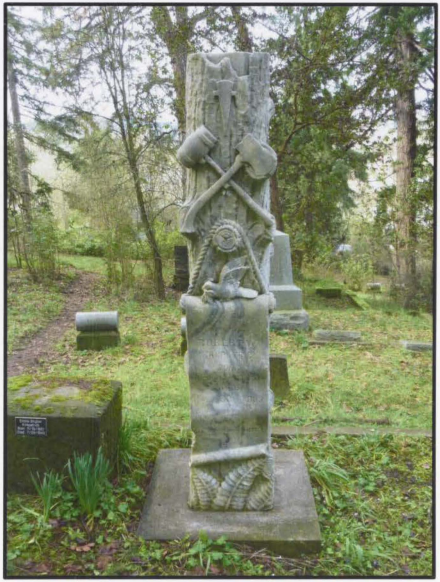
Eugene Masonic Cemetery

Condition Assessment and Treatment of the Historic Grave Markers and Mausoleum



Eugene, Oregon

October 2013 – May 2014

Prepared By

David Espinosa – Master of Science in Historic Preservation Candidate

University of Oregon

Eugene, Oregon

May 2014

Acknowledgements

I would like to thank the individuals and groups that made this project possible through their time, effort, and appreciation of the historic resource that is the Eugene Masonic Cemetery. A special thanks to Dennis Hellesvig, History Architect for the Eugene Masonic Cemetery Association, for introducing me to the rich history that the Eugene Masonic Cemetery has to offer. 'Denny' took immediate interest in my studies and was the catalyst that transformed a project focused on a single grave marker to one encompassing over thirty markers and the Hope Abbey Mausoleum. As a guide, project committee member, neighbor and friend, you have been nothing but gracious and giving. Dr. Lauren Allsopp, a constant mentor in my studies and a driving force behind my venture into the realm of conservation. Thank you for the invaluable guidance, patience, and for being a role model in the field of preservation. Thank you to the members of the Eugene Masonic Cemetery Association. For trusting your cherished historic resources with me. Your support and encouragement was felt from the outset of my project and never relented. In particular EMCA President EMCA President, and Cemetery Director Sally Dietrich, thank you for your leadership, for sharing your knowledge and your passion.

David Espinosa

TABLE OF CONTENTS

1 Project Overview

1.1 Problem Statement

Grave markers as a historic resource occupy a very unique context since the setting of these artifacts is typically open to the elements and highly accessible to the public. Due to deferred maintenance, vandalism, inappropriate repairs, and the relentless weather, the historic grave markers of the Eugene Masonic Cemetery (EMC) are under threat of deterioration and eventual loss.

The grave markers not only impart the historic significance that defines the Eugene Masonic Cemetery, but also serve as the tangible legacy of those whom they represent, including many of the original settlers of Eugene.

Historic cemeteries often struggle to acquire the resources necessary to create and execute a consistent and comprehensive maintenance plan. This was temporarily abated when it became a study within the Historic Preservation program of the School of Architecture and Allied Arts at the University of Oregon with the support of the Eugene Masonic Cemetery Association (EMCA). The tested treatments cited in this report can be applied to future maintenance and restoration programs in the Eugene Masonic Cemetery as well as other historic cemeteries of similar context. Future treatments, however, should be undertaken solely by a professional, who fully understands the treatment plans and products in this report.

1.2 Project Goals

It is the aim of this project to document historic grave markers, apply historically conscious conservation treatments and inform EMCA as to their efficacy. Necessary tools, chemicals and equipment will be listed and the cost of individual proprietary products will be documented. This document can be consulted for future projects undertaken by the Eugene Masonic cemetery.

In the course of treatment testing the project produced grave markers that have been carefully cleaned and restored. As a result, these markers serve as examples of the positive impact of an active preservation plan.

1.3 Brief Historical Background

The land upon which the Eugene Masonic Cemetery is located was part of a 320-acre Donation Land Claim owned by Fielding McMurray. The Eugene Masonic Cemetery was established in 1850 by McMurray and the first burials are believed to have taken place shortly after. The first recorded burial, however, was not until 1854 for a 22-year old Elizabeth H. Parsons.

The Free Masons fraternal organization did not invest in the cemetery until April 2, 1859. Masonic Lodge No. 11, established in 1856, deemed the McMurray property ideal for a cemetery in 1857. The Masonic Lodge originally purchased 6 acres from McMurray at a cost of $200 and the provision for a McMurray Family plot. That same month, the purchased acreage was surveyed and laid out in 20' x 20' lots with 8-foot wide alleys. Four of the six

acres were designated for Masons and the other two were to be sold to the general public. Lots were sold at a cost of $15 per unit with Masons getting first priority. One hundred plots were sold with four reserved for transient and/or poor Masons. The public lots were offered to Eugene citizens starting April 30, 1859. October of that year saw the purchase of an additional four acres.

The Eugene Masonic Cemetery is historically rich in the context of the establishment of the city of Eugene and the greater area. A clay pit, located at the northeast corner of the property, provided bricks that would be used in the construction of Deady Hall (1876) and Villard Hall (1885), the first two buildings of the University of Oregon and both National Historic Landmarks. Many of the areas pioneers, founders, legislators, merchants and businessmen of prominence now rest in the Eugene Masonic Cemetery.

The design of the cemetery, while plotted in a grid, very much reflected the Rural Cemetery movement of the mid to late 19th century. Graves set in a romantic landscape was a rebuttal to overcrowded and deteriorating cemeteries of the country's metropolitan areas. Meandering paths, ornamental plantings and an overall naturalistic feel characterize Eugene Masonic Cemetery and other rural cemeteries of the era.

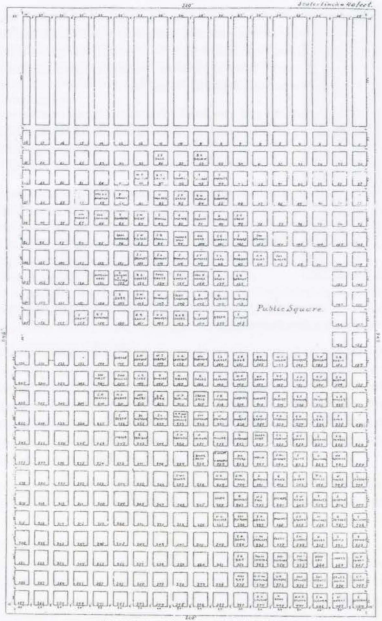
On November 12, 1912, the Eugene Masonic Lodge contracted the Portland Mausoleum Company to build a mausoleum and sell crypts starting at $200. Ellis Fuller Lawrence, an architect of local prominence, was responsible for the design of the Hope Abbey Mausoleum. Lawrence served as the first dean of the University of Oregon's School of Architecture and Allied Arts from 1914-1917. The Hope Abbey Mausoleum is a rare example of Egyptian Revival architecture in a region in which a more classically inspired architectural aesthetic is more common.

Construction of the mausoleum commenced on the western edge of the cemetery property in September of 1913. Work was finished and the building dedicated June 4, 1914.

The Eugene Masonic Lodge deeded the Eugene Masonic Cemetery and the Hope Abbey Mausoleum to the Eugene Masonic Cemetery Association in February of 1995. By this time, the cemetery was in a poor state of repair and required the concerted efforts of the EMCA, the University of Oregon Historic Preservation Program, the City of Eugene, the Lane County Historical Society, and Lane Community College. Since the Eugene Masonic Cemetery Association has accepted responsibility for the cemetery's maintenance there has been a notable improvement in the condition of the historic landscape, markers, and mausoleum.

MASONIC - CEMETERY

in Sec. 5. T. 18. S. R. 3. W. LANE COUNTY, OREGON.



Plat of Masonic Cemetery, March 18, 1892

—Frances Newsom Collection

2 Condition Assessment of the Masonic Cemetery Grave Markers

2.1 Materials & Types

The grave markers of the Eugene Masonic Cemetery represent a variety of materials undergoing various deterioration issues that require individual treatment considerations. The most prevalent material in the cemetery is marble, although there are a multitude of markers comprised of granite, sandstone, precast and cast-in-place concrete, bronze, and zinc.

Cast Bronze

Grave markers found in the Eugene Masonic Cemetery exhibiting elements of bronze are typically bevel markers.

Cast Zinc

The cast zinc markers within the Eugene Masonic Cemetery are products of the Monumental Bronze Co. and occupy a production range from 1874 to 1939. Zinc as a material is very resistant to weathering deterioration. Whereas cast iron, copper, and bronze in a cemetery setting often corrode when unattended, cast zinc can remain corrosion-free for decades. The primary deterioration issue faced by the cast zinc markers and monuments in the Eugene Masonic Cemetery is vandalism as evidenced by missing inscription panels.

Granite

Granite is an igneous rock, granular in texture, and consisting mainly of quartz, mica, and feldspar. Examples of granite in the Eugene Masonic Cemetery range in color and grain size. Those markers comprised of granite are usually more recent additions to the cemetery given the stone's difficult tooling that would have made historic production expensive and less popular. Granite markers are weathering much more gently than other stones in the cemetery, a beneficial characteristic of the naturally resilient stone.

MARBLE

Marble is a non-foliated metamorphic stone comprised of recrystallized carbonate minerals, mostly calcite or dolomite. Variations in crystalline structure results in grave markers that vary in aesthetic and weathering patterns. By far the most prevalent stone in the Eugene Masonic Cemetery, marble was the most treated material in this 2013-2014 restoration project.

SANDSTONE

Sandstone is a sedimentary rock formed by the compression of accumulated layers of sediment. Sandstone, as found in the Eugene Masonic Cemetery, is used as bases for the various grave markers. Being in contact with the ground they are in most cases plagued by invasive plant material and moisture related deterioration issues. There is a particular type of sandstone in the cemetery that is very soft and is rapidly deteriorating. Invasive root systems of moss and small plant life are able to penetrate the stone, prompting exfoliation and often causing large layers of stone material to fall away from the base. This, in turn, weakens the assembly as a whole.

Forms present include tablets, obelisks, bevel markers, flush markers, ledgers, and monuments. The form, design, and ornamentation of these markers are integral in the interpretation of the respective individual's or family's socioeconomic status, as well as overarching historic trends. Regardless of form or material, the entirety of Eugene Masonic Cemetery's grave markers is suffering from invasive biological material, vandalism, weathering, improper maintenance or a combination of these issues.

2.2 INVASIVE BIOLOGICAL MATERIALS

As a pioneer era cemetery the Eugene Masonic Cemetery maintains a minimally controlled landscape. This has less to do with negligence or deferred maintenance and more to do with retaining a specific aesthetic. While a character defining feature of the cemetery, the plant life, when left unchecked can greatly expedite the deterioration of the historic grave markers.

Larger plants such as bushes, grasses, and trees can pose multiple threats to historic markers. Root systems from plants, trees in particular, can tilt, dislodge, and topple grave markers and their enclosures. Markers upset by root systems often experience greater amounts of stress both internally and externally. A tilted marker will bear weight differently, placing stresses on elements of a masonry assembly not intended to support such loads. These stresses can contribute to mortar joint failure, cracking, and fragmentation of the stone. Roots and fallen branches can place pressure on points of a stone, resulting in cracking, fragmentation or collapse.

Dense foliage can also obscure markers, making them harder to locate and maintain. Extensive flora also keeps many markers perpetually shaded and damp. This creates an environment ideal for the growth of lichen, moss, and smaller biological growth.

Lichen, moss, and biological growth, while not immediately detrimental to stone assemblies, can contribute greatly to the deterioration of grave markers over time. Such growth often keeps moisture in contact with the stone including, in some cases, biological acids which over time can etch the stone and dull polished surfaces.

Accumulation of moss also contributes to material and mortar loss as the root systems seek sources of moisture. Tenacious roots will grow into and loosen mortar joints. Many markers throughout the cemetery have elements inhabited, if not covered by moss and lichen. There are multiple bases throughout the cemetery crafted from sedimentary stones that have experienced significant material loss due to biological growth. The sandstone bases that are so common in the Eugene Masonic Cemetery have been subject to delamination and spalling as invasive root systems creep through the sedimentary layers of the stone.

Smaller biological growth inhabits the porous surfaces of stones often expressing itself in the discoloration and staining of the grave markers.

2.3 Weathering and Pollution

Wind, rain and freeze-thaw cycles all play a role in advancing the deterioration of stone and joints. Rain water can penetrate pores, cracks, and joints then expand when frozen thus leading to spalling, further cracking, fragmentation, and joint failure. Luckily, temperatures seldom drop below freezing in the Willamette Valley, so freeze-thaw cycles are not a key concern, yet they must still be considered. Given the high annual rainfall in Eugene the Masonic Cemetery is most at risk from water and the associated deterioration issues.

Airborne pollution can also play a role in the deterioration of stone in cemeteries. Acidic airborne gases are a product of the combustion of solid fuels and oils. This type of soiling results in a tar-like build-up on a stone surface which will create a prominent stain. The most aggressive form of airborne gases is sulphur dioxide (SO_2) which is water soluble ($H_2O{\cdot}SO_3$). The accumulation of this acidic gas on a marble surface will eventually form a layer of gypsum. When exposed to rain this layer will wash away, removing any polish the marble once had. In the case of this cemetery, there little risk of damage via airborne pollution given the cemetery's suburban environment and dense tree cover.

2.4 Vandalism and Public Traffic

The most immediate and destructive form of damage visible in the Eugene Masonic Cemetery is vandalism. There have been periods of heightened vandalism in recent history that has seen many grave markers toppled, broken, and obscured with graffiti. Theft has also caused some grave markers to be dispersed across the neighboring counties. In some cases these markers have been returned, but unfortunately stolen markers are more often permanently lost.

Recent efforts by the Eugene Masonic Cemetery have deterred vandalism. Heightened neighborhood interest in the Eugene Masonic Cemetery has increased foot-traffic through the grounds as well as a sense of local pride for the historic resource. Public presence and pride in the cemetery has further deterred vandalism.

While public use of the grounds is desired, it also brings more people into contact with the historic grave markers and Hope Abbey Mausoleum, leading to potential and additional damage. Markers along walkways have seen more damage than those set further back, be it from vandals, oils deposited from human touch, or salt deposition from canine urine. Smaller markers, and those that have been oriented along the ground are often stepped upon further damaging their surfaces. This has forced relocation of multiple markers to safer distances from the public walkways, an unfortunate but often necessary departure from their historic setting and context.

2.5 Improper Maintenance & Restoration

Throughout the Eugene Masonic Cemetery's recent history, it has been subject to improper maintenance and restoration attempts. These treatments, although surely well-intentioned, in the best cases impede proper treatment and in the worst, contribute or accelerate deterioration. The creation of this document is meant, in part, to inform those conducting future restoration and maintenance undertakings as to proper, and effective practices.

Multiple episodes of improper or sloppy restoration projects are visible in all areas of the cemetery. During this 2013-14 restoration project, any evidence of prior restoration has been documented and assessed for performance.

Improper mortar mixes, poorly handled epoxies, and commercial grade caulk have been noted in multiple resetting and repointing attempts throughout the cemetery. Many markers that have been reset have previously been carelessly worked upon, producing canted or off-center settings, bases splattered with mortar, and joints that cannot properly function. Unfortunately, many of these procedures are not reversible without causing further damage to the historic material. There are several phases of epoxy applications that have varied in performance, but the majority have not been matched for color and often overflow from the repair area onto previously sound material.

While improper maintenance can greatly accelerate deterioration, deferred maintenance is the most common, and in some ways, the most detrimental deterioration issue that historic cemeteries face. With scarce funding grave marker maintenance is often one of the first duties abandoned by cemetery maintenance personnel. While understandable, such deferment is extremely detrimental to the resources that define a historic cemetery. A well maintained grave marker can serve as very tangible example of the benefits of charitable donations. It is the goal of this restoration project to produce grave markers that can serve as examples of proper maintenance. In turn, additional markers that can be cleaned and repaired with the aid of local donors.

It must be emphasized that each grave marker behaves uniquely in its setting and response to treatments. Therefore it is essential that, irrespective of one marker's similarity to another, each marker be approached, analyzed, and treated individually.

3 Treatment Methodology

General Guidelines

The goal of this project is to restore the historic grave markers and conserve their historic material by the gentlest means possible. With only one person researching, testing and executing the treatment program the procedures were simple and conservative in scope by necessity.

All treatments administered were designed to comply with the Secretary of Interior's Standards for Historic Preservation.

Chemicals and tools were carefully chosen with consideration for the ambient environment and long-term welfare of the historic materials. Any action taken on an individual marker was aimed to be in line with its historic design, reversible when possible, and fully documented. When considering a conservation method that may alter the condition of a grave marker, the Eugene Masonic Cemetery Association was consulted so as to more closely adhere to their set preservation and landscaping plan.

3.1 Documentation

Each grave marker slated for treatment was documented before, during, and after treatment. This ensures a record of the treatments performed and the efficacy of those treatments for consideration in future maintenance. A survey form was adapted from the National Center for Preservation Technology and Training for the purpose of recording the condition of each grave marker, the treatments they underwent, the effectiveness of said treatments, as well as recommendations and considerations for further maintenance and restoration. Photography and written descriptions are essential for the accurate documentation of any such preservation undertaking.

3.2 Horticultural Context

While the Hope Abbey Mausoleum and the grave markers that occupy its grounds are significant to its historical value, the Eugene Masonic Cemetery is also characterized by its lush and diverse plant life. So in the preservation of the cemetery's grave markers the surrounding horticultural landscape must be addressed. Retention of the flora was integral in the selection of treatments and chemicals to be employed in the restoration project. When using chemicals that pose a threat to the plant life they were adequately diluted, properly disposed of, and avoided when possible.

3.3 Treatment Grading

For the sake of the 2013-2014 restoration project grave markers selected for treatment have been categorized into three tiers of treatment based on condition with Tier 1 being the least invasive and Tier 3 being the most invasive. Treatment grading allows for organization of work days so necessary chemicals, mortars, treatments and man-hours can be more efficiently allocated.

Tier 1: Cleaning

This treatment tier represents a treatment regimen that can be replicated as a regular maintenance procedure. It includes the mechanical removal of invasive plant materials, cleansing with Orvus WA Paste, and stain removal with D2 Biological Solution. This treatment tier can be repeated by individuals of low skill with minimal risk to the historic resources as long as the treatments are carried out according to chemical specifications and recommendations presented in this document. Orvus WA Paste is used in this project to address heavy soiling. When treating a marker that has undergone regular cleaning a detergent can be avoided in favor of clean water.

NECESSARY TOOLS

- Brushes – Nylon or natural bristle brushes are used for clearing stones of soiling and applying an Orvus solution. Smaller brushes or toothbrushes are used to clean finer detailing such as inscriptions or relief carvings.
- Gallon buckets – Two 5 gallon buckets, one filled with clean water and the other with approximately ½ cup of Orvus WA Paste in 3-4 gallons of water were used for cleaning. The clean water was used to wet the stone as well as clean brushes before being resaturated with the Orvus mixture, this kept the Orvus mixture from becoming too soiled, ensuring its use for multiple markers.
- Hoses – Two 100 foot hoses were useful in transporting water to the work site as well as for wetting and rinsing resources.
- Pressure control nozzle – A brass pressure nozzle attached to the hoses allowed for control of water flow as well as the pressure of water.

Note: Pressurized water must be carefully controlled; pressure washer use is not advised for historic grave markers as the pressure is often too strong and can accelerate stone deterioration.

TIER 2: STABILIZATION

The second treatment tier represents procedures that require a higher level of skill and are necessitated by the historic resource's highly deteriorated condition. Procedures in this tier classification include leveling of a tilted marker, assembly of a toppled resource, raking and repointing of compromised masonry joints, and graffiti removal when necessary. This tier of treatment should not be approached by anyone lacking conservation or masonry experience and requires multiple people working together to ensure safety of the marker and personnel involved.

Note: Leveling a tilted marker is a very labor-intensive process and should only be approached by those in good health capable of lifting heavy loads utilizing proper lifting posture and braces when necessary.

NECESSARY TOOLS

- Industrial pry-bars – Large-scale pry bars are essential if larger stone assemblies are to be righted. It is important to cushion the contact between stone and pry-bar with a piece of lumber (small lengths of 2x4 suffice). Where pressure is applied to the stone is also key as one can easily crack or fracture a stone if a corner undergoes too much localized pressure. Such pry-bars can be rented from construction equipment purveyors.
- Gravel – Uniform gravel is necessary and must be packed beneath a grave marker so as to facilitate water drainage and avoid soil shifting.

- Lumber – Pieces of 2x4 lumber are used to shim the stone in question, cushion the contact between stone and pry-bar, act as a fulcrum for the pry bar and to pack the gravel beneath the stone base.
- Sledge Hammer – A sledge hammer is useful in gently positioning shims beneath a marker, as well as tamping the soil and gravel. Tamping was accomplished by striking a piece of lumber that was laid flat along the ground. By repeating this action, the gravel was uniformly flattened and compacted.
- Bubble Level or Plumb Bob – This tool, used to determine a grave marker's position relative to plumb, is essential if one is to accurately right a tilted marker.
- Shovel – Shovels allow the removal of soil around a marker so leveling can take place.
- Mortar tools – Specified under the 'Mortar' Section of this document.

TIER 3: REASSEMBLY

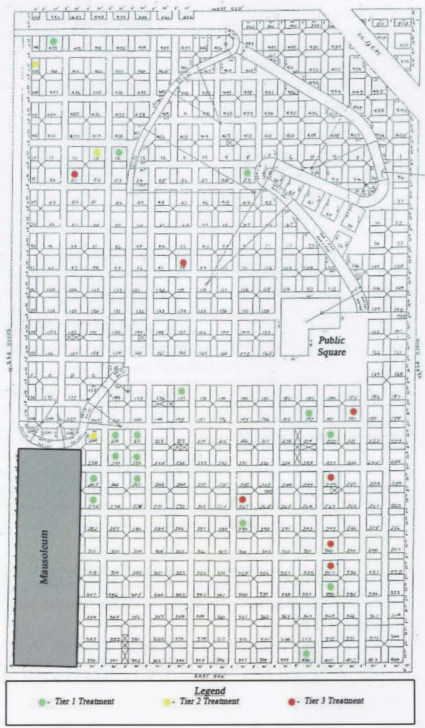
This most demanding treatment tier is applied to those historic resources requiring reassembly or material consolidation. Individuals involved in this tier of treatment should be required to have a working knowledge of the chemicals and treatments needed. The condition of resources classified as needing Tier 3 treatment is often very poor and requires great care in handling. Reassembly of fragmented markers in this project was accomplished with Akemi Akepox 5010.

NECESSARY TOOLS

- Disposable Gloves – Latex gloves are necessary to protect oneself from contact with epoxy. Epoxy poses several health hazards and must be handled with care.
- Clamps – When bonding two pieces of stone it is important to support them with pieces of lumber held in place by clamps. This ensures the pieces are bonded in alignment and applies necessary pressure to make a tight fit.
- Masking Tape – Applied around a joint to be bonded so as to catch any excess epoxy overflow.
- Disposable Cups – Used for mixing the epoxy components
- Scrapers or Razor Blades – Used for removing excess epoxy

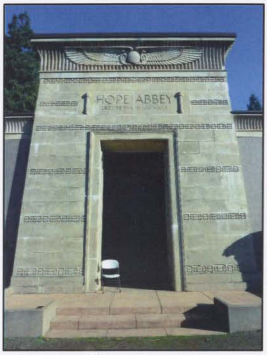
3.4 Treatment Map

The map below is adapted from the 1962 amended plat map to show treatment locations.



4 Condition Assessment of The Hope Abbey Mausoleum

Since the Eugene Masonic Cemetery Association took responsibility for maintenance of the Eugene Masonic Cemetery and the Hope Abbey Mausoleum in 1995, much work has been done to restore the decrepit mausoleum to its original splendor. In order to better inform the EMCA in future maintenance and conservation treatments of the mausoleum visible deterioration issues were noted, and photographed. Assessment was carried out on the central entrance pylon by David Espinosa and Julia Larson, Historic Preservation Master of Science Candidate.



Removal of efflorescence was carried out by David Espinosa and suggestions for further cleaning and treatments of individual deterioration issues have been submitted by Julia Larson and David Espinosa. In relation to the 2013-2014 restoration project, the assessment and Treatment of the Hope Abbey Mausoleum was executed under the same treatment methodology.

4.1 General Description

The Hope Abbey Mausoleum is part of Eugene Masonic Cemetery at 25th Ave & University Street in Eugene, OR built in the 2nd phase of Egyptian Revival Style from 1913-1914.

The architect was Lawrence & Holford, Associates with the chief designer being E. F. Lawrence. It has a rectangular plan with a concrete foundation and the main supporting walls are poured in concrete with horizontal wood molds. The primary window type is a steel fixed sash. The center of the west elevation includes a central pylon in cast stone with a cast stone parapet wall.

The pylon includes a central doorway including three sets of reeds within the doorway. Decorative bands are evenly placed going up the wall and culminates with an Egyptian revival eagle's wings motif at the top. A flared cornice is a prominent feature around the top of the entire building. An ADA accessible entrance ramp and stair is a newer addition. The building sits at the edge of the hilltop with some mature trees, new growth and mature and new vegetation around the building.

The Hope Abbey Mausoleum and Masonic Cemetery was listed in the National Register of Historic Places and as a Eugene Historic Landmark in 1980. The Mausoleum was Ellis Lawrence's first building in Eugene, and one of the first two of five mausoleums, which he built in Oregon. It is also Oregon's oldest example of "Egyptian" style architecture.

4.2 Setting

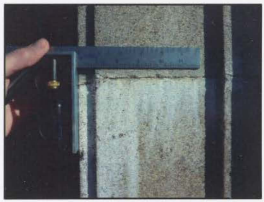
The Hope Abbey Mausoleum is located at the western edge of the Eugene Masonic Cemetery with the cemetery hill to the rear (East) of the mausoleum and the South University neighborhood to the front (West). The Mausoleum sits on a negative slope of moderate grade. A service road runs along the west, north, and east facades of the building and plantings are present along the west and north.

Ornamental Egyptian Revival urns flank the entrance. These are constructed of cast stone. Petal elements have been recently replaced, a repair made apparent by variations in color and texture between the original and new elements.

The original steps leading to the entrance have been replaced with ADA accessible concrete ramps designed by the current Eugene Masonic Cemetery Association Historic Architect, Dennis Hellesvig.

4.3 Condition Assessment

Efflorescence



Lime efflorescence is visible throughout the central pylon assembly with large tails of white efflorescence emanating from joints at multiple locations. The northern face of the pylon is experiencing heavy efflorescence above the parapet wall.

Staining

Cupric staining is visible below the flashing and is evidence of the original copper flashing. This greenish-blue staining begins just beneath the current flashing and terminates at the top of the cavetto cornice's fluting. This is not an ongoing problem but rather the remnants of staining from the no-longer extant copper flashing.

Possible ferrous staining is visible below the wing and disk ornament. Closer inspection is needed. If proven to be ferrous staining the source could be deteriorating cramps, or rebar. It is also possible that this red staining is red biological growth.

Biological Growth

Orange-red biological growth is present in various locations of the central pylon, most notable on the north facing surfaces, likely due to those surfaces experiencing less sunlight.

Cracking

Many small cracks exist throughout the masonry and have been noted in previous condition assessments. These are likely a result of the building settling and do not appear to affect the stability of the structure as a whole.

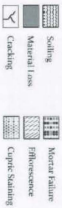
Joint failure

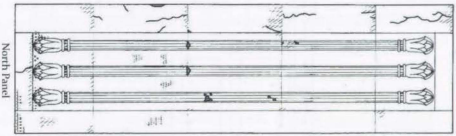
There are several distinct mortars used in the cast stone assembly indicated by variations in color, sand grain size, and performance. Joint deterioration and failure is present in several areas of the pylon, most notably along the southern edge of the entrance moulding.

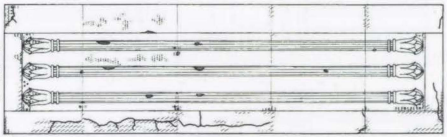
Roof

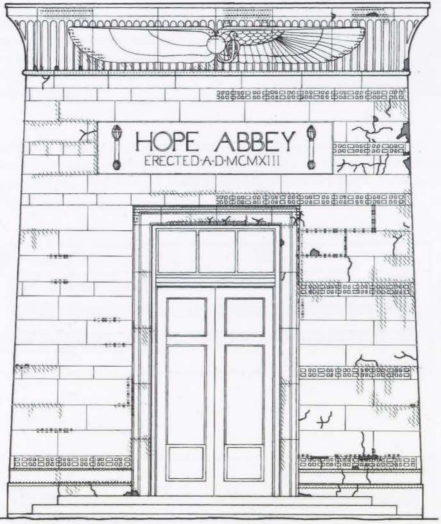
The original copper flashing has been replaced with painted steel flashing. The new flashing is performing well and will not contribute to the cupric staining left behind from the original flashing. A vinyl impermeable layer has been installed over the entirety of the roof. There is no apparent tears or breaches in the layer, but a more extensive analysis is required.

4.4 Deterioration Map









Soiling
Material Loss
Cracking
Mortar Failure
Efflorescence
Cupric Staining

5 Hope Abbey Mausoleum Treatment Suggestions

The following treatment recommendations will not only improve the entrance pylon of the Hope Abbey Mausoleum aesthetically, but should contribute to a more water-tight envelope and longer lifespan of the historic resource.

5.1 General cleaning

A gentle cleaning program is recommended to remove soiling, biological growth and diminish graffiti presence on the central pylon of the Hope Abbey Mausoleum. A mild anionic detergent, such as Orvus WA Paste is recommended. Clean water and detergent should be gently applied to the stone via a natural bristle or nylon bristle scrubbing brush. After cleaning the entire assembly should be thoroughly rinsed with clean water. Pressure washing is not recommended as excessive pressure will likely remove historic material and contribute to deterioration.

5.2 Graffiti Treatments

As noted above, graffiti is exhibited on both the side reed panels within the doorway. The medium used to make the markings include felt markers, pencils, pens, and other unknown mediums. The markings are of various letters and shapes. It is recommended that a poultice be used to remove the markings as it is the most gentle means of removing the markings and most versatile to respond to the specific marking. If needed a poultice also allows a paint stripper to remain in contact with the defaced stone for long periods of time. Mixtures of a water-soluble paint stripper and powder-inert clays applied to the graffiti and sealed with a plastic film have had varying levels of success with historic stone and should be tested on site to account for the age of the graffiti, as well as the condition of the stone.

5.3 General Description of a Poultice

A poultice consists of an absorbent material, powder-inert clay, or cellulose product, combined with a cleaning solution to form a paste or slurry. The purpose of a poultice is twofold: it enables a cleaning solution to be kept in contact with the stained area as long as possible, while allowing the cleaning solution to pull the staining material out of the substrate via the poultice without redepositing it in, or restaining, the stone. The term poultice, originally derived from the medical practice of applying a medicine pack to the body to fight infection, covers a range of cleaning techniques more accurately broken down into 'true' or 'plain' poultices and 'chemical' or 'active' poultices.

A 'true' or 'plain' poultice is typically used for desalination, the removal of soluble salt deposits from the stone substrate. This is achieved with a simple mixture of clay and water. The salt is drawn out from the stone into the poultice through capillary action with the moisture as the mixture is allowed to dry.

An 'active' or 'chemical' poultice is created through the modification of a plain poultice in order to remove a specific type of soiling or contaminant that would otherwise be insoluble in water. Active poultices can be engineered for specific purposes. These targeted applications can remove a range of contaminants, from graffiti to metal stains.

When dealing with a particularly stubborn stain or soiling it is recommended to cover the applied poultice (plain or active) with plastic. A plastic film will slow the drying process of the poultice thereby allowing it to draw more of the contaminant from the targeted stone.

5.4 Copper (cuprous) Stain Treatment

The cupric stains on the Mausoleum are located on the parapet wall and coping on the cornice of the central pylon. This staining is due to the deterioration of the original copper flashing. The original copper flashing has since been replaced with metal sheeting.

A poultice can be used to address the existing cupric stain. For copper stains on marble a mixture of 1 part dry ammonium chloride and 4 parts powdered talc or attapulgite or sepiolite clay with a 10% solution of ammonia water can be used. This mixture should be reliable on cast stone, but should be tested on site before extensive use. The mixture can be applied to the stain pre-wet with clean water then left to dry. Once dry, remove the paste with a non-metallic scraper or spatula and rinse the treatment area thoroughly with water. Repeat as necessary.

5.5 Iron (ferric) Stain Treatments

Possible Ferric stains or stains caused by the deterioration of iron are located on the parapet wall and cornice of the central pylon of the Hope Abbey Mausoleum, most notably under the Egyptian revival eagle wing and disk motif.

Historic masonry stained by iron usually responds well to a poultice containing a solution of 1 part sodium citrate and 6 parts water to an equal volume of glycerin. Mix this solution with attapulgite clay and apply to the stained area and leave until the paste is dry. Once dry the poultice can be removed with a wood or plastic scraper or spatula and the process repeated as necessary.

In the face of a stubborn stain the surface can be pre-wetted with a solution of 1 part sodium citrate and 6 parts water. Next an attapulgite poultice containing sodium dithionite should be applied. Once dried and removed the treatment area must be thoroughly cleaned with water.

5.6 Efflorescence Removal

While mostly an aesthetic problem, removal of efflorescence is recommended. Heavy deposits of efflorescence can lead to deterioration of the stone as well as diminish the posterity of a National Register resource. The efflorescence emanating from the joints of the cast stone pylon can be removed with the application of a lime solvent. Proper application involves an ample source of clean water, personal protection equipment, and adherence to product specifications.

David Espinosa testing Lime-Solv on efflorescence

Lime-Solv, an efflorescence solvent, was tested on the efflorescence of the entrance pylon. A test patch was chosen on the north side of the assembly behind an ornamental urn. The surface of the stone was thoroughly wetted before Lime-Solv was applied with a chip brush. Protective

eyewear, gloves, and mask were worn during application as the product can cause irritation and burns upon contact with eyes, skin, and mucosa.

Once applied to efflorescence a light foaming action occurs. The product was allowed to dwell upon the efflorescence for 1-3 minutes per product specifications. The area was then rinsed with clean water ensuring that the product, and any contaminated water were washed to the ground and diluted to environmentally acceptable levels. The test area showed successful removal of lime efflorescence and no visible damage to the historic stone.

After testing proved successful the application process was repeated on the west face of the entrance with success. Heavy deposits of efflorescence required repeated application in conjunction with mechanical removal of efflorescence using a plastic or wooden scraper.

While lime solvent application will remove the efflorescence, it will not remove the catalyst of efflorescence. The roof envelope should be thoroughly evaluated for leaks as moisture penetration is the primary cause of efflorescence development. Along with repointing, a water-tight roof will deter further efflorescence growth. The current efflorescence has accumulated over many years. Thanks to a new impermeable layer installed on the roof the efflorescence may no longer be accumulating.

Efflorescence pre-treatment

Efflorescence post-treatment

5.7 Repointing

Several phases of mortar repair are visible on the central pylon of the Hope Abbey Mausoleum. Variations in color, grain size, and performance are evidence of different phases and masons. Before repointing can be undertaken all mortar joints should be assessed for performance. Once assessment is complete those joints that are failing should be raked to a depth approximately twice the height of the joint then thoroughly cleaned with clean water.

Once raked and cleaned repointing can take place. A historically conscious mortar should be implemented in the repointing process. A mortar mixture consisting of Hydrated Lime and clean sand is the most historically appropriate and should be applied by an experienced mason.

Repointing will make the masonry assembly water-tight, aesthetically consistent, and will deter the growth of invasive plant materials.

5.8 Cracking Monitoring

The cracking noted on the west face of the central pylon masonry assembly does not appear to be actively advancing and is likely a product of the building settling. These cracks have been noted and should be monitored. If new cracks form or the current cracks grow in size the masonry assembly should be reassessed and a mitigation procedure created.

6 Proprietary Products

6.1 Orvus WA Paste

Orvus WA Paste is a near-neutral pH, anionic synthetic surfactant and wetting agent produced by Procter and Gamble. The primary component of Orvus is sodium lauryl sulfate, an organic compound widely used in cleaning agents. Salt deposition form use of Orvus WA Paste is not of concern when the treated surface is thoroughly rinsed with clean water. The stone most widely encountered in the cemetery is marble which has a low porosity rendering the problem of salt deposition with Orvus negligible. Runoff containing detergent should be directed away from any historic material and diluted with clean water.

This product is applied in a solution with clean water as a cleansing agent. Applied with a nylon or natural-bristled scrubbing brush the solution is gentle and effective in cleaning the surface of stone markers, removing accumulated soiling, and eradicating foreign biological material. A clean 5-gallon bucket filled with 3 to 4 gallons of clean water and approximately 1/2 cup of Orvus WA Paste was sufficient for the cleaning of multiple markers depending on the level of soiling. This solution should be diluted and disposed of according to the manufacturer's specifications once the solution becomes opaque.

PERFORMANCE EVALUATION

The use of Orvus WA Paste was very successful in every application. Materials in the Masonic Cemetery treated with Orvus from October of 2013 to May of 2014 all currently exhibit stable surfaces, largely clear of soiling. One 7.5 lb. container of Orvus WA Paste serviced over 30 markers with approximately 4 lbs. of paste remaining. As a gentle, reliable, and cost-effective tool it is recommended that this be used in future maintenance programs as specified in this document.

Cost: $20-$40 per 7.5 lb. container (depending on supplier)

6.2 D2 Biological Solution

D2 Biological Solution is a biodegradable, non-mutagenic, pH neutral quaternary ammonium solution. D2 Biological Solution is effective in the removal of stains caused by mold, algae, mildew, lichens, and air pollutants. It can be effectively applied to a wide variety of architectural materials including those comprising the grave markers of the Eugene Masonic Cemetery.

D2 is considered non-toxic if swallowed and requires no special ventilation or personal protection during use. It is also very gentle on vegetation and can be applied undiluted or in solution. There are two methods of application, one producing more immediate results and the other requiring less physical labor while producing results within one week to one month.

Immediate Result Method

Apply D2 Biological Solution to a pre-wetted surface with a brush, roller, or low pressure sprayer.
Allow D2 Biological Solution to dwell on surface for 10-15 minutes.
Apply additional D2 Biological Solution as necessary to maintain a wet surface.
Scrub surface with a soft nylon or natural bristle brush.
Mist the surface with water and continue scrubbing.
Rinse thoroughly with clean water.

No Scrub/No Rinse Method

Wet entire surface with D2 Biological Solution via low-pressure sprayer.
Allow to air dry.

*The treatment executed by David Espinosa during the 2013-2014 restoration project utilized the 'Immediate Result Method' of D2 application.

PERFORMANCE EVALUATION

D2 Biological Solution was instrumental in the removal of stains and biological growth across the range of stone materials in the Eugene Masonic Cemetery. Effectiveness varied based on the level of staining and the tenacity of application. With multiple applications stains can be effectively muted if not virtually removed. One gallon of D2 Biological Solution serviced over 30 markers effectively with approximately ¼ gallon remaining.

Cost: $40 per 1 gallon container (depending on supplier)

6.3 Akemi Akepox 5010 Knife Grade Epoxy Adhesive

Akemi epoxy products were selected at the recommendation of Christine Djuric, a Conservator for the New York City Arts & Antiquities Department, and after consultation with a representative from Akemi Group.

Akepox 5010 is a gel-like, two-component adhesive epoxy resin with a cycloaliphatic hardener. It is solvent free, subject to minimal shrinkage and minimal yellowing. It is designed for outdoor application and experiences little fatigue over time. When mixed in a 2:1 ratio, the components have a very

neutral color that can be altered with a coloring kit to accurately match the targeted stone. With minimal shrinkage during curing tension forces at the joint are avoided. It is suitable for a load-bearing joint and once cured, poses no health threats upon contact. Prior to curing, Akemi Akepox 5010 can cause skin and eye irritation. A ventilated or open-air workspace is recommended to avoid fume inhalation. It is also toxic to aquatic life and must be disposed of appropriately. It is a very viscous material that can be easily controlled upon application and performs well with a very thin coating. The mixture remains workable for 20-30 minutes at an ambient temperature of 20 degrees Celsius. After approximately 6-8 hours of curing at 20 degrees Celsius, 68 degrees Fahrenheit, the bonded parts can be transported and after 12-16, hours they can bear loads and be further tooled. Maximum strength is reached after 7 days.

During this project mixing was done in disposable containers wearing protective gloves with plenty of disposable shop towels at hand. Once mixed and matched for color, it was applied in a thin layer upon both surfaces that were to be bonded. When extensive material loss created voids or gaps that could not be bridged by layering, a plastic bag was filled with the Akepox mixture and piped into location in a manner similar to how one would use a pastry bag. Masking tape was placed around the joint to catch any drips that would be carefully removed with a scraper or razor blade. Once the broken pieces were bonded, they were braced with 2x4 lumber supports held in place by clamps. For in situ bonding procedures, caution tape was erected surrounding the treatment area.

PERFORMANCE EVALUATION

The use of Akemi Akepox 5010 allowed for reconstruction of very large and heavy grave markers with confidence. Only individuals with proper training in epoxy application should undertake work involving Akemi Akepox products. When prepared and applied in an equipped and controlled setting, Akepox 5010 was very easy to use and control to create clean joints of low-visibility. This product is highly recommended for future marker reconstruction in the Eugene Masonic Cemetery.

Cost: MSRP $139.95 for 2 containers (component A=1500 grams, B=750 grams)

6.4 200 Lime-Solv

200 Lime-Solv is a blend of organic and inorganic acids, wetting agents, and inhibitors combined to clean and remove residual mortar, lime efflorescence and soluble salt efflorescence. This product was selected for use on the Hope Abbey Mausoleum, in particular the central entrance pylon constructed of cast stone. For application on this material, the product was diluted to 1 part Lime-Solve to 10 parts clean water. The surface to be treated must be pre-wetted with clean water and proper personal protective equipment is necessary.

This product was selected to treat the large efflorescence accumulations on the cast stone elements of the Hope Abbey Mausoleum. A test patch was treated on the side of the masonry assembly. Treatment was carried out with a diluted mixture applied with a natural bristle chip brush. After an application, the product was allowed to dwell on the treated surface for approximately 3 minutes before being thoroughly washed away with clean water. The surrounding stone was also wetted and washed in order to effectively transport the applied product away from all stone surfaces.

Once applied, the digestive action of the product is visible in the form of a foaming action. After testing was deemed successful, large deposits of lime efflorescence were effectively removed. The process of application is slow and delicate in nature. Care for the historic material was of the most concern, therefore, thorough rinsing with clean water was carried out rigorously throughout the treatment process. Lime-Solv was only applied to the mausoleum as the setting did not contain much plant life and any run-off could be properly contained and diluted to environmentally acceptable levels.

PERFORMANCE EVALUATION

After testing proved successful large deposits of lime efflorescence were effectively removed. Given the health risks involved with Lime-Solv application it is imperative that experienced personnel with proper protective gear carry out efflorescence removal with this product. This product is recommended for future treatments but with safety to personnel and historic materials in mind.

Note: The removal of lime efflorescence is an aesthetic treatment. While extensive efflorescence build-up can lead to material demineralization, the cause of efflorescence accumulation is water penetration. Until water penetration issues are mitigated efflorescence with continue to accumulate.

Cost: $72.50 for one 5 gallon drum

7 Mortar

A variety of mortar mixes have been encountered throughout the Eugene Masonic Cemetery. For the 2013-14 restoration project 2 variations of a lime mortar mix were employed. Historically, grave markers and monuments were assembled using a hydrated lime mortar or lime and sand mortar mix. Some original setting

and pointing mixes remain in the cemetery as evidence hydrated lime's historicity. The mixtures selected for use in the cemetery came at the recommendation of Sally Donovan, a conservator that has consulted the Eugene Masonic Cemetery in the past. Current hydrated lime mortar mixes now include portions of Portland cement for greater durability but still rely on hydrated lime for softness, flexibility, and permeability.

7.1 Resetting & Repair

There are many markers in the Eugene Masonic Cemetery that require resetting on their base. They may have been subject to vandalism, toppling as a result of the shifting hillside, or deterioration of the base. Mortar application should be performed during temperate weather with ambient temperatures neither too hot nor too cold. Rain will wash away mortar so weather must be considered before resetting, repointing, or void patching.

7.2 Necessary Tools

Several tools are necessary for proper mortar work. These can range in price but are generally inexpensive, and when properly cared for can service their mason for years.

- Trowel – Trowels come in several shapes and sizes and are great for laying large amounts of mortar.
- Jointer – Jointers are used for packing and finishing a mortar joint with a clean consistent surface. These tools often have two varied thicknesses to tool multiple joints.
- Joint filler/striking tool – Useful for packing mortar into a joint as well as finishing the joint, these come in several thicknesses.
- Chisels - Essential for the removal of old mortar chisels can be purchased in multiple sizes. Chisel use must be done with care so as not to remove the historic stone material.
- Sponge – A sponge is useful for pre-wetting a joint or surface to accept mortar as well as cleaning the finished joint.
- Brush – A natural or nylon bristled brush is useful for removing waste mortar and ensuring excess mortar does not adhere to stone outside the joint. A small chip brush was used to this effect during the 2013-2014 project.
- Buckets – One gallon buckets are useful for mixing mortar and holding clean water necessary for mortar mixing and joint preparation.

7.3 Recessed Slot

Grave markers that are to be set into an above ground base that has a recessed slot should utilize this mortar mix after the slot has been properly cleaned and the base made level.

1 part white Portland cement (ASTM C-150, Type I)
4 Parts hydrated lime (ASTCM C-207, Type S)
8 Parts clean sand
Clean water

The final mixture should be made with clean water, using only enough to allow the mix to hang off a trowel when held upside down. A base layer of approximately ½" should be laid evenly across the bottom of the slot.

The marker is then placed in the slot with the assistance of wood braces or shims; afterwards, mortar is packed to fill the recessed slot. Care should be taken to ensure that the mortar is beaded or slightly angled so water will not be trapped against the stone.

7.4 Stacked

Those grave markers that are comprised of multiple stacked elements utilize a lime mortar mix excluding sand. Stacked markers that still retain their historic mortar exhibited a very thin layer of lime mortar, often with a joint less than a ¼ inch in height. The mortar used in this project attempted to match the color, texture and size, while preserving flexibility and water permeability.

1 Part white Portland cement (ASTM C-150, Type I)
3 Parts hydrated lime (ASTM C-207, Type S)
Clean water

When mixed the mortar should be able to hang from a trowel when held upside down. The two surfaces that are to be bonded should be cleaned and lightly wetted before mortar application to ensure a strong bond.

7.5 Void Patching

Limited supplies of matching stone fragments rendered void patching during the 2013-14 project impossible. Improper void patching is visible throughout the cemetery and should proper materials be inaccessible void patching should not be attempted. When fragments are available, the void patch mix should match the color of the original stone.

2 Parts white Portland cement (ASTM C-150, Type I)
4 Parts hydrated lime (ASTM C-207, Type S)
7 Parts matching stone dust and grit
Clean water

8 Repointing

8.1 Current state

As of 2014 many stacked markers exhibit joint deterioration, failure, and improper repointing. Several repointing phases are present using materials that are not historically appropriate or are carelessly applied. Portland cement, epoxy resins, and bathroom caulking are examples of inappropriate materials used for repointing in the Eugene Masonic Cemetery. While epoxy resins are inappropriate for repointing they are useful and appropriate the reassembly of broken markers as specified in this document. In addition to inappropriate materials, much of the repointing has been sloppily done, resulting in mortar spattered around the joint. This would not be much of an issue if the mortar used were appropriate. The inappropriate mortar mix often omits lime, thereby creating a mortar that is harder than the stone used in the grave marker putting that historic material in danger of damage if the mortar is removed.

8.2 Repointing Methodology

For the repointing treatments executed during the 2013-2014 restoration project, a mortar mix containing hydrated lime and white Portland cement was used. This mortar mixture is more consistent in color and texture with mortars used historically in the Eugene Masonic Cemetery. Being softer than a mix consisting primarily of Portland cement, it is also more easily removed should reversibility be necessary. The addition of Portland cement makes the mix harder, a necessary feature in a cemetery that cannot afford regular maintenance and repointing. The mix is identical to that listed above for use in setting stacked markers.

1 Part white Portland cement
3 Parts hydrated lime
Clean water

Note: proprietary pre-mixed mortars, such as Jahn mortars, are available to those qualified to use them and are appropriate for use in historic cemetery contexts.

9 Maintenance

For the continued welfare of the numerous grave markers it is recommended that the Eugene Masonic Cemetery adopt a regular maintenance program. A maintenance regime consistent with the treatment program set forth for Tier 1 treatment would be the simplest, and most cost effective means of preservation. In the process of maintenance, a full survey of the cemetery resources using the attached survey form should be completed for a full record of cleaning and repairs over time. While maintenance of the entire grounds can be daunting, the grave markers can be grouped by plot numbers for a rotating maintenance program, focusing on a specific quadrant of the cemetery annually or biannually.

Landscape maintenance procedures must be approached with a great amount of care given to any work around grave markers. Equipment such as weed-whackers, lawn mowers, and shovels can greatly damage markers and their bases if they are carelessly wielded in the vicinity of historic resources.

10 Advocacy

Advocacy for the resources of the Eugene Masonic Cemetery can be greatly enhanced by showcasing those markers that have undergone beneficial change as a result of the 2013-2014 restoration project. By showing potential donors the tangible benefits that their donation can produce the cemetery will receive more interest and funding for the continued preservation of its valuable resources.

It is recommended that the Eugene Masonic Cemetery develop a stronger relationship with the University of Oregon's School of Architecture and Allied Arts. Both parties could mutually benefit from student lead projects within the cemetery. Students can gain experience in resource surveys, HABS, HAER and HALS, Historic Structure Reports, and material conservation. The Eugene Masonic Cemetery Association would not only gain the documents and research produced by students but also a heightened interest in the historic resources of the Eugene masonic Cemetery.

11 Condition and Treatment Recordation Forms

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: C. Boren	
	plot designation: 236
Name(s) of interred: Roena Elvira Boren	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

ROENA ELVIRA
WIFE OF
CHAS. W.BOREN
DIED
In Eugene Monday
Dec. 31, 1888
AGED
75 Y, 9M, 2D
Mother is gone,
But not forgotten

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 5'4"	**Width:** 1'4"	**Depth (or L):** 1'4"
Dimensions (base) Height: 1'0"	**Width:** 1'11"	**Depth (or L):** 1'11"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration **incised decoration** ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* curb wall fence **none**		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

Surveyor: David Espinosa	**Date:** 11/20/13	**Plot identification:** 236
Weather *(circle all that apply):* hot warm **cool** cold **dry** humid sunny rain/snow/fog **overcast** windy		

MATERIALS: Check appropriate fields

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite		**X**			
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	Repointing and filling of voids with Portland cement	N/A	N/A	N/A	N/A
Condition of Repairs	Good				

CONDITIONS: Rank conditions from 0 (low presence) to 3 (high presence)

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 3/8/2014	**Plot identification:** 236
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	**Treatment description**	**Effectiveness**
Treatment 1	Removal of moss, lichen by hand and with plastic scraper	0 1 2 3
Treatment 2	Application of Orvus WA Paste in clean water. Scrubbing with plastic-bristle brush.	0 1 2 3
Treatment 3	Multiple applications of D2 Biological Solution. Solution applied with chip brush and allowed to sit for 20 minutes.	0 1 2 3

Comments:
There was an expected level of lichen and biological growth over the entire structure, with particular concentration of growth on the east and south façades. Previous repairs are present in the primary structure where the northwest and southwest corners of the middle marble element were lost. These voids were filled with Portland cement when repointing was carried out between the two lower marble elements. Compensating for such large material loss with Portland cement is not recommended as Portland cement is not pigmented to match the natural stone and will be difficult to remove without contributing to more material loss should a future repair along this joint be necessary. The uppermost marble element, most likely a piece of ornamental nature, is missing. A ghost and exposed pin are visible where the ornamental element once stood.

Recommendations: Regular cleaning with clean water and Orvus WA Paste is recommended to deter biological growth and staining. Two cracks are present at the northeast corner of the primary marble element and are liable to contribute to fragmentation in this area. Monitoring of this area and the joint between the two extant marble elements is recommended. The Northwest and Southwest corners at the bottom of the primary marble element are missing and have been filled with Portland cement. In cases where stone loss is present, but does not justify stone replacement (i.e. Dutchman repairs) it can be acceptable to redefine the profile of the stone with mortar. In such a case great care must be taken to match the color, grain size, and permeability of the stone. Furthermore, the mortar infill and the joint should be formed separately. The present repair failed to match color, or grain size. This joint must be monitored and may need to be readdressed in the future.

West face of Boren marker pre-treatment

Northwest corner pre-treatment

(Left) Detail of cracking at Northeast corner.

Detail of missing element

Boren marker post-treatment

Inscription detail post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: M. E. Brownlee	
	plot designation: 289
Name(s) of interred: Dr. J.G. Brownlee, Estella B. Mayberry, Joseph G. Brownlee, Anne Bowers	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

(West)
"TILL DEATH US JOIN"

DR. J.G. BROWNLEE
Died
Jan. 19, 1883;
AGED
28 Yrs, 3 Mo's
16 Dy's

BROWNLEE
(North)
ANNE BOWERS
FEB. 20, 1877
SEPT. 20, 1923

(South)
ESTELLA B.
MAYBERRY
SEPT. 8, 1874
AUG. 20, 1923

(East)
JOSEPH G.
BROWNLEE
APR. 2, 1880
MAY 3. 1902
WILLIAM L.
BROWNLEE
MAR. 14, 1883
MAR. 9, 1920

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 4'0"	**Width:** 0'8"	**Depth (or L):** 0'8"
Dimensions (base) Height: 2'10"	**Width:** 2'6"	**Depth (or L):** 2'6"
Dimensions (other): Height: 2'0	**Width:** 1'8"	**Depth (or L):** 1'8"
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one)* : yes no	**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none		
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence none		
Grade slope *(circle one):* positive negative cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)		

Surveyor: David Espinosa	**Date:** 4/4/2014	**Plot identification:** 289
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		X			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

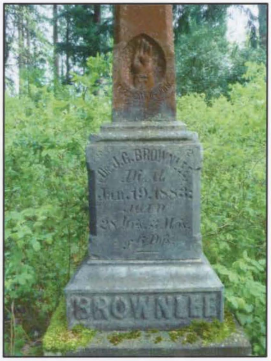
Conservator: David Espinosa	**Treatment Date:** 4/4/2014	**Plot identification:** 289
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	Treatment description	Effectiveness
Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste in clean water applied with nylon scrub brush	0 1 2 3
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 3

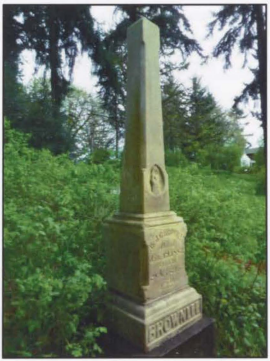
Comments:
Upon initial survey the Brownlee marker was exhibiting a dark red soiling on the obelisk element of marble. This was theorized to be an expression of iron ore within the marble, in some cases such iron deposits produce red ferric staining on the surface of what appears to be a pure marble element. Cleansing with Orvus WA Paste in water easily removed the red soiling. The ease of removal and presence of such soiling on unrelated markers suggests that the red soiling is a product of local vegetation. Some words and shapes were etched onto the west face of the obelisk but dissipated after cleansing.

Recommendations:
Regular cleaning with clean water and Orvus WA Paste would do well to preserve the natural color of the stone and beautifully carved script and relief. The landscaping of the plot should be evaluated to deter overgrowth of the surrounding plant life and locate any other markers that may be hidden.



(Above) Brownlee marker pre-treatment
(Below) Grafitti detail

(Above) Inscription detail pre-treatment
(Below) Brownlee marker post-treatment



CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Thomas Condon Plot	
	plot designation: 209
Name(s) of interred: Fanny Cornelia Condon	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

FANNY CORNELIA
CONDON
BORN Aug. 25, 1866
DIED Dec. 5, 1897

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 2'2"		**Width:** 2'4"	**Depth (or L):** 0'8"
Dimensions (base) **Height:** 1'0"		**Width:** 3'0"	**Depth (or L):** 1'2"
Dimensions (other): **Height:**		**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one) :* yes **no**		**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other			
Enclosure *(circle all that apply):* curb wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) 1 **2** 3 (high)			

Surveyor: David Espinosa	**Date:** 10/20/2013	**Plot identification:** 209
Weather *(circle all that apply):* hot warm **cool** cold **dry** humid sunny rain/snow/fog **overcast** windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	Marble element toppled by vandals, reset with mortar mix 1 part Portland cement, 4 parts hydrated lime, 8 parts clean sand	**N/A**	**N/A**	**N/A**	**N/A**
Condition of Repairs	Mortar joints open, with evidence of improper repointing with Portland cement				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	**0** 1 2 3	**0** 1 2 3		**0** 1 2 3	**0** 1 2 3
Loss	0 **1** 2 3	0 1 **2** 3		**0** 1 2 3	0 **1** 2 3
Fragmentation	**0** 1 2 3	0 1 **2** 3		**0** 1 2 3	0 **1** 2 3
Disaggregation	**0** 1 2 3	**0** 1 2 3		**0** 1 2 3	**0** 1 2 3
Erosion	**0** 1 2 3	**0** 1 2 3		0 **1** 2 3	0 **1** 2 3
Cracking	**0** 1 2 3	0 **1** 2 3	0 1 2 3	**0** 1 2 3	**0** 1 2 3
Exfoliation	**0** 1 2 3	**0** 1 2 3		**0** 1 2 3	**0** 1 2 3
Efflorescence	**0** 1 2 3	**0** 1 2 3	0 1 2 3	**0** 1 2 3	**0** 1 2 3
Finish detachment			0 1 2 3		
Corrosion	**0** 1 2 3	**0** 1 2 3		**0** 1 2 3	**0** 1 2 3
Bio-growth	0 **1** 2 3	0 1 **2** 3	0 1 2 3	0 1 **2** 3	0 **1** 2 3
Vegetation	0 **1** 2 3	0 **1** 2 3	0 1 2 3	0 **1** 2 3	0 **1** 2 3
Alterations	**0** 1 2 3	**0** 1 2 3	0 1 2 3	**0** 1 2 3	**0** 1 2 3
Open/missing joints	0 1 **2** 3	0 1 **2** 3		**0** 1 2 3	**0** 1 2 3
Soiling	0 1 **2** 3	0 1 **2** 3	0 1 2 3	0 **1** 2 3	0 1 **2** 3
Graffiti	**0** 1 2 3	**0** 1 2 3	0 1 2 3	**0** 1 2 3	**0** 1 2 3
Metallic staining	**0** 1 2 3	**0** 1 2 3	0 1 2 3	**0** 1 2 3	**0** 1 2 3
Other *(describe):*	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	**0** 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 **2** 3	0 **1** 2 3	0 1 2 3	0 1 2 **3**	0 1 **2** 3

Overall Integrity (0=poor 3=high)	0 1 2 **3**	0 1 **2** 3	0 1 2 3	0 1 2 **3**	0 1 2 **3**

Conservator: David Espinosa	**Treatment Date:** 11/18/2013, 4/8/2014	**Plot identification:** 209
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: *Rank from 0 (ineffective) to 3 (very effective)*

Tier: 2	**Treatment description**	**Effectiveness**
Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 **3**
Treatment 2	Cleansing with Orvus WA Paste in clean water applied with nylon scrub brush	0 1 2 **3**
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 **3**
Treatment 4	Raking and repointing of joints with mortar mix comprised of 1 part White Portland Cement 3 parts Hydrated Lime.	0 1 2 **3**

Comments: Heavy soiling and staining was present on the roof of the marker as a result of fruiting vegetation adjacent to the grave. The 1995 restoration plan prepared by Don Peting and Richa Wilson shows a photograph of the marble element toppled from its base. Minor material loss along the roof of the marble element is present but minimal and can likely be attributed to the vandalism. The upper portion of the south end of the base is missing. The joint between the base and primary element is open and deteriorating prompting repointing. Upon closer inspection of the joint 2 layers of mortar were found, one mixed with sand that was relatively soft and another below that was very hard and lacking sand. The joints were raked to a depth approximately twice the height of the joint and cleaned. Once prepared the joint was wetted with clean water then pointed with a mortar mix of 1 part White Portland Cement 3 parts Hydrated Lime. This mortar mix was obtained from Historic Preservationist Sally Donovan via Eugene Masonic Cemetery Historic Architect Dennis Hellesvig. The pointing mortar omitted sand in order to achieve maximum flexibility and water permeability. The presence of multiple materials in contact with each other atop a base that may lose stability makes such flexibility desirable. This pointing is relatively soft and can be easily removed. With the omission of sand the joint is also much smoother and aesthetically pleasing.

Recommendations: Yearly cleaning with Orvus WA Paste and clean water would do much to deter further accumulation of soiling and maintain the integrity of the relief carving of the marble element. D2 Biological Solution was very successful in tempering the stains on the roof of the marble. The base is sandstone and has experienced heavy material loss. Vegetation is also contributing to the sandstone's deterioration. Vegetation growth along the joint should be monitored and removed when encountered. The base must be monitored as it deteriorates until

its stability is compromised requiring replacement. The sandstone base, like many others throughout the Eugene Masonic Cemetery is faring poorly against rising damp and biological growth. Options for protective treatments are limited. The best means for preservation of the bases is regular maintenance and monitoring.

Condon marker pre-treatment

South and East faces pre-treatment

Deteriorated joint detail

Joint post-treatment

Condon marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
UTM Coordinates:		
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Croner Plot	
	plot designation: 210
Name(s) of interred: Cynthia A. Croner	
First burial date: N/A	**Last burial date:** N/A

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

CYNTHIA A.
WIFE OF
GEO. F. CRONER
DIED
SEP. 1, 1893
AGED
28Y's, 5M's, 20D's
Gone but not forgotten

CRONER

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'0"	**Width:** 1'0"	**Depth (or L):** 1'0"
Dimensions (base) Height: 1'0"	**Width:** 2'0"	**Depth (or L):** 2'0"
Dimensions (other): Height: 0'10"	**Width:** 1'4"	**Depth (or L):** 1'4"
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	At the lower southwest corner of the primary marble element there is evidence of a void	N/A	N/A	N/A	N/A

	repair as part of a repointing.				
Condition of Repairs	The repointing is neat. Any future work should aim to repair the void with a mortar mix including marble dust and grit.	N/A	N/A	N/A	N/A

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 10/20/2013	**Plot identification:** 209
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	**Treatment description**	**Effectiveness**
Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste in solution applied with nylon scrub brush	0 1 2 3
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 3

Comments:
The Cynthia A. Croner marker is a marble assembly atop a sandstone base that's beautiful natural veining was almost completely concealed by the accumulation of lichen and soiling. Upon cleaning incised ornament was revealed under each gable of the marker's roof. The crystalline structure of this particular marble is very tight and has withstood the elements very well.

There is evidence of a possible resetting of the primary marble element or a repointing of the joint between the marble elements. Damage and fragmentation is present on the primary element along the joint. This could be indicative of damage suffered by metal tools during raking and repointing of the joint, or damage due to erosion and invasive vegetation. It is also possible that the primary element was reset upon the lower marble element and the material loss currently seen is due to it having been toppled. The joint between the marble elements is significantly taller than the joint between the sandstone and marble and the lost material has been occupied by the joint mortar as opposed to a separate void patch mortar. Presently the joint is performing well and the marker as a whole is in good condition.

Recommendations:
Regular cleaning with Orvus WA Paste and clean water will deter regrowth of lichen and maintain the smooth finish and detailing of the Croner marker. Being highly visible the marker should be well maintained for the aesthetic benefit of the cemetery. As a highly visible marker, exhibiting fine craftsmanship and a naturally beautiful material, this marker can serve as a proponent for support of the Eugene Masonic Cemetery Association for further restoration projects.

West and South faces of Croner marker pre-treatment

East face pre-treatment

Cleaning in progress

West face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Holliday family plot	
	plot designation: 493
Name(s) of interred: Edward G. Holliday	
First burial date: December 1919	**Last burial date: N/A**

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: EDWARD G. HOLLIDAY NOV. 1, 1866 DEC. 19, 1919 HOLLIDAY	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'10 ½"		**Width:** 1'10"	**Depth (or L):** 1' ¼"
Dimensions (base)	**Height:** 1'4"	**Width:** 2'3 ½"	**Depth (or L):** 1'6"
Dimensions (other):	**Height:**	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown			
Interment status *(circle one):* active inactive abandoned			

State of interment *(circle all that apply):*	standing ruin fragment relocated altered replica tilted sunken
Type of interment *(circle one):*	individual family undeterminable
Pedestal *(circle one) :*	yes no **Base** (circle one): yes no
Ornament *(circle all that apply):*	urn sculpture cross plaque relief decoration incised decoration ornamental vase none
Furniture *(circle all that apply):*	sculpture container/vase plaque immortelles none
Landscape *(circle all that apply):*	brick asphalt concrete soil grass vegetation other
Enclosure *(circle all that apply):*	curb wall fence none
Grade slope *(circle one):*	positive negative cross-slope none
Degree of grade *(circle one):*	0 (low) 1 2 3 (high)

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		X			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Finish detachment									0	1	2	3								
Corrosion	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Bio-growth	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Vegetation	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Alterations	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Open/missing joints	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Soiling	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Graffiti	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Metallic staining	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Other *(describe):*	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
	Sharp contrast in color due to soiling																			

Rank conditions from 0 (poor) to 3 (high)

	Primary structure				Base				Surface Finish				Ornament				Roof			
Overall Condition (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Overall Integrity (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Conservator: David Espinosa	**Treatment date:** 2/25/14	**Plot identification:** 493
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	**Treatment description**	**Effectiveness**
Treatment 1	Mechanical removal of lichen and moss with plastic scraper	0 1 2 3
Treatment 2	Scrubbing with Orvus WA Paste in clean water applied with a nylon scrub brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution. D2 Biological Solution was applied in darker areas to diminish stark contrast in color causes by soiling and rain	0 1 2 3

Comments:

The Holliday marker is one of the larger monuments visible upon entering the cemetery from the Northwest. It was chosen for treatment due to its prominent position in the cemetery as well as its very visible discoloration. A large blotch of lighter stone runs from the top down the center of the west (front) façade approximately 3/4 of the way down the primary marble element. In order to diminish the contrast in color between this blotch and the rest of the stone undiluted D2 Biological Solution was applied to the darker areas of the marker and left to set for

approximately 20 minutes. The stone was rinsed with water then retreated with D2 Biological Solution over its entirety. The two applications were successful in significantly lightening the stone overall and muting the contrast between the lighter and darker areas of the primary marble element.

Recommendations:

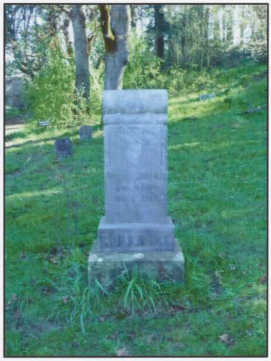
Regular cleaning with Orvus WA Paste and clean water is recommended for the Holliday marker as well as the other markers at this point of entry. It is hoped that the cleaned markers will serve as an example of the benefits of regular maintenance and inspire more donations to the cemetery association. Being located in this high-traffic area, the now cleaned Holliday marker should now draw attention in contrast to surrounding un-treated markers.

It is recommended that the sandstone base be monitored and periodically cleared of lichen and moss. The sandstone is at risk of deterioration through the accumulation of biological growth and vegetation. Simply scraping the base with a plastic scraper and a scrubbing with water and a non-ionic detergent will greatly extend the lifetime of the sandstone.

West face of the Holliday marker pre-treatment

East face pre-treatment

North face pre-treatment



West face post-treatment

North face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/20/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Hubble	
	plot designation: 247
Name(s) of interred: Emma A., Lee Roy, Harrison , Monroe S.	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

(*West Façade*)
EMMA A. HUBBLE
BORN
AUG. 25, 1856
DIED
JUNE 30, 1889
-
Died by drounding

(*North Façade*)
MONROE S.
HUBBLE
BORN
DEC. 30, 1859
DIED
SEP. 16, 1908

(*South Façade*)
LEE ROY
BORN
SEPT. 27, 1886
DIED
JUNE 30, 1889
-
Harrison
BORN
JULY 17, 1888
DIED
JUNE 30, 1889
-
SONS OF M.S. &
EMMA A. HUBBLE
Died by drounding

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'6"	**Width:** 1'0"	**Depth (or L):** 1'0"
Dimensions (base) **Height:** 0'10"	**Width:** 2'0"	**Depth (or L):** 2'0"
Dimensions (other): **Height:** 0'8"	**Width:** 1'4"	**Depth (or L):** 1'4"
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one) :* yes no	**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none		
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence none		
Grade slope *(circle one):* positive negative cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		X			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs	N/A	N/A	N/A	N/A	N/A

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/25/2013	**Plot identification:** 247
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	**Treatment description**	**Effectiveness**

Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste in solution applied with nylon scrub brush	0 1 2 3
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Allowed to dwell another 20 minutes. Rinsed with clean water.	0 1 2 3

Comments:

The Hubble family marker is accompanied by smaller tablets that mark the individual graves of each family member. The smaller markers, while intact, have been toppled or tilted due to a collapsing curb enclosure and growing vegetation. A large tree grows adjacent to the family marker but does not appear to be impacting the marker save for obscuring it from view. The finer detailing of the incised ornament on the family marker was slightly obscured by biological growth but was easily cleared after a simple cleaning treatment with Orvus WA Paste and D2 Biological Solution.

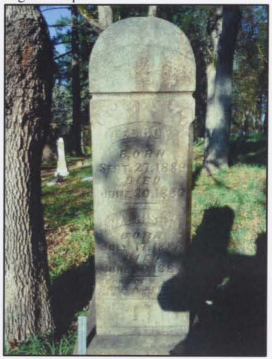
The base is in good condition and unaffected by the root system of the nearby tree. The entire assembly is relatively plumb in contrast to neighboring markers which are tilting as the hillside erodes to the west.

The concrete curb enclosure is succumbing to the shifting hill and has fractured at several points. This has contributed to the instability of the smaller tablets. The tablets are easily reset in the soil as they have no base.

Recommendations:

Regular cleaning with clean water and Orvus WA Paste is recommended. The plantings of the enclosure should be assessed as well should future marker instability issues arise. The concrete curb enclosure needs repair along the west edge of the plot.

West and South faces pre-treatment



South face inscription detail

West face post-treatment

South face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/20/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: C.W. Letson	
	plot designation: 237
Name(s) of interred: James Letson, Scharlotte Letson	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

(*West Façade*)	(East Façade)
JAMES LETSON	SCHARLOTTE LETSON
BORN	BORN
Apr. 5, 1830	Jan. 19, 1828
DIED	DIED
Aug. 31, 1892	Aug. 18, 1892

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 2'8"		**Width:** 0'8"	**Depth (or L):** 0'8"
Dimensions (base)	**Height:** 1'8"	**Width:** 2'6"	**Depth (or L):** 2'6"
Dimensions (other):	**Height:** 0'6"	**Width:** 1'0"	**Depth (or L):** 1'0"
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* individual **family** undeterminable			
Pedestal *(circle one) :* yes **no**		**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other			
Enclosure *(circle all that apply):* curb wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) 1 **2** 3 (high)			

Conservator: David Espinosa	**Treatment Date:**	**Plot identification:**
Weather *(circle all that apply):* hot **warm** cool cold **dry** humid **sunny** rain/snow/fog overcast windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

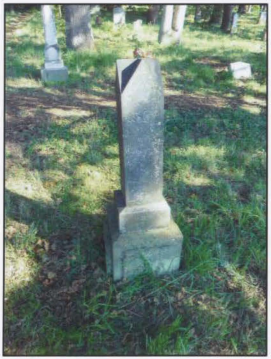
Tier: 1	**Treatment description**	**Effectiveness**
Treatment 1	Moss and lichen removal with plastic scraper.	0 1 2 3

Treatment 2	Cleansing with Orvus WA Paste in solution applied with nylon scrub brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 3

Comments: The Letson marker is comprised of a dark marble with white veining. This was obscured by a layer of soiling and lichen. The joint between the marble elements is deteriorating and will require repointing soon. The base is sandstone and in good condition. The entire assembly was washed with Orvus WA Paste and clean water. D2 Biological Solution was applied to the marker along the 'Instant Results' method then rinsed with clean water.

After treatment the marble was significantly lightened and the natural veining was much clearer. Incised detail was made clearer by the removal of lichen that clings to the unpolished, tooled surfaces.

Recommendations: Regular cleaning with Orvus WA Paste and clean water will deter biological growth and soiling. The joint must be monitored and eventually repointed.



West face pre-treatment

South face pre-treatment

North face pre-treatment

East face pre-treatment

West face post-treatment

South face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Date:** 2/27/2014
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: **Lithgow Family Plot**	
	plot designation: 400
Name(s) of interred: Harry Lithgow, Orlando Lithgow	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

HARRY J.
LITHGOW
BORN
SEP. 18, 1886
DIED
MAR. 3, 1888

Sleep on in thy beauty,
Thou sweet angel child,
By sorrow unblighted,
By sin undefiled

ORLANDO A.
LITHGOW
BORN
OCT. 19, 1854
DIED
SEP. 19, 1890

MEMBER OF
Du Bois Lodge No. 475
K. of P. Penn

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'10 ½"	**Width:** 1'4"	**Depth (or L):** 1'4"
Dimensions (base) Height: 1'1"	**Width:** 1' 5 ¾"	**Depth (or L):** 1'5 ¾"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one) :* yes no	**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none		
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence none		
Grade slope *(circle one):* positive negative cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)		

Surveyor: David Espinosa	**Date:**	**Plot identification:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		X			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	Resetting on lower marble element	**N/A**		**N/A**		**N/A**		**N/A**
Condition of Repairs	Good – off center							

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	**Primary structure**				**Base**				**Surface Finish**				**Ornament**				**Roof**			
Collapse	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Loss	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Fragmentation	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Disaggregation	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Erosion	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Cracking	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Exfoliation	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Efflorescence	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Finish detachment									0	1	2	3								
Corrosion	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Bio-growth	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Vegetation	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Alterations	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Open/missing joints	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Soiling	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Graffiti	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Metallic staining	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Other *(describe):*	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure				**Base**				**Surface Finish**				**Ornament**				**Roof**			
Overall Condition (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Overall Integrity (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Conservator: David Espinosa	**Treatment Date:** 2/27/2014	**Plot identification: 400**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

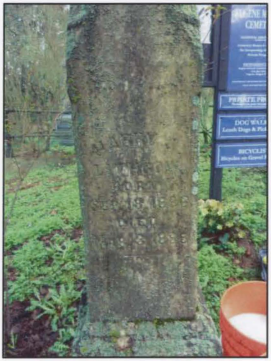
Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 1	Treatment description	Effectiveness
Treatment 1	Mechanical removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Scrubbed surface with Orvus WA Paste in water with stiff plastic-bristled brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution. 2 applications, with a dwelling time of 20 minutes each.	0 1 2 3

Comments:
The Lithgow marker, located at the Southeast entrance of the cemetery, was obscured by heavy biological growth and soiling. Rigorous scrubbing with Orvus WA Paste and water removed the majority of soiling and D2 Biological Solution application greatly lightened the areas discolored by the biological growth. Treatment was very successful in increasing legibility of the inscriptions. The sandstone base, although covered in moss, was found to be in good condition after removal of the moss.
It appears that the uppermost marble element was reset upon the lower element and done so off center slightly to the South.

Recommendations:
The Lithgow marker holds an important lot in the cemetery as it is the first marker encountered upon entering from the Southeast. Directly adjacent an informational posting board it draws more attention. Regular cleaning is recommended not only to preserve the stone but to

South face pre-treatment


West face pre-treatment

present an image of upkeep and respect for the deceased to the general public. No glaring issues, other than the extent of soiling and growth on the marker, are immediately visible.

West face inscription detail

South face inscription detail

West face post-treatment

South face post-treatment

CONDITIONS & Treatment Recordation FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684- 0949
Surveyor: David Espinosa		**Survey Date:** 10/17/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Lombard Family Plot	
	plot designation: 275
Name(s) of interred: James L. Lombard, Sara B.	
First burial date: June 1922	**Last burial date: June 1922**

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

East Façade:
JAMES L.
LOMBARD
DIED
JUNE 25, 1922
AGED
65 YEARS
LOMBARD

North Façade:
In loving remembrance of
SARA B.
WIFE OF
J.L. LOMBARD
DIED
OCT. 18, 1897
AGED
35 YEARS
Love is the fulfillment of the lord

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 2'0"	**Width:** 0'10"	**Depth (or L):** 0'10"
Dimensions (base) Height: 0'6"	**Width:** 1'0"	**Depth (or L):** 1'0"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one) :* yes no	**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none		
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence none		
Grade slope *(circle one):* positive negative cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X	X			
Limestone					
Granite					
Brick					
Concrete					
Metal					
Stucco					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs	N/A	N/A	N/A	N/A	N/A

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Date:**	**Plot identification:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

	Treatment description	Effectiveness
Treatment 1	Application of Orvus WA Paste in clean water and gentle scrubbing with plastic-bristled brush.	0 1 2 3

Treatment 2	Application of D2 Biological Solution along 'Instant Results' method. Rinsed with clean water.	0 1 **2** 3
Treatment 3	N/A	0 1 2 3

Comments:
After applying the treatments the soiling of the stone was severely lightened and the lichen growth was removed. An ornamental element is missing from the top of the monument, likely a casualty of vandalism. There is a large light spot on the north façade, the spot does not diminish legibility of the inscription but is in stark contrast to the surrounding stone that has experienced more consistent soiling.

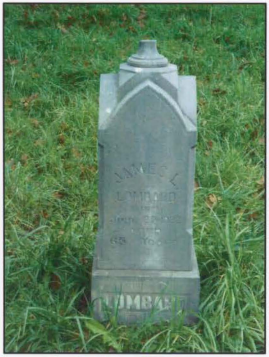
Recommendations:
The monument is not experiencing any substantial threat at this point. Regular cleaning with a mild detergent and water is recommended to deter biological growth and maintain inscription legibility. The monument is leaning downhill, but is not in immediate danger of toppling. The joint between the base and primary stone should be monitored, but as of yet repointing is not necessary. Accretions are visible on the ornament fragment and the roof of the. These are products of an interaction between natural inclusions in the stone and the ambient atmosphere. These accretions should not be tampered with as their removal would likely contribute to loss of the historic marble.

Detail of broken finial

North face pre-treatment (note discolored blotch)

West face pre-treatment

North and West faces post-treatment



West face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/14/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: McAlister Family Plot	
	plot designation: 29
Name(s) of interred: Samantha A., A. A., Lily	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

(Northeast façade)
SAMANTHA A.
Wife of
REV. E. A.
McALISTER
BORN
Oct. 23, 1839
DEPARTED THIS LIFE
July 18, 1896

(Northwest façade)
A.A. McALISTER
BORN
Nov. 8, 1869
DEPARTED THIS LIFE
June 9, 1879

LILY McALISTER
BORN
Feb. 4 1881
DEPARTED THIS LIFE
Feb. 4, 1881

McALISTER

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'0"		**Width:** 1'0"	**Depth (or L):** 1'0"
Dimensions (base) **Height:** 0'8"		**Width:** 1'6"	**Depth (or L):** 1'6"
Dimensions (other): **Height:**		**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown			
Interment status *(circle one):* active inactive abandoned			
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* individual family undeterminable			
Pedestal *(circle one) :* yes no		**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none			
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other			
Enclosure *(circle all that apply):* curb wall fence none			
Grade slope *(circle one):* positive negative cross-slope none			
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X	X			
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	The primary element has been reset with an epoxy	**N/A**	**N/A**	**N/A**	**N/A**

Condition of Repairs	The bond is still stable and the joint clean.				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3 The entire element is scratched	0 1 2 3 The 'base' is scratched	0 1 2 3	0 1 2 3 Scratched	0 1 2 3 Scratched

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/16/2013	**Plot identification:** 29
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier 1 Grade	Treatment description	Effectiveness
Treatment 1	Lichen and moss was mechanically removed with a plastic scraper.	0 1 2 3
Treatment 2	Surface scrubbed with Orvus WA Paste in clean water with a nylon bristle brush.	0 1 2 3
Treatment 3	D2 Biological Solution applied in 'Instant Results' method.	0 1 2 3

Comments:
The McAlister marker has experienced significant travel after having been lost by the Masonic Cemetery and only recovered several years ago. The entire marker is gouged, likely a result of tumbling and being struck by other stones or metal tools. It is also suspected that the original base was lost as it is uncommon for another marble element to serve as a base and be in contact with the ground. The 'base' and primary element have been bonded by an epoxy. The bond shows no signs of deterioration. While the joint is functioning it is not historically accurate and should have been made with a lime mortar mixture.
In an attempt to lessen the contrast between the gouged stone and the surviving surface an aggressive D2 Biological Solution treatment was applied. This did lighten the surrounding stone and reveal a more nuanced natural veining but was largely unsuccessful in muting the gouging. There are natural accretions on the roof of the obelisk along inclusions in the natural stone. While appearing foreign, they are consistent with natural exposure and should be left in place.
Recommendations: Regular cleaning with Orvus WA Paste and clean water is recommended to conserve the historic material. The 'base' must receive regular maintenance as marble will deteriorate relatively quickly if left in contact with the soil. Reconstruction of a base consistent with other markers of the period is recommended in order to ensure longevity of the marble's integrity.

McAlister marker pre-treatment

McAlister base pre-treatment

South corner of marker pre-treatment. Note material loss and conservation dog

Detail of gouging, and natural accretions

(Left) McAlister marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/15/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: McFall Family Plot	
	plot designation: 15
Name(s) of interred: S.T. McFall	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: FATHER S. T. McFALL 1835 1907	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 0'8"	**Width:** 2'0"	**Depth (or L):** 0'8"
Dimensions (base) Height: 0'10"	**Width:** 2'0"	**Depth (or L):** 0'8"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase **none**		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* curb wall fence **none**		
Grade slope *(circle one):* positive negative cross-slope **none**		
Degree of grade *(circle one):* **0** (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble					
Limestone					
Granite	**X**				
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Multiple resetting with Portland cement and caulking	**N/A**	**N/A**	**N/A**	**N/A**

Condition of Repairs	Failed				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/13/2014	**Plot identification:** 15
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 2	Treatment description	Effectiveness
Treatment 1	Removal of failed bonding materials with metal scraper, and chisel.	0 1 2 3
Treatment 2	Cleaning of the base and granite element with Orvus WA Paste and clean water	0 1 2 3
Treatment 3	Resetting of granite element with hydrated lime mortar.	0 1 2 3

Comments: The joint of the McFall marker had failed with the granite element rotated to expose caulking. Upon removal of the granite element remnants of caulk, Portland cement and yellow epoxy were discovered. Insects and biological growth had penetrated the joint as well. The various bonding materials were removed with a metal scraper, and chisel. The base and granite element were then cleaned with Orvus WA Paste and clean water. The base was wetted with clean water before a hydrated lime mortar was applied. The granite element was reset in the mortar, then the joint was struck, and excess mortar was removed.

Recommendations: Regular cleaning with Orvus WA Paste and clean water are recommended to maintain the marker and integrity of the new joint. Being low to the ground and relatively easy to topple, this marker, and others like it, should be regularly monitored for vandalism.

McFall marker pre-treatment

Detail of caulked joint

Detail of failed bonding materials on base

Detail of failed bonding material on granite element

(Left) McFall marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/20/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Owen/Noah	
	plot designation: 256
Name(s) of interred: Mary Ellen	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

MARY ELLEN
WIFE OF
GEORGE NOAH
DIED
Aug 8, 1880
AGED

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 4'0"	**Width:** 1'5"	**Depth (or L):** 1'5"
Dimensions (base) **Height:** 1'5"	**Width:** 2'0"	**Depth (or L):** 2'0"
Dimensions (other): **Height:**	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica **tilted** sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn **sculpture** cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete **soil** grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence **none**		
Grade slope *(circle one):* positive negative cross-slope **none**		
Degree of grade *(circle one):* **0** (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Resetting has taken place at the joint between the	**N/A**	**N/A**	**N/A**	**N/A**

	primary and middle marble elements.				
Condition of Repairs	The joint is stable.				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	**Primary structure**	**Base**	**Surface Finish**	**Ornament**	**Roof**
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	**Base**	**Surface Finish**	**Ornament**	**Roof**
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 10/30/2014, 4/21/2014	**Plot identification:** 256
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 2	Treatment description	Effectiveness
Treatment 1	Lichen and moss removed with plastic scraper.	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste solution applied with nylon scrub brush to remove soiling. Finer detailing accomplished with small nylon brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution along 'instant results' method. Staining largely removed or muted.	0 1 2 3
Treatment 4	Leveling of marker using large pry bars. Base supported with tamped gravel.	0 1 2 3

Comments: The Mary Ellen Noah marker holds occupies a prominent position along Skinner's row at the top of the cemetery hill. It was selected for treatment due to its high visibility along a high traffic path. Heavy soiling and staining rendered the inscribed text difficult to read and contributed to a loss of detail on the sculpted book ornament. There is material loss at the lower northwest and northeast corners of the primary marble element. The area around the joint between the primary and middle marble elements is rough suggesting the primary element was dislodged from its setting. Portland cement is present in the joint. Cleaning with Orvus WA Paste in clean water removed most of the soiling and significantly lightened the stone.
The sandstone base is experiencing advanced decay at the northwest corner do to invasive plant material and associated moisture deterioration. The corner is soft to the touch and the tooling has lost definition. Removal of the vegetation and biological growth on the base was successful without removing material from the deteriorating northwest corner.
The entire assembly was tilted to the northwest due to shifting of the surrounding soil and settling of the marker. The soil along the northwest corner of the base was excavated in preparation for leveling. Lumber pieces were used as a fulcrum for a large pry bar to raise the northwest corner of the marker. Using a bubble level the position of the marker was monitored as gravel was placed and tamped beneath the northwest corner of the marker. This process was repeated until the bed of gravel allowed the marker to rest in a plumb orientation. Gravel was used in order to better control settling and to promote water drainage away from the base. Dirt was placed over the gravel, tamped and raked to diminish visible variation of the soil. Upon monitoring several days after the marker remains plumb even after significant rainfall.

Recommendations: Regular cleaning with Orvus WA Paste and clean water is recommended to maintain the color of the stone as well as retain legibility and ornament detail. The base must be cleaned and monitored regularly in order to slow further deterioration. Material consolidants were researched for use on the base but require expense and expertise that EMCA would not be able to afford. As the base deteriorates it must be monitored until deemed unstable then replaced in kind.

Given the grave marker's context in the cemetery it must be cleaned and monitored as a point of cemetery advocacy and vandalism deterrence.

Mary Ellen Noah marker pre-treatment

East face pre-treatment, pitbull terrier assistant.

(Above) Gravel tamping and associated tools

Pry-bar in use as gravel infill is inserted

Mary Ellen Noah and associated Noah/Owen markers post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/24/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Robert Campbell (1905 plot identification)	
	plot designation: 98
Name(s) of interred: Henry C. Noble	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

HENRY C.
Son of
D & E Noble
DIED
Aug. 17, 1862
Aged 16 Yrs.
7 Mos. 1 Day

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'11"	**Width:** 1'4"	**Depth (or L):** 2"
Dimensions (base) Height: 8"	**Width:** 2'	**Depth (or L):** 1'6"
Dimensions (other): Height: N/A	**Width:** N/A	**Depth (or L):** N/A
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* standing ruin **fragment** relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other		
Enclosure *(circle all that apply):* curb wall fence **none**		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone		X			
Granite					
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/4/2014, 4/18/2014	**Plot identification:** 98
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade	3	Treatment description	Effectiveness

Treatment 1	Fragments of the marble element are scrubbed with Orvus WA Paste solution using nylon bristle brushes.	0	1	2	3
Treatment 2	D2 Biological Solution is applied in 'instant results' method.	0	1	2	3
Treatment 3	The fragments are bonded with Akemi Akepox 5010 and held in place with lumber braces and c-clamps. The bonds are left to cure for 48 hours.	0	1	2	3
Treatment 4	The limestone base is relocated away from the adjacent tree after consulting the landscaping staff and the EMCA architectural historian. It is reset upon a bed of gravel and leveled.	0	1	2	3
Treatment 5	The recessed slot is retooled to better accept mortar and the marble element.	0	1	2	3
Treatment 6	The marble element is set into the recessed slot using a mix of hydrated lime, Portland cement, and clean sand. Once plumb the assembly is supported by lumber braces and left to cure for 48 hours.	0	1	2	3

Comments:

The Noble marker was found in three pieces dislodged from its base and leaning against an adjacent tree. The base had been tilted due to the growth of the tree's root system. Although broken the marble element was in good condition.

The marble fragments were removed from the site for cleaning and bonding off-site. The upper and middle fragments were bonded before the lower fragment. The lower fragment was to be set in the base before bonding as it is easier and safer to handle and set smaller fragments. This process also made leveling the lowest fragment easier allowing for a more secure and plumb bonding of all the fragments.

The base was relocated after consulting the landscaping crew and the historic architect of the EMCA. A hole approximately four inches deep was dug adjacent to the original location of the base. A bubble level was used to ensure a flat and level surface. Gravel was laid in the hole and tamped with a piece of lumber struck repeatedly by a sledge hammer. The base was then positioned and adjusted to be level. The bottom of the base had deteriorated and presented an uneven surface that required more gravel to be packed beneath it. Excess soil was taken away from the area to be used by the landscaping crew for other projects. The base had experienced significant weathering that had roughened the surfaces and made retooling of the recessed slot necessary in order to properly accept mortar and the reassembled marble element. Retooling was accomplished with a wide blade chisel and hammer.

Once tooled and cleaned the recessed slot was wetted with clean water then covered with a uniform layer of mortar mix. The mortar used was a mix of 1 part white Portland cement, 4 parts hydrated lime, 8 parts clean sand, and water. Once situated to be plumb, mortar was packed into the voids between the marble and the base. Using a striking tool the mortar was packed and smoothed. A sponge was then used to clear away excess mortar. The lower marble fragment was then supported by wood braces. The braces were constructed of 2x4s cut and fastened to form right angles. The assembly was surrounded by caution tape and left to cure for several days.

Once cured the upper fragments were bonded to the now-set lower marble fragment with Akemi Akepox 5010 and left to cure for 48 hours.

Recommendations:

The Noble marker is a tablet that is relatively tall and thin standing almost five feet in height with the base and measuring only two inches thick. It is therefore necessary that the marker be routinely monitored to ensure it remains level. Should the marker tilt it will be at risk of uneven loads and likely break. Regular cleaning with Orvus WA Paste and clean water is recommended to retain the natural color of the stone as well as preserve the relief sculpture of a willow above the incised text.

Base before relocation

Marble fragments off-site pre-treatment

Upper fragments post-cleaning

Gravel bed set for base relocation

Recessed slot with mortar bed prepared

Lower marble fragment set in recessed slot

Mortar bed detail

Noble post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/24/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: W.T. Osborne	
	plot designation: 177
Name(s) of interred: Sarah Osburn	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: IN MEMORY OF SARAH WIFE OF W.T. OSBURN BORN NOV. 5, 1831 DIED MAY 12, 1883 AGED 51Ys. 6Ms. 7Ds.	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'8"	**Width:** 1'6"	**Depth (or L):** 0'3"	
Dimensions (base) **Height:** 2'3"	**Width:** 2'4"	**Depth (or L):** 1'0"	
Dimensions (other): **Height:** 0'6"	**Width:** 2'0"	**Depth (or L):** 0'8"	
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one)* : yes **no**	**Base** (circle one): **yes** no		
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase **none**			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other			
Enclosure *(circle all that apply):* **curb** wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) 1 **2** 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		X			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Reset on middle marble element with epoxy.	Joint between base and middle	**N/A**	**N/A**	**N/A**

	Fragments bonded with epoxy.	element reset with epoxy			
Condition of Repairs	Structurally sound, but sloppy use of improper bonding material	Structurally sound, but sloppy use of improper bonding material			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Conservator: David Espinosa	**Treatment Date:** 11/25/2013	**Plot identification:** 177

Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy

Tier Grade 1	**Treatment description**	**Effectiveness**
Treatment 1	Removal of lichen with plastic scraper.	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste and clean water applied with nylon scrub brush	0 1 2 3
Treatment 3	Application of D2 Biological Solution as specified in 'Instant Results' method.	0 1 2 3

Comments: The Sarah Osburn marker has experienced previous repairs. It appears that the middle marble element was fragmented and subsequently bonded with a yellow epoxy. The entire assembly was reset using epoxy. Whoever reset and bonded the marker was very sloppy in their work as there is excess epoxy spilling over the base and the middle element.

This marker was originally classified as a Tier 2 treatment marker. Upon closer inspection it was reduced to a Tier 1 treatment as removal of excess epoxy would endanger historic material. The marker is tilted and was slated for leveling. This procedure was later abandoned after soil stability was deemed unsecure. The curb enclosing the plot has collapsed immediately in front of the Sarah marker. This would make excavating beneath the marker dangerous to the stability of the surrounding soil, the marker, and the conservator.

Tier 1 treatment procedures were successful in eliminating the red biological staining on the primary marble element. Staining still remains just above the middle element and in the relief ornament above the incised text.

Recommendations: There is a large rose bush encroaching upon the marker. This may be a historic ornamental planting but nonetheless be considered for pruning by the landscaping staff as it contributes to biological staining and obscures the marker.

It is recommended that the curb enclosure be repaired so that further work within the plot can be carried out safely. Curb repair should also stabilize the soil and retard or halt tilting of the markers. Regular maintenance with Orvus WA Paste and clean water is recommended.

Osburn marker pre-treatment. Note broken curb.

East face of Osburn marker pre-treatment. Note middle element repair.

Detail of prior repair

West face of Osburn marker post-treatment

East face post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/27/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Owen/Noah	
	plot designation: 256
Name(s) of interred: Elizabeth E. Owen	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

ELIZABETH E.
Wife of
H. G. OWEN
BORN
July 3, 1832
DIED
Mar. 18, 1865

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'2"	**Width:** 1'3"	**Depth (or L):** 0'2"	
Dimensions (base) **Height:** 0'0"	**Width:** 2'0"	**Depth (or L):** 1'6"	
Dimensions (other): **Height:**	**Width:**	**Depth (or L):**	
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no		
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete **soil** grass **vegetation** other			
Enclosure *(circle all that apply):* curb wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete		**X**			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Fragments bonded with epoxy.	Removed from base and reset in poured concrete	**N/A**	**N/A**	**N/A**

Condition of Repairs	Failed	Stable			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 3/13/2014	**Plot identification:** 256
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade	3	Treatment description	Effectiveness

Treatment 1	Mechanical removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Removal of failed epoxy with 5-in-1 paint scraper.	0 1 2 3
Treatment 3	Cleansing with Orvus WA Paste applied with nylon scrub brush to remove soiling.	0 1 2 3
Treatment 4	Application D2 Biological Solution to remove or mute staining.	0 1 2 3
Treatment 5	Bonding of fragments with Akemi Akepox 5010. Bond braced with lumber and c-clamps during curing.	0 1 2 3

Comments:

The Elizabeth E. tablet was found fragmented with the upper fragment resting against the still standing lower fragment. Originally broken as a result of vandalism the fragments were bonded with a yellow epoxy that has failed. The tablet had been relocated from a position along the walking path to a location set back from traffic. This was done in attempt to protect the marker from further vandalism. This was done to several markers in the Owen/Noah plot and the original bases are still present along the path, partially buried. The Elizabeth E. tablet is now set in a base of concrete.

The original epoxy repair was insufficient as the epoxy was applied in quarter-sized dollops. This produced multiple weak bonds along the break as well as voids that could be occupied by water and invasive plant material. These epoxy dollops were easily removed with a 5-in-1 scraper, a tool typically used for paint-stripping. Upon the failure of the original epoxy application some historic material was lost. It is also suspected that small fragments were lost when originally vandalized as there are still substantial voids along the break.

The upper fragment has experienced more weathering than the lower as it was leaned against the lower fragment and bore the brunt of the elements. This produced a notable variation in texture between the upper and lower fragments.

After cleaning the fragments were bonded with Akemi Akepox 5010. A continuous strip of epoxy was laid along the break with approximately 1/3 inch space on all sides to account for spreading once the fragments were connected. The material loss presented an uneven surface for bonding and required epoxy to bridge these voids. The epoxy mixture was pigmented white in the hopes that as weathering, yellowing and soiling advanced the epoxy joint would match the natural stone. The fragments were supported with lumber braces and c-clamps during curing. The epoxy cured whiter than expected and given the voids is more visible than hoped.

There is a variation in color of the upper and lower fragments as a result of varied cleaning success. The upper fragment was cleaned off-site while the lower was cleaned on site. Surface texture variation may also have contributed to stain removal success. This variation should diminish as the marker weathers.

Recommendations:

Regular cleaning with Orvus WA Paste and clean water recommended to retain legibility and integrity of the tablet. The landscaping crew should evaluate the plot for cleaning as spring growth obscures the markers set back in the plot.

Owen marker fragments pre-treatment

Detail of epoxy 'dollops'

Upper fragment pre-treatment

Bonding preparation

Lumber supports in place during curing

Elizabeth Owen tablet post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Owen/Noah	
	plot designation: 256
Name(s) of interred: Lucinda Pauline Owen	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	**2**	3
Secondary inscription	0	1	2	3

Inscription:

LUCINDA PAULINE OWEN
Daughter
Of
G & E Owen
BORN
May 3, 1850
DIED
Nov. 5, 1859
Aged 8ys. 6ms. 2 ds.

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'0"	**Width:** 1'2"	**Depth (or L):** 0'2"	
Dimensions (base) Height: 0'0"	**Width:** 2'0"	**Depth (or L):** 1'8"	
Dimensions (other): Height:	**Width:**	**Depth (or L):**	
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin **fragment** **relocated** altered replica tilted sunken			
Type of interment *(circle one):* individual family undeterminable			
Pedestal *(circle one)* : yes **no**	**Base** (circle one): **yes** no		
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase **none**			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete **soil** grass **vegetation** other			
Enclosure *(circle all that apply):* curb wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete		**X**			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Fragments bonded with yellow epoxy	Relocated and set in concrete	**N/A**	**N/A**	**N/A**

Condition of Repairs	Failed	Stable			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 3/13/2014	**Plot identification:** 256
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: *Rank from 0 (ineffective) to 3 (very effective)*

Tier Grade	3	Treatment description	Effectiveness

Treatment 1	Removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Removal of failed epoxy with 5-in-1 scraper.	0 1 2 3
Treatment 3	Cleansing with Orvus WA Paste in clean water with nylon brush to remove soiling.	0 1 2 3
Treatment 4	Application of D2 Biological Solution to mute and remove staining.	0 1 2 3
Treatment 5	Bonding of fragments with Akemi Akepox 5010. Supported with lumber supports and c-clamps during curing. Left to cure for 48 hours before supports removed.	0 1 2 3

Comments:

The Lucinda tablet was broken as a result of vandalism. The tablet was relocated from its original position along the walking path to its current location set back in the plot. The original base has been replaced with a concrete base flush with the ground. The fragments were bonded with a yellow epoxy that has since failed. The upper fragment was found leaning against the back of the lower fragment.

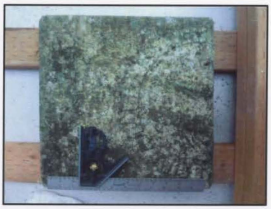
After cleaning the fragments were bonded with Akemi Akepox 5010. A continuous strip of epoxy was laid along the break with approximately 1/3 inch space on all sides to account for spreading once the fragments were connected. The material loss presented an uneven surface for bonding and required epoxy to bridge these voids. The epoxy mixture was pigmented white in the hopes that as weathering, yellowing and soiling advanced the epoxy joint would match the natural stone. The fragments were supported with lumber braces and c-clamps during curing. The epoxy cured whiter than expected and given the voids is more visible than hoped.

There is a variation in color of the upper and lower fragments as a result of varied cleaning success. The upper fragment was cleaned off-site while the lower was cleaned on site. Surface texture variation may also have contributed to stain removal success. This variation should diminish as the marker weathers.

Recommendations:

Regular cleaning with Orvus WA Paste in clean water is recommended to retain legibility and integrity of the tablet. The landscaping crew should evaluate the plot for cleaning as spring growth obscures the markers set back in the plot.

Lucinda Pauline (right) with upper fragment behind lower fragment and base



Off-site documentation of upper fragment

Detail of epoxy 'dollops'

Bonding preparation detail

Lucinda Pauline tablet post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/17/013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Owen/Noah	
	plot designation: 256
Name(s) of interred: unidentified	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0 1 2 3
Secondary inscription	0 1 2 3

Inscription: (Illegible)	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'8"	**Width:** 1'9"	**Depth (or L):** 0'2"
Dimensions (base) Height: 0'0"	**Width:** 2'4"	**Depth (or L):** 1'6"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one)* : yes no	**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none		
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other		
Enclosure *(circle all that apply):* curb wall fence none		
Grade siope *(circle one):* positive negative cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X			X	
Limestone					
Granite					
Brick					
Concrete		X			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	6 previous bonding attempts, 2 attempts with grey epoxy, 2 with yellow epoxy,	New base of poured concrete	**N/A**	**N/A**	**N/A**

	2 attempt with a white mortar				
Condition of Repairs	A yellow epoxy and a grey epoxy bond have failed	Stable			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/13/2014	**Plot identification:** 256
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 3	Treatment description	Effectiveness
Treatment 1	Removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Removal of failed epoxy with 5-in-1 scraper and dremel tool.	0 1 2 3
Treatment 3	Cleansing with Orvus WA Paste and clean water applied with nylon scrub brush to remove soiling.	0 1 2 3
Treatment 4	Application of D2 Biological solution to mute or remove staining using 'instant results' method.	0 1 2 3
Treatment 5	Bonding of fragments with Akemi Akepox 5010. Supported with lumber braces and c-clamps while curing for 48 hour period.	0 1 2 3

Comments:

The unidentified grave marker was in very poor condition upon documentation. The marker had been fragmented into three pieces. Evidence of prior repairs is present at the two most recent fractures as well as in four locations that are still stable. Two locations exhibit a grey epoxy that is stable and two more are still stable with a white mortar. Locations of failure are at breaks bonded with dollops of yellow epoxy and another at the uppermost grey epoxy application. This failed epoxy was removed with a metal scraper.

The two upper fragments of the marker were taken off-site for cleaning and epoxy removal while the lower fragment was left on site set in its concrete base. After cleaning the middle fragment was bonded to the lower portion with Akemi Akepox 5010 and left to cure for 48 hours. After deemed stable the upper portion was bonded to the lower two and left to cure for another 48 hours. Wood braces and c-clamps supported the marker during curing.

There is variation in the color of the stone due to variations in weathering and cleaning success. This variation should diminish as the marker weathers as a whole. Although illegible the carved ornament of the tablet is still in good condition and the tablet as a whole remains stable.

Recommendations:

Regular cleaning with Orvus WA Paste and clean water should be carried out very carefully to maintain the stone's color and carved detail. Landscape crews should evaluate the plot for pruning as the markers become obscured by vegetation in the spring and summer. Further research should be carried out to determine the identity of the individual represented by the tablet. All locations of repair should be monitored for structural stability regularly.

Unidentified tablet in three fragment pre-treatment

Removal of the two upper fragments

Documentation of middle fragment

Detail of yellow epoxy and white mortar

Bonding of the middle and lower fragments

Unidentified tablet post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/14/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Eugene Skinner	
	plot designation: 220
Name(s) of interred: Captain N.L. Packard	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

(West Face)
CAPTAIN
N. L. PACKARD
BORN
AT CAMDEN MAINE
JULY 4, 1818
DIED
AT EUGENE OREGON
FEB. 22, 1892

PACKARD

(North Face)
Always faithful to convict-
tions of right and justice

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 4'1"	**Width:** 1'7"	**Depth (or L):** 1'7"	
Dimensions (base) **Height:** 1'0"	**Width:** 2'1"	**Depth (or L):** 2'1"	
Dimensions (other): **Height:**	**Width:**	**Depth (or L):**	
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica **tilted** sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no		
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration **incised decoration** ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete **soil** grass vegetation other			
Enclosure *(circle all that apply):* curb wall fence **none**			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Reset upon middle element with Portland cement	Middle marble element reset upon	**N/A**	**N/A**	**N/A**

		base with Portland cement			
Condition of Repairs	Fair	Fair			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/15/2013, 4/20/2014	**Plot identification:** 220
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier 2 Grade	Treatment description	Effectiveness
Treatment 1	Removal of moss and lichen with plastic scraper.	0 1 2 3
Treatment 2	Cleaning with Orvus WA Paste in clean water applied with a nylon bristled scrub brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution along 'Instant Results' method guidelines.	0 1 2 3
Treatment 4	Leveling of marker with industrial pry-bar.	0 1 2 3

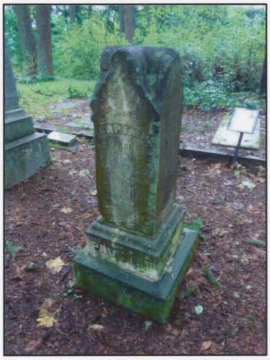
Comments:

The Captain Packard marker occupies a position in front of the Skinner family concrete pad. It was leaning to the southwest and has experienced previous repairs. The marble element shave been reset with Portland cement. The setting is misaligned and sloppy, with excess cement spilled on the base and lower marble element. Removal of this cement would damage the historic materials so must be left in place. A patch of iron oxide is present on the north face of the marker below the inscription. This likely remains from an iron fencing that would have been attached or adjacent to the marker. The lower corners of the primary marble element have experienced material loss consistent with toppling as a result of vandalism.

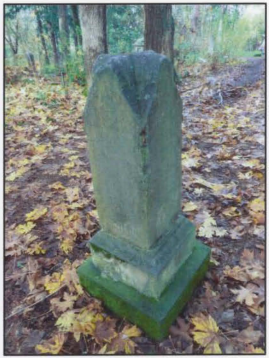
Tier 1 treatment was performed to clean the marker of soiling and staining. When drier weather permitted, Tier 2 treatment was executed. The soil around the southwest corner of the base was removed. Gravel was tamped into the void and using lumber pieces as a fulcrum the assembly was leveled with a heavy-duty pry-bar. The soil was replaced, tamped and raked to minimize visual footprint of the treatment. Excess soil was set aside for use by the landscaping crew.

Recommendations:

Regular cleaning with Orvus WA Paste and clean water is recommended as the marker occupies a prominent position in a high-traffic area. Monitoring is necessary to note any soil shifting and tilting of the marker.



Packard marker pre-treatment, west and south faces



North and east faces pre-treatment

Leveling of the Packard marker

Captain N. L. Packard marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/14/2014
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Eugene Skinner	
	plot designation: 220
Name(s) of interred: Mary Packard	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

MARY
Wife of
N. L. PACKARD
DIED
June 1, 1881
AGED
60 Years
OUR MOTHER

PACKARD

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'8"	**Width:** 2'0"	**Depth (or L):** 0'3"
Dimensions (base) **Height:** N/A	**Width:** N/A	**Depth (or L):** N/A
Dimensions (other): **Height:** 0'5"	**Width:** 2'6	**Depth (or L):** 0'3"
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated **altered** replica tilted sunken		
Type of interment *(circle one):* individual **family** undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase **plaque** immortelles none		
Landscape *(circle all that apply):* brick asphalt **concrete** soil grass **vegetation** other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive negative cross-slope **none**		
Degree of grade *(circle one):* **0** (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete		**X**			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Reset in concrete pad	Original base no longer extant,	**N/A**	**N/A**	**N/A**

		new concrete pad poured			
Condition of Repairs	Good	Good			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/15/2014	**Plot identification:** 220
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 1	Treatment description	Effectiveness
Treatment 1	Removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Cleaning with Orvus WA Paste and clean water with a nylon scrub brush.	0 1 2 3
Treatment 3	Application of D2 Biological solution along 'instant results' method.	0 1 2 3

Comments:

The Mary Packard marker has been removed from its original context and set into a large concrete pad alongside her first husband Eugene Skinner and two of their children. The marble elements of her marker have been cleared of mortar and set with the primary face in a skyward orientation. This orientation subjects the most detailed and important face of the marker to heavier weathering. Being located on the ground the marker is subject to damage and soiling from people walking around and over it.

The primary marble element appears to have been broken just below the primary inscription. No repairs along this fracture are visible. A large amount of moss covered the concrete pad and the grave marker. This was removed as moss will keep moisture in contact with the stone as well as obscure it from view. Cleaning was very successful in removing soiling and lightening the stone.

Recommendations:

Given the deceased's prominence in local history annual cleaning with Orvus WA Paste and clean water is recommended. This will protect the stone as well as allow visitors to appreciate the beautifully carved marker and better understand Mary's part in the history of Eugene, Oregon.

Mary Packard marker pre-treatment

Mary Skinner marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
UTM Coordinates:		
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Thomas Condon Plot	
	plot designation: 209
Name(s) of interred: Fanny Cornelia Condon	
First burial date: N/A	**Last burial date: N/A**

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: (// signifies damage that renders the inscription illegible)

ROBE//
Son of
JOHN & R.
RHEA
DIED
Feb. 7, 1899
Aged 21 Ys. 11Ms. 7Ds

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height:		**Width:**	**Depth (or L):**
Dimensions (base)	**Height:**	**Width:**	**Depth (or L):**
Dimensions (other):	**Height:**	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one) :* yes **no**		**Base** (circle one): yes **no**	
Ornament *(circle all that apply):* **urn** sculpture cross plaque relief decoration incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt **concrete** soil grass **vegetation** other			
Enclosure *(circle all that apply):* **curb** wall fence none			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)			

Surveyor: David Espinosa	**Date:**	**Plot identification:** 329
Weather *(circle all that apply):* hot **warm** cool cold **dry** humid **sunny** rain/snow/fog overcast windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X			X	
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	Primary element was reconstructed with threaded nylon pin and yellow epoxy Primary element reset with Portland cement and yellow epoxy.	Base is no longer extant	**N/A**	**N/A**	**N/A**
Condition of Repairs	Failed: Epoxy has failed and pin was off-center				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Overall Integrity (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 3	**Treatment description**	**Effectiveness**
Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 3
Treatment 2	Removal of failed epoxy and nylon pin at break.	0 1 2 3
Treatment 3	Cleansing with Orvus WA Paste in clean water applied with nylon scrub brush	0 1 2 3
Treatment 4	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 3
Treatment 5	Raking and repointing of joints with mortar mix comprised of 1 part White Portland Cement 3 parts Hydrated Lime.	0 1 2 3
Treatment 6	Bonding of fragments with Akemi Akepox 5010. Color was matched to natural stone and bonds were supported with lumber braces and c-clamps. Area surrounded with caution tape.	0 1 2 3

Comments:

The Robert Rhea marker has experienced previous repairs in two locations; an epoxy bond mid-way through the primary marble element, and a bond between the marble elements with both an epoxy and a grey mortar mixture. Both repair locations employed a threaded nylon joining the separate elements and fragments. Both repair locations had failed allowing for the fragments and elements to be easily separated by hand. The nylon pin joining the fragments of the primary marble element had been improperly set producing an off-set bond. This visual break prompted initial investigation which discovered the failures of previous repairs.

The epoxy and grey mortar bonding the upper and lower marble elements was removed with a chisel revealing a surface that had been texture with a chisel to promote a stronger bond. Once clear of mortar the lower marble element was cleaned with Orvus WA Paste and D2 Biological Solution. The nylon pin was left in place as it did not affect stability and was properly aligned. A new mortar mix of 1 part white Portland cement, 3 parts hydrated lime was applied to a wetted surface producing a joint of ¼ inch. The joint was struck and cleaned then allowed to cure for 48 hours.

The bond between the fragments of the upper element was done with a yellow epoxy applied around the threaded nylon pin. The epoxy flaked off easily without the use of tools. Misalignment of the fragments prompted removal of the nylon pin and application of a new epoxy bond. Akemi Akepox 5010 was colored to match the stone and applied in a thin layer to both fragments to be bonded. A ½ inch strip of stone around the edge of the broken fragments

was left in anticipation of the epoxy spreading. Upon setting the upper fragment upon the lower the epoxy created suction that allowed for a very tight fit and near-perfect alignment. The upper fragment was gently shaken to eliminate bubbles with the epoxy and achieve a tighter fit. The assembly was then supported with lumber braces and c-clamps. The epoxy was allowed to cure for 72 hours.

The ornamental finial was later discovered in storage at the Hope Abbey Mausoleum. This was later cleaned and bonded to the marker with Akemi Akepox 5010.

The marker rests on a concrete pad along with several other markers. It is apparent by the tilt of the marker that a base similar to the nearby markers once existed but is as of now unaccounted for.

Recommendations:

Reconstruction of a base is recommended to properly level the marker and raise the lower marble element off the concrete pad. Regular cleaning with Orvus WA Paste in clean water is recommended to maintain the stone's natural color and retain the integrity of the incised and carved ornament. Moss and vegetation should be removed from the joint and bonded fractures when encountered to ensure stability of these repairs. This marker is along a high traffic area and is an excellent example of what proper repairs and cleaning can accomplish especially when compared to the untreated markers within its shared plot. It should be utilized for cemetery advocacy.

Robert Rhea marker pre-treatment

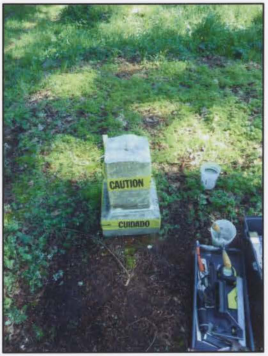
Separation of fragments and elements

Detail of epoxy, mortar and pin at failed joint

Removal of epoxy at fracture

(Above) Lower marble element after mortar removal
(Below) New mortar application

(Above) Primary element pre-cleaning, off-site



(Above) Curing of mortar joint

(Left) Supports in place during epoxy curing

(Left) Robert Rhea marker post-treatment

(Below) Robert Rhea marker and neighboring markers

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/17/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Rhea	
	plot designation: 300
Name(s) of interred: Eliza Catharine Rhea, Robert Henderson	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: (/// signifies a fracture that renders text illegible)

ELIZA CATHARINE
Wife of
E. W. RHEA,
Born. Sept. 3, 1826;
Died// [J]an. 15, 1860
[A]ged 33ys. 4ms. 10ds.

ROBERT HENDERSON
Son of
E.W. & E. C. Rhea
Died Jan 4, 1857 Aged 3 Yrs.
4 ms. 4 ds.

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 4'0"	**Width:** 1'8"	**Depth (or L):** 0'2"
Dimensions (base) Height: 0'0"	**Width:** 2'4"	**Depth (or L):** 1'4"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin **fragment** **relocated** altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* curb wall fence **none**		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete		**X**			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Multiple repairs with yellow epoxy	Original base lost, new	**N/A**	**N/A**	**N/A**

	and unknown binder	concrete base poured			
Condition of Repairs	Failure of yellow epoxy	Stable			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/2/2014	**Plot identification:** 300
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 3	Treatment description	Effectiveness
Treatment 1	Removal of lichen and moss with plastic scraper.	0 1 2 3
Treatment 2	Removal of failed epoxy with 5-in-1, chisel and hammer.	0 1 2 3
Treatment 3	Cleaning with Orvus WA Paste and clean water applied with nylon scrub brush to remove soiling.	0 1 2 3
Treatment 4	Application of D2 Biological Solution along 'Instant Results' method	0 1 2 3
Treatment 5	Bonding of fragments with Akemi Akepox 5010 supported by lumber braces and c-clamps over multiple day curing period.	0 1 2 3

Comments:

The Eliza Catharine Rhea tablet has been subject to multiple episodes of vandalism. This prompted several attempts at repair as well as reconstruction of a base with concrete. There are two distinct binders noted: a yellow epoxy applied in quarter-sized dollops, and a darker unidentified mastic binder. The yellow epoxy has failed while the unidentified binder remains stable.

The tablet was broken into three fragments, each experiencing different patterns of weathering. There is material loss along the breaks in stone, yet legibility and ornamental carving has survived relatively well.

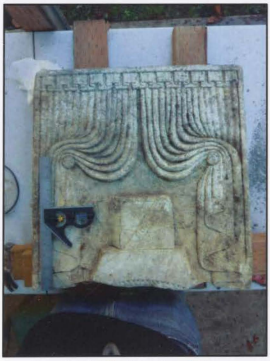
After removal of the failed epoxy the fragments were cleaned with Orvus WA Paste in clean water and treated with D2 Biological Solution to mute staining.

Once ambient temperatures were at an appropriate level bonding of the fragments was carried out with Akemi Akepox 5010. Significant voids due to material loss were present along the fractures. Akepox 5010 was placed into a plastic bag, forced to a corner which was then cut. This formed a makeshift pastry bag that allowed epoxy to be piped into the voids. This ensured no voids could be occupied with invasive plant life or moisture. The tablet was bonded in two phases to ensure proper curing and stability. Each curing phase lasted 72 hours and was supported by lumber braces held in place with c-clamps. The area was properly marked with caution tape during curing. The neighboring marker were documented and cleaned along a tier 1 program.

Recommendations:

Regular cleaning with Orvus WA Paste in clean water is recommended to maintain natural stone color and deter biological growth. Being in a high-traffic area this marker must be monitored and maintained to deter further vandalism.

Eliza Rhea marker pre-treatment



Documenting the upper fragment

Documenting middle fragment

(Below) Detail of failed yellow epoxy

(Below) Lower fragment and base post-cleaning

Curing of the lower and middle fragments

Curing of the upper and middle fragments

Rhea marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 2/25/2014
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Rugh	
	plot designation: 461
Name(s) of interred: Eugene W. Rugh	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

EUGENE W.
RUGH
FEB. 8, 1920
APR. 26, 1820

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 1'0"	**Width:** 1'0"	**Depth (or L):** 0'3"
Dimensions (base) **Height:** 0'6"	**Width:** 1'5"	**Depth (or L):** 0'9"
Dimensions (other): **Height:**	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* standing **ruin** fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase **none**		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive negative cross-slope **none**		
Degree of grade *(circle one):* **0** (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Reset in base with nylon pin and Portland cement	**N/A**	**N/A**	**N/A**	**N/A**

Condition of Repairs	Failed				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 **3**	**0** 1 2 3		0 1 2 3	0 1 2 3
Loss	0 **1** 2 3	0 1 **2** 3		0 1 2 3	0 1 2 3
Fragmentation	**0** 1 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Disaggregation	**0** 1 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Erosion	0 **1** 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Cracking	0 **1** 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	**0** 1 2 3	0 1 **2** 3		0 1 2 3	0 1 2 3
Efflorescence	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	**0** 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 **1** 2 3	0 1 2 **3**	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	**0** 1 2 3	0 1 2 **3**	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 **1** 2 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 **3**	0 1 2 **3**		0 1 2 3	0 1 2 3
Soiling	0 **1** 2 3	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 **2** 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 **3**	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 2/25/2014	**Plot identification:** 461
Weather *(circle all that apply):* hot warm **cool** cold **dry** humid sunny rain/snow/fog **overcast** windy		

Treatment effectiveness: *Rank from 0 (ineffective) to 3 (very effective)*

Tier Grade	2	Treatment description	Effectiveness

Treatment 1	Removal of moss with plastic scraper.	0 1 2 3
Treatment 2	Removal of failed mortar with chisel and hammer.	0 1 2 3
Treatment 3	Cleaning of primary element and base with Orvus WA Paste in clean water to remove soiling.	0 1 2 3
Treatment 4	Application of D2 Biological Solution to remove or mute biological staining.	0 1 2 3
Treatment 5	Resetting of primary element in mortar bed within recessed slot.	0 1 2 3

Comments:

The Eugene Rugh marker is a small grave marker located at the northwest entrance of the cemetery grounds. It was selected for treatment due to its highly visible location and the presence of prior repairs that have since failed. Yellow epoxy and Portland cement based mortar have failed at the connection between the marble element and the base.

Invasive plant life has contributed to advanced deterioration of the sandstone base. Moss root systems had penetrated the layers of sandstone causing exfoliation and compromised the stability of the mortar within the base's recessed slot. Previous repairs utilized a threaded nylon pin and a Portland cement based mortar mix that was much harder than the surrounding sandstone.

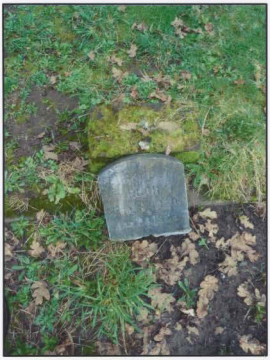
The pin was left in the base as it was not detrimental to the joint and removal would incur unnecessary loss of more historic material. Once the recessed slot was cleared of failed mortar it was cleaned and a bed of lime-based mortar was laid. The mortar used was a pre-mixed grey-pigmented s-type mortar. This came at the recommendation of a local masonry supply shop. This was the only instance in which pre-mixed mortar was used for this project. Further mortar use was reevaluated for the remainder of markers needing mortar work.

The recessed slot and marble element were pre-wetted with clean water before mortar was laid to facilitate a stronger bond between the elements. Once filled the joint was struck and excess mortar cleaned away. The recessed slot had become shallow as the sandstone deteriorated and mortar was tooled to fill the voids of the base surrounding the mortar bed. Caution tape was erected around the area and the site was cleaned of debris.

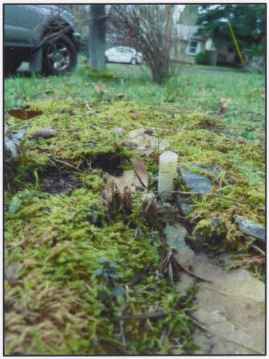
The mortar cured over the course of the following days and has since remained stable.

Recommendations:

Regular cleaning with Orvus WA Paste and clean water is recommended. Removal of moss is necessary in order to retain the stability of the sandstone base. The mortar should be monitored and compared in performance to custom-mixed mortars throughout the cemetery.



Eugene Rugh marker pre-treatment



Detail of nylon pin, failed epoxy and mortar

Detail of exfoliation and invasive root plant material

Recessed slot clear of mortar and cleaned

Detail of fresh mortar joint

Treatment site

Eugene Rugh marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 265
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: E. Scott Shelton	
	plot designation:
Name(s) of interred: Mary Shelton	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: MARY WIFE OF THOMAS E. SHELTON BORN DEC. 18, 1845 DIED FEB. 6, 1921	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'1"	**Width:** 1'4"	**Depth (or L):** 0'3"
Dimensions (base) Height: 2'0"	**Width:** 2'0"	**Depth (or L):** 1'1"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* standing **ruin** fragment relocated altered replica tilted **sunken**		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase **none**		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt **concrete** soil **grass** **vegetation** other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 **2** 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone		**X**			
Granite					
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 **3**	**0** 1 2 3		0 1 2 3	0 1 2 3
Loss	0 **1** 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 **2** 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	**0** 1 2 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 **1** 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Cracking	0 **1** 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	**0** 1 2 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	**0** 1 2 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 **2** 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 **1** 2 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 **3**	0 1 2 **3**		0 1 2 3	0 1 2 3
Soiling	0 1 2 **3**	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 **1** 2 3	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 **2** 3	0 1 2 **3**	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/13/2014	**Plot identification:** 265
Weather *(circle all that apply):* hot **warm** cool cold **dry** humid **sunny** rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade	3	Treatment description	Effectiveness
Treatment 1		Removal of lichen and plant material with plastic scraper.	0 1 2 **3**

Treatment 2	Cleaning of marble fragments with Orvus solution and nylon brush. Application of D2 Biological solution in 'Instant Results' method.	0 1 2 3
Treatment 3	Removal of failed mortar from recessed slot. Prepared slot to accept mortar and primary element.	0 1 2 3
Treatment 4	Lowest marble fragment set in recessed slot with lime mortar mix. Mortar mix consisting of 1 part white Portland cement, 4 parts hydrated lime, 8 parts clean sand, and water. Allowed to cure for 48 hours.	0 1 2 3
Treatment 5	Middle marble fragment bonded to lower element with Akemi Akepox 5010. Braced with lumber supports and c-clamps for 48 hours. Upper element bonded once middle bond cured.	0 1 2 3

Comments: The marble fragments of the Mary Shelton marker were excavated from behind the base. Heavy soiling and staining required rigorous cleaning and D2 treatment.

The base has experienced material loss around the recessed slot, likely as a result of the marble element falling from the slot. The remaining mortar was removed with a chisel before the base was cleaned and prepared for mortar work. The recessed slot was wetted with clean water then a ½ inch layer of mortar was laid across the slot. The lowest marble element was then placed in the slot and positioned with a bubble level until plumb. Mortar was packed in the voids of the slot then struck and cleaned. The marble element was supported with lumber braces for 48 hours while the mortar cured. Once deemed fit the middle fragment was bonded to the lower with Akemi Akepox 5010. The bond was braced and allowed to cure before the final fragment was bonded.

The treatment was very successful and the marker is very stable.

Recommendations: Regular cleaning with Orvus WA Paste in clean water is recommended to retain the stone's natural color and inscription legibility. The site should be monitored for soil shifting and mitigated if tilting of the marker is noticed.

Excavation of marble fragments

Base after mortar removal

Mortar mix

Removal of the marble fragments for off-site treatment

Mortar curing

Marble fragments curing

(Below) Mary Shelton marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/20/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: E. Scott Shelton	
	plot designation: 267
Name(s) of interred: Thomas E. Shelton	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription: (// signifies a break that renders inscription illegible) THOMAS E SHELTON BORN Sept. 6, 1834 Died May 28, 1882 As a husband loyal As a father affectionate [As a]// kind and true.	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 2'2"	**Width:** 1'8"	**Depth (or L):** 0'4"
Dimensions (base) Height: 2'1"	**Width:** 2'1"	**Depth (or L):** 1'1"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* standing **ruin** **fragment** relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase **none**		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt **concrete** soil **grass** **vegetation** other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) 1 **2** 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	The tenon element of the marble was fragmented and	Cast iron pins were installed to	**N/A**	**N/A**	**N/A**

	bonded with Portland cement.	secure the middle element			
Condition of Repairs	Failed	Failed			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	**Primary structure**	**Base**	**Surface Finish**	**Ornament**	**Roof**
Collapse	0 1 2 **3**	**0** 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 **2** 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 **2** 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	**0** 1 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Erosion	0 **1** 2 3	0 **1** 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 **2** 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	**0** 1 2 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	**0** 1 2 3	**0** 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 **3**	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 **1** 2 3	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 **1** 2 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 **3**	0 1 2 **3**		0 1 2 3	0 1 2 3
Soiling	0 1 2 **3**	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	**0** 1 2 3	**0** 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	**0** 1 2 3	0 **1** 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	**Base**	**Surface Finish**	**Ornament**	**Roof**
Overall Condition (0=poor 3=high)	0 **1** 2 3	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 **2** 3	0 1 **2** 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 4/5/2014	**Plot identification:** 267
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade	3	Treatment description		Effecti
Treatment 1		Excavation of buried middle element.	0 1 2 3	
Treatment 2		Removal of lichen and moss with plastic scraper.	0 1 2 3	
Treatment 3		Removal of failed mortar and cast iron pins. Accomplished with chisels, vise grips, and hammer.	0 1 2 3	
Treatment 4		Cleaning with Orvus WA Paste in clean water applied with a nylon scrub brush.	0 1 2 3	
Treatment 5		Application of D2 Biological Solution along 'Instant Results' method guidelines.	0 1 2 3	
Treatment 6		Resetting with hydrated lime and Portland cement mortar mix.	0 1 2 3	

Comments:

The Thomas E. Shelton marker consists of a marble element, sandstone base and a sandstone transition element. The sandstone transition element was found buried behind the base. Burying of markers was suggested to the EMCA in earlier years but is ill-advised as continual saturation in the soil will keep the stone in contact with water promoting softening of the surface, biological growth and associated staining. Buried tablets have been unearthed in the cemetery that when lifted bend and flex.

The transition element has a recessed slot that historically received a portion of the upper marble element. This portion has broken and is affixed within the recessed slot with Portland cement. A layer of Portland cement was found over the recessed slot and broken portion suggesting the upper element was reset upon the transition element while the broken piece remained inside. Rather than remove the broken piece to bond it to the upper element it was left in place. Attempts at remove would likely result in further material loss and the weakening of the transitional stone. Bonding the broken portion to the upper element would not provide any greater support to the assembly as a whole. As much Portland cement as possible was removed and the surface was prepared for resetting using a hydrated lime mortar.

There were cast iron pins set in the base with a mortar mix of Portland cement and sand. These pins exhibited corrosion prompting removal. The mortar surrounding the pins was removed with a thin chisel then the pins were removed with the use of vice grips. The base was then cleared of failed mortar and prepared for mortar application.

The transition element was set with a hydrated lime mortar mix of 1 part white Portland cement, 3 parts hydrated lime. Once cured a thin layer of the same mix was spread across the transition element and broken portion of marble. The mortar upon the marble portion was laid as thin as possible to secure a bond while keeping the height of the element close to its original position. A large void is present at the north end of the marble element. Not enough matching stone grit was available to create a void patch mix. The mortar was applied to promote water runoff from the joint.

The assembly was supported by lumber supports for 48 hours once positioned plumb. The roof of the marble element is missing with evidence of previous repair present in the form of failed Portland cement along the top of the extant element.

Recommendations:

The Thomas marker is in poor condition and requires monitoring to ensure stability. It is situated on a slope and may begin to tilt. If tilting is noticed it should be mitigated as soon as possible. Regular cleaning with Orvus WA Paste in clean water should be executed. If sufficient marble grit is accumulated a void patch should be created. Note: EMCA is in possession of broken marble elements stored in the mausoleum.

Thomas E. marker pre-treatment

Pre-cleaning off-site

Transition element with broken marble portion

Removal of cast iron pins

Reset transition element

Reset marble element

Thomas E. marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 11/14/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Eugene Skinner	
	plot designation: 220
Name(s) of interred: Eugene Skinner	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

EUGENE P SKINNER
Born in Essex, New York
Sept 13, 1809.
Founded Eugene City
June 5, 1853
Died at Eugene City
Dec. 15, 1861

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 5'0"	**Width:** 2'0"	**Depth (or L):** 0'2"
Dimensions (base) Height: N/A	**Width:** N/A	**Depth (or L):** N/A
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin **fragment** relocated **altered** replica tilted sunken		
Type of interment *(circle one):* individual **family** undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque **relief decoration** incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt **concrete** soil grass **vegetation** other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive negative cross-slope **none**		
Degree of grade *(circle one):* **0** (low) 1 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete		**X**			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	Reset in concrete pad	Original base not extant. New	**N/A**	**N/A**	**N/A**

		concrete pad poured.			
Condition of Repairs	Good	Good			

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	**Primary structure**	**Base**	**Surface Finish**	**Ornament**	**Roof**
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	**Base**	**Surface Finish**	**Ornament**	**Roof**
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/15/2013	**Plot identification:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier 1 Grade	Treatment description	Effectiveness
Treatment 1	Removal of moss, lichen, leaves and dirt covering concrete slab and inset marker by hand.	0 1 2 3
Treatment 2	Application of Orvus WA Paste in solution with water. Scrubbing with plastic-bristle brush.	0 1 2 3
Treatment 3	Application of D2 Biological Solution along 'Instant Results' method. Applied twice.	0 1 2 3

Comments:

The Eugene Skinner grave marker is inset in a concrete slab having been broken and damaged in its original context. Prior to treatment the marker was covered in dirt, vegetation, fallen leaves, and biological growth. Upon cleansing with Orvus WA Paste the marker was immediately more visible and the inscription more legible. Application of D2 Biological Solution greatly lightened the stone and penetrated the finer detailing to remove biological growth.

Recommendations:

Given the marker's importance in the Eugene Masonic Cemetery as well as Eugene Skinner's prominence in the local history an annual maintenance program along Tier 1 guidelines should be adopted. Regular cleaning is necessary to retain the historic material of the Eugene Skinner grave marker. With the inscription and incised ornament now facing skyward they are susceptible to many factors that are detrimental to the integrity of the monument.

Eugene Skinner marker pre-treatment

Eugene Skinner marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		**Survey Date:** 10/17/2013
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: W. M. Stevens	
	plot designation: 245
Name(s) of interred: Clifton B. Stevens	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

CLIFTON B.
SON OF
Wm & E.R.
STEVENS
DIED
Dec. 31, 1892
AGED
18Ys. 26Ds.

STEVENS

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 3'0"	**Width:**	**Depth (or L):**
Dimensions (base) **Height:** 0'2"	**Width:** 1'6"	**Depth (or L):** 1'6"
Dimensions (other): **Height:** 0'6"	**Width:** 1'2"	**Depth (or L):** 1'2"
Orientation *(circle one):* North South East **West** unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn **sculpture** cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* positive **negative** cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**			**X**	
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:** 11/18/2013	**Plot identification:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier Grade 1	Treatment description	Effectiveness
Treatment 1	Removal of lichen with plastic scraper	0 1 2 3

Treatment 2	Cleaning with Orvus WA Paste and clean water with a nylon bristle scrub brush.	0 1 2 **3**
Treatment 3	Application of D2 Biological solution along 'Instant Results' specifications.	0 1 **2** 3

Comments:

The Stevens marker inhabits an area of the cemetery much different than the majority of the markers treated. Minimal tree cover and consistent sun-exposure has deterred moisture related deterioration issues found on many of the markers located beneath the tree canopy.

A simple Tier 1 cleaning procedure was executed with the hopes of lightening the soiled stone. After D2 Biological Solution application was completed the stone did lighten, but not to the extent anticipated. A splatter of lighter stone is present on the east face of the marker. The cause of this is likely a liquid that kept the underlying stone concealed and unsoiled until it was washed away by rainfall.

Recommendations: Regular cleaning with Orvus WA Paste in clean water is recommended to maintain the color of the stone. More D2 Biological Solution treatments may further lighten the stone and are recommended.

Clifton Stevens marker pre-treatment

North face pre-treatment

Blotch detail post-treatment

Clifton Stevens marker post-treatment

CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
UTM Coordinates:		
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Wilmot Family Plot	
	plot designation: 211
Name(s) of interred: Mary M. Wilmot	
First burial date: Sept. 1888	**Last burial date:** Sept. 1888

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0	1	2	3
Secondary inscription	0	1	2	3

Inscription:

Gone but not forgotten
MARY M.
Wife of
M.L. WILMOT
BORN
May. 2, 1838
DIED
Sep. 12, 1888
AGED
50 Y. 4M. 13D

WILMOT

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height: 3'7"		**Width:** 1'4"	**Depth (or L):** 1'4"
Dimensions (base) Height: 1'0		**Width:** 1'11"	**Depth (or L):** 1'11"
Dimensions (other): Height:		**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East **West** unknown			
Interment status *(circle one):* **active** inactive abandoned			
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* **individual** family undeterminable			
Pedestal *(circle one) :* yes **no**		**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration **incised decoration** ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**			
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** **vegetation** other			
Enclosure *(circle all that apply):* **curb** wall fence none			
Grade slope *(circle one):* positive **negative** cross-slope none			
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)			

Surveyor: David Espinosa	**Date:** 11/20/2013	**Plot identification:** 211
Weather *(circle all that apply):* hot warm **cool** cold **dry** humid sunny rain/snow/fog **overcast** windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	**X**				
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone		**X**			
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	**Resetting of primary element on lower marble element apparent**	**N/A**	**N/A**	**N/A**	**N/A**
Condition of Repairs	**The joint is open and deteriorating. The resetting was off-set by approximately ¼"**				

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

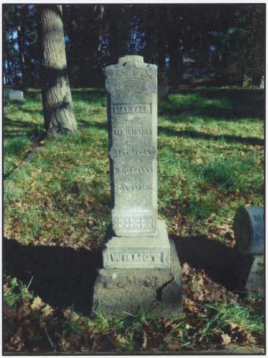
Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Tier: 2	**Treatment description**	**Effectiveness**
Treatment 1	Moss and lichen removal with plastic scraper	0 1 2 3
Treatment 2	Cleansing with Orvus WA Paste and clean water applied with nylon scrub brush	0 1 2 3
Treatment 3	Application of D2 Biological Solution on wet surface. Rewetting and agitation of solution after 20 minutes. Rinsed with clean water.	0 1 2 3
Treatment 4	Raking and repointing of joint between primary and lower marble elements. Latest mortar was gray Portland cement. This was removed and replaced with a mix of 1 part white Portland cement and 3 parts hydrated lime.	0 1 2 3

Comments: The Wilmot marker was heavily stained due to biological growth. There is evidence that the primary marble element was reset. This is deduced by the off-center placement of the piece and the presence of a mortar that would not be typical of the marker's era of origin. An ornamental element is missing from the top of the primary marble element, likely a casualty of vandalism. The sandstone base is spalling on all surfaces.

Recommendations: This marker sits in a location that is under constant shade rendering it vulnerable to damage from moisture and biological growth. Regular cleaning with Orvus WA Paste and water will do much to preserve the condition and integrity of the marble elements. Although still structurally sound, the sandstone base must be monitored as it is spalling on every exposed surface. Regular cleaning and application of D2 Biological Solution will greatly prolong the life of the base.


WILMOT



CONDITION & TREATMENT RECORDATION FORM

Site: Eugene Masonic Cemetery		
Street Address: 25th Avenue and University Street		
City: Eugene	**County:** Lane	**State:** Oregon
Owner: Eugene Masonic Cemetery Association		
Contact: Eugene Masonic Cemetery Association		**Phone:** (541) 684-0949
Surveyor: David Espinosa		
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification: Woodmen of the World plot	
	plot designation: 14
Name(s) of interred: Robert W. Kirkpatrick	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0 1 2 3
Secondary inscription	0 1 2 3

Inscription:

DUM TACET CLAMAT
ROBERT W.
KIRKPATRICK
BORN
OCT. 17, 1854
DIED
MAY 30, 1909
HERE RESTS A WOODMEN OF THE WORLD

Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb **marker** family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* **headstone** footstone ground tablet basal ruin cross pedestal obelisk **Woodmen of the World** pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height: 5'9"	**Width:** 1'2"	**Depth (or L):** 1'1"
Dimensions (base) Height: 0'4"	**Width:** 2'4"	**Depth (or L):** 2'5"
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South **East** West unknown		
Interment status *(circle one):* **active** inactive abandoned		
State of interment *(circle all that apply):* **standing** ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* **individual** family undeterminable		
Pedestal *(circle one) :* yes **no**	**Base** (circle one): **yes** no	
Ornament *(circle all that apply):* urn **sculpture** cross plaque relief decoration incised decoration ornamental vase none		
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles **none**		
Landscape *(circle all that apply):* brick asphalt concrete soil **grass** vegetation other		
Enclosure *(circle all that apply):* **curb** wall fence none		
Grade slope *(circle one):* **positive** negative cross-slope none		
Degree of grade *(circle one):* 0 (low) **1** 2 3 (high)		

Surveyor: David Espinosa	**Date: 2/23/14**	**Plot identification: 14**
Weather *(circle all that apply):* hot warm **cool** cold **dry** humid sunny rain/snow/fog **overcast** windy		

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble	X				
Limestone					
Granite					
Brick					
Concrete		X			
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof

History of Repairs	N/A	N/A	N/A	N/A	N/A
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator: David Espinosa	**Treatment Date:**	**Plot identification:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

Treatment effectiveness: R*ank from 0 (ineffective) to 3 (very effective)*

Treatment Grade 1	Treatment description	Effectiveness
Treatment 1	Removal of loose dirt, lichen with use of scrub brush, Orvus WA Paste in clean water.	0 1 2 3
Treatment 2	Application of D2 Biological Solution to wet stone surface, multiple treatments allowed to dwell for 20 minutes each.	0 1 2 3
Treatment 3		0 1 2 3

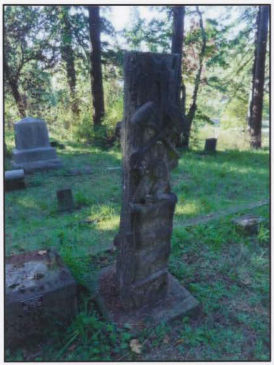
Comments:

The Woodmen of the World monument is a great example of a highly sculptural grave marker. The amount of detail did allow dirt, and biological growth to settle in crevices leading to a heavily obscured marker. Substantial soiling had made the inscriptions difficult to read and the natural veining of the stone impossible to appreciate. The highly sculptural nature of the marker slowed cleaning as much care needed to be taken to clean the finer details.

A small amount of sugaring was noticed on the top of the marker. This phenomena occurs when rainwater attacks the spaces between calcite grains in marble resulting in a loose granular texture similar to sugar. This is likely occurring on the WOW monument due to the fact that the top of the monument is sculpted to resemble a tree stump. The flat top has channels carved into it to give the appearance of trunk growth rings. These channels allow rainwater to gather and deteriorate the stone. The deterioration does appear slight at this point and still allows for the carved detail to be visible.

Recommendations:

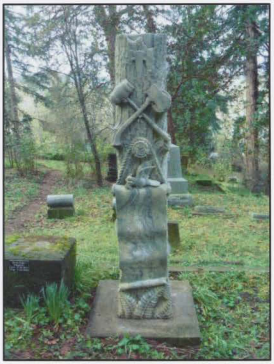
As a highlighted site within the cemetery it is recommended that the WOW monument receive an annual or biannual cleaning with Orvus WA Paste and clean water.



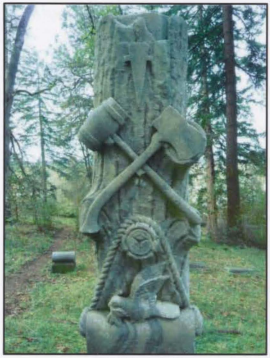
WOW marker South and East façade pre-treatment

West (rear) façade pre-treatment

Ornament detail pre-treatment



East face post-treatment



Ornament detail post-treatment

Inscription detail post-treatment

Detail of loose calcite granules on top of monument post-treatment

West facade post-treatment

12 References

Ashurst, John, and Francis G. Dimes. *Conservation of Building and Decorative Stone*. 2 vols. Butterworth Heinemann Series in Conservation and Museology. London: Butterworths, 1990.

Djuric, Christine, Conservator, New York City Arts and Antiquities Department

Donovan, Sally, Conservator, Donovan and Associates

Fagin, Elizabeth "The Preservation" Master's thesis, University of Oregon, 2002.

Harrity, Michael, and Janet Hansen. *Masonry Conservation Technology*. Charlestown: Massachusetts Masonry Institute, 1976.

London, Mark. *Masonry: How to Care for Old and Historic Brick and Stone*. Respectful Rehabilitation. Washington, D.C.: Preservation Press, 1988.

Maguire, Byron W. *Masonry and Concrete*. Reston, VA: Reston Publishing Company, 1979.

National Center For Preservation Technology and Training. "National Center for Preservation Technology and Training." http://ncptt.nps.gov/.

National Park Service. Preservation Brief 2: Repointing Mortar Joints. Technical Preservation Services. Accessed October 2, 2013. http://www.nps.gov/tps/how-to-preserve/briefs.htm

National Park Service. Preservation Brief 6: Dangers of Abrasive Cleaning. Technical Preservation Services. Accessed October 2, 2013. http://www.nps.gov/tps/how-to-preserve/briefs.htm

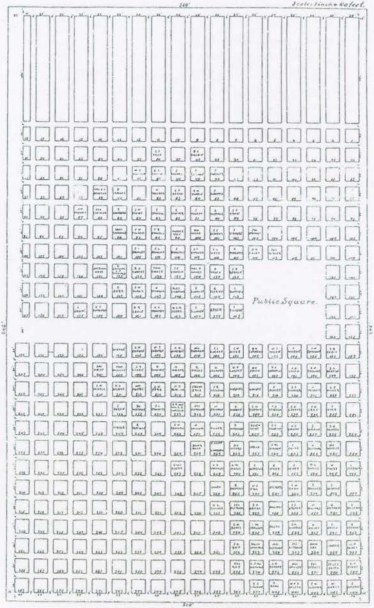
National Park Service. Preservation Brief 15: Preservation of Historic Concrete. Technical Preservation Services. Accessed October 2, 2013. http://www.nps.gov/tps/how-to-preserve/briefs.htm

National Park Service. Preservation Brief 38: Removing Graffiti from Historic Masonry. Technical Preservation Services. Accessed October 2, 2013. http://www.nps.gov/tps/how-to-preserve/briefs.htm

National Park Service. Preservation Brief 42: The Maintenance, Repair and Replacement of Historic Cast Stone. Technical Preservation Services. Accessed October 2, 2013. http://www.nps.gov/tps/how-to-preserve/briefs.htm

Peting, Donald, and Richa Wilson. *A Restoration Plan for the Masonic Cemetery and Hope Abbey Mausoleum*. Eugene: 1995.

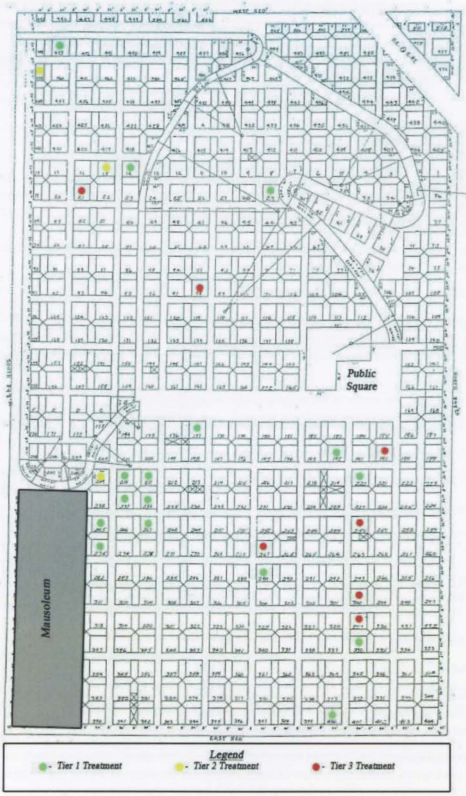
Strangstad, Lynette. *A Graveyard Preservation Primer*. Walnut Creek: AltaMira Press, 1995.



Plot of Masonic Cemetery, March 18, 1892

--Frances Newsom Collection


Public Square


N
Carriage Path
Public Square
Mausoleum
Legend
- Tier 1 Treatment
- Tier 2 Treatment
- Tier 3 Treatment

14 Appendix B – Blank Survey and Treatment Forms

The following definitions and survey form was created by the National Center for Preservation Technology and Training (NCPTT). The 'Condition and Treatment Recordation Form' was adapted from the NCPTT form by David Espinosa.

Conditions Survey Definitions

Site: Full name of cemetery with no abbreviations

Street Address: Approximate address of the cemetery, with no abbreviations.

City: City in which the cemetery is located, with no abbreviations.

Parish: Parish or county in which the cemetery is located, with no abbreviations.

State: State (no abbreviations) in which the cemetery is located, followed by the two-letter postal abbreviation for the state (ex. Louisiana--LA).

GPS Coordinates: A set of coordinates for the Global Positioning System.

UTM Coordinates: A set of coordinates (easting and northing) that indicates a unique location according to the Universal Transmercator Grid appearing on maps of the United States Geological Survey (USGS). Indicate the centermost coordinate within the cemetery boundary (include Zone, Easting and Northing coordinates).

Owner: Full name of the owner of the cemetery, with no abbreviations.

Contact: The name of the person representing the cemetery owner.

Phone: The telephone number of the contact person for the cemetery.

Surveyor: The first and last name of the surveyor.

Date: Date of the survey (ex: 01/01/2002)

Weather: Weather conditions at the time when survey form completed.

Identification:
Plot identification: Includes block number and plot number on site map. **Name(s) of interred**: First and last name(s) of interred.

First burial date: Date of earliest interment (ex: 1802)

Last burial date: Date of most recent interment (ex: 2002)

Inscription: A transcription of the tomb or marker inscription recorded in the language in which it has been written. Include abbreviations, punctuation and historic spellings. The transcription is a document of what the surveyor sees and *should not include any guesses*.

Stone carver (if known): First and last name (if available) of stone carver. The stone carver may "sign" his or her work on the base of the marker or tomb, on the rear elevation, or on the top of the marker. Often, the carver's "signature" is in a different font than the inscription on the tomb or marker.

Location of mark: Location of the stone carver's "signature" in terms of geographic orientation. It may be found on the top, rear, bottom, or on the side of the stone.

DESCRIPTION:

Type of interment:

Tomb: mortuary structure associated with or containing one or more burial vaults.

Type of tomb present in the American Cemetery, Natchitoches, LA:

- *Mausoleum*: a tomb with accessible interior space, often containing wall or subterranean vaults and a small area intended for private prayer or contemplation accessed by a door. (Note: there is only *ONE* mausoleum in the American Cemetery, that of John Gideon Lewis, Sr.)

Marker: any non-tomb mortuary structure which does not accommodate an interment and whose form is often sculptural.

Types of markers present in the American Cemetery, Natchitoches, LA:

- *Headstone*: An upright slab embedded in the ground or in a separate stone base and which is inscribed.
- *Footstone*: An inscribed upright slab embedded in the ground or in a separate stone base that is associated with and commonly smaller than a headstone.
- *Ground tablet*: An inscribed marker laid flush with or slightly above ground level.
- *Basal*: A table grave supported by a low, solid wall base. It does not contain a casket or coffin within the walls.
- *Ruin*: A marker that has been destroyed and no longer retains its original shape. *Cross*: a cross,
- with or without inscription, placed in the ground or supported by a pedestal.
- *Pedestal obelisk*: A monumental, four-sided stone shaft, usually monolithic and tapering to a pyramidal tip, and stands on a pedestal.
- *Woodmen of the world*: a marker carved in the shape of a tree stump or wood stack, often including an inscription and a Woodmen of the World insignia. The Woodmen are a benevolent fraternal organization founded in 1890.
- *Pedestal column*: A single pillar standing alone as a monument surmounting a pedestal or pedestal base.

- *Funeral home plaque:* A small metal plaque that is the only marker (for recent burials).
- *Bedstead:* a marker with a headstone, footstone, and side rails designed to imitate the form of a bed.

TYPES OF MARKERS:

Headstone	Footstone	Ground tablet	Funeral home plaque
			

Basal	Pedestal column	Pedestal obelisk	Cross	Woodmen of the World	Bedstead
					

Family name marker

Family name marker: A large headstone inscribed with the name of the family to whom the plot belongs. A family name marker does not indicate a burial--it only indicates a family plot.

Dimensions: The height, width and depth (or length) of the primary stone, base, and other features of the tomb or marker, in inches. **Orientation**: Compass direction of the primary face or surface that contains the inscription (the orientation of unmarked graves is "unknown").

Interment status:

- *Active*: A body has been interred in the past twenty years.
- *Inactive*: No bodies have been interred in over twenty years, but the space is still usable because it is sealed. (Most grave markers and tombs in the American Cemetery are "inactive.")
- *Abandoned*: The tomb/marker is open, vacant, or derelict.

State of interment:

- *Standing*: The tomb or marker maintains its structural form and support.
- *Ruin*: The tomb or marker has been destroyed through collapse or demolition.

Fragment: A piece or pieces of a tomb or marker that have dissociated from the original fabric. The tomb or marker no longer reads as a whole.

- *Relocated*: The tomb or marker has been moved from its original site and relocated to another portion of the cemetery. (Note: relocation of a tomb or marker must be verified through historic documentation.)

- *Altered*: The tomb or marker has been modified through patching or reassembly, or by replacing parts of the monument.

- *Replica*: The original tomb or marker has been removed from its original site and replaced with an exact copy. (Note: replication of a tomb or marker may be indicated on the new gravestone inscription, but this must be verified through historic documentation.) *Tilted*: The tomb or marker has shifted horizontally due to settling of the earth. *Sunken*: The tomb or marker has shifted below or partially below grade.

STATES OF INTERMENT:

Standing	Ruin	Fragment
		

Altered	Tilted	Sunken
		

Type of interment:

- *Individual:* The tomb or marker contains only one interment.
- *Family:* The tomb or marker contains two or more interments from the same or related family.
- *Undeterminable:* Interment representation is not clear (unmarked graves are *always* "undeterminable").

Pedestal

Pedestal: A support for a column, statue or urn consisting of a base, dado or die, and a cornice, surbase or cap. A pedestal has more tiers than a base.

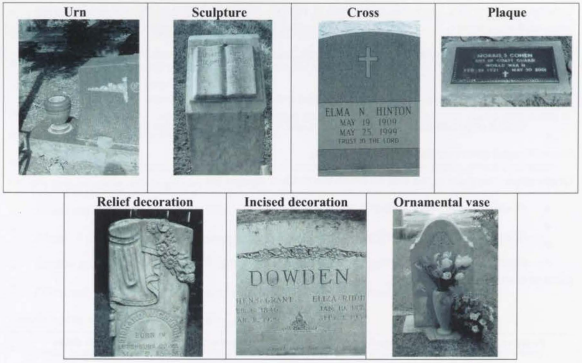
Base: The lowest visible element of a tomb or a marker that is above ground level. (Many unmarked basal markers have lost their primary stone and only have a base showing.)

Base

Ornament: Ornament is *integral to the structure of the tomb or marker.*

- *Urn*: A cylindrical container with a foot that is integral to the structure of the tomb or marker. It may be open or closed.
- *Sculpture*: Any masonry ornament integral to the structure of the tomb or marker which is not a plaque, urn, or relief or incised decoration.
- *Cross:* A cross that is integral to the structure of the tomb or marker.
- *Plaque:* A thin, flat piece of cast metal applied to a tomb or marker.
- *Relief decoration:* Decorated carved relief above a background plane.
- *Incised decoration:* Decorated carved incision below a background plane.
- *Ornamental vase:* Vase that is integral to the structure of the marker. *None:* No ornament present on the tomb or marker.

TYPES OF ORNAMENT:



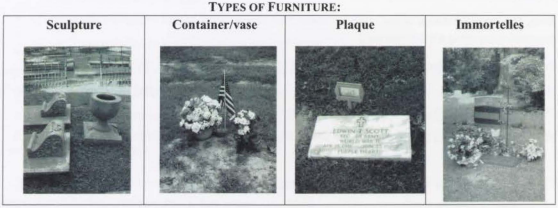
Furniture: objects related to but *not permanently attached* to the tomb or marker.

- *Sculpture:* Any three-dimensional object not permanently attached to the tomb or marker.

Sculpture may include urns, figures, crosses, etc.

- *Container/vase*: A container not permanently attached to the tomb or marker that holds flowers or other immortelles.
- *Plaque:* A commemorative tablet or medallion unattached to the tomb or marker.
- *Immortelles*: Temporary ephemeral offerings.

TYPES OF FURNITURE:



Landscape: The setting surrounding the tomb or marker. May include one or more of the following: brick, asphalt, concrete, soil, grass, vegetation or other ("other" includes leaves).

Enclosure: A curb, wall or fence separating a tomb, marker or family plot from the remainder of the cemetery.

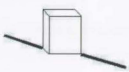
- *Curb*: A low edging that surrounds the plot and is six inches high or less.
- *Wall*: A structure that surrounds the plot and is greater than six inches in height.

Fence: A metal enclosure that surrounds the plot.

Grade slope: The slope of the land on which the tomb or marker lies.

- *Positive:* The tomb or marker is at the top of a rise.
- *Negative:* The tomb or marker is at the bottom of a rise.
- *Cross-slope:* The tomb or marker intersects a slope. *None:* The tomb or marker is on flat ground.

TYPES OF GRADE SLOPE:

Positive slope	Negative slope	Cross-slope	No slope
			

Degree of slope: Rated from 0 (low) to 3 (high). (Degree of grade does not need to be indicated if there is no slope).

MATERIALS:

Primary structure: The portion of the tomb or marker which contains the inscription.

Base: The lowest element of the tomb or marker that supports the primary structure (ex: bricks or concrete supporting a basal marker).

Surface finish: The stucco, concrete and/or paint applied to the surface of the tomb or marker.

Ornament: Decorative elements that are an integral part of the tomb or marker. These include most urns, crosses, sculpture, plaques, and all relief and incised decoration.

Roof: The top covering of a tomb. (Note: this applies only to the mausoleum.)

Types of material:

- *Marble:* A metamorphic stone, white or variously colored and sometimes streaked or mottled; can take a high polish. Usually white and crystalline, although may be pink.

- *Limestone:* A sedimentary rock consisting mainly of calcium carbonate or magnesium carbonate often containing fossil remains. May be cream, tan or dark gray.

- *Granite*: A hard igneous crystalline rock consisting of small, visible amounts of other materials. Usually red or gray variegated.

- *Brick*: A solid masonry unit of clay or shale molded into a rectangular shape while plastic and burnt in a kiln. Usually red, salmon, or red-orange colored.

- *Concrete:* A hard, compact material consisting of cement mortar, sand aggregate, gravel and water. Usually gray or white, although may be colored.

- *Metal:* Includes wrought or cast iron.

- *Stucco*: A plaster made of lime, cement and sand used for surface finishes and decorative work.

- *Modern coating:* A thin exterior coating based on oil or emulsion.

- *Limewash*: A thin exterior coating of calcium or magnesium carbonate (lime) and water.

Usually white, although may be tinted.

- *Cement wash:* A thin exterior coating of cement which is harder and more durable than limewash.

History of repairs: Indicate visible or historical repairs made to the tomb or marker. Indicate repairs on the primary structure, base, ornament, surface finish and roof.

CONDITIONS:

Conditions: Indicate degree of deterioration for the primary structure, base, surface finish, ornament and roof.

= no deterioration
= slight deterioration
= moderate deterioration
= significant or total deterioration

Forms of deterioration include:

- *Collapse*: Complete or partial failure of the structure.

- *Loss*: Absence of all or a portion of the original fabric.

Fragmentation: Fragments from a tomb or marker that have dissociated from the original fabric. The tomb or marker no longer reads as a whole.

- *Disaggregation*: The loss of granular material when a masonry unit is touched or rubbed.
- *Erosion*: The gradual surface loss of material and/or detail caused by weathering that results in an overall granular texture.

- *Cracking*: Fractures of various lengths on the surface material that have not developed into fragments. Indicates structural damage.

- *Exfoliation*: Loss of material along the surface of a masonry unit (especially in brick). *Efflorescence*:
- White, crystalline surface deposits caused by the presence of water-soluble salts.

- *Finish detachment:* The failure of surface finish attachment to masonry resulting in flaking, peeling or complete loss of material.

- *Corrosion*: Surface oxidation of metals resulting in color, texture and dimensional changes.

- *Bio-growth*: Growth of microflora (usually algae, fungi or lichen) on the surface of the tomb or marker.

- *Vegetation*: Growth of macro plant forms (ivy, moss, grass, vines, etc.) or their roots.

- *Alterations:* Intentional modifications to the original fabric.

- *Open/missing joints*: Loss or deterioration of mortar between masonry units.

Soiling: Surface deposits usually dark in color that are caused by moisture, pollution or anthropogenic origins (bird droppings, paint, etc.).

- *Graffiti*: Intentionally inscribed or applied markings, often the result of vandalism but may also occur from gravestone rubbings. May include visible footprints or cat scratches.

- *Metallic staining*: Colored stains on masonry units caused by the corrosion of metals.

Overall condition: Rank the overall state of the entire tomb or marker.

= **extremely deteriorated condition** (structural failure)
= **poor condition** (significant threat to structure and/or total loss of decorative features)
= **moderate deterioration** (structurally stable, significant or progressive loss of decorative features)
= **good condition** (structurally stable, decorative features and finishes largely intact)

Overall integrity: Rank the overall authenticity and retention of original fabric for the entire tomb or marker.

= **total loss of integrity** (25% or less of original materials remain, or an overwhelming presence of inappropriate replacement materials or alterations)
= **low integrity** (26% - 50% of original materials remain, or a significant presence of inappropriate replacement materials or alterations)
= **moderate integrity** (51% - 75% of original materials remain, or an obvious presence of tolerable replacement materials or alterations)
= **high integrity** (76% or more of original materials remain, or a minimal presence of tolerable replacement materials or alterations)
Inappropriate replacement materials or alterations: Replacement materials or alterations that are not in keeping with historic materials and/or use of the tomb or marker. Examples include the application of a concrete surface finish, repointing brick with cement mortar, etc. (Does not include traditional maintenance regimens).

Comments: Please include any comments you may have regarding the tomb or marker.

CONDITIONS SURVEY FORM

Site:		
Street Address:		
City:	**County:**	**State:**
UTM Coordinates:		
Owner:		
Contact:		**Phone:**
Surveyor:		**Date:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification:	
	plot designation:
Name(s) of interred:	
First burial date:	**Last burial date:**
Inscription:	
Stone carver (if known):	**Location of mark:**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker		
Type of tomb *(circle one):* mausoleum		
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead		
Dimensions (primary stone) Height:	**Width:**	**Depth (or L):**
Dimensions (base) Height:	**Width:**	**Depth (or L):**
Dimensions (other): Height:	**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown		
Interment status *(circle one):* active inactive abandoned		
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken		
Type of interment *(circle one):* individual family undeterminable		
Pedestal *(circle one) :* yes no	**Base** (circle one): yes no	

Ornament *(circle all that apply):*	urn sculpture cross plaque relief decoration incised decoration ornamental vase none
Furniture *(circle all that apply):*	sculpture container/vase plaque immortelles none
Landscape *(circle all that apply):*	brick asphalt concrete soil grass vegetation other
Enclosure *(circle all that apply):*	curb wall fence none
Grade slope *(circle one):*	positive negative cross-slope none
Degree of grade *(circle one):*	0 (low) 1 2 3 (high)

Surveyor:	**Date:**	**Plot identification:**
Weather *(circle all that apply):*	hot warm cool cold dry humid sunny rain/snow/fog overcast windy	

MATERIALS: **Check appropriate fields**

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble					
Limestone					
Granite					
Brick					
Concrete					
Metal					
Stucco					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs					

CONDITIONS: **Rank conditions from 0 (low) to 3 (high)**

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3

Bio-growth	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Vegetation	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Alterations	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Open/missing joints	0	1	2	3	0	1	2	3					0	1	2	3	0	1	2	3
Soiling	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Graffiti	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Metallic staining	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Other *(describe):*	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure				**Base**				**Surface Finish**				**Ornament**				**Roof**			
Overall Condition (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Overall Integrity (0=poor 3=high)	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

Comments:

CONDITION & TREATMENT RECORDATION FORM

Site:		
Street Address:		
City:	**County:**	**State:**
Owner:		
Contact:		**Phone:**
Surveyor:		**Survey Date:**
Weather *(circle all that apply):* hot warm cool cold dry humid sunny rain/snow/fog overcast windy		

IDENTIFICATION:

Plot identification:	
	plot designation:
Name(s) of interred:	

Inscription Legibility: *Rank from 0 (illegible) to 3 (easily legible)*

Primary inscription	0 1 2 3
Secondary inscription	0 1 2 3

Inscription:	
Stone carver (if known): N/A	**Location of mark: N/A**

DESCRIPTION:

Type of interment *(circle one):* tomb marker family name marker			
Type of tomb *(circle one):* mausoleum			
Type of marker *(circle all that apply):* headstone footstone ground tablet basal ruin cross pedestal obelisk Woodmen of the World pedestal column funeral home plaque bedstead			
Dimensions (primary stone) Height:		**Width:**	**Depth (or L):**
Dimensions (base) Height:		**Width:**	**Depth (or L):**
Dimensions (other): Height:		**Width:**	**Depth (or L):**
Orientation *(circle one):* North South East West unknown			
Interment status *(circle one):* active inactive abandoned			
State of interment *(circle all that apply):* standing ruin fragment relocated altered replica tilted sunken			
Type of interment *(circle one):* individual family undeterminable			
Pedestal *(circle one) :* yes no		**Base** (circle one): yes no	
Ornament *(circle all that apply):* urn sculpture cross plaque relief decoration incised decoration ornamental vase none			
Furniture *(circle all that apply):* sculpture container/vase plaque immortelles none			
Landscape *(circle all that apply):* brick asphalt concrete soil grass vegetation other			
Enclosure *(circle all that apply):* curb wall fence none			
Grade slope *(circle one):* positive negative cross-slope none			
Degree of grade *(circle one):* 0 (low) 1 2 3 (high)			

MATERIALS: *Check appropriate fields*

Type of material	Primary structure	Base	Surface Finish	Ornament	Roof
Marble					
Limestone					
Granite					
Brick					
Concrete					
Metal					
Sandstone					
Modern Coating					
Limewash					
Cement wash					

	Primary structure	Base	Surface Finish	Ornament	Roof
History of Repairs					
Condition of Repairs					

CONDITIONS: *Rank conditions from 0 (low presence) to 3 (high presence)*

Conditions	Primary structure	Base	Surface Finish	Ornament	Roof
Collapse	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Loss	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Fragmentation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Disaggregation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Erosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Cracking	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Exfoliation	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Efflorescence	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Finish detachment			0 1 2 3		
Corrosion	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Bio-growth	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Vegetation	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Alterations	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Open/missing joints	0 1 2 3	0 1 2 3		0 1 2 3	0 1 2 3
Soiling	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Graffiti	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Metallic staining	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Other *(describe):*	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Rank conditions from 0 (poor) to 3 (high)

	Primary structure	Base	Surface Finish	Ornament	Roof
Overall Condition (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3
Overall Integrity (0=poor 3=high)	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3

Conservator:	**Treatment Date:**	**Plot identification:**

Treatment

Weather *(circle all that apply):* hot warm cool cold dry humid
sunny rain/snow/fog overcast windy

effectiveness: *Rank from 0 (ineffective) to 3 (very effective)*

Tier Grade		**Treatment description**	**Effectiveness**
Treatment 1			0 1 2 3

Treatment 2		0 1 2 3
Treatment 3		0 1 2 3

Comments:

Recommendations:

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**
Version No. 24005 Date of Issue: March 2008 *ANSI-Z400.1-2003 Format*

Section 1: PRODUCT & COMPANY IDENTIFICATION

Product Name: D/2 Biological Solution

Exclusively Distributed By:
Cathedral Stone® Products, Inc.
7266 Park Circle Drive
Hanover, MD 21076
Telephone: 410-782-9150
Fax: 410-782-9155

Manufactured By:
Sunshine Makers, Inc.
15922 Pacific Coast Highway
Huntington Harbour, CA 92649
Telephone: 800-228-0709
Fax: 562-592-3830

Emergency Phone: Chem-Tel 24-Hour Emergency Service: 800-225-3924

Use of Product D/2 Biological Solution is an easy-to-use liquid that aids in the removal of a broad spectrum of soils. It is designed for use on outdoor sculpture, monuments, decorative fountains, stone, brick, terra cotta, concrete, stucco, and other architectural surfaces.

Section 2: HAZARDS IDENTIFICATION

D/2 Biological Solution is a colorless liquid with a very faint detergent-like odor. It is non-flammable, noncombustible, non-explosive, and non-reactive.

Hazard Rating (NFPA/HMIS)
Health = 1* Reactivity = 0
Fire = 0 Special = 0
* Mild eye irritant, non-mutagenic and non-carcinogenic

Rating Scale
0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe

Eye Contact: Eye Irritant.

Skin Contact: Prolonged skin contact with D/2 Biological Solution may irritate the skin. Repeated daily application to the skin without rinsing, or continuous contact of D/2 Biological Solution on the skin may lead to irritation.

Ingestion: Essentially non-toxic. May cause stomach or intestinal upset if swallowed.

Inhalation: No adverse effects expected under typical use conditions. Adequate ventilation should be present when using D/2 Biological Solution over a prolonged period of time. Open windows or ventilate via fan or other air-moving equipment if necessary. Mucous membranes may become irritated by concentrate mist.

Carcinogens: No ingredients are listed by OSHA, IARC, or NTP as known or suspected carcinogens.

Medical Conditions: No medical conditions are known to be aggravated by exposure to D/2 Biological Solution.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	OSHA PEL ACGIH TLV
Surfactants	Proprietary	None established
Wetting Agents	Proprietary	None established
Buffers	Proprietary	None established

Section 4: FIRST AID MEASURES

If in Eyes: Immediately rinse the eye with large quantities of cool water; if present, contact lenses should be removed after 5 minutes of rinsing; continue rinsing 10-15 minutes more. Both upper and lower lids should be lifted to facilitate thorough rinsing.

If on Skin: Minimal effects, if any, from diluted product; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area.

If Inhaled: Use in well-ventilated area, or use adequate protection from inhaling mist during spray applications. Prolonged exposure of workers to concentrate-mist during spray application may cause mild irritation of nasal passages or throat. If this happens, relocate workers to fresh air.

If Ingested: Give several glasses of milk or water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**
Version No. 24005 Date of Issue: March 2008 *ANSI-Z400.1-2003 Format*

Section 5: FIRE FIGHTING MEASURES

Extinguishing Media: Not flammable/non-explosive. No special procedures required.

Special Fire Fighting Procedures: None required.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes. Do not rub eyes with hands during cleanup. No special precautions for dermal contact are needed. Wash hands thoroughly after cleaning up spill or leak.

Procedure to follow in case of spill or leak: Evacuate area. Identify source of leak or spill and contain with sand, earth, or containment bin. Then proceed to clean up spill or leak.

Method for cleaning up: Recover all usable material. Residual may be removed by wipe or wet mope. Rinse area with plenty of water and mop to sanitary sewer.

Section 7: HANDLING AND STORAGE

No special handling is required. Keep in a closed plastic container. Store at ambient temperature. Avoid contact with eyes. Wash hands thoroughly after handling. **This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.**

This material does not meet the definition of a hazardous material according to 49 CFR, ICAO, IMDG and the UN Orange Book.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary measures:	No special requirements under normal use conditions.
Exposure Limits:	The D/2 Biological Solution formulation presents no health hazards to the user, other than mild eye irritancy.
Eye protection:	Caution, including reasonable eye protection, should always be used to avoid eye contact where splashing may occur, such as during spray applications.
Respiratory Protection:	No special precautions required.
Ventilation:	No special ventilation is required during normal use.
Skin protection:	No special precautions required; rinse completely from skin after contact.
General hygiene conditions:	There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices: - Avoid breathing vapor or mist. - Avoid contact with eyes. - Wash thoroughly after handling and before eating, drinking, or smoking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear Liquid	**Freezing Point:**	-9 °C (16 °F)
Odor:	Very faint detergent-like odor	**Boiling Point:**	98°C (209°F)
pH:	9.5	**Specific Gravity:**	1.011
Evaporation Rate:	0.4 (butyl acetate = 1)	**Vapor Pressure:**	20.7 mm Hg
Water Solubility:	100%	**Vapor Density:**	1.3 (air = 1)

Section 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials to Avoid: **Contains ammoniated compounds – do not mix with bleach, tub & tile cleaner, mold/mildew removers, or chlorinated compounds.**

Hazardous Decomposition Products: None expected

Material Safety Data Sheet: **D/2 BIOLOGICAL SOLUTION**

Version No. 24005 Date of Issue: March 2008 *ANSI-Z400.1-2003 Format*

Section 11: TOXICOLOGICAL INFORMATION

Toxicity Data: Available from relevant laboratory testing of ingredients or similar mixtures.

Acute Toxicity: Oral LD_{50}: >2.0 g/kg body weight Dermal LD_{50}: Not estimated

Eye Irritation: With or without rinsing with water, the irritation scores in rabbits at 24 hours did not exceed 17 (mild irritant) on a scale of 110 (extremely irritating); all scores were normal at seven days.

Dermal Irritation: In a standard test on rabbits, mild irritation was found at 72 hours; well-defined reddening was observed at 7 and 14 days after exposure.

Dermal Sensitization: No allergic reactions occurred in guinea pigs treated with D/2 Biological Solution.

Carcinogenicity: D/2 Biological Solution contains no carcinogenic compounds as defined by the National Toxicology Program (NTP), the international Agency for Research on Carcinogens (IARC), or the Occupational Health and Safety Administration (OSHA).

Section 12: ECOLOGICAL INFORMATION

Biodegradability: All components are inherently biodegradable.

Ecotoxicity: Not Tested.

Section 13: DISPOSAL CONSIDERATIONS

Unused Product: * Dilute with water 1:10 (1 part D/2 Biological Solution to 10 parts water) and dispose by sanitary sewer.

Used Product: *Used product may be hazardous depending on the cleaning application and resulting contaminants.

Empty Containers: *Triple-rinse with water and offer for recycling if available. Otherwise, dispose as non-hazardous waste.

*Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal regulations for your location. Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

Section 14: TRANSPORT INFORMATION

IATA Proper Shipping Name: Detergent solution Hazard Class: Non hazardous

Section 15: REGULATORY INFORMATION

*Reportable components: None. The U.S. Environmental Protection Agency (EPA) has determined that propylene glycol ethers are not included within the listed category "glycol ethers" under either EPCRA §313 Toxic Release Inventory or Clean Air Act §112 Hazardous Air Pollutants (both lists include only ethylene glycol ethers). Nor are propylene glycol ethers included in the various EPA Resource Conservation and Recovery Act, and Clean Water Act lists, nor the California Proposition 65 lists.

All components are listed on: EINECS and TSCA Inventory

No components listed under: Clean Air Act Section 112

RCRA Status: Not a hazardous waste. CERCLA Status: No components listed

TSCA TRI Reporting: Not required / Not listed CA PROP. 65 Status: No components listed

Section 16: OTHER INFORMATION

For Safety Information, Sales Applications and Availability contact:

CATHEDRAL STONE® PRODUCTS, INC.

7266 Park Circle Drive, Hanover, MD 21076

Telephone: 410-782-9150 Fax: 410-782-9155

200 LIME SOLV NEW MASONRY DETERGENT CLEANER

SECTION I - PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: DIEDRICH TECHNOLOGIES INC. **EMERGENY TELEPHONE NUMBER:**

AND ADDRESS: A Hohmann & Barnard Company **8:00 AM – 5:00 PM EST Monday – Friday: 800-283-3888**

310 Wayto Road, Schenectady, NY 12303 **NON-BUSINESS HOURS (CHEMTREC): 800-424-9300**

PRODUCT NAME: 200 LIME SOLV NEW MASONRY DETERGENT CLEANER **11/2011**

SECTION II - HAZARDOUS INGREDIENTS

NOTE: Hazardous acidic ingredients in this product are in a water diluted form; not in the pure concentrated acidic form. This product contains less than 20% Hydrochloric Acid (HCL) reduced of a 45% by more than 70% water and buffered by a surfactant wetting agent.

CHEMICAL NAME	CAS NO.	NFPA CODE	TLV	PEL
Hydrochloric Acid	7647-01-1	3/0/0/-	5 ppm	5 ppm

SPECIFIC CHEMICAL IDENTITY AND PERCENTAGE CONTENT OF INGREDIENTS WITHHELD AS TRADE SECRET PURSUANT TO MASSACHUSETTS REGULATIONS. REPORTING REQUIREMENTS OF SECTION 313 TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 10 CFR PART 373 APPLY.

SECTION III - PHYSICAL DATA

BOILING POINT (EF)	212EF	**SPECIFIC GRAVITY (H_2O=1):**	1.10
VAPOR PRESSURE (mmHg):	25	**% VOLATILE (by weight):**	35%
VAPOR DENSITY (Air=1):	1.64	**EVAPORATION RATE (Ether=1):**	-1
SOLUBILITY IN WATER:		**APPEARANCE AND ODOR:** Clear to light amber liquid, sharp acid smell.	
VOLATILE ORGANIC COMPONENTS:	N/A	**pH** = 1	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Non-flammable **FLAMMABLE LIMITS:** LEL = N/A UEL = N/A

EXTINGUISHING MEDIA: Dry chemical or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Hydrogen chloride gas may be released from vented or ruptured containers. Heat is generated when water is added with the possibility of spattering. Use water to keep containers exposed to fire cool until fire is extinguished. Water and foam may cause a violent reaction if sprayed on melting, burning containers, endangering fire fighters. Full protective equipment and SCBA is recommended **UNUSUAL FIRE AND EXPLOSION HAZARDS:** Possible formation of hydrogen gas caused by contact with metals which can when mixed with air be explosive.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin, eyes, ingestion.

CARCINOGENIC INFORMATION: Not listed (OSHA, IARC, NTP).

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: No applicable information found.

EFFECTS OF OVEREXPOSURE:

Chronic nose, throat or sinus conditions. Lung conditions such as asthma, bronchitis, emphysema, etc. Prolong high exposure can cause weight loss corresponding to exposure levels. Erosion of the teeth has been associated with long term overexposure.

CHRONIC EFFECTS:

Liquid, vapors and mists can cause severe burns to eyes, skin, respiratory and gastrointestinal tracks. Contact to the eye can quickly lead to blindness. Skin contact will result in burns and deep skin ulcers. Swallowing will cause severe burns to mucous membranes and deep tissue, and possible death if vital areas are penetrated.

EYE CONTACT:

Product's vapor, liquid and mists are extremely corrosive to the eyes. Minor or brief contact with vapors will cause severe irritation. Brief contact with liquid or mist will cause severe damage to the eyes. Prolonged contact can cause permanent injury to the eye and even blindness.

SKIN CONTACT:

Product's vapor, liquid and mists are extremely corrosive to skin. Contact with vapors will cause severe irritation to the skin. Contact with liquid and mists will cause severe burns to the skin. Prolonged contact with liquid will cause burns and destroy surrounding tissue. Burns that extend over large percentage of the body can result in death.

INHALATION:

Product's vapor, liquid and mist are extremely corrosive to nose, throat, and mucous membranes.. Bronchitis, pulmonary edema, and chemical pneumonitis may result. Brief exposure may result in difficulty breathing, irritation, coughing and chest pains. Severe irritation and tissue damage can result from extended periods of exposure. Death can occur from breathing high concentrations.

INGESTION:

Product's vapor, mist and liquid are extremely corrosive to mouth and throat. If swallowed the liquid will cause burns to tissue and extreme abdominal pain, nausea, vomiting and collapse. If large quantities are swallowed, death can result.

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT: Flush eyes immediately with plenty of water for a minimum of 30 minutes. Lift both upper and lower eyelids periodically. Seek immediate medical attention.

SKIN CONTACT: Flush immediately with cold water for minimum of 15 minutes and remove contaminated clothing. If hands are contaminated, particular attention must be paid to skin under fingernails. Launder contaminated clothing before reuse. Discard contaminated shoes. Seek immediate medical attention.

INHALATION: Remove to fresh air immediately. If breathing difficulty is experienced give oxygen. If not breathing give artificial respiration, preferably mouth-to-mouth. Seek medical attention immediately.

INGESTION: DO NOT INDUCE VOMITING. Immediately give large quantities of water or milk. Seek immediate medical attention. Never give an unconscious person anything by mouth.

SECTION VI - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Contact with highly alkaline materials can cause a violent reaction which can generate large amounts of heat.

HAZARDOUS/THERMAL DECOMPOSITION PRODUCTS: Contact with metals can cause evolution of explosive hydrogen gas. Hydrogen chloride, carbon monoxide and carbon dioxide. Poisonous, flammable hydrogen sulfide can be generated from contact with sulfides.

SECTION VII - SPILL OR LEAK PROCEDURES

SPILL, LEAK AND WASTE DISPOSAL PROCEDURES:

Immediately evacuate area where concentrated fumes are found. Allow only cleanup personnel wearing the appropriate protective equipment and clothing into the areas. Dike with absorbent material and carefully neutralize with alkali, soda ash, lime or limestone. Adequate ventilation must be provided due to release of carbon dioxide gas. Prevent un-neutralized material from entering drains, sewers, waterways or soil. Applicable government regulations regarding spill reporting, handling and waste disposal must be complied with.

WASTE DISPOSAL METHODS:

Contaminated product and materials used in cleanup must be placed in approved containers and disposed of in accordance with federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH/MSHA approved dust/mist filter respirator for routine work purposes when exposure exceed the permissible exposure limits. The respirator use limitations made by NIOSH/MSHA or the manufacturer must be observed.

VENTILATION:

Local Exhaust - Sufficient to maintain exposure to levels below permissible exposure limits. If mechanical exhaust is required it should be of the steel or plastic fan type.

PROTECTIVE CLOTHING:

Protect all body parts from contact by using full acid resistant suit with tight fitting cuffs and collar, rubber boots and head protection.

PROTECTIVE GLOVES:

Neoprene - butyl rubber - PVC - polyethylene.

EYE PROTECTION:

Close fitting safety chemical goggles and full face shield.

OTHER PROTECTIVE EQUIPMENT:

Apply Diedrich recommended skin barrier cream for additional protection. Solvent resistant boots and hardhat. Safety shower and eyewash or fresh running water close at hand.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Keep away from heat, sparks, and open flames. Use with adequate ventilation. Store away from oxidizing materials. Avoid prolonged or repeated contact with skin. After this container has been emptied it may contain explosive and/or harmful vapors and residue.

OTHER PRECAUTIONS:

Do not store in or pipe through anything metallic, use only poly-lined steel or approved plastic. Keep containers tightly sealed. Do not cut puncture or weld on or near this container. Do not re-use container for any purpose until it has been commercially cleaned. Keep container closed when not in use.

SECTION X - SHIPPING INFORMATION

Proper Shipping Name: Corrosive liquids n.o.s. (Contains hydrochloric acid)

Class: 8

LEGENDS:

0 = LEAST 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME

N.D. = NOT DETERMINED N.A. = NOT AVAILABLE N/A = NOT APPLICABLE

While this company believes that the data contained herein are factual and the opinions expressed are based on tests and data believed to be reliable, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by this company as to the effects of such use, the results to be obtained, or the safety and toxicity of the product, nor does this company assume any liability arising out of use, by others, of the product referred to herein. Nor is this information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulations.

REQUIRED SUPPLEMENTAL CONTRACT TERMS: Failure to obtain a property owner's written acceptance of the enclosed Required Supplemental Terms and Conditions for Restoration Contract shall release any and all of the manufacturer's express or implied warranties (including, without limitation merchantability and fitness for particular purpose) and user shall indemnify and hold manufacturer harmless from all liability cost and expenses arising in any way from use of or contact with this product. All claims of any kind against manufacturer arising from or related to this product in any way shall be decided by binding arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association.

HOHMANN & BARNARD, INC.
A MiTek - BERKSHIRE HATHAWAY COMPANY

SANDELL
Corporate Office
310 Wayto Road
Schenectady NY 12303
Toll Free: 1-800-283-3888 Fax: 1-518-357-9636

HOHMANN & BARNARD
Corporate Headquarters
30 Rasons Court
Hauppauge, NY 11788
Toll Free: 1-800-645-0616
Fax: 1-631-234-0683

MARYLAND
Hohmann & Barnard
7079-A Oakland Mills Rd
Columbia, MD 21046
Toll Free: 1-800-999-7816
Fax: 1-410-290-9316

ILLINOIS
Hohmann & Barnard -
6100 S. New England Ave
Chicago, IL 60638
Toll Free: 1-800-323-7170
Fax: 1-773-586-6710

CANADA: Blok-Lok
12 Ashbridge Circle Woodbridge, ON,
L4L 3R5, Canada
Toll Free: 1-800-561-3026
Fax: 1-905-266-2272

PENNSYLVANIA
Foamtastic Products
441 Boot Road, Suite 100 Downingtown, PA 19335
Toll Free: 1-800-645-0616
Fax: 1-631-234-0683

TEXAS
Hohmann & Barnard
2415 Cold Spring Road Ft. Worth, TX 76106
Toll Free: 1-800-822-5228
Fax: 1-817-626-3819

ALABAMA
Hohmann & Barnard-
1902 Woodlands Industrial Dr.
Trussville, AL 35173
Toll Free: 1-800-296-0771
Fax: 1-205-956-5292

www.diedrichtechnologies.com | www.h-b.com

Procter&Gamble Professional®

MATERIAL SAFETY DATA SHEET

16 1. Product and Company Identification

Material name	**Orvus WA Paste**
Product Code	95161362
Version #	03
Revision date	11-01-2010
Manufacturer Address	Procter & Gamble Professional 2 P&G Plaza Cincinnati Ohio 4 5 2 0 2 U S
P&G Telephone Number:	1-800-332-7787
Emergency 24-hr Telephone #:	CHEMTREC 1-800-424-9300

17 2. Hazards Identification

Potential health effects

Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.
Eyes	Health injuries are not known or expected under normal use. Accidental exposure to the eyes may produce a mild but transient irritation.
Skin	Health injuries are not known or expected under normal use. Substance does not generally irritate and is only mildly irritating to the skin.
Inhalation	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Potential environmental effects	Considering the limited amount applied during use and the size of the container, the risk of adverse effects is considered small.

18 3. Composition / Information on Ingredients

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

19 4. First Aid Measures

First aid procedures

Eye contact	Immediately rinse with water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops or persists.
Skin contact	Rinse skin with water. Get medical attention if irritation develops and persists.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Ingestion	Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center or doctor. Get medical attention if any discomfort continues.

20 5. Fire Fighting Measures

Environmental precautions Prevent further leakage or spillage if safe to do so.

Extinguishing media

Suitable extinguishing media Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Protection of firefighters

Protective equipment and precautions for firefighters Firefighters must use standard protective equipment including flame retardant coat, helmet wit face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

21 6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Wear suitable protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so.

Clean-up methods and materials and containment measures In case of spills, beware of slippery floors and surfaces. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Flush with plenty of water to clean spillage area.

7. Handling and Storage

Handling Use personal protective equipment as required. Avoid contact with skin. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of reach of childre

Storage Store in a cool and well-ventilated place. Keep from freezing.

22 8. Exposure Controls / Personal Protection

Engineering controls Provide adequate ventilation.

Personal protective equipment

Eye / face protection Not normally needed.

Skin protection Not normally needed. For prolonged or repeated skin contact use suitable protective gloves. Rubber gloves. Neoprene gloves.

Respiratory protection Not normally needed.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

23 9. Physical & Chemical Properties

Color	White
Odor	Faint detergent scent
Odor threshold	Not available.
Physical state	Solid.
pH	7.8
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	>= 201 °F (>= 93.9 °C)
Evaporation rate	Not available.
Vapor pressure	Not available.
Specific gravity	1.04
Solubility (water)	Complete
Partition coefficient (n-octanol/water)	Not available
VOC	0 % estimated
Percent volatile	0 % estimated estimated

24 10. Chemical Stability & Reactivity Information

Chemical stability This is a stable material.

Conditions to avoid Temperatures above 140 F (60 C). Maintain pH above 7.0 to prevent decomposition. Contact with acids.

Hazardous decomposition products Sulfuric acid. Sodium oxides. Hydrogen sulfide.

Hazardous polymerization Will not occur.

25 11. Toxicological Information

Sensitization Not available.

Chronic effects Not available.

Skin corrosion/irritation Not available.

26 12. Ecological Information

Environmental effects Based on ecotoxicity and fate data for the individual ingredients in this specific formulation, and for related consumer household cleaning products formulations, this product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment at relevant environmental concentrations. This product is intended for dispersive use and should not be disposed of directly into the environment.

27 13. Disposal Considerations

Disposal instructions This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

28 14. Transport Information

DOT

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

29 15. Regulatory Information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

State regulations

ILLRTK

Contains no Illinois Right To Know toxic substances.

US - Massachusetts RTK - Substance: Listed substance

SODIUM SULPHATE (CAS 7757-82-6) LISTED

US - New Jersey RTK - Special Hazard: Listed substance

Contains no New Jersey Right To Know special hazards.

US - New Jersey RTK - Substances: Listed substance

Contains no New Jersey Right To Know Substances

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Contains no Pennsylvania Right To Know hazardous substances

US - Rhode Island RTK - Hazardous Substances: Listed substance

Contains no Rhode Island Right To Know hazardous substances.

Canadian regulations

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Inventory Status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

30 16. Other Information

HMIS® ratings

Health: 1
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 1
Instability: 0

Disclaimer

This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

University of Oregon Historic Preservation Program

Terminal Project Approval Page

Student: David Espinosa

Title: Eugene Masonic Cemetery: Condition Assessment and Treatment of the Historic Grave Markers and Mausoleum

This Terminal Project has been accepted and approved in partial fulfillment of the requirements for the Master of Science degree in the Historic Preservation Program by:

Committee Chairperson: Laura S. Alsop Date: 5/31/2014

Committee Member: [signature] Date: 6/3/2014

Committee Member: _____ Date: _____

Degree awarded: Month, Year