

Project name:
Bethel Burying Ground Memorial
Archaeological Monitoring Plan
During Site Preparation and Construction

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Project ref: 60714611

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Bethel Burying Ground Memorial: Archaeological Monitoring Plan

Mr. Ritchie,

The following document outlines a plan for conducting archaeological monitoring in conjunction with the creation of the Bethel Burying Ground Memorial within the Weccacoe Playground in South Philadelphia. The purpose of conducting monitoring is to ensure, or reduce the likelihood to the greatest extent possible, that human remains and intact burials within that hallowed ground will not be impacted during the Memorial's construction. Archaeological monitoring will be performed by archaeologists with AECOM, and specifically by individuals having intimate knowledge of this particular cemetery, extensive experience with historic burying grounds in Philadelphia generally, and who meet the Secretary of the Interior's (SOI) *Professional Qualifications Standards* (36 CFR 61 and Federal Register 48:44738-44739).

Burying Ground Setting

The City of Philadelphia has undertaken the memorialization of the thousands of individuals interred in the Bethel Burying Ground, which occupies slightly more than one-quarter of an acre and is located between South Lawrence and Leithgow Streets and north of Queen Street and lies beneath a portion of the asphalted surface of the Weccacoe Playground (**Figure 1**). At present a small brick Community Center building and restrooms occupy the south-central space of the cemetery ground and a paved tennis court encircled by a tall chain link fence overlaps the northwest Burying Ground limit. Trees have been planted within the historical Burying Ground boundary in the South Lawrence Street sidewalk, inside of the fenced playground property adjacent to South Lawrence and Queen Streets, and between the Community Center and the tennis court fence. A concrete shuffleboard court lies immediately to the west of the Community Center building and a small planting bed borders the south side of the tennis court. A wrought iron fence lines the southern border of the Burying Ground, along Queen Street, and traverses through the western margin of the cemetery along Lawrence Street (where the cemetery limits extend below the adjacent sidewalk to near the eastern Lawrence Street curb).

Background Information

The historical Burying Ground population is associated with the Mother Bethel African Memorial Episcopal (AME) Church, which was founded during the late eighteenth century and is the genesis of the modern AME church, but also includes other African American individuals who were not AME congregants. The Bethel Burying Ground property was in active use as a graveyard from approximately 1810-1864 and during subsequent decades was utilized as a yard for goods storage, a pocket park, an educational garden, and from 1912 to the present as a municipal playground.

Archaeological investigations within the Burying Ground were performed by AECOM in 2012-2013, which verified the presence of intact historical interments a short depth below the present playground surface. These field studies additionally confirmed that burials within this ground have been previously disturbed to an unknown extent by subsequent transformations and modifications of the Burying Ground space. Twentieth century subsurface impacts to the historical Burying Ground property include the construction of a "shelter building" (built c. 1924) and wing addition (Community Center, added 1970s), the installation of a spray pool in the 1950s, and the placement of associated subsurface utilities (i.e., water, sewer, electric). Prior nineteenth and early twentieth century uses of the cemetery might also have resulted in impacts to

burial remains; however, their actual effect is difficult to assess with any certainty. Previous disturbances likely resulted in the movement of human remains within the Burying Ground limits to the extent that they could now be encountered in multiple unanticipated contexts and locations.

Archaeological testing of the property identified a variably thick layer of gravel sub-base below the present asphalt surface of the Burying Ground (**Figure 2**). Below the sub-base, archaeologists documented a yellow soil that contained visible evidence of grave shaft excavations associated with the interment of the deceased, as well as traces of shallowly buried wooden coffins and associated funerary objects such as coffin nails, screws, and decorative screw caps.

Project Description

The proposed memorial will encompass the entire historical Burying Ground footprint and has been designed to reduce the risk of potential impact to historical burials. Elements of the proposed installation include ornamental iron gates, a concrete stair, access ramp, and integral cheekwall, granite and precast concrete pavers, brick paving and a brick clad seat wall, and planting beds and landscaping (**Figure 3**). To prepare the project footprint for the construction of the memorial, the extant recreation center and much, but not all, of the surrounding hardscaping will be removed. The demolition and construction Limits of Disturbance (LOD) encompass and extend slightly beyond the historical cemetery property.

- Within the historical Burying Ground footprint, **the depth of demolition and construction impacts will be restricted to approximately one foot (12 inches) below the current ground surface.** This one (1) foot demolition/construction impact limit is intended to safely accommodate the removal of existing asphalt or concrete and sub-base layers without intruding into the underlying natural soil.
- **All natural soil within the historical Burying Ground property limits has the potential to contain human remains and mortuary objects.** Construction equipment will access the site via the property's southeast corner.
- **If mechanized equipment (e.g., backhoe) will be used to expedite demolition and Memorial construction tasks, the movement of such equipment will be restricted to existing hardscaped surfaces.**

Summary of Project Tasks

Project tasks with the potential to impact subsurface cultural resources include the demolition of the extant building, subsurface utility disconnection, saw cutting and stripping of existing ground surfaces, including concrete, asphalt paving, rubberized safety surface, and brick pavers, the removal of fencing, including the cutting of fence posts, tree felling, the relocation and installation of new Burying Ground access gates from Queen Street, construction of a concrete stair and sloped handicap access ramp with integral cheekwall adjacent to the new Queen Street gates, the installation of precast concrete and brick pavers and a seat wall with a memorial stone, and landscaping. These tasks are addressed in detail below.

No excavation or ground disturbance exceeding one (1) foot below the ground surface may occur anywhere within the boundaries of the Burying Ground without an archaeological monitor present on site. Ground disturbance that extends below the existing gravel sub-base and into cemetery soil, regardless of depth below ground surface, must be monitored by an archaeologist. Archaeologists must be given at least twenty-four (24) hours advance notice before any ground disturbing activities occur within the Burying Ground boundaries. Archaeologists must be notified immediately if any suspected human remains or funerary artifacts are exposed within the Burying Ground.

Demolition

1. Community Center building: Building demolition will be accomplished using hand methods, although limited use of mechanical assistance is permissible to expedite the building demolition process. Material removal from the west half of the building will be halted at the level of the concrete slab, which corresponds to the current playground surface and will be left in place. Demolition of the east half of the building will include the saw cutting and hand removal of the concrete slab. See project plans for the horizontal and vertical limits of slab removal (SMP Architects 2023a). Existing utility lines are to be disconnected in Queen Street and associated underground conduit to be cut no deeper than demolition base depth and left in place within the LOD (see below).

2. Queen Street fence and cheekwall (retaining wall): Three iron fence panels will be removed and salvaged for reuse. Corresponding sections of concrete retaining wall will be sawcut and removed to expose the surface of the historical Burying Ground perimeter wall.
3. Utilities: Known utilities will be disconnected outside of the LOD and associated underground conduit or pipe will be cut and capped no deeper than the demolition base depth. Utility conduit and pipe installed below the cut depth will be disconnected but otherwise left in place. Known subsurface utilities to be disconnected and capped consist of:
 - a. Electric
 - i. From the Queen Street sidewalk to a PECO customer box on the north side of the property fence and into the Community Center.
 - ii. From a pole on the east interior of the tennis court, and extending south to connect to the Community Center
 - b. Gas
 - i. Pipe connection from the main below Queen Street to the interior of the Community Center
 - c. Sewer
 - i. Pipe connection directly south to the main in Queen Street from the Community Center
 - ii. Pipe between the southwest corner of the building and the direct sewer connector that extends south from the building and turns east to connect with the direct line to the main.

* Additional utilities separate from the known utilities addressed above that are discovered or otherwise identified within the Burying Ground limits during the Project will be mitigated through comparable methodology. These additional utilities will be disconnected and capped at the edge of the LOD. Subsurface utility components will be cut and left in place.

4. Sealed ground surface removal: See project plans for the horizontal and vertical limits of sealed ground surface removal (SMP Architects 2023a). Asphalt, concrete patch, tennis court paving, rubberized safety surface, brick pavers, and concrete sidewalk within the historical Burying Ground parcel limits will be saw cut as necessary into manageable segments to expedite removal. **If mechanized equipment, such as a front loader, is to be used, machines must be set up on paved surfaces. No heavy machinery access will occur in areas where paved surfaces have been removed. An archaeological monitor must be present during the removal of subbase below paved surfaces.** Material removal will terminate at the base depth of modern sub-base or upon encountering natural soil.
5. Tree felling: A large (36-inch diameter) sweet gum tree situated at the northwest corner of the historical Burying Ground parcel will be removed from the Lawrence Street sidewalk. Mechanized tree limbing equipment must be stationed on sealed ground surface, preferably within Lawrence Street. After felling and the removal of the trunk to sidewalk grade, the roots and remaining trunk shall be mechanically ground below the sidewalk no deeper than is necessary to repair/replace sidewalk and not to exceed one (1) foot below the sidewalk surface. The stump may not be pulled or otherwise removed in a manner that might disturb subsurface soil. An archaeological monitor must be present during stump reduction activities. A medium (15-inch diameter) oak tree to be removed is located north of the Community Center building and within the historic cemetery boundary. Removal of the oak tree will adhere to procedures established for felling of the west sweet gum tree, including stationing of machinery on the existing hardscape. Removal of additional trees within the historical bounds of the cemetery must follow the same protocol.
6. Tennis court fence: In ground supporting fence posts will be cut approximately six (6) inches and no deeper than one (1) foot below the current ground surface. Sections of concrete post foundations that exceed one (1) foot below ground surface are to remain in the ground and will not be pulled, excavated, or otherwise removed. The upper portion of existing concrete footers may be removed through mechanical means (i.e., jackhammer, grinder) to a maximum depth of one (1) foot below the current surface. If necessary, excavation of adjacent fill material to expand post access may occur but is not to exceed one (1) foot in depth.
7. Clearing and grubbing: Contractors are expected to clear the ground of existing organic matter within excavation areas to a depth of eight (8) inches below the existing ground and remove any remaining topsoil over eight (8) inches in depth to a maximum depth of one (1) foot below ground surface. Obstructions, including small stumps and roots, within these soil removal areas may be cut at a maximum of one (1) foot below current ground surface. The existing three (3) foot tall landscaping fence will be cut flush with existing paving, ground down if necessary, and patched.
8. Erosion and sediment control: Material stockpile and washout stations will be established east and north of the historical Burying Ground limits. Water and sediment will be managed by compost filter sock secured by heavy objects (i.e.,

sandbags, concrete blocks, etc.) or wood stakes that will not exceed one (1) foot below ground surface when installed. Stockpiles will not exceed 20 feet in height and silt fence or straw bales will be used in sediment control.

9. Bench removal: A synthetic bench is secured at the northeast corner of the Burying Ground parcel and will be removed and returned to Philadelphia Park and Recreation. Removal activities must not require excavation or other impact deeper than one (1) foot below ground surface.

Memorial Construction

1. New gate piers: The new entry gate will be supported by two-foot-square piers that will stand nearly eleven feet above grade. The piers will be tied into the subsurface Burying Ground perimeter wall using rebar dowels and will not extend into the interior of the Burying Ground. The inability to locate, or absence of, the wall will trigger a construction plan modification. Archaeologists will be present during the field verification of the wall location and to monitor pier foundation excavation.
2. Concrete stair and ramp with integral cheekwall (retaining wall): Current plans for the construction of the architectural concrete stair, ramp, and cheekwall are contingent upon the identification of a subsurface Burying Ground perimeter wall, and inability to locate, or absence of, the wall will trigger a construction plan modification. As currently designed, the north edges of the stair and ramp and the retaining wall will be anchored to the historical stone perimeter wall using rebar dowels. The proposed one (1) foot thick concrete retaining wall will be seated directly on the stone wall and will extend to the height of finished grade. Architectural plans (SMP 2023a) propose an eight (8) inch excavation north from the perimeter wall into the cemetery to permit the construction of the retaining wall, with temporary shoring installed as necessary to preserve the integrity of the cut face. The construction of over 20 feet of retaining wall is proposed. Metal fence panels (3) will be shifted to accommodate the revised entry gate location and will be seated in the retaining wall. The stairs, ramp, and associated handrails will extend into the Queen Street sidewalk and as such are outside of the historical Burying Ground property and their installation carries little risk of impact to human remains. Rebar dowels used to reinforce concrete cheek and retaining walls will exceed the mandated depth restriction; however, the dowels will be anchored in the historical stone Burying Ground perimeter wall and as such are likely to avoid impacts to interments in the Burying Ground. **Archaeologists will be notified and allowed access to proposed retaining wall locations in advance of construction to conduct supplemental subsurface testing of presumed Burying Ground wall foundations.** Archaeological monitors should be present during the field verification of the wall location and during excavations north of the historical wall.
3. Precast concrete and brick paver installation: The interior of the memorial will be surfaced with precast concrete and granite pavers. This material will be laid atop a rolled asphalt leveling course and bituminous setting bed on the current paving. An additional layer of compacted 2A modified aggregate sub-base will be utilized where exposed soil is present. Proofrolling of the subgrade material will be conducted to minimize compression impact to underlying burials. Any corrective action that may be required will not extend into the natural soil. A 1.5-foot-wide band of brick pavers will be used to delineate the historical Burying Ground perimeter. Installation of this feature will entail four (4) inch layers of aggregate base and concrete slab on exposed subgrade and capped by a 1.5-foot-wide mortared brick alignment. The installation of these materials will not need to be monitored by archaeologists.
4. Brick seating wall: Current plans for the construction of the brick seating wall are contingent upon the identification of a subsurface Burying Ground perimeter wall. Inability to locate or absence of the wall will trigger a construction plan modification. Archaeological monitors should be present during the field verification of the wall location. As currently designed, the seatwall is 21 feet long and 1.5 feet deep and high with an engraved granite headstone-shaped monument mounted at the midpoint. The wall location corresponds to a section of the Burying Ground north boundary. The presence of a subsurface perimeter wall will be verified in the field and if suitable will be used as a footer for the seatwall. Rebar dowels will be embedded in the stone wall as anchors. A concrete foundation will be poured atop the wall [six (6) inch] and against the wall exterior [eight (8) inch]. If necessary, deeper excavation for wall support may occur in adjacent ground located outside the boundaries of the Burying Ground.
5. Planting beds: Landscape plans and plant lists will not include any flowers, shrubs, or trees that require a root ball excavation exceeding one (1) foot in maximum depth. Topsoil application requires scarification or other loosening of the upper 3 to 6 inches of soil (subgrade) on graded areas prior to soil application to create an irregular surface that will aid the adhesion of applied material. This will be achieved using the teeth of a backhoe or loader bucket, tiller, or another

suitable device. Planting soil is to be applied in six (6) inch lifts to a minimum final depth of one (1) foot with mechanical compaction after each lift. Tilling of laid matrix in preparation for the placement of sod or grass seed will not exceed the depth of introduced material. Archaeological monitors must be present during the scarifying of non-introduced soil within the historical Burying Ground property.

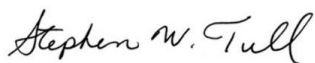
6. Bollard installation: Steel pipe bollards will be installed at the Lawrence Street curb on the west edge of the cemetery. Concrete footings for the bollards will extend more than three (3) feet below the finished grade. Although outside of the historic Burying Ground boundary, the immediate proximity of the excavations carry risk of impact to human remains. Archaeological monitors must be present during excavations in this vicinity.
7. Tennis court: Replacement tennis court fence post and lighting systems require footings that extend more than three (3) feet below the court surface; however, their proposed locations are outside of the historic Burying Ground property and therefore their installation is unlikely to impact human remains.
8. Utilities: A four (4) foot wide trench will be excavated east of the tennis court to permit the installation of a proposed yard hydrant and water supply pipe. The depth of this excavation is undefined; however, the proposed locations are outside of the historic Burying Ground property and therefore the installation is unlikely to impact human remains. The location of a proposed electrical box at the northeast corner of the tennis court is outside of the historic Burying Ground property and therefore the installation is unlikely to impact human remains.

Methodology

- Archaeologists will visually monitor activities during site preparation and memorial construction that include ground disturbance and that have the potential to impact intact burials or previously disturbed human remains.
- If demolition and construction work is temporarily halted in one location, it will be permitted to continue elsewhere on the property.
- If an unanticipated discovery is made that affects the memorial construction, consultation will be initiated to find a mutually acceptable solution that does not affect the Burying Ground.
- A digital photographic record and written notes regarding all ground disturbing activities will be maintained.
- If any Burying Ground-associated objects are encountered, they will be fully documented in accordance with current archaeological practices and standards and collected.
- If previously disturbed human remains are identified anywhere on site, they will be fully documented and recovered. Any recovered remains will be temporarily transferred to the safe keeping of the Museum and Archives at Mother Bethel AME Church (6th and Lombard Streets). All identified and recovered human remains will be reinterred within the Burying Ground prior to the completion of Memorial construction.
- At least 24-hour notice in advance of any ground disturbing activities will be provided to AECOM so that archaeological monitors can be present on site.

If there are any questions about the information presented in the above document, please do not hesitate to contact myself or Senior Archaeologist Doug Mooney (douglas.mooney@aecom.com; 609-902-0428).

Sincerely,



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References Cited

SMP Architects

2023a “Bethel Burying Ground Memorial Project at Weccacoe Playground: Design Development Set, 11/06/2023”. Philadelphia, Pennsylvania.

2023b “Bethel Burying Ground: Schematic Design Set, November 6, 2023” Philadelphia, Pennsylvania.

URS

2013 *Phase IB Archaeological Investigations of the Mother Bethel Burying Ground, 1810 – Circa 1864*. Prepared for Pennsylvania Horticultural Society. Prepared by URS Corporation, Burlington, New Jersey.

Figures

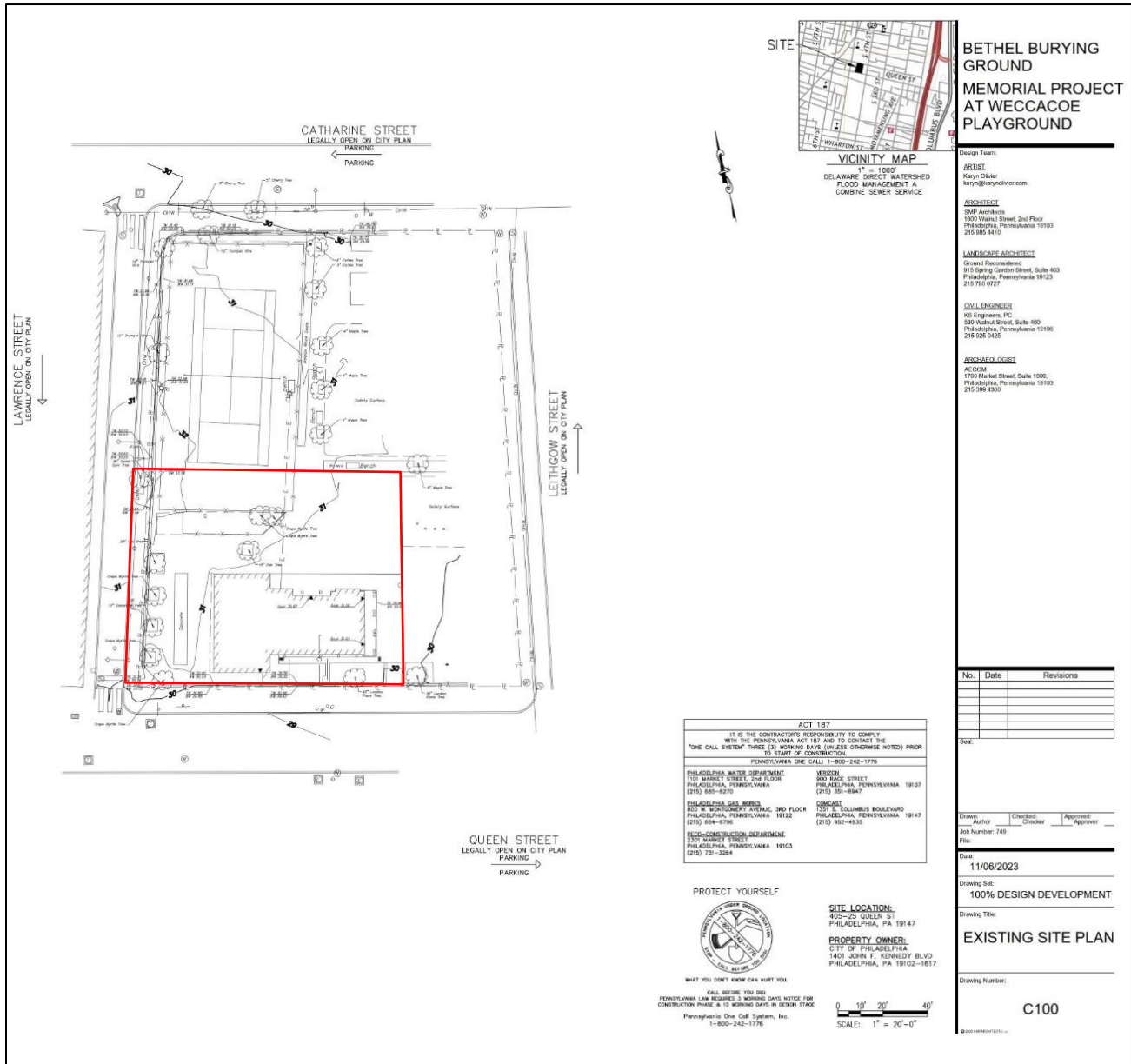


Figure 1. Project area location and existing conditions (base drawing from SMP Architects 2023a).
 Approximate historical Burying Ground boundary is depicted in red.



Figure 2. Asphalt and gravel sub-base exposed in the Trench 2 east profile (URS 2013).

