufacturer's installation instructions.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Bar reinforcement: to CSA-A371 and CAN/CSA G30.18, Grade 300 for bars 10M or smaller, and Grade 400 for bars larger than 10M.

.2 Connectors: to CSA-A370 and CSA-S304.

.3 Corrosion protection: to CSA-S304, galvanized to CSA-S304 and CSA-A370.

2.2 FABRICATION

.1 Fabricate reinforcing in accordance with CAN/CSA-A23.1.

.2 Fabricate connectors in accordance with CSA-A370.

.3 Obtain Contract Administrator's approval for locations of reinforcement splices other than shown on placing drawings.

.4 Upon approval of Contract Administrator, weld reinforcement in accordance with CSA W186.

.5 Ship reinforcement and connectors, clearly identified in accordance with drawings.

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 Supply and install masonry connectors and reinforcement in accordance with CSA-A370, CSA-

A371, CAN/CSA-A23.1 and CSA-S304.1 unless indicated otherwise.

3.3 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.

3.4 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.

3.5 GROUTING

.1 Grout masonry in accordance with CSA-S304.1, CSA-A371 and CSA-A179 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 MOVEMENT JOINTS

.1 Reinforcement will not be continuous across movement joints unless otherwise indicated.

3.9 FIELD BENDING

.1 Do not field bend reinforcement and connectors except where indicated or authorized by Contract Administrator.

.2 When field bending is authorized, bend without heat, applying a slow and steady pressure.

.3 Replace bars and connectors which develop cracks or splits.

3.10 FIELD TOUCH-UP

.1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcement steel and connectors with compatible finish to provide continuous coating.

3.11 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

End of Section

PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures.

.2 Section 04 05 10 - Common Work Results for Masonry.

.3 Section 04 05 19 - Masonry Anchorage and Reinforcing.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian Standards Association (CSA International).

.1 CSA-A371, Masonry Construction for Buildings.

1.3 SUBMITTALS

.1 Manufacturer's Instructions:

.1 Submit manufacturer's installation instructions.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Control joint filler: purpose-made elastomer 80 durometer hardness to ASTM D 2240 of size and shape indicated.

.2 Lap adhesive: recommended by masonry flashing manufacturer.

.3 Copper flashings.

.1 Copper sheet, 300 g/m², asphalt laminated to two layers of creped kraft paper, reinforced with 12.7 x 12.7 mm fibreglass scrim.

.4 Aluminum flashings.

.1 Aluminum foil, .004 mm thick, asphalt laminated between two sheets of creped kraft paper with one exposed paper surface coated with asphalt-wax treatment.

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 INSTALLATION

.1 Install continuous control joint fillers in control joints at locations indicated on drawings.

.2 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.

3.3 CONSTRUCTION

.1 Build in flashings in masonry in accordance with CSA-A371.

.1 Install flashings under exterior masonry bearing on foundation walls, slabs, shelf angles, and steel angles over openings. Install flashings under weep hole courses and as indicated.

.2 In cavity walls and veneered walls, carry flashings from front edge of masonry, under outer wythe, then up backing not less than 150 mm, and as follows:

.1 For wood frame backing, staple flashing to walls behind sheathing paper.

.2 For gypsum board backing, bond to wall using manufacturer's recommended adhesive.

.3 Lap joints 150 mm and seal with adhesive.

3.4 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

End of Section

PART 1 - GENERAL

1.1 RELATED SECTIONS

.1 Section 04 05 10 - Common Work Results for Masonry.

.2 Section 04 05 12 - Masonry Mortar and Grout.

.3 Section 04 05 19 - Masonry Anchorage and Reinforcements.

.4 Section 04 05 23 - Masonry Accessories.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian Standards Association (CSA International)

.1 CAN/CSA A165 Series, Standards on Concrete Masonry Units

PART 2 - PRODUCTS

2.1 MATERIALS

.1 Standard concrete block units: to CAN3-A165 Series (CAN3-A165.1), 1 Hour Fire Resistance Rating.

.1 Classification: H / 15 / A / O.
.2 Size: Depth 190mm x Height 190mm x Width 390mm.
.3 Special shapes: Provide purpose-made shapes for lintels and bond beams.
.4 Colour: to match Pietra Antica.
.5 Finish: Smooth Face.
.6 Standard of Acceptance: Expocrete.

.2 Standard concrete block units: to CAN3-A165 Series (CAN3-A165.1), 1 Hour Fire Resistance Rating.

.1 Classification: H / 15 / A / O.
.2 Size: Depth 188mm x Height 190mm x Width 390mm.
.3 Special shapes: Provide purpose-made shapes for lintels and bond beams.
.4 Colour: Granito.
.5 Finish: Terrazzo. Refer to drawings for terrazzo finished faces and locations.
.6 Standard of Acceptance: Terazzo Block as manufactured by Expocrete.

.3 Standard concrete block units: to CAN3-A165 Series (CAN3-A165.1), 1 Hour Fire Resistance Rating.

.1 Classification: H / 15 / A / O.
.2 Size: Depth 188mm x Height 190mm x Width 390mm.
.3 Special shapes: Provide purpose-made shapes for lintels and bond beams.
.4 Colour: Pietra Antica.
.5 Finish: Terrazzo. Refer to drawings for terrazzo finished faces and locations.
.6 Standard of Acceptance: Terazzo Block as manufactured by Expocrete.

PART 3 - EXECUTION

3.1 INSTALLATION

.1 Concrete block units.

.1 Bond: running.
.2 Coursing height: 200 mm for one block and one joint unless noted otherwise.
.3 Jointing: concave where exposed or where paint or other finish coating is specified.

.2 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.

3.2 CLEANING

.1 Standard and Decorative block: Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block and finally by brushing.

End of Section