BALUSTRADING INSTALLATION

Notes for standard 660 GRC Georgian Balustrading 07 06 2011. These notes are general; site details may affect the process please discuss all aspects of the installation with us before ordering.

THE STANDARD CONCRETE HOB
It is standard procedure to make a solid concrete hob to form the structural element or ridge on which the balusters stand. The dimensions of this hob will be shown on standard shop drawings supplied to the builder. The top of this hob should be true and level and the sides formed at 90° to the horizontal surface.

POINTING
This is optional, if joints are preferred 305 mm they should be pointed with great care using special pointing mix or Standard Rendermix to which has been added a little coarse river sand. All mortar pointing should be cleaned with fresh clean water, replaced every half an hour at the minimum. An additive such as Cemstick or Bondcrete should be mixed with the mortar mix. Flexible grout joints are recommended. Masking the joints before pointing is recommended. Try Sikaflex flexible grout in the appropriate colour. Joints which are close butt finished with no space left for pointing are recommended in most cases as the risk of pointing smears is avoided. If smears of pointing mix do occur they must be washed away with clean water within 15 minutes.

BEST SPACING OF BALUSTERS.
We recommend that 220 mm from centre to centre be used as an initial spacing measurement this will comply with most local government regulations. Council approval for such details is the owner's responsibility. Most systems offered by The Stonemakers will be supplied at a 1 metre height and as such they will comply with council requirements.

THE BALUSTERS WITH A HOLLOW VOID
They will be supplied hollow with a 25mm wall thickness. A cold galvanised threaded steel or stainless rod (in coastal locations) should be inserted into the centre void of every 4th baluster thus making this element structurally secure. The rod should than be connected to the lower part of the capping system through a drilled hole and then secured by a threaded washer. We recommend lining the inside of the baluster void with thin -wall ribbed 5mm Cell Aire so that the fresh cement pour does not key directly with the inside grc surface and also so that staining due to concrete spillage is avoided.

BALUSTER CAPPING and BASE INTERSECTIONS.
It is standard to supply caps and base elements with reverse profiles at one end; they are called intersection elements. They will lock with the corresponding base and cap element of the pier. The balustrade base elements should be epoxy fixed to the sides of the concrete hob using builders epoxy such as Megapoxy, Hydrapoxy or equivalent. Connection points should be created at approximately 300 mm centres along the side of the hob.

BALUSTRADING PIERS
The piers should be dowelled with threaded rod in the same manner as the balusters. Drill and epoxy fix into the foundation, the rod must continue up the hollow core of the pier shaft. The shaft of the pier should than be protected with cellaire or polystyrene and filled with 1:4 concrete mix. A column fixing plate should be used as additional reinforcement with every pier.

BALUSTRADING ON STAIRS
Stair installations with a ramp should be drawn up by the company before commencement and details of the connections between pier cap and base and balustrading cap and base should be understood and agreed. Stairway balusters and separately ordered, they are normally supplied with an extended base block and top block for trimming to stairway angles on site. If mid air elbows are required than it is important to have a detailed drawing so the cutting angles can be calculated. It is standard practice to make and supply a taller pedestal (plus 100 mm) with stair installations so that capping does not need a difficult mid-air mitre connection. In this case the cap butts straight into the shaft face. The cap does not have a reverse profile to lock underneath the pier cap element. Mid -air shoulder mitres and similar details should be considered with care before commencement.