



Evergreen and East End Preservation Project Project Design Document List

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- Project Map
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- Carbon Quantification
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- Evergreen Forest Management Plan
- Historical Image (1936)
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- Canopy Cover
- Co-Benefit Quantification
- GIS shape files are available upon request



Richmond, VA - Evergreen and East End Preservation Project Project Design Document

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PROJECT OVERVIEW

Basic Project Details

Project Name: Evergreen and East End Preservation Project

Project Number: 006

Project Type: Preservation Project (under the Tree Preservation Protocol – 40 years, version 7.40, dated June 1, 2019)

Project Start Date: November 6, 2019

Project Location: Richmond, Virginia

Project Operator Name: Enrichmond Foundation

Project Operator Contact: Jessica Maffey, Assistant Manager of Operations & TreeLab; (804) 234-3905 ext. 108 or jmaffey@enrichmond.org

Project Area Parcels

List of parcel or parcels covered by the Preservation Commitment(s), collectively defining the Properties, noting which ones contain the Project Area, each with a unique identifier

Jurisdiction / Location	Property Name	Property Parcel Number	Description / Notes
Richmond, VA	East End	E0003307011	1.83 acres – property straddles City of Richmond and Henrico County
Henrico County, VA	East End	805-721-5113	14.291 acres
Richmond, VA	Evergreen	E0003307004	59.2 acres

Project Area Ownership

Project Operator must demonstrate ownership of potential credits or eligibility to receive potential credits. If the Project Operator is not the same as the landowner, provide agreement(s) between Project Operator and landowner authorizing Project Operator to execute this project. Include documentation including title/filename as an attachment.

Project Owner: Parity LLC

Parity, LLC is a Virginia limited liability company and the landowner of the East End and Evergreen Cemetery properties. The Enrichmond Foundation is a nonprofit who has committed to undertake a tree preservation project on the properties owned by Parity, LLC. The two parties have agreed, through a signed “Agreement to Transfer Potential Credits”, that Enrichmond is allowed to undertake the tree preservation project on the properties, including developing and selling potential carbon credits through the project.

Additional Notes:

A conservation easement was added to the Project Area and the existing trees will be managed. The Project avoids conversion of the property from a treed cemetery to a grass cemetery, and the cemetery use is not displaced.

Title and filename of relevant attachment(s):

Title: Agreement to Transfer Potential Credits

File: 1 Evergreen and East End Agreement to Transfer Credits.pdf

LOCATION OF PROJECT AREA (Section 1.3, 1.4)**Location Eligibility**

Project Areas must be located in parcels within or along the boundary of at least one of the following criteria. Describe how the Project Area(s) meet the location criteria.

- A) The Urban Area boundary ("Urban Area"), defined by the most recent publication of the United States Census Bureau*
- B) The boundary of any incorporated city or town created under the law of its state;*
- C) The boundary of any unincorporated city, town, or unincorporated urban area created or designated under the law of its state;*
- D) The boundary of land owned, designated, and used by a municipal or quasi-municipal entity such as a utility for source water or water shed protection;*
- E) A transportation, power transmission, or utility right of way, provided the right of way begins, ends, or passes through some portion of A through D above.*

Project Area(s) location eligibility description:

The Project Area is comprised of three parcels, informally known as East End Cemetery and Evergreen Cemetery. East End Cemetery straddles the City of Richmond boundary, and meets criteria A and B. Evergreen Cemetery is wholly within the City of Richmond boundary, and meets criteria A and B. The Project Area excludes one open area and is a total of 64.76 acres.

Maps

Provide a map of the Project Area with geospatial location vector data in 1) pdf form and 2) any file type that can be imported and read by Google Earth Pro (example KML, KMZ, or Shapefile format). Map should include relevant urban/town boundaries. Include title/filename of relevant attachments.

Regional-scale map of Project Area

Title (and filename) of relevant attachment(s):

Title: East End and Evergreen Cemeteries Regional Scale Map

File: 2 EnRichmond Regional Scale Map.pdf

Map(s) of Project Area

Title and filename of relevant attachment(s):

Title: East End and Evergreen Cemeteries Project Area Map

File: 3 EnRichmond Project Map.pdf

Geospatial location (boundaries) of Project Area

Title (and filename) of relevant attachment(s):

Title: EnrichmondParcelOutline_WGS84

File: 4 EnrichmondParcelOutline_WGS84.shp

DEMONSTRATION OF THREAT OF LOSS (Section 4.2, 4.3)

Project Operator must demonstrate that the Project Area is eligible per existing land use designations. Provide evidence to support the following statement: "Prior to the Preservation Commitment(s), the Project Trees were not preserved from removal through a Recorded Encumbrance, Governmental Preservation of Trees on Public Land, or other prohibitions on their removal."

Describe all "overlay zones", critical areas and their protection buffers, legal encumbrances, and any other pre-existing tree/forest restrictions that may have hindered removal of the Project Trees (in the pre-Preservation Commitment condition). If such pre-existing tree/forest restrictions cover any portion of the Project Area, explain how such restrictions still permitted development and tree removal (such that there was a verifiable threat of loss consistent with your Quantification) and provide supporting evidence including a map.

Land use designation(s) for the Project Area:

The Evergreen parcel is zoned R5- Residential (Single Family), and the East End parcels are zoned R5 and M-2 (General Industrial District).

Overall Explanation:

The total perimeter of the Property Area is 9,561.13 ft and is made up of 84.73% land in developable uses, including land that is privately-owned and zoned as light industrial and general industrial. The surrounding properties include Gillies Creek Industrial Recycling, Reese Sandblasting, and land used for cellular towers. The perimeter measurements were done using ArcGIS Pro 2.4.2. The Property Area is bordered by Stony Run Creek and Gillies Creek, two small waterways that are not subject to any critical environmental designations. The East End and Evergreen Cemetery properties are held on and subject to one conservation easement. There are no other critical area designations on the Project Area.

Title (and filename) of relevant attachment(s):

Title: East End and Evergreen Cemeteries Project Area Map

File: 3 EnRichmond Project Map.pdf

PRESERVATION COMMITMENT

Provide a complete copy of the written Preservation Commitment. Include title/filename, date, and term. If the Project Operator (PO) is not the same as the landowner and the carbon rights (right of PO to receipt and disposal of credits) are not established in the Preservation Commitment itself, then attach the agreement establishing these rights. If Project Area does not have the same boundaries as Preservation Commitment, please state the reasons why, and reference the PDD section(s) where those reasons are discussed in detail.

Title and filename of relevant attachment(s):

Title: 1) Declaration of Restrictive Covenants, 2) Deed of Easement

Files:

5 Evergreen East End Declaration of Restrictive Covenants.pdf

6 Evergreen Easement Amendment Add East End.pdf

Dates:

- The Declaration of Restrictive Covenants was signed by Parity LLC on November 6, 2019 and recorded on December 12, 2019
- The Deed of Easement was signed on September 11, 2019 to amend an open-space easement from December 11, 2018. It was recorded on September 23, 2019.

Preservation Term (years applicable): In perpetuity.

MONITORING AND REPORTING

Describe your plans for continuity of operation of this Carbon+ Project, including monitoring and reporting. If Project Operator plans to claim credits for future growth, describe methods that will be used to quantify future growth.

The Enrichmond Foundation will monitor the Project Area and report to City Forest Credits every three years for forty years, in accordance with the Tree Preservation Protocol. The Project Area is a place of great historical and environmental significance; the plans for its restoration include best practices in forestry management and keeping the space safe and accessible for visitors. Currently, Enrichmond recruits volunteers to assist with removal of invasive species, including invasive trees, meant to increase the overall health and longevity of the forest. Enrichmond has engaged the Virginia Department of Forestry, which offered its recommendations for maintaining a healthy forest on the properties in two Community Forest Management reports. Enrichmond plans to follow these management reports, which will include invasive species removal and management, tree health assessment, as well as mitigation or removal of dead or dying trees. In its annual report, Enrichmond will comment on overall forest health as well as estimate the percentage of trees removed.

Enrichmond currently hosts weekly volunteer clean ups at the cemetery, as well as grave recording and data entry. Enrichmond will continue its regular volunteer opportunities and host annual events, such as a Martin Luther King, Jr. Day of Service and other large-scale volunteer opportunities to further reach out to the surrounding community. A volunteer advisory board, made up of family members and other stakeholders, is leading the execution of the master plan for restoration at the properties. Enrichmond staff will continue to work with the advisory board members to ensure that the work on the ground is reflective of the long-term vision for the properties, with consideration for the health of the forest and environment. Going forward, Enrichmond will continue to develop community investment in the space through volunteer events, grave recording activities, and educational programming led by experts in the cultural and historical content present at the properties.

QUANTIFICATION DOCUMENTATION (Section 10)

Follow detailed instructions in the Protocol for conducting quantification and utilize the Carbon Quantification Spreadsheet to show calculations. Ensure that your requested credit issuance schedule (issuance dates) is accurate and complete in the spreadsheet. Project Operators should describe and appropriately reflect in their carbon quantification any and all planned future activities that may affect the % canopy or carbon stocking in any way.

Method for determining canopy cover (e.g. i-Tree, inventory, other):

iTree Canopy.

Brief description of approach to quantifying carbon (e.g. Forest Service tables, inventory, other):

We used approach 10.1.A found in the Tree Preservation Protocol, which includes referencing US Forest Service General Technical Report (GTR) NE-343 tables to determine the type of stand. The stand age was determined by referencing historical aerial photos of the properties. The percent canopy cover was determined using iTree Canopy with a shapefile of the exact property boundaries minus an open area that is not part of the Project Area. The calculations were completed using the Carbon Quantification Spreadsheet.

Title and filename of attached Excel version of your completed Carbon Quantification Spreadsheet:

Title: East End and Evergreen Carbon Quantification

File: 7 Evergreen and East End Carbon Quantification 20191203.xlsx

Summary numbers from Carbon Quantification Spreadsheet

Project Area (acres)	64.76
Does carbon quantification use stratification (yes or no)?	No
Percent tree canopy cover within Project Area	82%
Project stock / acre (tCO ₂ e/acre)	8,296
Accounting Stock / acre (tCO ₂ e/acre)	6,637
On-site avoided biomass emissions (tCO ₂ e / acre)	5,973
On-site avoided soil carbon emissions (tCO ₂ e / acre)	0
Deduction for displaced biomass emissions (tCO ₂ e / acre)	--
Deduction for displaced soil emissions (tCO ₂ e / acre)	--
Credits from avoided biomass emissions (tCO ₂ e / acre)	5,973
Credits from avoided soil emissions (tCO ₂ e / acre)	--
Total credits from avoided biomass and soil emissions (tCO ₂ / acre)	5,973
Credits attributed to the project (tCO ₂), excluding future growth	5,973
Contribution to Registry reversal pool	597
Total credits to be issued to the Project Operator (tCO₂) <i>(excluding future growth)</i>	5,376

Data Sources & Filenames Referenced in Carbon Quantification Spreadsheet (Section 10)

The following list of information is only a summary for ease of navigation of your PDD.

Accounting Stock Measurement Method

Description of quantification, including methods, forest type, and data sources.

We used the method 10.1.A from City Forest Credit's Tree Preservation Protocol. We referenced the US Forest Service General Technical Report (GTR) NE-343, Appendix B, Table B44. The forest type (B44, Oak-hickory, Southeast) was determined by referencing the Community Forest Management Plans prepared for Enrichmond by the Virginia Department of Forestry for both East End and Evergreen Cemeteries. The canopy cover percentage was determined using iTree Canopy.

Title (and filename) of relevant attachment(s):

Title: East End Cemetery Community Forest Management Plan, 2019

File: 8 East End Cemetery Forest Management Plan.pdf

Title: Evergreen Cemetery Community Forest Management Plan, 2019

File: 9 Evergreen Cemetery Forest Management Plan.pdf

GTR: https://www.nrs.fs.fed.us/pubs/gtr/ne_gtr343.pdf

If stratification is used, maps of strata and stratum definitions

Stratification was not used for carbon quantification.

Stand Maps

Explanation / statement of method(s) used:

The stand map was determined using the property boundaries, minus one open area not included in the Project Area. SKTWorks, a professional environmental surveying firm, prepared the map using ArcGIS Pro 2.4.2.

Title (and filename) of relevant attachment(s):

Geospatial location (boundaries) of Project Area

Title: EnrichmondParcelOutline_WGS84

File: 4 EnrichmondParcelOutline_WGS84.shp

Map of Project Area

Title: East End and Evergreen Cemeteries Project Area Map

File: 3 EnRichmond Project Map.pdf

Forest Age

Age and explanation / statement of method(s) used:

The forest age was determined to be 40-50 years. The final age was determined taking the median of that estimate, 45 years. We based this determination on aerial imagery of the properties from 1936 and 1953.

Title (and filename) of relevant attachment(s):

Title: 1936 Aerial map of East End and Evergreen

File: 10 Evergreen and East End 1936.jpg

Title: 1953 Aerial map of East End and Evergreen

File: 11 Evergreen and East End 1953.jpg

Forest Composition

Composition and explanation / statement of method(s) used:

The forest composition, according to the GTR, is Oak-hickory, Southeast. The primary tree species present on the properties are oak, hickory, maple, poplar, and pine, with oak and hickory consistently prominent across both properties. We referenced the US Forest Service General Technical Report (GTR) NE-343, Appendix B, Table B44. The forest type (B44, Oak-hickory, Southeast) was determined by referencing the Community Forest Management Plans prepared for Enrichmond by the Virginia Department of Forestry for both East End and Evergreen Cemeteries. The Forest Management plans were prepared using on-site surveying by Virginia Department of Forestry staff with the ESRI Collector app.

Title and filename of relevant attachment(s):

Title: East End Cemetery Community Forest Management Plan, 2019

File: 8 East End Cemetery Forest Management Plan.pdf

Title: Evergreen Cemetery Community Forest Management Plan, 2019

File: 9 Evergreen Cemetery Forest Management Plan.pdf

GTR: https://www.nrs.fs.fed.us/pubs/gtr/ne_gtr343.pdf

Canopy Cover

Percent cover and explanation / statement of method(s) used:

The canopy cover of the Project Area is 82%. The percentage was determined using iTree Canopy with a shapefile of the exact property boundaries minus an open area that is not part of the Project Area.

Through iTree, a total of 51 points were surveyed, with a standard error of 5%.

Title (and filename) of relevant attachment(s):

Title: Survey of iTree Points

File: 13 Evergreen and East End Canopy Cover_iTree (2)

Title: Spreadsheet of iTree Points

File: 12 Evergreen and East End Canopy Cover_iTree.csv

Fraction of Biomass at Risk

Fraction at risk and explanation / statement of method(s) used:

A conservation easement was added to the Project Area and the existing trees will be managed instead of converted to grass, while continuing cemetery use. The Project Area contains parcels zoned for residential and commercial/industrial uses. The Tree Preservation Protocol section 10.2 states that areas

zoned as residential or commercial/industrial have 90% avoided clearance. Since the Project Area contains both of those zoning designations and would otherwise have been converted to grass, the biomass at risk for clearance is 90%.

Title (and filename) of relevant attachment(s): N/A

Impervious Limits

Maximum fraction impervious cover and explanation / statement of method(s) used:

The Project avoids conversion of the property to grass, corresponding to the Tree Preservation Protocol section 10.4C, which states that no soil carbon loss is avoided if the property were to retain live vegetation on the ground as its developed use. Therefore, the avoided soil carbon emissions are zero, since if the property were to be developed, it would be converted to grass and would not include impervious cover.

Title (and filename) of relevant attachment(s): N/A

Existing Impervious Area

Existing impervious cover fraction and explanation / statement of method(s) used:

The Project has zero displaced development because the avoided conversion due to development is avoiding a conversion of the treed cemetery to a grass cemetery, thus the cemetery use is not displaced. The Tree Preservation Protocol section 10.5 does not apply to the Project Area, as there is no displaced development to quantify.

Title (and filename) of relevant attachment(s): N/A

Planned Project Activities

Description / statement of method(s) used:

Enrichmond will engage volunteers and staff to conduct maintenance on the property, including following best practices in forestry management to contribute to the longevity of the trees and safety of the properties. The project activities include removal of invasive species of plants, removal of dead or dying trees, and monitoring tree health. Please see the "Monitoring and Reporting" section for more information.

Title (and filename) of relevant attachment(s): N/A

Additional Notes

If the Project Area were developed, it would be converted to grass and retain its use as a cemetery. The Project avoids conversion of the property from a treed cemetery to a grass cemetery, and the cemetery use is not displaced.

CO-BENEFITS QUANTIFICATION DOCUMENTATION

Optional: If Project Operators has conducted co-benefits quantification for this Project, please summarize results and list source / supporting files here.

The co-benefits quantification for the Project Area is based on an 85% deciduous and 15% coniferous tree canopy, over 64.76 acres in the South climate zone.

The calculator indicates that the Project Area yields a total of \$42,218.39 worth of ecosystem services per year. The ecosystem services include rain interception (\$30,112.12 total), CO2 avoided (\$766.13 total), air quality (\$4,078.25 total), and energy savings (\$7,261.90 total). The Project Area yields \$651.92 per acre of tree canopy, per year.

File: 14 Evergreen and East End CoBenefits Quantification 20191203.xlsx

ATTACHMENTS

- 1 Evergreen and East End Agreement to Transfer Credits.pdf
- 2 EnRichmond Regional Scale Map.pdf
- 3 EnRichmond Project Map.pdf
- 4 EnrichmondParcelOutline_WGS84.shp
- 5 Evergreen East End Declaration of Restrictive Covenants.pdf
- 6 Evergreen Easement Amendment Add East End.pdf
- 7 Evergreen and East End Carbon Quantification 20191203.xlsx
- 8 East End Cemetery Forest Management Plan.pdf
- 9 Evergreen Cemetery Forest Management Plan.pdf
- 10 Evergreen and East End 1936.jpg
- 11 Evergreen and East End 1953.jpg
- 12 Evergreen and East End Canopy Cover_iTree.csv
- 13 Evergreen and East End Canopy Cover_iTree (2)
- 14 Evergreen and East End CoBenefits Quantification 20191203.xlsx

Prepared by:
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 Rudy, Coyner & Associates, PLLC
 P.O. Box 58
 Chesterfield, VA 23832

19-26391

Consideration: \$0.00

City of Richmond PIDs: E000330700 and E0003307011
 County of Henrico GPIN: 805-721-5113

Agreement to Transfer Potential Credits

This Agreement to Transfer Potential Credits ("Agreement") is entered in to this 6th day of November, 20 19 (the "Effective Date") by PARITY, LLC, a Virginia limited liability company (the "Landowner") and THE ENRICHMOND FOUNDATION, a Virginia non-profit organization ("Enrichmond") whose mission is to serve the people, parks, and public space of the City of Richmond, Virginia, and who has committed to undertake, on that certain real property owned by the Landowner, which is more particularly described in EXHIBIT A, attached hereto and incorporated herein (the "Property"), a tree-preservation project (the "Tree Project") in those portions of the Property that are more particularly shown on EXHIBIT B, incorporated herein and attached hereto ("Tree Project Areas").

1. Purpose and Intent

Enrichmond and Landowner desire to help Enrichmond fund this Tree Project by allowing Enrichmond to develop potential carbon and environmental credits that it can attempt to sell to defray project costs or to plant additional trees. The Landowner will receive the benefits of the trees planted in this project at little to no cost to the Landowner.

These potential carbon or environmental credits or offsets include amounts of carbon dioxide stored, storm water run-off reductions, energy savings, fish habitat, and air quality benefits arising from the planting and growth of trees in the Tree Project ("Carbon+ Credits"). The Carbon+ Credits will be developed using the protocols and registry of City Forest Credits, a non-profit organization ("CFC").

2. Rights Granted

In consideration of the foregoing Purpose and Intent, and further in consideration of the mutual terms provided herein, Landowner transfers and grants to Enrichmond the title and rights to any and all Carbon+ Credits developed from the Tree Project during the term of this agreement, including rights to register with CFC, and develop and sell the Carbon+ Credits.

3. Subject Lands

The Property is more particularly described in EXHIBIT A. Those portions of the Property that comprise the Tree Project are more particularly shown on EXHIBIT B.

4. Obligations of Landowner

Landowner shall not prune, cut down, destroy or remove trees within the Tree Project Areas, except as permitted in writing by Enrichmond or CFC, or as necessary (a) to control or prevent hazard, disease, or fire, (b) to improve forest health, (c) for storm damage control, or (d) for invasive species control.

5. Obligations of Enrichmond

Enrichmond will pay all costs and assume all responsibilities for development and sale of Carbon+ Credits from the Tree Project.

6. Landowner Representations

Landowner represents that it has authority to enter this agreement, and that the Property is free from any liens, claims, encumbrances, tenancies, restrictions, or easements that would prevent or interfere with the rights to Carbon+ Credits granted under this Agreement.

7. Enrichmond Representations

Enrichmond represents that it has the capacities necessary to execute its obligations under this agreement.

8. Default

If either party is in default of this agreement, the other party may notify the defaulting party of the specific nature of the default. The defaulting Party has 30 days from the date of notice to correct the default. If the default is not corrected in 30 days, the non-defaulting party may cancel this Agreement. Notice of cancellation shall be delivered in writing to the current contact address of the defaulting party.

9. Term of Agreement and Option to Renew

This Agreement shall remain in force for 40 years after the Effective Date of the Agreement. Enrichmond may renew this Agreement for a second 40 years if it delivers written notice of renewal to Landowner at least 90 days prior to expiration of this Agreement.

10. Governing Law

This Agreement shall be construed and enforced in accordance with the laws of the Commonwealth of Virginia.

WITNESS the following signatures and seals on the following two (2) counterpart signature pages:

[Counterpart signature page 1 of 2]

PARITY, LLC

By: ENRICHMOND FOUNDATION, the sole member of Parity, LLC

By: John Sydnor

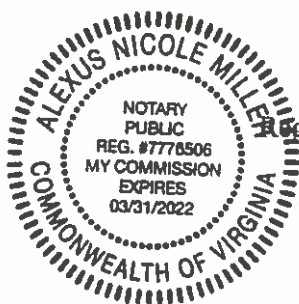
Its: Executive Director

COMMONWEALTH OF VIRGINIA,
CITY/COUNTY OF Richmond, TO WIT:

The foregoing instrument was acknowledged before me this 6th day of November, 2019 by John Sydnor, the Executive Director of Enrichmond Foundation, the sole member of Parity, LLC.

Alexus Nicole Miller
Notary Public

(SEAL)



My commission expires: 03/31/2022
Registration No. 7776506

[Counterpart signature page 2 of 2]

ENRICHMOND FOUNDATION

By: 
John Sydnor

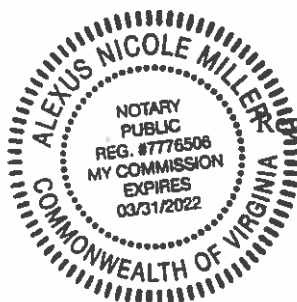
Its: Executive Director

COMMONWEALTH OF VIRGINIA,
CITY/COUNTY OF Richmond, TO WIT:

The foregoing instrument was acknowledged before me this 6th day of November, 2019 by John Sydnor, the Executive Director of Enrichmond Foundation.


Notary Public

(SEAL)



My commission expires: 03/31/2022
Registration No. 7776506

EXHIBIT A. Legal Description of Property

Tax Map # E000330700 (City of Richmond)

“ALL that certain parcel of land situated on the north side of East Richmond Road, containing 59.2 acres, more or less, shown on a plat dated December 7, 1965 (revised on February 16, 1967) made by J. K. Timmons & Associates, Consulting Engineers, entitled "Plat Showing a Parcel of Land Situated on the North Side of East Richmond Road, being the Evergreen Cemetery in the City of Richmond, Virginia," a copy of which plat is recorded with the deed from The Evergreen Cemetery Association to Metropolitan Memorial Services, Inc., dated January 15, 1970, and recorded in the Clerk's Office, Chancery, City of Richmond, Virginia in Deed Book 662C, Page 456.

NOTE: The northern and western boundaries of the aforesaid Property are more clearly shown on that certain exhibit plat made by Timmons Group, dated June 4, 2018, and entitled, “COMPILED EXHIBIT SHOWING THE NORTHERN AND WESTERN PROPERTY LINE OF EVERGREEN CEMETERY IN THE CITY OF RICHMOND, VA,” which exhibit plat is attached hereto as EXHIBIT A and incorporated herein by this reference.

BEING the same real estate conveyed to Parity LLC, a Virginia limited liability company, by deed from U.K. Corporation, a Virginia corporation, dated May 23, 2017, recorded May 24, 2017 in the Clerk's Office, Circuit Court, City of Richmond, Virginia as Instrument No. 170010519.”

Tax Map # 805-721-5113 (Henrico County) – shown as 14.29 acres in County tax records

Tax Map # E0003307011 (City of Richmond) – shown as 1.835 acres in City tax records

“ALL that certain lot, piece or parcel of land, lying and being partly in Henrico County and partly in the City of Richmond, Virginia, fronting 778.8 feet, more or less, on the western line of Evergreen Road (formerly Bulheller) and more particularly described as follows: BEGINNING at a point on the western line of Evergreen Road where the same is intersected by the present dividing line of the City of Richmond and the County of Henrico, thence northwardly along the western line of Evergreen Road and fronting thereon 708.8 feet, more or less, to the lands of Henrico County; thence N 67 degrees 45' W along the line with said property of Henrico County 1139 feet, more or less, to a stone; thence S 22 degrees W with the lands of Henrico County 445 feet, more or less, to a stone on the line of Oakwood Cemetery; thence S 73 degrees 30' E along the line with Oakwood Cemetery 565 feet, more or lose, to the easternmost part of said Oakwood Cemetery line; thence southwardly along the line with Oakwood Cemetery 220 feet, more or less, to the point of intersection of said line with the Henrico County - City of Richmond present dividing line; thence continuing southwardly along the line with Oakwood Cemetery 240 feet, more or less, to the common boundary line with Evergreen Cemetery thence S 75 1/4 degrees E along said common boundary line with Evergreen Cemetery 569 feet, more or less, to a

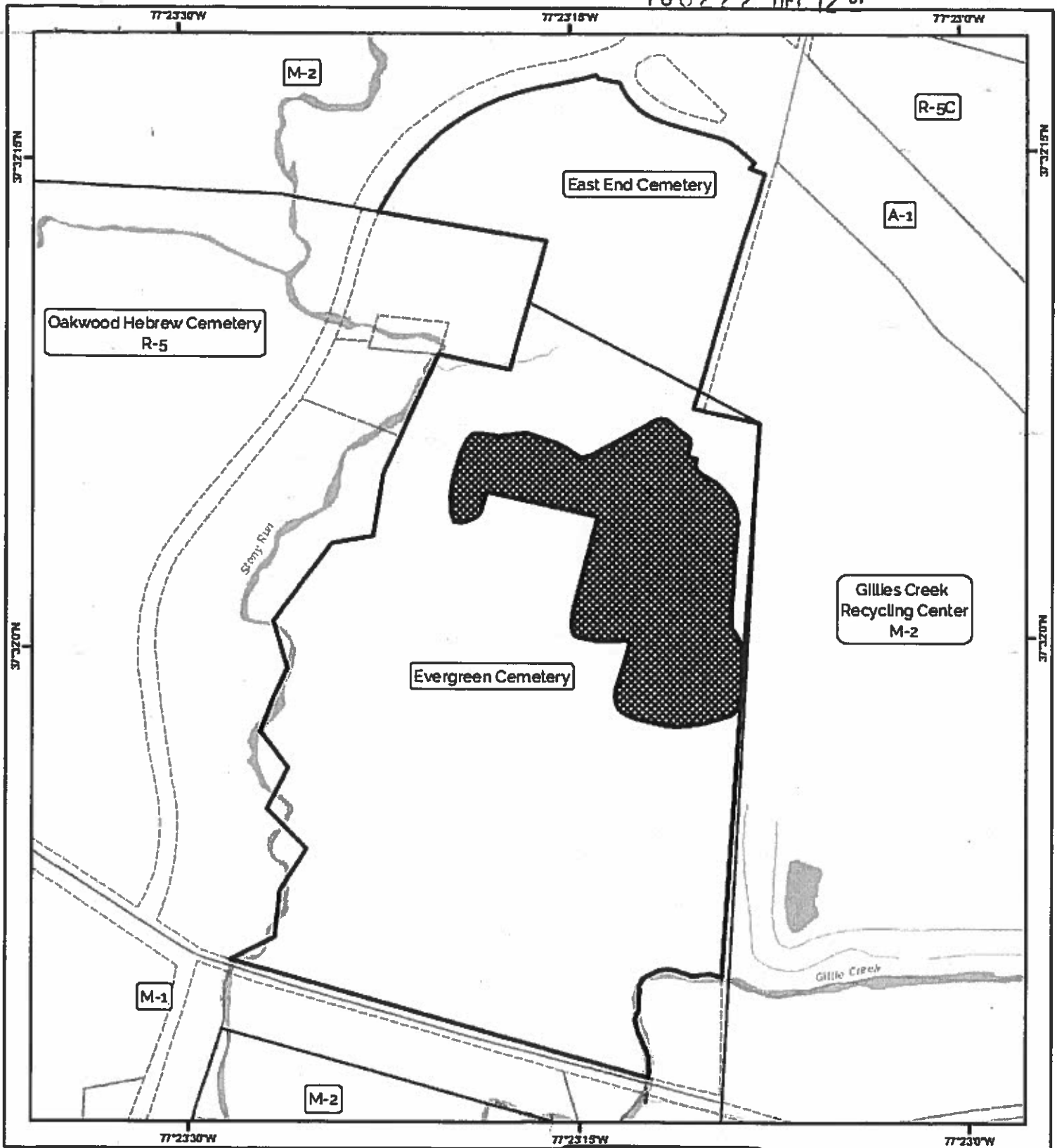
point on the western line of Evergreen Road; thence northwardly along the western line of Evergreen Road and fronting thereon 70 feet, more or less, to the point and place of beginning.

INCLUDING THEREWITH therewith all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 62,125 square feet, more or less, as was acquired by Deed of Exchange from the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point on the south line of the proposed Stony Run Parkway which point is S 67 degrees 11' E (N 67 degrees 11' W as shown on plat) a distance of 301 ft. from the northwest corner of the property of East End Burial Association Cemetery which corner is marked by a stone; thence along a curve to the right having a radius of 667 ft. a distance of 134 ft., more or less, to a point; thence N 86 degrees 48' E a distance of 53 ft. to a point; thence along a curve to the left having a radius of 633 ft. a distance of 104 ft., more or less, to a point; thence S 25 degrees 25' 15" E a distance of 7 ft. to a point; thence S 84' 57" E a distance of 68 ft., more or less, to a point; thence along a curve to the left having a radius of 238.7 ft. a distance of 203 ft., more or less, to a point; thence S 74 degrees 15' 06" E a distance of 143 ft., more or less, to a point; thence along a curve to the right having a radius of 220 ft. a distance of 102 ft., more or less, to a point; thence S 47 degrees 41' 52" E a distance of 55 ft., more or less, to a point; thence S 42 degrees 18' W a distance of 25 ft., more or less, to a point; thence N 67 degrees 11' W a distance of 780 ft., more or less, to the point and place of beginning. For a more particular description of the land hereby conveyed, reference is made to the print prepared by Henrico County Engineering Department dated April 28, 1965 and revised July 27, 1965 attached and recorded with the Deed of Exchange aforesaid in Deed Book 1451, Page 427 and shown thereon as Parcel "B."

LESS AND EXCEPT FROM the parcel of land first herein above described all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 59,125 square feet, more or less, as was conveyed by Deed of Exchange to the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point marked by a stone which point is the northwest corner of the property of East End Burial Association Cemetery; thence S. 23 degrees 09' W a distance of 444.70 ft. to a point marked by a pin; thence S. 72 degrees 37' E (N 72 degrees 37' W as shown on plat) a distance of 43.3 ft., to a point; thence along a curve to the right having a radius of 667 ft. a distance of 525 ft., more or less to a point; thence N 67 degrees 11' W. a distance of 301 ft. to the point and place of beginning. For a more particular description of the land conveyed, reference is made to the aforesaid print showing the land designated as Parcel 'A.'"

BEING the same real estate conveyed to Parity, LLC from Special Commissioner Michael L. Warwick by that certain Special Commissioner's Deed, dated April 1, 2019, and recorded April 11, 2019 in the Circuit Court Clerk's Office of the City of Richmond, Virginia as Instrument Number 190006816 and recorded on April 11, 2019 in the Circuit

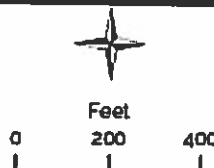
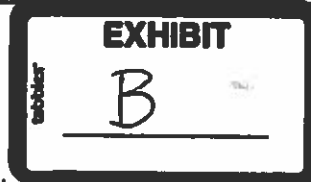
Court Clerk's Office of the County of Henrico, Virginia as Instrument Number 201900009714.



East End and Evergreen Cemeteries Tree Project Area Map

- Tree Project Area
- City of Richmond/Henrico County Line
- Streams

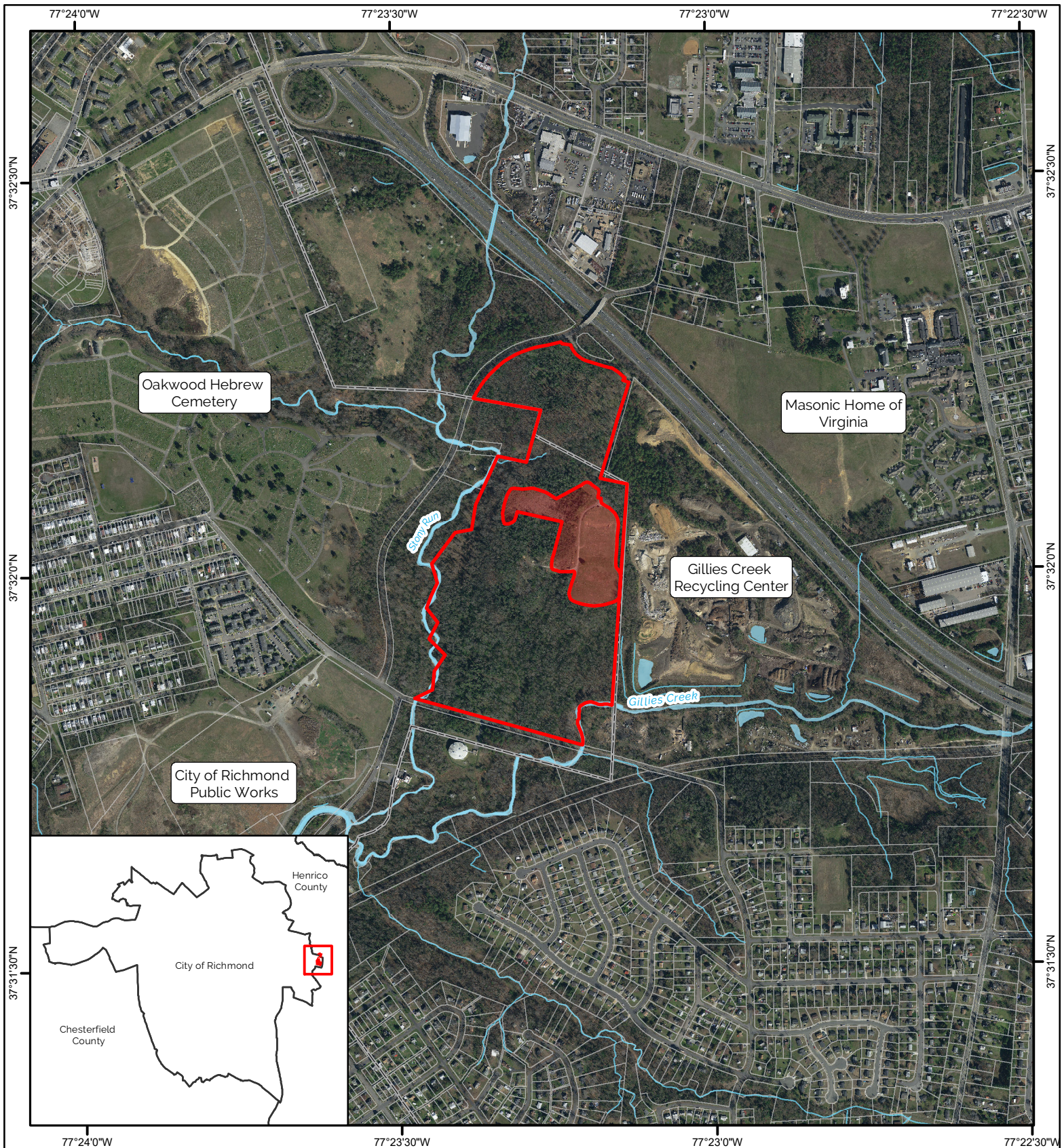
- Area Not Included in Project
- Zoning Districts
- Parcel Boundaries



Map prepared for Earth for Conservation Foundation on November 10, 2010, by SKTWorld LLC. Parcel zoning, stream and waterbody data from City of Richmond GIS and Henrico County GIS. Aerial imagery dated March 2, 2017 from VCAN VMAP, copyright Commonwealth of Virginia. This data information and related graphics are for preliminary illustrative purposes only. Any property boundaries or other delineation are approximate. This map is for informational purposes only and is distributed "AS-IS" without warranty of any kind, either expressed or implied, including but not limited to warranty of suitability to a particular purpose or use.

PG 0223 DEC 12 2019

INSTRUMENT 190026391
RECORDED IN THE CLERK'S OFFICE OF
RICHMOND CITY CIRCUIT COURT ON
DECEMBER 12, 2019 AT 01:42 PM
EDWARD F. JEWETT, CLERK
RECORDED BY: JRO



East End and Evergreen Cemeteries Regional Scale Map



Evergreen and East End
Cemetery Boundary



City of Richmond/Henrico
County Line



Area Not Included in
Project



Parcel Boundaries



Streams



Feet
0 500 1,000

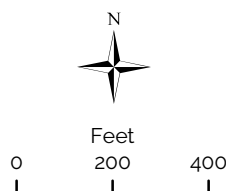


Map prepared for Enrichmond Foundation on November 10, 2019, by SKTWorks LLC. Parcel, streams and waterbodies data from City of Richmond GIS and Henrico County GIS. Aerial imagery dated March 2, 2017 from VGIN VBMP, copyright Commonwealth of Virginia. This data information and related graphics are for preliminary illustrative purposes only. Any property boundaries or other delineation are approximate. This map is for informational purposes only and is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use.



East End and Evergreen Cemeteries Project Area Map

- Evergreen and East End Cemetery Boundary
- Area Not Included in Project
- City of Richmond/Henrico County Line
- Parcel Boundaries
- Zoning Districts
- ~~~~~ Streams



Map prepared for Enrichmond Foundation on November 10, 2019, by SKTWorks LLC. Parcel, zoning, stream and waterbodies data from City of Richmond GIS and Henrico County GIS. Aerial imagery dated March 2, 2017 from VGIN VBMP, copyright Commonwealth of Virginia. This data information and related graphics are for preliminary illustrative purposes only. Any property boundaries or other delineation are approximate. This map is for informational purposes only and is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use.

Prepared by:
 Kerry Brian Hutcherson #75018
 Rudy, Coyner & Associates, PLLC
 P.O. Box 58
 Chesterfield, VA 23832

19- 26390

Consideration: \$0.00

City of Richmond PIDs: E0003307010 and E0003307011
 County of Henrico GPIN: 805-721-5113

DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS (this "Declaration") made this 6th day of November, 2019, by PARITY, LLC, a Virginia limited liability company ("Declarant"),

WITNESSETH:

WHEREAS, Declarant is the owner in fee simple of certain real property situated in the City of Richmond, in part, and the County of Henrico, in part, containing in the aggregate 75.325 acres, more or less, which is more particularly described on EXHIBIT A, attached hereto and incorporated herein (the "Property"), and

WHEREAS, Declarant wishes to engage in a certain tree-preservation project on portions of the Property with The Enrichmond Foundation, a Virginia non-profit organization ("Enrichmond") whose mission is to serve the people, parks, and public space of the City of Richmond, Virginia, and

WHEREAS, Declarant and Enrichmond agree that the covenants imposed by this Declaration are being created for the purpose of preserving portions of the Property's tree canopy, as more particularly described herein, which protection will help improve air and water quality, provide wildlife habitat, and preserve scenic beauty, and which protection will enable Enrichmond to qualify for Carbon+ Credits that will be developed using the protocols and registry of City Forest Credits, a non-profit organization ("CFC").

NOW, THEREFORE, THIS DECLARATION OF RESTRICTIVE COVENANTS WITNESSETH THAT: in consideration of the foregoing recitals, incorporated herein and made a part hereof, Declarant hereby imposes on those certain portions of the Property, shown as "Tree Project Areas" and being more particularly described on EXHIBIT B, attached hereto and incorporated herein, the following conditions and restrictions which shall run with the land and be binding in perpetuity on all parties and persons claiming under them.

1. Pruning, cutting down, or other destruction or removal of trees located within the Tree Project Areas is prohibited, except as permitted in writing by Enrichmond or CFC, or as necessary

(a) to control or prevent hazard, disease, or fire, (b) to improve forest health, (c) for storm damage control, or (d) for invasive species control.

2. Declarant shall provide to County a Baseline Documentation Report describing the character and condition of the Tree Project Areas as of the date of this Declaration.

3. The covenants and restrictions made herein shall be enforceable by Enrichmond or CFC in any proceeding at law or in equity. Failure by either Enrichmond or CFC to enforce any covenant or restriction contained herein shall in no event be deemed a waiver of the right to do so thereafter.

4. The interpretation and performance of this Declaration shall be governed by the laws of the Commonwealth of Virginia.

WITNESS the following signatures and seals on the following two (2) counterpart signature pages:

[Counterpart signature page 1 of 1]

PARITY, LLC

By: ENRICHMOND FOUNDATION, the sole member of Parity, LLC

By: 

John Sydnor

Its: Executive Director

COMMONWEALTH OF VIRGINIA,
CITY/COUNTY OF Richmond, TO WIT:The foregoing instrument was acknowledged before me this 6th day of November, 2019 by John Sydnor, the Executive Director of Enrichmond Foundation, the sole member of Parity, LLC.

Notary Public

(SEAL)

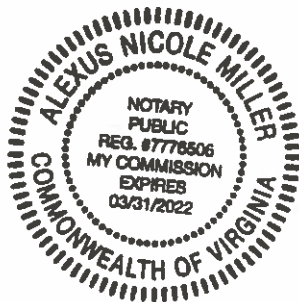
My commission expires: 03/31/2022Registration No. 7776506

EXHIBIT A. Legal Description of Property

Tax Map # E000330700 (City of Richmond)

"ALL that certain parcel of land situated on the north side of East Richmond Road, containing 59.2 acres, more or less, shown on a plat dated December 7, 1965 (revised on February 16, 1967) made by J. K. Timmons & Associates, Consulting Engineers, entitled "Plat Showing a Parcel of Land Situated on the North Side of East Richmond Road, being the Evergreen Cemetery in the City of Richmond, Virginia," a copy of which plat is recorded with the deed from The Evergreen Cemetery Association to Metropolitan Memorial Services, Inc., dated January 15, 1970, and recorded in the Clerk's Office, Chancery, City of Richmond, Virginia in Deed Book 662C, Page 456.

NOTE: The northern and western boundaries of the aforesaid Property are more clearly shown on that certain exhibit plat made by Timmons Group, dated June 4, 2018, and entitled, "COMPILED EXHIBIT SHOWING THE NORTHERN AND WESTERN PROPERTY LINE OF EVERGREEN CEMETERY IN THE CITY OF RICHMOND, VA," which exhibit plat is attached hereto as EXHIBIT A and incorporated herein by this reference.

BEING the same real estate conveyed to Parity LLC, a Virginia limited liability company, by deed from U.K. Corporation, a Virginia corporation, dated May 23, 2017, recorded May 24, 2017 in the Clerk's Office, Circuit Court, City of Richmond, Virginia as Instrument No. 170010519."

Tax Map # 805-721-5113 (Henrico County) – shown as 14.29 acres in County tax records
Tax Map # E0003307011 (City of Richmond) – shown as 1.835 acres in City tax records

"ALL that certain lot, piece or parcel of land, lying and being partly in Henrico County and partly in the City of Richmond, Virginia, fronting 778.8 feet, more or less, on the western line of Evergreen Road (formerly Bulheller) and more particularly described as follows: BEGINNING at a point on the western line of Evergreen Road where the same is intersected by the present dividing line of the City of Richmond and the County of Henrico, thence northwardly along the western line of Evergreen Road and fronting thereon 708.8 feet, more or less, to the lands of Henrico County; thence N 67 degrees 45' W along the line with said property of Henrico County 1139 feet, more or less, to a stone; thence S 22 degrees W with the lands of Henrico County 445 feet, more or less, to a stone on the line of Oakwood Cemetery; thence S 73 degrees 30' E along the line with Oakwood Cemetery 565 feet, more or lose, to the easternmost part of said Oakwood Cemetery line; thence southwardly along the line with Oakwood Cemetery 220 feet, more or less, to the point of intersection of said line with the Henrico County - City of Richmond present dividing line; thence continuing southwardly along the line with Oakwood Cemetery 240 feet, more or less, to the common boundary line with Evergreen Cemetery thence S 75 1/4 degrees E along said common boundary line with Evergreen Cemetery 569 feet, more or less, to a point on the western line of Evergreen Road; thence northwardly along the western line of

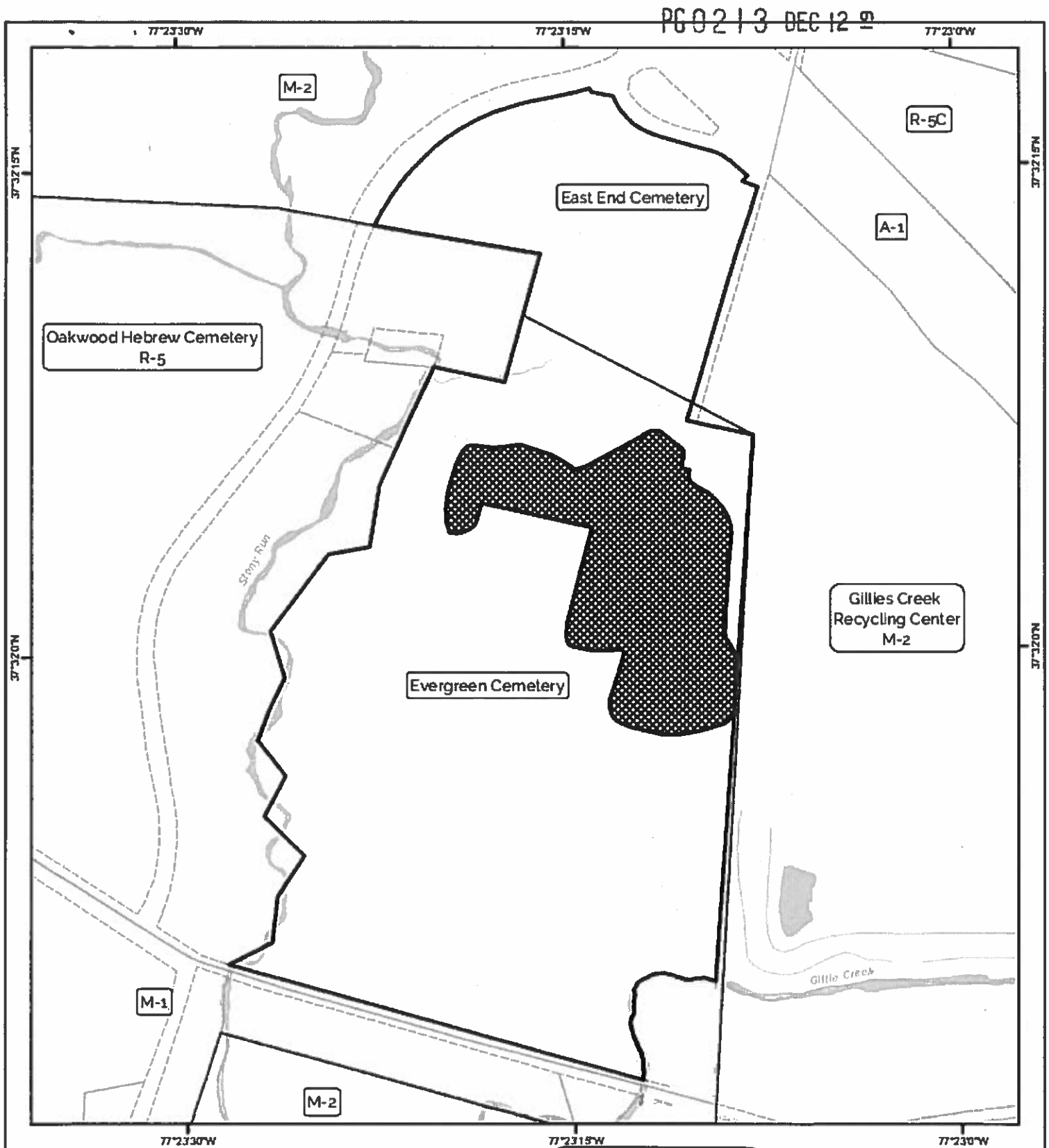
Evergreen Road and fronting thereon 70 feet, more or less, to the point and place of beginning.

INCLUDING THEREWITH therewith all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 62,125 square feet, more or less, as was acquired by Deed of Exchange from the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point on the south line of the proposed Stony Run Parkway which point is S 67 degrees 11' E (N 67 degrees 11' W as shown on plat) a distance of 301 ft. from the northwest corner of the property of East End Burial Association Cemetery which corner is marked by a stone; thence along a curve to the right having a radius of 667 ft. a distance of 134 ft., more or less, to a point; thence N 86 degrees 48' E a distance of 53 ft. to a point; thence along a curve to the left having a radius of 633 ft. a distance of 104 ft., more or less, to a point; thence S 25 degrees 25' 15" E a distance of 7 ft. to a point; thence S 84' 57" E a distance of 68 ft., more or less, to a point; thence along a curve to the left having a radius of 238.7 ft. a distance of 203 ft., more or less, to a point; thence S 74 degrees 15' 06" E a distance of 143 ft., more or less, to a point; thence along a curve to the right having a radius of 220 ft. a distance of 102 ft., more or less, to a point; thence S 47 degrees 41' 52" E a distance of 55 ft., more or less, to a point; thence S 42 degrees 18' W a distance of 25 ft., more or less, to a point; thence N 67 degrees 11' W a distance of 780 ft., more or less, to the point and place of beginning. For a more particular description of the land hereby conveyed, reference is made to the print prepared by Henrico County Engineering Department dated April 28, 1965 and revised July 27, 1965 attached and recorded with the Deed of Exchange aforesaid in Deed Book 1451, Page 427 and shown thereon as Parcel "B."

LESS AND EXCEPT FROM the parcel of land first herein above described all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 59,125 square feet, more or less, as was conveyed by Deed of Exchange to the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point marked by a stone which point is the northwest corner of the property of East End Burial Association Cemetery; thence S. 23 degrees 09' W a distance of 444.70 ft. to a point marked by a pin; thence S. 72 degrees 37' E (N 72 degrees 37' W as shown on plat) a distance of 43.3 ft., to a point; thence along a curve to the right having a radius of 667 ft. a distance of 525 ft., more or less to a point; thence N 67 degrees 11' W. a distance of 301 ft. to the point and place of beginning. For a more particular description of the land conveyed, reference is made to the aforesaid print showing the land designated as Parcel 'A.'"

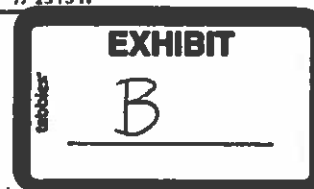
BEING the same real estate conveyed to Parity, LLC from Special Commissioner Michael L. Warwick by that certain Special Commissioner's Deed, dated April 1, 2019, and recorded April 11, 2019 in the Circuit Court Clerk's Office of the City of Richmond, Virginia as Instrument Number 190006816 and recorded on April 11, 2019 in the Circuit

Court Clerk's Office of the County of Henrico, Virginia as Instrument Number
201900009714.

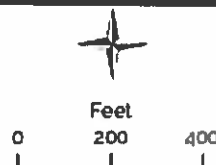


East End and Evergreen Cemeteries Tree Project Area Map

- | | |
|--------------------------------------|------------------------------|
| Tree Project Area | Area Not Included in Project |
| City of Richmond/Henrico County Line | Zoning Districts |
| Streams | Parcel Boundaries |



Map prepared for Erskine Foundation on November 10, 2016, by SKTWorld LLC. Parcel zoning, acreage and waterbody data from City of Richmond GIS and Henrico County GIS. Aerial imagery dated March 2, 2017 from VGIN VBNP, copyright Commonwealth of Virginia. This data information and related graphics are for preliminary illustration purposes only. Any property boundaries or other delineation are approximate. This map is for informational purposes only and is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use.



INSTRUMENT 190026390
RECORDED IN THE CLERK'S OFFICE OF
RICHMOND CITY CIRCUIT COURT ON
DECEMBER 12, 2019 AT 01:41 PM
EDWARD F. JEWETT, CLERK
RECORDED BY: JRO

**VIRGINIA LAND RECORD COVER SHEET
FORM A - COVER SHEET CONTENT**

Instrument Date: 9/11/2019
Instrument Type: AMEND
Number of Parcels: 1 Number of Pages: 15
☐ City ☒ County

HENRICO

TAX EXEMPT? VIRGINIA/FEDERAL LAW

[X] Grantor: 58.1-811(A)(3), 17.1-266

[X] Grantee: 58.1-811(A)(3), 17.1-266

Consideration: \$0.00

Existing Debt: \$0.00

Actual Value/Assumed: \$0.00

PRIOR INSTRUMENT UNDER § 58.1-803(D):

Original Principal: \$0.00

Fair Market Value Increase: \$0.00

Original Book Number:

Original Page Number:

Original Instrument Number:

Prior Recording At: ☐ City ☐ County

Percentage In This Jurisdiction: 100%

BUSINESS / NAME

1 [X] Grantor: PARITY, LLC

[] Grantor:

1 [X] Grantee: VIRGINIA OUTDOORS FOUNDATION

[] Grantee:

GRANTEE ADDRESS

Name: VIRGINIA OUTDOORS FOUNDATION

Address: 600 E. MAIN STREET SUITE 420

City: RICHMOND

State: VA Zip Code: 23219

Book Number: Page Number:

Instrument Number:

Parcel Identification Number (PIN): 805-721-5113

Tax Map Number: 805-721-5113

Short Property Description: 14.29 ACRES

Current Property Address: EVERGREEN ROAD

City: HENRICO

State: VA Zip Code: 23223

Instrument Prepared By: KERRY B. HUTCHERSON

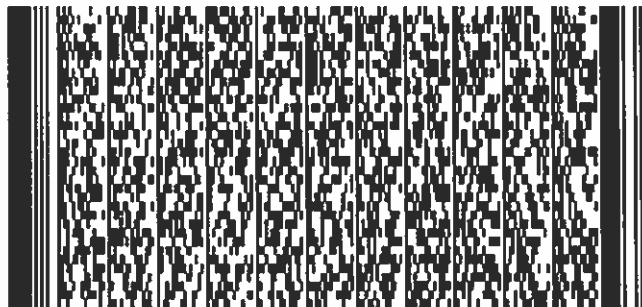
Recording Paid By: RUDY, COYNER & ASSOCIATES

Recording Returned To: RUDY, COYNER & ASSOCIATES

Address: 9910 WAGNERS WAY PO BOX 58

City: CHESTERFIELD

State: VA Zip Code: 23832



BK5897PG1011

Advance

RECORDED IN
COUNTY OF HENRICO, VA
HEIDI S. BARSHINGER
CLERK OF CIRCUIT COURT
FILED Sep 20, 2019
AT 01:58 pm
BOOK 05897
START PAGE 1011
END PAGE 1027
INSTRUMENT #
201900029303

TJJ

(Area Above Reserved For Deed Stamp Only)

19-19512

Book 5897 Pg 1012

+++++

NOTE TO TITLE EXAMINERS: This open-space easement contains restrictions on permitted uses and activities on the property described below, which run with the land and are applicable to the property in perpetuity.

Prepared by: **Kerry Brian Hutcherson, VSB # 75018**
Rudy, Coyner & Associates, PLLC
P.O. Box 58
Chesterfield, VA 23832

Return to: **Virginia Outdoors Foundation**
600 E. Main Street, Suite 402
Richmond VA 23219-2416

City of Richmond PID: E000330700 (Evergreen Cemetery)
 City of Richmond PID: E0003307011
 County of Henrico GPIN: 805-721-5113

Exempted from recordation tax
 under the Code of Virginia (1950), as amended,
 Sections 58.1-811 (A) (3) and 10.1-1803
 and from Circuit Court Clerk's fee under Section 17.1-266

THIS AMENDED DEED OF OPEN-SPACE EASEMENT (this "Amended Easement"), made this 11 day of September, 2019, between PARITY, LLC, a Virginia limited liability company, ("Grantor") and the VIRGINIA OUTDOORS FOUNDATION, an agency of the COMMONWEALTH OF VIRGINIA, ("Grantee") (the designations "Grantor" and "Grantee" refer to Grantor and Grantee and their respective successors and assigns), witnesseth:

RECITALS:

R-1 By Deed of Open-Space Easement (the "Original Easement") made the 27th day of December, 2018, between Grantor and Grantee, recorded in the Clerk's Office of the Circuit Court of the City of Richmond, Virginia, as Instrument Number 180026162, Grantor conveyed an open-space easement on 59.2 acres, more or less, (the "Original Property") known as Evergreen Cemetery to Grantee.

R-2 Grantor is the owner in fee simple of certain real property situated in the City of Richmond, in part, and the County of Henrico, in part, containing in the aggregate 16.125 acres, more or less, (the "Additional Property") known as East End Cemetery as further hereinafter described, which is adjacent to and contiguous with the Original Property subject to the Original Easement.

R-3 Grantor desires to amend the Original Easement so that both the Original Property and the Additional Property (together and herein "the Property") will be subject to and bound by the terms, conditions and restrictions contained in the Original Easement, as amended herein.

R-4 Grantee is a governmental agency of the Commonwealth of Virginia and is willing to accept a perpetual amended open-space easement over the Property as set forth herein.

R-5 Chapter 461 of the Acts of 1966 provides in part "that the provision and preservation of permanent open-space land are necessary to ... to help provide or preserve necessary park, recreational, historic and scenic areas, and to conserve land and other natural resources" and authorizes the acquisition of interests in real property, including easements in gross, as a means of preserving open-space land. The balance of the Chapter is codified in Chapter 17, Title 10.1, Sections 10.1-1700 through 10.1-1705 of the Code of Virginia, as amended (the "Open-Space Land Act").

R-6 Pursuant to the Open-Space Land Act, the purposes of the Original Easement and this Amended Easement include retaining and protecting open-space and natural resource values of the Original Property and the Additional Property, and the limitation on division and development contained in the Original Easement, as amended herein, ensures that the Property will remain perpetually available for open-space use, all as more particularly set forth therein.

R-7 Chapter 525 of the Acts of 1966, Chapter 18, Title 10.1, Sections 10.1-1800 through 10.1-1804 of the Code of Virginia, declares it to be the public policy of the Commonwealth to encourage preservation of open-space land and authorizes the Virginia Outdoors Foundation to hold real property or any estate or interest therein for the purpose of preserving the natural, scenic, historic, scientific, open-space, and recreational lands of the Commonwealth.

R-8 As required under Section 10.1-1701 of the Open-Space Land Act, the use of the Property for open-space land conforms to the City of Richmond's "Master Plan 2000-2010" (referred to herein as the "Richmond Plan") adopted on January 8, 2001, last revised September 2017, and use of the Property conforms to the County of Henrico's "Henrico County Vision 2026 Comprehensive Plan" (referred to herein as the "Henrico Plan") adopted on August 11, 2009. The Property *is not* located within a designated growth area.

R-9 The Original Easement, as amended herein, is an open-space easement in gross, constitutes a restriction granted in perpetuity on the use that may be made of the Property, and is in furtherance of and pursuant to the clearly delineated governmental conservation policies set forth below:

(i) Land conservation policies of the Commonwealth of Virginia as set forth in:

a. Section 1 of Article XI of the Constitution of Virginia, which states that it is the Commonwealth's policy to protect its atmosphere, lands and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth;

b. The Open-Space Land Act cited above;

c. Chapter 18, of Title 10.1, Sections 10.1-1800 through 10.1-1804 of the Code of Virginia cited above;

d. On May 17, 2017, Governor Terry McAuliffe signed HB 2296 directing Virginia Foundation for the Humanities to organize a statewide task force that would work to better identify and promote Virginia's African American historical sites and cultural heritage resources. The bill was patroned by Delegate Delores McQuinn and unanimously passed by the General Assembly;

e. Also on May 17, 2017 Governor McAuliffe signed HB 1547 to provide for the maintenance of 6,975 historic African American graves, monuments, and markers at the East End Cemetery and Evergreen Cemetery (the Property contains both cemeteries and together the cemeteries are referred to herein as the "Cemeteries"). The bill was patroned by Delegate Delores McQuinn on behalf of the Governor and passed unanimously in the General Assembly. "Unlike Confederate cemeteries, Black gravesites have gone centuries without state funds allocated for their maintenance and preservation," said Governor Terry McAuliffe. "Today, we are taking steps to reverse injustices the African American community has faced for generations. These two bills represent a new beginning and present an opportunity to make this Commonwealth a more inclusive, more just place for all its citizens."

(ii) Land use policies of the City of Richmond as delineated in:

a. the Richmond Plan adopted on January 8, 2001, last revised September 2017, to which plan the restrictions set forth in this Amended Easement conform and which contains the following:

Natural Resources Goals: "Environmentally sensitive lands will be protected from harmful and/or inappropriate land uses" and "As the City of Richmond continues to grow and change, the natural environment will be protected and enhanced, and Richmond's citizens will have a greater appreciation for and access to, the natural environment." See Richmond Plan, p. 62

Water Quality Policies and Strategies: "Reduce the impacts of streambank erosion along the James River and all of its tributaries. Streambank erosion is a major contributing factor in the degradation of water quality." See Richmond Plan, p. 65.

Air Quality Policies and Strategies: "Support land use and development that reduces reliance on private automobiles and promotes greater use of public transportation systems." See Richmond Plan, p. 67.

Environmentally Sensitive Lands Policies and Strategies: "Prevent development in flood plains that would result in environmental degradation or significant changes in the hydraulic condition of the watercourse" and "Increase educational opportunities throughout the community in order to

raise the awareness of citizens and visitors about Richmond's natural resources." See Richmond Plan, p. 69.

Guiding Principles of Historic Preservation: "Visits to City historic sites are a major component of the local tourism industry. Therefore, it is in the City's best interest to nurture its historic sites, structures, neighborhoods and heritage parks that contribute to Richmond's unique character as the capital of the Commonwealth." See Richmond Plan, p. 113.

Land use goals for the East Planning District (where the Property is located): "The Land Use Plan map reflects key elements of the recreation and parks plan as they relate to land use. The Plan recognizes the existing City parks in the District and also identifies lands appropriate for City park system expansion. Additional park and public open space should be added to the existing inventory of City Parks within the East District only if these areas can be properly maintained, and access and security can be controlled so as to not present problems for adjacent residential neighborhoods and/or business owners. The Plan includes the following elements of the Parks plan: ...

- Conversion of a portion of the East Richmond Road Landfill to public open space, with the extent of development and programming dependent upon environmental conditions.
- Expansion of the Gillies Creek Park to create a contiguous public park space with Powhatan Hill Park, Libbie Hill Park, and a portion of the land at East Richmond Road landfill, and Great Shiplock Park.
- Development of recreational facilities and/or recreational opportunities within Gillies Creek, inclusive of parkland created at the site of the former East End Landfill.

In addition to the foregoing, the East Planning District Transportation and Roadway Improvements map shows bike routes along Stoney Run Parkway and East Richmond Road, which would further enhance recreational opportunities on and around the Property. See Comprehensive Plan, pp. 171-173. Although the land use goals quoted above do not explicitly reference the Property or Evergreen Cemetery, the Property is adjacent to or near the aforementioned public parks, and protection of the Property hereunder to facilitate cultural enrichment, education, and passive recreation by the public would further the City's land use goals.

c. Correspondence dated June 14, 2019 from the City of Richmond, Virginia acknowledging that contribution of this Easement to Grantee and the restrictions set forth herein conform to the land use plan and policies of the city.

(iii) Land use policies of the County of Henrico as delineated in:

a. the Henrico Plan adopted on August 11, 2009, to which plan the restrictions set forth in this Amended Easement conform and which contains the following guiding principles, visions and goals:

1. Chapter 5: "Encourage the preservation of private open space by supporting the use of conservation and open space easements to preserve land use in each Land

Use Group/Classification, provided such easements do not adversely impact planned infrastructure or the pattern of development in the area"; and

2. Chapter 8: "The following policies should be used to guide development decisions related to natural environmental features in the county:

- A. promote the protection of Chesapeake Bay Preservation Areas from development that may have an adverse environmental impact on the Chesapeake Bay ecosystem; and
- B. encourage public and private cooperation in the preservation and use of environmentally sensitive areas for public open space, or park and recreation activities with minimal impact on environmentally valuable sites; and

3. Chapter 9: "The policies listed below should be used to assist in the protection, preservation and conservation of historic resources in the county:

- A. ...seek funding and other mechanisms to protect and preserve vital resources...; and
- B. ...maintain a sense of historical continuity through the preservation of sites, buildings, structures and objects important to our heritage...; and
- C. ... Seek Federal and State funds to provide public access to historic sites and structures that are open to the public. Encourage developers to provide access to historic sites and structures as part of the development process..."; and

b. Correspondence dated August 14, 2019 from the County of Henrico, Virginia acknowledging that contribution of this Amended Easement to Grantee and the restrictions set forth herein conform to the land use plan and policies of the city.

(iv) Land conservation policies of the United States as set forth in:

a. Federal Executive Order 13508 (5/19/2009), the goals of which include permanently protecting two million acres in the Chesapeake Bay Watershed by 2025;

b. The National Park Service's African American Civil Rights Grant Program (Civil Rights Grants) which documents, interprets, and preserves sites and stories related to the African American struggle to gain equal rights as citizens in the 20th Century. The NPS' 2008 report, Civil Rights in America, A Framework for Identifying Significant Sites serves as the foundation reference document for the grant program and for grant applicants to use in determining the appropriateness of proposed projects and properties. The grants are funded by the Historic Preservation Fund (HPF), and administered by the NPS. The grants fund a broad range of planning, development, and research projects for historic sites including: survey, inventory, documentation,

interpretation, education, architectural services, historic structure reports, preservation plans, and "bricks and mortar" repair. The FY2018 African American Civil Rights grant made \$13 million available for physical preservation projects and history projects.

R-10 The Property lies within the James River watershed, the James River being a major tributary of the Chesapeake Bay and the source of public water supply of the City of Richmond, Henrico County, and downstream communities. Protection of said waters by limiting development of the Property hereunder will help implement the goals of the Chesapeake Bay Preservation Act Sections 10.1-2100 *et seq.* of the Code of Virginia (1950), as amended, and support the land conservation goals of the interstate Chesapeake Bay Program and the Federal Executive Order 13508 (5/19/09) strategy to permanently protect two million acres in the bay watershed by 2025.

R-11 This Easement contributes to the "Goals and Outcomes" of the 2014 Chesapeake Watershed Agreement, for which former Governor McAuliffe affirmed the Commonwealth's commitment on June 16, 2014, as a member of the Chesapeake Executive Council, making Virginia a partner in the agreement among six states, the District of Columbia, The Chesapeake Bay Commission, and seven federal agencies. Protecting the Property hereunder supports three of the goals outlined in this agreement:

- Land Conservation Goal: "By 2025, protect an additional two million acres of lands throughout the watershed" and, by 2017, "reduce the rate of conversion of agricultural lands, forests, and wetlands as well as the rate of changing landscapes from more natural lands that soak up pollutants to those that are paved-over, hardscaped or otherwise impervious."
- Vital Habitats Goal: "Continually improve stream health and function throughout the watershed" and "[r]estore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of the riparian areas throughout the watershed are forested."
- Public Access Goal: "By 2025, add 300 new public access sites....."

R-12 The Property, which includes the Evergreen and East End Cemeteries, serves as a unique, sacred site of remembrance for the families and acquaintances of at least 34,000 individuals (at least 22,000 at Evergreen and at least 12,000 at East End). This Amended Easement will allow descendants and loved ones of those interred on the Property to continue to use the site as a gathering place, a place of homecoming, and a site of reunion.

R-13 The Property offers families, students, and the general public unique opportunities to honor and understand more deeply the contributions of African Americans to Virginia and American History, from the Civil War Era to the present day. Founded in 1891 (Evergreen) and 1897 (East End) by leaders of Richmond's African American community, the Property, located on approximately 75 acres in the East End of the City of Richmond and the County of Henrico, is the resting place for at least 34,000 individuals who contributed in important ways to the city's, the county's, and the nation's—vibrant social, political, intellectual, and religious life. Grave markers

and their inscriptions located on the Property attest to the strength, resilience, and creativity of those interred, as well as their loved ones.

R-14 The Property features an historic African American cultural landscape that is, in its size, scale, and significance, distinctive in the City of Richmond and Henrico County and, more generally, Virginia and even the United States.

R-15 The Property is one of the few remaining sites in Richmond's East End and Henrico County whose late 19th-century historical fabric remains intact, despite more than a century of development in the area and decades of deterioration. Several miles of original winding roads and pathways exist on the Property (often under several inches of topsoil or considerable debris), the preservation of which will offer Richmond and Henrico residents the opportunity to enjoy the significant cultural setting as intended by its designers—in a natural park-like environment that stood (and stands today) in relief from the surrounding urban environment.

R-16 The Property serves as a nexus of community life, serving as a space for community volunteer events that convene Richmond and Henrico residents—young and old—from all neighborhoods in the city and county. Volunteers clear overgrowth and refuse, maintain cleared areas, map gravesites, record grave information, and assist in making the cemeteries and their records available to families of those interred. This Amended Easement will preserve the Property as a place where Richmond and Henrico residents can meet, walk, and volunteer alongside one another.

R-17 This Amended Easement will allow the Property to continue to serve as an open-air classroom for Richmond City and Henrico County Public School children, as well as college and nontraditional students, by offering space for educational field trips, museum tours, and family visits. Grave markers and monuments present mini-biographies of thousands of individuals, contextualized by their birth and death dates.

R-18 The Property's grave markers and family plots contain a distinctive collection of late 19th- and early 20th-century burial iconography, statuary, ceramic tilework, and architectural design elements enshrined in early concrete. Many of the Property's grave markers were intended to be artistic expressions of familial love, and many of these striking works of art survive today. This Amended Easement will help to preserve these deeply personal works of art for generations to come.

R-19 Collectively, grave markers and family plots on the Property serve as a memorial to African American institution-building, family bonds, community development, and civil rights struggles from Reconstruction to the present day. Few other such monuments exist in the United States.

R-20 The Property contains significant historical horticultural elements that are important to the study and understanding of late 19th-century American cemeteries, especially those created by and for African Americans. For example, yucca can be found in a number of places on the Property and often exist at the entranceways to paths or grave plots or as the focal point of a sightline. Likewise, some of the cemeteries' original cedar trees still line the former main entrance road.

R-21 Much of the western border of the Property is adjacent to Stony Run, fed by runoff from deep-cut creek ravines formed by erosion as well as human activity, including the creation of a large borrow pit from the construction of a mill dam. Preservation of the Property helps to preserve the history of milling in this part of Richmond and Henrico, as well as of the labor required to create and maintain the mill dams and operate the mills.

R-22 In addition to Stony Run, the Property also contains a portion of Gillies Creek, and the protection of these two tributaries to the James River as provided herein will help protect the water quality of the James River and the Chesapeake Bay.

R-23 The Property holds a wealth of archaeological information pertaining to late-19th and early 20th-century cemetery construction and operation. For example, the brick ruins of the Evergreen Cemetery's caretaker's cottage can be found near the original main entranceway on East Richmond Road. In addition, early concrete steps link the main road to a series of hilly pathways, and cobblestones decorate another road, which connects the Cemeteries' high ground to another entrance on East Richmond Road. Moreover, remains of items left by loved ones at gravesites provide yet another material record of visitation through the Cemeteries' histories, as well as changing expressions of love and remembrance over time.

R-24 The Property's frontage along East Richmond Road affords those in the surrounding communities of Montrose, Fulton, and Church Hill a view of a sacred resting place of many from their communities. The Cemeteries provide a critical sense of continuity and affirmation of historical legacies for residents of these dynamic communities.

R-25 The Property is an important natural and cultural asset of the community and the state. With public access provided by Grantor, including interpretive signage and walking paths, this Amended Easement will ensure that the Property remains accessible for remembrance, public education, and recreation.

R-26 The United Nations Educational, Scientific, and Cultural Organization ("UNESCO") has designated Evergreen Cemetery as a "site of memory" to help protect its history as a site contributing to UNESCO's Slave Route Project.

R-27 Pursuant to Section 10.1-1801.1 of the Code of Virginia, Grantee has approved an Open-Space Lands Preservation Trust Fund grant to Grantor as an entity conveying an open-space easement on agricultural, forestal, or other open-space land for conveyance of this Amended Easement, associated costs, and to support preservation of the Property.

R-28 This Amended Easement will yield significant public benefit to the citizens of the Commonwealth as set forth in these recitals and in Section I below.

R-29 Grantor and Grantee desire to protect in perpetuity the conservation values of the Property as specified in Section I by restricting the use of the Property as set forth in Section II of the Original Easement.

R-30 Grantee has determined that the restrictions set forth in Section II, of the Original Easement, (the Restrictions) will preserve and protect in perpetuity the conservation values of the Property and will limit use of the Property to those uses consistent with, and not adversely affecting, the conservation values of the Property and the governmental conservation policies furthered by this Amended Easement.

R-31 Grantee, by acceptance of this Amended Easement, designates the Property as property to be retained and used in perpetuity for the preservation and provision of open-space land pursuant to the Open-Space Land Act.

NOW, THEREFORE, in consideration of the foregoing recitals and the recitals set forth in the Original Easement, incorporated herein and made a part hereof, and in further consideration of the mutual covenants herein and their acceptance by Grantee, and in further consideration of an Open-Space Lands Preservation Trust Fund grant in the amount of \$85,944.00, Grantor does hereby grant and convey to Grantee an open-space easement in gross (this "Amended Easement") over, and the right in perpetuity to restrict the use of, the Property, which is described below and consists of 75.325 acres, more or less, a portion of which is located in the City of Richmond and a portion of which is located in the County of Henrico, pursuant to the terms, conditions and restrictions of the Original Easement, as amended herein, which Original Easement is incorporated herein by reference as if it were textually set forth herein:

Original Property

Tax Map # E000330700 (City of Richmond)

"ALL that certain parcel of land situated on the north side of East Richmond Road, containing 59.2 acres, more or less, shown on a plat dated December 7, 1965 (revised on February 16, 1967) made by J. K. Timmons & Associates, Consulting Engineers, entitled "Plat Showing a Parcel of Land Situated on the North Side of East Richmond Road, being the Evergreen Cemetery in the City of Richmond, Virginia," a copy of which plat is recorded with the deed from The Evergreen Cemetery Association to Metropolitan Memorial Services, Inc., dated January 15, 1970, and recorded in the Clerk's Office, Chancery, City of Richmond, Virginia in Deed Book 662C, Page 456.

NOTE: The northern and western boundaries of the aforesaid Property are more clearly shown on that certain exhibit plat made by Timmons Group, dated June 4, 2018, and entitled, "COMPILED EXHIBIT SHOWING THE NORTHERN AND WESTERN PROPERTY LINE OF EVERGREEN CEMETERY IN THE CITY OF RICHMOND, VA," which exhibit plat is attached hereto as EXHIBIT A and incorporated herein by this reference.

BEING the same real estate conveyed to Parity LLC, a Virginia limited liability company, by deed from U.K. Corporation, a Virginia corporation, dated May 23,

2017, recorded May 24, 2017 in the Clerk's Office, Circuit Court, City of Richmond, Virginia as Instrument No. 170010519."

Additional Property

Tax Map # 805-721-5113 (Henrico County) – shown as 14.29 acres in County tax records

Tax Map # E0003307011 (City of Richmond) – shown as 1.835 acres in City tax records

"ALL that certain lot, piece or parcel of land, lying and being partly in Henrico County and partly in the City of Richmond, Virginia, fronting 778.8 feet, more or less, on the western line of Evergreen Road (formerly Bulheller) and more particularly described as follows: BEGINNING at a point on the western line of Evergreen Road where the same is intersected by the present dividing line of the City of Richmond and the County of Henrico, thence northwardly along the western line of Evergreen Road and fronting thereon 708.8 feet, more or less, to the lands of Henrico County; thence N 67 degrees 45' W along the line with said property of Henrico County 1139 feet, more or less, to a stone; thence S 22 degrees W with the lands of Henrico County 445 feet, more or less, to a stone on the line of Oakwood Cemetery; thence S 73 degrees 30' E along the line with Oakwood Cemetery 565 feet, more or lose, to the easternmost part of said Oakwood Cemetery line; thence southwardly along the line with Oakwood Cemetery 220 feet, more or less, to the point of intersection of said line with the Henrico County - City of Richmond present dividing line; thence continuing southwardly along the line with Oakwood Cemetery 240 feet, more or less, to the common boundary line with Evergreen Cemetery thence S 75 1/4 degrees E along said common boundary line with Evergreen Cemetery 569 feet, more or less, to a point on the western line of Evergreen Road; thence northwardly along the western line of Evergreen Road and fronting thereon 70 feet, more or less, to the point and place of beginning.

INCLUDING THEREWITH therewith all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 62,125 square feet, more or less, as was acquired by Deed of Exchange from the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point on the south line of the proposed Stony Run Parkway which point is S 67 degrees 11' E (N 67 degrees 11' W as shown on plat) a distance of 301 ft. from the northwest corner of the property of East End Burial Association Cemetery which corner is marked by a stone; thence along a curve to the right having a radius of 667 ft. a distance of 134 ft., more or less, to a point; thence N 86 degrees 48' E a distance of 53 ft. to a point; thence along a curve to the left having a radius of 633 ft. a distance of 104 ft., more or less, to a point; thence S 25 degrees 25' 15" E a distance of 7 ft. to a point; thence S 84' 57" E a distance of 68 ft., more or less, to a point; thence along a curve to the left having a radius of 238.7 ft. a distance of 203 ft., more or less., to a point; thence S 74 degrees 15' 06" E a distance of 143 ft., more or less, to a point; thence along a curve to the right having a radius of 220 ft. a distance of 102 ft., more or less, to a point; thence S 47 degrees 41' 52" E a

distance of 55 ft., more or less, to a point; thence S 42 degrees 18' W a distance of 25 ft., more or less, to a point; thence N 67 degrees 11' W a distance of 780 ft., more or less, to the point and place of beginning. For a more particular description of the land hereby conveyed, reference is made to the print prepared by Henrico County Engineering Department dated April 28, 1965 and revised July 27, 1965 attached and recorded with the Deed of Exchange aforesaid in Deed Book 1451, Page 427 and shown thereon as Parcel "B."

LESS AND EXCEPT FROM the parcel of land first herein above described all that piece or parcel of land, lying and being in the County of Henrico, Virginia, containing 59,125 square feet, more or less, as was conveyed by Deed of Exchange to the Board of County Supervisors of Henrico County, Virginia, dated June 24, 1970, recorded January 25, 1971 in the Clerk's Office, Circuit Court, Henrico County, Virginia in Deed Book 1451, Page 427, and described as follows: Beginning at a point marked by a stone which point is the northwest corner of the property of East End Burial Association Cemetery; thence S. 23 degrees 09' W a distance of 444.70 ft. to a point marked by a pin; thence S. 72 degrees 37' E (N 72 degrees 37' W as shown on plat) a distance of 43.3 ft., to a point; thence along a curve to the right having a radius of 667 ft. a distance of 525 ft., more or less to a point; thence N 67 degrees 11' W. a distance of 301 ft. to the point and place of beginning. For a more particular description of the land conveyed, reference is made to the aforesaid print showing the land designated as Parcel 'A.'"

BEING the same real estate conveyed to Parity, LLC from Special Commissioner Michael L. Warwick by that certain Special Commissioner's Deed, dated April 1, 2019, and recorded April 11, 2019 in the Circuit Court Clerk's Office of the City of Richmond, Virginia as Instrument Number 190006816 and recorded on April 11, 2019 in the Circuit Court Clerk's Office of the County of Henrico, Virginia as Instrument Number 201900009714.

The Property is shown as Richmond City PIDs E0003307011 and E0003307004 and Henrico County GPIN 805-721-5113. **Even if the Property may have been acquired previously as separate parcels, it shall be considered one parcel for purposes of this Easement, and the restrictions and covenants of this Easement shall apply to the Property as a whole.**

Paragraph 12 of Section V of the Original Easement is hereby amended to read as follows:

"12. AMENDMENT. Grantee and Grantor may amend this Easement to enhance the Property's conservation values or add to the restricted property by an amended deed of easement, provided that no amendment shall (i) affect this Easement's perpetual duration, (ii) conflict with or be contrary to or inconsistent with the conservation purpose of this Easement, or (iii) reduce the protection of the conservation values. No amendment shall be effective unless documented in a notarized writing executed by Grantee and Grantor and recorded in the Clerks' Offices of the Circuit Courts of the City of Richmond and the County of Henrico, Virginia."

Paragraph 19 of Section V of the Original Easement is hereby amended to read as follows:

"19. RECORDING. This Easement shall be recorded in the land records in the Circuit Court Clerks' Offices of the City of Richmond, Virginia and the County of Henrico, Virginia, and Grantee may re-record it any time as may be required to preserve its rights under this Easement."

The addition of the Additional Property to the Original Property by this Amended Easement shall not provide Grantor any additional division rights, the right to construct any additional buildings or other structures on the Property, or the right to carry on any additional industrial or commercial activities on the Property.

Except as otherwise specifically amended herein, all the terms, restrictions, and conditions of the Original Easement shall apply to the Property and shall remain in full force and effect.

WITNESS the following signatures and seals:

[Counterpart signature pages follow.]

[Counterpart signature page 1 of 2 of deed of open-space easement]

PARITY, LLC, a Virginia limited liability company

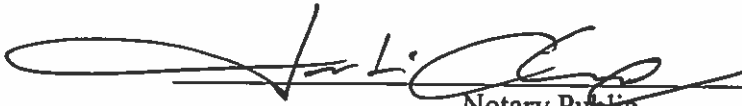
By: ENRICHMOND FOUNDATION, the sole member of Parity, LLC

By: 
John Sydnor

Its: Executive Director

COMMONWEALTH OF VIRGINIA,
CITY/COUNTY OF Richmond, TO WIT:

The foregoing instrument was acknowledged before me this 11th day of SEPTEMBER, 2019 by John Sydnor, the Executive Director of Enrichmond Foundation, the sole member of Parity, LLC.


Notary Public

(SEAL)

My commission expires: June 30, 2023
Registration No. 7638163



[Counterpart signature page 2 of 2 of deed of open-space easement]

Accepted:

VIRGINIA OUTDOORS FOUNDATION,

By: Brett C. Glymph

COMMONWEALTH OF VIRGINIA,

CITY/COUNTY OF Fauquier, TO WIT:

The foregoing instrument was acknowledged before me this 12th day of September, 2019 by Brett C. Glymph, the Executive Director of the Virginia Outdoors Foundation.

Barbara J. Cabibbo
Notary Public

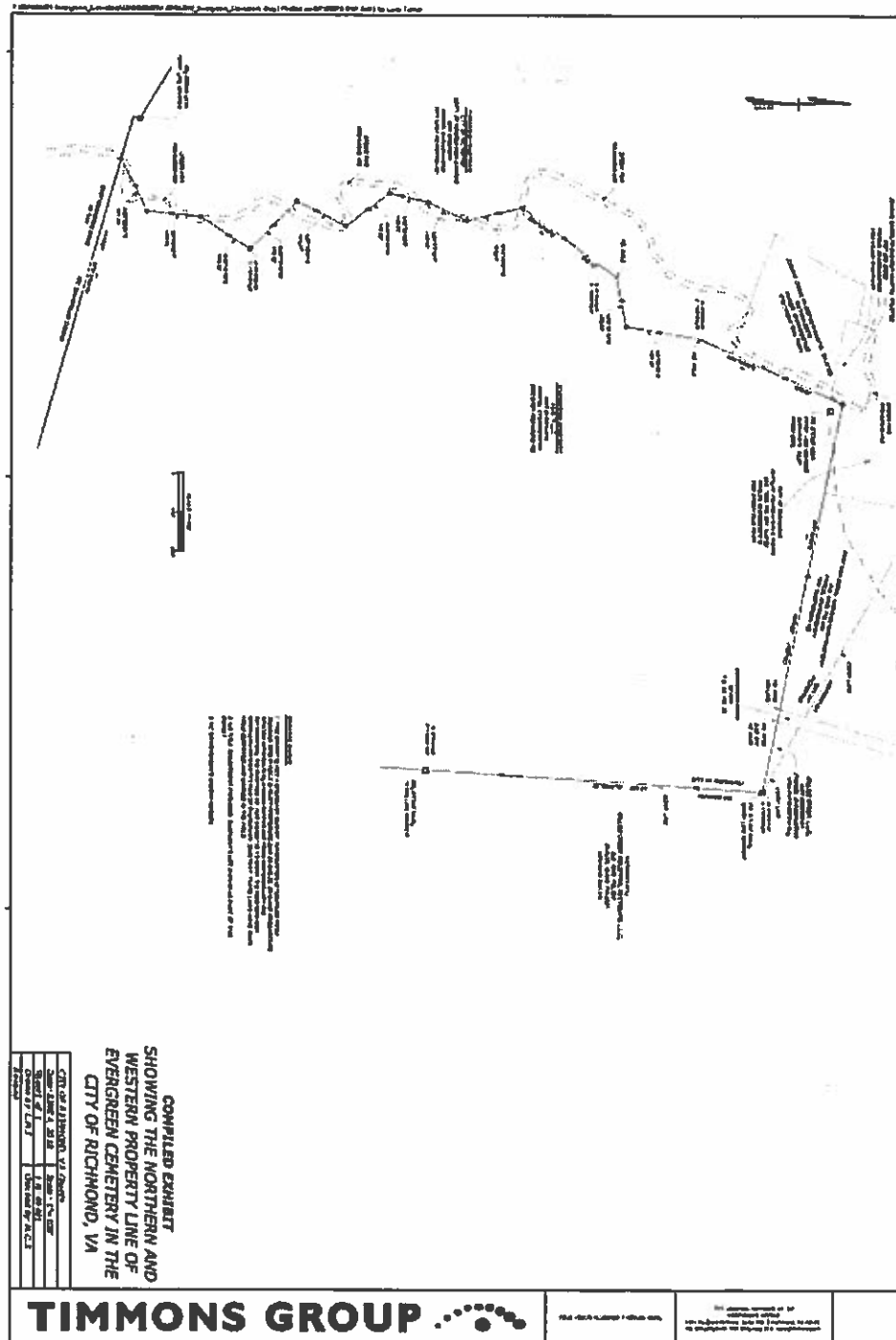
(SEAL)

My commission expires: 9-30-20

Registration No. 7207144

BARBARA J CABIBBO
NOTARY PUBLIC
REG. #7207144
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES SEPT. 30, 2020

EXHIBIT A



PG 0359 SEP 23 2

CLERK'S CERTIFICATE
DO NOT REMOVE FROM DOCUMENT

BK5897PG1027

INSTRUMENT # 201900029303
RECORDED IN THE CLERK'S OFFICE OF
HENRICO COUNTY ON
SEPTEMBER 20, 2019 AT 01:58PM

HEIDI S. BARSHINGER, CLERK
RECORDED BY: TJJ



Official Receipt
Henrico Circuit Court
Heidi S. Barshinger
P.O. Box 90775
Henrico, VA 23273-0775
(804) 501-4202

PG0361 SEP 23 2019

Receipt For : RUDY, COYNER & ASSOCIATES
Cashier : TJJ

Instrument Type : AMEND
Instrument # : 201900029303
Book/Page : 05897 / 1011-01027 Pages : 17
1st Grantor : PARITY LLC
1st Grantee : VIRGINIA OUTDOORS FOUNDATION
Description : 14.29 ACRES
Consideration: 0.00 Assumed Value: 0.00

Receipt # : 2019-192636
Date : 09/20/2019 01:58pm
Document : 1 of 1
Ex : Y
Ex : Y
Pct : 100.00%
1st City: Y

Item #	Description	Qty	Unit Cost	Extended
035	VOF	1	1.00	1.00
301	Clerk 11-30 Pages	1	28.50	28.50
145	VSLA	1	1.50	1.50
106	TTF	1	5.00	5.00
236	Copies	17	0.50	8.50
Document 1				44.50
Grand Total				44.50
Check 30542				-44.50
Balance				0.00

INSTRUMENT 190019512
RECORDED IN THE CLERK'S OFFICE OF
RICHMOND CITY CIRCUIT COURT ON
SEPTEMBER 23, 2019 AT 02:02 PM
EDWARD F. JEWETT, CLERK
RECORDED BY: SHJ

CITY FOREST CREDITS - PRESERVATION CARBON QUANTIFICATION CALCULATOR

Credit calculator for use with standard carbon stock tables (Section 10.1.A)

Project Name
Project Location
Project Operator

Evergreen and East End Cemetery
Richmond, VA
Enrichmond Foundation

	25-Nov-19	Date of quantification
	64.76	Total acres in the project
	0	Not clearable, per code, acres
	0	Developable area to be kept in trees not counted in the line above, acres
	64.76	Net potential clearable, per code, and to be preserved, acres
B44 Southeast Oak-Hickory		Table number and forest type & region from Appendix B,US Forest Service General Technical Report NE-343
	45	Stand age (years)
	42.4	Biomass tC/ac
	155.5	Biomass tCO2e/ac
	82%	Percent cover, from i-Tree Canopy (provide file containing coordinates of evaluated points)
	8,296	Project Stock, tCO2e (Section 10.1.A.)
	6,637	Accounting Stock, tCO2e
	90%	Fraction at risk of tree removal (Section 10.2)
	5,973	Avoided Biomass Emissions, tCO2e
	0%	Avoided impervious surface, percent (Section 10.4)
	0	Avoided impervious surface, acres
	-	Avoided Soil Carbon Emissions, tCO2e
	0.0%	Displacement: fraction of avoided development that cannot be served by development or re-development of existing non-treed properties within the urban area (Section 10.5.A)
	-	Displaced Biomass Emissions, tCO2e
	-	Displaced Soil Emissions (assumes that redevelopment causes increase in impervious surface on reveveloped parcels)
	5,973	Credits from Avoided Biomass Emissions, tCO2e
	-	Credits from Avoided Soil Emissions, tCO2e
	5,973	Total Credits attributed to the project, tCO2e
	597	Registry reversal pool (10%), tCO2e
5,376 Total credits issued to the project, tCO2e		
83 Total credits issued to the project, tCO2e/acre		

Year	Credits Issued This Year		Cumulative Credits Issued
	1	4151	4151
	2	1225	5376
	3	0	5376
	4	0	5376
	5	0	5376

Assumptions:

Afforestation, not reforestation

Assuming stand age 45

Cemetery: would be logged and converted to lawn, but remain grass

Intial credits, without ongoing growth

No impervious surface, no displaced development



East End Cemetery

Community Forest Management Plan

2019

Prepared By

Molly O'Liddy

Area Forester

Capital Work Area

Virginia Department of Forestry

530 E. Main Street Richmond, VA 23219

East End Cemetery Urban Forest Objectives:

- Preservation of cultural & historical resources
- Control of invasive species
- Create a safe, inviting place for visitors to enjoy
- Maintain the health of the forest

The overall objective of this plan is to help build and maintain a healthy urban forest canopy that can be enjoyed for generations while honoring the cultural and historical nature of the property. Urban trees provide a long range of environmental benefits from stormwater mitigation to improved air quality. By constructing a plan to rid the area of the invasive species we are allowing the trees to highlight their social and cultural benefits as well.

Trees can improve health, reduce stress, reduce crime, improve social cohesiveness, and reduce the effects of ADHD. For more information about the benefits of urban trees, visit <http://www.naturewithin.info/>, <http://www.treesaregood.com/> and <http://lhhl.illinois.edu/>.

Community Forest Management Plan

This plan has been constructed with the hope of mitigating current and future issues facing trees in the East End Cemetery. Tree health, invasive species mitigation, public safety concerns, and the preservation of historical/cultural resources are the specific factors driving this plan's creation. The approach to developing the plan was to deliver on a "Level 2" Tree Risk Assessment as defined by the ANSI A300 Part 9-2011 standard. This standard is defined more specifically by the 93.4.2.2.1 which states that "*assessments shall include a 360-degree, ground-based visual inspection of the tree crown, trunk, trunk flare, above-ground roots, and site conditions around the tree in relation to targets*".

The need for a community tree management plan was indicated through the property owner of East End Cemetery. Historically, the cemetery was not a forested area and contained some native species with a mixture of ornamental species of trees/shrubs that spoke to the culture of those resting there. *Yucca filamentosa* can be found near various gravesites on the property. It was often tradition in southern folk cemeteries to plant live plants around grave sites.

Due to lack of management and the presence of succession, the cemetery grounds reverted back into a native forested area over the decades. The dominant native canopy cover is made up of a mixture Gum, Oak, Pine, and Hickory species. In conjunction, the dominant invasive species is English Ivy *Hedera helix* which can be found throughout the landscape. Invasive species negatively alter forestland composition and ecosystem processes on the landscape. Invasive plant control can be addressed via four different categories – mechanical, chemical, biological, and cultural techniques. This plan illustrates options to combat the invasive species and to re-establish this area to a beautiful resting space.

Data Collection

A team of foresters from the Virginia Department of Forestry collected data over the entire cemetery. The foresters collected 3 to 4 waypoints per grid area to produce an accurate representation of the entire forest canopy. Each waypoint contains information regarding the dominant tree species present, invasive species present, stand quality, and percent coverage of invasives. Collection was done using ArcGIS software and the ArcGIS 'Collector' application.

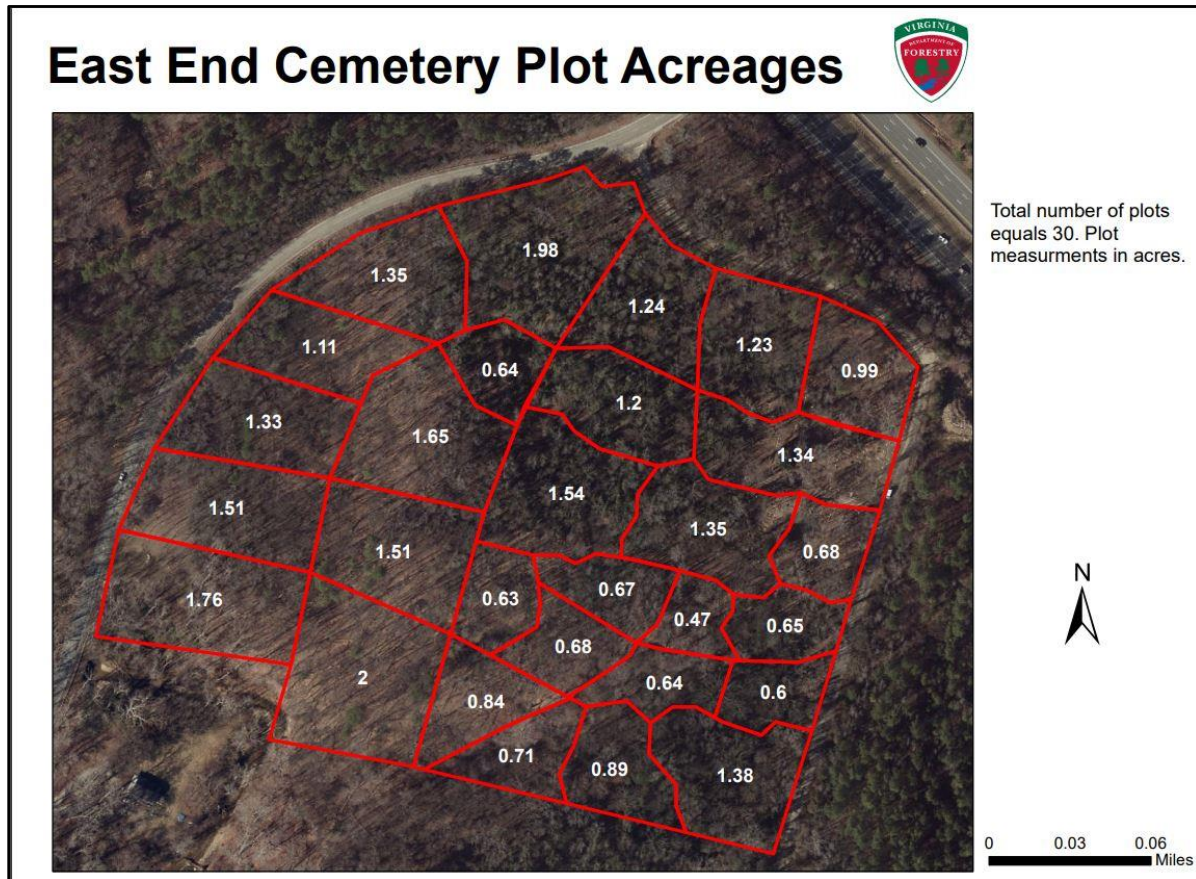


Figure 1. Overlay of plot work areas with acreages included

Forest Composition & Ground Cover

Although these maps and data findings largely identify invasive plants, there are beneficial/native plants that also reside throughout the plot areas. These plants are just as important to understand and identify because they will factor in to the management options of the property. As mentioned before, the canopy consists of mostly Oak, Gum, Pine and Hickory species. This is a standard mix of tree species for forests residing within the state of Virginia. Because many of these trees are deciduous, and only lose their leaves in the winter, shade is abundant throughout the area. That being said, ground cover that is currently present (that is not necessarily invasive) consists of shade tolerant species, such as vincas, mosses and lichens.

General Recommendations & Historical Trees

There were a total of twenty-four trees that were identified as ‘Historical trees.’ The species included Beech, Oak, Pine, Gum, Poplar and Chestnut. All of the historical trees were larger than many of the other trees on the property. Due to their height and circumference (Diameter Breast Height – DBH) measurements, it is believed that these trees were already established before succession took over the cemetery. Only one tree, Post Oak *Quercus stellata*, was indicated as being in ‘poor’ condition by the foresters due to the fact that it is visibly declining. Unlike the historical trees of Evergreen cemetery, none of these trees were threatened by climbing vines. The foresters indicated which trees would benefit from corrective pruning and cleaning.

- Focus on removing invasives manually from these all trees (historical included) if saving these are of interest
- Address areas that have already been cleared by volunteers; Bare soil needs to be covered and monitored to prevent return of invasives
- Establish access to additional work areas for volunteers
- Most of the areas have at least one of the three top invasive species present (English Ivy *Hedera helix* L, Tree of Heaven *Ailanthus altissima*, and Mimosa Tree (*Albizia julibrissin*). Focus on eradication and treatment options for these invasives before moving on to lesser prominent invasives.

****Many of these treatments will need to be repeated in order to gain control of invasives. Continuously monitor treatment areas and treat at first sign of invasive return****

Management Recommendations -

1. Access

Establishing walking paths and access areas throughout the cemetery is essential to continue the forest management process. There are some pathways that are more visible than the neighboring Evergreen Cemetery, but there is still a large amount of potential access. There is a steep gully through one area of the property that drains out to the nearby waterway of Stony Run. This area in particular contained a number of large, specimen trees and had only a small amount of invasive English Ivy *Hedera helix L.* Aerial imagery (Figure 2) from the mid-1900s shows how the cemetery was originally laid out prior to succession taking over.



Figure 2. Aerial Imagery of Evergreen & East End Cemeteries- 1953 – Courtesy of VCU

2. Invasive Species Management

The three most common invasive species found on the property are English Ivy *Hedera helix* L, Tree of Heaven *Ailanthus altissima*, and Mimosa Tree (*Albizia julibrissin*). By using an Integrated Forest Vegetation Management approach (IVM) a combination of mitigation strategies can be used to rid this property of unwanted flora. IVM combines silvicultural, mechanical, biological, and chemical approaches to achieve this overall goal. **Please keep in mind that with any herbicidal use recommendation, the label is the law.** Make sure any applicators read and follow the label, mind safety warnings, and pay attention to site/rate warnings.

The following map shows the dominant invasive species present in each work area. Focusing on the dominant species will give East End volunteers a direction to begin managing each area.

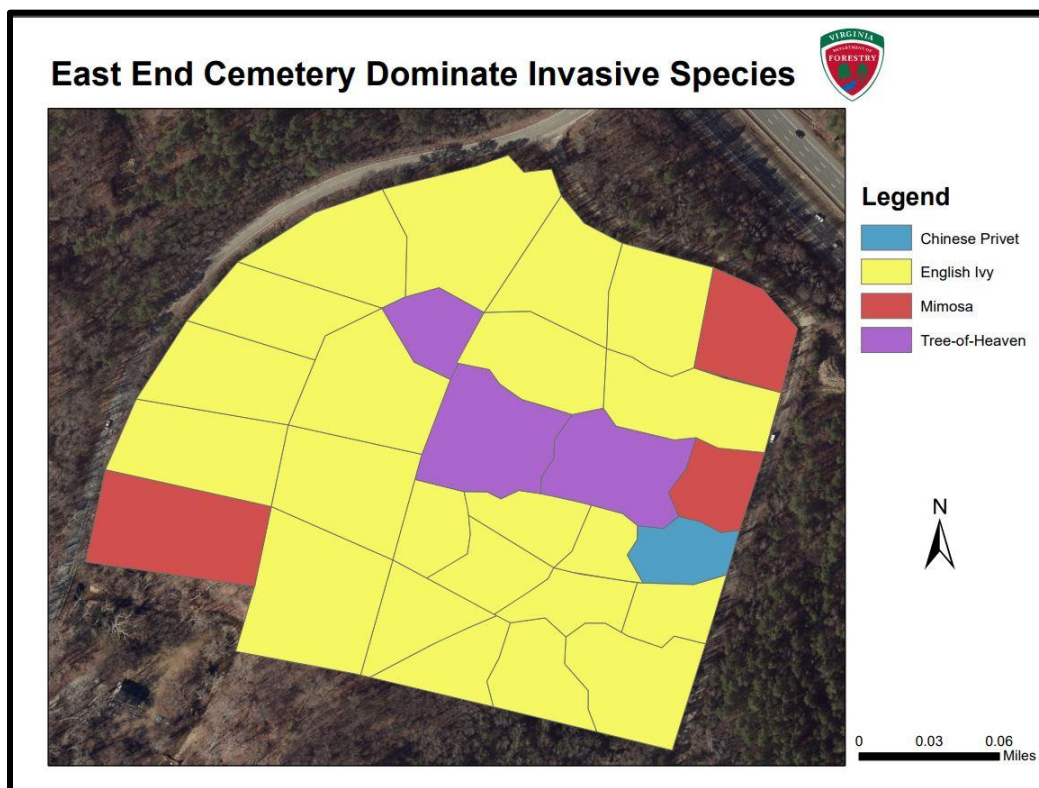


Figure 3: Dominant Invasive Species Map. A full page map is available on the next page.

English Ivy –

English Ivy *Hedera helix* L. touches almost all areas of the East End property. Because this is a climbing vine, English Ivy tends to climb up and around tree trunks to gain access to sunlight. Eventually the ivy will suffocate the tree and leave it susceptible to wind throw.

Prioritize volunteer work to remove vines from trees. Use garden clippers to cut the ivy at the bottom around the entire trunk of the tree. **Any ivy above the cut will die off on its own**; leave vines above the cut alone because pulling could harm the tree. Be sure to pull vines out of the ground surrounding the base of the tree. Removing all ivy from the soil in a 2 foot ring will prevent the ivy from re-establishing itself on the tree. Cover the 2 foot space surrounding the tree with 2 inches of arborist wood chips to preserve moisture in the soil and to discourage future ivy establishment. When cutting the ivy, be sure that tree is **NOT** damaged/cut during this process. Continuous, deep cuts around the tree may result in girdling of the tree which would inhibit the uptake of water/nutrients.



Figure 4. Courtesy of Arlington Tree Stewards- Ivy Removal

English Ivy has shallow roots which makes it easy to be pulled from the soil. Large areas or mats of ivy may need to be removed via shovel to ensure root removal. Large areas of ivy that are not intertwined with historically significant areas can be mowed down with a lawn mower or weed eater.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
English Ivy <i>Pueraria montana</i>	Mechanical (Hand Cutting & Pulling)	Hand Pruners, Loppers, Shovel, and/or Mower, PPE (Personal Protective Equipment i.e. gloves, glasses, etc)	Winter is most common but can be done anytime	Focus on removing any ivy on trees before focusing on ground populations

Table 1. English Ivy Removal Options (IVM)

Tree of Heaven –

Tree of Heaven *Ailanthus altissima* is not as prevalent throughout the property as English Ivy, but is very aggressive invasive specie that spreads rapidly. Established trees send up root suckers that can emerge as far as 50 feet from the parent tree. The leaves, shoots, roots, and bark are allelopathic which means they produce chemicals that can prevent or limit the establishment of other plants. Unfortunately, removing this tree is not as simple as cutting it down. Once the trunk is cut, the tree responds by sending up numerous new stump sprouts to establish even more specimens. Mechanical methods are not as effective because these trees are so heavily rooted.

When removing this invasive, the applicator must follow and read the label on the herbicide completely. It is a heavy pollen producer and has been known to irritate skin on contact. Treating these areas with an herbicide is the most effective way to manage its numbers. Because East End is a sensitive area and has great historical value, only individual stems should be treated either by a basal bark method or frill herbicide applications (hack and squirt). The timing is particularly important when treating this pest to ensure maximum control of the root system.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
Tree of Heaven <i>Ailanthus altissima</i>	Chemical (Herbicide) – Basal Bark Treatment	PPE, Backpack Sprayer, Concentrated herbicide containing active ingredient triclopyr	July through October	Apply w’ backpack sprayer from ground to 12 – 18” up trunk completely around the stem
	Chemical (Herbicide) – Frill Application or Hack & Squirt	PPE, Backpack Sprayer, Machete or Ax, Concentrated herbicide containing active ingredient glyphosate or triclopyr	July through October	Make cuts in stem every inch per diameter of the tree (min of two); Spray herbicide into cuts **Make sure not to girdle the tree which would inhibit the flow of herbicide through the tree **

Table 2. Tree of Heaven Removal Options (IVM)

Mimosa Tree –

Mimosa Tree is a landscape tree from Asia that has escaped cultivation and moved into natural areas. Areas in East End that contain Mimosa Tree are near the waterway of Stoney Run and along the entrance road. Young plants can be managed through mechanical techniques such as hand pulling, weed wrenching, mowing, or cutting. The plant tends to re-sprout, so to be observant of new growth. The new growth will need to be removed again by hand or an herbicide can be applied to the trunk.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
Mimosa Tree (<i>Albizia julibrissin</i>)	Mechanical (Hand Cutting & Pulling)	Hand Pruners, Loppers, Mower, and/or Shovel, PPE <i>Optional</i> – Weed Wrench	Anytime – usually easiest when soil is moist	Following mechanical treatments, mimosa sprouts from stumps.
	Chemical (Herbicide) – Frill Application or Hack & Squirt	PPE, Backpack Sprayer, Machete or Ax, Concentrated herbicide containing active ingredient glyphosate or triclopyr	July through October	Make cuts in stem every inch per diameter of the tree (min of two); Spray herbicide into cuts **Make sure not to girdle the tree which would inhibit the flow of herbicide through the tree **

Table 3. Mimosa Tree Removal Options (IVM)

3. Ground Cover Options

Successful eradication of these invasive species will not stop with the first pesticide treatment or volunteer work day. It is likely that the top soil (seedbed) is inundated with seeds from these plants. Newly exposed bare soil should be covered. An inexpensive option would be to cover the ground with a thick layer of mulch to keep any sunlight from reaching the fragile seedbed. Another option would be to introduce a combination of native ground cover species with a high rate of spread that would establish quickly and reduce the likelihood of invasives/weeds returning to the site.

If composting is an option, unwanted vegetative debris (native or invasive) could be composted into usable mulch. Make sure that the compost cures for at least one growing season before use to allow organisms and enzymes to break down any invasive material.

When selecting ground cover options, be sure to lean on native species. Native species grow well in Virginia's Plant Hardiness Zones (5-7) as well as will provide the most benefits in terms of wildlife support and pollinator habitat. If new tree seedlings are needed for the area, the Virginia Department of Forestry grows and sells both pine and hardwood species through their state nurseries. Larger trees could also be obtained from various nurseries around the Richmond area.

Additional Resources –

Please contact the Virginia Department of Forestry with any questions or suggestions in regards to this plan. A forester should be called at a minimum of every 3 years to update this plan and visit the site. Below are additional informational resources that may be helpful when enacting this plan.

English Ivy - <https://www.srs.fs.usda.gov/factsheet/127>

Tree of Heaven - <https://www.srs.fs.usda.gov/factsheet/120>

Mimosa Tree - <https://extension.tennessee.edu/publications/Documents/W232.pdf>

Virginia Department of Forestry - <http://www.dof.virginia.gov/>



Evergreen Cemetery

Community Forest Management Plan

2019

Prepared By

Molly O'Liddy

Area Forester

Capital Work Area

Virginia Department of Forestry

530 E. Main Street Richmond, VA 23219

Evergreen Cemetery Urban Forest Objectives:

- Preservation of cultural & historical resources
- Control of invasive species
- Create a safe, inviting place for visitors to enjoy
- Maintain the health of the forest

The overall objective of this plan is to help build and maintain a healthy urban forest canopy that can be enjoyed for generations while honoring the cultural and historical nature of the property. Urban trees provide a long range of environmental benefits from stormwater mitigation to improved air quality. By constructing a plan to rid the area of the invasive species we are allowing the trees to highlight their social and cultural benefits as well.

Trees can improve health, reduce stress, reduce crime, improve social cohesiveness, and reduce the effects of ADHD. For more information about the benefits of urban trees, visit <http://www.naturewithin.info/>, <http://www.treesaregood.com/> and <http://lhhl.illinois.edu/>.

Community Forest Management Plan

This plan has been constructed with the hope of mitigating current and future issues facing trees in the Evergreen Cemetery. Tree health, invasive species mitigation, public safety concerns, and the preservation of historical/cultural resources are the specific factors driving this plan's creation. The approach to developing the plan was to deliver on a "Level 2" Tree Risk Assessment as defined by the ANSI A300 Part 9-2011 standard. This standard is defined more specifically by the 93.4.2.2.1 which states that "*assessments shall include a 360-degree, ground-based visual inspection of the tree crown, trunk, trunk flare, above-ground roots, and site conditions around the tree in relation to targets*".

The need for a community tree management plan was indicated through the advisory board and caretaker of Evergreen. Historically, the cemetery was not a forested area and contained some native species with a mixture of ornamental species of trees/shrubs that spoke to the culture of those resting there. *Yucca filamentosa* can be found near various gravesites on the property. It was often tradition in southern folk cemeteries to plant live plants around grave sites. Other ornamental plants found throughout the property include Osage Orange trees *Maclura pomifera*, which were often used to indicate boundary lines within cemeteries.

Due to lack of management and the presence of succession, the cemetery grounds reverted back into a native forested area over the decades. The dominant native canopy cover is made up of a mixture maple, oak, poplar, and hickory species. In conjunction, invasive species such as English Ivy *Hedera helix*, Kudzu *Pueraria montana*, and Chinese Privet *Ligustrum sinense* have taken hold and now dominate the landscape. Invasive species negatively alter forestland composition and ecosystem processes on the landscape. Invasive plant control can be addressed via four different categories – mechanical, chemical, biological, and cultural techniques. This plan illustrates options to combat the invasive species and to re-establish this area to a beautiful resting space.

Data Collection

A team of foresters from the Virginia Department of Forestry collected data over the entire cemetery. The foresters collected 3 to 4 waypoints per grid area to produce an accurate representation of the entire forest canopy. Each waypoint contains information regarding the dominant tree species present, invasive species present, stand quality, and percent coverage of invasives. Collection was done using ArcGIS software and the ArcGIS ‘Collector’ application.



Figure 1. Overlay of plot work areas with acreages included

Forest Composition & Ground Cover

Although these maps and data findings largely identify invasive plants, there are beneficial/native plants that also reside throughout the plot areas. These plants are just as important to understand and identify because they will factor in to the management options of the property. As mentioned before, the canopy consists of mostly Oak, Maple, Poplar, and Hickory species. This is a standard mix of tree species for forests residing within the state of Virginia. Because many of these trees are deciduous, they cast shade over most of the areas more the seasons of the year and lose their leaves during the winter. That being said, ground cover that is currently present (that is not necessarily invasive) consists of shade tolerant species, such as vincas, mosses and lichens.

General Recommendations & Historical Trees

There were a total of five trees that were identified as ‘Historical trees.’ All were in the Oak family and were larger than many of the other trees on the property. Due to their height and circumference (Diameter Breast Height – DBH) measurements, it is believed that these trees were already established before succession took over the cemetery. Only one tree, White Oak *Quercus alba*, was indicated as being in ‘good’ condition by the foresters. Every one of these trees had some kind of vine climbing the trunk, threatening to strangle these trees.

- Focus on removing invasives manually from these all trees (historical included) if saving these are of interest
- Address areas that have already been cleared by volunteers; Bare soil needs to be covered and monitored to prevent return of invasives
- Establish access to additional work areas for volunteers
- All or most of the areas have the three top invasive species present (English Ivy *Hedera helix* L, Tree of Heaven *Ailanthus altissima*, and Chinese Privet *Ligustrum sinense*). Focus on eradication and treatment options for these invasives before moving on to lesser prominent invasives.

****Many of these treatments will need to be repeated in order to gain control of invasives. Continuously monitor treatment areas and treat at first sign of invasive return****

Management Recommendations -

1. Access

Establishing walking paths and access areas throughout the cemetery is essential to continue the forest management process. Aerial imagery (Figure 2) from the early 1900s shows how the cemetery was original laid out prior to succession taking over.



Figure 2. Aerial Imagery of Evergreen Cemetery- 1953 – Courtesy of VCU

2. Invasive Species Management

The three most common invasive species found on the property are English Ivy *Hedera helix* L, Tree of Heaven *Ailanthus altissima*, and Chinese Privet *Ligustrum sinense*. By using an Integrated Forest Vegetation Management approach (IVM) a combination of mitigation strategies can be used to rid this property of unwanted flora. IVM combines silvicultural, mechanical, biological, and chemical approaches to achieve this overall goal. **Please keep in mind that with any herbicidal use recommendation, the label is the law.** Make sure any applicators read and follow the label, mind safety warnings, and pay attention to site/rate warnings.

The following map shows the dominant invasive species present in each work area. Focusing on the dominant species will give Evergreen volunteers a direction to begin managing each area.

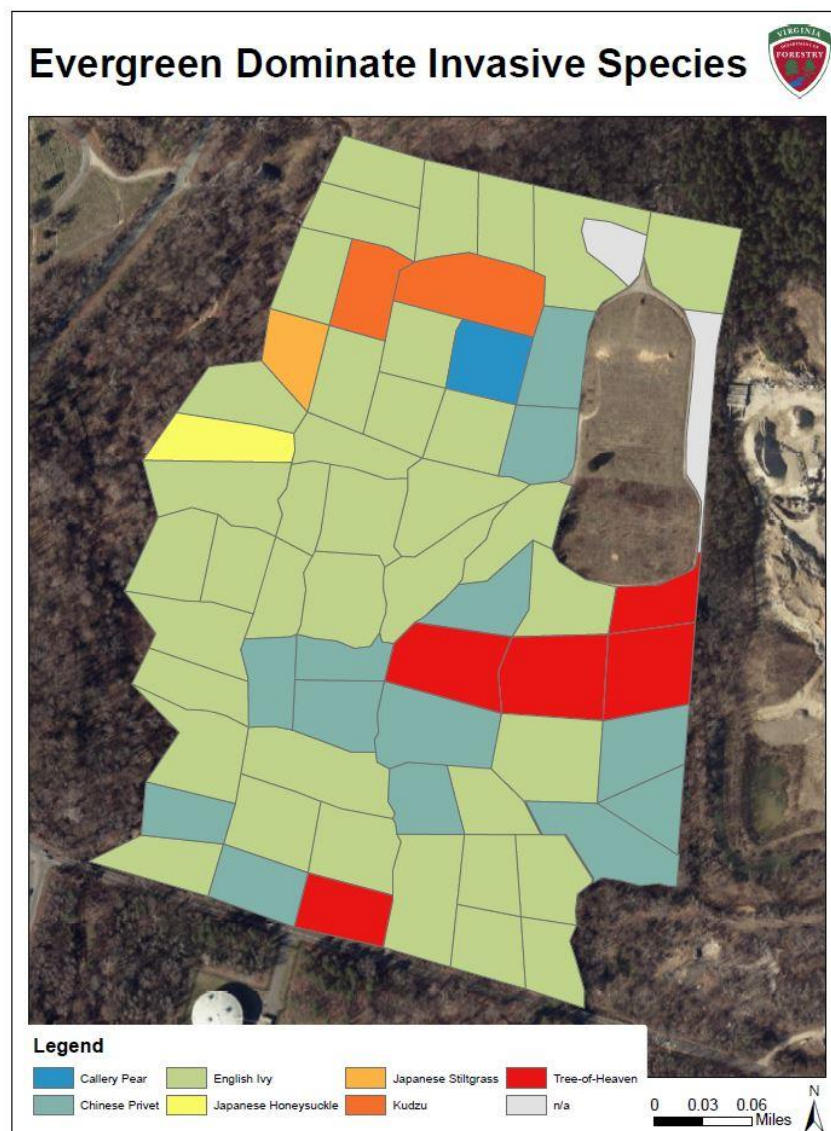


Figure 3: Dominant Invasive Species Map. A full page map is available on the next page.

English Ivy –

English Ivy *Hedera helix* L. touches almost all areas of the Evergreen property. Because this is a climbing vine, English Ivy tends to climb up and around tree trunks to gain access to sunlight. Eventually the ivy will suffocate the tree and leave it susceptible to wind throw.

Prioritize volunteer work to remove vines from trees. Use garden clippers to cut the ivy at the bottom around the entire trunk of the tree. **Any ivy above the cut will die off on its own**; leave vines above the cut alone because pulling could harm the tree. Be sure to pull vines out of the ground surrounding the base of the tree. Removing all ivy from the soil in a 2 foot ring will prevent the ivy from re-establishing itself on the tree. Cover the 2 foot space surrounding the tree with 2 inches of arborist wood chips to preserve moisture in the soil and to discourage future ivy establishment. When cutting the ivy, be sure that tree is **NOT** damaged/cut during this process. Continuous, deep cuts around the tree may result in girdling of the tree which would inhibit the uptake of water/nutrients.



Figure 4. Courtesy of Arlington Tree Stewards- Ivy Removal

English Ivy has shallow roots which makes it easy to be pulled from the soil. Large areas or mats of ivy may need to be removed via shovel to ensure root removal. Large areas of ivy that are not intertwined with historically significant areas can be mowed down with a lawn mower or weed eater.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
English Ivy <i>Pueraria montana</i>	Mechanical (Hand Cutting & Pulling)	Hand Pruners, Loppers, Shovel, and/or Mower, PPE (Personal Protective Equipment i.e. gloves, glasses, etc)	Winter is most common but can be done anytime	Focus on removing any ivy on trees before focusing on ground populations

Table 1. English Ivy Removal Options (IVM)

Tree of Heaven –

Tree of Heaven *Ailanthus altissima* is not as prevalent throughout the property as English Ivy, but is very aggressive invasive specie that spreads rapidly. Established trees send up root suckers that can emerge as far as 50 feet from the parent tree. The leaves, shoots, roots, and bark are allelopathic which means they produce chemicals that can prevent or limit the establishment of other plants. Unfortunately, removing this tree is not as simple as cutting it down. Once the trunk is cut, the tree responds by sending up numerous new stump sprouts to establish even more specimens. Mechanical methods are not as effective because these trees are so heavily rooted.

When removing this invasive, the applicator must follow and read the label on the herbicide completely. It is a heavy pollen producer and has been known to irritate skin on contact. Treating these areas with an herbicide is the most effective way to manage its numbers. Because Evergreen is a sensitive area and has great historical value, only individual stems should be treated either by a basal bark method or frill herbicide applications (hack and squirt). The timing is particularly important when treating this pest to ensure maximum control of the root system.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
Tree of Heaven <i>Ailanthus altissima</i>	Chemical (Herbicide) – Basal Bark Treatment	PPE, Backpack Sprayer, Concentrated herbicide containing active ingredient triclopyr	July through October	Apply w’ backpack sprayer from ground to 12 – 18” up trunk completely around the stem
	Chemical (Herbicide) – Frill Application or Hack & Squirt	PPE, Backpack Sprayer, Machete or Ax, Concentrated herbicide containing active ingredient glyphosate or triclopyr	July through October	Make cuts in stem every inch per diameter of the tree (min of two); Spray herbicide into cuts **Make sure not to girdle the tree which would inhibit the flow of herbicide through the tree **

Table 2. Tree of Heaven Removal Options (IVM)

Chinese Privet –

Like Tree of Heaven, Chinese Privet *Ligustrum sinense* rapidly spreads and is established by root sprouts. Privet is a multi-stemmed shrub that can grow up to 20' tall. The areas of Evergreen Cemetery that were close to E. Richmond Road had an extensive amount of this invasive in particular. Young plants can be managed through mechanical techniques such as hand pulling, weed wrenching, mowing, or cutting. To eliminate the roots, a foliar herbicide treatment applied during the dormant season (early spring or late autumn) is most effective.

Invasive Species	Type of Treatment	Equipment Needed	Time of Year	Notes
Chinese Privet <i>Ligustrum sinense</i>	Mechanical (Hand Cutting & Pulling)	Hand Pruners, Loppers, Mower, and/or Shovel, PPE <i>Optional</i> – Weed Wrench	Anytime – usually easiest when soil is moist	Following mechanical treatments, privet rapidly sprouts from stumps/lateral roots. Treating new sprouts with fall foliar treatment is very effective
	Chemical (Herbicide) – Foliar	PPE, Backpack sprayer, Concentrated herbicide containing at least 41% glyphosate	November through early January	Use on smaller privet plants to decrease risk of drift to other favorable plants
	Chemical (Herbicide) – Cut Stump	PPE, Backpack sprayer, Concentrated herbicide containing at least 41% glyphosate or 44% triclopyr; Machete/Ax, Pruners	November through early January	Spray stump to wet entire surface

Table 3. Chinese Privet Removal Options (IVM)

3. Ground Cover Options

Successful eradication of these invasive species will not stop with the first pesticide treatment or volunteer work day. It is likely that the top soil (seedbed) is inundated with seeds from these plants. Newly exposed bare soil should be covered. An inexpensive option would be to cover the ground with a thick layer of mulch to keep any sunlight from reaching the fragile seedbed. Another option would be to introduce a combination of native ground cover species with a high rate of spread that would establish quickly and reduce the likelihood of invasives/weeds returning to the site.

If composting is an option, unwanted vegetative debris (native or invasive) could be composted into usable mulch. Make sure that the compost cures for at least one growing season before use to allow organisms and enzymes to break down any invasive material.

When selecting ground cover options, be sure to lean on native species. Native species grow well in Virginia's Plant Hardiness Zones (5-7) as well as will provide the most benefits in terms of wildlife support and pollinator habitat. If new tree seedlings are needed for the area, the Virginia Department of Forestry grows and sells both pine and hardwood species through their state nurseries. Larger trees could also be obtained from various nurseries around the Richmond area.

Additional Resources –

Please contact the Virginia Department of Forestry with any questions or suggestions in regards to this plan. A forester should be called at a minimum of every 3 years to update this plan and visit the site. Below are additional informational resources that may be helpful when enacting this plan.

English Ivy - <https://www.srs.fs.usda.gov/factsheet/127>

Tree of Heaven - <https://www.srs.fs.usda.gov/factsheet/120>

Chinese Privet - <https://plants.usda.gov/core/profile?symbol=LISI>

Virginia Department of Forestry - <http://www.dof.virginia.gov/>





Id	Cover Class	Description	Latitude	Longitude
1	Tree	Tree, non-shrub	37.53059145	-77.38797921
2	Tree	Tree, non-shrub	37.52997872	-77.387269
3	Tree	Tree, non-shrub	37.53793188	-77.38825529
4	Non-Tree	All other surfaces	37.53415538	-77.38862735
5	Tree	Tree, non-shrub	37.5332529	-77.38726794
6	Tree	Tree, non-shrub	37.53549774	-77.38789194
7	Non-Tree	All other surfaces	37.53607219	-77.38610899
8	Tree	Tree, non-shrub	37.53085136	-77.39030931
9	Tree	Tree, non-shrub	37.53484832	-77.38942735
10	Tree	Tree, non-shrub	37.53705673	-77.3888516
11	Non-Tree	All other surfaces	37.53538987	-77.38662033
12	Tree	Tree, non-shrub	37.53264896	-77.387855
13	Tree	Tree, non-shrub	37.53145635	-77.38707768
14	Tree	Tree, non-shrub	37.53060296	-77.38908803
15	Tree	Tree, non-shrub	37.53042413	-77.38988494
16	Non-Tree	All other surfaces	37.53077667	-77.39088304
17	Non-Tree	All other surfaces	37.5332237	-77.38572043
18	Non-Tree	All other surfaces	37.53208931	-77.3905412
19	Tree	Tree, non-shrub	37.53761657	-77.38629254
20	Tree	Tree, non-shrub	37.53471264	-77.38571726
21	Tree	Tree, non-shrub	37.53741204	-77.38689789
22	Tree	Tree, non-shrub	37.5375367	-77.38740512
23	Tree	Tree, non-shrub	37.53454757	-77.38569821
24	Tree	Tree, non-shrub	37.53087759	-77.3887252
25	Tree	Tree, non-shrub	37.53712894	-77.38820323
26	Non-Tree	All other surfaces	37.53474467	-77.38949173
27	Tree	Tree, non-shrub	37.53355428	-77.39007148
28	Tree	Tree, non-shrub	37.53167138	-77.38707865
29	Tree	Tree, non-shrub	37.53184032	-77.38967828
30	Non-Tree	All other surfaces	37.53132406	-77.39056902
31	Tree	Tree, non-shrub	37.53014372	-77.38733309
32	Tree	Tree, non-shrub	37.53168269	-77.38683901
33	Tree	Tree, non-shrub	37.53530969	-77.38894828
34	Tree	Tree, non-shrub	37.53515871	-77.38593421
35	Tree	Tree, non-shrub	37.53370792	-77.38863025
36	Tree	Tree, non-shrub	37.5323003	-77.38997805
37	Tree	Tree, non-shrub	37.53385162	-77.38901068
38	Tree	Tree, non-shrub	37.53532998	-77.3887139
39	Tree	Tree, non-shrub	37.53089768	-77.38755791
40	Tree	Tree, non-shrub	37.53333724	-77.38899356
41	Tree	Tree, non-shrub	37.5312496	-77.38958573
42	Tree	Tree, non-shrub	37.53233173	-77.39023615
43	Tree	Tree, non-shrub	37.53290075	-77.39016594
44	Tree	Tree, non-shrub	37.53145929	-77.38752497
45	Tree	Tree, non-shrub	37.53798753	-77.3873118
46	Tree	Tree, non-shrub	37.53305578	-77.38994089

47 Non-Tree	All other surfaces	37.53316038	-77.38801281
48 Tree	Tree, non-shrub	37.53258521	-77.38590035
49 Tree	Tree, non-shrub	37.53670762	-77.38659041
50 Tree	Tree, non-shrub	37.53618354	-77.38644459
51 Tree	Tree, non-shrub	37.53108065	-77.38803328

City Forest Preservation Co-Benefits Quantification Tool for the South Climate Zone

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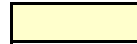
The analyst can use this method to calculate the amount of co-benefits estimated to be produced by existing tree canopy. The tool uses information you provide on tree canopy cover (deciduous and coniferous), and estimates annual co-benefits in Resource Units and \$ per year. Transfer functions (i.e., kWh of electricity per m² of tree canopy) were calculated as the average of values for the large, medium and small trees in the deciduous and coniferous life forms. Resource units for the dbh corresponding to a 25-year old tree were used, along with the crown projection area of the representative species for each tree-type. Energy effects and avoided CO2 are reduced to 20% of values in the i-Tree Streets source data because preserved areas generally have fewer nearby buildings affected by climate and shade effects than areas with street trees. Local prices were from i-Tree Streets.

Steps

- 1) Use i-Tree Canopy, or another tool, to estimate the amount of area that is covered by deciduous and coniferous tree cover. In Table 1 enter the area (acres) in deciduous and coniferous tree cover in the project area. Also, enter the non-tree cover area.
- 2) Table 2 automatically provides estimates of co-benefits for the current canopy in Resource Units (e.g., kWh) per year and \$ per year. Values are adapted from i-Tree Streets results for this climate zone and assume that the deciduous and coniferous canopy is evenly distributed among large, medium and small tree types.

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Light pink background denotes an input cell ->



Directions

- 1) Use i-Tree Canopy, or another tool, to estimate the amount of deciduous and coniferous tree cover area (acres) (Cell C18 and D18).
- 2) Use i-Tree Canopy, or another tool, to estimate the amount of non-tree cover area (acres) (Cell F18) in the project area.
- 3) In Cell G18 the total area of the project is calculated (acres). Prompt i-Tree Canopy to provide an estimate of the project area by clicking on the gear icon next to the upper right portion of the image and selecting "Report By Area."
- 4) Total Project Area, cell G15 should equal 100%.

Table 1. Tree Cover

	Deciduous Tree Cover	Coniferous Tree Cover	Total Tree Cover	Non-Tree Cover	Total Project Area
Percent (%)	85%	15%	100%	0%	100%
Area (sq miles)	0.086	0.015	0.101	0.000	0.10
Area (m2)	222,762	39,311	262,072	0	262,072
Area (acres)	55.046	9.71	64.76	0.00	64.76

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Using the information you provide on tree canopy cover, the tool provides estimates of co-benefits in Resource Units and \$ per year.

Table 2. Co-Benefits per year with current tree canopy cover.

Ecosystem Services	Resource Units Totals	Res Unit/Acre Tree Canopy	Total \$	\$/Acre Tree Canopy
Rain Interception (m3/yr)	11,512.6	177.8	\$30,112.12	\$ 464.98
CO2 Avoided (t, \$20/t/yr)	38.3	0.6	\$766.13	\$ 11.83
Air Quality (t/yr)				
O3	1.0857	0.0168	\$3,225.53	\$ 49.81
NOx	0.2786	0.0043	\$827.86	\$ 12.78
PM10	0.6285	0.0097	\$709.88	\$ 10.96
Net VOCs	-0.2412	-0.0037	-\$685.02	\$ (10.58)
Air Quality Total	1.7516	0.0270	\$4,078.25	\$62.97
Energy (kWh/yr & kBtu/yr)				
Cooling - Elec.	89,877	1,388	\$6,821.63	\$ 105.34
Heating - Nat. Gas	42,373	654	\$440.27	\$ 6.80
Energy Total (\$/yr)			\$7,261.90	\$112.14
Grand Total (\$/yr)			\$42,218.39	\$651.92