Civil War Memorial Tablets – Cleaning & Conservation

Amherst Historical Commission

The following describes the scope of work involved to crate, safely transport, and professionally clean and conserve one (1) marble dedication plaque and five (5) large marble memorial tablets inscribed with the names of soldiers and sailors who participated in the Civil War on behalf of the Town of Amherst, Massachusetts.

These tablets have varying widths and the following heights and lengths:
- Dedication plaque - 1' 2 ¾” tall x 6' 3 ¾” long
- Our Dead in the War - 4' 8” tall x 5' 9” long
- Infantry (2nd-27th Regiments.) - 4' 8” tall x 6' 3” long
- Infantry (27th-52nd Regiments) - 4' 8” tall x 6’ 1” long
- Infantry (52nd-60th Regiments), Reserve Corps & Artillery - 4’ 8” tall x 6’ 8” long
- Artillery, Cavalry, Navy & Other - 4’ 8” tall x 6’ 6 ½” long

The marble tablets vary in thickness from approximately 1½” to 2”.

The plaques were unpacked and removed to a dry bay in the storage facility and placed on custom made supports. Cleaning tests were initially carried out on the smaller dedication plaque. This plaque had a unique stain most likely caused by the wood fiber board storage conditions containing Lignin. This is a complex chemical compound derived from wood comprising ¼ to 1/3 of the dry mass of wood. It is acidic.

Materials tested were single and multiple applications of Arte Mundit Type 1, and 2, poultices of D/2 Biological Solution (Cathedral Stone Hanover MD), mixed with calcium carbonate or kaolin, and #942 Limestone and Marble Cleaner (Prosoco Inc, Kansas). All of these materials are recommended for marble surfaces which are very susceptible to acid.

The surface of all the plaques appeared to have lost their original polish, perhaps due to environmental conditions or previous cleaning. There is a difference in the reflected light between the perimeter framed area and the rest of the plaques. The plaques may have been previously cleaned while in place with a mild acidic cleaner which did not touch (or etch) the molded framed area.

The dulling of the marble is also a natural process in the interior setting. The cooler surface of the stone will allow a thin film of condensed water to form. This water is de-ionized, or demineralized water. This water has no mineral ions in it and thus reacts with the ions in the marble surface causing a slow dulling effect. Thus, without re-polishing (which we do not recommend), the framed or protected area of the surface may never quite appear to have the same surface finish as the main area of the tablet.

Additionally, some areas of the large plaques had evidence of aggressive cleaning in the past using an acid-based product. Areas of the surface were open grained compared to most of the surfaces. This is most noticeable on the Artillery, Cavalry, Navy and Other plaque which also had a heavy residue of a shellac type substance. This was removed with mineral spirits, directly and in a poultice.

While all the cleaners tested had success, it was decided to clean the plaques with applications of Arte Mundit Type II. (FTB– Remmers, Grobbendonk, Belgium) This product has no runoff and cleanup of materials is environmentally friendly.

During testing it was found that the original black lettering was relatively water soluble. Efforts to protect the lettering with a coating of clear potassium silicate prior to cleaning helped minimally. Necessary retouching of the letters was done with an acrylic based back paint, Mars Black Basics Acrylic color (Liquitex, Piscataway, NJ)

Because of the water solubility of the original black lettering, and the cleaning, all of the lettering had to be touched up. While the acrylic should be considerably less water soluble, the original paint can be affected by washing with water.

August 2010

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541 860–307-6695 mcllcc@gmail.com
Top left and above: detail of unusual staining on Dedication Plaque. This staining is most probably due to storage conditions.

Lower left: various cleaning tests on Dedication plaque.
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission        Amherst Planning Department

Cleaning test, before and after on Dedication plaque.
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Cleaning tests, before and after on Dedication plaque.
The 5 large plaques were unpacked and moved to a clean, dry storage bay on Pulpit Hill Rd and placed on custom built supports.
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541     860–307-6695 mccllc@gmail.com

Typical application of Arte Mun-dit Type II latex. This was left to dry for approximately two days.
Peeling the cured Arte Mundit. After peeling, a light sponging with water removed additional surface soiling.
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Detail of typical results of latex cleaning (inscriptions have
been re-lettered on the right up to “GLA”.)
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Re-lettering with acrylic paint.

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541     860-307-6695 mccllc@gmail.com
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Peeling the cured Arte Mundit; note heavy soiling attached to latex. This plaque was heavily stained and also had shellac residue.
Civil War Memorial Tablets – Cleaning & Conservation

Amherst Historical Commission          Amherst Planning Department

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541     860–307-6695 mccllc@gmail.com

Before cleaning

Cleaned and re-lettered
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Before cleaning

Cleaned and re-lettered

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541     860-307-6695 mccllc@gmail.com
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Before cleaning

Cleaned and re-lettered

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541     860–307-6695 mccllc@gmail.com
Civil War Memorial Tablets – Cleaning & Conservation
Amherst Historical Commission          Amherst Planning Department

Plaques are secured in crates with foam insulation spacers.

Monument Conservation Collaborative LLC, Norfolk, CT 06058-0541  860–307-6695 mccllc@gmail.com