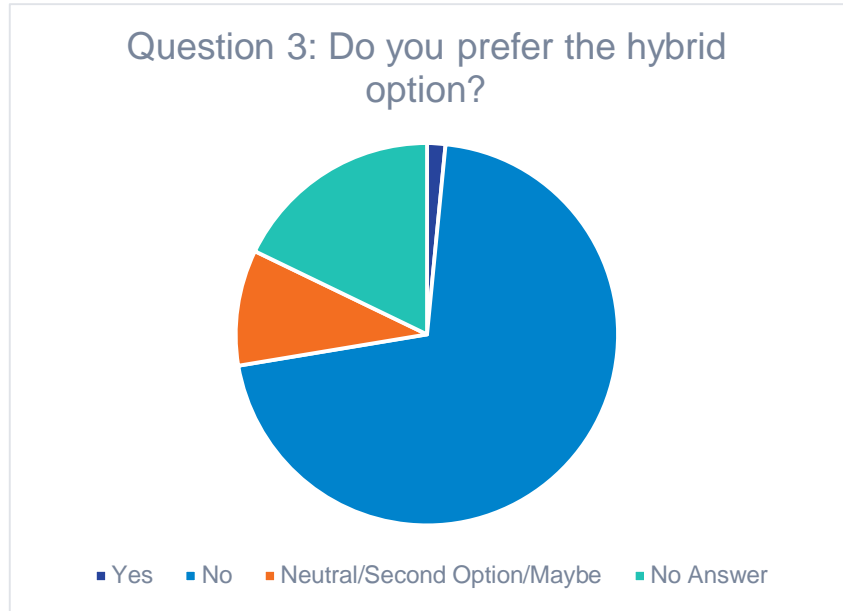


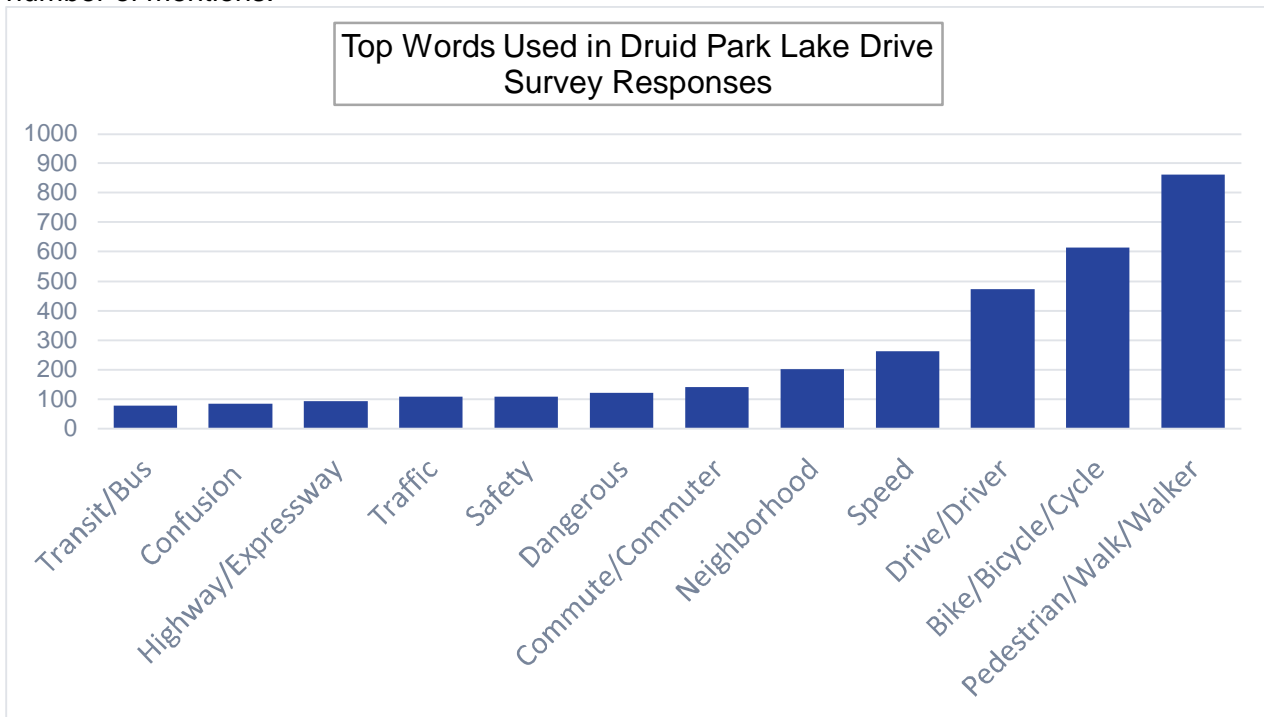
Option 3

82.1 percent of respondents (788) provided an answer, with 679 stating that they are not in favor of the hybrid concept. One percent of total respondents (15) gave positive answers about this option, and 94 provided statements that either were neutral, expressed that this option is a compromise, or that it is the second favorite option. Statements against this option include a preference for either the single-lane or two-lane concepts, safety concerns (especially regarding a shared travel/bike lane with no barriers) and confusion about the design.



General Themes

Several major themes and words came up throughout the 959 responses. They include the following number of mentions:



In order of mentions:

Pedestrian/Walk/Walker – 867
 Bike/Bicycle/Cycle – 614
 Drive/Driver – 473
 Speed – 262

Neighborhood – 201
 Commute/Commuter – 140
 Dangerous – 121
 Safety – 107

Traffic – 107
 Highway/Expressway – 92
 Confusion – 84
 Transit/Bus – 78

Appendix C

Environmental and Cultural Resources

- Environmental Desktop Screening Memorandum
- Cultural Resources Memo



Environmental Desktop Screening Memorandum Druid Park Lake Drive (DPLD) Complete Streets Accessibility Baltimore, Maryland

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LIST OF ATTACHMENTS

1. Project Location Map
2. Tree Survey Map
3. Watershed Map
4. Natural Resources Map
5. Agency Coordination
6. Custom Soil Resource Report
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1 BACKGROUND

WSP USA, Inc. (WSP), under contract with Baltimore City Department of Transportation (BCDOT), is compiling an Environmental Desktop Screening Memorandum (Environmental Memo) for the Druid Park Lake Drive (DPLD) Complete Streets Accessibility project. The Environmental Memo identifies existing environmental resources, potential impacts to those resources, and federal, state, and local requirements associated with permitting any impacts that may result from the project. Recommendations included herein are based on preliminary project planning information and recommendations may change as the project progresses.

1.1 PROJECT DESCRIPTION

WSP USA, Inc. in coordination with the Baltimore City Department of Transportation (BCDOT) Planning Division is evaluating and identifying streetscape improvements, traffic calming opportunities and multi-modal roadway enhancements for the Druid Park Lake Drive corridor from Mount Royal terrace ramp on the west side of I-83 to the Greenspring Avenue Intersection near the northwest portion of the park. The scope of this project includes existing conditions assessments including traffic and environmental resources, concept development (10% design), and community outreach.

The project is located (Lat: 39.315717, Long: -76.640493) northwest of the intersection of Jones Falls Expressway (Interstate 83) and Belair Road (US Route 40) adjacent to Druid Hill Park (Attachment 1: Project Location Map).

2 ENVIRONMENTAL RESOURCES

2.1 ONLINE DESKTOP REVIEW AND AGENCY COORDINATION

WSP reviewed readily available data from federal, state, and local environmental agencies and data sources to assess for existing environmental and cultural resources within the project limits.

A number of sources were used to capture the environmental resources as listed and contained within the maps attached to this Environmental Memo. Below is a summary of the resources used, and included with this submittal is an ArcGIS geodatabase with individual feature classes for each resource:

Table 1: Geodatabase Feature Classes

Feature Class	Source	Website	Date Accessed
Wetlands	USFWS National Wetlands Inventory	https://www.fws.gov/wetlands/data/Mapper.html	12/2/2020
WUS	USFWS National Wetlands Inventory	https://www.fws.gov/wetlands/data/Mapper.html	12/2/2020



NWI Lake	USFWS National Wetlands Inventory	https://www.fws.gov/wetlands/data/Mapper.html	12/2/2020
Trees	Baltimore City Tree Survey	https://www.arcgis.com/apps/webappviewer/index.html?id=d2cfbbe9a24b4d988de127852e6c26c8	12/14/2020
Park	Baltimore Open Data Catalog	https://data.baltimorecity.gov/Culture-Arts/Park/bmeq-5ibw	12/17/2020
Trails	Baltimore Open Data Catalog	https://data.baltimorecity.gov/Transportation/Multi-Use-Trails/ca8m-ir6r#revert	12/17/2020
MDE 8-Digit Watersheds	Maryland Department of the Environment Data Center	https://mde.maryland.gov/programs/water/TMDL/datacenter/pages/8digitwatershed.aspx	12/11/2020
USGS 8-Digit Watersheds	USGS Water Resources of the United State	https://water.usgs.gov/GIS/huc.html	12/11/2020

The following resources were reviewed for their presence within the project limits:

2.1.1 FLOODPLAIN

- Federal Emergency Management Agency (FEMA) Online Mapping¹
 - Per the FEMA Online Mapping tool, there are no regulated FEMA floodplains within the project limits.

2.1.2 VEGETATION (INCLUDING TREES AND FORESTED AREAS)

- Baltimore City Tree Survey
 - The TreeBaltimore² initiative in partnership with Baltimore City Department of Recreation and Parks Urban Forestry Division completed an individual tree survey to identify every living tree, stump, or available tree pit within Baltimore City limits. The inventory data is readily available online.³ According to the data, there are approximately 1431 surveyed trees within the DPLD project limits (Attachment 2: Tree Survey Map).
 - The Baltimore City Department of Planning regulates trees and forest within Baltimore City. All healthy Protected Trees must be preserved to the greatest extent practicable. The standards for tree preservation are available in the Baltimore City Landscape Manual. Replacement mitigation

¹ National Flood Hazard Layer (NFHL) Viewer. <https://msc.fema.gov/portal/home>. Accessed 12/8/2020.

² TreeBaltimore <http://treebaltimore.org/>. Accessed 12/18/2020.

³ The Baltimore Tree Inventory <https://baltimore.maps.arcgis.com/apps/webappviewer>. Accessed 12/18/2020.



for Protected Trees determined to be in fair or better condition by a certified arborist is one caliper inch (DBH) of replacement for each caliper inch (DBH) removed.⁴ Tree impacts and mitigation requirements will be determined as the project advances in planning and design.

2.1.3 WATERSHED

- The project falls within the 8-digit US Geologic Survey (USGS) 02060003 Gunpowder-Patapsco watershed⁵ and two MDE 8-Digit watersheds, 02130904 Jones Falls and 02130905 Gwynns Falls⁶ (Attachment 3: Watershed Map).

2.1.4 WETLANDS AND WATERWAYS

- National Wetlands Inventory (NWI) Wetland Mapper
 - The NWI Wetland Mapper indicates one Palustrine Forested Wetland (PFO1A) within Druid Hill Park and a Druid Lake (L1UBHh) within the project limits.⁷ Other adjacent wetland and water resources are displayed on Attachment 4: Natural Resources Map.
- Maryland Department of Natural Resources Environmental Review Program (DNR ERP)
 - WSP sent a letter to Maryland DNR ERP requesting information concerning resident fish and anadromous fish or additional water quality considerations within the project limits. A response from Maryland DNR WHS is anticipated by late January 2021. The review request letter is included in Attachment 5: Agency Coordination.

2.1.5 SOILS

- US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Web Soil Survey
 - The USDA NRCS online Web Soil Survey report mapped nineteen soil units within the project limits, none of which have a Hydric Rating. The soil unit summary is shown in Table 1 below. The full soil report is included as Attachment 6: Custom Soil Resource Report.⁸

Table 2 - Soils

Map unit symbol	Map unit name	Slope (%)	Hydric Rating (%)
11B	Galestown loamy sand	0-8	No
12UB	Jackland-Urban land complex	0-8	No

⁴ Baltimore City Landscape Manual, 2017 <http://planning.baltimorecity.gov/sites/default/files/LandscapeManual.pdf> Accessed 12/18/2020.

⁵ USGS Watershed Boundaries <https://water.usgs.gov/GIS/huc.html> Accessed 12/18/2020.

⁶ Maryland's 8-Digit Watersheds <https://mde.maryland.gov/programs/water/TMDL/datacenter/pages/8digitwatershed> Accessed 12/18/2020.

⁷ National Wetland Inventory Mapper. <https://www.fws.gov/wetlands/data/mapper.html> Accessed 12/3/2020.

⁸ USDA NRCS Web Soil Survey. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> Accessed 1/6/2021.



14UB	Urban land-Joppa complex	0-8	No
17B	Legore loam	0-8	No
17C	Legore loam	8-15	No
17E	Legore loam	15-45	No
18C	Legore loam, stony	8-15	No
18UB	Legore-Urban land complex	0-8	No
18UC	Legore-Urban land complex	8-15	No
18UE	Legore-Urban land complex	15-45	No
19UC	Urban land-Legore complex	8-15	No
21E	Manor loam	15-50	No
22UB	Manor-Urban land complex	0-8	No
24UB	Matapeake-Urban land complex	0-8	No
31UB	Urban land-Sassafras complex	0-8	No
38C	Udorthents, clayey, very deep	0-15	No
43U	Urban land-Udorthents complex, occasionally flooded	-	No
44UC	Urban land	0-15	No
W	Water	-	No

2.1.6 RARE, THREATENED, AND ENDANGERED (RTE) SPECIES

- Maryland Department of Natural Resources Wildlife and Heritage Division (DNR WHS)
 - WSP sent a letter to Maryland DNR WHS requesting information concerning federally or state-listed rare, threatened, or endangered species and unique or critical habitat that may occur in the project limits. A response from Maryland DNR WHS is anticipated by late January 2021. The review request letter is included in Attachment 5: Agency Coordination.
- US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC)



- WSP obtained an official species list of potential threatened and endangered species for the project limits on January 6, 2021, from the USFWS IPaC online application (Attachment 5: Agency Coordination). The Northern Long-eared Bat is identified within the project limits. No critical habitats are identified.⁹
- In Maryland, an online endangered species project review can be used by landowners, consultants, agency personnel and other individuals or groups requiring U.S. Fish and Wildlife review or approval of their project. If the Northern Long-eared Bat is the only threatened or endangered species identified within the project and there is less than 15 acres of forest clearing, then an Online Project Review Self-Certification Letter can be completed. A complete project review package, including the Online Project Review Certification Letter, map of the project area, and the Official Species List must be emailed to the Chesapeake Bay Field Office (CBFO). As design advances, a representative of the Druid Park Lake Drive project should identify whether the project will result in tree/forest impacts of greater than 15 acres and continue coordination with the CBFO accordingly.

2.1.7 PARKLANDS AND TRAILS

- Section 4(f) of the Department of Transportation Act
 - Publicly owned parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing on the National Register of Historic Places is considered a Section 4(f) property. Section 4(f) refers to the original section within the US Department of Transportation Act of 1966 which provided consideration for the types of properties listed above. The law, which is now codified as 49 U.S.C. §303 and 23 U.S.C. §138, applies only to the U.S. Department of Transportation and is implemented by FHWA through the regulation 23 Code of Federal Regulations (CFR) 774.
- Baltimore City Open Data: Trail and Park Layers
 - The project borders the southwestern edge of Druid Hill Park in Baltimore City. Druid Hill Park consists of 754 acres and is the third oldest established park in the United States. It is well known for the man-made reservoir, Maryland Zoo, and the country's second oldest Victorian glass conservatory. There are also a variety of athletic fields, pavilions, and picnic tables. According to Maryland Department of Natural Resources Trail Atlas mapping and Baltimore City Open Data, the Jones Falls trail is within the project limits and offers a place for the community to bike, run, and walk. Several other parks including Greenspring Ave Park, Woodberry Park, among others, are also adjacent to the project (Attachment 7: Parks and Trails Map). As planning of the project advances, all efforts will be made to avoid and minimize any impact to the trail and parks. If a "use" of the trail or parks is required, a Section 4(f) determination may be necessary and further coordination with FHWA and the Official(s) with Jurisdiction of the resources would be required.

⁹ USFWS IPaC Database. <https://ecos.fws.gov/ipac/> Accessed 1/6/2021.



2.1.8 CULTURAL RESOURCES

- Built Historic Properties
 - Although an Area of Potential Effects (APE) has not been delineated, a general Preliminary Study Area has been developed. This area includes built historic properties, which are those that are listed in or eligible for the National Register of Historic Places (NRHP). Only historic properties are subject to compliance with federal historic preservation law and they are assessed for effects from the project's physical impacts as well as visual, auditory, atmospheric, or vibratory effects from the project. The APE will be established when the project's limits of disturbance are confirmed.
 - Many prominent built historic properties, including both historic districts and individual resources, are within the Preliminary Study Area. Some, such as the Reservoir Hill Historic District (B-1379) are listed in or determined eligible for the NRHP, while others have only been identified but not evaluated for NRHP eligibility. Properties more than fifty years of age within the APE are generally evaluated for NRHP eligibility. Some of these properties may not have been identified or evaluated previously.
 - NRHP-listed or eligible properties, including both built resources and archaeological sites, are subject to compliance with Section 106 of the National Historic Preservation Act and its enabling legislation found at 36 CFR Section 800. This is required if the project will receive federal funding or permitting. Compliance with Baltimore City's Commission of Historical and Architectural Preservation's (CHAP) regulations is required for Baltimore City's designated local historic districts and landmarks. As more project information is confirmed, qualified cultural resources staff will coordinate with city project management staff, CHAP, and State Historic Preservation Office staff, as appropriate, to make sure the project complies with applicable local, state, and federal historic preservation laws.
 - Although numerous historic properties are present within the Preliminary Study Area, the most prominent and relevant is Druid Hill Park (B-56), which was listed in the National Register of Historic Places in 1973. A substantial update of the original registration form was completed in 1997. This updated documentation identifies 22 contributing buildings; 4 contributing sites; 24 contributing structures; and 20 contributing objects.
- Archaeological Sites and Related Considerations
 - Information on archaeological sites and survey efforts were obtained by a professional archaeologist meeting to Secretary of the Interior's Professional Qualifications Standards from on-line Maryland Historical Trust (MHT) records (accessed November 2020 - January 2021). Additional online digital data sources were used in the assessment of archaeological potential, including historic mapping, aerial photography, and soils and geology data as well as LiDAR imaging.
 - Based on current MHT records, there is only one previously identified archaeological site located within the current Preliminary Study Area for the Druid Park Lake Drive project. The Druid Hill Park Superintendent's House archaeological site (18BC176) is situated in the triangular parcel



bound by Auchentoroly Terrace, Liberty Heights and Reisterstown Road. This site does not appear to have had a formal Determination of Eligibility (DOE) for the National Register of Historic Places (NRHP). However, given the documented nineteenth-century structural remains and archaeological deposits, as well as the potential remains from an earlier eighteenth-century plantation, the site should be considered potentially significant and will need to be formally evaluated. Site 18BC176 falls completely within the currently delineated Preliminary Study Area, and if eligibility is confirmed, planning would need to consider attempts to avoid, minimize or mitigate potential adverse effects. There is one additional archaeological resource recorded in the general vicinity of the current Preliminary Study Area: 18BC100, which is the remains of an earlier eighteenth-nineteenth century industrial mill dam, located east to the Johns Falls Expressway, 403 feet (122 meters) from the nearest point of the current Preliminary Study Area.

- MHT records do not show any other previously completed archaeological survey efforts in the vicinity of the current project. Druid Hill Park (specifically the Maryland Zoo area) is reported to contain at least two cemeteries (one of which has African American associations) and these have been tentatively located based on historic mapping. The smaller cemetery is in the north-western portion of the park, 781 feet (233 meters) from the closest point of the currently defined Preliminary Study Area. The larger cemetery is shown in the south-central part of the park, separated from the Preliminary Study Area by Druid Hill and approximately 1,657 feet (510 meters). Potential project effects to either cemetery or Site 18BC100 are not anticipated.

- Archaeological Potential

- In addition to effects to recorded archaeological sites, ongoing cultural resource studies will consider potential effects on previously unidentified archaeological resources. Within the Preliminary Study Area, areas of park property could be considered to have generally higher potential to preserve the integrity of historic landscapes and any archaeological sites they might contain. However, given the intensity of the landform modification required to create the park, pre-contact or early historic site preservation is likely to be low. The potential for historic archaeological sites and features associated with the 150+ year-old park and zoo also should be taken into consideration. For the portions of the Preliminary Study Area outside the park, mostly characterized by relatively dense rowhouse residential and light commercial development, an assessment of potential of urban archaeological resources will need to be conducted. In general terms, existing roadways and sidewalks of such urban neighborhoods have a relatively low potential for archaeological resources, compared to landscaped areas, backyards, open lots and alleys. There also are several churches within the Preliminary Study Area and the location of associated graveyards and the potential for unmarked burials may also need to be assessed.

- Additional Research Potential

- In addition to the initial environmental screening for built historic properties and archaeological sites presented to the project team, numerous Maryland Inventory of Historic Properties forms and survey forms for surrounding buildings as well as for the park itself provide information. These include but are not limited to those inventoried by the Maryland Historical Trust; CHAP; and the National Register of Historic Places. When an APE is developed and both funding and permitting sources are confirmed, those within the Area of Potential Effects will need to be



assessed for historic significance if they have not previously been subject to evaluations and those that are significant for historic or architectural reasons, i.e., meeting established federal, state, and/or local criteria, will be assessed for effects from the project.

- Additional Details and Future Research
 - Finally, the well-researched, erudite, delightfully written book *Druid Hill Park: The Heart of Historic Baltimore* by Eden Unger Bowditch and Ann Draddy provides images and text useful to understanding the park's history and importance of place within Baltimore and the entire state. It is a reliable source to add accurate details to the cursory information provided here.

2.1.9 AIR QUALITY

- US Environmental Protection Agency (EPA)
 - National Ambient Air Quality Standards (NAAQS) have been established by the US Environmental Protection Agency (EPA) for six major pollutants: carbon monoxide (CO); nitrogen dioxide (NO₂); ozone (O₃); respirable particulate matter (PM), including particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM₁₀) and particles with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM_{2.5}); sulfur dioxide (SO₂); and lead. These are regulated by the EPA and are referred to as "criteria pollutants." The USEPA Green Book website identifies the Nonattainment or Maintenance status for each county by year for all of the criteria pollutants.
 - Baltimore City is designated as a nonattainment area for two NAAQS. The 8-hour Ozone (2008) is classified as Moderate and the 8-hour Ozone (2015) is classified as marginal.

3 NEXT STEPS AND PERMITTING APPROACH

Given the resources identified during the online desktop review, recommendations for immediate next steps and permitting approach are found in Section 3.1, 3.2, and 3.3 below.

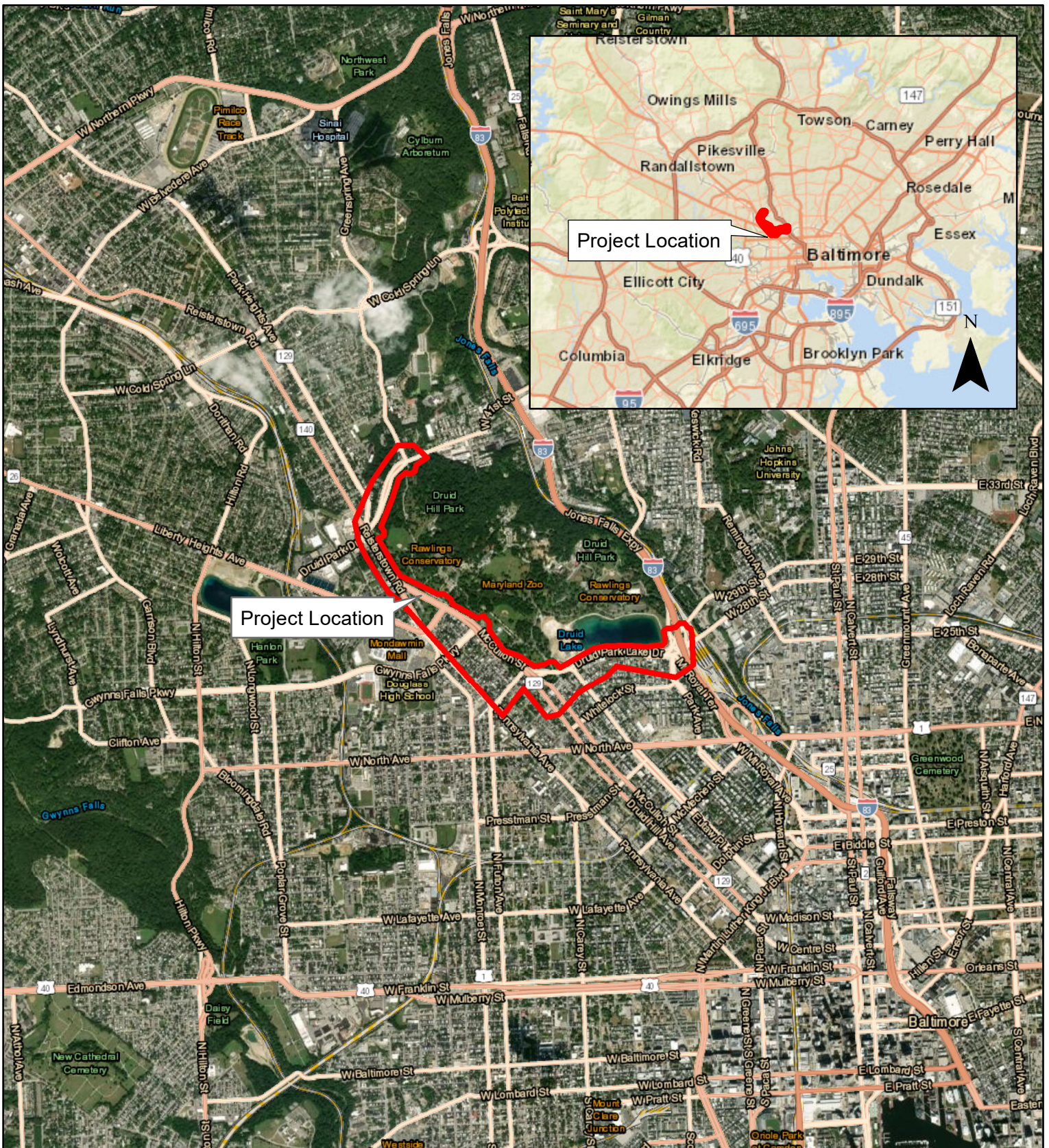
3.1 ACTION ITEMS

- Complete Wetland Delineation - Following the process of the US Army Corps of Engineers manual, complete a full wetland/waterway delineation and forest stand review at the site to verify the presence or absence of regulated Waters of the U.S., including wetlands, and identify potential for tree impacts on site.
- Verify and confirm that less than 15 acres of trees will be removed as a part of the project. If so, complete the USFWS Chesapeake Bay Field Office Self Certification process as outlined on the CBFO website.
- Contact the "Official with Jurisdiction" for the trail and parks and determine their Section 4(f) status and make a determination or avoid a use of the resources.
- Complete any additional cultural resources research and/or archeological survey required at the site.

3.2 PERMITTING APPROACH



- Though wetlands and waterways are not currently delineated in the proposed project limits, impacts to potential wetlands and/or waterways are possible. Following the recommended fieldwork and delineations, if wetlands/waterways are identified and there are impacts to those resources, a Section 404 of the Clean Water Act Joint Federal/State Permit Application will be required. Application instructions for the Section 404 and Section 401 certification and compliance process instructions are available on Maryland Department of the Environment's website. The permitting process takes approximately nine to twelve months.



Project Location

Project Location



Project Location

LOCATION MAP

Druid Park Lake Drive (DPLD)
Complete Streets Accessibility

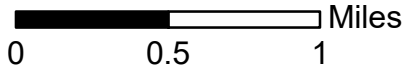
Baltimore City Department of Transportation

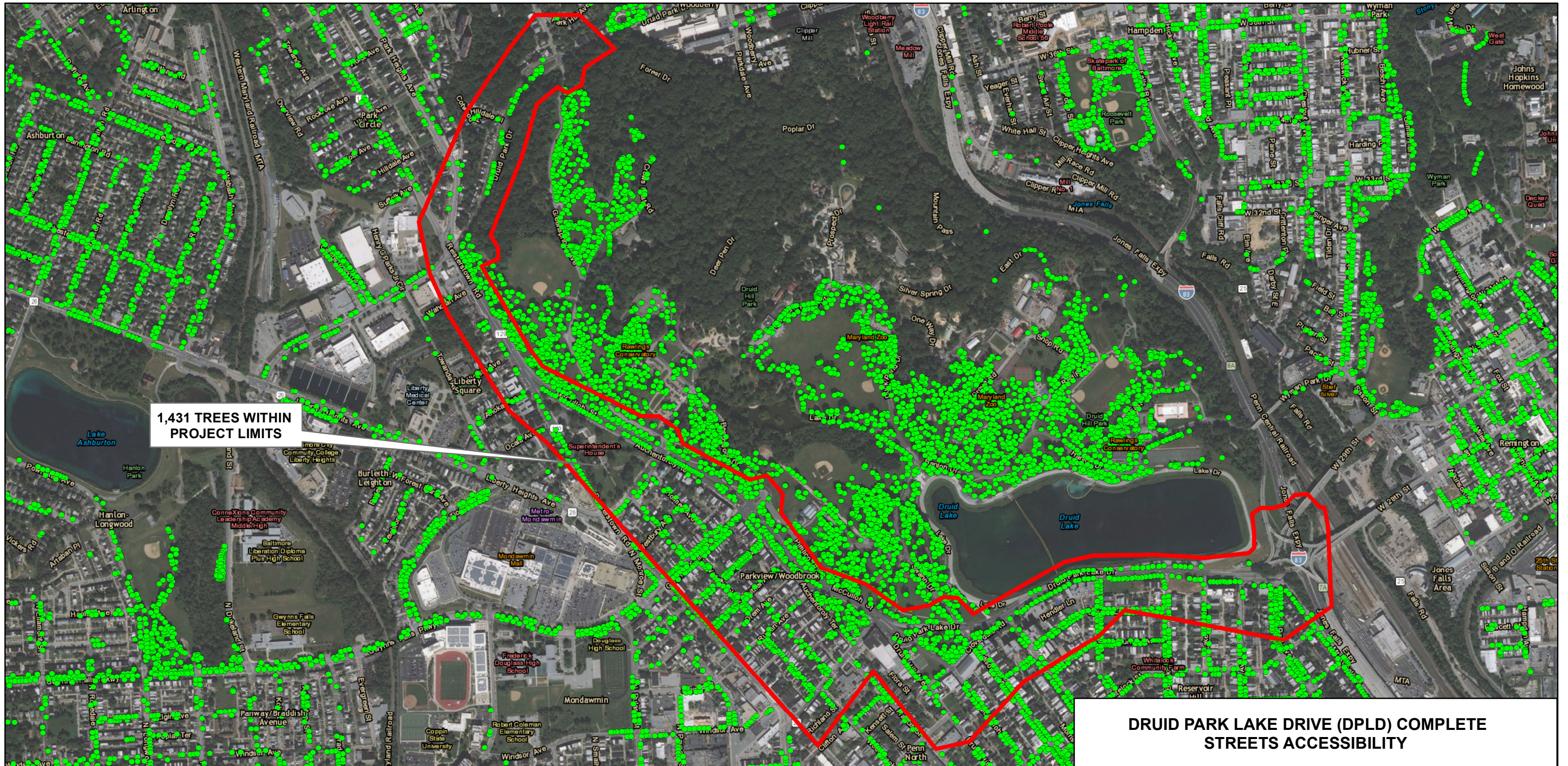
Baltimore, Maryland

39.316671, -76.646165

8-digit HUC: 02060003



December 2020


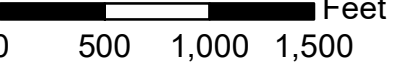




1,431 TREES WITHIN PROJECT LIMITS

DRUID PARK LAKE DRIVE (DPLD) COMPLETE STREETS ACCESSIBILITY

 Project Limits
 Baltimore City Tree Survey



 0 500 1,000 1,500 Feet


 WSP USA Inc
 1 EAST PRATT STREET SUITE 300
 BALTIMORE, MD 21202
 (410) 727-5050

Date: January 2021 Contract No:

TREE SURVEY MAP

Drawn By: KMG Checked By: BG Sheet No. 1 of 1