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New York City's Lost Cemeteries

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ABSTRACT

Encountering human remains during construction poses a high risk to owners and contractors – usually delaying the construction project by years and generating unforetold cost overruns. In American cities, this risk is especially high due to a complex history of multi-cultural colonialization, industrialization, and large-scale heterogeneous immigration, which has repetitively reshaped the composition and configuration of "New World" cities through their communities, institutions, and the subsurface. Both immigrants and rural workers formed rapidly morphing urban communities, which then created institutions such as churches, cemeteries, pauper's graveyards. Subsequently, their decedents moved to more affluent neighbourhoods and to greater assimilation – frequently abandoning their long-buried ancestors. Ultimately, many such burial locations disappeared from local maps, often with the originally interred bodies still in the ground. In New York City (NYC), more than 138 "lost" burial locations have been identified in just the borough of Manhattan. While their rediscovery provides both rich historical insight into the expansion and evolution of NYC, pre-construction identification of such sites is critical for future infrastructure installation on both private property and in what is now the public right of way (i.e., streets and sidewalks). This paper (1) outlines some strategies for identification, validation, and future automation of these processes using NYC's oldest Dutch community as a case history, and (2) posits the concept of a shared resource tool to prevent accidental excavation of human remains.

Keywords: Site Investigation, Subsurface construction, Cemeteries, Burials, New York City

INTRODUCTION

Identifying urban, subsurface elements through geophysical testing is commonly hampered by known technology depth limitations (Martorana et al., 2023), and further impeded by the existence of asphalt and concrete paving (Liu et al., 2023). This is especially problematic in older cities with their generations of habitation and municipal modifications in both street layouts and ground elevations. Furthermore, decades of urban planning modifications obfuscate modern expectations of the likely locations of buried infrastructure and human remains and, thereby, complicate systematic identification of burial locations. In "New World" cities, the confluence of multiple cycles of colonization (e.g. Dutch, English, Spanish, French, and Portuguese) have intersected with large-scale immigration and industrialization resulting in massive changes in the built municipal environments and those who populate them. Amongst such demographic and technological upheaval, the absence of continuous and complete records of subsurface burials and construction is unsurprising, as evident in the nearly 200,000 unique reported annual utility strikes (CGA, 2025), as well as not uncommon discovery of human remains (e.g. Condon

2026; Ragsdale, 2025). This paper uses the first decades of non-native inhabitation of the island of Manhattan in New York as a case study of the potential resources, policies, and factors that should be considered in the compilation of a comprehensive subsurface record of human burials and ultimately the creation of a shared Geographical Information System (GIS) based resource to memorialize the information and make it broadly accessible. This paper aims to illustrate the “losing” and “rediscovery” of New York City (NYC) community burial grounds (both formal cemeteries and pauper fields) through in-depth, digital retelling of lower Manhattan in the 17th century, with a special focus on the original Dutch colony and its environs. Furthermore, the project aims to provide a more comprehensive resource amalgamation from references like the Castello Plan of 1660 (Blaue, 1660), Montresor Plan of 1766 (Montresor, 1766), and Ratzer Map of 1776 (Ratzer, 1776). While this may at first appear labor-intensive and requiring many resources, the recent advances in combined large language and vision models [e.g. LLAVA (2023) may mitigate or even remove burdens of resource identification and processing.

BACKGROUND

Early Settlement

New York City is comprised of five boroughs of which the island of Manhattan is best known. The southern tip Manhattan was initially settled in 1624 as New Amsterdam, as part of The New Netherlands under the direction of the Dutch West Indies Trading Company, but this fact does not convey the highly diverse character of its inhabitants in terms of their national origins, religions, and community status. In fact, the very first settlers were not Dutch, but instead indentured Walloons that had fled religious persecution in what is today modern Belgium. Accompanied by deployed Dutch soldiers, that group of less than 200 individuals was soon joined by French Huguenots, English Protestants, Lutherans, Dutch Reformed, Mennonites, Moravians, Jews, and at least 1 Muslim (Figure 1) (Blaue, 1660). Jews came to escape the Inquisition after Dutch Brazil fell to the Portuguese.

Beyond New Amsterdam’s northern wall were landholdings called the “Land of the Blacks” (Berlin and Harris, 2005). The inhabitants predominantly came from seized Spanish ships. The convergence of geopolitical circumstances including codified Dutch tolerance (Shorto, 2005) and Dutch prioritization of commercial opportunity over religious considerations resulted in an extraordinarily diverse population whose existence and property ownership impacted the creation of cultural institutions (e.g. houses of worship and affiliated cemeteries) and general settlement patterns (Shorto, 2014), as will be discussed.

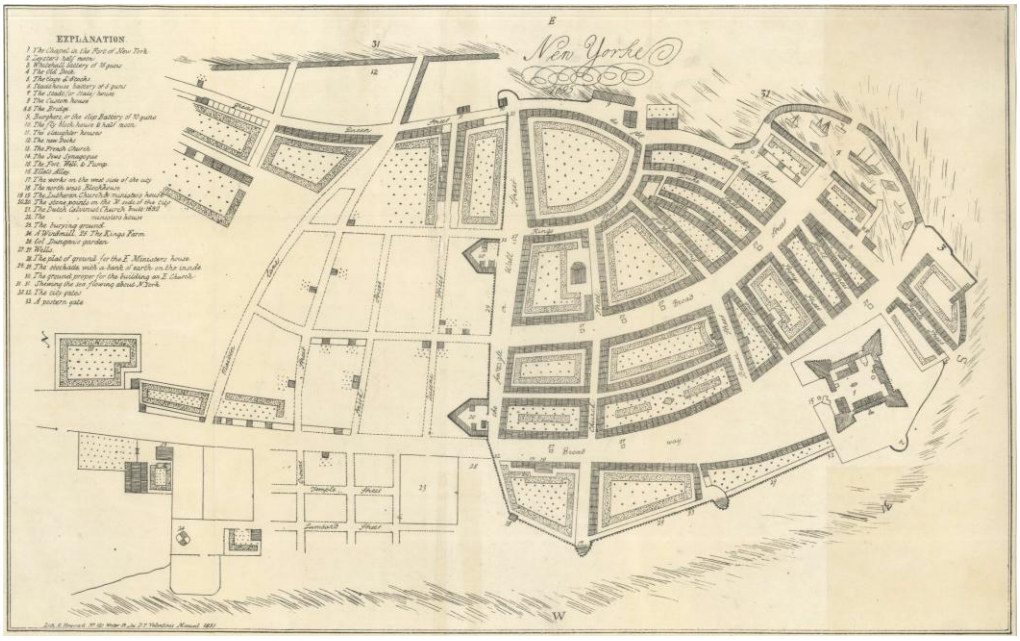

Figure 1. *Version of the Costello Plan as per Joan Blaue (1660).*

METHODOLOGY

Scope

This project unites previously accessible but unintegrated historical resources in a single resource. Capturing the shape and location of individual properties, commercial buildings, churches, and burial sites, the GIS resource is intended to enable visualization of migration and land use by early settlers and be the start of a more comprehensive, city-wide, preconstruction tool. This study layers historic maps with data on congregants, land owners, and Africans (free and enslaved). By synthesizing data from multiple time periods and sources, new means of exploration and analysis can become available to historians, city planners, preservation groups, and ultimately the construction industry. By focusing on a relatively small number of cemeteries, this paper aims to provide a more in depth understanding of how cemeteries are "lost" and the potential resources and strategies to rediscover them.

References span 1633-1766 for the spatial extent from State St. at the south to what is currently Vesey St. on the west, which then becomes Ann St. and then Beekman St. and then modern-day Pearl St as the eastern boundary (Figure 2). In addition to the cemeteries, information was collected and mapped related religious institutions, their congregants, commercial entities, and land ownership, when available. This way the roles cemeteries play with respect to the larger subsection of the communities, including blacks in the colony, could help reinforce knowledge about their likely locations.

Previous Scholarship and Original Sources

The research presented herein had multiple "starting points". Primary sources included many of the oldest known maps of lower Manhattan, from both Dutch and English sources; Dutch documents were accessed through The Holland Society of New York (THSNY, 2025) and local legislation was used to determine burial location restrictions. Information from secondary sources were largely taken from the scholarship of Mary French in the form of an on-line blog (French, 2025) and an unrelated doctoral dissertation published in 2020 (Meade, 2020). While both of those burial site compilations represent major, important pieces of scholarship as previously described, the aims and outputs of those undertakings differ from the aspirations herein of building a knowledge framework that has the potential for being automated, AI ready, and transferrable to other North American cities.

Early Burials and Restrictions

Due to a combination of increasing population and repeated waves of contagion, over the course of the subsequent centuries New York City imposed a series of restrictions on the location of burial sites, as recently summarized in Laefer et al. (2026). Ultimately, burials were prohibited in Manhattan. A visualization of the most significant set of burial restrictions is shown in Figure 2. While those demarcations are all 19th century ones, the policies helped to erase the collective memory of human burials in those parts of Manhattan. Figure 2 shows those demarcations with respect to the location of the Dutch Colony and the affiliated "Land of the Blacks"; an informal set of farms located beyond the Dutch walled settlement. Most major burial restrictions came in 1832 (which prohibited burials south of Canal Street), 1839 (which extended that ban northward to 14th Street), and 1852 (which further extended the prohibition northward to 86th Street) [see Burrows and Wallace (1998) for specific legislative details]. These restrictions were offset by the Rural Cemetery Act of 1847, which allowed the formation of private companies to establish large burial sites far from population areas, mostly in what is now the Brooklyn/Queens border (Williams, 2017).

Data Identification, Aggregation, and Integration

In addition to visible houses of worship on the maps, congregants were identified through respective birth, marriage and death records. Those names were then checked against governmental property deeds, as found in the 6 volumes of "The Iconography of Manhattan Island" (Stokes, 1922). This enabled the assignment of religious affiliation to the ownership of houses and businesses within the larger community. Those data were then aggregated through a GIS where specific layers were created with a particular theme. For example, one layer focused on determining and mapping the residency of congregants of various religious affiliations with the aim of discovering the spatial extent of specific religious communities (see Findings section for more information). Such work could be used as the basis to explore subsequent demographic trends, such as tracking the dispersal of individual community members when the colony became British in the middle of the century.

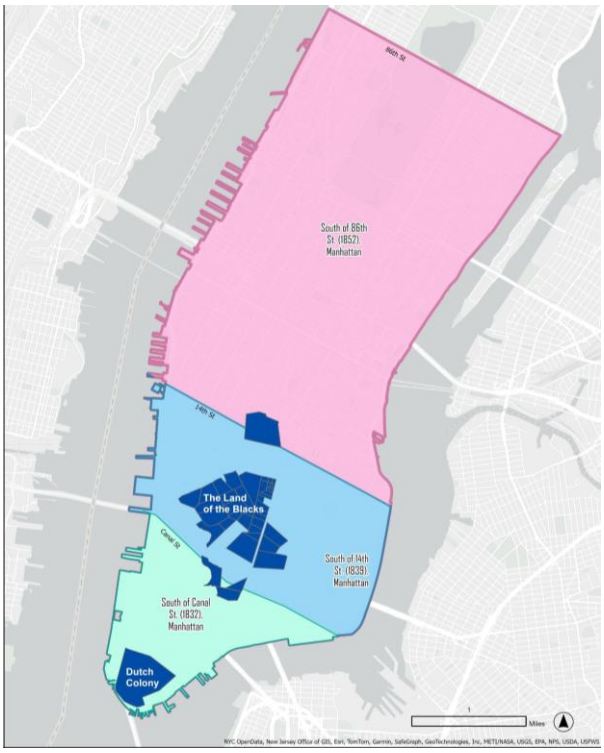

Figure 2. *Burial restrictions shown with respect to the location of the 17th century Dutch colony and the affiliated locations of the "Land of the Blacks" stretching approximately 3 km northward.*

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FINDINGS

Cemetery Identification

A total of 158 cemeteries were identified through this project as shown on Figure 4. The earliest date from the middle of the 17th century. Of these, only 20 exist today as sites with visible, above-ground grave markings. The other 138 were "lost". Only a very few have been rediscovered. The most prominent of which is the 6 acre "Negroes Burial Ground" where more than 15,000 intact skeletons were found 25-30 feet below ground. Found in 1991 during the preparation for a pair of new federal buildings, the grave site discovery caused a multi-year delay, the eventual cancellation of 1 of the 2 buildings planned for the site, and the creation of a national monument (NPS, 2023).

Colonial Heterogeneity with Clear Demographic Groupings

For the period of 1633-1660 in the Dutch colony of New Amsterdam, a total 98 residents with religious association and a further 95 without known religious association were identified by names. As show in Figure 4, congregants of a particular religious institution often lived in what appears as concentric rings emanating from their respective house of worship. Two such "spheres of influence" are shown (1 for each of the Dutch Reform churches). Yet, there were also smaller religious communities existing wholly within larger ones, such as Lutherans, French Protestants and a group of Sephardic Jews.

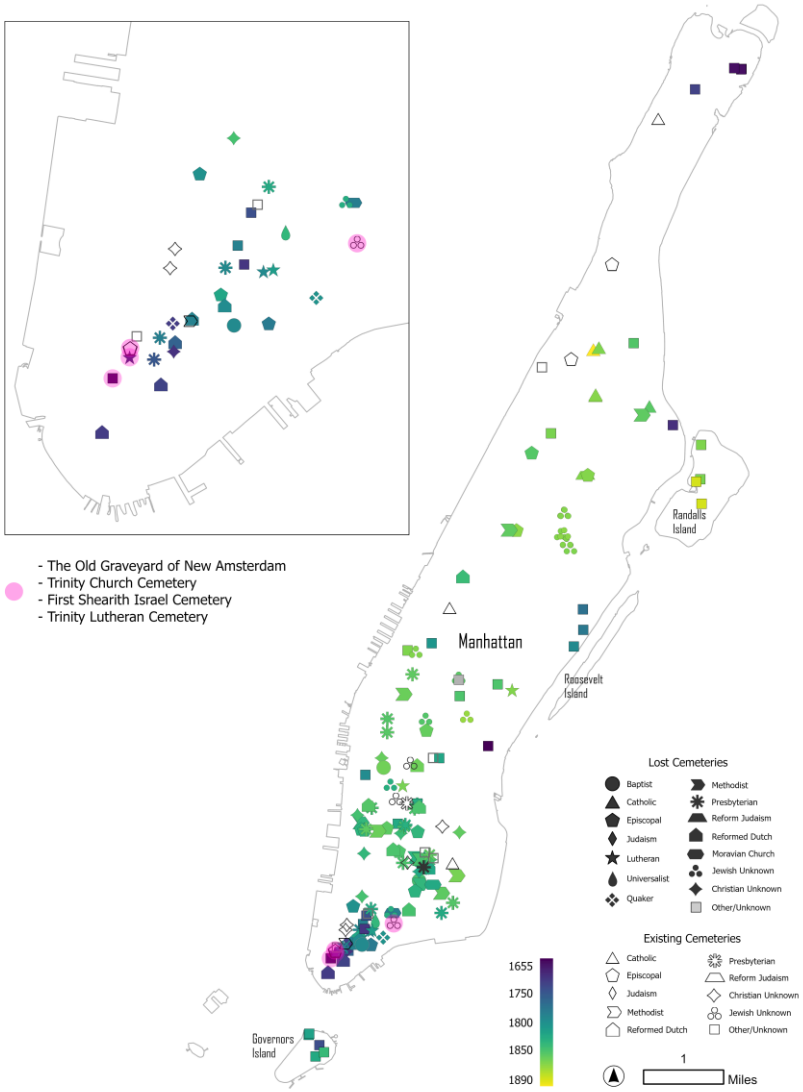

Figure 3. *Cemetery locations with known religious affiliations. See Findings for pink property details.*

This research contributed to the identification of “spheres of influence” that each church had using the location of the congregant furthest from the house of worship to bound the geometric shape. In 1660, the majority of resident owners who partook in religious practices were Dutch Reform (Refer to Figure 3). The Lutherans were actually located beyond the wall portrayed in the Castello Plan, thereby further distinguishing theirs from the predominant culture of the Dutch colony. The Liberty Lutheran Church, begn within the house of Cornelis Jansen Pluyvier as a meeting place. The property was then bought from him by the community and consecrated as the first Lutheran Church in New Amsterdam. After only a few years, the church was moved to its current location (Anon, n.d.).

These connections visualize how religious life took up space: each sphere becomes a proxy for how far individuals were willing to travel to participate in religious life (Fig. 4). The map also doubles as evidence of social hierarchy and uneven freedoms within early New Amsterdam. Larger, more diffuse spheres, such as those surrounding the Dutch Reformed Church, reveal a sizable and geographically dispersed community with broad access to land. In contrast, the smaller, tightly clustered spheres associated with the Jewish community reflect both a smaller population and the constraints of discrimination, which limited where Jewish residents could live and own property. Beyond documenting religious affiliation, the figure highlights how churches functioned as organizing nodes that shaped circulation and daily rhythms. The clustering of congregants within comfortable walking distance of their place of worship suggest that religious practice directly influenced residential patterns. When these spheres overlap, they reveal zones where different communities lived in proximity, igniting areas of cultural and belief exchange, conflict, or negotiation.

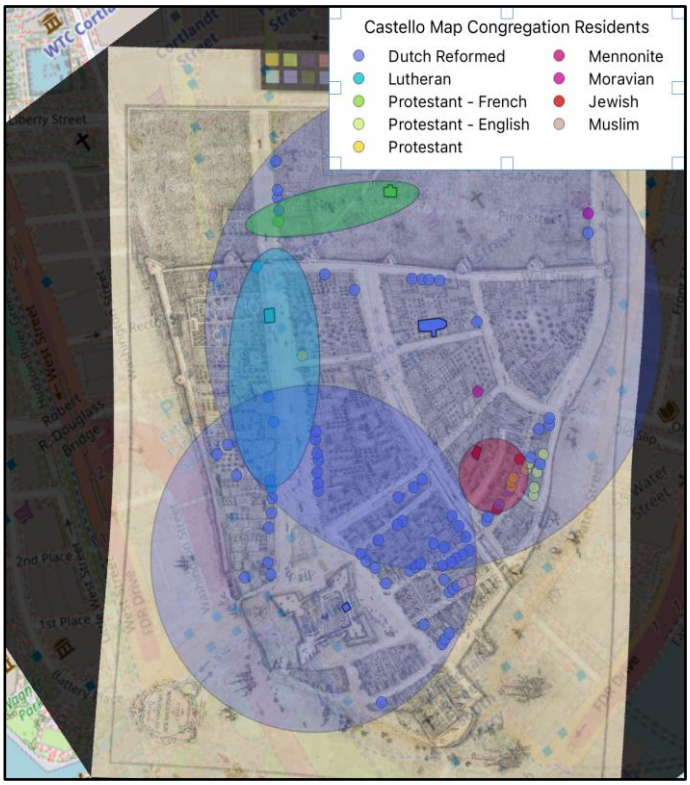

Figure 4. *Sample layer superimposed on the Costello Plan geo-registered to current NYC base map. Shaded areas denote spatial extent of congregants and their house of worship, where applicable.*

Land of the Blacks

Blacks were prohibited from being buried in the formal graveyards, despite playing an important part in Dutch colonial life (Medford, 2004). While some were slaves or indentured servants, many were free. Until the subsequent expulsion of the Dutch by the British, those individuals lived in a conglomeration of mostly adjacent properties commonly referred to as “The Land of the Blacks”. This area, located above the Dutch colony of New Amsterdam (modern day Greenwich Village), comprised around 30-40 farms, the vast majority of which were owned by “Half-Free” black people. These half-freed farmers were allowed to own property and get married, but were not considered fully freed due to them having to pay a form of tax to maintain their freedom, as well as their children not necessarily being born into freedom. These black landowners were all previously slaves, who were granted land by the Dutch to act as a buffer between New Amsterdam and the Native American tribes. Black ownership of these properties occurred from 1643 to the early 1700s. Notably, Figure 5 shows 4 black landowners that do not commonly appear in other resources. Information regarding ownership was obtained through examination of individual land deeds (THSNY, 2025).

A total of 10 seventeenth century burial sites were found in lower Manhattan. They are shown in Figure 6. One of the lesser known is the First Shearith Israel Cemetery, which is the oldest surviving Jewish burial ground in NYC. aFounded in 1682, it is located near Chatham Square in present-day Chinatown and is approximately 19,984ft2 (Meade, 2020). Used until 1833, the current cemetery is much smaller with only about extent 100 burials (French, 2025). Several hundred reinternments were made to the congregations newer cemetery further uptown on 21st.

Another is the cemetery affiliated with the French Protestants. Founded in 1688 (before the opening of the actual French Church du Saint Esprit in 1704) (French, 2025). Located on the modern-day Northeast corner of Pine st and Nassau, its area was an estimated 11,440ft² (Meade, 2020). The congregation sold the church building in February of 1831, and the graves and the churchyard were removed (French, 2025). Remains unclaimed by family members were reinterred in a vault that the congregation had purchased at the cemetery of St. Mark’s Church-in-the-Bowery (French, 2025), The property is the site of a current skyscraper. There was also The Friends Meeting House burial ground – a Quaker cemetery that opened in 1696, at the present-day corner of Liberty St. and Liberty Pl. (Meade, 2020). Originally 14,170 ft² (Meade, 2020), closed in 1823, and destroyed between the years 1825 and 1826 (Meade,

2020), burials were relocated to Friends Cemetery on Houston Street further uptown.

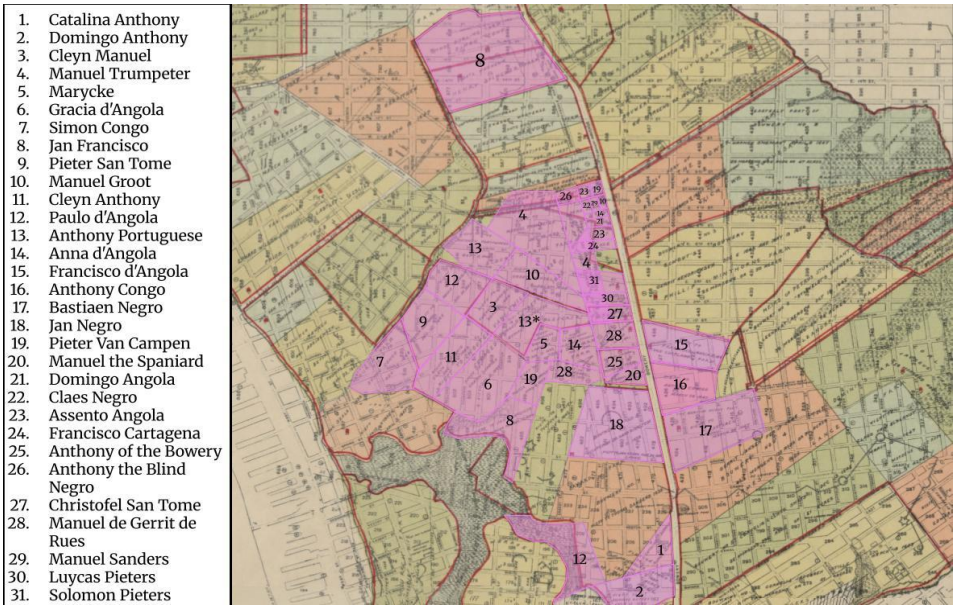

***Figure 5**. Location of properties within the 17th century "Land of the Blacks" in lower Manhattan (assembled from original land deeds accessed through THSNY, 2025).*

***Figure 6**. Voroni analysis of pre-1700 burial sites in lower Manhattan shown with respect to potential affiliation zones. All 10 burial sites (left); excluding Leisler family plot (center); further exclusion of the African Burial Ground, Graveyard with Gate of the City, and Old Graveyard of New Amsterdam (right).*

There was also a family burial plot and three other less formal burial sites. The Leisler family burial plot was not large but historically important given the family's role in the Leisler Rebellion of 1691 and Jacob Leisler's subsequent execution and burial near the execution site and the later reinterment to the family's property (Anon, 2016). Arguably, the most import is the Old Graveyard of New Amsterdam. While no specific date is known for the creation of "The Old Graveyard of New Amsterdam", it is regarded as the earliest non-native burial ground of the Dutch colony of New Amsterdam. The earliest record of its existence was in 1656, where Dutch Records described it as already "wholly in ruins" (O'Callaghan, 1897). It was located around present-day Morris Street. And is to have been 25,617ft². Marked on the Castello Plan of 1660, the British colonial authorities ordered it to be partitioned into lots and sold in 1676 (CCCNY, 1905). No reinterment information is known, but in the middle of the 19th century, workmen uncovered human remains in that area during excavation of cellars (CCCNY, 1842). In modern day NYC, there are extensive permitting requirements, but the discovery of the Revolutionary War period African American Burial Ground in 1991 was not for lack of known facts and traces in various reports and maps. The uncover of the burial grounds ultimately scuttled a $54 million federal investment, which could have been completely averted (Frohne, 2015).

CONCLUSIONS

This paper presents a spatial enablement of the underlying data for 17th burial sites in the form Dutch colony of New Amsterdam and its immediate environs and the affiliated community members and institutions. These represented a set of highly multi-cultural and multi-religious set of communities living

within only a few square kilometers. The work herein lays a path for the creation of spatially-enabled, machine readable data as input for advanced statistical models and AI-enabled exploration.

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