

**United States Department of the Interior**  
**NATIONAL PARK SERVICE**  
Minute Man National Historical Park  
174 Liberty Street  
Concord, Massachusetts 01742



1A2 (MIMA)

June 1, 2023

Ms. Ann Clifford, Senior Planner  
Town of Concord, Massachusetts  
141 Keyes Road  
1st Floor  
Concord, MA 01742

Re: Great American Outdoors Act (GAOA) Projects, Programmatic Review Package #6 Landscapes and Sceptic Systems, Minute Man National Historical Park, Concord, Lexington, Lincoln, MA

Dear Ms. Clifford:

In adherence with the stipulation IV(c)(2) of the *Programmatic Agreement Between the National Park Service, Minute Man National Historical Park and the Massachusetts Historical Preservation Officer Concerning Implementation of a Strategic Facilities Plan to Eliminate Deferred Maintenance Within the Park* (PA), Minute Man National Historical Park (Park) is pleased to provide you and the other consulting parties to the PA with this 65% design package for landscape improvements. Most of this design package has already completed compliance, with the condition that the Park cultural resource management (CRM) team review and confirm their preliminary effect finding. This is discussed in greater detail below.

Now that we have a more refined design, the Park can also provide a formal effect finding for the septic improvements at six (6) properties.

### **Landscape Improvements**

In June 2022, Minute Man National Historical Park sent you a schematic design (SD) set of drawings for landscape improvements and new septic systems. This letter included a table listing which landscape improvements NPS intended to streamline in accordance with Stipulation V of the PA review process and which were expected to be *No Adverse Effect* pending confirmation on the work to be performed. On September 9, 2022, Brona Simon, State Historic Preservation Officer, concurred with this conditional *No Adverse Effect* determination. Since then, work at the Job Brooks House and the Barker House have been removed from the project due to a variety of considerations and landscape work at the Rego House has been added.

The park CRM team has reviewed the 65% design plans and confirmed that the project scopes and impacts are the same as the SD package, or, in some cases, refinements have reduced potential impacts. The results of the archeology conducted for the septic improvements has helped the CRM Team analyze potential impacts. They have confirmed that the landscape improvements will have *No Adverse Effect* on the Minute Man National Historical Park National Register District or the Wayside National Historic Landmark. The pathways for each landscape set are as follows.

Landscape work at the following properties meet the definition for streamlined review and will be streamlined:

#### Brooks Landscape

- Joshua Brooks
- Noah Brooks

#### Fiske Landscape

- Fiske Hill

#### Hartwell Landscape

- Hartwell Chimney
- Captain Smith House

#### Jones-Stow Landscape

- Carty Barn

#### Meriam Landscape

- East Quarter School

#### Nelson Landscape

- Nelson Farm

#### North Bridge Landscape

- Buttrick Landscapes
- Elisha Jones House

#### Revere Landscape

- Paul Revere Capture Site

#### Wayside Landscape

- The Wayside

#### Stone Wall Work (Various properties)

The landscape work at the eight properties below received a conditional *No Adverse Effect* Finding with the condition that our CRM Team review the plan set and confirm that the refined work would still meet the criteria for *No Adverse Effect*. The attached plans and CRM team review comments serve as supporting documentation that the design impacts remain consistent with the previous design package and that the *No Adverse Effect* Finding was appropriate.

#### Hartwell Landscape

- Hartwell Tavern

#### Jones-Stow Landscape

- George Hall House
- Inferrera House
- Jones Stow House

#### Meriam Landscape

- Burke House
- Meriam House

#### Nelson Landscape

- Parker's Revenge
- Whittemore House

Prior to planting trees at the properties listed below, NPS will test each tree placement location using the methodology in the scope previously sent you for the landscape and trail work. This scope also covers monitoring specific work as discussed in the Assessment of Effect form for this aspect of the GAOA work.

- Major John Buttrick
- Elisha Jones
- The Wayside
- Meriam
- Burke
- Sam Brooks
- Hartwell Tavern
- Whittemore

The Rego House was not reviewed last year. It does not meet the criteria for streamlining under Stipulation V due to the installation of an asphalt driveway over a previous gravel driveway. This project will be reviewed under Stipulation VI of the PA. The CRM Team reviewed the plans and have determined that the landscape work at the Rego House will have *No Adverse Effect* on the Minute Man National Historical Park Historic District.

#### **Sceptic System Installations**

The new GAOA -funded septic improvements at the park were identified as not meeting the criteria for streamlining under Stipulation V of the PA and will be reviewed under Stipulation VI of the PA. As part of the planned improvements five (5) houses will receive new septic systems

- East Quarter School House (Plan sheet L1.0)
- George Hall House (Plan sheet L1.1)
- Inferrera House (Plan sheet L1.2)
- Joshua Brooks House (Plan sheet L1.3)
- Rego House (Plan sheet L1.3)

The Stow-Hardy House (Plan sheet L1.1) will receive a pump and septic tank that will be connected to an existing septic field behind the Farwell Jones House. The current design of these systems was informed by the results of an archeological survey that was accomplished last year at all six properties. The survey also included a 7th property, the Baker House and Garage. All septic work at the Barker House was eliminated from the GAOA due to the archeological sensitivity of the property.

The management summary for the archeological work was sent to you last August, followed by a draft report for your comment. The final report was submitted to you in January 2023 (Banister and Waller 2022). A summary of the testing and an effect finding for each septic system can be found below.

### Archeological Testing Summary

PAL’s survey methodology included a combination of geophysical survey, metal detection, standard test pits, and excavation units. Table 2-1 of the report (reproduced here) provides a summary of the type of testing used at each property. The methodology for the testing can be found in Chapter 2 of the report. In all cases, the testing was designed to cover not only the potential locations of the new septic systems, but all of the GAOA work contemplated for each property.

**Table 2-1. Type of Investigation and Proposed and Actual Archeological Testing by Project Area, MIMA Project.**

| Project Area              | Metal Detection Survey | Geophysical Survey | Proposed # STPs (50-x-50-x-cm) | Actual # STPs (50-x-50-cm) | Proposed and Actual # EUs (1-x-2-m) |
|---------------------------|------------------------|--------------------|--------------------------------|----------------------------|-------------------------------------|
| East Quarter School       | Yes                    | Yes                | 38 (10-m interval)             | 39 (10-m interval)         | 0                                   |
| George Hall House         | No                     | No                 | 40 (10-m interval)             | 40 (10-m interval)         | 3                                   |
| Stow-Hardy House          | No                     | Yes                | 32 (5-m interval)              | 30 (5-m interval)          | 0                                   |
| Inferrera House and Stand | No                     | No                 | 74 (10-m interval)             | 63 (10-m interval)         | 1                                   |
| Joshua Brooks House       | Yes                    | Yes                | 100 (5-m interval)             | 84 (5-m interval)          | 0                                   |
| Barker House and Garage   | Yes                    | No                 | 36 (10-m interval)             | 47 (10-m interval)         | 2                                   |
| Rego House and Garage     | No                     | No                 | 42 (10-m interval)             | 35 (10-m interval)         | 0                                   |
| <b>Total</b>              |                        |                    | <b>362</b>                     | <b>338</b>                 | <b>6</b>                            |

All of the properties were sensitive for pre- and post-Contact archeological sites. PAL identified 34 pre-Contact and 25 post-Contacts sites within 0.5 miles of at least one of the seven properties. The types of sites located near each property are summarized on Tables 4-1 and 4-2 of the report and discussed in detail for each location in subsequent chapters of the report.

Table 12-1 (page 197-198) of the report provides a summary of the results of the survey. The text below similarly provides information from the table, as well as the report.

#### East Quarter School

The Second (extant) East Quarter School House was built in 1853 after the first East Quarter School was decommissioned. It was used until 1887, after which it was bought by a local farmer and used for storage. By 1904 it had been converted into a house and went through several owners who lived in the house. Outbuildings included a store, barn, hen house, and gas tanks built between the 1920s and 1850s. More information can be found in Chapter 5 of the report.

A combination of geophysical, metal-detecting, and traditional survey was completed at this property.

The geophysical survey identified anomalies include possible former foundations or excavation areas; two buried drywells or cisterns; linear utilities; former shallow surface near Lexington Road; unidentified structures or objects; buried metal or metal objects; and a remnant driveway.

The metal detection survey had a total of 23 “hits” with 23 artifacts retained for curation and categorized as follows: personal (buckle, religious medal, container lid, toy coin); domestic (furniture handle, drawer pull, spoons, fork); agricultural (horseshoe, axe fragment); architectural (window counterweight, hinge); and indeterminate (lead spatter and sheet fragments, lead disk, lead rod).

Subsurface testing included 39 50-x-50-cm test pits at 10-m intervals. A total of 101 (4 pre-contact, 97 post-contact) pieces of cultural material was recovered at 0–70 cmbs in Landscape A, Fill, and Apz strata in 25 of the test pits. The artifacts included: 4 chipping debris, 61 ceramic, 9 glass, 23 bone, 3 metal, and 1 post-contact stone.

The report interpreted these finds as follows:

The variably filled and plowed soil profiles recorded at the East Quarter School project area are consistent with the use of the property as farmland/meadow in the late seventeenth to mid-nineteenth centuries; for a schoolhouse in the mid-to-late-nineteenth century; and for a home-farmhouse in the late nineteenth and twentieth centuries. The post-Contact materials recovered across the entire project area in Landscape A, Fill, and plow zone deposits are designated the East Quarter School Site. The deposits were not temporally stratified, however, and exhibited no discernible artifact patterning that would indicate anything more than utilitarian landscape modifications designed to fill and level the landscape.

The geophysical survey identified the location of buried utilities, shallow surfaces, possible former foundations or excavation areas, possible dry-wells or cisterns, possible buried metal, and possible unidentified structures or objects. Archeological testing in these areas confirmed the presence of the former circular drive, buried Fill deposits with dense slag, and the leach field for a septic system in the backyard. Testing at the two possible dry-well or cistern locations on the west and east sides of the house did not identify any structural remnants or Fill deposits associated with this type of feature, nor were any other buried foundation or structural features identified.

The four pieces of chipping debris recovered at 40–80 cmbs in Apz and B2 strata in three test pits may be associated with one or more of the previously recorded archeological sites near Merriam’s Corner that date to the Middle Archaic to Late Woodland periods: the Unnamed (19-MD-111); Revolutionary Ridge (19-MD-180); Burke House Site (19-MD-1149); and Burke Field (19-MD-945) sites. The lithic materials were likely deposited on the edge of wetlands associated with Mill Brook before rechanneling of the brook for agricultural use. This pre-Contact component of the East Quarter School Site contains a low density of cultural material, lacks complexity, and has limited research potential.

### *Finding*

After reviewing the data, PAL recommended that the East Quarter School Site is not eligible for listing in the National Register. NPS agrees with this assessment. As a result, the Park has determined that the installation of the septic system and the landscape improvements will have *No Adverse Effect* on the Minute Man National Historical Park Historic District

## George Hall House

The first house on the George Hall property was likely built circa 1728 by the Minot family. This house was standing during the American Revolution and Amos Barrett reported that he engaged the British column from the vicinity of the Deacon George Minot House on April 19, 1775. The George Hall House was built in 1865 or 1866 by George Hall just east of the first house. The first house was likely demolished sometime in the late 19th century. By 1906 several outbuildings and an ell had been added to the George Hall house. These were subsequently demolished. More information can be found in Chapter 6 of the report.

PAL excavated 40 50-x-50-cm test pits at 10-m intervals and three 2-x-1-m excavation units around house foundation. A total of 646 (1 pre-contact, 645 post-contact) pieces of cultural material was recovered at 0–80 cmbs in Landscape A, Fill, and Apz strata in 28 of test pits and the 3 EUs. Recovered artifact include: 1 rhyolite chipping debris, 290 ceramic, 191 glass, 48 bone, 8 shell, 104 metal, 1 post-contact stone, and 3 synthetic.

PAL interpreted the results of the survey as follows:

The variably filled and plowed soil profiles recorded at the George Hall House are consistent with the use of the property by residents and farmers in the eighteenth to twentieth centuries. The post-Contact materials were recovered across the entire project area in Landscape A, Fill, and plow zone deposits that are not temporally stratified and exhibit no discernible artifact patterning that would indicate anything more than utilitarian landscape modifications designed to fill and level the landscape.

The three excavation units placed along the house foundation on the east, west, and north sides documented deep Fill deposits over Apz, B2, and C subsoil in EU-01 and C subsoil in EU-03. EU-02 contained three Fill deposits with dense rock adjacent to the brick foundation and brick and mortared fieldstone bulkhead wall. The granite block documented in EU-03 separated Fills 1, 3, and 4, cut through Fill 2A, and was above Fills 5–8. The granite block likely represents a landscape border for plantings along the foundation.

An isolated piece of rhyolite chipping debris was found in a Landscape A deposit in the eastern yard near the road. No additional pre-Contact cultural material was recovered from any of the surrounding test pits, and the find spot (if cultural) is not considered a significant archeological resource.

## Finding

After reviewing the data, PAL recommended that the George Hall deposits ineligible for listing in the National Register. NPS agrees with this assessment. As a result, the Park has determined that the installation of the septic system at this property will have *No Adverse Effect* on the Minute Man National Historical Park Historic District.

## Inferrera House

The history of the Inferrera lot is unclear. Although the present house was built in 1923, another house may have been somewhere on the farm as early as 1775. Details about the history of the property can be found in Chapter 8 of the report.

Eight (8) prehistoric and one previously recorded post-Contact site were listed within 0.5 miles of the property. PAL conducted a previous survey in 2019 on the property for the reroute of the Battle Road Trail.

PAL excavated 63 50-x-50-cm test pits at 10-m intervals in the western and main house lots and one 2-x-1-m excavation unit around house foundation. A total of 83 pieces of post-contact cultural material was recovered at 0–110 cmbs in Landscape A, Fill, A1, and Apz in 25 of the test pits and the 1 EU. These artifacts included: 55 ceramic sherds, 17 glass fragments, 2 bone fragments, 8 metal fragments, and 1 post-contact stone.

PAL interpreted the results of the survey as follows:

The variably filled and plowed soil profiles recorded at the Inferrera House main and western lots are consistent with the use of the property by local residents and farmers in the eighteenth to twentieth centuries. The low-density post-Contact cultural materials were recovered across the entire project area in Landscape A, Fill, and plow zone deposits that are not temporally stratified and exhibit no discernible artifact patterning that would indicate anything more than utilitarian landscape modifications designed to fill and level the landscape. EU-04 was placed to document a crack in the mortared fieldstone foundation and showed that it only extends a few inches below the ground surface. The EU documented landscaping Fills around the house and indicated that the foundation is set on natural bedrock at its base.

### *Finding*

After reviewing the data, PAL recommended that the Inferrera deposits are not eligible for listing in the National Register. NPS agrees with this assessment. As a result, the Park has determined that the installation of the septic system at this property will have *No Adverse Effect* on the Minute Man National Historical Park Historic District.

### *Joshua Brooks*

The Joshua Brooks House was built in 1780 immediately southeast of an earlier house that had been built in 1713. The earlier Deacon Joshua Brooks house was extant at least until 1880. More information about the history of the project area can be found in Chapter 9 or the report.

A portion of the Joshua Brooks House project area is within the mapped bounds of the Joshua Brooks Site (19-MD-1008) that is mostly to the north on the other side of North Great Road and adjacent to the Rogers Property Site (19-MD-997). The Joshua Brooks Site is a lithic workshop that contained 381 pieces of cultural material including “six projectile points, fourteen bifaces, 1 uniface, 10 cores, and 350 flakes” of mostly felsite (MHC site form). The Rogers Property Site is a lithic scatter that contained one felsite Merrimack projectile point and two pieces of chipping debris (one quartzite, one felsite), dating to the Middle and Late Archaic periods (MHC site form).

Several previous surveys occurred of this property. They are documented in the following reports:

Pendery, Steven R.

2000 Joshua Brooks House Excavations: Summer, Fall 2000. Unpublished summary report on file Minute Man National Historical Park, Concord, MA.

Kirk, Matthew, Bradley Russell, Thomas Jamison, and Jennifer Geraghty

2020 *Phase IA: Archeological Assessment and KOCOA Analysis, Bloody Angle Battlefield, Minute Man National Historical Park, Massachusetts. North Great Road (Route 2A), Old Bedford Road, and Virginia Road, Towns of Concord and Lincoln, Middlesex County, Massachusetts.* Prepared by Hartgen Archeological Associates, Inc., Rensselaer, NY. Submitted to National Park Service, Minute Man National Historical Park, Concord, MA.

A combination of geophysical, metal-detecting, and traditional survey was completed at this property.

The geophysical survey identified anomalies include possible septic tanks; linear utilities; unidentified structures or objects; buried metal or metal objects.

The metal detection survey identified a total of 94 “hits” with 116 artifacts retained for curation including those identified as: personal (coins, buttons, clothing snap, eyehook, pocket watch part, buckles, sole tacks, toy saucer, toy soldier, pocket knife, jewelry); domestic (furniture hardware, oil lamp burner, lamp parts, spoon, lead seal, key plate); architectural (hand-wrought nails, hinges); agricultural (horseshoes, oxen cue, bullet); and miscellaneous (musket ball, ingot or sabots, lead weight).

Subsurface testing included 84 50-x-50-cm test pits at 5-m intervals. A total of 961 (7 pre-contact, 954 post-contact) pieces of cultural material was recovered at 0–100 cmbs in Landscape A, Fill, and A1 strata in 70 of the 84 test pits. Recovered artifacts included: 773 ceramic, 90 glass, 17 bone, 73 metal, and 8 stone (7 pre-contact, 1 post-contact).

PAL interpreted the results of the survey as follows:

The variably filled soil profiles recorded at the Joshua Brooks House project area are consistent with the use of the property in the eighteenth to twentieth centuries. The Fill deposits extended up to 100 cmbs in the northern half of the front yard space and are consistent with construction and/or raising of North Great Road. Fill deposits were shallower closer to the house and in a few test pits were over buried A1 and B and C subsoils. The post-contact materials were recovered across the entire project area in Landscape A, Fill, and buried A1 deposits. Ceramics recovered from across the site date to the late seventeenth to late eighteenth centuries (tin enamel, Staffordshire, English brown stoneware, and Nottingham Stoneware); the eighteenth and early nineteenth centuries (trailed slipware, Jackfield, white salt glazed stoneware, creamware, Whieldon ware, and pearlware); and the nineteenth century (whiteware, ironstone, yellow ware, and Rockingham). The deposits were not temporally stratified, however, and exhibited no discernible artifact patterning that would indicate anything more than utilitarian landscape modifications designed to fill and level the landscape.

The metal detection survey recovered items dating to the eighteenth century, including six buttons (JB-MD-03, JB-MD-38, JB-MD-40, JB-MD-44, JB-MD-46, and JB-MD-80); a lead spoon fragment (JB-MD-23); a Coronet large cent dating to 1793 to 1893 (JB-MD-25); and a fired/impacted musket ball (JB-MD-06). The musket ball was recovered just north of the northwest corner of the extant house and identified in the field by Joel Bohy (AMDA instructor and Historic Arms and Militaria Director at Bruneau & Co. Auctioneers and specialist/expert appraiser for the television program *Antiques Roadshow*) as a British musket ball based on its size and deformation index. The location of this finding would have been behind the Deacon Joshua Brooks house on April 19, 1775 and may be where the British column or flankers were firing on the militia that were taking positions behind stone walls, barns, and houses as they came down from the top of Brooks Hill. The defining feature of this area identified in the KOCOA report was “Observation and Field of Fire” (Kirk et al. 2020). The musket ball was recovered from the Landscape A strata and was not in situ, but it likely came from the property and was displaced by landscaping activities, possibly the demolition of the 1713 Deacon Joshua Brooks house or installation of a utility line. Although its original strike location cannot be determined, the musket ball still represents important information about the engagement of the British column and the militia along this portion of the Bay Road between Brooks Hill to the west and Elm Brook Hill (Bloody Angle) to the east. The post-contact materials recovered across the entire

project area in Landscape A, Fill, and buried A<sub>1</sub> deposits (and the low density of recovered precontact materials) are designated the Joshua Brooks House Site.

The geophysical survey identified the location of buried utilities, possible buried metal, and possible nonmetallic structures or objects. Archeological testing in these areas confirmed the presence of Fill deposits with metal artifacts and the likely location of the late seventeenth-century Deacon Joshua Brooks House. The geophysical survey identified several locations of possible non-metallic structure or object in the front yard space northwest of the existing house. Archeological test pits in this area confirmed the presence of disarticulated foundation stones likely related to the original 1713 house foundation (Figure 9-7). Two buried utility lines cross this area and several large trees with shallow roots are present; it is uncertain to what extent they have compromised the physical integrity of the foundation remains (see Figure 9-3). A review of historical maps and a ca. 1880 photograph places the Deacon Joshua Brooks house in this general location (see Figures 9-1 and 9-2a and b).

Seven pieces of pre-contact rhyolite chipping debris were recovered at 10–20 cmbs in Landscape A and 70–80 cmbs in Fill deposits. The materials may be related to the previously recorded Joshua Brooks Site (19-MD-1008) to the north or the Rogers Property Site (19-MD-997) to the west. The pre-contact component of the Joshua Brooks House Site represents a low density of cultural material, lacks complexity, has limited research potential and no further archeological investigations of the pre-contact component are recommended.

### *Finding*

PAL identified the Joshua Brooks House Site as potentially eligible for listing in the National Register because of its association with documented eighteenth-century occupations including the events of April 19, 1775. NPS agrees with this assessment.

As a result of the survey, NPS has located the septic improvements and other landscape improvements away from the 1713 Deacon Joshua Brooks house foundation. The project as depicted in the plans will have *No Adverse Effect* on the Joshua Brooks House site or the Minute Man National Historical Park Historic District.

### *Rego House*

The Rego House was constructed between 1890 and 1910 and is thought to be the first improvement on this piece of land. A second house, the Kinsler-Petricca House was built on the adjacent western lot in 1915. The Kinsler-Patricca House was demolished in 1998. More information about the history of the property can be found in Chapter 11 of the report.

Previous archeological work at this property included monitoring for small improvements, including the installation of a cess pool, gas line and cable line between 2000 and 2009.

For this survey, PAL excavated 35 50-x-50-cm test pits at 10-m intervals. A total of 42 pieces of post-contact cultural material was recovered from 9 of the test pits. Artifact types included: 9 ceramics, 31 glass, and 2 metal.

PAL interpreted the results of the survey as follows:

The soil profiles recorded for test pits at the Rego House and Garage project area indicate primarily shallow Landscape A and Fill deposits over natural subsoils across the property and are consistent with grading and landscaping activities of a house lot. All but three porcelain sherds were recovered from the western lot that contained the no longer extant ca. 1915 Kinsler-Petricca

House (MHC# LIN.154). The recovered post-contact materials, designated the Kinsler-Petricca Site, date primarily to the late nineteenth and twentieth centuries, were low density, not temporally stratified, and exhibited no discernible artifact patterning that would indicate anything more than secondary deposition field/yard scatter. Subsurface testing around two separate stone wall structures of one to two courses of dry-laid fieldstones did not identify any significant deposits or soil strata to determine their possible function(s). No associated structures are seen in historical aerial photographs (NETR 1955–2018), and Structures 1 and 2 may represent landscape and/or garden features.

### *Finding*

PAL did not identify potentially significant resources that would be impacted by the current septic or landscape project. NPS agrees with their recommendations and finds that the GAOA projects would have *No Adverse Effect* on the Minute Man National Historical Park Historic District.

### *Stow Hardy House*

The Stow Hardy House is a two-and-one-half story Georgian-style structure that was constructed ca. 1786 based on dendrochronological analysis. Information about the history of the house and property can be found in Chapter 7 of the report.

Portions of the yard were previously surveyed in 2008, 2010, and 2013 for past improvements. There is one known site on the property listed as the Farwell Jones Find Spot (19-MD-1150).

Geophysical and subsurface testing were conducted at this property.

Geophysical survey identified anomalies including possible former foundations or excavation areas; linear utilities; former shallow surface near Lexington Road; unidentified structures or objects; buried metal or metal objects.

PAL excavated 30 50-x-50-cm test pits at 5-m intervals. A total of 627 (1 pre-contact, 626 post-contact) pieces of cultural material was recovered at 0–100 cmbs in Landscape A, Fill, and Apz strata in 26 of the test pits. Artifact types included: 1 quartz chipping debris, 439 ceramic, 88 glass, 45 bone, 5 shell, 1 leather, 44 metal, 1 other mineral, and 3 synthetic.

PAL interpreted the results of the survey as follows:

Barbara Yocum’s historic structure report (2003) notes that the location of the original house constructed ca. 1684–1689 by Nathaniel Stow is not known. It was in this old family home that Olive Stow and her two children are believed to have been living on April 19, 1775. While it is possible that the existing Olive Stow House was constructed on the site of the old house, no obvious remnants of an earlier structure were identified during the 2002 architectural investigation of the extant house. The constraints of the natural terrain suggest that the old house had been sited in the same general vicinity as the existing house: on high ground, above the marshes to the east, and close to the road.

Yocum (2003) also notes that there was physical evidence of a missing two-story wing on the west side of the rear elevation that was discovered in October 2002 beneath the existing shingle siding. Step flashing for a former roof (presumably the east slope of a gable roof) had been nailed flat against the original sheathing boards when the wing was removed ca. 1892. However, the wing or ell is still depicted on the 1906 (Walker) map. The flashing appeared to be zinc, which was employed as a building material as early as the 1840s–1850s. Outcroppings of what may be the remains of an earlier stone foundation, or related to the no longer extant ell, may be seen

today only a short distance from the house on the northwest side. Yocum noted that future archeological investigations may uncover the foundation of the missing wing.

Test pits placed in this area (see Figure 7-2) exposed possible cobble flooring or tumbled foundation remnants near the rock outcropping, supporting that this is the location of the documented rear ell of the house. However, it is unclear if this rear ell was an original portion of the original late seventeenth-century Nathaniel Stow house. The test pits contained deposits with no temporal stratification, with eighteenth- to early to mid-twentieth-century ceramics, nineteenth-century machine made and molded glass, and pre- 1830s to 1900 nails.

Yocum (2003) notes that the stone ruins of what may be the foundation of the missing shed are not far from the house on the north (back) side. This structure appears to have been in dilapidated condition by 1935, judging by a partial view recorded in a photograph from that year. The shed had disappeared from the tax records by 1947. The foundation ruins of the no longer extant shed to the north of the house may incorporate some portion of an earlier structure. This shed foundation was recorded as Foundation 1 in the 2012 archeological survey conducted by PAL (Banister and Herbster 2001), and additional test pits placed in this location did not provide any definitive age or function of this structure. The general consistency of artifact density inside and outside the feature support the interpretation of an outbuilding but could not determine if it was once part of the earlier dwelling house. Test pits excavated in and around the foundation did not contain temporally stratified deposits, with ceramics dating from the late eighteenth through mid-twentieth centuries, primarily nineteenth-century machine made and molded glass, and hand-wrought, machine-cut and wire nails present.

The geophysical survey identified the locations of buried utilities, shallow surfaces, possible former foundations or excavation areas, possible buried metal, and possible unidentified structures or objects. Archeological testing in these areas confirmed the presence of a former pull-off next to Lexington Road that is possibly associated with the ca. 1928–1940 “store” or farm stand; a likely tree throw, from a large tree visible in the 1935 photograph in this area; and buried Fill deposits with dense slag and metal materials. The areas of possible foundation or former excavation directly behind the house have been thoroughly tested and contain deposits associated with the subsurface cobble flooring and Foundation 1 (see above). If the no longer extant late seventeenth-century house and/or earlier barn was in this general location, it has been severely compromised by later construction and landscape modifications. Cultural materials dating to the late seventeenth and eighteenth centuries have been recovered at the site but are intermixed with nineteenth- and twentieth-century material and not from discreet cultural deposits associated with any of the documented households that occupied the Stow-Hardy project area from the late seventeenth to mid-twentieth centuries.

### *Finding*

In PAL’s opinion, the landscape and septic system improvements at the Stow-Hardy property will not impact significant archeological resources. After reviewing the updated plans, NPS agrees with this assessment. The project will have *No Adverse Effect* on the Minute Man National Historical Park Historic District.

### **Barker House**

The Barker House (MHC# LIN.169) is a one-and-one-half-story Cape-style house constructed ca. 1940. It appears to be the first improvement within the current property lines. It is located within a portion of the park called the Bloody Angle, where intense fighting took place on April 19, 1775. More information about the history of the property can be found in Chapter 10 of the report.

The Barker House and Garage project area is within the mapped bounds of the Joshua Brooks Farm Site (19-MD-677). It was also included in the study area reported in *Phase IA Archeological Assessment and KACOA Analysis, Bloody Angle Battlefield, Minute Man National Historical Park, Massachusetts* study area (Kirk et al. 2020).

Both metal detection and subsurface testing were completed at this property.

The metal detection survey had a total of 30 “hits” with 29 artifacts retained for curation: personal (coins, pocketknife, rivet, bullet); agricultural (horseshoe, buckle, or tack fragments); domestic (kettle fragment, spoon, handle, latch); military (musket balls); and some indeterminate ferrous items.

Subsurface testing included 47 50-x-50-cm test pits at 10-m intervals and two 2-x-1-m excavation units. A total of 140 pieces of precontact cultural material recovered at 0–50 cmbs primarily in A1 and B1 strata in 15 of the test pits and 2 EUs: 135 chipping debris (124 rhyolite, 3 felsite, 6 quartz, 1 quartzite, 1 igneous), 1 quartzite biface, 1 rhyolite projectile point fragment, 1 hornfels Atlantic projectile point, and 2 slate possible source material.

PAL interpreted the results of the survey results as follows:

The cultural material recovered from the Barker House and Garage project area are designated the Elm Brook Hill Site. The project area is on a level, well-drained terrace to the east of Elm Brook and its associated wetlands. The pre-contact component of the site is characterized by a moderate density of lithic material recovered from 15 test pits and the 2 EUs at 0–50 cmbs in primarily A1, B1, and B2 strata. Recovered cultural material includes 135 pieces of chipping debris (124 rhyolite, 6 quartz, 1 quartzite, 3 felsite, and 1 igneous), a quartzite biface, an untyped rhyolite projectile point fragment, two possible slate source material, and a hornfels Atlantic projectile point. The Atlantic projectile point dates to the Susquehanna tradition of the Transitional Archaic Period (3600–2500 B.P.). The fragmentary rhyolite projectile point, biface, and the chipping debris do not provide temporal indicators, but indicate the possibility that the site may have been used during more than one temporal period. The site exhibits good integrity, with most of the cultural materials recovered from natural A and B strata. Although no cultural features were identified during the current investigations, the environmental location, diversity of lithic material types identified, and presence of tools and intact soils suggest the site has the potential to contain additional data classes.

The four musket balls recovered during the metal detection survey are related to the events of April 19, 1775, and the Bloody Angle Battle Site. The two dropped British musket balls were approximately 4 m (13 ft) apart and aligned parallel to Old Bedford Road (Bay Road/Battle Road) that currently is approximately 9–10 m (30–33 ft) to the east. Excavation of test pits at and around the musket balls exposed natural strata and no evidence of a former road surface. The two fired (impacted) Colonial militia/Provincial musket balls were recovered less than 28 m (100 ft) and slightly northwest of the dropped British musket balls and only a few feet from each other. The location of the British musket balls found within natural A1 strata strongly indicate they were dropped by a flanking guard and not the main column along the road. The two fired/impacted Colonial militia/Provincial musket balls were also recovered from natural A1 strata, indicating that they are also in situ.

A historical account from militia volunteer Edmond Foster notes that after the bridge over Elm Brook where the road turned sharply to the northeast, the British column “was completely between two fires” and they ordered out a flank guard on the left (the Barker House and Garage project area) to “dislodge the Americans from their posts behind large trees but they only became

a better mark to be shot at” (NPS 2022d). Hafner noted that the location of the Barker House and Garage project area would not be a favorable terrain for the attacking Colonial militia due to the narrow landform between the road and the slope down to Elm Brook and that there would be potential for friendly fire with forces positioned in the orchard on the east side of the road (Kirk et al. 2020: Appendix 2). Kirk et al. (2020) noted that their survey work within this project area could answer an open question about “the presence or absence of a firing line” along the inside of the south bend and the west side of the road to the north. The fired musket balls could have come from pursuing colonial forces on the western side of Elm Brook. Engagement distances for combat in this period trend toward 200 yards but a musket ball with deadly velocity could travel several hundred yards beyond that if unobstructed. The four musket balls recovered from the Barker House and Garage project area help reinforce Foster’s primary account of what occurred at this specific location at the southern end of the Bloody Angle Battle Site, i.e., an engagement between the two forces on the west side of the road.

Kirk et al. (2020) also notes that archeological data, “particularly deformed musket balls,” could provide greater evidence of the presence of wood lots, which are not clearly described in deeds or noted on historical land-use maps. The two Colonial militia/Provincial musket balls were impacted, meaning they hit an obstacle of some sort and possibly the same obstacle because the musket balls were found close to each other. Malcolm (1985) identifies this area as pastureland in 1775, but Foster’s account notes that the British flank guard was sent out to the left in this area to dislodge the militia from their posts “behind large trees.” Kirk et al. (2020) notes, that Malcolm’s (1985) land-use maps should be used as a speculative reconstruction and not a definitive map of the 1775 landscape. There are no documented structures within the Barker House and Garage project area, no evidence of a stone wall, nor is there a large erratic in the vicinity of the musket balls, indicating that they likely struck a tree. Whether this area was pastureland with a few large trees or was a woodlot in 1775 is not certain, but the findings lend credence to Kirk et al.’s (2020) idea that the archeological data could confirm or refute the historical records.

Testing across the property and near and adjacent to the existing stone wall exposed intact, natural soil strata consisting of A1 over B1, B2, and C subsoils. No evidence of a former road surface or buried remnant eighteenth-century stone wall was uncovered in any of the test pits or either excavation unit. EU-05, placed adjacent to the stone wall, exposed one additional buried course set into the A1 stratum. Kirk et al. (2020) noted that Thorson and LeNoir’s preliminary investigation (pending) of the stone walls in their study area concluded that the segment of stone wall (Wall #1) running along the west side of present-day Old Bedford Road in the Barker House and Garage project area is not from the eighteenth century. The construction of the wall and the presence of pink granite indicate that it was likely reconstructed either by the NPS when the modern highway (Route 2A) was constructed in the late nineteenth century or when the NPS purchased and razed the majority of the house lots along Old Bedford and Virginia roads (Kirk et al. 2020). Although the location of the stone wall may be generally accurate in relation to the documented eighteenth-century stone wall on the west side of the Bay Road, most of its current iteration is reconstructed and not the original wall.

The horizontal extent of the pre-contact materials is approximately 1,400 square meters and could extend outside the project area in all directions, including northwest to the lower terrace along Elm Brook. These newly recovered pre-contact deposits may be related temporally to nearby recorded pre-contact sites: the Joshua Brooks Farm Site (19-MD-677) or Hartwell Farm Site (19-MD-119) along Elm Brook and also on MIMA property. It is also likely that additional material related to the April 19, 1775 battle are present beyond the limits of the metal detection survey in all directions.

### *Finding*

PAL identified the Elm Brook Hill Site within the Barker House and Garage project area as potentially eligible for listing in the National Register because of its association with Native American occupation during the Transitional Archaic Period and the events of April 19, 1775. As a result of this survey, NPS decided not to move forward with installing a septic system at the Barker House or doing any ground-disturbing landscape work.

### **Finding and Next Steps**

NPS finds that there will be *No Adverse Effect* finding for the following work:

- Landscape and septic improvements at the Rego House
- Septic System improvements at:
  - East Quarter School
  - George Hall House
  - Stow-Hardy House
  - Inferrera House
  - Joshua Brooks House

We thank you for your partnership as we move through this very complicated project. If you have any questions about how the process is moving forward, please contact Margie Coffin Brown at [Margie\\_Coffin\\_Brown@nps.gov](mailto:Margie_Coffin_Brown@nps.gov) or 617-620-2942.

Sincerely,

*Simone Monteleone*

Simone Monteleone  
Superintendent

Enclosures:  
Landscape 65% Design Package  
CRM Team Comments

Cc: Margo Brooks, NPS-NERO  
Matt Flynn, NPS-NERO  
Margie Brown, NPS-NERO  
Nicole Walsh, NPS-MIMA





# MIMA GAOA Project Component S106 Review May 2023

Landscape Work

## INSTRUCTIONS FOR REVIEWERS

Please find the property that you are reviewing and provide your S106 advisor comments on this table as you would in PEPC. See Row 1 for an example.

1. Add your name to column 2 in the proper box. If you are not one of the advisors listed, add a row and include your name and role.
2. Provide your S106 advisor comments in column 3 as you would in PEPC.
3. Indicate your assessment of effect in column 4. **NAE** (No Adverse Effect) or **AE** (Adverse Effect)
4. Determine if in your opinion the project is streamlined (**S**) or 4-step (**4-step**) and indicate that in column 5. If it is streamlined, add the streamlined review activity number that best fits. The full descriptions for streamlined activities can be found in the [Nationwide PA](#).
5. Add any conditions or stipulations in column 7.
6. We will have a second chance to review these packages. During the second review, please indicate in column 6 if your review has changed and update your comments if necessary.

|   |
|---|
| 1. Preservation Maintenance and Repair of Historic Properties   |
| 2. Rehabilitation and/or Minor Relocation of Existing Trails, Walks, Paths, and Sidewalks   |
| 3. Repair/Resurfacing/Removal of Existing, Roads, Trails and Parking Areas  |
| 4. Health and Safety Activities   |
| 5. Routine Grounds Maintenance  |
| 6. Battlefield Preservation and Management  |
| 7. Hazardous Fuel and Fire Management   |
| 8. Installation of Environmental Monitoring Units   |
| 9. Maintenance or Replacement of Non-Historic Utility Lines, Transmission Lines, and Fences   |
| 10. Erection of Signs, Wayside Exhibits, and Memorial Plaques   |
| 11. Culvert Replacement   |
| 12. Reburial of Human Remains and Other Cultural Items Subject to the Native American Graves Protection and Repatriation Act (NAGPRA) |
| 13. Meeting Accessibility Standards in Historic Structures and Cultural Landscapes  |
| 14. Mechanical, Electrical and Plumbing Systems   |
| 15. Acquisition of Lands for Park Purposes  |
| 16. Leasing of Historic Properties  |

| Project Component  | Advisor Name/Type                     | Comments  | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations  |
|--|---------------------------------------|---|----------------------|----------------------|------------------------|--|
| <i>Sample Project Component</i>  | <i>M. Brooks—S106 Advisor</i>         | <i>The work is all in kind and meets the strict definition of streamlined activity #1.</i>    | <i>NAE</i>           | <i>S-#1</i>          | <i>No Change</i>       | <i>If excavation is needed ensure that the archeological advisor is notified in advance so that monitoring can occur.</i>  |
| <b>Stone Wall Repair (Throughout Park)</b>   | Stephen Pisani - Historical Architect |   |                      |                      |                        |  |
|  | Eliot Foulds - Landscape Architect    | <b>This work consists of preservation maintenance as described. Streamlined undertaking.</b>  | NAE                  | S-#1                 | No change              |  |
|  | Joel Dukes - Archeologist             |   | NAE                  | S-#1                 | No change              | <b>Archaeological monitoring of wall footing excavations and walls that act as retaining walls.</b>  |
|  | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.           | NAE                  | S-#1                 | No change              | <b>An archeologist should monitor any repairs that require excavation deeper than existing wall bases.</b>   |
|  | N. Walsh – S106 Specialist (MIMA)     |   |                      |                      |                        |  |
|  | Matt Flynn - Archeologist             |   |                      |                      |                        |  |
| <b>Septic System Final Placements (East Quarter School, George Hall House, Stow-Hardy House, Inferrera House, Joshua Brooks House, Rego House)</b> | Stephen Pisani - Historical Architect |   |                      |                      |                        |  |
|  | Eliot Foulds - Landscape Architect    | No Adverse effect to the above ground characteristics and features of the cultural landscape. | NAE                  | 4-step               | No change              |  |
|  | Joel Dukes - Archeologist             | <b>Locations were included in phase I archaeological investigations.</b>                      | NAE                  | 4step                | No change              | Based on results and recommendations of the Phase I investigations the proposed septic locations are unlikely to impact significant intact archaeological resources. I recommend archaeological monitoring of Joshua Brooks septic installation. |

| Project Component                        | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations   |
|--|---------------------------------------|--|----------------------|----------------------|------------------------|---|
|  | M. Brooks—S106 Advisor                |  | NAE                  | 4-step               | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
|  | Matt Flynn - Archeologist             |  |                      |                      |                        |   |
| <b>Monument Street and Buttrick Wall</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101324</b>                       | Eliot Foulds - Landscape Architect    | <b>This work consists of preservation maintenance as described. Streamlined undertaking.</b> | NAE                  | SL#1                 | No change              |   |
|  | Matt Flynn - Archeologist             |  |                      |                      |                        | Excavation for wall shall be limited to the smallest amount possible. If excavation beyond the existing footer or base materials is necessary, an archeological monitor must be present |
|  | M. Brooks                             | The work is all in kind and meets the strict definition of streamlined activity #1.          | NAE                  | SL-#1                | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Buttrick Garden Plan</b>              | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101324</b>                       | Joel Dukes - Archeologist             | Plans do not indicate major subsurface disturbance.  | NAE                  | SL                   | No change              | No archaeological investigations are needed prior to project.   |
|  | Matt Flynn - Archeologist             |  |                      |                      |                        |   |
|  | M. Brooks                             | The work is all in kind and meets the strict definition of streamlined activity #1.          | NAE                  | SL-#1                | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Maj. John Buttrick Landscape</b>      | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |

| Project Component             | Advisor Name/Type                     | Comments  | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations   |
|-------------------------------|---------------------------------------|---|----------------------|----------------------|------------------------|---|
| PEPC 101324                   | Eliot Foulds - Landscape Architect    | This work consists of preservation maintenance as described. Streamlined undertaking. Rehabilitation of existing features and removal of hazard-prone trees.            | NAE                  | SL-#1                | No change              |   |
|                               | Matt Flynn - Archeologist             |   |                      |                      |                        | Tree plantings need to be archaeologically investigated prior to installation, J.Dukes  |
|                               | M.Brooks—S106 Advisor                 | The work is all in kind and meets the strict definition of streamlined activity #1.   | NAE                  | SL-#1                | No change              |   |
|                               | N. Walsh – S106 Specialist (MIMA)     |   |                      |                      |                        |   |
| <b>Elisha Jones Landscape</b> | Stephen Pisani - Historical Architect |   |                      |                      |                        |   |
| PEPC 101324                   | Eliot Foulds - Landscape Architect    | Repairs to ex. Flagstone paving, brick walkways, resetting gateposts, planting of vegetation for screening adjacent neighbor pool                                       | NAE                  | 4-step               | No change              |   |
|                               | Joel Dukes - Archeologist             | If deep subsurface excavations are needed to reset gate post archaeological monitoring is needed.   | NAE                  | SL                   | No change              | Tree planting locations need to be archaeologically investigated prior to installation. |
|                               | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.   | NAE                  | SL-#1                | No change              |   |
|                               | N. Walsh – S106 Specialist (MIMA)     |   |                      |                      |                        |   |
| <b>Wayside Landscape</b>      | Stephen Pisani - Historical Architect |   |                      |                      |                        |   |
| PEPC 101001                   | Eliot Foulds - Landscape Architect    | Resetting front stone walk, repairing gravel walk to barn, tree planting, etc. This is landscape preservation maintenance. No Adverse Effect to the cultural landscape. | NAE                  | SL #1                | No change              |   |

| Project Component            | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations  |
|------------------------------|---------------------------------------|--|----------------------|----------------------|------------------------|--|
|                              | Joel Dukes - Archeologist             |  |                      |                      |                        | Recommend Archaeological monitoring of excavation needed to reset retaining walls. Tree planting locations need to be archaeologically investigated prior to installation. |
|                              | M. Brooks—S106 Advisor                | Defer to archeologist for splash blocks.   | NAE                  | SL-#1                | No change              |  |
|                              | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |  |
| <b>Meriam Landscape</b>      | Stephen Pisani - Historical Architect |  |                      |                      |                        |  |
| <b>PEPC 101132</b>           | Eliot Foulds - Landscape Architect    | Remove parallel parking on Old Bedford Road; planting of two elms to replace trees disfigured by line-clearance pruning.   | NAE                  | 4-step               | No change              |  |
|                              | Joel Dukes - Archeologist             |  |                      |                      |                        | Archaeological testing needed for fence post and new tree plantings.   |
|                              | M. Brooks—S106 Advisor                | 4-Step due to the new fence and walkways.  | NAE                  | SL #1                | 4-step                 | Drainage, fence & new walkway-defer to archeologist.   |
|                              | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |  |
| <b>Burke House Landscape</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |  |
| <b>PEPC 101132</b>           | Eliot Foulds - Landscape Architect    | New walkway to back of the house from parking area ; tree replacement (5X) based on mortality of white pine row. No Adverse Effect to the above ground qualities of the cultural landscape | 4-step               |                      | 4-step                 |  |
|                              | Joel Dukes - Archeologist             | <b>There isn't any detail for path installation, does it require excavation?</b>   |                      |                      |                        | Archaeological testing of new tree locations needed prior to installation  |
|                              | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.  | NAE                  | None                 | 4-step                 |  |

| Project Component                    | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations  |
|--------------------------------------|---------------------------------------|--|----------------------|----------------------|------------------------|--|
|                                      | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |  |
| <b>East Quarter School Landscape</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |  |
| <b>PEPC 101132</b>                   | Eliot Foulds - Landscape Architect    | Replace existing concrete walk, repave asphalt drive, remove clothesline support, remove non-historic landscape plantings and lawn rehab. No-Adverse Effect on above ground characteristics and features; Streamlined undertaking. | NAE                  | SL-#1                | No Change              |  |
|                                      | Joel Dukes - Archeologist             | <b>The entire East Quarter School lot was tested for the septic project. No significant archaeological resources were identified.</b>  | NAE                  | SL                   | No change              | <b>No additional investigations are needed prior to project.</b> |
|                                      | M. Brooks—S106 Advisor                | Is the concrete path new?  | NAE                  | SL-#1                | No change              |  |
|                                      | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |  |
| <b>Jones-Stowe Landscape</b>         | Stephen Pisani - Historical Architect |  |                      |                      |                        |  |
| <b>PEPC 101132</b>                   | Eliot Foulds - Landscape Architect    | Resurfacing existing unpaved vehicular routes with crushed stone   | NAE                  | 4-step               | No change              |  |
|                                      | Joel Dukes - Archeologist             |  | NAE                  |                      |                        | <b>No additional archaeological investigations needed.</b>       |
|                                      | M. Brooks—S106 Advisor                | How do the new drives and paths relate to existing?  | NAE                  | 4-step               | No change              |  |
|                                      | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |  |
| <b>Carty Barn Landscape</b>          | Stephen Pisani - Historical Architect |  |                      |                      |                        |  |

| Project Component          | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations   |
|----------------------------|---------------------------------------|--|----------------------|----------------------|------------------------|---|
| PEPC 101132                | Eliot Foulds - Landscape Architect    | Repair to barn ramp. Placement of additional crushed stone gravel over an existing unpaved drive(s). No Adverse Effect on the cultural landscape | NAE                  | SL-#1                | No change              |   |
|                            | Joel Dukes - Archeologist             |  |                      |                      | No change              | No additional archaeological investigations needed.   |
|                            | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.  | NAE                  | SL-#1                | No change              |   |
|                            | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>George Hall House</b>   | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| PEPC 101132                | Eliot Foulds - Landscape Architect    | New tenant parking at rear of dwelling. New concrete path system proposed around Geo. Hall house. NAE with stipulations.                         | NAE                  | 4-step               | No change              | NAE provisional upon elimination of the new walkway encircling the house leading to the front door. |
|                            | Joel Dukes - Archeologist             | <b>Entire George Hall property archaeologically investigated for septic project. No significant resources identified.</b>                        | NAE                  |                      | No change              | No additional archaeological investigations needed.   |
|                            | M. Brooks—S106 Advisor                | New walks and driveway   | NAE                  | 4-step               | No change              |   |
|                            | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Inferrera Landscape</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| PEPC 101132                | Eliot Foulds - Landscape Architect    | Extensive reconfiguration of existing circulation route. Rehabilitation of the   | NAE                  | 4-step               | No change              |   |

| Project Component                             | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations                               |
|---|---------------------------------------|--|----------------------|----------------------|------------------------|---|
|   |                                       | cultural landscape, reduction of pavement.<br>No Adverse Effect  |                      |                      |                        |   |
|   | Joel Dukes - Archeologist             | The Inferrera property was included in the Septic System project archaeological investigations. No significant resources were identified.  |                      |                      | No change              | No additional archaeological investigations needed.   |
|   | M. Brooks—S106 Advisor                | New walks and drives   | NAE                  | 4-step               | No change              |   |
|   | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Sam Brooks Landscape</b>                   | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>                            | Eliot Foulds - Landscape Architect    | Adding gravel to existing driveway, adding bump-out parking to terminus of driveway. Adding new orchard trees to screen existing parking lot from view from Route 2A. Rehabilitation. No Adverse Effect to above ground characteristics and features of the cultural landscape | NAE                  | 4-step               | No change              |   |
|   | Joel Dukes - Archeologist             | Is excavation needed for gravel drive?   |                      |                      | No change              | Archaeological testing needed for new tree locations. |
|   | M. Brooks—S106 Advisor                |  | NAE                  | 4-step               | No change              |   |
|   | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Noah Brooks and Roger's Barn Landscape</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>                            | Eliot Foulds - Landscape Architect    | Repairs to retaining walls, repair to brick walkway; erosion mitigation with addition of   | NAE                  | SL#1                 | No change              |   |

| Project Component                | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations   |
|----------------------------------|---------------------------------------|--|----------------------|----------------------|------------------------|---|
|                                  |                                       | gravel between dwelling and barn. adding crushed stone to existing unpaved driveway. Work is landscape preservation maintenance. No-Adverse. Streamlined.  |                      |                      |                        |   |
|                                  | Joel Dukes - Archeologist             |  |                      |                      |                        | <b>Archaeological monitoring needed for retaining wall excavation and barn drain.</b> |
|                                  | M. Brooks—S106 Advisor                |  | <b>NAE</b>           | <b>SL-#1</b>         | <b>No change</b>       |   |
|                                  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Joshua Brooks Landscape</b>   | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>               | Eliot Foulds - Landscape Architect    | Repair and reset of walkways and stairs. Project work is landscape preservation maintenance. No-Adverse; streamlined   | <b>NAE</b>           | <b>Streamlined</b>   | <b>No change</b>       |   |
|                                  | Joel Dukes - Archeologist             |  | <b>NAE</b>           | <b>4-step</b>        |                        | <b>Archaeological monitoring recommended for retaining wall and septic system.</b>    |
|                                  | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.  | <b>NAE</b>           | <b>4-step</b>        | <b>SL-#1</b>           | <b>Sceptic reviewed separately.</b>   |
|                                  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Hartwell Tavern Landscape</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>               | Eliot Foulds - Landscape Architect    | Add new gravel to existing unpaved driveway; Addition of new street tree plantings for succession to ailing maple trees at edge of road; repair and replace rail and rider fence, replace gate. Rehabilitation due to new plantings. | <b>NAE</b>           | <b>4-step</b>        | <b>No change</b>       |   |
|                                  | Joel Dukes - Archeologist             |  | <b>NAE</b>           | <b>4-step</b>        | <b>No change</b>       | <b>Archaeological testing needed for tree plantings.</b>                              |

| Project Component   | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations                             |
|---|---------------------------------------|--|----------------------|----------------------|------------------------|---|
|   | M. Brooks—S106 Advisor                |  | NAE                  | 4-step               | No change              | 4-step due to gate replacement and planting beds    |
|   | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Rego House</b>   | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>  | Eliot Foulds - Landscape Architect    | Accessibility project, new wooden ramp; install asphalt drive at MIMA Ranger Station. Work is Rehabilitation. No Adverse Effect                  | NAE                  | None                 | 4-step                 |   |
|   | Joel Dukes - Archeologist             | Rego was included in septic system investigations. No significant resources were encountered.  | NAE                  | None                 | 4-step                 | No additional archaeological investigations needed. |
|   | M. Brooks—S106 Advisor                |  | NAE                  | None                 | 4-step                 |   |
|   | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Comfort Station, Hartwell Chimney, Captain William Smith</b> | Stephen Pisani - Historical Architect | Repair of existing brick pavement at CS; Resurfacing path/trail at Chimney;. Work is landscape preservation maintenance. No Adverse, Streamlined | NAE                  | Streamlined          | No change              |   |
| <b>PEPC 101132</b>  | Eliot Foulds - Landscape Architect    |  |                      |                      |                        |   |
|   | Joel Dukes - Archeologist             |  | NAE                  | SL                   | No change              | No archaeological investigations needed.            |
|   | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.  | NAE                  | SL#1                 | No change              |   |
|   | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Revere Capture Site Landscape</b>                            | Stephen Pisani - Historical Architect |  | NAE                  | SL                   | No change              |   |

| Project Component                      | Advisor Name/Type                     | Comments   | Assessment of Effect | Streamline or 4-Step | 2 <sup>nd</sup> Review | Conditions/Stipulations                                   |
|--|---------------------------------------|--|----------------------|----------------------|------------------------|---|
| <b>PEPC 101132</b>                     | Eliot Foulds - Landscape Architect    | Work is lawn repair and preservation maintenance .;  |                      |                      |                        |   |
|  | Joel Dukes - Archeologist             |  | NAE                  | SL                   | No change              | No archaeological investigations needed.                  |
|  | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.                          | NAE                  | SL-#1                | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Nelson Farm Landscape</b>           | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>                     | Eliot Foulds - Landscape Architect    | New tree plantings at Visitor Center Parking Lot. This is preservation maintenance. Parking lot not historic | NAE                  | Streamlined          | No change              |   |
|  | Joel Dukes - Archeologist             |  |                      |                      |                        |   |
|  | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.                          | NAE                  | SL-#1                | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |
| <b>Minute Man VC, Parker's Revenge</b> | Stephen Pisani - Historical Architect |  |                      |                      |                        |   |
| <b>PEPC 101132</b>                     | Eliot Foulds - Landscape Architect    | Install new barways at edge of trail to discourage shortcutting.   | NAE                  | 4-step               | No change              |   |
|  | Joel Dukes - Archeologist             | Trees and trails in locations that are already altered.  | NAE                  | 4-step               | No change              | No archaeological investigations needed prior to project. |
|  | M. Brooks—S106 Advisor                | 4-step due to bar way  | NAE                  | 4-step               | No change              |   |
|  | N. Walsh – S106 Specialist (MIMA)     |  |                      |                      |                        |   |

| <b>Project Component</b>    | <b>Advisor Name/Type</b>              | <b>Comments</b>  | <b>Assessment of Effect</b> | <b>Streamline or 4-Step</b> | <b>2<sup>nd</sup> Review</b> | <b>Conditions/Stipulations</b>  |
|-----------------------------|---------------------------------------|--|-----------------------------|-----------------------------|------------------------------|---|
| <b>Whittemore Landscape</b> | Stephen Pisani - Historical Architect |  |                             |                             |                              |   |
| <b>PEPC 101132</b>          | Eliot Foulds - Landscape Architect    | Addition of gravel crushed stone over top of an existing unpaved driveway; planting of new trees between dwelling and public road. Work is Rehabilitation. No Adverse – 4-step | <b>NAE</b>                  | <b>None</b>                 | <b>4-Step</b>                |   |
|                             | Joel Dukes - Archeologist             |  |                             |                             | <b>No change</b>             | <b>Archaeological testing of new tree planting locations and orchard fencing prior to installation.</b> |
|                             | M. Brooks—S106 Advisor                | .  | <b>NAE</b>                  | <b>None</b>                 | <b>4-Step</b>                |   |
|                             | N. Walsh – S106 Specialist (MIMA)     |  |                             |                             |                              |   |
| <b>Fiske Hill</b>           | Stephen Pisani - Historical Architect |  |                             |                             |                              |   |
| <b>PEPC 101132</b>          | Eliot Foulds - Landscape Architect    | Meadow management and revitalization. Work is landscape preservation maintenance. No Adverse; Streamlined.   | <b>NAE</b>                  | <b>Streamlined</b>          | <b>No change</b>             |   |
|                             | Joel Dukes - Archeologist             |  | <b>NAE</b>                  | <b>SL</b>                   | <b>No change</b>             | <b>No archaeological investigations needed prior to project.</b>  |
|                             | M. Brooks—S106 Advisor                | The work is all in kind and meets the strict definition of streamlined activity #1.  | <b>NAE</b>                  | <b>SL-#1</b>                | <b>No change</b>             |   |
|                             | N. Walsh – S106 Specialist (MIMA)     |  |                             |                             |                              |   |

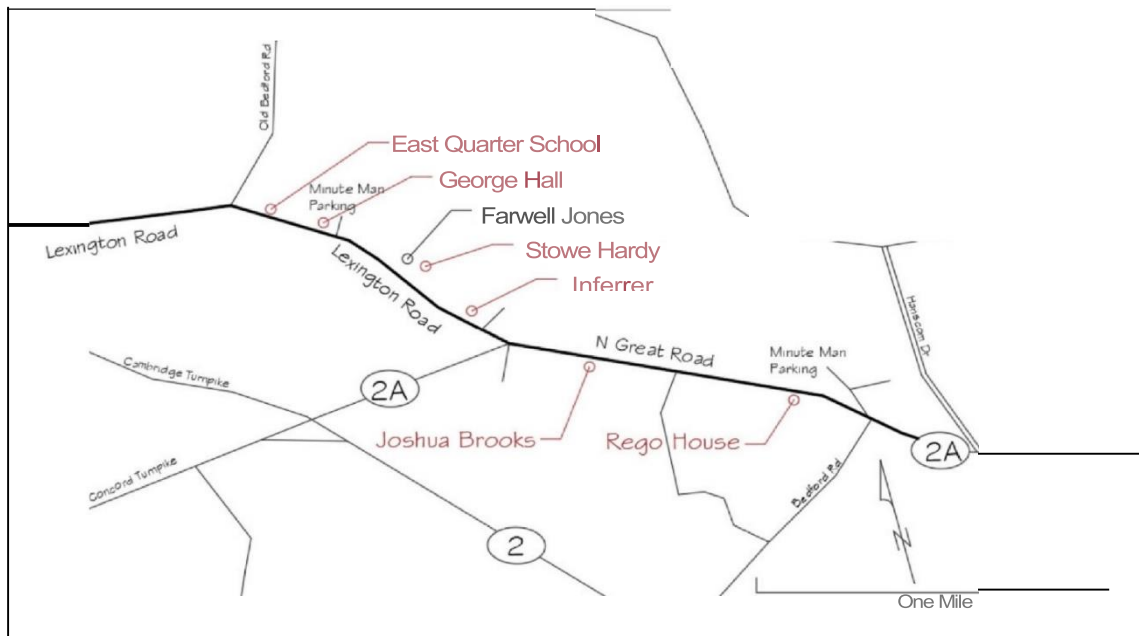
## SCOPE OF WORK (SOW)

### Minuteman National Historical Park – Septic Systems

March 3, 2023

#### BACKGROUND AND PURPOSE:

Six structures (see map below) at Minuteman National Historical Historic Park are being rehabilitated for use as single family residences. These structures have historical significance to the park. Most structures have municipal water, telephone, and natural gas service. All have existing sanitary systems which do not meet modern standards.



#### SCOPE AND OBJECTIVES:

In general, the scope of this project is to provide Title 5 engineering services to develop the required construction drawings and specifications for the local jurisdictions having authority to obtain permits, complete inspections, and approve the work for the sanitary systems. The drawings shall include but not be limited to creating the necessary site plans, elevations, cross sections, and specifications as required.

The scope of the site work will include final layout of new systems, salvaging topsoil for reuse, removal of existing septic tanks (if present), providing new self-contained grinder pump stations (if required), installing new sanitary systems at five structures, installing a septic tank that is tied into an existing septic system at one structure. Work will also require site clean-up and disposal of debris and excess soil off-site, topsoil replacement, fine grading for drainage, and seeding, fertilizing, and mulching.

An archeology monitor will be required, provided by the contractor, to monitor all excavations.

#### SUPPORTING INFORMATION:

The following attachments are on file and will be provided upon request including the following:

1. Architectural drawings for the rehabilitation of structures:
  - a. East Quarter Schoolhouse
  - b. George Hall House
  - c. Inferrera House
  - d. Stow-Hardy House
2. Landscape drawings, in AutoCAD format, showing existing topography, general site plan, and wetland delineations at structures:
  - a. East Quarter Schoolhouse
  - b. George Hall House
  - c. Inferrera House
  - d. Stow-Hardy House
  - e. Joshua Brooks House
  - f. Rego House
3. Construction schedule for contractor rehabilitating structures.
4. Construction schedule for contractor rehabilitating the park trails.
5. Park schedule for scheduled events and staff contact list.
6. A wetlands delineation report is attached to this document.

**PURCHASE ORDER REQUIREMENTS, DELIVERABLES, AND TIMELINE:**

The following tasks are included in this contract:

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**Task #1 – Deliverable: Confirm Existing Conditions/Obtain Permits**

**Timeline Estimate: 60 days**

1. Confirm existing conditions including work by other contractors, field staking, topographic information supplied by government, wetlands delineation report supplied by government.
2. Investigate permitting requirements with local jurisdictions.
3. Develop drawings and specifications for the septic systems sealed by a licensed engineer in the State of Massachusetts.
4. Obtain all necessary permits.
5. Submit required documents to the contracting officer including but not limited to:
  - Copy of approved construction drawings and specifications with engineer's seal.
    - Include plans, elevations, sections, details,
    - Include construction material descriptions and dimensions,
    - Include manhole openings, covers, and pipe connections,
    - Show that new construction is outside 100' wetlands boundary when possible.
  - a. Manufacturer's literature and certificates of compliance with the reference standards.
  - b. Product data sheets.
  - c. Manufacturer's installation instructions.
  - d. Copies of permits.
  - e. O&M Manual(s) for packaged sewer pumping station.
  - f. Designation of a Project Supervisor
  - g. Proposed work schedule
  - h. Accident prevention plan
  - i. Waste management plan

- j. Tree protection plan
- k. Topsoil, seed, and fertilizer certifications

**Task #2 – Deliverable: Site Mobilization**

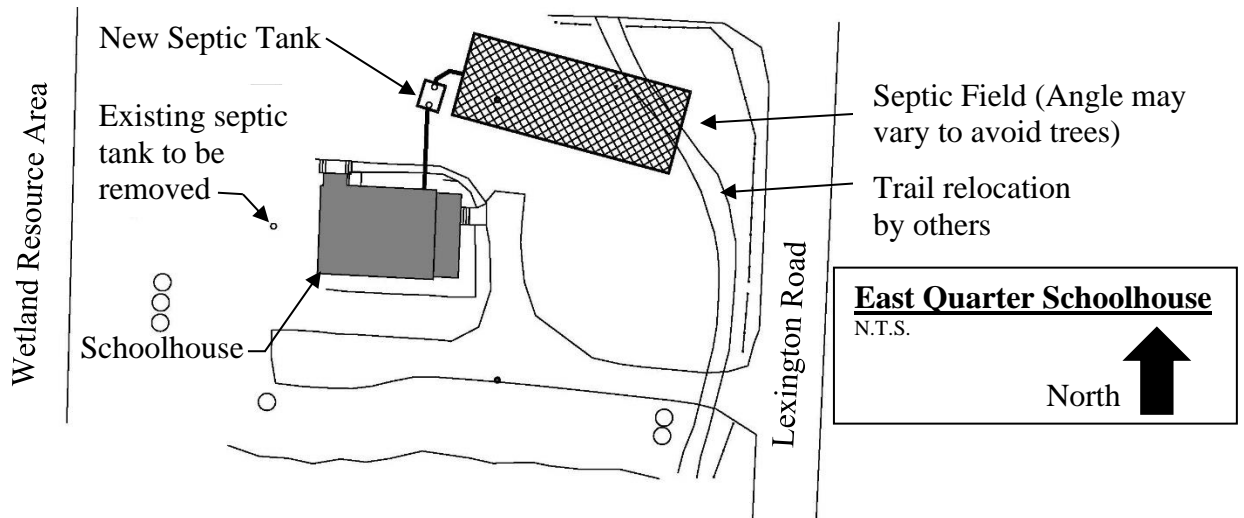
**Timeline Estimate: 5 days**

1. Site mobilization to include but not be limited to:
  - a. Coordination with building contractor and/or trail contractor (if present).
  - b. Installation of erosion control measures.
  - c. Protection of all woody vegetation to remain.
  - d. Protection of existing pavement.
  - e. Protection of other existing site improvements.
  - f. Protection of wetlands and 100' wetlands boundary.
  - g. Locate and protect existing underground utilities.
  - h. Staking for new work performed under this contract.
  - i. Delivery of materials to an approved staging area directly adjacent to work area.
  - j. Delivery of equipment.
2. All equipment mobilized on-site shall be free of excess soil and/or plant material collected off-site which could potentially contain exotic/invasive species.
3. Labor practices, tools and equipment shall meet or exceed OSHA requirements. In case of conflicts between Federal, State, and local safety and health requirements, the most stringent shall apply.

**Task #3 – Deliverable: Septic System - East Quarter Schoolhouse**

**Timeline Estimate: 5 days**

**737 Lexington Rd.  
 Concord, MA 01742  
 Lot #4225  
 5 Bedroom House**



GENERAL SCOPE OF WORK:

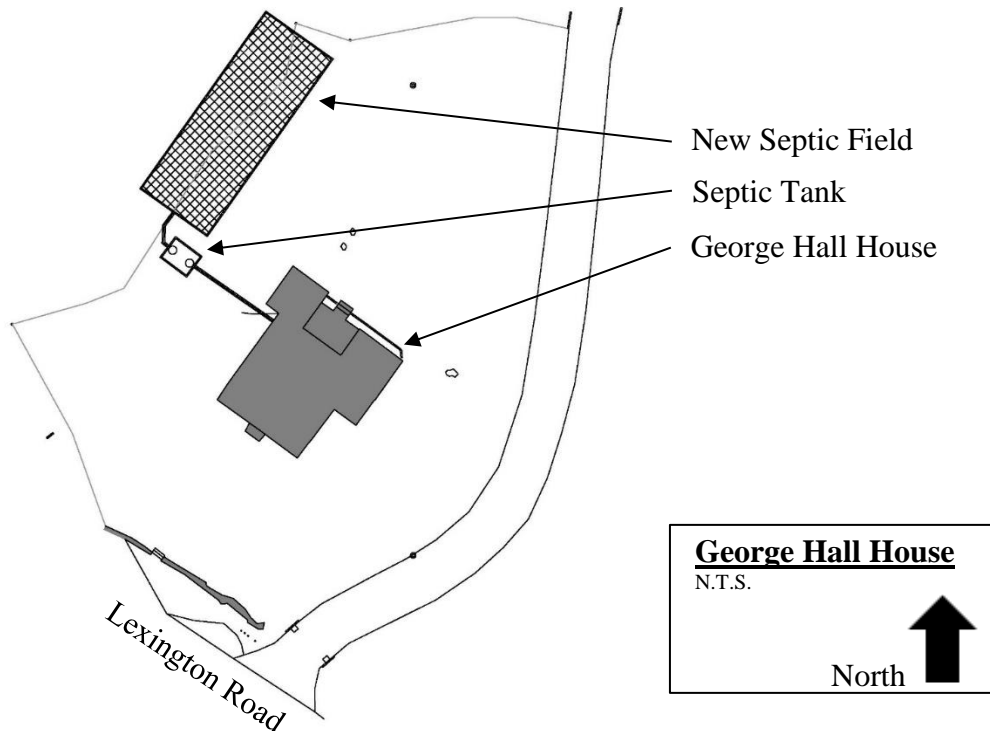
1. Demolition of existing septic tank. Plug exposed incoming and outgoing pipes.
2. Connect 30 L.F. of 4" PVC from house sanitary line stubbed out of house by others.
3. Excavate and install one a 2,000-gallon (est.) precast concrete septic tank and one distribution box.
4. Install secured cast iron manhole covers with frames on precast risers located on tank and distribution box (three total).
5. Connect tank to proposed distribution box and septic field with 15 L.F. 4" PVC with elbows.
6. Trench for 4" perforated PVC pipe w/ required fittings. Field shall be four (4) lateral runs of 79 feet each (assumed).
7. Stone backfill around tank and pipes.
8. Place metallic warning tape over system.
9. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

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**Task #4 – Deliverable: Septic System - George Hall House**

**Timeline Estimate: 5 days**

**831 Lexington Rd.  
Concord, MA 01742  
Lot #4229-5  
6 Bedroom House**



GENERAL SCOPE OF WORK:

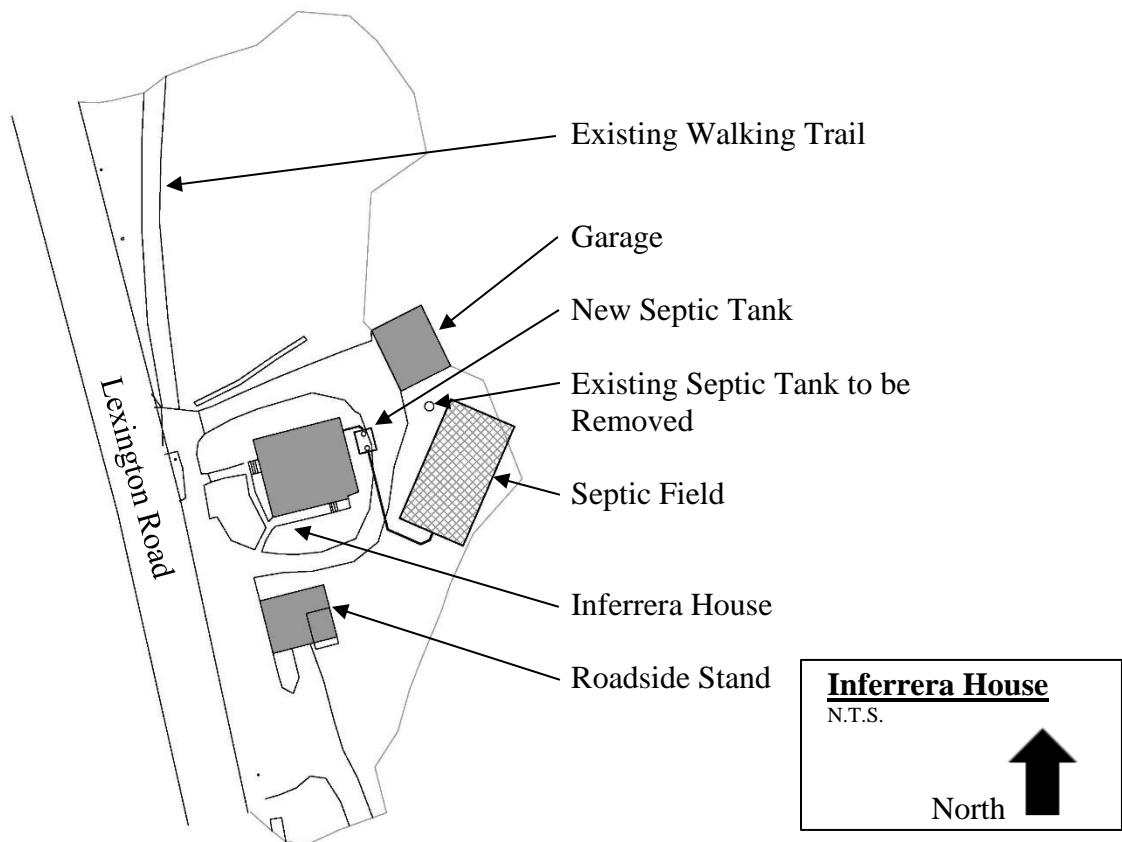
1. Connect 35 L.F. 4" PVC from house sanitary line stubbed out of house by others.
2. Excavate and install one 2,000-gallon (est.) precast concrete septic tank and one distribution box.
3. Install secured cast iron manhole covers with frames on precast risers located on tank and distribution box (3 total).
4. Connect tank to proposed distribution box and septic field with 15 L.F. 4" PVC w/ elbows.
5. Trench for 4" perforated PVC pipe w/ required fittings. Field to be four runs of 78.5' assumed.
6. Stone backfill around tank and pipes.
7. Place metallic warning tape over system.
8. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

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**Task #5 – Deliverable: Septic System – Inferrera House**

**Timeline Estimate: 5 days**

**1087 Lexington Rd.  
Concord, MA 01742  
Lot #1087  
4 Bedroom House**



GENERAL SCOPE OF WORK:

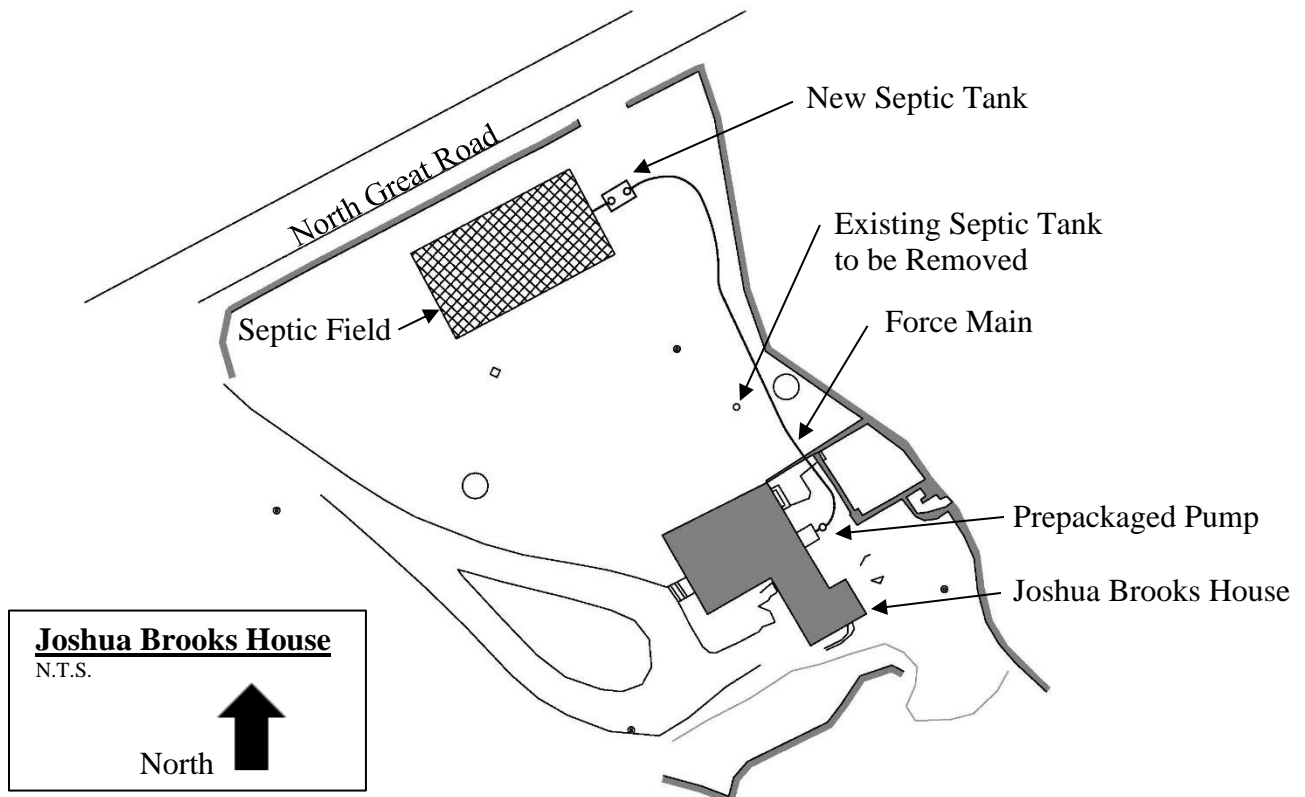
1. Demolition of existing septic tank. Plug exposed incoming and outgoing pipes.
2. Connect 15 L.F. 4" PVC from house sanitary line stubbed out of house by others.
3. Excavate and install one 1,500-gallon (est.) precast concrete septic tank.
4. Install secured cast iron manhole covers with frames on precast risers located on tank and distribution box (three total).
5. Connect tank to proposed septic field with 50 L.F. 4" PVC with elbows.
6. Trench for 4" perforated PVC pipe w/ required fittings. Field shall be four (4) lateral runs of 56 feet each assumed.
7. Stone backfill around tank and pipes.
8. Place metallic warning tape over system.
9. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

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**Task #6 – Deliverable: Septic System – Joshua Brooks House**

**Timeline Estimate: 8 days**

**41 North Great Road  
Lincoln, MA 01773  
Lot #109\_3\_0  
4 Bedroom House**



GENERAL SCOPE OF WORK:

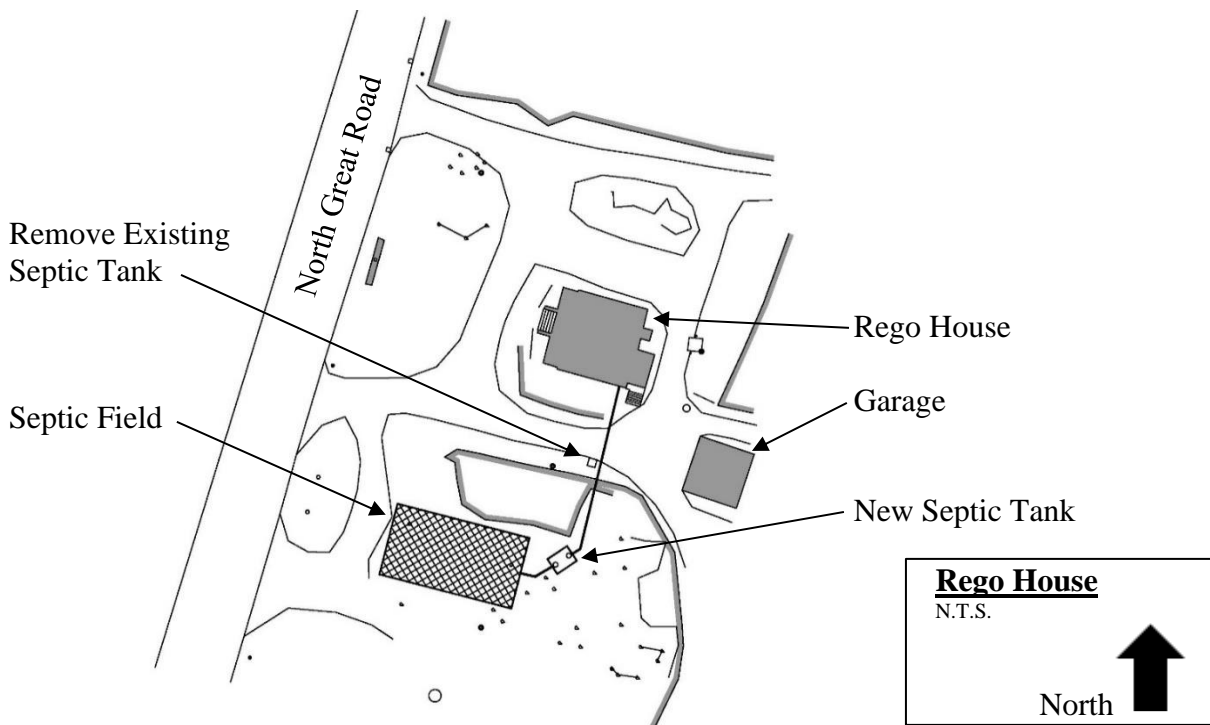
1. Demolition of existing septic tank. Plug exposed incoming and outgoing pipes.
2. Connect 10 L.F. of 4" PVC from house sanitary line stubbed out of house by others.
3. Install one prepackaged duplex pump complete including electrical hook-up.
4. Install 140 L.F. forced main piping directionally drilled from duplex pump to proposed location of new septic tank.
5. Excavate and install one 1,500-gallon precast concrete septic tank and distribution box.
6. Install secured cast iron manhole covers with frames on precast risers located on tank and distribution box (three total).
7. Connect tank to proposed septic field with 4" PVC with elbows.
8. Trench for 4" perforated PVC sewer pipe w/ required fittings. Field shall be four (4) lateral runs of 56 L.F. each assumed.
9. Stone backfill around tanks and pipes.
10. Place metallic warning tape over system.
11. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

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**Task #7 – Deliverable: Septic System - Rego House**

**Timeline Estimate: 5 days**

**101 North Great Road Rd.  
Lincoln, MA 01773  
Lot #113\_53\_0  
4 Bedroom House**



GENERAL SCOPE OF WORK:

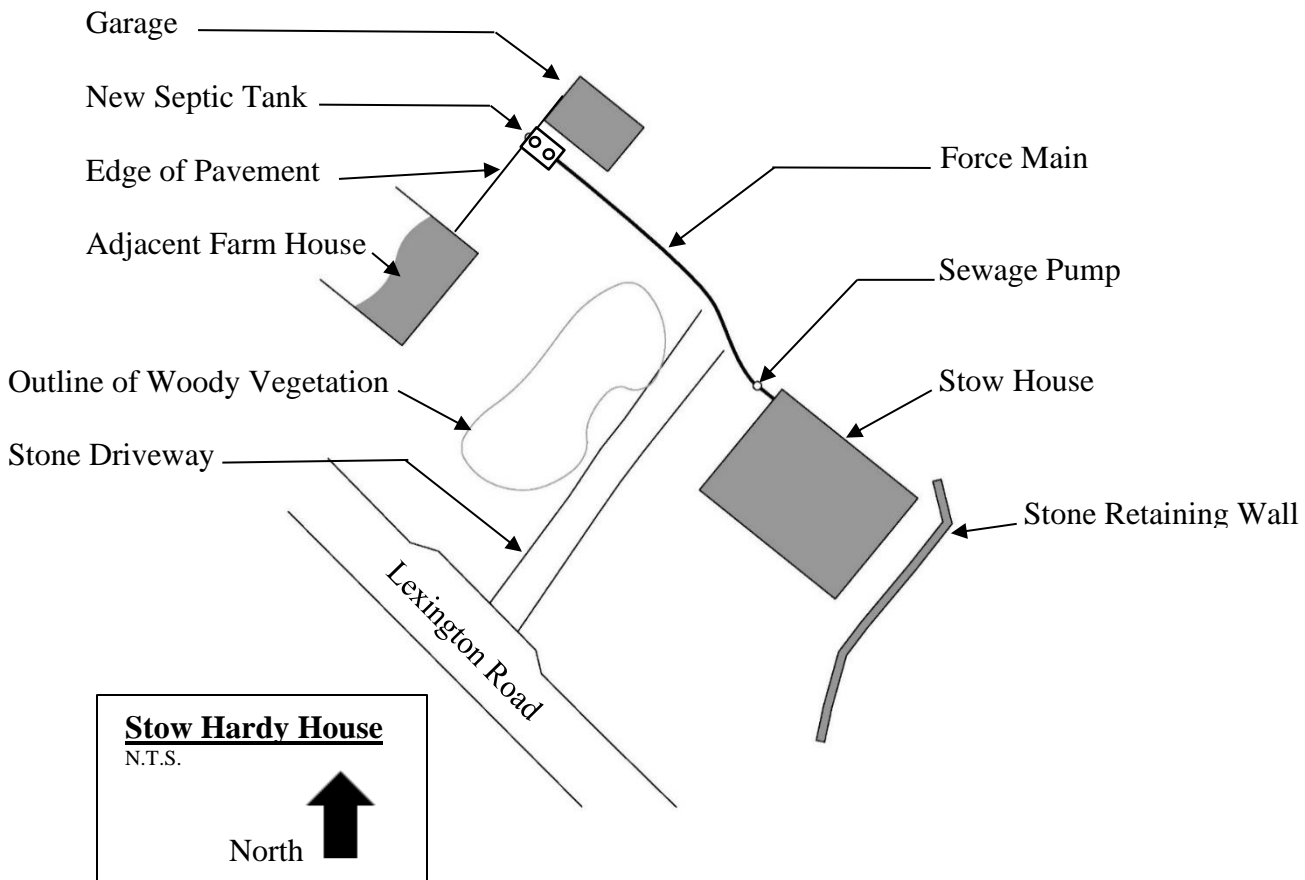
1. Demolition of existing septic tank. Plug exposed incoming and outgoing pipes.
2. Connect 130 L.F. 4" PVC from house sanitary line stubbed out of house by others.
3. Excavate and install one 1,500-gallon (est) precast concrete septic tank.
4. Install secured cast iron manhole covers with frames on precast risers located on tank (3 total).
5. Trench for 4" perforated PVC sewer pipe w/ required fittings. Field shall be four lateral runs of 56 L.F. assumed.
6. Stone backfill around tank and pipes.
7. Place metallic warning tape over system.
8. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

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**Task #8 – Deliverable: Septic System – Stow-Hardy House**

**Timeline Estimate: 5 days**

**965 Lexington Rd.  
Concord, MA 01742  
Lot #4232  
4 Bedroom House**



**GENERAL SCOPE OF WORK:**

1. Connect to house sanitary line w/15 L.F. PVC. Pipe stubbed out of house by others.
2. Install prepackaged underground duplex pump complete including electrical hook up.
3. Install 75 L.F. forced main piping directionally drilled from duplex pump to proposed location of new septic tank.
4. Locate existing outgoing pipe at the edge of existing asphalt pavement which pitches towards an existing septic system, located on the opposite side of the paved driveway.
5. Excavate and install one 1,500-gallon (est) precast concrete septic tank at location of outgoing pipe off the edge of existing asphalt pavement.
6. Install secured cast iron manhole covers with frames and precast risers for tank (two required).
7. Stone backfill around tank and pump.
8. Backfill over and around new septic system in preparation for topsoil placement and lawn operations.

**Task #9 – Deliverable: Selective Demolition**

**Timeline Estimate: 5 days**

| <b>SITE</b>              | <b>CUT 4” SANITARY LINE AND PLUG</b> | <b>DEMOLISH EXISTING SEPTIC TANK</b> |
|--------------------------|--------------------------------------|--------------------------------------|
| East Quarter Schoolhouse | X                                    | X                                    |
| George Hall House        | X                                    | No existing tank                     |
| Inferrera House          | X                                    | X                                    |
| Stow-Hardy House         | X                                    | No existing tank                     |
| Joshua Brooks House      | X                                    | X                                    |
| Rego House               | X                                    | X                                    |

**GENERAL SCOPE OF WORK:**

1. Work consists of demolition and removal of the following:
  - a. Cut and plug existing 4-inch cast iron, clay, or plastic pipes.
  - b. Demolish existing septic tanks and remove from site.
2. Comply with safety requirements for demolition, ANSI A10.6-90.
  - a. Keep dust to a minimum at removal site and on haul roads. Use sprinklers or water trucks as necessary.
  - b. Ensure safety of persons in demolition area. Provide temporary barricades as required.
  - c. Explosives shall not be used.
3. Protect from injury, all vegetation in the area.

4. Salvage topsoil and stockpile for reuse.
5. Determine the exact location of existing underground utilities and perform Work in a manner that will avoid possible damage to them. Any utilities damaged by Work shall be immediately repaired to the satisfaction of the Government at no additional cost to the Government.
6. Backfill materials below topsoil layer shall be native soils, stone, gravel, or sand, free from debris, frozen materials, roots, and other organic matter. Place backfill material in horizontal layers not exceeding 8 inches in loose depth. Replace top six inches of salvaged/new topsoil. Roll but do not compact each layer to a density equal to surrounding ground.
7. Lawns and any pavement disturbed will be repaired by the Contractor to match original grades and finishes. Blend topsoil with original contours and provide free drainage flow.
8. Disposal of debris, vegetation, and unused excavated materials at an approved disposal site is the Contractor's responsibility and must be in accordance with Federal, State, and local regulations. Provide copies of all permits required. Debris and rubbish shall be removed from the site daily. If debris and rubbish is not removed daily, provide a storage container to contain the debris and rubbish. Clean site daily by depositing debris and rubbish into container.

**Task #10 – Deliverable: Precast Concrete Structures**

**Timeline Estimate: Included in Task Items 3 - 8**

| <b>SITE</b>              | <b>1,500<br/>GALLON</b> | <b>2,000<br/>GALLON</b> | <b>DISTRUBUTION<br/>BOX</b> |
|--------------------------|-------------------------|-------------------------|-----------------------------|
| East Quarter Schoolhouse |                         | X                       | X                           |
| George Hall House        |                         | X                       | X                           |
| Inferrera House          | X                       |                         | X                           |
| Stow-Hardy House         | X                       |                         |                             |
| Joshua Brooks House      | X                       |                         | X                           |
| Rego House               | X                       |                         | X                           |

**GENERAL SCOPE OF WORK:**

Furnishing and installing precast reinforced concrete, two compartment Septic Tank, and 5 outlet Distribution Box and appurtenances. Precast concrete units to withstand HS-20 traffic loads.

**PERFORMANCE REQUIREMENTS:**

Comply with ACI 318, PCI MNL 120, "PCI Design Handbook, Manual for Quality Control for Plants and Production of Precast Concrete Products.

### DELIVERY:

Handle Precast units carefully to ensure delivery at the project site in sound, undamaged condition. Contracting Officer will reject damaged materials. Contractor shall replace damaged materials at no additional expense to the Government.

### STORAGE:

Do not store materials directly on the ground. Adequately support to prevent damage.

### PRECAST CONCRETE SEPTIC TANK AND DISTRIBUTION BOX:

1. FINISHES: Standard for formed surfaces
2. MANHOLES: 24" diameter opening with risers to grade and securable cast iron access lid with steel lift rings.
3. FILTER: Provision to install Filter in the outlet of the Septic Tank to restrict discharge solids to 1/8-inch.
4. INLET AND OUTLET ACCESS: Match 4-inch dia. PVC pipes.
5. BEDDING AND BACKFILL: To top of structure; 3/4" stone. Septic field; washed 3/4" stone or equal.

### EXECUTION

1. Precast Concrete Units and other accessories shall, unless otherwise directed in the Special Provisions, be unloaded at the point of delivery, hauled to and distributed at the site of the project by the Contractor. They shall, at all times, be handled with care to avoid damage. In distributing the material at the site, each piece shall be unloaded opposite or near the place where it is to be laid in the trench.
2. Inspect units for defects. Defective, damaged, or unsound units will be rejected by the Contracting Officer.
3. Install precast units to lines and grades established in the field.

### INSTALLATION

1. Install precast concrete septic tanks according to ASTM C 891.
2. Shore and brace precast concrete units to maintain location, stability, and alignment
3. Install septic tanks level and plumb.
4. Install filter in septic tank outlet. Secure filter to septic tank wall.
5. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.

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**Task #11 – Deliverable: Root Barrier Fabric****Timeline Estimate: Included in Task Items 3 – 7**

| <b>SITE</b>              | <b>ROOT BARRIER REQUIRED</b>                            |
|--------------------------|---|
| East Quarter Schoolhouse | North and East sides of septic field (109 L.F.)         |
| George Hall House        | Northwest side of septic field (70 L.F.)                |
| Inferrera House          | North and East sides of septic field (86 L.F.)          |
| Stow-Hardy House         | No root barrier required                                |
| Joshua Brooks House      | South sides of septic field (56 L.F.)                   |
| Rego House               | North, East, and South sides of septic field (142 L.F.) |

**GENERAL SCOPE OF WORK:**

Furnish all labor, materials, equipment, and incidentals required to install root barrier along portions of the septic field to provide both a physical and chemical barrier zone to restrict vegetative root encroachment as specified herein.

**DELIVERY, STORAGE, AND HANDLING:**

1. Product labels shall clearly show the manufacturer or supplier name, style number, and roll number and shall include a compliance statement certifying that all ingredients and inspection standards for this product have been met.
1. Root control product roll shall be wrapped with a protective EVOH bag and placed in a box that will protect the product from damage due to shipment, water, sunlight, and contaminants and to prevent premature release of herbicide. The protective wrapping shall be maintained during periods of shipment and storage.
2. During storage, root control product shall be elevated off the ground and out of direct sunlight. It shall remain sealed in EVOH protective bag inside shipping box at a temperature of not more than 110°F.

**PHYSICAL AND CHEMICAL REQUIREMENTS:**

1. Fibers used in the manufacture of a roll of root control barrier substrate fabric shall consist of long chain synthetic polyolefins (at least 95% by weight) and a UV stabilizer. They shall be formed into a stable network such that the filaments or yarns retain their dimensional stability relative to each other.

2. Nodules consisting of trifluralin, carbon black, and polyethylene compounded in a patented method utilizing time-released characteristics are permanently attached to the substrate fabric on 1-1/2" centers by a through injection molding process.
3. All substrate property values, with the exception of apparent opening size (AOS), in these specifications represent minimum average roll values (MARV) in the weakest principal direction (i.e., average test results of any roll in a lot sampled for conformance or quality assurance testing shall meet or exceed the minimum values provided herein). Values for AOS represent maximum average roll values.
4. Property values for the trifluralin are average run values.

**PRODUCT DESCRIPTION:**

Overall product major composition and ingredients:

- Active – Trifluralin - 17.5% Inert - 100% Spunbonded Polypropylene, Polyethylene and Carbon – 82.5%

Minimum Values:

| Characteristics       |                                    | English          | Metric                     | Test Method           |
|-----------------------|------------------------------------|------------------|----------------------------|-----------------------|
| Unit Weight           | 3.9 oz/yd <sup>2</sup><br>130 lbs. | 130 g/m<br>575 N | ASTM D-5261<br>ASTM D-4632 | Grab Tensile Strength |
| Elongation at Break   | 60%                                | 60%              | ASTM D-4632                |                       |
| Puncture Strength     | 40 lbs.                            | 175 N            | ASTM D-4833                |                       |
| Trap Tear             | 60 lbs                             | 265 N            | ASTM D-4533                |                       |
| Permittivity          | 0.7 sec.                           | 0.7 sec.         | ASTM D-4491                |                       |
| AOS (Max Value)       | 0.21 mm                            | 0.21 mm          | ASTM D-4751                |                       |
| Ultraviolet Stability | 70% @ 500 hrs                      | 70% @ 500 hrs    | ASTM D-4355                |                       |

**INSTALLATION:**

1. Fabric roll shall be unrolled and cut into required lengths. The fabric shall be placed by hand along the sides of the outermost trenches for the lateral lines. The fabric shall be held in place with nails and/or pins. Install fabric after lateral runs are placed but before backfilling operations. Assure fabric stays in place during backfill.

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**Task #11 – Deliverable: Facility Sanitary Sewers**

**Timeline Estimate: Included in Task Items #3 – #8**

| SITE                     | Distance from building to pump or tank | Distance from pump or tank to septic field | Septic Field Laterals - perf. sewer pipe in 2' wide trenches with 12" sidewalls |
|--------------------------|--|--|---|
| East Quarter Schoolhouse | 30'<br>PVC                             | 15'<br>PVC                                 | 4 runs at 79' each  |

|                     |             |                       |                          |
|---------------------|-------------|-----------------------|--------------------------|
| George Hall House   | 35'<br>PVC  | 15'<br>PVC            | 4 runs at 79' each       |
| Inferrera House     | 15'<br>PVC  | 50'<br>PVC            | 4 runs at 56' each       |
| Stow-Hardy House    | 10'<br>PVC  | (75'<br>Forced Main)  | Tie into existing system |
| Joshua Brooks House | 10'<br>PVC  | (125'<br>Forced Main) | 4 runs at 56' each       |
| Rego House          | 130'<br>PVC | 15'<br>PVC            | 4 runs at 56' each       |

**GENERAL SCOPE OF WORK:**

Task Includes:

1. All pipe and fittings.
2. Non-pressure couplings.
3. Cleanouts (if required).

**PIPE:**

PVC Type PSM Sewer Piping:

1. Pipe: ASTM D 3034, SDR 35, PVC Type PSM sewer pipe with bell-and-spigot ends for gasketed joints.
2. Fittings: ASTM D 3034, PVC with bell ends.
3. Gaskets: ASTM F 477, elastomeric seals.

**NON-PRESSURE-TYPE TRANSITION COUPLINGS:**

Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground non-pressure piping. Include ends of same sizes as piping to be joined and corrosion-resistant-metal tension band and tightening mechanism on each end.

Sleeve Materials:

1. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
2. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

Unshielded, Flexible Couplings:

1. Description: Elastomeric sleeve with corrosion-resistant-metal tension band and tightening mechanism on each end.

## CLEANOUTS:

Cast-Iron Cleanouts: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside calk or spigot connection and countersunk, tapered-thread, brass closure plug.

1. Top-Loading Classification: Light Duty
2. Sewer Pipe Fitting and Riser to Cleanout: ASTM A 74, Service class, cast-iron soil pipe and fittings.

## PIPING INSTALLATION:

1. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground sanitary sewer piping. Location and arrangement of piping layout taking into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
2. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for using lubricants, cements, and other installation requirements.
3. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited
4. Install gravity-flow, non-pressure, drainage piping according to the following:
  - a. Install piping pitched down in direction of flow, at minimum slope of ¼" per foot from the building to the septic tank and 1/8" per foot from the septic tank to the distribution box and distribution box to lateral chambers unless otherwise indicated.
  - b. Install piping with 18" minimum cover.
  - c. Install PVC Type PSM sewer piping according to ASTM D 2321 and ASTM F 166.
5. Clear interior of piping and manholes of dirt and superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plug in end of incomplete piping at end of day and when work stops.

## PIPE JOINT CONSTRUCTION:

1. Join gravity-flow, non-pressure, drainage piping according to the following:
  - a. Join PVC Type PSM sewer piping according to ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric-gasket joints.
  - b. Join dissimilar pipe materials with non-pressure-type, flexible couplings.
2. Pipe couplings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

3. Use non-pressure flexible couplings where required to join gravity-flow, non-pressure sewer piping unless otherwise indicated.
  - a. Unshielded flexible couplings for pipes of same or slightly different OD.
  - b. Unshielded, increaser/reducer-pattern, flexible couplings for pipes with different OD.
  - c. Ring-type flexible couplings for piping of different sizes where annular space between smaller piping's OD and larger piping's ID permits installation.

#### CLEANOUT INSTALLATION:

1. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and use cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
  - a. Use Light-Duty, top-loading classification cleanouts in earth or unpaved foot-traffic areas.
2. Set cleanout frames and covers in earth. Set with tops to match surrounding grade.
3. Place cleanouts at a location to provide access to elbows.

#### IDENTIFICATION:

1. Arrange for installation of green warning tapes directly over piping and at outside edges of underground manholes.
  - a. Use detectable warning tape over nonferrous piping.

#### TRENCH/BED ABSORPTION-SYSTEM MATERIALS:

1. Filter Material: ASTM D 448, 3/4 to 2-1/2 inches, washed, crushed stone or gravel; or broken, hard-burned clay brick.
2. Cover for Distribution Pipe: Geotextile woven filter fabric, in one or more layers, for minimum total unit weight of 3 oz./sq. yd.
3. Fill Material: Soil removed from trench.

#### FIELD QUALITY CONTROL:

1. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after backfill is in place, and again at completion of Project.
2. Submit separate report for each system inspection.
3. Defects requiring correction include the following:

- a. Alignment: Less than full diameter of inside of pipe is visible between structures.
  - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
  - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
  - d. Infiltration: Water leakage into piping.
  - e. Exfiltration: Water leakage from or around piping.
4. Replace defective piping using new materials and repeat inspections until defects are within allowances specified.
  5. Reinspect and repeat procedure until results are satisfactory.
  6. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
    - a. Do not enclose, cover, or put into service before inspection and approval.
    - b. Test completed piping systems according to requirements of authorities having jurisdiction.
    - c. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
    - d. Submit separate report for each test.
  7. Air Tests: Test sanitary sewerage according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
    - a. Test plastic gravity sewer piping according to ASTM F 1417.
  8. Leaks and loss in test pressure constitute defects that must be repaired.
  9. Replace leaking piping using new materials and repeat testing until leakage is within allowances specified.
  10. NOTE: If on-site restrictions prevent installation of a conventional 4" PVC septic field to the proper length, a chamber based system would be an acceptable alternative.

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**Task #12 – Deliverable: DIRECTIONAL DRILLING**

**Timeline Estimate: Included in Task Items #6 and #8**

**GENERAL SCOPE OF WORK:**

Work of this Section consists of directional drilling to install a force main at Stow Hardy and Joshua Brooks Houses.

**DRILLING FLUIDS:**

1. Use a drilling fluids mixture composed of potable water and stabilizing agent – usually bentonite and/or polymer and/or appropriate additives continuously pumped into the drill bit. Select the drilling fluid to: transport spoils; maintain temperatures of bits and transmitter; clean cuttings from the drill bit and reamers; reduce friction, pullback, and torque on drill rods and

product pipe; stabilize the borehole; and reduce migration of drilling fluids in soil. Vary the fluid viscosity to best fit the encountered soil conditions. Do not use any other chemicals of polymer surfactants in the drilling fluids without written consent of contracting officer.

TRACER WIRE:

1. Electronic detection material for non-conductive piping products. Select tracer wire designated for HDD to conductively locate underground utility lines according to ASTM D-1248. Use either a continuous green sheathed solid conductor copper wire line (minimum 12 AWG for external placement) or coated conductivity tape. Select a minimum 12-gauge copper clad steel wire, able to withstand the installation tension along the entire length of the line.

HDPE PIPE:

1. HDPE sewer pipe to be smooth wall, light grey for TV inspection. It shall be pressure rated for 125 psi. It shall meet the standards for tensile strength – ASTM D638 Type IV; flexural modulus – ASTM D790; density – ASTM D1505; melt index – ASTM D1238. For bidding purposes, 2” ID pipe is specified. Joints and fittings shall be fusion welded. Once sewage pumping station is selected, pipe size shall be verified.

DRILLING OPERATIONS:

1. Prior to the start of the boring operation, provide a plan and schedule to the contracting officer showing the locations for setting up the drill rig. Submit this information at least 24 hours before the start of the pilot bore operations.
2. Drill the pilot hole along the path shown on the plans within the allowable tolerance of the type of utility. Provide and maintain instrumentation necessary to accurately locate the pilot hole (both horizontal and vertical placements).
3. Ensure adequate removal of soil cuttings and stability of the bore hole by monitoring the drilling fluid parameters such as the pumping rate, pressures, viscosity, and density during the pilot bore, back reaming, and product pipe installation.
4. Maintain proper disposition of drilling fluids and minimize inconvenience to park visitors and staff.
5. Ensure that all drilling fluids are disposed of or recycled in a manner acceptable to the appropriate local, state, or federal regulatory agencies. Remove any excess material upon completion of the bore.
6. Install all facilities such that their location can be readily determined by electronic designation after installation. Attach a continuous conductive tracking (tracer wire) materials, externally or integral with the product. Tracking conductors must extend two feet beyond the bore termini. Test conductors for continuity.
7. Within 48 hours of completing the installation, clean the work site of all excess slurry or spoils, demobilize equipment, and ensure that the site is safe and secured.

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**Task #12 – Deliverable: FACILITY PACKAGED SEWAGE PUMPING STATION**

**Timeline Estimate: Included in Task Items #6 and #8**

GENERAL SCOPE OF WORK:

Furnish complete factory-built and tested Wetwell/Drywell Grinder Pump Station, each consisting of grinder pump suitably mounted in a basin constructed of high density polyethylene (HDPE) with dimensions and capacities as indicated for site specific tasks, NEMA 6P electrical quick disconnect (EQD), pump removal system, stainless steel discharge assembly/shut-off valve, anti-siphon valve/check valve, each assembled in the basin, electrical alarm panel and all necessary internal wiring and controls. Component type grinder pump systems that require field assembly will not be acceptable due to the potential problems that can occur during field assembly. For ease of serviceability, all pump, motor/grinder units shall be of like type and horsepower throughout the system.

MANUFACTURER AND EXPERIENCE:

Grinder pump stations, complete with all appurtenances, form an integral system, and as such, shall be supplied by one grinder pump station manufacturer. The contractor shall be responsible for the satisfactory operation of the entire system. The equipment specified shall be a product of a company experienced in the design and manufacture of grinder pumps for specific use in low pressure sewage systems.

OPERATING CONDITIONS:

The pumps shall be capable of delivering 15 GPM against a rated total dynamic head of 0 feet (0 PSIG), 11 GPM against a rated total dynamic head of 92 feet (40 PSIG), and 7.8 GPM against a rated total dynamic head of 185 feet (80 PSIG). The pump(s) must also be capable of operating at negative total dynamic head without overloading the motor(s). Under no conditions shall in-line piping or valving be allowed to create a false apparent head.

WARRANTY:

A part(s) and labor warranty on the complete station and accessories, including, but not limited to, the panel for a period of 24 months after notice of Government's acceptance. Any manufacturing defects found during the warranty period will be reported to the contractor by the Government and will be corrected by the contractor at no cost to the Government.

PUMP:

The pump shall be a custom designed, integral, vertical rotor, motor driven, solids handling pump of the progressing cavity type with a single mechanical seal. Double radial O-ring seals are required at all casting joints to minimize corrosion and create a protective barrier. All pump castings shall be cast iron, fully epoxy coated to 8-10 mil Nominal dry thickness, wet applied. The rotor shall be through-hardened, highly polished, precipitation hardened stainless steel. The stator shall be of a specifically compounded ethylene propylene synthetic elastomer. This material shall be suitable for domestic wastewater service. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature stability, excellent aging properties, and outstanding wear resistance. Buna-N is not acceptable as

a stator material because it does not exhibit the properties as outlined above and required for wastewater service.

#### GRINDER:

1. The grinder shall be placed immediately below the pumping elements and shall be direct driven by a single, one-piece motor shaft. The grinder impeller (cutter wheel) assembly shall be securely fastened to the pump motor shaft by means of a threaded connection attaching the grinder impeller to the motor shaft. Attachment by means of pins or keys will not be acceptable. The grinder impeller shall be a one-piece, 4140 cutter wheel of the rotating type with inductively hardened cutter teeth. The cutter teeth shall be inductively hardened to Rockwell 50 – 60c for abrasion resistance. The shredder ring shall be of the stationary type and the material shall be white cast iron. The teeth shall be ground into the material to achieve effective grinding. The shredder ring shall have a staggered tooth pattern with only one edge engaged at a time, maximizing the cutting torque. These materials have been chosen for their capacity to perform in the intended environment as they are materials with wear and corrosive resistant properties.
2. This assembly shall be dynamically balanced and operate without objectionable noise or vibration over the entire range of recommended operating pressures. The grinder shall be constructed so as to minimize clogging and jamming under all normal operating conditions including starting. Sufficient vortex action shall be created to scour the tank free of deposits or sludge banks which would impair the operation of the pump. These requirements shall be accomplished by the following, in conjunction with the pump:
  - a. The grinder shall be positioned in such a way that solids are fed in an upward flow direction.
  - b. The maximum flow rate through the cutting mechanism must not exceed 4 feet per second. This is a critical design element to minimize jamming and as such must be adhered to.
  - c. The inlet shroud shall have a diameter of no less than 5 inches. Inlet shrouds that are less than 5 inches in diameter will not be accepted due to their inability to maintain the specified 4 feet per second maximum inlet velocity which by design prevents unnecessary jamming of the cutter mechanism and minimizes blinding of the pump by large objects that block the inlet shroud.
  - d. The impeller mechanism must rotate at a nominal speed of no greater than 1800 rpm.
3. The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of “foreign objects,” such as paper, wood, plastic, glass, wipes, rubber and the like, to finely-divided particles which will pass freely through the passages of the pump and the 1-1/4" diameter stainless steel discharge piping.

#### ELECTRICAL MOTOR:

As a maximum, the motor shall be a 1 HP, 1725 RPM, 240 Volt 60 Hertz, 1 Phase, capacitor start, ball bearing, air-cooled induction type with Class F installation, low starting current not to exceed 30 amperes and high starting torque of 8.4 foot pounds. The motor shall be press-fit into the casting for better heat transfer and longer winding life. Inherent protection against running overloads or locked rotor conditions for the pump motor shall be provided by the use of an automatic-reset, integral thermal overload protector incorporated into the motor. This motor

protector combination shall have been specifically investigated and listed by Underwriters Laboratories, Inc., for the application. Non-capacitor start motors or permanent split capacitor motors will not be accepted because of their reduced starting torque and consequent diminished grinding capability. The wet portion of the motor armature must be 300 Series stainless. To reduce the potential of environmental concerns, the expense of handling and disposing of oil, and the associated maintenance costs, oil-filled motors will not be accepted.

#### MECHANICAL SEAL:

The pump/core shall be provided with a mechanical shaft seal to prevent leakage between the motor and pump. The seal shall have a stationary ceramic seat and carbon rotating surface with faces precision lapped and held in position by a stainless-steel spring.

#### TANK AND INTEGRAL ACCESSWAY HIGH DENSITY POLYETHYLENE CONSTRUCTION:

1. The tank shall be a Wetwell/Drywell design made of high-density polyethylene, with a grade selected to provide the necessary environmental stress cracking resistance. Corrugated sections are to be made of a double wall construction with the internal wall being generally smooth to promote scouring. The corrugations of the outside wall are to be a minimum amplitude of 1-1/2" to provide necessary transverse stiffness. Any incidental sections of a single wall construction are to be 0.250" thick (minimum). All seams created during tank construction are to be thermally welded and factory tested for leak tightness. The tank wall and bottom must withstand the pressure exerted by saturated soil loading at maximum burial depth. All station components must function normally when exposed to 150 percent of the maximum external soil and hydrostatic pressure.
2. The tank shall be furnished with one EPDM grommet fitting to accept a 4.50" OD DWV or Schedule 40 pipe. The tank capacity shall be 70 gallons.
3. The Drywell accessway shall be an integral extension of the Wetwell assembly and shall include a lockable cover assembly providing low profile mounting and watertight capability. The cover shall be high density polyethylene, green in color, with a load rating of 150 lbs per square foot. The accessway design and construction shall enable field adjustment of the station height in increments of 3" or less without the use of any adhesives or sealants requiring cure time before installation can be completed.
4. The station shall have all necessary penetrations molded in and factory sealed. To ensure a leak free installation no field penetrations will be acceptable.
5. All discharge piping shall be constructed of 304 stainless steel. The discharge shall terminate outside the accessway bulkhead with a stainless steel, 1-1/4" Female NPT fitting. The discharge piping shall include a stainless-steel ball valve rated for 235 psi WOG; PVC ball valves or brass ball/gate will not be accepted. The bulkhead penetration shall be factory installed and warranted by the manufacturer to be watertight.
6. The accessway shall include a single NEMA 6P Electrical Quick Disconnect (EQD) for all power and control functions, factory installed with accessway penetrations warranted by the manufacturer to be watertight. The EQD will be supplied with the required length of useable Electrical Supply Cable (ESC) outside the station, to connect to the alarm panel. The ESC shall be installed in the basin by the manufacturer. Field assembly of the ESC into the basin is not acceptable because of potential workmanship issues. The EQD shall require no tools for

connecting, seal against water before the electrical connection is made, and include radial seals to assure a watertight seal regardless of tightening torque. Plug-type connections of the power cable onto the pump housing will not be acceptable due to the potential for leaks and electrical shorts. A junction box shall not be permitted in the accessway due to the large number of potential leak points. The EQD shall be so designed to be conducive to field wiring as required. The accessway shall also include an integral 2-inch vent to prevent Sewage gases from accumulating in the tank.

#### CHECK VALVE:

The pump discharge shall be equipped with a factory installed, gravity operated, flapper type integral check valve built into the stainless-steel discharge piping. The check valve will provide a full-ported passageway when open and shall introduce a friction loss of less than 6 inches of water at maximum rated flow. Moving parts will be made of a 300 Series stainless steel and fabric reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly providing a maximum degree of freedom to assure seating even at a very low back-pressure. The valve body shall be an injection molded part made of an engineered thermoplastic resin. The valve shall be rated for continuous operating pressure of 235 psi. Ball-type check valves are unacceptable due to their limited sealing capacity in slurry applications.

#### ANTI-SIPHON VALVE:

The pump discharge shall be equipped with a factory-installed, gravity-operated, flapper type integral anti-siphon valve built into the stainless-steel discharge piping. Moving parts will be made of 300 Series stainless steel and fabric-reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength. A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure proper operation even at a very low pressure. The valve body shall be injection-molded from an engineered thermoplastic resin. Holes or ports in the discharge piping are not acceptable anti-siphon devices due to their tendency to clog from the solids in the slurry being pumped. The anti-siphon port diameter shall be no less than 60% of the inside diameter of the pump discharge piping.

#### CORE UNIT:

The grinder pump station shall have a cartridge type, easily removable core assembly consisting of pump, motor, grinder, all motor controls, check valve, anti-siphon valve, level controls, electrical quick disconnect and wiring. The core unit shall be installed in the basin by the manufacturer. Field assembly of the pump and controls into the basin is not acceptable because of potential workmanship issues and increased installation time. The core unit shall seal to the tank deck with a stainless-steel latch assembly. The latch assembly must be actuated utilizing a single quick release mechanism requiring no more than a half turn of a wrench. The watertight integrity of each core unit shall be established by a 100 percent factory test at a minimum of 5 PSIG.

#### CONTROLS:

1. All necessary motor starting controls shall be located in the cast iron enclosure of the core unit secured by stainless steel fasteners. Locating the motor starting controls in a plastic enclosure is not acceptable. The wastewater level sensing controls shall be housed in a separate enclosure from motor starting controls. The level sensor housing must be sealed via a radial type seal; solvents or glues are not acceptable. The level sensing control housing

must be integrally attached to pump assembly so that it may be removed from the station with the pump and in such a way as to minimize the potential for the accumulation of grease and debris accumulation, etc. The level sensing housing must be a high-impact thermoplastic copolymer over-molded with a thermo plastic elastomer. The use of PVC for the level sensing housing is not acceptable.

2. Non-fouling wastewater level controls for controlling pump operation shall be accomplished by monitoring the pressure changes in an integral air column connected to a pressure switch. The air column shall be integrally molded from a thermoplastic elastomer suitable for use in wastewater and with excellent impact resistance. The air column shall have only a single connection between the water level being monitored and the pressure switch. Any connections are to be sealed radially with redundant O-rings. The level detection device shall have no moving parts in direct contact with the wastewater and shall be integral to the pump core assembly in a single, readily exchanged unit. Depressing the push to run button must operate the pump even with the level sensor housing removed from the pump.
3. All fasteners throughout the assembly shall be 300 Series stainless steel. High-level sensing will be accomplished in the manner detailed above by a separate air column sensor and pressure switch of the same type. Closure of the high-level sensing device will energize an alarm circuit as well as a redundant pump-on circuit. For increased reliability, pump ON/OFF and high-level alarm functions shall not be controlled by the same switch. Float switches of any kind, including float trees, will not be accepted due to the periodic need to maintain (rinsing, cleaning) such devices and their tendency to malfunction because of incorrect wiring, tangling, grease buildup, and mechanical cord fatigue. To assure reliable operation of the pressure switches, each core shall be equipped with a factory installed equalizer diaphragm that compensates for any atmospheric pressure or temperature changes. Tube or piping runs outside of the station tank or into tank-mounted junction boxes providing pressure switch equalization will not be permitted due to their susceptibility to condensation, kinking, pinching, and insect infestation. The grinder pump will be furnished with a 6 conductor 14 gauge, type SJOW cable, pre-wired and watertight to meet UL requirements with a FACTORY INSTALLED NEMA 6P EQD half attached to it.

#### ALARM PANEL:

1. Each grinder pump station shall include a NEMA 4X, UL-listed alarm panel suitable for wall or pole mounting. The NEMA 4X enclosure shall be manufactured of thermoplastic polyester to ensure corrosion resistance. The enclosure shall include a hinged, lockable cover with padlock, preventing access to electrical components, and creating a secured safety front to allow access only to authorized personnel. The enclosure shall not exceed 12.5" W x 16" H x 7.5" D.
2. The alarm panel shall contain one 15-amp, double-pole circuit breaker for the pump core's power circuit and one 15-amp, single-pole circuit breaker for the alarm circuit. The panel shall contain a push-to-run feature, an internal run indicator, and a complete alarm circuit. All circuit boards in the alarm panel are to be protected with a conformal coating on both sides and the AC power circuit shall include an auto resetting fuse.
3. The alarm panel shall include the following features: external audible and visual alarm; push-to-run switch; push-to-silence switch; redundant pump start; and high level alarm capability. The alarm sequence is to be as follows when the pump and alarm breakers are on:

- a. When liquid level in the sewage wet-well rises above the alarm level, the contacts on the alarm pressure switch activate, audible and visual alarms are activated, the discrete output alarm signal shall be sent to the existing dialer, and the redundant pump starting system is energized.
  - b. The audible alarm may be silenced by means of the externally mounted, push-to-silence button.
  - c. Visual alarm remains illuminated until the sewage level in the wet-well drops below the "off" setting of the alarm pressure switch.
4. The visual alarm lamp shall be inside a red, oblong lens at least 3.75" L x 2.38" W x 1.5" H. Visual alarm shall be mounted to the top of the enclosure in such a manner as to maintain NEMA 4X rating. The audible alarm shall be externally mounted on the bottom of the enclosure, capable of 93 dB @ 2 feet. The audible alarm shall be capable of being deactivated by depressing a push-type switch that is encapsulated in a weatherproof silicone boot and mounted on the bottom of the enclosure (push-to-silence button).
  5. The entire alarm panel, as manufactured and including any of the following options shall be listed by Underwriters Laboratories, Inc. Alarm Contacts Package.
    - a. Alarm Activated Dry Contacts – Normally open relay contact closes upon alarm activation and sends a discrete alarm signal to the dialer. The pump alarm shall be connected to the building's monitored alarm system.
  6. Service Equipment/Main Service Disconnect Breaker – A separate, internal breaker rated and approved for use as "service equipment" and acts as a main service disconnect of the grinder pump station shall be provided.
  7. Run-time/Hour Meter – A run-time or hour meter to display the total run-time or operation time for the pump core shall be provided.
  8. Event/Cycle Counter – An event or cycle counter to display the number of operations of the pump core shall be provided.

**SERVICEABILITY:**

The grinder pump core, including level sensor assembly, shall have two lifting hooks complete with lift-out harness connected to its top housing to facilitate easy core removal when necessary. The level sensor assembly must be easily removed from the pump assembly for service or replacement. All mechanical and electrical connections must provide easy disconnect capability for core unit removal and installation. Each EQD half must include a water-tight cover to protect the internal electrical pins while the EQD is unplugged. A pump push-to-run feature will be provided for field trouble shooting. The push-to-run feature must operate the pump even if the level sensor assembly has been removed from the pump assembly. All motor control components shall be mounted on a readily replaceable bracket for ease of field service.

**OSHA CONFINED SPACE:**

All maintenance tasks for the grinder pump station must be possible without entry into the grinder pump station (as per OSHA 1910.146, permit-required confined spaces). "Entry means the action by which a person passes through an opening into a permit required confined space. Entry

includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.”

#### SAFETY:

1. The grinder pump shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder pump station shall be listed by Underwriters Laboratories, Inc. to be safe and appropriate for the intended use. UL listing of components of the station, or third-party testing to UL standard are not acceptable.
2. The grinder pump shall meet accepted standards for plumbing equipment for use in or near residences, shall be free from noise, odor, or health hazards, and shall have been tested by an independent laboratory to certify its capability to perform as specified in either individual or low-pressure sewer system applications. As evidence of compliance with this requirement, the grinder pump shall bear the seal of NSF International. Third party testing to NSF standard is not acceptable.

#### FACTORY TEST:

1. Each grinder pump shall be submerged and operated for 1.5 minutes (minimum). Included in this procedure will be the testing of all ancillary components such as, the anti-siphon valve, check valve, discharge assembly and each unit's dedicated level controls and motor controls. All factory tests shall incorporate each of the above listed items. Actual appurtenances and controls which will be installed in the field shall be particular to the tested pump only. A common set of appurtenances and controls for all pumps is not acceptable. Certified test results shall be available upon request showing the operation of each grinder pump at two different points on its curve. Additional validation tests include: integral level control performance, continuity to ground and acoustic tests of the rotating components.
2. The Government reserves the right to inspect such testing procedures, at the GRINDER PUMP MANUFACTURER'S facility.

#### DELIVERY:

Grinder pump unit will be delivered to the job site 100 percent completely assembled, including testing, ready for installation. Field installation of the pump in tanks under 96 inches is not allowed. Field installation of the level sensor into the tank is not allowed. Grinder pump stations will be individually mounted on wooden pallets.

#### INSTALLATION:

1. The CONTRACTOR shall excavate for the pump station in accordance with the drawings but shall not disturb the area two feet outside the perimeter of the existing septic tank.
2. The CONTRACTOR shall be responsible for handling ground water to provide a firm, dry subgrade for the structure, and shall guard against flotation or other damage resulting from general water or flooding.
3. The grinder pump stations shall not be set into the excavation until the installation procedures and excavation have been approved by the Government.

4. Remove packing material. Users' instructions MUST be given to the Government. Hardware supplied with the unit, if required, will be used at installation.
5. The basin will be supplied with a standard 4" inlet grommet (4.50" OD) for connecting the incoming sewer line. Appropriate inlet piping must be used. The basin may not be dropped, rolled or laid on its side for any reason.
6. Installation shall be accomplished so that 1" to 4" of accessway, below the bottom of the lid, extends above the finished grade line. The finished grade shall slope away from the unit Approximately 2" from the side wall of the unit to the edge of the removed septic tank wall. The diameter of the excavated hole must be large enough to allow for the concrete anchor.
7. A 6" inch (minimum) layer of naturally rounded aggregate, clean and free flowing, with particle size of not less than 1/8" or more than 3/4" shall be used as bedding material under each unit.
8. A concrete anti-flotation collar, as detailed on the drawings, and sized according to the manufacturer's instructions, shall be required and shall be pre-cast to the grinder pump or poured in place. Each grinder pump station with its pre-cast anti-flotation collar shall have a minimum of three lifting eyes for loading and unloading purposes.
9. If the concrete is poured in place, the unit shall be leveled, and filled with water, to the bottom of the inlet, to help prevent the unit from shifting while the concrete is being poured. The concrete must be manually vibrated to ensure there are no voids. If it is necessary to pour the concrete to a level higher than the inlet piping, an 8" sleeve is required over the inlet prior to the concrete being poured.
10. The CONTRACTOR will provide and install a 4-foot piece of 4-inch PVC pipe with water tight cap, to stub-out the inlet, as depicted on the contract drawings.
11. The electrical enclosure shall be furnished, installed, and wired to the grinder pump station by the CONTRACTOR at the location shown on the drawings.
12. The alarm panel will be connected to the grinder pump station by a length of 6-conductor type TC cable as shown on the contract drawings. The power and alarm circuits must be on separate power circuits. The grinder pump stations will be provided with the required length of useable, electrical supply cable to connect the station to the alarm panel. This cable shall be supplied with a FACTORY INSTALLED EQD half to connect to the mating EQD half on the core.

**BACKFILL REQUIREMENTS:**

1. Backfill utilizing Class I material as defined in ASTM 2321 equivalent to #57 stone. This stone backfill shall extend to 48-inches below grade. Native soil shall used for backfill to within 6: of the top of the unit. A minimum of 6 inches of topsoil shall be placed at grade.
2. All restoration will be the responsibility of the CONTRACTOR. The properties shall be restored to their original condition in all respects, including, but not limited to, curb and sidewalk replacement, landscaping, loaming and seeding, and restoration of the traveled ways, as directed by the Government.

START-UP AND FIELD TESTING:

1. The MANUFACTURER shall provide the services of qualified factory trained technician(s) who shall inspect the placement and wiring of each station, perform field tests as specified herein, and instruct the Government's personnel in the operation and maintenance of the equipment before the stations are accepted by the Government.
2. All equipment and materials necessary to perform testing shall be the responsibility of the CONTRACTOR. This includes, as a minimum, a portable generator and power cable (if temporary power is required), water in each basin (filled to a depth sufficient to verify the high-level alarm is operating) and opening of all valves in the system. These steps shall be completed prior to the qualified factory trained technician(s) arrival on site.
3. The services of a trained factory-authorized technician shall be provided for 1 (one) 8-hour day. If the CONTRACTOR schedules these services prior to all installation requirements being completed, then the training shall be rescheduled at no additional cost to the Government.
4. Upon completion of the installation, the authorized factory technician(s) will perform the following test on each station:
  - a. Make certain the discharge shut-off valve in the station is fully open.
  - b. Turn ON the alarm power circuit and verify the alarm is functioning properly.
  - c. Turn ON the pump power circuit. Initiate the pump operation to verify automatic "on/off" controls are operative. The pump should immediately turn ON.
  - d. Consult the Manufacturer's Service Manual for detailed start-up procedures.
5. Upon completion of the start-up and testing, the MANUFACTURER shall submit to the Government the start-up authorization form describing the results of the tests performed for each grinder pump station. Final acceptance of the system will not occur until authorization forms have been received for each pump station installed and any installation deficiencies corrected.

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**Task #13 – Deliverable: General Earthwork**

**Timeline Estimate: Included in Tasks 3 to 8**

1. Materials shall comply with the following Massachusetts Department of Transportation (MDOT) Construction Specifications (Latest Edition):
  - a. Section 206 – Embankment
2. Site requirements are as follows:
  - a. Control the grading so that ground is pitched to prevent water from running to excavated areas, damaging other structures, or adjacent properties.
  - b. Where soil has been softened or eroded by flooding, equipment, traffic, or placement during unfavorable weather, or such other conditions, it shall be removed and

replaced by the Contractor with suitable material, and at no cost to the Government. An archeology monitor shall be present during any excavations.

- c. Exercise care to preserve the material below and beyond the lines of excavation. Where excavation is carried out below indicated grade or beyond the lines of excavation, Contractor shall backfill and compact the over excavation with structural fill to the indicated grade, at no additional cost to the Government.
- d. Limits of excavation are such that all unsuitable material shall be removed to firm natural ground in the manner specified below.
- e. Unsuitable materials which are classified as organics such as peat, trash, fill, roots, debris, and topsoil and subsoil when determined by CO to be unacceptable for incorporation into the work.
- f. All suitable material, as determined by the CO, may be reused on the site provided it meets the gradation requirements for the given materials in the information of embankments, subgrades, backfills, topsoil, etc.

### 3. Backfilling

- a. Dewater subgrade areas prior to filling.
- b. Soil fill moisture shall be maintained at an acceptable working range to allow for proper compaction.
- c. Do not place fill on frozen ground.
- d. Do not place frozen fill.
- e. Place fill in uniform horizontal layers and roll immediately after placement.
- f. Protect utilities from damage during backfilling operations. Repair damage at no cost to Government.
- g. Placement of fill shall not begin prior to observation and approval of subgrade conditions by CO and inspectors representing jurisdictions having authority.
- h. Upon completion of the work, the final ground surface shall be left in a firm, unyielding, true, uniform condition free from ruts. New grades shall match surrounding elevations. Repair disturbed areas caused equipment traffic at no cost to the Government.
- i. Compaction equipment for fill shall be accomplished by means of a roller or hand-guided vibratory plate tampers.
- j. Any additional fill needed for this project is the responsibility of the contractor.
- k. Fill sections and embankments shall be constructed of earth, or granular fill deposited in successive lifts.

- l. During fill and embankment construction operations, earth moving equipment shall be routed as evenly as possible over the entire width of the work.
- m. At the close of each day's work the working surface shall be crowned, shaped, and rolled with smooth steel or pneumatic tired rollers to ensure proper drainage.

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**Task #14 – General Deliverable: Topsoil, Seeding, Fertilizing, Mulching**

**Timeline Estimate: 5 days**

1. Topsoil: Any additional topsoil shall be Class B topsoil from sources outside the project limits and shall be the original top layer of a soil profile formed under natural conditions, technically defined as the "A" horizon or as defined by USDA-NCRS Soil Survey Division. It shall consist of natural, friable, loamy soil without admixtures of subsoil or other foreign materials and shall be free of viable noxious weed seed, brush, litter and rocks greater than 1" in any dimension. The allowable pH range for Class B topsoil shall be 5.5 to 7.0. Class B topsoil shall be a "sandy loam," "loamy sand," or "sandy clay loam" soil as defined by the USDA Soil Textural Classification System with an organic matter content between 1 and 8 percent or as approved by the CO. The soil shall be clean topsoil and free of contaminants.
2. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen. Fertilizer shall be a complete, standard product complying with state and federal fertilizer laws. The fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis, and submitted to the CO for approval.
  - a. Fertilizer shall contain the following minimum percentage of available plant food by weight: 10% nitrogen, 10% phosphorus, 10% potash, in which 75% of the nitrogenous elements shall be derived from organic sources or urea form.
  - b. Exact percentages of fertilizer may vary in accordance with the soil test report.
  - c. Any fertilizer that becomes caked or otherwise damaged (making it unsuitable for use) will be rejected.
3. Certified seed will be used for all permanent seeding whenever possible. Certified seed is inspected by the certifying agency in Massachusetts. The seed must meet published state standards and bear an official "Certified Seed".
4. Selection of turf seeds shall be based on climate, topography, soils, land use, and planting season.
5. If hydroseeding, the Contractor shall submit a certified statement as to number of lbs. of fertilizer, amounts and types of grass seed, and processed fiber, per 100 gallons of water.
6. If applying straw mulch, provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
7. Installation shall comply with Division 610 – Turf and Wildflowers in the Massachusetts Department of Transportation Standards and Specifications. Fine grading of topsoil shall

match surrounding grade and provide for positive drainage away from the septic field and structures.

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DELIVERABLES:

Deliverables shall be reviewed and either approved or disapproved in 5 days after receipt.

1. Work Schedule – this is to ensure adequate planning, coordination, scheduling, and reporting during the execution of the work. This will be reviewed weekly during the progress meetings.
2. Photographs – Photos shall be taken prior to, during and after completion of the work outlined in the SOW. Photos shall be delivered to the COR on a CD-R and be labeled as MIMA Septic Fields. Images shall be in either a JPEG or PDF format on the disks. These digital images will use the maximum range of depth of field and must be in focus to clearly show work. Out of focus or blurry images will not be accepted.
  - a. Existing condition images – to be delivered one (1) week after kickoff meeting. These images shall be taken from multiple vantage points. The Contractor shall take as many as are reasonably necessary to document the work so that it can be understood by a reviewer who does not have physical access to the site. The Contractor shall document the existing condition of roads at access points prior to beginning work as well as flag excavation areas before recording these images.
  - b. Periodic images during work – to be delivered weekly. The Contractor shall take a sufficient number of color, digital images as reasonably necessary to document work so that it could be understood by a viewer who does not have physical access to the site. The Contractor shall select vantage points to show the progress of the work since the last images were taken.
  - c. After images – to be delivered one (1) week after work ends. The Contractor shall take images from multiple vantage points and take as many as are reasonably necessary to document the work so that it can be understood by a reviewer who doesn't have physical access to the site.
  - d. Additional images – the CO may issue requests for additional images, in addition to those mentioned above. Three (3) days' notice will be given if possible. In emergency situations, the Contractor shall take images within 24 hours of the request. Examples of situations requiring additional images include, but are not limited to, immediate follow-up when onsite events result in damage or losses, substantial completion of a portion of the work, and extra record images at the time of acceptance.

ELECTRICAL SUBMITTALS:

The prepackaged sewer pumping station requires connection to a fused disconnect located on the outside of the structure near the location of the proposed pump.

The submittal for electrical work shall include the following and be submitted to the COR 5 days prior to work beginning for approval:

1. Disconnect/fused safety switches.
2. Wire and cable.

3. Conduit, raceway and fittings.
4. Wiring devices.
5. Controls as required.

ACCIDENT PREVENTION PLAN:

The submittal for an accident prevention plan shall include the following and be submitted to the COR 5 days prior to commencement of onsite work:

1. Name of responsible supervisor to carry out the program.
2. Schedule of weekly and monthly safety meetings.
3. First aid procedures.
4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase.
5. Training, both initial and continuing.
6. Planning for possible emergency situations, such as floods, fires, cave-ins, slides, explosions, power outages, and windstorms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.

ARCHEOLOGICAL CONCERNS:

1. The contractor shall provide an archeological monitor to observe all ground-disturbing site work, including construction of temporary facilities from a safe location mutually agreed on by Contractor and Monitor. As new ground is broken, Monitor will examine excavated materials, using construction layout centerline and perimeter staking as a reference point to record locations of findings.
2. If Archeological Monitor or Contractor discovers resources during the course of work, work in that area shall stop immediately and the Contracting Officer shall be notified. The Contractor may relocate work to a non-sensitive area to allow Monitor to identify and document resources and, if necessary, develop an appropriate mitigation plan.
3. All archeological resources are the property of NPS.
4. The Contractor shall plan, schedule, and execute the work to prevent stoppages at one area from stopping all work at the construction site.

CONTRACTOR USE OF PREMISES:

1. The Contractor shall prevent damage to natural surroundings. If damage occurs, the Contractor shall restore damaged areas by repairing and/or replacing damaged trees, plant, and grass at no additional cost to the Government.

2. The Contractor shall provide temporary barriers to protect existing trees and plants to remain and their root zones where heavy machinery is used.
3. The Contractor shall not remove, injure, or destroy trees or other plants which are not identified to be removed or pruned in this Statement of Work.
4. The Contractor shall not fasten ropes, cables, or guys to existing trees which are to remain.
5. The Contractor shall carefully supervise excavating, grading, filling, and other operations near trees to prevent damage.
6. The Contractor shall obtain a portable toilet enclosure for use by employees; the location shall be determined by the government.
7. There is no electricity, phone, or water for use by the contractor's staff on the premises.
8. The Contractor shall always keep driveways and entrances serving the premises clear and available to the Government and emergency vehicles. The Contractor shall not use these areas for parking or storage of materials.
9. The Contractor shall schedule deliveries to minimize the use of driveways and entrances, and to minimize the space and time requirements for storage of materials and equipment onsite.
10. A camp will not be authorized at any time.
11. The Contractor shall comply with all legal load restrictions in the hauling of materials. Load restrictions on park and neighborhood roads are identical to the state load restrictions with such additional regulations as may be imposed by the Park Superintendent. Information regarding rules and regulations for vehicular traffic on park and neighborhood roads may be obtained from the Office of the Park Superintendent. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.
12. The Contractor shall conduct operations to ensure the least amount of inconvenience to the public.
13. Any flagging operations that occur on roads affiliated with this project shall be coordinated between the Contractor and the Park Superintendent. The Contractor shall inform the Contracting Officer (CO) and Contracting Officer's Representative (COR) in writing no less than one (1) week prior to anticipated flagging operations. The CO shall respond in writing with either park approval or disapproval of the flagging operations.
14. The Contractor shall notify the CO, COR, and utility companies of proposed locations and times for excavation.
15. The Contractor shall be responsible for locating and preventing damage to known utilities. If damage occurs, the Contractor shall work with the utility to repair at no additional cost to the government.
16. If damage occurs to an unknown utility, the Contractor shall immediately notify the CO and COR for instructions on how to proceed.
17. The Contractor shall not interrupt utilities serving any part of the park unit unless permitted under the following conditions and with written approval from the CO:

- a. The Contractor shall notify the CO and COR no less than two (2) weeks in advance of proposed utility interruption.
- b. The contractor shall provide for arranging temporary utility services.

MEETINGS:

Prior to commencement of work, an onsite and/or virtual kickoff meeting will occur. The agenda will be sent out at least one (1) week prior to the meeting. The meeting will be a combination of virtual and in-person due to travel restrictions in place for SARS-CoV-2. Progress meetings will occur on a weekly basis and shall include the COR and representatives from the Contractor staff. The agenda shall be distributed at least one (1) week prior to each meeting. Weekly meetings will also be a hybrid of in-person and virtual.

WORKDAYS AND HOURS:

All onsite work shall be completed during the hours of 8:00 AM and 5:00 PM local time, Monday through Friday. If deemed necessary to work outside of the aforementioned hours, the Contractor shall provide a written statement to the CO and COR with a justification as to why work should proceed on weekends or in the evening. The request will be reviewed and either disapproved or approved on a case-by-case basis. Unless otherwise approved, no work will take place on federal holidays.

INVOICING:

Invoicing will be done via the Department of the Treasury's Internet Payment Platform (IPP) system. This system can be accessed at the following address: <https://www.ipp.gov>. The Contractor may invoice for work performed and accepted. The invoice shall include the period of performance or deliverable/progress payment period covered by the invoice and the CLIN number and title. All costs shall be reported by CLIN and shall be provided for the current invoice and in total from project inception to date. The listing shall include separate columns and totals for the current invoice period and the project to date.

PERIOD OF PERFORMANCE:

The NPS anticipates a period of performance from September 1, 2023 to November 15, 2023

CONTRACT TYPE:

The NPS anticipates awarding based on lowest price technically acceptable. Travel, if required, will be reimbursed on an actual cost basis.

TRAVEL:

In accordance with P.L. 99-234, "Federal Civilian Employee and Contractor Travel Expense Act of 1985", travel-related expenditures for Contractor's personnel are restricted to the limits established for federal employees. This includes mileage for company-owned vehicles.

The Contractor shall travel as required to support program tasks. All travel arrangements are to be made by the Contractor. Payment for transportation, per diem, mileage, parking, and other fair and reasonable travel expenses will be paid in accordance with the effective Federal Travel Regulations as amended and supplemented by the Department of the Interior travel regulations where applicable. No Federal travel authorizations are to be issued. All travel expenses are to be

submitted through the Contractor's invoice for reimbursement. The Contractor shall make every effort to keep travel costs to a minimum. No reimbursement will be made for parking at a Contractor's normal place of work.

**PLACE OF PERFORMANCE:**

Work under this contract will take place at Minute Man National Historical Park, 174 Liberty St., Concord, MA 01742.

**EVALUATION CRITERIA:**

Award will be made to the responsible offeror whose proposal conforms to the solicitation and represents the best value to the Government based upon an integrated assessment of the evaluation factors and sub-factors listed below. The Government will consider: Key Personnel, Management Capacity, Quality Control, Technical Approach, Past Performance and Cost/Price. The factors listed below are in descending order of importance.

All evaluation factors other than cost/price, when combined, are significantly more important than price; however, price will contribute substantially to the selection decision. The evaluated price will not be rated or scored but will be a consideration for reasonableness and realism in the final source selection decision.

**Factor 1 – KEY PERSONNEL (limited to 1 page per resume)**

The proposed key personnel will be evaluated on their relevant education, experience, demonstrated technical knowledge and expertise to fulfill the requirements of the SOW and possession of substantial, relevant knowledge within their respective subject areas. While specific job titles will not be required within this evaluation factor, the personnel comprised within the team should demonstrate an interdisciplinary approach that emphasizes knowledge and understanding of visitor locomotion in protected areas, survey research, transportation research and planning, innovative approaches to applying technology to document both descriptive and visitor reported data collections in remote settings, and the analytic, professional, and communication capacity to effectively execute a project of this scale. Personnel should demonstrate knowledge and experience working on visitor use, transportation, and recreation data collection in regions similar to U.S. parks and protected areas.

**Factor 2 – MANAGEMENT CAPACITY (limited to 3 pages)**

Offerors will be evaluated on their ability to undertake and effectively manage the technical, personnel and financial aspects of a contract of this scope and magnitude to ensure effective, efficient, timely and responsive support. Visitor use management dimensions require expertise in recreation, social sciences, transportation, automation and other technological dependent collection and analytic methods. The following will be evaluated in descending order of importance:

- Demonstration of a capable team of experts highlighting robust interdisciplinary and complementary skill sets with minimal redundancy.
- Demonstrated success with past projects using similar approaches.
- Description of the team's current and anticipated workload for the next 24 months and a clear outline of how this project will receive the attention needed given the aggressive schedule.

**Factor 3 – QUALITY CONTROL (limited to 2 pages)**

Offerors shall provide examples of Quality Control process records demonstrating the effectiveness of the team's procedures to ensure that document deliverables are complete and include the information required for the stage. Offerors shall demonstrate effectiveness of the team's quality review and control procedures.

**Factor 4 – TECHNICAL APPROACH (limited to 12 pages)**

Offeror shall provide a detailed plan that describes the team and the approach to this project. Offeror shall also include information about the date the team was established, the office location, number of employees, where the work will be performed and a description of how the team will work with the park to facilitate the study design process. This shall include a Phase I data plan and an OMB package by February 15, 2021. Data plan approaches will be evaluated on the quality of the technical approach in demonstrating an ability to both document visitor travel and movement patterns while concurrently receiving in-situ visitor feedback on the acceptability of crowding and congestion conditions (or lack thereof) being experienced.

**Factor 5 – PAST PERFORMANCE (limited to 5 pages)**

- a. An evaluation of offeror's past performance information will be conducted subsequent to the technical evaluation. The offeror must have demonstrated successful operations and maintenance of similar contract, to include scale and complexity. Preference will be given to proposals that demonstrate past performance of similar projects related to management of parks and protected areas.
- b. The evaluation will be based on information obtained from the write-ups, other relevant past performance information obtained from other sources known to the Government, and any other information supplied by the offeror, to include problems encountered on the identified contracts and corrective action taken.
- c. The Government will assess the relative risks associated with each offeror. Performance risks are those associated with an offeror's likelihood of success in performing the acquisition requirements as indicated by that offeror's record of past performance.
- d. The assessment of performance risk is not intended to be the product of a mechanical or mathematical analysis of an offeror's performance on a list of contracts, but rather the product of subjective judgement by the Government after it considers all available and relevant information.
- e. When assessing performance risks, the Government will focus on the past performance of the offeror as it relates to all acquisition requirements, such as: 1) the offeror's record of performing according to specifications, including standards of good workmanship; 2) the offeror's record of controlling and forecasting costs; 3) the offeror's adherence to contract schedules including the administrative aspects of performance; 4) the offeror's reputation for reasonable and cooperative behavior and commitment to customer satisfaction; and 5) the offeror's business-like concern for the interest of the customer.
- f. The Government will consider the currency and relevance of the information, sources of the information, context of the data and general trends in the offeror's performance. The lack of a relevant performance record may result in an unknown performance risk assessment, which will neither be used to the advantage nor disadvantage of the offeror.
- g. Note: Contractors submitting offers without past performance will receive a neutral rating.

- h. Offerors shall provide 3 projects completed in the past 5 years with a similar scope. Describe any previous experience in collecting and analyzing data of this kind, including the scope and complexity of the project. (Note: Listing completed projects does not address this criterion. A narrative that articulates past experience and description of technical expertise in methods and analysis for these needs should be discussed).

### **Price**

- a. Offeror's price proposal will not be point scored or adjectively scored but will be evaluated on price reasonableness and realism. The price proposal will also be used as an aid to determine the Offeror understands of the requirements of the solicitation, price reasonableness and to assess the validity of the offeror's approach to managing and performing the work.
- b. The offeror shall submit a price proposal separate from all other volumes; any pricing information found in the technical or past performance volumes will be removed prior to evaluation.
- c. The Government will evaluate the price proposal for reasonableness and realism. The Government will evaluate the base period to determine best value to the Government. The Government will also evaluate cost with regard to the ability of the offeror to meet requirements in terms of skills required, complexity of disciplines and job difficulty, if the Government deems such analysis necessary.

### **TERMS AND CONDITIONS:**

#### **Provisions Incorporated by Reference:**

52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. (SEP 2007)

52.203-11 Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. (OCT 2016)

52.204-16 Commercial and Government Entity Code Reporting. (JUL 2016)

52.204-16 Commercial and Government Entity Code Reporting. (JUL 2016)

52.212-1 Instructions to Offerors—Commercial Items. (JAN 2017)

52.217-5 Evaluation of Options. (JUL 1990)

52.225-25 Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certifications. (OCT 2015)

#### **Provisions Incorporated by Full Text**

##### **52.204-20 Predecessor of Offeror. (JUL 2016)**

As prescribed in [4.1804](#)(d), insert the following provision:

(a) Definitions. As used in this provision—

“Commercial and Government Entity (CAGE) code” means—

(1) An identifier assigned to entities located in the United States or its outlying areas by the Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Branch to identify a commercial or government entity; or

(2) An identifier assigned by a member of the North Atlantic Treaty Organization (NATO) or by the NATO Support and Procurement Agency (NSPA) to entities located outside the United States and its outlying areas that the DLA Commercial and Government Entity (CAGE) Branch records and maintains in the CAGE master file. This type of code is known as a NATO CAGE (NCAGE) code.

“Predecessor” means an entity that is replaced by a successor and includes any predecessors of the predecessor.

“Successor” means an entity that has replaced a predecessor by acquiring the assets and carrying out the affairs of the predecessor under a new name (often through acquisition or merger). The term “successor” does not include new offices/divisions of the same company or a company that only changes its name. The extent of the responsibility of the successor for the liabilities of the predecessor may vary, depending on State law and specific circumstances.

(b) The Offeror represents that it  is or  is not a successor to a predecessor that held a Federal contract or grant within the last three years.

(c) If the Offeror has indicated “is” in paragraph (b) of this provision, enter the following information for all predecessors that held a Federal contract or grant within the last three years (if more than one predecessor, list in reverse chronological order):

Predecessor CAGE code: \_\_\_\_\_ (or mark “Unknown”)

Predecessor legal name: \_\_\_\_\_

(Do not use a “doing business as” name)

(End of provision)

#### **52.209-5 Certification Regarding Responsibility Matters. (OCT 2015)**

As prescribed in [9.104-7\(a\)](#), insert the following provision:

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that—

(i) The Offeror and/or any of its Principals—

(A) Are  are not  presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have  have not , within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property (if offeror checks “have”, the offeror shall also see [52.209-7](#), if included in this solicitation);

(C) Are  are not  presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision;

(D) Have , have not , within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,500 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

(i) *The tax liability is finally determined.* The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(ii) *The taxpayer is delinquent in making payment.* A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) *Examples.*

(i) The taxpayer has received a statutory notice of deficiency, under I.R.C. § 6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. § 6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(iii) The taxpayer has entered into an installment agreement pursuant to I.R.C. § 6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

(ii) The Offeror has  has not , within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) “Principal,” for the purposes of this certification, means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (*e.g.*, general manager; plant manager; head of a division or business segment; and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in

connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror non-responsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

#### **52.209-7 Information Regarding Responsibility Matters. (JUL 2013)**

As prescribed at [9.104-7\(b\)](#), insert the following provision:

(a) *Definitions.* As used in this provision—

“Administrative proceeding” means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (*e.g.*, Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

“Federal contracts and grants with total value greater than \$10,000,000” means—

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

“Principal” means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (*e.g.*, general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror  has  does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked “has” in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in—

(A) The payment of a monetary fine or penalty of \$5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the System for Award Management database via <https://www.acquisition.gov> (see [52.204-7](#)).

(End of provision)

**52.209-11 Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law. (FEB 2016)**

As prescribed in [9.104-7](#)(d), insert the following provision:

(a) As required by sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), and similar provisions, if contained in subsequent appropriations acts, the Government will not enter into a contract with any corporation that—

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless an agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or

(2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless an agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Offeror represents that—

(1) It is  is not  a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and

(2) It is  is not  a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

(End of provision)

## **52.212-2 Evaluation—Commercial Items. (OCT 2014)**

As prescribed in [12.301\(c\)](#), the Contracting Officer may insert a provision substantially as follows:

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

1. Key Personnel
2. Management Capacity
3. Quality Control
4. Technical Approach
5. Past Performance.

All factors, when combined, are significantly more important than cost/price.

(b) *Options.* The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the option(s).

(c) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

(End of provision)

## **52.212-3 Offeror Representations and Certifications—Commercial Items. (JAN 2017)**

As prescribed in [12.301\(b\)\(2\)](#), insert the following provision:

The Offeror shall complete only paragraph (b) of this provision if the Offeror has completed the annual representations and certification electronically via the System for Award Management (SAM) website located at <https://www.sam.gov/portal>. If the Offeror has not completed the annual representations and certifications electronically, the Offeror shall complete only paragraphs (c) through (u) of this provision.

(a) *Definitions.* As used in this provision—

“Administrative merits determination” means certain notices or findings of labor law violations issued by an enforcement agency following an investigation. An administrative merits determination may be final or be subject to appeal or further review. To determine whether a particular notice or finding is covered by this definition, it is necessary to consult section II.B. in the DOL Guidance.

“Arbitral award or decision” means an arbitrator or arbitral panel determination that a labor law violation occurred, or that enjoined or restrained a violation of labor law. It includes an award or decision that is not final or is subject to being confirmed, modified, or vacated by a court, and includes an award or decision resulting from private or confidential proceedings. To determine whether a particular award or decision is covered by this definition, it is necessary to consult section II.B. in the DOL Guidance.

“Civil judgment” means–

(1) In paragraph (h) of this provision: A judgment or finding of a civil offense by any court of competent jurisdiction.

(2) In paragraph (s) of this provision: Any judgment or order entered by any Federal or State court in which the court determined that a labor law violation occurred, or enjoined or restrained a violation of labor law. It includes a judgment or order that is not final or is subject to appeal. To determine whether a particular judgment or order is covered by this definition, it is necessary to consult section II.B. in the DOL Guidance.

“DOL Guidance” means the Department of Labor (DOL) Guidance entitled: “Guidance for Executive Order 13673, ‘Fair Pay and Safe Workplaces’”. The DOL Guidance was initially published in the Federal Register on August 25, 2016, and significant revisions will be published for public comment in the *Federal Register*. The DOL Guidance and subsequent versions can be obtained from [www.dol.gov/fairpayandsafeworkplaces](http://www.dol.gov/fairpayandsafeworkplaces).

“Economically disadvantaged women-owned small business (EDWOSB) concern” means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business eligible under the WOSB Program.

“Enforcement agency” means any agency granted authority to enforce the Federal labor laws. It includes the enforcement components of DOL (Wage and Hour Division, Office of Federal Contract Compliance Programs, and Occupational Safety and Health Administration), the Equal Employment Opportunity Commission, the Occupational Safety and Health Review Commission, and the National Labor Relations Board. It also means a State agency designated to administer an OSHA-approved State Plan, but only to the extent that the State agency is acting in its capacity as administrator of such plan. It does not include other Federal agencies which, in their capacity as contracting agencies, conduct investigations of potential labor law violations. The enforcement agencies associated with each labor law under E.O. 13673 are–

(1) Department of Labor Wage and Hour Division (WHD) for–

(i) The Fair Labor Standards Act;

(ii) The Migrant and Seasonal Agricultural Worker Protection Act;

(iii) [40 U.S.C. chapter 31](#), subchapter IV, formerly known as the Davis-Bacon Act;

(iv) [41 U.S.C. chapter 67](#), formerly known as the Service Contract Act;

(v) The Family and Medical Leave Act; and

(vi) E.O. 13658 of February 12, 2014 (Establishing a Minimum Wage for Contractors);

(2) Department of Labor Occupational Safety and Health Administration (OSHA) for–

(i) The Occupational Safety and Health Act of 1970; and

(ii) OSHA-approved State Plans;

(3) Department of Labor Office of Federal Contract Compliance Programs (OFCCP) for–

- (i) Section 503 of the Rehabilitation Act of 1973;
- (ii) The Vietnam Era Veterans' Readjustment Assistance Act of 1972 and the Vietnam Era Veterans' Readjustment Assistance Act of 1974; and
- (iii) E.O. 11246 of September 24, 1965 (Equal Employment Opportunity);
- (4) National Labor Relations Board (NLRB) for the National Labor Relations Act; and
- (5) Equal Employment Opportunity Commission (EEOC) for—
  - (i) Title VII of the Civil Rights Act of 1964;
  - (ii) The Americans with Disabilities Act of 1990;
  - (iii) The Age Discrimination in Employment Act of 1967; and
  - (iv) Section 6(d) of the Fair Labor Standards Act (Equal Pay Act).

“Forced or indentured child labor” means all work or service—

(6) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(7) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

“Highest-level owner” means the entity that owns or controls an immediate owner of the offeror, or that owns or controls one or more entities that control an immediate owner of the offeror. No entity owns or exercises control of the highest level owner.

“Immediate owner” means an entity, other than the offeror, that has direct control of the offeror. Indicators of control include, but are not limited to, one or more of the following: ownership or interlocking management, identity of interests among family members, shared facilities and equipment, and the common use of employees.

“Inverted domestic corporation”, means a foreign incorporated entity that meets the definition of an inverted domestic corporation under [6 U.S.C. 395\(b\)](#), applied in accordance with the rules and definitions of [6 U.S.C. 395\(c\)](#).

“Labor compliance agreement” means an agreement entered into between a contractor or subcontractor and an enforcement agency to address appropriate remedial measures, compliance assistance, steps to resolve issues to increase compliance with the labor laws, or other related matters.

“Labor laws” means the following labor laws and E.O.s:

- (1) The Fair Labor Standards Act.
- (2) The Occupational Safety and Health Act (OSHA) of 1970.
- (3) The Migrant and Seasonal Agricultural Worker Protection Act.
- (4) The National Labor Relations Act.
- (5) [40 U.S.C. chapter 31](#), subchapter IV, formerly known as the Davis-Bacon Act.

- (6) [41 U.S.C. chapter 67](#), formerly known as the Service Contract Act.
- (7) E.O. 11246 of September 24, 1965 (Equal Employment Opportunity).
- (8) Section 503 of the Rehabilitation Act of 1973.
- (9) The Vietnam Era Veterans' Readjustment Assistance Act of 1972 and the Vietnam Era Veterans' Readjustment Assistance Act of 1974.
- (10) The Family and Medical Leave Act.
- (11) Title VII of the Civil Rights Act of 1964.
- (12) The Americans with Disabilities Act of 1990.
- (13) The Age Discrimination in Employment Act of 1967.
- (14) E.O. 13658 of February 12, 2014 (Establishing a Minimum Wage for Contractors).
- (15) Equivalent State laws as defined in the DOL Guidance. (The only equivalent State laws implemented in the FAR are OSHA-approved State Plans, which can be found at [www.osha.gov/dcsp/osp/approved\\_state\\_plans.html](http://www.osha.gov/dcsp/osp/approved_state_plans.html)).

“Labor law decision” means an administrative merits determination, arbitral award or decision, or civil judgment, which resulted from a violation of one or more of the laws listed in the definition of “labor laws”.

“Manufactured end product” means any end product in product and service codes (PSCs) 1000-9999, except—

- (1) PSC 5510, Lumber and Related Basic Wood Materials;
- (2) Product or Service Group (PSG) 87, Agricultural Supplies;
- (3) PSG 88, Live Animals;
- (4) PSG 89, Subsistence;
- (5) PSC 9410, Crude Grades of Plant Materials;
- (6) PSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) PSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) PSC 9610, Ores;
- (9) PSC 9620, Minerals, Natural and Synthetic; and
- (10) PSC 9630, Additive Metal Materials.

“Place of manufacture” means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

“Predecessor” means an entity that is replaced by a successor and includes any predecessors of the predecessor.

“Restricted business operations” means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate—

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;
- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;
- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
- (5) Consist of providing goods or services that are used only to promote health or education; or
- (6) Have been voluntarily suspended.

“Sensitive technology”—

- (1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically—
  - (i) To restrict the free flow of unbiased information in Iran; or
  - (ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and
- (2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act ([50 U.S.C. 1702\(b\)\(3\)](#)).

“Service-disabled veteran-owned small business concern”—

- (1) Means a small business concern—
  - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
  - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in [38 U.S.C. 101\(2\)](#), with a disability that is service-connected, as defined in [38 U.S.C. 101\(16\)](#).

“Small business concern” means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

“Small disadvantaged business concern”, consistent with 13 CFR 124.1002, means a small business concern under the size standard applicable to the acquisition, that—

(1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by—

(i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States; and

(ii) Each individual claiming economic disadvantage has a net worth not exceeding \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(2) The management and daily business operations of which are controlled (as defined at 13.CFR 124.106) by individuals, who meet the criteria in paragraphs (1)(i) and (ii) of this definition.

“Subsidiary” means an entity in which more than 50 percent of the entity is owned—

(1) Directly by a parent corporation; or

(2) Through another subsidiary of a parent corporation.

“Veteran-owned small business concern” means a small business concern—

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at [38 U.S.C. 101\(2\)](#)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

“Successor” means an entity that has replaced a predecessor by acquiring the assets and carrying out the affairs of the predecessor under a new name (often through acquisition or merger). The term “successor” does not include new offices/divisions of the same company or a company that only changes its name. The extent of the responsibility of the successor for the liabilities of the predecessor may vary, depending on State law and specific circumstances.

“Women-owned business concern” means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

“Women-owned small business concern” means a small business concern—

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

“Women-owned small business (WOSB) concern eligible under the WOSB Program” (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

**Note to paragraph (a):** By a court order issued on October 24, 2016, the following definitions in this paragraph (a) are enjoined indefinitely as of the date of the order: “Administrative merits determination”, “Arbitral award or decision”, paragraph (2) of “Civil judgment”, “DOL Guidance”, “Enforcement agency”, “Labor compliance agreement”, “Labor laws”, and “Labor law decision”. The enjoined definitions will become effective immediately if the court terminates the injunction. At that time, GSA, DoD and NASA will publish a document in the *Federal Register* advising the public of the termination of the injunction.

(b)(1) *Annual Representations and Certifications.* Any changes provided by the offeror in paragraph (b)(2) of this provision do not automatically change the representations and certifications posted on the SAM website.

(2) The offeror has completed the annual representations and certifications electronically via the SAM website accessed through <http://www.acquisition.gov>. After reviewing the SAM database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR [52.212-3](#), Offeror Representations and Certifications—Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR [4.1201](#)), except for paragraphs \_\_\_\_\_.

*[Offeror to identify the applicable paragraphs at (c) through (t) of this provision that the offeror has completed for the purposes of this solicitation only, if any.]*

*These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.*

*Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted electronically on SAM.]*

(c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.

(1) *Small business concern.* The offeror represents as part of its offer that it  is,  is not a small business concern.

(2) *Veteran-owned small business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents as part of its offer that it  is,  is not a veteran-owned small business concern.

(3) *Service-disabled veteran-owned small business concern.* *[Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.]* The offeror represents as part of its offer that it  is,  is not a service-disabled veteran-owned small business concern.

(4) *Small disadvantaged business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents, that it  is,  is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) *Women-owned small business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents that it  is,  is not a women-owned small business concern.

(6) WOSB concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(5) of this provision.] The offeror represents that—

(i) It  is,  is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It  is,  is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: \_\_\_\_\_.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.

(7) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a WOSB concern eligible under the WOSB Program in (c)(6) of this provision.] The offeror represents that—

(i) It  is,  is not an EDWOSB concern, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

(ii) It  is,  is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: \_\_\_\_\_.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

**Note:** Complete paragraphs (c)(8) and (c)(9) only if this solicitation is expected to exceed the simplified acquisition threshold.

(8) *Women-owned business concern (other than small business concern).* [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it  is a women-owned business concern.

(9) *Tie bid priority for labor surplus area concerns.* If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:\_\_\_\_\_

(10) *HUBZone small business concern.* [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that—

(i) It  is,  is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR Part 126; and

(ii) It  is,  is not a HUBZone joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: \_\_\_\_\_.] Each

HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.

(d) Representations required to implement provisions of Executive Order 11246—

(1) Previous contracts and compliance. The offeror represents that—

(i) It  has,  has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It  has,  has not filed all required compliance reports.

(2) *Affirmative Action Compliance.* The offeror represents that—

(i) It  has developed and has on file,  has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 cfr parts 60-1 and 60-2), or

(ii) It  has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) *Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352).* (Applies only if the contract is expected to exceed \$150,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(f) *Buy American Certificate.* (Applies only if the clause at Federal Acquisition Regulation (FAR) [52.225-1](#), Buy American—Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, *i.e.*, an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of “domestic end product.” The terms “commercially available off-the-shelf (COTS) item” “component,” “domestic end product,” “end product,” “foreign end product,” and “United States” are defined in the clause of this solicitation entitled “Buy American—Supplies.”

(2) Foreign End Products:

**Line Item No.    Country of Origin**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

[List as necessary]

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR [Part 25](#).

(g)(1) *Buy American—Free Trade Agreements—Israeli Trade Act Certificate*. (Applies only if the clause at FAR [52.225-3](#), Buy American—Free Trade Agreements—Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product and that for other than COTS items, the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The terms “Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end product,” “commercially available off-the-shelf (COTS) item,” “component,” “domestic end product,” “end product,” “foreign end product,” “Free Trade Agreement country,” “Free Trade Agreement country end product,” “Israeli end product,” and “United States” are defined in the clause of this solicitation entitled “Buy American—Free Trade Agreements—Israeli Trade Act.”

(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled “Buy American—Free Trade Agreements—Israeli Trade Act”:

Free Trade Agreement Country End Products (Other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

**Line Item No.    Country of Origin**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

[List as necessary]

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled “Buy American—Free Trade Agreements—Israeli Trade Act.” The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products, *i.e.*, an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of “domestic end product.”

Other Foreign End Products:

**Line Item No.    Country of Origin**

\_\_\_\_\_  
\_\_\_\_\_

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[List as necessary]

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR [Part 25](#).

(2) *Buy American—Free Trade Agreements—Israeli Trade Act Certificate, Alternate I.* If Alternate I to the clause at FAR [52.225-3](#) is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled “Buy American—Free Trade Agreements—Israeli Trade Act”:

Canadian End Products:

**Line Item No.**

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[List as necessary]

(3) *Buy American—Free Trade Agreements—Israeli Trade Act Certificate, Alternate II.* If Alternate II to the clause at FAR [52.225-3](#) is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled “Buy American—Free Trade Agreements—Israeli Trade Act”:

Canadian or Israeli End Products:

**Line Item No.    Country of Origin**

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[List as necessary]

(4) *Buy American—Free Trade Agreements—Israeli Trade Act Certificate, Alternate III.* If Alternate III to the clause at [52.225-3](#) is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end

products as defined in the clause of this solicitation entitled “Buy American-Free Trade Agreements-Israeli Trade Act”:

Free Trade Agreement Country End Products (Other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

**Line Item No.    Country of Origin**

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

[List as necessary]

(5) *Trade Agreements Certificate*. (Applies only if the clause at FAR [52.225-5](#), Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(5)(ii) of this provision, is a U.S.-made or designated country end product, as defined in the clause of this solicitation entitled “Trade Agreements.”

(ii) The offeror shall list as other end products those end products that are not U.S.-made or designated country end products.

Other End Products:

**Line Item No.    Country of Origin**

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

[List as necessary]

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR [Part 25](#). For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made or designated country end products without regard to the restrictions of the Buy American statute. The Government will consider for award only offers of U.S.-made or designated country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) *Certification Regarding Responsibility Matters (Executive Order 12689)*. (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals—

(1)  Are,  are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(2)  Have,  have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property;

(3)  Are,  are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses enumerated in paragraph (h)(2) of this clause; and

(4)  Have,  have not, within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,500 for which the liability remains unsatisfied.

(i) Taxes are considered delinquent if both of the following criteria apply:

(A) *The tax liability is finally determined.* The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(B) *The taxpayer is delinquent in making payment.* A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(ii) *Examples.*

(A) The taxpayer has received a statutory notice of deficiency, under I.R.C. §6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(B) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. §6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(C) The taxpayer has entered into an installment agreement pursuant to I.R.C. §6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(D) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. §362 (the Bankruptcy Code).

(i) Certification Regarding Knowledge of Child Labor for *Listed End Products (Executive Order 13126)*. [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at [22.1503\(b\)](#).]

(1) *Listed end products.*

**Listed End Product    Listed Countries of Origin**

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(2) *Certification.* [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

- (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.
- (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) *Place of manufacture.* (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

- (1)  In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or
- (2)  Outside the United States.

(k) *Certificates regarding exemptions from the application of the Service Contract Labor Standards* (Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services.) [The contracting officer is to check a box to indicate if paragraph (k)(1) or (k)(2) applies.]

(1) Maintenance, calibration, or repair of certain equipment as described in FAR [22.1003-4\(c\)\(1\)](#). The offeror  does  does not certify that—

(i) The items of equipment to be serviced under this contract are used regularly for other than Governmental purposes and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontract) in substantial quantities to the general public in the course of normal business operations;

(ii) The services will be furnished at prices which are, or are based on, established catalog or market prices (see FAR [22.1003-4\(c\)\(2\)\(ii\)](#)) for the maintenance, calibration, or repair of such equipment; and

(iii) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract will be the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.

(2) Certain services as described in FAR [22.1003-4\(d\)\(1\)](#). The offeror  does  does not certify that—

(i) The services under the contract are offered and sold regularly to non-Governmental customers, and are provided by the offeror (or subcontractor in the case of an exempt subcontract) to the general public in substantial quantities in the course of normal business operations;

(ii) The contract services will be furnished at prices that are, or are based on, established catalog or market prices (see FAR [22.1003-4\(d\)\(2\)\(iii\)](#));

(iii) Each service employee who will perform the services under the contract will spend only a small portion of his or her time (a monthly average of less than 20 percent of the available hours on an annualized basis, or less than 20 percent of available hours during the contract period if the contract period is less than a month) servicing the Government contract; and

(iv) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract is the same as that used for these employees and equivalent employees servicing commercial customers.

(3) If paragraph (k)(1) or (k)(2) of this clause applies—

(i) If the offeror does not certify to the conditions in paragraph (k)(1) or (k)(2) and the Contracting Officer did not attach a Service Contract Labor Standards wage determination to the solicitation, the offeror shall notify the Contracting Officer as soon as possible; and

(ii) The Contracting Officer may not make an award to the offeror if the offeror fails to execute the certification in paragraph (k)(1) or (k)(2) of this clause or to contact the Contracting Officer as required in paragraph (k)(3)(i) of this clause.

(1) *Taxpayer Identification Number (TIN)* ([26 U.S.C. 6109](#), [31 U.S.C. 7701](#)). (Not applicable if the offeror is required to provide this information to the SAM database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (1)(3) through (1)(5) of this provision to comply with debt collection requirements of [31 U.S.C. 7701\(c\)](#) and [3325\(d\)](#), reporting requirements of [26 U.S.C. 6041](#), [6041A](#), and [6050M](#), and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government ([31 U.S.C. 7701\(c\)\(3\)](#)). If the resulting contract is subject to the payment reporting requirements described in FAR [4.904](#), the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) *Taxpayer Identification Number (TIN)*.

TIN: \_\_\_\_\_.

TIN has been applied for.

TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of the Federal Government.

(4) *Type of organization*.

Sole proprietorship;

- Partnership;
- Corporate entity (not tax-exempt);
- Corporate entity (tax-exempt);
- Government entity (Federal, State, or local);
- Foreign government;
- International organization per 26 CFR 1.6049-4;
- Other \_\_\_\_\_.

(5) *Common parent.*

- Offeror is not owned or controlled by a common parent;
- Name and TIN of common parent:

Name \_\_\_\_\_.

TIN \_\_\_\_\_.

(m) *Restricted business operations in Sudan.* By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(n) *Prohibition on Contracting with Inverted Domestic Corporations.*

(1) Government agencies are not permitted to use appropriated (or otherwise made available) funds for contracts with either an inverted domestic corporation, or a subsidiary of an inverted domestic corporation, unless the exception at [9.108-2\(b\)](#) applies or the requirement is waived in accordance with the procedures at [9.108-4](#).

(2) *Representation.* The Offeror represents that—

- (i) It  is,  is not an inverted domestic corporation; and
- (ii) It  is,  is not a subsidiary of an inverted domestic corporation.

(o) *Prohibition on contracting with entities engaging in certain activities or transactions relating to Iran.*

(1) The offeror shall e-mail questions concerning sensitive technology to the Department of State at [CISADA106@state.gov](mailto:CISADA106@state.gov).

(2) *Representation and Certifications.* Unless a waiver is granted or an exception applies as provided in paragraph (o)(3) of this provision, by submission of its offer, the offeror—

(i) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran;

(ii) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act; and

(iii) Certifies that the offeror, and any person owned or controlled by the offeror, does not knowingly engage in any transaction that exceeds \$3,500 with Iran’s Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked pursuant to the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) (see OFAC’s Specially Designated Nationals and Blocked Persons List at <http://www.treasury.gov/ofac/downloads/t11sdn.pdf>).

(3) The representation and certification requirements of paragraph (o)(2) of this provision do not apply if—

(i) This solicitation includes a trade agreements certification (e.g., [52.212-3](#)(g) or a comparable agency provision); and

(ii) The offeror has certified that all the offered products to be supplied are designated country end products.

(p) Ownership or Control of Offeror. (Applies in all solicitations when there is a requirement to be registered in SAM or a requirement to have a unique entity identifier in the solicitation.

(1) The Offeror represents that it  has or  does not have an immediate owner. If the Offeror has more than one immediate owner (such as a joint venture), then the Offeror shall respond to paragraph (2) and if applicable, paragraph (3) of this provision for each participant in the joint venture.

(2) If the Offeror indicates “has” in paragraph (p)(1) of this provision, enter the following information:

Immediate owner CAGE code: \_\_\_\_\_.

Immediate owner legal name: \_\_\_\_\_.

(Do not use a “doing business as” name)

Is the immediate owner owned or controlled by another entity:  Yes or  No.

(3) If the Offeror indicates “yes” in paragraph (p)(2) of this provision, indicating that the immediate owner is owned or controlled by another entity, then enter the following information:

Highest-level owner CAGE code: \_\_\_\_\_.

Highest-level owner legal name: \_\_\_\_\_.

(Do not use a “doing business as” name)

(q) *Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law.*

(1) As required by sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), and similar provisions, if contained in subsequent appropriations acts, The Government will not enter into a contract with any corporation that—

(i) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless an agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or

(ii) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless an agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(2) The Offeror represents that—

(i) It is  is not  a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and

(ii) It is  is not  a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

(r) *Predecessor of Offeror*. (Applies in all solicitations that include the provision at [52.204-16](#), Commercial and Government Entity Code Reporting.)

(1) The Offeror represents that it  is or  is not a successor to a predecessor that held a Federal contract or grant within the last three years.

(2) If the Offeror has indicated “is” in paragraph (r)(1) of this provision, enter the following information for all predecessors that held a Federal contract or grant within the last three years (if more than one predecessor, list in reverse chronological order):

Predecessor CAGE code: \_\_\_\_\_ (or mark “Unknown”)

Predecessor legal name: \_\_\_\_\_

(Do not use a “doing business as” name)

(s) *Representation regarding compliance with labor laws (Executive Order 13673)*. If the offeror is a joint venture that is not itself a separate legal entity, each concern participating in the joint venture shall separately comply with the requirements of this provision.

(1)(i) For solicitations issued on or after October 25, 2016 through April 24, 2017: The Offeror  does  does not anticipate submitting an offer with an estimated contract value of greater than \$50 million.

(ii) For solicitations issued after April 24, 2017: The Offeror  does  does not anticipate submitting an offer with an estimated contract value of greater than \$500,000.

(2) If the Offeror checked “does” in paragraph (s)(1)(i) or (ii) of this provision, the Offeror represents to the best of the Offeror’s knowledge and belief [*Offeror to check appropriate block*]:

(i) There has been no administrative merits determination, arbitral award or decision, or civil judgment for any labor law violation(s) rendered against the offeror (see definitions in paragraph (a) of this section) during the period beginning on October 25, 2015 to the date of the offer, or for three years preceding the date of the offer, whichever period is shorter; or

(ii) There has been an administrative merits determination, arbitral award or decision, or civil judgment for any labor law violation(s) rendered against the Offeror during the period beginning on October 25, 2015 to the date of the offer, or for three years preceding the date of the offer, whichever period is shorter.

(3)(i) If the box at paragraph (s)(2)(ii) of this provision is checked and the Contracting Officer has initiated a responsibility determination and has requested additional information, the Offeror shall provide—

(A) The following information for each disclosed labor law decision in the System for Award Management (SAM) at [www.sam.gov](http://www.sam.gov), unless the information is already current, accurate, and complete in SAM. This information will be publicly available in the Federal Awardee Performance and Integrity Information System (FAPIIS):

(1) The labor law violated.

(2) The case number, inspection number, charge number, docket number, or other unique identification number.

(3) The date rendered.

(4) The name of the court, arbitrator(s), agency, board, or commission that rendered the determination or decision;

(B) The administrative merits determination, arbitral award or decision, or civil judgment document, to the Contracting Officer, if the Contracting Officer requires it;

(C) In SAM, such additional information as the Offeror deems necessary to demonstrate its responsibility, including mitigating factors and remedial measures such as offeror actions taken to address the violations, labor compliance agreements, and other steps taken to achieve compliance with labor laws. Offerors may provide explanatory text and upload documents. This information will not be made public unless the contractor determines that it wants the information to be made public; and

(D) The information in paragraphs (s)(3)(i)(A) and (s)(3)(i)(C) of this provision to the Contracting Officer, if the Offeror meets an exception to SAM registration (see FAR [4.1102\(a\)](#)).

(ii)(A) The Contracting Officer will consider all information provided under (s)(3)(i) of this provision as part of making a responsibility determination.

(B) A representation that any labor law decision(s) were rendered against the Offeror will not necessarily result in withholding of an award under this solicitation. Failure of the Offeror to furnish a representation or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(C) The representation in paragraph (s)(2) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous representation, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation in accordance with the procedures set forth in FAR [12.403](#).

(4) The Offeror shall provide immediate written notice to the Contracting Officer if at any time prior to contract award the Offeror learns that its representation at paragraph (s)(2) of this provision is no longer accurate.

(5) The representation in paragraph (s)(2) of this provision will be public information in the Federal Awardee Performance and Integrity Information System (FAPIIS).

**Note to paragraph (s):** By a court order issued on October 24, 2016, this paragraph (s) is enjoined indefinitely as of the date of the order. The enjoined paragraph will become effective immediately if the

court terminates the injunction. At that time, GSA, DoD and NASA will publish a document in the *Federal Register* advising the public of the termination of the injunction.

(t) *Public Disclosure of Greenhouse Gas Emissions and Reduction Goals.* Applies in all solicitations that require offerors to register in SAM ([52.212-1\(k\)](#)).

(1) This representation shall be completed if the Offeror received \$7.5 million or more in contract awards in the prior Federal fiscal year. The representation is optional if the Offeror received less than \$7.5 million in Federal contract awards in the prior Federal fiscal year.

(2) *Representation.* [Offeror to check applicable block(s) in paragraph (t)(2)(i) and (ii)].

(i) The Offeror (itself or through its immediate owner or highest-level owner)  does,  does not publicly disclose greenhouse gas emissions, *i.e.*, makes available on a publicly accessible website the results of a greenhouse gas inventory, performed in accordance with an accounting standard with publicly available and consistently applied criteria, such as the Greenhouse Gas Protocol Corporate Standard.

(ii) The Offeror (itself or through its immediate owner or highest-level owner)  does,  does not publicly disclose a quantitative greenhouse gas emissions reduction goal, *i.e.*, make available on a publicly accessible website a target to reduce absolute emissions or emissions intensity by a specific quantity or percentage.

(iii) A publicly accessible website includes the Offeror's own website or a recognized, third-party greenhouse gas emissions reporting program.

(3) If the Offeror checked "does" in paragraphs (t)(2)(i) or (t)(2)(ii) of this provision, respectively, the Offeror shall provide the publicly accessible website(s) where greenhouse gas emissions and/or reduction goals are reported:\_\_\_\_\_.

(u)(1) In accordance with section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions), Government agencies are not permitted to use appropriated (or otherwise made available) funds for contracts with an entity that requires employees or subcontractors of such entity seeking to report waste, fraud, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or subcontractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

(2) The prohibition in paragraph (u)(1) of this provision does not contravene requirements applicable to Standard Form 312 (Classified Information Nondisclosure Agreement), Form 4414 (Sensitive Compartmented Information Nondisclosure Agreement), or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

(3) *Representation.* By submission of its offer, the Offeror represents that it will not require its employees or subcontractors to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or subcontractors from lawfully reporting waste, fraud, or abuse related to the performance of a Government contract to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information (*e.g.*, agency Office of the Inspector General).

(End of provision)

**52.216-1 Type of Contract. (APR 1984)**

As prescribed in [16.105](#), complete and insert the following provision:

The Government contemplates award of a firm fixed price contract resulting from this solicitation.

(End of provision)

**52.233-2 Service of Protest. (SEPT 2006)**

As prescribed in [33.106](#), insert the following provision:

(a) Protests, as defined in section [33.101](#) of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Jennifer Gartzke, Contracting Officer at Jennifer\_Gartzke@nps.gov.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

**52.252-1 Solicitation Provisions Incorporated by Reference. (FEB 1998)**

As prescribed in [52.107](#)(a), insert the following provision:

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<https://www.acquisition.gov/browsefar>

(End of provision)

**Clauses Incorporated by Reference**

52.202-1 Definitions. (NOV 2013)

52.202-1 Definitions. (APR 1984)

52.203-5 Covenant Against Contingent Fees. (MAY 2014)

52.203-5 Covenant Against Contingent Fees. (SEP 2006)

52.203-5 Covenant Against Contingent Fees. *Alternate I (Oct 1995)*.

52.203-7 Anti-Kickback Procedures. (MAY 2014)

52.203-8 Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity. (MAY 2014)

52.203-10 Price or Fee Adjustment for Illegal or Improper Activity. (MAY 2014)

52.203-10 Price or Fee Adjustment for Illegal or Improper Activity. (OCT 2010)

52.203-10 Price or Fee Adjustment for Illegal or Improper Activity. (APR 2014)

52.204-4 Printed or Copied Double-Sided on Postconsumer Fiber Content Paper. (MAY 2011)

52.204-4 Printed or Copied Double-Sided on Postconsumer Fiber Content Paper. (OCT 2016)

52.204-13 System for Award Management Maintenance. (OCT 2016)

52.204-18 Commercial and Government Entity Code Maintenance. (JUL 2016)

52.204-19 Incorporation by Reference of Representations and Certifications. (DEC 2014)

52.212-14 Contract Terms and Conditions – Commercial Items. (JAN 2017)

52.222-50 Combating Trafficking in Persons. (MAR 2015)

52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving. (AUG 2011)

52.223-18 Encouraging Contractor Policies to Ban Text Messaging While Driving. (JUN 2008)

52.227-14 Rights in Data—General. (MAY 2014)

52.227-14 Rights in Data—General. (DEC 2007)

52.227-17 Rights in Data—Special Works. (DEC 2007)

52.232-1 Payments. (APR 1984)

52.232-33 Payment by Electronic Funds Transfer-System for Award Management. (JUL 2013)

52.232-39 Unenforceability of Unauthorized Obligations. (JUN 2013)

52.242-13 Bankruptcy. (JUL 1995)

52.242-15 Stop-Work Order. (AUG 1989)

52.242-17 Government Delay of Work. (APR 1984)

52.244-6 Subcontracts for Commercial Items. (JAN 2017)

#### **Clauses Incorporated by Full Text**

##### **52.204-1 Approval of Contract. (DEC 1989)**

As prescribed in [4.103](#), insert the following clause:

This contract is subject to the written approval of Jennifer Gartzke, NPS Contracting Officer, and shall not be binding until so approved.

(End of clause)

##### **52.212-5 Contract Terms and Conditions Required To Implement Statutes or Executive Orders—Commercial Items. (JAN 2017)**

As prescribed in [12.301\(b\)\(4\)](#), insert the following clause:

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

- (1) [52.203-19](#), Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).
- (2) [52.209-10](#), Prohibition on Contracting with Inverted Domestic Corporations (Nov 2015).
- (3) [52.233-3](#), Protest After Award (Aug 1996) ([31 U.S.C. 3553](#)).
- (4) [52.233-4](#), Applicable Law for Breach of Contract Claim (Oct 2004)(Public Laws 108-77 and 108-78 ([19 U.S.C. 3805 note](#))).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

\_X\_ (1) [52.203-6](#), Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) ([41 U.S.C. 4704](#) and [10 U.S.C. 2402](#)).

\_\_ (2) [52.203-13](#), Contractor Code of Business Ethics and Conduct (Oct 2015) ([41 U.S.C. 3509](#))).

\_\_ (3) [52.203-15](#), Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (June 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

\_X\_ (4) [52.204-10](#), Reporting Executive Compensation and First-Tier Subcontract Awards (Oct 2016) (Pub. L. 109-282) ([31 U.S.C. 6101 note](#)).

\_\_ (5) [Reserved].

\_X\_ (6) [52.204-14](#), Service Contract Reporting Requirements (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).

\_\_ (7) [52.204-15](#), Service Contract Reporting Requirements for Indefinite-Delivery Contracts (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).

\_X\_ (8) [52.209-6](#), Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (Oct 2015) ([31 U.S.C. 6101 note](#)).

\_X\_ (9) [52.209-9](#), Updates of Publicly Available Information Regarding Responsibility Matters (Jul 2013) ([41 U.S.C. 2313](#)).

\_\_ (10) [Reserved].

\_\_ (11)(i) [52.219-3](#), Notice of HUBZone Set-Aside or Sole-Source Award (Nov 2011) ([15 U.S.C. 657a](#)).

\_\_ (ii) Alternate I (Nov 2011) of [52.219-3](#).

- \_\_\_ (12)(i) [52.219-4](#), Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Oct 2014) (if the offeror elects to waive the preference, it shall so indicate in its offer) ([15 U.S.C. 657a](#)).
- \_\_\_ (ii) Alternate I (Jan 2011) of [52.219-4](#).
- \_\_\_ (13) [Reserved]
- \_X\_ (14)(i) [52.219-6](#), Notice of Total Small Business Set-Aside (Nov 2011) ([15 U.S.C. 644](#)).
- \_\_\_ (ii) Alternate I (Nov 2011).
- \_\_\_ (iii) Alternate II (Nov 2011).
- \_\_\_ (15)(i) [52.219-7](#), Notice of Partial Small Business Set-Aside (June 2003) ([15 U.S.C. 644](#)).
- \_\_\_ (ii) Alternate I (Oct 1995) of [52.219-7](#).
- \_\_\_ (iii) Alternate II (Mar 2004) of [52.219-7](#).
- \_X\_ (16) [52.219-8](#), Utilization of Small Business Concerns (Nov 2016) ([15 U.S.C. 637\(d\)\(2\)](#) and (3)).
- \_\_\_ (17)(i) [52.219-9](#), Small Business Subcontracting Plan (Jan 2017) ([15 U.S.C. 637\(d\)\(4\)](#)).
- \_\_\_ (ii) Alternate I (Nov 2016) of [52.219-9](#).
- \_\_\_ (iii) Alternate II (Nov 2016) of [52.219-9](#).
- \_\_\_ (iv) Alternate III (Nov 2016) of [52.219-9](#).
- \_\_\_ (v) Alternate IV (Nov 2016) of [52.219-9](#).
- \_\_\_ (18) [52.219-13](#), Notice of Set-Aside of Orders (Nov 2011) ([15 U.S.C. 644\(r\)](#)).
- \_X\_ (19) [52.219-14](#), Limitations on Subcontracting (Jan 2017) ([15 U.S.C. 637\(a\)\(14\)](#)).
- \_\_\_ (20) [52.219-16](#), Liquidated Damages—Subcon-tracting Plan (Jan 1999) ([15 U.S.C. 637\(d\)\(4\)\(F\)\(i\)](#)).
- \_\_\_ (21) [52.219-27](#), Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (Nov 2011) ([15 U.S.C. 657 f](#)).
- \_X\_ (22) [52.219-28](#), Post Award Small Business Program Rerepresentation (Jul 2013) ([15 U.S.C. 632\(a\)\(2\)](#)).
- \_\_\_ (23) [52.219-29](#), Notice of Set-Aside for, or Sole Source Award to, Economically Disadvantaged Women-Owned Small Business Concerns (Dec 2015) ([15 U.S.C. 637\(m\)](#)).
- \_\_\_ (24) [52.219-30](#), Notice of Set-Aside for, or Sole Source Award to, Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program (Dec 2015) ([15 U.S.C. 637\(m\)](#)).
- \_X\_ (25) [52.222-3](#), Convict Labor (June 2003) (E.O. 11755).
- \_X\_ (26) [52.222-19](#), Child Labor—Cooperation with Authorities and Remedies (Oct 2016) (E.O. 13126).
- \_X\_ (27) [52.222-21](#), Prohibition of Segregated Facilities (Apr 2015).
- \_X\_ (28) [52.222-26](#), Equal Opportunity (Sept 2016) (E.O. 11246).

\_X\_ (29) [52.222-35](#), Equal Opportunity for Veterans (Oct 2015)([38 U.S.C. 4212](#)).

\_X\_ (30) [52.222-36](#), Equal Opportunity for Workers with Disabilities (Jul 2014) ([29 U.S.C. 793](#)).

\_X\_ (31) [52.222-37](#), Employment Reports on Veterans (Feb 2016) (38 U.S.C. 4212).

\_X\_ (32) [52.222-40](#), Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496).

\_X\_ (33)(i) [52.222-50](#), Combating Trafficking in Persons (Mar 2015) ([22 U.S.C. chapter 78](#) and E.O. 13627).

\_\_ (ii) Alternate I (Mar 2015) of [52.222-50](#) ([22 U.S.C. chapter 78](#) and E.O. 13627).

\_X\_ (34) [52.222-54](#), Employment Eligibility Verification (Oct 2015). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in [22.1803](#).)

\_\_ (35) [52.222-59](#), Compliance with Labor Laws (Executive Order 13673) (Oct 2016). (Applies at \$50 million for solicitations and resultant contracts issued from October 25, 2016 through April 24, 2017; applies at \$500,000 for solicitations and resultant contracts issued after April 24, 2017).

**Note to paragraph (b)(35):** By a court order issued on October 24, 2016, 52.222-59 is enjoined indefinitely as of the date of the order. The enjoined paragraph will become effective immediately if the court terminates the injunction. At that time, GSA, DoD and NASA will publish a document in the *Federal Register* advising the public of the termination of the injunction.

\_X\_ (36) [52.222-60](#), Paycheck Transparency (Executive Order 13673) (OCT 2016).

\_\_ (37)(i) [52.223-9](#), Estimate of Percentage of Recovered Material Content for EPA–Designated Items (May 2008) ([42 U.S.C. 6962\(c\)\(3\)\(A\)\(ii\)](#)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

\_\_ (ii) Alternate I (May 2008) of [52.223-9](#) ([42 U.S.C. 6962\(i\)\(2\)\(C\)](#)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

\_\_ (38) [52.223-11](#), Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons (Jun 2016) (E.O. 13693).

\_\_ (39) [52.223-12](#), Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners (Jun 2016) (E.O. 13693).

\_\_ (40)(i) [52.223-13](#), Acquisition of EPEAT®-Registered Imaging Equipment (Jun 2014) (E.O.s 13423 and 13514).

\_\_ (ii) Alternate I (Oct 2015) of [52.223-13](#).

\_\_ (41)(i) [52.223-14](#), Acquisition of EPEAT®-Registered Televisions (Jun 2014) (E.O.s 13423 and 13514).

\_\_ (ii) Alternate I (Jun 2014) of [52.223-14](#).

\_\_ (42) [52.223-15](#), Energy Efficiency in Energy-Consuming Products (Dec 2007) ([42 U.S.C. 8259b](#)).

- \_\_\_ (43)(i) [52.223-16](#), Acquisition of EPEAT®-Registered Personal Computer Products (Oct 2015) (E.O.s 13423 and 13514).
- \_\_\_ (ii) Alternate I (Jun 2014) of [52.223-16](#).
- \_X\_ (44) [52.223-18](#), Encouraging Contractor Policies to Ban Text Messaging While Driving (Aug 2011) (E.O. 13513).
- \_\_\_ (45) [52.223-20](#), Aerosols (Jun 2016) (E.O. 13693).
- \_\_\_ (46) [52.223-21](#), Foams (Jun 2016) (E.O. 13693).
- \_\_\_ (47)(i) [52.224-3](#), Privacy Training (JAN 2017) (5 U.S.C. 552a).
- \_\_\_ (ii) Alternate I (JAN 2017) of 52.224-3.
- \_\_\_ (48) [52.225-1](#), Buy American—Supplies (May 2014) ([41 U.S.C. chapter 83](#)).
- \_\_\_ (49)(i) [52.225-3](#), Buy American—Free Trade Agreements—Israeli Trade Act (May 2014) ([41 U.S.C. chapter 83](#), [19 U.S.C. 3301](#) note, [19 U.S.C. 2112](#) note, [19 U.S.C. 3805](#) note, [19 U.S.C. 4001](#) note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).
- \_\_\_ (ii) Alternate I (May 2014) of [52.225-3](#).
- \_\_\_ (iii) Alternate II (May 2014) of [52.225-3](#).
- \_\_\_ (iv) Alternate III (May 2014) of [52.225-3](#).
- \_\_\_ (50) [52.225-5](#), Trade Agreements (Oct 2016) ([19 U.S.C. 2501](#), *et seq.*, [19 U.S.C. 3301](#) note).
- \_X\_ (51) [52.225-13](#), Restrictions on Certain Foreign Purchases (June 2008) (E.O.’s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- \_\_\_ (52) [52.225-26](#), Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; [10 U.S.C. 2302 Note](#)).
- \_\_\_ (53) [52.226-4](#), Notice of Disaster or Emergency Area Set-Aside (Nov 2007) ([42 U.S.C. 5150](#)).
- \_\_\_ (54) [52.226-5](#), Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) ([42 U.S.C. 5150](#)).
- \_\_\_ (55) [52.232-29](#), Terms for Financing of Purchases of Commercial Items (Feb 2002) ([41 U.S.C. 4505](#), [10 U.S.C. 2307\(f\)](#)).
- \_\_\_ (56) [52.232-30](#), Installment Payments for Commercial Items (Jan 2017) ([41 U.S.C. 4505](#), [10 U.S.C. 2307\(f\)](#)).
- \_X\_ (57) [52.232-33](#), Payment by Electronic Funds Transfer—System for Award Management (Jul 2013) ([31 U.S.C. 3332](#)).
- \_\_\_ (58) [52.232-34](#), Payment by Electronic Funds Transfer—Other than System for Award Management (Jul 2013) ([31 U.S.C. 3332](#)).

- \_\_ (59) [52.232-36](#), Payment by Third Party (May 2014) ([31 U.S.C. 3332](#)).
- \_\_ (60) [52.239-1](#), Privacy or Security Safeguards (Aug 1996) ([5 U.S.C. 552a](#)).
- \_\_ (61) [52.242-5](#), Payments to Small Business Subcontractors (Jan 2017)(15 U.S.C. 637(d)(12)).
- \_\_ (62)(i) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)).
- \_\_ (ii) Alternate I (Apr 2003) of [52.247-64](#).

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

- \_\_ (1) [52.222-17](#), Nondisplacement of Qualified Workers (May 2014)(E.O. 13495).
- \_\_ (2) [52.222-41](#), Service Contract Labor Standards (May 2014) ([41 U.S.C. chapter 67](#)).
- \_\_ (3) [52.222-42](#), Statement of Equivalent Rates for Federal Hires (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).
- \_\_ (4) [52.222-43](#), Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (Multiple Year and Option Contracts) (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).
- \_\_ (5) [52.222-44](#), Fair Labor Standards Act and Service Contract Labor Standards—Price Adjustment (May 2014) ([29 U.S.C. 206](#) and [41 U.S.C. chapter 67](#)).
- \_\_ (6) [52.222-51](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment—Requirements (May 2014) ([41 U.S.C. chapter 67](#)).
- \_X\_ (7) [52.222-53](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services—Requirements (May 2014) ([41 U.S.C. chapter 67](#)).
- \_\_ (8) [52.222-55](#), Minimum Wages Under Executive Order 13658 (Dec 2015).
- \_\_ (9) [52.222-62](#), Paid Sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).
- \_\_ (10) [52.226-6](#), Promoting Excess Food Donation to Nonprofit Organizations (May 2014) ([42 U.S.C. 1792](#)).
- \_\_ (11) [52.237-11](#), Accepting and Dispensing of \$1 Coin (Sept 2008) ([31 U.S.C. 5112\(p\)\(1\)](#)).

(d) *Comptroller General Examination of Record*. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at [52.215-2](#), Audit and Records—Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor’s directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR [subpart 4.7](#), Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—

(i) [52.203-13](#), Contractor Code of Business Ethics and Conduct (Oct 2015) ([41 U.S.C. 3509](#)).

(ii) [52.203-19](#), Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).

(iii) [52.219-8](#), Utilization of Small Business Concerns (Nov 2016) ([15 U.S.C. 637\(d\)\(2\)](#) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$700,000 (\$1.5 million for construction of any public facility), the subcontractor must include [52.219-8](#) in lower tier subcontracts that offer subcontracting opportunities.

(iv) [52.222-17](#), Nondisplacement of Qualified Workers (May 2014) (E.O. 13495). Flow down required in accordance with paragraph (l) of FAR clause [52.222-17](#).

(v) [52.222-21](#), Prohibition of Segregated Facilities (Apr 2015)

(vi) [52.222-26](#), Equal Opportunity (Sept 2016) (E.O. 11246).

(vii) [52.222-35](#), Equal Opportunity for Veterans (Oct 2015) ([38 U.S.C. 4212](#)).

(viii) [52.222-36](#), Equal Opportunity for Workers with Disabilities (Jul 2014) ([29 U.S.C. 793](#)).

(ix) [52.222-37](#), Employment Reports on Veterans (Feb 2016) ([38 U.S.C. 4212](#))

(x) [52.222-40](#), Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause [52.222-40](#).

(xi) [52.222-41](#), Service Contract Labor Standards (May 2014) ([41 U.S.C. chapter 67](#)).

(xii)

[52.222-50](#), Combating Trafficking in Persons (Mar 2015) ([22 U.S.C. chapter 78](#) and E.O 13627). Alternate I (Mar 2015) of [52.222-50](#) ([22 U.S.C. chapter 78 and E.O 13627](#)).

(xiii) [52.222-51](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

(xiv) [52.222-53](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (May 2014) ([41 U.S.C. chapter 67](#)).

(xv) [52.222-54](#), Employment Eligibility Verification (Oct 2015) (E.O. 12989).

(xvi) [52.222-55](#), Minimum Wages Under Executive Order 13658 (Dec 2015).

(xvii) [52.222-59](#), Compliance with Labor Laws (Executive Order 13673) (Oct 2016) (Applies at \$50 million for solicitations and resultant contracts issued from October 25, 2016 through April 24, 2017; applies at \$500,000 for solicitations and resultant contracts issued after April 24, 2017).

**Note to paragraph (e)(1)(xvii):** By a court order issued on October 24, 2016, 52.222-59 is enjoined indefinitely as of the date of the order. The enjoined paragraph will become effective immediately if the court terminates the injunction. At that time, GSA, DoD and NASA will publish a document in the *Federal Register* advising the public of the termination of the injunction.

(xviii) [52.222-60](#), Paycheck Transparency (Executive Order 13673) (Oct 2016)).

(xix) [52.222-62](#), Paid Sick Leave Under Executive Order 13706 (Jan 2017) (E.O. 13706).

(xx)(A) 52.224-3, Privacy Training (Jan 2017) (5 U.S.C. 552a).

(B) Alternate I (Jan 2017) of 52.224-3.

(xxi) [52.225-26](#), Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; [10 U.S.C. 2302 Note](#)).

(xxii) [52.226-6](#), Promoting Excess Food Donation to Nonprofit Organizations (May 2014) ([42 U.S.C. 1792](#)). Flow down required in accordance with paragraph (e) of FAR clause [52.226-6](#).

(xxiii) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)). Flow down required in accordance with paragraph (d) of FAR clause [52.247-64](#).

(2) While not required, the Contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)

*Alternate I (Feb 2000).* As prescribed in [12.301\(b\)\(4\)\(i\)](#), delete paragraph (d) from the basic clause, redesignate paragraph (e) as paragraph (d), and revise the reference to “paragraphs (a), (b), (c), or (d) of this clause” in the redesignated paragraph (d) to read “paragraphs (a), (b), and (c) of this clause.”

*Alternate II (Jan 2017).* As prescribed in [12.301\(b\)\(4\)\(ii\)](#), substitute the following paragraphs (d)(1) and (e)(1) for paragraphs (d)(1) and (e)(1) of the basic clause as follows:

(d)(1) The Comptroller General of the United States, an appropriate Inspector General appointed under section 3 or 8G of the Inspector General Act of 1978 ([5 U.S.C. App.](#)), or an authorized representative of either of the foregoing officials shall have access to and right to—

- (i) Examine any of the Contractor's or any subcontractors' records that pertain to, and involve transactions relating to, this contract; and
  - (ii) Interview any officer or employee regarding such transactions.
- (e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), and (c), of this clause, the Contractor is not required to flow down any FAR clause in a subcontract for commercial items, other than—
- (i) *Paragraph (d) of this clause.* This paragraph flows down to all subcontracts, except the authority of the Inspector General under paragraph (d)(1)(ii) does not flow down; and
  - (ii) *Those clauses listed in this paragraph (e)(1).* Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—
- (A) [52.203-13](#), Contractor Code of Business Ethics and Conduct (Oct 2015) ([41 U.S.C. 3509](#)).
  - (B) [52.203-15](#), Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (Jun 2010) (Section 1553 of Pub. L. 111-5).
  - (C) [52.219-8](#), Utilization of Small Business Concerns (Nov 2016) ([15 U.S.C. 637\(d\)\(2\) and \(3\)](#)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$700,000 (\$1.5 million for construction of any public facility), the subcontractor must include [52.219-8](#) in lower tier subcontracts that offer subcontracting opportunities.
  - (D) [52.222-21](#), Prohibition of Segregated Facilities (Apr 2015).
  - (E) [52.222-26](#), Equal Opportunity (Sept 2016) (E.O. 11246).
  - (F) [52.222-35](#), Equal Opportunity for Veterans (Oct 2015) ([38 U.S.C. 4212](#)).
  - (G) [52.222-36](#), Equal Opportunity for Workers with Disabilities (Jul 2014) ([29 U.S.C. 793](#)).
  - (H) [52.222-40](#), Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause [52.222-40](#).
  - (I) [52.222-41](#), Service Contract Labor Standards (May 2014) ([41 U.S.C. chapter 67](#)).
  - (J)   X  (1) [52.222-50](#), Combating Trafficking in Persons (Mar 2015) ([22 U.S.C. chapter 78](#) and E.O 13627).
  - \_\_\_(2) Alternate I (Mar 2015) of [52.222-50](#) ([22 U.S.C. chapter 78 and E.O 13627](#)).
  - (K) [52.222-51](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment—Requirements (May 2014) ([41 U.S.C. chapter 67](#)).
  - (L) [52.222-53](#), Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services—Requirements (May 2014) ([41 U.S.C. chapter 67](#)).
  - (M) [52.222-54](#), Employment Eligibility Verification (Oct 2015) (Executive Order 12989).
  - (N) [52.222-55](#), Minimum Wages Under Executive Order 13658 (Dec 2015).
  - (O) [52.222-59](#) Compliance with Labor Laws (Executive Order 13673) (OCT 2016).

**Note to paragraph (e)(1)(ii)(O):** By a court order issued on October 24, 2016, 52.222-59 is enjoined indefinitely as of the date of the order. The enjoined paragraph will become effective immediately if the court terminates the injunction. At that time, GSA, DoD and NASA will publish a document in the *Federal Register* advising the public of the termination of the injunction.

(P) [52.222-60](#), Paycheck Transparency (Executive Order 13673) (OCT 2016).

(Q) [52.222-62](#), Paid Sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).

(R)(1)52.224-3, Privacy Training (Jan 2017) (5 U.S.C. 552a).

(2)Alternate I (Jan 2017) of 52.224-3.

(S) [52.225-26](#), Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note)

(T) [52.226-6](#), Promoting Excess Food Donation to Nonprofit Organizations. (May 2014) ([42 U.S.C. 1792](#)). Flow down required in accordance with paragraph (e) of FAR clause [52.226-6](#).

(U) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)). Flow down required in accordance with paragraph (d) of FAR clause [52.247-64](#).

#### **52.217-8 Option to Extend Services. (NOV 1999)**

As prescribed in [17.208](#)(f), insert a clause substantially the same as the following:

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 DAYS PRIOR TO CONTRACT END.

(End of clause)

#### **52.217-9 Option to Extend the Term of the Contract. (MAR 2000)**

As prescribed in [17.208](#)(g), insert a clause substantially the same as the following:

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 DAYS; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed FIVE YEARS.

(End of clause)

#### **52.252-2 Clauses Incorporated by Reference. (FEB 1998)**

As prescribed in [52.107\(b\)](#), insert the following clause:

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

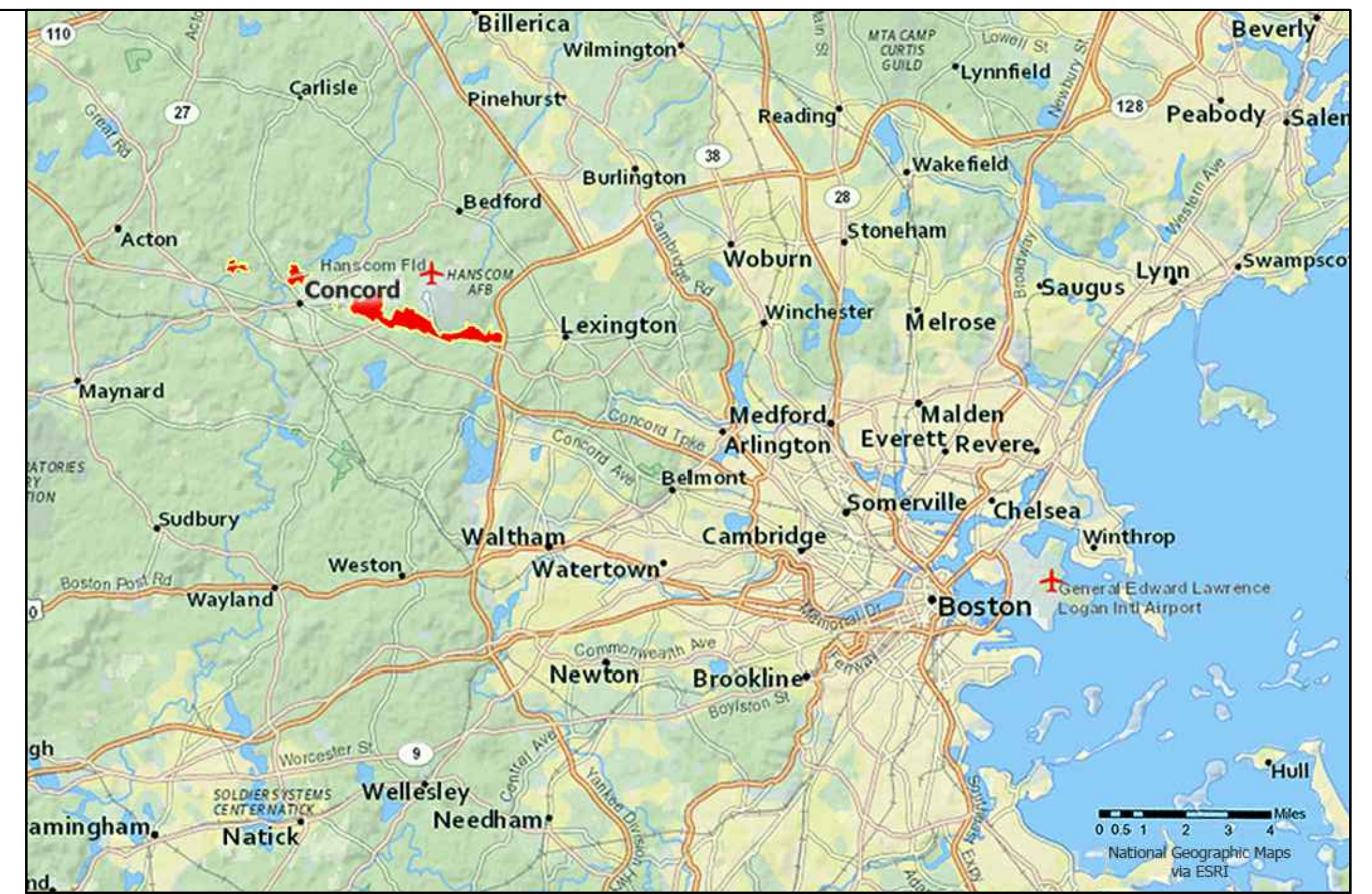
<https://www.acquisition.gov/browsefar>

(End of clause)

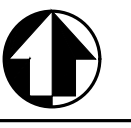
# REHABILITATE AND REPAIR STRUCTURES AND LANDSCAPES: LANDSCAPE AND SEPTIC GREAT AMERICAN OUTDOORS ACT (GAOA)

MINUTE MAN NATIONAL HISTORICAL PARK  
LEXINGTON, LINCOLN, & CONCORD, MASSACHUSETTS

NPS PMIS# 317529  
RFP SOLICITATION No. XXXXX

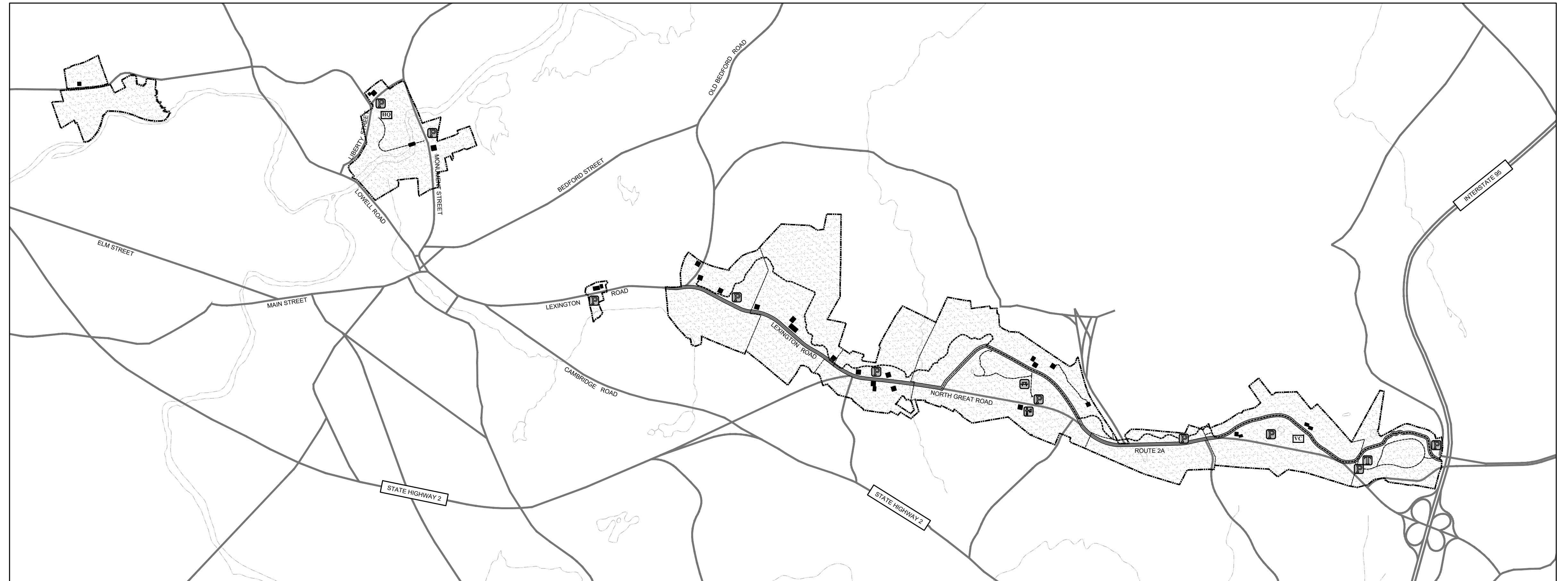


MASSACHUSETTS

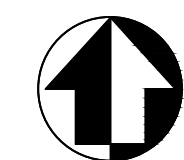


## LEGEND

- PARK BOUNDARY
- CULTURAL LANDSCAPE BOUNDARY
- PAVED ROAD
- TRAIL
- BATTLE ROAD
- WATERWAY
- VC** VISITOR CENTER
- HQ** PARK HEADQUARTERS
- RANGER STATION
- INFORMATION CENTER
- PARKING
- PICNIC AREA
- TRANSIT STOP



## MINUTE MAN NATIONAL HISTORICAL PARK



| QUALITY DESIGN CERTIFICATION   | MARK | SHEET | REVISION | DATE | INTL |
|--|------|-------|----------|------|------|
| <input type="checkbox"/> PREPARED IN ACCORDANCE WITH DESIGN DEVELOPMENT (TITLE I) _____ DRAWING NO. _____          |      |       |          |      |      |
| OR   |      |       |          |      |      |
| <input type="checkbox"/> VARIANCE FROM DESIGN DEVELOPMENT (TITLE I) APPROVED BY SUPERINTENDENT ON _____ DATE _____ |      |       |          |      |      |
| OR   |      |       |          |      |      |
| <input type="checkbox"/> CONSTRUCTION DRAWING NOT PRECEDED BY DESIGN DEVELOPMENT (TITLE I)                         |      |       |          |      |      |
| PROJECT MANAGER _____ DATE _____   |      |       |          |      |      |

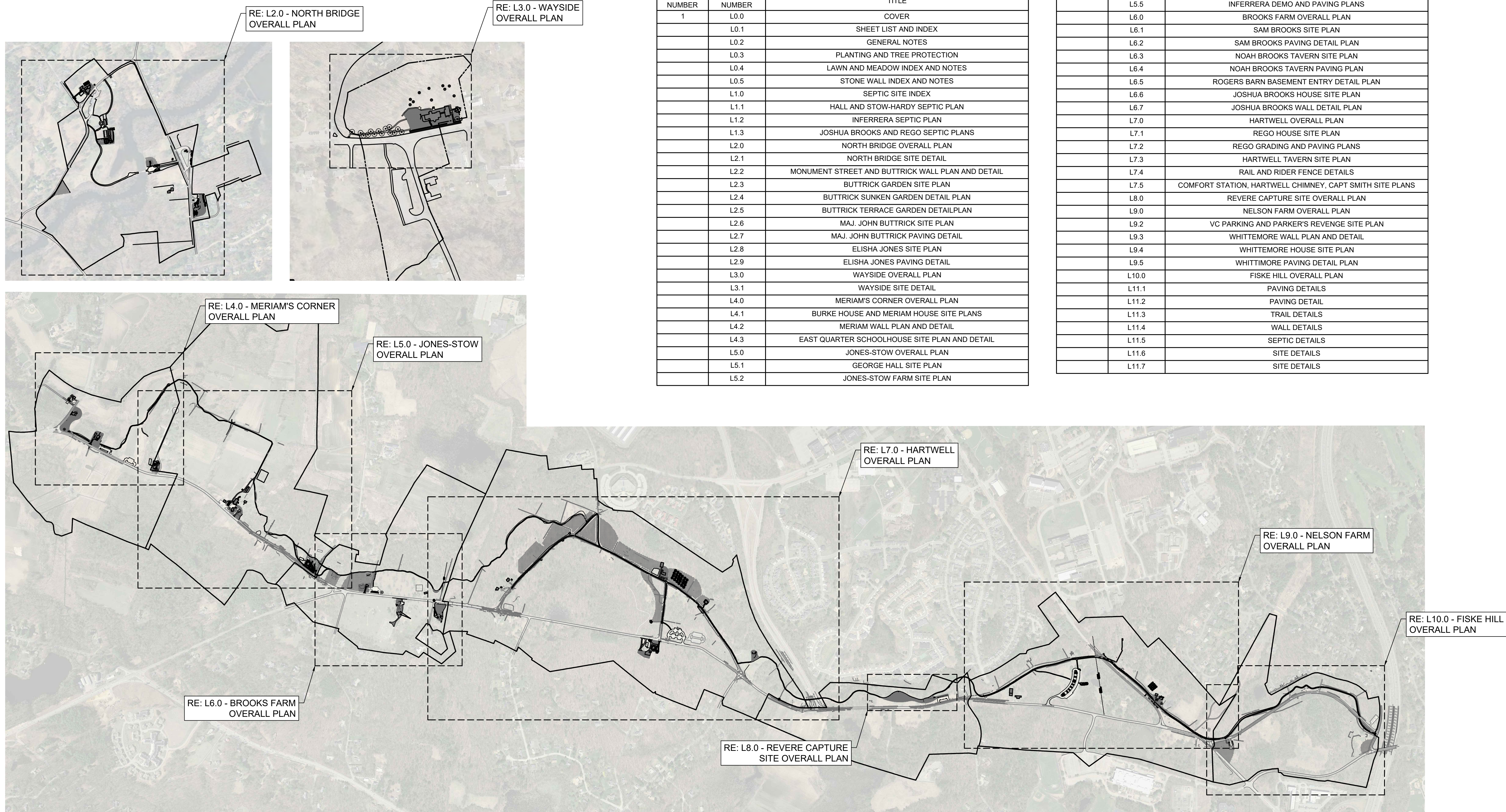


DD - DRAFT - NFC  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
HACE

TITLE OF DRAWING  
**LANDSCAPE & SEPTIC REPAIRS**  
LOCATION WITHIN PARK  
NORTH BRIDGE, WAYSIDE, BATTLE ROAD  
NAME OF PARK  
MINUTE MAN NATIONAL HISTORICAL PARK  
REGION COUNTY STATE  
IR1/NER MIDDLESEX MASS

|             |        |
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| DRAWING NO. | 406    |
| PKG. NO.    | 184184 |
| SHEET       | 1      |
| OF          | 60     |

5/1/2023 12:52 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DO\PARKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\C\_PACKAGE\LO\_COVER\_NOTES\_CULA.DWG



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| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L0.1</b> | TITLE OF SHEET<br><br><b>SHEET LIST AND INDEX</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |   | 184184                 |
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|                       |                                  |   | SHEET<br>OF 60         |

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**PROJECT INFORMATION:**

- PROJECT LOCATION: MINUTE MAN NATIONAL HISTORICAL PARK, CONCORD, LINCOLN, AND LEXINGTON, MIDDLESEX COUNTY, MASSACHUSETTS
- SITE WORK GENERALLY CONSISTS OF THE FOLLOWING:
  - DEMOLITION OF EXISTING PAVING, REMOVAL OF TREES
  - ARCHAEOLOGICAL MONITORING IN SENSITIVE AREAS
  - TREE AND LANDSCAPE PROTECTION
  - INSTALLATION OF NEW PAVING
  - IMPROVEMENT OF EXISTING PAVING
  - REPAIR OF LAWN AREAS
  - RETURN OF PREVIOUSLY PAVED AREAS TO LAWN
  - CLEANING OF LAWN AREAS AT RESIDENCES TO BE LEASED
  - REMOVAL OF SHRUBBY GROWTH AND SMALL TREES FROM OPEN MEADOW, SEEDING OF DISTURBED AREAS, MOWING OF AREAS TO IMPROVE MEADOW HEALTH
  - REPAIR OF STACKED STONE WALLS
  - REPAIR OF STONE STAIRWAYS AND RETAINING WALLS
  - CLEANING AND REPOINTING OF BRICK
  - PLANTING OF NEW TREES

**GENERAL NOTES:**

- CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS, HORIZONTAL AND VERTICAL CONTROLS, AND PROPOSED DIMENSIONS PRIOR TO CONSTRUCTION. NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BASED ON BEST INFORMATION AVAILABLE. UTILITIES MAY NOT BE IN EXACT LOCATION SHOWN, AND CONTRACTOR SHALL EXERCISE CARE IN EXCAVATION. CONTACT THE LOCAL UTILITY SERVICE PROVIDER OR LOCATOR, ETC. SERVICE.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES PRIOR TO DISCONNECTION, REMOVAL AND RELOCATION OF ALL SERVICE LINES.
- CONTRACTOR SHALL NOTIFY CONTRACTING OFFICER IMMEDIATELY IN THE EVENT THAT ANY UTILITY IS DAMAGED DURING DEMOLITION OR CONSTRUCTION.
- REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTORS EXPENSE, INCLUDING BUT NOT LIMITED TO UNKNOWN UNDERGROUND UTILITIES.
- CONTRACTOR TO CONFORM TO ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY RULES AND REGULATIONS.
- CONTRACTOR RESPONSIBLE FOR HAVING REQUIRED DOCUMENTATION AT THE JOB SITE AT ALL TIMES FOR ALL AGENCY REVIEWS.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS INCLUDING, BUT NOT LIMITED TO; COORDINATING, INITIATING PERMIT ACQUISITION SERVICES, SCHEDULING, FURNISHING APPLICATIONS, PERMIT STATUS, AND FINAL PERMITS.
- ALL WALKWAYS, TRAILS, RAMPS, HANDRAILS, SIGNAGE, AND SITE FURNISHINGS PROVIDED AS PART OF THIS CONTRACT SHALL BE IN COMPLIANCE, AS AMENDED, WITH ARCHITECTURAL BARRIERS ACT-ABA ACCESSIBILITY STANDARDS; DESIGN; OUTDOOR DEVELOPED AREAS - ABAAS CHAPTER 10, AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING ACCESSIBLE FACILITIES.
- COMPLY WITH APPLICABLE CODES, AS SUPPLEMENTED, AMENDED, OR OTHERWISE MODIFIED, SUCH AS INTERNATIONAL BUILDING CODE, EXISTING BUILDING CODE, NFPA 101 LIFE SAFETY CODE, AND OTHER RELATED CODES.
- REFER TO ORDERS OF CONDITIONS PREPARED BY LOCAL AUTHORITIES HAVING JURISDICTION APPENDED TO PROJECT MANUAL FOR ADDITIONAL PROTECTIONS REGARDING WETLANDS.

**PRESERVATION OF CULTURAL RESOURCES:**

- ALL WORK MUST BE IN KEEPING WITH THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES WITH GUIDELINES FOR PRESERVING, REHABILITATING, RESTORING & RECONSTRUCTING HISTORIC BUILDINGS (2017) AND THE SECRETARY OF INTERIOR'S GUIDELINES FOR THE TREATMENT OF CULTURAL LANDSCAPES (1996).
- LANDSCAPES AND STRUCTURES ARE CULTURALLY AND HISTORICALLY SIGNIFICANT. THIS PROPERTY IS MANAGED IN ACCORDANCE WITH DOI AND NPS STANDARDS TO PROTECT RESOURCES FROM DAMAGE OR LOSS OF HISTORIC INTEGRITY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW BEST PRESERVATION PRINCIPLES AND PRACTICES, NOT ONLY IN IMPLEMENTING WORK IN ACCORDANCE WITH THE HISTORIC PRESERVATION TREATMENT PLAN REQUIRED, BUT IN OCCUPYING THE SITE AND PERFORMING TASKS RELATED TO THE WORK ON THE SITE OR WITHIN THE BUILDING.
- CONTRACTOR SHALL COORDINATE WITH CONTRACTING OFFICER DESIGNATED ARCHEOLOGIST TO IDENTIFY PROTECTION NECESSARY FOR SENSITIVE AREAS.

**STAGING AND ACCESS:**

- CONTRACTOR TO PROVIDE A CULTURAL LANDSCAPE COORDINATION PLAN FOR CONTRACTING OFFICER APPROVAL PRIOR TO NOTICE TO PROCEED PER THE CULTURAL LANDSCAPE PROCEDURES SPECIFICATION PROVIDED IN THE PROJECT MANUAL. PROTECTION PRACTICES SHALL FOLLOW SPECIFICATIONS OR INDUSTRY BMPs, WHICHEVER ARE MORE STRINGENT.
- STAGING AND LAYDOWN FACILITIES SHALL BE CONTAINED TO PREVIOUSLY DISTURBED AREAS, AREAS PLANNED TO BE PAVED AS PART OF THIS PROJECT, OR PAVED AREAS TO THE GREATEST EXTENT POSSIBLE. LOCATIONS OF ALL LAYDOWN FACILITIES SHALL BE APPROVED BY CONTRACTING OFFICER.

- SHEETS XXX, XXX, AND XXX INDICATE PROPOSED STAGING AREAS AT SPECIFIC PARK SITES. ANY CHANGE TO SIZE AND LOCATION OF DESIGNATED CONSTRUCTION ZONES, STAGING AREAS, OR PARKING SHALL BE COORDINATED WITH CONTRACTING OFFICER.
- PARKING, STAGING, AND LAYDOWN FACILITIES MAY BE PROVIDED IN NEARBY DESIGNATED PARKING LOT AT CONTRACTING OFFICER AND PARK'S DISCRETION. ACCESS TO PARKING IN PUBLIC LOTS SHALL BE COORDINATED WITH CONTRACTING OFFICER.
- CONTRACTOR SHALL COORDINATE NECESSARY INTERMEDIATE LAYDOWN AREAS WITH CONTRACTING OFFICER AND PARK REPRESENTATIVE. LAYDOWN AREAS SHOULD BE OUTSIDE OF 100' WETLAND BUFFER. CONTRACTOR SHALL PROVIDE PROTECTIVE MEASURES TO PREVENT ANY CONTAMINATION OF SOIL, WATER, OR WETLAND.
- CONTRACTOR RESPONSIBLE FOR KEEPING CONSTRUCTION AREA, STAGING AREA, AND PARKING AREAS FREE OF DEBRIS AND GARBAGE.
- STAGING AREAS ON SOFT SOILS SHALL BE PROTECTED FROM VEHICULAR DAMAGE THROUGH THE USE OF APPROPRIATE PROTECTIVE MATS DESIGNED FOR SITE CONDITIONS AND WEIGHT OF MATERIALS. IN PERIODS OF MUDDY CONDITIONS, CONTRACTOR SHALL USE ALTERNATE AREA FOR PARKING AND STORAGE OF HEAVY EQUIPMENT AND/OR MATERIALS. ALTERNATE AREAS SHALL BE COORDINATED AND APPROVED BY CONTRACTING OFFICER.
- CHEMICALS SHALL ONLY BE STORED IN STAGING AREAS UNLESS OTHERWISE APPROVED BY CONTRACTING OFFICER. BEST PRACTICES FOR STORAGE OF MATERIALS, INCLUDING MEASURES TO CONTROL POSSIBLE SPILLS AND PREVENT CONTAMINATION OF SURROUNDING LANDSCAPE, SHALL BE TAKEN BY CONTRACTOR. NO CHEMICALS MAY BE STORED WITHIN 100 FOOT WETLAND BUFFER.
- FUELING OF EQUIPMENT SHALL TAKE PLACE IN AREA OUTSIDE OF THE 100 FOOT WETLAND BUFFER. REFUELING AREA SHALL BE PROTECTED TO ENSURE NO CONTAMINATION OF SOIL, WATER, OR WETLAND.
- PROTECTIVE MATS SHALL BE CLEANED PER SPECIFICATION BEFORE AND AFTER PLACEMENT IN WETLANDS, AND WHEN TRANSFERRED BETWEEN WETLAND LOCATIONS.
- CONFLICTS WITH ACTIVELY USED TRAILS SHALL BE CLEARLY MARKED, FENCED, AND SIGNAGE SHALL BE PROVIDED WHICH INSTRUCTS PARK VISITORS AND CONSTRUCTION CREW REGARDING CONFLICT.
- OFF-TRAIL WORK SITES SHALL BE PROPERLY SECURED DURING CONSTRUCTION.
- INSTALL CONSTRUCTION SIGNAGE ON TEMPORARY POSTS PRIOR TO ANY CONSTRUCTION OPERATIONS AT THE SITE(S). TEMPORARY POSTS SHOULD BE ANCHORED USING WEIGHTS AND/OR STANDS WHERE PRACTICAL TO MINIMIZE SUB-SURFACE DISRUPTION. REMOVE AFTER ALL CONSTRUCTION OPERATIONS ARE COMPLETE. THE INSTALLATION OF THE SIGNS ARE SUBSIDIARY TO INSTALLING FENCE.
- SAFETY AND PROTECTIVE FENCING SHALL BE CONTINUOUSLY MONITORED THROUGHOUT THE DURATION OF CONSTRUCTION PER FEDERAL, STATE, LOCAL REQUIREMENTS AND AS DIRECTED BY THE CONTRACTING OFFICER.
- PROVIDE TEMPORARY SIGNAGE PLAN FOR CONTRACTING OFFICER APPROVAL BEFORE COMMENCEMENT OF WORK.
- INSTALL MOVABLE 6 FOOT CHAIN LINK FENCE & TEMPORARY TRAFFIC CONTROL AT THE SITE(S) PRIOR TO ANY CONSTRUCTION OPERATIONS. REMOVE AFTER ALL CONSTRUCTION OPERATIONS ARE COMPLETE. RESTORE LANDSCAPE GRADE TO PRE-CONSTRUCTION OR IMPROVED CONDITION.
- IN LOCATIONS WHERE SITE ACCESS REQUIRED CROSSING OF ACTIVE PUBLIC TRAIL FACILITIES, A FLAG PERSON MAY BE REQUIRED TO ESCORT VEHICLES OR FACILITATE ACTIVITY OF LARGE MACHINERY. THIS REQUIREMENT MAY BE COORDINATED WITH THE CONTRACTING OFFICER DURING PHASING AND SCHEDULING OR WORK.
- TEMPORARY FACILITIES SHALL BE REMOVED FOLLOWING PROJECT COMPLETION. STAGING AND CONSTRUCTION AREAS WILL REQUIRE RESTORATION AS SPECIFIED AT END OF CONSTRUCTION ACTIVITY.

**MANAGEMENT OF SITE**

- UNLESS OTHERWISE MARKED, KEEP DRIVEWAYS AND ENTRANCES SERVING PREMISES CLEAR AND AVAILABLE TO GOVERNMENT, GOVERNMENT'S EMPLOYEES, AND EMERGENCY VEHICLES AT ALL TIMES.
- SCHEDULE DELIVERIES TO MINIMIZE USE OF DRIVEWAYS AND ENTRANCES.
- SCHEDULE DELIVERIES TO MINIMIZE SPACE AND TIME REQUIREMENTS FOR STORAGE OF MATERIALS AND EQUIPMENT ON-SITE.
- HAULING RESTRICTIONS: COMPLY WITH ALL LEGAL LOAD RESTRICTIONS IN THE HAULING OF MATERIALS. LOAD RESTRICTIONS ON PARK ROADS ARE IDENTICAL TO THE STATE LOAD RESTRICTIONS WITH SUCH ADDITIONAL REGULATIONS AS MAY BE IMPOSED BY THE CONTRACTING OFFICER. A SPECIAL PERMIT WILL NOT RELIEVE CONTRACTOR OF LIABILITY FOR DAMAGE WHICH MAY RESULT FROM MOVING OF EQUIPMENT.

**CONSTRUCTION SEQUENCE:**

- INSTALL SEDIMENT CONTROL DEVICES (SILT FENCE) AS REQUIRED.
- STAKE LIMITS OF DISTURBANCE.
- INSTALL PROTECTIVE FENCING AND SITE BARRIERS.
- REMOVE TREES AND VEGETATION AS DESIGNATED ON THE DRAWINGS. TRANSPORT OFFSITE TO AN APPROVED DISPOSAL SITE.
- REMOVE ALL MATERIALS DESIGNATED FOR DEMOLITION. TRANSPORT OFFSITE TO AN APPROVED DISPOSAL SITE.
- STAKE BOUNDARIES OF PAVING, NEW TREE LOCATIONS, AND ANY OTHER INSTALLATION LIMITS NECESSARY TO CONVEY CONSTRUCTION INTENT FOR APPROVAL BY CONTRACTING OFFICER.

- COMPLETE SITE CONSTRUCTION AND RESTORATION AS REQUIRED BY PLANS OR SPECIFICATIONS.
- REMOVE STAKING, BARRIERS, AND ANY OTHER CONSTRUCTION RELATED EQUIPMENT FROM SITE.

**DEMOLITION AND SITE PREPARATION:**

- CONTRACTOR TO COORDINATE ARCHEOLOGICAL SERVICES PRIOR TO ANY EARTH DISTURBANCES. WORK WHICH REQUIRES ARCHEOLOGICAL TESTING OR MONITORING SHALL BE COORDINATED WITH THE CONTRACTING OFFICER AND FIRM PROVIDING APPROVED ARCHEOLOGICAL SERVICES.
- CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL CODES FOR THE DEMOLITION AND DISPOSAL OF ALL MATERIALS.
- ALL QUANTITIES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY.
- EXCAVATE ONLY AS NECESSARY TO PERFORM THE WORK.
- CONTRACTOR TO STAKE EXTENT OF DISTURBANCE FOR NPS APPROVAL PRIOR TO IMPLEMENTATION.
- TEMPORARY DISTURBANCE AREAS ARE TO BE APPROVED BY THE CONTRACTING OFFICER.
- IF TEMPORARY DISTURBANCE TO UTILITIES IS DEEMED NECESSARY, THE CONTRACTOR SHALL FIELD COORDINATE AND PROVIDE STAMPED DRAWINGS BY A PROFESSIONAL WITH THE APPROPRIATE LICENSES AND CERTIFICATIONS FOR THE STATE OF MASSACHUSETTS FOR GOVERNMENT REVIEW.
- CONTRACTOR TO PROVIDE ALL NECESSARY MEANS TO PROTECT EXISTING STRUCTURES, PAVING, SITE FEATURES, SITE FURNISHINGS, AND VEGETATION TO REMAIN.
- CONTRACTOR SHALL MAINTAIN ALL LAWNS, SIDEWALKS, AND PARKING AREAS NOT DESIGNATED AS STAGING AREA FROM CONSTRUCTION EQUIPMENT AND DEBRIS.
- ANY TREATMENT OF PLASTIC LUMBER WHICH MAY RESULT IN SHAVINGS, CUTTINGS, OR DEBRIS SHALL BE ACCOMPLISHED IN A MANNER WHICH CONTROLS WASTE AND PREVENTS CONTAMINATION OF SITE. NO PLASTICS OR PLASTIC LUMBER SHALL BE CUT INSIDE A WETLAND BOUNDARY.
- ENSURE POSITIVE DRAINAGE AT ALL TIMES.

**STORM CONTROL:**

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL REQUIRED PERMITS AND IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF WORK.
- NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED AS NOTED ON DRAWINGS. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.

- TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE GRADED OR TOP-DRESSED. NY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSION ELEMENTS. PILE MAY BE COVERED FOR SHORT TERM STORAGE, OR SEEDED WITH ANNUAL RYE FOR LONGER TERM STORAGE.
- IF PROJECT REQUIRED EARTHWORK, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION AT ALL TIMES. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
- THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING WETLANDS AND/OR WATERWAYS DURING ALL DEMOLITION, EXCAVATION, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, ROADWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN INADVERTENTLY DISCHARGED TO, OR ACCUMULATED IN, THE FLOW LINES AND PUBLIC RIGHT-OF-WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS CONSTRUCTION PROJECT.
- THERE SHALL BE NO CUT SOIL OR EXCAVATED STONE TRANSPORTED FROM THE SITE WITHOUT PRIOR APPROVAL OF CONTRACT OFFICER.
- APPROVED EROSION AND SEDIMENT CONTROL "BEST MANAGEMENT PRACTICES" (BMP) SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL BMPs WEEKLY AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.

**LAYOUT & GRADING:**

- CONTRACTOR TO FIELD VERIFY EXISTING DIMENSIONS & GRADES PRIOR TO CONSTRUCTION.
- BACKFILL PER FEDERAL, STATE AND LOCAL REQUIREMENTS. STAKE ALL IMPROVEMENTS FOR GOVERNMENT REVIEW PRIOR TO INSTALLATION. CONTRACTOR TO RE-STAKE IMPROVEMENTS AND MAKE ADJUSTMENTS AT THE DIRECTION OF THE GOVERNMENT.

**LEGEND**

|                                     |                                      |                      |
|-------------------------------------|--------------------------------------|----------------------|
| <b>CONSTRUCTION BOUNDARIES</b>      | <b>TRAIL WORK</b>                    | <b>WALLS</b>         |
| LIMIT OF CONSTRUCTION               | NEW TRAIL SURFACE, RE: TRAIL REPAIRS | STACKED STONE WALL   |
| STAGING AREA                        | REPAIR OR TRAIL PATCH                | FENCE                |
| TEMPORARY PARKING                   | ABANDON TRAIL                        | WALL TO BE REPAIRED  |
| <b>LANDSCAPE</b>                    | <b>PAVING</b>                        | <b>UTILITIES</b>     |
| MEADOW                              | ASPHALT                              | GAS                  |
| RESIDENTIAL LAWN                    | CONCRETE                             | OVERHEAD ELECTRIC    |
| SPECIFIC LAWN REPAIR                | BRICK WALKWAY                        | UNDERGROUND ELECTRIC |
| GRUBBING, REMOVAL OF SHRUBBY GROWTH | FLAGSTONE/BLUESTONE WALKWAY          | SEPTIC               |
| ORNAMENTAL LANDSCAPE PLANTING       | GRAVEL FOR PARKING                   | STORM SEWER          |
| STUMP TO BE REMOVED                 | ASPHALT WITH CHIP SEAL               | SANITARY SEWER       |
| TREE TO BE REMOVED                  | <b>WETLANDS</b>                      | WATER                |
| EXISTING TREE                       | WETLAND BOUNDARY                     | TELECOM              |
| TREE TO BE PROTECTED RE: L2         | 50' WETLAND BUFFER                   |                      |
| NEW DECIDUOUS TREE                  | 100' WETLAND BUFFER                  |                      |
| NEW EVERGREEN PLANTING              | SILT SOCK                            |                      |

REFERENCE NUMBER: 1  
DRAWING OR DETAIL  
SCALE: L0.2  
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| DESIGNED:<br>MPS/JAS   | SUB SHEET NO.<br><br><b>L0.2</b> | TITLE OF SHEET<br><br><b>GENERAL NOTES</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE  |                                  |  | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023  |                                  |  | SHEET<br>OF 60         |
| LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                                  |  |                        |

| LANDSCAPE CONSTRUCTION SCHEDULING CONSIDERATIONS |     |     |     |     |     |   |                              |     |     |     |     |     |
|--|-----|-----|-----|-----|-----|---|------------------------------|-----|-----|-----|-----|-----|
| ACTION   | JAN | FEB | MAR | APR | MAY | JUNE                                    | JULY                         | AUG | SEP | OCT | NOV | DEC |
| LANDSCAPE PLANTING <sup>4</sup>                  |     |     |     |     |     |   |                              |     |     |     |     |     |
| TREE PLANTING <sup>4</sup>                       |     |     |     |     |     |   |                              |     |     |     |     |     |
| TREE PRUNING                                     |     |     |     |     |     | LIMITED DUE TO BIRD AND BAT PROTECTIONS |                              |     |     |     |     |     |
| TREE REMOVAL                                     |     |     |     |     |     | LIMITED DUE TO BIRD AND BAT PROTECTIONS |                              |     |     |     |     |     |
| HEAVY SHRUB/SCRUB REMOVAL                        |     |     |     |     |     | LIMITED DUE TO BIRD AND BAT PROTECTIONS |                              |     |     |     |     |     |
| SODDING, SEEDING LAWN <sup>1</sup>               |     |     |     |     |     | CO APPROVAL                             |                              |     |     |     |     |     |
| SEEDING MEADOW <sup>1,2</sup>                    |     |     |     |     |     | CO APPROVAL                             | CO APPROVAL<br>+25% INC SEED |     |     |     |     |     |
| LAWN MOWING                                      |     |     |     |     |     |   |                              |     |     |     |     |     |
| FIRST YEAR MEADOW MOWING                         |     |     |     |     |     |   |                              |     |     |     |     |     |
| ESTABLISHED MEADOW MOWING                        |     |     |     |     |     | COOL SEASON <sup>3</sup>                |                              |     |     |     |     |     |

| WETLAND SCHEDULING CONSIDERATIONS     |     |     |     |     |     |      |      |     |     |     |     |             |
|---------------------------------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-------------|
| ACTION                                | JAN | FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEP | OCT | NOV | DEC         |
| VERNAL POOL CONSTRUCTION <sup>5</sup> |     |     |     |     |     |      |      |     |     |     |     | CO APPROVAL |
| WETLAND CONSTRUCTION <sup>5</sup>     |     |     |     |     |     |      |      |     |     |     |     | CO APPROVAL |

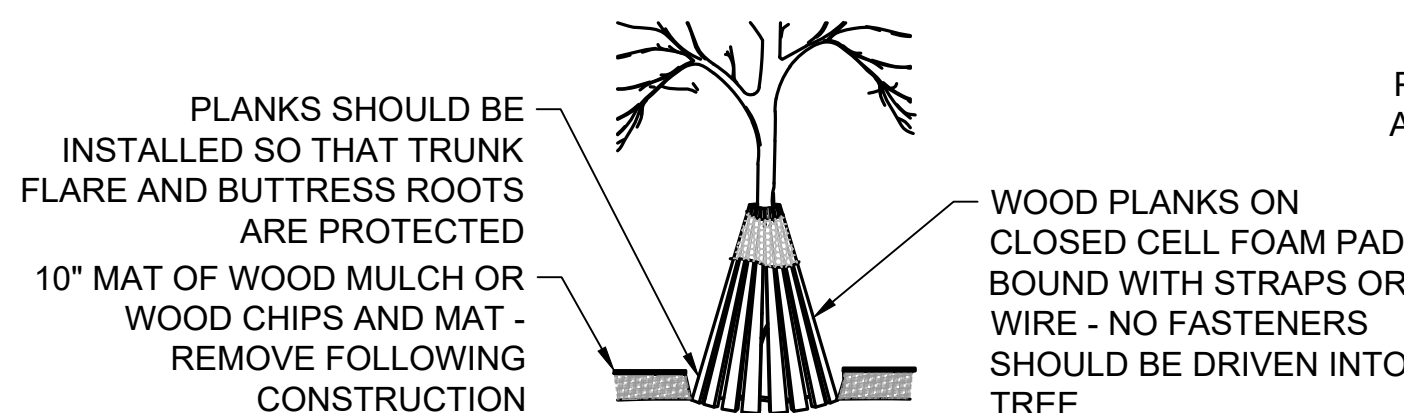
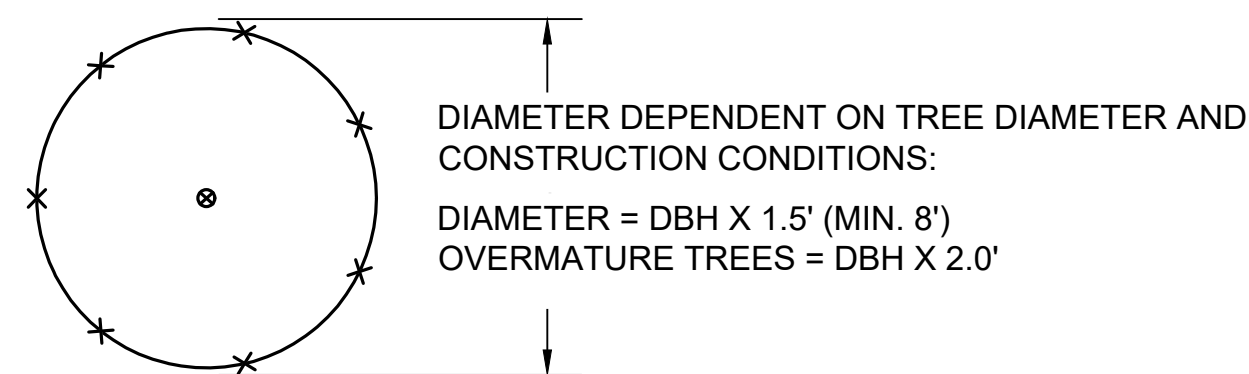
| ALLOWED           | NOTES:  |
|-------------------|---|
| ALLOWED           | 1. LAWN AND MEADOW SEEDING SHOULD BE WITHIN THE LIMITS ACCEPTABLE FOR SPECIES OR MIX TYPE. DO NOT SEED OR PLANT MEADOW OUTSIDE OF RECOMMENDATIONS FOR TYPE.   |
| LIMITED           | 2. REFER TO MEADOW SEEDING SPECIFICATION. RATES FOR SEEDING SHOULD BE INCREASED BY 25% DURING CERTAIN SUMMER MONTHS.  |
| CO APPROVAL       | 3. USE A STRING TRIMMER OR MOWER TO CUT BACK COOL SEASON GRASSES IN SELECT AREAS.   |
| SPECIAL CONDITION | 4. IN SOME AREAS, ARCHEOLOGICAL OVERSIGHT MAY BE NEEDED FOR EXCAVATION/DIGGING. COORDINATE WITH PARK REPRESENTATIVES OR CONTRACTING OFFICER IF DIGGING IS REQUIRED FOR PERENNIAL SHRUB OR TREE PLANTINGS.                         |
| LIMITED/FORBIDDEN | 5. WETLAND CONSTRUCTION ALLOWED JUNE 1 THROUGH OCTOBER 15. WORK WITHIN WETLANDS FROM OCTOBER 15 TO FEBRUARY 28 MAY BE ALLOWED WITH THE APPROVAL OF CONTRACTING OFFICER FOLLOWING CONSULTATION WITH JURISDICTION HAVING AUTHORITY. |

**TREE AND PLANT PROTECTION:**

- NO PRUNING OF LIMBS OR ROOTS ON ANY PART OF THE TREE SHALL BE PERFORMED EXCEPT UNDER GUIDANCE OF CERTIFIED ARBORIST OR AN APPROVED PARK REPRESENTATIVE.
- INSTALL PROTECTION FENCING, SIGNAGE, AND ANY NECESSARY ACCESSORIES AS INDICATED IN DRAWINGS AND SPECIFICATIONS.
- REMOVE TREES AND OTHER VEGETATION ONLY AS INDICATED ON THE DRAWINGS AND AS PER SPECIFICATIONS. REMOVAL SHALL BE COMPLETED USING INDUSTRY BEST PRACTICES. TRANSPORT OFFSITE TO AN APPROVED DISPOSAL SITE.
- TREES MARKED ALONG TRAIL FOR PROTECTION ARE VERY CLOSE TO TRAIL AND IN THE PATH OF CONSTRUCTION. TREES REQUIRE TRUNK PROTECTION DURING CONSTRUCTION. IF TREE REQUIRES REMOVAL, THIS TREE SHOULD BE REPLACED IN KEEPING WITH OTHER TREES, IN APPROPRIATE, APPROVED SPECIES FOR LOCATION.
- ALL TREES AND NATURAL AREAS NOTED IN TREE PROTECTION PLAN SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING AT THE START OF ANY SITE PREPARATION WORK THROUGH THE ENTIRETY OF CONSTRUCTION.
- PROTECTIVE FENCING SHALL EXPAND TO INCLUDE TREES WHOSE TRUNKS ARE WITHIN FIVE FEET OF CONSTRUCTION ZONE. EXTRA CARE SHOULD BE TAKEN TO AVOID DAMAGE BY CONSTRUCTION ACTIVITY.
- IF AN EXISTING IRRIGATION SYSTEM IS RENDERED INOPERABLE DURING CONSTRUCTION, CONTRACTOR SHALL PROVIDE ADEQUATE WATER FOR PLANT MATERIALS AS SPECIFIED.
- EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE MAINTAINED TO PREVENT SOIL BUILDUP IN PROTECTED AREA.
- REMOVAL OF SUB-GRADE MATERIALS WITHIN CRITICAL ROOT ZONE SHALL BE DONE BY HAND UTILIZING HAND TOOLS AND/OR AN AIR SPADE WHEN LARGE (2" DIAMETER OR GREATER) ROOTS ARE UNCOVERED. EXPOSED ROOTS WITHIN THE EXCAVATED AREA SHALL BE PRUNED AND KEPT MOIST UNTIL SUBGRADE MATERIALS HAVE BEEN LIFTED INTO SITE AND COMPACTED. ROOT PRUNING SHALL BE OVERSEEN BY CERTIFIED ARBORIST OR AN APPROVED PARK REPRESENTATIVE.
- PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS THROUGH COORDINATION WITH CONTRACTING OFFICER.
- IN THE EVENT OF DAMAGE TO TREES OR LANDSCAPE, CONTRACTOR SHALL CONTACT PARK REPRESENTATIVE IMMEDIATELY.
- REFER TO SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.

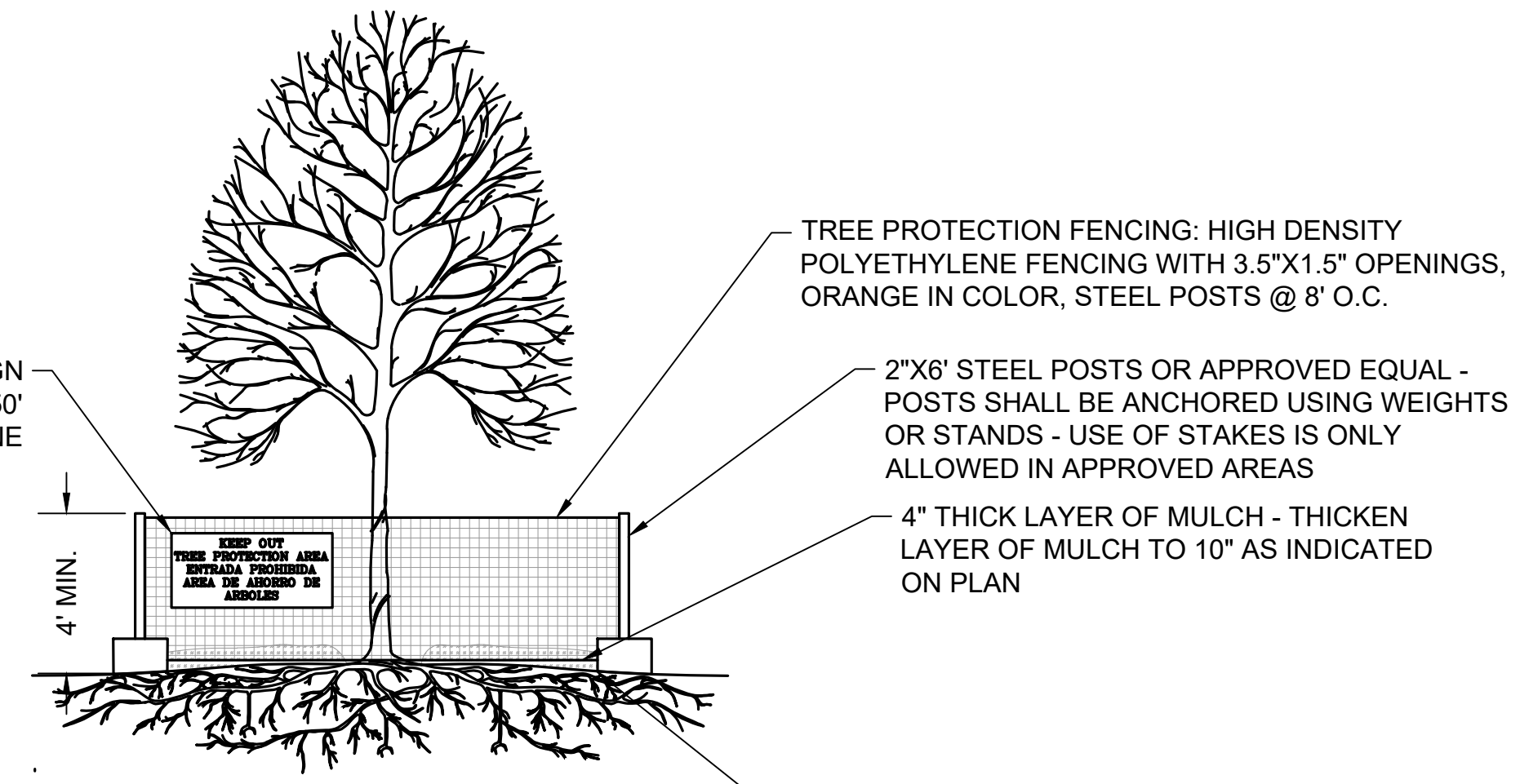
**PLANTING, SODDING, SEEDING:**

- NO PLANT MATERIAL SHALL BE PLANTED IN FROZEN GROUND. NO PLANT MATERIAL SHALL BE PLANTED DURING PERIOD OF EXTREME HEAT OR DROUGHT.
- NO SEEDING SHALL TAKE PLACE DURING DROUGHT, HIGH WINDS, WHEN GROUND IS FROZE, WHEN TEMPERATURES ARE BELOW 32 DEGREES FAHRENHEIT, OR DURING PERIODS OF EXCESSIVE MOISTURE AS DETERMINED BY THE CONTRACTING OFFICER.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON PLANTING PLANS AND COVERAGE OF ALL DISTURBED AREAS IN CONSTRUCTION AREA, UNLESS OTHERWISE NOTED. WHEN ANY DISCREPANCIES OCCUR BETWEEN PLANT LIST AND PLANTING PLAN, THE PLANTING PLAN IS TO SUPERCEDE. NOTIFY CONTRACTING OFFICER OF ANY LAYOUT DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION.
- NO SUBSTITUTIONS SHALL BE ALLOWED WITHOUT APPROVAL OF THE CONTRACTING OFFICER.
- ALL PLANTING BED LOCATIONS, BED SHAPES, AND THE LOCATIONS OF ALL TREES MUST BE APPROVED BY THE CONTRACTING OFFICER BEFORE THE INSTALLATION OF ANY PLANT MATERIAL. STAKE TREE LOCATIONS AND MARK BED BOUNDARIES WITH STAKES OR PAINT, NOTIFY CONTRACTING OFFICER TO ARRANGE FOR INSPECTION.
- ALL PLANT MATERIAL SHALL BE #1 GRADE, GROWN AND PLANTED TO ANSI SPECIFICATIONS, AND INSECT AND DISEASE FREE.
- ALL CONTAINER GROWN MATERIAL SHALL BE EXAMINED FOR CIRCLING OR GIRDLING ROOTS. IF GIRDLING AND CIRCLING IS MINIMAL, GIRDLING ROOT MAY BE PRUNED BEFORE PLANTING. EXCESSIVELY COMPROMISED ROOT STOCK SHALL BE REJECTED.
- ALL PLANTING BEDS SHALL BE EDGED AS INDICATED ON DRAWINGS, AND RECEIVE A MINIMUM 3" OF WOOD MULCH.
- CONTRACTOR IS RESPONSIBLE FOR ESTABLISHMENT OF PLANT MATERIAL PER SPECIFICATIONS.



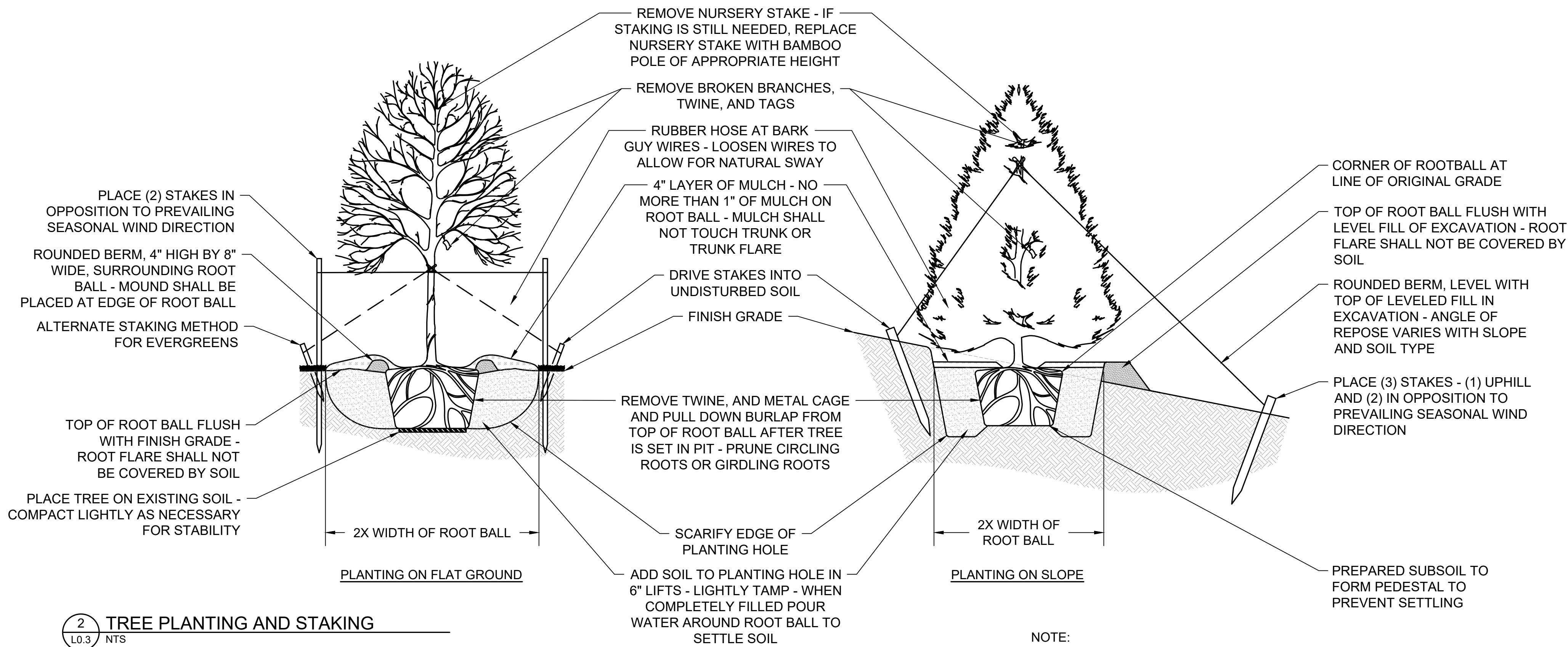
TRUNK PROTECTION OPTION (REFER TO NOTES)

- NOTE:
- TREE PROTECTION SHALL BE PROVIDED AS INDICATED ON DRAWINGS, OR AS DETERMINED BY CONTRACTING OFFICER DURING PROJECT COORDINATION.
  - PLANK TRUNK PROTECTION SHALL ONLY BE PROVIDED AS INDICATED ON PLANS. DO NOT INSTALL UNLESS EXPRESSLY INDICATED OR APPROVED BY CONTRACTING OFFICER.
  - ANY DAMAGE TO TREES ON ANY PORTION OF SITE SHALL BE REPORTED TO CONTRACTING OFFICER OR PARK REPRESENTATIVE AS SOON AS POSSIBLE.
  - OVERMATURE TREES SHALL BE DESIGNATED BY CONTRACTING OFFICER BEFORE CONSTRUCTION.



CRITICAL ROOT ZONE OR LIMITS OF TREE PROTECTION NOTED ON TREE PRESERVATION PLAN

**1 TREE PROTECTION DETAIL**



- NOTE:
- CONTRACTOR SHALL PROVIDE SLOW WATERING DEVICE FOR EVERY TREE PLANTED AS PART OF THIS WORK.

**2 TREE PLANTING AND STAKING**

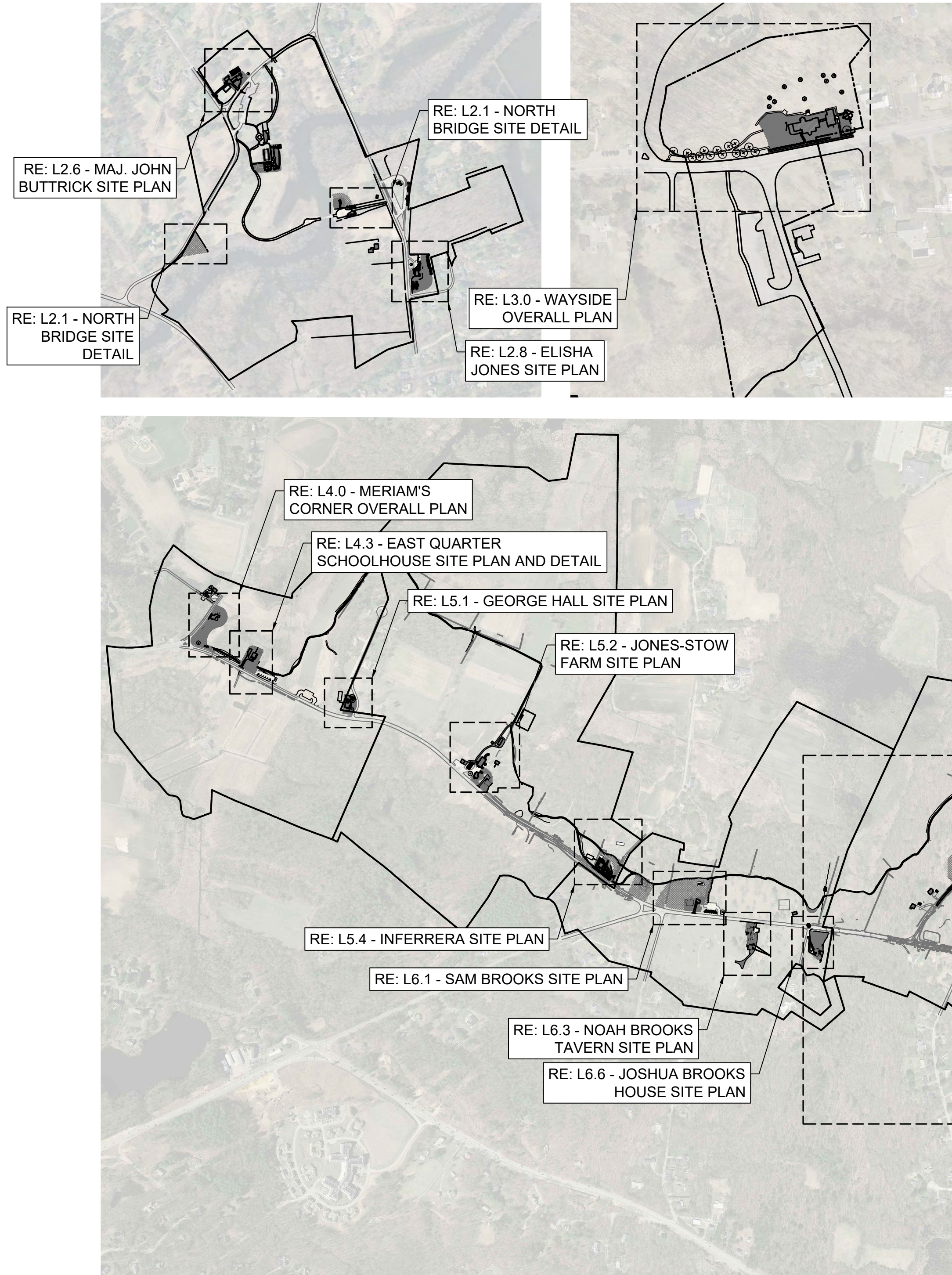


- NOTE:
- NOTIFY C.O. IMMEDIATELY IN THE EVENT ARCHEOLOGICAL REMAINS ARE DISCOVERED.

**3 STUMP REMOVAL**

|                    |  |                    |  |  |  |                     |  |
|--------------------|--|--------------------|--|--|--|---------------------|--|
| DESIGNED: MPS/JAS  |  | SUB SHEET NO. L0.3 |  | TITLE OF SHEET   |  | DRAWING NO. 406     |  |
| TECH. REVIEW: HACE |  |                    |  | PLANTING AND TREE PROTECTION   |  | 184184              |  |
| DATE: 05/01/2023   |  |                    |  | LANDSCAPE & SEPTIC REPAIRS GREAT AMERICAN OUTDOORS ACT (GAOA) LEXINGTON, LINCOLN, & CONCORD MA |  | PMIS/PKG NO. 317529 |  |
|                    |  |                    |  |  |  | SHEET OF 60         |  |

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**LAWN REPAIR - SELECTIVE:**

1. REPAIR DENTS, DIVOTS, DEAD TURF AREAS, AND EROSION DAMAGE BY AERATING AREA AND TOP DRESSING WITH IMPORTED, ARCHEOLOGICALLY STERILE TOPSOIL. TOPSOIL SHALL MEET SPECIFIED QUALITY.
2. REMOVE STICKS, BRANCHES, DEAD LEAVES AND OTHER DEBRIS FROM LIMITS OF YARD AREA.
3. IF LAWN CONTAINS OR IS BORDERED BY WALLS, TRIM SAPLINGS AND NOXIOUS WEEKS FLUSH, TREAT WITH HERBICIDE BY HAND. THIS REMOVAL MUST INCLUDE POISON IVY.
4. SEED DISTURBED AREAS AND BARE SOIL WITH APPROVED SEED MIX. IF AREA IS LARGER THAN 500 SF IN SIZE, THE SEEDING SHALL BE ACCOMPLISHED VIA HYDROSEED.
5. DO NOT REMOVE BURIED OR PARTIALLY BURIED STONES. LOOSE STONES MAY BE STOCKPILED IN APPROVED LOCATION WITHIN RESIDENTIAL SITE.

**LAWN REPAIR - FULL/REMAINING:**

1. REPAIR DENTS, DIVOTS, DEAD TURF AREAS, AND EROSION DAMAGE BY AERATING AREA AND TOP DRESSING WITH IMPORTED, ARCHEOLOGICALLY STERILE TOPSOIL. TOPSOIL SHALL MEET SPECIFIED QUALITY.
2. REMOVE STICKS, BRANCHES, DEAD LEAVES AND OTHER DEBRIS FROM LIMITS OF YARD AREA.
3. IF LAWN CONTAINS OR IS BORDERED BY WALLS, TRIM SAPLINGS AND NOXIOUS WEEKS FLUSH, TREAT WITH HERBICIDE BY HAND. THIS REMOVAL MUST INCLUDE POISON IVY.
4. AERATE ENTIRE YARD UTILIZING METHOD WHICH DOES NOT DE-THATCH OR PULL UP ANY SUBSURFACE MATERIALS - SLICE OR PIERCE METHOD REQUIRED. NO NOT DISTURB SUBSURFACE SOILS BY DIGGING OR PULLING PLUGS.
5. BROADCAST SEED ACROSS ENTIRE LAWN AREA AT SPECIFIED RATE. IF BARE AREAS ARE PRESENT THAT ARE LARGER THAN 500 SF IN SIZE, THE SEEDING OF BARE AREA SHALL BE ACCOMPLISHED VIA HYDROSEED.
6. FERTILIZE ENTIRE LAWN AT RATE SPECIFIED. BROADCAST THIN LAYER OF COMPOST OVER LAWN SURFACE FOLLOWING SEEDING.
7. CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION OR WATERING NECESSARY FOR SUCCESSFUL GERMINATION AND ESTABLISHMENT OF TURF. SATISFACTORY LAWN SHALL HAVE GONE THROUGH TWO SUCCESSFUL MOWINGS AND CONTAIN NO BARE SPOTS OVER 10 SF IN ANY AREA.
8. DO NOT REMOVE BURIED OR PARTIALLY BURIED STONES. LOOSE STONES MAY BE STOCKPILED IN APPROVED LOCATION WITHIN RESIDENTIAL SITE.

**MEADOW IMPROVEMENTS:**

1. STAKE BOUNDARY OF MEADOW AND CONFIRM LIMITS WITH CONTRACTING OFFICER. BOUNDARY SHALL EXTEND TO EDGE OF TREE LINE.
2. REMOVE TREES WITHIN STAKED MEADOW BOUNDARY WHICH ARE UNDER 6 INCHES DIAMETER AT BREAST HEIGHT (DBH). GRIND STUMP PER DETAIL 3/L0.3.
3. IDENTIFY SHRUBBY OVERGROWTH, INVASIVE GROWTH, OR NOXIOUS WEED PATCHES SUCH AS POISON IVY MASSES AND TREAT WITH HERBICIDE BETWEEN JUNE AND OCTOBER, WITH SEPTEMBER AND OCTOBER BEING THE PREFERRED TIMING FOR TREATMENT. WHEN TREATMENT HAS CONCLUDED, SCALP AREA TO GROUND LEVEL, AS LOW AS POSSIBLE. IF PRONOUNCED AREAS OF ROOT MASS ARE EVIDENT, HAND GRUB ROOT MASS AS SHALLOWLY AS POSSIBLE.
4. APPLY FIRST ROUND OF SEED FOLLOWING SUCCESSFUL TREATMENT. SEED AGAIN IN APRIL/MAY.
5. MIX SEED WITH APPROPRIATE CARRIER AND MOISTEN TO LEVEL APPROPRIATE FOR DISTRIBUTION. DISTRIBUTE BY HAND OR SEED DRILL. RAKE AND ROLL SEEDED AREA FOLLOWING BROADCAST TO ENSURE EVEN COVERAGE.

6. APPLY COMPOST MAT TO SEEDED AREA AND WATER IN.
7. AFTER FIRST YEAR, MOW AT MIN. 4"- 6" MID-SUMMER WITHIN TARGETED AREA.
8. COMPLETE TARGETED HERBICIDE APPLICATION FOR WEEDS OR INVASIVES WHICH MAY HAVE RESPROUTED.
9. AFTER ESTABLISHMENT, BEGIN MOWING IN EARLY SPRING TO DISCOURAGE SHRUBBY GROWTH.
10. ROOT MASS REMOVALS AND HAND GRUBBING WHICH WILL DISTURB SOILS SHOULD BE COMPLETED WITH ARCHEOLOGICAL MONITORING. COORDINATE MONITOR WITH CONTRACTING OFFICER.

**LAWN MIX**

FINE FESCUE (*FESTUCA SPP.* MIX OF CHEWING/RED/HARD); OVER 50%  
 BLUEGRASS (*POA PRATENSIS*); 15% TO 25%  
 PERENNIAL RYE (*LOLIUM PERENNE*); REMAINDER OF MIX

1. ROUGH BLUEGRASS IS NOT ACCEPTABLE AS PART OF THE MIX.
2. NURSE CROP SHALL BE LOLIUM MULTIFLORUM (ANNUAL RYE GRASS). SEEDING RATE SHALL BE 25 POUNDS PER THREE ACRES.

**SUNNY MEADOW MIX**

| GRASSES   | FORBES  |
|---|---|
| LITTLE BLUESTEM ( <i>SCHIZACHYRIUM SCOPARIUM</i> )<br>VIRGINIA WILD RYE ( <i>ELYMUS VIRGINICUS</i> )<br>CANADA WILD RYE ( <i>ELYMUS CANADENSIS</i> )<br>INDIAN GRASS ( <i>SORGHUSTRUM NUTANS</i> )<br>SWITCH GRASS ( <i>PANICUM VIRGATUM</i> )<br>TIAGA DEERTONGUE GRASS ( <i>DICHANTHELIUM CLANDESTINUM</i> 'TIAGA')<br>UPLAND BENTGRASS ( <i>AGROSTIS PERENNANS</i> ) | PARTRIDGE PEA ( <i>CHAMAECRISTA FASCICULATA</i> )<br>GREY GOLDENROD ( <i>SOLIDAGO NEMORALIS</i> )<br>SWAMP MILKWEED ( <i>ASCLEPIAS INCARNATA</i> )<br>BEARD TONGUE ( <i>PENSTEMON DIGITALIS</i> )<br>BUTTERFLY MILKWEED ( <i>ASCLEPIAS TUBEROSA</i> )<br>NEW ENGLAND ASTER ( <i>SYMPHYOTRICHUM NOVAE-ANGLIAE</i> )<br>WILD BERGAMOT ( <i>MONARDA FISTULOSA</i> )<br>EARLY GOLDENROD ( <i>SOLIDAGO JUNCEA</i> )<br>HEATH ASTER ( <i>ASTER PILOSUS</i> )<br>WHITE GOLDENROD ( <i>SOLIDAGO BICOLOR</i> ) |

1. BASIS OF DESIGN: THE SEED MIX SHALL BE A BROAD SPECTRUM OF NATIVE WARM SEASON GRASSES TO ENSURE THAT A VARIETY OF THE SPECIES WILL SURVIVE IN DRY, MESIC CONDITIONS TYPICALLY FOUND ALONG TRAILSIDES, UPLAND MEADOW, AND OTHER LOW FERTILITY WELL DRAINED SOIL CONDITIONS. LITTLE BLUESTEM IS INTENDED TO BE THE DOMINANT GRASS. MIX SHALL BE APPROVED BY CONTRACTING OFFICER.
2. MIX SHOULD INCLUDE APPROXIMATELY 10-20% FLOWERING SPECIES, WITH PREFERRED SPECIES NATIVE TO MASSACHUSETTS.

**SHADY MEADOW MIX**

| GRASSES   | FORBES  |
|---|---|
| VIRGINIA WILD RYE ( <i>ELYMUS VIRGINICUS</i> )<br>CANADA WILD RYE ( <i>ELYMUS CANADENSIS</i> )<br>LITTLE BLUESTEM ( <i>SCHIZACHYRIUM SCOPARIUM</i> )<br>SWITCH GRASS ( <i>PANICUM VIRGATUM</i> )<br>FOX SEDGE ( <i>CAREX VULPINOIDEA</i> )<br>UPLAND BENTGRASS ( <i>AGROSTIS PERENNANS</i> )<br>SOFT RUSH ( <i>JUNCUS EFFUSUS</i> ) | PARTRIDGE PEA ( <i>CHAMAECRISTA FASCICULATA</i> )<br>SENSITIVE FERN ( <i>ONOCLEA SENSIBILIS</i> )<br>WHITE GOLDENROD ( <i>SOLIDAGO BICOLOR</i> )<br>BEARD TONGUE ( <i>PENSTEMON DIGITALIS</i> )<br>NEW ENGLAND ASTER ( <i>SYMPHYOTRICHUM NOVAE-ANGLIAE</i> )<br>WILD BERGAMOT ( <i>MONARDA FISTULOSA</i> )<br>WOODLAND GOLDENROD ( <i>SOLIDAGO CAESIA</i> )<br>SLENDER MOUNTAIN MINT ( <i>PHYLNANTHEMUM TENUIFOLIUM</i> )<br>BONESET ( <i>EUPATORIUM PERFORLIATUM</i> ) |

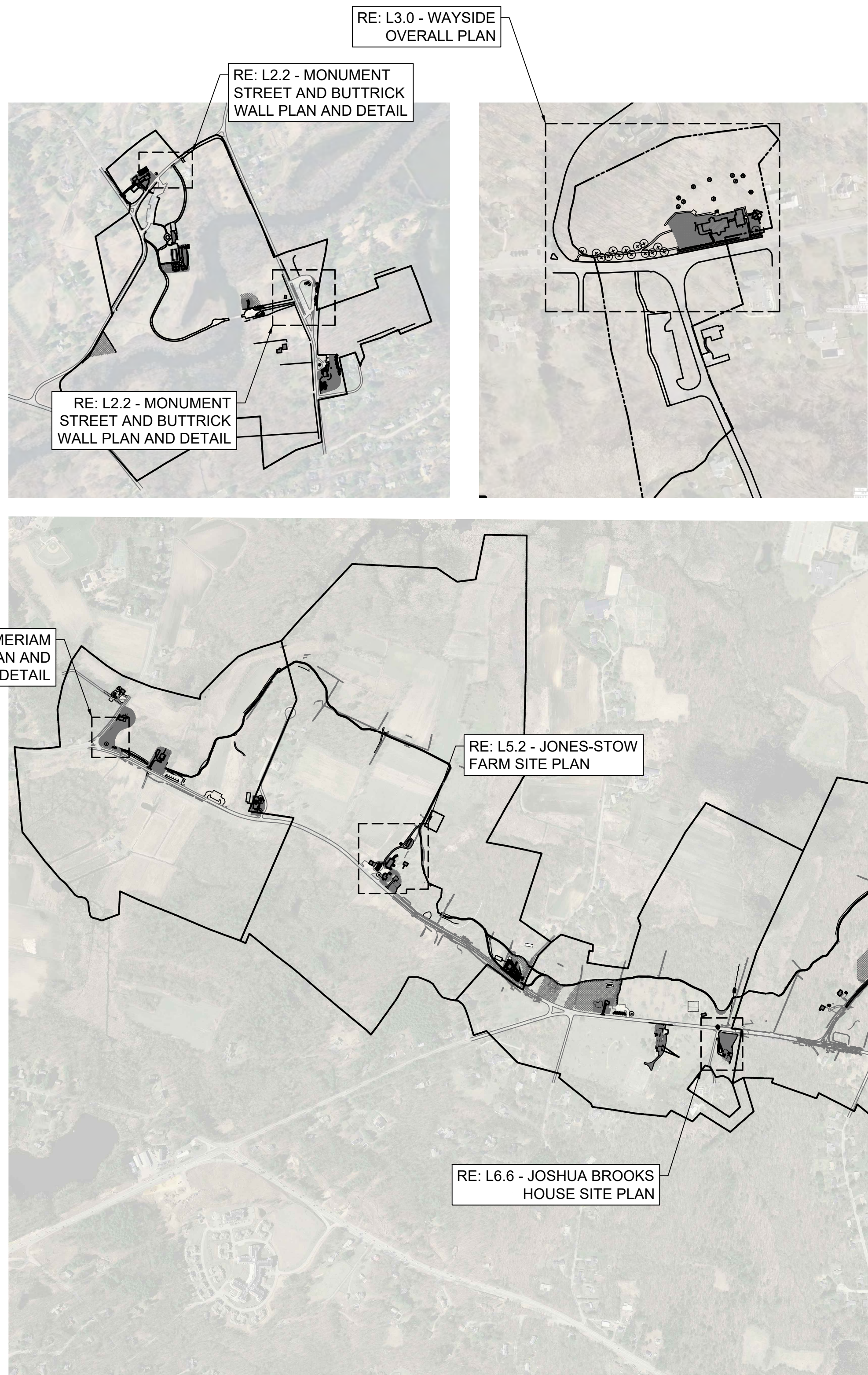
1. BASIS OF DESIGN: THE SEED MIX SHALL BE A BROAD SPECTRUM OF NATIVE GRASSES AND FORBS THAT WILL TOLERATE SEMI-SHADE AND EDGE CONDITIONS. SPECIES SHALL BE TOLERANT OF BOTH WET AND DRY CONDITIONS.

1 L0.4  
LAWN AND MEADOW INDEX  
NTS

DD - DRAFT - NFC

|                       |                                  |  |                        |
|-----------------------|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L0.4</b> | TITLE OF SHEET<br><br><b>LAWN AND MEADOW INDEX AND NOTES</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |  | 184184                 |
| DATE:<br>05/01/2023   |                                  |  | PMIS/PKG NO.<br>317529 |
|                       |                                  |  | SHEET                  |
|                       |                                  |  | OF 60                  |

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**STONE WALL REPAIR:**

1. RE-STACK EXISTING SEGMENTS OF HISTORIC DRY-LAID, FREE-STANDING FIELDSTONE WALLS TO IMPROVE STRUCTURAL INTEGRITY AND APPEARANCE.
2. DISASSEMBLE EXISTING WALL SEGMENTS AND REUSE EXISTING FIELDSTONE MATERIAL TO RE-STACK WALL SEGMENTS ALONG PRE-EXISTING ALIGNMENTS.
3. SUPPLEMENT EXISTING MATERIAL WITH ADDITIONAL FIELDSTONE MATERIAL STOCKPILED BY THE PARK.
4. IF EXISTING AND STOCKPILED FIELDSTONE MATERIALS ARE INSUFFICIENT, ADDITIONAL MATERIALS MUST BE APPROVED BY CONTRACTING OFFICER BEFORE USE.
3. NO STONE SHALL BE REMOVED FROM SITE. ANY REMAINING STONE SHALL BE STOCKPILED FOR PARK USE.
4. RE-STACK FIELDSTONE WALLS IN ACCORDANCE WITH SPECIFIED TECHNIQUE. REFER TO L11.4 WALL DETAILS.
5. PRIOR TO CONSTRUCTION, BUILD A SAMPLE LINEAR WALL SECTION OF 10' DEMONSTRATING CONSTRUCTION TECHNIQUE AND MATERIALS, FOR APPROVAL BY THE CONTRACTING OFFICER IN CONSULTATION WITH CULTURAL LANDSCAPE SUBJECT MATTER EXPERT.
6. EXISTING SUBGRADE BASE MATERIALS OF WALLS MAY BE ADJUSTED, SUPPLEMENTED, AND COMPACTED TO IMPROVE WALL STABILITY. DUE TO ARCHEOLOGICAL SENSITIVITY, DO NOT EXCAVATE BEYOND EXISTING BASE MATERIALS.

**RETAINING WALL REPAIR:**

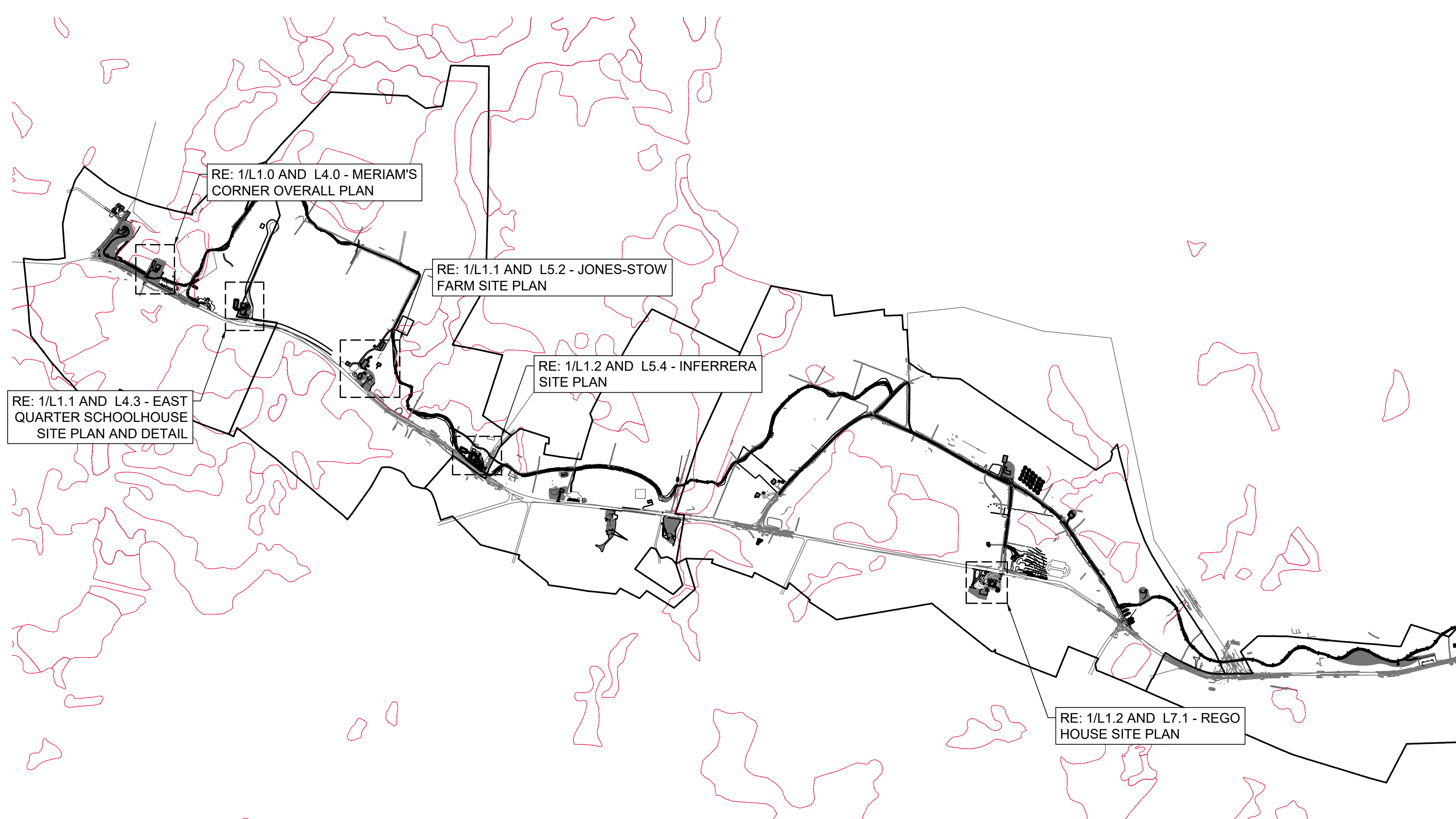
1. RE-STACK EXISTING SEGMENTS OF HISTORIC DRY-LAID, FREE-STANDING FIELDSTONE WALLS TO IMPROVE STRUCTURAL INTEGRITY AND APPEARANCE.
2. REUSE EXISTING MATERIAL TO THE EXTENT POSSIBLE. IF ADDITIONAL STONE IS NEEDED, MATCH IN KIND. NEW MATERIALS SHALL BE APPROVED BY CONTRACTING OFFICER.
3. NO STONE SHALL BE REMOVED FROM SITE. ANY REMAINING STONE SHALL BE STOCKPILED FOR PARK USE.
4. ENSURE APPROPRIATE FOOTING AND DRAINAGE IS PRESENT BEHIND WALL PER RETAINING WALL DETAIL. EXCAVATION FOR NEW FOOTERS SHALL BE MONITORED. NO SOIL SHALL LEAVE SITE WITHOUT PERMISSION OF CONTRACTING OFFICER.
5. EXCAVATION FOR WALL SHALL BE LIMITED TO THE SMALLEST AMOUNT POSSIBLE. WHEN POSSIBLE, DO NOT EXCAVATE BEYOND EXISTING FOOTER OR BASE MATERIALS.
6. RESTACK WALLS USING BEST PRACTICES FOR DRY STACKED RETAINING WALLS. ENSURE STABILITY OF STONES. UNLESS PRESENT IN EXISTING WALL CONSTRUCTION, NO MORTAR IS TO BE USED WITHOUT APPROVAL OF CONTRACTING OFFICER.

1 STONE WALL INDEX  
L0.5 NTS

DD - DRAFT - NFC

|                       |      |                            |  |
|-----------------------|------|----------------------------|--|
| DESIGNED:<br>MPS/JAS  | L0.5 | TITLE OF SHEET             | DRAWING NO.<br>406   |
| TECH. REVIEW:<br>HACE |      | STONE WALL INDEX AND NOTES | 184184   |
| DATE:<br>05/01/2023   |      |                            | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |
|                       |      |                            | SHEET  |

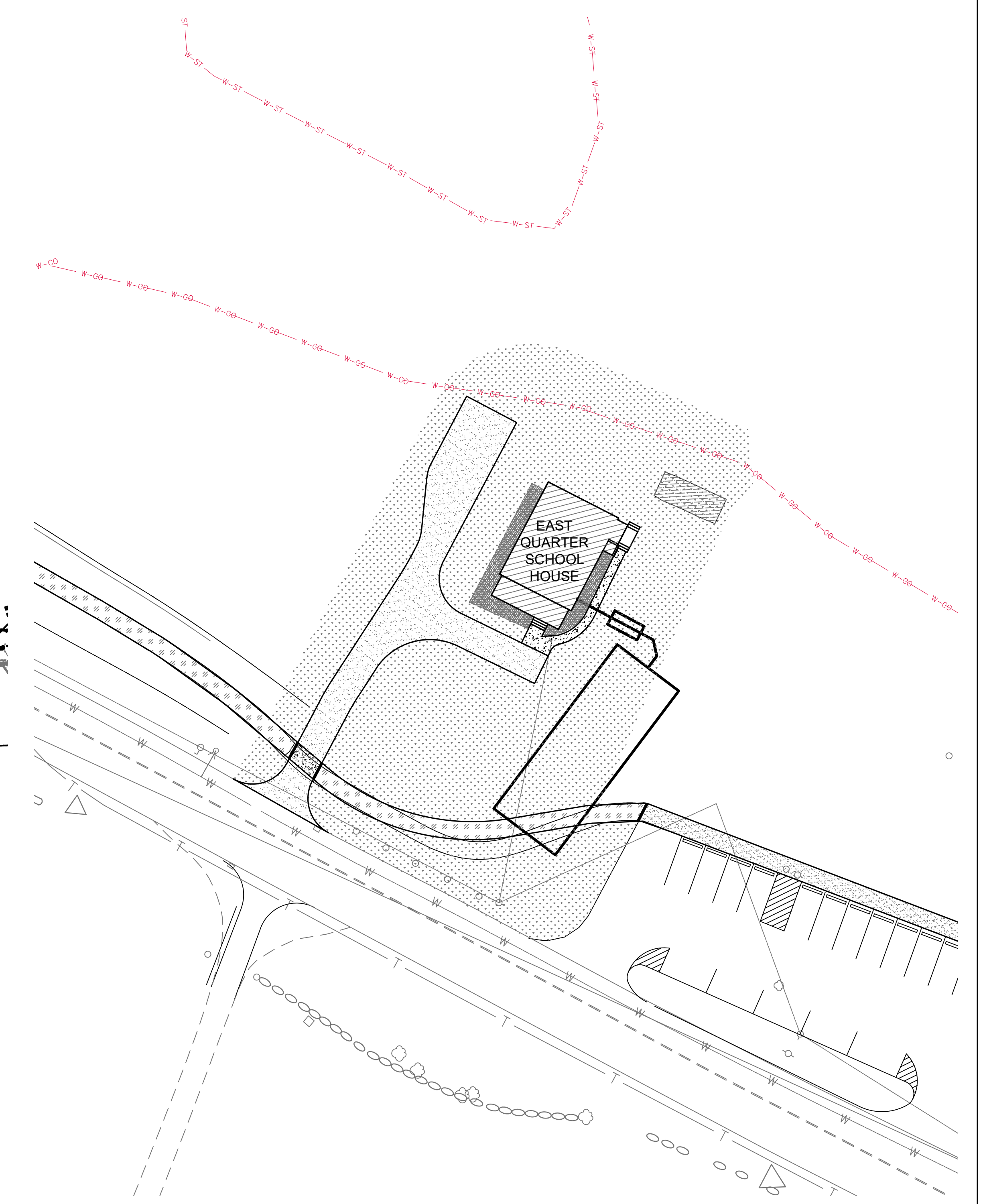
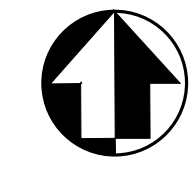
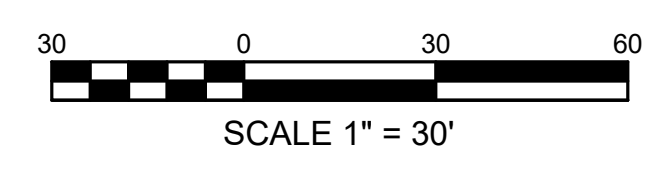
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**1 SEPTIC INDEX**  
L1.0 NTS

| SITE TASK LIST |                                   |        |        |  |
|----------------|-----------------------------------|--------|--------|--|
| KEY            | TASK                              | SYMBOL | BID    | DESCRIPTION  |
| A              | SEPTIC - EAST QUARTER SCHOOLHOUSE |        | SEPTIC | Install septic system. Detach and abandon existing septic system.            |
| B              | SEPTIC - GEORGE HALL HOUSE        |        | SEPTIC | Install septic system.   |
| C              | SEPTIC - STOW-HARDY HOUSE         |        | SEPTIC | Connect house to existing septic field.                                      |
| D              | SEPTIC - INFERRERA HOUSE          |        | SEPTIC | Install septic system. Detach and abandon existing septic system.            |
| E              | SEPTIC - JOSHUA BROOKS HOUSE      |        | SEPTIC | Install septic system. Detach and abandon existing septic system.            |
| F              | SEPTIC - REGO HOUSE               |        | SEPTIC | Install septic system. Detach and abandon existing septic system.            |
| G              | WELL - REGO HOUSE                 |        | SEPTIC | Install residential well.  |
| H              | WELL - REGO HOUSE                 |        | SEPTIC | Cap existing well in neighboring yard. Fill depression with soil for safety. |

NOTES:  
1. REFER TO SEPTIC SCOPE OF WORK DETAILED IN DOCUMENT PROVIDED SEPARATELY.

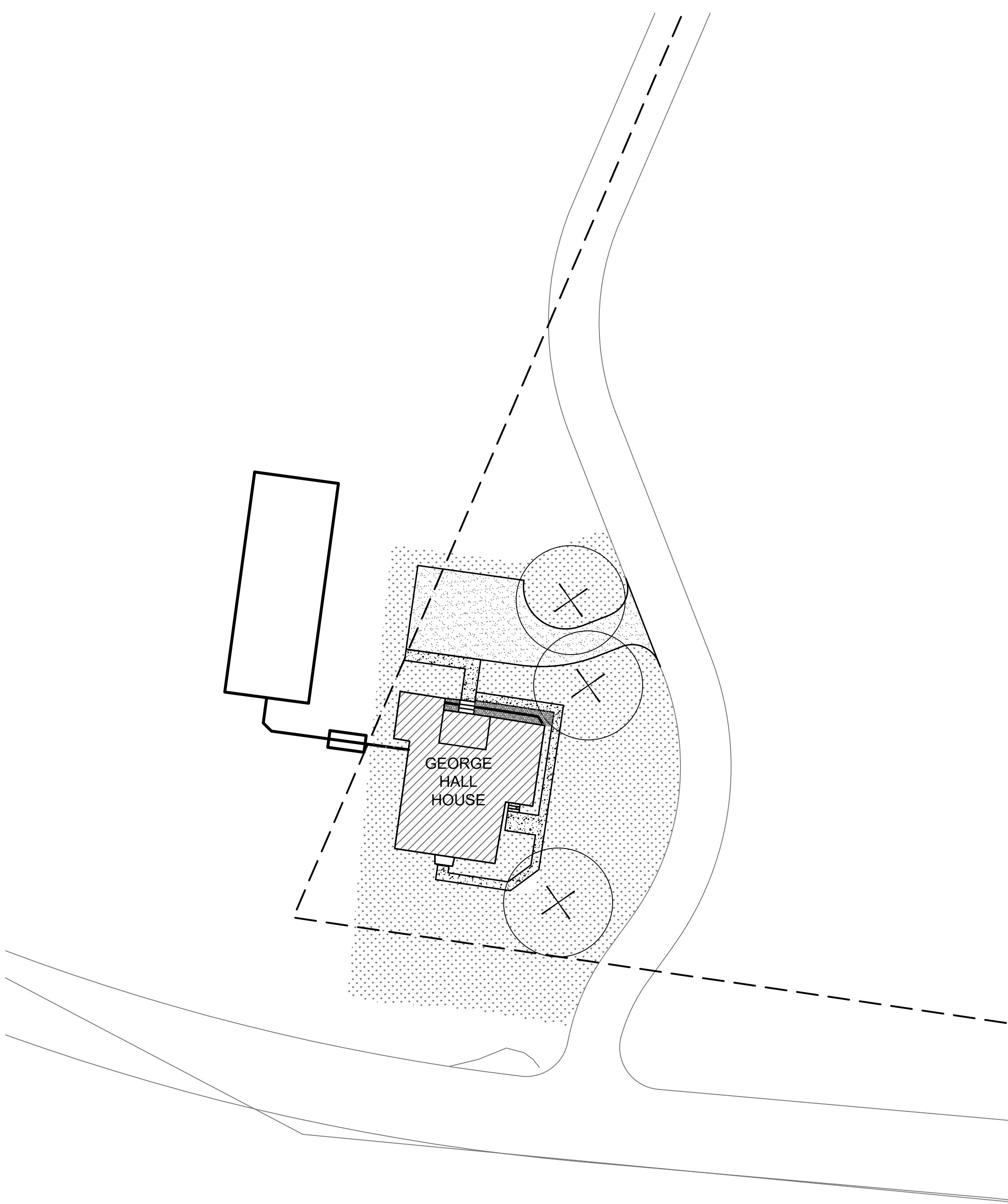


**2 EAST QUARTER SCHOOLHOUSE SEPTIC PLAN**  
L1.0 SCALE 1" = 30'

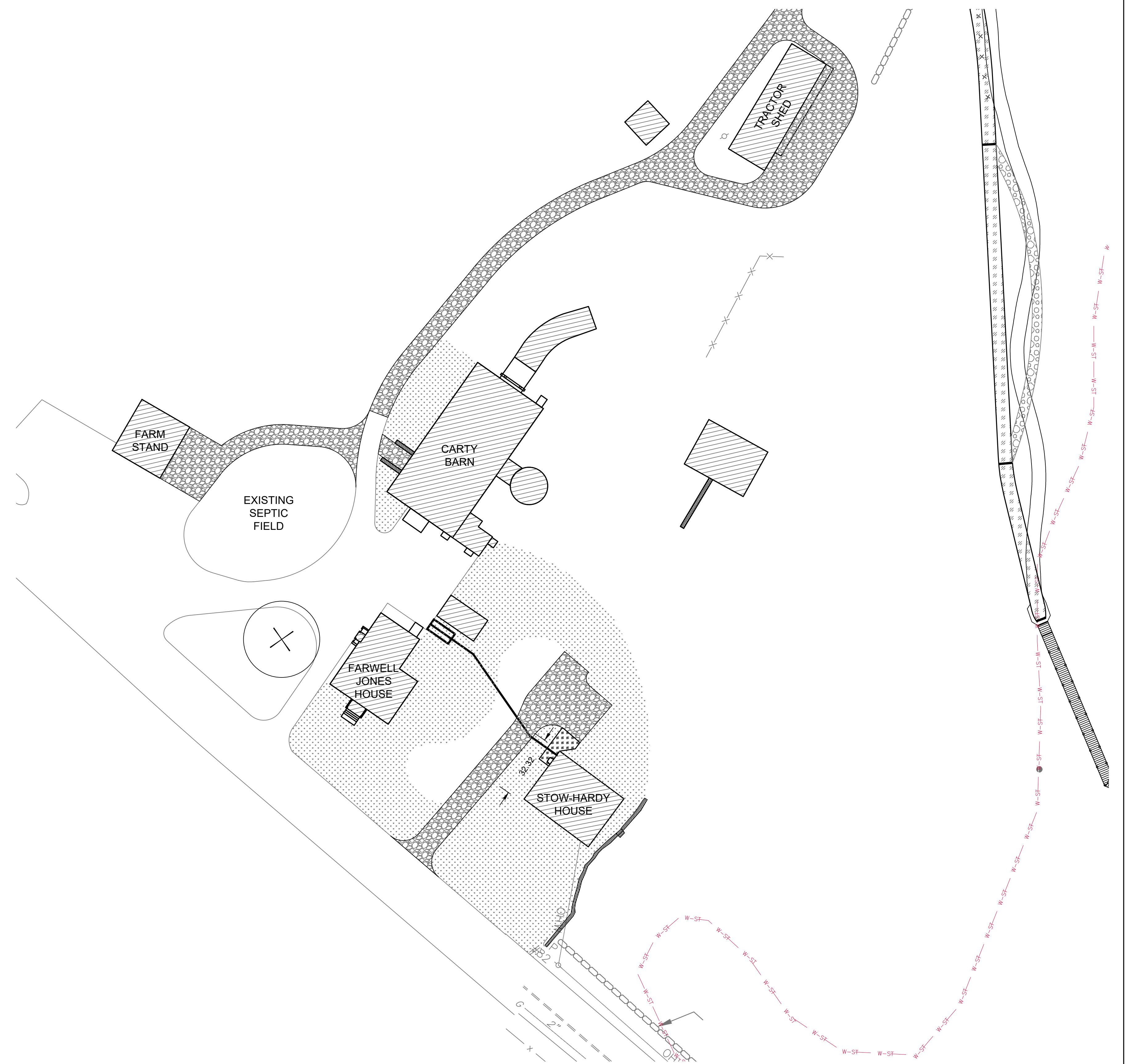
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| DESIGNED:<br>MPS/JAS  |  | L1.0 | TITLE OF SHEET   | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |  |      | SEPTIC SITE INDEX  | 184184                 |
| DATE:<br>05/01/2023   |  |      |  | PMIS/PKG NO.<br>317529 |
|                       |  |      |  | SHEET<br>--- OF 60     |
|                       |  |      | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                        |

DD - DRAFT - NFC

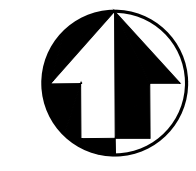
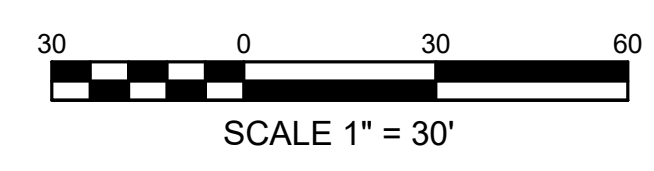
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1 GEORGE HALL HOUSE SEPTIC PLAN  
L1.1 SCALE 1" = 30'

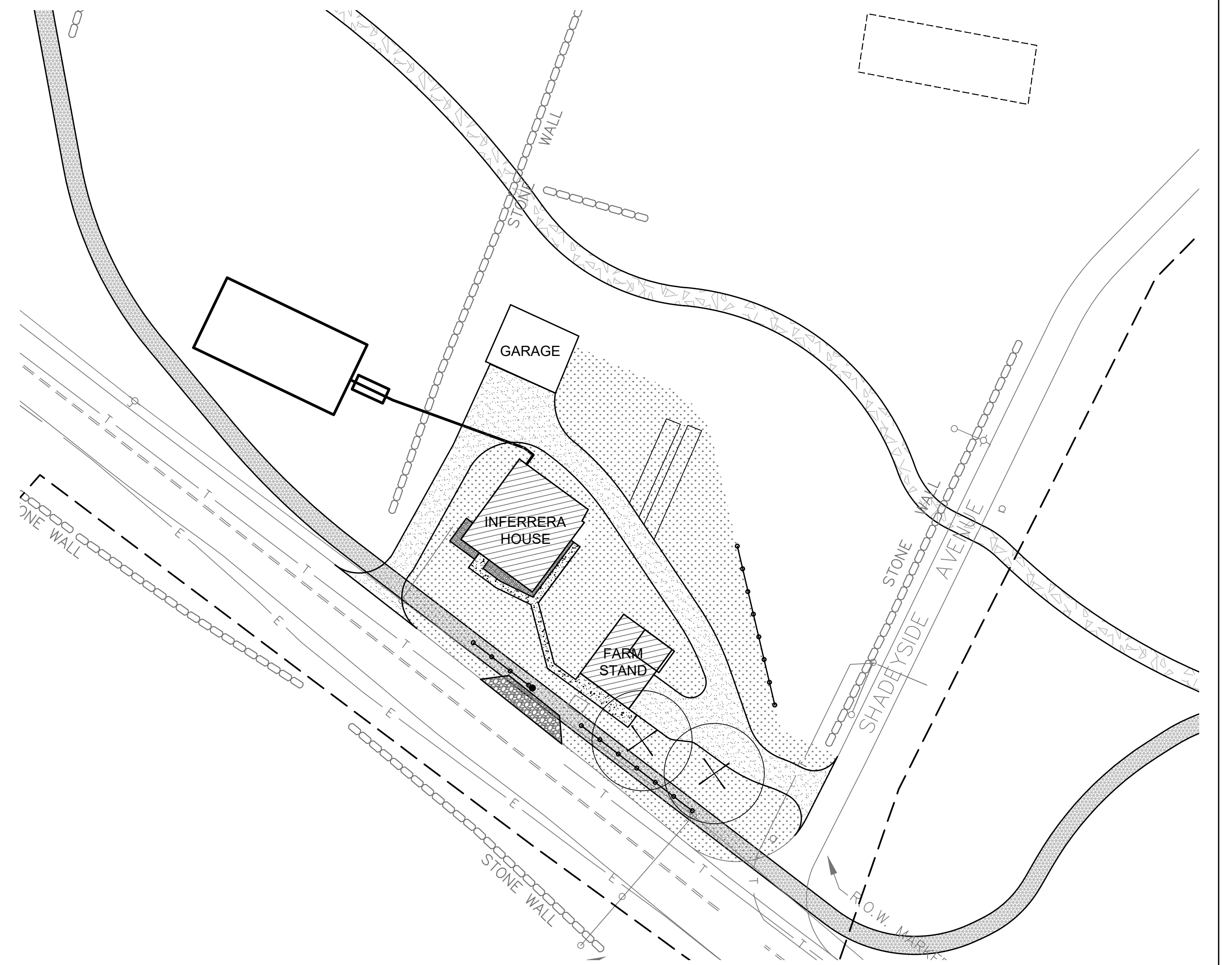


2 STOW-HARDY HOUSE SEPTIC PLAN  
L1.1 SCALE 1" = 30'

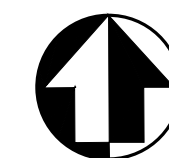
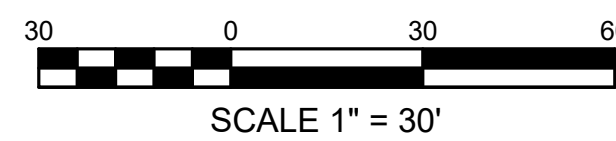


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| DD - DRAFT - NFC      |                                  | TITLE OF SHEET   |  | DRAWING NO.            |
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L1.1</b> | <b>HALL AND STOW-HARDY SEPTIC PLAN</b>   |  | 406                    |
| TECH. REVIEW:<br>HACE |                                  |  |  | 184184                 |
| DATE:<br>05/01/2023   |                                  |  |  | PMIS/PKG NO.<br>317529 |
|                       |                                  |  |  | SHEET<br>OF 60         |
|                       |                                  | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAAO)<br>LEXINGTON, LINCOLN, & CONCORD MA |  |                        |

5/1/2023 1:16 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L1\_SEPTIC\_EGSSSTOW\_CUIA.DWG



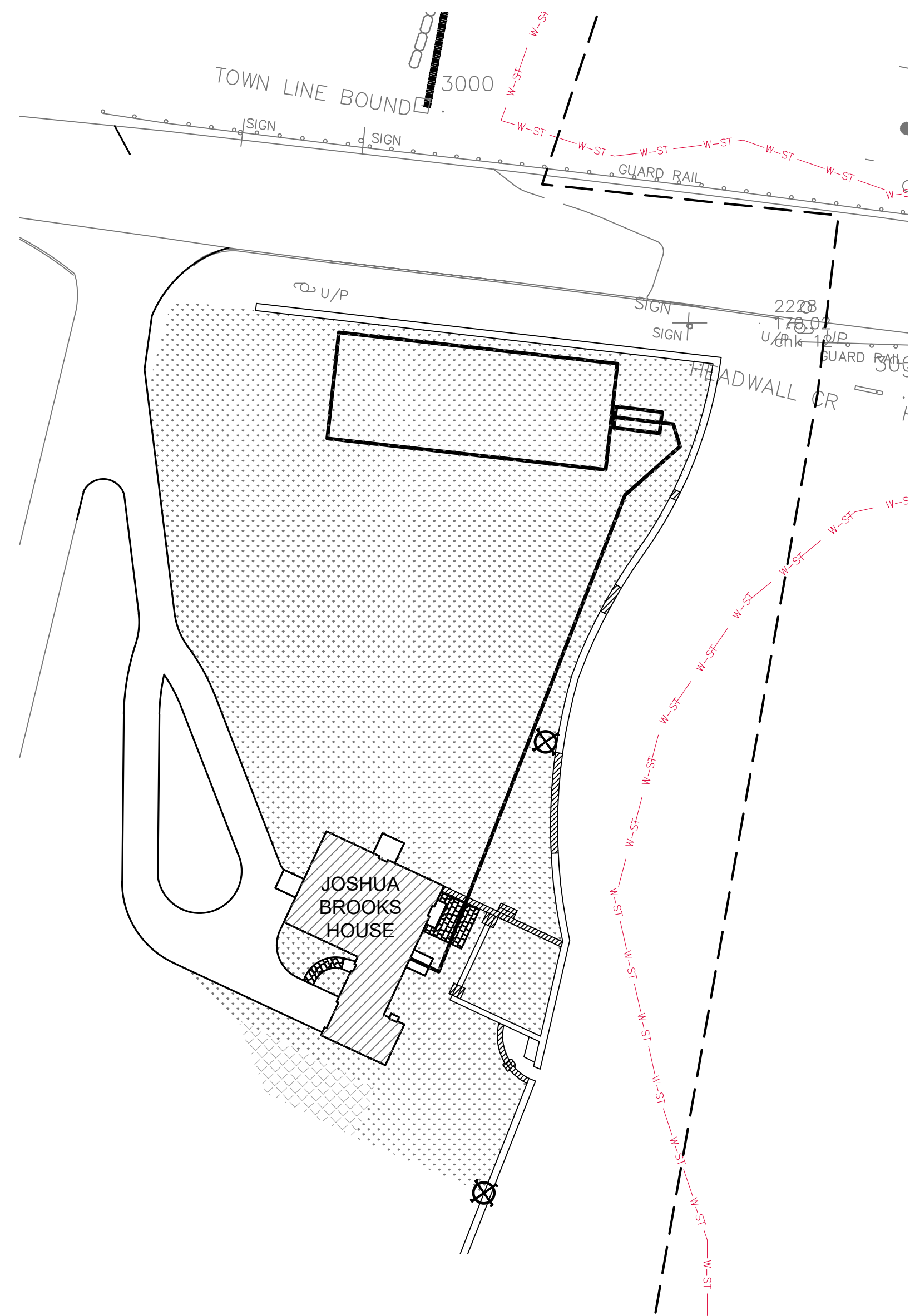
1 INFERRERA HOUSE SEPTIC PLAN  
 L1.2 SCALE 1" = 30'



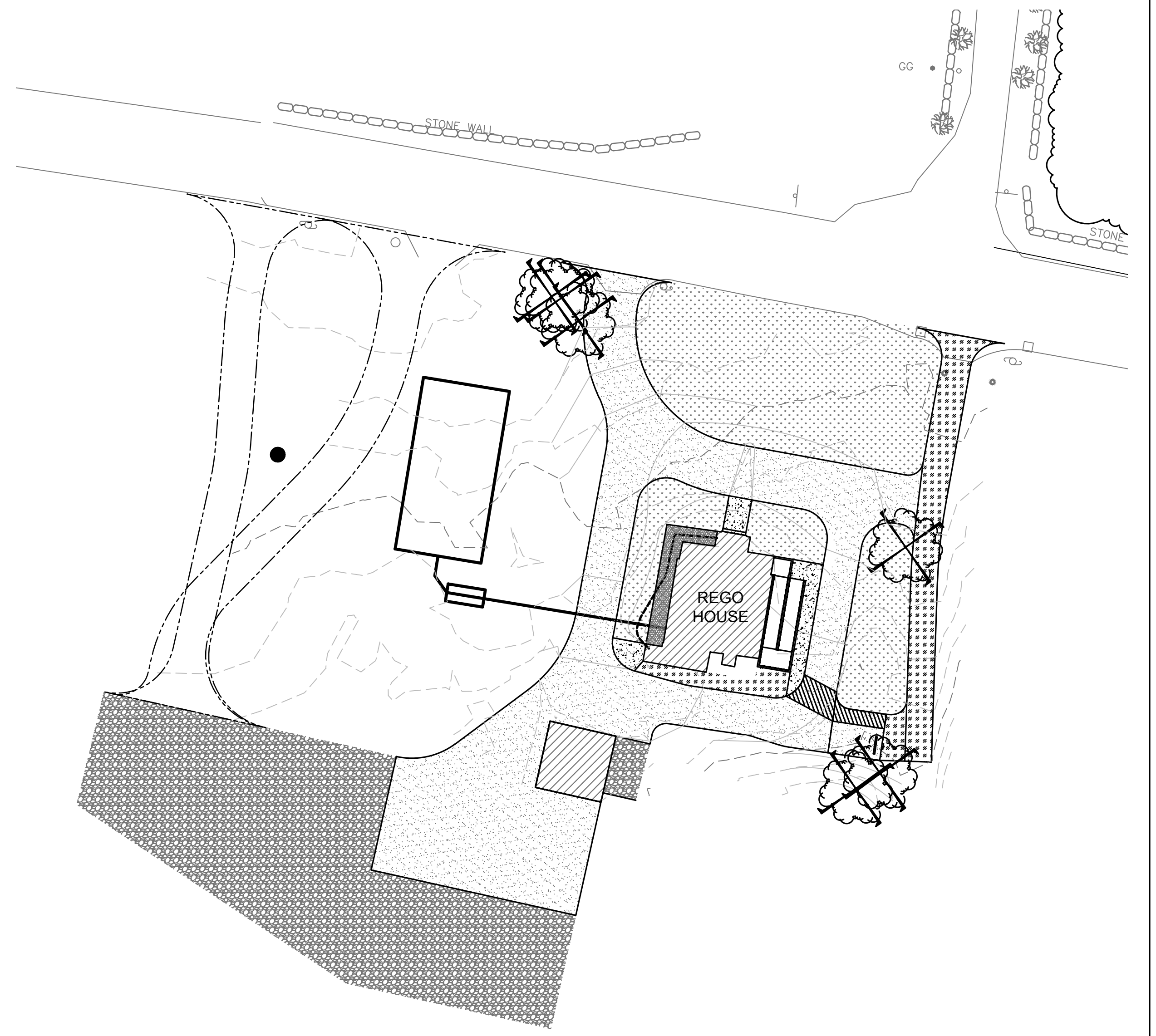
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|--|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS   | SUB SHEET NO.<br><br><b>L1.2</b> | TITLE OF SHEET<br><br><b>INFERRERA SEPTIC PLAN</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE  |                                  |  | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023  |                                  |  | SHEET<br>OF 60         |
| LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                                  |  |                        |

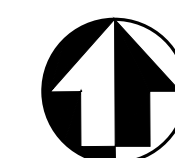
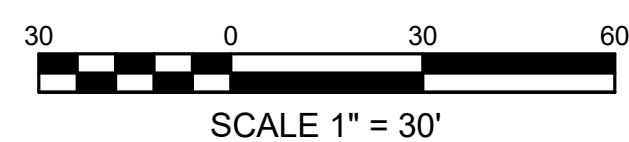
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1 JOSHUA BROOKS HOUSE SEPTIC PLAN  
L1.3 SCALE 1" = 30'



2 REGO HOUSE SEPTIC PLAN  
L1.3 SCALE 1" = 30'



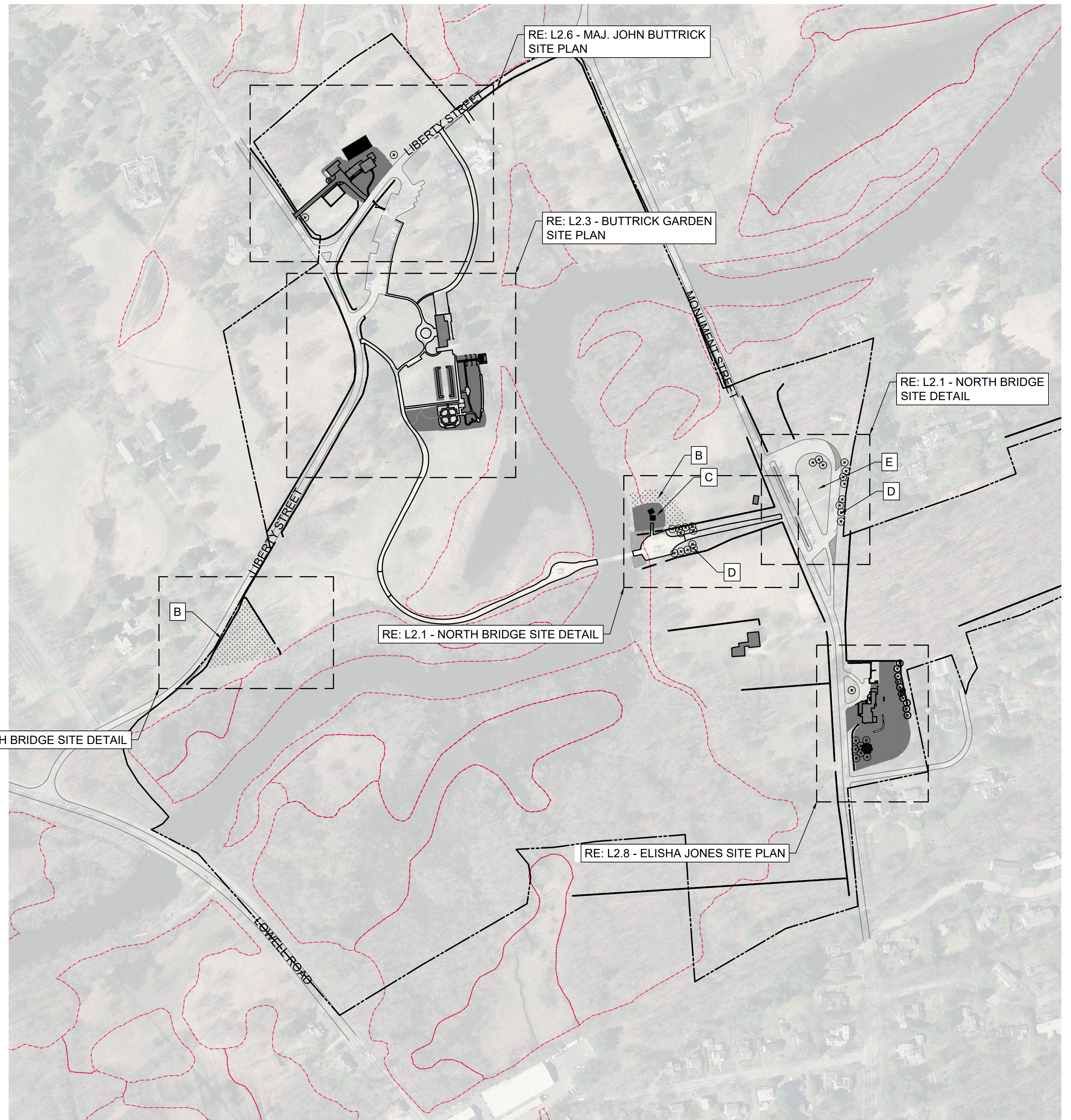
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|-----------------------|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L1.3</b> | TITLE OF SHEET<br><br><b>JOSHUA BROOKS AND<br/>REGO SEPTIC PLANS</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAAO)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |  | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |                                  |  | SHEET<br>OF 60         |
|                       |                                  |  |                        |

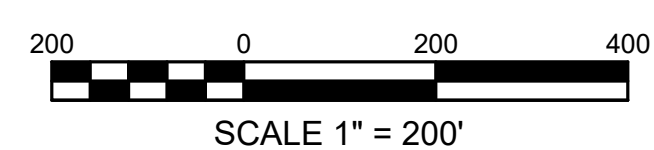
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| SITE TASK LIST |                           |        |      |   |
|----------------|---------------------------|--------|------|---|
| KEY            | TASK                      | SYMBOL | BID  | DESCRIPTION   |
| A              | WALL VEGETATION REMOVAL   |        |      | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls.  |
| B              | MEADOW WORK               |        |      | Mow, scalp areas overgrown by woody shrubs, treat woody shrubs with herbicide. Retreat if necessary. In fall, overseed with approved seed mix. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for details on treatment.                        |
| C              | LAWN REPAIR - SELECTIVE   |        |      | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seeding. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for details on treatment. |
| D              | TREE PLANTING             |        | BASE | Plant per materials list, plan, detail and specification.   |
| E              | DELIVER TWO PICNIC TABLES |        |      | Deliver four freestanding picnic tables to Monument Street Parking Lot, two ABAAS compliant and two standard picnic table. Sitescapes New York Picnic Table basis of design. "Antique Mahogany" recycled plastic lumber top, bronze metal base. |

NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.

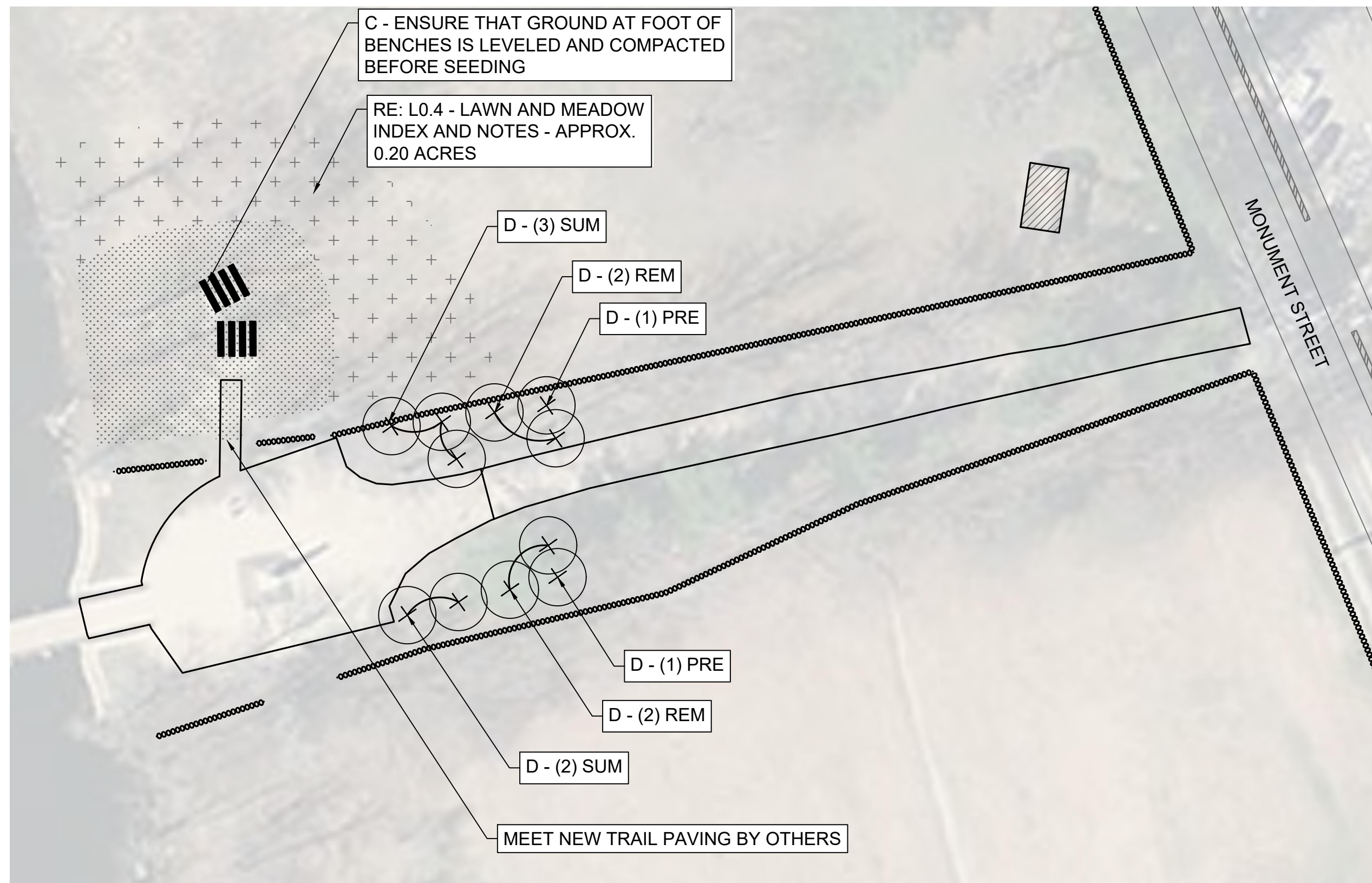


1 NORTH BRIDGE OVERALL PLAN  
 L2.0 SCALE 1" = 200'-0"

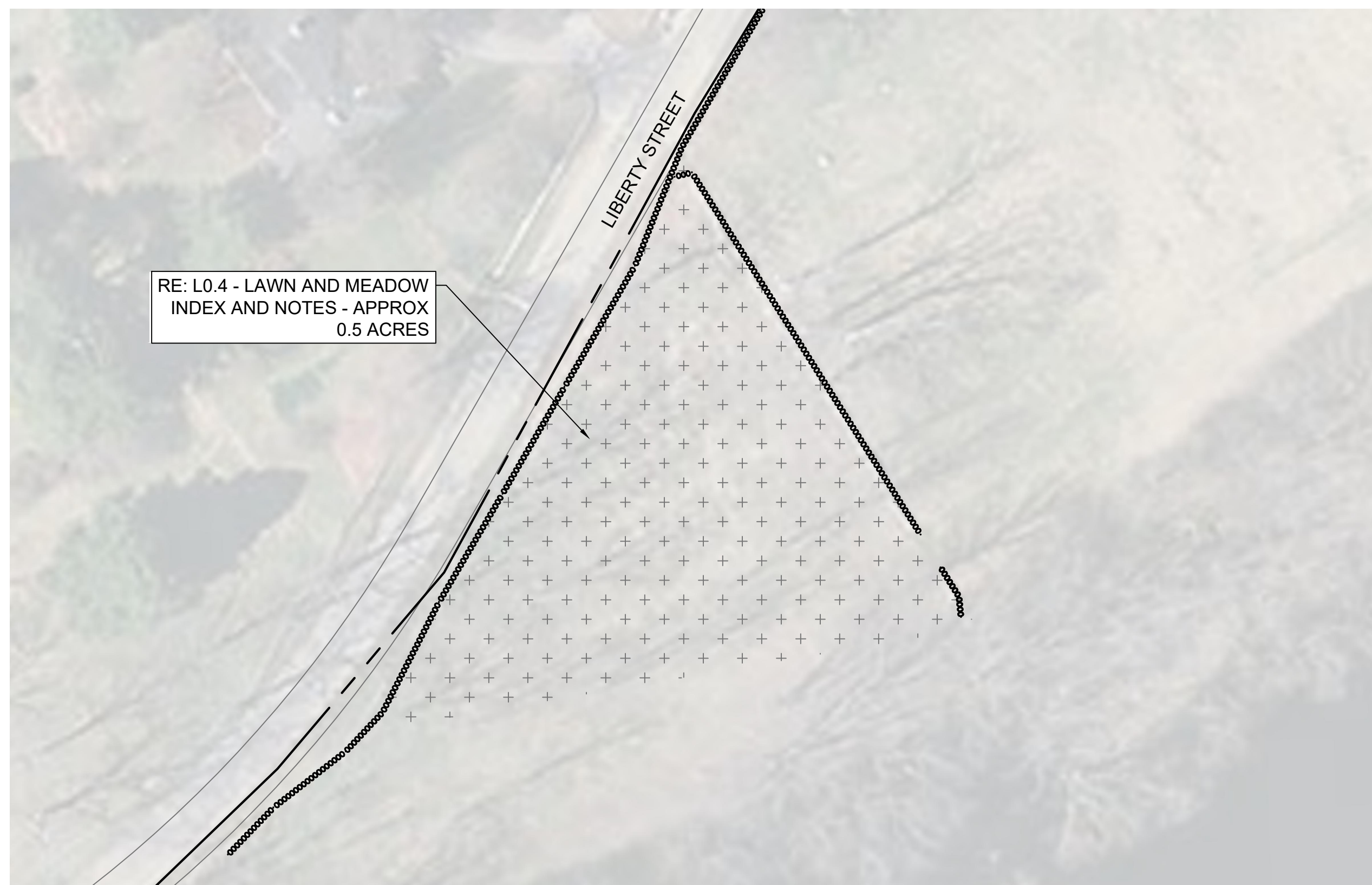


|                  |                                  |  |  |             |
|------------------|----------------------------------|--|--|-------------|
| DD - DRAFT - NFC |                                  | TITLE OF SHEET   |  | DRAWING NO. |
| DESIGNED:        | SUB SHEET NO.<br><br><b>L2.0</b> | <b>NORTH BRIDGE OVERALL PLAN</b>   |  | 406         |
| MPS/JAS          |                                  |  |  | 184184      |
| TECH. REVIEW:    |                                  |  |  | 317529      |
| HACE             |                                  |  |  | SHEET       |
| DATE:            |                                  | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |  | OF 60       |
| 05/01/2023       |                                  |  |  |             |

5/1/2023 1:23 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARKS\MIMA\GEO\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L2\_NOBR\_OVERALL\_CULA.DWG



1 NORTH BRIDGE ALLEE DETAIL PLAN  
L2.1 SCALE 1" = 40'-0"



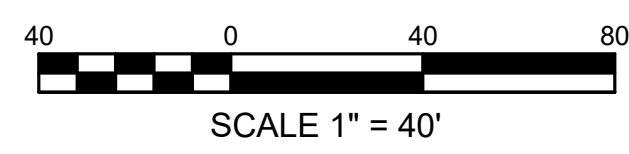
2 KEYES PASTURE DETAIL PLAN  
L2.1 SCALE 1" = 40'-0"

| PLANT MATERIALS SCHEDULE |      |                        |                                       |        |   |
|--------------------------|------|------------------------|---------------------------------------|--------|---|
| QTY                      | CODE | COMMON NAME            | SCIENTIFIC NAME                       | SIZE   | NOTES   |
| 2                        | PRE  | Princeton American Elm | <i>Ulmus Americana</i><br>'Princeton' | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Valley Forge' or 'Jefferson', as approved by C.O. |
| 4                        | AMB  | American Basswood      | <i>Tilia americana</i>                | 1" Cal | #10 or equivalent BB  |
| 3                        | SYC  | Sycamore               | <i>Platanus occidentalis</i>          | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.  |
| 6                        | REM  | Red Maple              | <i>Acer rubrum</i>                    | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.  |
| 7                        | SUM  | Sugar Maple            | <i>Acer saccharum</i>                 | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.  |

NOTES:  
1. TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.



3 MONUMENT STREET PARKING DETAIL PLAN  
L2.1 SCALE 1" = 40'-0"



|                       |  |      |  |                        |
|-----------------------|--|------|--|------------------------|
| DESIGNED:<br>MPS/JAS  |  | L2.1 | NORTH BRIDGE SITE DETAIL   | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |  |      |  | PMSI/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |  |      |  | SHEET<br>OF 60         |
|                       |  |      |  |                        |
| DD - DRAFT - NFC      |  |      | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                        |

5/1/2023 1:24 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L2\_NOBR\_CRITICALWALL\_CULA.DWG



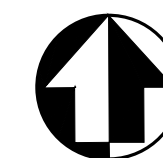
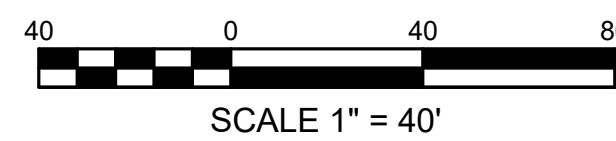
1 SITE DETAIL - MONUMENT STREET WALL  
L2.2 SCALE 1" = 40'-0"

1 SITE DETAIL - LIBERTY AVENUE WALL  
L2.2 SCALE 1" = 40'-0"

| SITE TASK LIST |                               |        |      |   |
|----------------|-------------------------------|--------|------|---|
| KEY            | TASK                          | SYMBOL | BID  | DESCRIPTION   |
| A              | WALL REPAIR - MONUMENT STREET |        | BASE | Repair 500 LF of wall. Wall is approximately 22" height with a bottom width of 32". Work is limited to restacking of wall. Any foundation repair shall be by approval of Contracting Officer. Refer to L0.5 - STONE WALL INDEX AND NOTES for further details. |
| B              | WALL REPAIR - LIBERTY STREET  |        | BASE | Repair 50 LF of wall. Wall is approximately 22" height with a bottom width of 32". Work is limited to restacking of wall. Any foundation repair shall be by approval of Contracting Officer. Refer to L0.5 - STONE WALL INDEX AND NOTES for further details.  |

NOTES:

- SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



DD - DRAFT - NFC

DESIGNED:  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
  
**L2.2**

TITLE OF SHEET  
**MONUMENT STREET  
AND BUTTRICK WALL  
PLAN AND DETAIL**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

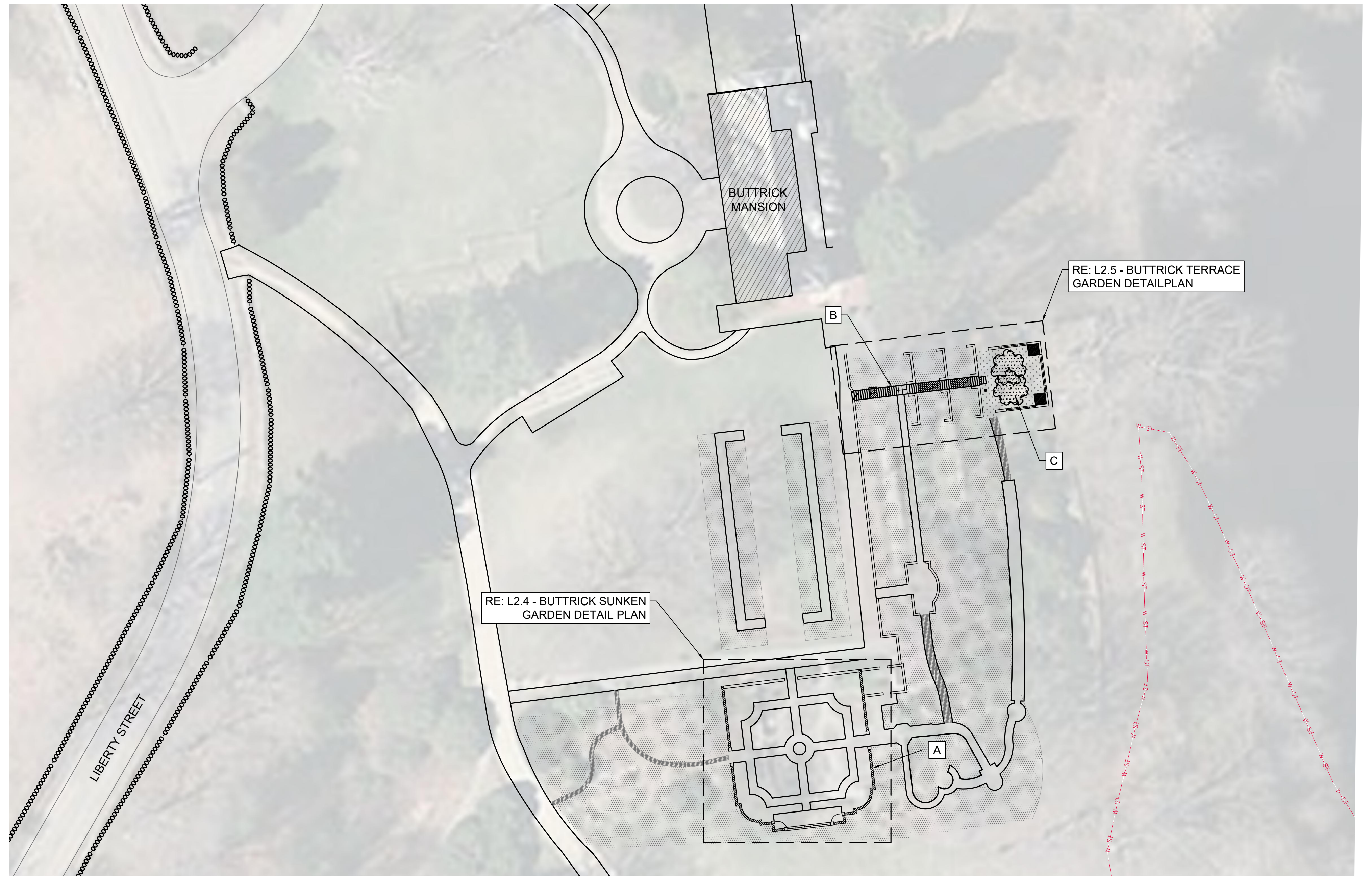
DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
--- OF 60

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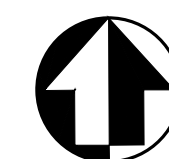
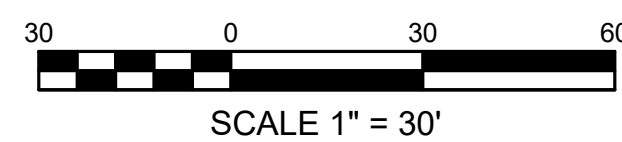
| SITE TASK LIST |  |        |      |   |
|----------------|--|--------|------|---|
| KEY            | TASK   | SYMBOL | BID  | DESCRIPTION   |
| A              | REPAIR AND REPOINT BRICK WALL AND COLUMNS - SUNKEN GARDEN              |        |      | Clean and repoint 1270 face feet of brick wall. Reset capstones and repair capstone on columns and walls.                                       |
| B              | LEVEL FIELDSTONE STAIRS, RESET PAVING AT EACH LANDING - TERRACE GARDEN |        | OPT1 | Reset 9 stairs to level, reset 70 SF of bluestone at landings on stairway, clean excess soil and grass away from stairs, fine grade and reseed. |
| C              | REPAIR SURFACE ON TERRACE - TERRACE GARDEN                             |        |      | Topdress and fine grade to level 780 square foot terrace, raise and reset 50 SF of brick paving at corners of terrace                           |

**NOTES:**

1. PROVIDE PROTECTION FOR LANDSCAPE AND GARDEN MATERIALS ADJACENT TO ANY CONSTRUCTION ACTIVITY. THIS INCLUDES, BUT IT NOT LIMITED TO, TREES, SHRUBS, GROUNDCOVERS, WALLS, AND STONE PAVING.
2. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



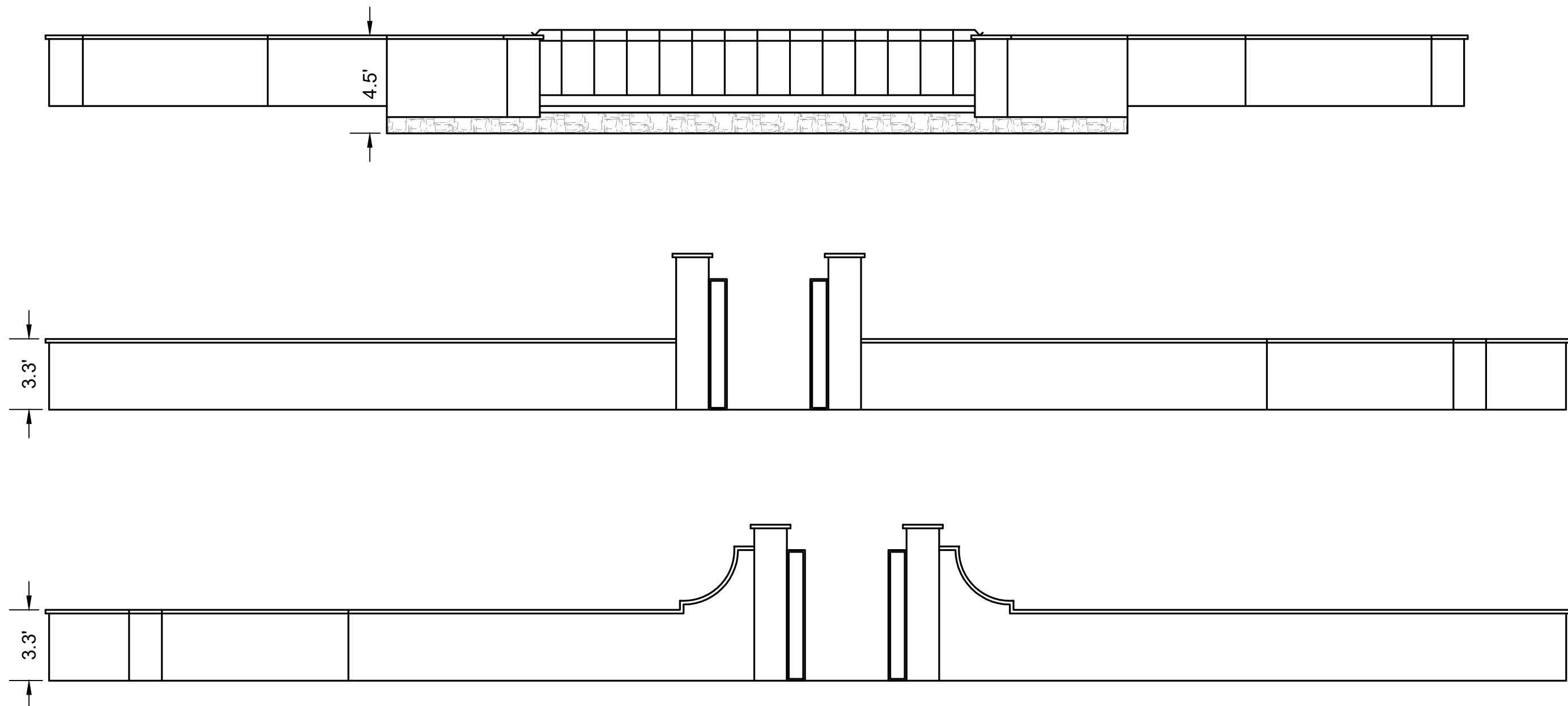
**1 BUTTRICK GARDEN SITE PLAN**  
L2.3 SCALE 1" = 30'-0"



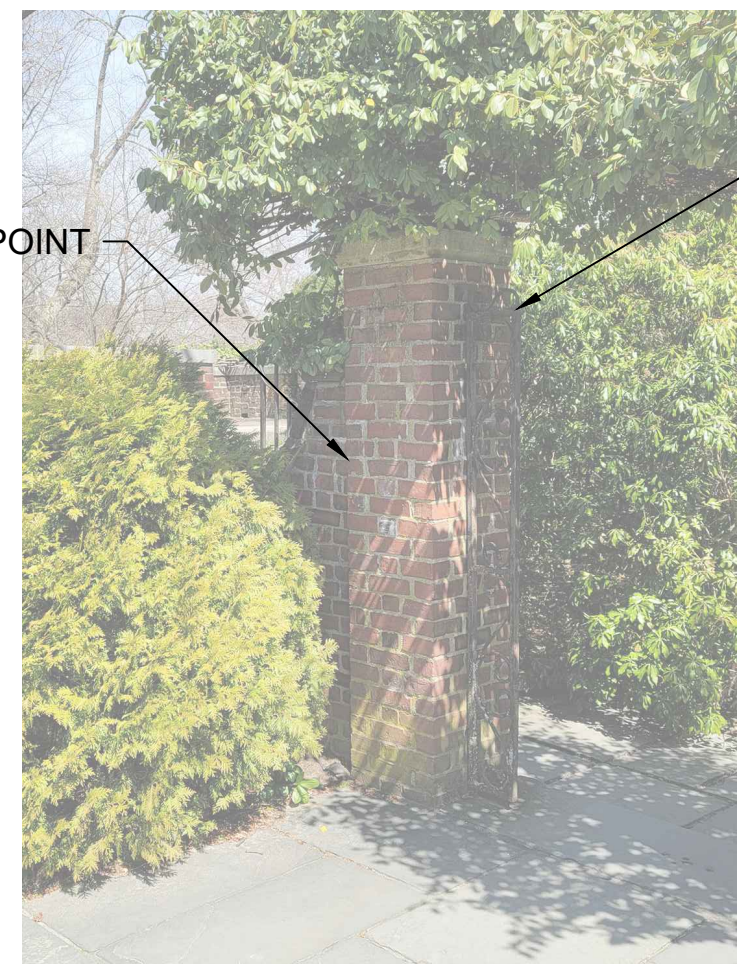
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| DESIGNED:<br>MPS/JAS  | L2.3 | TITLE OF SHEET   | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |      | <b>BUTTRICK GARDEN<br/>SITE PLAN</b>   | 184184                 |
| DATE:<br>05/01/2023   |      |  | PMIS/PKG NO.<br>317529 |
|                       |      | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | SHEET<br>OF 60         |

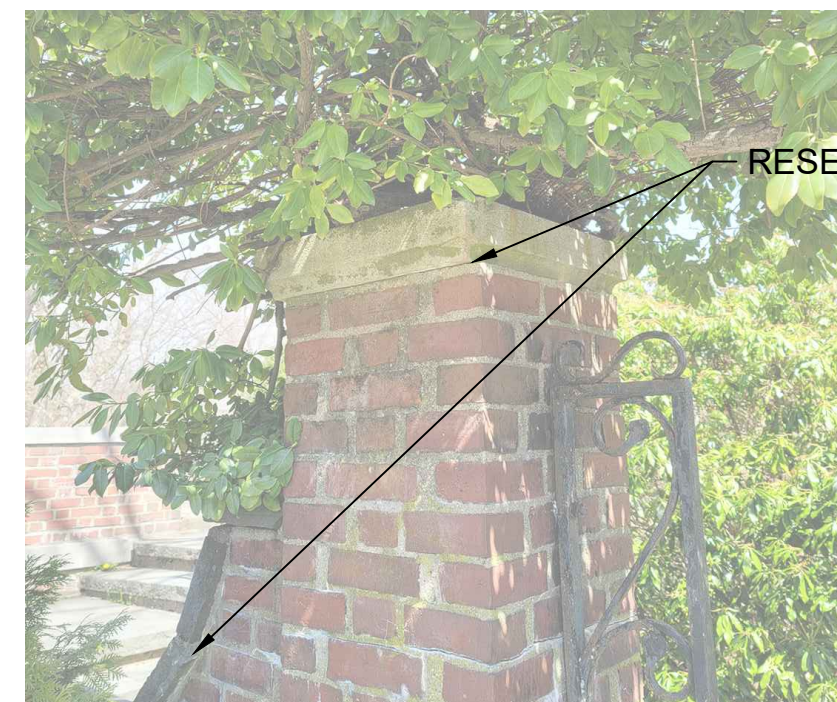
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**2 BUTTRICK SUNKEN GARDEN WALL DETAILS**  
L2.4 SCALE 1" = 5'-0"

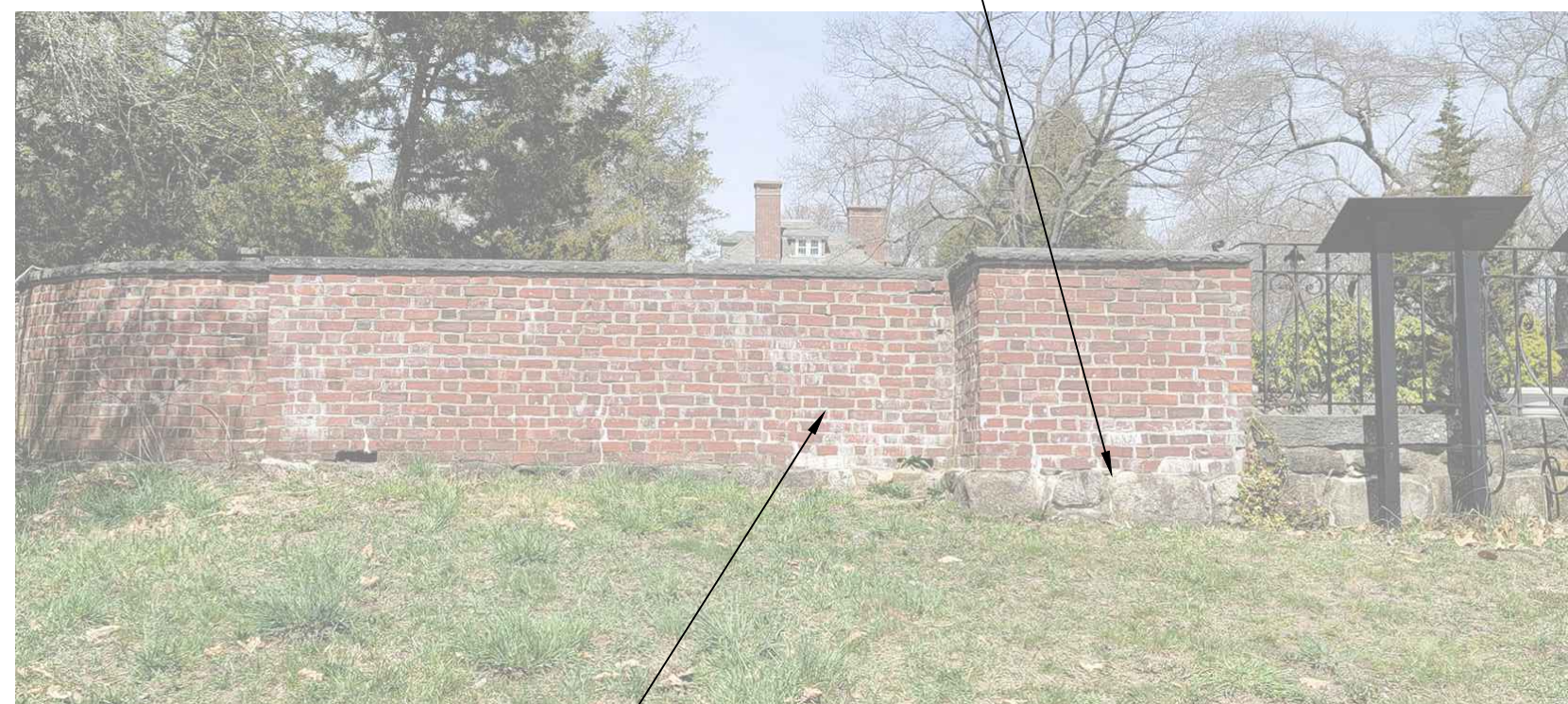


REFINISH IRON RECEIVER AND GATES



RESET CAP AND CAPSTONE

**3 BUTTRICK SUNKEN GARDEN GATE/COLUMNS**  
L2.4 SCALE 1" = 5'-0"



PATCH MORTAR ON STONE STEM WALL

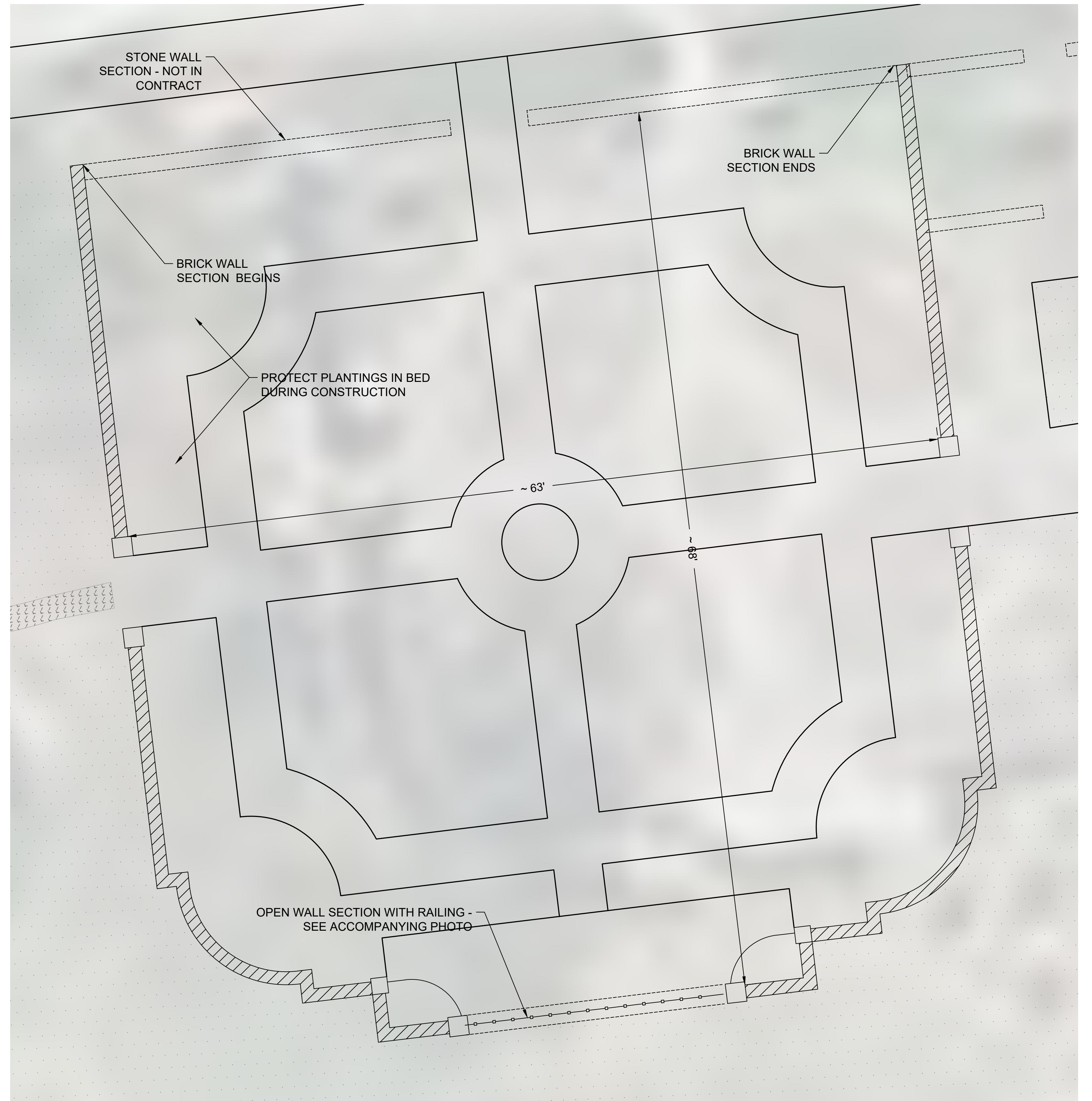


PROTECT METAL RAILING AND WAYSIDES DURING CONSTRUCTION

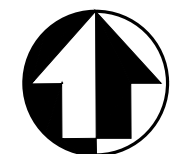
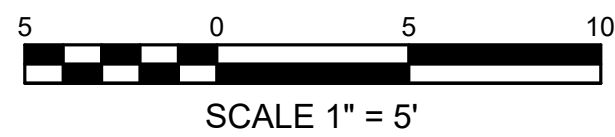
CLEAN AND REGROUT SEAMS AT BENCHES

**4 BUTTRICK SUNKEN GARDEN WALL AND FIXTURES**  
L2.4 SCALE 1" = 5'-0"

CLEAN AND REPOINT



**1 BUTTRICK SUNKEN GARDEN DETAIL PLAN**  
L2.4 SCALE 1" = 5'-0"



DD - DRAFT - NFC

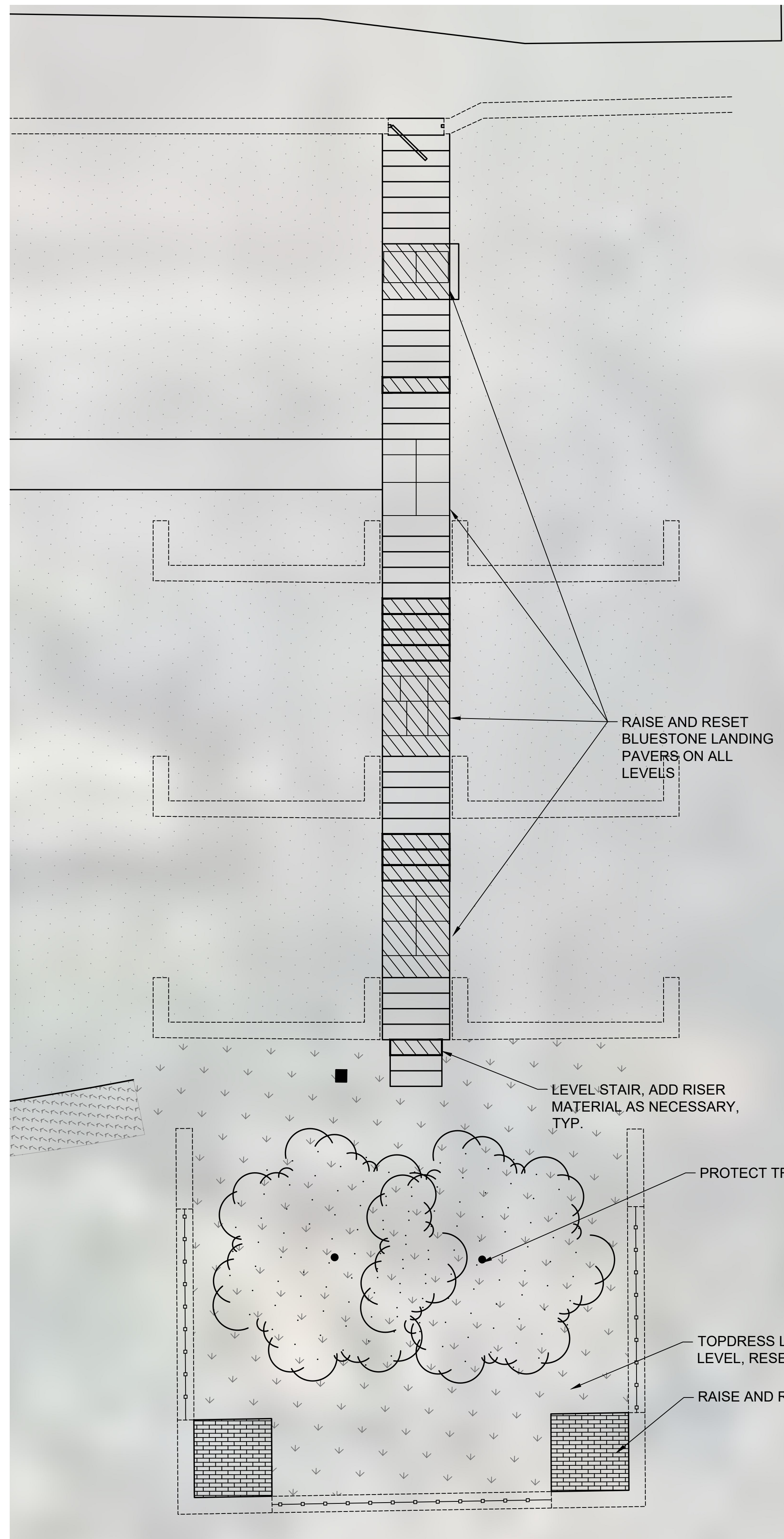
DESIGNED: MPS/JAS  
 TECH. REVIEW: HACE  
 DATE: 05/01/2023

SUB SHEET NO. **L2.4**

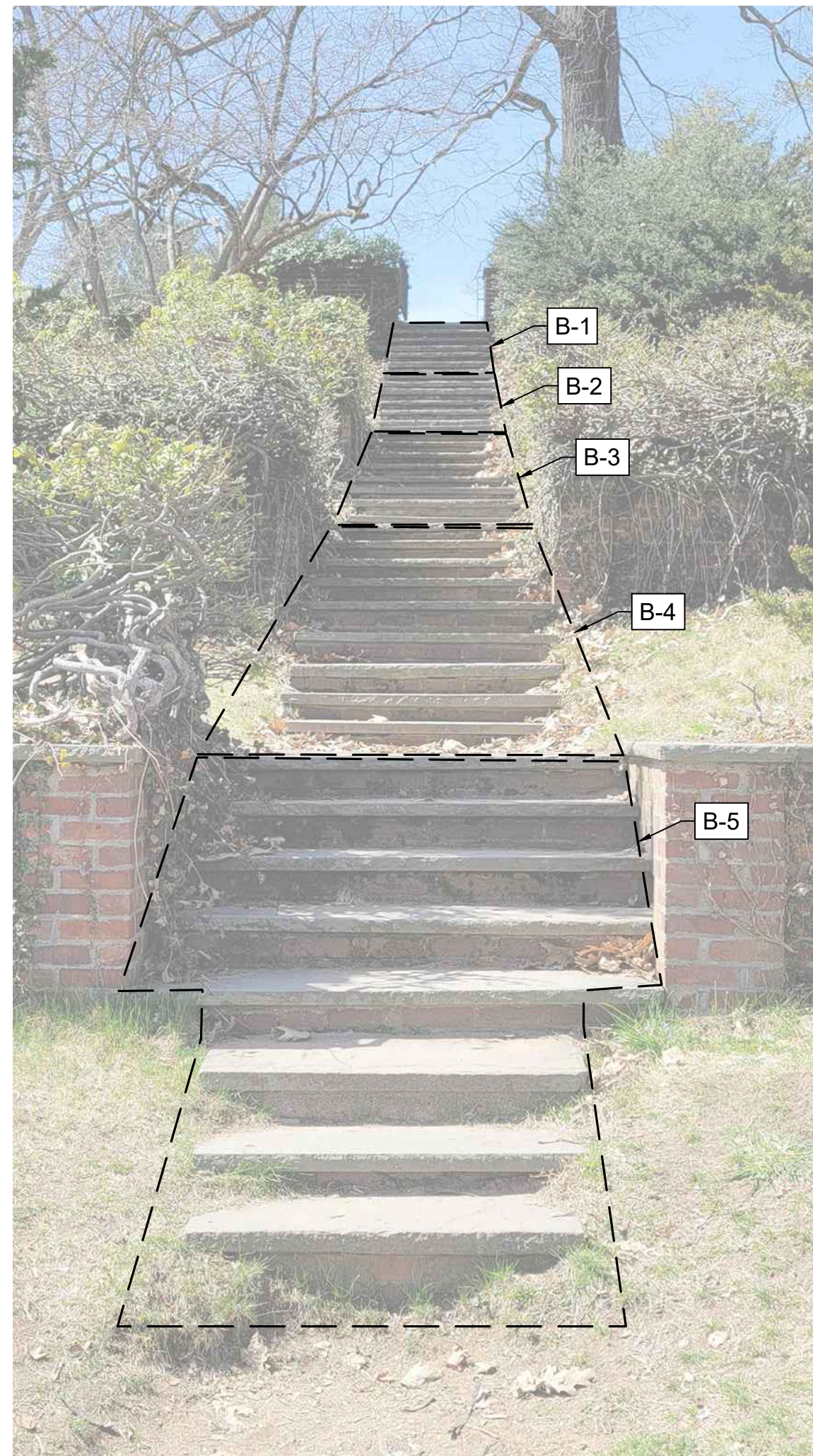
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**BUTTRICK SUNKEN GARDEN DETAIL PLAN**  
 LANDSCAPE & SEPTIC REPAIRS  
 GREAT AMERICAN OUTDOORS ACT (GAOA)  
 LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO. 406  
 184184  
 PMIS/PKG NO. 317529  
 SHEET  
 OF 60

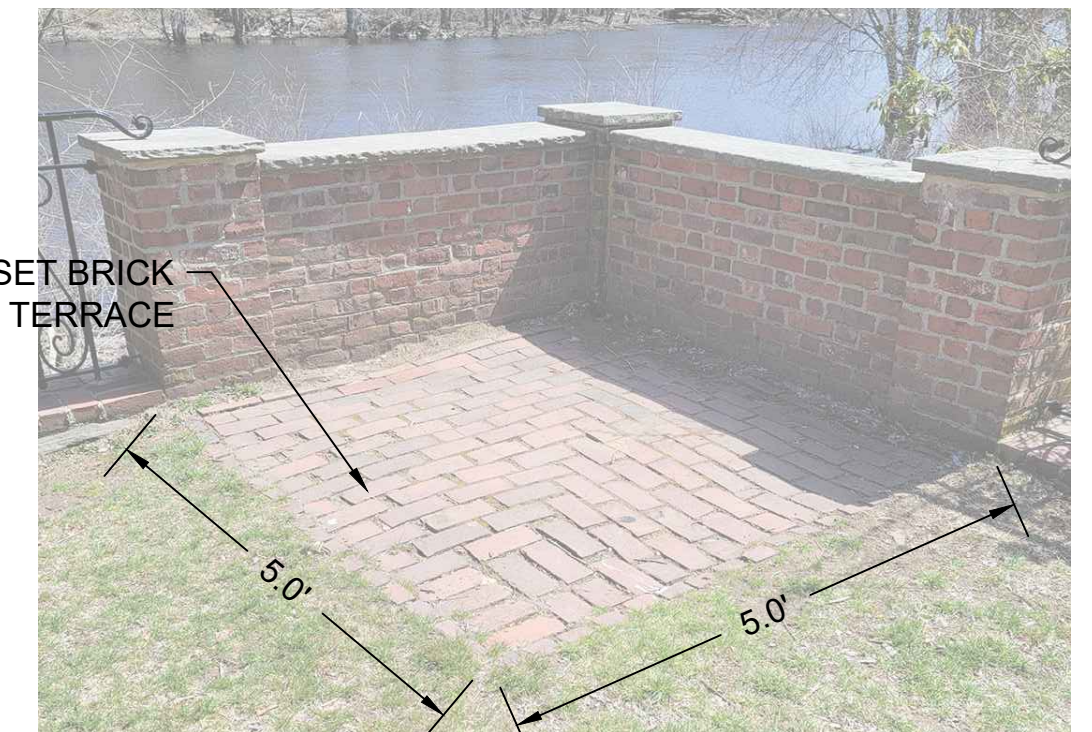
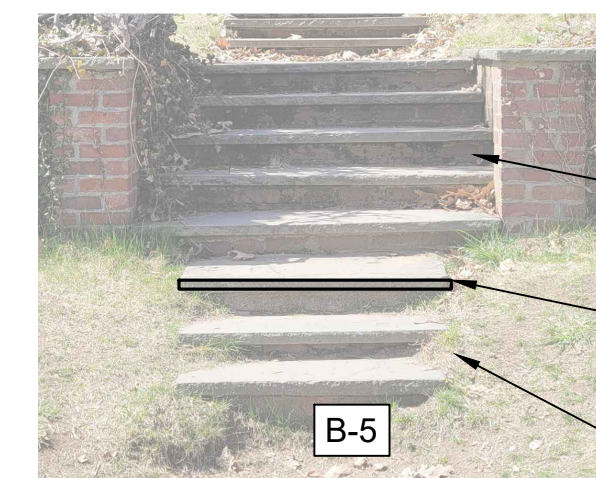
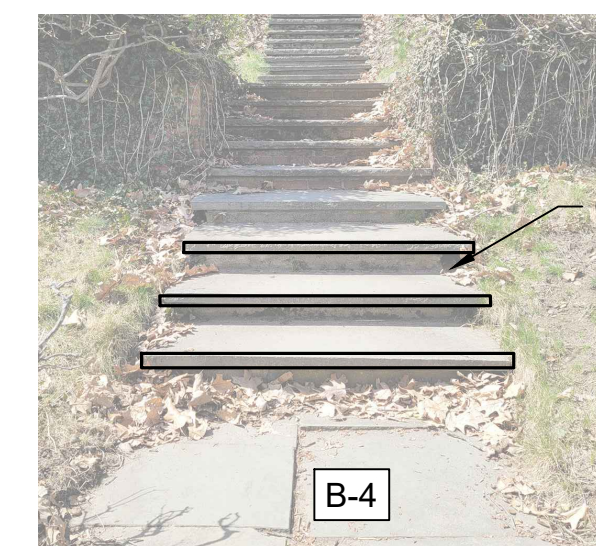
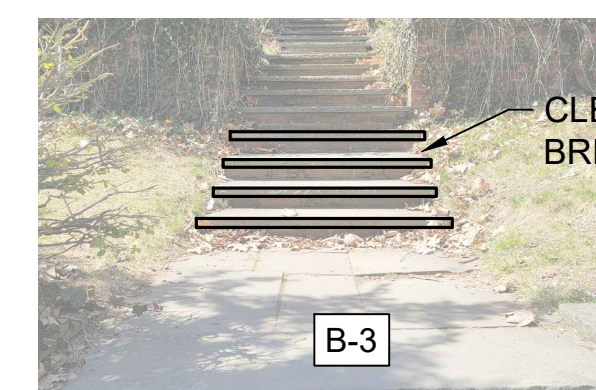
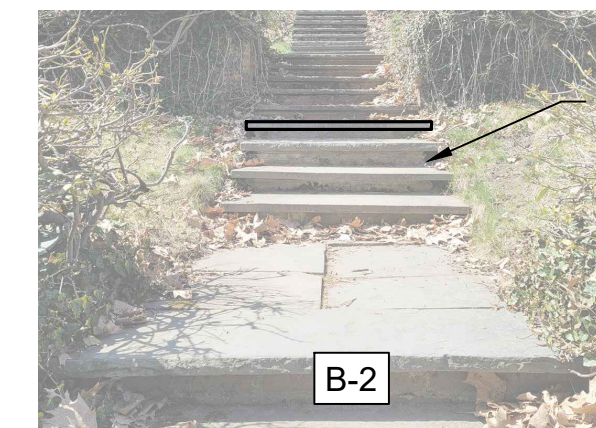
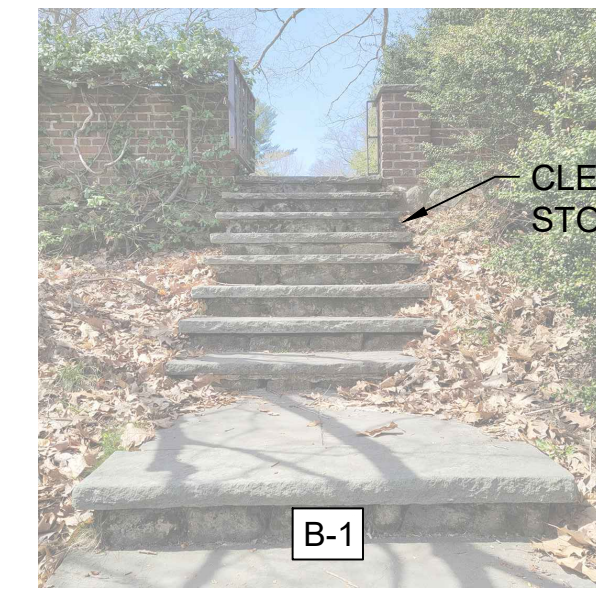
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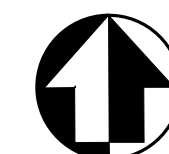
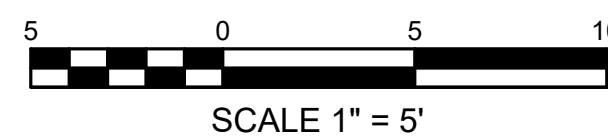
**1 BUTTRICK TERRACE GARDEN DETAIL PLAN**  
L2.5 SCALE 1" = 5'-0"



**2 BUTTRICK TERRACE GARDEN STAIR**  
L2.5 SCALE 1" = 5'-0"



**3 BUTTRICK TERRACE GARDEN BRICK**  
L2.5 SCALE 1" = 5'-0"



DD - DRAFT - NFC

DESIGNED: MPS/JAS  
 MPS/JAS  
 TECH. REVIEW: HACE  
 DATE: 05/01/2023

SUB SHEET NO.  
**L2.5**

TITLE OF SHEET  
**BUTTRICK TERRACE GARDEN DETAIL PLAN**  
 LANDSCAPE & SEPTIC REPAIRS  
 GREAT AMERICAN OUTDOORS ACT (GAOA)  
 LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO. 406  
 184184  
 PMIS/PKG NO. 317529  
 SHEET  
 OF 60

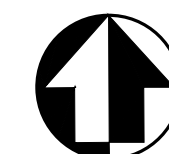
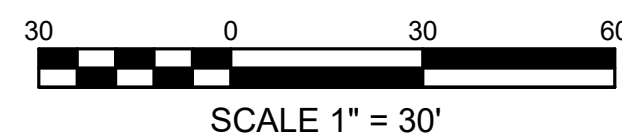
| SITE TASK LIST |                                   |        |      |   |
|----------------|-----------------------------------|--------|------|---|
| KEY            | TASK                              | SYMBOL | BID  | DESCRIPTION   |
| A              | REPAIR CHIPSEAL WALK - HOUSE      |        | BASE | Mill, repave, and reapply chipseal to 245 SF asphalt of residential asphalt walk per 3/L11.1  |
| B              | REPAIR CHIPSEAL WALK - HOUSE      |        | BASE | Mill, repave, and reapply chipseal to 180 SF of asphalt of residential asphalt walk per 3/L11.1   |
| C              | REPAIR CHIPSEAL WALK - FOUNDATION |        | BASE | Mill, repave, and reapply chipseal to 75 SF of asphalt of residential asphalt walk per 3/L11.1  |
| D              | REPAIR CHIPSEAL WALK - PARKING    |        | BASE | Mill, repave, and reapply chipseal to 140 SF of asphalt of residential asphalt walk per 3/L11.1   |
| E              | REPAVE ASPHALT DRIVE              |        | BASE | Mill, repave, and reapply chipseal to 4245 SF of residential asphalt drive per 2/L11.1  |
| F              | LAWN REPAIR - SELECTIVE           |        | BASE | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seeding. |
| G              | TREE PLANTING                     |        | BASE | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |         |  |
|--------------------------|------|---------------------------|---------------------------------------|---------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE    | NOTES  |
| 1                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i> | 1" Cal  | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 3                        | ERC  | Eastern Red Cedar         | <i>Juniperus virginiana</i>           | 8-10 FT | #10 or equivalent BB   |
| 5                        | LIB  | Liberty Apple             | <i>Malus domestica 'Liberty'</i>      | 1" CAL  | #10 OR EQUIVALENT BB<br>Semi dwarf root stock which is cold hardy and disease resistant, such as Antonovka                                   |

- NOTES:
- TWO SEPTIC FIELD EXIST ON THIS SITE (SHOWN IN APPROXIMATE LOCATION ON PLAN). USE OF EQUIPMENT AND MOVEMENT OF VEHICLES IS PROHIBITED IN THESE AREAS.
  - TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 MAJOR JOHN BUTTRICK HOUSE SITE PLAN  
L2.6 SCALE 1" = 30'-0"



DD - DRAFT - NFC

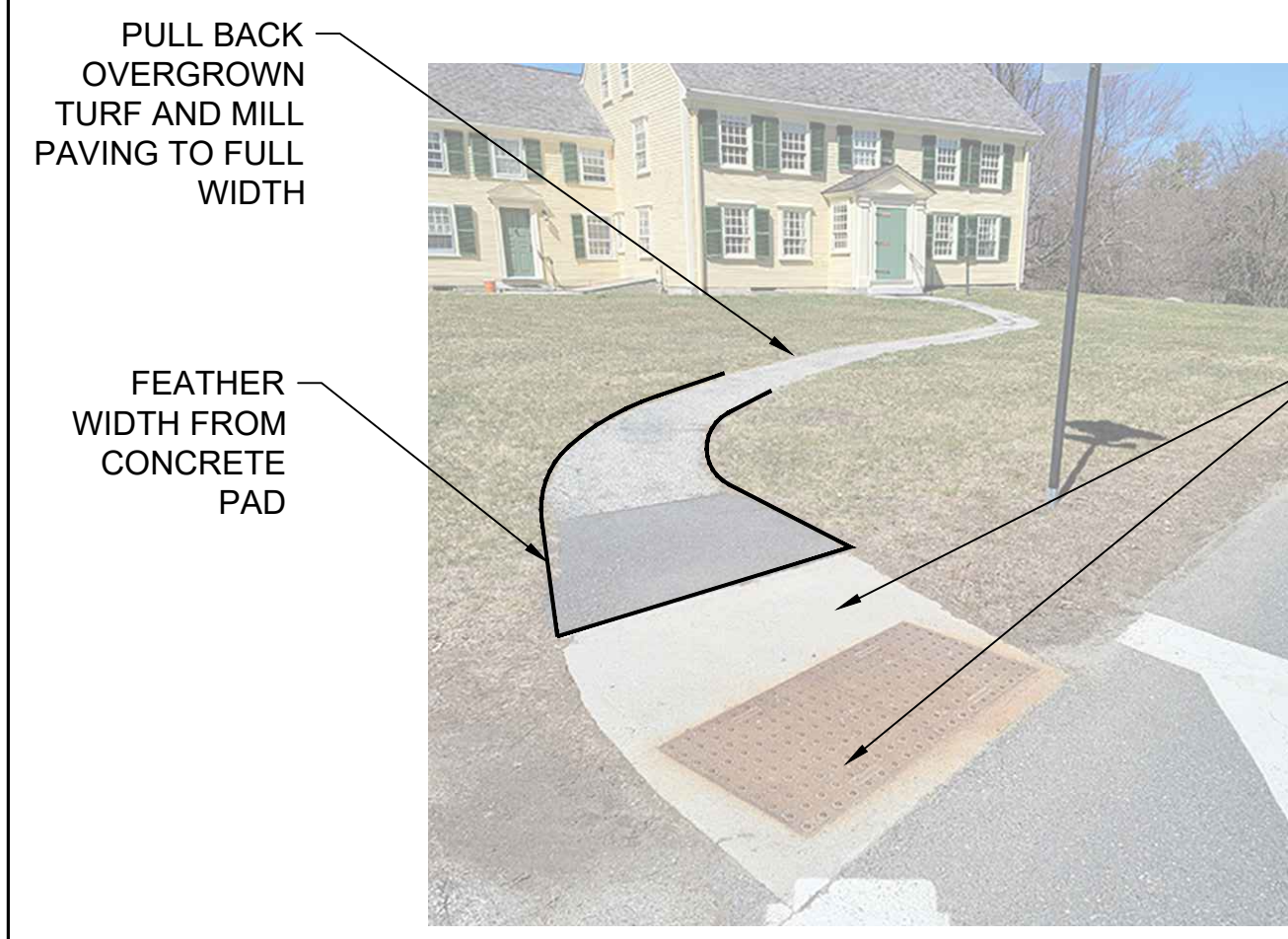
DESIGNED:  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L2.6**

TITLE OF SHEET  
**MAJ. JOHN BUTTRICK  
SITE PLAN**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
--- OF 60

5/1/2023 1:31 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOV\PARKS\WIMM\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CIPPACKAGE\L2\_MBT\_SITEPLAN\_CUL.A.DWG

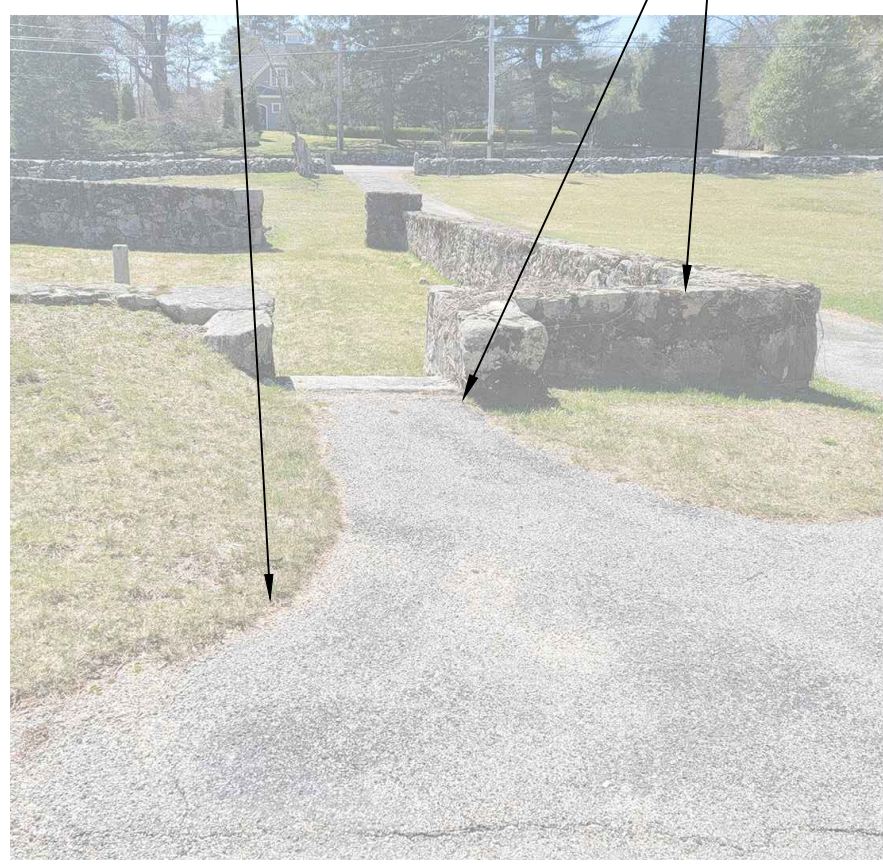


**2** DETAIL - WALK A  
L2.7 NTS

CONCRETE AND TACTILE STRIP TO REMAIN  
POWER WASH CONCRETE  
AND METAL PLATE



**3** DETAIL - WALK B  
L2.7 NTS

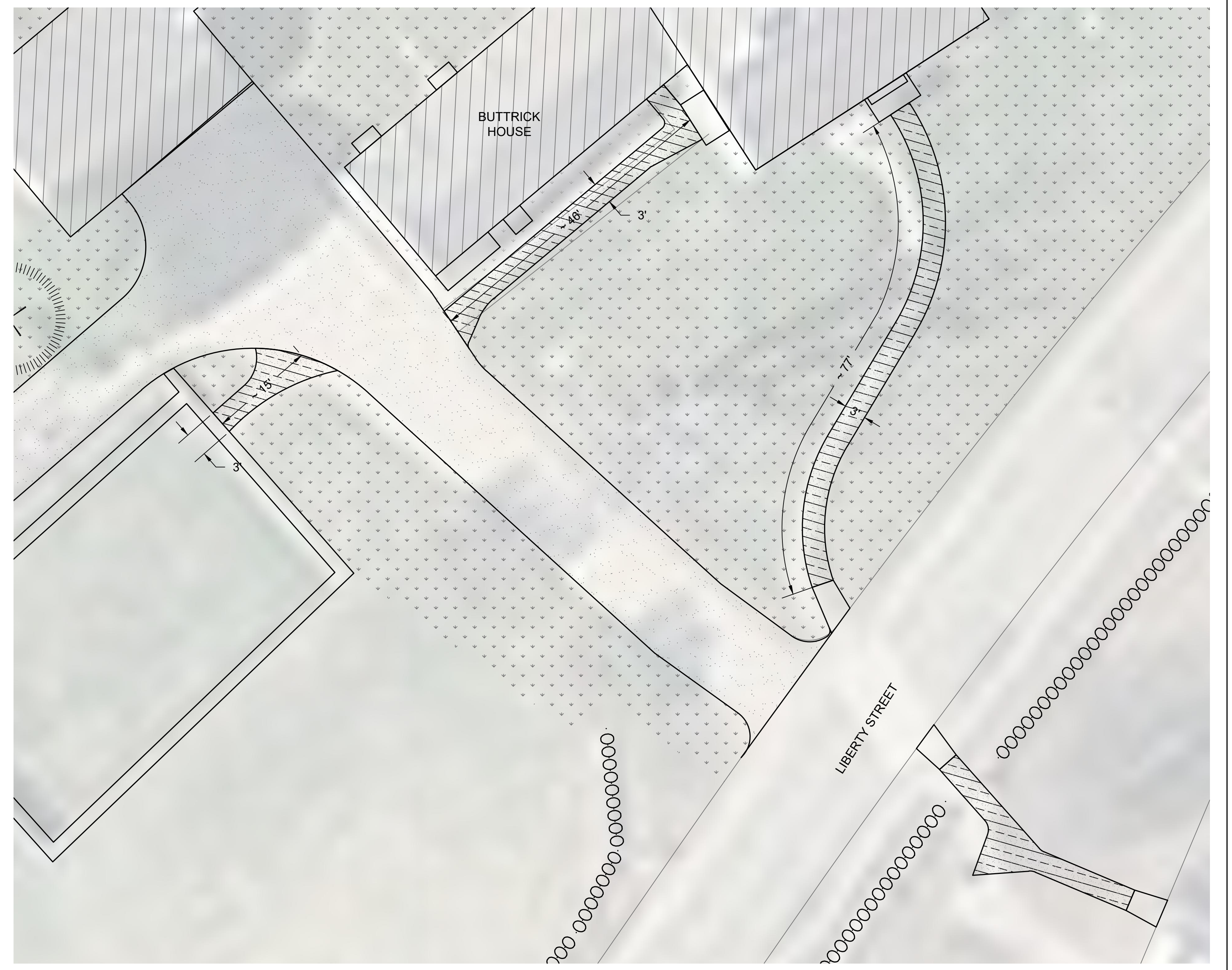


**4** DETAIL - WALK C  
L2.7 NTS

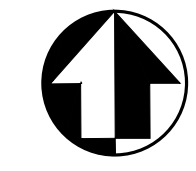
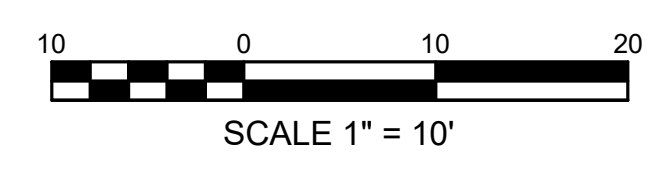


**5** DETAIL - WALK D  
L2.7 NTS

CONCRETE AND TACTILE STRIP TO REMAIN  
POWER WASH CONCRETE  
AND METAL PLATE



**1** BUTTRICK HOUSE PAVING DETAIL PLAN  
L2.7 SCALE 1" = 10'-0"



|                       |  |               |  |  |                        |
|-----------------------|--|---------------|--|--|------------------------|
| DESIGNED:<br>MPS/JAS  |  | L2.7          | TITLE OF SHEET   |  | DRAWING NO.<br>406     |
| MPS/JAS               |  |               | <b>MAJ. JOHN BUTTRICK<br/>PAVING DETAIL</b>  |  | 184184                 |
| TECH. REVIEW:<br>HACE |  |               |  |  | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |  |               | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |  | SHEET<br>OF 60         |
| DD - DRAFT - NFC      |  | SUB SHEET NO. |  |  |                        |

5/1/2023 2:54 PM MSURBER R21 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\WIMA\GAOA\LANDSCAPE\L2\_ELJO\_SITEPLAN\_CUIA.DWG

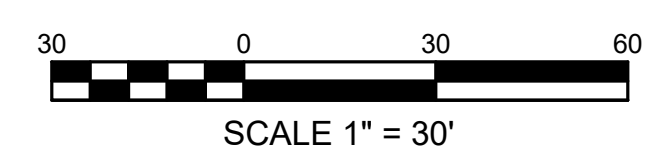
| SITE TASK LIST |  |     |       |   |
|----------------|--|-----|-------|---|
|                | TASK   | KEY | BID   | DESCRIPTION   |
| A              | REPAIR/RESET PAVING STONE ENTRY WALK TO FRONT ENTRY (WEST) |     | OPT 1 | Excavate and lift 40 LF of stone walkway, reset on gravel base per detail 7/L11.2. Add new stone to supplement missing stone to create complete path. Any new stone used to fill in gaps in walk shall match existing.  |
| B              | REPAIR/RESET BRICK WALKWAY TO FRONT ENTRY (NORTH)          |     | OPT 1 | Lift 100 SF of brick walkway, repair and compact base and sub-base, relay brick on stone dust bed per detail 5/L11.2. Brick shall be re-laid in pattern matching existing. Broken or damaged brick shall be replaced in-kind with new material.                 |
| C              | REPAIR/RESET BRICK WALKWAY TO GARAGE ENTRY (WEST)          |     | OPT 1 | Lift 20 SF of brick walkway, repair and compact new base and sub-base, relay brick on stone dust bed per detail 5/L11.2. Brick shall be re-laid in pattern matching existing. Broken or damaged brick shall be replaced in-kind with new material.              |
| D              | RESET STONE GATE POST                                      |     | OPT 1 | Reset stone gate post to plum condition.  |
| E              | REPLACE AREA DRAIN   |     | OPT 1 | Replace drain with new receiver, plus grate.  |
| F              | LAWN REPAIR - SELECTIVE                                    |     | OPT 1 | Selective repair of approximately 950 SY of lawn with ruts, divots, depressions. Work consists of topdress with topsoil, any necessary scarification or aeration of surface, seeding. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for details on treatment. |
| G              | LAWN REPAIR - REMAINING                                    |     |       | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for details on treatment.   |
| H              | TREE PLANTING  |     | OPT 1 | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |  |         |  |
|--------------------------|------|---------------------------|--|---------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                        | SIZE    | NOTES  |
| 1                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i>  | 1" Cal  | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 5                        | NSP  | Norway Spruce             | <i>Picea abies</i>                     | 8-10 FT | #10 or equivalent BB   |
| 4                        | WHF  | White Fir                 | <i>Abies concolor</i>                  | 8-10 FT | #10 or equivalent BB   |
| 3                        | ERC  | Eastern Red Cedar         | <i>Juniperus virginiana</i>            | 8-10 FT | #10 or equivalent BB   |
| 5                        | LIB  | Liberty Apple             | <i>Malus domestica 'Liberty'</i>       | 1" CAL  | #10 OR EQUIVALENT BB<br>Semi dwarf root stock which is cold hardy and disease resistant, such as Antonovka                                   |
| 2                        | AKA  | Ashmead's Kernel Apple    | <i>Malus pumila 'Ashmead's Kernel'</i> | 1" C    | Semi dwarf root stock which is cold hardy and disease resistant, such as Antonovka   |

- NOTES:
- PROPERTY MAY BE OCCUPIED AT TIME OF CONSTRUCTION. COORDINATE WORK WITH CONTRACTING OFFICER AND ENSURE THAT ACCESS TO STRUCTURE AND PARKING FOR RESIDENTS IS MAINTAINED DURING CONSTRUCTION.
  - TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.

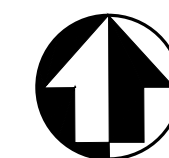
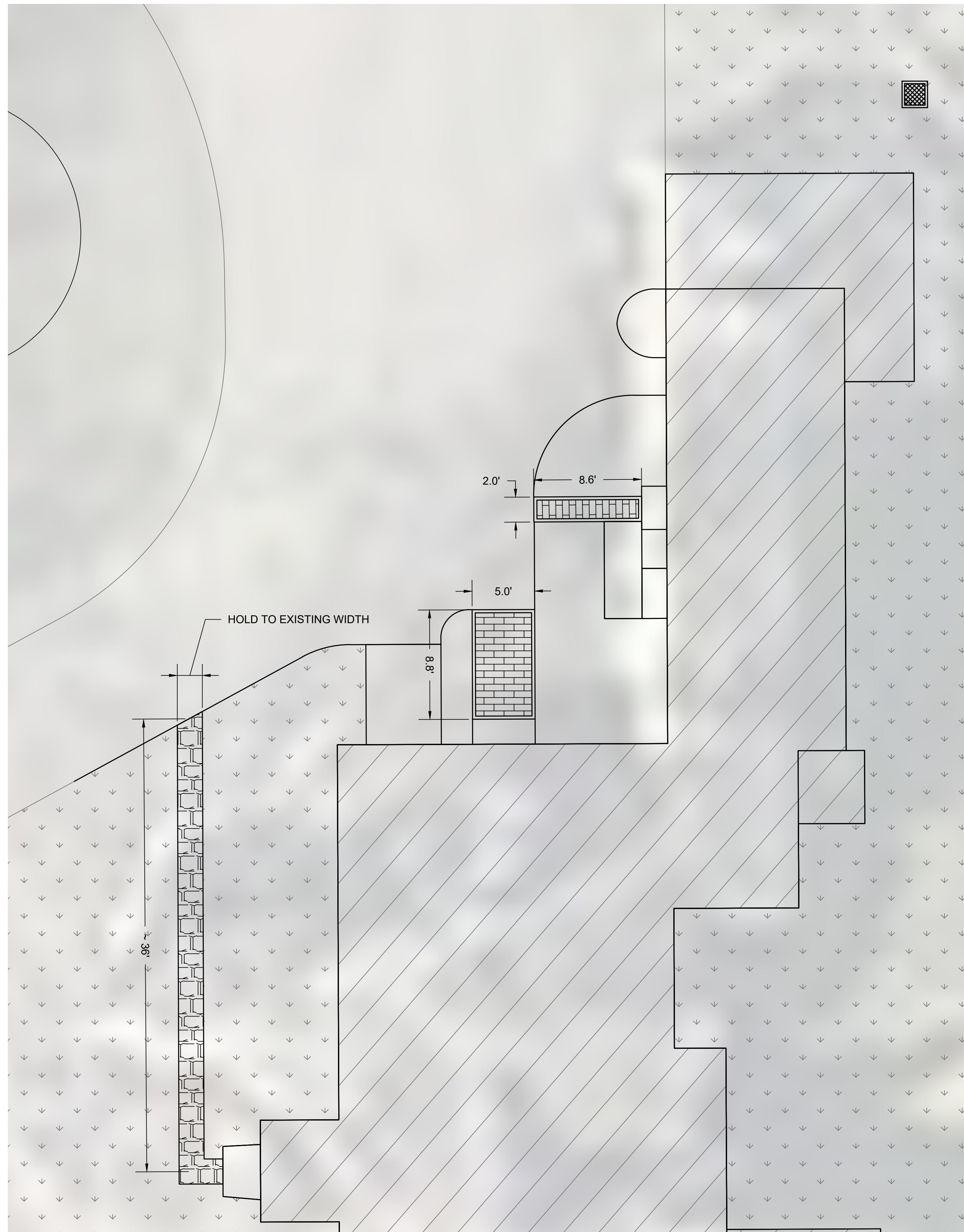


1 ELISHA JONES HOUSE SITE PLAN  
L2.8 SCALE 1" = 30'-0"



|                       |                              |  |                        |
|-----------------------|------------------------------|--|------------------------|
| DD - DRAFT - NFC      |                              |  |                        |
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><b>L2.8</b> | TITLE OF SHEET<br><b>ELISHA JONES SITE PLAN</b>  | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | 184184                 |
| DATE:<br>05/01/2023   |                              |  | PMIS/PKG NO.<br>317529 |
|                       |                              |  | SHEET<br>--- OF 60     |

5/1/2023 1:32 PM MSURBER R21 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L2\_ELJO\_SITEPLAN\_CUIA.DWG



1 ELSHA JONES PAVING DETAIL PLAN  
L2.9 SCALE 1" = 5'-0"

DD - DRAFT - NFC

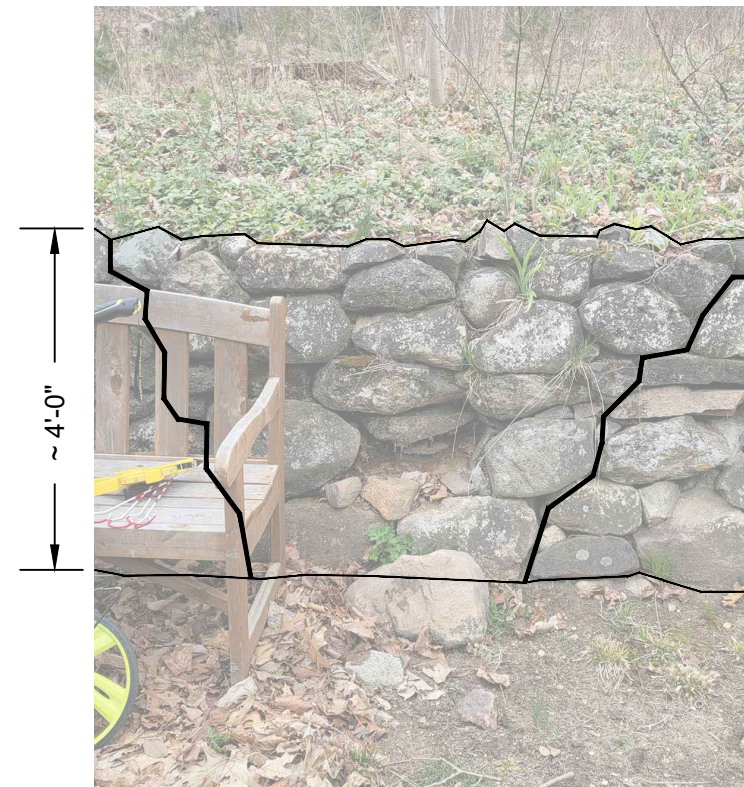
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| TECH. REVIEW:<br>HACE |                                  |   | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |                                  |   | SHEET<br>---- OF 60    |
|                       |                                  |   |                        |



5/1/2023 1:39 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOV\PARKS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L3\_WAYS\_SITEPLAN\_CULA.DWG

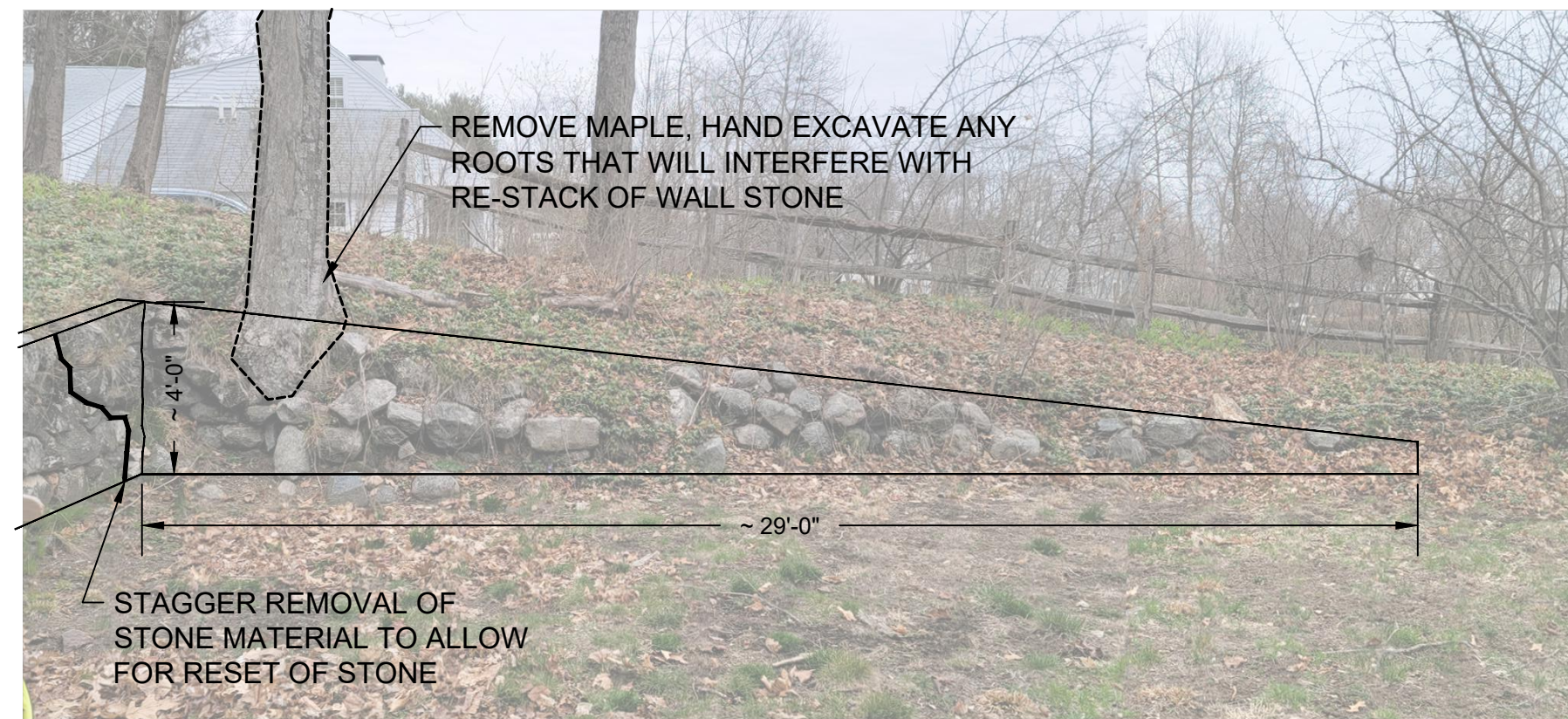


**2 WALL CONSTRUCTION DETAIL**  
L3.1 NTS

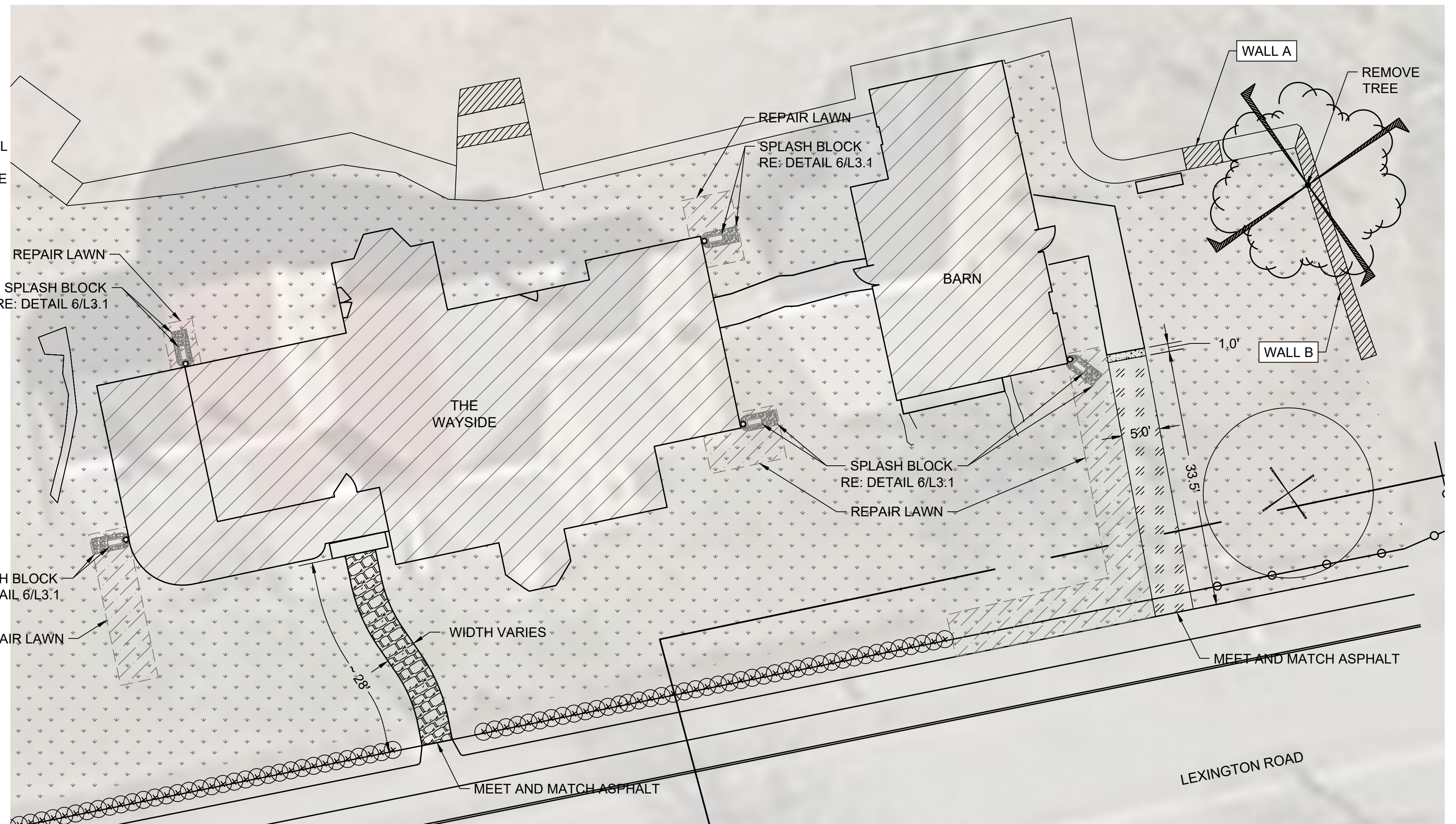


**3 REPAIR DETAIL - WALL A**  
L3.1 NTS

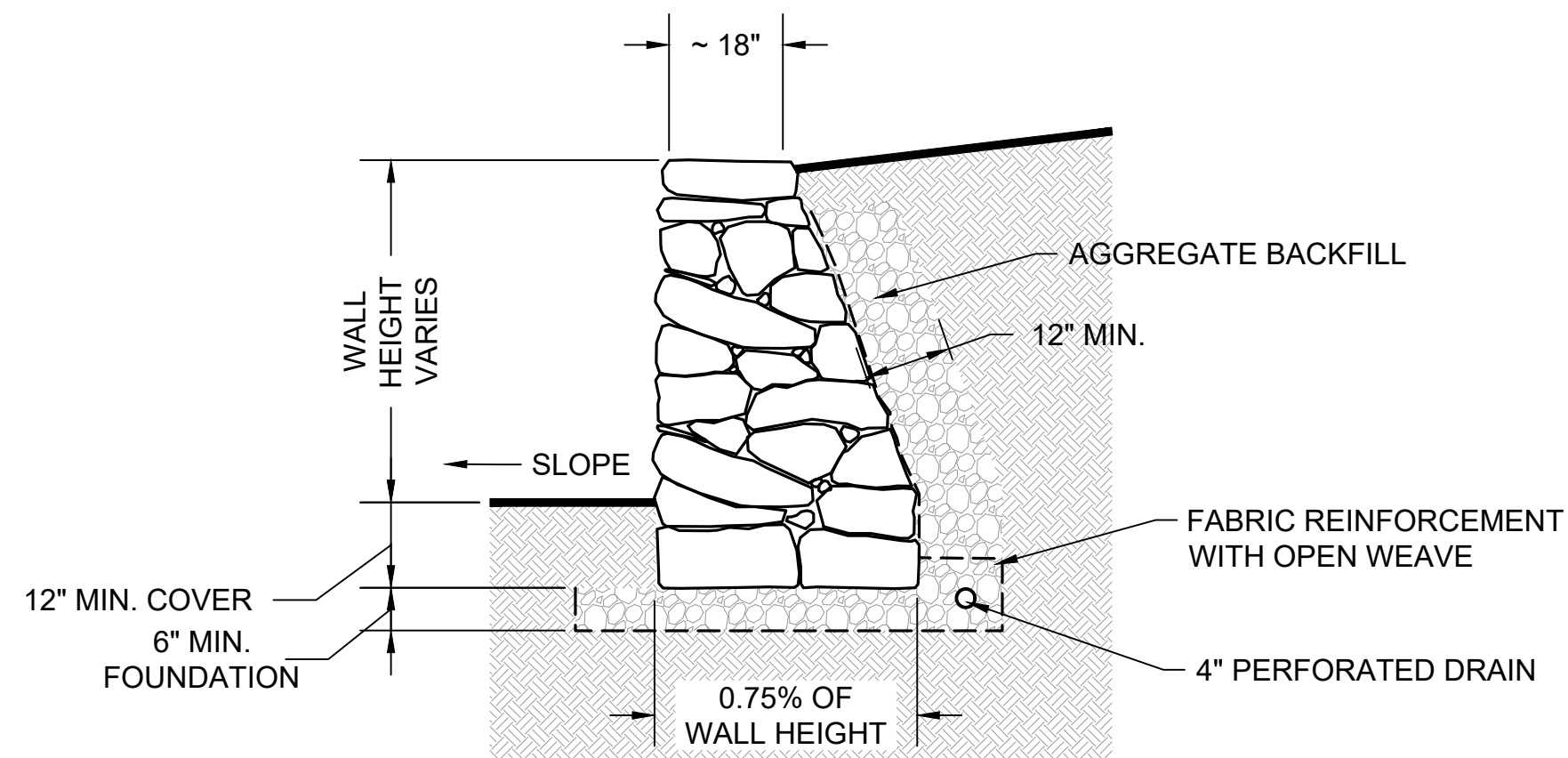
STAGGER  
REMOVAL OF  
STONE MATERIAL  
TO ALLOW FOR  
RESET OF STONE



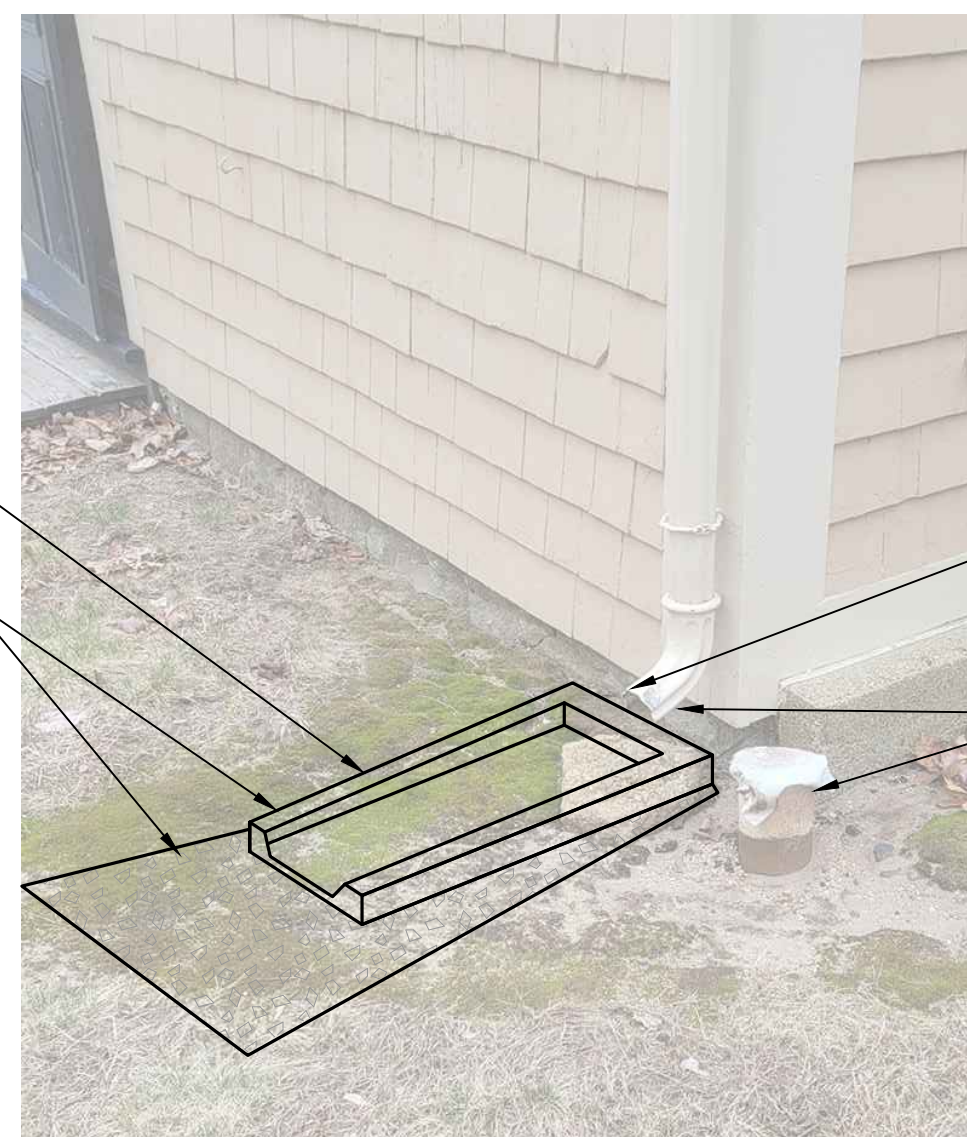
**4 REPAIR DETAIL - WALL B**  
L3.1 NTS



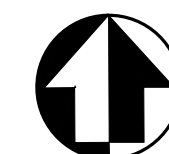
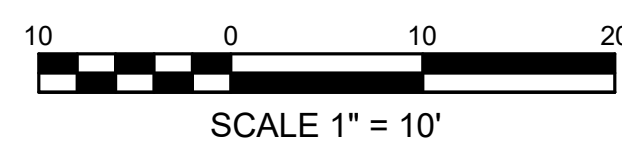
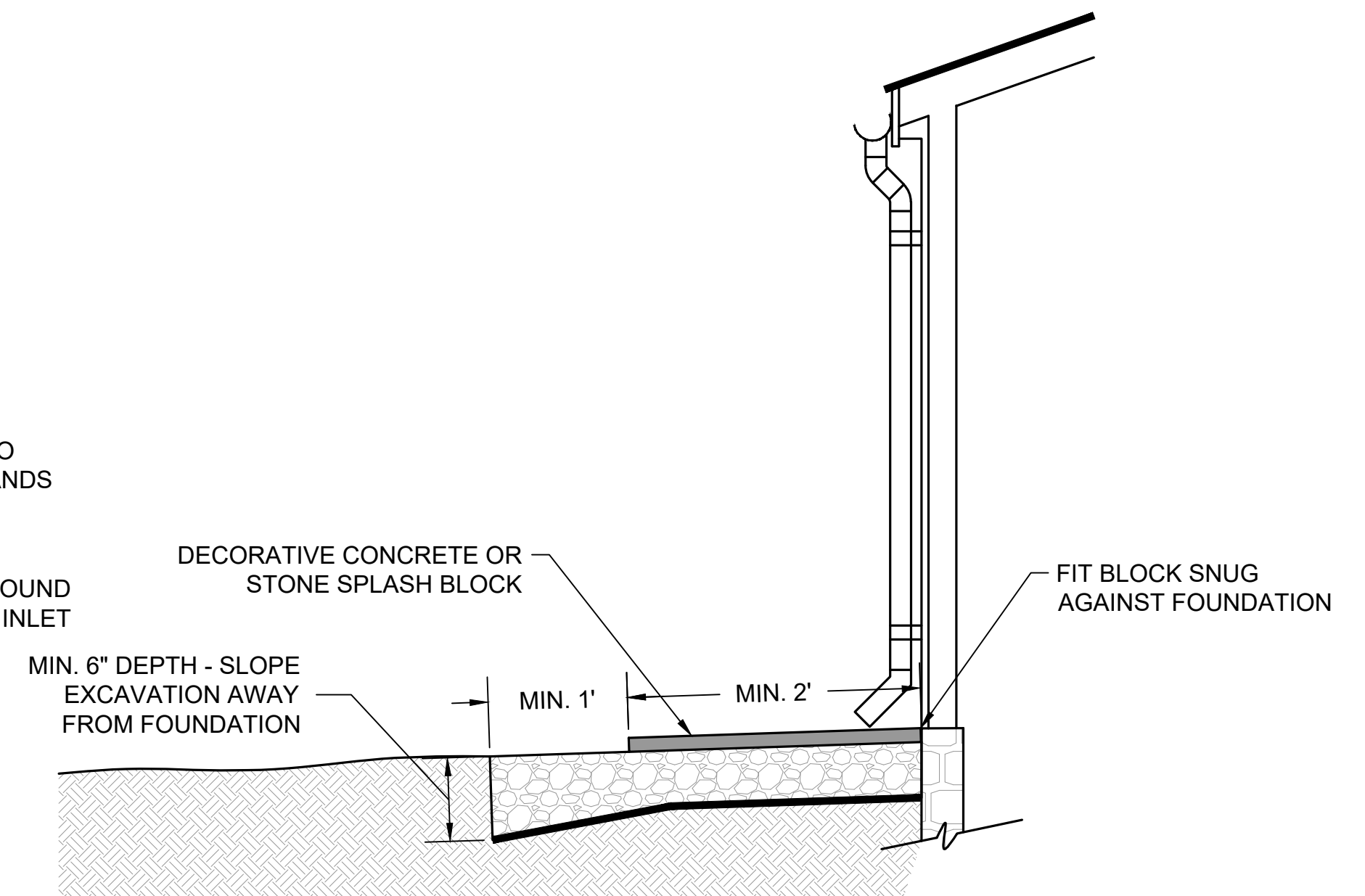
**1 WAYSIDE DETAIL PLAN**  
L3.1 1"=10'-0"



**5 WALL CONSTRUCTION DETAIL**  
L3.1 NTS



**6 GUTTER DETAIL**  
L3.1 NTS



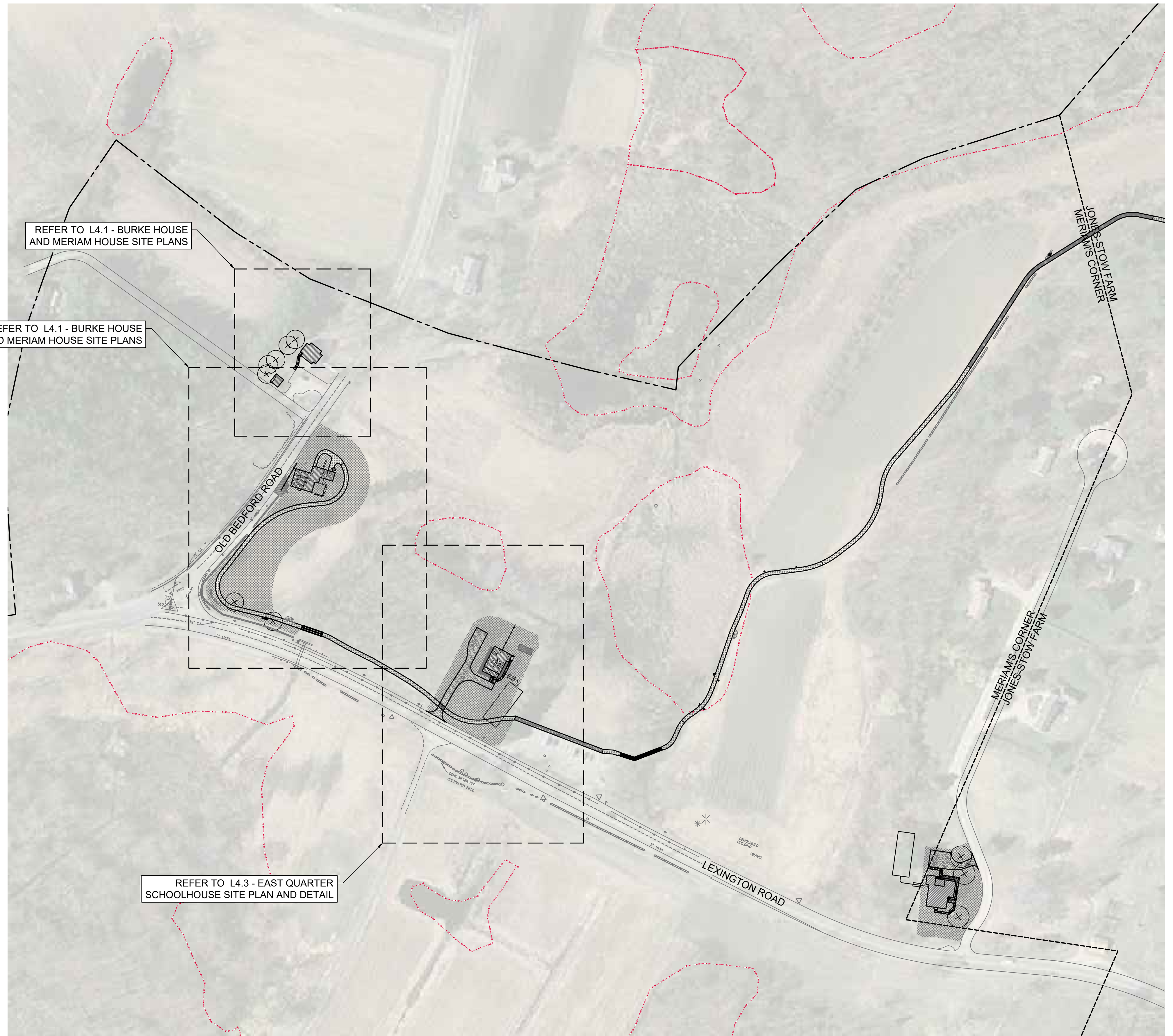
DD - DRAFT - NFC

|                       |      |  |                        |
|-----------------------|------|--|------------------------|
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| TECH. REVIEW:<br>HACE |      | <b>WAYSIDE SITE DETAIL</b>   | 184184                 |
| DATE:<br>05/01/2023   |      |  | PMIS/PKG NO.<br>317529 |
|                       |      | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | SHEET                  |

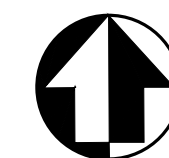
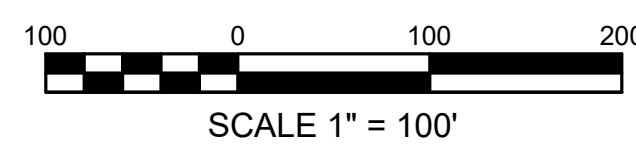
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| SITE TASK LIST |                         |        |     |  |
|----------------|-------------------------|--------|-----|--|
| KEY            | TASK                    | SYMBOL | BID | DESCRIPTION  |
| A              | WALL VEGETATION REMOVAL |        |     | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls. |

NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 MERIAM'S CORNER OVERALL PLAN  
 L4.0 SCALE 1" = 100'-0"



DD - DRAFT - NFC

DESIGNED:  
MPS/JAS  
 TECH. REVIEW:  
HACE  
 DATE:  
05/01/2023

SUB SHEET NO.  
**L4.0**

TITLE OF SHEET  
**MERIAM'S CORNER OVERALL PLAN**  
 LANDSCAPE & SEPTIC REPAIRS  
 GREAT AMERICAN OUTDOORS ACT (GAOA)  
 LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
 184184  
 PMIS/PKG NO.  
317529  
 SHEET  
 OF 60

5/1/2023 1:46 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L12\_MERI\_SITEPLAN\_CUIA.DWG

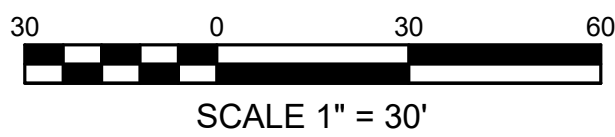
| SITE TASK LIST |                               |        |       |   |
|----------------|-------------------------------|--------|-------|---|
| KEY            | TASK                          | SYMBOL | BID   | DESCRIPTION   |
| A              | INSTALL WALKWAY - BURKE HOUSE |        | BASE  | Install 140 SF of trail surface walkway between parking and back entry to house. Re: 1/L11.3 and 2/L11.3  |
| B              | REPAIR MERIAM'S CORNER WALL   |        | BASE  | Repair fieldstone wall on north side of monument to match existing stonework on south side of monument. Refer to L4.2 - MERIAM WALL PLAN AND DETAIL                   |
| C              | REPAIR DRAINAGE               |        |       | Infill low area to drain toward street drainage, fine grade and seed with appropriate seed mix.   |
| D              | INSTALL STOCKADE FENCE        |        |       | Install 56 LF of stockade fence, posts 9' O.C. Connect new fence to existing fence along Old Bedford Road. Refer to 3/L11.7   |
| E              | REPLACE EXISTING BENCH        |        | BASE  | Replace existing 6' bench in kind. Re-use existing foundational posts if possible, replace if required.   |
| F              | LAWN REPAIR - SELECTIVE       |        | OPT 1 | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seeding. |
| G              | TREE PLANTING                 |        | BASE  | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |  |
|--------------------------|------|---------------------------|---------------------------------------|--------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES  |
| 2                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i> | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 2                        | REM  | Red Maple                 | <i>Acer rubrum</i>                    | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |
| 3                        | SUM  | Sugar Maple               | <i>Acer saccharum</i>                 | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |

- NOTES:
- BURKE HOUSE MAY BE OCCUPIED DURING CONSTRUCTION. COORDINATE SITE ACCESS WITH CONTRACTING OFFICER AND ENSURE PARKING AND SITE ACCESS IS MAINTAINED FOR RESIDENT.
  - TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



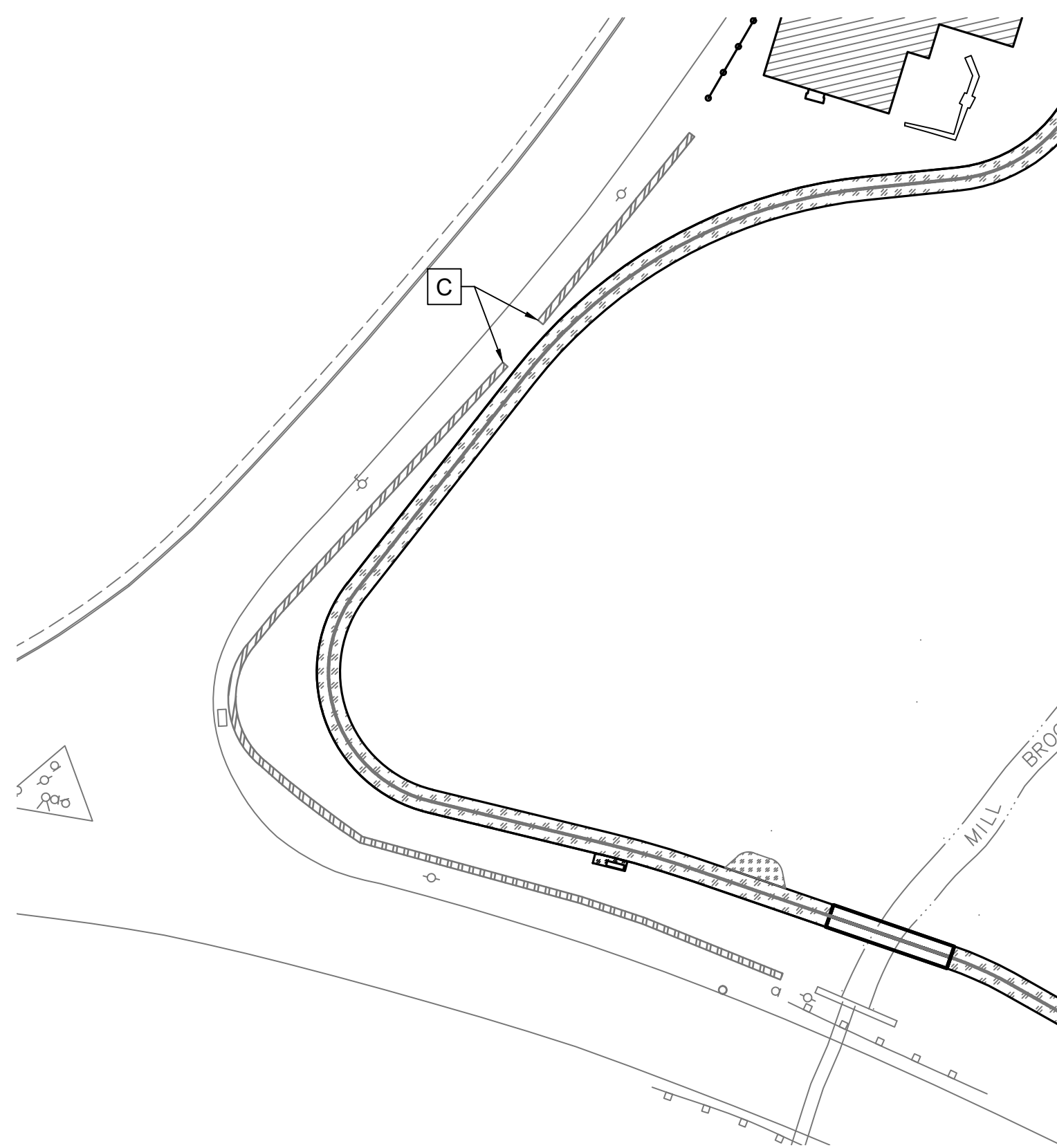
1 BURKE HOUSE SITE PLAN  
SCALE 1" = 30'-0"



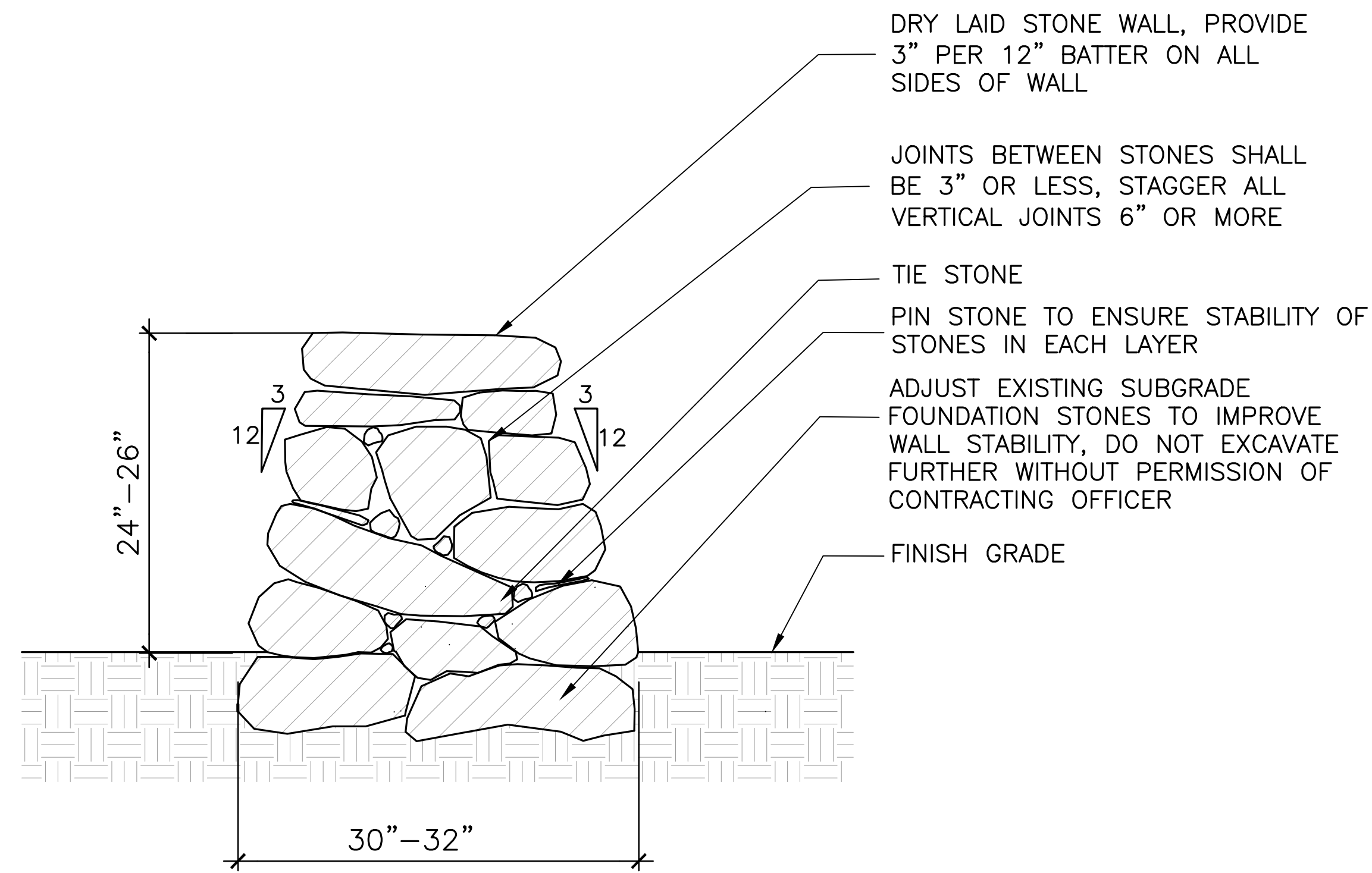
2 MERIAM HOUSE SITE PLAN  
SCALE 1" = 30'-0"

|                  |            |                |  |              |        |
|------------------|------------|----------------|--|--------------|--------|
| DD - DRAFT - NFC |            | TITLE OF SHEET |  | DRAWING NO.  |        |
| DESIGNED:        | MPS/JAS    | SUB SHEET NO.  | L4.1   | 406          |        |
| TECH. REVIEW:    | HACE       |                |  | 184184       |        |
| DATE:            | 05/01/2023 |                |  | PMIS/PKG NO. | 317529 |
|                  |            |                |  | SHEET        | OF 60  |
|                  |            |                | BURKE HOUSE AND MERIAM HOUSE SITE PLANS  |              |        |
|                  |            |                | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |              |        |

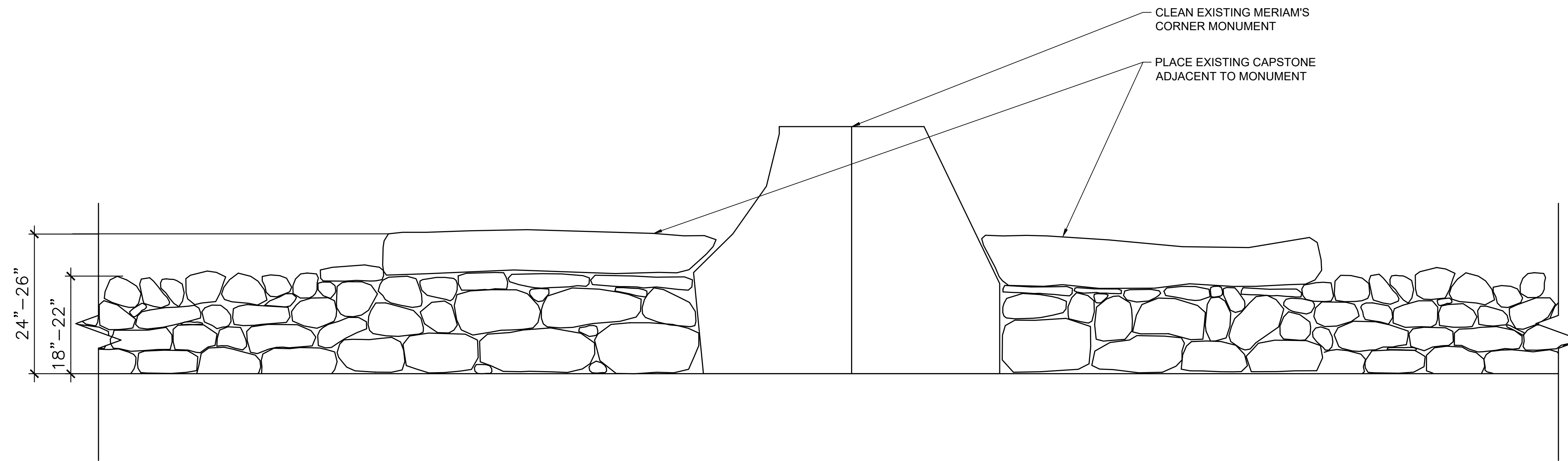
5/1/2023 2:35 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARCS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLPACKAGE\L2\_NOBR\_CRITICALWALL\_CULA.DWG



**1 MERIAM'S CORNER MONUMENT WALL DETAIL PLAN**  
L4.2 SCALE 1" = 40'-0"



**2 SECTION - MERIAM'S CORNER MONUMENT WALL**  
L4.2 NTS



**3 ELEVATION - MERIAM'S CORNER MONUMENT WALL**  
L4.2 NTS

DRY LAID STONE WALL, PROVIDE 3" PER 12" BATTER ON ALL SIDES OF WALL

JOINTS BETWEEN STONES SHALL BE 3" OR LESS, STAGGER ALL VERTICAL JOINTS 6" OR MORE

TIE STONE

PIN STONE TO ENSURE STABILITY OF STONES IN EACH LAYER

ADJUST EXISTING SUBGRADE FOUNDATION STONES TO IMPROVE WALL STABILITY, DO NOT EXCAVATE FURTHER WITHOUT PERMISSION OF CONTRACTING OFFICER

FINISH GRADE

CLEAN EXISTING MERIAM'S CORNER MONUMENT

PLACE EXISTING CAPSTONE ADJACENT TO MONUMENT

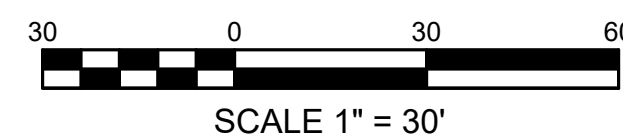
**GENERAL NOTES**

- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONSTRUCT A SAMPLE LINEAR WALL SECTION OF 10' DEMONSTRATING CONSTRUCTION TECHNIQUE AND MATERIALS, FOR APPROVAL BY THE CONTRACTING OFFICER IN CONSULTATION WITH CULTURAL LANDSCAPE SUBJECT MATTER EXPERT
- STONES SHALL INCREASE IN SIZE FROM TOP TO BOTTOM OF WALL
- CONTRACTOR SHALL USE EXISTING WALL STONES, SUPPLEMENTED BY STONES STOCKPILED BY THE PARK
- IF ADDITIONAL STONE IS REQUIRED, MATERIALS MUST BE APPROVED BY CONTRACTING OFFICER
- MAINTAIN CONSISTENT HEIGHT AND WIDTH ALONG LENGTH OF WALL

| SITE TASK LIST |  |        |      |   |
|----------------|--|--------|------|---|
| KEY            | TASK                                   | SYMBOL | BID  | DESCRIPTION   |
| A              | WALL REPAIR - MERIAM'S CORNER MONUMENT |        | BASE | Repair 425 LF of wall. Wall is approximately 22" height with a bottom width of 32". Wall is slightly higher at monument. Work is limited to restacking of wall. Any foundation repair shall be by approval of Contracting Officer. Monument cleaning by others. Refer to L0.5 - STONE WALL INDEX AND NOTES for further details. |

**NOTES:**

- SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



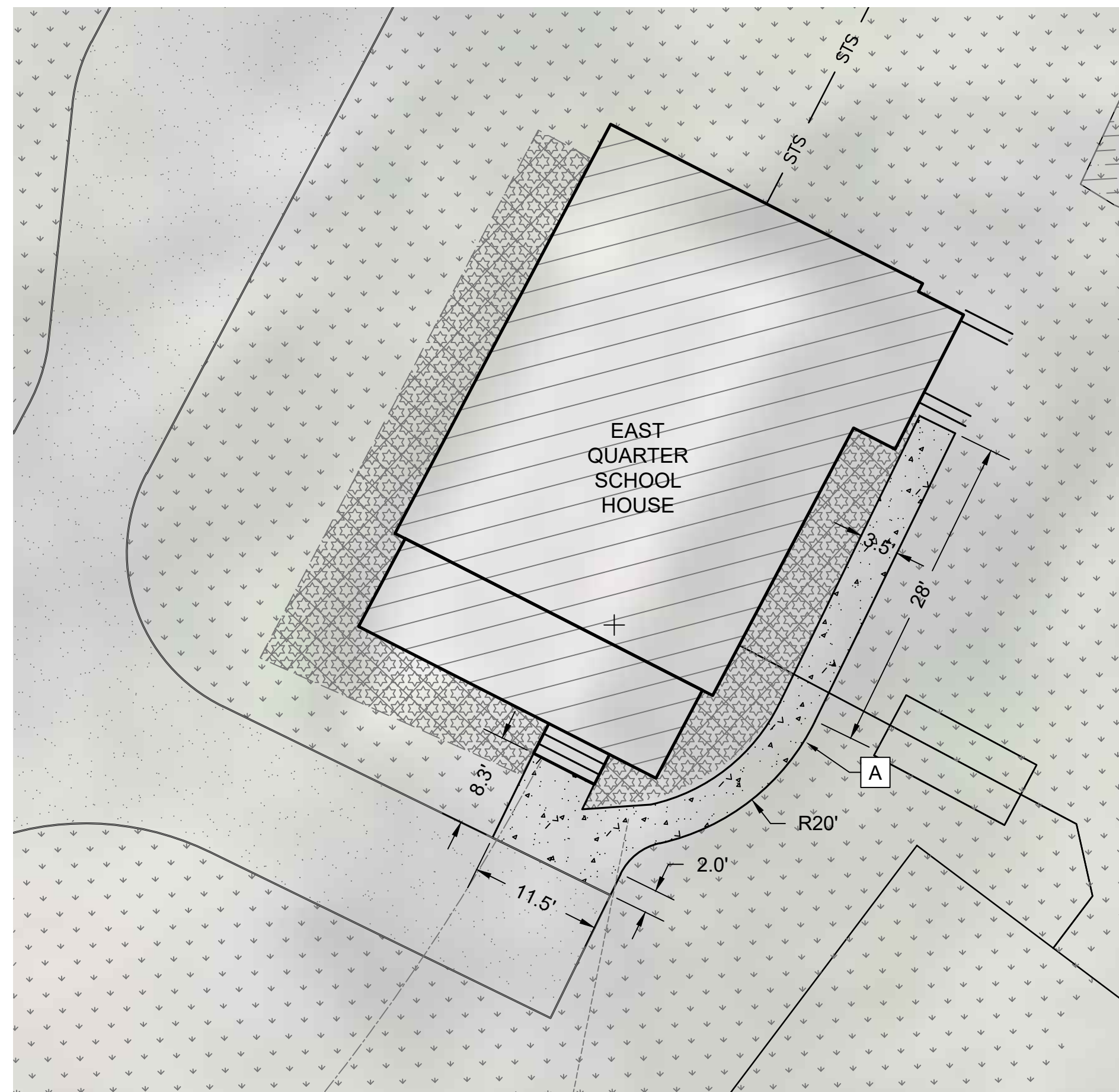
DD - DRAFT - NFC

|                       |                              |  |                        |
|-----------------------|------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><b>L4.2</b> | TITLE OF SHEET<br><b>MERIAM WALL<br/>PLAN AND DETAIL</b>   | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |                              |  | SHEET<br>OF 60         |

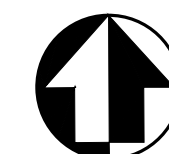
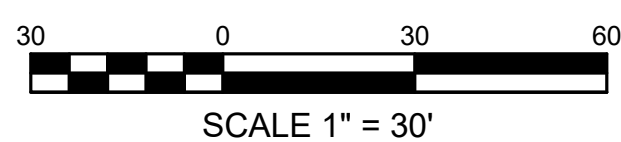
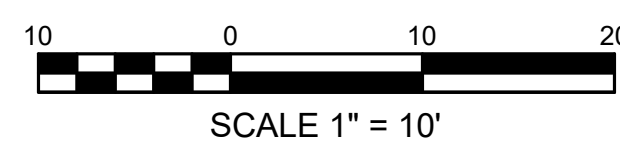
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| SITE TASK LIST |   |        |      |   |
|----------------|---|--------|------|---|
| KEY            | TASK  | SYMBOL | BID  | DESCRIPTION   |
| A              | REPLACE CONCRETE WALK, EAST OF STRUCTURE    |        | BASE | Install 275 SF of concrete with integral color (Davis 677 Outback or similar), salt finish, per 1/L11.2   |
| B              | REPAVE ASPHALT DRIVE                        |        | BASE | Mill and repave 3500 SF of residential asphalt drive per 2/L11.1  |
| C              | INSTALL CONCRETE PAD AT TRAIL JUNCTION      |        | BASE | Install 80 SF of concrete with integral color (Davis 677 Outback or similar), broom finish, per 1/L11.2   |
| D              | REMOVE CLOTHES HANGING PAD                  |        |      | Remove concrete pad, add topsoil to level grade, seed with approved seed mix.   |
| E              | REMOVE FOUNDATION PLANTINGS, RETURN TO LAWN |        | BASE | Remove remaining foundation plantings and root cores, fine grade, and seed with approved seed mix.  |
| F              | LAWN REPAIR - SELECTIVE                     |        | BASE | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| G              | LAWN REPAIR - FULL/REMAINING                |        |      | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |

- NOTES:
1. WETLAND BUFFER EXTENDS 100' FROM WETLAND BOUNDARY SHOWN ON PLAN. NO FUELING OR STORAGE OF HAZARDOUS MATERIALS WITHIN BUFFER.
  2. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 EAST QUARTER SCHOOLHOUSE PAVING DETAIL PLAN  
L4.3 SCALE 1" = 10'-0"



2 EAST QUARTER SCHOOLHOUSE SITE PLAN  
L4.3 SCALE 1" = 30'-0"

DD - DRAFT - NFC

DESIGNED:  
MPS/JAS  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L4.3**

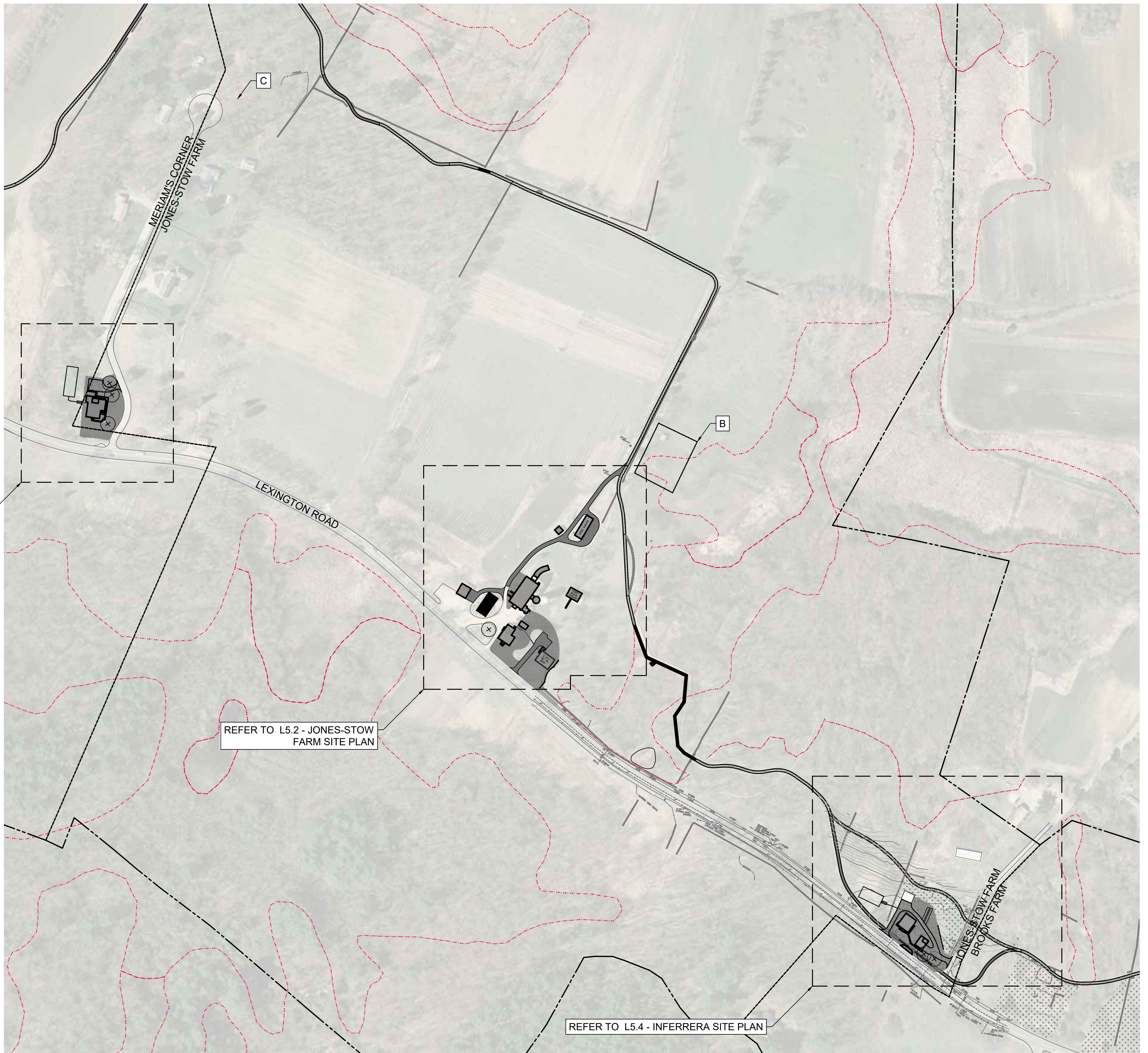
TITLE OF SHEET  
**EAST QUARTER SCHOOLHOUSE SITE PLAN AND DETAIL**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
OF 60

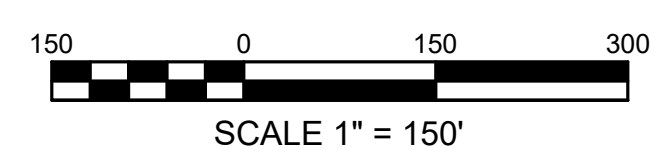
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| SITE TASK LIST |                                    |        |     |  |
|----------------|------------------------------------|--------|-----|--|
| KEY            | TASK                               | SYMBOL | BID | DESCRIPTION  |
| A              | WALL VEGETATION REMOVAL            |        |     | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls. |
| B              | INSTALL LIVESTOCK FENCE            |        |     | Refer to L5.2 - JONES-STOW FARM SITE PLAN  |
| C              | HAUL DEBRIS FROM MANUAL DRIVE SITE |        |     | Haul composted soil from Manual Drive location to Whittemore House Site. XXX CY of materials.                                  |

NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 JONES-STOW FARM OVERALL PLAN  
 L5.0 SCALE 1" = 150'-0"



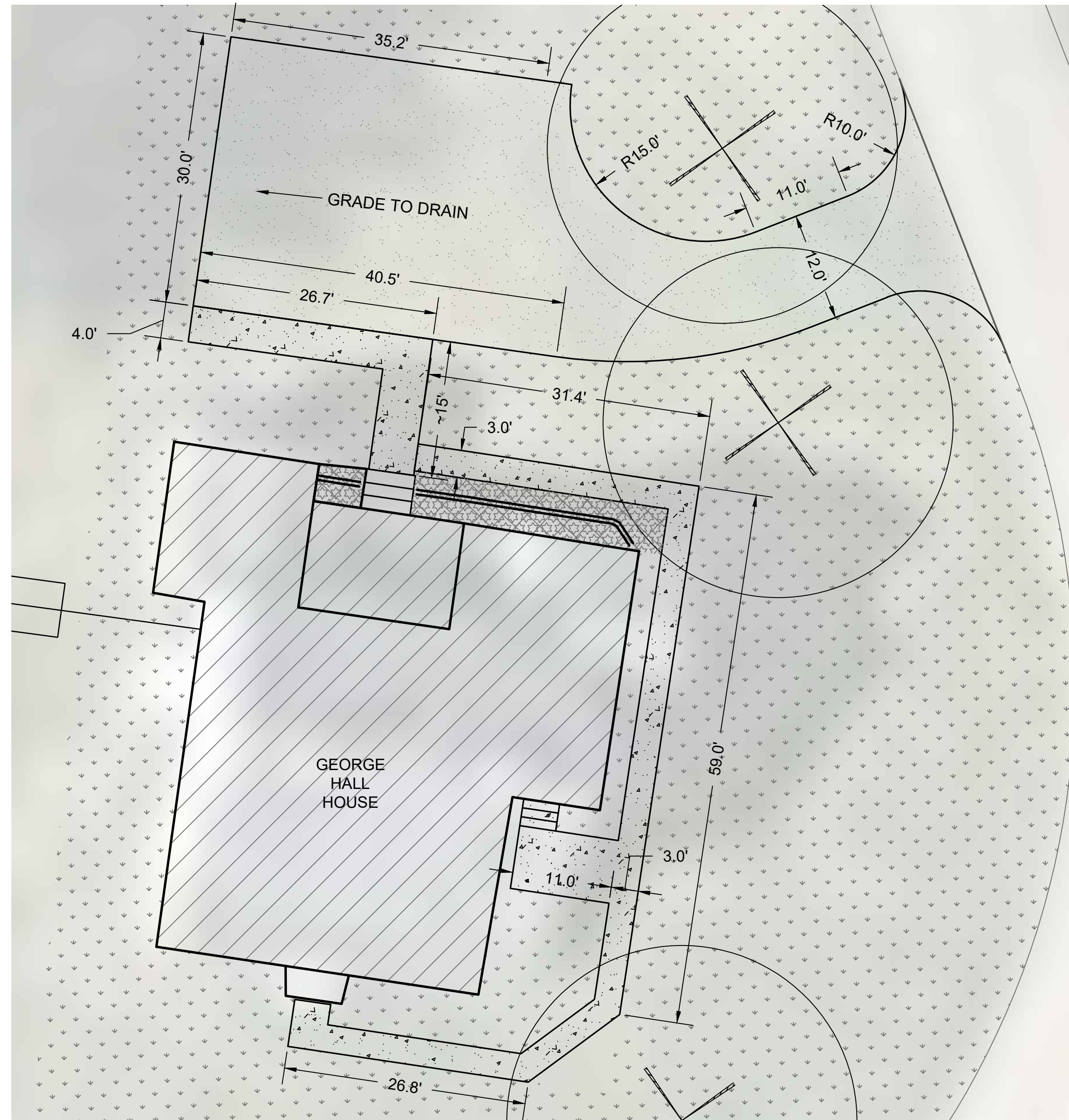
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|--|------------|----------------|-------------|-------------|
| DD - DRAFT - NFC   |            | TITLE OF SHEET |             | DRAWING NO. |
| DESIGNED:  | MPS/JAS    | SUB SHEET NO.  | <b>L5.0</b> | 406         |
| TECH. REVIEW:  | MPS/JAS    |                |             | 184184      |
| DATE:  | HACE       |                |             | 317529      |
|  | 05/01/2023 |                |             | SHEET       |
| LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |            |                |             | OF 60       |

| SITE TASK LIST |   |        |      |   |
|----------------|---|--------|------|---|
| KEY            | TASK  | SYMBOL | BID  | DESCRIPTION   |
| A              | INSTALL CONCRETE WALKWAY                    |        | BASE | Install 650 SF of concrete with integral color (Davis 677 Outback or similar), salt finish, per 1/L11.2   |
| B              | INSTALL ASPHALT DRIVE                       |        | BASE | Install 1850 SF of residential asphalt drive per 1/L11.1  |
| C              | REMOVE FOUNDATION PLANTINGS, RETURN TO LAWN |        | BASE | Remove remaining bricks and borders, any remaining shrubby materials along foundation. If noxious weeds or vines or present, remove and treat base with herbicide.                                      |
| D              | LAWN REPAIR - SELECTIVE                     |        | BASE | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| E              | LAWN REPAIR - REMAINING                     |        |      | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |
| F              | TREE PLANTING                               |        | BASE | Plant per materials list, plan, detail and specification.   |

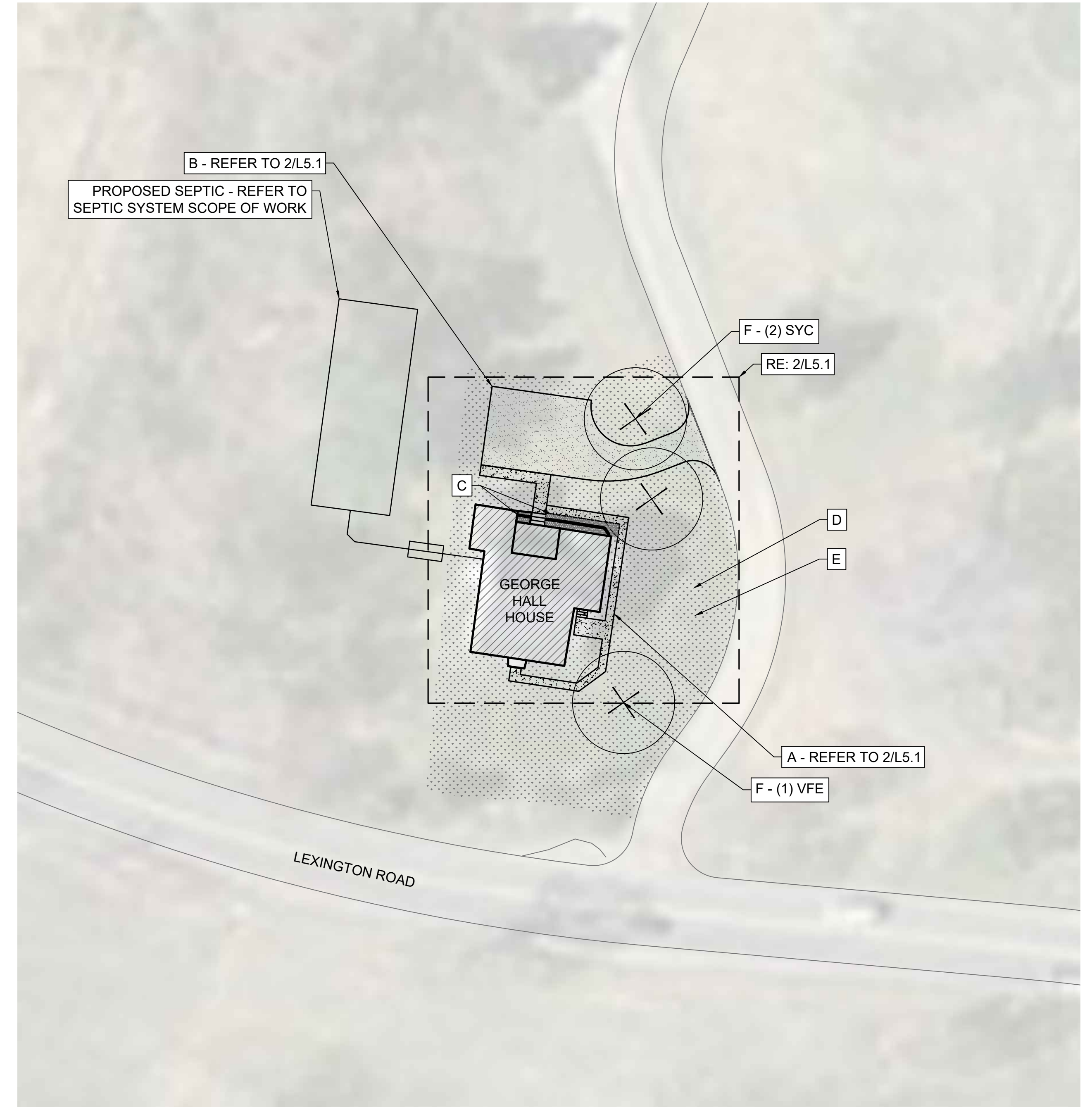
NOTES:

- TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
- SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.

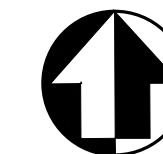
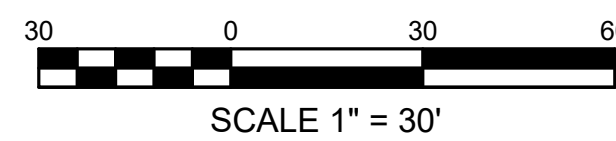
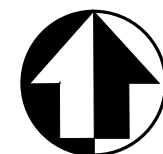
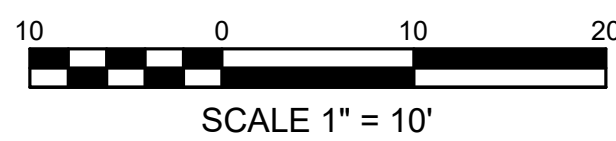
| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |  |
|--------------------------|------|---------------------------|---------------------------------------|--------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES  |
| 1                        | VFE  | Valley Forge American Elm | <i>Ulmus americana</i> 'Valley Forge' | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 2                        | SYC  | Sycamore                  | <i>Platanus occidentalis</i>          | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |



2 HALL PAVING DETAIL PLAN  
L5.1 SCALE 1" = 10'-0"



1 GEORGE HALL HOUSE SITE PLAN  
L5.1 SCALE 1" = 30'-0"



DD - DRAFT - NFC

|                       |                                  |  |                        |
|-----------------------|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L5.1</b> | TITLE OF SHEET<br><br><b>GEORGE HALL SITE PLAN</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |  | 184184                 |
| DATE:<br>05/01/2023   |                                  |  | PMIS/PKG NO.<br>317529 |
|                       |                                  |  | SHEET<br>---- OF 60    |

5/1/2023 2:01 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOV\PARKS\MIMA\GEO\LANDSCAPE\3.0 CADD\CURRENT\CIP\PACKAGE\L5\_STOW\_SITEPLAN\_CULA.DWG

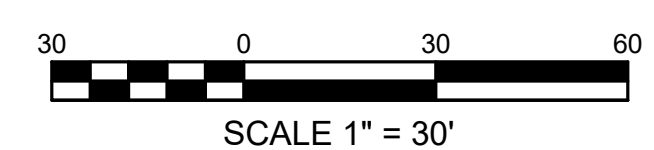


| SITE TASK LIST |   |        |       |   |
|----------------|---|--------|-------|---|
| KEY            | TASK                                      | SYMBOL | BID   | DESCRIPTION   |
| A              | INSTALL WALKWAY                           |        | BASE  | Install 150 SF of stone dust walkway between parking and back entry to Stow-Hardy house.  |
| B              | INSTALL GRAVEL DRIVE                      |        | OPT 1 | Install 11,600 SF of gravel service drive per detail 8/L11.1  |
| C              | INSTALL GRAVEL DRIVE                      |        | BASE  | Install 2,200 SF of gravel drive and parking per detail 8/L11.1   |
| D              | REPAIR EARTHEN RAMP AT REAR OF CARTY BARN |        |       | Restack displaced stones on side walls of ramp, inject concrete into void between concrete headwall and stone and earth of ramp.  |
| E              | INSTALL LIVESTOCK FENCE                   |        |       | Install livestock fence in wetland pasture. Wellscoft Fence Systems woven wire fencing - black, 3' fixed knot wire fence on cedar posts spaced 5' to 6' O.C. For location, refer to L5.0 - JONES-STOW OVERALL PLAN for location.  |
| F              | LAWN REPAIR - SELECTIVE                   |        | BASE  | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. At this site, this will also require treatment of any vines growing on silo - trim at base, treat stems with herbicide. |
| G              | TREE PLANTING                             |        | BASE  | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |  |
|--------------------------|------|---------------------------|---------------------------------------|--------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES  |
| 1                        | VFE  | Valley Forge American Elm | <i>Ulmus americana</i> 'Valley Forge' | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |

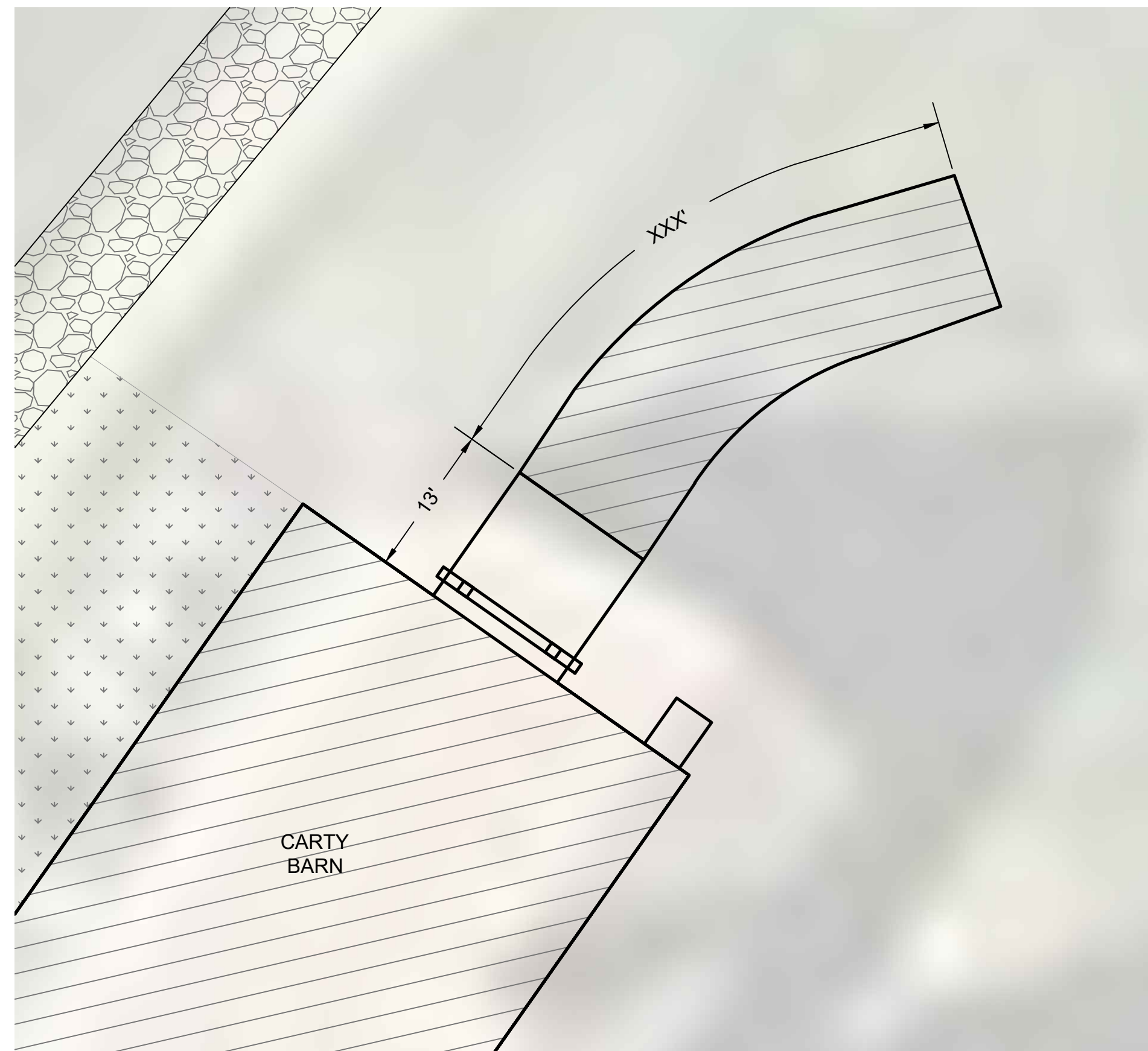
- NOTES:
- TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.

1 HALL PAVING SITE DETAIL PLAN  
L5.2 SCALE 1" = 30'-0"

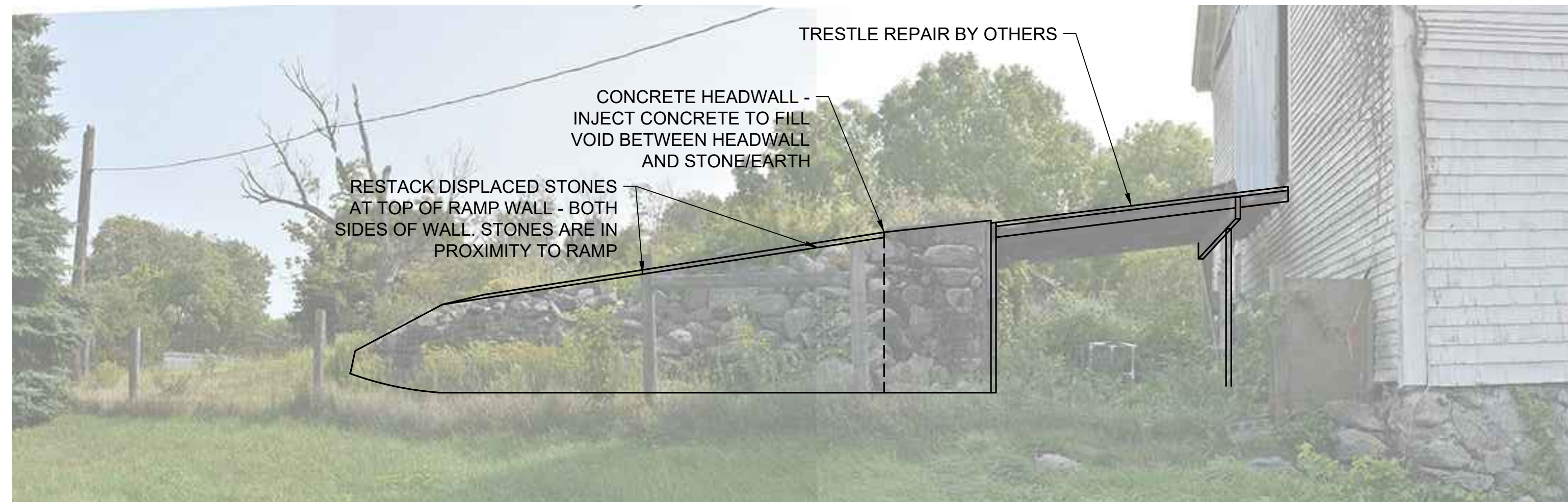


|                    |  |                              |  |  |
|--------------------|--|------------------------------|--|--|
| DESIGNED: MPS/JAS  |  | SUB SHEET NO.<br><b>L5.2</b> | TITLE OF SHEET<br><b>JONES-STOW FARM<br/>SITE PLAN</b> | DRAWING NO.<br>406   |
| TECH. REVIEW: HACE |  |                              |  | PMIS/PKG NO.<br>317529   |
| DATE: 05/01/2023   |  |                              |  | SHEET<br>---- OF 60  |
|                    |  |                              |  | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GEOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |

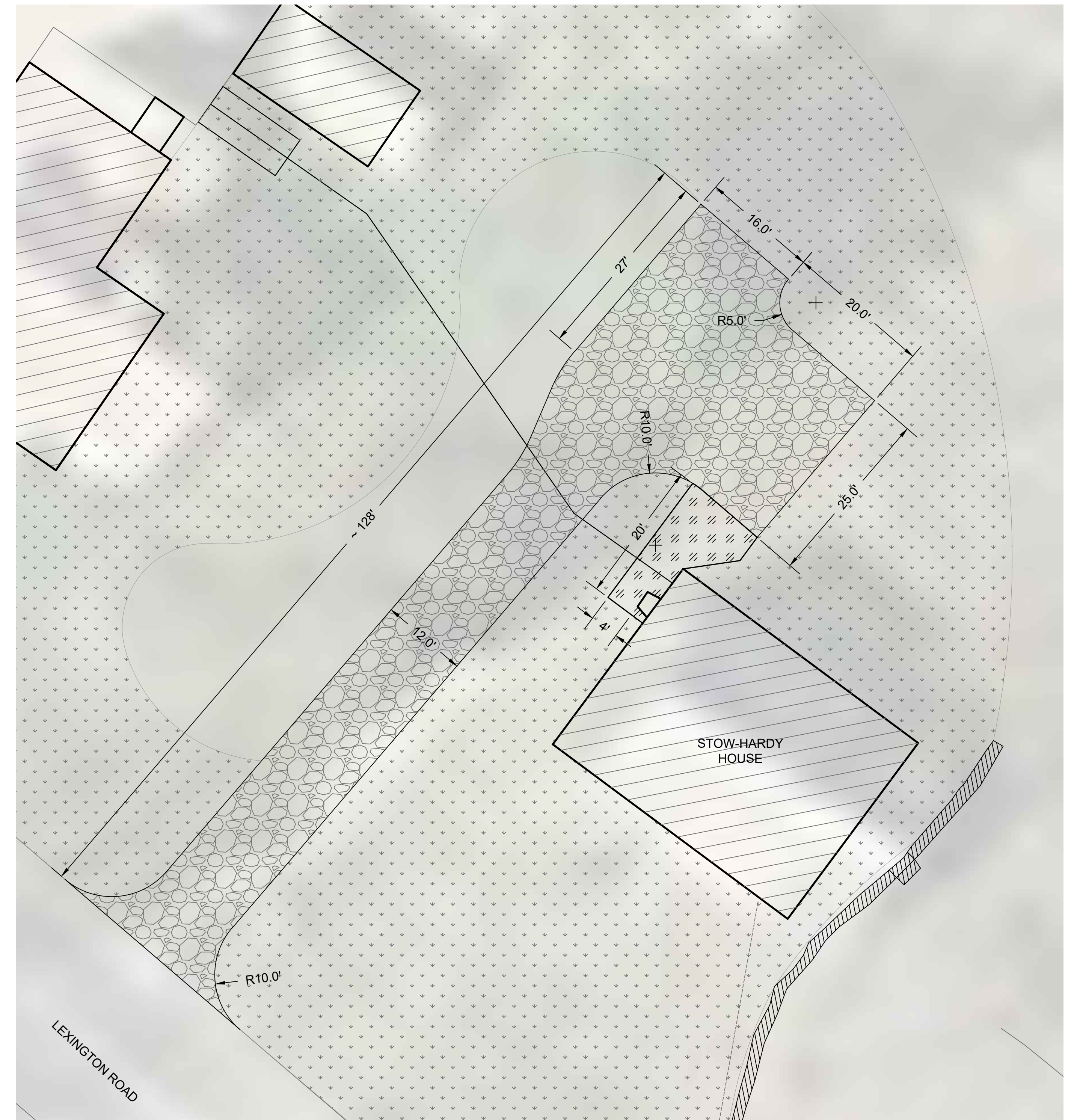
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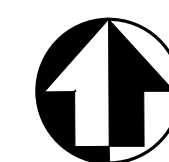
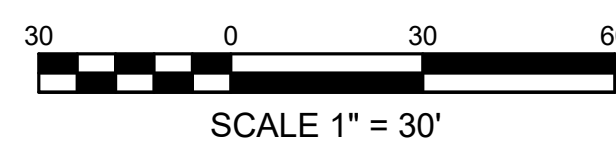
1 CARTY BARN RAMP DETAIL  
L5.3 SCALE 1" = 30'-0"



2 REPAIR DETAIL - RAMP  
L5.3 NTS



3 STOW PAVING SITE DETAIL PLAN  
L5.3 SCALE 1" = 30'-0"



DD - DRAFT - NFC

DESIGNED:  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L5.3**

TITLE OF SHEET  
**JONES-STOW RAMP  
AND PAVING DETAILS**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
OF 60

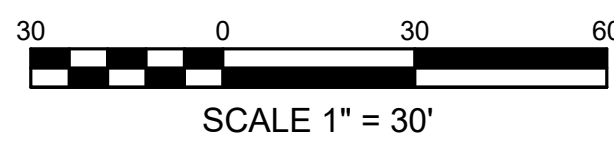
| SITE TASK LIST |   |        |       |  |
|----------------|---|--------|-------|--|
| KEY            | TASK  | SYMBOL | ASE   | DESCRIPTION  |
| A              | DEMOLISH EXISTING ASPHALT DRIVE AND CONCRETE WALK |        | BASE  | Demolish existing asphalt drive and apron. Refer to L5.4 - INFERRERA SITE PLAN for scope of removal.   |
| B              | REPLACE/INSTALL CONCRETE WALKWAY                  |        | OPT 1 | Install 460 SF of concrete with integral color (Davis 677 Outback or similar), salt finish, per 1/L11.2  |
| C              | INSTALL ASPHALT DRIVE                             |        | BASE  | Install 4,240 SF of residential asphalt drive per 1/L11.1  |
| D              | INSTALL STOCKADE FENCE                            |        |       | Install 144 LF of stockade fence, posts 9' O.C. Connect new fence to existing fence along Old Bedford Road.  |
| E              | INSTALL MAILBOX AND ACCESS SHOULDER               |        | BASE  | Install appropriate residential mailbox and 100 SF of gravel access shoulder per detail 8/L11.1  |
| F              | REMOVE FOUNDATION PLANTINGS, RETURN TO LAWN       |        | BASE  | Remove remaining foundation plantings and root cores, remove any bricks or stones marking boundary of planting, fine grade, and seed with approved seed mix. |
| G              | ESTABLISH LAWN                                    |        | BASE  | Apply topsoil to disturbed areas, fine grade, hydro-seed with approved seed mix.   |
| H              | TREE PLANTING                                     |        | BASE  | Plant per materials list, plan, detail and specification.  |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |  |
|--------------------------|------|---------------------------|---------------------------------------|--------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES  |
| 2                        | VFE  | Valley Forge American Elm | <i>Ulmus americana 'Valley Forge'</i> | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |

- NOTES:
- TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 INFERRERA HOUSE SITE PLAN  
L5.4 SCALE 1" = 30'-0"



DD - DRAFT - NFC

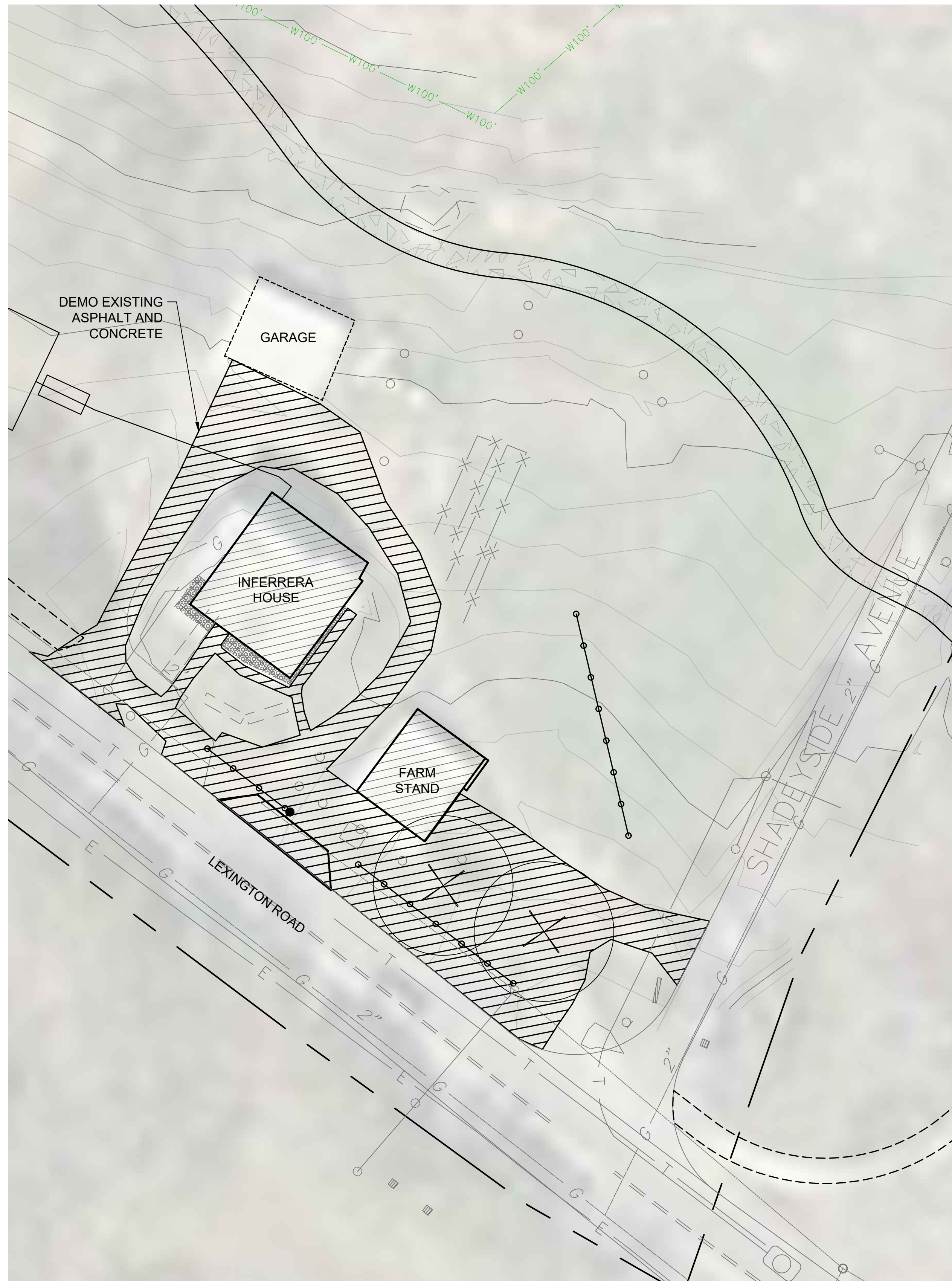
DESIGNED:  
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HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L5.4**

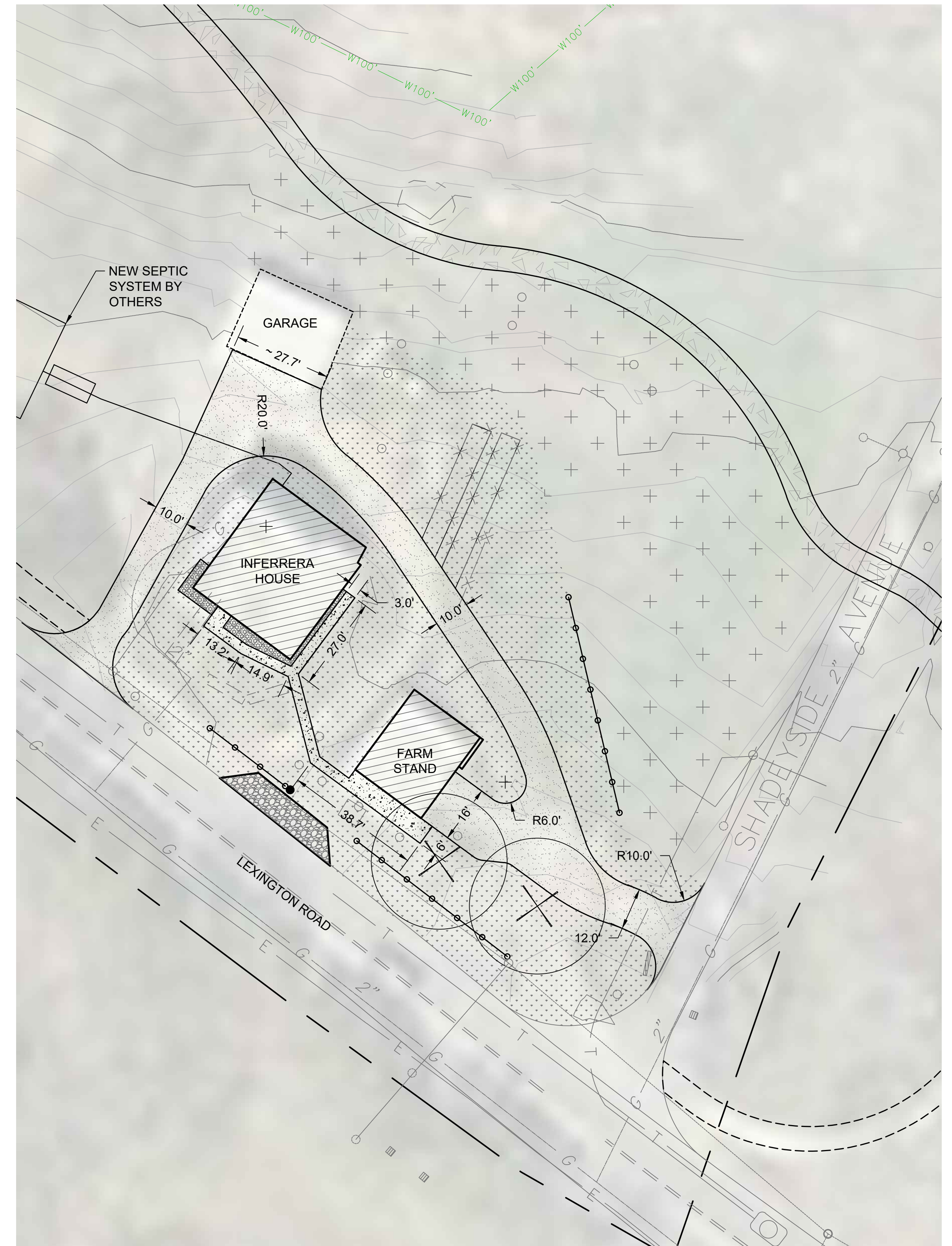
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**INFERRERA SITE PLAN**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
--- OF 60

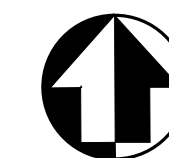
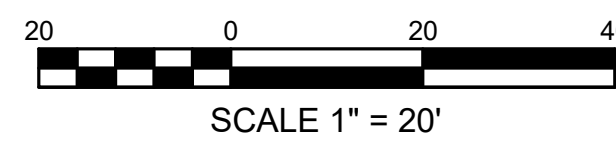
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1 INFERRERA HOUSE DEMO PLAN  
L5.5 SCALE 1" = 20'-0"



2 INFERRERA HOUSE PAVING AND GRADING PLAN  
L5.5 SCALE 1" = 20'-0"



DD - DRAFT - NFC

DESIGNED:  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L5.5**

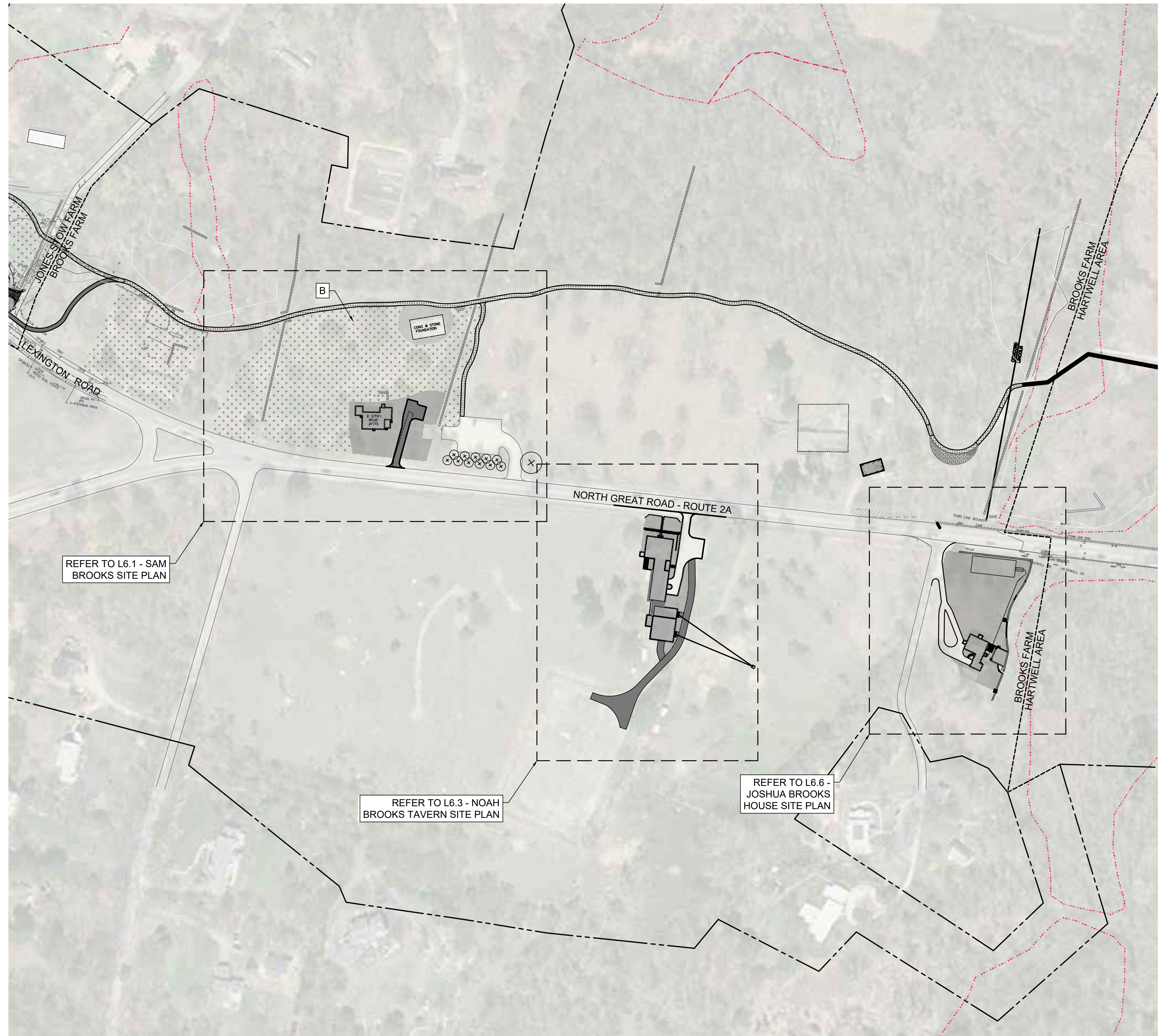
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**INFERRERA DEMO AND PAVING PLANS**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
---- OF 60

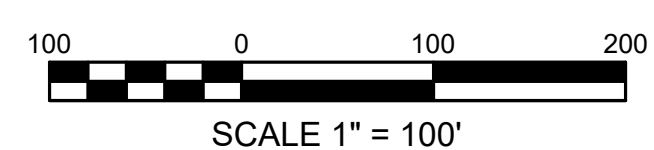
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| SITE TASK LIST |                                |        |     |  |
|----------------|--------------------------------|--------|-----|--|
| KEY            | TASK                           | SYMBOL | BID | DESCRIPTION  |
| A              | WALL VEGETATION REMOVAL        |        |     | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls.                                       |
| B              | MEADOW WORK - SAM BROOKS FIELD |        |     | Mow ~ 1.7 acres of meadow, scalp areas overgrown by woody shrubs, treat woody shrubs with herbicide. Retreat if necessary. In fall, overseed with approved seed mix. |

NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 BROOKS FARM OVERALL PLAN  
 L6.0 1" = 100'-0"



DD - DRAFT - NFC

|                       |                                  |   |                        |
|-----------------------|----------------------------------|---|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L6.0</b> | TITLE OF SHEET<br><br><b>BROOKS FARM OVERALL PLAN</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |   | 184184                 |
| DATE:<br>05/01/2023   |                                  |   | PMIS/PKG NO.<br>317529 |
|                       |                                  |   | SHEET<br>OF 60         |

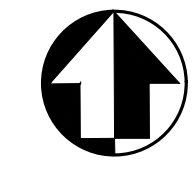
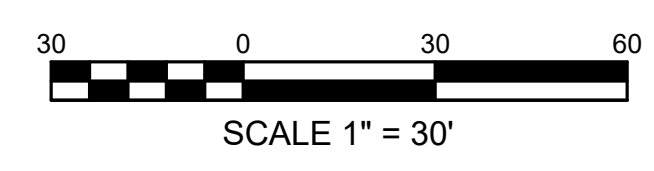
| SITE TASK LIST |                         |        |      |   |
|----------------|-------------------------|--------|------|---|
| KEY            | TASK                    | SYMBOL | BID  | DESCRIPTION   |
| A              | INSTALL GRAVEL DRIVE    |        | BASE | Install 2,200 SF of gravel drive and parking per detail 8/L11.1   |
| B              | LAWN REPAIR - SELECTIVE |        | BASE | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| C              | LAWN REPAIR - REMAINING |        |      | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |
| D              | TREE PLANTING           |        | BASE | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |  |        |  |
|--------------------------|------|---------------------------|--|--------|--|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                        | SIZE   | NOTES  |
| 1                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i>  | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 6                        | LAP  | Liberty Apple             | <i>Malus domestica 'Liberty'</i>       | 1" Cal | #10 OR EQUIVALENT BB<br>Semi dwarf root stock which is cold hardy and disease resistant, such as Antonovka                                   |
| 5                        | AKA  | Ashmead's Kernel Apple    | <i>Malus pumula 'Ashmead's Kernel'</i> | 1" Cal | Semi dwarf root stock which is cold hardy and disease resistant, such as Antonovka   |

- NOTES:
- TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



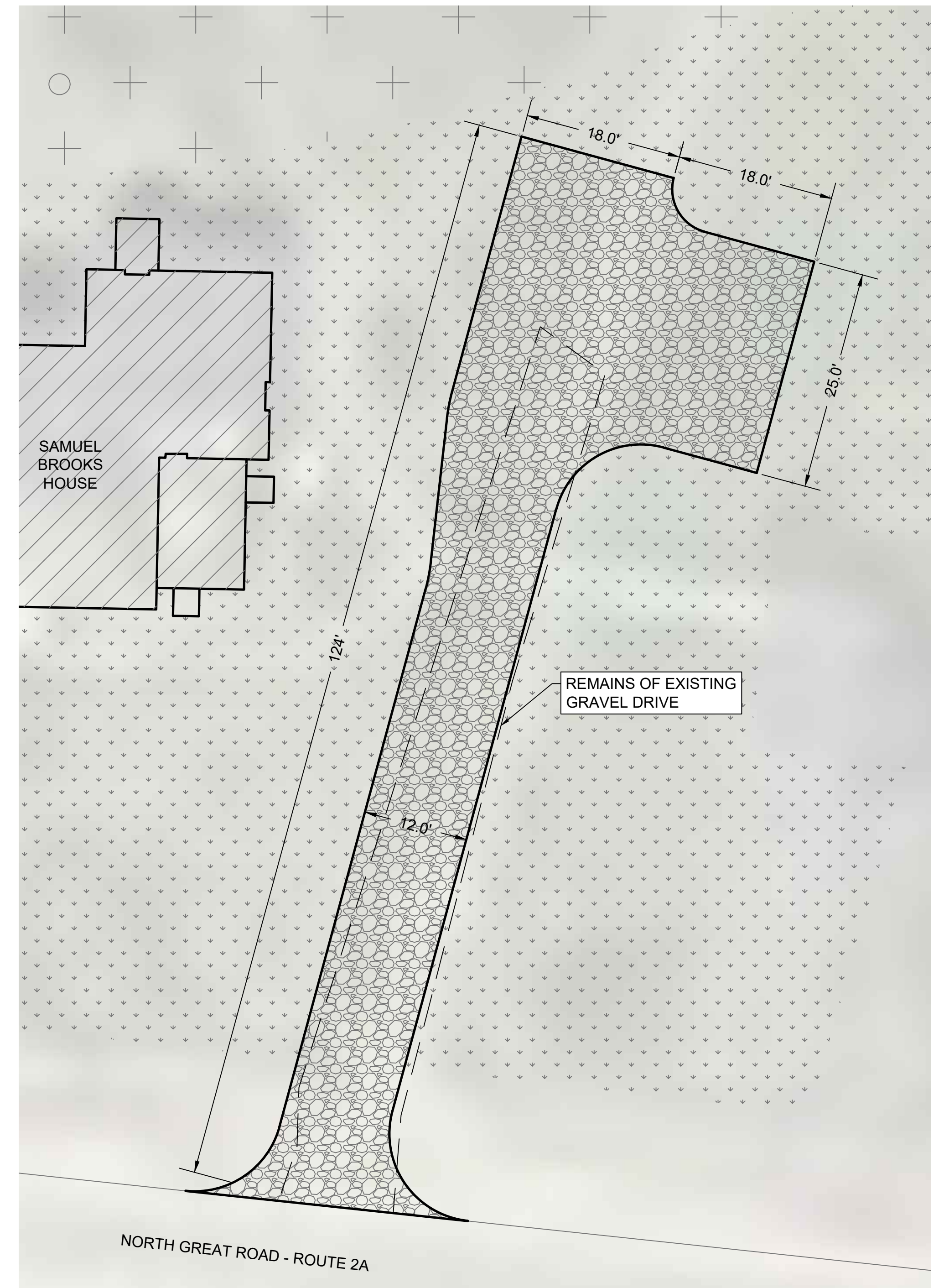
1 SAM BROOKS HOUSE SITE PLAN  
L6.1 SCALE 1" = 30'-0"



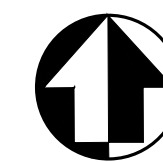
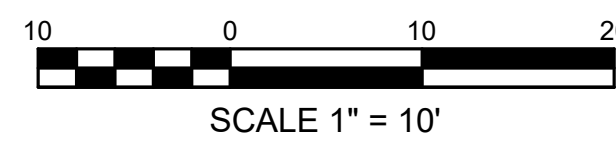
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| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L6.1</b> | TITLE OF SHEET<br><br><b>SAM BROOKS SITE PLAN</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |   | 184184                 |
| DATE:<br>05/01/2023   |                                  |   | PMIS/PKG NO.<br>317529 |
|                       |                                  |   | SHEET<br>OF 60         |

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1 SAM BROOKS PAVING DETAIL PLAN  
L6.2 SCALE 1" = 10'-0"



DD - DRAFT - NFC

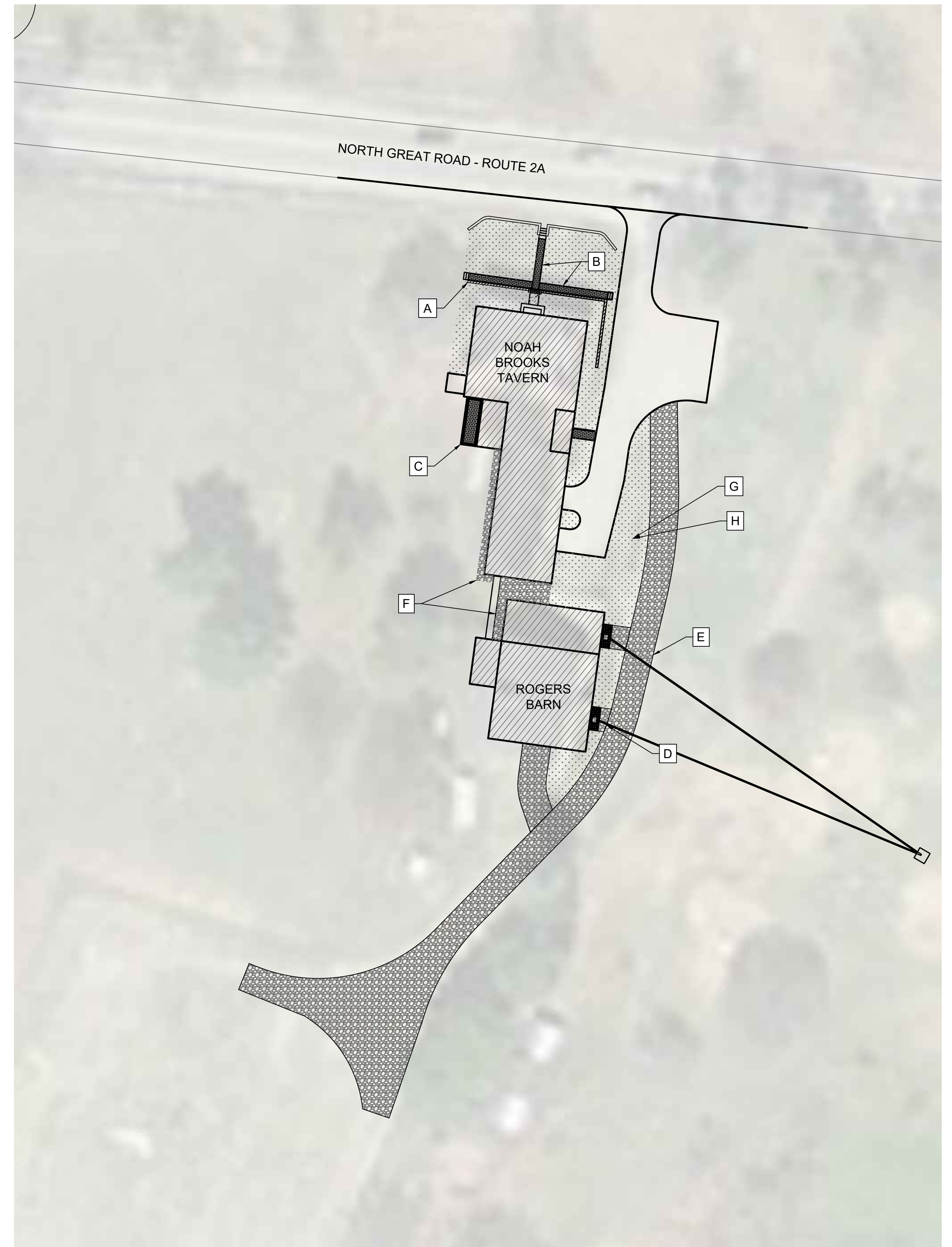
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| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | 184184                 |
| DATE:<br>05/01/2023   |                              |  | PMIS/PKG NO.<br>317529 |
|                       |                              |  | SHEET<br>--- OF 60     |

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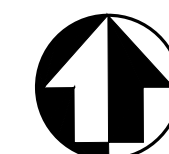
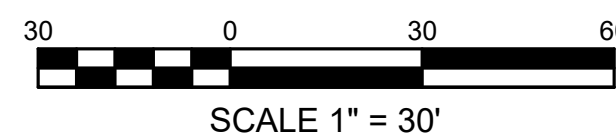
| SITE TASK LIST |  |        |       |   |
|----------------|--|--------|-------|---|
| KEY            | TASK   | SYMBOL | BID   | DESCRIPTION   |
| A              | REPAIR RETAINING WALL                                  |        | OPT 1 | Reset 90 LF of stone retaining wall. Includes 20 LF which will require re-establishment of wall line where slope has slumped. Refer to detail 5/L3.1 for similar work.  |
| B              | REPAIR/RESET BRICK WALKWAY TO FRONT ENTRY (NORTH)      |        | OPT 1 | Lift 220 SF of brick walkway, repair and compact base and sub-base, relay brick on stone dust bed per detail 5/L11.2. Brick shall be re-laid in pattern matching existing. Broken or damaged brick shall be replaced in-kind with new material. |
| C              | REPAIR/RESET BRICK PATIO - WEST ENTRANCE               |        | OPT 1 | Lift 140 SF of brick walkway, repair and compact base and sub-base, relay brick on stone dust bed per detail 5/L11.2. Brick shall be re-laid in pattern matching existing. Broken or damaged brick shall be replaced in-kind with new material. |
| D              | REPAIR DRAINAGE AT SOUTH ENTRY TO ROGERS BARN BASEMENT |        | BASE  | Install gravel sump, pump, and drain to pasture   |
| E              | INSTALL GRAVEL DRIVE                                   |        | OPT 1 | Install 2,200 SF of gravel drive per detail 8/L11.1   |
| F              | INSTALL GRAVEL AT BASE OF HOUSE                        |        | OPT 1 | Install 450 SF of gravel at base of house and between house and barn to repair and mitigate erosion.  |
| G              | LAWN REPAIR - SELECTIVE                                |        | OPT 1 | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix.   |
| H              | LAWN REPAIR - REMAINING                                |        |       | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |

**NOTES:**

- FOR ANY WORK DEALING WITH RESET OF WALL OR PAVING, LIMIT EXCAVATION TO SMALLEST AREA NECESSARY TO COMPLETE WORK. IF SUBBASE OR DRAINAGE EXISTS, STAY WITHIN LIMITS OF CURRENT CONSTRUCTION. IF WORK MUST EXTEND BEYOND, NOTIFY CONTRACTING OFFICER TO COORDINATE TESTING AND MONITORING.
- SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 NOAH BROOKS TAVERN SITE PLAN  
L6.3 SCALE 1" = 30'-0"

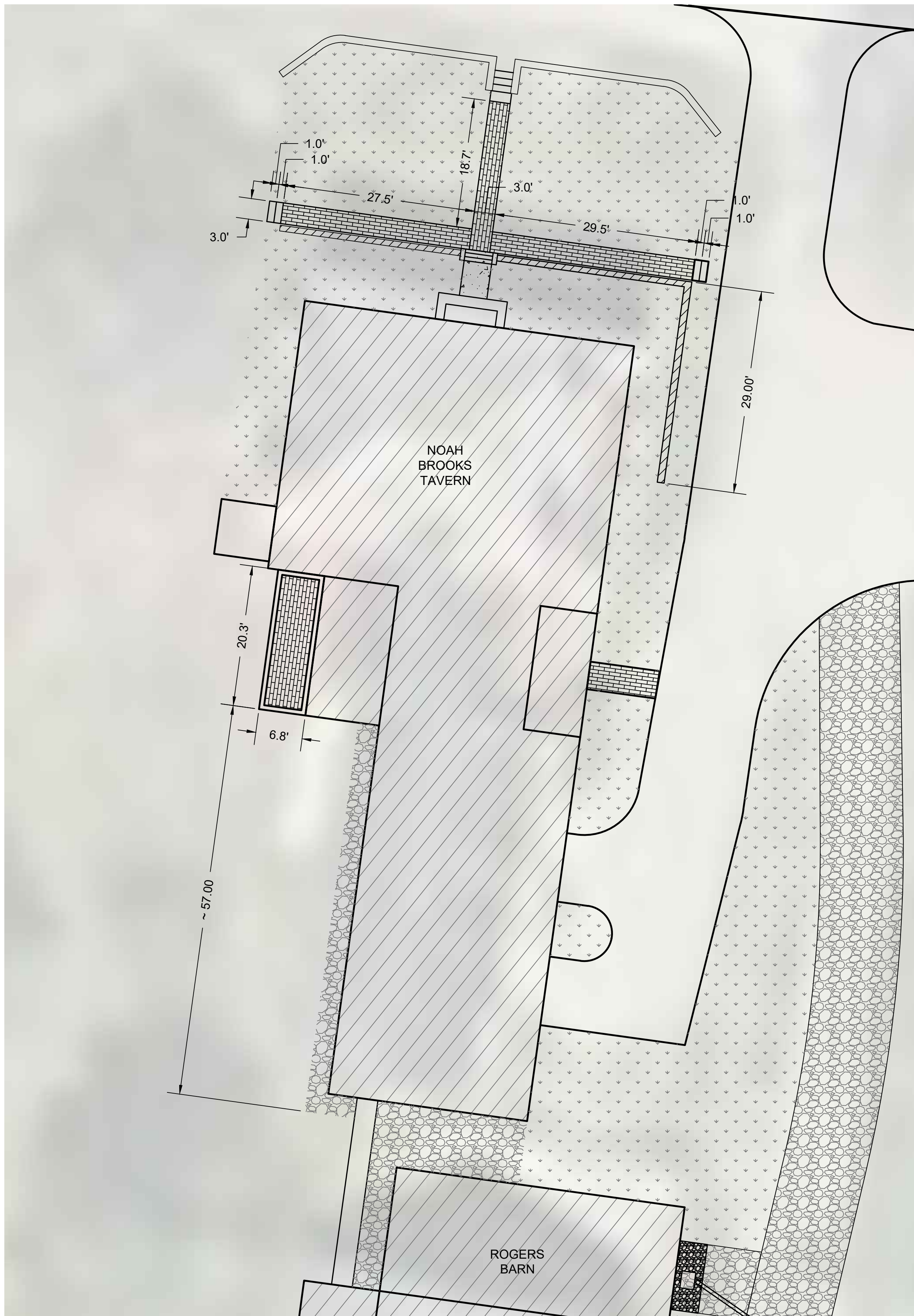


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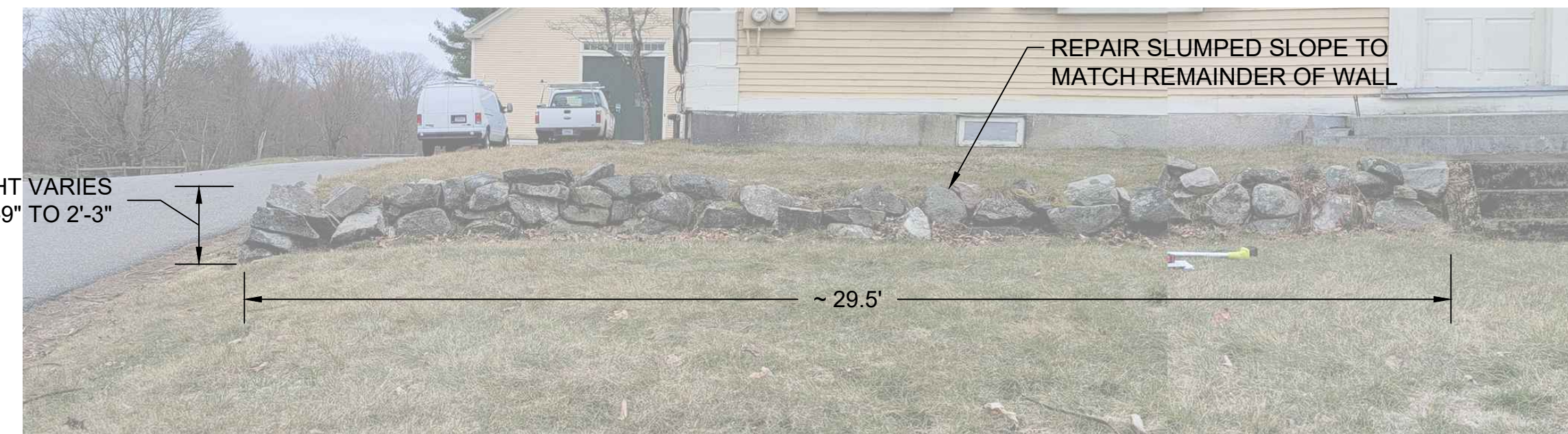
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| TECH. REVIEW:<br>HACE |                                  |   | PMIS/PKG NO.<br>184184 |
| DATE:<br>05/01/2023   |                                  |   | SHEET<br>317529        |
|                       |                                  |   | OF 60                  |

LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

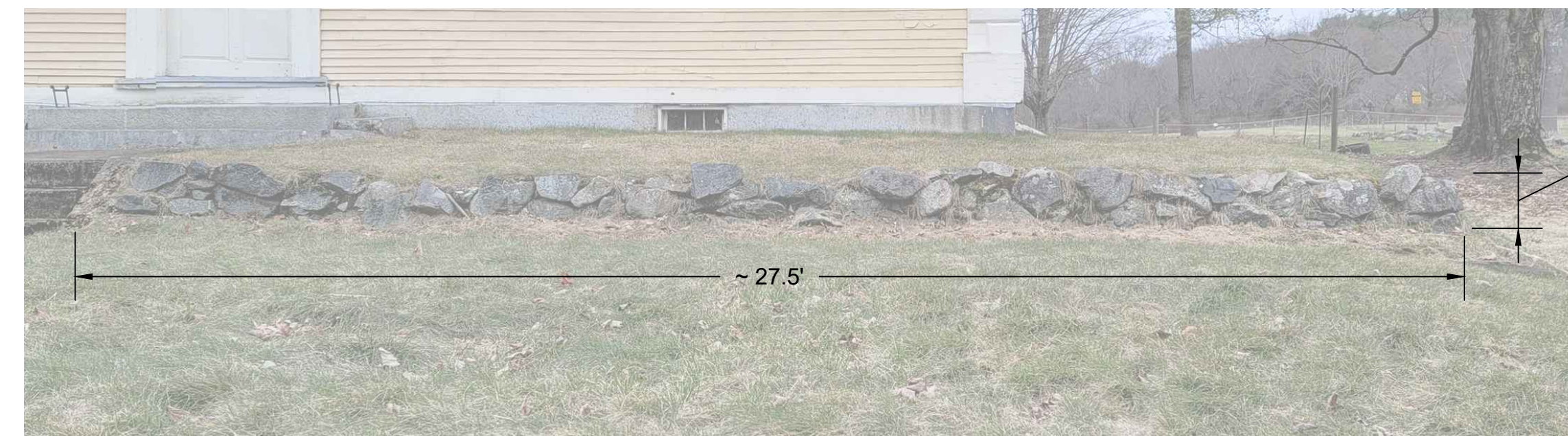
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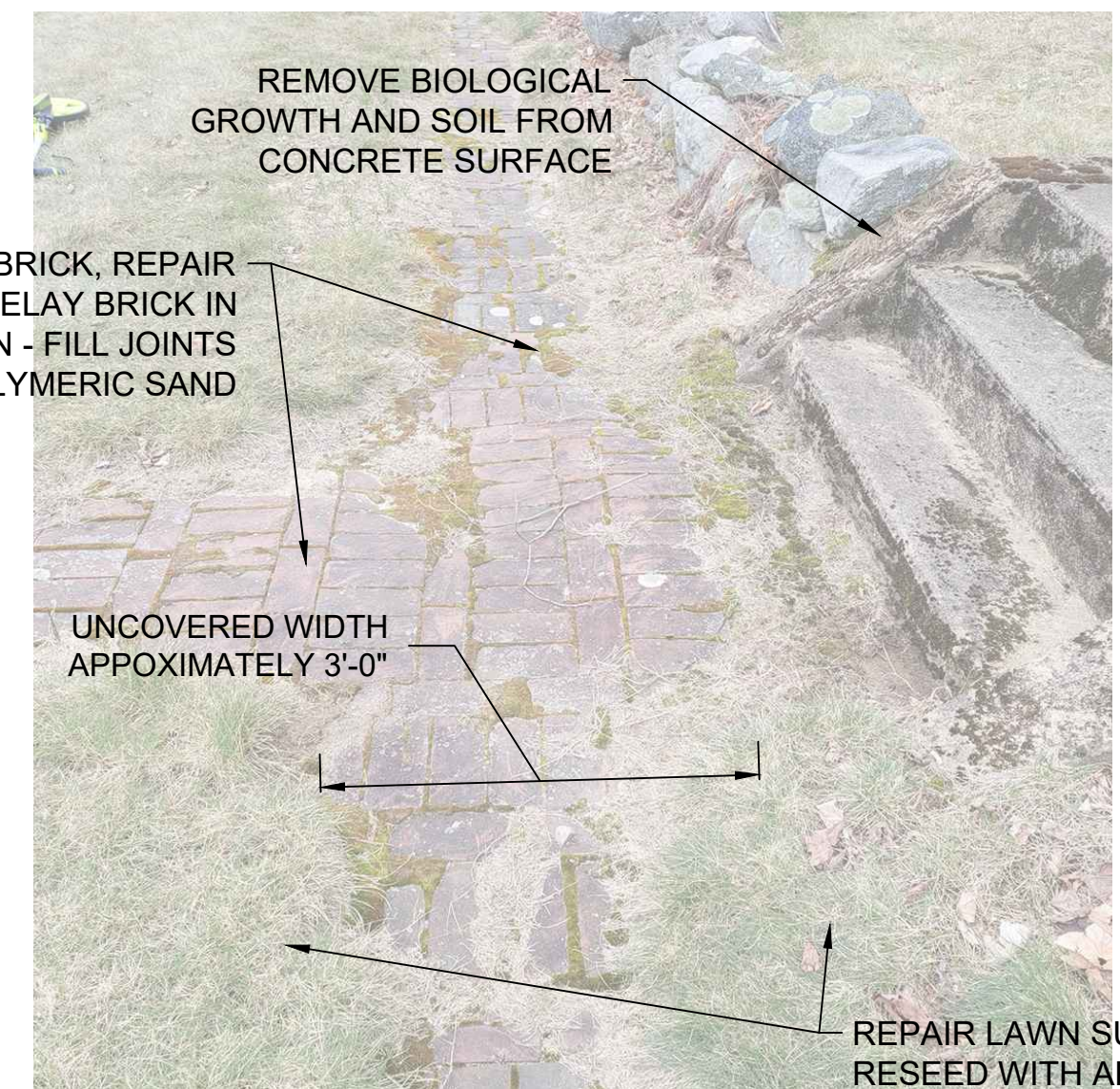
**1** NOAH BROOKS TAVERN PAVING PLAN  
L6.4 SCALE 1" = 10'-0"



**2** REPAIR DETAIL - WALL A  
L6.4 NTS



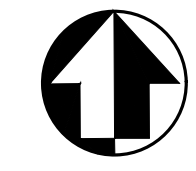
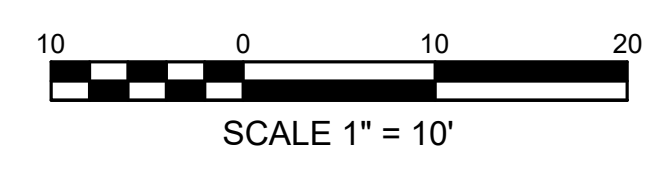
**3** REPAIR DETAIL - WALL B  
L6.4 NTS



**4** REPAIR DETAIL - FRONT WALK  
L6.4 NTS

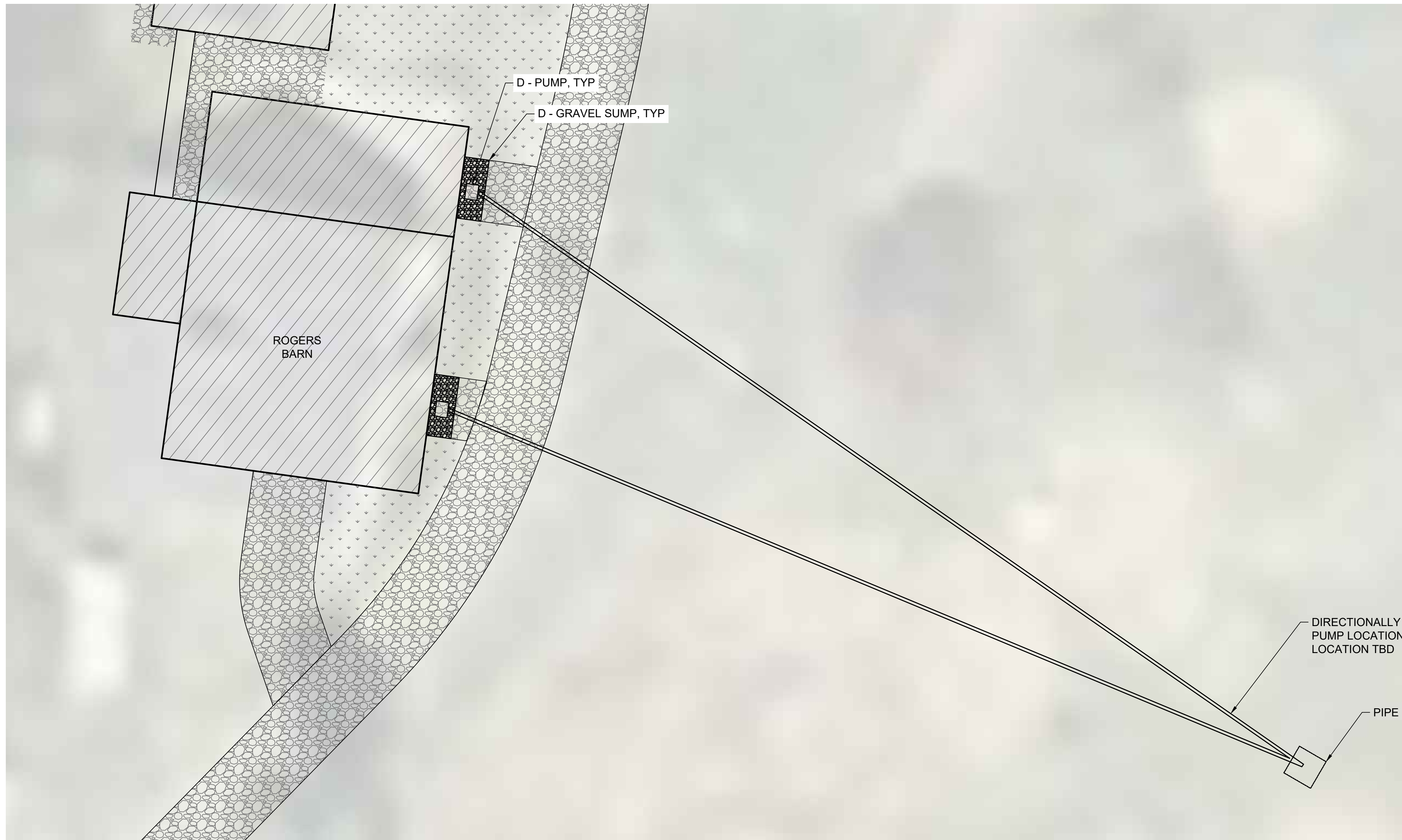


**5** REPAIR DETAIL - PATIO  
L6.4 NTS

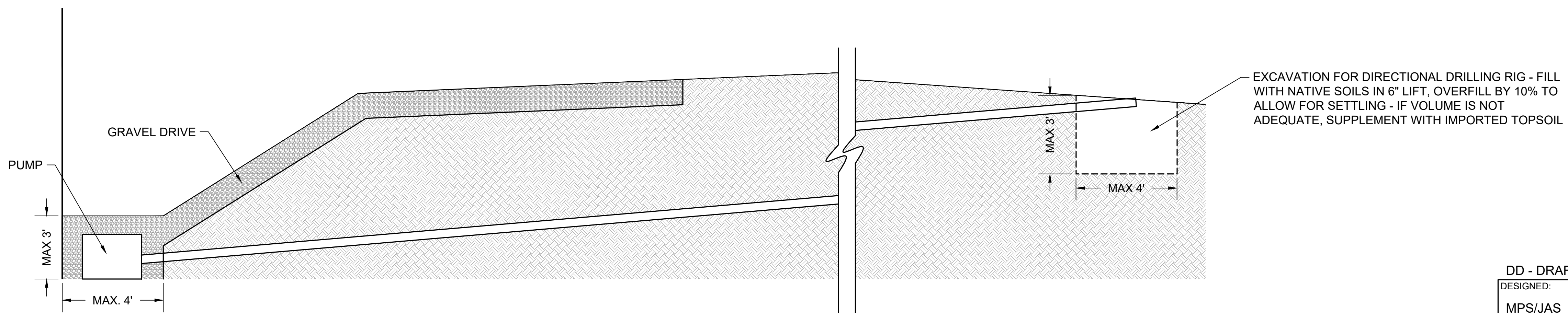


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| DD - DRAFT - NFC |               | TITLE OF SHEET   | DRAWING NO. |
| DESIGNED:        | SUB SHEET NO. | <b>NOAH BROOKS TAVERN<br/>PAVING PLAN</b>  | 406         |
| MPS/JAS          | <b>L6.4</b>   |  | 184184      |
| TECH. REVIEW:    |               | 317529   |             |
| MPS/JAS          |               | SHEET  |             |
| HACE             | DATE:         | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | OF 60       |
|                  | 05/01/2023    |  |             |

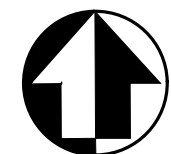
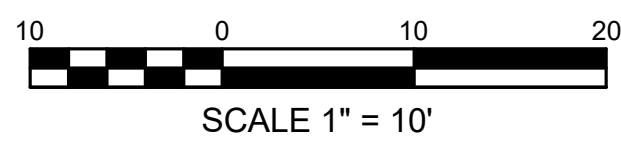
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1 ROGERS BARN BASEMENT ENTRY DETAIL PLAN  
L6.5 SCALE 1" = 10'-0"



2 SUMP AND DRAIN DETAIL  
L6.5 NTS



DD - DRAFT - NFC

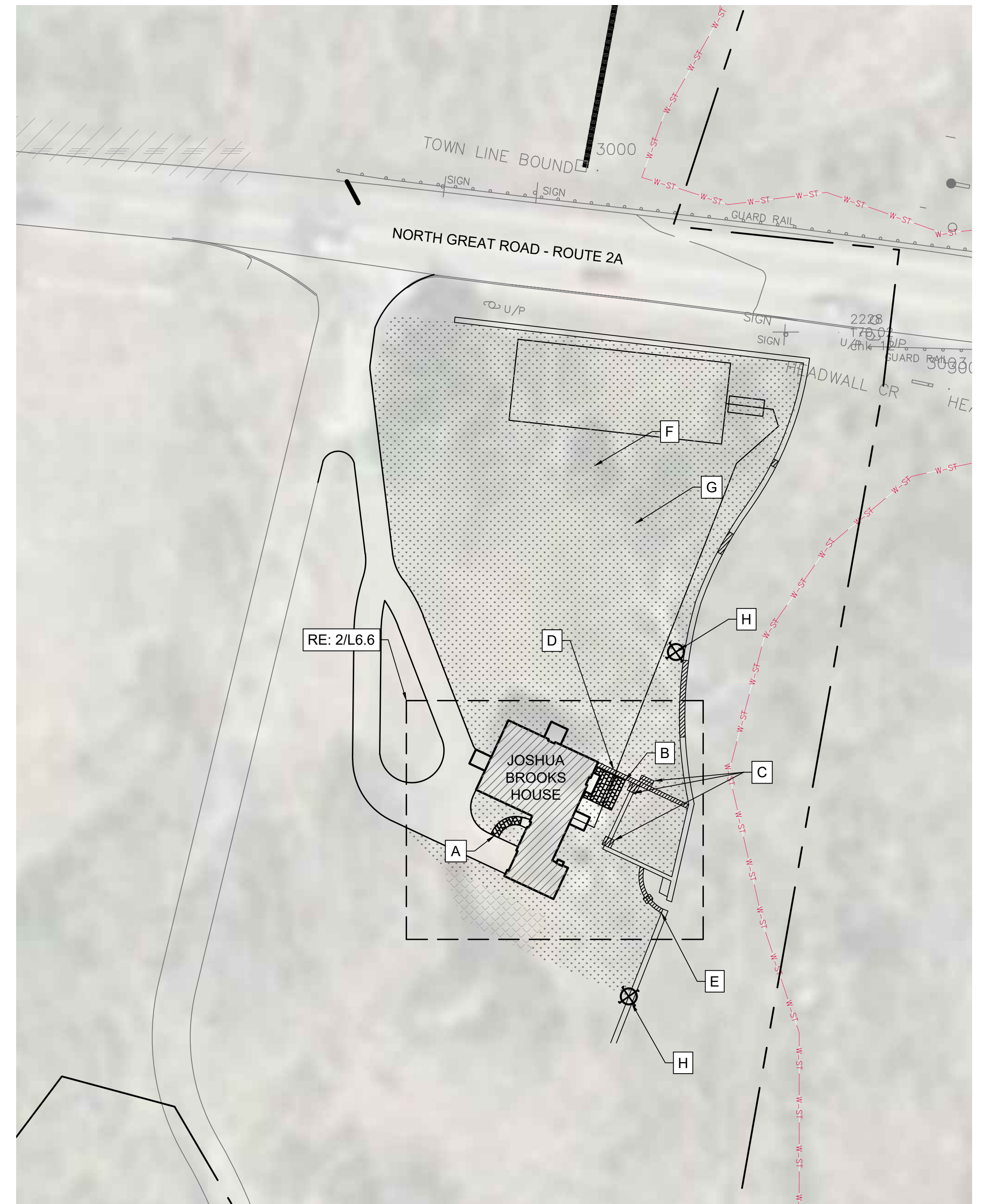
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| TECH. REVIEW:<br>HACE |                                  |   | 184184                 |
| DATE:<br>05/01/2023   |                                  |   | PMIS/PKG NO.<br>317529 |
|                       |                                  |   | SHEET<br>OF 60         |

LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

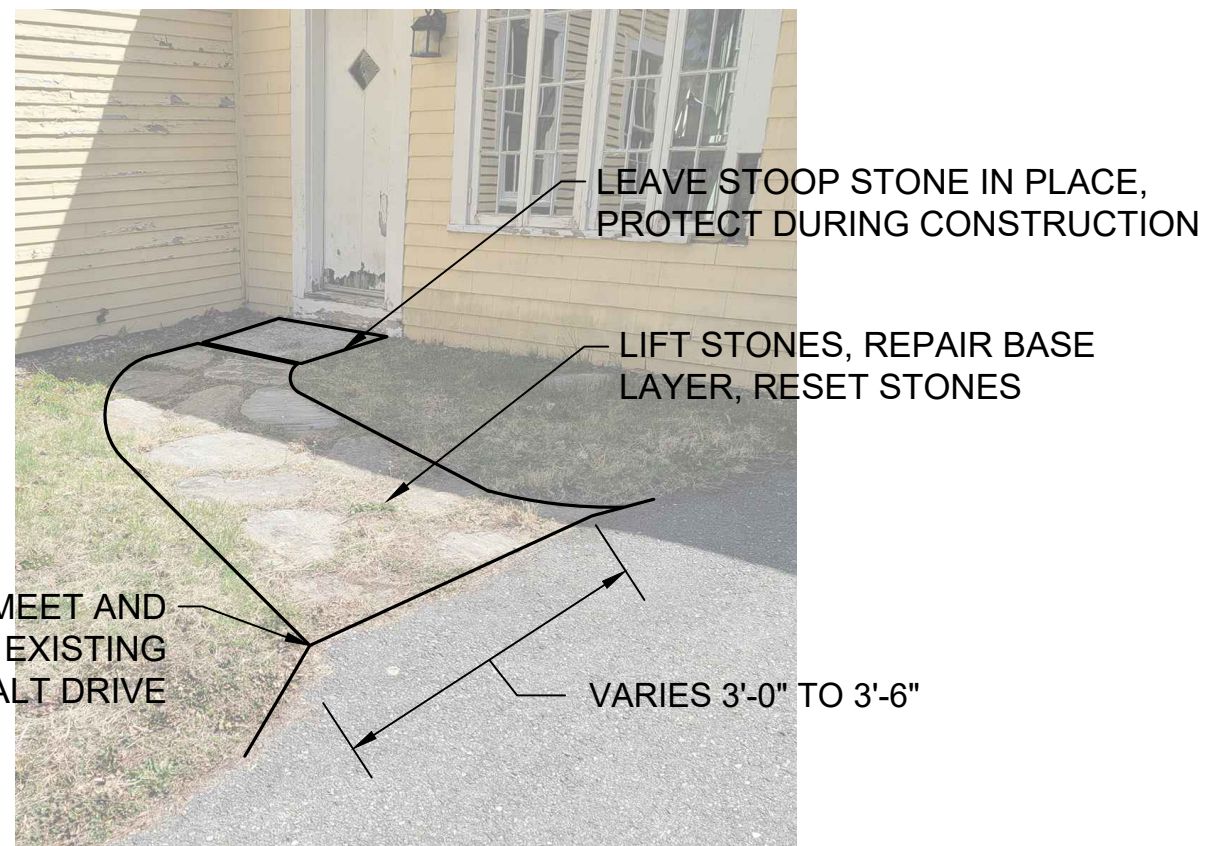
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| SITE TASK LIST |   |        |      |   |
|----------------|---|--------|------|---|
| KEY            | TASK  | SYMBOL | BID  | DESCRIPTION   |
| A              | REPAIR/RESET STONE WALKWAY TO FRONT ENTRY (SOUTH) |        | BASE | Lift 15 SF of stone walkway, repair and compact base and sub-base, relay stone 7/L11.2. Stone shall be relaid to be as even as possible. Infill stone as necessary to complete walk.  |
| B              | REPAIR/RESET STONE WALKWAY TO FRONT ENTRY (EAST)  |        | BASE | Lift 37 SF of stone patio, repair and compact base and sub-base, relay stone 7/L11.2. Stone shall be relaid to be as even as possible. Replace stones that are less than 2" thick. Infill stone as necessary to complete patio. |
| C              | RESET STONE STAIRS - EAST YARD                    |        | BASE | Reset bottom stair on three stone stairways. Bottom stair should be set on gravel base, mortared into place to make stable and safe.  |
| D              | REPAIR RETAINING WALL - EAST YARD, FRONT          |        |      | Reset 40 LF of stone retaining wall. Wall varies in height.   |
| E              | REPAIR RETAINING WALL - EAST YARD - CURVED        |        | BASE | Reset 37 LF of stone retaining wall. Wall is curved with inset stair. Wall is an average of 1'-9" in height.  |
| F              | LAWN REPAIR - SELECTIVE                           |        | BASE | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix.                         |
| G              | LAWN REPAIR - REMAINING                           |        |      | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |
| H              | REMOVE STUMPS                                     |        |      | Remove stumps noted on plan. Remove per detail 3/L0.3   |

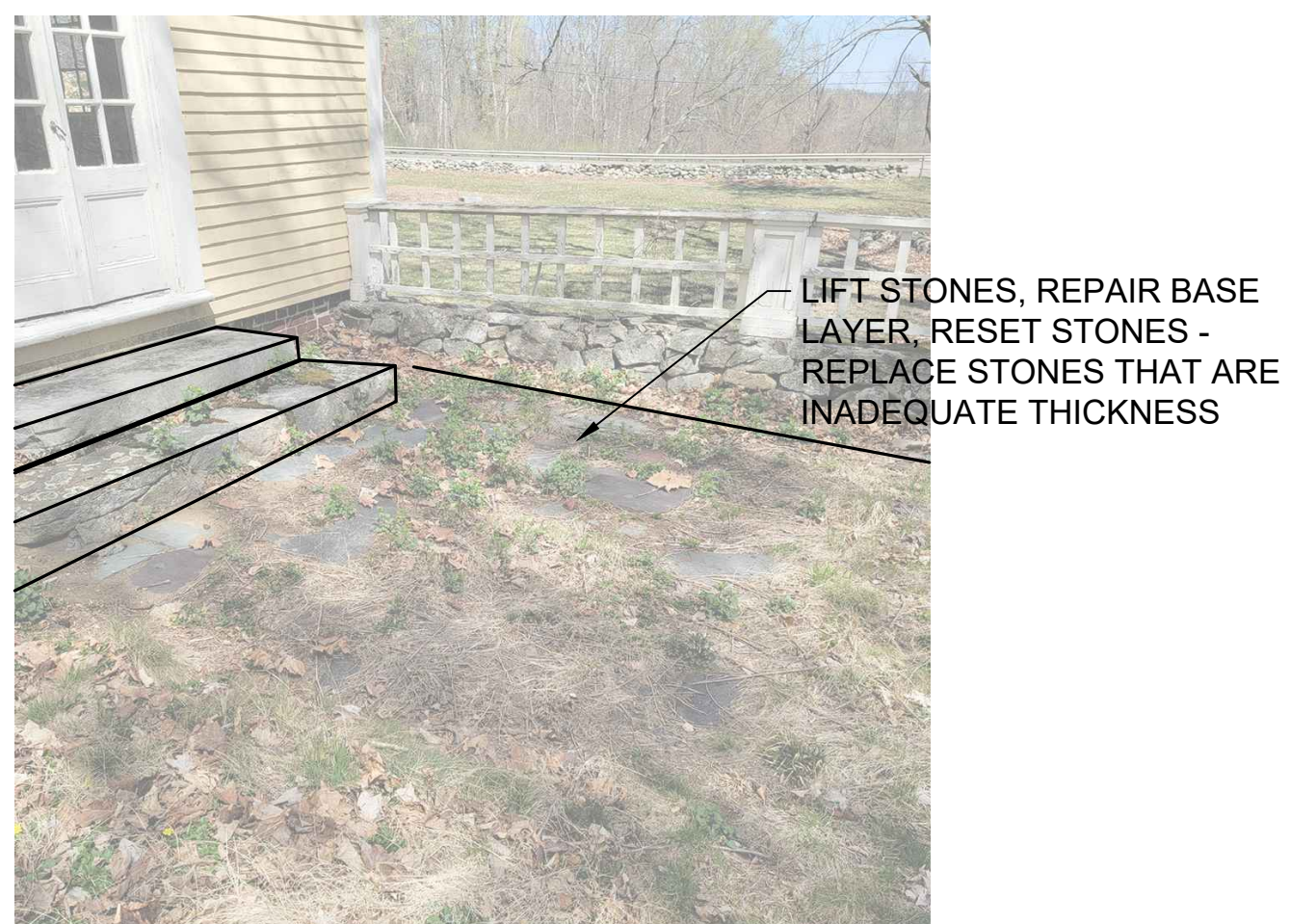
NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



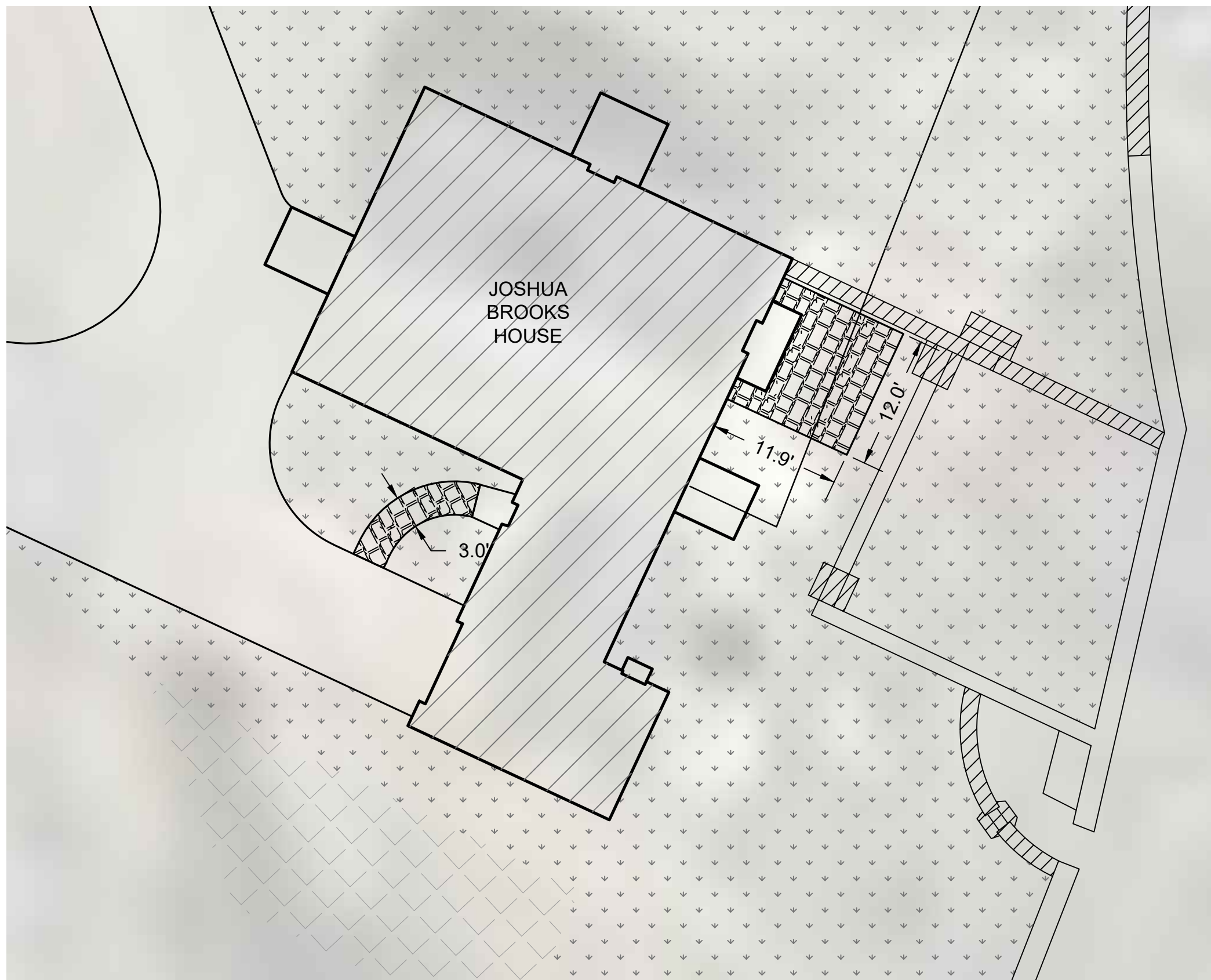
1 JOSHUA BROOKS HOUSE PAVING PLAN  
 SCALE 1" = 30'-0"



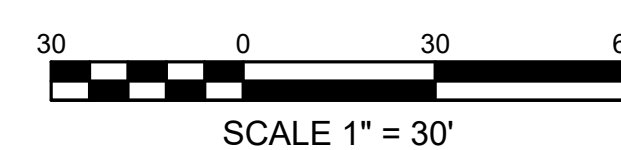
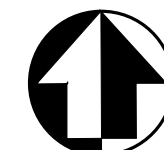
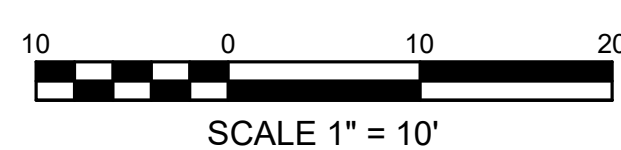
3 ENTRY REPAIR  
 L6.6 NTS



4 PATIO REPAIR  
 L6.6 NTS

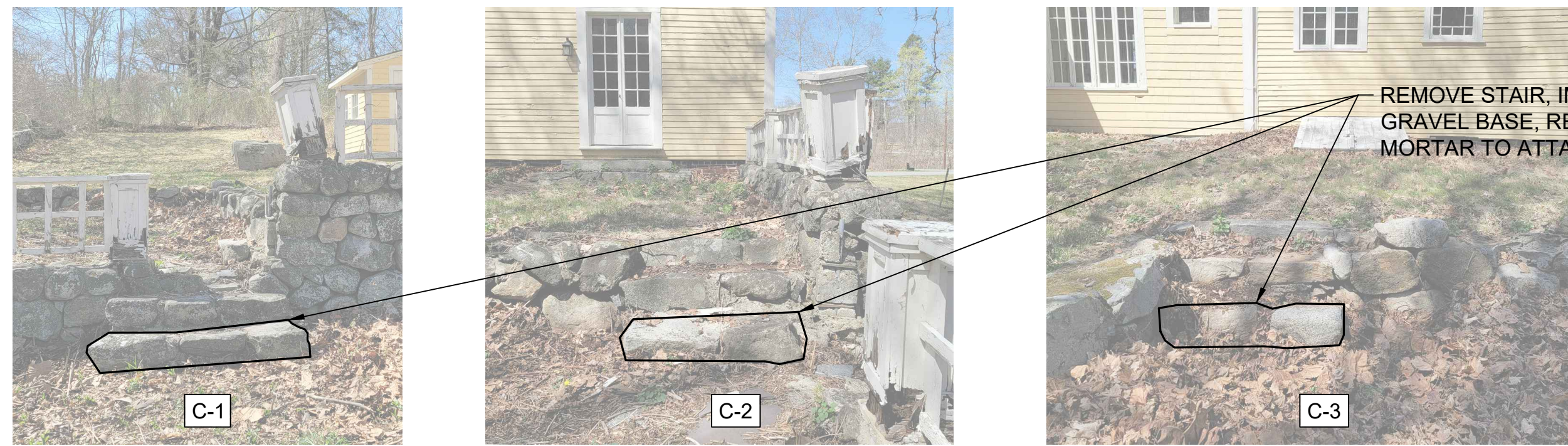


2 JOSHUA BROOKS HOUSE DETAIL PLAN  
 SCALE 1" = 10'-0"

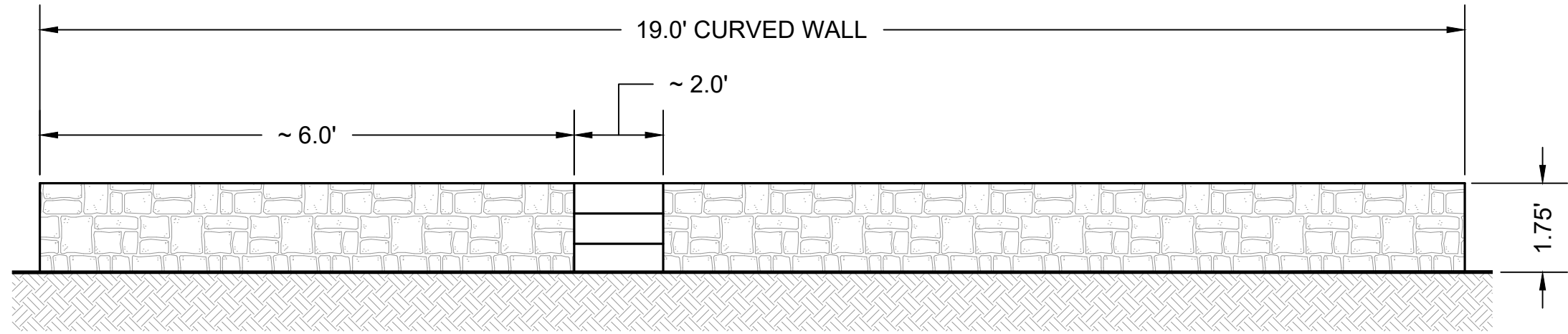


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| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L6.6</b> | <b>JOSHUA BROOKS HOUSE<br/>SITE PLAN</b>   |  | 406            |
| TECH. REVIEW:<br>HACE |                                  |  |  | 184184         |
| DATE:<br>05/01/2023   |                                  |  |  | 317529         |
|                       |                                  |  |  | SHEET<br>OF 60 |
|                       |                                  | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |  |                |

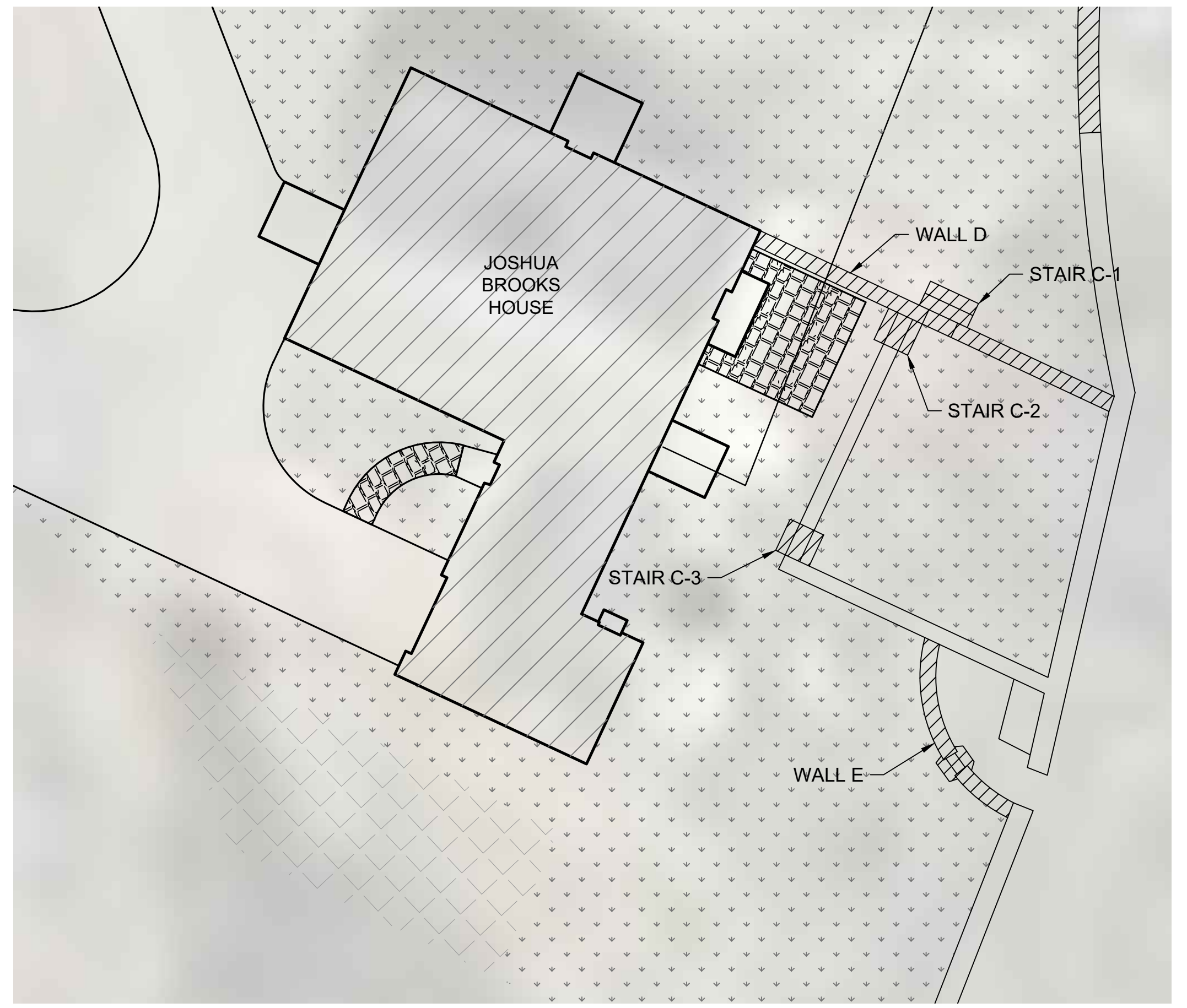
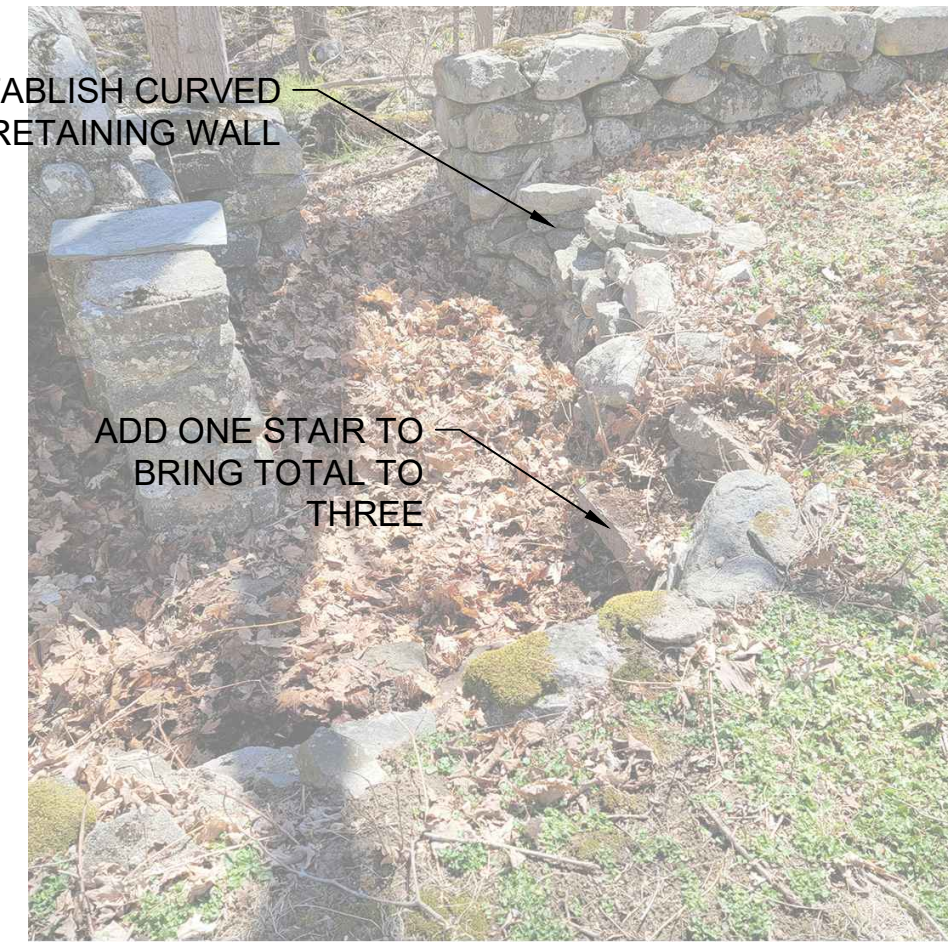
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2 REPAIR DETAIL - STAIRS  
L6.7 NTS



3 REPAIR DETAIL - WALL E  
L6.7 NTS



1 JOSHUA BROOKS WALL DETAIL PLAN  
L6.7 SCALE 1" = 30'-0"

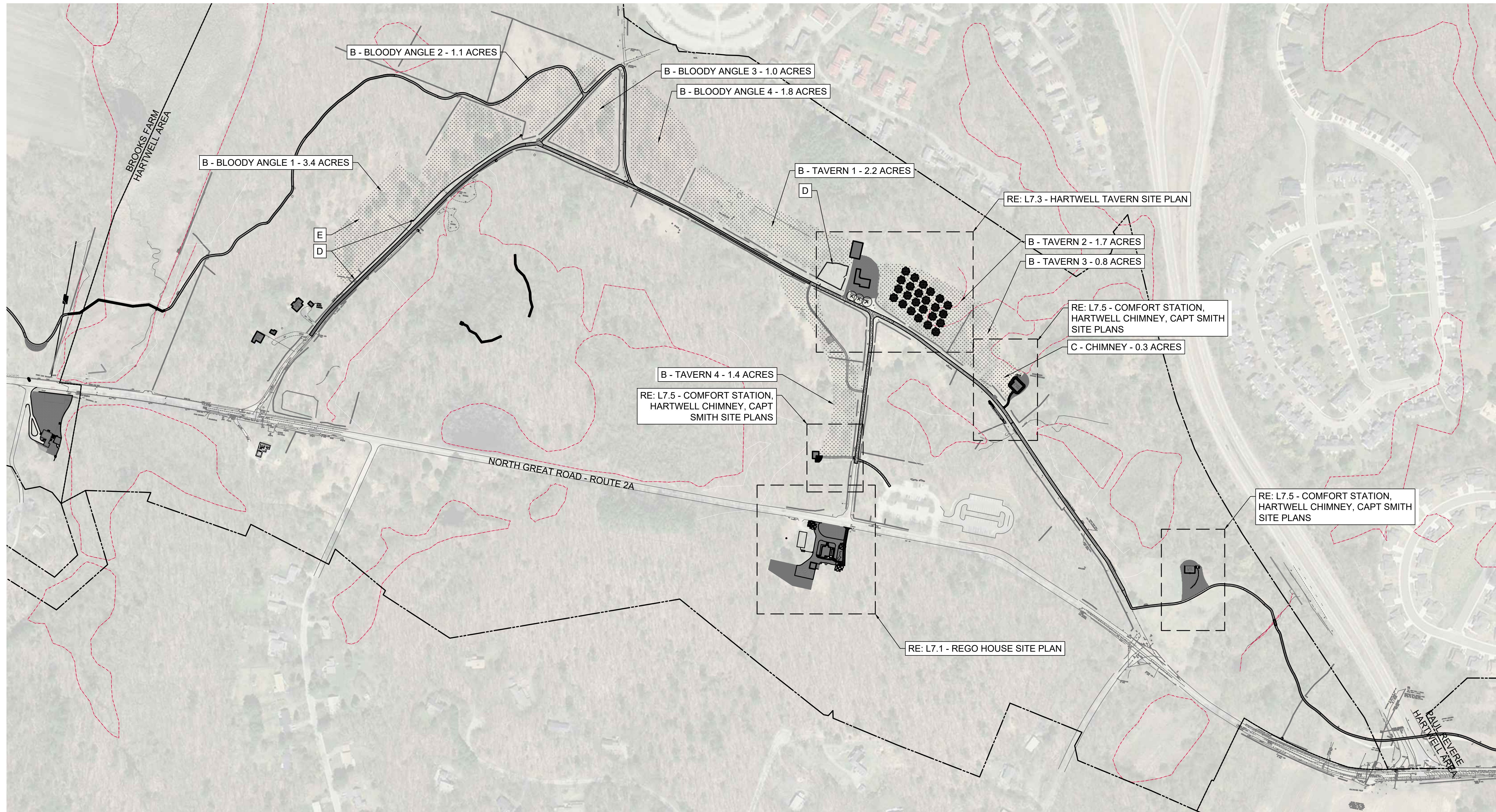


4 REPAIR DETAIL - WALL D  
L6.7 NTS



|                  |               |   |       |             |
|------------------|---------------|---|-------|-------------|
| DD - DRAFT - NFC |               | TITLE OF SHEET  |       | DRAWING NO. |
| DESIGNED:        | SUB SHEET NO. | <b>JOSHUA BROOKS WALL<br/>DETAIL PLAN</b><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |       | 406         |
| MPS/JAS          | L6.7          |   |       | 184184      |
| TECH. REVIEW:    |               |   |       | 317529      |
| HACE             |               |   |       | SHEET       |
| DATE:            |               | 05/01/2023  | OF 60 |             |

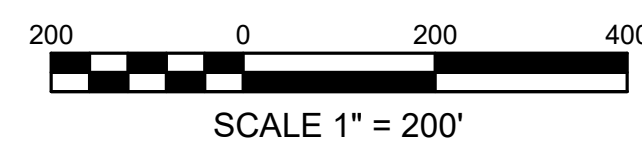
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**1 HARTWELL AREA OVERALL PLAN**  
L7.0 SCALE 1" = 200'-0"

| SITE TASK LIST |   |        |       |   |
|----------------|---|--------|-------|---|
| KEY            | TASK  | SYMBOL | BID   | DESCRIPTION   |
| A              | WALL VEGETATION REMOVAL                             |        |       | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls.  |
| B              | MEADOW WORK - HARTWELL TAVERN, BLOODY ANGLE         |        |       | Mow ~ 13.2 acres of meadow, scalp areas overgrown by woody shrubs, treat woody shrubs with herbicide, remove trees that are less than 6" DBH. Retreat if necessary. In fall, overseed with approved seed mix. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES |
| C              | MEADOW WORK - HARTWELL CHIMNEY                      |        | BASE  | Mow ~ 0.3 acres of meadow, scalp areas overgrown by woody shrubs, treat woody shrubs with herbicide, remove trees that are less than 6" DBH. Retreat if necessary. In fall, overseed with approved seed mix. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES  |
| D              | REPAIR, REPLACE RAIL AND RIDER FENCE - BLOODY ANGLE |        | OPT 1 | Replace fence per details on L7.4 - RAIL AND RIDER FENCE DETAILS.   |
| E              | REMOVE ROONEY SHED                                  |        |       | 10x20 Wooden Shed. Remove shed from field, dispose of or recycle materials  |

NOTES:  
1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



DD - DRAFT - NFC

|                       |                              |  |  |
|-----------------------|------------------------------|--|--|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><b>L7.0</b> | TITLE OF SHEET<br><b>HARTWELL OVERALL PLAN</b>   | DRAWING NO.<br>406                                 |
| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | 184184<br>PMSI/PKG NO.<br>317529<br>SHEET<br>OF 60 |
| DATE:<br>05/01/2023   |                              |  |  |

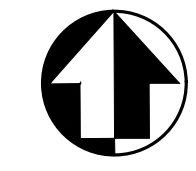
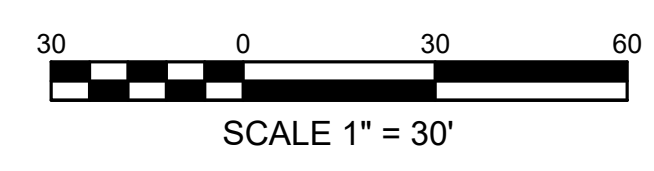
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| SITE TASK LIST |  |        |       |   |
|----------------|--|--------|-------|---|
| KEY            | TASK   | SYMBOL | BID   | DESCRIPTION   |
| A              | INSTALL CONCRETE WALKWAY AND STAIR           |        | BASE  | Install 450 SF of concrete with integral color (Davis 677 Outback or similar), salt finish, per 1/L11.2. Install one (1) stair, tie in to existing stair and new concrete with steel reinforcement.     |
| B              | INSTALL ASPHALT DRIVE                        |        | BASE  | Install 10,700 SF of residential asphalt drive per 1/L11.1  |
| C              | INSTALL GRAVEL DRIVE                         |        |       | Install 9,400 SF of gravel service area per detail 8/L11.1  |
| D              | INSTALL GRAVEL OVERFLOW - SOUTH OF STRUCTURE |        |       | Install 320 SF of gravel service area per detail 8/L11.1  |
| E              | REFRESH TRAIL SURFACE                        |        |       | Refresh 1600 SF of gravel trail surfacing, level and compact per detail 4/L11.3   |
| F              | ABAAS IMPROVEMENTS                           |        | BASE  | Install wood ABAAS ramp per plan and details L7.2 - REGO GRADING AND PAVING PLANS. White striping per plan, 6' concrete wheel stop, and aba signage per 7/L11.1   |
| G              | REMOVE FOUNDATION PLANTINGS, RETURN TO LAWN  |        | BASE  | Remove remaining foundation plantings and root cores, remove any bricks or stones marking boundary of planting, fine grade, and seed with approved seed mix.  |
| H              | LAWN REPAIR - SELECTIVE                      |        | OPT 1 | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| I              | LAWN REPAIR - REMAINING                      |        |       | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |
| J              | REMOVE TREES                                 |        | BASE  | Remove trees shown on plan.   |

NOTES:  
 1. OPEN FIELD NEXT TO REGO CONTAINS SOME LARGE STONES AND AN OPEN PIT AT THE SITE OF AN ABANDONED WELL. USE CAUTION WHEN OPERATING IN FIELD.  
 2. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 MAJOR JOHN BUTTRICK HOUSE SITE PLAN  
 L7.1 SCALE 1" = 30'-0"



|               |  |                                  |   |              |
|---------------|--|----------------------------------|---|--------------|
| DESIGNED:     |  | SUB SHEET NO.<br><br><b>L7.1</b> | TITLE OF SHEET<br><br><b>REGO HOUSE SITE PLAN</b> | DRAWING NO.  |
| MPS/JAS       |  |                                  |   | 406          |
| MPS/JAS       |  |                                  |   | 184184       |
| TECH. REVIEW: |  |                                  |   | PMIS/PKG NO. |
| HACE          |  |                                  |   | 317529       |
| DATE:         |  |                                  |   | SHEET        |
| 05/01/2023    |  |                                  |   | OF 60        |

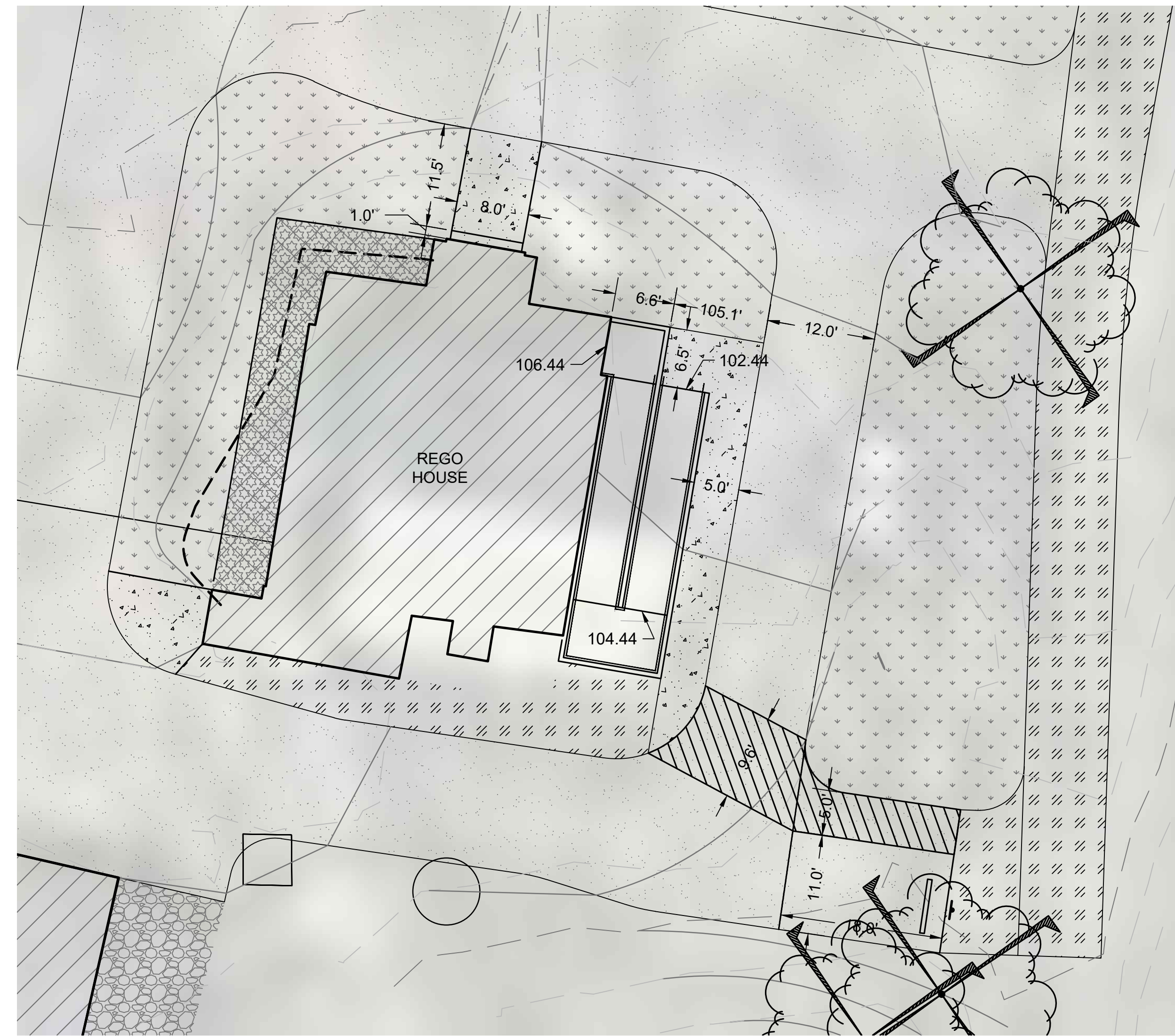
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LANDSCAPE & SEPTIC REPAIRS  
 GREAT AMERICAN OUTDOORS ACT (GAOA)  
 LEXINGTON, LINCOLN, & CONCORD MA

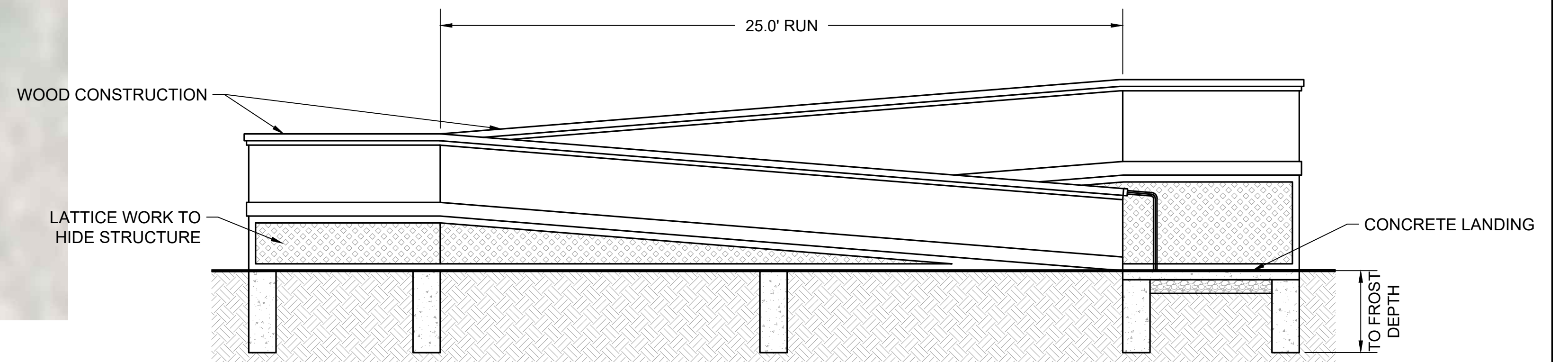
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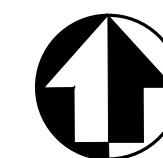
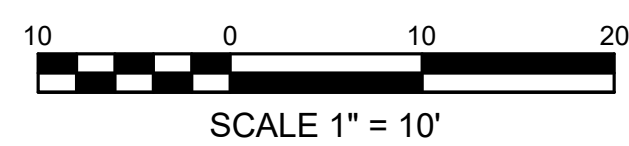
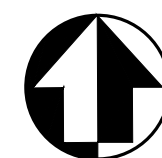
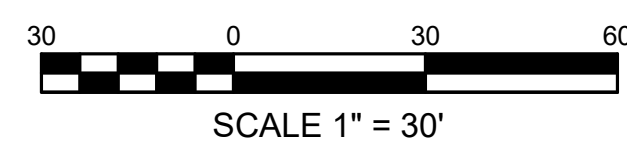
1 REGO PAVING AND GRADING PLAN  
L7.2 SCALE 1" = 30'-0"



2 REGO RAMP IMPROVEMENT PLAN  
L7.2 SCALE 1" = 10'-0"



3 REGO RAMP DETAIL  
L7.2 SCALE 1" = xx'-0"



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|                       |                              |  |                        |
|-----------------------|------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><b>L7.2</b> | TITLE OF SHEET<br><b>REGO GRADING AND PAVING PLANS</b>   | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | 184184                 |
| DATE:<br>05/01/2023   |                              |  | PMIS/PKG NO.<br>317529 |
|                       |                              |  | SHEET<br>OF 60         |

5/1/2023 2:26 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\WIMM\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CIP\PACKAGE\L29\_HATA\_SITEPLAN\_CULAD.DWG

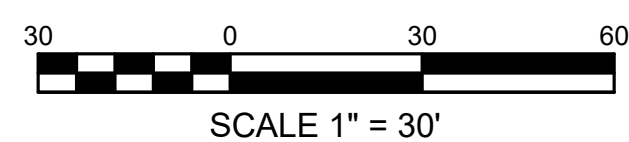
| SITE TASK LIST |   |        |       |   |
|----------------|---|--------|-------|---|
| KEY            | TASK  | SYMBOL | BID   | DESCRIPTION   |
| A              | REFRESH DRIVEWAY SURFACE                    |        |       | Refresh 1600 SF of gravel trail surfacing, level and compact per detail 4/L11.3   |
| B              | UPDATE ORCHARD FENCING, REPLACE TREES       |        |       | Replace 5 orchard trees, install larger deer fencing perimeter per detail 3/L11.6   |
| C              | REPLACE WOODEN GATE, POSTS ON TAVERN CORRAL |        | OPT 1 | Replace fence per details on L7.4 - RAIL AND RIDER FENCE DETAILS.   |
| D              | REPAIR, REPLACE RAIL AND RIDER FENCE        |        | OPT 1 | Repair or replace fence per details on L7.4 - RAIL AND RIDER FENCE DETAILS. Fence at Corral is approximately 340 LF. Fence on Bloody Angle is approximately 960 LF.                                     |
| E              | LAWN REPAIR - SELECTIVE                     |        | OPT 1 | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| F              | LAWN REPAIR - REMAINING                     |        |       | Repair remainder of lawn. Topdress with imported topsoil, aerate, and seed lawn with approved seed mix.   |
| G              | TREE PLANTING                               |        | BASE  | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |   |
|--------------------------|------|---------------------------|---------------------------------------|--------|---|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES   |
| 3                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i> | 1" Cal | #10 or equivalent BB Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |

- NOTES:
- WHEN DIGGING FOR NEW TREES, DIG BY HAND AND TAKE CARE TO PROTECT EXISTING ROOTS OF NEIGHBORING MAPLES.
  - TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



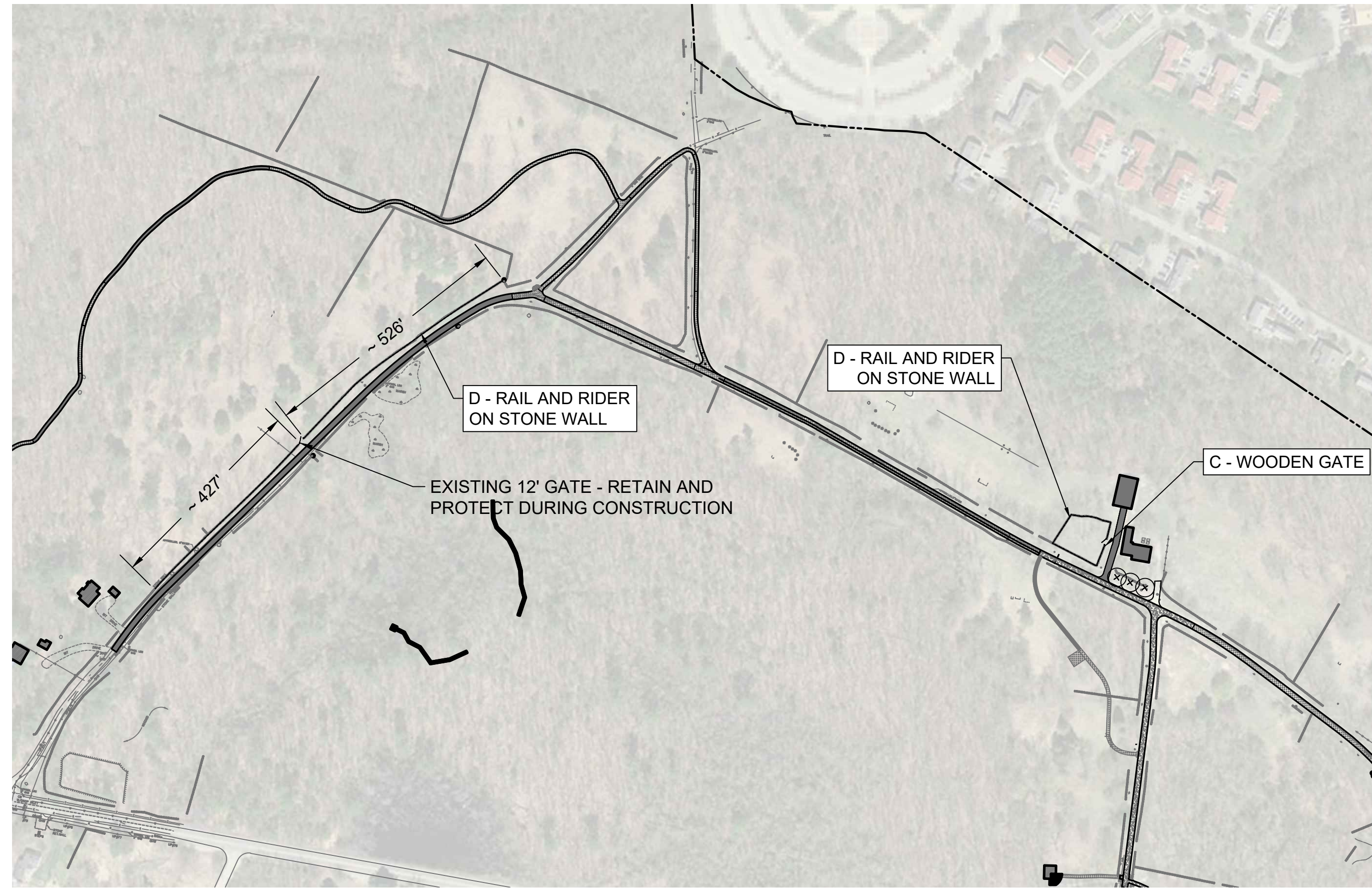
1 HARTWELL TAVERN COMFORT STATION  
L7.3 SCALE 1" = 30'-0"



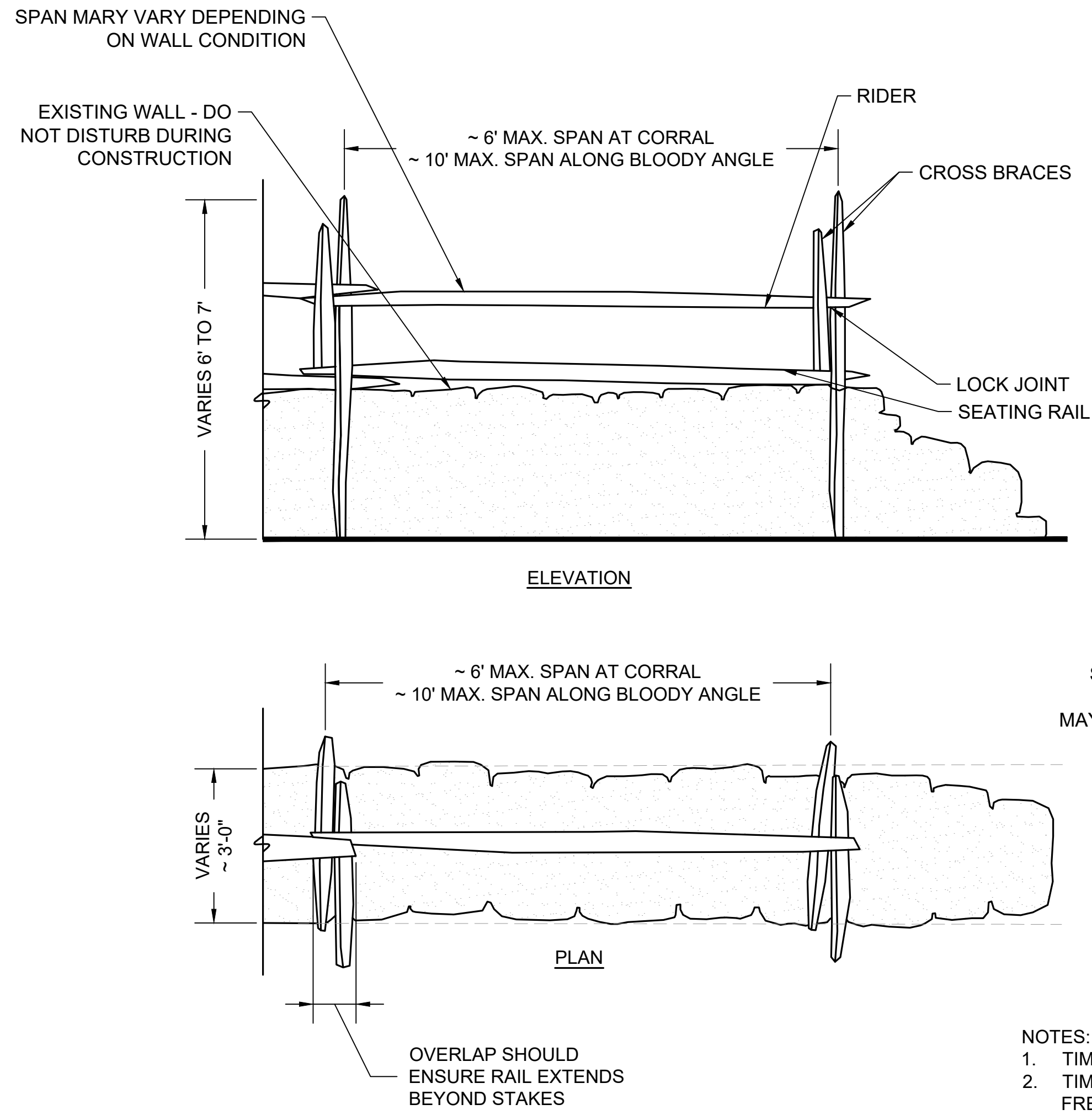
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|-----------------------|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L7.3</b> | TITLE OF SHEET<br><br><b>HARTWELL TAVERN<br/>SITE PLAN</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |  | 184184                 |
| DATE:<br>05/01/2023   |                                  |  | PMIS/PKG NO.<br>317529 |
|                       |                                  |  | SHEET<br>OF 60         |

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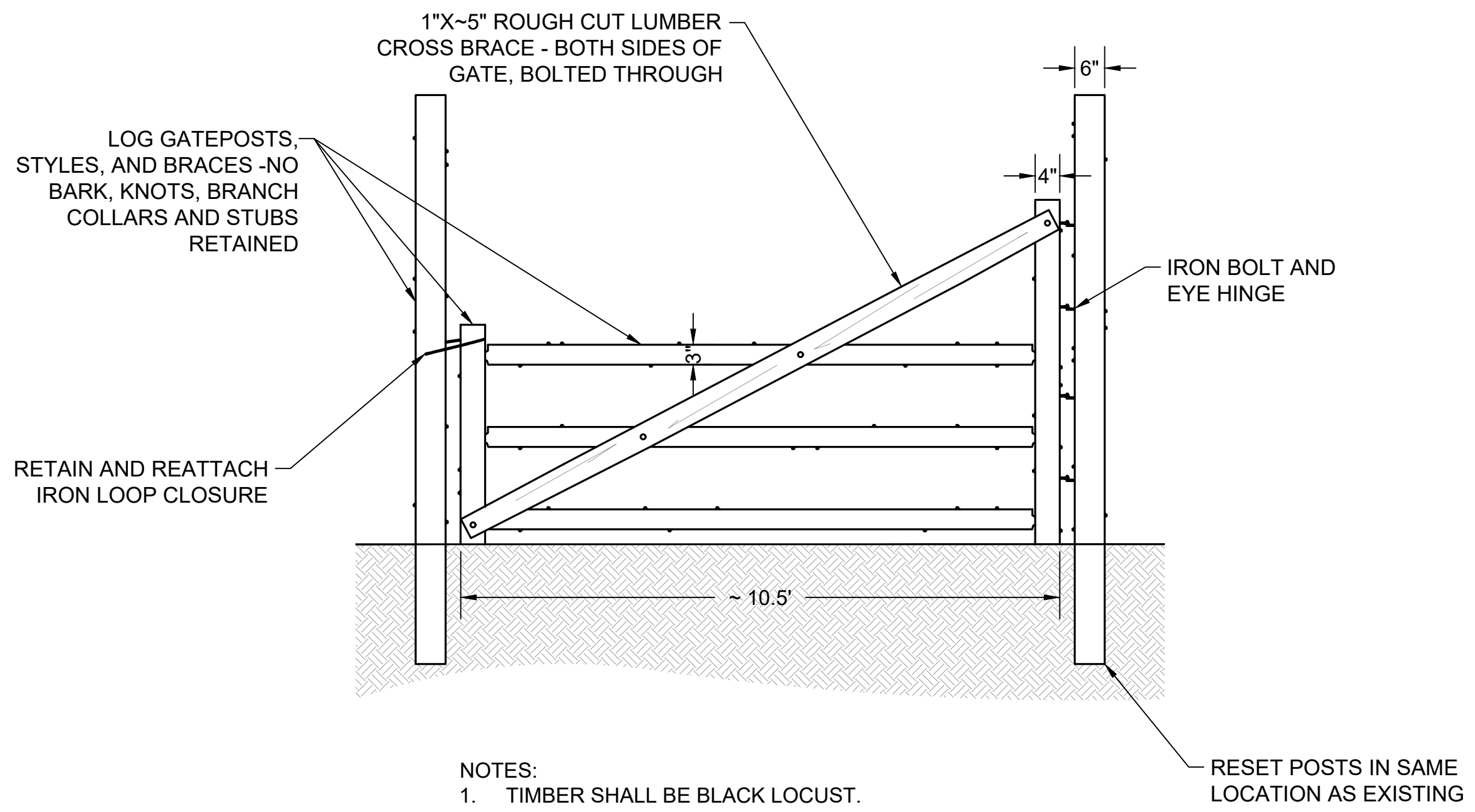


**1 RAIL AND RIDER FENCE KEY**  
L7.4 SCALE 1" = 150'-0"



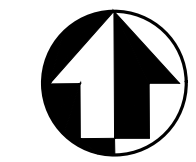
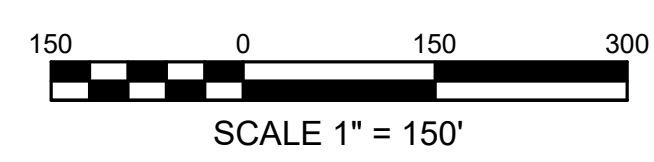
- NOTES:
1. TIMBER SHALL BE BLACK LOCUST.
  2. TIMBER MAY BE RE-USED IF IT IS STILL TRUE, PEST AND ROT FREE. TIMBER THAT HAS SAGGED WILL NOT BE ACCEPTED.
  3. CROSS BRACE SPACING MAY BE SPACED MORE CLOSELY DEPENDING ON SITE AND WALL SITUATION.

**2 RAIL AND RIDER FENCE DETAILS**  
L7.4 NTS



- NOTES:
1. TIMBER SHALL BE BLACK LOCUST.

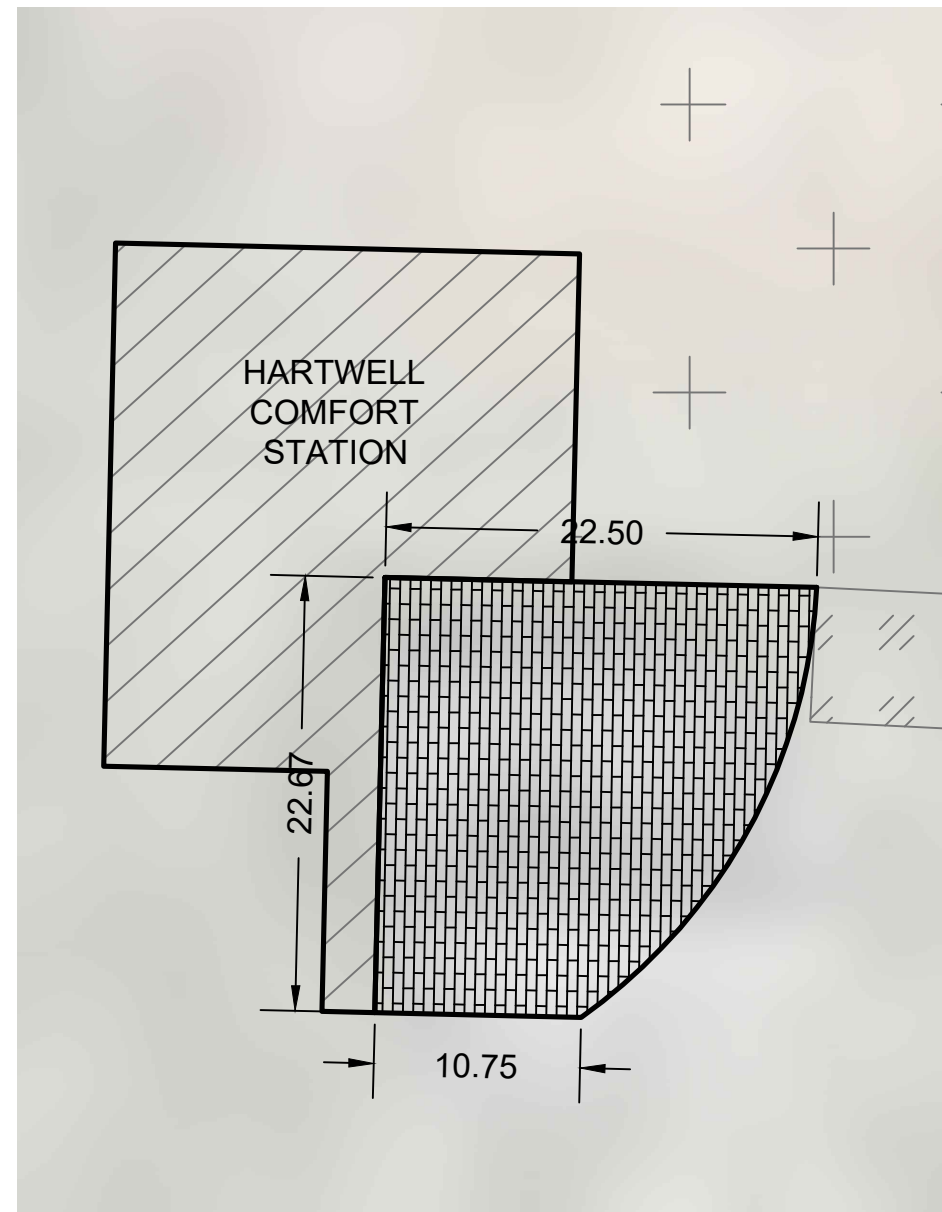
**3 GATE DETAILS**  
L7.4 NTS



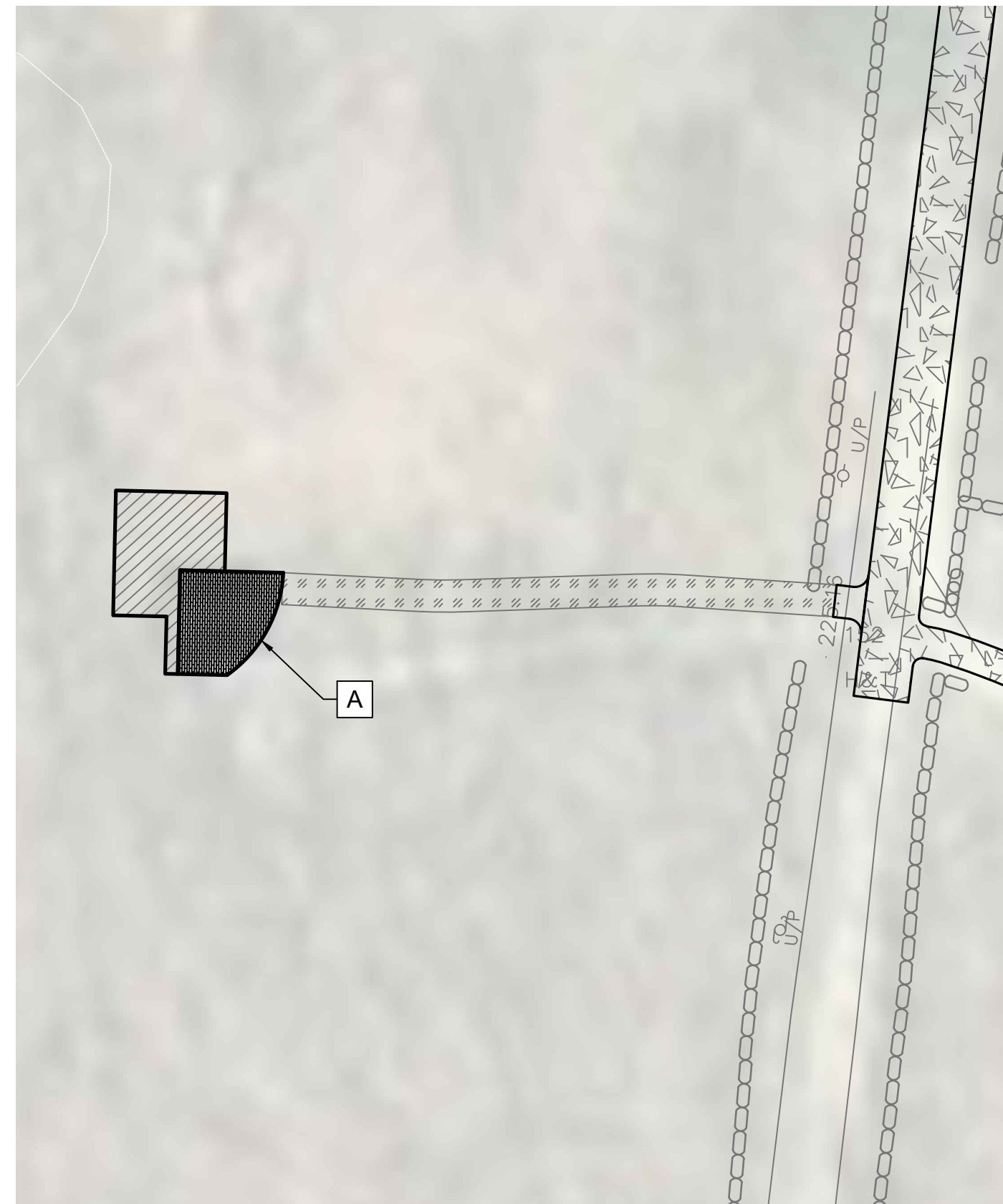
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|                       |                              |  |                        |
|-----------------------|------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><b>L7.4</b> | TITLE OF SHEET<br><b>RAIL AND RIDER FENCE DETAILS</b>  | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                              | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | 184184                 |
| DATE:<br>05/01/2023   |                              |  | PMIS/PKG NO.<br>317529 |
|                       |                              |  | SHEET<br>OF 60         |

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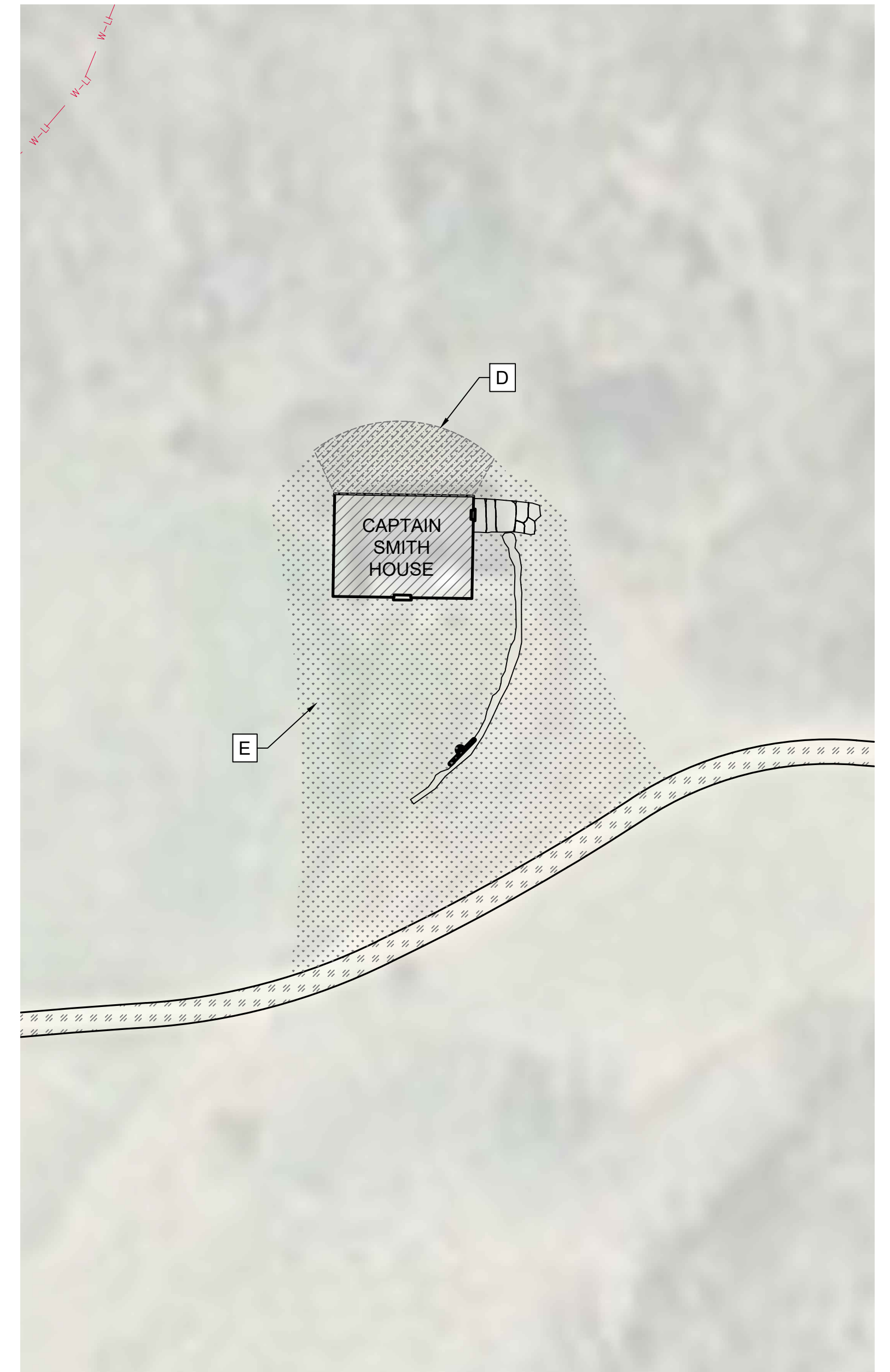
**2 C.S. PAVING DETAIL**  
L7.5 SCALE 1" = 10'-0"



**1 COMFORT STATION SITE PLAN**  
L7.5 SCALE 1" = 30'-0"



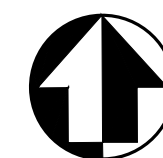
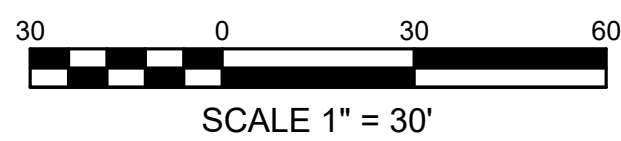
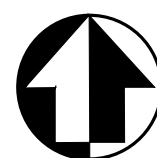
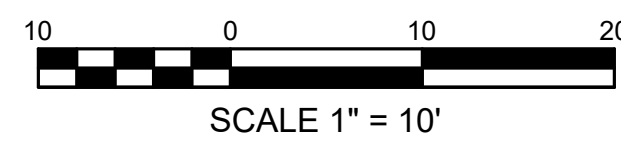
**3 HARTWELL CHIMNEY SITE PLAN**  
L7.5 SCALE 1" = 30'-0"



**4 CAPTAIN SMITH HOUSE SITE PLAN**  
L7.5 SCALE 1" = 30'-0"

| SITE TASK LIST |  |        |       |   |
|----------------|--|--------|-------|---|
| KEY            | TASK                                     | SYMBOL | BID   | DESCRIPTION   |
| A              | REPLACE BRICK PAVING AT COMFORT STATION  |        | BASE  | Refresh 430 SF of mortared brick paving per detail 6/L11.2  |
| B              | REFRESH/INSTALL TRAIL SURFACE AT CHIMNEY |        | BASE  | Refresh 1800 SF of gravel trail surfacing, level and compact per Details 2/L11.3 and 4/L11.3. Slope away from Chimney site.   |
| C              | RETURN AREA TO LAWN AT CHIMNEY           |        | OPT 1 | Remove woody shrub materials, treating stumps/stems with herbicide. Fine grade to level, hydroseed with approved seed mix.  |
| D              | RETURN AREA TO LAWN AT CAPT. SMITH       |        |       | Remove woody shrub materials, treating stumps/stems with herbicide. Fine grade to level, hydroseed with approved seed mix.  |
| E              | LAWN REPAIR AT CAPT. SMITH - SELECTIVE   |        |       | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |

NOTES:  
1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



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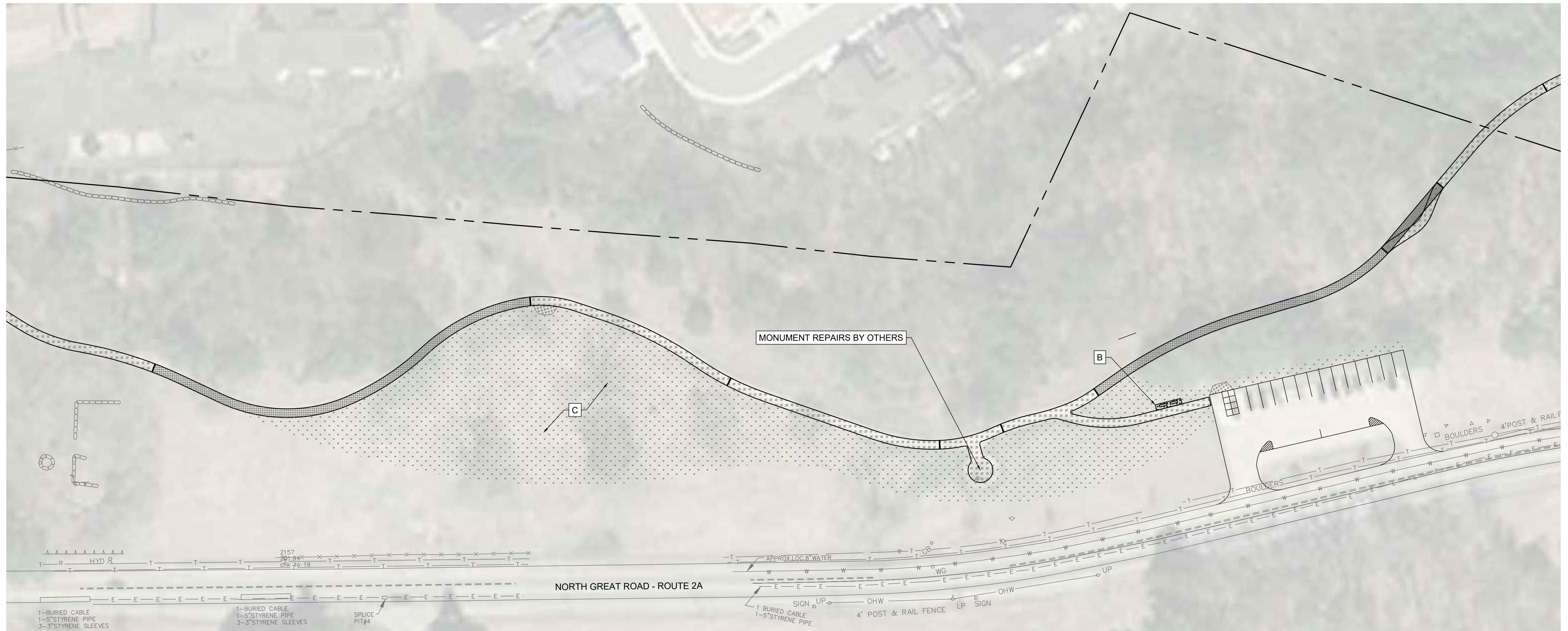
DESIGNED:  
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TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L7.5**

TITLE OF SHEET  
**COMFORT STATION,  
HARTWELL CHIMNEY,  
CAPT. SMITH SITE PLANS**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

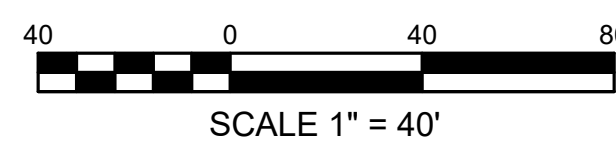
DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
--- OF 60

5/1/2023 2:37 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CIPPACKAGE\L32\_REVE\_SITEPLAN\_CUIA.DWG



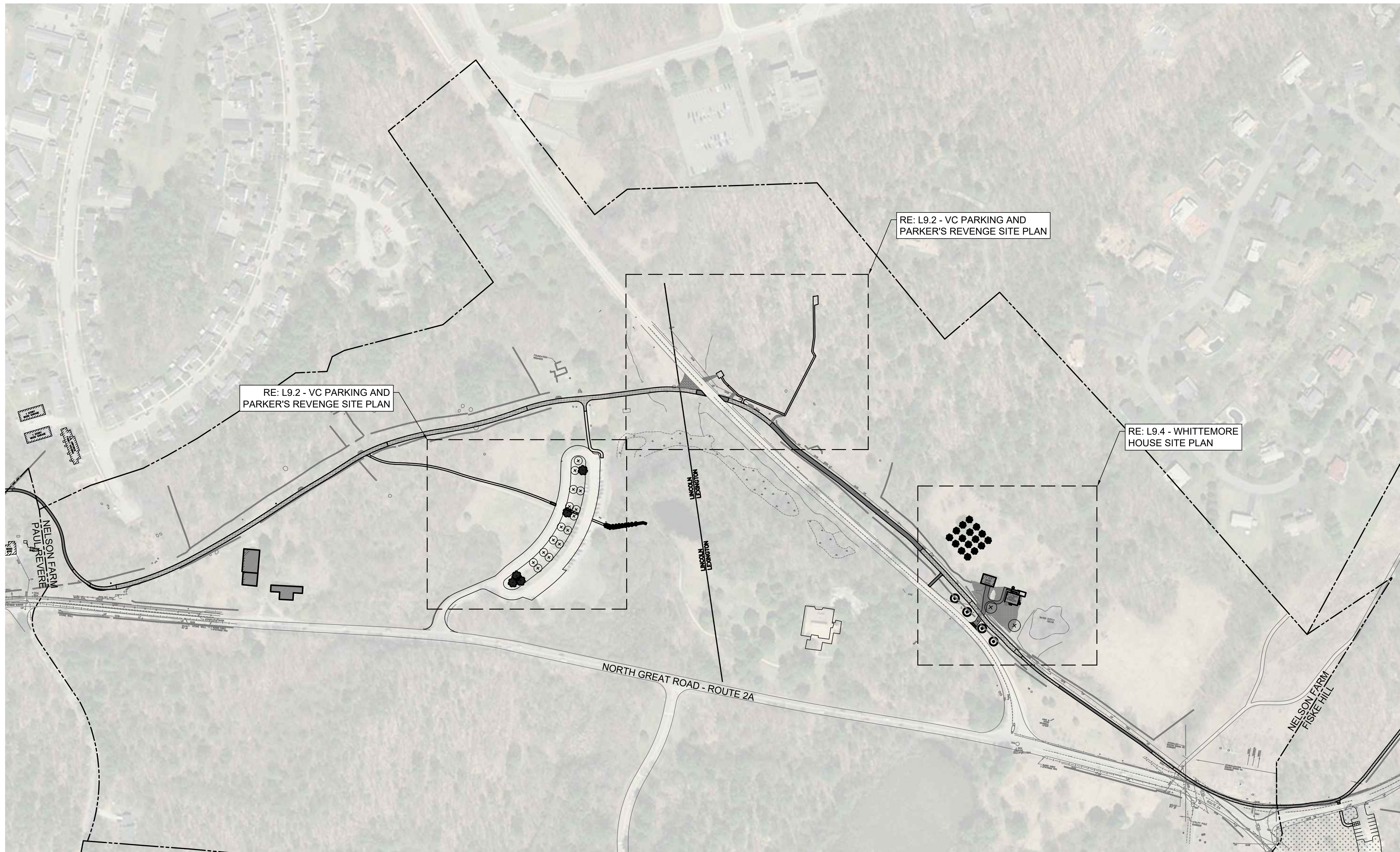
**1 REVERE OVERALL PLAN**  
L8.0 SCALE 1" = 40'-0"

| SITE TASK LIST |                         |        |       |  |
|----------------|-------------------------|--------|-------|--|
| KEY            | TASK                    | SYMBOL | BID   | DESCRIPTION  |
| A              | WALL VEGETATION REMOVAL |        |       | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls.   |
| B              | REPLACE EXISTING BENCH  |        | BASE  | Replace existing 6' bench in kind. Re-use existing foundational posts if necessary, replace if necessary.  |
| C              | LAWN REPAIR - SELECTIVE |        | OPT 1 | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seeding. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for further details. |



DD - DRAFT - NFC

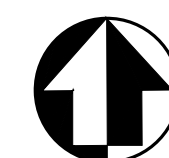
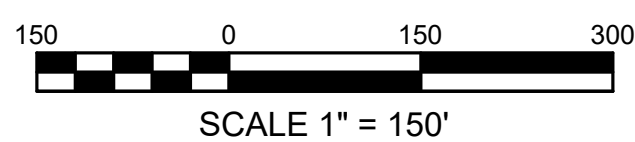
|                       |                                  |   |                    |
|-----------------------|----------------------------------|---|--------------------|
| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L8.0</b> | TITLE OF SHEET<br><br><b>REVERE CAPTURE SITE<br/>OVERALL PLAN</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406 |
| TECH. REVIEW:<br>HACE |                                  |   | 184184             |
| DATE:<br>05/01/2023   |                                  |   | 317529             |
|                       |                                  |   | SHEET<br>OF 60     |



1 NELSON FARM OVERALL PLAN  
L9.0 SCALE 1" = 150'-0"

| SITE TASK LIST |                         |        |     |  |
|----------------|-------------------------|--------|-----|--|
| KEY            | TASK                    | SYMBOL | BID | DESCRIPTION  |
| A              | WALL VEGETATION REMOVAL |        |     | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls. |

NOTES:  
1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



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DESIGNED:  
MPS/JAS  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L9.0**

TITLE OF SHEET  
**NELSON FARM OVERALL PLAN**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
OF 60

5/1/2023 2:39 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARCS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L36\_PARE\_SITEPLAN\_CULA.DWG



**1** VISITOR CENTER PLANTING PLAN  
L9.2 SCALE 1" = 40'-0"

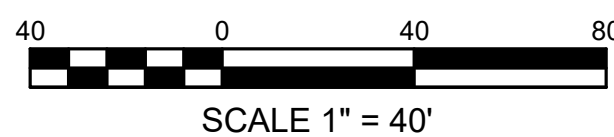


**1** PARKER'S REVENGE SITE PLAN  
L9.2 SCALE 1" = 40'-0"

| SITE TASK LIST |                      |        |      |   |
|----------------|----------------------|--------|------|---|
| KEY            | TASK                 | SYMBOL | BID  | DESCRIPTION   |
| A              | REPAIR SOCIAL TRAILS |        |      | Aerate soil, add topsoil as necessary to create level surface. Seed with approved seed mix. |
| B              | ADD BARWAY           |        |      | Install log barway to discourage pedestrian traffic.  |
| C              | TREE PLANTING        |        | BASE | Plant per materials list, plan, detail and specification.                                   |

| PLANT MATERIALS SCHEDULE |      |  |                                       |        |  |
|--------------------------|------|--|---------------------------------------|--------|--|
| QTY                      | CODE | COMMON NAME  | SCIENTIFIC NAME                       | SIZE   | NOTES  |
| -                        | VFE  | Valley Forge American Elm                                  | <i>Ulmus Americana 'Valley Forge'</i> | 1" Cal | #10 or equivalent BB<br>Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |
| 4                        | PIO  | Pin Oak  | <i>Quercus alba</i>                   | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |
| 4                        | REO  | Red Oak  | <i>Quercus rubra</i>                  | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |
| 2                        | WHO  | White Oak  | <i>Quercus palustris</i>              | 1" Cal | #10 or equivalent BB<br>Straight species preferred, improved varieties allowed with approval of C.O.   |
| 5                        | TBD  | VERIFY SPECIES TO PAIR WITH EXISTING - LIKELY ELM OR MAPLE |                                       | 1" Cal | #10 or equivalent BB   |

NOTES:  
 1. TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.  
 2. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



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DESIGNED:  
MPS/JAS  
TECH. REVIEW:  
HACE  
DATE:  
05/01/2023

SUB SHEET NO.  
**L9.2**

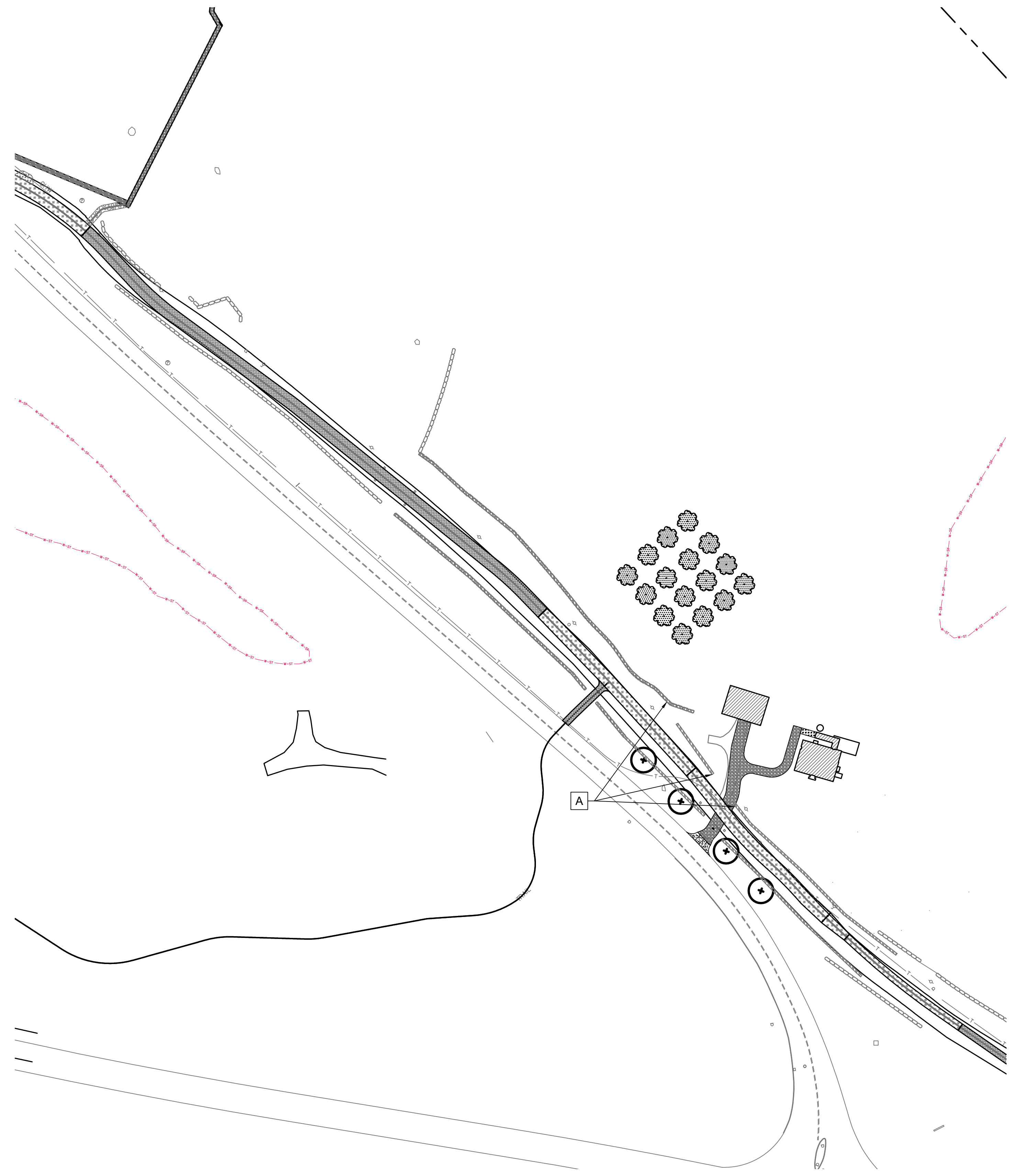
TITLE OF SHEET  
**VC PARKING AND  
PARKER'S REVENGE  
SITE PLAN**  
LANDSCAPE & SEPTIC REPAIRS  
GREAT AMERICAN OUTDOORS ACT (GAOA)  
LEXINGTON, LINCOLN, & CONCORD MA

DRAWING NO.  
406  
184184  
PMIS/PKG NO.  
317529  
SHEET  
OF 60

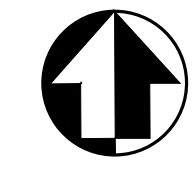
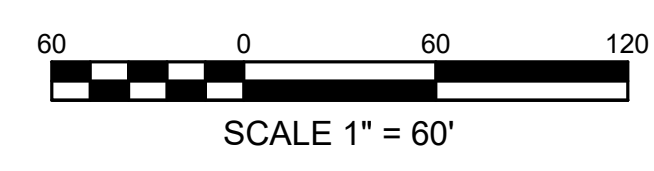
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| SITE TASK LIST |                          |        |      |  |
|----------------|--------------------------|--------|------|--|
| KEY            | TASK                     | SYMBOL | BID  | DESCRIPTION  |
| A              | WALL REPAIR - WHITTEMORE |        | BASE | Repair 1500 LF of wall. Wall is approximately 22" height with a bottom width of 32". Work is limited to restacking of wall. Any foundation repair shall be by approval of Contracting Officer. Refer to L0.5 - STONE WALL INDEX AND NOTES for further details. |

NOTES:  
 1. SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



1 SITE DETAIL - WHITTEMORE WALL  
 L9.3 SCALE 1" = 60'-0"



|                       |  |                                  |  |                        |
|-----------------------|--|----------------------------------|--|------------------------|
| DESIGNED:<br>MPS/JAS  |  | SUB SHEET NO.<br><br><b>L9.3</b> | TITLE OF SHEET<br><br><b>WHITTEMORE WALL<br/>PLAN AND DETAIL</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |  |                                  |  | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023   |  |                                  |  | SHEET<br>--- OF 60     |
|                       |  |                                  |  |                        |

| SITE TASK LIST |                                       |        |      |   |
|----------------|---------------------------------------|--------|------|---|
| KEY            | TASK                                  | SYMBOL | BID  | DESCRIPTION   |
| A              | INSTALL GRAVEL DRIVE                  |        |      | Install 9,400 SF of gravel service area per detail 8/L11.1  |
| B              | REFRESH TRAIL SURFACE                 |        |      | Refresh 1600 SF of gravel trail surfacing, level and compact per detail 2/11.3  |
| C              | REMOVE REMAINING LILAC MATERIAL       |        | BASE | Pre-treat foliage with herbicide. Remove root crown, add topsoil as necessary, seed with approved seed mix.   |
| D              | LAWN REPAIR - SELECTIVE               |        |      | Selective repair of sections of lawn with ruts, divots, depressions. Topdress with imported topsoil, perform necessary scarification or aeration of surface, seed repaired area with approved seed mix. |
| E              | UPDATE ORCHARD FENCING, REPLACE TREES |        |      | Replace 5 orchard trees, install larger deer fencing perimeter per detail 1/L11.6   |
| F              | TREE PLANTING                         |        | BASE | Plant per materials list, plan, detail and specification.   |

| PLANT MATERIALS SCHEDULE |      |                           |                                       |        |   |
|--------------------------|------|---------------------------|---------------------------------------|--------|---|
| QTY                      | CODE | COMMON NAME               | SCIENTIFIC NAME                       | SIZE   | NOTES   |
| 2                        | VFE  | Valley Forge American Elm | <i>Ulmus Americana 'Valley Forge'</i> | 1" Cal | #10 or equivalent BB Substitute only with Dutch Elm resistant, improved varieties such as 'Princeton' or 'Jefferson', as approved by C.O. |

- NOTES:
- TREE PLANTING SHALL OCCUR AT PRE-APPROVED, TESTED LOCATIONS TO BE DELINEATED WITH STAKING. PLANT TREES IN LOCATION INDICATED - DO NOT EXTEND PLANTINGS BEYOND PRE-APPROVED AREA.
  - SITE IS ARCHEOLOGICALLY SENSITIVE. WORK MAY REQUIRE ADDITIONAL TESTING BEFORE COMMENCEMENT OF WORK AND/OR THE PRESENCE OF AN NATIONAL PARK SERVICE APPROVED ARCHEOLOGICAL MONITOR. COORDINATE NECESSARY MONITORING WITH CONTRACTING OFFICER.



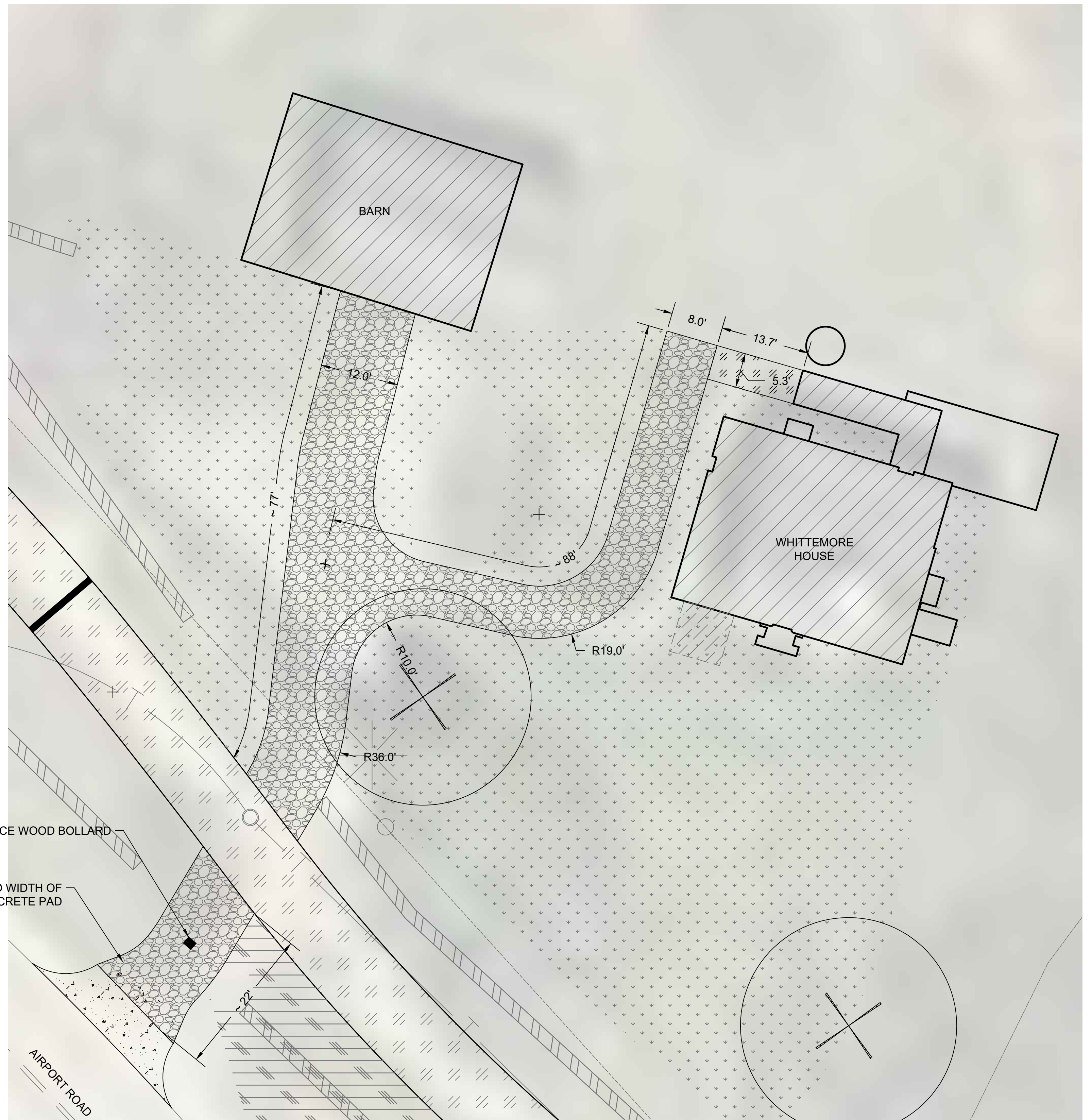
1 WHITTEMORE HOUSE SITE PLAN  
L9.4 SCALE 1" = 30'-0"

5/1/2023 2:43 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L9\_WHIT\_SITEPLAN\_CULA.DWG

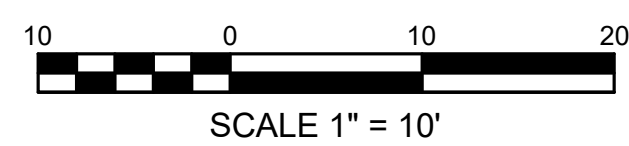
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| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L9.4</b> | TITLE OF SHEET<br><br><b>WHITTEMORE HOUSE<br/>SITE PLAN</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                  |   | 184184                 |
| DATE:<br>05/01/2023   |                                  |   | PMIS/PKG NO.<br>317529 |
|                       |                                  |   | SHEET<br>--- OF 60     |

5/1/2023 2:40 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\PARKS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L9\_WHIT\_SITEPLAN\_CULA.DWG



1 WHITTEMORE PAVING DETAIL PLAN  
 L9.5 SCALE 1" = 10'-0"



DD - DRAFT - NFC

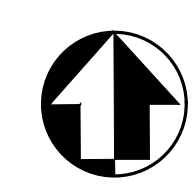
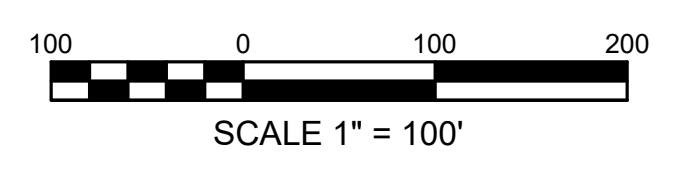
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| DATE:<br>05/01/2023   |                                  |  | SHEET<br>--- OF 60     |
|                       |                                  |  |                        |

5/1/2023 2:31 PM MSURBER R19 C:\USERS\MSURBER\ONEDRIVE - DOI\PARCS\WIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L10\_FISK\_OVERALLPLAN\_CULA.DWG

| SITE TASK LIST |                         |        |     |   |
|----------------|-------------------------|--------|-----|---|
| KEY            | TASK                    | SYMBOL | BID | DESCRIPTION   |
| A              | WALL VEGETATION REMOVAL |        |     | Placeholder for additional work which may be identified later. This would consist of removal of overgrown vegetation on walls.  |
| B              | MEADOW WORK             |        |     | Mow, scalp areas overgrown by woody shrubs. Treat woody shrubs with herbicide. Retreat if necessary. In fall, overseed with approved seed mix. Refer to L0.4 - LAWN AND MEADOW INDEX AND NOTES for further details. |

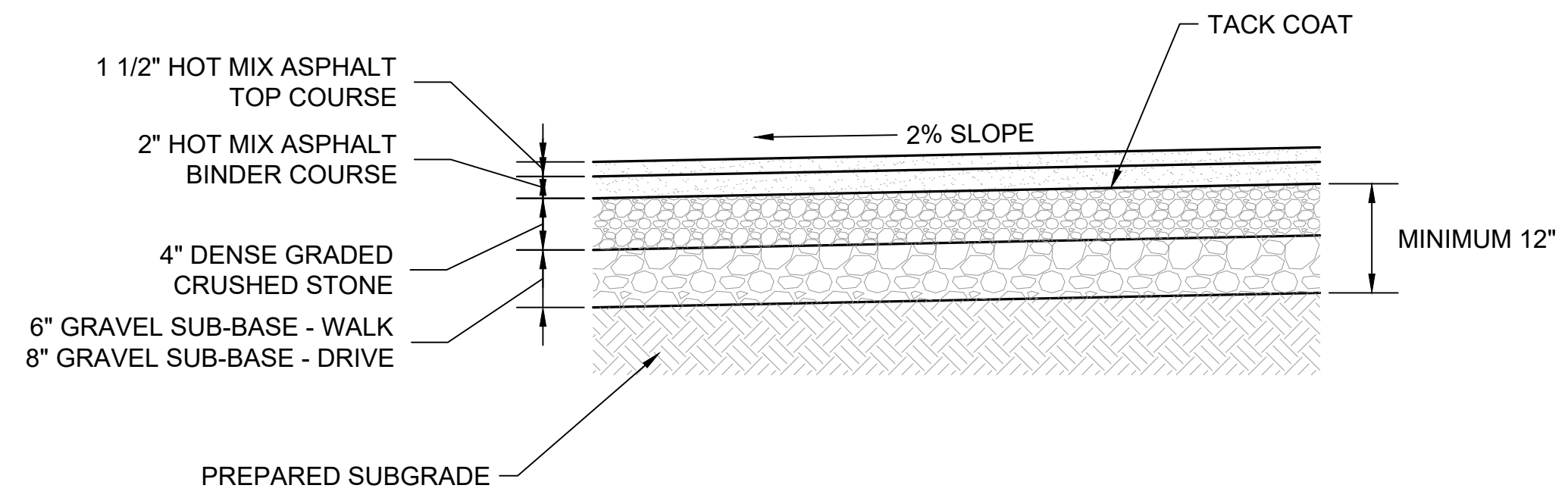


1 FISCHE HILL OVERALL PLAN  
L10.0 SCALE 1" = 100'-0"

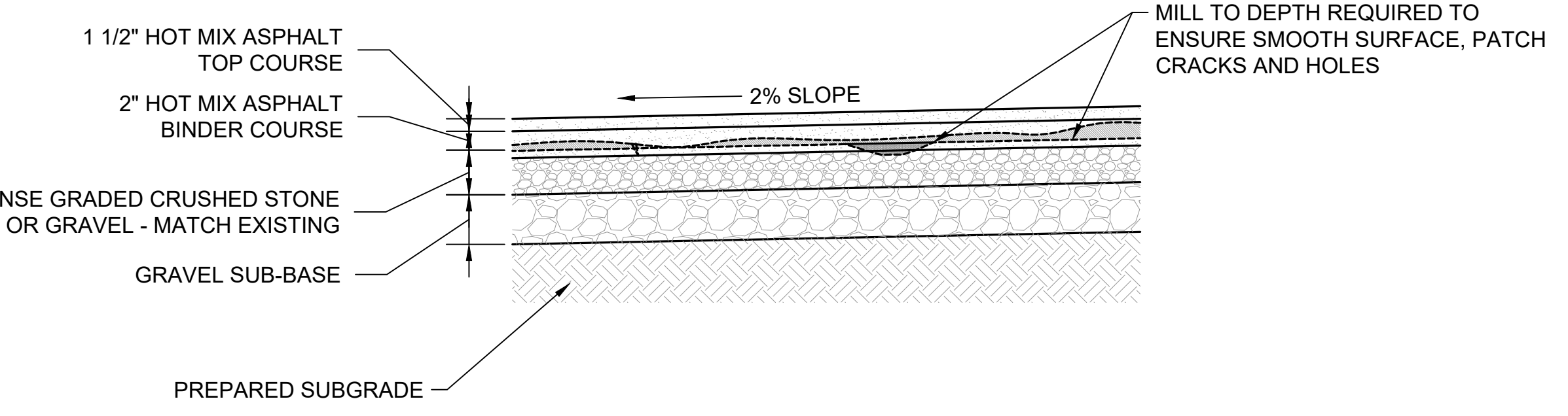


|                       |  |                                   |   |                        |
|-----------------------|--|-----------------------------------|---|------------------------|
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| TECH. REVIEW:<br>HACE |  |                                   |   | PMIS/PKG NO.<br>317529 |
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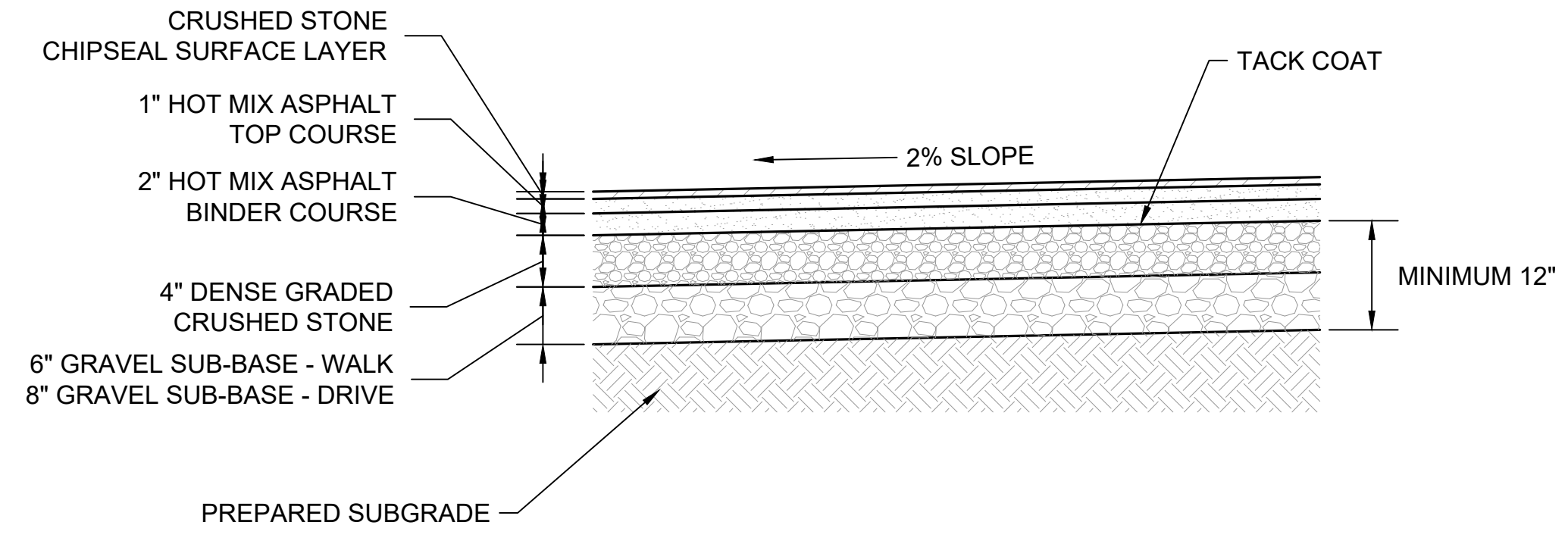
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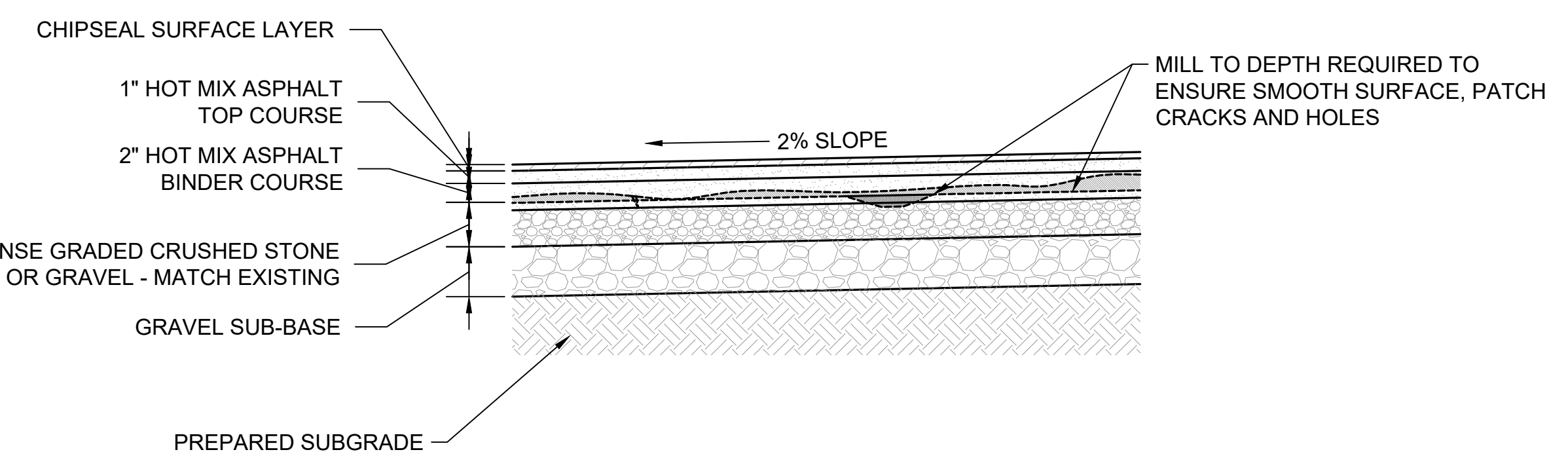
**1 NEW ASPHALT ON GRAVEL BASE**  
L11.1 NTS



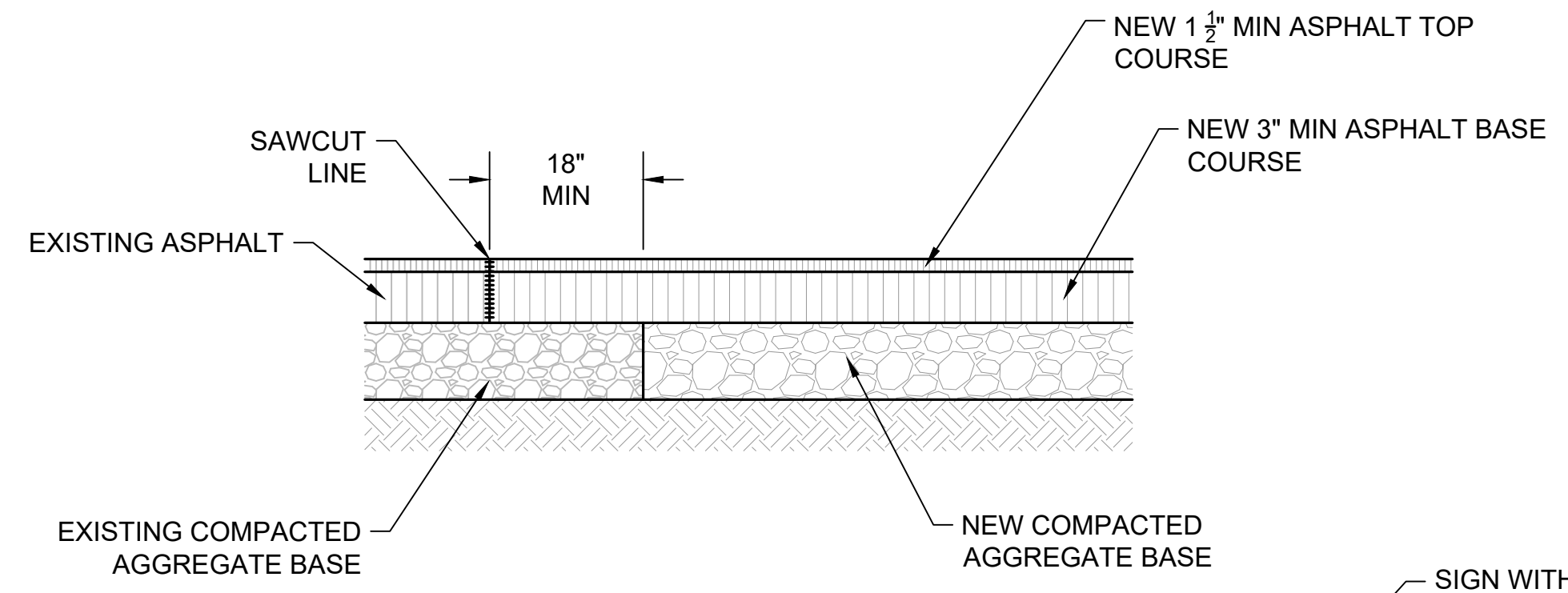
**2 MILLED ASPHALT RESURFACE**  
L11.1 NTS



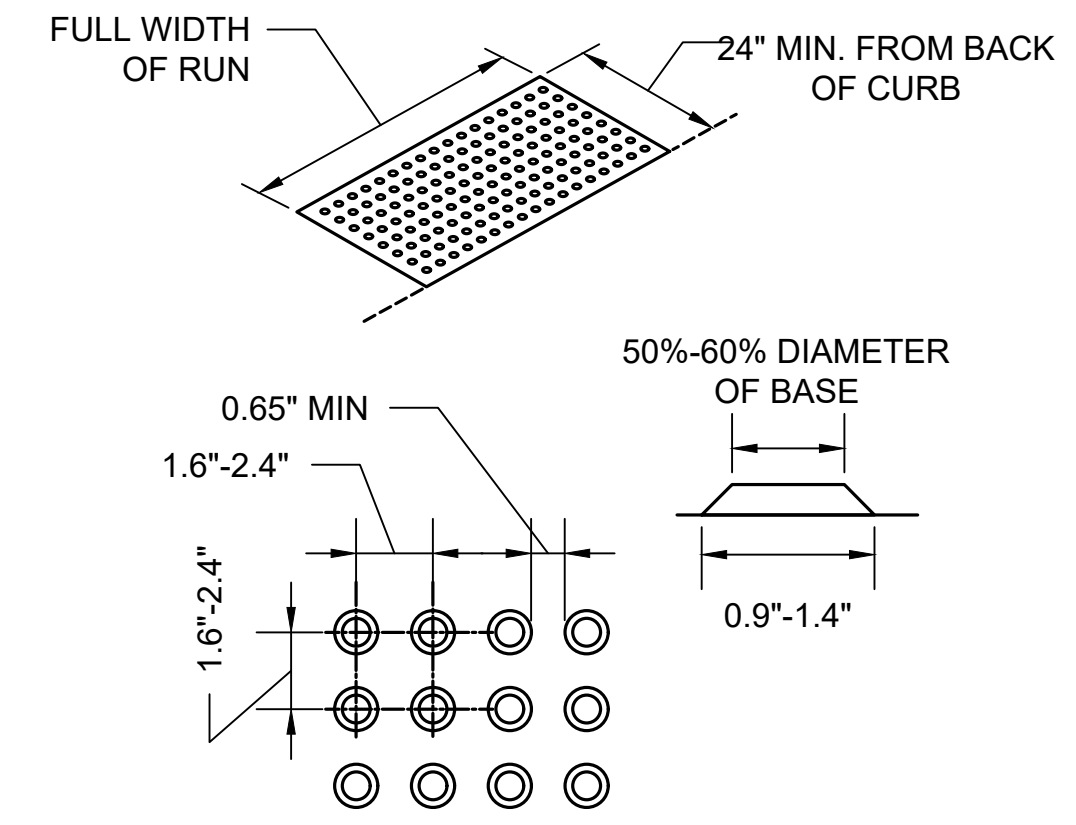
**3 NEW ASPHALT WITH CHIPSEAL**  
L11.1 NTS



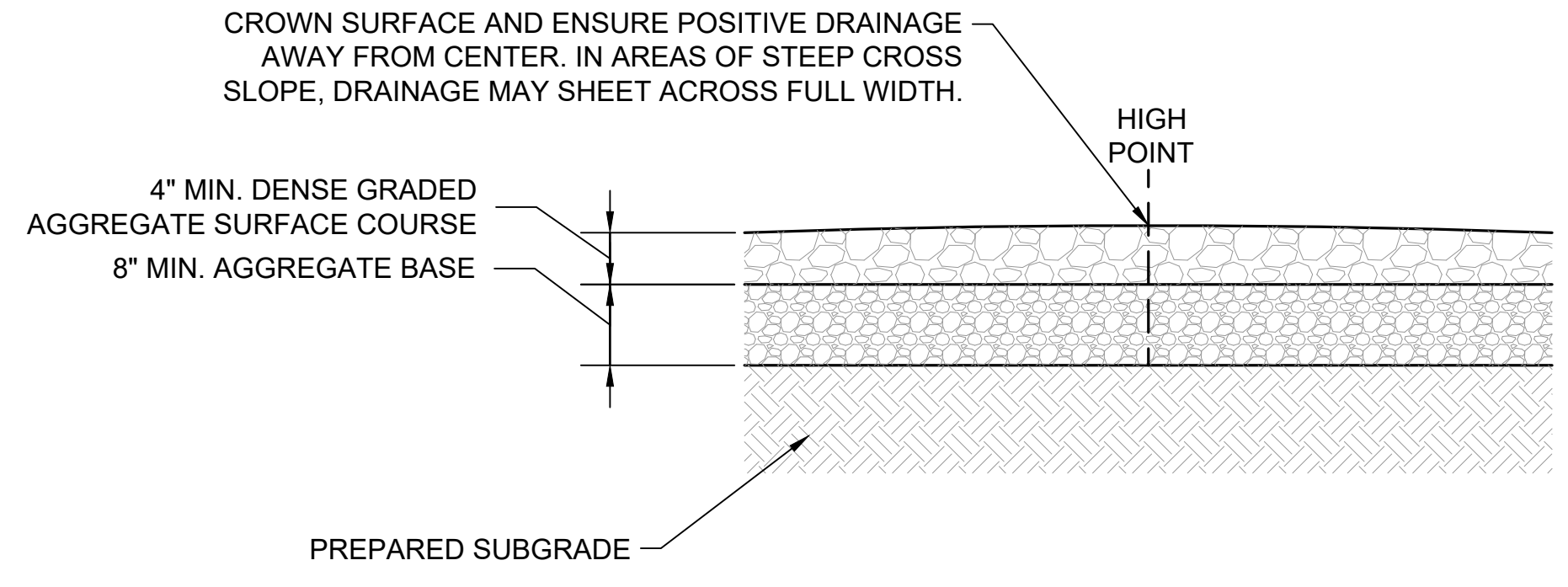
**4 MILLED ASPHALT WITH CHIPSEAL**  
L11.1 NTS



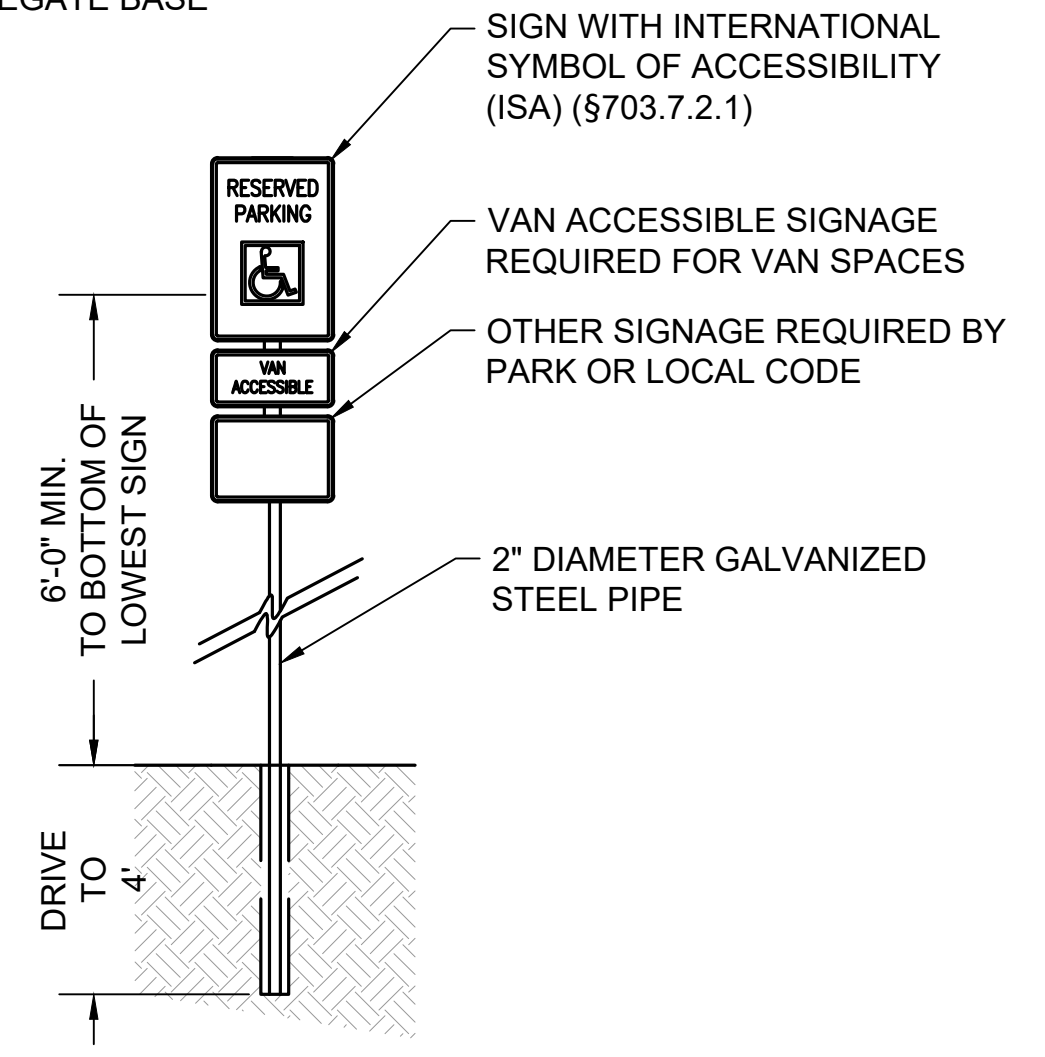
**5 NEW ASPHALT - JOIN TO OLD**  
L11.1 NTS



**6 TACTILE STRIP**  
L11.1 NTS



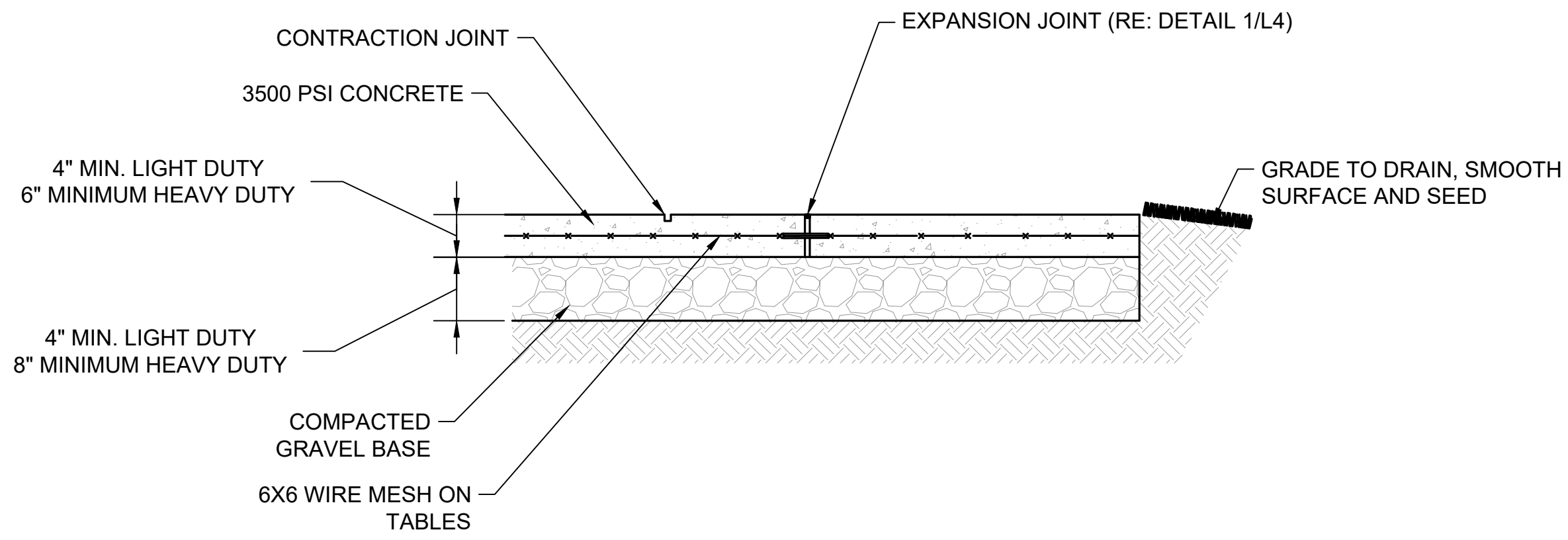
**8 GRAVEL DRIVEWAY**  
L11.1 NTS



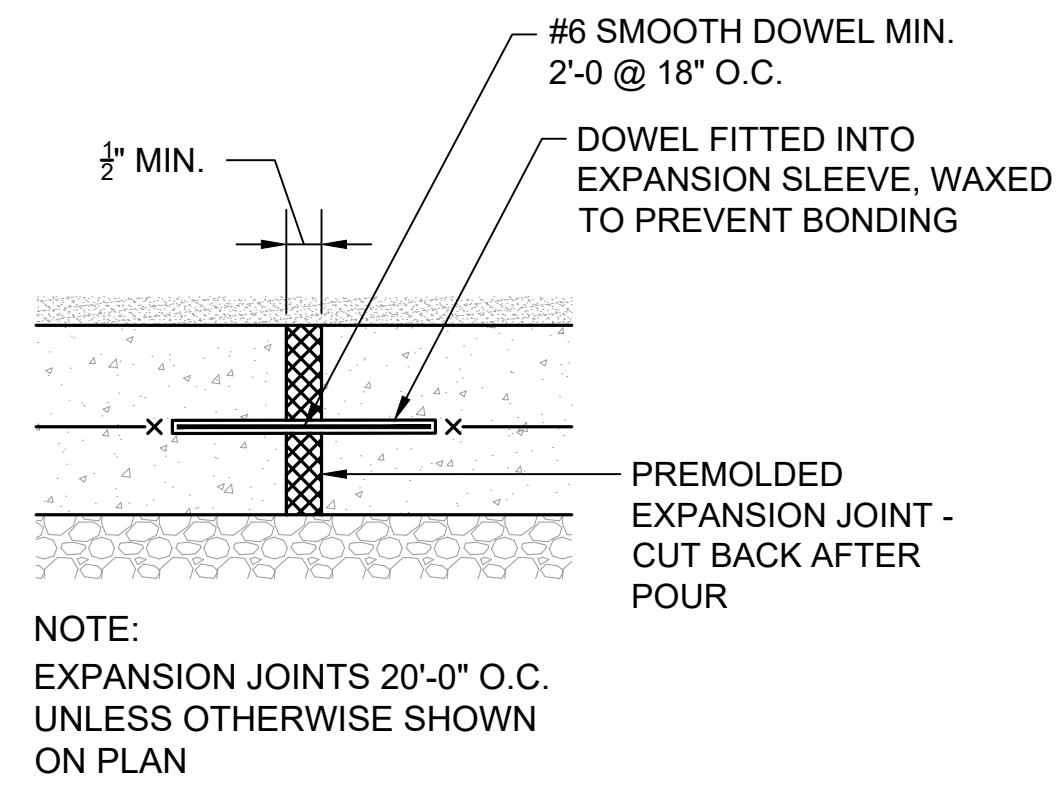
**7 ACCESSIBLE PARKING SIGN**  
L11.1 NTS

|                    |  |  |                       |                     |
|--------------------|--|--|-----------------------|---------------------|
| DESIGNED: MPS/JAS  |  | <b>L11.1</b>   | <b>PAVING DETAILS</b> | DRAWING NO. 406     |
| TECH. REVIEW: HACE |  |  |                       | 184184              |
| DATE: 05/01/2023   |  |  |                       | PMIS/PKG NO. 317529 |
|                    |  |  |                       | SHEET 8 OF 60       |
| DD - DRAFT - NFC   |  | TITLE OF SHEET   |                       |                     |
|                    |  | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                       |                     |

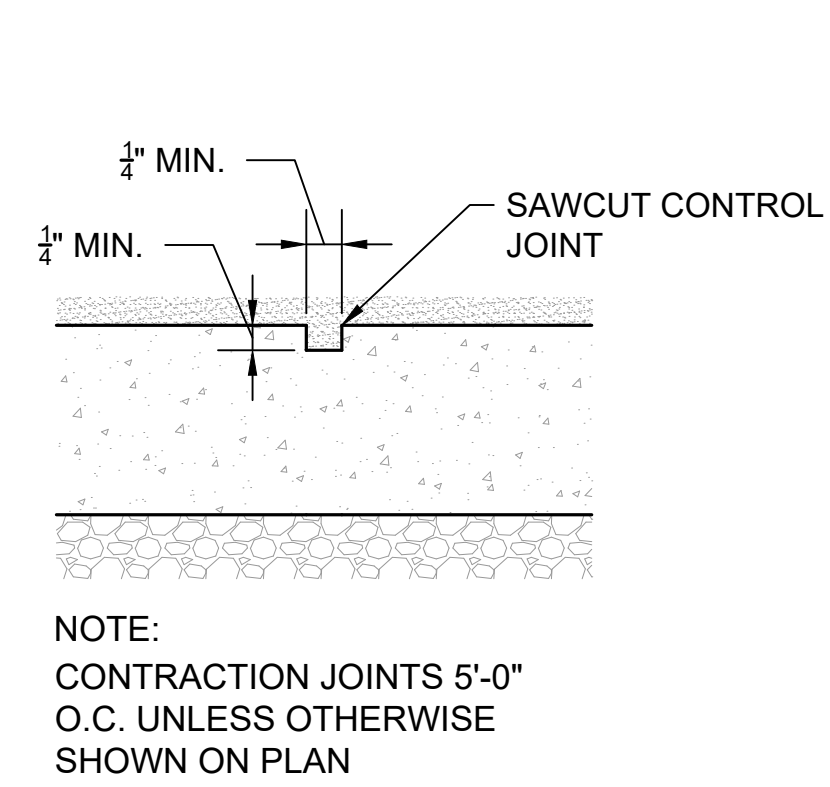
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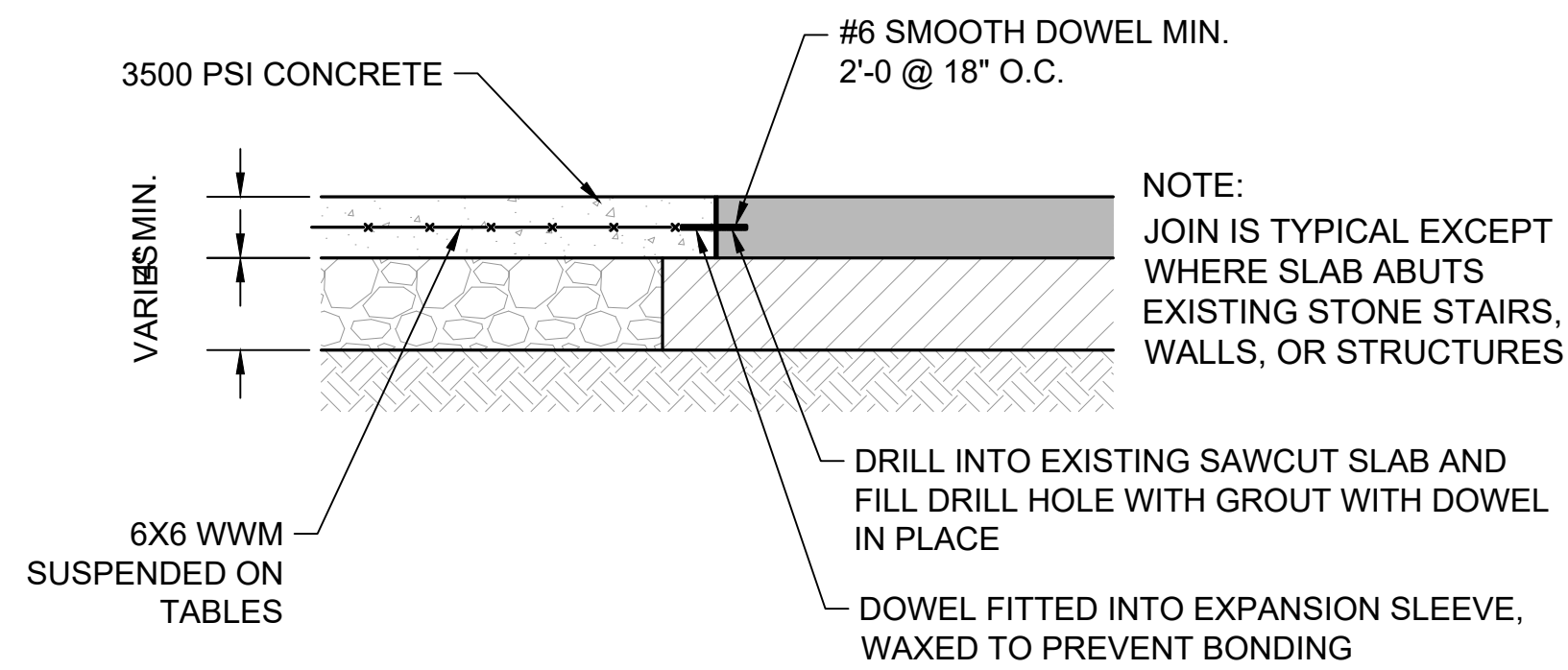
**1 NEW CONCRETE - PEDESTRIAN**  
L11.2 NTS



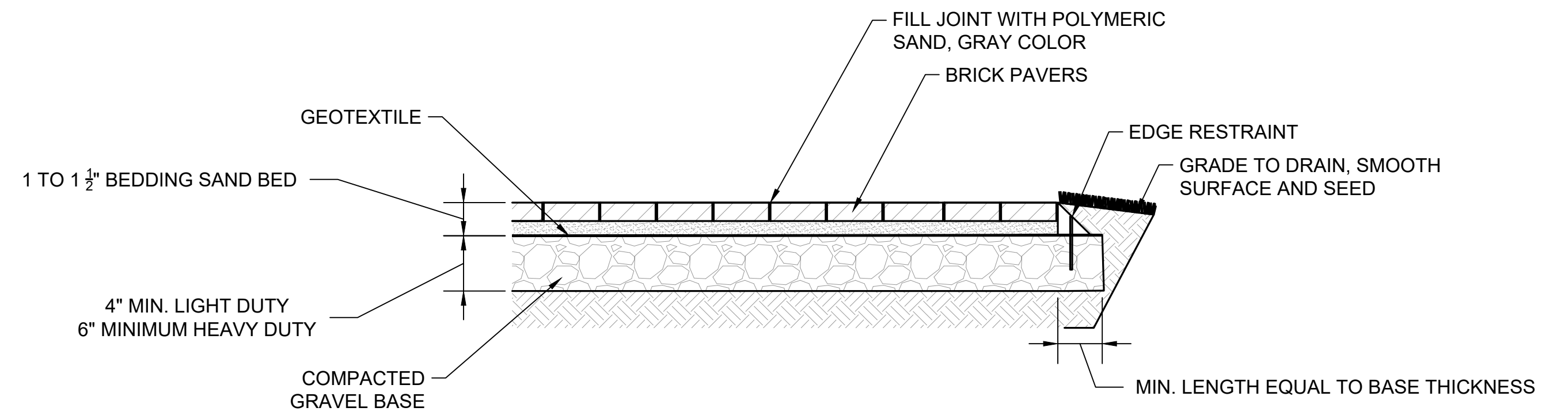
**2 NEW CONCRETE - EXPANSION JOINT**  
L11.2 NTS



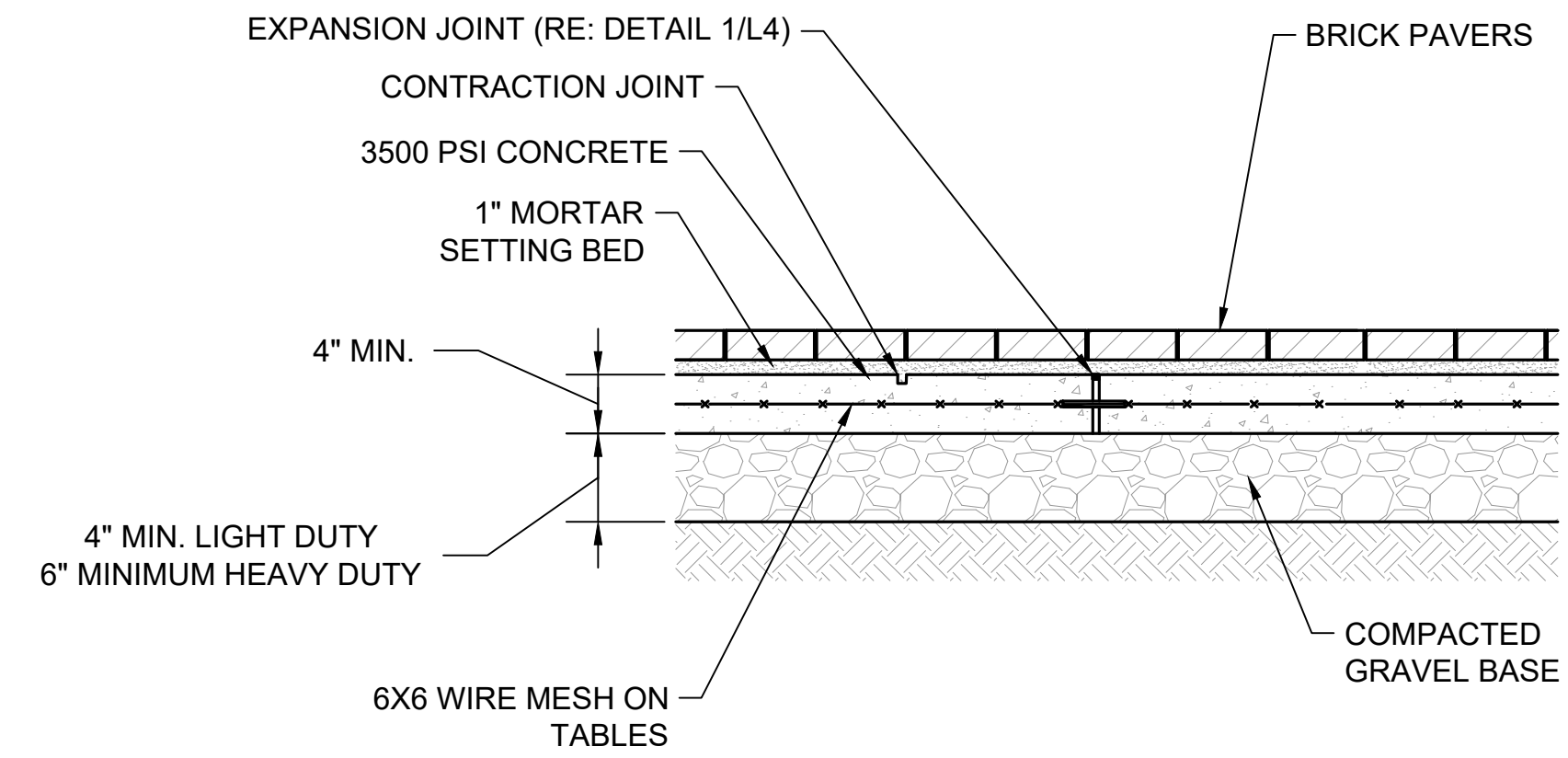
**3 NEW CONCRETE - CONTROL JOINT**  
L11.2 NTS



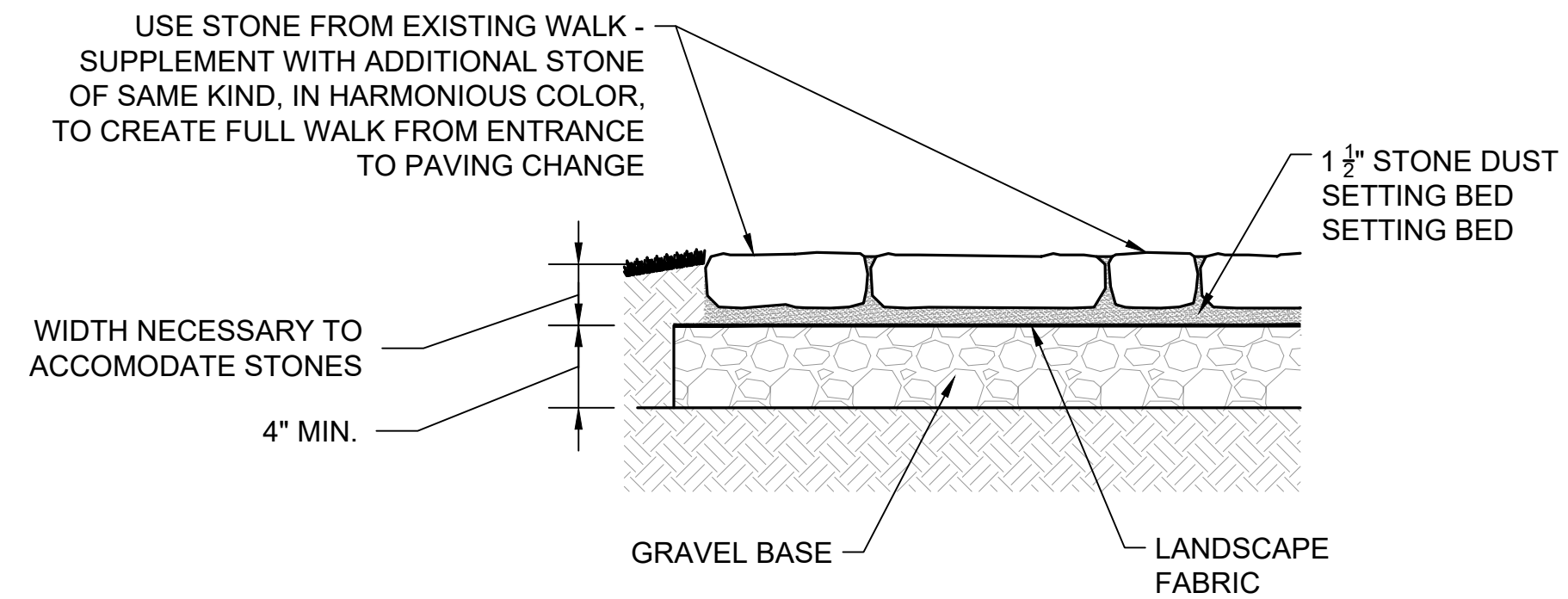
**4 NEW CONCRETE - JOIN TO OLD**  
L11.2 NTS



**5 RESET BRICK PAVERS - SAND**  
L11.2 NTS



**6 RESET BRICK PAVERS - MORTAR**  
L11.2 NTS

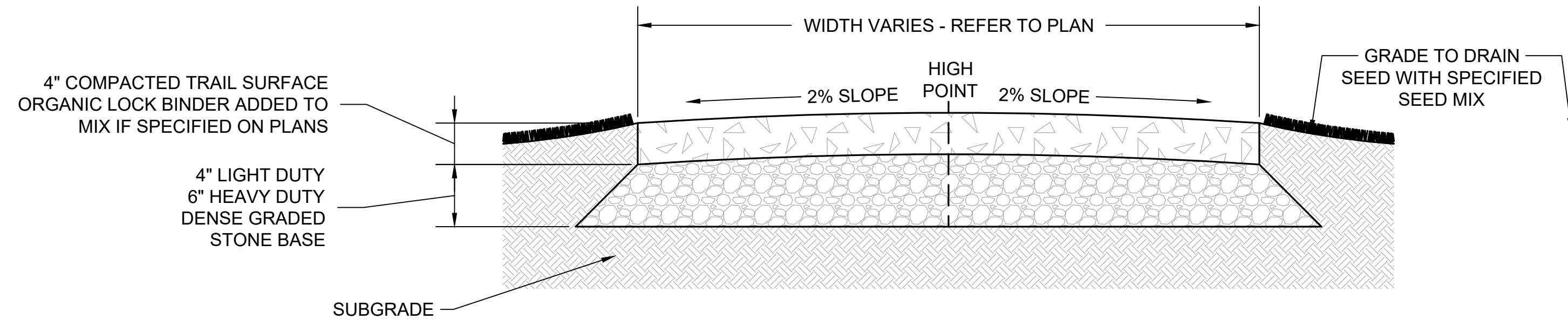


**7 STONE WALKWAY REPAIR**  
L11.2 NTS

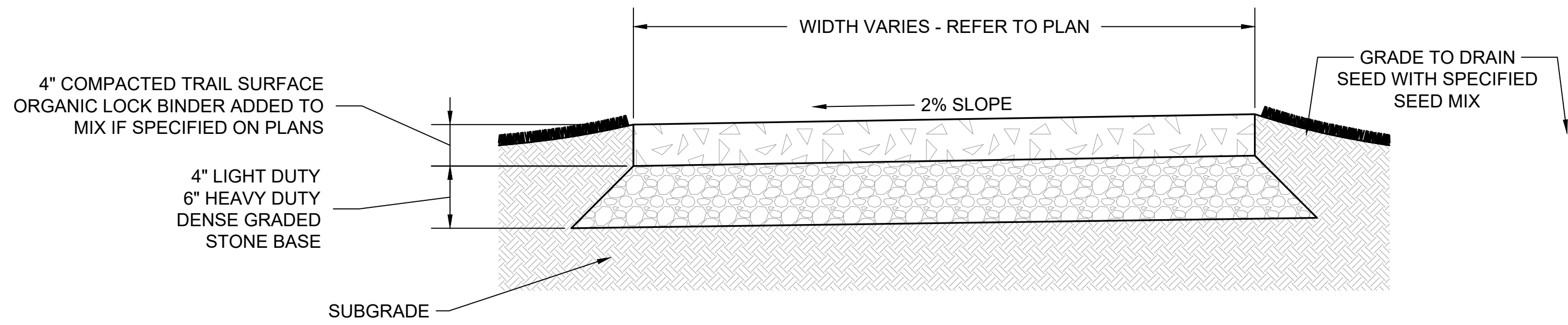
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| DATE:<br>05/01/2023   |                               | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | SHEET<br>OF 60         |

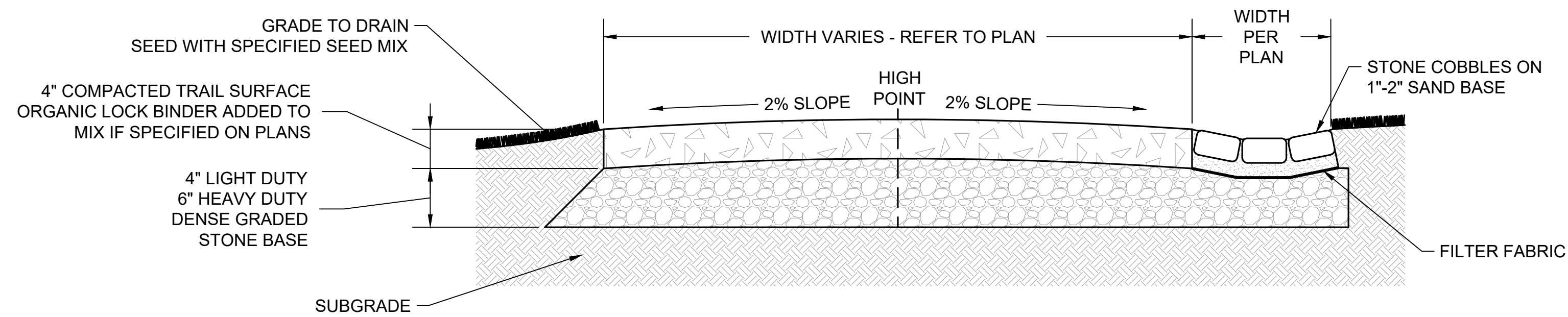
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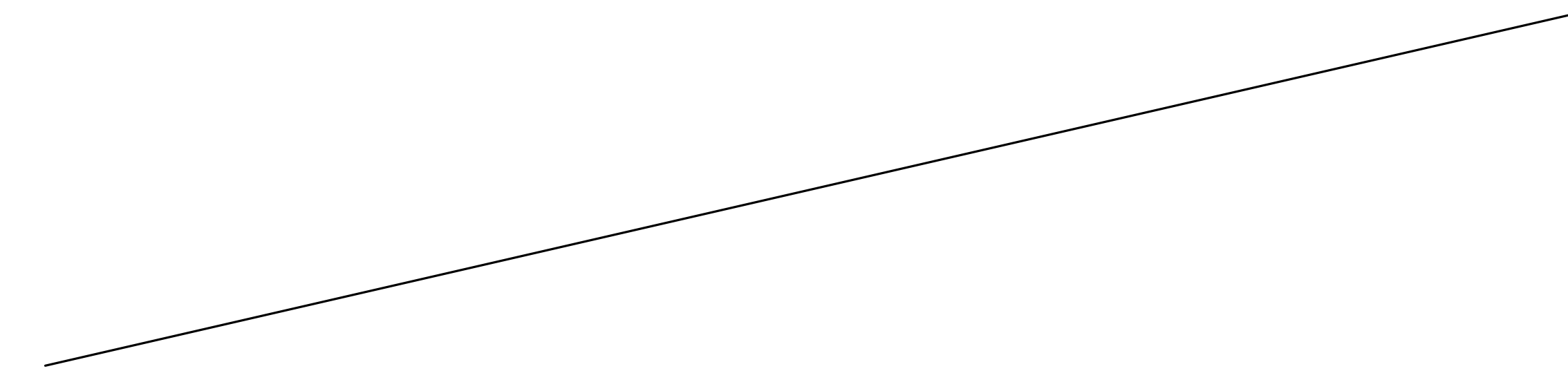
1 HARDENED TRAIL SURFACE - CROWNED  
L11.3 NTS



2 HARDENED TRAIL SURFACE - SLOPED  
L11.3 NTS



3 HARDENED TRAIL WITH COBBLE DRAIN  
L11.3 NTS

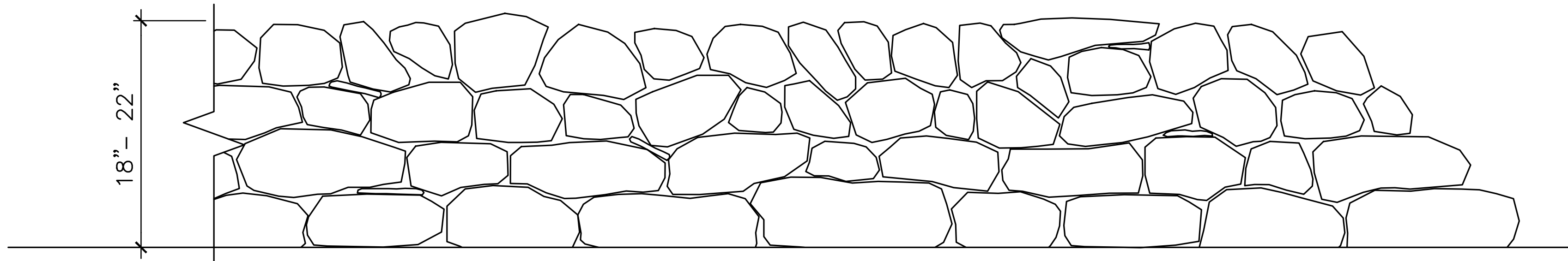


4 REFRESH TRAIL SURFACE  
L11.3 NTS

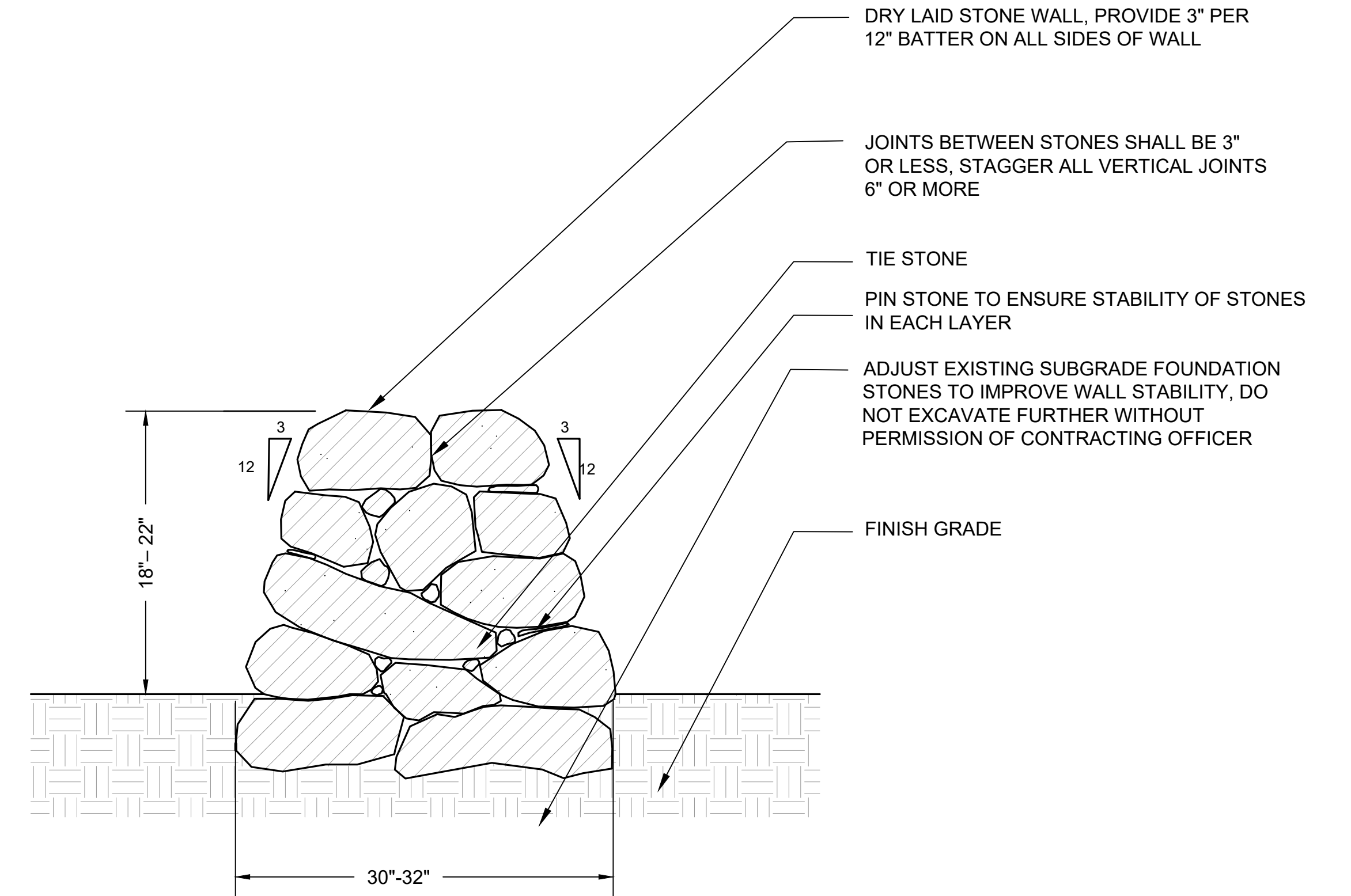
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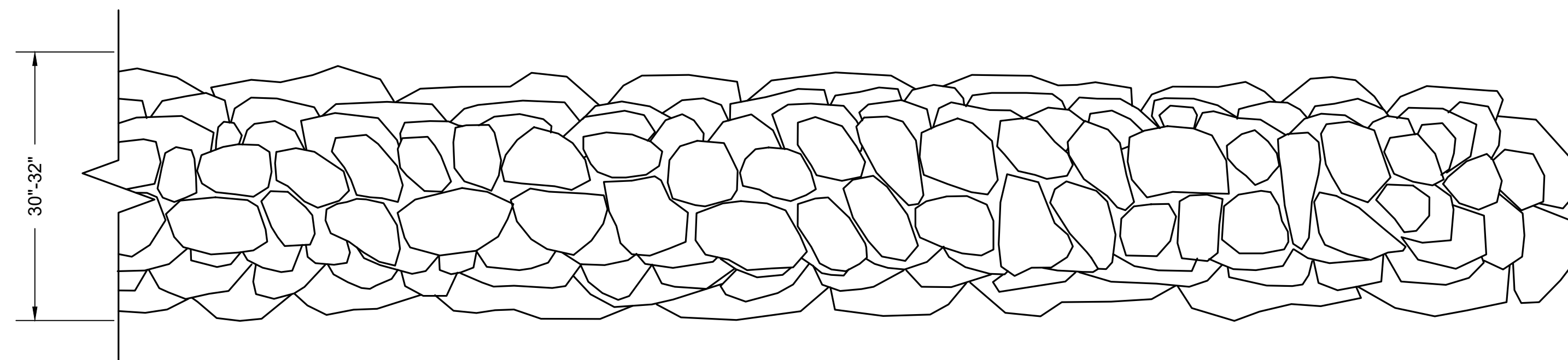
**1 DRY LAID STONE WALL ELEVATION**  
L11.4 NTS



**2 DRY LAID STONE WALL SECTION**  
L11.4 NTS

**GENERAL NOTES**

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONSTRUCT A SAMPLE LINEAR WALL SECTION OF 10' DEMONSTRATING CONSTRUCTION TECHNIQUE AND MATERIALS. FOR APPROVAL BY THE CONTRACTING OFFICER IN CONSULTATION WITH CULTURAL LANDSCAPE SUBJECT MATTER EXPERT
2. STONES SHALL INCREASE IN SIZE FROM TOP TO BOTTOM OF WALL
3. CONTRACTOR SHALL USE EXISTING WALL STONES, SUPPLEMENTED BY STONES STOCKPILED BY THE PARK
4. IF ADDITIONAL STONE IS REQUIRED, MATERIALS MUST BE APPROVED BY CONTRACTING OFFICER
5. MAINTAIN CONSISTENT HEIGHT AND WIDTH ALONG LENGTH OF WALL



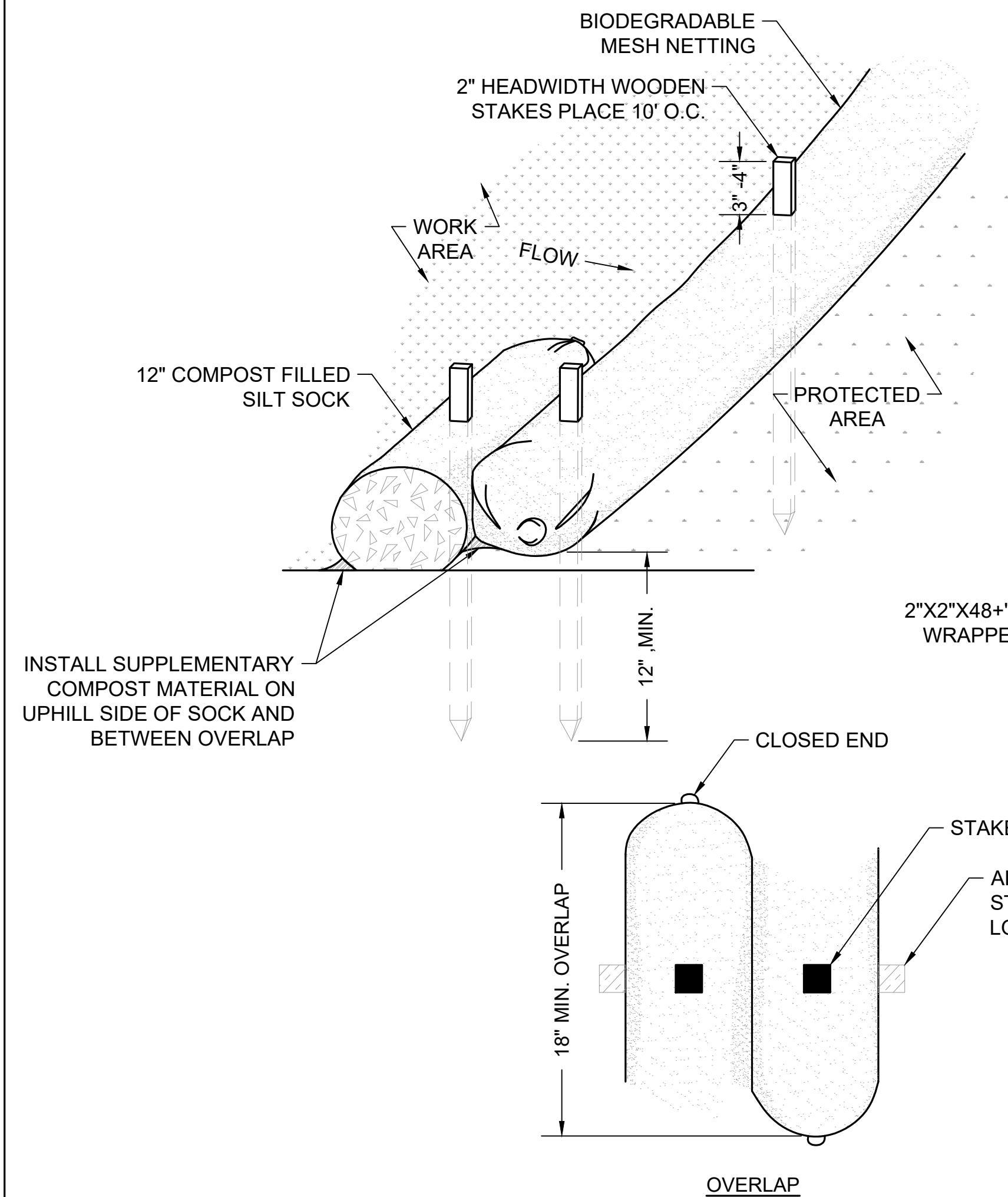
**3 DRY LAID STONE WALL PLAN**  
L11.4 NTS

DD - DRAFT - NFC

|  |                                   |   |                        |
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| DESIGNED:<br>MPS/JAS   | SUB SHEET NO.<br><br><b>L11.4</b> | TITLE OF SHEET<br><br><b>WALL DETAILS</b> | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE  |                                   |   | PMIS/PKG NO.<br>317529 |
| DATE:<br>05/01/2023  |                                   |   | SHEET<br>OF 60         |
| LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |                                   |   |                        |

5/1/2023 2:46 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\WORKS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CLIPKAGE\L11\_DETAILS-SITE\_CULA.DWG

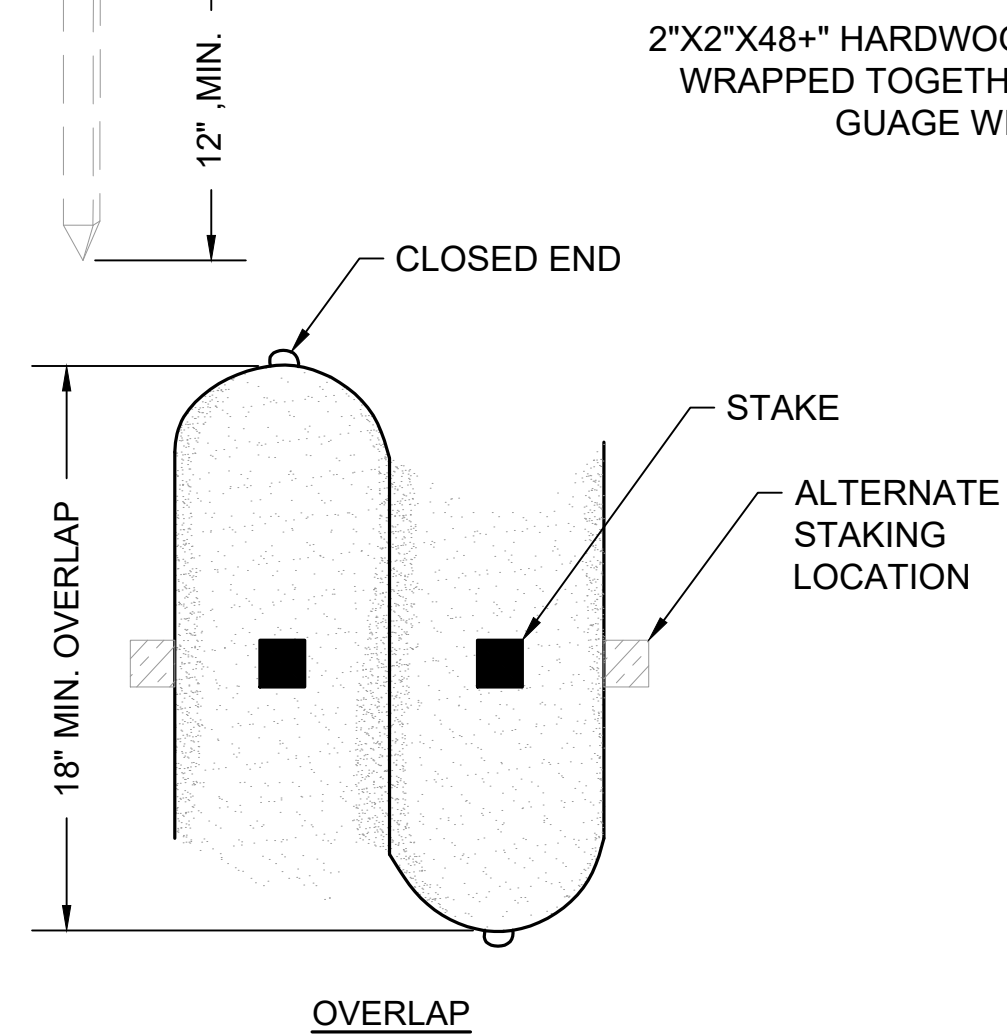
**1 SEEDING AND COMPOST BLANKET**  
L11.6 NTS



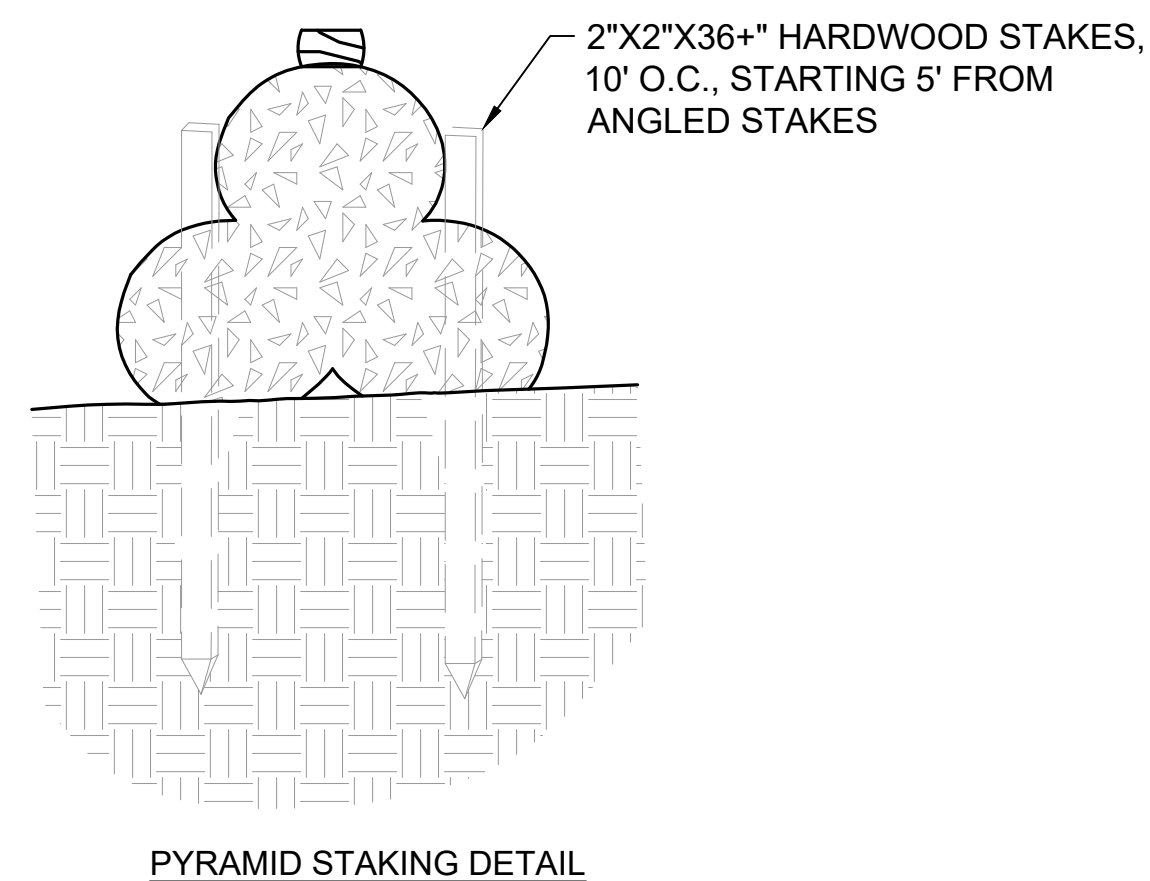
- EROSION CONTROL NOTES**
1. SILT SOCK CONSTRUCTION, FILL MATERIALS, AND MESH NETTING TO MEET PROJECT SPECIFICATIONS.
  2. COMPOST MATERIAL TO BE DISPERSED FOLLOWING REMOVAL OF EROSION CONTROL MEASURES AT END OF PROJECT.
  3. INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN EVENT.

INSTALL SUPPLEMENTARY COMPOST MATERIAL ON UPHILL SIDE OF SOCK AND BETWEEN OVERLAP

**2 SILT SOCK - EROSION CONTROL BARRIER**  
L11.6 NTS

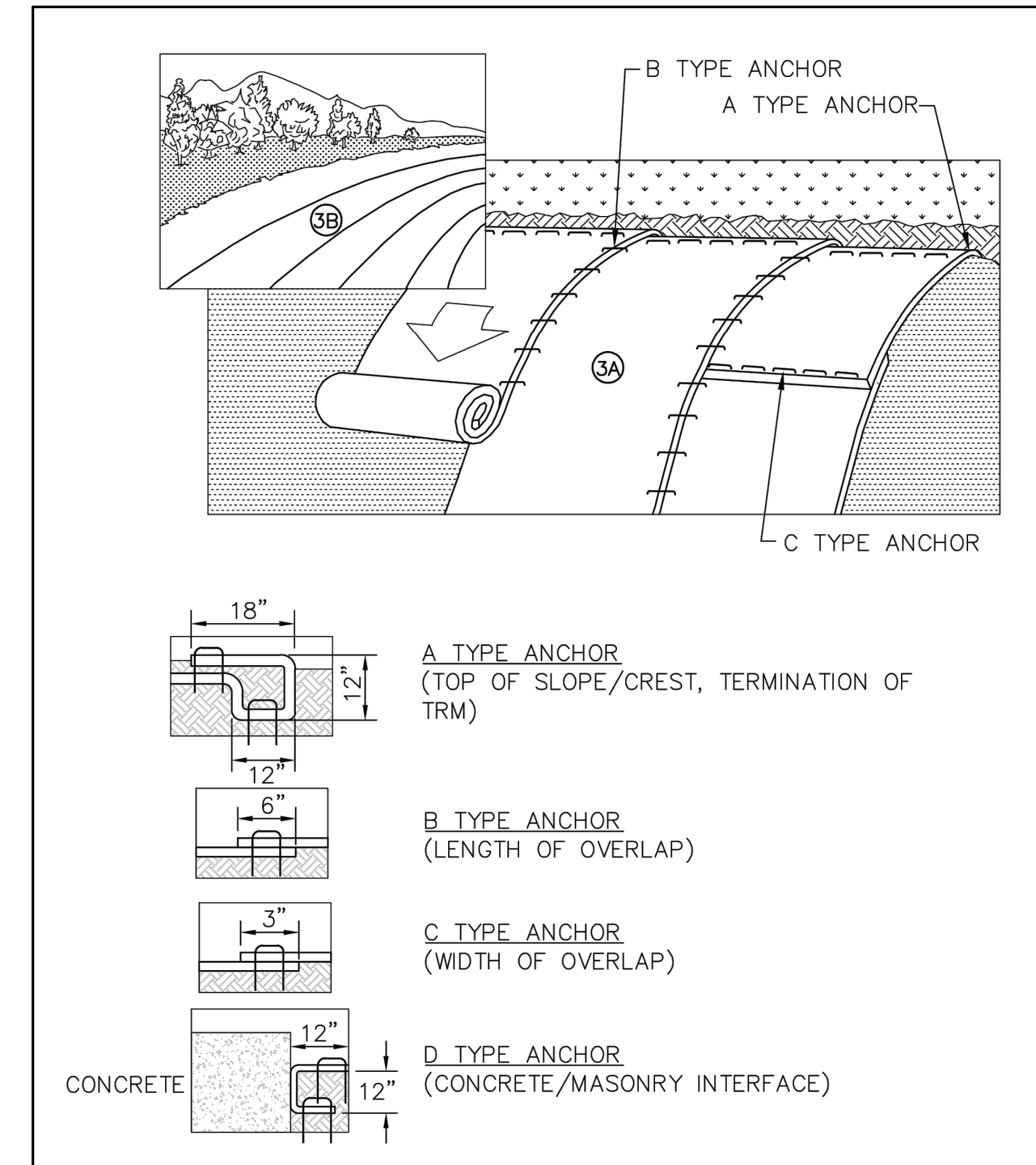


2"X2"X48+" HARDWOOD STAKES, WRAPPED TOGETHER WITH 16 GAUGE WIRE, 10' O.C.

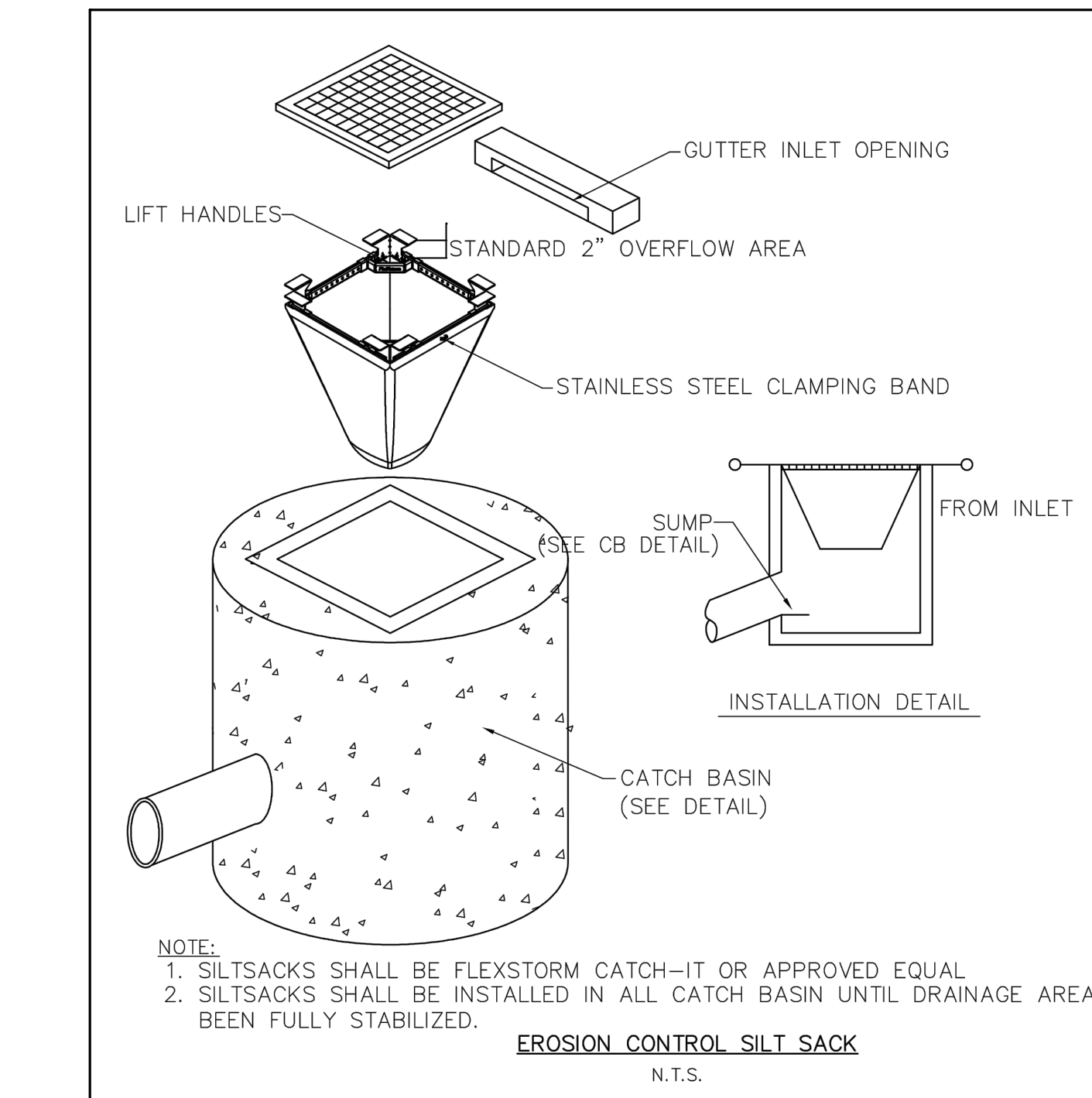


**PYRAMID STAKING DETAIL**

**3 EROSION CONTROL MATTING**  
L11.6 NTS



- EROSION CONTROL MATTING INSTALLATION NOTES**
1. INSTALL TURF REINFORCEMENT MAT (TRM) IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. MANUFACTURERS REPRESENTATIVE SHALL INSPECT THE SITE PREPARATION PRIOR TO INSTALLATION OF THE TURF REINFORCEMENT MAT AND PROVIDE ON SITE SUPERVISION FOR THE INSTALLATION. UPON COMPLETION, THE REPRESENTATIVE SHALL PROVIDE WRITTEN CERTIFICATION AS TO THE ACCEPTABILITY OF THE INSTALLATION.
  2. PREPARE SOIL BEFORE INSTALLING TRM, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  3. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE TRM IN A 6"x6"x6" TRENCH WITH APPROXIMATELY 12" OF TRM EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE TRM WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF TRM BACK OVER SEED AND COMPACTED SOIL. SECURE TRM OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE TRM.
  4. ROLL THE TRM (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. TRM WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL TRM MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
  5. THE EDGES OF PARALLEL TRM MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON TRM TYPE.
  6. CONSECUTIVE TRM SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE TRM WIDTH.
- NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE TRM.
7. WHERE THE BLANKETS RUN PARALLEL TO CONCRETE OR STONE MASONRY WALL, PLACE AND SECURE BLANKET WITH D-TYPE ANCHOR.

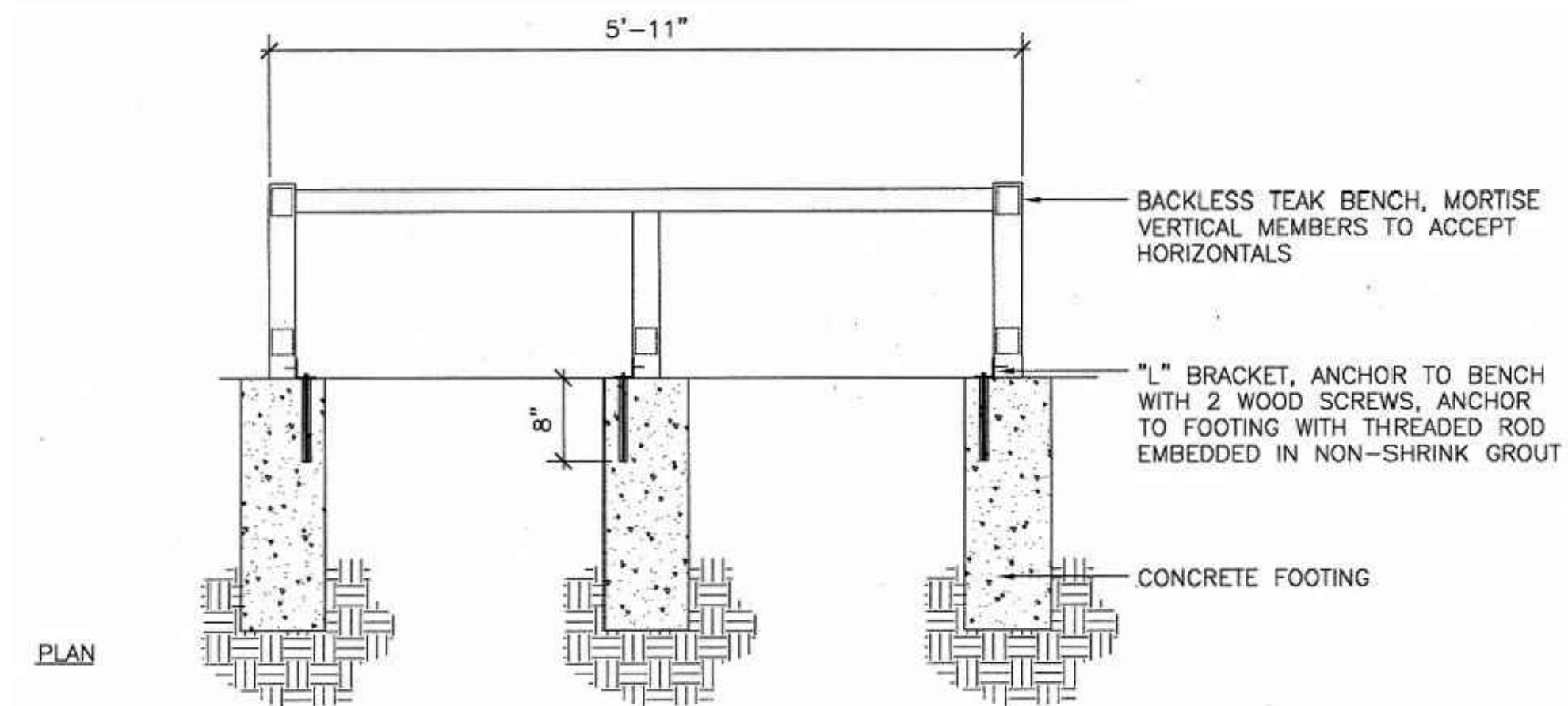
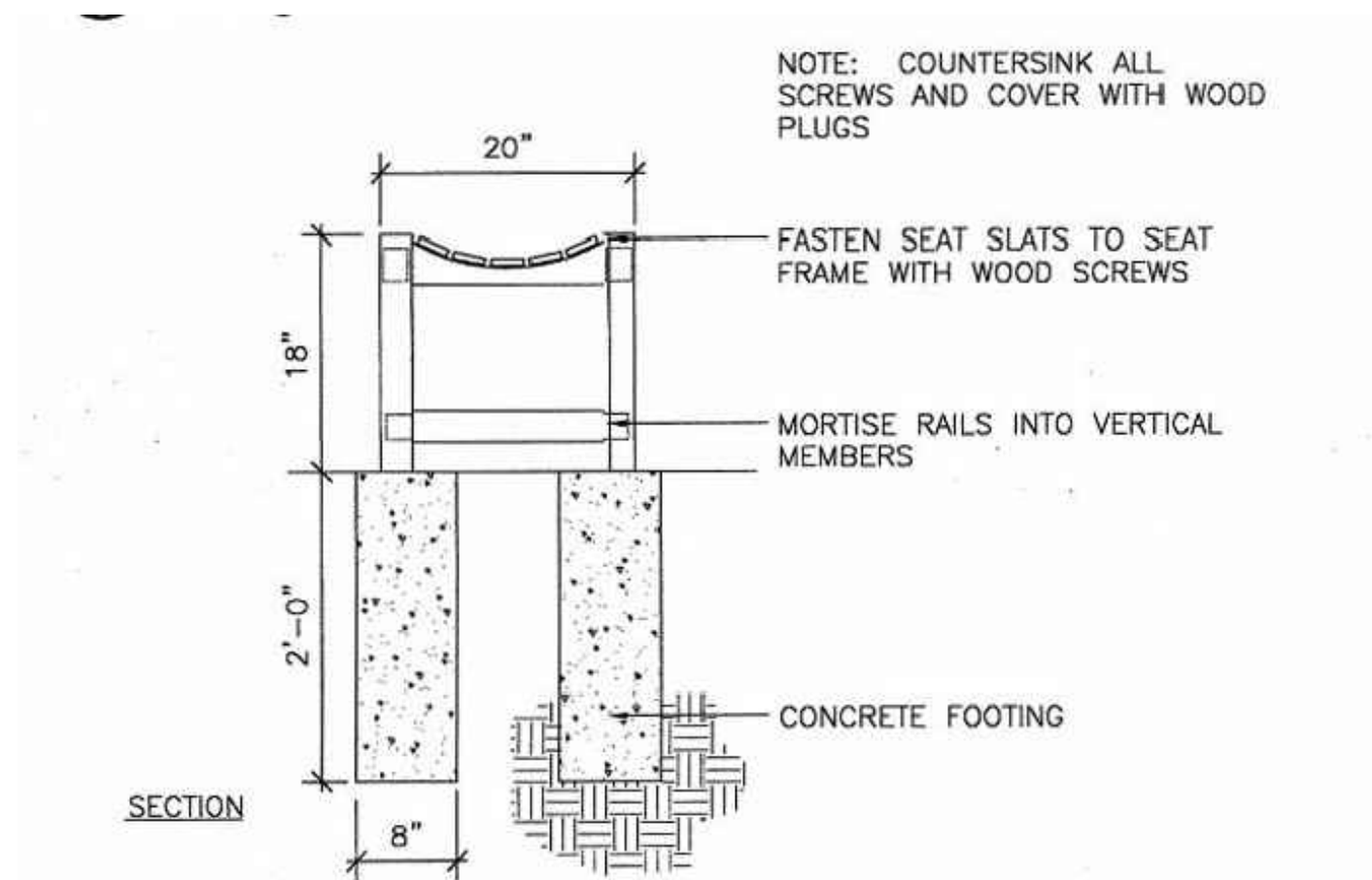


**4 SILT SACK**  
L11.6 NTS

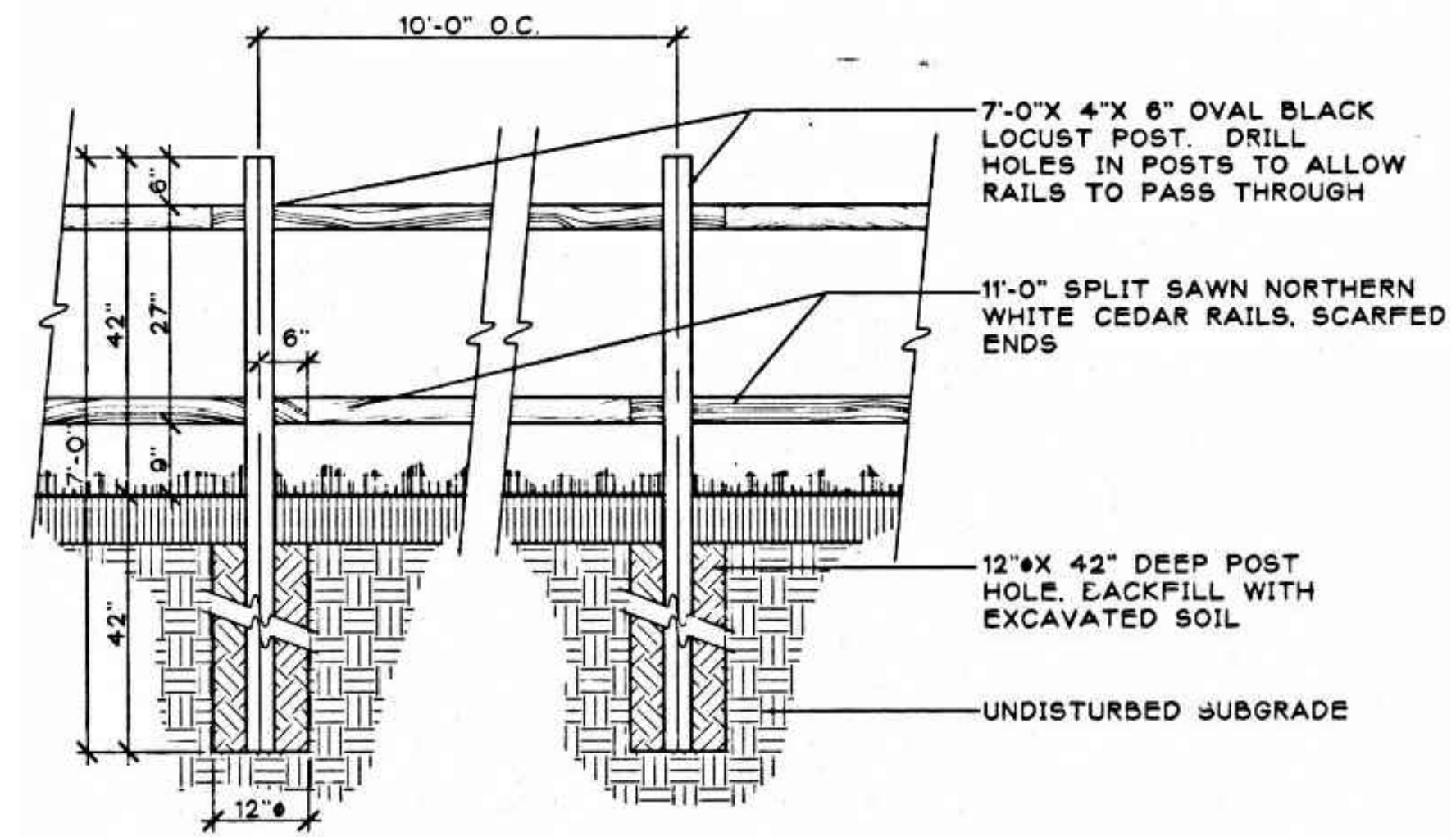
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| DESIGNED:        | L11.6      | SITE DETAILS   |  | 406         |
| MPS/JAS          |            |  |  | 184184      |
| TECH. REVIEW:    |            |  |  | 317529      |
| HACE             |            |  |  | SHEET       |
| DATE:            | 05/01/2023 | LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA |  | OF 60       |

5/1/2023 2:46 PM MSURBER R19 C:\USERS\MSURBER\ONE DRIVE - DOI\PARCS\MIMA\GAOA\LANDSCAPE\3.0 CADD\CURRENT\CIPACKAGE\L11\_DETAILS-SITE\_CULA.DWG

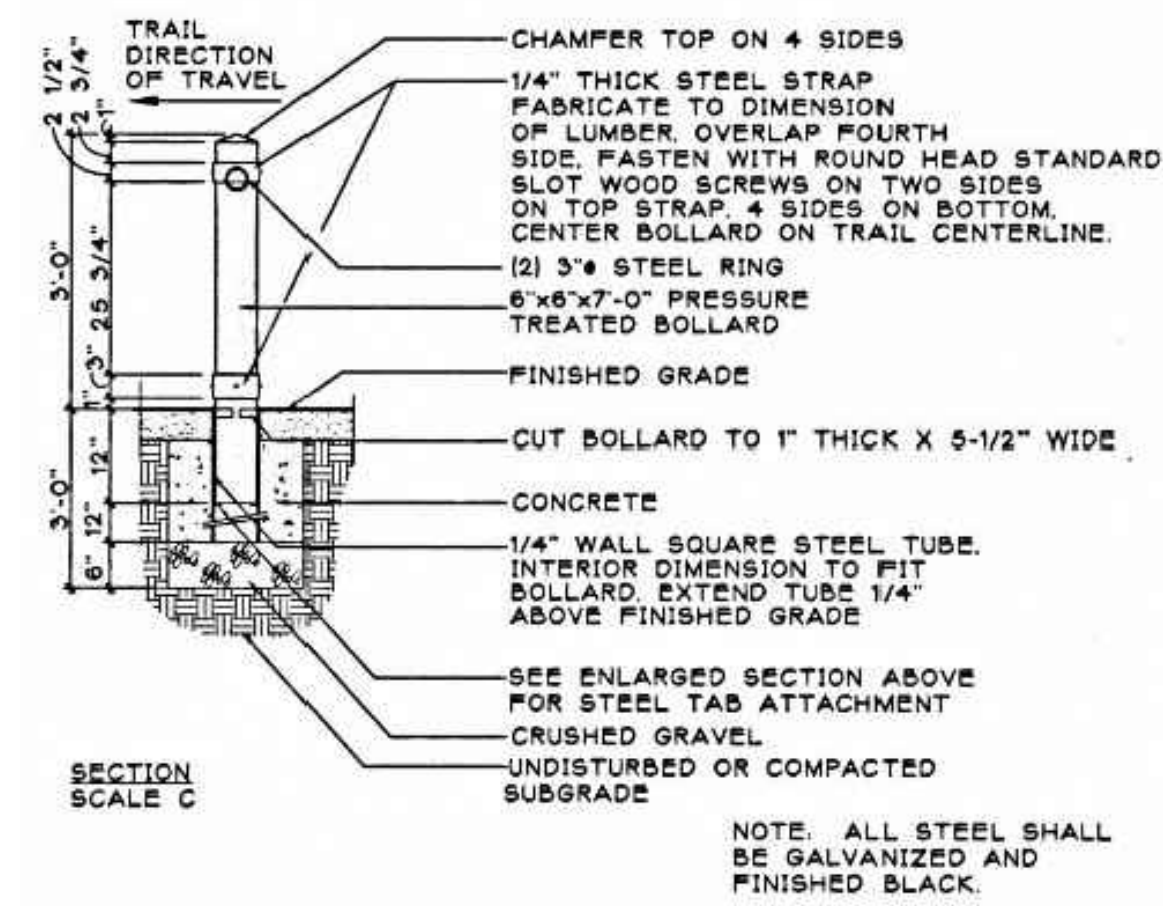
1 DEER FENCING  
L11.7 NTS



2 BENCH DETAIL  
L11.7 NTS



3 SPLIT RAIL FENCE  
L11.7 NTS



4 REMOVABLE BOLLARD  
L11.7 NTS

DD - DRAFT - NFC

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| DESIGNED:<br>MPS/JAS  | SUB SHEET NO.<br><br><b>L11.7</b> | TITLE OF SHEET<br><br><b>SITE DETAILS</b><br><br>LANDSCAPE & SEPTIC REPAIRS<br>GREAT AMERICAN OUTDOORS ACT (GAOA)<br>LEXINGTON, LINCOLN, & CONCORD MA | DRAWING NO.<br>406     |
| TECH. REVIEW:<br>HACE |                                   |   | 184184                 |
| DATE:<br>05/01/2023   |                                   |   | PMIS/PKG NO.<br>317529 |
|                       |                                   |   | SHEET<br>OF 60         |