



ENVIRONMENTAL SCREENING

Final Version
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Introduction

The Catawba Crossings Feasibility Study is evaluating a new alignment roadway between NC 279 (S. New Hope Road) in southeastern Gaston County to NC 160 (Steele Creek Road) in western Mecklenburg County. The proposed project would include new bridges over the South Fork Catawba River and Catawba River (Lake Wylie) and a new, or expanded, interchange with I-485 south of the West Boulevard interchange. The Catawba Crossings is an important component of the region's future transportation system.

Both GCLMPO and CRTPO's Comprehensive Transportation Plans (CTPs) recommend a Boulevard cross-section. Based on the traffic analyses conducted for this feasibility study, GCLMPO is recommending a four-lane median divided cross section except for the Catawba River bridge which is recommended six-lanes.

The Catawba Crossings Feasibility Study is the first step in reimagining what a new alignment roadway crossing the Catawba River could look like. Additional design and environmental studies will have to be conducted after the proposed project is programmed in the State Transportation Improvement Program (STIP), which is hoped to be after Prioritization 7.0 in 2023. Considering the scale of the proposed transportation project and the likelihood that federal funds would be required to implement the project, Catawba Crossings will be subject to review in compliance with the National Environmental Policy Act (NEPA) following programming in the STIP and initiation of preliminary engineering.

Environmental Screening

The purpose of this screening is to identify and evaluate the potential for environmental impacts because of the Catawba Crossings Project. The NCDOT Project Scoping Report Screening Checklist is utilized for this screening. The Screening Checklist questions are based on the Categorical Exclusion (CE) Checklists developed by the NCDOT and FHWA for transportation projects in North Carolina. These questions touch on all major components of an environmental review and is a useful tool to screen the Catawba Crossings. A determination of the National Environmental Policy Act (NEPA) Class of Action would be made by FHWA and NCDOT during project scoping later.

Study Area

The study area consists of a 1,000-foot-wide Catawba Crossings Project Corridor which is based on alignments developed by two other NCDOT Feasibility Studies. The Catawba Crossings Feasibility Study (Project ID H190069; SP-1710A) was completed in 2017 by NCDOT and established a conceptual roadway alignment from NC 279 (S. New Hope Road) in Gaston County to I-485 in Mecklenburg County. The NCDOT began the Airport Area and River District Feasibility Study (Project ID H184060) in 2019 but it was put on hold in 2020 and is not final. This incomplete study was reviewed by the Catawba Crossings Project Team and forms the basis for the conceptual roadway alignment on the Mecklenburg County side of the Catawba River only. This Project continues over I-485 and terminates at NC 160 (Steele Creek Road).

Screening Methodology

Based on coordination with the Project Team, the alignment described above is the most feasible alignment alternative for the purposes of this feasibility study. Minimal refinements were made to this alignment and all occurred within the 1,000-foot project corridor. The resulting four-lane, median divided boulevard was laid out and construction limits (cut and fill activity, a.k.a. slope stakes) generated in MicroStation. These conceptual slope stake limits were buffered by 40 feet in ArcGIS, a standard applied by NCDOT in the calculation of impacts based on functional level roadway design.

This screening-level analysis was completed by overlaying the approved 1,000-foot study corridor and conceptual design details on available GIS data from the NCDOT's ATLAS Screening Tool (January 2021 download). (See Figures 1a-d.) No field surveys or on-site verification of resources were conducted for this screening.

Environmental Screening

Potential environmental impacts are summarized in Table 1 at the corridor-level and at the alignment level. The corridor-level figures quantify the presence of resources within the 1,000-foot project corridor. The alignment-level figures quantify potential impacts within the conceptual design slope stakes plus 40 feet and represent a more realistic estimation of impacts based on current information.

Table 1. Potential Environmental Impacts		
Environmental Resource	1,000-foot Study Corridor	Conceptual Design Slope stakes + 40-feet
Streams and Wetlands		
Stream (NCDOT Hydrography) (feet)*	24,300	8,000
USFWS National Wetland Inventory (NWI) (acre)	15	10
US Department of Agriculture (USDA) Hydric Soils (acre)	25	8
National Register of Historic Places (NRHP) Property (acre)	5	< 1
NC Division of Environmental Quality 303(d) List Stream (feet)	3,100	860
FEMA Special Flood Hazard Area		
Zone AE Floodway (acre)*	64.6	18.6
Zone AE Community Encroachment (Mecklenburg County) (acre)	1	0.2
1% Annual Chance Flood Hazard (100-year Floodplain) (acre)	10.1	1.5
Community Floodplain (1% Annual Chance Flood Hazard) (Mecklenburg County) (acre)	0.5	0.1
0.2% Annual Chance Flood Hazard (500-year Floodplain) (acre)	4.2	1.4

Parks and Protected Land		
City of Charlotte Open Space (acre)	104	40
Mecklenburg County Open Space-Berewick Park (acre)	6	0.1
NC Division of Mitigation Services Easement (acre)	< 0.1	0
Potential Relocations ⁺		
Commercial/Industrial (#)	NA	1
Residential (#)	NA	33 (Gaston Co.)
Public/Institutional (#)	NA	0
<p>* Stream impacts and floodway impacts associated with the South Fork Catawba River and Catawba River channels would be mostly avoided by bridging these resources; therefore, these resources are excluded from the reported totals.</p> <p>* Potential relocations were not enumerated within the 1,000-foot corridor because it would result in an inflated number of real property impacts that are not realistic when considering the potential direct impacts of the 4-lane divided roadway project.</p>		

The NCDOT Project Scoping Report Screening Checklist consists of thirty-three (33) questions. Responses are categorized as unresolved, yes, or no. A discussion accompanies each **unresolved** and **yes** response and some no responses. In all cases additional studies by qualified professionals, consultation and/or coordination with appropriate state and/or federal regulatory resource agency will be required to determine the presence of a specific resource and whether the proposed project would result in a significant impact to that resource. This is a desktop screening for informational purposes only.

1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	UNRESOLVED
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There are 2 threatened, 1 threatened/similar in appearance, and 4 endangered species listed in the US Fish and Wildlife Service (FWS) Information for Planning and Coordination (IPaC) Threatened and Endangered List report dated April 14, 2021, for this study corridor.

- Threatened
 - o Northern Long-eared Bat (*Myotis septentrionalis*)
 - o Dwarf-flowered Heartleaf (*Hexastylis naniflora*)
- Threatened/Similar in Appearance
 - o Bog Turtle (*Clemmys muhlenbergii*)
- Endangered
 - o Carolina Heelsplitter (*Lasmigona decorata*)
 - o Michaux's Sumac (*Rhus michauxii*)
 - o Schweinitz's Sunflower (*Helianthus schweinitzii*)
 - o Smooth Coneflower (*Echinacea laevigata*)

A Natural Resources Technical Report (NRTR) must be prepared during project development before this question can be fully answered.

2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	UNRESOLVED
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Habitat for the Bald Eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water. Lake Wylie's open waters presents appropriate foraging habitat for the Bald Eagle. Surveys for nesting sites within the project area would need to be conducted to determine occurrence of potential utilized nesting site opportunities. A NRTR must be prepared during project development before this question can be fully answered.

3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	UNRESOLVED
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This project includes the same project corridor as the discontinued Garden Parkway (i.e., Detailed Study Alternative 9). The Garden Parkway generated substantial controversy and public opposition before it was discontinued by the NCDOT in 2015. The Catawba Crossings is a smaller project (i.e., approximately 6.5-mile boulevard) compared to the 22-mile interstate toll road proposed for the Garden Parkway.

Stakeholder coordination and public involvement activities undertaken to date by the GCLMPO suggests some public and stakeholder opposition arising from the project's controversial history (i.e., opposition to Garden Parkway) and the potential environmental and community impacts associated with a new alignment project. The Southern Environmental Law Center (SELC) submitted a comment letter during the first public input opportunity that ended February 6, 2021 which reiterated several concerns previously submitted for the Garden Parkway.

The GCLMPO plans one more public comment opportunity during the feasibility study development. Additional public and stakeholder involvement would be required during the NEPA process.

4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	UNRESOLVED
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A demographic review of the project area using the NCDOT Demographic Snapshot Tool identified the presence of low income and minority populations that meet NCDOT thresholds:

- Minority
 - o CT 59.06 BG 3 (Mecklenburg County)
 - o CT 59.12 BG 1 (Mecklenburg County)
- Low-income
 - o CT 59.06 BG 3 (Mecklenburg County)
 - o CT 59.06 BG 4 (Mecklenburg County)
 - o CT 59.12 BG 1 (Mecklenburg County)

The identified block groups intersect the study corridor; however, potential direct impacts to resources within these block groups and caused by this project are unlikely (Figure 2). A small portion of CT 59.12 east of NC 160 is included because it intersects the project corridor – no direct impacts are anticipated in CT 59.12 by this proposed project. The planned River District development – which would occur with or without this proposed transportation project – is located entirely within CT 59.06 and would conceivably

alter the demographic composition of this area in western Mecklenburg County.

The proposed project alignment intersects one mobile home park (Joyes Mobile Home Park, 108 Joye Lane, Belmont, NC) and would likely result in severing current access to South Point Road (NC 273) resulting in a new access driveway to Boat Club Road. Further, the current concept would require the relocation of approximately 8 residences in the mobile home park. The South Point Road corridor is moderately developed and an avoidance alternative would result in other residential relocations. Additional analysis should be conducted.

The demographic screening also identified language assistance (LA) populations:

- CT 59.06, BG 3 (Mecklenburg County) – Spanish
- CT 59.12, BG 1 (Mecklenburg County) – Asian/Pacific

5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	YES
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YES. The project is a new alignment roadway and would involve residential displacements (see Table 1). The proposed Boulevard cross section would be approximately 200 feet wide and substantial new right of way would be required for the approximately 6.5-mile length.

6	Does the project require an Individual Section 4(f) approval?	UNRESOLVED
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The study corridor includes two Section 4(f) properties: Byrum-Croft House (NRHP-listed) and Berewick Park (Mecklenburg County Park). While impacts to Berewick Park appear unlikely, impacts to the Byrum-Croft House, located south of the proposed Catawba Crossings intersection with existing Steele Creek Road, are possible. Conceptual design includes right of way from the property's front yard. However, it also appears likely right of way requirements could be reduced through design refinements.

Further evaluation will be required with more detailed designs. Design should attempt to avoid and minimize potential impacts to Section 4(f) properties. Potential effects to the property will need to be evaluated in consultation with the appropriate federal and state regulatory resource agencies.

7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	UNRESOLVED
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At this time, potential effects to known historic resources (i.e., the NRHP-listed Byrum-Croft House) do not appear to rise to the level of effects that could not be resolved through the Section 106 process. However, further evaluation will be required with more detailed designs. Design should attempt to avoid and minimize potential impacts to eligible- and listed-NRHP properties. Potential effects to the property will need to be evaluated in consultation with the appropriate federal and state regulatory resource agencies.

Note that this does not account for the potential presence of archaeological resources.

8	Does the project result in a finding of "may affect not likely to adversely affect" for listed species, or designated critical habitat under Section 7 of the Endangered Species Act (ESA)?	UNRESOLVED
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Refer to Question #1 above. A NRTR must be prepared during project development before this question can be fully answered.

9	Is the project located in anadromous fish spawning waters?	NO
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), WaterSupply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	YES

The Catawba River and South Fork Catawba River are designated as Lake Wylie and subject to the Catawba River Buffer Rules. The Catawba Buffer Rule applies to 50 feet along Lake Wylie's shorelines in the project corridor. Beaverdam Creek in the project corridor is not considered part of Lake Wyle and is not, therefore, subject to the Catawba River Buffer Rule.

Further, Lake Wylie is 303(d) listed. As a result, Section 401 Water Quality Certification permitting would require all portions of the proposed project draining to 303(d) listed impaired watersheds be designed, constructed, and operated with sediment and erosion control measures that meet "Design Standards in Sensitive Watersheds" (15A NCAC 4B .0124). Further, all portions of the proposed project draining to 303(d) listed impaired watersheds could not discharge new stormwater directly to surface waters. Stormwater would have to be treated using appropriate best management practices (e.g., vegetated conveyances, constructed wetlands, detention ponds, etc.) prior to discharging to surface waters.

11	Does the project impact waters of the United States in any of the designated mountain trout streams?	NO
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12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	UNRESOLVED
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The project study corridor includes 12 potential jurisdictional streams (including the South Fork Catawba River, the Catawba River, and Beaverdam Creek which should be considered jurisdictional). The project study corridor also includes 6 potential jurisdictional wetlands identified in the USDA Natural Resources Conservation Service (NRCS) Soil Surveys/Hydric Soils of which 3 of the 6 are also identified as potential jurisdictional wetlands by the US Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) maps. Based on conceptual design slope stakes plus 40 feet, the Catawba Crossings Project may impact 8,000 feet of streams and 10 acres of wetlands based on available information.

Further study will be required to establish the presence and extent of jurisdictional resources in consultation with the appropriate federal and state regulatory resource agency. After establishing jurisdiction of water features the potential impacts will be evaluated and the type of Section 404 Department of the Army permit and Section 401 General Water Quality Certification appropriate for this project determined.

13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	YES
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Lake Wylie is a Duke Energy hydropower project licensed by FERC.

14	Does the project include a Section 106 of the NHPA effects determination other than a no effect, including archaeological remains?	UNRESOLVED
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Impacts to the Byrum-Croft House appear to be possible based on conceptual plans. (Refer to Question #7 above.) Design should attempt to avoid and minimize potential impacts to eligible- and listed-NRHP properties. Potential effects to the property will need to be evaluated in consultation with the appropriate federal and state regulatory resource agencies.

Note that this does not account for the potential presence of archaeological resources.

15	Does the project involve hazardous materials and/or landfills?	YES
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The project study corridor includes one suspected leaking registered underground storage tank (RUST) (35.196667, -81.045144). Additional research would be required to determine the specifics of this site and the risk it may (or may not) cause to the project.

The Duke Power Allen Steam Station and associated coal ash ponds are located south of the project corridor on the west bank of the Catawba River. The power generating station has been decommissioned. The NC Department of Environmental Quality (DEQ) -approved closure plan for the Allen Steam Station outlines how nearly all of the coal ash will be excavated and moved to three, new onsite lined landfills.¹

16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 Subpart A?	UNRESOLVED
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The three major water crossings (i.e., South Fork Catawba River, Catawba River, and Beaverdam Creek) are within a FEMA floodway. Beaverdam Creek is a Detailed Study and South Fork Catawba River and Catawba River are in Re-delineated Studies. The new structures will require a Letter of Map Revision (LOMR) and a Conditional Letter of Map Revision (CLOMR) approval from NC Floodplain Mapping Program (FMP). Additionally, Mecklenburg County identifies Community Floodplains, which show where flooding is likely to occur in the future, based on expected development upstream.

17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	NO
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18	Does the project require a U.S. Coast Guard (USCG) permit?	NO
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Lake Wylie is not regulated by the USCG.

19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	NO
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¹ "DEQ approves closure plan for Allen Steam Station under historic coal ash settlement", Oct. 29, 2020. Accessed online June 12, 2021, deq.nc.gov/news/press-releases/2020/10/29/deq-approves-closure-plan-allen-steam-station-under-historic-coal-ash

20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	NO
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21	Does the project impact federal lands (e.g. U.S. Forest Service [USFS], USFWS, etc.) or Tribal Lands?	NO
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22	Does the project involve any changes in access control?	NO
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Catawba Crossings is a new alignment boulevard project with proposed at-grade intersections with existing roads.

23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	NO
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The project is expected to benefit the local and regional traffic network. The existing residential and business development in the project area have access to the existing north-south corridors (e.g., S, New Hope Road [NC 279], South Point Road [NC 273], I-485) which force westbound and eastbound traffic to share a few east-west corridors in the area (e.g., I-85, Wilkinson Boulevard [US 29-74], Highway 49). The proposed project will include at-grade intersections with the existing north-south corridors and provide an alternate east-west route that would reduce congestion on existing east-west corridors and reduce travel distance and travel time for travelers in the study area. As a result, the proposed project is expected to improve connectivity and access to community resources and improve community cohesiveness.

24	Will maintenance of traffic cause substantial disruption?	NO
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Catawba Crossings is a new alignment project. It is expected that the project would utilize on-site temporary detours as needed on at-grade intersections with the new alignment.

25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	YES
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The proposed project is not included in the NCDOT STIP.

26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	NO
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The project study area intersects a portion of a NC Division of Environmental Quality (DEQ) stream mitigation bank associated with Beaverdam Creek in Mecklenburg County (Permit No. IMS_ID: 92217). The mitigation bank is contained fully within the Mecklenburg County Berewick Park. Based on conceptual designs, direct impacts to the site appear unlikely and avoidable.

27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	NO
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Based on a cursory review, the proposed project does not appear to involve FEMA buyout properties.

28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	UNRESOLVED
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As discussed in Question #6 above, the study corridor includes two Section 4(f) properties: Byrum-Croft House (NRHP-listed) and Berewick Park (Mecklenburg County Park). Impacts to Berewick Park are unlikely. Further evaluation and design details will be needed to determine whether the proposed project would use a portion of the Byrum-Croft House property. More detailed designs will facilitate consultation between the FHWA and the owner with jurisdiction (OWJ) – the State Historic Preservation Office (SHPO) in the case of NRHP-listed property.

29	Is the project considered a Type I under the NCDOT's Noise Policy?	YES
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If the project is federally funded, it would be classified as a Type I Noise project. If the proposed project is state-funded, additional coordination would be required to determine whether the proposed project would be evaluated for potential noise impacts by NCDOT.

30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	YES
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The project study area includes prime farmland and farmland of statewide importance. However, the Farmland Conversion Impact Rating assessment for the Garden Parkway Final Environmental Impact Statement (FEIS) indicated that impacts from that project – which had a larger footprint – would not meet the USDA thresholds for concern. This would seem to suggest the Catawba Crossings would likewise not result in an adverse effect to farmland. However, this assessment should be updated during any NEPA review of this project.

31	Are there other issues that may affect project decisions?	UNRESOLVED
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Multiple planned developments and potential future developments that intersect the Catawba Crossings corridor may affect project decisions in the future. The Overlook at Riverside (Town of Cramerton) and River District (City of Charlotte) are large planned multi-use developments that intersect, or bound, the proposed project; other residential and multi-use developments are expected. Local jurisdictions are aware of this proposed transportation project and are making decisions with that knowledge. Additionally, there is the potential that the Charlotte Douglas International Airport (CLT) runway extension, expansion of the intermodal yard, and planned future development south of CLT may affect project decisions, particularly east of I-485. While these factors are “known” they contribute to a dynamic environment surrounding the proposed project that will require close coordination at the local level.

32	Is a project-level analysis for direct, indirect, or cumulative effects required based on the NCDOT community studies screening tool?	UNRESOLVED
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Based on a review of the NCDOT Direct and Indirect Screening Tool (DIST), a project-level analysis for direct, indirect, or cumulative effects appears to be appropriate. The proposed project is expected to result in travel time savings of more than one minute; permanently add new connections to the existing road network; and provide new or expanded access to properties. Further, there is the potential that the

proposed project may encourage the development of activity centers with moderate to high intensity land development or redevelopment. This question should be further evaluated during project development.

33	Is a project level air quality Mobile Source Air Toxics (MSAT) analysis required?	NO
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Projected traffic volumes for the proposed project are not expected to exceed 40,000 vehicles per day (vpd) in 2045 and therefore does not meet the threshold for an MSAT analysis.

Figure 1a

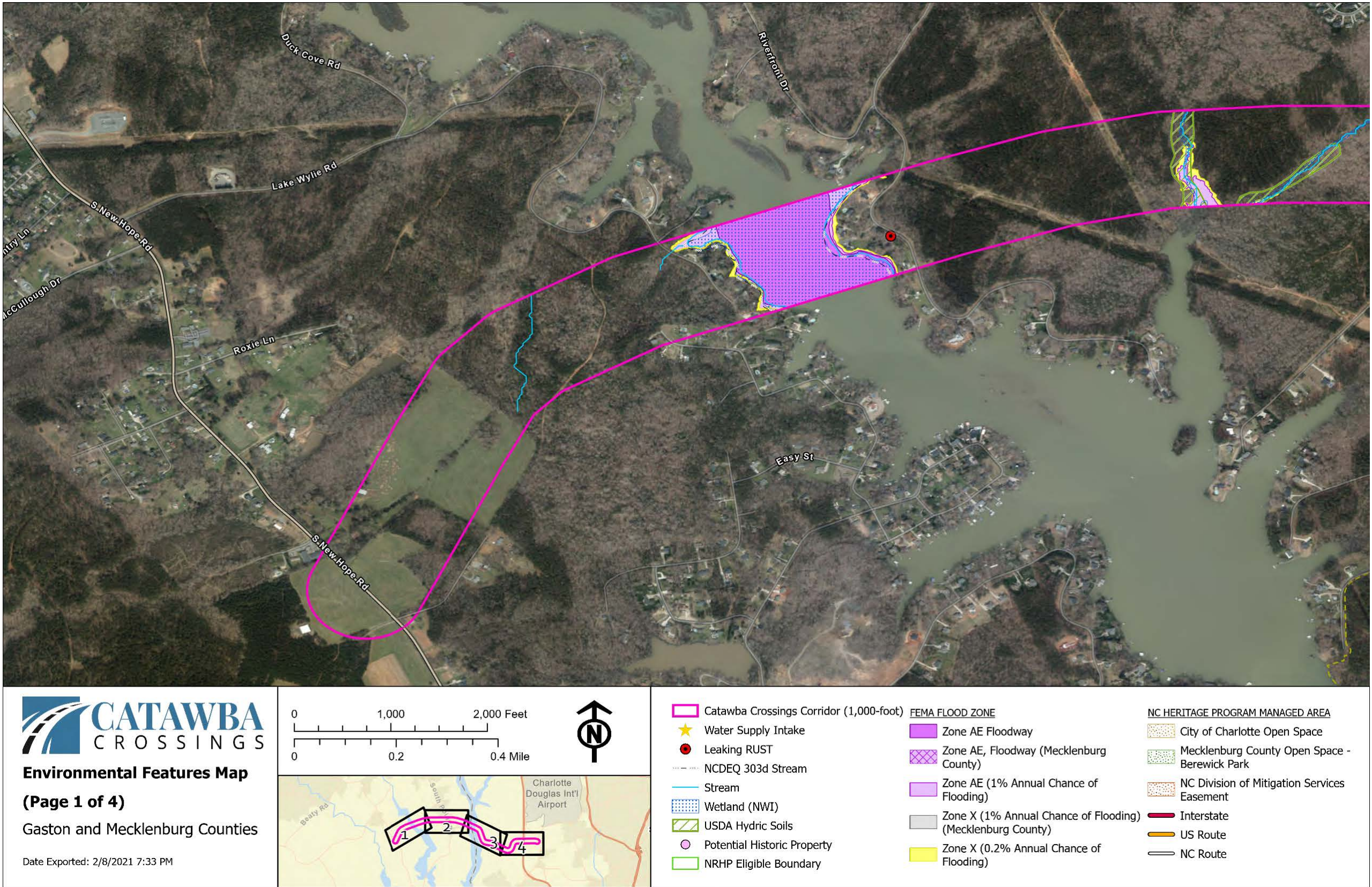


Figure 1b

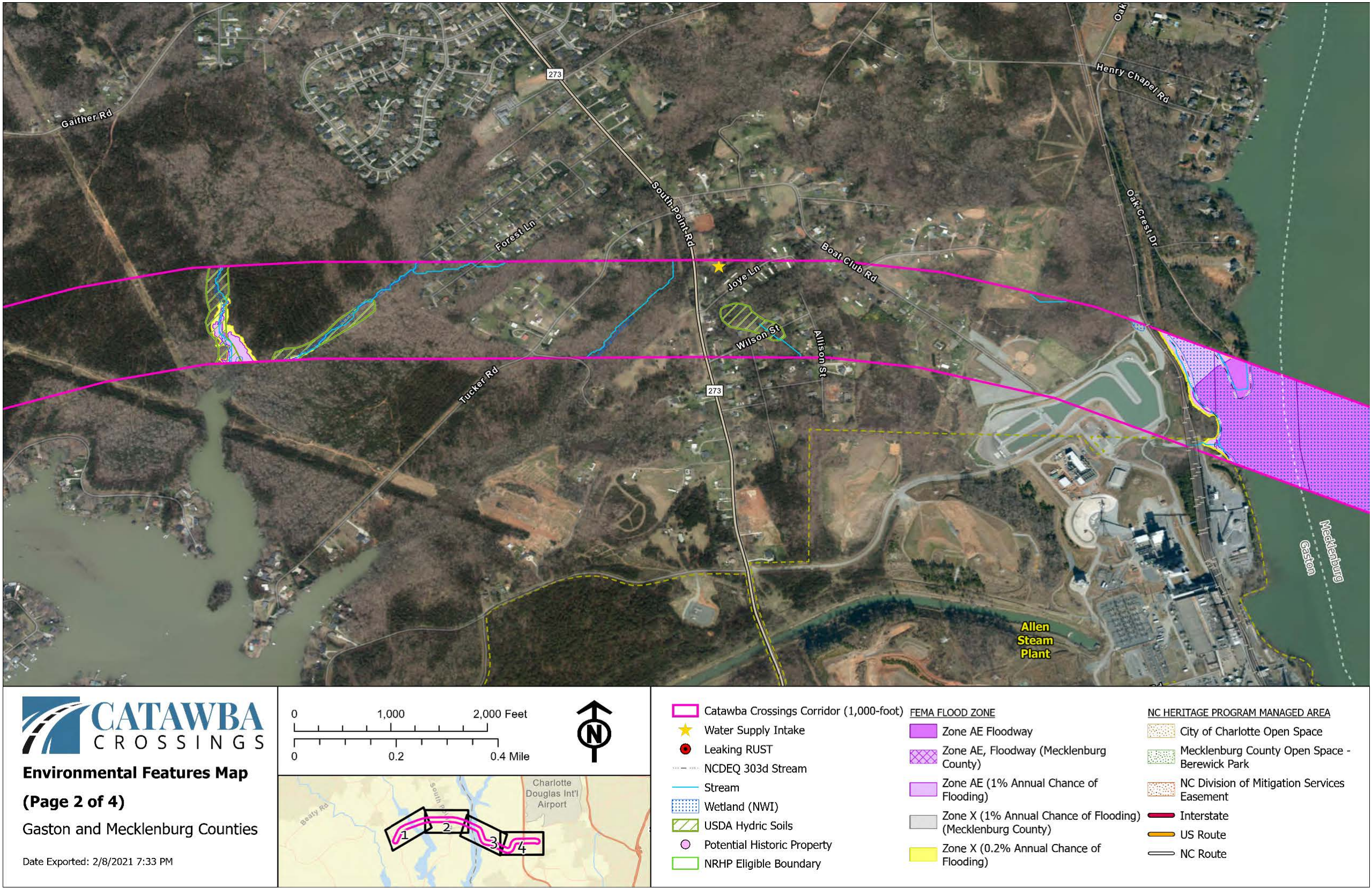


Figure 1c

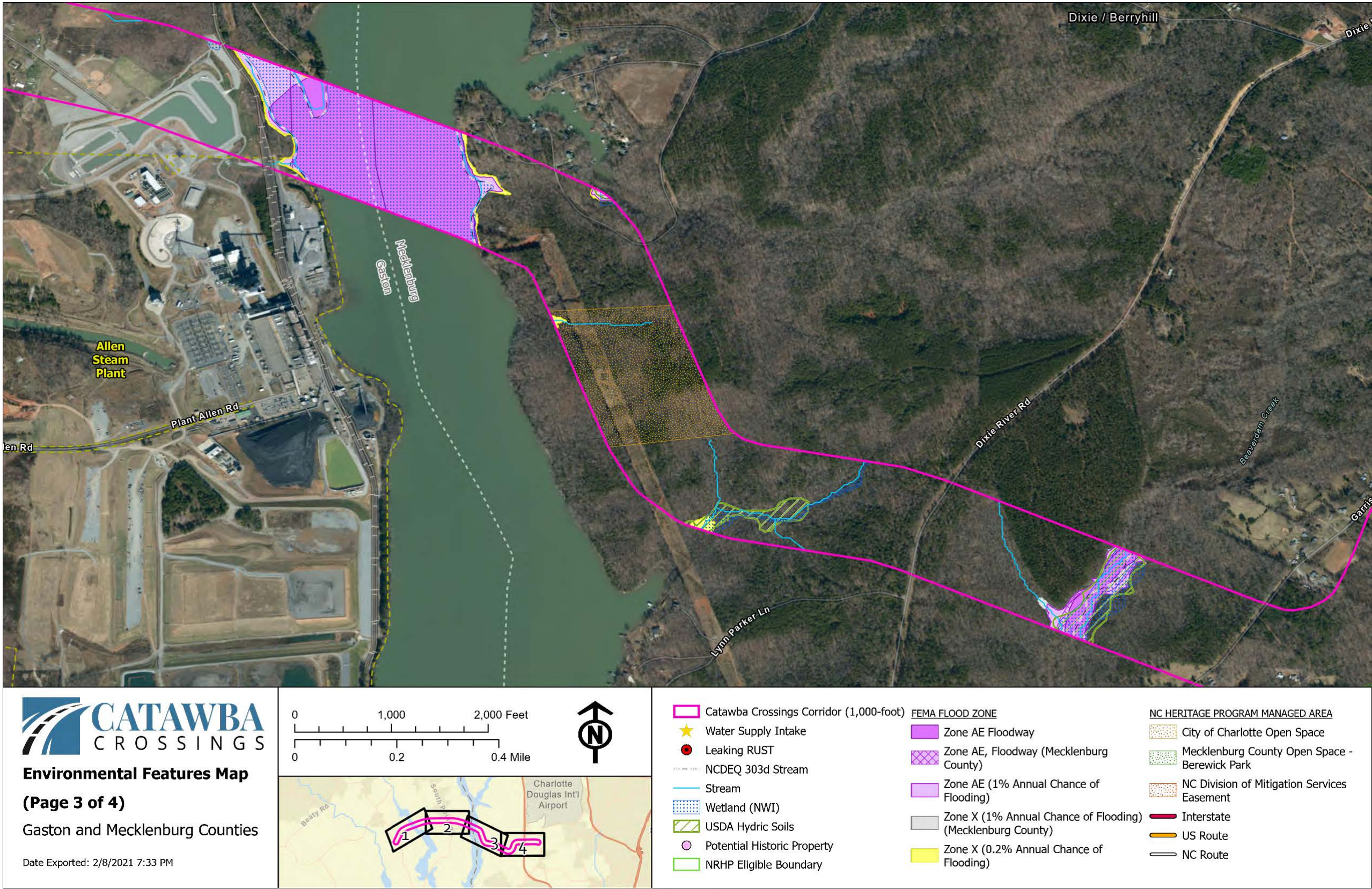


Figure 1d

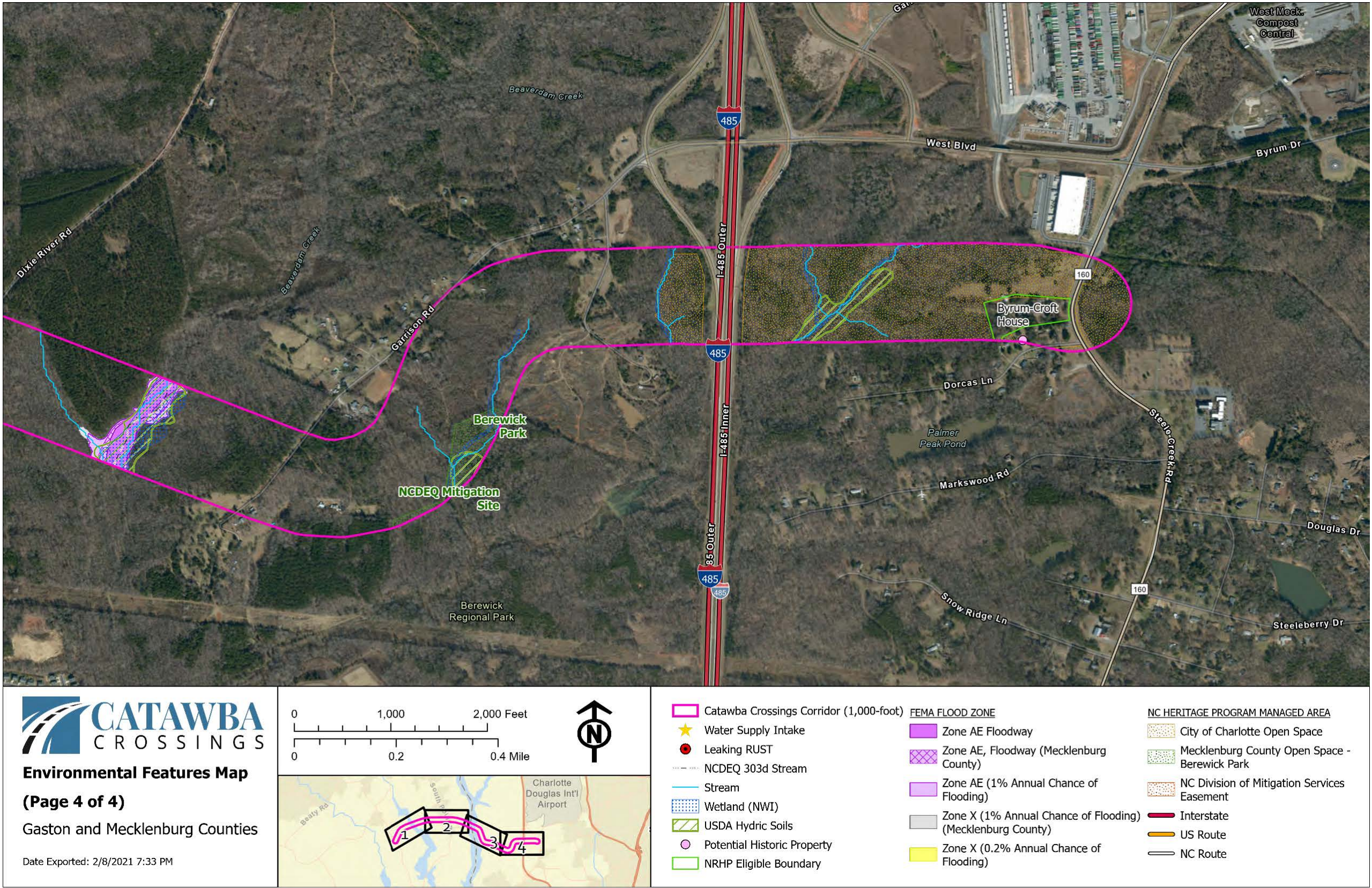


Figure 2

