

NINETEENTH-CENTURY GRAVE MARKERS AND TWENTY-FIRST CENTURY  
LANDSCAPING AT LAUREL HILL CEMETERY

By

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ABSTRACT OF THE THESIS

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Like most cemeteries, the grounds of Laurel Hill are mostly covered by two things: grave markers and grass. Although landscaping is necessary to keep the grave markers clean, visible, and accessible, modern landscaping methods can potentially cause damage to Laurel Hill's hundred-year-old grave markers. This thesis looks at the methods used by groundskeepers at Laurel Hill and suggests changes that could be made to better protect and preserve the site. My investigation concentrates on grave markers installed during the Victorian period, between 1837 and 1901. I considered any and all modern-day landscaping equipment used by Laurel Hill's groundskeepers, including lawnmowers, pesticides, the removal of plants by hand, and especially string trimmers. Following my research, this thesis recommends that financial resources be reallocated to hire landscapers that specialize in cemetery maintenance. Further, this thesis recommends that additional study be conducted, and a master plan commissioned.

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## Chapter 1: Introduction

### The History of Laurel Hill Cemetery

#### Origins

Before the building of Laurel Hill Cemetery, most people living in Philadelphia were buried in churchyards, potter's fields, or on private property. But this system became untenable during the first quarter of the nineteenth century, when the population more than doubled, from 81,000 to 189,000 people.<sup>1</sup> Burial grounds became overcrowded because more people meant more corpses, and because burial grounds were being closed so that housing could be built on top of them. The city was plagued by epidemics like the 1822 outbreak of yellow fever. Advances in science revealed the danger of germs, and religious ideology declined. Doctors, scientists, and ordinary Philadelphians were calling for reform, for cemeteries to be moved out of urban churchyards and into rural areas.<sup>2</sup> Reform came in 1836, when officials outlawed burials within the city.

Laurel Hill was built the same year. Its founder, John Jay Smith, was motivated to do so by a tragic experience. He had previously buried a young daughter at the Friends Burial Ground, which in the space of less than half a city block on Cherry Street, had tightly packed nearly 20,000

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<sup>1</sup> Thomas H. Keels, "Laurel Hill Cemetery," The Encyclopedia of Greater Philadelphia, last modified 2012, accessed December 10, 2019, <https://philadelphiaencyclopedia.org/archive/laurel-hill-cemetery>.

<sup>2</sup> John McManners, *Death and the Enlightenment: Changing Attitudes to Death Among Christians and Unbelievers in Eighteenth-Century France* (New York: Oxford University Press, 1981), 303.

corpses. Smith tried counting plots to find his daughter's grave, but as he found out later, he ended up paying his respects over the wrong person. He decided after that experience that Philadelphia needed "a suitable, neat and orderly location for a rural cemetery."<sup>3</sup>

But when they established Laurel Hill, Smith and the other founders aimed to do more than merely improve on the disorganized churchyards, with caskets stacked one on top of the other in flooded pits. Resolved to transform the way Philadelphia buried its dead, Smith sought to emulate the rural cemetery model from Europe. The Père Lachaise Cemetery in Paris, built in 1804, was a prototype of the rural cemetery.<sup>4</sup> In the United States, Mount Auburn Cemetery was built in 1831 in Boston, after the Père Lachaise Cemetery model.<sup>5</sup> Five years later, Laurel Hill was built, the third rural cemetery to be built in the United States.<sup>6</sup> Rural cemeteries were built with the idea of idealizing death, of making death beautiful.<sup>7</sup> Smith and the other founders pictured Romanticized grounds, picturesque views of the river, and tree-lined walkways.

Smith and the other founders purchased the 32-acre estate of merchant Joseph Sims, attractive because it had well-drained soil (it was formerly a farm), was remote from the city, and had marvelous views of

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<sup>3</sup> Aaron V. Wunsch, Catherine LaVoie, and Carolyn Pitts, *National Historic Landmark Nomination: Laurel Hill Cemetery* (Washington: The Service, 1998), 18.

<sup>4</sup> Thomas A. Kselman, *Death and Afterlife in Modern France* (Princeton: Princeton University Press, 2014), 169.

<sup>5</sup> Stanley French, "The Cemetery as Cultural Institution: The Establishment of Mount Auburn and the 'Rural Cemetery' Movement," *American Quarterly* 26, No. 1 (1974): 39.

<sup>6</sup> Augustine Nigro, "The Origins of Laurel Hill Cemetery: Rural Deliverance from Urban Blight," *Proteus* 19, No. 1 (2002): 52.

<sup>7</sup> James R. Cothran and Erica Danylichak, *Grave Landscapes. The Nineteenth-Century Rural Cemetery Movement* (Columbia: University of South Carolina, 2018), 6.

the Schuylkill River. The Scottish architect John Notman won a competition to design Laurel Hill. His design was favored by the founders most of all because it sculpted the landscape into the shape of an amphitheater facing the Schuylkill. Notman's ground plan for Laurel Hill was based on the Kensal Green residential area outside London, a fusion of art and nature. He added a Roman Doric gatehouse on Ridge Avenue, and circular tree-canopied roads and curving loops for carriages, all of which eventually led back to the center of the cemetery.<sup>8</sup>

The elaborate visions of lush greenery made sense in the case of Smith, who was a horticulturalist. But he was also a Quaker, and Quakers didn't typically mark the graves of their dead with much more than unadorned stones. Contrary to that humble and minimalist aesthetic, Smith permitted families to commission grand monuments erected by prominent architects and sculptors.<sup>9</sup> Laurel Hill grew to become not only a cemetery for the dead, but a sculpture garden and scenic park for the living.

## Rise and Fall

Laurel Hill is an excellent illustration of why the landscapes of rural cemeteries in the United States were especially important: because "America's rural cemeteries were explicitly designed both for the living and

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<sup>8</sup> Sarah Leu, Anastasia Matijkiw, and Linda Stanley, "Laurel Hill Cemetery Records" (finding aid, Philadelphia, 2015), 4.

<sup>9</sup> Anastasia Matijkiw, "Laurel Hill Cemetery," *Historical Society of Pennsylvania* (blog), May 27, 2015, <https://hsp.org/blogs/archival-adventures-in-small-repositories/laurel-hill-cemetery>.

for the dead.”<sup>10</sup> Rural cemeteries were located on the outskirts of urban areas not only because they had more room for the dead, but also in order to serve as recreational areas for the public.<sup>11</sup> Like Central Park in New York City (the creation of which was influenced by rural cemeteries), the rural cemetery served as a refuge from the congested urban landscape, and offered a more natural environment where the living could rest in peace too. By the middle of the nineteenth century, Laurel Hill was receiving 30,000 living visitors a year.

Although Laurel Hill welcomed both the dead and the living, it was not as equally accommodating to both the poor and the wealthy. The price of being buried at Laurel Hill was not cheap, even for families not commissioning grand monuments by prominent architects. Smith and the founders were therefore not improving the burial options for all of Philadelphia, but just the wealthy, which because of the private cemeteries on their estates, were never subjected to the overcrowded churchyards in the first place. Might we perhaps say that Laurel Hill still served the public as a garden retreat to take a break from the city heat and crowds? We cannot, unfortunately, because on Sunday, the one day of the week when the working-class had the day off, Laurel Hill was only open to families that had purchased lots.<sup>12</sup>

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<sup>10</sup> Thomas Bender, "The 'Rural' Cemetery Movement: Urban Travail and the Appeal of Nature," *New England Quarterly* 47, No. 2 (1974): 196-211.

<sup>11</sup> Ibid.

<sup>12</sup> Keels.



The success of Laurel Hill led to the expansion of Laurel Hill.

Between 1849 and 1863, three additional sections of land were added to the original thirty-two acres, and were named according to their geographical orientation: one new section was called South Laurel Hill, another Central Laurel Hill, and the third was attached to the original thirty-two acres, which now was called North Laurel Hill (Fig. 1). The additions brought Laurel Hill's total acreage up to ninety.

When Smith purchased those original thirty-two acres from the Joseph Sims estate (twenty of which were suitable for burials), they had purposely chosen a location as remote as possible from the city, in the hope that it would remain rural and picturesque for as long as possible.<sup>13</sup> But by 1900, the cemetery which had been built as an alternative to overcrowded churchyards, itself was overcrowded, and not just with people, but adjacent buildings too. Industrial neighborhoods surrounded Laurel Hill on its north and east sides, and to its south was Fairmount Park, which had been built to absorb some of the overflow of visitors. People in Philadelphia began to look for other places to bury their dead, for example West Laurel Hill in the suburb of Lower Merion. Although also founded by John Jay Smith, West Laurel Hill is across the river from the original Laurel Hill, and not considered to be a part of it. West Laurel Hill uses a more open, grass-filled plan, and represents a change in taste from

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<sup>13</sup> Aaron Wunsch, "Location and Conception," Building a City of the Dead: The Creation and Expansion of Philadelphia's Laurel Hill Cemetery, The Library Company of Philadelphia and The Friends of Laurel Hill Cemetery, last updated April 29, 2011, accessed December 10, 2019, <http://librarycompany.org/laurelhill/location.htm>.

the more rambling, plant-filled, rural cemetery style.<sup>14</sup> The decline of Laurel Hill got worse after World War II, they were selling fewer and fewer plots, and no longer had the money to maintain the property. Vandalism and theft proliferated.

Renewed interest in Laurel Hill emerged during the 1970s. A descendent of John Jay Smith, Drayton Smith, along with his wife, Jane Smith, and local historian John Francis Marion, banded together and founded the Friends of Laurel Hill Cemetery. Through event-planning and fund-raising, the non-profit organization raises awareness of and interest in the cemetery among the public, as well as money to restore the grounds and monuments that had fallen into disrepair over the years of neglect.

### **National Historic Landmark**

In 1960, the National Park Service established the National Historic Landmark program (NHL) to help protect “nationally significant historic properties.”<sup>15</sup> In 1966, the National Historic Preservation Act was created, making the National Register of Historic Places (NRHP) part of this act.<sup>16</sup> Although both programs operate at the national level, only the NHL designates landmarks of national significance, whereas the landmarks on

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<sup>14</sup> “Mission and History,” West Laurel Hill Cemetery and Funeral Home, accessed December 9, 2019, <http://westlaurelhill.com/about/mission>.

<sup>15</sup> Geoffrey Burt, “Roots of the National Historic Landmarks Program,” National Park Service, originally published 2013, accessed February 21, 2019, <https://www.nps.gov/articles/roots-of-the-national-historic-landmarks-program.htm>.

<sup>16</sup> Ibid.

the NRHP are deemed to have only local or regional significance. As a result, all landmarks on the NHL are on the NRHP.<sup>17</sup>

After being nominated by the Friends of Laurel Hill Cemetery, the National Park Service added Laurel Hill to the NRHP in 1977.<sup>18</sup> Later, in 1998, Laurel Hill was nominated and promoted to the NHL. This was no small honor. Laurel Hill was only the second cemetery added to the list, and of the 2,600 or so historic places on the list of NHL's,<sup>19</sup> only nine are cemeteries.<sup>20</sup>

For a cemetery to be included on the NHL, it must have at least one but usually some combination of the following: (1) important people buried within its grounds, (2) unique landscaping or architecture, (3) gravestones that exemplify a folk tradition, or (4) had an important event (e.g. a battle) occur on its grounds or have the potential to yield valuable knowledge (e.g. archeological).<sup>21</sup> In the official "Statement of Significance" form documented on Laurel Hill, the NHL cited Laurel Hill's "architecture, art, landscape architecture, urban design, community planning and

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<sup>17</sup> "Frequently Asked Questions - National Historic Landmarks," U.S. Department of the Interior, National Park Service, accessed February 21, 2019, <https://www.nps.gov/subjects/nationalhistoriclandmarks/faqs.htm>.

<sup>18</sup> U.S. Department of the Interior, National Park Service, "National Register of Historic Places Inventory—Nomination Form: Laurel Hill Cemetery" (Washington, DC: Government Printing Office, 1977).

<sup>19</sup> "National Historic Landmarks Program," U.S. Department of the Interior, U.S. National Park Service, last updated August 29, 2018, accessed February 21, 2019, <https://www.nps.gov/orgs/1582/index.htm>.

<sup>20</sup> Wunsch, et al., 16; U.S. Department of the Interior, National Park Service, "List of NHLs by State," National Historic Landmarks, last updated August 21, 2019, <https://www.nps.gov/subjects/nationalhistoriclandmarks/list-of-nhls-by-state.htm>.

<sup>21</sup> "Burial Customs and Cemeteries in American History," U.S. Department of the Interior, National Park Service, National Register Bulletin, [https://www.nps.gov/nr/publications/bulletins/nrb41/nrb41\\_5.htm](https://www.nps.gov/nr/publications/bulletins/nrb41/nrb41_5.htm), accessed February 21, 2019.

development, and social history” as justifications for its inclusion on the list.<sup>22</sup>

The advancement of Laurel Hill from the NRHP to the NHL means that Laurel Hill is state-sanctioned heritage.<sup>23</sup> Preserving Laurel Hill is, therefore, a worthwhile pursuit.

### **Project Scope**

Out of Laurel Hill’s current seventy-four acres, my research concentrated on the original Laurel Hill, the twenty acres known today as North Laurel Hill, built in 1836. This is the most historically-important section, the section most responsible for Laurel Hill being certified as heritage by the NHL, and the section most vulnerable to modern landscaping equipment and methods. Within these twenty acres, my research concentrated on the oldest sections, A-C and E-I.

The threat of modern landscaping equipment and methods is not the only threat against the material integrity of the grave markers at Laurel Hill. Like most cemeteries, Laurel Hill is located outdoors, and its grave markers are also vulnerable to the elements, vandalism, and theft.<sup>24</sup> I did not examine these or any of the other dangers faced by Laurel Hill’s grave

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<sup>22</sup> “Statement of Significance: Laurel Hill Cemetery,” U.S. Department of the Interior, National Park Service, accessed July 6, 2019, <https://npgallery.nps.gov/GetAsset/6b0e4cf2-467b-4cbb-92e8-716bd9c82c57/>

<sup>23</sup> Wunsch, et al., 16.

<sup>24</sup> Carol Yaster and Rachel Wolgemuth, *Images of America: Laurel Hill Cemetery* (Charleston, South Carolina: Arcadia Publishing, 2017), 50.

markers. I concentrated exclusively on the dangers posed to them by modern landscaping equipment and methods.

## **Chapter 2: Review of the Literature**

The literature review is divided into two sections: case studies and industry practices. Introductions on each topic precede the sections individually.

### **Case Studies**

What impact has modern landscaping tools and techniques had on old grave markers in other cemeteries? Below, I survey case studies done by previous researchers to compare their findings with what I learned at Laurel Hill. When commonalities between Laurel Hill and other cemeteries were found, the knowledge learned from previous researchers may be of practical use to Laurel Hill. When differences between Laurel Hill and other cemeteries were found, here is where there may be a gap in the literature, and where the knowledge I gained from my research may make a useful theoretical addition.

### **Case Study 1: Master Plan at Mount Auburn**

Mount Auburn Cemetery is in Cambridge, Massachusetts, and as stated above, is a rural cemetery built in 1831, a few years prior to Laurel Hill.

But unlike Laurel Hill, Mount Auburn has a master plan.<sup>25</sup> A master plan is an inventory of documentation on a site and includes recommendations for maintenance procedures. Mount Auburn's master plan includes research much like the type I have done, except on a far more comprehensive scale. Unlike Laurel Hill, which only records damage on monuments that are most important to the site, Mount Auburn documents losses even to "small scale elements such as curbs, fences, and monuments."<sup>26</sup> Individually such losses may not seem significant, but in combination so many small losses equate to substantial changes in the landscape and the authenticity of the site.

The same reasoning can be used to explain much of the damage I discovered on the gravestones at Laurel Hill, as I shall explain in more detail below. If Laurel Hill had a master plan like Mount Auburn, its managers would have known many years ago whether or not modern landscaping equipment presented a danger to its gravestones, and my research would not have been necessary.

## **Case Study 2: Cultural Culpability at African Cemetery No. 2**

Cemeteries serve not only to link individuals to their personal ancestors and families, but in some cases, to the history of their people. In Lexington, Kentucky, African Cemetery No. 2 contains the remains of oppressed black Americans ranging from slaves to victims of the Jim Crow

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<sup>25</sup> Halvorson Co. and Shary Page Berg, *Mount Auburn Cemetery, Cambridge, Massachusetts: Master Plan 1993* (Boston: The Company, 1993).

<sup>26</sup> Halvorson Co. and Shary Page Berg, 75.

era. The site was established as early as 1669, and was added to the NRHP in 2004. For many of the individuals interred, this cemetery is the only record of their existence.<sup>27</sup> For many black descendants today, grave markers in this cemetery are their only link to that ancestry. Whereas whites have access to historical records such as books, photographs, and journals written by ancestors in safer and more privileged circumstances, all blacks have left from their ancestors is this field of silent grave markers (Fig. 2).

Despite its cultural importance, African Cemetery No. 2 was found in 2003 to be in disrepair owing to the elements, vandalism, and neglect.<sup>28</sup> Although these dangers are not the ones I'm researching at Laurel Hill, African Cemetery No. 2 nevertheless raises questions about cultural culpability which prove to be worth considering at Laurel Hill, as I detail below.

In the case of African Cemetery No. 2, Lexington's black community has a personal stake in the cemetery's contents and condition, has a better understanding of its importance,<sup>29</sup> and has more to lose by mismanagement.<sup>30</sup> Lexington's black community therefore has a convincing case that they ought to play a role in the preservation decisions

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<sup>27</sup> "About - African Cemetery No. 2," Kentucky African American Heritage Organization, accessed July 14, 2019, <http://www.africancemeteryno2.org/about>.

<sup>28</sup> M. Riegert and Alice Turkington, "Setting Stone Decay in a Cultural Context: Conservation at the African Cemetery No. 2, Lexington, Kentucky, USA," *Building and Environment* 38, Nos. 9-10 (2003): 1105-1111.

<sup>29</sup> Dirk H.R. Spennemann, "Cultural Heritage Conservation During Emergency Management: Luxury or Necessity?" *International Journal of Public Administration* 22, No. 5 (1999): 745-804.

<sup>30</sup> Linda S. Smith, "Concept Analysis: Cultural Competence," *Journal of Cultural Diversity* 5, No. 1 (1998): 4-10.

made at African Cemetery No. 2.<sup>31</sup> Is the same true of individuals who have a personal stake in Laurel Hill? Maybe and maybe not. After all, Laurel Hill's NHL status may mean that its importance to the nation takes precedence over individual people and/or a cultural group. But if not, then individuals with a personal stake in Laurel Hill should perhaps have a say in how money that may come from the National Park Service is employed to preserve grave markers at Laurel Hill, including against the dangers of modern landscaping tools and techniques.

### **Case Study 3: Traditional Landscaping on Prairie Cemeteries**

American pioneer prairie cemeteries face the challenge of not only protecting their grave markers from landscaping, they must also (oddly enough) protect their grass from landscaping. The tall grasses at American pioneer prairie cemeteries are heritage in their own right (Fig. 3),<sup>32</sup> and must be shielded against over-landscaping.<sup>33</sup> Staff at American pioneer prairie cemeteries must accomplish this while at the same time protecting gravestones from aggressive plants, as well as maintaining landscape that is inviting to the public.

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<sup>31</sup> Ismail Serageldin, Ephim Shluger, and Joan Martin-Brown (Eds.), *Historic Cities and Sacred Sites: Cultural Roots for Urban Futures* (Washington, DC: The World Bank, 2001), 10.

<sup>32</sup> Christopher Borrelli, "In Pioneer Cemeteries, a Disappearing Part of Illinois' Landscape Lives On," *The Chicago News Tribune* (Chicago, Ill), August 4, 2017.

<sup>33</sup> Angella K. Moorehouse and Harold Hassen, "Protecting Pioneer Cemetery Prairies: Balancing the Need to Preserve Cultural and Natural Heritage Values," *Proceedings of the 19th North American Prairie Conference: the Conservation Legacy Lives on ... : held August 8-12, 2004, University of Wisconsin-Madison, Madison, Wisconsin* (Madison: University of Wisconsin-Madison, 2006).



To balance these conflicting needs, staff at American pioneer prairie cemeteries use traditional techniques rather than modern ones. In the past, lawnmowers proved to be damaging to gravestones, so staff members switched to smaller hand tools. Fences were installed which not only managed to “prevent incidental encroachment from neighbors with different land uses,” but were also historically significant in their own right. Finally, and somewhat controversially, caretakers at American pioneer cemeteries incorporate the use of fire in their preservation procedures. Controlled burns preserve flora and fauna because prairie fires are a part of the ecosystem’s natural cycle, and have been proven to not cause damage to the gravestones.

The success that American pioneer prairie cemeteries have had with traditional methods and tools may turn out to be similarly useful at Laurel Hill. Even if Laurel Hill needn’t protect the same sort of culturally important grass, or fend off the same kinds of aggressive vegetation, Laurel Hill’s nineteenth-century grave markers were designed with nineteenth-century landscaping methods in mind. It is doubtful that even the most prophetic nineteenth-century grave keeper could have imagined rideable lawn mowers or chemical weed killers. So, in order to avoid (or at least reduce) the grave marker damage I document in my findings below, the groundskeepers ought to avoid the use of modern tools and techniques when cutting the grass of Laurel Hill.

#### Case Study 4: Stone Type in New England Cemeteries

In several New England cemeteries, caretakers pay close attention to the types of stone from which their grave markers are carved, aware that “each type of stone has its own qualities, characteristics, and challenges.”<sup>34</sup> We can assume that this awareness of materials is true of cemeteries in other regions of the United States.

Grave markers from the colonial era were typically carved out of slate. Slate “can chip and flake quite easily,”<sup>35</sup> but is relatively “resistant to the lichen and mold that accumulates easily on other stones.”<sup>36</sup> Grave markers carved since the nineteenth century, however, are more likely to have been carved out of granite and marble, rather than slate.

Granite tends to withstand abuse from the elements quite well, but marble, because of its porosity, does not.<sup>37</sup> Granite is, however, vulnerable to chipping and decay,<sup>38</sup> although can be made resistant to chipping with stone polish.<sup>39</sup> In stones that have already sustained damage, it may be necessary to fill in chipped areas and pockmarks with acrylic or polyester resin, prior to polishing.

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<sup>34</sup> Edward E. Andrews, “Digging Up History: How Photo-Flo and Elbow Grease Are Saving New England’s Historic Cemeteries,” *Common-Place* 11, No. 2 (January 2011).

<sup>35</sup> Jason Church, U.S. Department of the Interior, National Park Service, “The Challenges of Treating Delaminating Slate Headstones: New Treatments with New Materials,” National Center for Preservation of Technology and Training, last updated December 10, 2014, accessed November 11, 2019, <https://www.ncptt.nps.gov/blog/the-challenges-of-treating-delaminating-slate-headstones-new-treatments-with-new-materials>.

<sup>36</sup> Ibid.

<sup>37</sup> Thomas C. Meierding, “Marble Tombstone Weathering and Air Pollution in North America,” *Annals of the Association of American Geographers* 83, No. 4 (1993): 568-588.

<sup>38</sup> José D. Rodrigues, “Conservation of Stone Monuments. From diagnostic to practice,” *MINBAR AL JAMIAA n°7, Actes de la RIPAM 2005, Meknès, Maroc* (2007): 287-295.

<sup>39</sup> Jennifer K. Dinsmore, “Conservation and Storage: Stone,” in *The Manual of Curatorship*, 2nd edition, ed. John M.A. Thompson (Oxford: Butterworth-Heinemann, 1992).

What types of stone are the nineteenth-century grave markers at Laurel Hill carved from? As the literature suggests, and as my field study bore out, the types of stone individual grave markers are carved from plays an important factor in how vulnerable the grave markers are to the dangers of modern landscaping tools and techniques used today at the cemetery. Stone type was in fact one of the factors that influenced the process by which I selected grave markers to survey at Laurel Hill (Figs. 4-6), as I describe in more detail below.

### **Case Study 5: Landscape History in Southern Michigan**

Knowing the local history of a landscape is essential when attempting to preserve that landscape. In Southern Michigan, for instance, settlement cemeteries date from the early 1800s to around 1850. Some were the burial sites of extended families, and most were sparsely planted and surrounded by open fields. Later in the nineteenth century, however, cemeteries in the same area were constructed in the Victorian image, based on paintings from that era depicting organized grave sites. Some of these cemeteries also became associated with specific religious groups or ethnic communities. For those tasked with constructing a comprehensive and sensitive conservation plan for Southern Michigan, being familiar with the area's history proved essential.

Did the design of Laurel Hill's grounds evolve in unison with the evolution of landscaping tools and methods? According to my

observations, it did. In contrast to the haphazardly-spaced grave markers of the cemetery's oldest sections, the more recent sections of Laurel Hill are designed more neatly and with enough space for modern lawn mowers to pass through. This was the only sensible option, seeing as how Laurel Hill had adopted newer methods of landscaping since the nineteenth century, and employed newer tools as well. But unfortunately, as I report below, these newer tools and methods were also used on the historical sections of Laurel Hill, resulting in damage to the oldest and most culturally-significant grave markers.

## **Literature Review (Part 2): Industry Practices, Government**

### **Documents**

Gravestone and cemetery manuals are typically written by historical preservation agencies at the state level, rather than by scholars acting independently. They are supported by practical experience rather than by academic knowledge. They are a guide to best practices, and are intended to be followed by practitioners, not interpreted by scholars. Nevertheless, I think there is value in analyzing such documents. To what extent, for instance, would following industry practices be of use to landscapers at Laurel Hill? Every cemetery is different, so industry practices in some cases may recommend techniques that might be harmful to Laurel Hill's grave markers. In some cases, Laurel Hill may

justifiably diverge from recommendations by the government, whereas in other cases they may do so wrongly.

When preserving cemeteries built in the nineteenth century, the guides recommend a return to nineteenth-century standards for turf maintenance.<sup>40</sup> Grass height of about three inches is generally optimal. This means less frequent mowing of the grass, which is less stressful for both the grass and for the grave markers. Riding mowers should not be used, and push mowers should be equipped with rubber bumpers in case of inadvertent collisions with the markers. Not that lawn mowers should be getting that close to the gravestones anyway, because “string trimmer” style machines should be used to trim the grass near the gravestones. Invented in the early 1970s,<sup>41</sup> string trimmers are equipped with a flexible cord rather than a blade. When one collides with an object, the cord bends instead of cuts, as the blade of a lawn mower does.

Wherever practicable, reel mowers should be used instead of powered mowers. Reel mowers are more laborious to operate, but they are safer for the grave markers. Reel mowers do not kick up stones in dangerous directions. Stones propelled by a rotary-blade lawn mower are liable to fly in any direction at random, although usually to the left or right depending on whether the blade rotates clockwise or counter-clockwise, respectively. But stones propelled by a reel mower can only go forward or

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<sup>40</sup> Gregg King, Susan Kosky, Kathleen Glynn, and Gladys Saborio, *Michigan Historic Cemetery Preservation Manual* (Lansing: Michigan State Historic Preservation Office, 2004): 30.

<sup>41</sup> Dennis Hevesi, “George Ballas, Inventor of the Weed Whacker, Dies at 85,” *The New York Times* (New York, NY), July 1, 2011.

backward. Because the mower will generally not be pointed directly at a gravestone, this means that a reel mower is less likely to launch a stone into a marker. And even if it does occasionally happen, reel mowers spin much more slowly than powered mowers, and the kicked-up stone would cause far less damage.

When seeking to improve the soil of a cemetery, the current best practices are to use light and gradual methods. Guides caution that any chemicals added to the soil will eventually be wicked up into the markers.<sup>42</sup> That is, in addition to the concern of runoff, it is possible that by capillary action some of the fertilizer will be leached directly into the gravestones themselves, causing chemical damage to the interior of the stone. Some guides do recommend intrusive procedures like aeration and aggressive seeding of turf, but even those guides recommend conducting surveys first in order to ensure that no markers might be damaged by the aeration.<sup>43</sup> It is questionable, however, how much of a difference this can make: the process of aerating soil involves somewhat heavy machinery and can kick up stones. In the relatively tight quarters of historical cemeteries, it seems that some risk to the gravestones is unavoidable during mowing or aeration.

Several state governments have guidelines for basic preservation practices.<sup>44</sup> In the state of Illinois, for instance, only individuals approved

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<sup>42</sup> King, et al.

<sup>43</sup> Ibid., 131.

<sup>44</sup> Ronald D. Richards Jr., "Regulating Cemeteries: Understanding and Sensitivity Can Go a Long Way," *American Bar Association State & Local Law News* (Spring 2007): 12.

by the IHPA can be hired to undertake maintenance procedures. Prospective individuals are required to provide testaments that indicate where they have previously worked, and the necessary certifications which qualified them to do the work they did. The guidelines further require an officer to contact the IHPA in case they have concerns about the preservation process. The chief purpose of implementing such guidelines, as well as others, is to ensure that only qualified professionals undertake maintenance practices. Similar guidelines are also present in the state of Michigan, Texas, and Oregon.

### **Chapter 3: Method**

In order to determine the effects of modern landscaping equipment and methods on Laurel Hill's oldest grave markers, I examined the material condition of the grave markers, and observed Laurel Hill's landscapers at work in real time. My first goal was to determine whether or not a causal relationship could be established between damage sustained by the grave markers (if any), and the methods and tools used by Laurel Hill's landscapers. My second goal was to understand why the particular tools and methods used by the landscapers was causing damage, so that I could suggest changes that might be made to better protect and preserve the site.

### **Selecting Grave Markers**

I selected grave markers to examine based on multiple factors, including the age, location, and material of the grave markers.

As noted above, I concentrated my research to Laurel Hill's oldest grave markers. Dating from the years 1836 to 1853, they are located at the center of the cemetery, on twenty acres of land in sections A - I. The oldest grave markers are the most important to study because of their heightened risk of being damaged. They have endured more than a century of weathering, pollution, vandalism, and landscaping. They are also situated on sections of land that were not designed to accommodate modern landscaping equipment, since such equipment had not yet been invented. For all of these reasons, older grave markers proved to be more vulnerable to continued landscaping compared to younger grave markers.

As noted above, the literature suggests that stone type plays an important role in how vulnerable grave markers are to modern landscaping equipment and methods. I therefore also considered stone type as a factor when I selected grave markers to examine.

### **Landscapers at Work**

Although I was able to choose which grave markers to examine, I had less choice over the areas where I'd be able to observe the landscapers at work. I made my visits to the cemetery at the same time on the same day during each week of my study, but I seldom found the landscapers



working in the same area. The only regularity followed by the landscapers was that they worked ten hours a day, seven days a week. It was a grueling schedule to say the least, but presumably a necessary one in order to keep all seventy-four acres of Laurel Hill's grass cut during the warmer months of the year, when the grass grew more quickly. I therefore knew I would always find the landscapers at work when I made my visits, but because the rotation pattern they followed was too enigmatic to decipher, I could never be certain what area of Laurel Hill they'd be landscaping on any given day.

At first, I was concerned I would not be able to witness them landscaping the cemetery's oldest section, the focal point of my study, but this worry turned out to be unwarranted. In fact, the groundskeepers appeared to work in that part of the cemetery more often than the others. Perhaps it was because the oldest section was near the cemetery's main entrance, and the first part of the property that visitors saw. Or maybe it was because the oldest section contained the most culturally valuable grave markers in Laurel Hill's care. Perhaps it was a combination of those two reasons. Either way, I had plenty of opportunity to witness them working there.

My observations of the landscapers at work were non-participatory, and I did no more than gather descriptive research on the subjects.<sup>45</sup> I did not verbally interact with them, or invite anyone to fill out a questionnaire.

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<sup>45</sup> Carol Barner-Barry, "An Introduction to Nonparticipant Observational Research Techniques," *Politics and the Life Sciences* 5, No. 1 (1986): 140.

To do so would have been to run the risk of influencing their behavior. If the landscapers knew a researcher was studying the damage that modern landscaping might inflict on the grave markers, they might have been inclined to work more carefully. They might not have worked true to form, and any data I collected from observation of such inauthentic work would have been tainted.

I paid close attention to the tools the landscapers used, and the techniques they employed. I watched to see how fast or slow they did their work. I kept an eye out for any sort of physical contact made with any of the grave markers, whether by the landscapers or their tools, intentionally or unintentionally.

### **Documentation**

The data I collected from my field observation consisted of three types: (1) GPS locations of each grave marker, (2) photographs of each grave marker, (3) written descriptions of each grave marker, and (4) photographs of the landscapers at work.

To record the GPS locations of each grave marker, I used an Apple iPhone app named Solocator. The app attaches GPS coordinates and a unique reference number to photographs taken with an iPhone (Figs. 5-7). Once I recorded the GPS coordinates of a grave marker, I had no trouble finding that same grave marker on a future research visit (Fig. 8).

The chief purpose of the photographs was to document the physical condition of the grave markers. To supplement the photographs, I wrote descriptive notes about the grave markers, which I could later cross-reference with the photographs.

The fourth and final type of documentation I used in my research were photographs of the landscapers at work, all taken on the standard camera app on an Apple iPhone. The camera was sharp enough to clearly see the landscapers at work, even from a distance (Fig. 9). Although the worker's face happens to be obstructed here, even if it hadn't been, I would have edited out any of the worker's identifiable features to protect his privacy. As with the photographs of grave markers, I supplemented the worker photographs with brief written descriptions.

### **Timeline**

I conducted my research during the late summer and early autumn of 2019, in the eight weeks between the beginning of August and the end of September. Grass grows faster during the warmer months, as noted above, which required more landscaping than at other times of the year. This afforded me more opportunities to observe the landscapers at work in real time.

## **Chapter 4: Findings**

## **Visual Evidence**

Many of the grave markers I observed at Laurel Hill appear to have been damaged by modern landscaping. This is visually apparent from the location and shape of the marks on the gravestones (Figs. 5 and 6). Much of the damage is located at the base of the grave markers, a couple of inches off the ground—the same level where landscape equipment cuts grass. In many instances the damaging marks are thin, horizontal, and comparable to the lashes of a small whip. This indicates that the damage was inflicted not by lawn mowers—which would have cut chunks out the grave stones—but by string trimmers.

This visual evidence of damage on the grave markers is corroborated by observing the landscapers working in real time. As stated above, I took photographs of the landscapers at work, and in one (Fig. 9), a worker is operating a string trimmer in front of a tombstone adorned with an American flag. The photograph shows that the spinning filament of the string trimmer is dangerously close to the stone, so much so that the American flag rattles when the filament presumably dings it. Given that the flag was installed only a few inches from the stone, the spinning filament almost certainly lashed against the wall of the grave marker as well.

## **Alternative Culprits Considered**

Did I observe landscapers such as the one in the photograph actually make all of the damaging marks that I documented on the grave markers,

in real time? I did not. And so in the interests of validity and fairness, I shall suspend my judgment for the time being (if not quite give the landscapers the benefit of the doubt) and consider all of the possible origins for the damage on the grave markers.

Perhaps the damage is the work of vandals. It is logically possible, but not really probable, because when vandals attack gravestones, they typically do things like spray graffiti or smash stones or knock markers over.<sup>46</sup> Plus, is it likely that vandals would get on their hands and knees, at the level of the grass, to rub thin lines into the base of the stones? I very much doubt it. Consider too that vandals are sometimes motivated by political reasons; what sort of political message would such uninspiring damage send? By contrast, sometimes vandals are minors who destroy gravestones for recreation. Could grinding small slashes in the bottom corners of gravestones possibly meet anyone's definition of entertainment?

But perhaps the damage I observed was caused by weather. Damage sustained by gravestones due to the elements is common.<sup>47</sup> Could weather be responsible for the damage I observed on the grave markers? Again, it doesn't seem very likely. The location and shape of the damage does not coincide with the sort of the damage typically caused by weather. In the case of acid rain, for instance, damage doesn't merely

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<sup>46</sup> Joy Giguere, "Too Mean to Live, and Certainly in No Fit Condition to Die: Vandalism, Public Misbehavior, and the Rural Cemetery Movement," *Journal of the Early Republic* 38, No. 2 (2018): 293-324.

<sup>47</sup> Thomas C. Meierding, "Marble Tombstone Weathering and Air Pollution in North America," *Annals of the Association of American Geographers* 83, No. 4 (1993): 568-588.

occur at the base of the gravestones, but over the entire surface of the grave marker—especially at the top of the stone, not the base.

This exercise of exploring other possible culprits may also be extended to animals and the footwear of human visitors. But same as when compared to vandals and the elements, I don't think the thin, whiplash appearance of the damage likely leads to such possibilities. So, despite not being an eye-witness to the making of every damaging mark on the tombstones documented, I think the visual evidence nevertheless strongly suggests that the damage was caused by modern landscaping equipment and methods.

### **Damage Over Time**

What prevented me from being an eye-witness to all the damage I documented on the grave markers? Perhaps it was because I couldn't walk beside the landscapers as they worked, or because it wasn't feasible for me to visit the cemetery every day over the course of my eight-week study. But I doubt being able to do either would have made much of a difference. Much of the damage I documented appears to have been there well before I embarked on my study.

There may be a straightforward visual way to distinguish some of the newer damage from the older damage on the gravestones: color. If a mark on a gravestone is green (Fig. 5), the mark could be a newer mark because the green residue left over from the blades of grass getting

whipped into the marker has not yet been washed away by rain or watering. This is especially true when blades of grass are embedded in the cuts. Is it possible that grass is being whipped into older marks without causing new damage? Certainly. But if grass is being whipped into the markers at all, the strings of the string trimmer are getting extremely close to the stones, and it is quite likely that at least some of the time they are making impact.

It is important to note that grave markers are sustaining newer damage on top of older damage because it's the repetition of being whipped by the string trimmers that causes meaningful damage to the gravestones in the first place. After all, string trimmer strings are typically made from monofilament line,<sup>48</sup> the same type of string typically used as fishing line. Imagine whipping a string of fishing line into a gravestone. How much damage would that cause? Virtually none. This is why, as noted in my above section on Industry Practices and Government Documents, string trimmers are far less dangerous than lawn mowers, which employ metal blades. But despite the at worst trivial damage a single whip of fishline will inflict on a gravestone, whip the gravestone repeatedly, over long periods of time, and just as running water has carved out mesas and mountains,<sup>49</sup> so too can flimsy fishing string inflict meaningful damage in rock-hard grave markers.

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<sup>48</sup> Andy Pargh, "Outdoor Equipment Makes Weeding a Snap," *Design News* 51, No. 9 (1996): 176.

<sup>49</sup> David A. Robinson and R. B. G. Williams, *Rock Weathering and Landform Evolution* (Chichester: Wiley, 1994).

## Spalling

When acid rain falls on gravestones over long periods of time, in some cases the rain doesn't only damage the stone through corrosion, but makes the stone weaker.<sup>50</sup> Weaker stones are in turn more vulnerable to damage from other dangers like landscape equipment.

An argument can be made—and has been made<sup>51</sup>—that string trimmer damage is minor compared to the chunks of stone that lawn mowers are liable to break off tombstones should they collide. I do not dispute this argument, but wish to point out that even though string trimmer cuts appear relatively minor, they can lead to major damage. This is not only because of damage over time, as argued above, but because of spalling.

Water is denser than ice and ice is more voluminous than water, so when water seeps into the pores of a grave marker and then freezes, the resulting ice crystals exert stress on the pore walls, causing microfractures in the structure of the grave marker.<sup>52</sup> The process repeats when the ice melts and refreezes, eventually resulting in the grave marker's overall deterioration (Fig. 7). But if water has bigger openings through which to seep deeper into the grave marker, the process will happen faster. String

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<sup>50</sup> Howard D. Mooers, Avery R. Cota-Guertin, Ronald R. Regal, Anthony R. Sames, Amanda J. Dekan, and Linnea M. Henkels, "A 120-Year Record of the Spatial and Temporal Distribution of Gravestone Decay and Acid Deposition," *Atmospheric Environment* 127 (2016): 139–154.

<sup>51</sup> King, et al., p. 130.

<sup>52</sup> Mary F. Striegel, *Preserving Grave Markers in Historic Cemeteries* (Washington, D.C: National Park Service, U.S. Department of the Interior, Technical Preservation Services, 2016).



trimmer cuts may not be as big as lawn mower gashes, but they are bigger than surface pores, and for this reason, may accelerate the deterioration process of spalling.<sup>53</sup>

### **Unframing Family Plots**

Gravestones in modern cemeteries are often organized in a grid pattern. The advantages of a grid pattern are at least twofold: (1) the design is aesthetically clean, hard-edged, and minimalist,<sup>54</sup> and (2) from a functional perspective, the cemetery's grass is easier to care for because modern lawn equipment can move smoothly and efficiently up and down the pathways between the grave stones, like taxi cabs driving on city streets between buildings.

The grave markers in the oldest sections of Laurel Hill, the original sections under investigation in this paper, are not organized in a grid pattern. In fact, to an ordinary visitor, the grave markers appear haphazardly situated, randomly installed, not part of any organizational scheme whatsoever. As if the messy aesthetics were not unpleasant enough, such disorganization means modern lawn equipment cannot easily pass between the gravestones to care for the grass. And the increased difficulty of maneuvering the equipment between the stones

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<sup>53</sup> Encyclopædia Britannica, "Art conservation and restoration," last updated June 2, 2017, accessed October 20, 2019, <https://www.britannica.com/art/art-conservation-and-restoration/Sculpture#ref225802>.

<sup>54</sup> James Meyer, *Minimalism* (London: Phaidon, 2010).

increases the likelihood that impact between the equipment and the stones will occur, resulting in damage.

It must be borne in mind, however, that whereas the modern aesthetic is minimalist and functional, the Victorians preferred the irregularity of the picturesque movement in art. Like a building by the Victorian architect (and Philadelphia native) Frank Furness, Laurel Hill's landscape was designed to be "multifarious, drawing bits and pieces from a variety of sources and combining them...into strident and gesticulating patchworks."<sup>55</sup> So perhaps my own eye, accustomed to the neat organization of more modern minimalist aesthetics, has been blinded to the beauty that the Victorian once saw in Laurel Hill's picturesque landscape.<sup>56</sup>

In the early days of Laurel Hill, customers typically purchased family plots, not individual ones. Today plots are sold to families too, but at Laurel Hill during the nineteenth century, family plots were organized differently. In order to partition one family plot from another, iron fences were constructed around the swatch of land purchased by the family. Some of those iron fences still stand today, but most have been removed. Perhaps they were removed because of rust and decay, but if that was the sole reason, then the managers of Laurel Hill likely would have repaired or

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<sup>55</sup> James F. O'Gorman, *Three American Architects* (Chicago: The University of Chicago Press), 1991, 18.

<sup>56</sup> Jason Rosenfeld, "The Salon and The Royal Academy in the Nineteenth Century," in *Heilbrunn Timeline of Art History* (New York: The Metropolitan Museum of Art, 2000), last updated October 2004, accessed October 28, 2019, [http://www.metmuseum.org/toah/hd/sara/hd\\_sara.htm](http://www.metmuseum.org/toah/hd/sara/hd_sara.htm).

replaced them, same as they did for broken tombstones. Unless of course another reason played a role in their removal: because of the difficulty of maneuvering modern lawn equipment through them.

Throughout most of this study, I have been concentrating on the damage modern lawn equipment has inflicted upon the physical integrity of individual grave markers at Laurel Hill. But here we may have an example of a broader, more schematic type of damage that modern lawn equipment has inflicted upon the *organization* of the grave markers. The oldest grave markers would not look nearly as cluttered if the iron fences still stood. Each fenced-in plot would still have a unique organizational scheme of its own, just as rooms do in a house.

### **Family Care of Plots**

Prior to 1915, families were permitted to do the landscape work around their own plots. This is not to say the managers of Laurel Hill did not arrange for landscape work to be done on their property at all. Some families opted for their plots to be cared for by Laurel Hill, and areas that had not been sold to customers were still the responsibility of the institution, and were not left to grow wild. After all, such areas were potential plots for prospective customers, and leaving them to grow wild would not have been a wise way to advertise them.

Prior to the widespread use of motorized lawn mowers and the invention of string trimmers, families employed all sorts of ways to care for

their plots, from simple hand tools to grazing animals. The explanation behind permitting families to care for their own plots is perfectly reasonable. Families have a personal interest in keeping their plots well-manicured. Just as people want their loved ones to live in good homes, so too would people want the final resting place of their loved ones to be in good condition. This is the same reasoning, as mentioned in the literature review above, behind the black community of Lexington, Kentucky wishing to have a voice in the maintenance of African Cemetery No. 2: because community members have a personal stake in the people buried in the cemetery, have a deeper appreciation of the cemetery's importance, and have more to lose if it is not managed properly.<sup>57</sup>

Having a personal stake really was personal in Victorian times, because the condition of a family plot could influence the reputation of a family. Cemeteries like Laurel Hill played a different role in the community than it does now, as suggested above in my discussion of rural cemeteries. Today, when people visit cemeteries, it is typically to visit deceased loved ones, family members, or friends. But during Victorian times, it would not have been odd for people to visit Laurel Hill despite not having any loved ones buried there. Cemeteries like Laurel Hill were similar to outdoor parks.<sup>58</sup> People went there for recreational reasons. And the world was smaller then, the Philadelphia community was smaller. Just as people were more likely to recognize one another on the street, so too

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<sup>57</sup> Riegert and Turkington, 1105-1111.

<sup>58</sup> Bender, 196.

were they more likely to recognize one another's family plots at Laurel Hill. So if a family plot was in poor shape, members of society would undoubtedly take note.

Laurel Hill put little to no regulations on the methods and tools families used to maintain their plots, and this was probably a mistake. There is documentation of various incidents between families, like for example an incident where one family's "horse ate a rose bush in the Patten lot. Sometime ago this horse became scared at an automobile and threw over and kicked the foot stone at the grave of Clara McCoy in lot #105, Section M, and fell over the railing of the Hogg lot adjoining."<sup>59</sup>

### **Laurel Hill Takes Control**

The following is a quotation from the minutes of a 1913 meeting between Laurel Hill's managers:

RESOLVED—That as a protection to all lot holders, to avoid disturbances, jealousies or contention among workmen and for the general welfare and better preservation of the Cemetery and the consistent and uniform improvement of

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<sup>59</sup> Laurel Hill Cemetery Co., "Letter to Mr. Michael Drennan, Mgr., and Mary Dunn Est.," Philadelphia, October 1, 1914.

the same, the management reserves the right to do all gardening work for all lots after January 1, 1915.<sup>60</sup>

Halfway through the second decade of the twentieth century, Laurel Hill discontinued its policy of permitting family members to care for their own plots. Problems like the horse incident above may have been partly why. People were also making less recreational visits to cemeteries. And modern landscaping equipment was invented and became widespread. Although families still had a personal stake in how their plots were maintained, and might have even owned their own landscaping equipment for the lawns of their homes, it would be highly impractical for them to transport that equipment to Laurel Hill. People relocated more frequently during modern times as well,<sup>61</sup> and families were more likely to have moved out of Philadelphia entirely. This would have entailed outsourcing the work of maintaining their family plots to gardeners who did not have a personal stake in their upkeep, which was one of the best reasons for leaving families in charge of their upkeep in the first place.

A bigger problem with hired laborers was their willingness to destroy Laurel Hill's landscape in order to care for the plots of their clients. "They cut our trees...using the cuttings to decorate graves, for which decoration they were paid...as if they had had to buy the material," writes

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<sup>60</sup> Laurel Hill Cemetery Co., "Extract From the Minutes of a Meeting of the Managers of Laurel Hill Cemetery Company Held November 25, 1913," Philadelphia, December 10, 1913.

<sup>61</sup> Susan Matt, "You Can't Go Home Again: Homesickness and Nostalgia in U.S. History," *The Journal of American History* 94, No. 2 (2007): 469-497.

A.L. Smith in 1913, general manager of Laurel Hill. “[T]he cemetery suffers the loss of the cuttings and is roundly berated by such lotholders as find trees and bushes on their lots mutilated.”<sup>62</sup> Smith lists several other offenses committed by the outside gardeners, from causing traffic jams with their horses to disturbing the peace due to being “frequently under the influence of liquor.” The time had come, therefore, for the managers of Laurel Hill to assume full responsibility for landscaping their own grounds.

### **Modern Landscape Companies**

Laurel Hill has overseen the maintenance of its own landscape for more than a century. Over the course of that time, they have employed a variety of companies to landscape their seventy-four acres. The names of many of these companies are inaccessible, unfortunately, because documentation on them is sparse in the Laurel Hill archives. Receipts for landscape companies begin to appear around the 1980s, when they were employing a firm called David Brothers Landscape Design Contracting.<sup>63</sup> Today that company is David Brothers Landscape Services, and it consists of a team of registered landscape architects, certified arborists,

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<sup>62</sup> A.L. Smith, “Letter to the Trustees and Managers of Laurel Hill Cemetery,” Philadelphia, August 21, 1913.

<sup>63</sup> David Brothers Landscape Design Contracting, “Estimate for Turf Maintenance for 1987 season,” Philadelphia, January 16, 1987.

horticulturists, and self-described pioneers of sustainable landscape practices.<sup>64</sup>

More recently Laurel Hill employed a specialist landscaping company: Merendino Cemetery Care. Merendino offers complete and comprehensive cemetery maintenance services. Their grounds management services include turf diagnostics, monument protection, ground aeration, and weed eradication.<sup>65</sup> They also do horticultural work, install grave foundations, and resurface granite and marble. Merendino operates in several states across the country, and belongs to official cemetery organizations in those states, as well as national and international cemetery associations.

Merendino's experience and expertise—as beneficial as they probably were for Laurel Hill's gravestones and grass—eventually got too expensive, and Laurel Hill no longer employs them. Today a company called Charles Friel Inc. does the landscape work at Laurel Hill. Friel is equipped to work on a very broad range of properties, including residential, office, retail, college, and institutional properties.<sup>66</sup> They plow snow, sweep parking lots, install irrigation, and maintain hardscapes like walkways and inground pools. The only type of landscape I did not see advertised on their website was cemetery landscapes.

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<sup>64</sup> "About Our Sustainable Landscaping Company," David Brothers Landscape Services, <https://www.davidbrothers.com/about-our-sustainable-landscaping-company-in-worcester-pennsylvania>, accessed November 11, 2019.

<sup>65</sup> "Services: Grounds Management," Merendino Cemetery Care, <http://www.merendino-cc.com/services.html>, accessed November 14, 2019.

<sup>66</sup> "Markets We Serve," Charles Friel Inc., <http://www.charlesfrielinc.com/#what-we-do>, accessed November 14, 2019.



Knowing that the Friel workers I witnessed at Laurel Hill likely do not have much specialized cemetery training or experience, I cannot be surprised that the worker in the photograph described above did not make more of an effort to prevent his string trimmer from coming into such close contact with the grave marker. As I discuss above, trimming grass around grave markers is difficult enough because of how close the grass grows to the stones. This is why only trained professionals like David Brother's or Merendino's should be hired to trim the grass at Laurel Hill, especially in the sections where the grave markers are so old and culturally important.

The following is a quotation from Merendino's website: "If you think cemetery care is nothing more than standard landscaping, think again. Cemeteries have special needs. And it takes a cemetery care specialist to ensure your cemetery always looks its best." Commercial wording aside, it's true.

### **Shabby Gravestone Aesthetics**

One of the factors that may have played a role in Laurel Hill's decision to settle for less less-experienced (because less expensive) landscapers is the public's acceptance of what I'll call the shabby aesthetics of gravestones. In other words, how do members of the public expect old tombstones to look? People do not expect to find them in perfect condition, without blemish, shiny and new, as if carved the week before. When people visit old cemeteries, they don't blink an eye at gravestones

that are chipped, crooked, broken, and showing faded inscriptions. In contrast to preservationists and art historians, members of the public are not perturbed to see old tombstones in bad condition, not only because that's what ordinary people are accustomed to, but also because, in a way, it is solemnly fitting that tombstones decay and crumble.

An argument can be made that a grave marker which endures gradual destruction—whether by natural or artificial means—is a fitting way for that grave marker to persist through time. After all, is the purpose of a grave marker to *immortalize* the memory of a deceased person? Maybe at a funeral we like to tell ourselves that, but of course it isn't true. All material things return to dust, and to expect a grave marker not to do so may be to deny something fundamental about existence. Grave markers serve not only to remind us of a person that once was, but to remind us that all material things are mortal, and our efforts against nature are ultimately futile.

Not only do people expect to find old grave markers in shabby condition, I might even go so far as to say that they are appreciative of the aesthetic. If preservationists invented a sort of technology which made grave markers immune to abrasion from weather and string trimmers, or enabled us to resurrect tombstones from lawn mower crashes and the ravages of time, I think they would look strange, unnatural. To say nothing of the fact that people would want to know why the preservationists hadn't spent their efforts on making human flesh immortal instead.

By contrast to gravestones, consider how people expect to find grass in a cemetery. Even in older cemeteries, even in small inactive graveyards behind old churches, people are not happy when they find the grass unmowed and sprouting weeds everywhere. Whereas wretched gravestones solemnly communicate the transient nature of existence, wretched grass just says you're too lazy to mow your lawn.

For the administrators of Laurel Hill, this means they will be given more slack if their gravestones aren't in great shape, but less slack if their grass isn't in great shape. Let me repeat I am talking about slack that the public will give, not preservationists and art historians. In terms of the general expectations of the public, maintaining the grass of a cemetery takes first priority, the gravestones second. This suggests a justification for why the administrators of Laurel Hill changed their landscaping service from one that specializes in cemeteries, to a less expensive one that doesn't. Perhaps the general landscaper can't guarantee the material integrity of the tombstones, but it can guarantee that when people come to admire the crumbling tombstones in solemn awe, they will do so on well-manicured grass.

### **Assigning Blame**

When things get damaged, whether grave markers or other pieces of property, people look for somebody to blame. But there are lines to be

drawn—in some cases legal ones—between intentional damage, accidental damage, responsibility, and blameworthiness.

The managers of Laurel Hill never intended for their grave markers to be damaged by modern landscaping equipment and methods. Just the opposite, in fact. And yet, they still bear the lion's share of the blame for their gravestones being damaged. Why? Because they hired a team of general landscapers that have neither the training nor experience required to properly care for a cemetery.

I do not deny that the landscapers themselves are the ones that physically inflicted damage upon the grave markers. But even so, the managers deserve the most blame because the preservation of their gravestones is their responsibility. Even if the managers had instructed the landscapists to cut the grass without damaging the tombstones, that wouldn't have made a difference. The managers cannot verbally shift responsibility to the landscapers, because the managers know they are telling the landscapers to do something they are not qualified to do.

Although I think the managers of Laurel Hill ought to take full responsibility for the damage, I do not fully blame them for the damage. The distinction once again has to do with intention, and to make the point, I'll contrast the managers of Laurel Hill with cemetery vandals. Damage inflicted upon a grave marker by vandals—regardless of the reason—is intentional damage. They bring the damage about in three important ways: they *know* the damage will happen because of their actions, they *intend*

for the damage to happen, and they physically *act* to cause the damage. For these three reasons, vandals deserve to be fully blamed, not merely held responsible for the damage. By contrast, the managers merely knew the damage would happen by hiring unqualified landscapers, but neither intended for the damage to happen, nor brought it about with their physical actions. The difference in culpability might be paralleled with unintentional manslaughter and intentional murder—even if there is no parallel of course between a damaged grave marker and a lost human life.

## **Chapter 5**

### **Recommendations for Better Care of**

#### **Material Culture at Laurel Hill**

##### **Money for Trained Landscapers**

One of the most important things Laurel Hill can do is return to the practice of hiring a team of landscapers with specialized experience and training in taking care of cemeteries. A general landscaping service like Friel may be perfectly suitable for apartment complex lawns and public parks, but as Merendino points out, a cemetery is a special sort of landscape with unique needs. To a general landscaper, a tombstone is nothing more than an obstacle to work around. A general landscaper should not be expected to consider the cultural importance of a tombstone over one hundred

years old, especially one situated in a cemetery that has been declared a heritage site by the National Park Service.

Like museums and other historical institutions, Laurel Hill's officers are active fundraisers. They offer yearly memberships, hold regular fundraisers, have a gift shop onsite and online, and sell tickets to all sorts of events like historical tours, picnics, concerts, ghost hunts, astronomy nights and walking tours. "Ticket sales help to support The Friends of Laurel Hill Cemetery's mission to preserve, promote and further interpret our National Historic Landmark site."<sup>67</sup> But the leaders of Laurel Hill must make it a priority to use whatever money is at their disposal to hire a landscaping service trained in cemetery maintenance. Perhaps one way of balancing out the cost would be to hire the specialized cemetery landscaper to only work in the older Victorian section where the grave markers are more valuable and vulnerable. The less expensive, general landscaper can work in the newer parts, which were anyway designed and organized with modern landscaping equipment in mind.

### **Flags and Stickers**

No matter how much money Laurel Hill successfully raises, the reality is that there is never going to be enough money to fund all of its preservation projects. This is why easy and inexpensive methods ought to be explored and implemented when feasible.

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<sup>67</sup> "Ticketing Policy," Laurel Hill Cemetery, accessed October 15, 2019, <https://thelaurelhillemetery.org/about/ticketing-policy>.

Maybe stickers could be affixed to tombstones that are particularly vulnerable to landscaping equipment. Tombstones made from soft marble, for instance, or tombstones that have already sustained a fair amount of damage and cannot endure much more. The sticker first of all would need to have a safe, non-stick adhesive backing, one that would not damage older gravestones. A discrete sticker with a particular shape and/or color which will not be obvious to visitors, but easily recognized by landscapers. A worker might pass several dozen grave markers during the hours when he is trimming grass. If he is not trained in landscaping cemeteries, if he is a general landscaper, then the likelihood of him knowing the strength of different stones is probably pretty low. But by putting simple stickers on the stones that are more vulnerable than others, the general landscaper will know which ones to be more careful around.

Stickers used for similar purposes are already not uncommon in cemeteries. In some cemeteries, for instance, families pay extra for the gravestones of their loved ones to be decorated with flowers on a regular basis.<sup>68</sup> Cemetery workers know which gravestones are due to receive flowers because they bear stickers that read `ENDOWED` on them.

A similar solution might be used for tombstones that have toppled over and are lying on their backs. While these tombstones wait to be picked up and repaired, they aren't easy to see and are at risk of being run over by lawn mowers. A simple and inexpensive way of letting

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<sup>68</sup> "What is Perpetual Care/Endowed Care/Perpetual Care Endowment?" Mount Lebanon Cemetery, accessed October 12, 2019, <https://www.mountlebanoncemetery.com/services>.

landscapers know where tombstones have fallen might be to place small flags beside them. Perhaps small flags aren't aesthetically ideal, but they are better than indelible scratch marks on centenarian tombstones.

### **Tombstone Bumpers**

When considering possible ways to prevent or reduce damage being inflicted upon gravestones by modern lawncare equipment, it may prove helpful to consider how objects are spatially oriented. Grave markers, in other words, are typically oriented upright and vertical. Grass is orientated in the same way, but is a lot shorter than the average tombstone. This is why damage happens at the base of gravestones: because the point of contact between equipment and stone is at the level of grass. Structurally this is the most impactful location for damaging to occur. Break the base and the entire tombstone will collapse, just as enormous trees are felled by cutting a single point at the base.

From an informational and historical standpoint, however, the damage is less impactful. Most of the inscriptions on grave markers are located higher than the base of the stone, above the reach of lawn mowers and string trimmers. This means that if something were installed around the base of the stone, a protective layer of thin rubber, for instance, in most cases it would not obstruct the informational content of a gravestone.



Rubber bumpers around tombstones might be compared to car bumpers and door stoppers. They acknowledge an important fact about human behavior: no matter how careful people are, there are going to be accidents. Even a landscape service with training and experience in taking care of cemeteries is going to make mistakes. The nature of the job and the types of tools entail it. Grass naturally grows right up against tombstones. Unless a landscaper gets down on his hands and knees and cuts the grass with a pair of scissors, there is going to be impact between gardening tool and tombstone. And since it goes without saying that cutting seventy-four acres of cemetery grass with a pair of scissors is completely out of the question, perhaps a layer of protective rubber around the base of the most important tombstones might be worth considering.

But installing rubber bumpers around tombstones may come with more problems than benefits. While the historical and informational value of a tombstone may be preserved, the aesthetic damage of a rubber bumper—the term alone recalls the gutter lane bumpers of bowling alleys—may be too tasteless for public viewers and conservationists alike to endure. To say nothing of the production, logistical, and maintenance costs that would accompany the project of installing rubber bumpers around the tombstones, as well as the durability of rubber or any other feasible material. While acknowledging these problems, the main point I wish to make here is that based on the visual evidence I gathered at the

Laurel Hill, the damage from modern landscaping is happening predominantly at the base of the stone. That is the most vulnerable point of the grave marker, and if that part can be protected, the entire grave marker can be protected.

### **Bring Stones Inside**

In some cases, a grave marker may be so badly damaged that it cannot be repaired. There are usually only two options for a cemetery at that point, and neither are especially pleasant: (1) continue to let the stone decay naturally and eventually go the way of all material things, or (2) remove the gravestone from the ground and dispose of it.

But sometimes a grave marker, despite being irreparable, is too culturally important to be lost. What should be done in a case of that sort? One cemetery in Massachusetts took the drastic step of bringing its tombstone indoors.<sup>69</sup> The immediate advantage of such a tactic is that the tombstone is much safer indoors, both from the elements and from landscaping equipment. But there are drawbacks from bringing a tombstone indoors too. There are first of all logistical problems to consider, including the availability of indoor space. Based on the size and contents of Laurel Hill's museum, it does not have much indoor space to spare. Plus, even if bringing a gravestone inside may preserve its material integrity, the authenticity and identity of the tombstone suffers an injury.

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<sup>69</sup> Edward L. Bell, "'Where Angels Fear to Tread': Cemetery Preservation Efforts by the Massachusetts Historical Commission," *Northeast Historical Archaeology* 25, No. 3 (1996).

After all, if a grave marker no longer marks a grave, it becomes reduced to a grave marker merely in name and ceases to be one in fact.

A useful comparison might be made with statuary. Probably the most famous instance of an outdoor statue being brought indoors is Michelangelo's *David*.<sup>70</sup> For centuries the original stood outside the Palazzo Vecchio, until it was moved inside the Galleria dell'Accademia, and a replica was placed on its original outdoor pedestal. Even if moving the original statue inside made it slightly less prominent, it is still undeniably a statue because it is still serving its intended purpose as a work of art. I wouldn't say the same, however, of a grave marker alienated from the grave it was designed to mark. To bring a grave marker inside may save a hunk of rock from crumbling, but it destroys the monument.

## Chapter 6

### Concluding Remarks

Now that I've documented all of the damage I observed at Laurel Hill, and made a list of recommendations on how the administrators of Laurel Hill might do their jobs better, I'd like to take a step back and qualify some of the things I've written. I don't mean to sound like an apologist for the administrators of Laurel Hill, but I don't imagine that managing an enormous cemetery over one hundred and eighty years old is especially easy in the year 2019.

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<sup>70</sup> John T. Paoletti and Rolf Bagemihl, *Michelangelo's David: Florentine History and Civic Identity* (New York: Cambridge University Press, 2015).

Cemetery culture was different in the past. The living did not feel squeamish in cemeteries back then, and were perfectly comfortable visiting them. Not merely to pay respects to departed people, whether loved ones or not, but simply as a scenic place to congregate. I might compare cemeteries to town squares, but town squares aren't what they once were either.

Unfortunately, Laurel Hill's resources are limited, and thus their ability to protect their grave markers are limited. Said another way, they have little choice but to do what they can with what they have. If they had the money to pay for better landscapers, they would do it. If there were additional ways to bring in revenue, more so than the variety of ways they already employ, they would do them.

This isn't to say that improvements can't be made, and I hope that some of my suggestions above either prove helpful or lead to helpful ideas. But I nevertheless think it's important to acknowledge that Laurel Hill is doing a good job considering their limitations.

### **Additional Study and Master Plan**

As stated above, the research I conducted at Laurel Hill concentrated on an isolated section of the cemetery, and should not be construed as comprehensive. In a cemetery enclosing thousands of gravestones, I examined less than twenty-five (Fig. 8). Over the course of two months, I made a mere eight visits to a cemetery that has existed for more than one hundred and eighty years. It is important to keep in mind the modest

scope of my work, when considering the overall implications of my findings.

That said, it did not take long for me to determine that modern landscaping equipment was inflicting damage upon Laurel Hill's oldest tombstones. After just a single visit during which I closely examined several of the grave markers, it seemed apparent to me that damage was being inflicted on the stones by modern landscaping. Although it was important to develop a controlled methodology for the purposes of writing this report, I remember wondering during my first visit how such obvious damage could have been neglected by the managers of Laurel Hill. Clearly more study was needed to explain such a discrepancy, and so I resolved to conduct my examination.

Nevertheless, it was by design that the study I conducted would be a preliminary one. One of the purposes of this investigation was to see if more research and study was necessary at Laurel Hill. The cost of doing a comprehensive study at a cemetery as large and old as Laurel Hill—in terms of money and hours and people—is considerable. Before any organizations decide to make a commitment of that sort, a cost-effective tactic is to do a smaller, preliminary study. A comprehensive study should only then be taken on if it is justified. After all, if I had found no evidence of damage on the grave markers at Laurel Hill, if I had found that modern landscaping equipment did not pose any meaningful threats to the grave markers, then a more comprehensive study would not be justified, and I'd

be able to recommend that resources be allocated elsewhere. But unfortunately the evidence did not pan out that way.

One of the strongest recommendations I can make for Laurel Hill is that it commissions the development of a master plan. An inventory ought to be taken of all the grave markers currently on the property, documenting the condition of each and determining what sorts of repairs are needed. And not only with respect to the tombstones, but also to the other elements in the cemetery such as the fences, pathways, and vegetation, all of which impact the aesthetics and authenticity of the tombstones, and all of which are potentially vulnerable to damage from modern landscaping equipment.

At the risk of sounding disrespectful to the managers of the Laurel Hill, I think it is something of an embarrassment that Laurel Hill did not commission a master plan long ago. Mt. Auburn cemetery was founded around the same time as Laurel Hill, and has had a master plan since 1993. Laurel Hill is as needful—and as deserving—of such a master plan. My optimistic hope is that this thesis contributes to the eventual writing of that plan.

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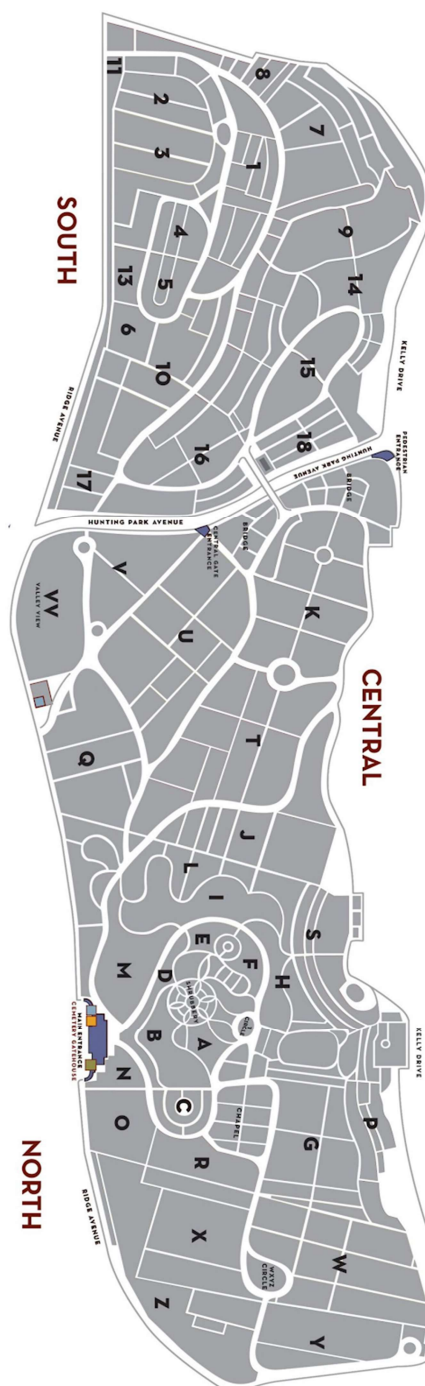
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## Appendix: Illustrations



*Figure 1. Map of Laurel Hill Cemetery.*



**Figure 2.** *For many black Americans today, the grave markers in African Cemetery No. 2 are their only link to ancestors from slaves to victims of Jim Crow.* Photograph by Russell Poore and Sydney Poore. "African Cemetery No. 2," April 26, 2008, digital photograph, 2,898 × 1,276 pixels, Wikipedia Commons, accessed November 15, 2019.

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**Figure 3.** *Tall grasses at American pioneer prairie cemeteries are heritage in their own right and must be protected from over-landscaping.*

Photograph by Zbigniew Bzdak in Christopher Borrelli, "In Pioneer Cemeteries, a Disappearing Part of Illinois' Landscape Lives On," *The Chicago News Tribune* (Chicago, Ill), August 4, 2017.





**Figure 4.** *Slate is highly prone to chipping and flaking.* Photographs by Irving Slavid in Jason Church, U.S. Department of the Interior, National Park Service, “The Challenges of Treating Delaminating Slate Headstones: New Treatments with New Materials,” National Center for Preservation of Technology and Training, posted December 10, 2014, accessed November 11, 2019, <https://www.ncptt.nps.gov/blog/the-challenges-of-treating-delaminating-slate-headstones-new-treatments-with-new-materials/>





**Figure 5.** *Solocator GPS Image.* String trimmer scratches may be seen on the edge and grass stains indicating newer impact are alongside the horizontal base of the granite grave marker. Photograph by Author.





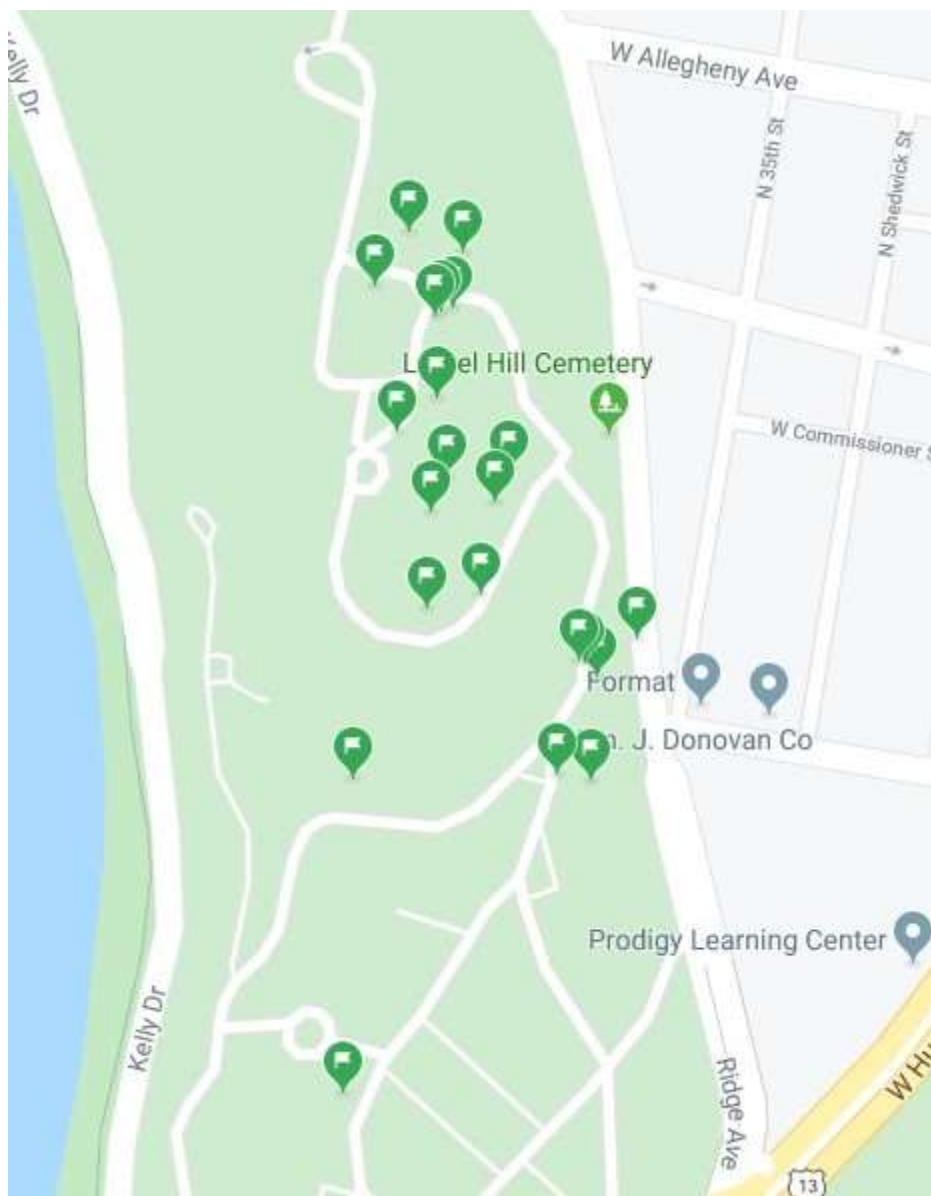
**Figure 6.** *Solocator GPS Image.* String trimmer damage may be seen in the corner and alongside the horizontal base of the marble grave marker. Photograph by Author.





**Figure 7.** Solocator GPS Image. Spalling damage on metal grave marker.

Photograph by Author.



**Figure 8.** Google Maps image of Laurel Hill Cemetery. Green flags indicate GPS locations of examined grave markers.





**Figure 9.** *iPhone Photograph.* Landscape worker operates a string trimmer dangerously close to a grave marker. Photograph by Author.