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Studio 1: Problem 3: Field Documentation  
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11/02/2013

### Armour Mausoleum

Situated in a grove of beach trees along Woodlawn Cemetery's Chestnut street, sits the impressive and monumental Armour Mausoleum. The Structure completed in 1901 by the prominent architectural firm, Renwick, Aspinwall, and Owens, was designed to emulate the power of the man who lies within its walls; Herman Ossian Armour. Herman was born March 2, 1837 into a large Irish Catholic family at Stockbridge in Madison County, New York. In total his father and mother, Danforth and Julia Armour, had 8 children, Herman being the 7th, and they lived a sturdy, hard working life. However, Herman didn't see himself living here forever and was attracted by the business and enterprise that was growing in the midwest due to railroad expansion after the Civil War. He was trained in Milwaukee for business and eventually set up house in Chicago, a slaughter house that is. Herman and his brother Phillip Danforth Armour were kings of the meatpacking industry. As the west became readily accessible due to the railroads, Herman would purchase huge tracks of lands in Iowa, Nebraska, and Kansas, and raise cattle there. Then, from a few central locations, the largest being Chicago, he set up slaughter houses close to the railroads for easy transportation of goods.<sup>1</sup> Still, there was no solution, other than salting meats, to keep them from spoiling on their journey. He wanted to finance a new refrigerated rail car technology, but the the railroad conglomerates did not want to invest. So, Herman decided to patent his own and, much to the dismay of the railroads, by 1890, 6000 cars were in service generating millions in profit. Before this point, meat was a luxury, only

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<sup>1</sup> All America's Successful Men: An Encyclopedia of Contemporaneous Biography. Volume 1: page 27, Ancestry.com.

accessible for the wealthy, but now it was readily available for everyone's table. The brothers ran a tight ship in their factories. They had employees work 18 hour shifts under terrible conditions, which made the turnover rate extremely high. Even Herman had trouble watching the animals walking through the pens to their imminent death, but he had to look at the big picture. Not only was he supplying meat to millions of families in America, he was also the largest supplier of meat products in Western Europe. The company employed thousands of people world wide, so death was an essential part of life. In response to the inhumane slaughtering, the Armour brothers made it their mission to use as much of the animals as possible, and are famously quoted as saying, "We use everything but the squeal!" To Herman, waste was criminal. Despite his efforts to do good by opening missions in New York City and feeding soldiers during wars, the slaughter houses were in terrible condition with a proliferation of rats, sawdust, and germs. It was no great surprise that a number of soldiers died from the meats supplied to them during the Spanish American War. When the company was faced with lawsuits, money has a way of persuading opinions, so no charges were filed. Still, this lawsuit lead to the creation of legislation such as the Sherman Anti Trust Act, and the National Livestock and Meat Board, that helped in the protection of the public from unsanitary foods.<sup>2</sup> Herman moved to New York City and took charge of the economic side of the business, quickly assimilating into high society. He funded the arts, museums, and other public institutions. His company was a powerhouse that changed the way we eat meat and still thrives to this day. Herman passed away on September 8th, 1901.

At the same time Armour was living in New York City, a prominent architect, James Renwick Jr., and his firm, Renwick, Aspinwall, and Owens, were creating architectural marvels.

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<sup>2</sup> Jeffery Nelson Armour, Vegsource and the Meatpackers, Vegsource.articles.com 2009

from their 5th avenue office. St. Patricks Cathedral, built from 1858-1878, is the most famous structure they designed in New York City, and from this Neo-Gothic church, their popularity skyrocketed. After James Renwick's Death in 1895, the firm continued as a strong presence in the city, designing luxurious hotels, apartment buildings, and what were called, "public comfort stations," or bath houses that were dotted throughout affluent areas.<sup>3</sup> However, in 1900, the firm was asked to design a structure that had to be as impressive as St. Patricks Cathedral but at a scale they hadn't really tried before; thirty five feet wide by forty seven feet tall. They were designing the mausoleum for the powerful Herman Ossian Armour. Correspondence records from then Avery archives show that the first drawings were drafted in 1900, one year prior to Armour's death, so he very well knew he would be buried here. I'm assuming he chose this firm because of their notoriety and expertise, but there is no definitive answer as to why. Renwick, Aspinwall, and Owens, up to this point in history, had never designed a mausoleum.<sup>4</sup> Still, the firm knew of a team that was skilled in the execution of large stone construction. The Norcross Brothers, James Atkinson and Orlando Whitney (Norcross being a family name they inherited) were a prominent 19th century American construction company, especially noted for their work in stone. Starting in 1894, the duo was working under McKim, Meade, and White at their fifth avenue office; very convenient for Renwick, Aspinwall, and Owens.<sup>5</sup> The Brothers had just completed a mausoleum in 1895 located in Woodlawn Cemetery for the wealthy financier family, Miriam and Charles Osborn. The comparably modest structure, was used as a precedent for the Armour Mausoleum but not for what is above the surface, rather for what lies beneath. If you

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<sup>3</sup> Metro History, Architect search Renwick Aspinwall and Owens, <http://www.metrohistory.com/dbpages/NBresults.lasso>

<sup>4</sup> Selma Rettna, Files on James Renwick, Avery Library Archives 2006

<sup>5</sup> Philip Norcross Gross, [Norcross Brothers Projects 1864 to 1924](http://www.norcross.ca), norcross.ca, Copyright 2004

look at the section drawings from McKim, Meade, and White's Osborn Mausoleum, completed on March 7, 1895, and compare it to what was built for Armour in 1901, it can be seen that the Brothers employed the same structural tactics for the foundation (Fig. 6 & 7). They both consist of two large concrete footings and a dome made of guastavino tiles supporting the structure above.<sup>6</sup> Guastavino was still a relatively new technology during this time period. Nevertheless, small scale projects like these helped prove the material's performance capabilities making future large scale construction, such as Grand Central Station in 1913, a reality.<sup>7</sup> For the rest of the Armour Mausoleum, however, a much different precedent must be examined to understand the architecture.

Baroque design is beautiful and powerful. It's no surprise Renwick, Aspinwall, and Owens modeled the Armour mausoleum in this artful fashion. If you want to create a presence there is no better solution than the shadows and perspectives formed by the geometry in Baroque architecture.<sup>8</sup> Still, it is important to find from where the structure acquired its basic form. Looking to Donato Bramante, the Armour Mausoleum can be broken down into its historic and geometric features. If you look at Bramante's original intentions for the recreation of St. Peter's cathedral in Rome in the 16th century, the plan is a greek cross, which is seen as a more stable and pure form when choreographed in a building; an example being the Pantheon. From this form, more elements can be realized. The cross is symmetrical and overall, it creates a nine square lattice. Then the outer four squares can be turned at forty five degree angles and split at

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<sup>6</sup> Mark R. Zwerger, Janet M. Malang, Andrew F. Horn, *The Osborns*, <http://books.google.com>, Arcadia Publishing, 2008

<sup>7</sup> National Building Museum, *Palaces for the People: Guastavino and America's Great Public Spaces* <http://www.nbm.org/exhibitions-collections/exhibitions/palaces-for-the-people.html>, March 16, 2013

<sup>8</sup> George L. Hersey, *Architecture and Geometry in the Age of the Baroque*, University of Chicago Press, 2000

the diagonal, as seen in the plan of St. Peter's (Fig 1-3). This split helps create a sense of depth in the facade and emphasizes the greek cross plan. In elevation, we can visualize this within Pietro Perugino's painting, Charge to Saint Peter (Handling of the Key) 1481- 1483 (Fig 4). The structure in the background has a greek cross plan, a manipulated nine square lattice, and a dome to connect the segments. In a more detailed section you can look to Bramante's Tempietto to understand how the structure is engineered (Fig 5). Within the building there is a sequence of spaces: the dome beneath the structure, the main square space, the drum, and ultimately the, "dome of heaven," as it was called, with a copula. All the pieces combine together to structurally enforce the space with each section being of equal importance.<sup>9</sup> From these Renaissance precedents the skeleton of the mausoleum is decoded and simply diagramed. The movement and life found throughout the design are what makes the building more Baroque.<sup>10</sup> These include: entasis in the columns, deep shadows formed by entablatures and cornice pieces, huge volutes that appear to be supporting the drum and dome, illusions of unlimited space, and overall elements that give a theatricality to such a basic geometric form. There are many shared qualities between Baroque and Renaissance architecture, so when they combine, it leads to a structure that conveys many ideas simultaneously. There seems to be a juxtaposition in the architecture; the plan and section versus the elevation. The chaos and intensified elements on the facade are meant to impress the viewer, as Herman would have wanted. The interior, however, is more somber because in here lies the truth. No matter how important we are in life, in death we are but the bones of our construction. The Mausoleum makes itself known on the site, as Armour was

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<sup>9</sup> Kenney Mencher, Video: The Redesign of St Peters During the Renaissance by Bramante and Michelangelo, <http://kenney-mencher.blogspot.com/2012/02/videothe-redesign-of-st-peters-during.html>, Tuesday, February 28, 2012

<sup>10</sup> "Baroque Art and Architecture." *Encyclopedia 2001* Microsoft Corporation.

known in life, but when you turn the large skeleton key and open the massive bronze door, the interior is actually calming. All the emotions of life are gone and all the overwhelming ornamentation is no longer visible. The stoney creek granite walls that were highly decorated, polished, or rusticated on the exterior, are more basic and smooth inside, as the blocks stack up to the bronze dome which completes the structure. The doric order, meant to portray strength and importance on the facade, and the multidimensionality created by extra cornice pieces and columns, flatten out to become a single unifying space. The mausoleum was exquisitely engineered and crafted and will live on the showcase the life of Herman Armour. In the end, the mausoleum tells the story of life. Humans and, rightly architecture, inevitably pass away, but their ideologies never die.

Images:

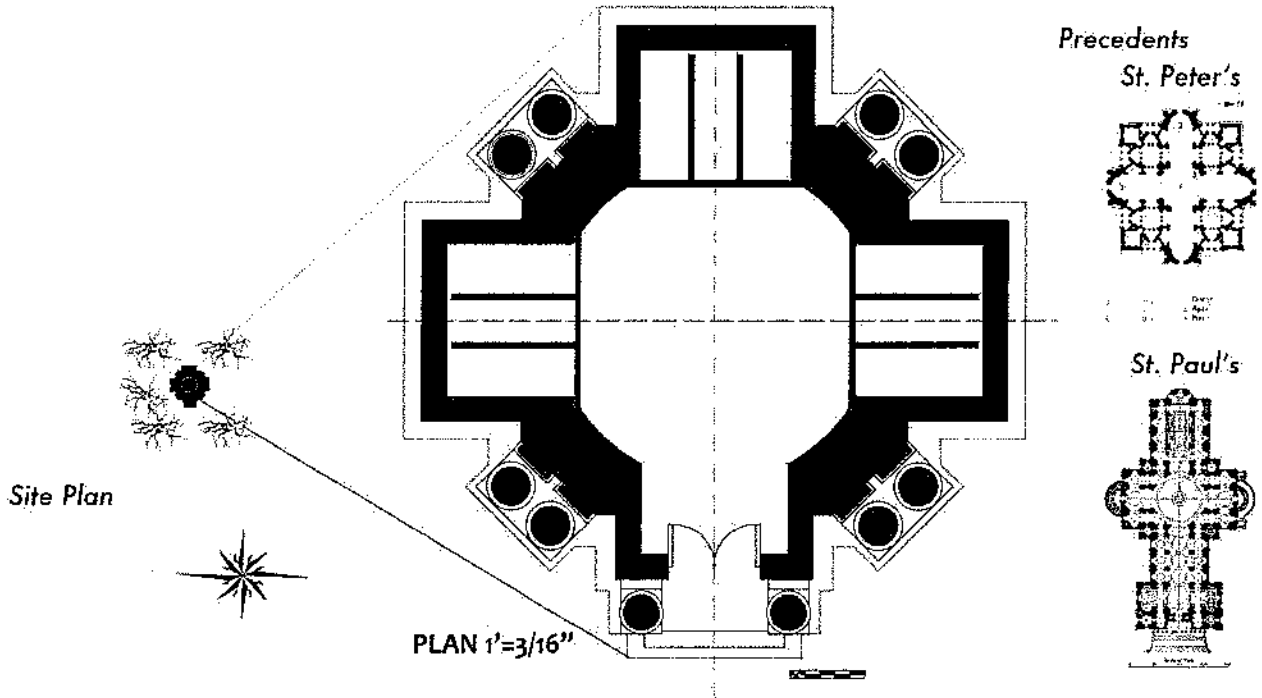
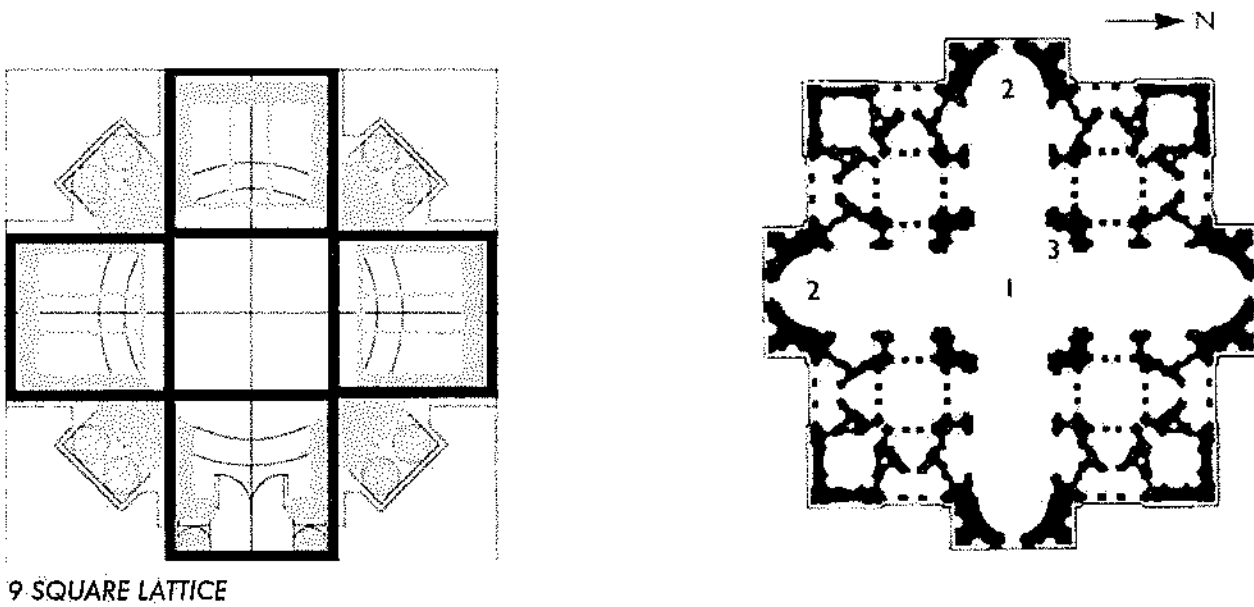


Figure 1

# St. Peter's



9 SQUARE LATTICE

Figure 2 9 Square Lattice overlaid on Armour Mausoleum

Figure 3 George L. Hersey, *Architecture and Geometry in the Age of the Baroque*, University of Chicago Press, 2000



Figure 4 Pietro Perugino's painting, Charge to Saint Peter (Handling of the Key) 1481- 1483

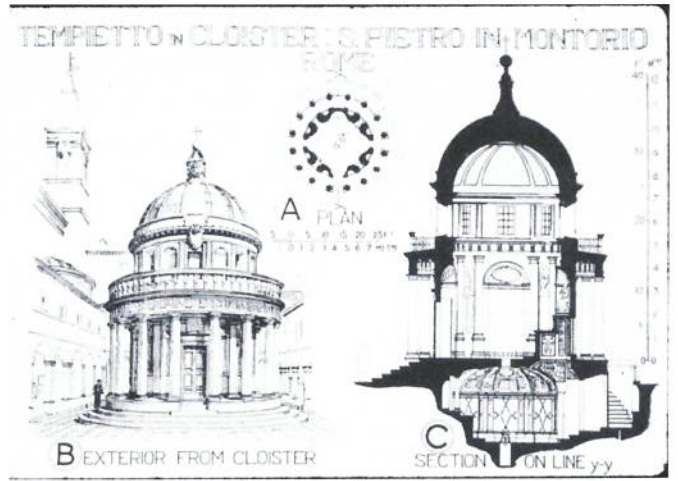


Figure 5 Donato Bramante Tempietto

*Armour Mausoleum, Woodlawn Cemetery*  
 Andre Stiles  
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**SITE ELEVATION/SECTION**

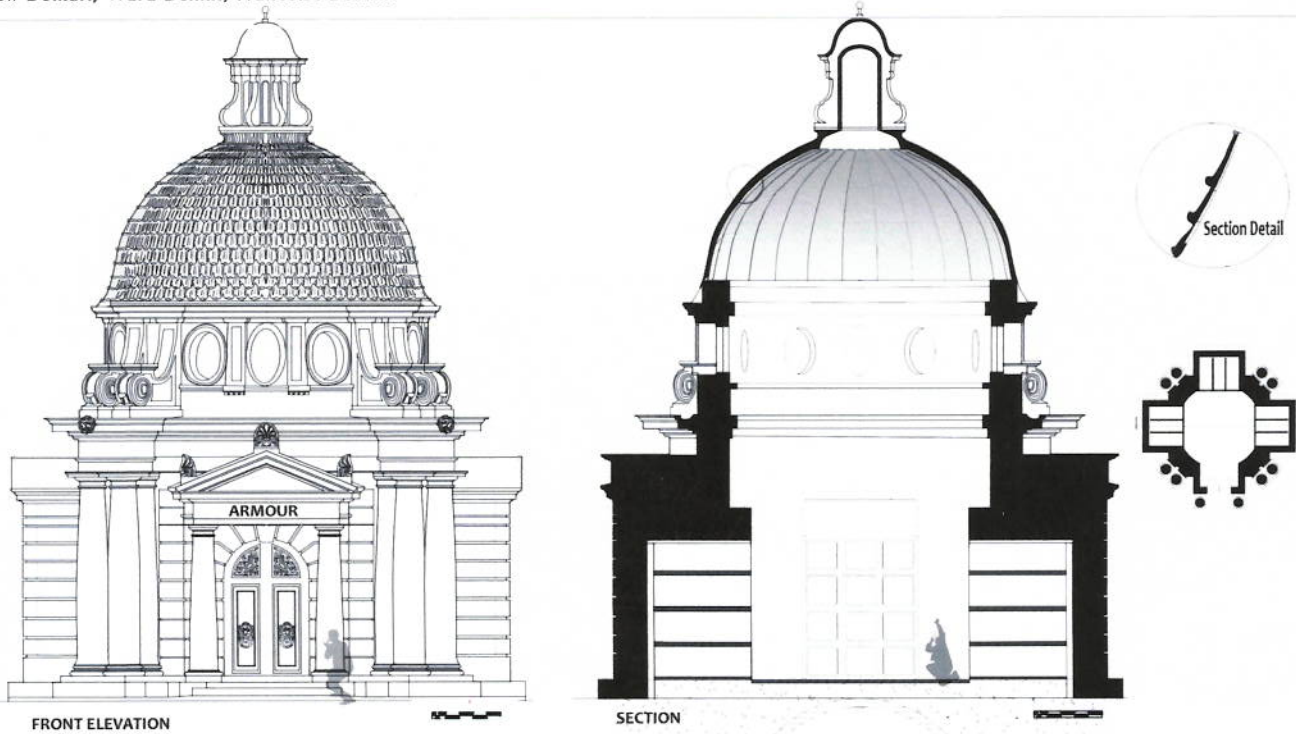


Figure 6

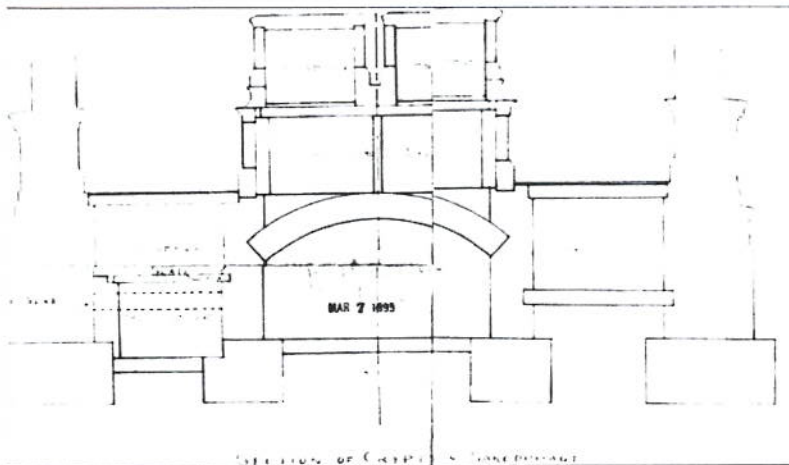
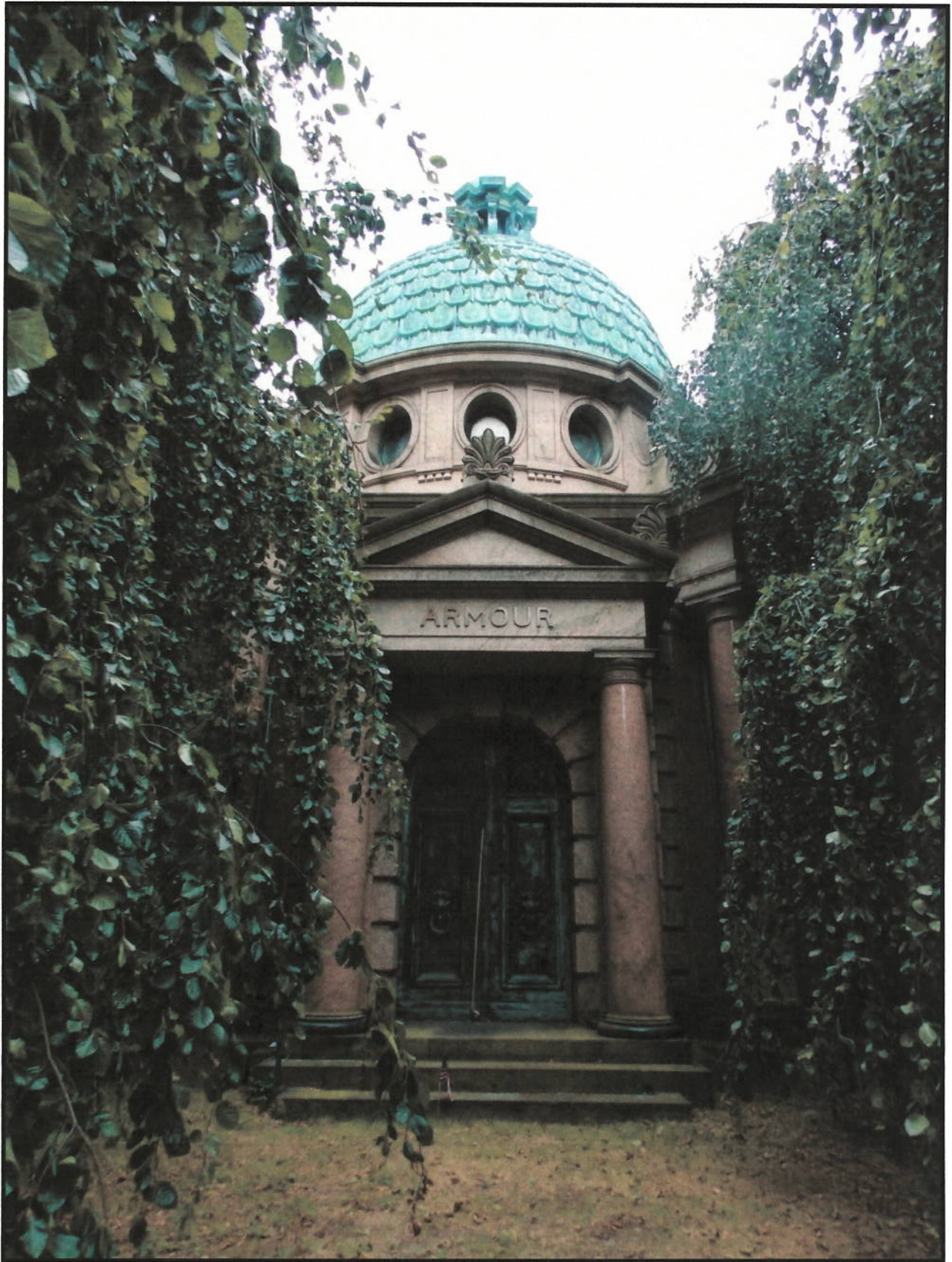


Figure 7 Osborn Mausoleum  
 Architects: McKim Meade and White  
 Contractor: Norcross Brothers  
 Date: March 7, 1895





Armour Mausoleum  
Woodlawn Cemetery

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