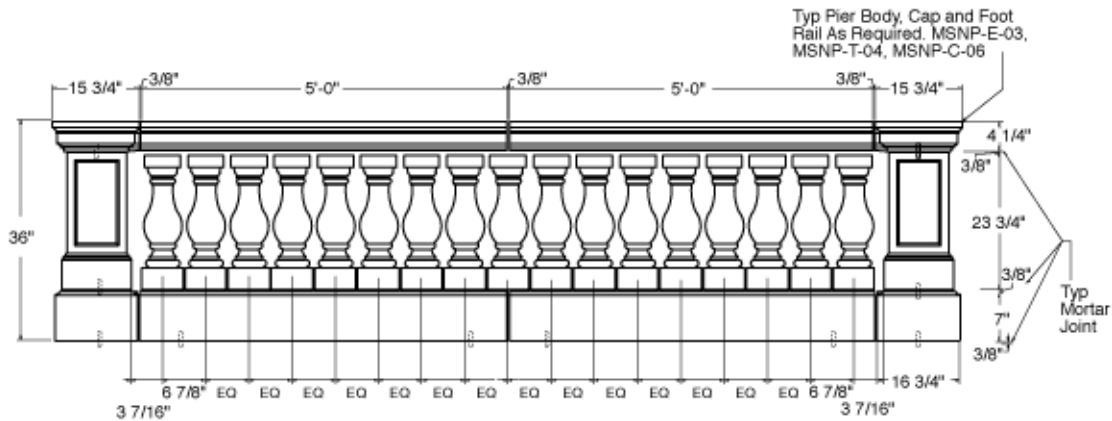


MeltonStone™ Cast Stone Balustrade Installation Information



Baluster Base Rail and Newel Base: Layout entire project, make sure to only cut end pieces of each run if required. Field drill vertical dowel holes two (02) per section of base rail and newel base. Field drill horizontal dowel holes one on each end of base rail and where required on newel base. Field drill vertical dowel holes and clean floor area where base rail and newel base will be installed. Make sure all mortar dust is removed from all holes and area. Use Type "S" mortar to set stone and 1/2" x 3" stainless steel dowels. Wipe off any excess mortar with clean sponge and water.

Newel Post: Field drill vertical dowel holes in newel post bottom and top. Field drill vertical dowel holes in center of newel base to match newel body dowel hole. Use Type "S" mortar to set stone, wipe off any excess mortar with clean sponge and water.

Baluster Connection: Baluster is predrilled top and bottom. Layout balusters on base rail to local code dimensions, then mark and field drill vertical dowel holes where required. Make sure to let mortar on base rail setup before trying to field drill base rail, Use Type "S" mortar and 1/2" x 3" stainless steel dowel.

Baluster Hand Rail and Newel Tops: Layout entire project to match joints of base rail. Make sure to only cut end pieces of each run if required. Field drill vertical dowel holes two (02) per section of hand rail and newel tops. Also mark location of balusters and field drill vertical dowel holes on bottom of hand rail to match baluster layout. Field drill horizontal dowel holes one on each end of hand rail and where required on newel tops. Field drill vertical dowel holes and clean area where hand rail and newel tops meet. Make sure all mortar dust is removed from all dowel holes. Use Type "S" mortar to set stone and 1/2" x 3" stainless steel dowels, wipe off any excess mortar with clean sponge and water.

Dowels and 1/2" x 3" stainless steel dowel. Dowel hole 5/8" x 2" each way into pieces

Dowel Holes:	of cast stone.
Drill and Drill Bit:	Hammer drill and 5/8" x 4" bit.
General Information:	Follow attached industry standard recommendation for cast stone handling and installation.

Job Site Handling and Installation

The on-site personnel should be familiar with the applicable sections of the Project Specification pertaining to delivery, storage, setting, patching, cleaning, pointing, caulking and scaling. In case of a conflict between the two specifications, the project specification should prevail. Where the Project Specification may not include a particular issue, the industry standards should be followed.

The following checklist has been developed for Cast Stone installation.

- Color and texture should be inspected in accordance to approved color sample. In general, the color and texture of the Cast Stone delivered to the job site should be approximately equal to the approved sample when viewed in good typical daylight conditions at a ten foot distance.
- Storage of Cast Stone should be above the ground on non-staining planks or pallets. The storage site should be away from heavy construction traffic. Cast Stone stored for an extended period of time should be kept on pallets or non-staining planking and covered with non-staining tarpaulins. Allow for air circulation.
- Prior to setting, insure climatic conditions are within thermal limitations of mortar. Mortar retarders and accelerators should be used according to manufacturers directions but not with parching material. Set stone in full mortar joints and fill all dowel holes and anchor slots completely with mortar. Insure uniform joint widths within specifications tolerances.
- Ensure that all specified flashing and damp proofing is installed. Flashing pierced by stone anchors must be sealed either by fatal thimble, grommet or approved sealant.
- Concrete should never be poured against unprotected Cast Stone. Where poured in place concrete is placed against Cast Stone sills, separate with a bond breaker prior to pouring concrete.
- Stone anchors must meet specified standards and be non-corrosive. Stone slots to receive anchors should be completely filled with mortar.

- Prior to setting insure that the surfaces set in mortar are drenched with water. This will secure a good bond and help to prevent mortar shrinkage.
- Weep holes must be installed over windows, at relieving angles and at the bottom of walls. No mortar drippings shall be allowed in the width between back of stone and faces of back-up structure.
- All head joints in general, all stone sections with projecting profiles, exposed top joints or rigid suspension connections to the supporting structure should be sealant joints. After setting, prime the ends of the stones, insert properly sized backup rod and gun in sealant.
- All trim items except parapet coping must align with control joints. Do not bridge coping over expansion joints.
- Cast stone should be handled to minimize chipping. Care must be taken not to bump the stone into anything. Handle stones with the wide portion of the cross section in the vertical position to minimize breakage.
- After setting, columns, pilasters, entry jambs, window sills and all stone with projecting profiles should be protected during the remaining construction.
- During construction, cover open walls when rain is anticipated.
- Chipped Cast Stone must be patched by skilled mechanics. A trial patch must be approved before general patching is to commence. Patch will not match at first and could take up to 6 months to match existing cast stone work.
- All Cast Stone should be treated with a silane or siloxane water repellent after setting. This will minimize the likelihood of dirt and groundwater entering the surface of the stone; a frequent cause of staining, efflorescence and enhancement of crazing. Check that water repellent does not affect color or texture when dry.
- Load bearing units should be reinforced as necessary. They may not be designed to be handled in a different orientation than they will be installed in the structure. Lintels and large panels must be kept vertical.