Repointing and Replastering

Tolomato Cemetery Preservation
The vaults at Tolomato were constructed of brick or coquina blocks covered with a layer of stucco (render) and then limewashed to protect the mortar and the stone.
Bricks

- If the render and limewash are not maintained, the lime dissolves out of the mortar and it reverts to sand and falls out of the joints. This makes the bricks collapse on each other and ultimately causes the collapse of the wall.
Remove the old mortar to a uniform depth, about 1 ½ times the width of the joint.

John Beaty has a selection of chisels and hammers. A 1/4” plugging chisel is helpful. Bon Tools sells them online.
The mortar

HYDRATED LIME  SAND
Sand and lime are mixed together in a proportion of approximately 2 ½ : 1 (sand:lime).
Mix dry materials thoroughly then add water a little at a time.
The finished mortar should not be too slack or too crumbly, but should stick to the trowel or plasterer’s hawk slightly and hold a shape when pressed together.
Apply Mortar

Dampen the hawk and the area where you are going to work. To apply the mortar, use a pointing trowel that is narrower than the joint; press in firmly to avoid gaps and hollow spots.
Replacing Bricks

This is a good time to replace bricks.

Chip out old mortar and remove brick.
Soak brick in water while wetting surfaces and covering them with mortar. Spread a layer of mortar on top of brick and slide it firmly into place. If necessary, force in more mortar from the front.
Level and finish

- Check with straightedge to make sure brick is level with surface.
- Mortar – either for replacement or repointing – should not cover the edges of the bricks but should be close to level with them.
If you are not going to cover it with render, you can make new mortar blend in with the old mortar by striking the wet mortar in the joints with a coarse-bristled brush. This roughens and levels the surface of the mortar in the joints.
The repointed surface is ready to be covered with a new layer of stucco (a.k.a. render).

Notice the joints. John is trying out a layer of render made with white sand.
The mortar is similar to that for repointing (3:1), but a little wetter. Color can be controlled by the type of sand used. We used sand from St Augustine’s “sterile layer,” which was obviously what the original residents used. Sand like this should be washed to remove clay and vegetable matter.
Place the mortar on the hawk and form a smooth cake.
The hawk and tools should be dampened before use. The surface to be finished should also be dampened.
Build up in thinner layers. Avoid “feathering” onto old render and keep the edges clean. Irregularities will be smoothed out later. Large areas of new mortar to be covered with render should be cross-hatched, as in photo.
Smoothing

- Level, dampen and smooth.
- When the render is slightly drier, it can be “burnished” a bit more.
- Press very firmly with the plastering trowel.
John goes over the surface, pressing firmly in a circular motion, with a straight piece of wood.

- The surface should be as smooth and level as possible.
- The new mortar should go to the edges but generally should not overlap the old.
John creates a corner, checking its straightness with a string and using a small plastering tool.
John draws the lines to simulate ashlars using the lines on the old mortar as guides. He uses a string to mark them and then draws them with a pointing trowel.
The finished wall should be dampened down a couple of times for the next 2 or 3 days. Here John and his volunteers take a break to admire their work. The new work should be good for another 20-30 years (or more!).

**Finishing and drying**
The photos in this presentation were taken on April 26 and 27, 2011, at Tolomato Cemetery, by Elizabeth Gessner, one of the volunteers attending John Beaty’s workshop. Also shown is volunteer Matt Armstrong.

John Beaty is a historic preservationist from the University of Florida at Gainesville, currently completing his doctorate with work on historic masonry and materials.