

### **2.3.11 Engineered Masonry**

- A. Lay masonry units with core cells vertically aligned and cavities between widths clear of mortar and unobstructed.
- B. Place mortar in masonry unit bed joints back 6 mm from edge of unit grout spaces, bevel back and upward.
- C. Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist displacement of masonry units and breaking of mortar bond. Install shores and bracing, if required, before starting grouting operations.
- D. Place vertical reinforcing before grouting and either before or after laying blocks, as required by job conditions. Support vertical reinforcing at intervals shown. Where individual bars are placed after laying masonry, place wire loops extending into cells as masonry is laid and loosens before mortar sets. After insertion of reinforcing bar, pull loops and bar to proper position and tie free ends.
- E. Prior to grouting, clean and inspect grout spaces and close cleanout holes. Remove dust, dirt, mortar droppings, loose pieces of masonry and other foreign materials from grout spaces. Clean reinforcing and adjust to proper position as required. Clean top surface of structural members supporting masonry to ensure bond. After final cleaning and inspection, close cleanout holes and brace closures as required to resist grout pressures.
- F. Wet masonry unit surfaces in contact with grout just prior to grout placement.
- G. Limit grout pours to sections which can be completed in one working day with not more than one hour interruption of pouring operation. Place pour in lifts which do not exceed 1.2 m. Allow not less than 30 minutes and not more than one hour between lifts of a given pour. Rod or vibrate each grout lift during pouring operation.
- H. When more than one pour is required to complete a given section of masonry, extend reinforcing beyond masonry as required for splicing.
- I. Grout spaces less than 50mm in width with fine grout using low lift grouting techniques and grout spaces 50mm or greater in width with coarse grout.
- J. After grouted masonry is cured, lay masonry units and place reinforcing for second pour section before grouting. Repeat sequences if more pours are required.
- K. When grouting is stopped for more than one hour, terminate grout 38 mm below top of upper masonry unit to form a positive key for subsequent grout placement.
- L. Use either low-lift or high-lift grouting techniques subject to the following requirements.