



## TECHNICAL DATA & DETAILS FOR ARCHITECTURAL & CAMBRIDGE SERIES BLOCKS

All Richvale York Block Inc. products should be handled with care and this information is intended to assist masons, designers and builders when using our product to achieve the best performance in the field.

### Exterior Installation

- Ensure that Concrete Block products delivered to job site remain as dry as possible. Concrete masonry units should never be wetted immediately before or during placement.
- All required flashing with sloped drip edge and damp-proofing should be installed.
- Flashing and weep holes or open head joints should be installed.
- All joints between the coping units and parapet walls should be raked and caulking applied.
- During installation of masonry units protect walls from rain or snow and other moisture by covering.

Handle Cambridge Series product with care in order to avoid minor chipping.

### Crack Control & Control Joints

- Concrete masonry walls tend to *SHRINK* whereas clay brick walls tend to *EXPAND*.
- Control Joints are used to allow this *MOVEMENT*.
- Concrete masonry units usually require only *VERTICAL* control joints.
- Shrinkage cracks in concrete masonry units are an aesthetic rather than a structural concern.
- Crack control recommendations for concrete masonry veneers are as follows: maximum panel length to height ratio of 1 to 1 1/2 to a maximum of 20'-0" (6.1m) and where stress concentrations occur.
- Horizontal joint reinforcement should be spaced at 16" (406mm) O.C. and Type N mortar should be used.
- Vertical Control joints should be located where stress concentrations occur such as:
  - Changes in wall height or wall thickness
  - Openings and
  - End of Lintels



Figure 2—Example of Residential Control Joint Placement

### Crack Preventative Measures

- Make sure that concrete masonry units are relatively dry when laid – this will help minimize shrinkage.
- Minimize water absorption – have Richvale York Block incorporate *Integral water Repellents* (Dry-Block) additives at production stage.
- Using a lower compressive strength mortar compared to the masonry unit, will ensure that cracks occur in the mortar joints rather than through the unit.
- For veneer wall control joints – mortar joints should be raked out and a backer rod is installed and sealed with a sealant or caulking.

Refer to NCMA TEK 10-4-Crack Control or contact the Richvale York Head office for more information.

### Anchor Ties and Weepers

- Anchors and ties are types of connectors which attach masonry to a structure or two or more wythes of masonry together.
- Connectors are used to connect wythes of masonry, intersecting walls or masonry walls to the structured frame.
- Provide adequate corrosion protection by using either galvanized or epoxy coated Anchor and Ties.

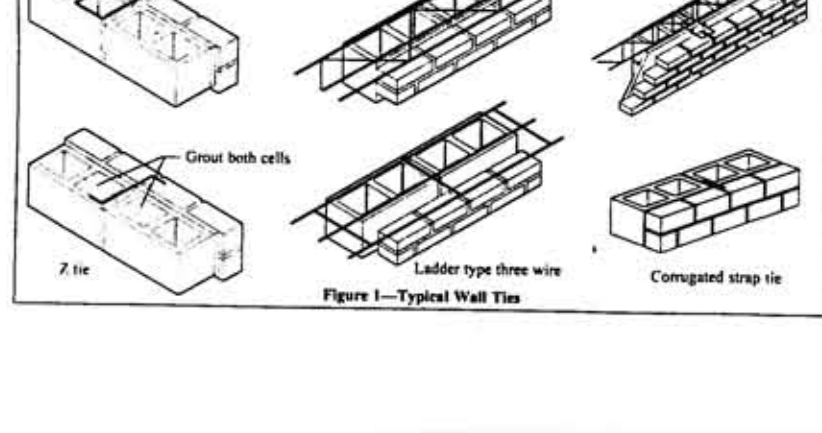


Figure 1—Typical Wall Ties

- Connectors must be embedded at least 1 1/2 (38mm) into a mortar bed of solid units. The required embedment of unit ties in hollow masonry is that the tie must extend completely across the hollow units.

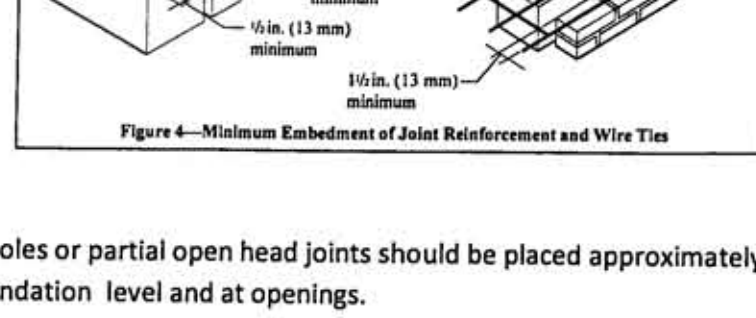


Figure 4—Minimum Embedment of Joint Reinforcement and Wire Ties

- Weep holes or partial open head joints should be placed approximately 32" (813mm) apart at the foundation level and at openings.

Refer to NCMA TEK 12-1A and NCMA TEK 19-5A Flashing – Anchors and Ties or contact Richvale York head office for more information.

### Flashing

- Flashing in a cavity wall at the top of foundation wall should be sealed to the exterior face of the back-up block and terminated with a sloped drip.

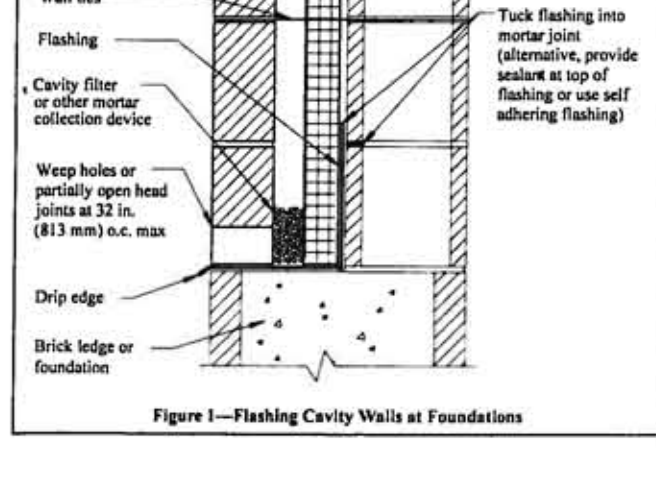


Figure 1—Flashing Cavity Walls at Foundations

- Cavity Filter or any other mortar collection device should be used to avoid clogging of air space.
- Use flashing at all lintel and sill locations as per figure 2 and 3.

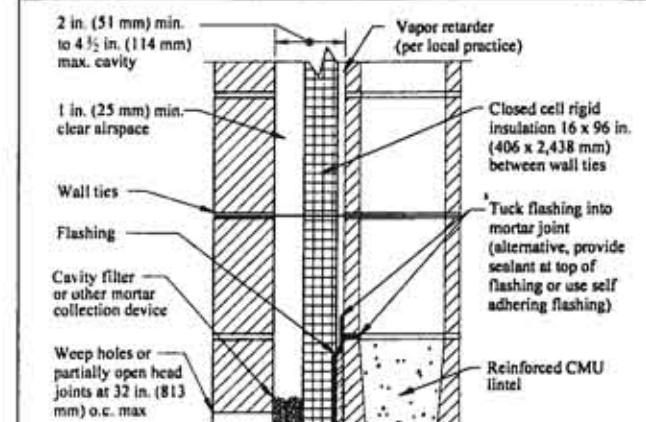


Figure 2—Flashing Cavity Walls at Boad Beam Locations

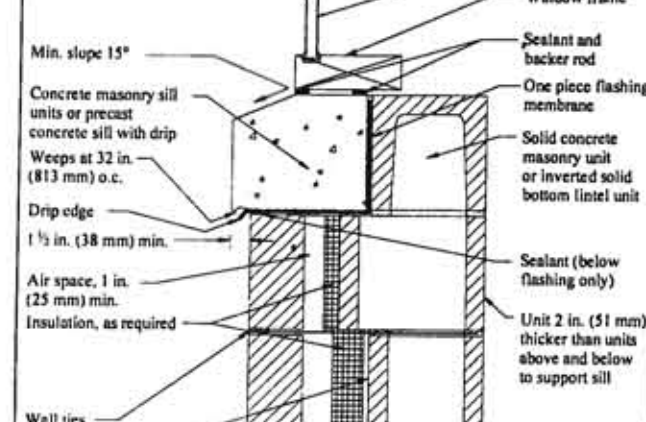


Figure 3—Flashing Cavity Walls at Sills

Refer to NCMA TEK 19-5A – Flashing or contact Richvale York head office for more information.

### Cold Weather Construction

- Proper enclosures for mortar mixing aggregates and protection of fresh laid masonry should be provided to prevent frost damage.
- Mortar should be kept from freezing for the first 24 hours.
- Sufficient heat is required to ensure hydration of the cement.
- To avoid heat set, water and aggregate should be mixed first. Then add the cement. After combining all ingredients mortar temperature should be within a range of 4°C (40°F) to 50°C (125°F).
- Any anti-freeze liquids, calcium chloride, frost inhibitors, salts or other substances used to lower the freezing point or accelerating the set time should NOT be added to the mortar.

For temperatures from freezing to 4°C (40°F): water shall be heated to a min. of 20°C. Protect walls and materials from rain, snow and freezing for at least 24 hours.

For temperatures below freezing 0°C (32°F): same as above and also heat sand. Maintain the masonry temperature above 0°C for at least 24 hours by enclosures and supplementary heat.

- When grouting ensure that the grout and surrounding ambient temperature is above freezing 0°C by providing enclosures and auxiliary heat for at least 24 hours before and after placing.

Refer to NCMA TEK 3-1C.All-Weather concrete Masonry Construction or contact Richvale York Head office for more information.

### Hot Weather Construction

- Sprinkle water on sand stock piles will reduce the temperature and will help the mortar workability.
- Avoid mortar dehydration by wetting mortar boards and bins immediately before use.

Refer to Lafarge Canada Inc. – Guide to the use of Lafarge Masonry Cements or contact Richvale York Head office for more information.

### Head Office

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