



# Fletcher's Boathouse Transportation Upgrades

## Section 106 Consultation

October 21, 2019



# Agenda

Introductions

Overview of Undertaking

Review of Draft Area of Potential Effect

Existing Conditions

Review of Alternatives Considered but Dismissed

Alternatives

Review of Determination of Effects

Discussion

Status Update + Next Steps



# Purpose

The purpose of the proposed project is to provide more direct and safer transportation connections between Canal Road and the Fletcher's Boathouse, the C&O Canal towpath, and the Capital Crescent Trail.



Entrance ramp at Canal Road



Road approach from road culvert (tunnel) below the C&O Canal up to the upper parking lot



East approach to bridge over the C&O Canal



Entrance ramp approach up to Canal Road; Abner Cloud House



# Need

The transportation upgrades are needed to address the following concerns and ongoing issues affecting the Fletcher's Boathouse area:

- The single-lane entrance ramp provides the only access between the area and Canal Road for entering and exiting traffic, which can result in unsafe traffic situations
- Safe access from Canal Road's eastbound/inbound traffic is nearly impossible due to the entrance ramp's configuration immediately adjacent and parallel to Canal Road
- The geometry and grade differential between the entrance ramp and Canal Road creates inadequate sight distances for entering and exiting traffic
- A one-lane road culvert (tunnel) with low clearance and poor sight distance provides the only vehicle access to the larger, lower parking lot west of the C&O Canal
- Large fire trucks, ambulances, and river rescue crews are severely challenged in gaining unfettered access to the area during an emergency
- Large equipment/trucks have very limited access to the area to perform repair and maintenance to park facilities and the DC Water Odor Abatement Facility
- Existing pedestrian access routes to the project area from outside the park are unsafe and cause pedestrian/vehicular conflicts
- Some portions of the area are not fully compliant with accessibility standards



*Entrance ramp adjacent and parallel to Canal Road*



*West road approach to road culvert (tunnel) below the C&O Canal*



# Site Context

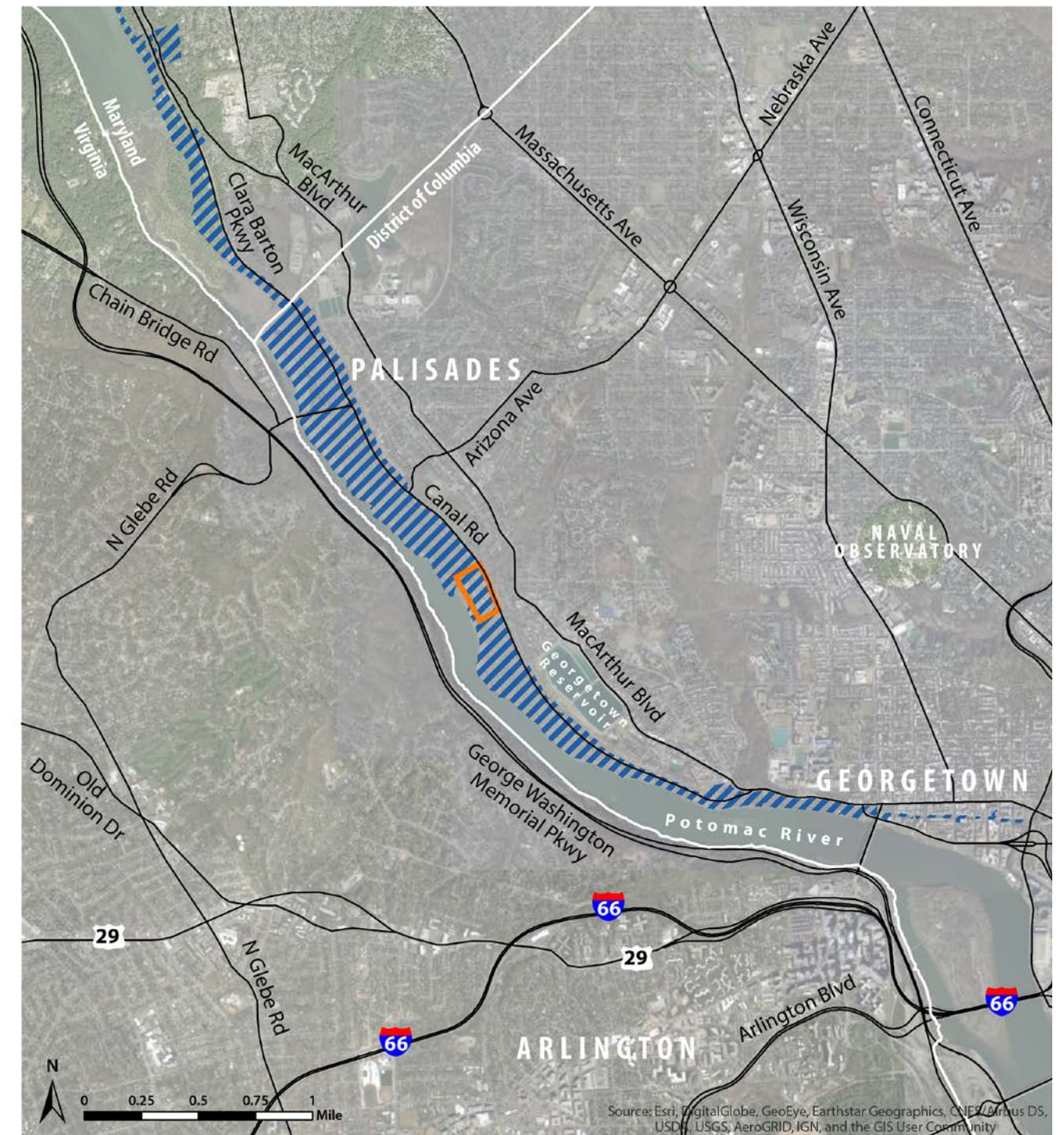
- Fletcher's Boathouse (officially named Fletcher's Cove) is a renowned fishing and recreational area along the Chesapeake & Ohio (C&O) Canal and Potomac River.
- The project area is located on federal land in the Palisades neighborhood of Washington, D.C. and is part of the C&O Canal National Historical Park.
- The C&O Canal National Historical Park (CHOH) administers the project area.



C&O Canal(left); C&O Canal Towpath (middle); Capital Crescent Trail (right)



Concessions building (left); Fletcher's Boathouse (right)



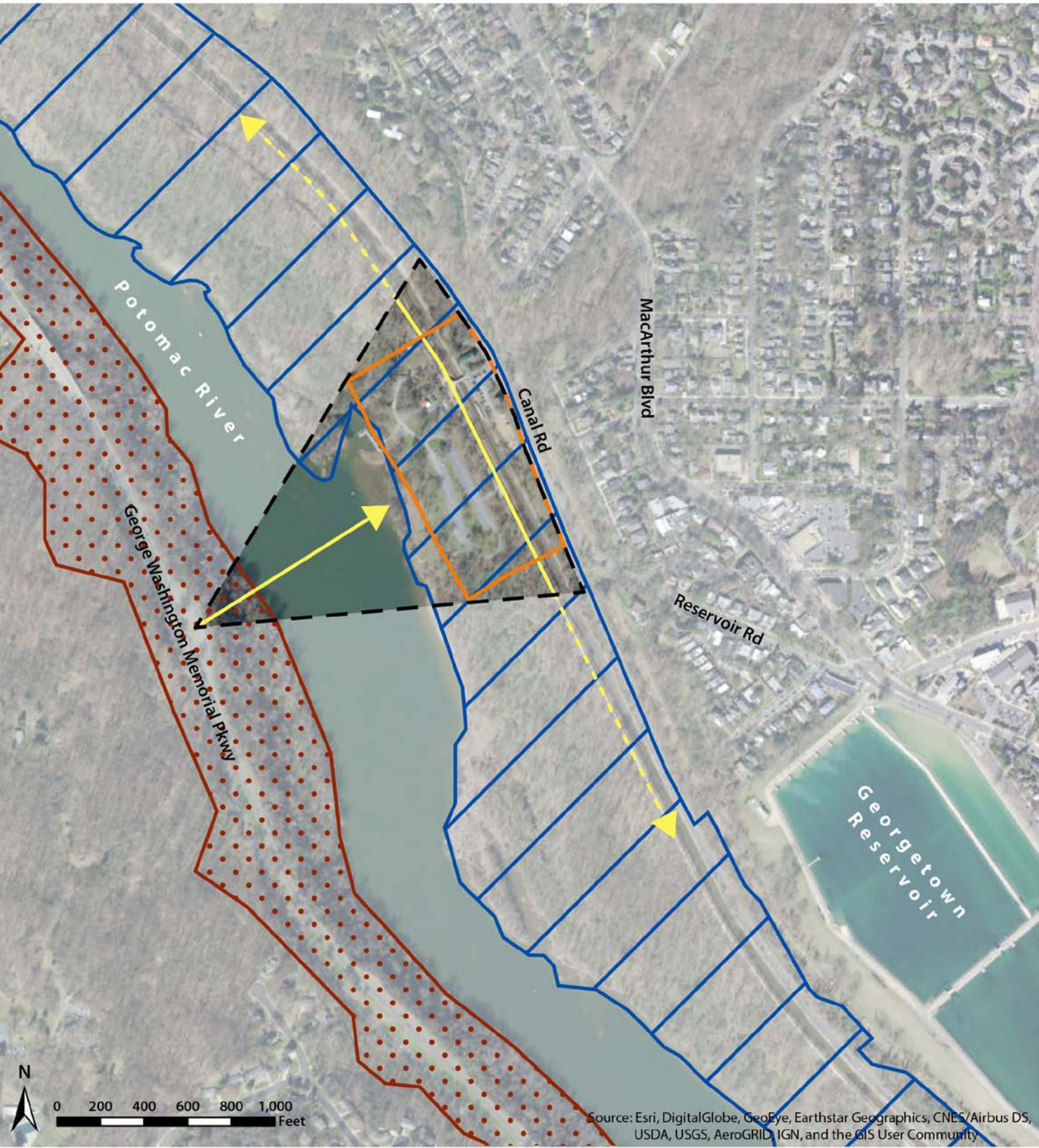
## LEGEND

Project Area

NPS Chesapeake & Ohio Canal National Historical Park



# Draft Area of Potential Effect



## LEGEND

- Project Area
- Draft Area of Potential Effect (APE)
- Chesapeake & Ohio Canal National Historical Park Historic District
- George Washington Memorial Parkway
- Viewshed in the APE
- Continuing view outside the APE



*View from the South Donaldson Scenic Overlook on the George Washington Memorial Parkway*



# Historic Resources

The Chesapeake & Ohio Canal National Historical Park Historic District's contributing and potentially contributing resources in the APE include:

- Canal Prism
- Towpath
- Abner Cloud House (1801, stone house, restoration completed in 1978)
- Road Culvert at Fletcher's (circa 1830, 14-foot wide stone culvert, concrete extension added in early 1900s)
- Battery Kemble Culvert (circa 1830, six-foot wide stone culvert)
- Wasteweir No. 3 (1850, concrete replacement or repair of an earlier stone dual openings closed by wicket gates)
- Boathouse
- Prehistoric and historic archeological sites



*Abner Cloud House and the C&O Canal*



*East approach to road culvert at Fletcher's*



# Historic Resources



**LEGEND**

- Project Area
- Draft Area of Potential Effect (APE)
- Chesapeake & Ohio Canal National Historical Park Historic District

Chesapeake & Ohio Canal National Historical Park Historic District  
Contributing and Potentially Contributing Resources:

- |   |                         |   |   |
|---|-------------------------|---|---|
| ① | Canal prism             | ⑤ | Battery Kemble Culvert                          |
| ② | Towpath                 | ⑥ | Wasteweir #3                                    |
| ③ | Abner Cloud House       | ⑦ | Fletcher's Boat House Fletcher's and Metal Shed |
| ④ | Fletcher's Road Culvert | ⑧ | Bike Shop                                       |



# Existing Conditions

Key existing features include the following:

- Single-lane entrance ramp provides vehicle, pedestrian, and bicycle access between Canal Road and the upper parking lot
- Road culvert (one-lane tunnel) with low clearance allows visitor use vehicle, pedestrian, and bicycle access between the upper and lower parking lots
- Canal bridge, stairs, and accessible ramp also provide pedestrian and bicycle access between the upper and lower parking lots, C&O Canal Towpath, and Capital Crescent Trail
- Official use vehicle (maintenance and emergency) access to the lower parking lot provided via the canal bridge, towpath, and an access ramp



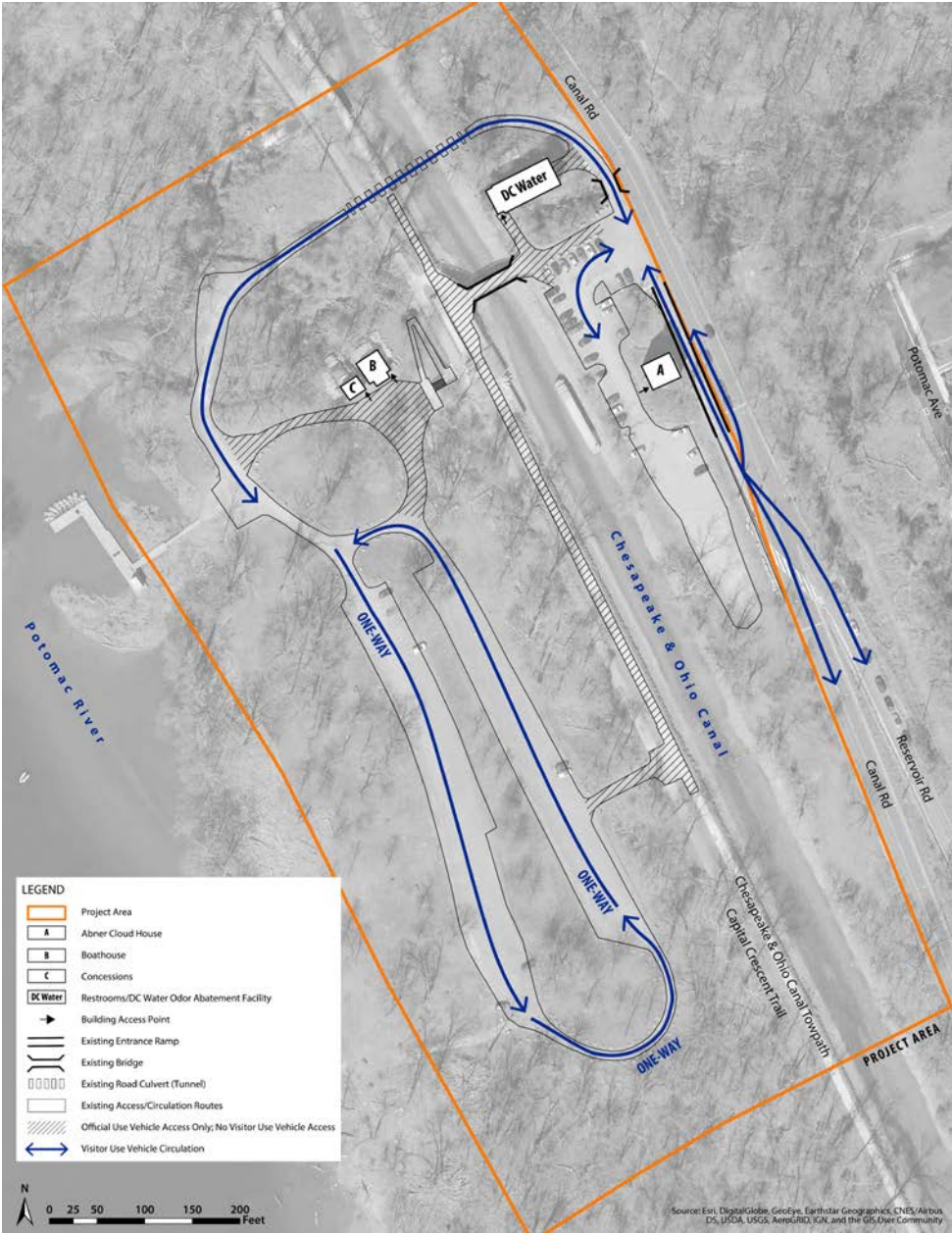


# Existing Conditions Circulation

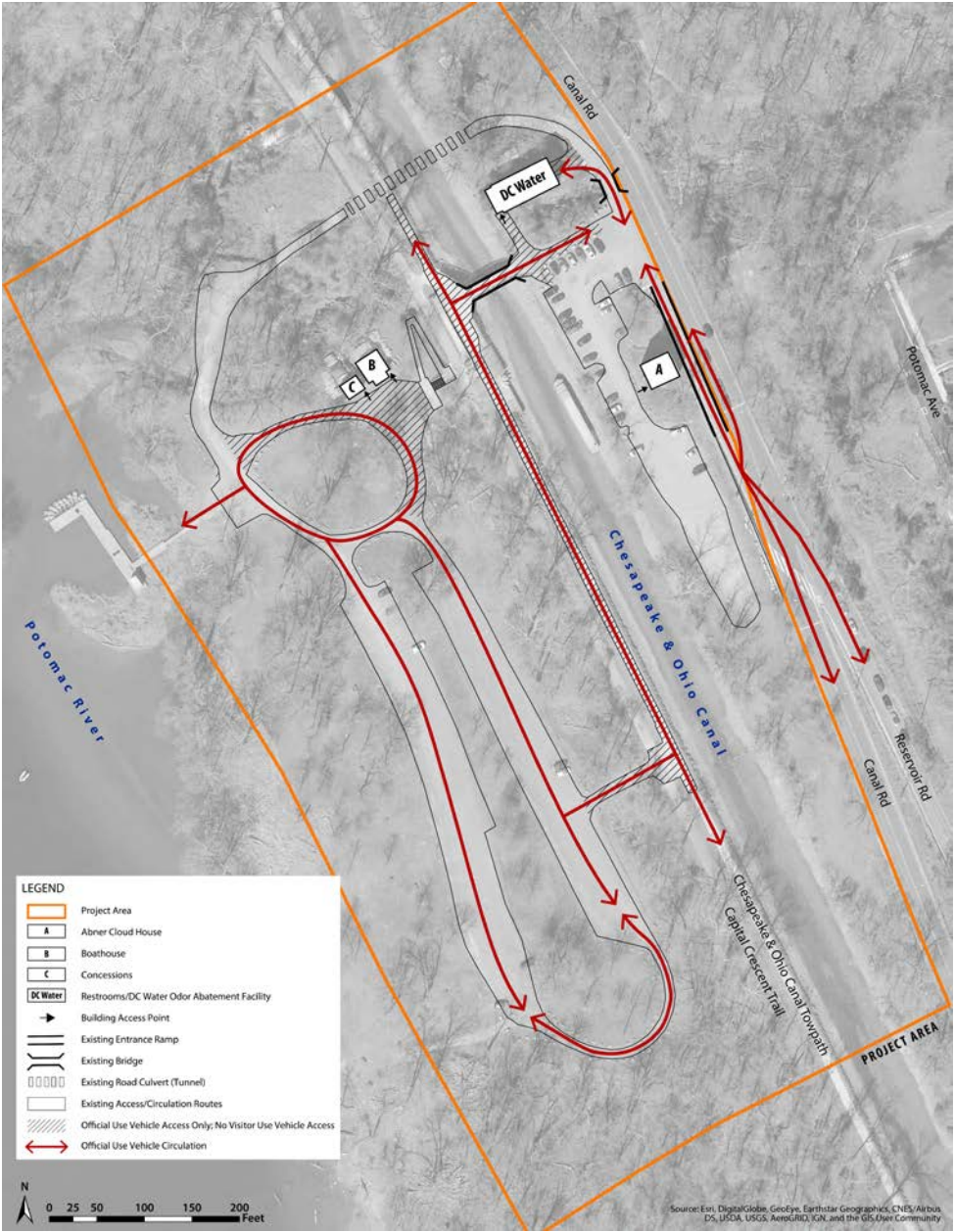
PEDESTRIAN/BICYCLE



VISITOR USE VEHICLE

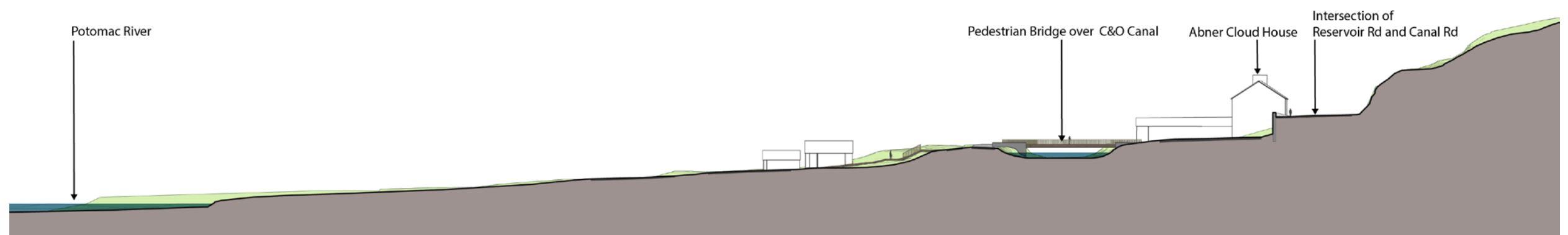
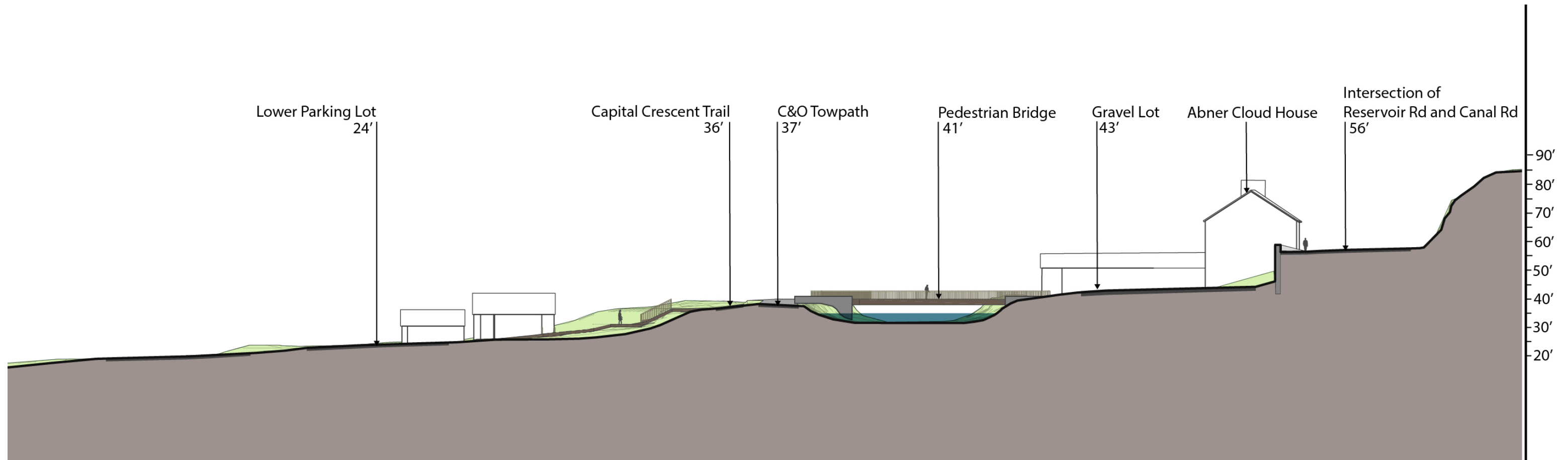


OFFICIAL USE VEHICLE





## Existing Conditions



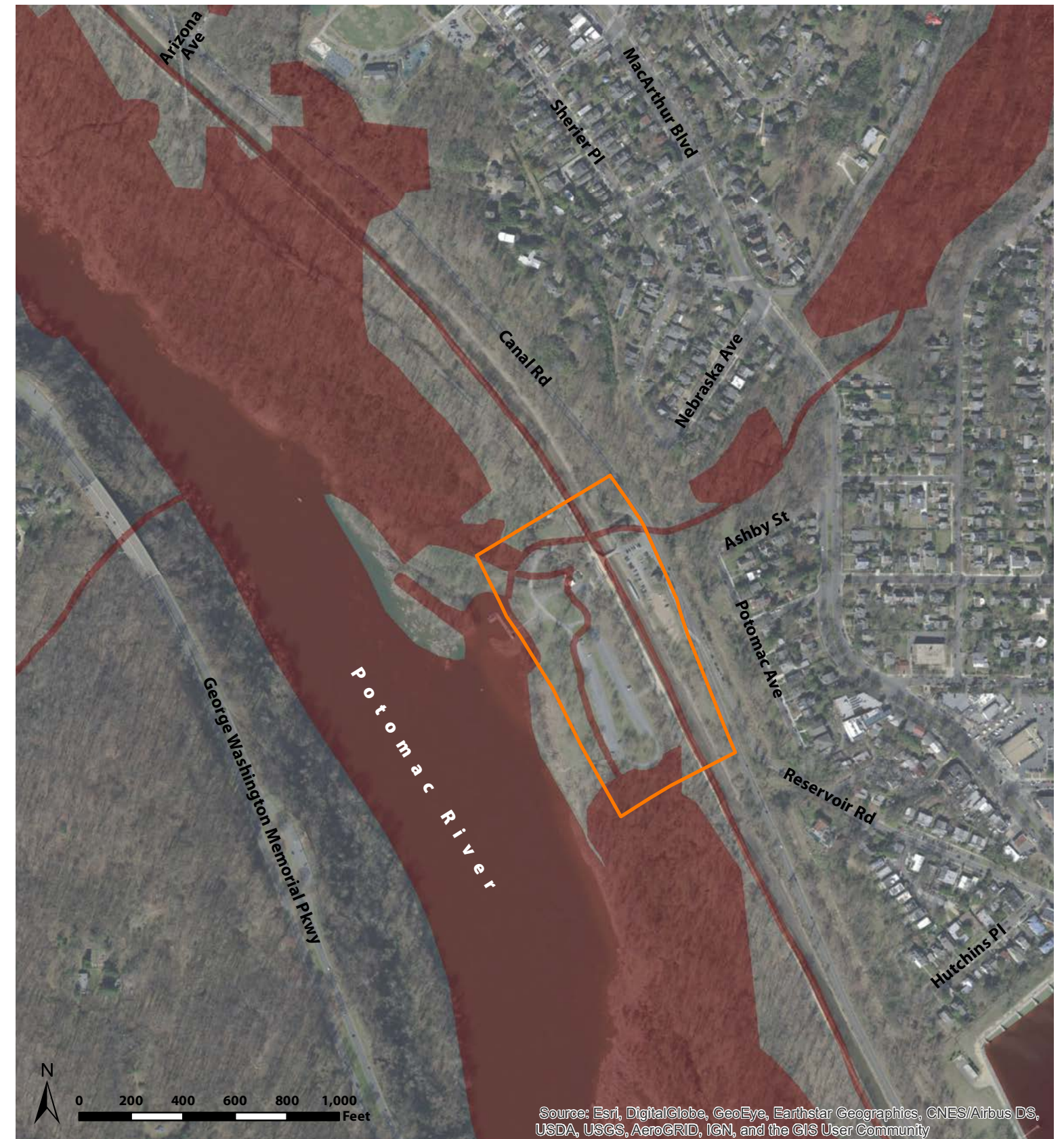


# Environmental Constraints

Environmental constraints include:

- Wetlands
- Highly or extremely significant or critical habitats for biodiversity conservation as defined in the 2015 DC Wildlife Action Plan
- Archeological sites and site points with 10-meter buffer\*

\*Archeological sites not shown on map per NPS policy, but were included in constraint considerations. Archeological site points do not denote archeological site boundaries. It is likely that some of these sites are larger than the 10-meter buffer.



## LEGEND

 Project Area

 Environmental constraints



# Alternatives Considered but Dismissed

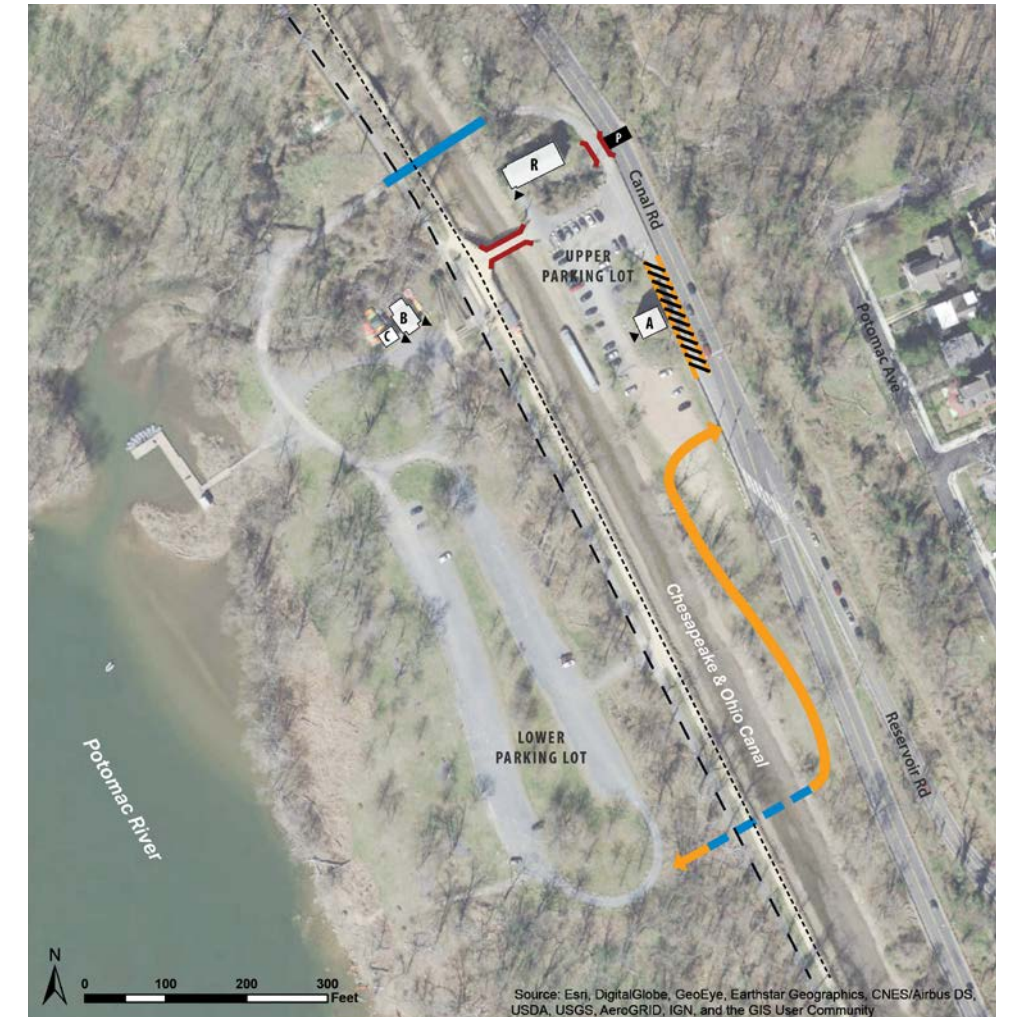
## IMPROVED CANAL BRIDGE



## RIVER ACCESS (EXISTING TUNNEL CLOSED)



## FULL CIRCULATION BELOW CANAL



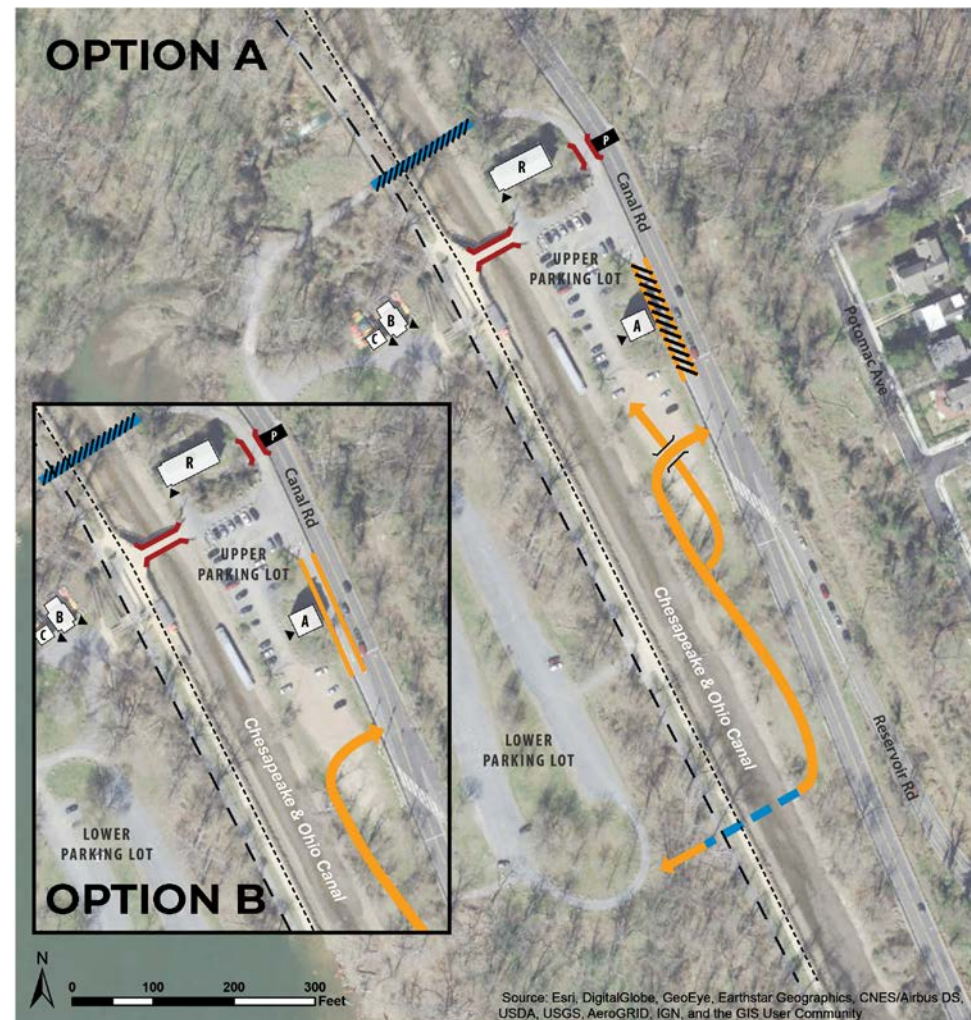
These alternatives were dismissed from further consideration because they would:

- Create vehicle, pedestrian, and cyclist conflicts at the at-grade visitor use vehicle crossing of the towpath and Capital Crescent Trail
- Not meet the project purpose
- Add a second vehicle entrance/exit point and create a five-way intersection at Canal Road
- Not meet project purpose
- Add a new tunnel under the C&O Canal that would likely experience flooding and drainage issues
- Add a new tunnel under the C&O Canal that would intersect the Potomac Interceptor mainline



# Alternatives Considered but Dismissed

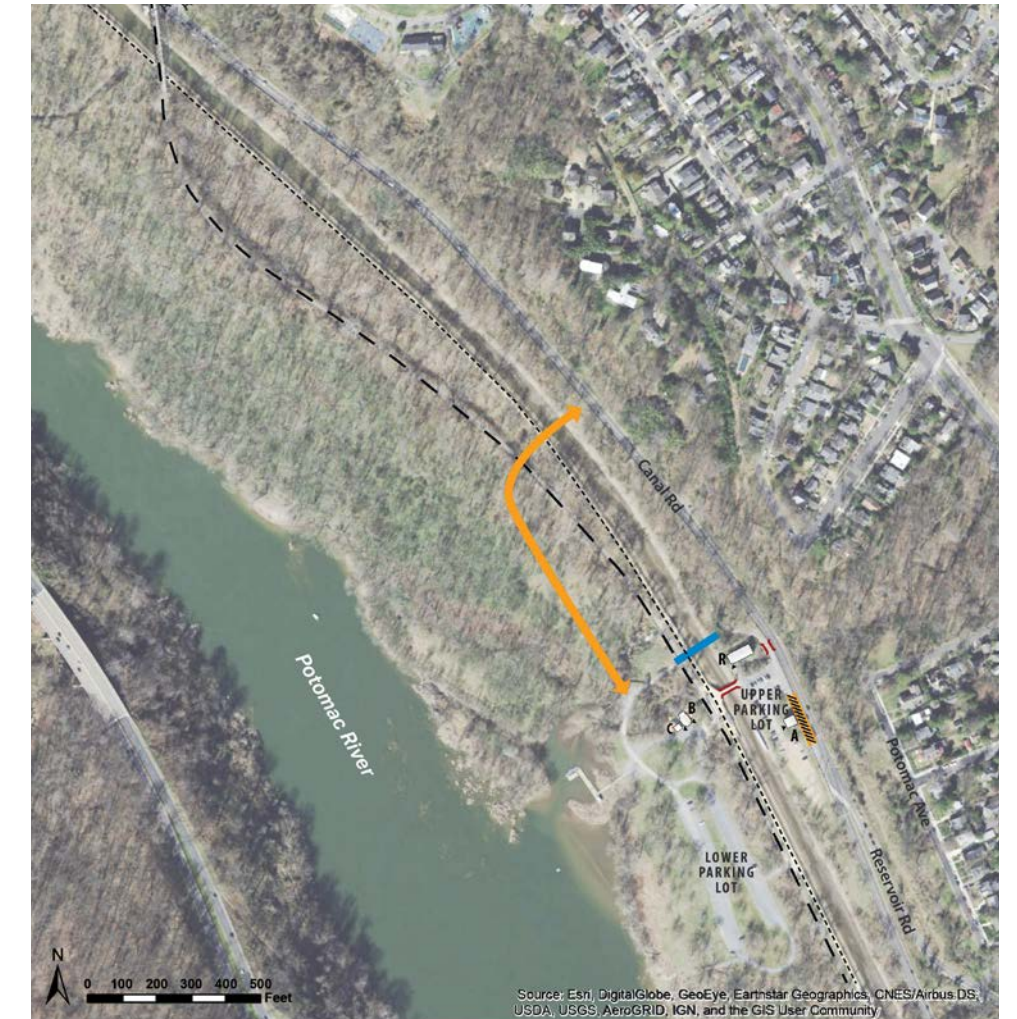
## RIVER ACCESS BELOW CANAL



## RIVER ACCESS DOWNSTREAM



## RIVER ACCESS UPSTREAM



These alternatives were dismissed from further consideration because they would:

- Add a new tunnel under the C&O Canal that would likely experience flooding and drainage issues
- Add a new tunnel under the C&O Canal that would intersect the Potomac Interceptor mainline
- Add a second vehicle entrance/exit point and create a five-way intersection at Canal Road (Option B only)
- Not meet project purpose (Option B only)
- Result in greater adverse impacts on vegetation and highly or extremely significant habitat for biodiversity conservation than the Upper Parking Lot Access Alternative and the Upper and Lower Parking Lot Access Alternative
- Constrain entrance to park during rush hours when Canal Road is one-way only
- Result in greater adverse impacts on vegetation, highly or extremely significant or critical habitat for biodiversity conservation, and archeological sites than the Upper Parking Lot Access Alternative and the Upper and Lower Parking Lot Access Alternative
- Constrain entrance to park during rush hours when Canal Road is one-way only



# Alternatives Considered but Dismissed

## SCOPING ALTERNATIVE 2



## SCOPING ALTERNATIVE 4



## ALTERNATIVE 1B



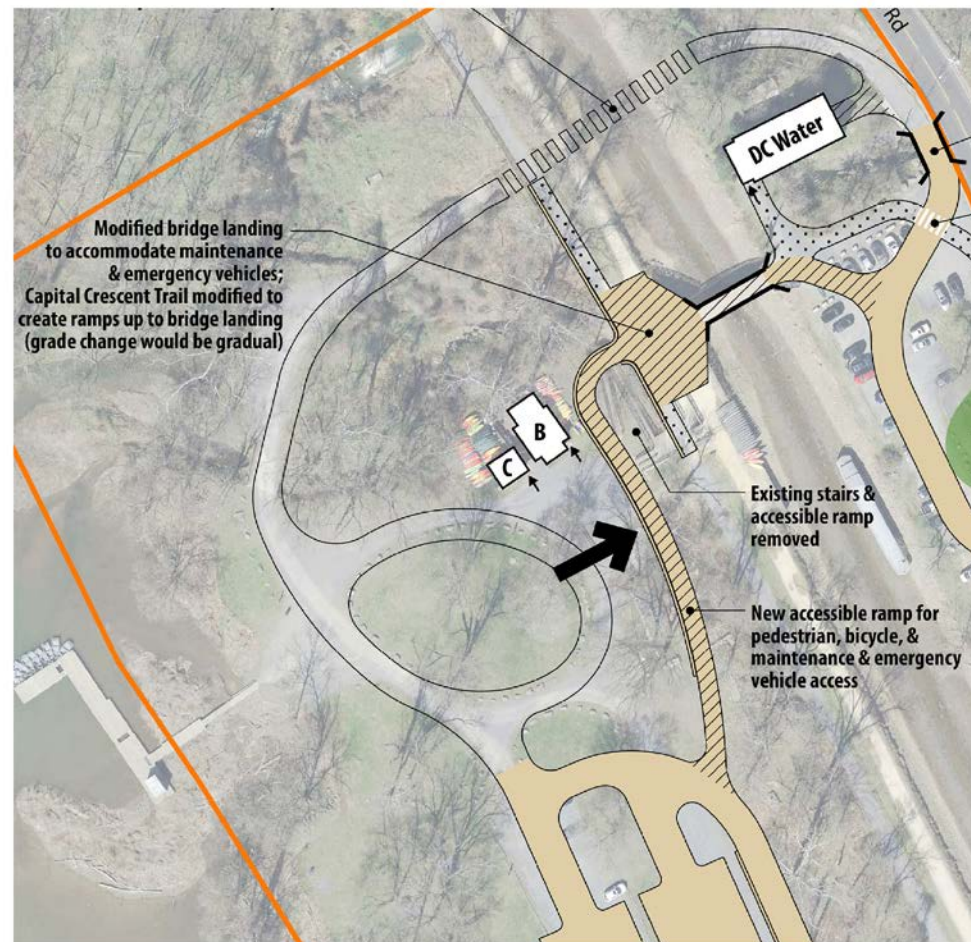
These alternatives were dismissed from further consideration because they would:

- Not improve visitor use and official use vehicle access to the upper parking lot
- Create an upstream-facing landing of the new entrance ramp/bridge which would be prone to flooding and flood-debris build up
- Result in greater adverse impacts on historic resources than the Upper Parking Lot Access Alternative

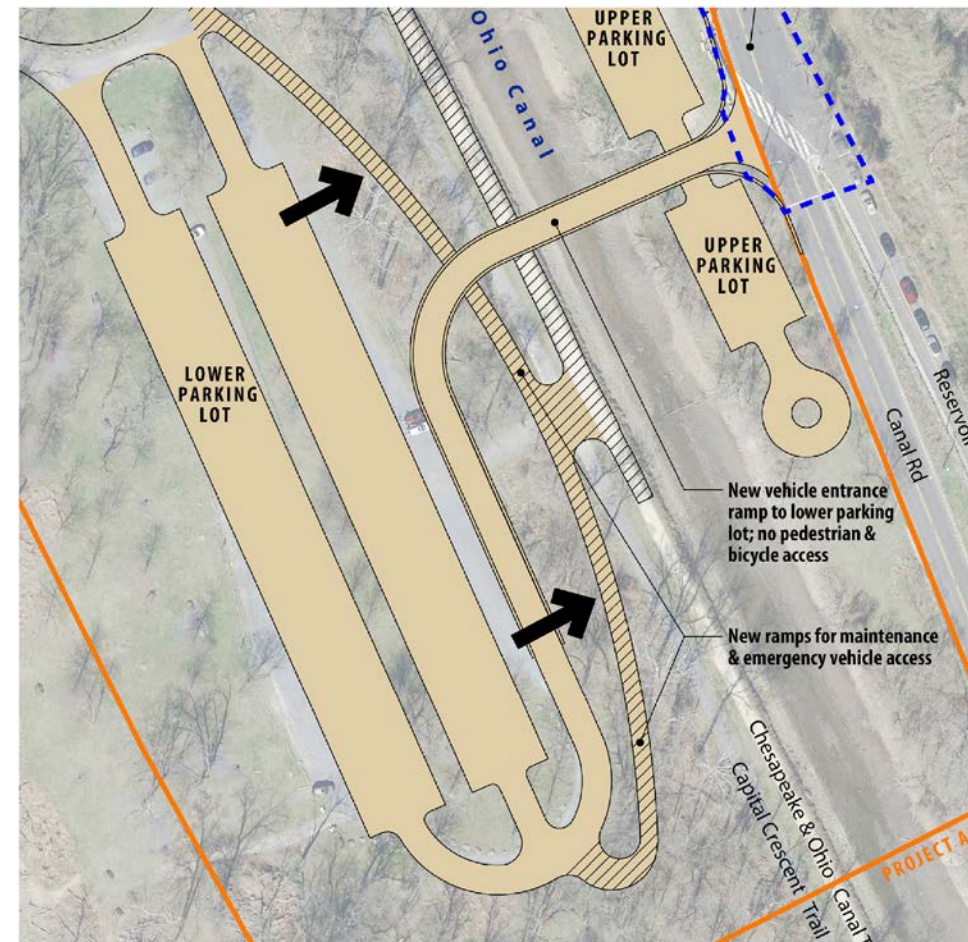


# Alternatives Considered but Dismissed

OFFICIAL USE VEHICLE ACCESS OPTION A



OFFICIAL USE VEHICLE ACCESS OPTION B



These alternatives were dismissed from further consideration because they would:

- Result in the removal of existing vegetation
- Increase the distance pedestrians and cyclists would need to travel from the canal to access the boathouse, concessions, and boat launch
- Result in the removal of more existing vegetation between the towpath and lower parking lot than the Upper Parking Lot Access Alternative

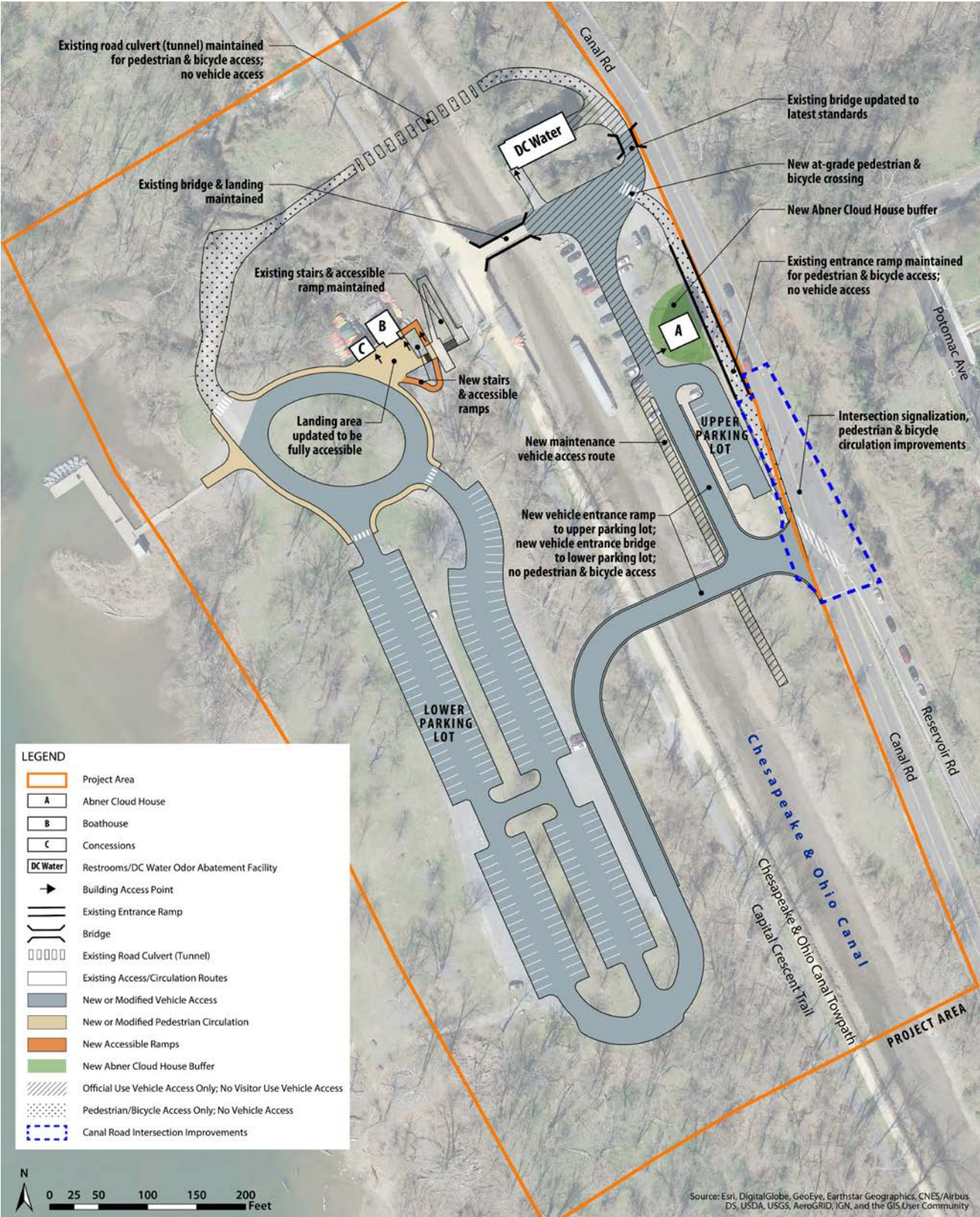


# July 2019 Alternatives

ALTERNATIVE 1B



ALTERNATIVE 3



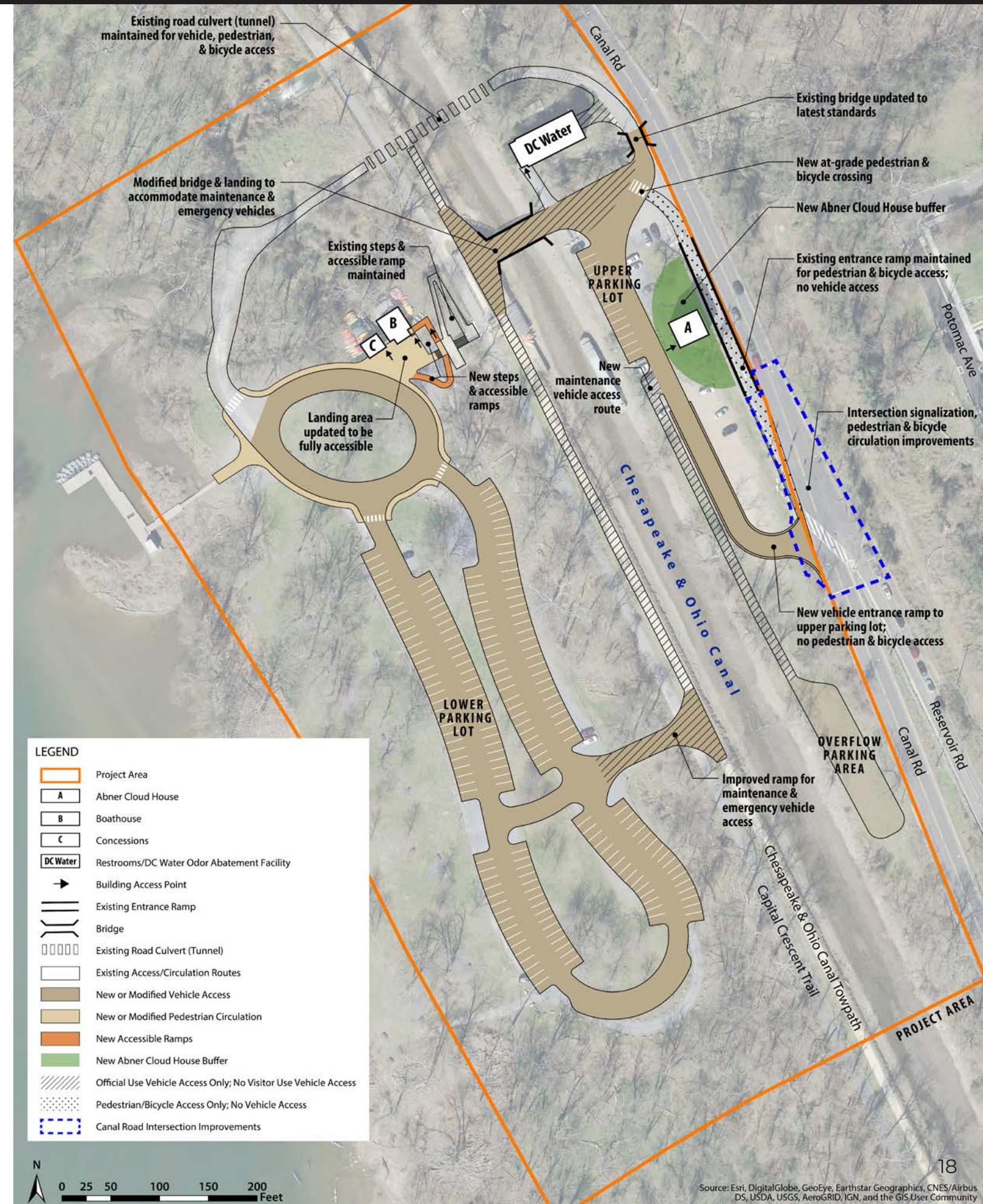


# Upper Parking Lot Access Alternative

(Updated previous Alternative 1B)

## KEY FEATURES

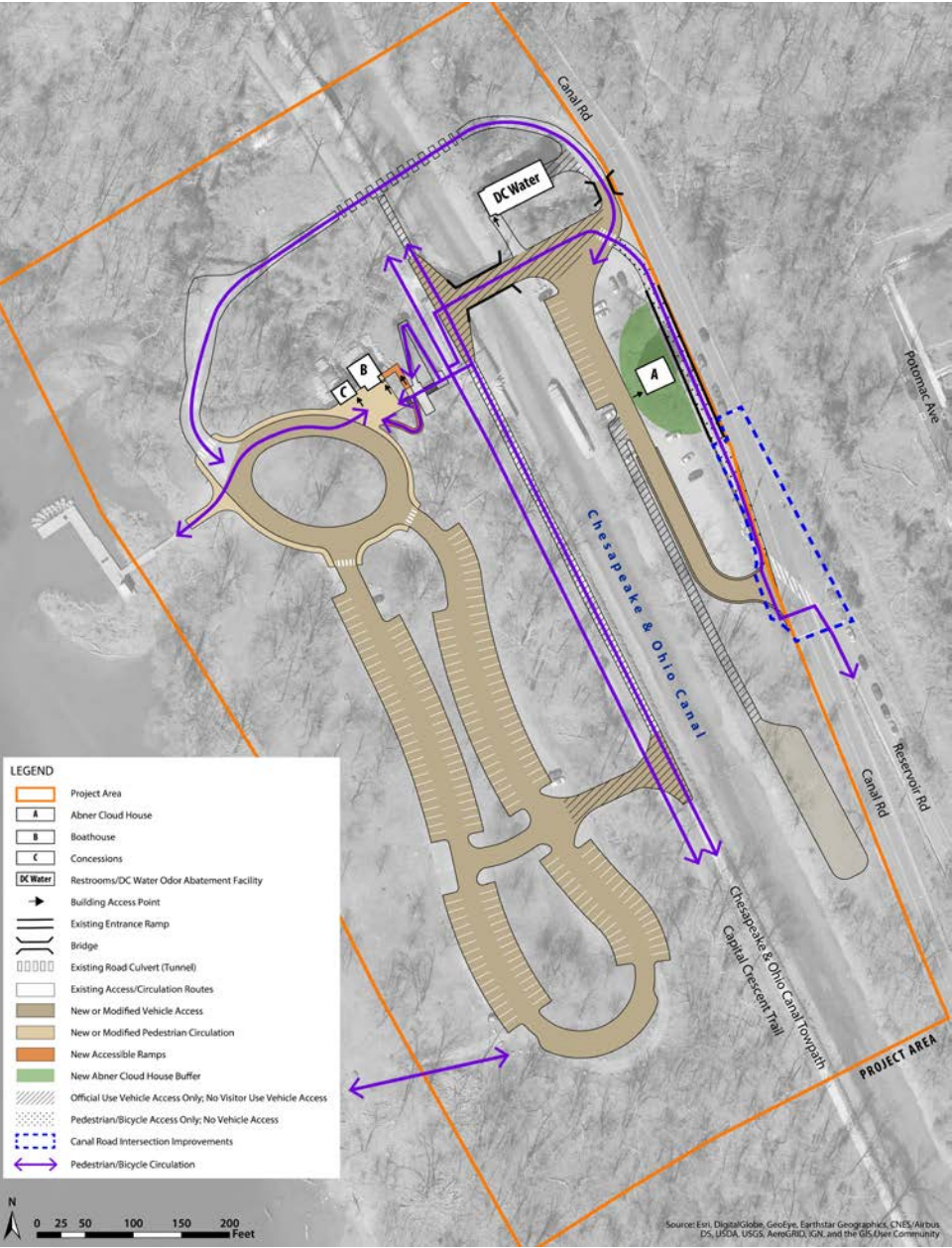
- New entrance ramp provides vehicle access between Canal Road and the upper parking lot; pedestrians and bicyclists prohibited on new entrance ramp
- Existing entrance ramp maintained for pedestrian and bicycle access, but closed to vehicles
- Existing culvert bridge updated to latest standards
- Existing road culvert (tunnel) maintained for visitor use vehicle, pedestrian, and bicycle access between the upper and lower parking lots
- Visitor use vehicle parking provided in the upper and lower parking lots
- Upper parking lot relocated; lower parking reconfigured; parking surface consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*
- Overflow parking available downstream of the new entrance ramp
- Official use vehicle (maintenance and emergency) access to the lower parking lot provided via a modified bridge, landing, and ramp from the towpath
- New steps and accessible ramps added near boathouse and concessions; landing area updated to be fully accessible (consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*)
- Expand the Abner Cloud House buffer



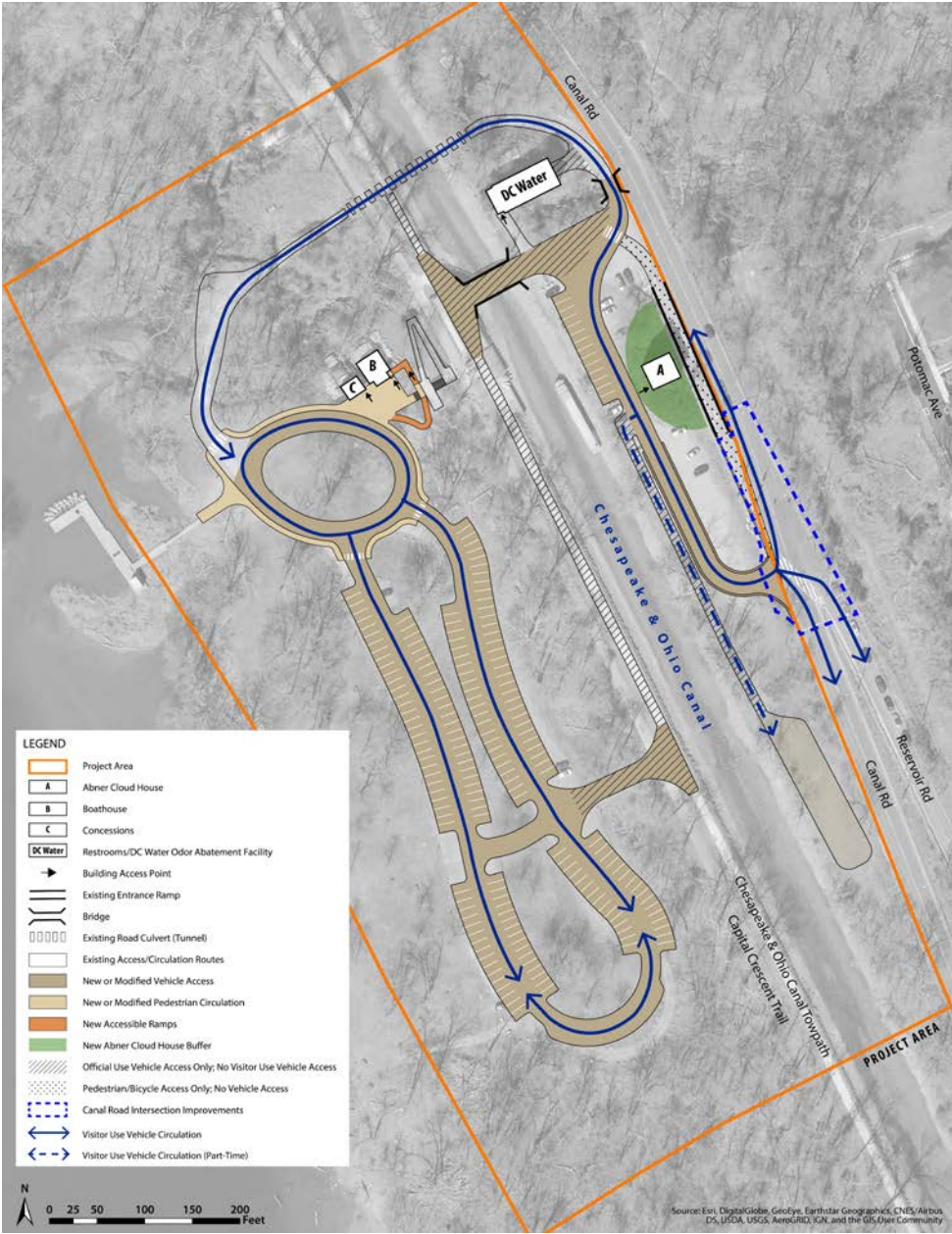


# Upper Parking Lot Access Alternative

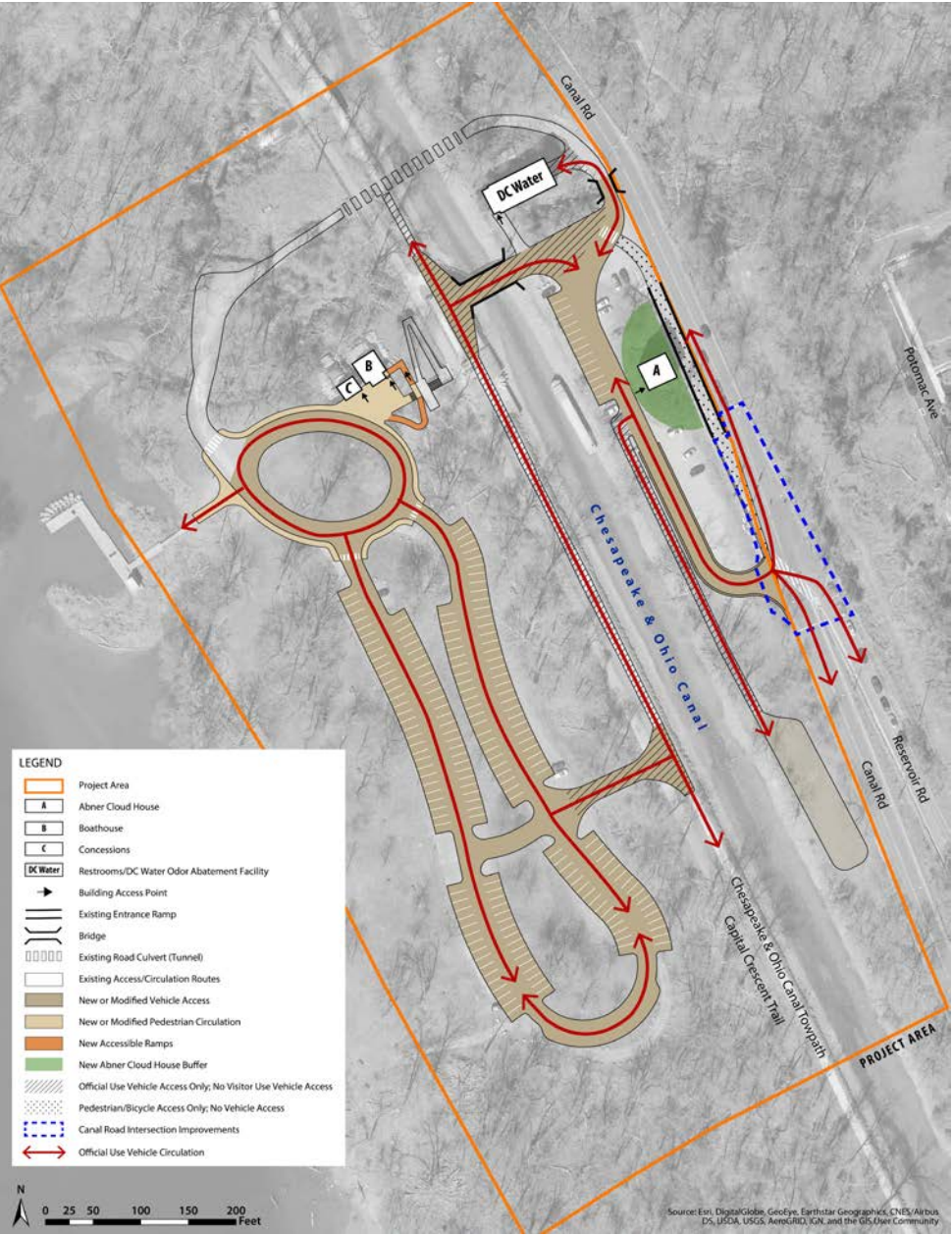
PEDESTRIAN/BICYCLE



VISITOR USE VEHICLE

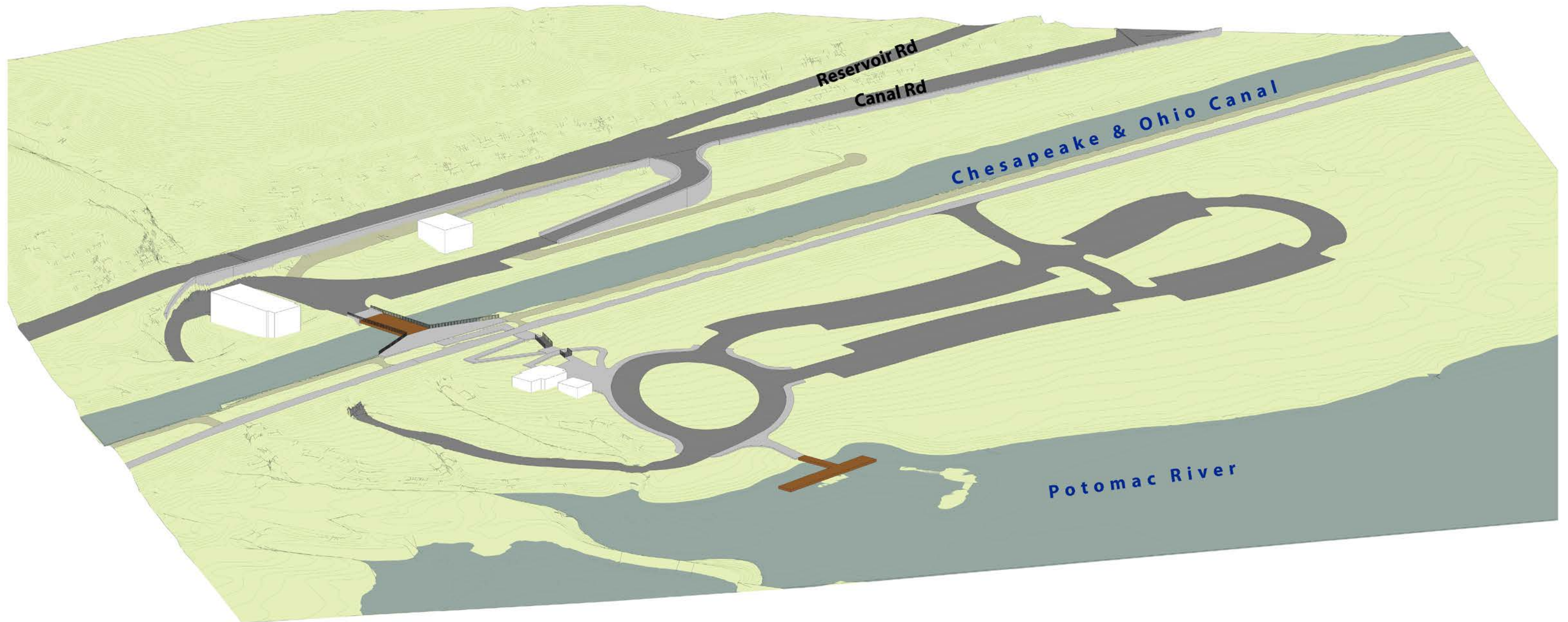


OFFICIAL USE VEHICLE



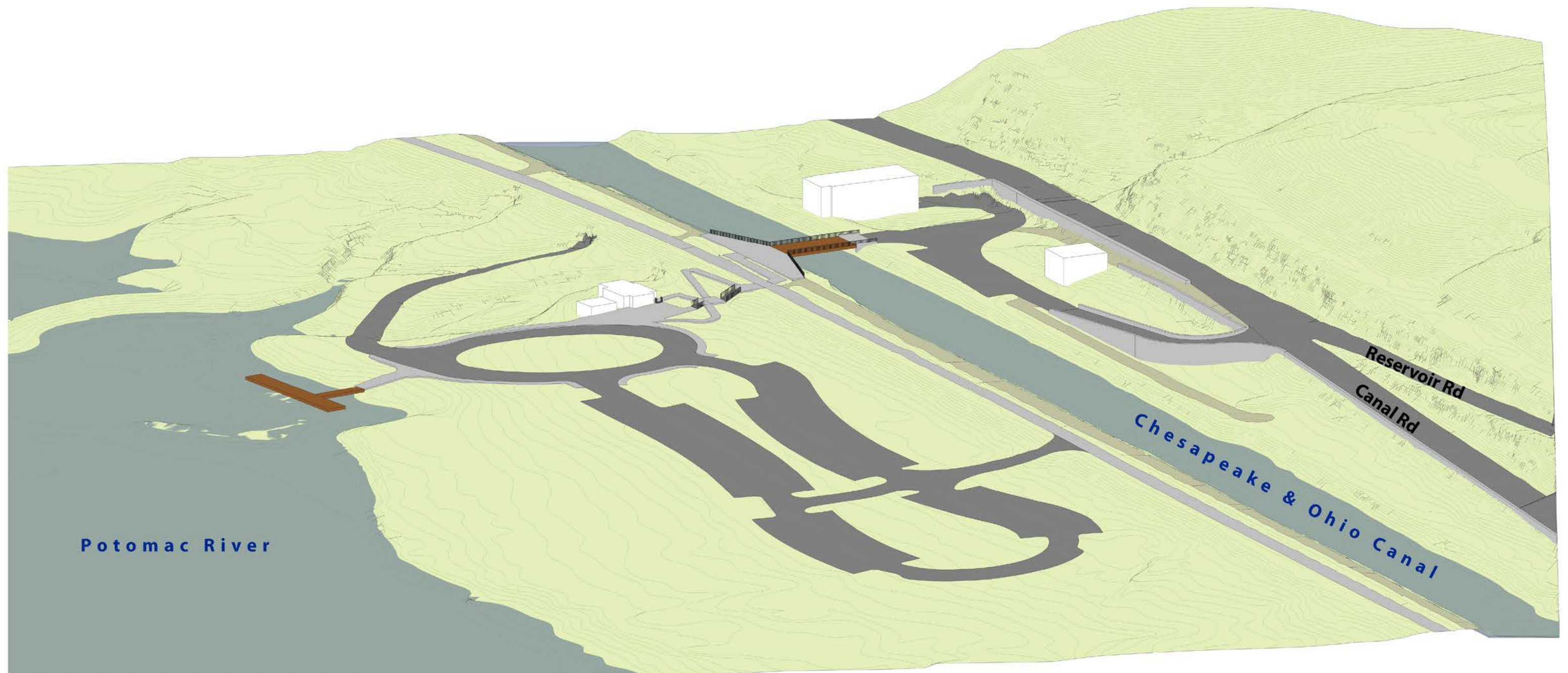


# Upper Parking Lot Access Alternative



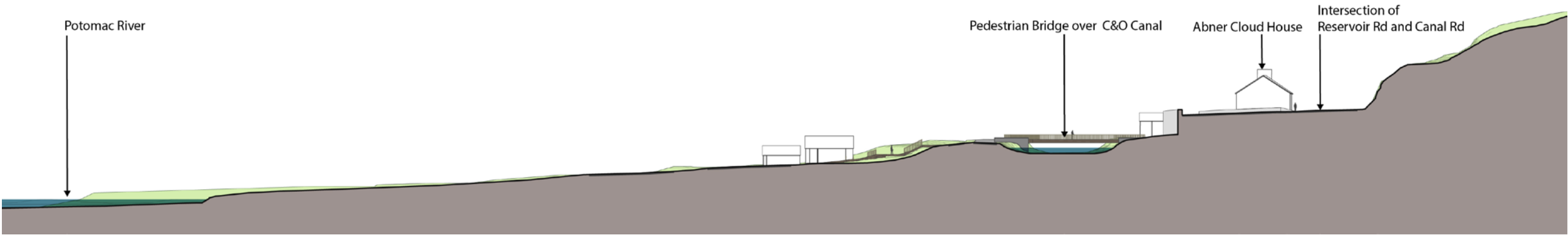
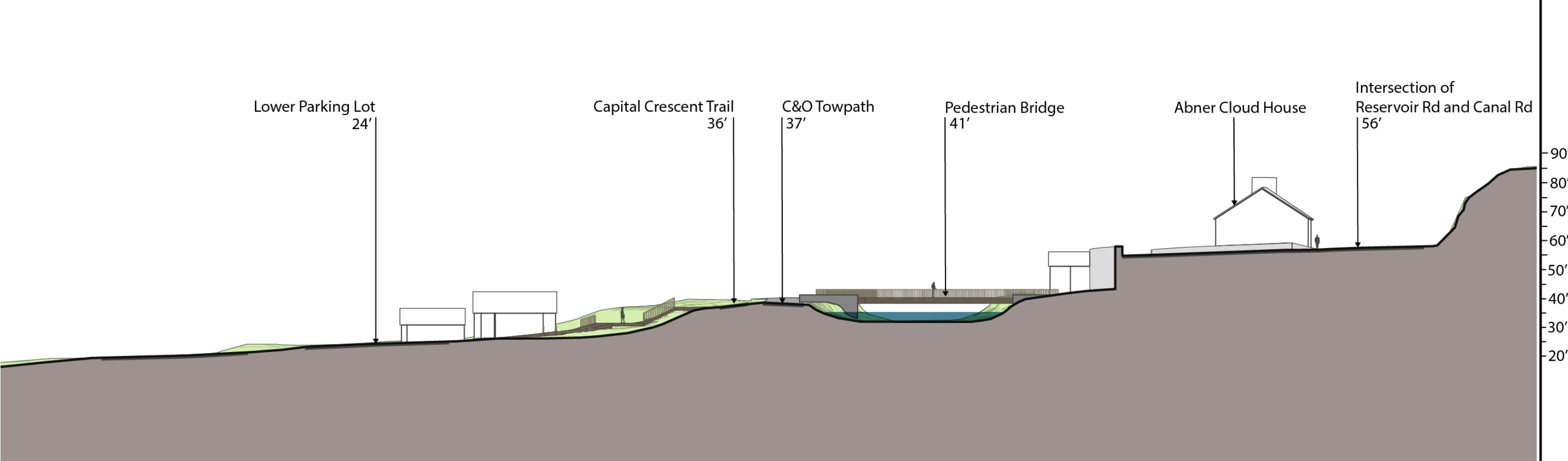


# Upper Parking Lot Access Alternative





# Upper Parking Lot Access Alternative

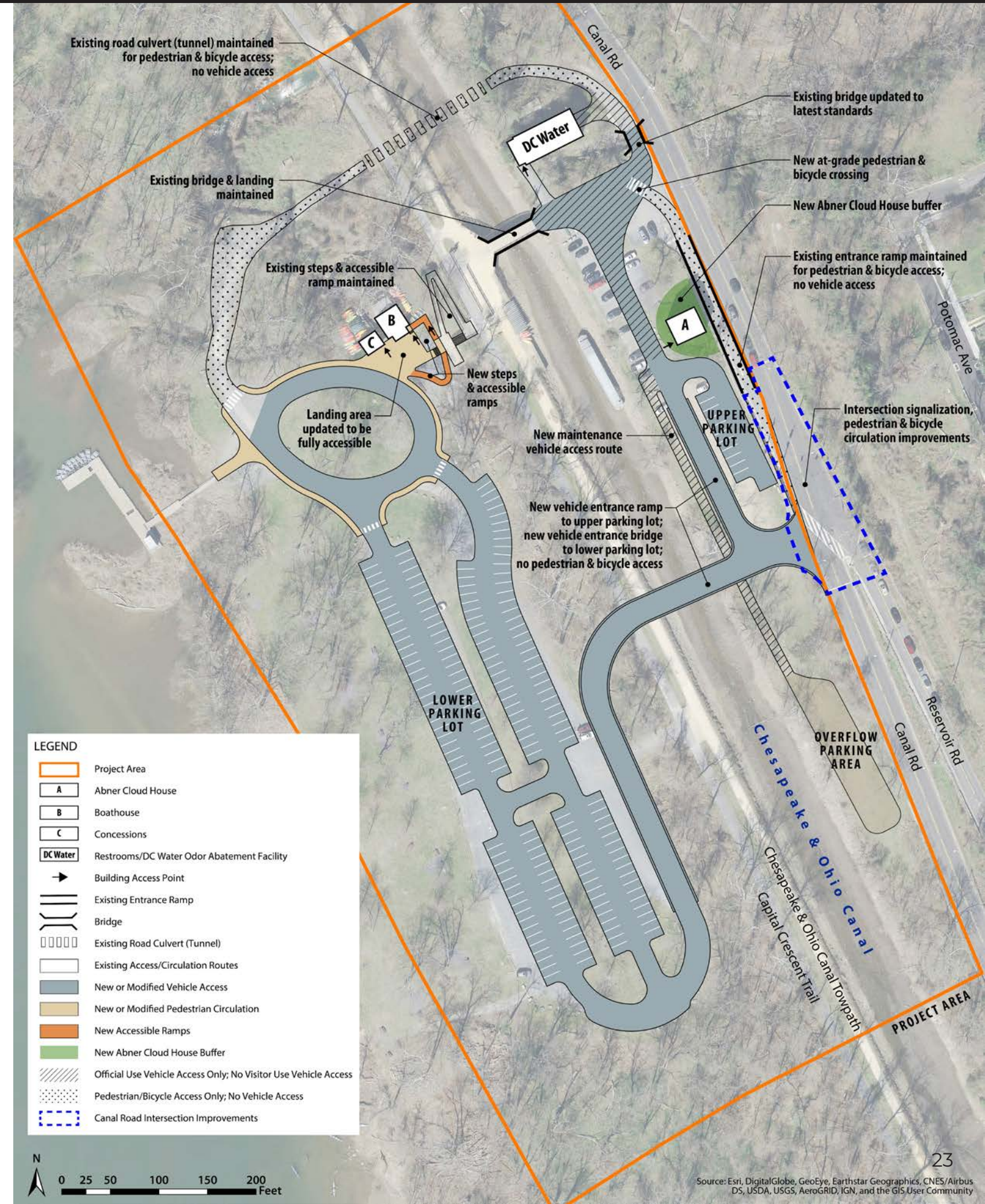




# Upper and Lower Parking Lot Access Alternative *(Previously Alternative 3)*

## KEY FEATURES

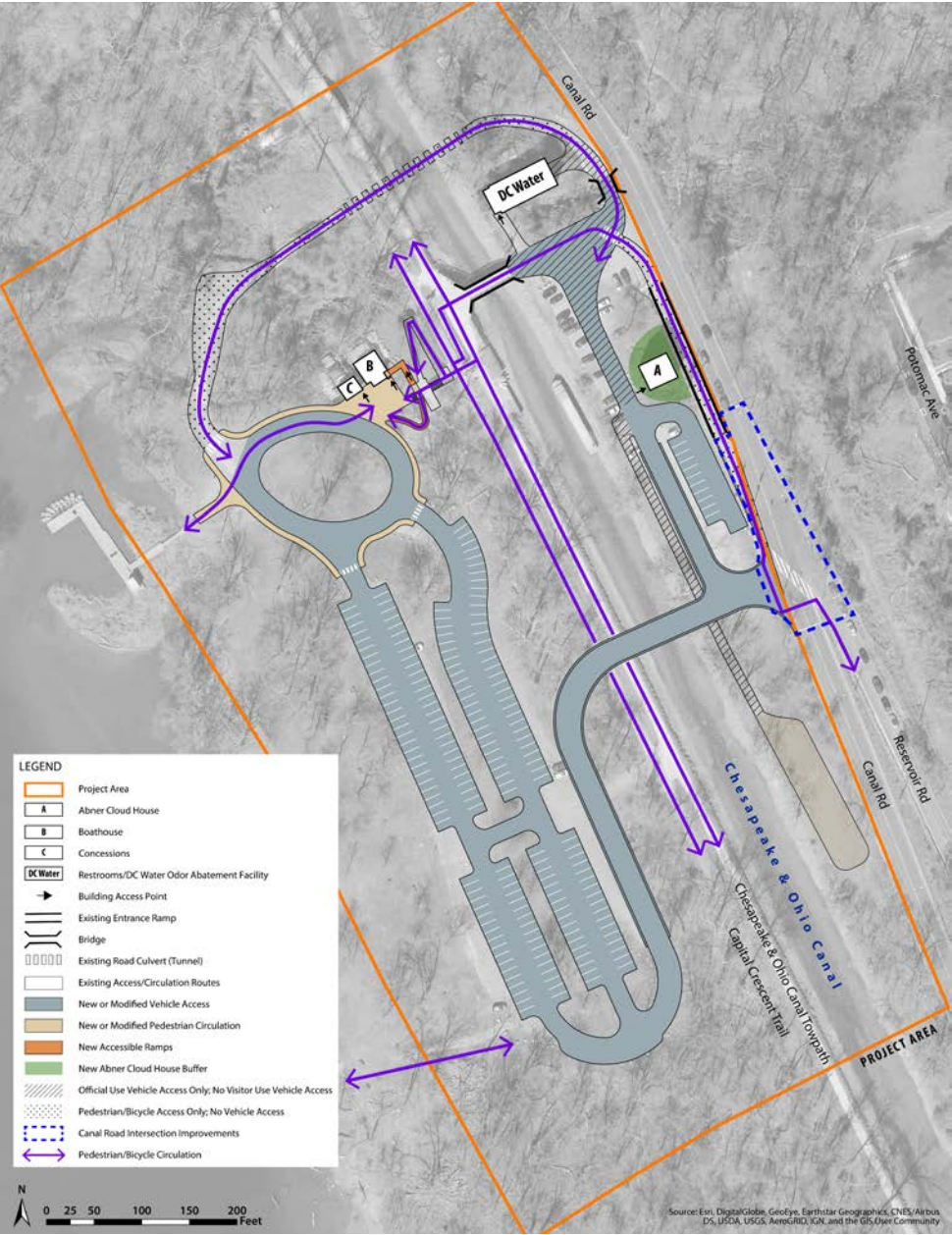
- New entrance ramp and bridge provide vehicle access (including official use vehicles) between Canal Road and the upper and lower parking lots, respectively; pedestrians and bicyclists prohibited on new entrance ramp and bridge
- Existing entrance ramp maintained for pedestrian and bicycle access, but closed to vehicles
- Existing culvert bridge updated to latest standards
- Existing road culvert (tunnel) maintained for pedestrian and bicycle access between the lower and upper parking lots, but closed to vehicles
- Visitor use vehicle parking provided in the upper and lower parking lots
- Upper parking lot moved; lower parking lot reconfigured
- Overflow parking available downstream of the new entrance ramp and bridge
- New steps and accessible ramps added near boathouse and concessions; landing area updated to be fully accessible



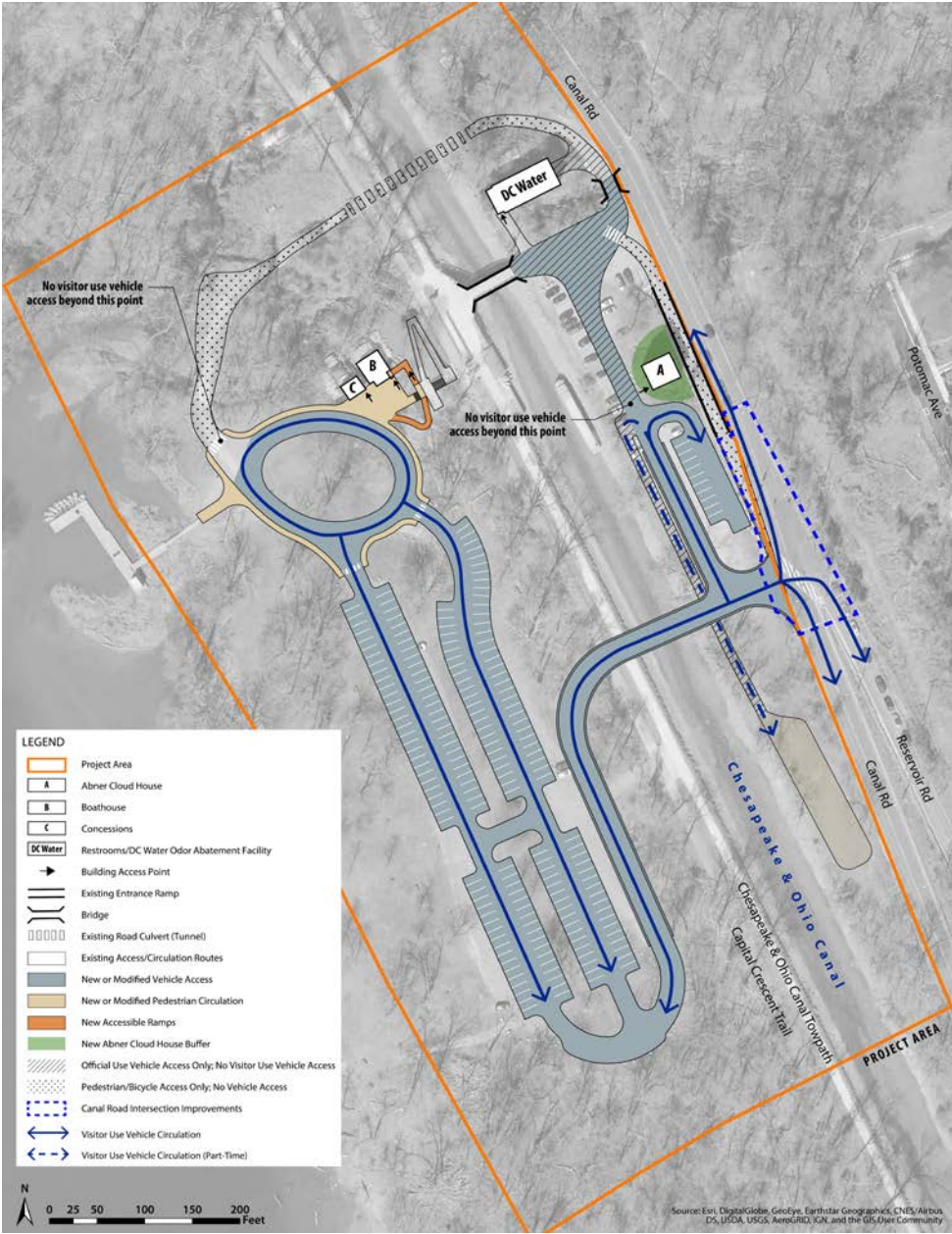


# Upper and Lower Parking Lot Access Alternative Circulation

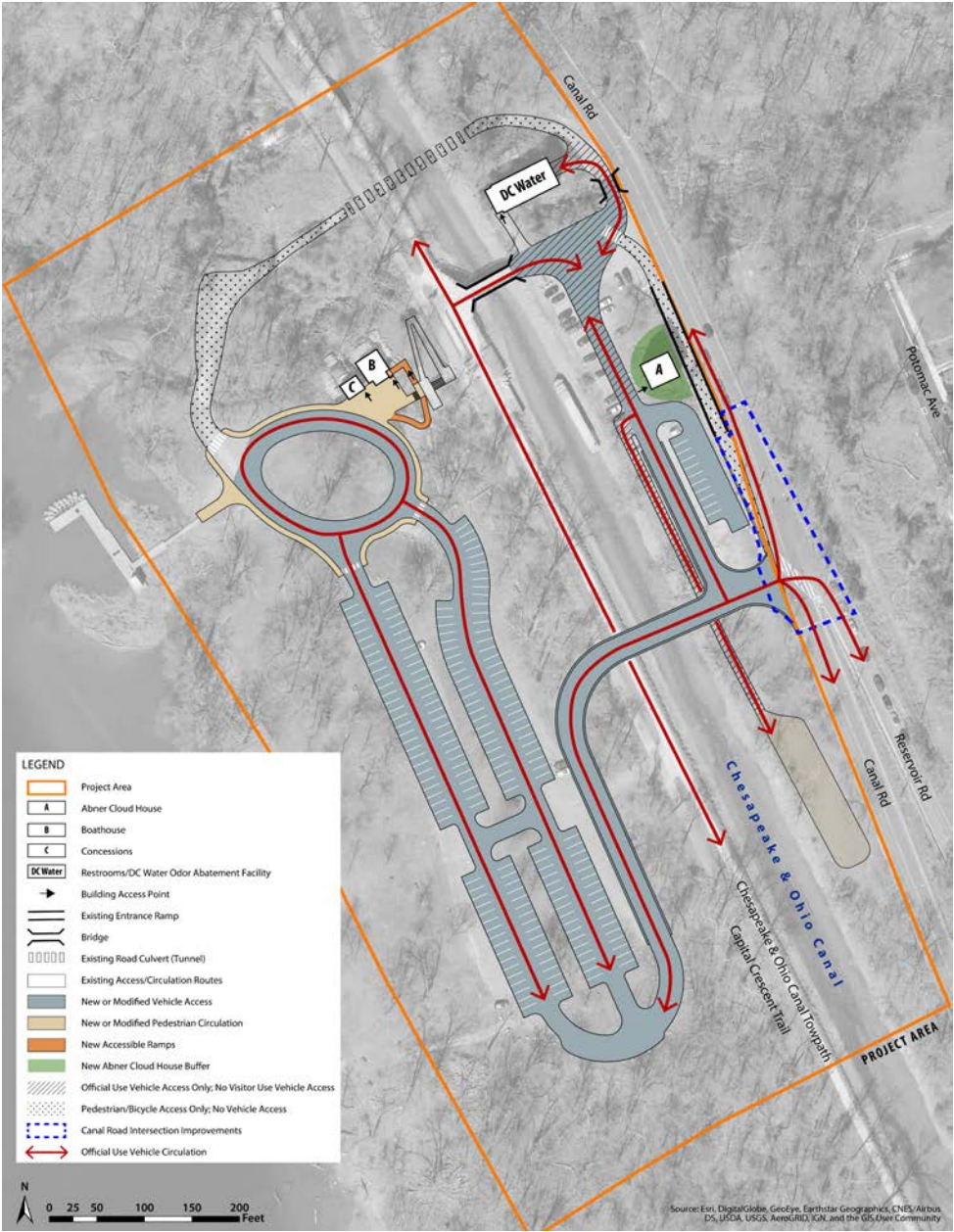
PEDESTRIAN/BICYCLE



VISITOR USE VEHICLE

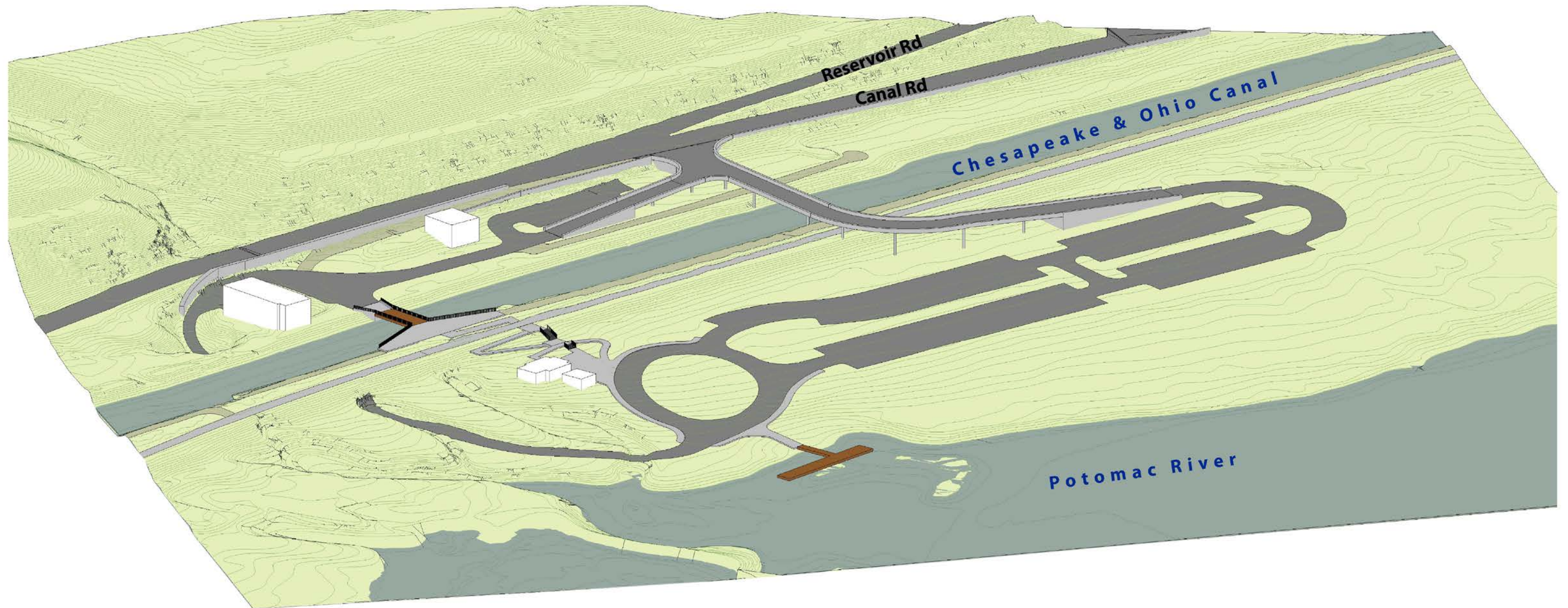


OFFICIAL USE VEHICLE



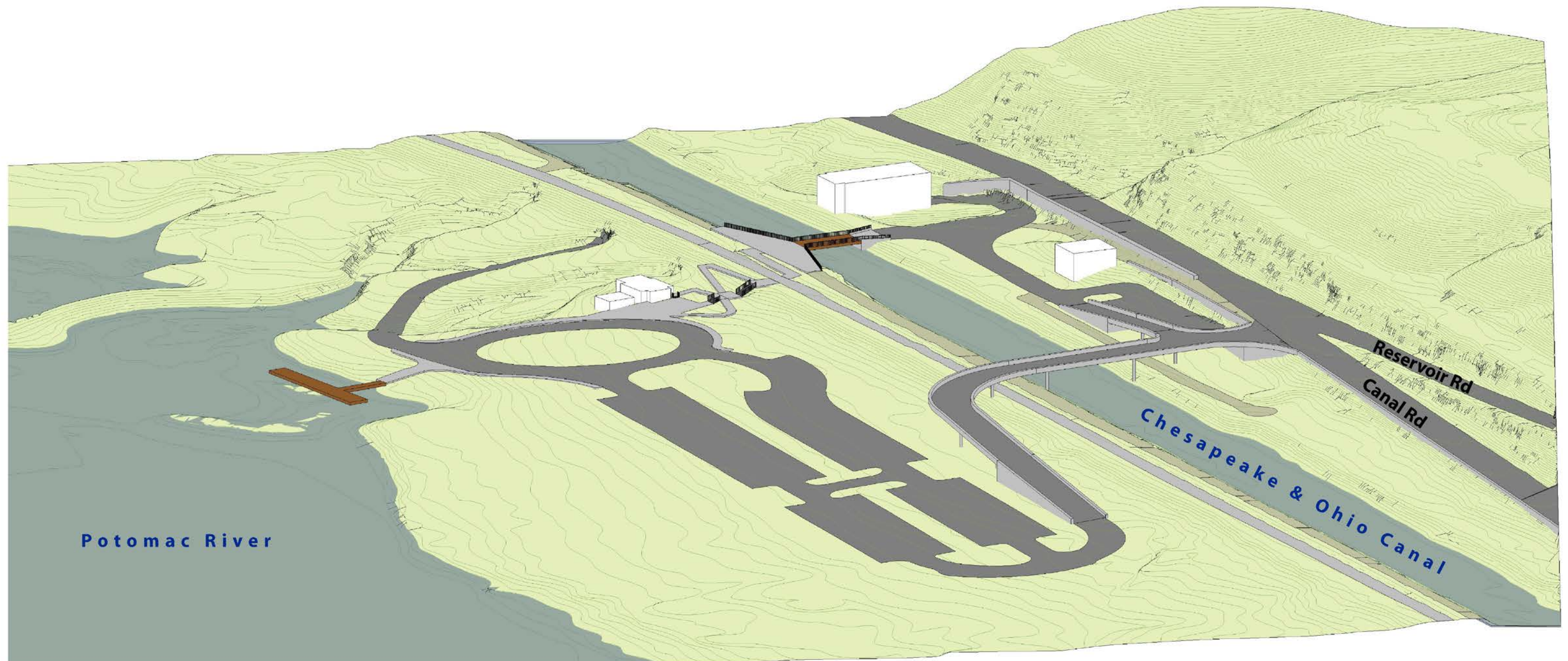


# Upper and Lower Parking Lot Access Alternative



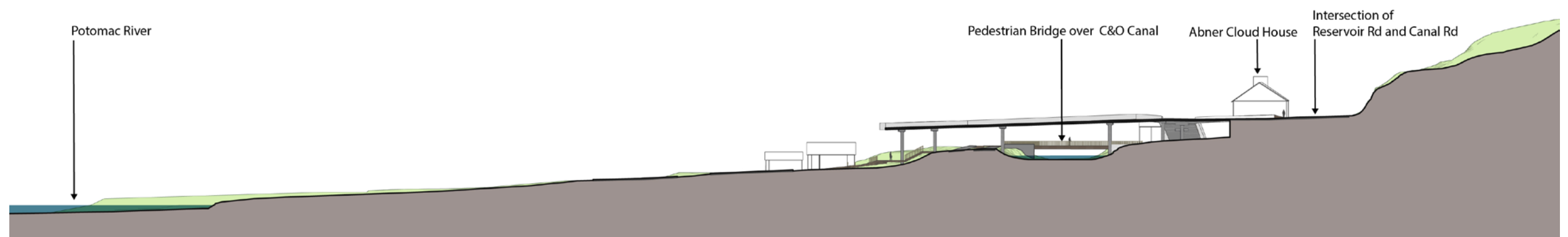
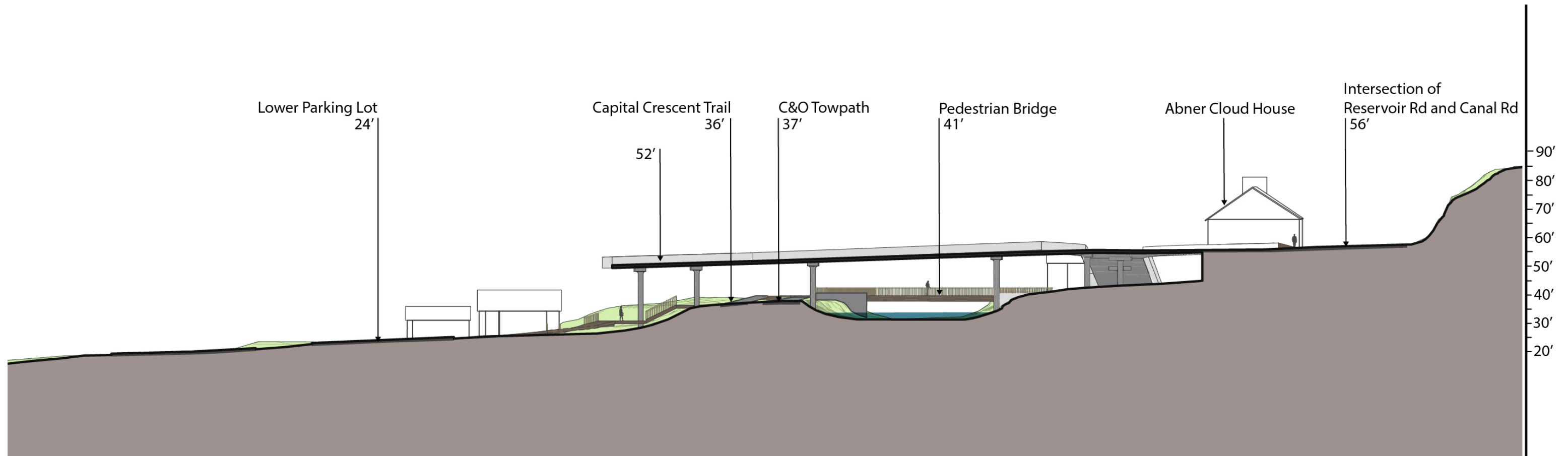


# Upper and Lower Parking Lot Access Alternative





## Upper and Lower Parking Lot Access Alternative





# Alternative Small-Scale Improvements

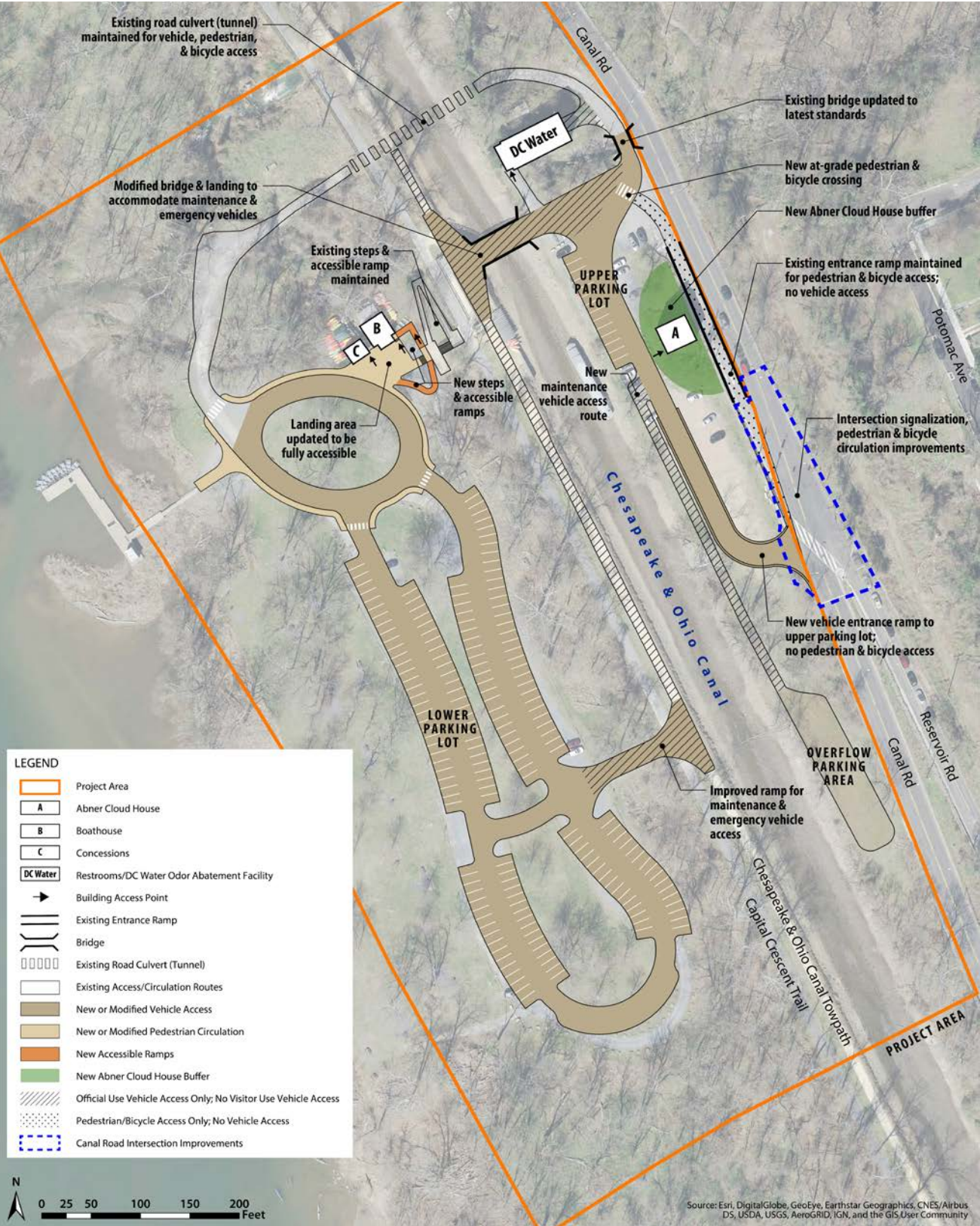
Small-scale improvements for all alternatives include:

- Work with the District Department of Transportation (DDOT) to enable improvement of the pedestrian and bicycle access routes at the intersection of Canal Road, Reservoir Road, and the new ramp
- Install protective safety measures near the top of the existing ramp to separate pedestrians and bicycles from Canal Road vehicle traffic and prevent vehicle access to the ramp from Canal Road
- Improve pedestrian and bicycle access routes at Canal Road intersection
- Install signage to direct safe circulation on site
- Upper Parking Lot Access Alternative
  - Install an access gate along the approach road to the existing road culvert (tunnel) to prevent vehicle access during floods
  - Signalize existing road culvert (tunnel) to safely accommodate two-way traffic

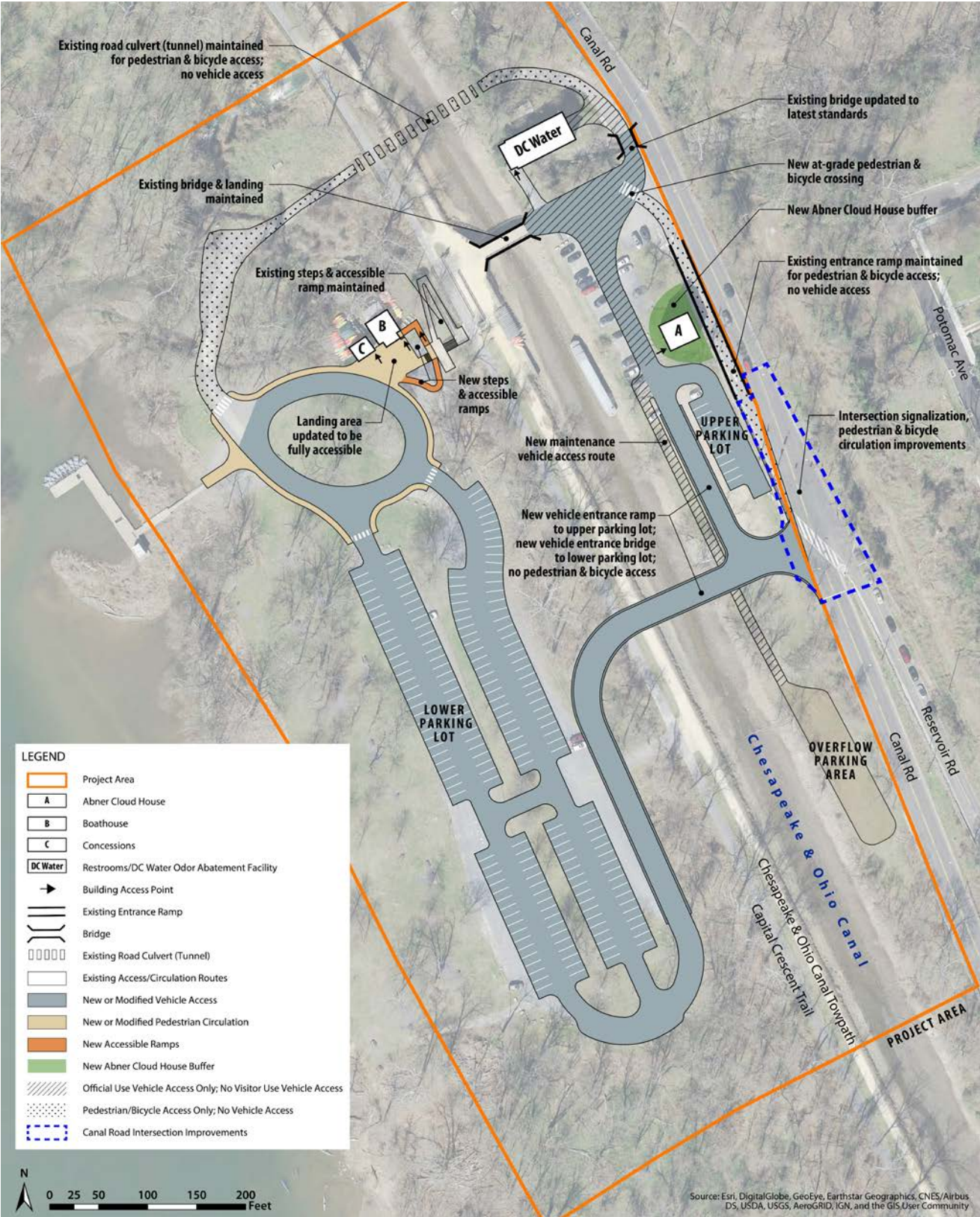


# Alternative Comparison

UPPER PARKING LOT ACCESS ALTERNATIVE



UPPER AND LOWER PARKING LOT ACCESS ALTERNATIVE

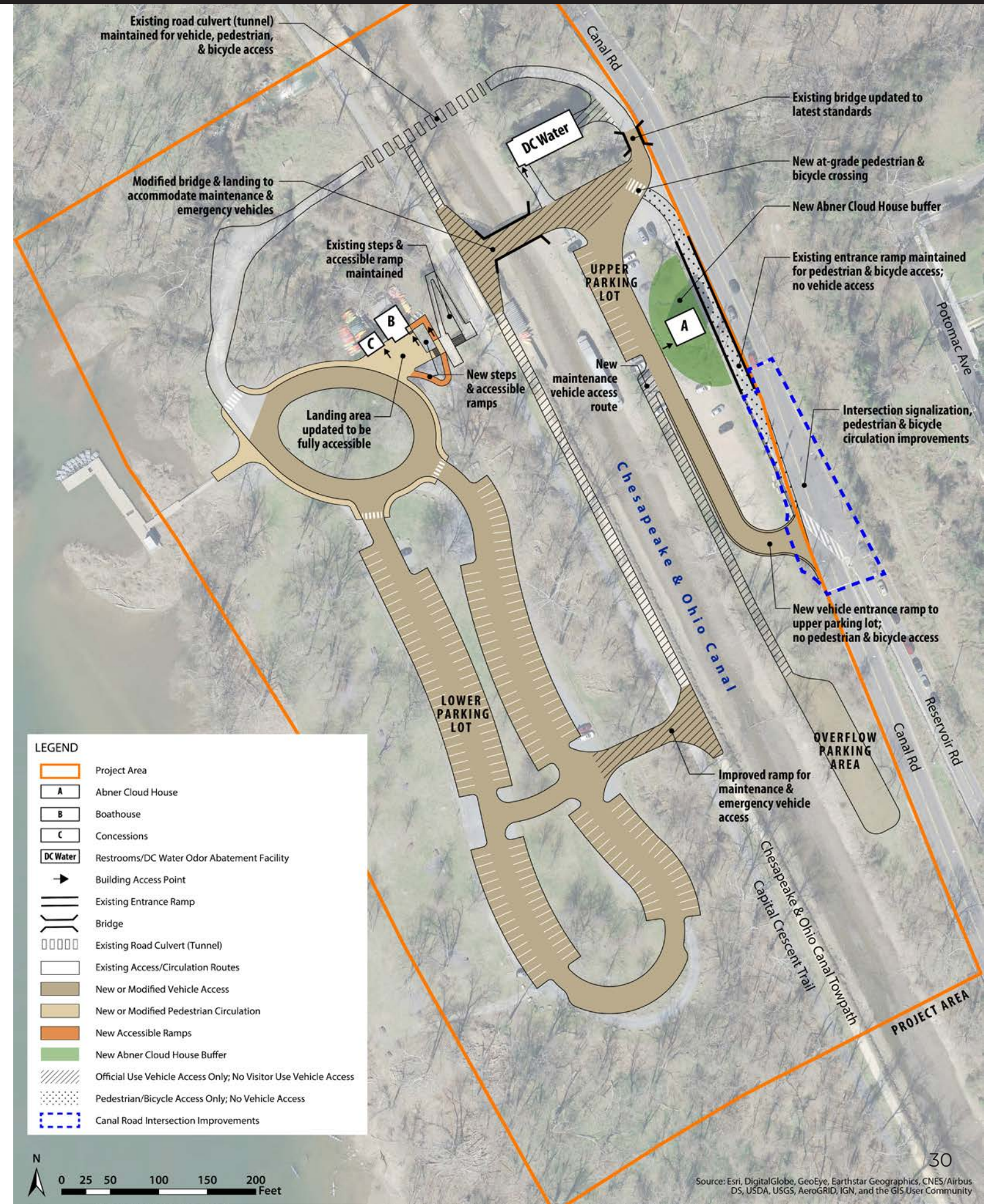




# Assessment of Effects

The **Upper Parking Lot Access Alternative** would result in the following:

- No adverse effect on the **George Washington Memorial Parkway**
- Adverse effect on the **C&O Canal National Historical Park** due to changes in the setting, circulation, and spatial relationships within the site:
  - Addition of new entrance ramp
  - Modifications to parking lots and vehicle circulation areas
- Potential adverse effect on **archeological resources**





# Assessment of Effects

The **Upper and Lower Parking Lot Access Alternative** would result in the following:

- No adverse effect on the **George Washington Memorial Parkway**
- Adverse effect on the **C&O Canal National Historical Park** due to changes in the setting, circulation, and spatial relationships within the site:
  - Addition of new entrance ramp and bridge
  - Re-located upper parking lot
  - Paved parking lots and vehicle circulation areas
- Potential adverse effect on **archeological resources**





# Avoidance, Minimization, and Mitigation Measures

- Undertake design of the following in a manner that is consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*:
  - Bridge replacement
  - Surface materials for the updated fully accessible landing area and associated new sets of steps and accessible ramps
  - Small-scale features associated with proposed upgrades (e.g., railings)
  - Small-scale improvements (i.e., signalization at the Fletcher's Road Culvert, access gates, and signage)
- Use materials (e.g., wood, stone) and a design that are compatible with the historic character of the landscape
- Screen the parking area and ramp to upper parking lot from view of canal using natural materials (e.g., wood fences, stone walls, stones, or natural vegetation)
- Avoid using support piers in the canal prism and on the towpath in the design of the new entrance bridge over the canal
- Avoid disturbing known historic and archeological resources during design and construction to the extent practicable
- Minimize ground-disturbing activities to the extent practicable during the construction phase, including using existing vehicle circulation area and construction methods that minimize land disturbance
- Conduct archeological investigation for any areas of potential ground disturbance with moderate to high archeological potential



# Discussion

- Potential effects
- Identified minimization measures
- Potential mitigation measures



# Status Update + Next Steps

- Receive comments by October 25, 2019
- Continue evaluation of potential adverse effects on historic properties
- Develop and release Assessment of Effects and Environmental Assessment





# Appendix



# Fletcher’s Boathouse Vehicle Trips

	Per Weekday	Per Weekend Day	Per Hour Per Weekday <i>(Assumes 80% of visits in 8 hours)</i>	Per Hour Per Weekend Day <i>(Assumes 80% of visits in 8 hours)</i>
January	7	98	1	10
February	7	105	1	10
March	12	164	1	16
April	25	359	3	36
May	22	314	2	31
June	20	282	2	28
July	20	280	2	28
August	20	278	2	28
September	15	214	2	21
October	12	168	1	17
November	10	135	1	13
December	7	96	1	10
<b>Spring</b>	-	<b>279</b>	-	<b>28</b>
<b>Summer</b>	-	<b>280</b>	-	<b>28</b>
<b>Fall</b>	-	<b>172</b>	-	<b>17</b>

**Methodology:**

- Divided traffic counts by 2.5 to account for visitor estimates
  - Averaged monthly visitor counts from 2000-2018
- 15% of visits occur during weekdays; 85% of visits occur during weekends
  - 80% of visits occur within an eight hour period



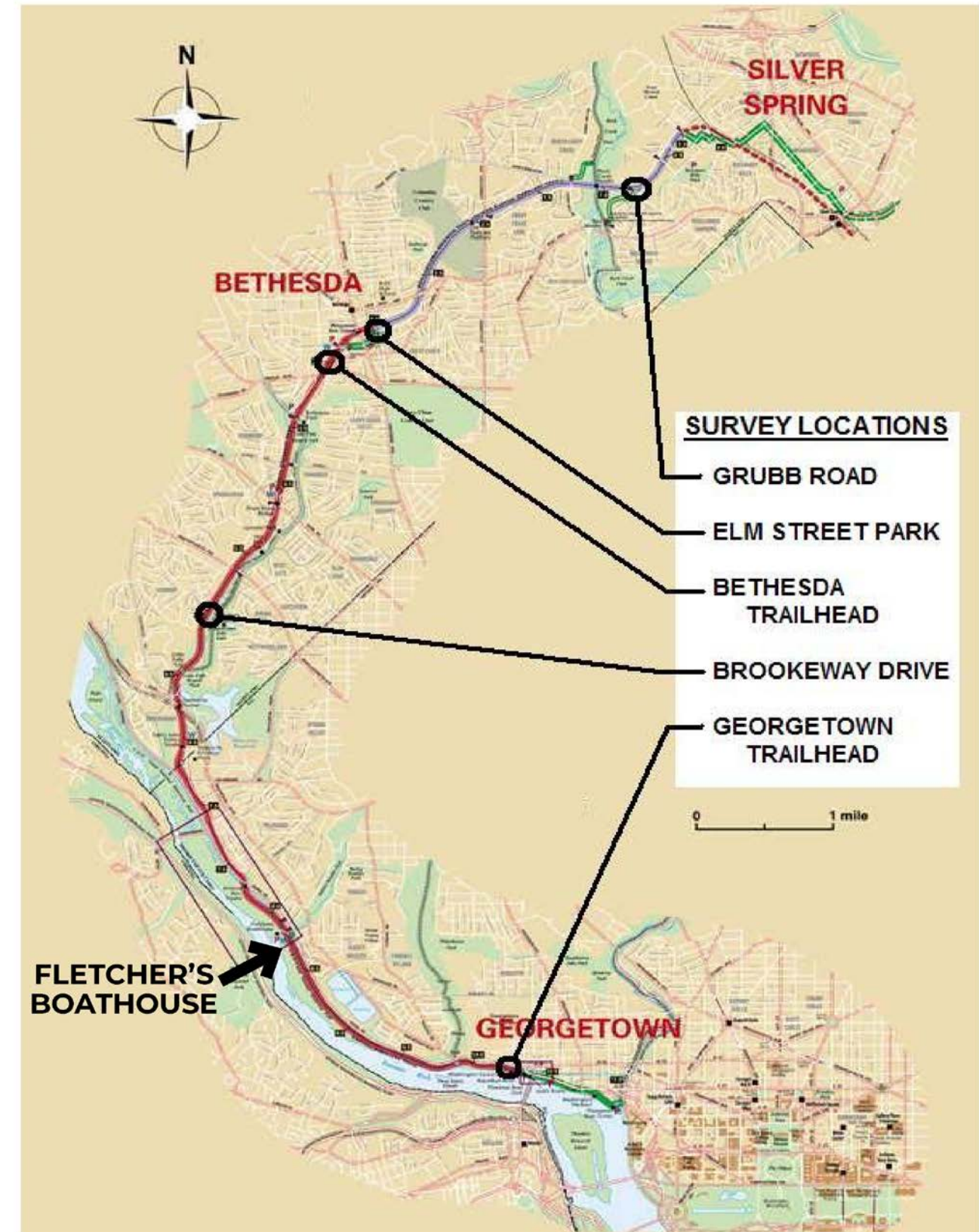
# Fletcher’s Boathouse Parking Spaces

	Existing	Upper Parking Lot Access Alternative	Upper and Lower Parking Lot Access Alternative
Upper Parking Lot	77	14	11
Overflow Parking Area	NA	16	16
Lower Parking Lot	188	181	188
Total	265	211	215



# 2006 Capital Crescent Trail Use Survey

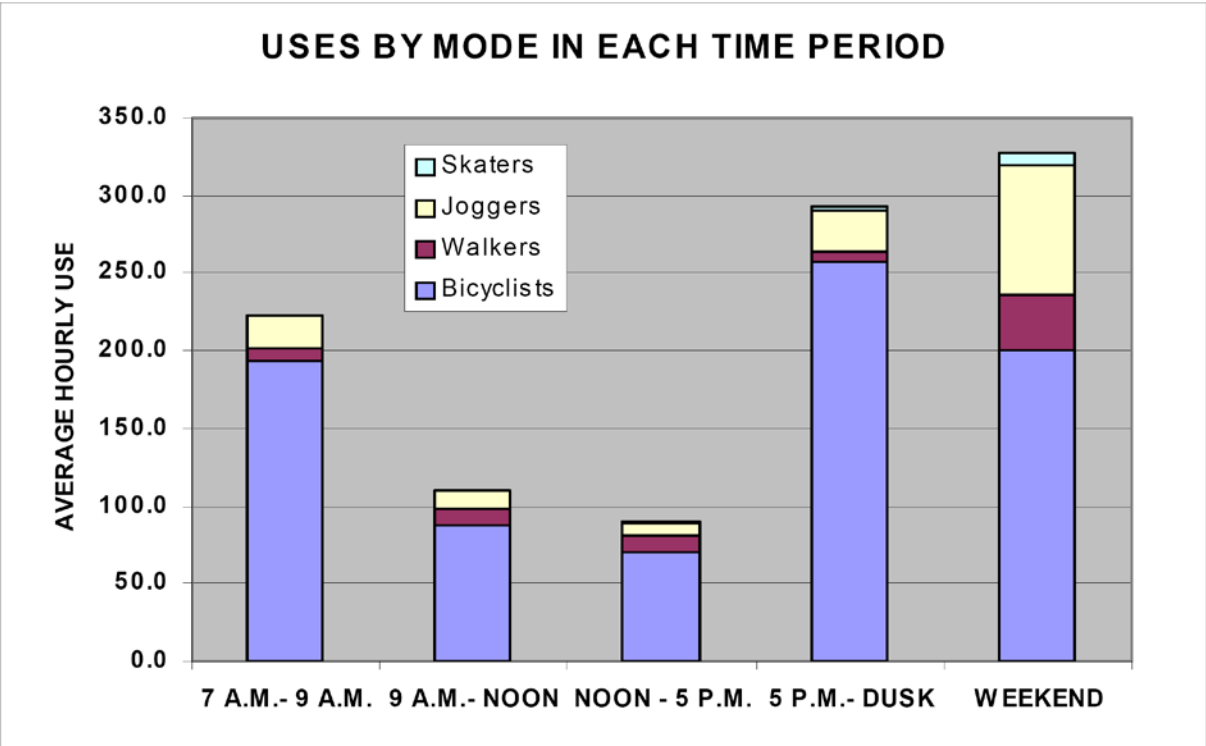
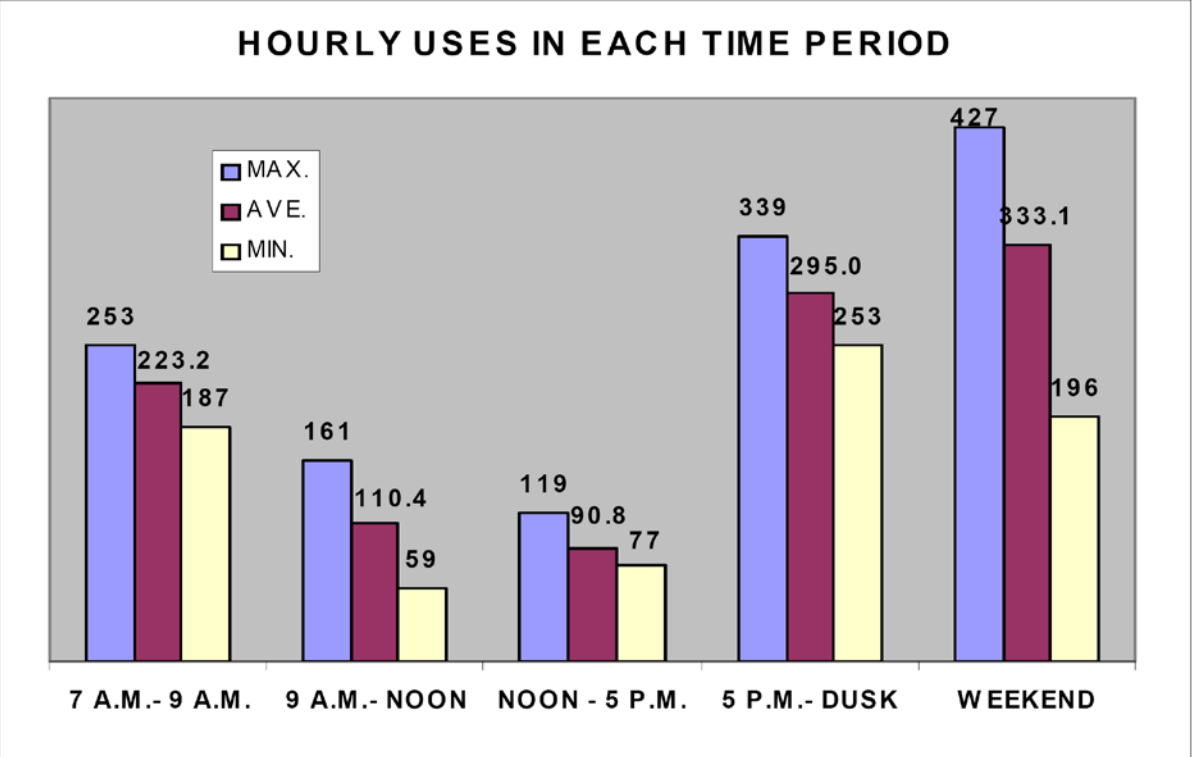
- Performed by the Coalition for the Capital Crescent Trail
- Data collected from September 5-October 4, 2006





# 2006 Capital Crescent Trail Use Survey

GEORGETOWN TRAILHEAD (near milepost 10.0)



BROOKWAY DRIVE ACCESS (milepost 5.5)

