DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT CORPS OF ENGINEERS
69A HAGOOD AVENUE
CHARLESTON, SC 29403-5107

04 February 2019

RECEIVED
FEB 7 2019
Environmental Management
SCDOT

Regulatory Division

South Carolina Department of Transportation
Mr. Sean Connolly
P.O. Box 191, 955 Park St.
Columbia, South Carolina 29202-0191

Dear Mr. Connolly:

This letter is in response to your request for a Preliminary Jurisdictional Determination (PJD) (SAC-2015-01080) received in our office on January 7, 2019, for a 1,482-acre site located in Richland and Lexington Counties. The site in question is shown in Figures 6-1 to 6-35 on the enclosed CD, entitled "Figures 6-1 to 6-35, "Delineated Waters of the U.S., Sheets 1-35 of 35, Carolina Crossroads" and dated November 15, 2018 prepared by Mead & Hunt for South Carolina Department of Transportation. A PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources that are presumed to be waters of the United States on the site pursuant to Section 404 of the Clean Water Act (CWA) (33 USC § 1344).

Based on a review of aerial photography, topographic maps, National Wetlands Inventory maps, soil survey information, and Wetland Determination Data Forms, it has been concluded that the boundaries shown on the referenced figures are a reasonable approximation of the aquatic resources found within the site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. The site in question contains approximately 12.219 acres of federally defined wetlands and approximately 0.739 acre and 27,922 linear feet of other aquatic resources that are presumed to be waters of the United States that are subject to regulatory jurisdiction under Section 404 of the CWA.

You are cautioned that the boundaries of the delineated wetlands and/or other aquatic resources that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers shown on the enclosed depiction are approximate and subject to change. **Also, please be aware, that due to revisions to the project area, this PJD supersedes the former PJDs the Corps provided for the Carolina Crossroads project dated June 27, 2018 and March 9, 2016.**

By providing this PJD, the Corps of Engineers is making no legally binding determination of any type regarding whether jurisdiction exists over the particular aquatic resource(s) in question. In this regard, this PJD is not a definitive determination of the presence or absence of areas within the Corps of Engineers' jurisdiction, and, therefore, it does not have an expiration date. A PJD is "preliminary" in the sense that a recipient of a PJD can later request and obtain an Approved Jurisdictional Determination (AJD) for a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, including the identification of the geographic limits of the jurisdictional aquatic resources. In order for a definitive determination of jurisdiction to be provided, you must submit a request for an AJD.

You should be aware that a permit from this office may be required for certain activities in the areas identified as wetlands and/or other aquatic resources that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. A PJD may be used as the basis of a permit decision; however, for purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a PJD will treat all aquatic resources that would be affected in any way by the permitted activity on the site as jurisdictional. If you intend to request an AJD in the future, you are advised not to commence work in these wetlands and/or other aquatic resources that are presumed to be jurisdictional prior to receiving the AJD. Enclosed is a Preliminary Jurisdictional Determination Form describing the areas in question and clarifying the option to request an AJD.

Please note that this is a PJD, and as such is not an appealable action under the Corps of Engineers' administrative appeal procedures defined at 33 CFR 331. If a permit application is forthcoming as a result of this PJD, a copy of this letter and attached figures should be submitted as part of the application. Otherwise, a delay could occur in confirming that a PJD was performed for the proposed project area.

It should also be noted that some or all of these areas may be regulated by other state or local government entities. Specifically, you are encouraged to contact the South Carolina Department of Health and Environmental Control to determine the limits of their jurisdiction.

This PJD has been conducted for the purpose of identifying the approximate location(s) of aquatic resources that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers on the particular site identified in this request. This PJD may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Enclosed is a copy of the Preliminary Jurisdictional Determination Form signed by our office. Please sign, retain a copy for your records, and return a signed copy to this office within 30 days of receipt of this letter.

In all future correspondence concerning this matter, please refer to file number SAC-2015-01080. A copy of this letter is being forwarded to certain State and/or Federal agencies for their information. If you have any questions concerning this matter, please contact Stephen A. Brumagin, Project Manager, at (803) 253-3445.

Sincerely,

Amanda L. Heath
Chief, Special Projects

Enclosures:
Preliminary Jurisdictional Determination Form
Notification of Appeal Options
Self-addressed envelope
CD containing: Figures 6-1 to 6-35, entitled "Delineated Waters of the U.S., Sheets 1-35 of 35, Carolina Crossroads", dated 11/15/2018

Copies Furnished:

Ms. Siobhan Gordon (Electronic copy, w/o enclosures)
SC Department of Transportation
GordonSO@scdot.org

Mr. Matt DeWitt, PWS (Electronic copy, w/o enclosures)
Mead & Hunt
Matt.DeWitt@MeadHunt.com

South Carolina Department of
Health and Environmental Control (Electronic copy, w/o enclosures)
Bureau of Water
WQCWetlands@dhec.sc.gov

Memo

Date: Friday, November 30, 2018

Project: Carolina Crossroads I-20/26/126 Corridor Project

To: Siobhan Gordon, Permits Manager, Midlands

From: Matt DeWitt, Mead & Hunt

Subject: Jurisdictional Determination Revisions

Jurisdictional Determination Revisions

A preliminary jurisdictional determination (PJD) request package was prepared for the Carolina Crossroads (I-20/I-26/I-126) project in August 2015 and was subsequently verified by the US Army Corps of Engineers (USACE) and issued SAC 2015-1080-DS. As the project has developed, revisions to the project study area were necessary to encompass all areas of potential impact. A revised PJD request package was prepared in January 2018 to detail the changes to the study area and associated changes to aquatic features. These changes were field verified on May 15, 2018 and the USACE subsequently issued a superseding PJD on June 27, 2018 with the same SAC ID number.

Following these revisions, it has become necessary to again revise the project study area to include extended areas along Western Lane north of the intersection of I-26 and US 176, Harbison Road on either side of its interchange with I-26, and I-20 west side of the Saluda River. The following PJD package reflects the revisions made to the Project Study Area.

The information below provides a summary of the revisions made for all jurisdictional features within the revised Project Study Area. Please also find the enclosed Jurisdictional Determination Request form and the attached Jurisdictional Determination Project Summary (Appendix A), photographs of the additional and extended features (Appendix B), mapping depicting these revisions (Appendix C, titled “Delineated Waters of the U.S.” (Figures 6-1 through 6-35), dated November 15, 2018, and additional wetland and upland dataformes (Appendix D). Supplemental mapping, including topography, soils, NWI, 2-foot contours, and hydrologic connectivity is also included in Appendix C.

Tributary 2

- Extended 39-lf (0.006 acre) to a total of 273-lf (0.029 acre)
- See Figure 6-2
- See photos 195 and 196

Tributary 10

- Extended 100-lf (0.019 acre) to a total of 186-lf (0.028 acre)
- See Figure 6-7

Tributary 70

- A new tributary, approximately 7-lf (0.001 acre), was delineated within the revised study area
- See Figure 6-19
- See photo 201

Tributary 71

- A new tributary, approximately 191-lf (0.010 acre), was delineated within the revised study area
- See Figure 6-20
- See photos 203 and 204

Tributary 72

- A new tributary, approximately 11-lf (0.002 acre), was delineated within the revised study area
- See Figure 6-20
- See photos 205 and 206

Wetland 56

- A new wetland, approximately 0.004 acre, was delineated within the revised study area
- See Figure 6-2
- See photo 197

Wetland 57

- A new wetland, approximately 0.075 acre, was delineated within the revised study area
- See Figure 6-2
- See photo 198

Wetland 58

- A new wetland, approximately 0.043 acre, was delineated within the revised study area
- See Figure 6-7
- See photo 199

Wetland 59

- A new wetland, approximately 0.040 acre, was delineated within the revised study area
- See Figure 6-8
- See photo 200

Wetland 60

- A new wetland, approximately 0.123 acre, was delineated within the revised study area

- See Figure 6-19
- See photo 202

The changes listed above are reflected in the tables and maps attached below.

If you have any questions, or if Mead & Hunt can be of additional assistance, please feel free to contact Matt DeWitt at (803) 520-2837 or (864) 201-8446.

Sincerely,



Matt DeWitt
Environmental Scientist

Attachments:
Attachment A - Revised Jurisdictional Determination Project Summary
Attachment B – Representative Photographs of Additional and Extended Features
Attachment C – Revised Jurisdictional Determination Mapping
Attachment D – Wetland and Upland Dataforms for Additional Wetlands

CAROLINA CROSSROADS

Attachment A

Revised Jurisdictional Determination Project Summary

SCDOT U.S. Department of Transportation Federal Highway Administration

U.S. Army Corps of Engineers – Charleston District - Regulatory Division

REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD) / DELINEATION

(For Jurisdictional Status and Identifying Wetlands and Other Aquatic Resources)

I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: Carolina Crossroads (I-20/I-26/I-26 Interchange Improvements) Date: 01/26/2018
City/Township/Parish: Columbia, South Carolina County: Lexington and Richland
Latitude/Longitude: 34.108137, -81.184289; 34.001993, -81.110059; 34.048956, -81.070740 Acreage: Approx. 1,482 acres
Tax Map Sequence (TMS) #(s): Multiple
Property Address(es): I-20/I-26/I-26 Interchange and Surrounding Vicinity
[✓] Please attach a survey/plat map and vicinity map identifying location and review area for the JD/delineation. An accurate depiction of the review area must be provided (survey, tax map, or GPS coordinates). Tax maps may only be used if the site includes the entire tax map parcel.

B. Requestor of Jurisdictional Determination/Delineation *(if there are multiple property owners, please attach additional pages)*

Name: SCDOT (Attn: Siobhan Gordon)
Company Name (*if applicable*): South Carolina Department of Transportation
Address: P.O. Box 191, Columbia, SC 29202-0191
Phone: (803) 737-1337 Email: GordonSO@scdot.org
Check one: [ ] I currently own this property
[ ] I plan to purchase this property
[✓] Other, please explain * SCDOT is conducting environmental studies under eminent domain notice/easement *

C. Agent/Environmental Consultant Acting on Behalf of the Requestor *(if applicable)*:

Consultant/Agent Name: Matt DeWitt
Company Name: Mead & Hunt, Inc.
Address: 878 South Lake Drive, Lexington, SC 29072 Phone: (803) 520-2837
Email: Matt.DeWitt@MeadHunt.com

II. REASON FOR REQUEST *(check all that apply)*

[ ] I intend to construct/develop a project or perform activities on this site which would be designed to avoid all aquatic resources.

[ ] I intend to construct/develop a project or perform activities on this site which would be designed to avoid all jurisdictional aquatic resources under Corps authority.

[✓] I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps, and the Jurisdictional Determination would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.

[ ] I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps; this request is accompanied by my permit application and the jurisdictional determination is to be used in the permitting process.

[ ] I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is subject to the ebb and flow of the tide.

[ ] A Corps jurisdictional determination is required in order to obtain my local/state authorization.

[ ] I intend to contest jurisdiction over a particular aquatic resource and the request the Corps to confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.

[ ] I believe that the site may be comprised entirely of dry land.

[ ] Other:_____

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

**The SCDOT, acting under The Eminent Domain Procedure Act (South Carolina Code of Laws Title 28, Chapter 2, Article 1), has identified multiple properties which are being investigated for possible future right of way acquisition and/or easement access. The SCDOT is requesting assistance from the USACE to verify water features identified within the project study corridor having been accessed through The Eminent Domain Procedure Act (EDA).*

III. TYPE OF REQUEST:

☐ **Approved[1] Jurisdictional Determination (AJD) Only**

☑ **Preliminary[2] Jurisdictional Determination (PJD) Only**

☐ **Approved Jurisdictional Determination (AJD)** with submittal of a Pre-Construction Notification or Department of the Army permit application

☐ **Preliminary Jurisdictional Determination (PJD)** with submittal of a Pre-Construction Notification or Department of the Army permit application

☐ **Delineation of Wetlands and/or Other Aquatic Resources Only Conducted By Agent/Environmental Consultant** with submittal of a Pre-Construction Notification or Department of the Army permit application (No jurisdictional determination requested)

☐ I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property with the attached **Pre-Construction Notification or Department of the Army permit application**

☐ I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property **with an AJD or PJD**

☐ **"No Permit Required" (NPR) Letter** as I believe my proposed activity is not regulated[3]

☐ **Unclear** as to which jurisdictional determination I would like to request and require additional information to inform my decision

[1]Approved – An AJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, an AJD is used to indicate that this office has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status. AJDs are valid for 5 years.

[2]Preliminary – A PJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, a PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources on a site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. Unlike an AJD, a PJD does not represent a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, and does not have an expiration date.

[3] "No Permit Required" (NPR) Letter- A NPR letter may be provided by the Corps to notify the requestor that an activity will not require a permit (authorization) from the Corps; this letter can only be used if the proposed activity is not a regulated activity, regardless of where the activity may occur. A NPR letter cannot be used to indicate the presence or absence of wetlands and/or other aquatic resources, nor can it be used to determine their jurisdictional status.

IV. LEGAL RIGHT OF ENTRY

By signing below, I am indicating that I have the authority, or am acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant U.S. Army Corps of Engineers personnel right of entry to legally access the property(ies) subject to this request for the purposes of conducting on-site investigations (e.g., digging and refilling shallow holes) and issuing a jurisdictional determination. I acknowledge that my signature is an affirmation that I possess the requisite property rights to request a jurisdictional determination on the properties subject to this request.

See attached SCDOT Notice of Entry to Property Owners	Multiple
Mailing Address	Property Address / TMS #(s)
GordonSO@scdot.org	(803) 737-1337
Email Address	Daytime Phone Number
	Siobhan Gordan 12/07/2018
*Signature:	Printed Name and Date

Charleston Office:	Columbia Office:	Conway Office:
US Army Corps of Engineers Regulatory Division 69A Hagood Avenue Charleston, SC 29403 (ph) 843-329-8044	US Army Corps of Engineers Regulatory Office 1835 Assembly Street, Room 865 B-1 Columbia, SC 29201 (ph) 803-253-3444	US Army Corps of Engineers Regulatory Office 1949 Industrial Park Road, Room 140 Conway, SC 29526 (ph) 843-365-4239

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

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Net Amount	Tax Amount	Total Amount
$316.05	$0.00	$316.05

Payment Amt	Amount Due
$0.00	$316.05

Ad Number	Ad Size	Color
0001621023-01	1.0 X 63 Li	<NONE>

Product Information	# Inserts	Cost
Placement/Classification		
Position		
Run Dates		
Run Schedule Invoice Text		
COL- The State:Print:COL-Full Run	1	$301.05
0300 - Legals Classified		
0301-Legals & Public Notices		
3/16/2015		
NOTICE TO CITIZENS OF RICHLAND AND LEXINGTON COUNTY:		
COL-upsell.ST.com:Online:	7	$15.00
0300 - Legals Classified		
0301-Legals & Public Notices		
3/16/2015, 3/17/2015, 3/18/2015, 3/19/2015, 3/20/2015, 3/21/2015, 3/22/2015		
NOTICE TO CITIZENS OF RICHLAND AND LEXINGTON COUNTY:		

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NOTICE TO CITIZENS OF RICHLAND AND LEXINGTON COUNTY:

Pursuant to the South Carolina Eminent Domain Procedure Act, Section 28-2-70(c), Code of Laws of South Carolina, 1976, as amended, notice is hereby given that entry by personnel of the South Carolina Department of Transportation will be made in the area of the roads described below for such purposes as topographic surveys, environmental surveys, traffic data collection and for the gathering of any other data necessary for planning potential future projects within the corridor.

The project may consist of roadway improvement studies along I-126 from Elmwood Avenue to I-26, I-26 from US 378 to US 176, I-20 from the Saluda River to the Broad River, Bush River Road from I-20 to US 176, US 176 from SC 27 to SC 31, Colonial Life Boulevard from I-126 to Bush River Road, St. Andrews Road from Bush River Rd to Broad River Road, Piney Grove Road from St. Andrews Road to Broad River Road, Harbison Boulevard from St. Andrews Road to Broad River Road, and Lake Murray Boulevard from St. Andrews Road to Broad River Road in Richland and Lexington County, South Carolina.

More specific information about the project may be obtained by contacting SCDOT Midlands Regional Production Engineer Randy Young at (803) 737-1827 in Columbia, South Carolina.

Jurisdictional Determination Request Package

Carolina Crossroads

I-20/I-26/I-126 Corridor Improvements

Lexington and Richland Counties, South Carolina

Revised – November 30, 2018

Prepared for
South Carolina Department of Transportation,
and the Federal Highway Administration

Prepared by

Mead & Hunt

1 Introduction

HDR, in cooperation with Mead & Hunt, STV, and other subconsultants (the Project Team) has been contracted by the South Carolina Department of Transportation (SCDOT) to provide environmental services necessary for the preparation of an Environmental Impact Statement (EIS), right of way plans, and final construction plans for roadways and bridges for improvements to the I-20/26/126 corridor in Richland and Lexington Counties.

The proposed project is a transportation corridor improvement located in Richland and Lexington Counties. To date, the project study area (PSA) has been defined as a mainline corridor including I-20 between US 378 and the Broad River, I-26 from US 378 to north of Broad River Road, and I-126 from Stone Ridge Drive to I-26. Furthermore, the PSA extends approximately 100-150 feet beyond the existing SCDOT right-of-way limits within the mainline corridor; please see **Attachment C, Figure 1** for a Site Location Map.

This document serves to summarize the findings of Delineated Waters of the U.S. within the approximate 1,482 acres PSA.

2 Reference Material

Prior to conducting fieldwork, Mead & Hunt reviewed reference material including:

- U.S. Geological Survey (USGS) 7.5 minute topographic quadrangles; Irmo, South Carolina (1990) and Columbia North, South Carolina (1990).
- USGS National Hydrography Dataset (NHD) Geodatabase; Subregion 0305.
- U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database; South Carolina, Statewide (2015).
- USDA-NRCS National List of Hydric Soils Database; South Carolina. (Accessed November 2018).
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Seamless Wetlands Data for South Carolina (Last Updated October 1, 2017).
- USDA National Agriculture Imagery Program (NAIP) Aerial Photography; Lexington County, South Carolina (2015) and Richland County (2015).
- USGS High Resolution Orthoimagery; Columbia, South Carolina (2014).

3 Topography

The PSA spans extends across two USGS 7.5-minute topographic quadrangle maps, including Irmo in the northwest portion of the project, and Columbia North in the southern and eastern portions of the PSA. According to these USGS maps, the PSA is primarily comprised of developed land with some hills and linear ridges. Elevation within the PSA ranges from approximately 160 to 350 feet above mean sea level (MSL). The highest elevations within the PSA are located in the vicinity of the US 176 (Broad River Road) interchange with I-26 (Exit 101). The lowest elevations within the PSA are located in the eastern extent of the project, within the floodplain of the Broad River. Twenty-six (26) blue-line streams are depicted on USGS mapping within the PSA, including five (5) named waters and twenty-one (21) unnamed tributaries. Named waters include the Broad River, the Saluda River,

Stoop Creek, Moccasin Branch, and Senn Branch; please see **Attachment C, Figures 2-1 through 2-35** for USGS Topography Maps.

4 Soil Map Units

According to the NRCS SSURGO data, forty-nine (49) soil map units (SMUs) are mapped within the PSA. Of these, three (3) SMUs are classified as hydric, one (1) SMU is classified as predominantly hydric, and eight (8) SMUs are classified as predominantly nonhydric. The remaining thirty-nine (39) SMUs are classified as nonhydic. In total, SMUs with a hydric component comprise approximately seven (7) percent of the PSA; please see **Attachment C, Figures 3-1 through 3-35** for NRCS Soil Map Unit Maps.

5 National Wetland Inventory

The USFWS National Wetland Inventory (NWI) classification system identifies 44 wetland communities within the PSA. These communities are defined as 30 Riverine systems (R2UBH, R4SBC, and R5UBH), one (1) lake (L1UBHh), eight (8) freshwater ponds (PAB4Kx, PUBHh, PUBHx, and PUSCx), one (1) freshwater emergent wetland (PEM1Fx), and four (4) freshwater forested/shrub wetlands (PFO1A, PFO1C, and PSS1A); please see **Attachment C, Figures 4-1 through 4-35** for National Wetland Inventory Maps.

6 Light Detection and Ranging (LiDAR)

Two foot contour data, derived from SCDNR Light Detection and Ranging (LiDAR) data, identified significant crenulations throughout the PSA. These areas were evaluated for evidence of flow, an ordinary high water mark, and other characteristics of Waters of the U.S.; please see **Attachment C, Figures 5-1 through 5-35** for Two Foot Contour Maps.

7 Fieldwork Methodology

Mead & Hunt Environmental Scientist and Professional Wetland Scientist (P.W.S.) Matt DeWitt led field reviews of the PSA for the presence of wetlands and other waters of the U.S. between April 16, 2015 and November 18, 2015. Field reviews of the additional study area was conducted between July 25, 2017, September 20, 2017, and November 15 and 16, 2018. Wetlands were determined using the Routine On-Site Determination Method as defined in the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the appropriate Regional Supplement to the Manual. The majority of the PSA is located within the Eastern Mountains and Piedmont Region, and the southern extent of the project, in the vicinity of the US 378 (Sunset Boulevard) interchange with I-26 (Exit 110), is located within the Atlantic and Gulf Coastal Plain Region. The boundaries of delineated waters within the PSA were flagged (delineated) in the field at the time of field reviews. Wetlands were delineated with pink flagging tape, pre-printed with the words “Wetland Delineation” in black letters. Tributaries were delineated with a combination of the pink pre-printed “Wetland Delineation” flagging tape and solid blue flagging to differentiate the feature as a tributary. Furthermore, delineated waters were subsequently located using a handheld Trimble GeoXH Global Positioning System (GPS) unit capable of sub-meter accuracy; please see **Attachment C, Figures 6-1 through 6-35** for Delineated Waters of the U.S. Maps.

8 Surface Hydrology

Surface hydrology within the PSA drains to multiple receiving waterbodies, including the Broad River, the Saluda River, Kinley Creek, Stoop Creek, Double Branch, Moccasin Branch, and Senn Branch. **Attachment C, Figures 7-1 through 7-35** include the flow direction of surface hydrology within the PSA.

9 Delineation Findings

Field reviews of the PSA identified sixty (60) freshwater wetlands, totaling 12.219 acres; seventy-two (72) tributaries, totaling 27,922 linear feet (lf) and 24.381 acres; and five (5) ponds/other waters, totaling 0.739 acre.

Wetland and associated upland data forms as well as representative photographs of delineated features are also included in Attachments B and D, respectively. **Attachment C, Figures 7-1 through 7-35** also include the location of the data forms provided and the location of photographs provided and their direction of view.

Coordinates of delineated features identified within the PSA are provided in Tables 1 through 3 below.

TABLE 1
FRESHWATER WETLANDS IDENTIFIED IN THE PROJECT STUDY AREA

Feature	Figure	Latitude	Longitude	Acreage
Freshwater Wetland 1	6-3	34.096320 N	-81.173066 E	0.045
Freshwater Wetland 2	6-4	34.090909 N	-81.171742 E	0.061
Freshwater Wetland 3	6-4	34.092820 N	-81.166090 E	0.014
Freshwater Wetland 4	6-9	34.074010 N	-81.148074 E	0.020
Freshwater Wetland 5	6-10	34.071566 N	-81.145617 E	0.092
Freshwater Wetland 6	6-11	34.065804 N	-81.139786 E	0.051
Freshwater Wetland 7	6-12	34.059946 N	-81.135280 E	0.134
Freshwater Wetland 8	6-13	34.055801 N	-81.130720 E	0.330
Freshwater Wetland 9	6-18	34.027409 N	-81.127256 E	0.358
Freshwater Wetland 10	6-18	34.027467 N	-81.126949 E	0.040
Freshwater Wetland 11	6-18	34.026924 N	-81.126008 E	0.800
Freshwater Wetland 12	6-18	34.026580 N	-81.127972 E	0.057
Freshwater Wetland 13	6-22	34.038591 N	-81.104649 E	0.066
Freshwater Wetland 14	6-22	34.034778 N	-81.113052 E	0.024
Freshwater Wetland 15	6-23	34.038813 N	-81.103902 E	0.091

Feature	Figure	Latitude	Longitude	Acreage
Freshwater Wetland 16	6-26	34.046865 N	-81.077540 E	0.041
Freshwater Wetland 17	6-26	34.047259 N	-81.076495 E	0.393
Freshwater Wetland 18	6-26	34.047161 N	-81.076129 E	0.251
Freshwater Wetland 19	6-26	34.047740 N	-81.075625 E	0.015
Freshwater Wetland 20	6-27	34.028767 N	-81.104110 E	0.046
Freshwater Wetland 21	6-28	34.026707 N	-81.103230 E	0.189
Freshwater Wetland 22	6-28	34.025802 N	-81.103096 E	0.579
Freshwater Wetland 23	6-28	34.025377 N	-81.101580 E	2.483
Freshwater Wetland 24	6-28	34.025711 N	-81.101606 E	0.148
Freshwater Wetland 25	6-28	34.025366 N	-81.100592 E	1.537
Freshwater Wetland 26	6-28	34.025225 N	-81.099811 E	0.200
Freshwater Wetland 27	6-28 & 6-29	34.024399 N	-81.098791 E	0.470
Freshwater Wetland 28	6-28	34.025523 N	-81.098240 E	0.181
Freshwater Wetland 29	6-29	34.021882 N	-81.096388 E	0.039
Freshwater Wetland 30	6-29	34.019935 N	-81.094701 E	0.311
Freshwater Wetland 31	6-29 & 6-30	34.019481 N	-81.093825 E	0.106
Freshwater Wetland 32	6-32	34.022004 N	-81.105387 E	0.166
Freshwater Wetland 33	6-32	34.021233 N	-81.105484 E	0.085
Freshwater Wetland 34	6-32	34.020842 N	-81.104509 E	0.026
Freshwater Wetland 35	6-33	34.016895 N	-81.107349 E	0.470
Freshwater Wetland 36	6-33	34.015562 N	-81.108226 E	0.168
Freshwater Wetland 37	6-33	34.015337 N	-81.108604 E	0.022
Freshwater Wetland 38	6-33	34.014804 N	-81.108667 E	0.474
Freshwater Wetland 39	6-2	34.100229 N	-81.179335 E	0.020
Freshwater Wetland 40	6-3	34.097296 N	-81.175482 E	0.240
Freshwater Wetland 41	6-4	34.091060 N	-81.170956 E	0.011
Freshwater Wetland 42	6-5	34.088072 N	-81.161944 E	0.262

Feature	Figure	Latitude	Longitude	Acreage
Freshwater Wetland 43	6-6	34.08779 N	-81.159624 E	0.034
Freshwater Wetland 44	6-7	34.079769 N	-81.151557 E	0.040
Freshwater Wetland 45	6-9	34.074020 N	-81.147876 E	0.018
Freshwater Wetland 46	6-10 & 6-11	34.065964 N	-81.142298 E	0.051
Freshwater Wetland 47	6-12	34.060400 N	-81.134089 E	0.070
Freshwater Wetland 48	6-19	34.021016 N	-81.132632 E	0.029
Freshwater Wetland 49	6-21	34.033208 N	-81.117964 E	0.017
Freshwater Wetland 50	6-24	34.039523 N	-81.090611 E	0.371
Freshwater Wetland 51	6-27	34.030271 N	-81.105573 E	0.017
Freshwater Wetland 52	6-29	34.023504 N	-81.098366 E	0.037
Freshwater Wetland 53	6-29	34.022652 N	-81.098024 E	0.098
Freshwater Wetland 54	6-29	34.020471 N	-81.095467 E	0.021
Freshwater Wetland 55	6-30	34.017449 N	-81.088533 E	0.015
Freshwater Wetland 56	6-2	34.102714 N	-81.177063 E	0.004
Freshwater Wetland 57	6-2	34.102227 N	-81.176955 E	0.075
Freshwater Wetland 58	6-7	34.081357 N	-81.150921 E	0.043
Freshwater Wetland 59	6-8	34.073301 N	-81.156728 E	0.040
Freshwater Wetland 60	6-19	34.020308 N	-81.135519 E	0.123
Freshwater Wetland Total		**12.219 acres**		

TABLE 2
TRIBUTARIES IDENTIFIED IN THE PROJECT STUDY AREA

Feature	Figure	Latitude	Longitude	Delineated Area	
				Linear Feet	Acre
Tributary 1	6-2	34.100805 N	-81.180096 E	11	0.001
Tributary 2	6-2	34.101448 N	-81.176719 E	273	0.029
Tributary 3	6-3	34.096040 N	-81.172771 E	440	0.046
Tributary 4	6-4	34.090660 N	-81.171458 E	160	0.019

Feature	Figure	Latitude	Longitude	Delineated Area	
				Linear Feet	Acre
Tributary 5	6-4	34.090660 N	-81.171458 E	157	0.022
Tributary 6	6-4	34.089468 N	-81.167239 E	22	0.003
Tributary 7	6-5 & 6-6	34.087991 N	-81.162715 E	970	0.130
Tributary 8	6-6	34.084707 N	-81.159478 E	571	0.070
Tributary 9	6-6	34.081844 N	-81.156363 E	188	0.014
Tributary 10	6-7	34.080574 N	-81.148647 E	186	0.028
Tributary 11	6-9	34.072878 N	-81.147494 E	1,755	0.308
Tributary 12	6-9	34.073142 N	-81.147209 E	10	0.001
Tributary 13	6-10	34.071775 N	-81.145557 E	14	0.001
Tributary 14	6-10	34.070221 N	-81.144383 E	195	0.035
Tributary 15	6-10	34.066157 N	-81.142308 E	164	0.015
Tributary 16	6-12	34.060913 N	-81.136281 E	99	0.007
Tributary 17	6-12	34.059971 N	-81.135047 E	25	0.003
Tributary 18	6-14	34.050479 N	-81.123828 E	485	0.084
Tributary 19	6-14	34.050930 N	-81.123805 E	166	0.017
Tributary 20	6-14	34.049089 N	-81.121757 E	101	0.015
Tributary 21, aka Stoop Creek	6-15 & 6-16, 6-21, & 6-22	34.044806 N	-81.117840 E	1,281	0.594
Tributary 22	6-16	34.041751 N	-81.114315 E	143	0.031
Tributary 23	6-17 & 6-21	34.033991 N	-81.119682 E	1,031	0.141
Tributary 24	6-17	34.032011 N	-81.123012 E	323	0.035
Tributary 25	6-17	34.031487 N	-81.122957 E	94	0.011
Tributary 26	6-17	34.031166 N	-81.123047 E	295	0.022
Tributary 27	6-18	34.026873 N	-81.127653 E	752	0.112
Tributary 28	6-18	34.026170 N	-81.128813 E	153	0.032
Tributary 29	6-18	34.026067 N	-81.128988 E	56	0.007
Tributary 30, aka Saluda River	6-18, 6-28, 6-29, & 6-32	34.024054 N	-81.102974 E	1,345	9.956

Feature	Figure	Latitude	Longitude	Delineated Area	
				Linear Feet	Acre
Tributary 31	6-18	34.024643 N	-81.128479 E	76	0.008
Tributary 32	6-21	34.034980 N	-81.115679 E	70	0.008
Tributary 33	6-21	34.035067 N	-81.115263 E	101	0.010
Tributary 34	6-22	34.036103 N	-81.115221 E	382	0.043
Tributary 35	6-22	34.038172 N	-81.104822 E	522	0.052
Tributary 36	6-22	34.037663 N	-81.104892 E	76	0.005
Tributary 37	6-22	34.037931 N	-81.104056 E	372	0.034
Tributary 38	6-23 & 6-24	34.039484 N	-81.096045 E	342	0.064
Tributary 39	6-25 & 6-26	34.046068 N	-81.076604 E	3,958	0.753
Tributary 40, aka Broad River	6-26	34.047922 N	-81.073314 E	531	9.247
Tributary 41	6-27	34.031886 N	-81.106480 E	517	0.107
Tributary 42	6-27	34.031900 N	-81.104388 E	874	0.071
Tributary 43	6-27, 6-28, & 6-32	34.024206 N	-81.103830 E	2,244	1.135
Tributary 44	6-28	34.025730 N	-81.100279 E	229	0.021
Tributary 45	6-28 & 6-29	34.025041 N	-81.098961 E	934	0.088
Tributary 46	6-29	34.023438 N	-81.097774 E	322	0.026
Tributary 47	6-29	34.021424 N	-81.095980 E	1,052	0.292
Tributary 48	6-29	34.021618 N	-81.096122 E	29	0.010
Tributary 49	6-29	34.019802 N	-81.094272 E	298	0.024
Tributary 50	6-32	34.021823 N	-81.104989 E	889	0.098
Tributary 51	6-32	34.022232 N	-81.105048 E	21	0.002
Tributary 52	6-32	34.021203 N	-81.105340 E	35	0.002
Tributary 53, aka Senn Branch	6-33	34.015736 N	-81.107293 E	933	0.279
Tributary 54	6-33	34.015648 N	-81.108009 E	46	0.004
Tributary 55	6-33	34.015248 N	-81.108179 E	70	0.005
Tributary 56	6-33	34.015233 N	-81.108155 E	20	0.001

Feature	Figure	Latitude	Longitude	Delineated Area	
				Linear Feet	Acre
Tributary 57	6-33	34.015505 N	-81.106705 E	187	0.027
Tributary 58	6-35	34.002236 N	-81.110428 E	16	0.001
Tributary 59	6-1	34.106267 N	-81.181634 E	77	0.006
Tributary 60	6-2	34.102672 N	-81.178750 E	195	0.030
Tributary 61	6-18 & 6-19	34.023246 N	-81.131836 E	224	0.047
Tributary 62	6-28	34.022260 N	-81.131595 E	46	0.005
Tributary 63	6-28	34.024127 N	-81.099706 E	38	0.005
Tributary 64	6-28	34.024037 N	-81.099496 E	138	0.014
Tributary 65	6-30	34.026403 N	-81.097885 E	205	0.041
Tributary 66	6-30	34.017618 N	-81.088899 E	60	0.004
Tributary 67	6-31	34.017472 N	-81.088661 E	8	0.001
Tributary 68	6-31	34.015234 N	-81.086006 E	19	0.003
Tributary 69	6-19	34.021358 N	-81.132309 E	92	0.006
Tributary 70	6-19	34.015510 N	-81.141300 E	7	0.001
Tributary 71	6-20	34.015349 N	-81.141595 E	191	0.010
Tributary 72	6-20	34.019203 N	-81.135099 E	11	0.002
Tributary Total		**27,922-lf**		**24.381 acres**	

TABLE 3
PONDS / OTHER WATERS IDENTIFIED IN THE PROJECT STUDY AREA

Feature	Figure	Latitude	Longitude	Acreage
Pond 1	6-6	34.082140 N	-81.156035 E	0.035
Pond 2	6-30	34.022466 N	-81.105255 E	0.023
NPDES-Permitted Treatment Basin	6-17	34.026997 N	-81.127944 E	0.161
Pond 3	6-1	34.104592 N	-81.181326 E	0.155
Pond 4	6-8	34.077371 N	-81.148181 E	0.365
Ponds / Waters Total		**0.739 acre**		

If you have any questions, or if Mead & Hunt can be of additional assistance, please feel free to contact Matt DeWitt at (803) 520-2837 or (864) 201-8446.

Respectfully Submitted



Matt DeWitt, P.W.S.
Environmental Scientist

Attachment B

Representative Photographs of Additional and Extended Features



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 195

Description:
View of the additional reach of Tributary 2 (north of Western Lane). The photograph was taken looking at the culvert outlet, facing southeast (upstream).



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 196

Description:
View of the additional reach of Tributary 2 (north of Western Lane). The photograph was taken from the culvert outlet, facing north (downstream).



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 197

Description:
View of Freshwater Wetland 56. The photograph was taken north of Western Lane, facing northwest.



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 198

Description:
View of Freshwater Wetland 57. The photograph was taken south of Western Lane, facing northeast.



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 199

Description:
View of Freshwater Wetland 58. The photograph was taken within the wetland northeast of Parkridge Drive, facing north.



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 200

Description:
View of Freshwater Wetland 59. The photograph was taken on the edge of the wetland south of Harbison Road, facing northeast.



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 201

Description:
View of Tributary 70. The entirety of the feature within the Project Study Area is shown in the photograph. The left portion of the photograph shows the stream origination point (headcut). The photograph was taken within a utility easement, facing northeast (across gradient).



Date:
11/16/2018

Taken By:
Conor Makepeace

Photograph 202

Description:
View of Freshwater Wetland 60. The photograph was taken from the Project Study Area boundary, facing southeast.



Date:
11/15/2018

Taken By:
Conor Makepeace

Photograph 203

Description:
View of the stream origination point (pipe) of Tributary 71. The photograph was taken north of Riverchase Way, facing south (upstream).



Date:
11/15/2018

Taken By:
Conor Makepeace

Photograph 204

Description:
View of Tributary 71. The photograph was taken from the lower reach of the tributary, facing northeast (upstream).



Date:
11/15/2018

Taken By:
Conor Makepeace

Photograph 205

View of the of Tributary 72 and the culvert under Riverchase Way. This culvert represents the stream origination point of the feature within the Project Study Area. The photograph was taken north of Riverchase Way, facing southeast (upstream).



Date:
11/15/2018

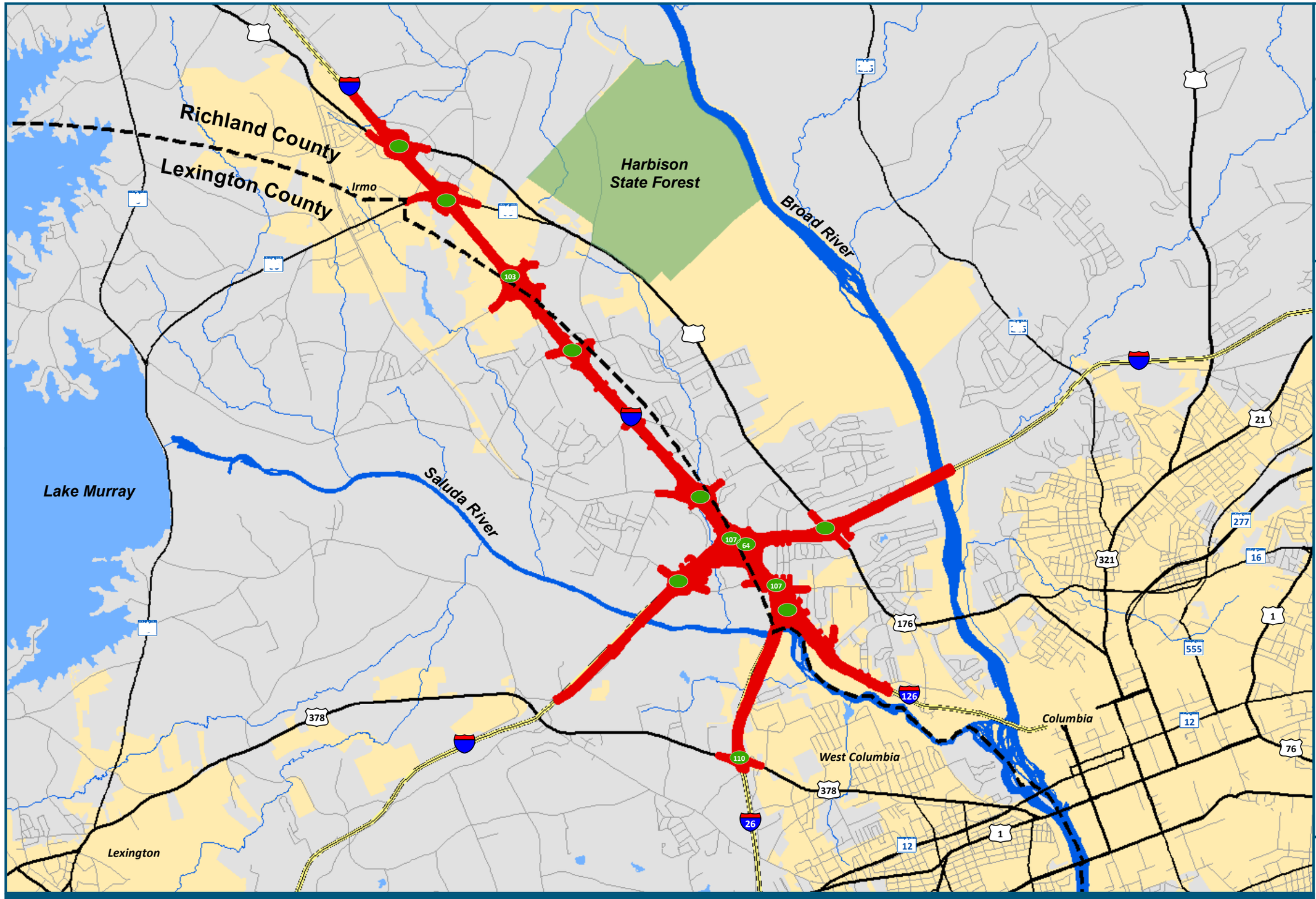
Taken By:
Conor Makepeace

Photograph 206

Description:
View of Tributary 72. The photograph was taken north of Riverchase Way, facing northwest (downstream).

Attachment C

Revised Jurisdictional Determination Mapping





0 0.5 1

Miles

1 inch = 5,280 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: TIGER Road Data, TIGER County Boundaries, and TIGER Municipality Data (2010)

Legend

- Project Study Area (1,482 acres)
- Municipality
- Lake
- Major River
- County Boundary
- 83 Exit Location/Number

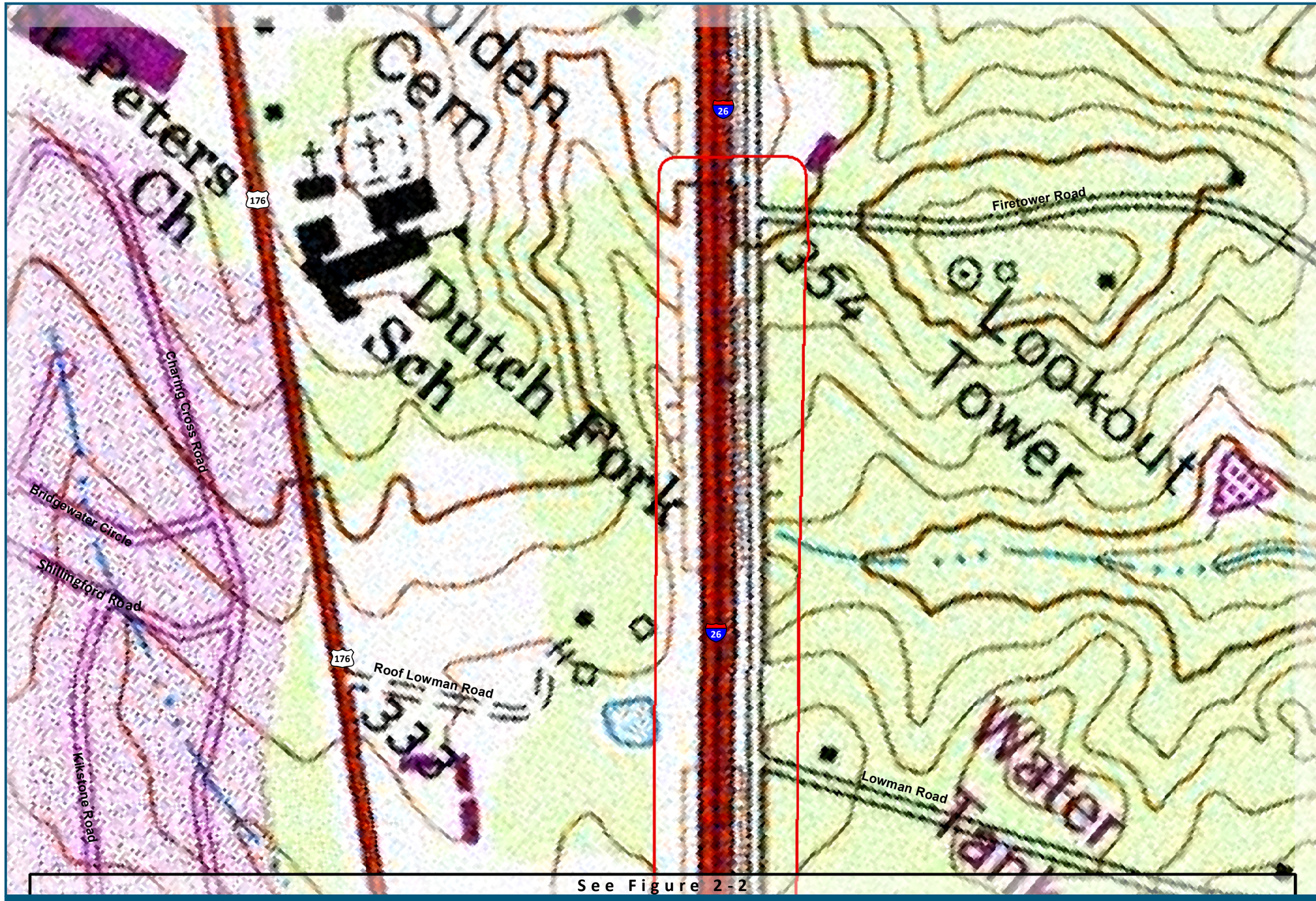
Figure 1
Site Location Map

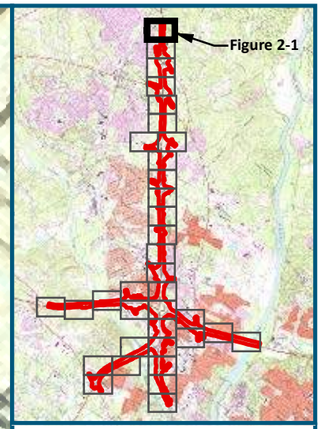
11/15/2018 Sheet 1 of 1

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-1
USGS Topography Map

11/15/2018 Sheet 1 of 35

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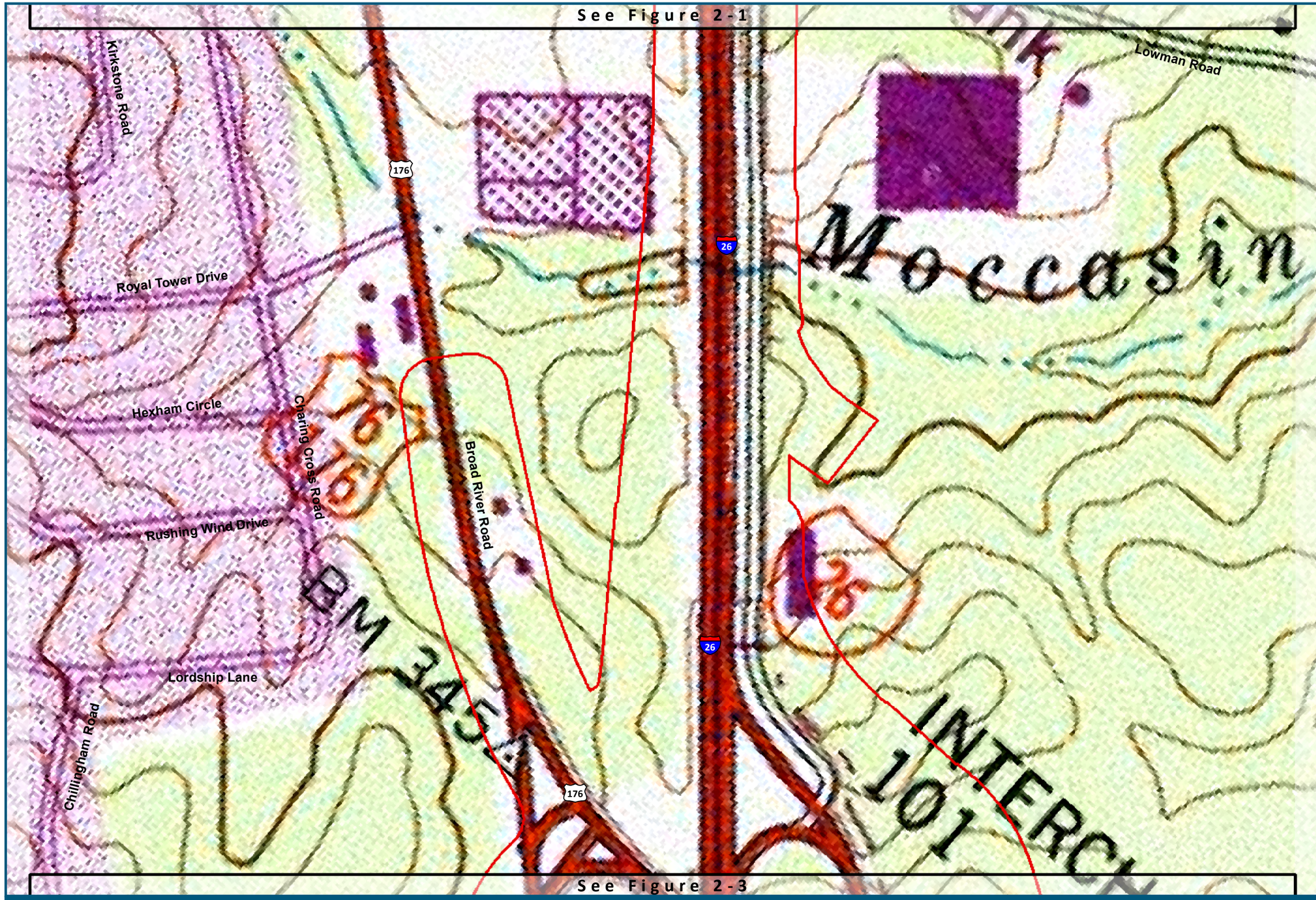
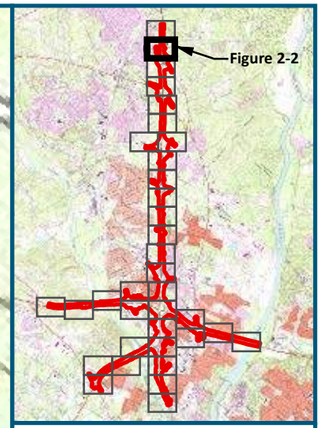
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-2
USGS Topography Map

11/15/2018 Sheet 2 of 35

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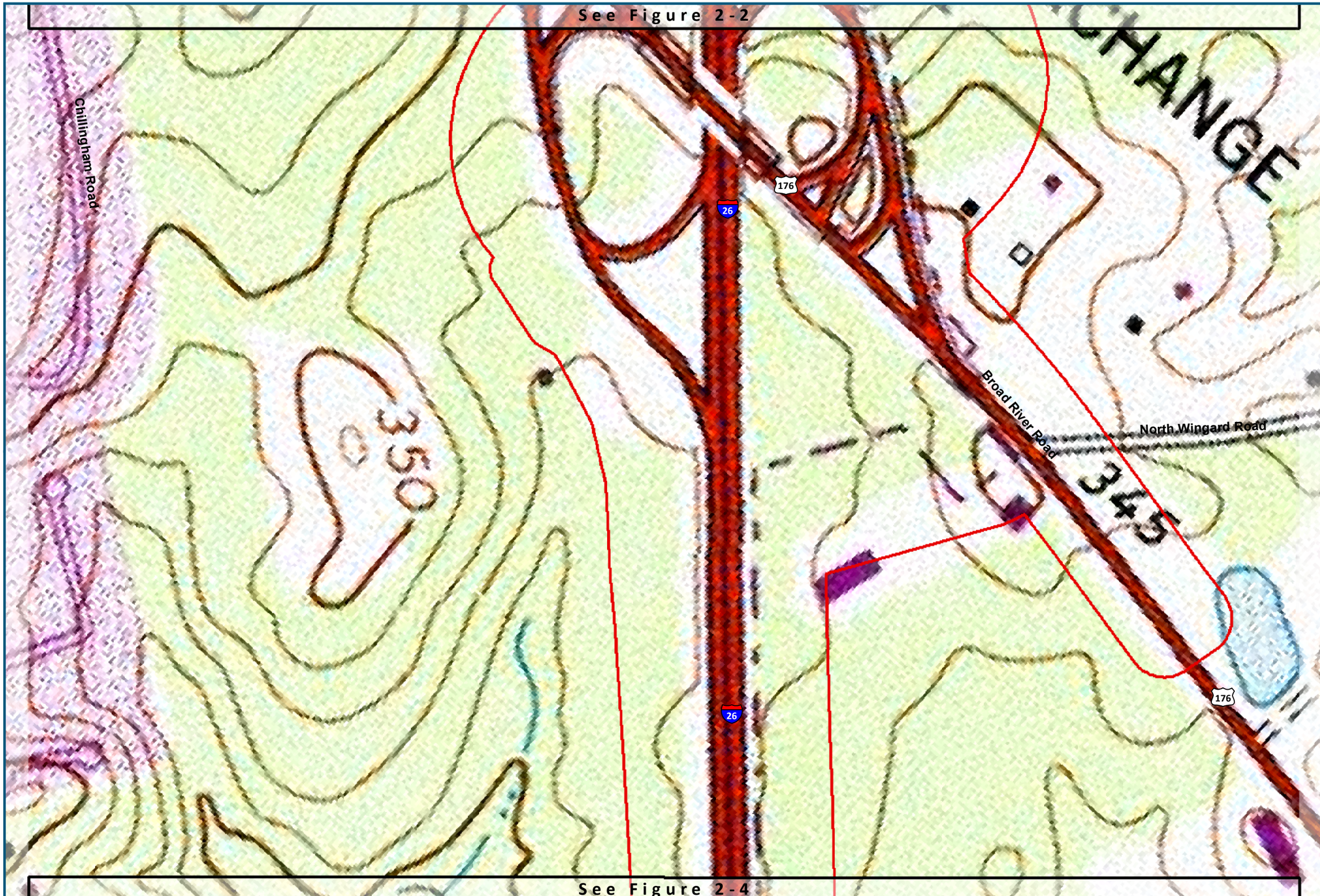
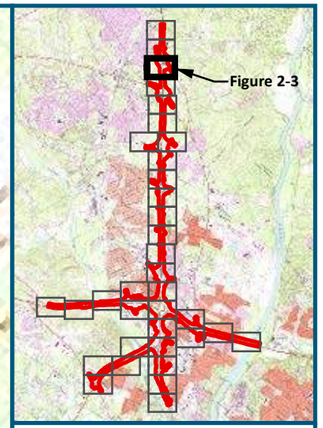
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-2



See Figure 2-4



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-3
USGS Topography Map

11/15/2018 Sheet 3 of 35

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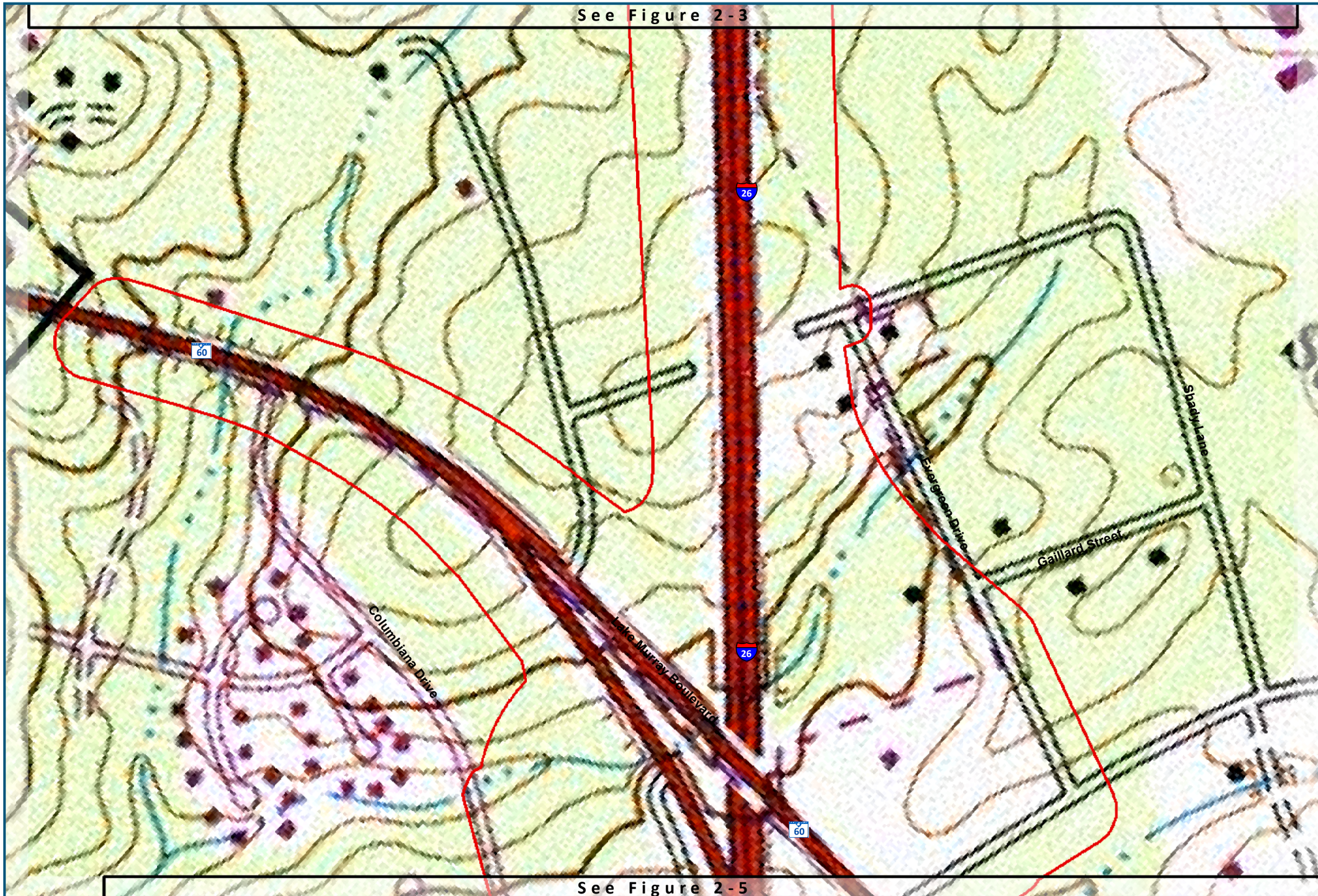
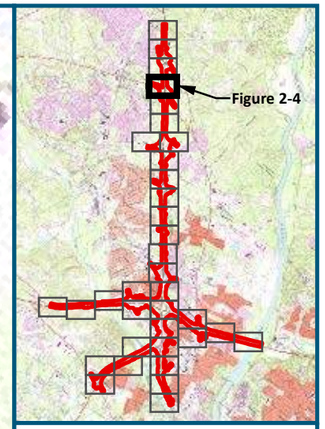
CAROLINA CROSSROADS

See Figure 2-3



See Figure 2-5



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-4
USGS Topography Map

11/15/2018 Sheet 4 of 35

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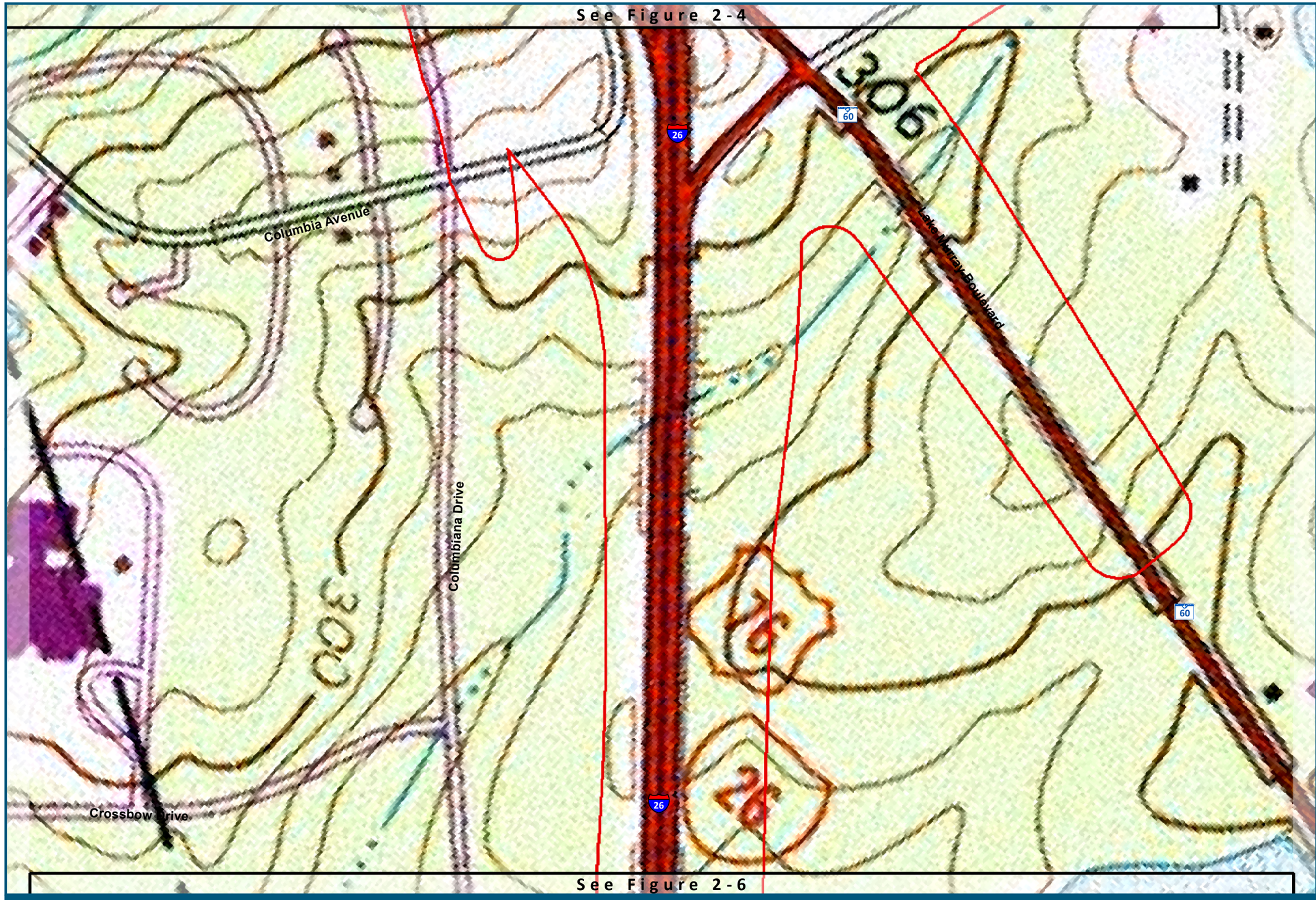
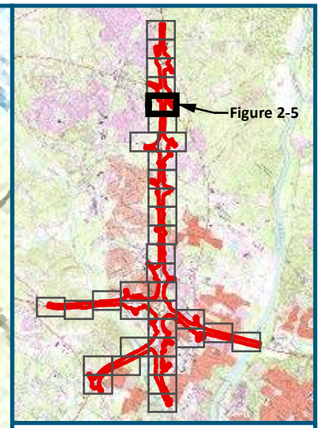
See Figure 2-4



See Figure 2-6



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-5
USGS Topography Map

11/15/2018

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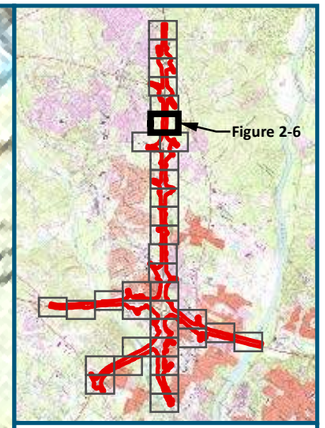
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-5



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

Figure 2-6
USGS Topography Map

11/15/2018 Sheet 6 of 35

See Figure 2-8

See Figure 2-7

SCDOT South Carolina Department of Transportation

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CAROLINA CROSSROADS

See Figure 2-6

See Figure 2-8

See Figure 2-9

LANE

Parkridge Drive

Harbison Boulevard

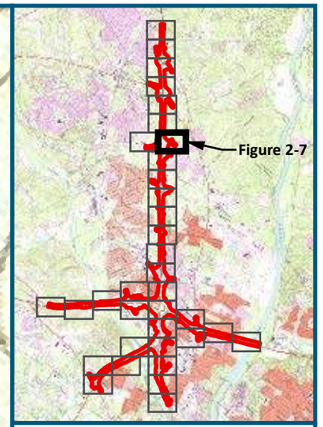
Fernandina Road

Woodcross Drive

26

26

308



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

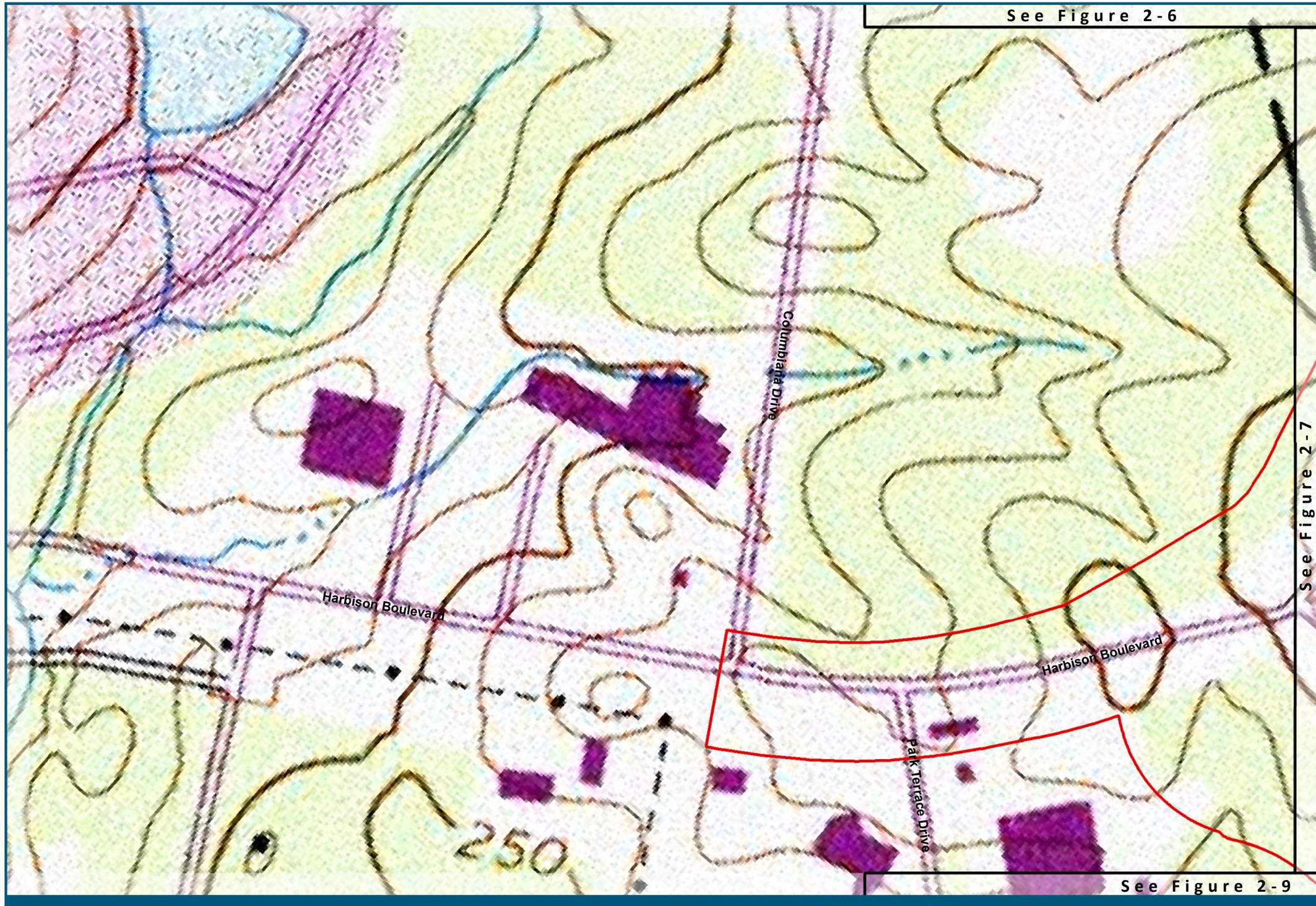
Figure 2-7
USGS Topography Map

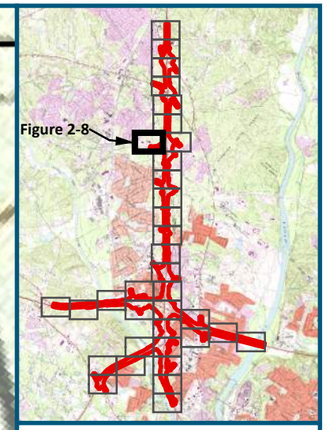
11/15/2018

SCDOT
South Carolina Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-8
USGS Topography Map

11/15/2018 Sheet 8 of 35

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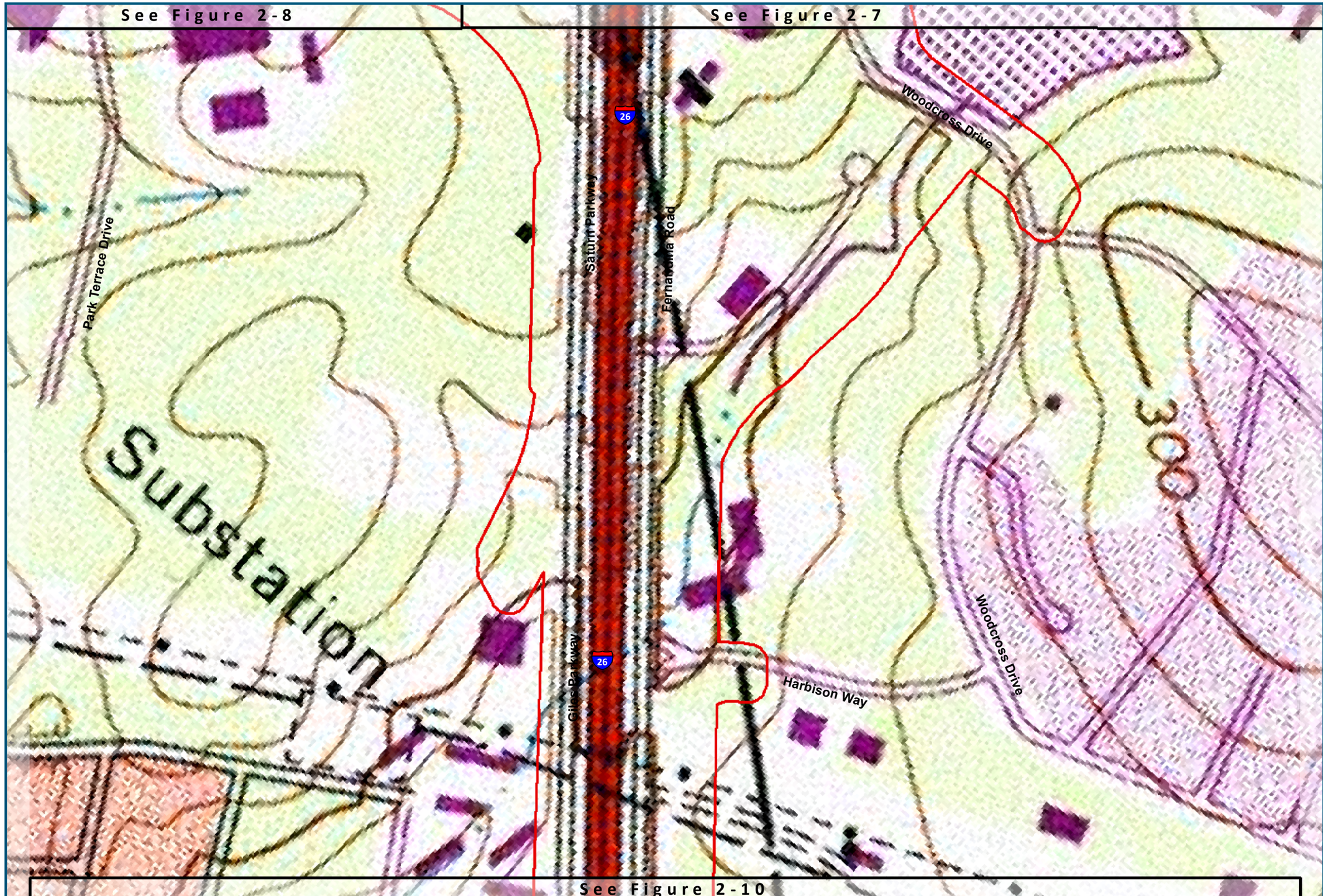
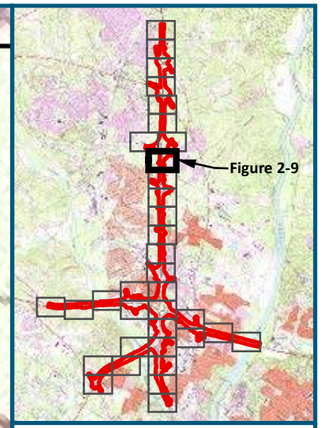
CAROLINA CROSSROADS

See Figure 2-8

See Figure 2-7



See Figure 2-10



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

Figure 2-9
USGS Topography Map

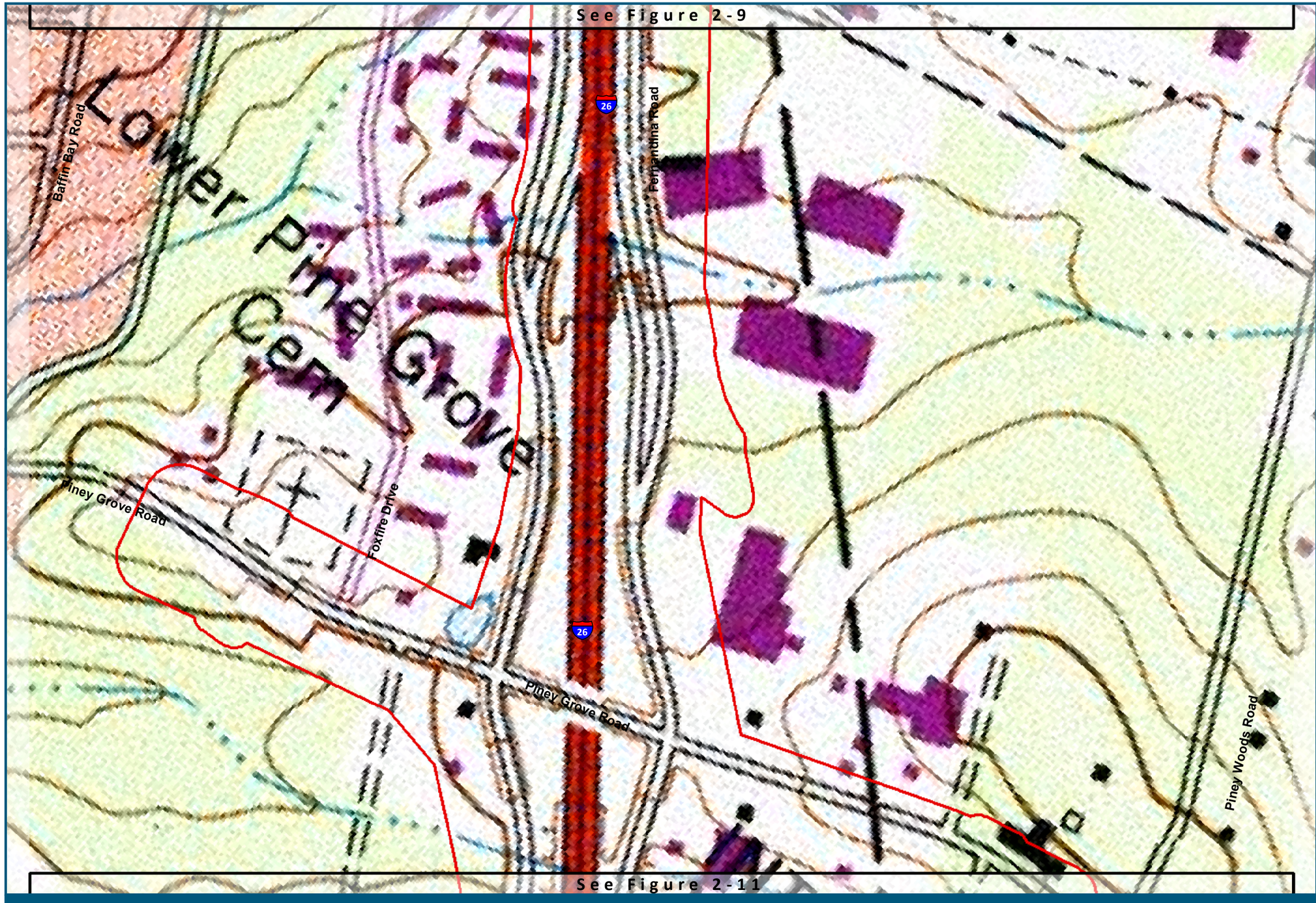
11/15/2018

SCDOT South Carolina Department of Transportation

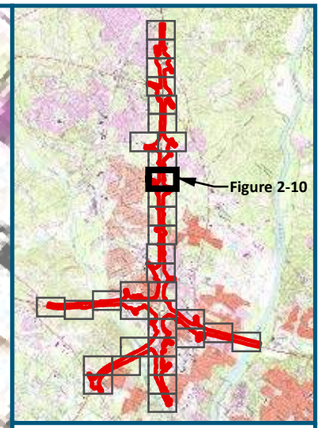
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-9



See Figure 2-11



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

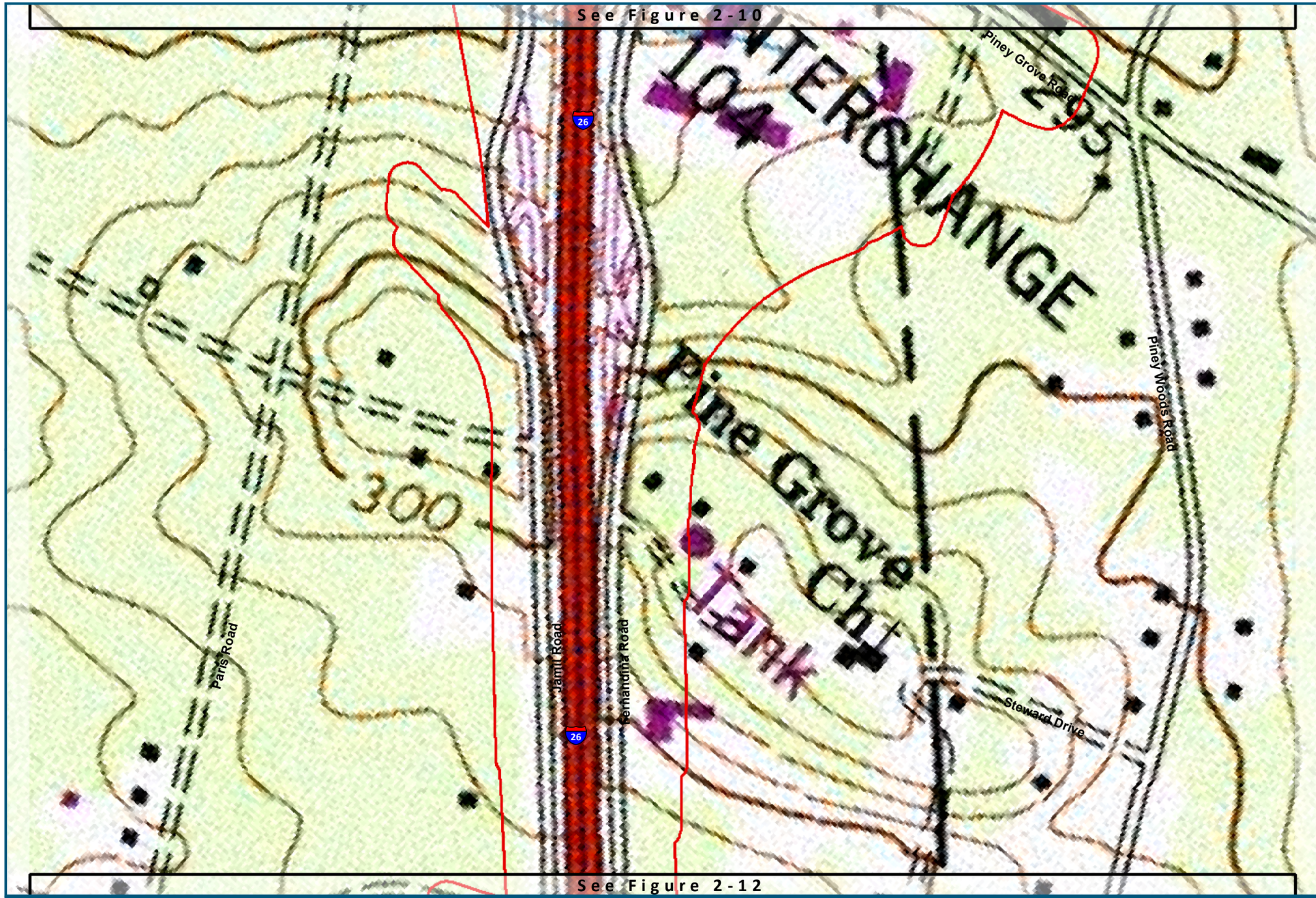
Figure 2-10
USGS Topography Map

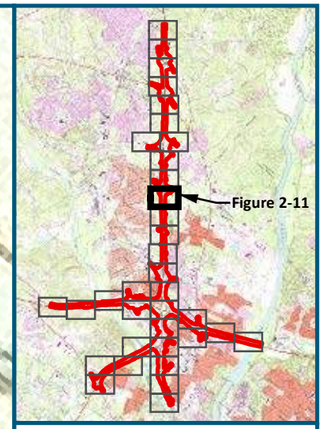
11/15/2018 Sheet 10 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

Figure 2-11
USGS Topography Map

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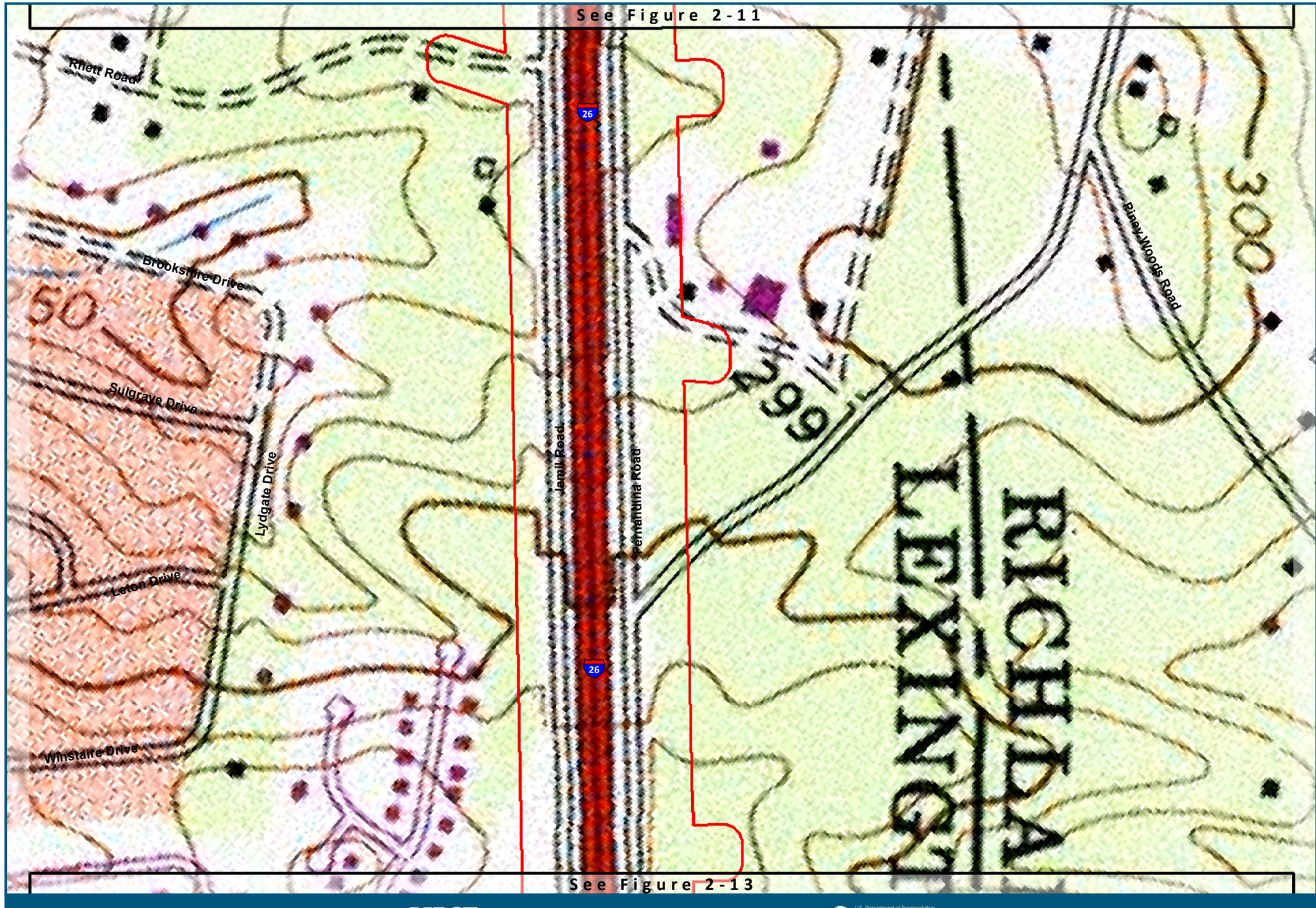
SCDOT South Carolina Department of Transportation

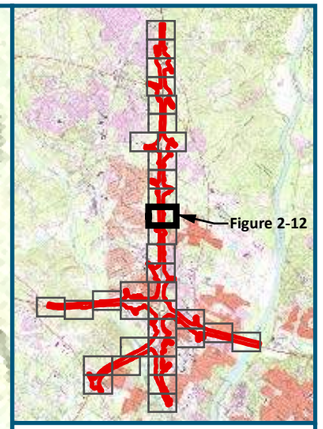
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-11



See Figure 2-13



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-12
USGS Topography Map

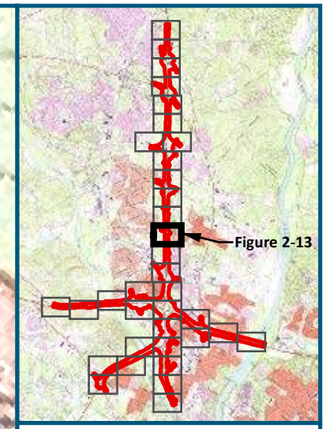
11/15/2018

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-12



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps [Irmo (1990) and Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Tram Road
Sidney Road
Jamil Road
Fernandina Road
Beatty Road
Moonlight Drive
Morningside Drive
Mistwoode Road
Doris Drive
King George Way
Irmo Quad
Columbia North Quad
26
376
380
388

See Figure 2-14

Figure 2-13
USGS Topography Map

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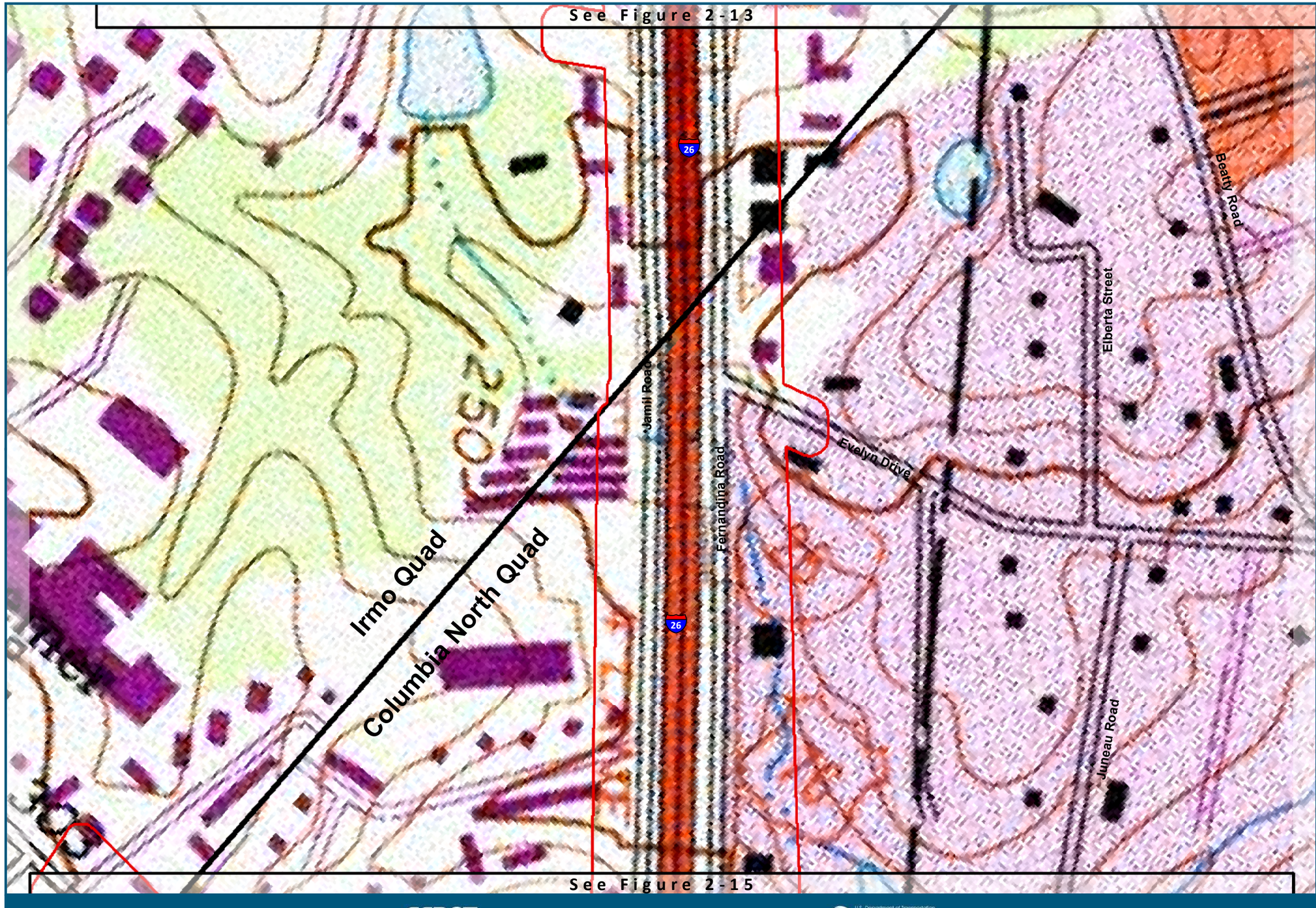
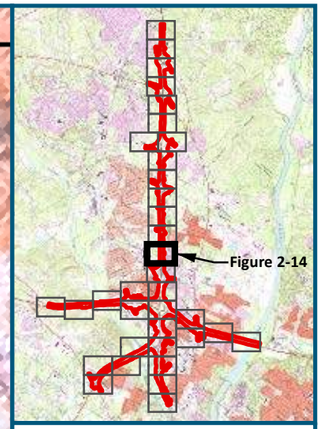
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps [Irmo (1990) and Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-14
USGS Topography Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-14

Irmo Quad

Columbia North Quad

Jamil Road

Fernandina Road

Saint Andrews Road

Woodland Hills Road

Berryhill Drive

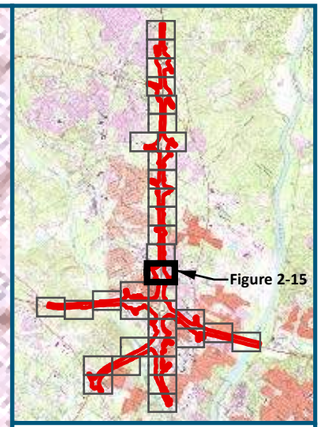
Burning Tree Drive

Kay Street

Chartwell Road

26

See Figure 2-16



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps [Irmo (1990) and Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-15
USGS Topography Map

11/15/2018

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-15

See Figure 2-17

See Figure 2-22

Westover Road

Fairway Lane

Tower Lane

Woodland Hills Road

Burning Tree Drive

Berrymill Drive

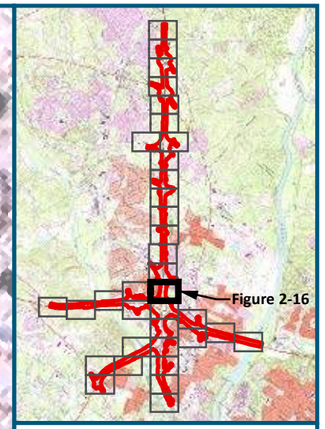
Chartwell Road

Chartwell Road

Zimalcrest Drive

26

250



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-16
USGS Topography Map

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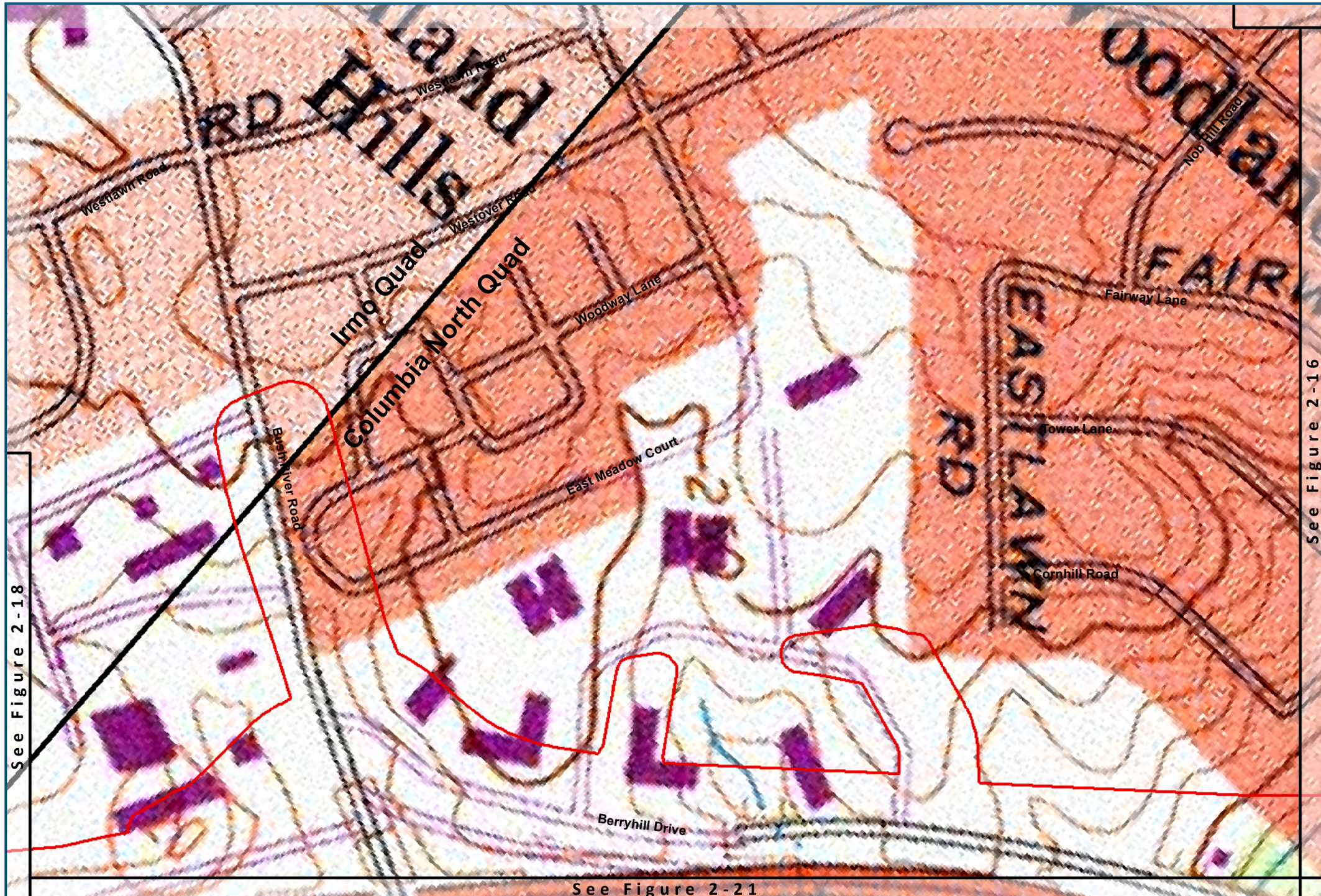
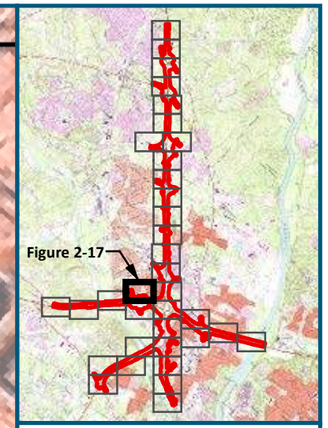
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps [Irmo (1990) and Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-17
USGS Topography Map

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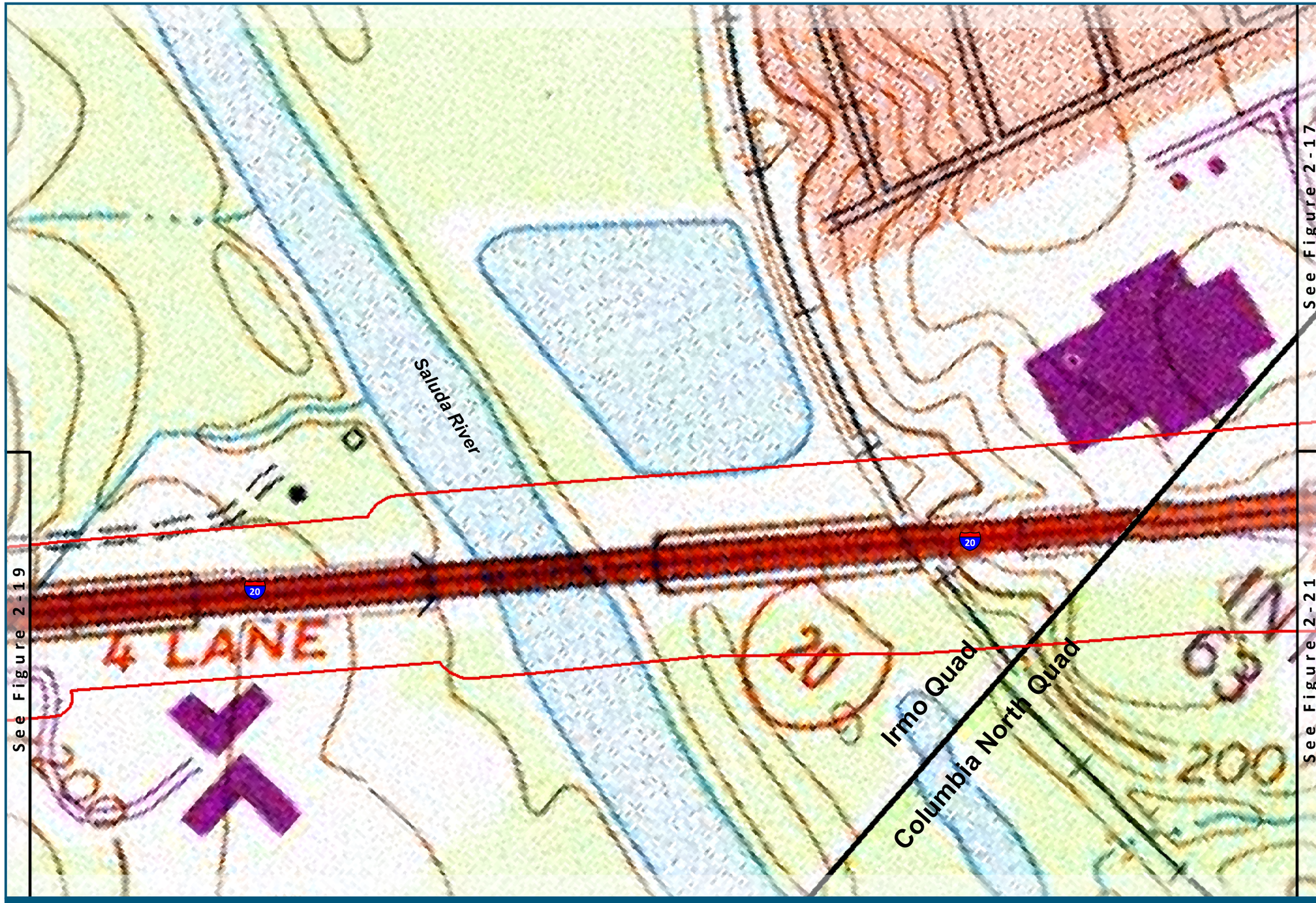
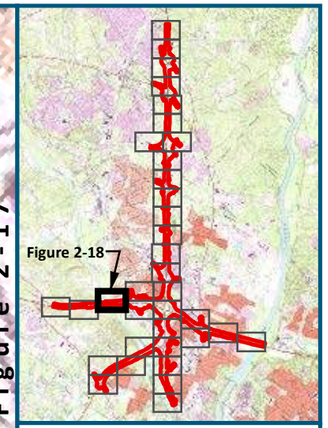
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps [Irmo (1990) and Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-18
USGS Topography Map

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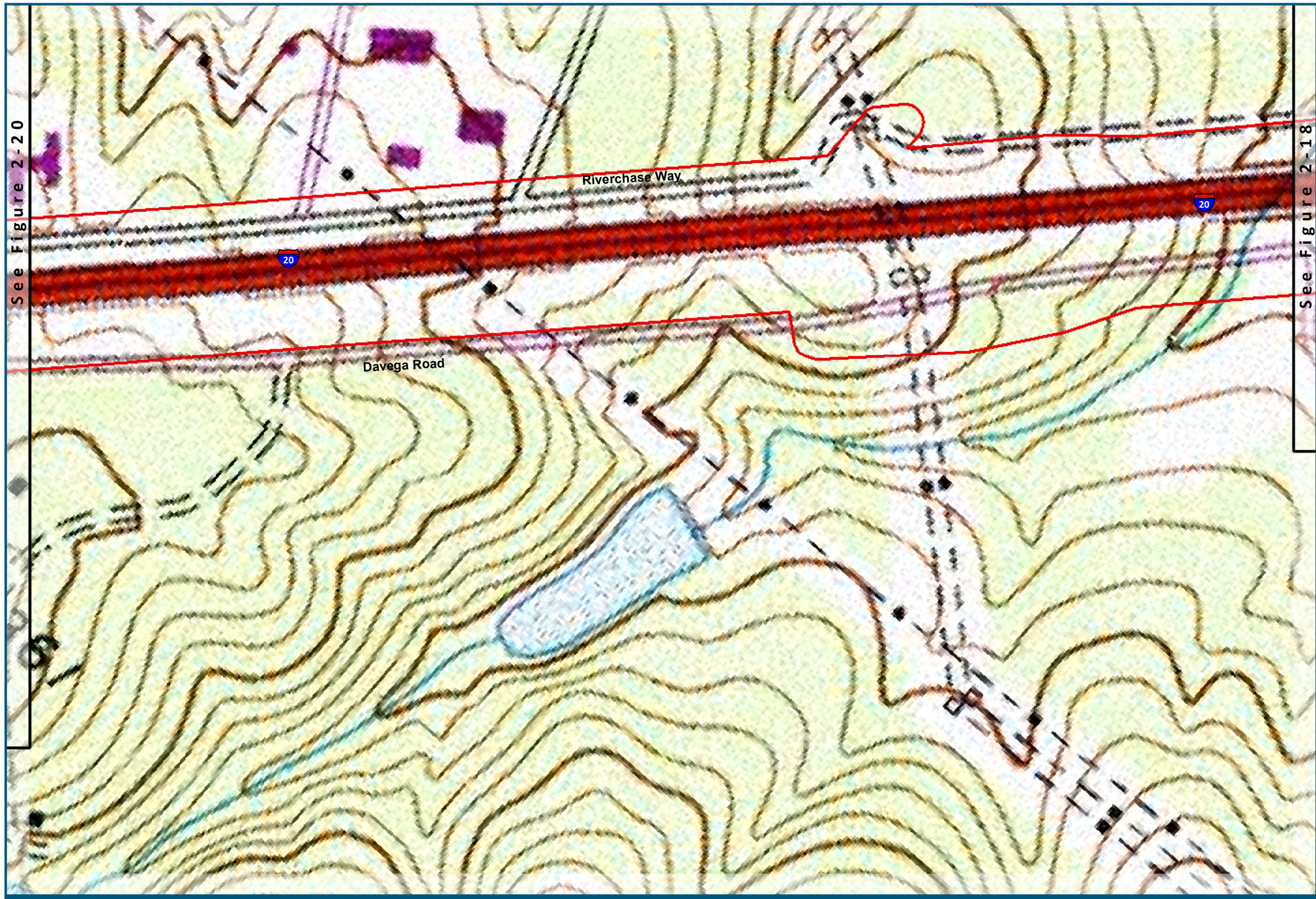
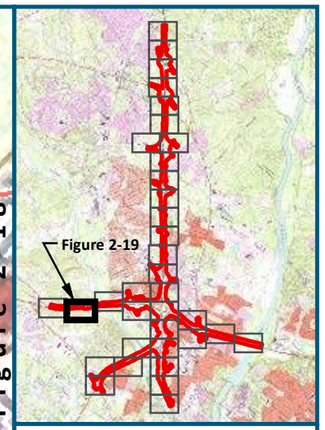
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

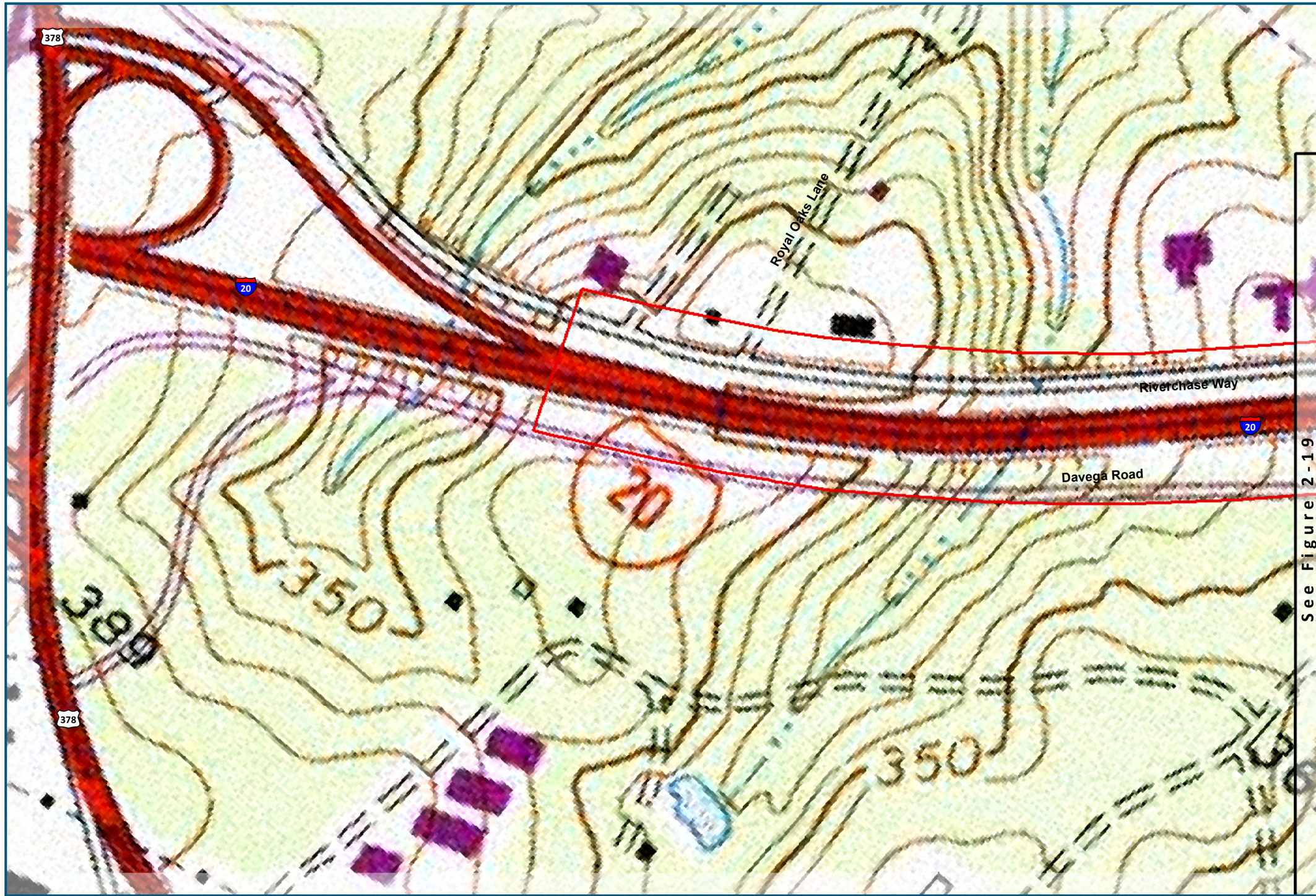
Figure 2-19
USGS Topography Map

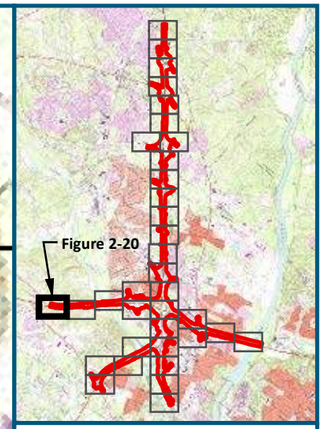
11/15/2018 Sheet 19 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Irmo (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-20
USGS Topography Map

11/15/2018

SCDOT South Carolina Department of Transportation

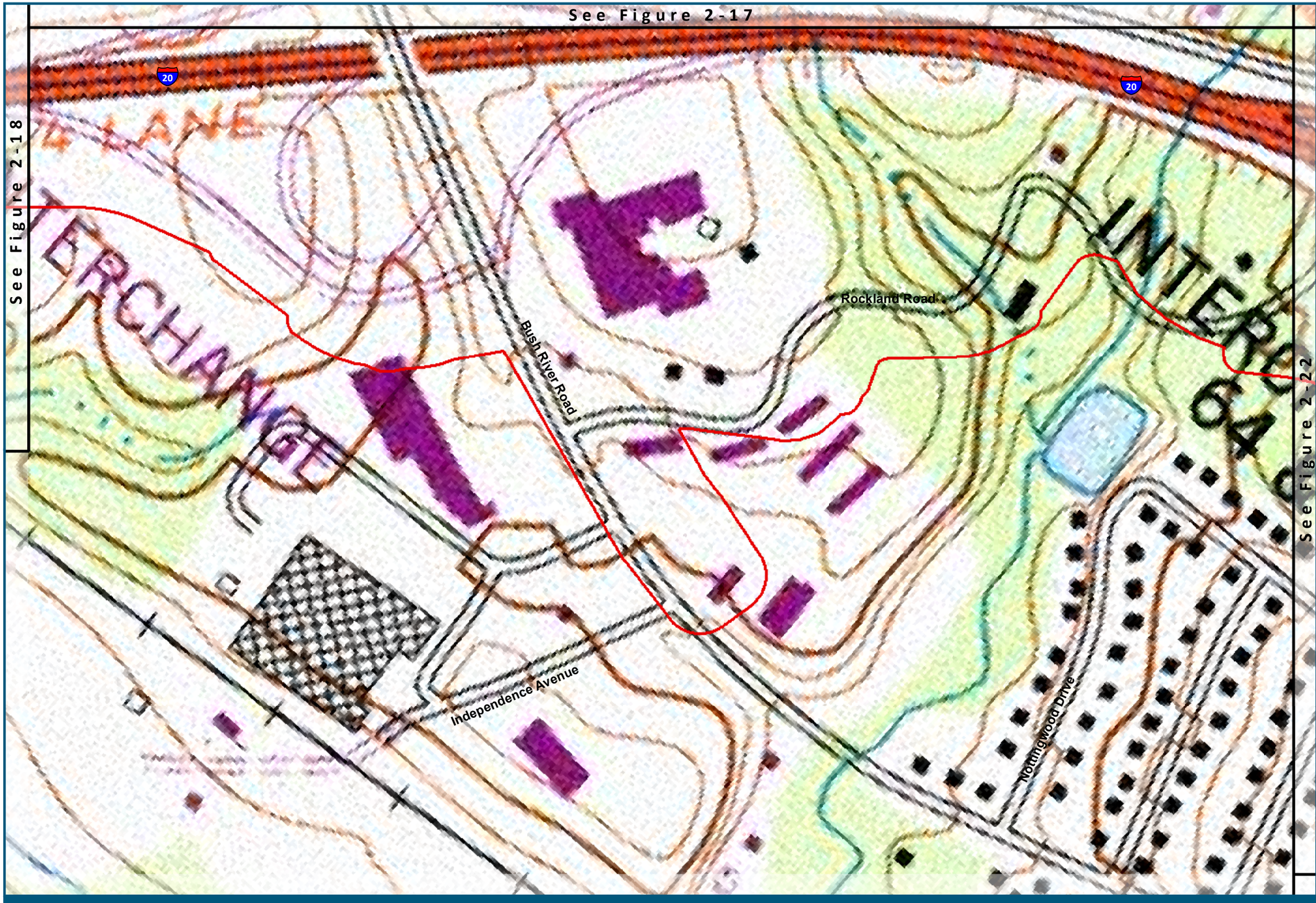
U.S. Department of Transportation Federal Highway Administration

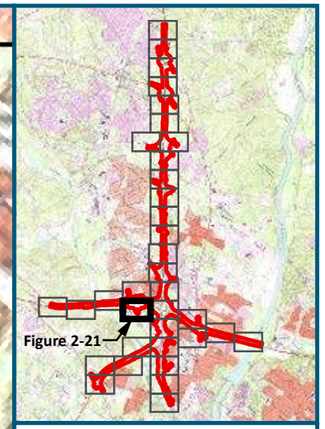
CAROLINA CROSSROADS

See Figure 2-17

See Figure 2-18

See Figure 2-22





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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-21
USGS Topography Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-16

Berryhill Drive

Browning Road

Zimalcrest Drive

20

26

See Figure 2-21

Zimalcrest Drive

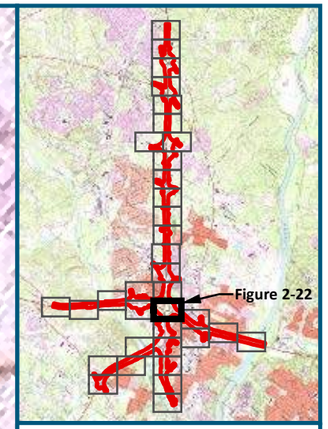
26

20

Browning Road

See Figure 2-23

See Figure 2-27



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-22
USGS Topography Map

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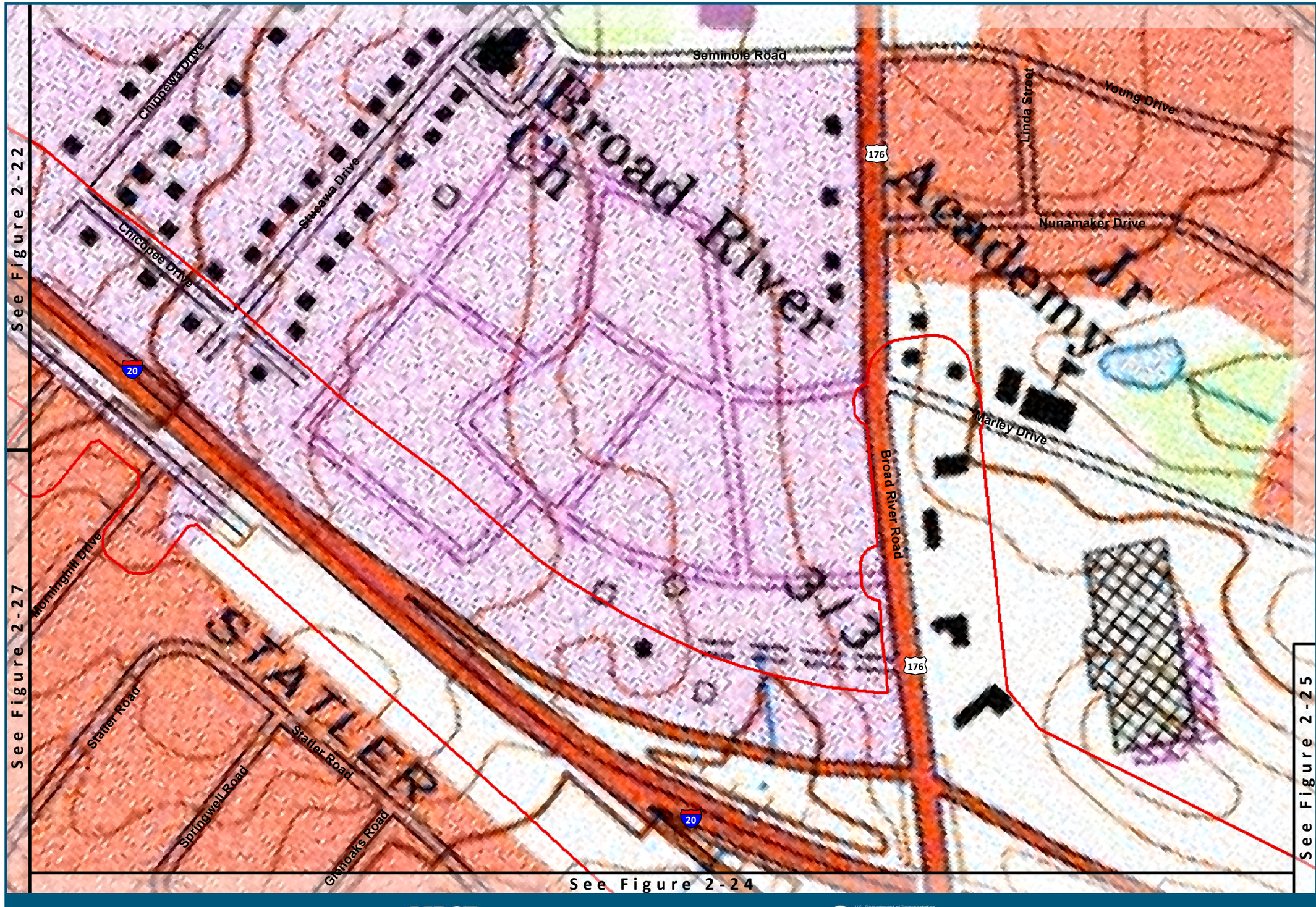
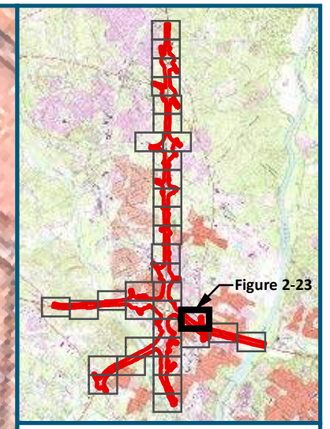
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-23
USGS Topography Map

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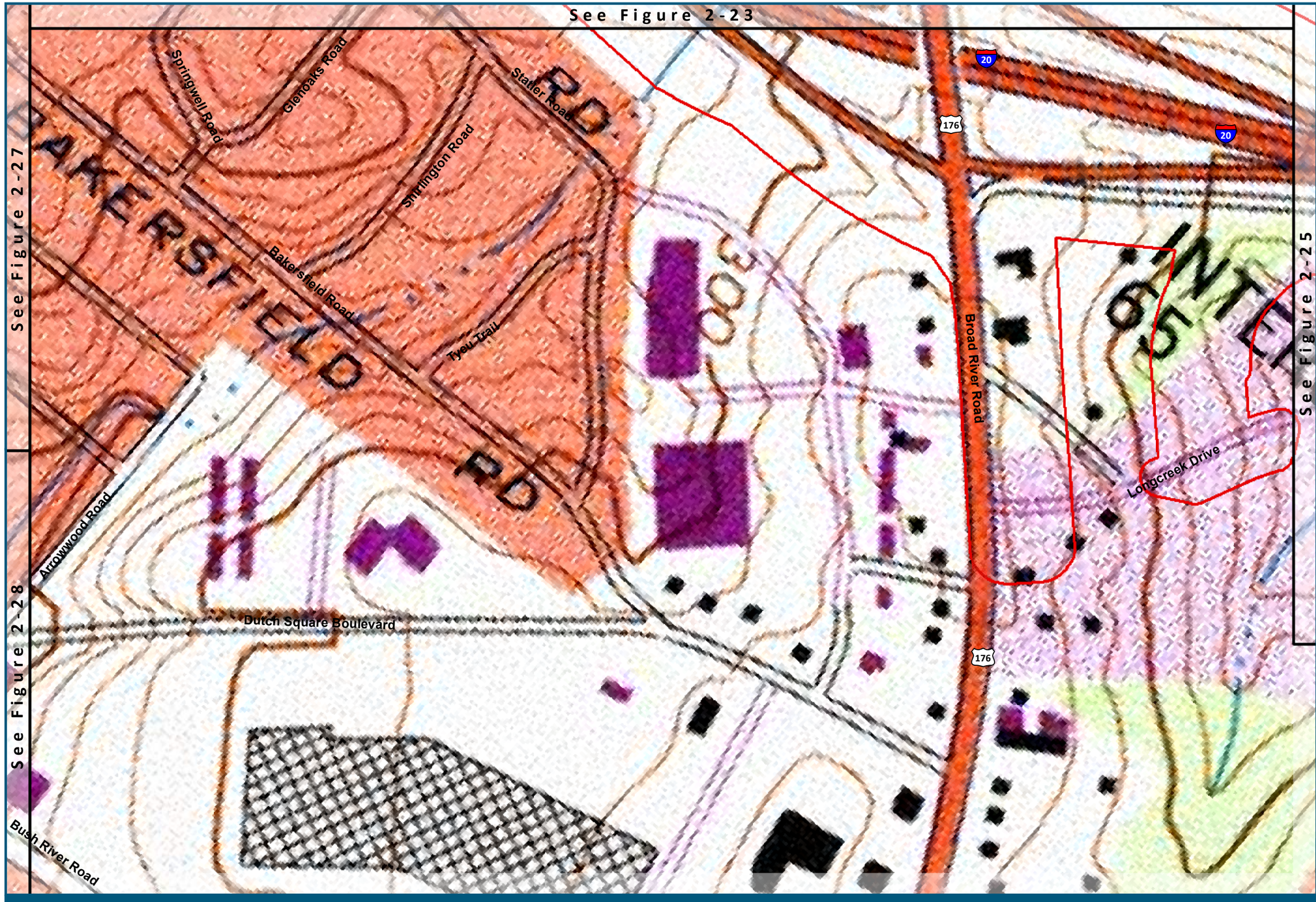
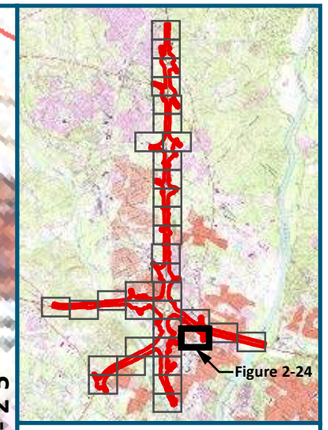
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-24
USGS Topography Map

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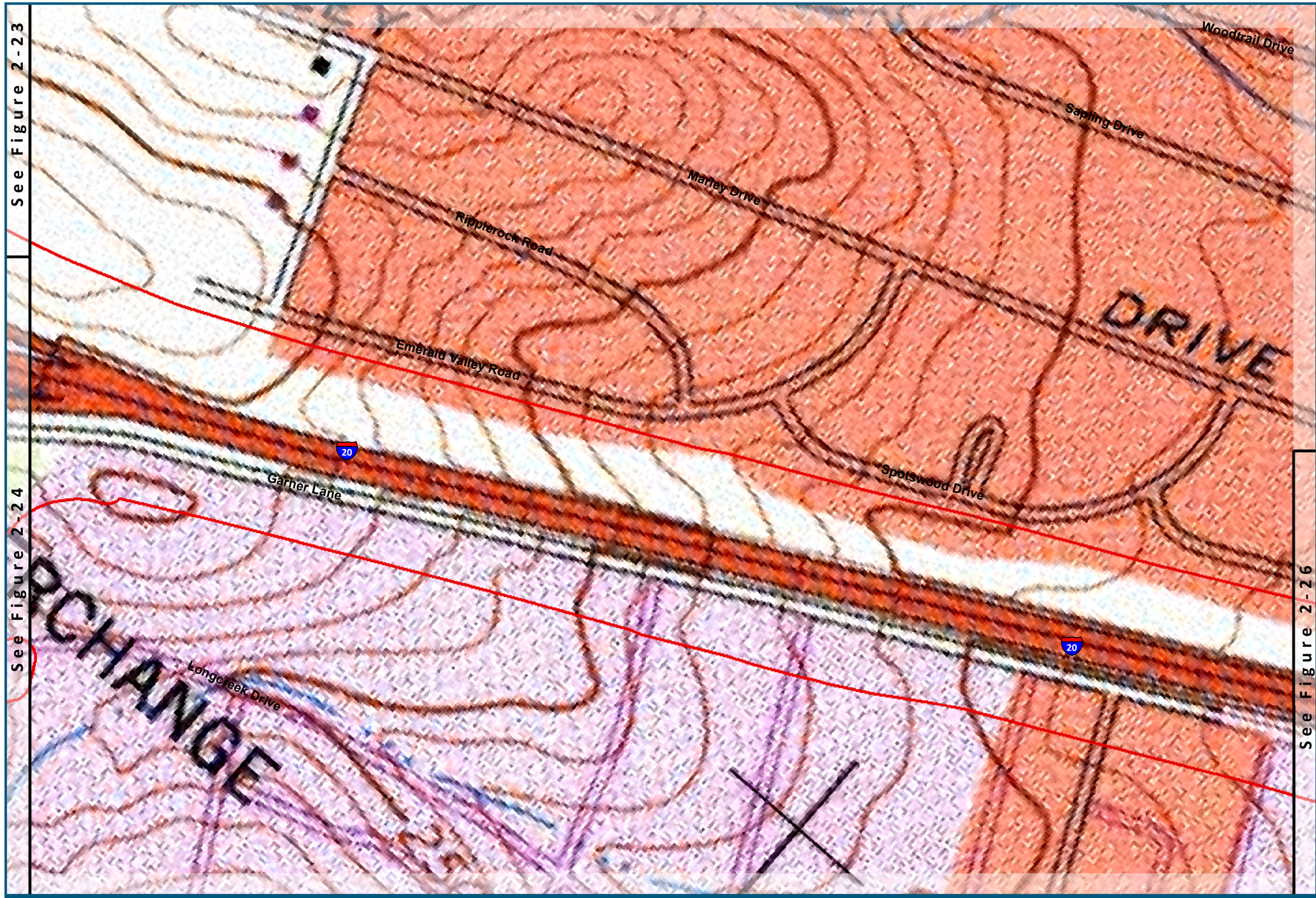
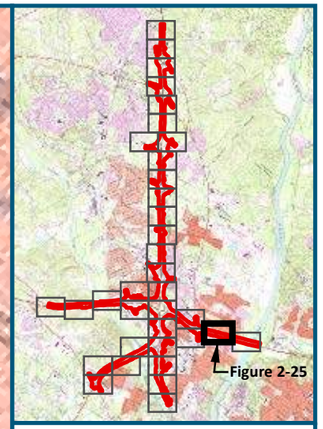
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-25
USGS Topography Map

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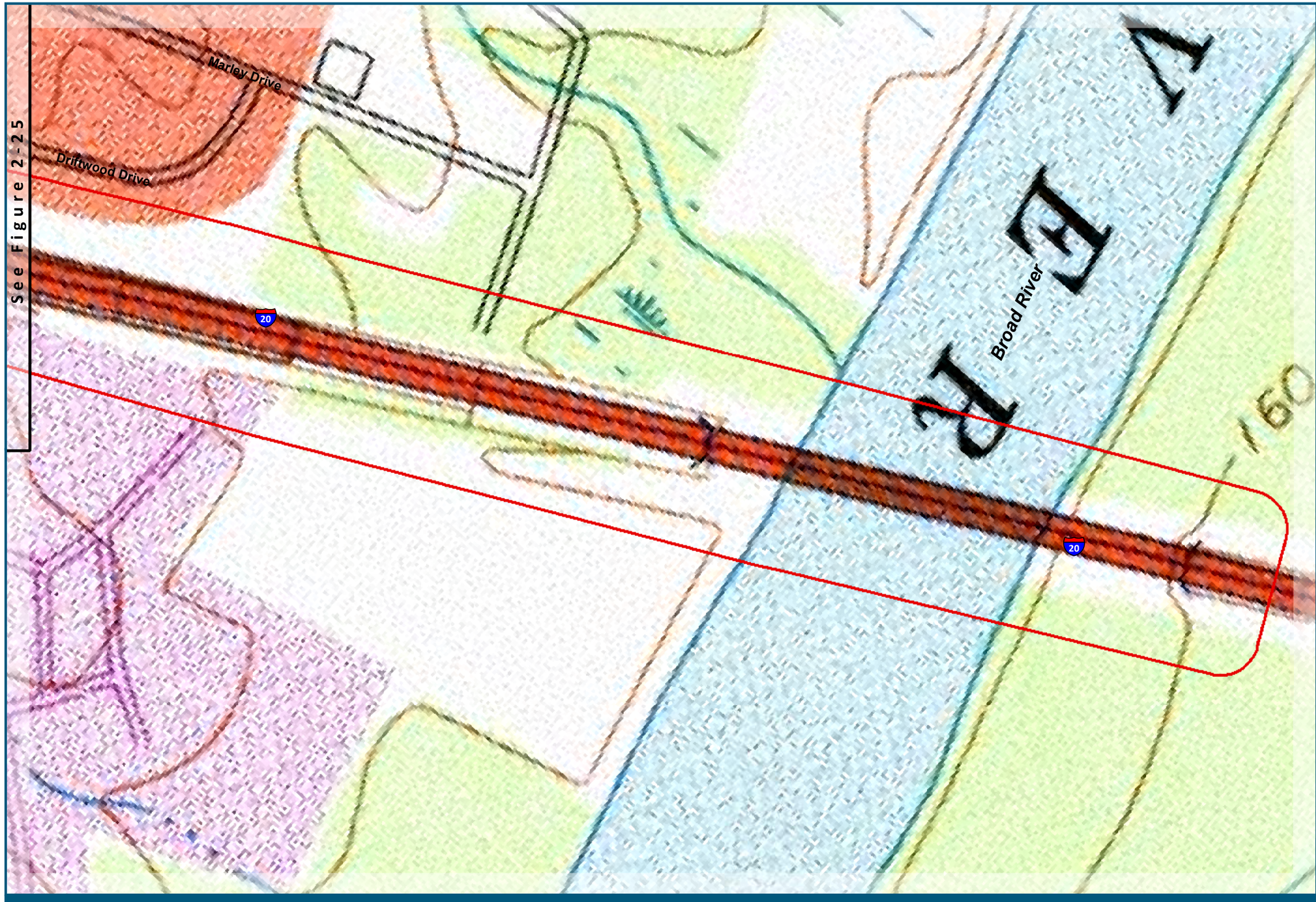
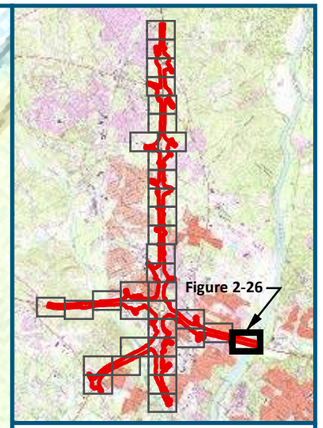
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area (1,482 acres)

USGS Quad Index

Figure 2-26
USGS Topography Map

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SCDOT South Carolina Department of Transportation

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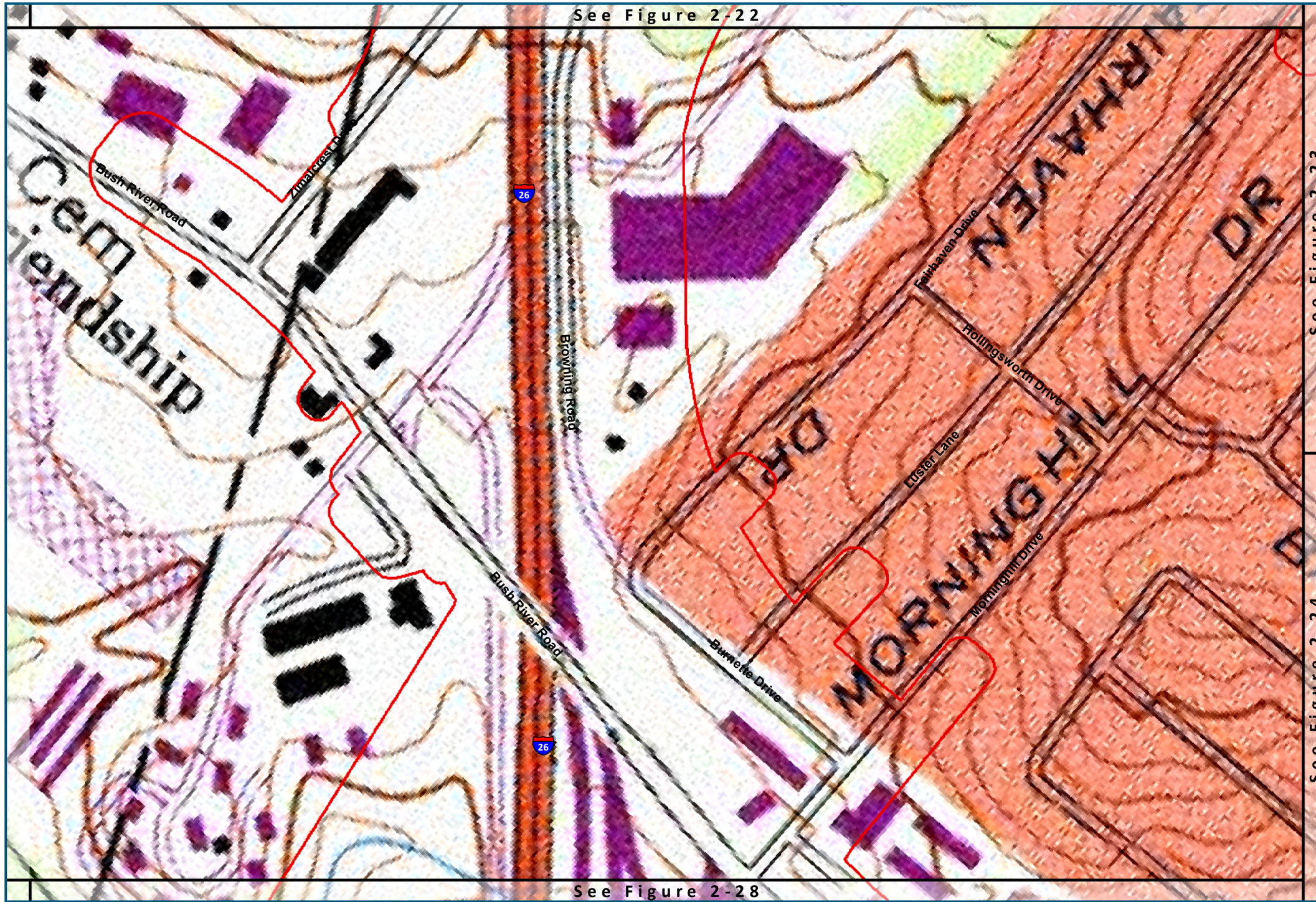
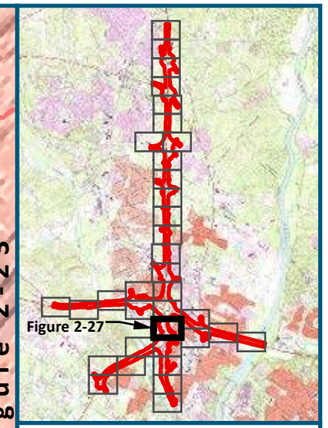
CAROLINA CROSSROADS

See Figure 2-22





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-27
USGS Topography Map

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U.S. Department of Transportation Federal Highway Administration

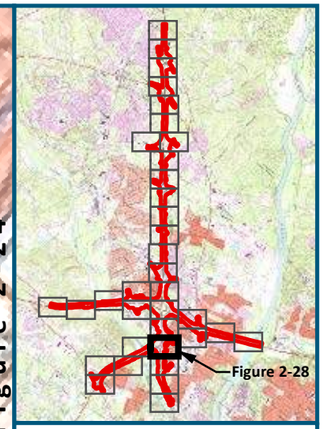
CAROLINA CROSSROADS

See Figure 2-27

See Figure 2-32

See Figure 2-24

See Figure 2-29



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Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

Figure 2-28
USGS Topography Map

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CAROLINA CROSSROADS

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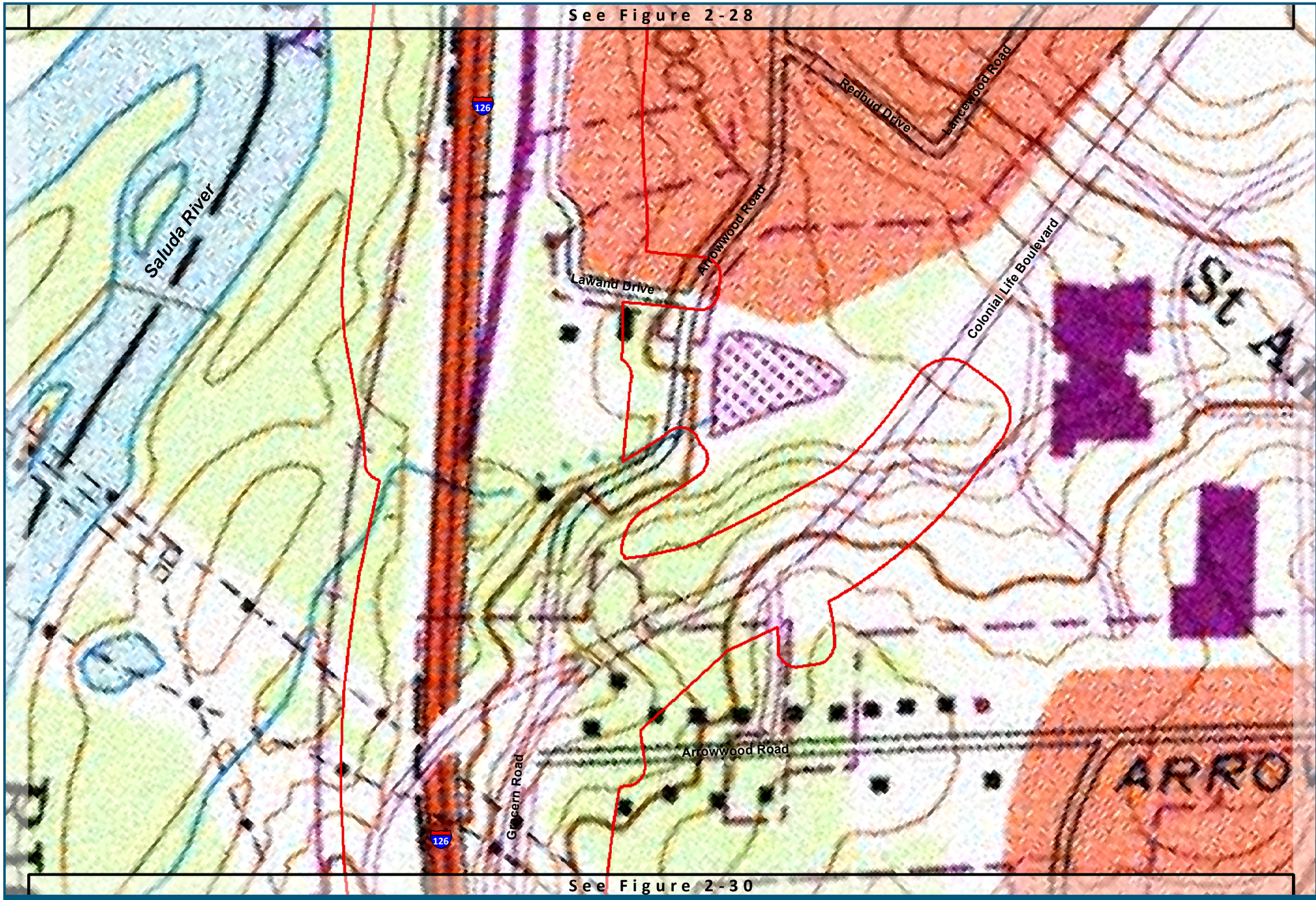
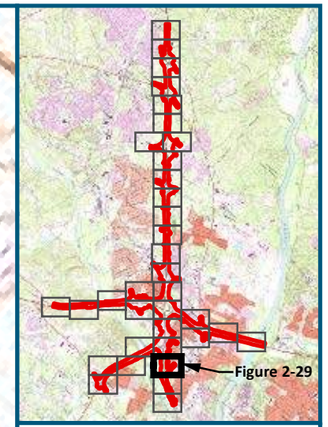
U.S. Department of Transportation Federal Highway Administration

See Figure 2-28



See Figure 2-30



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

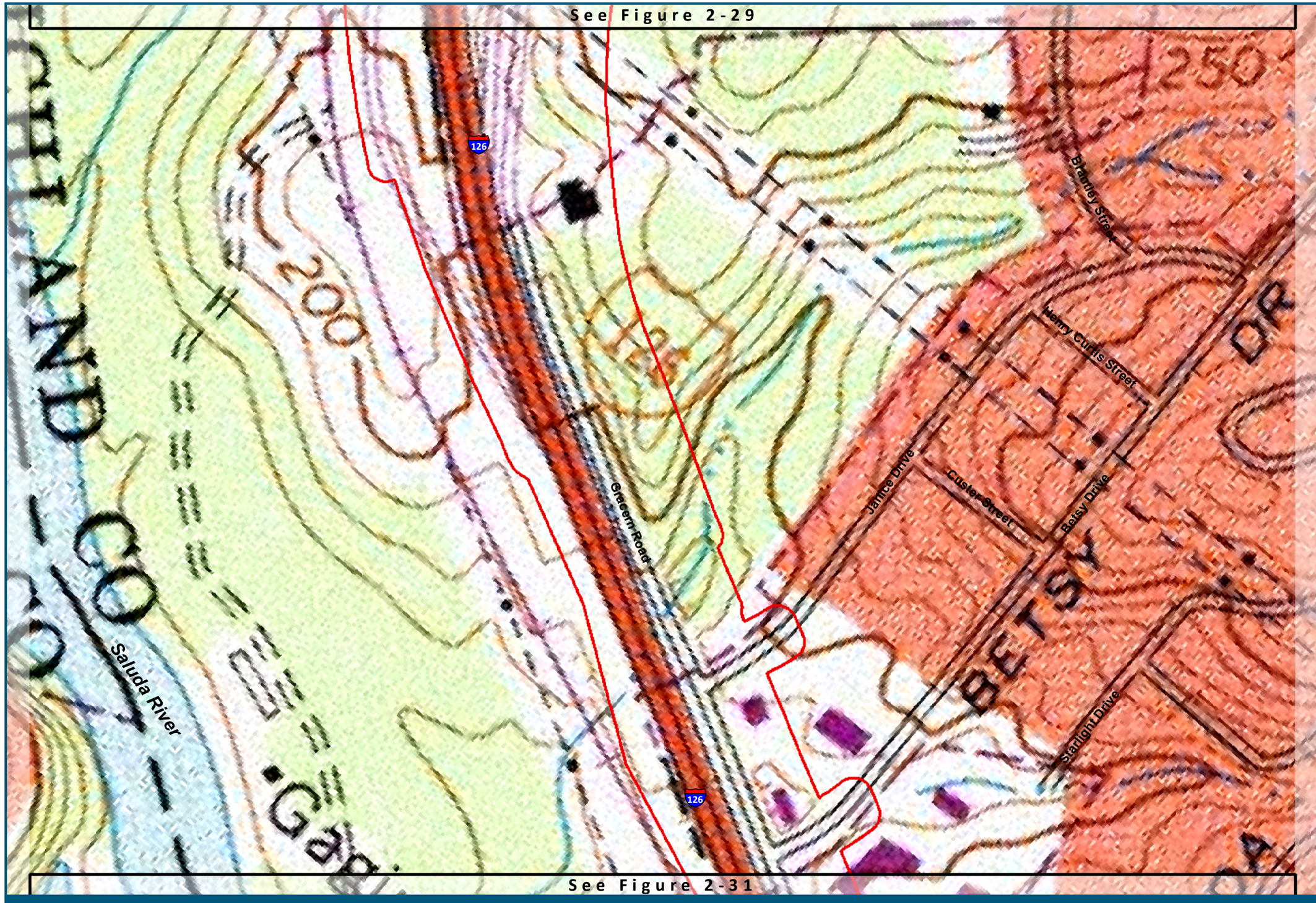
Figure 2-29
USGS Topography Map

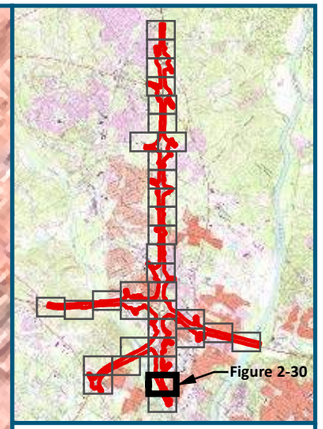
11/15/2018 Sheet 29 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-30
USGS Topography Map

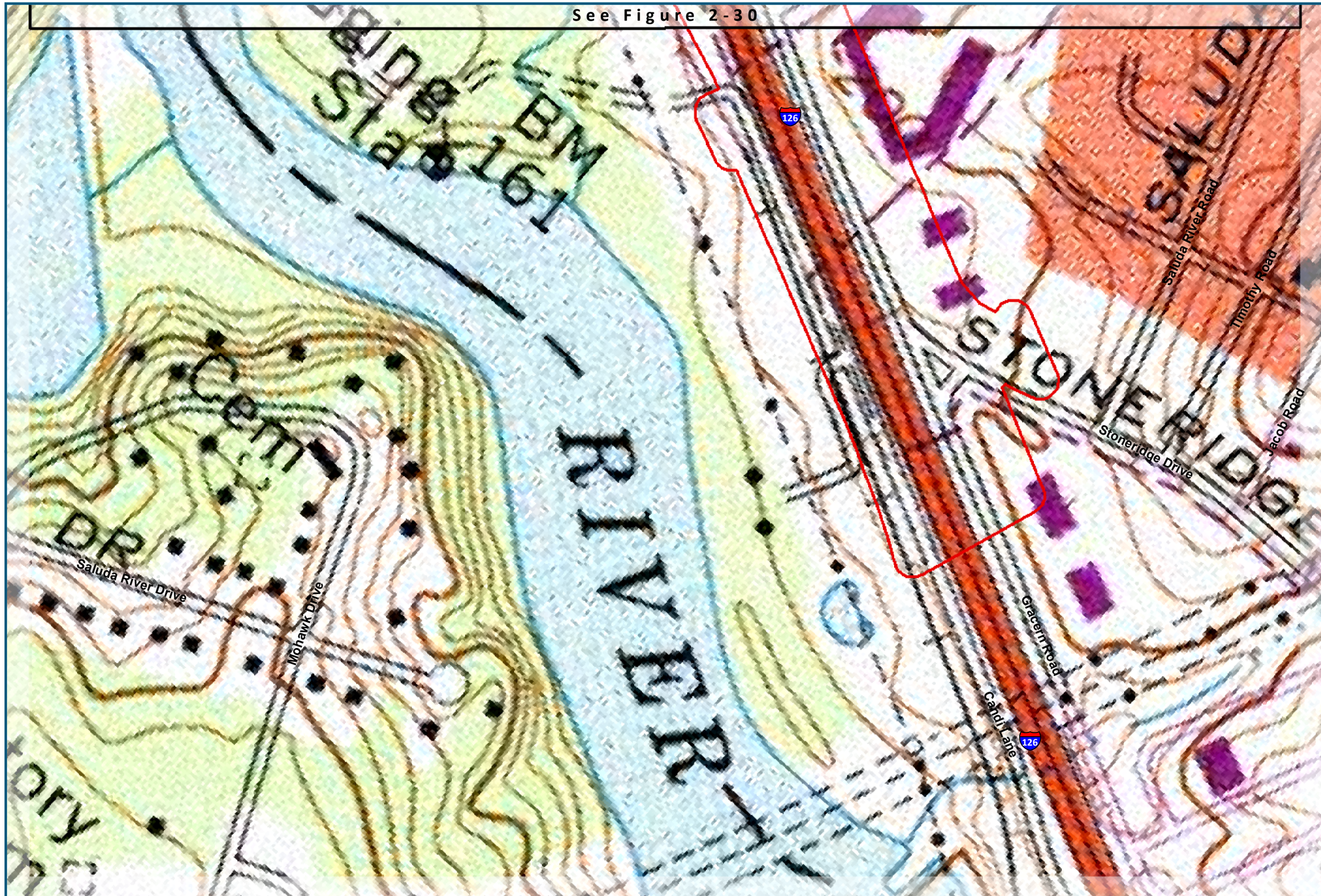
11/15/2018 Sheet 30 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-30



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

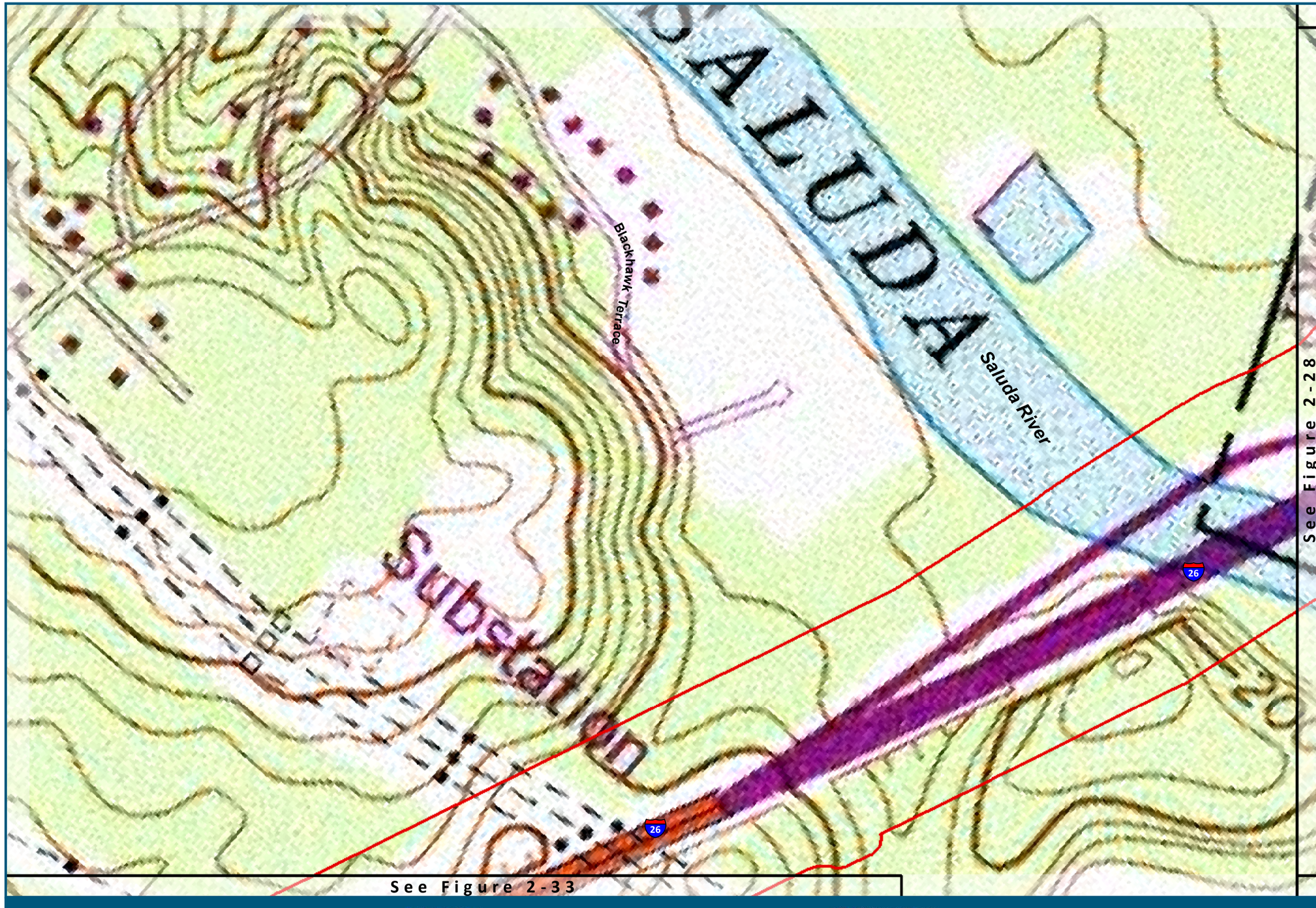
Figure 2-31
USGS Topography Map

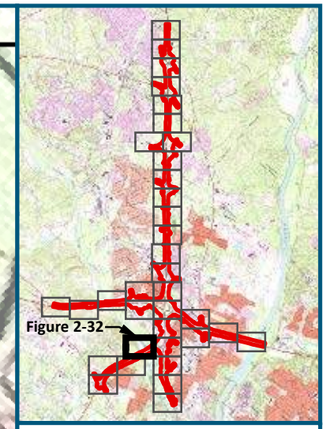
11/15/2018 Sheet 31 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-32
USGS Topography Map

11/15/2018 Sheet 32 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-32

See Figure 2-34

Broadmoor

TERRACE VIEW

McSwain Drive

Holly Hill Drive

Terrace View Drive

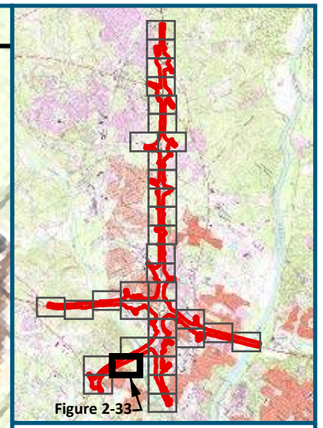
Robin Crest Drive

Robin Crest Drive

Riviera Drive

26

26



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

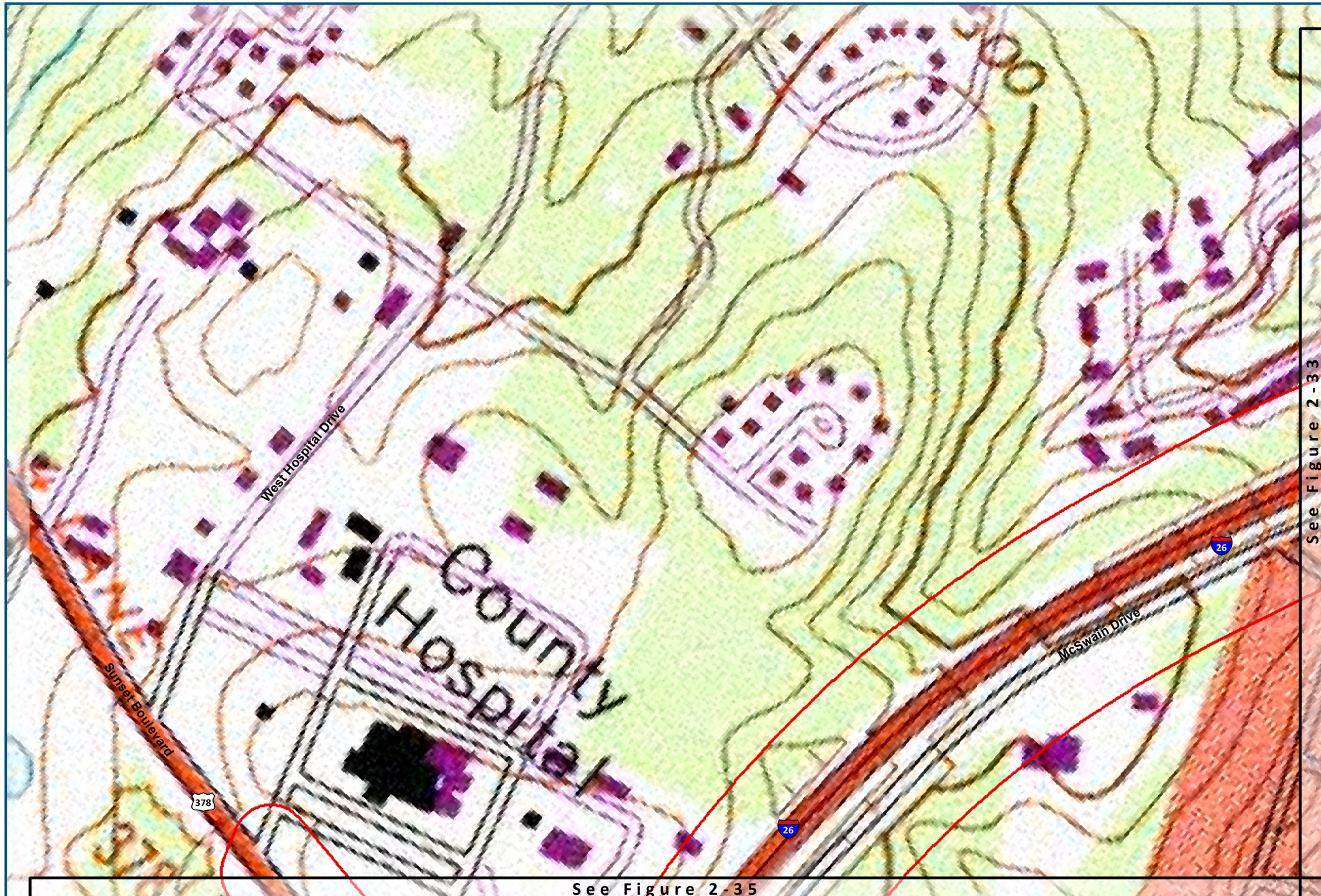
Figure 2-33
USGS Topography Map

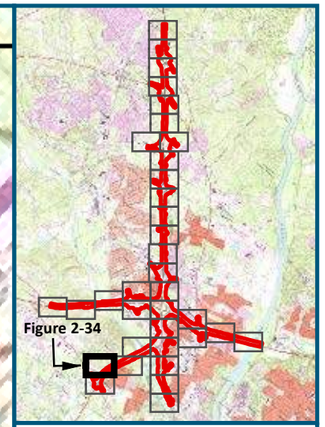
11/15/2018 Sheet 33 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Map [Columbia North (1990)]

Legend

Project Study Area
(1,482 acres)

USGS Quad Index

Figure 2-34
USGS Topography Map

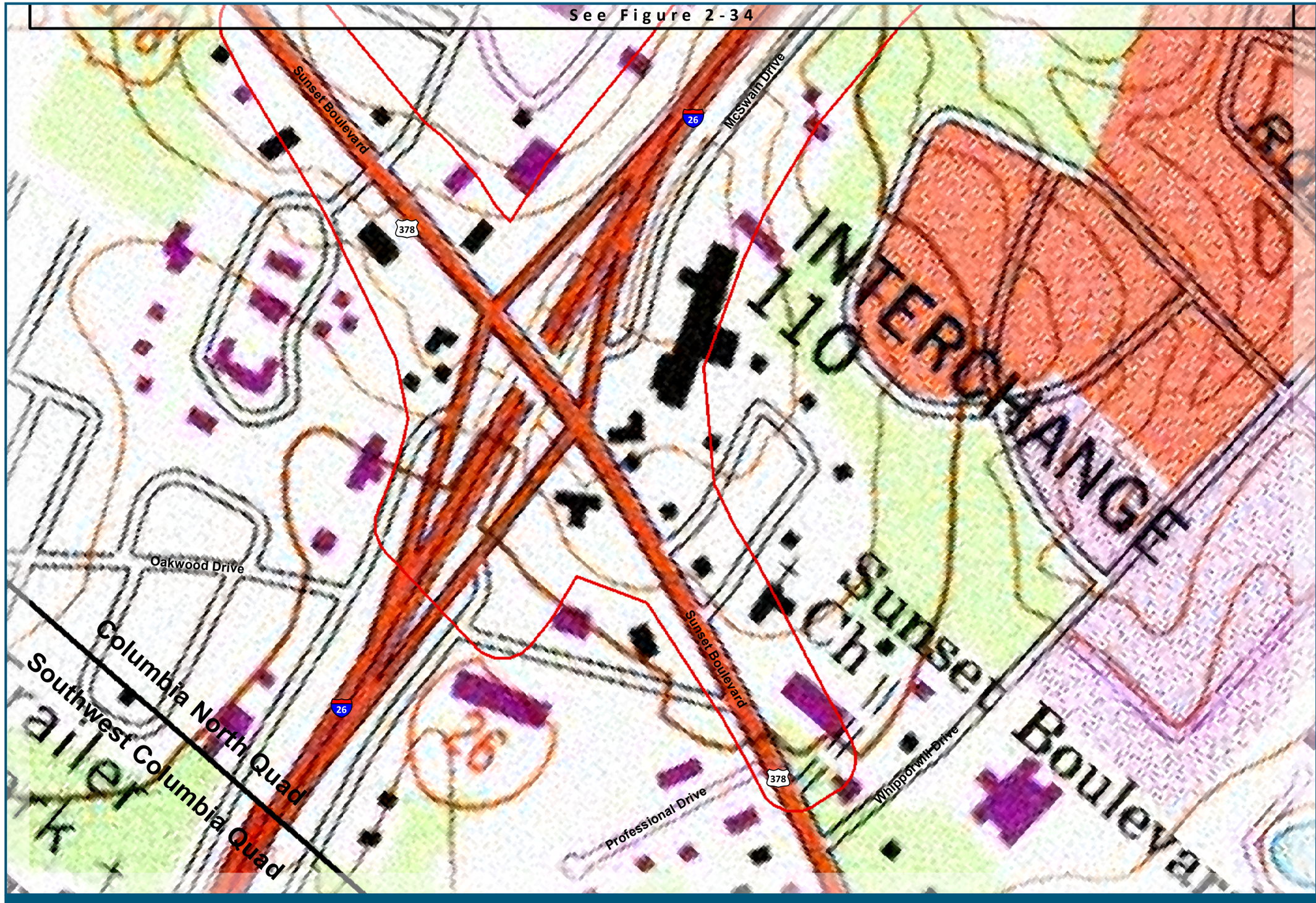
11/15/2018 Sheet 34 of 35

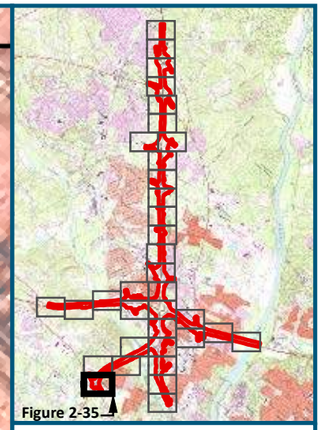
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 2-34





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS 7.5 Minute Quad Maps (Columbia North (1990) and Southwest Columbia (1982))

Legend

- Project Study Area (1,482 acres)
- USGS Quad Index

Figure 2-35
USGS Topography Map

11/15/2018 Sheet 35 of 35

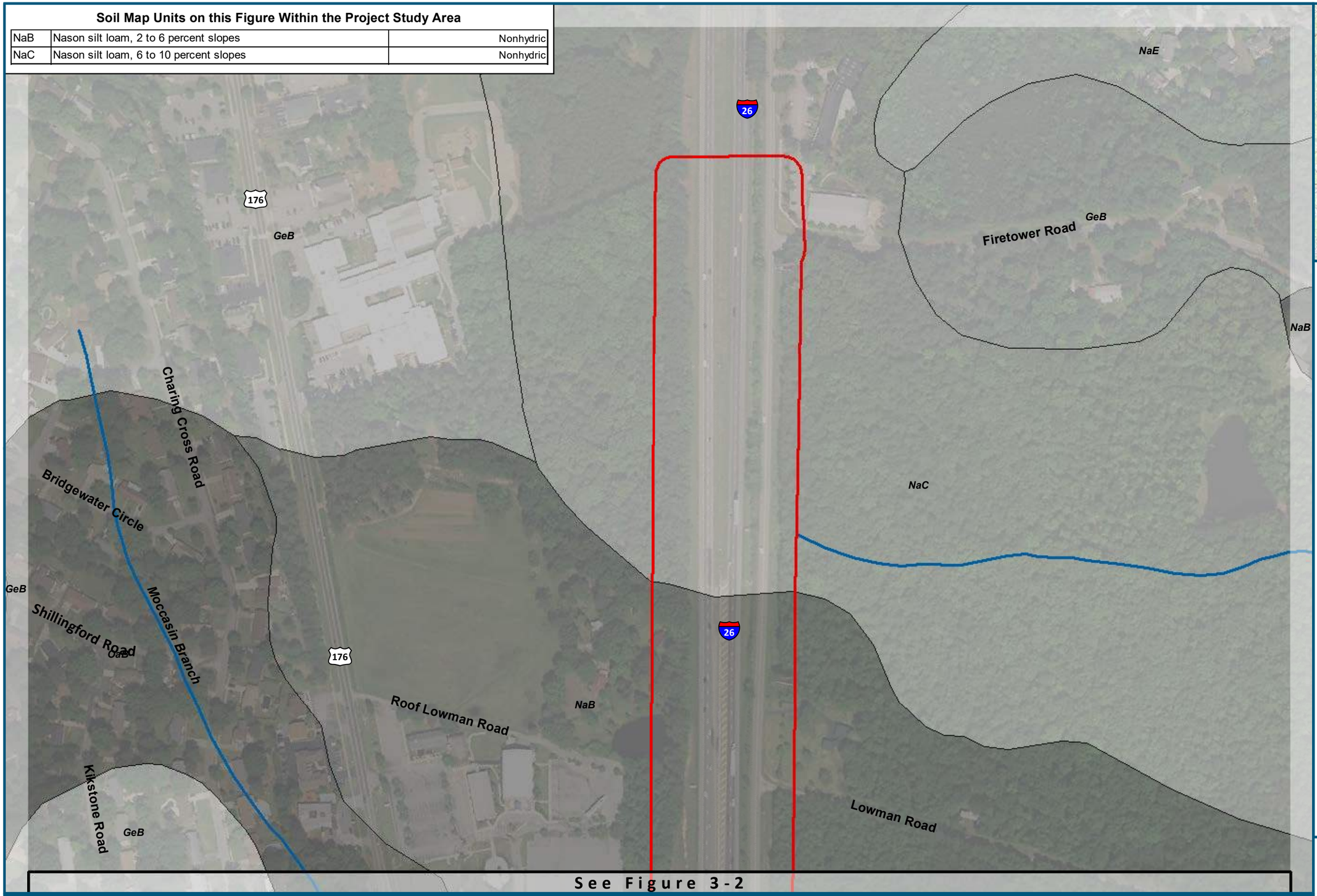
SCDOT South Carolina Department of Transportation

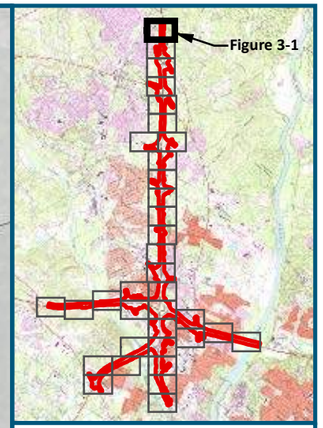
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

NaB	Nason silt loam, 2 to 6 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-1
NRCS Soil Map Unit Map

11/15/2018 Sheet 1 of 35

SCDOT South Carolina Department of Transportation

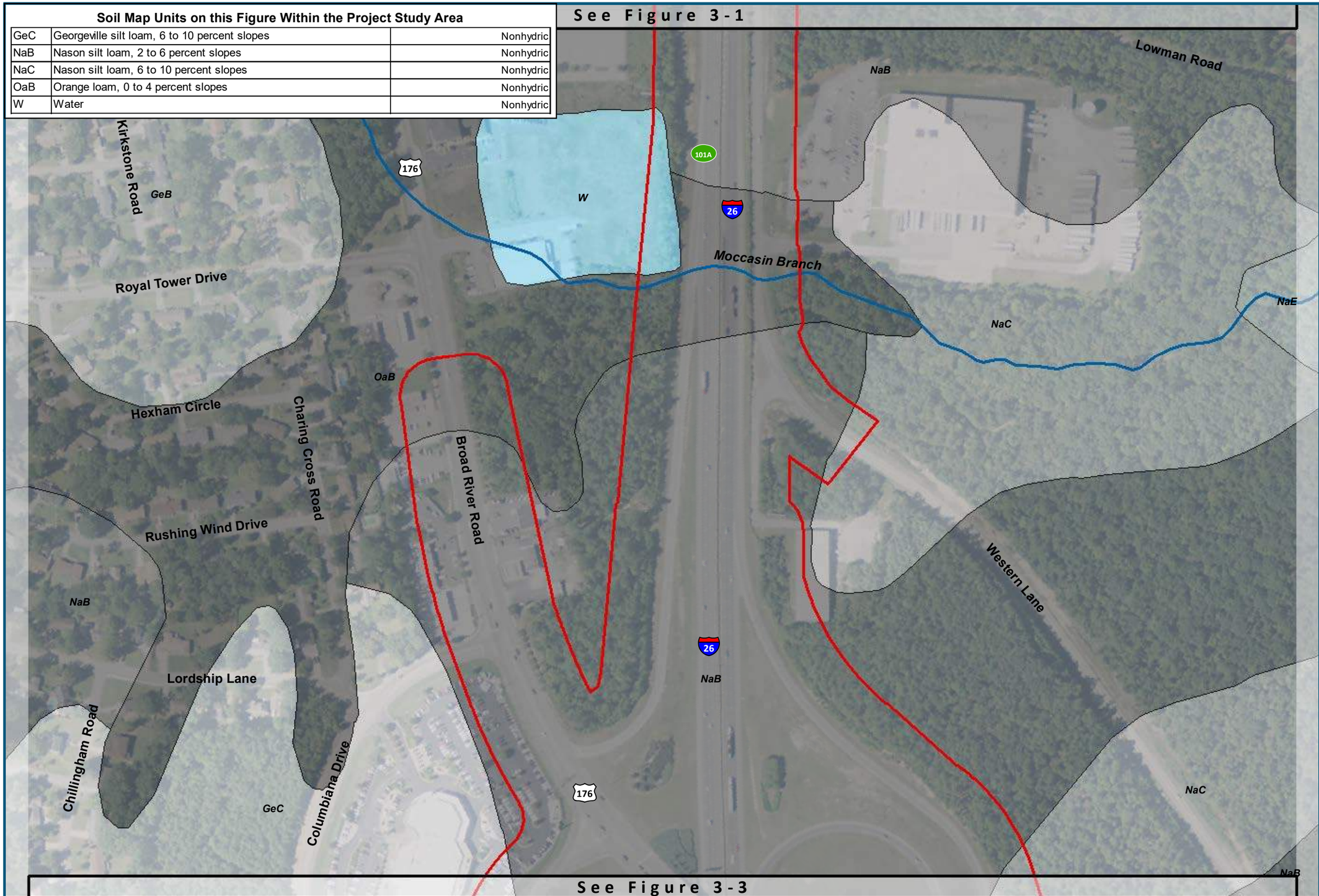
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

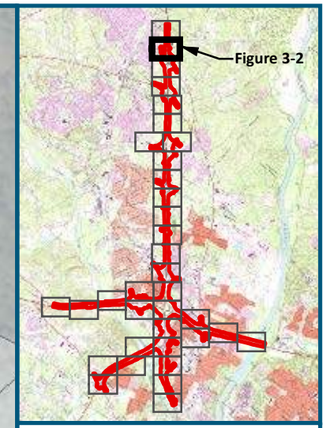
Soil Map Units on this Figure Within the Project Study Area

GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
NaB	Nason silt loam, 2 to 6 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric
W	Water	Nonhydric

See Figure 3-1



See Figure 3-3



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-2
NRCS Soil Map Unit Map

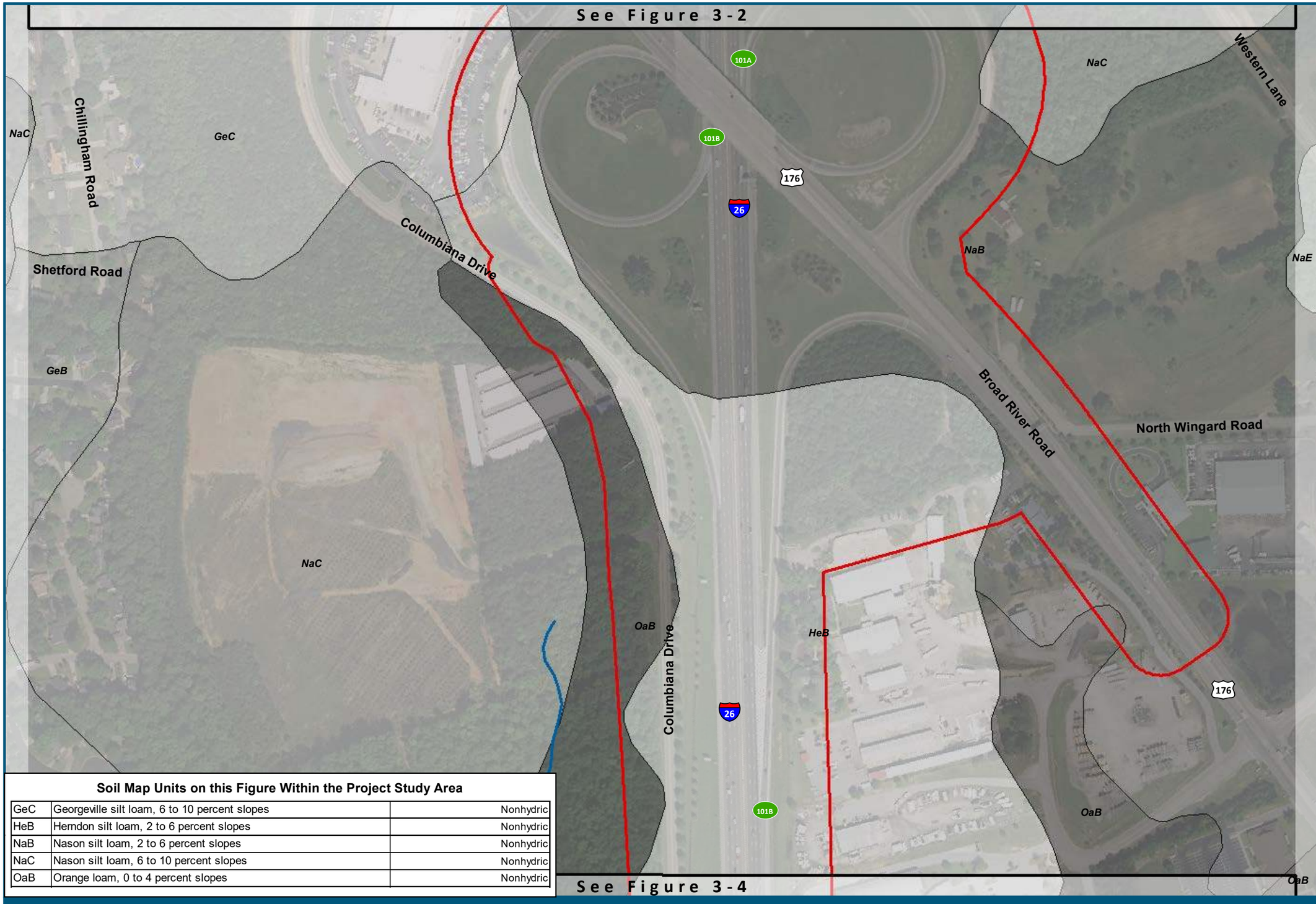
11/15/2018 Sheet 2 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

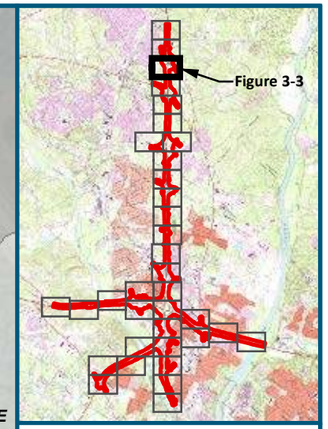
See Figure 3-2



See Figure 3-4

Soil Map Units on this Figure Within the Project Study Area

GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
NaB	Nason silt loam, 2 to 6 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-3
NRCS Soil Map Unit Map

11/15/2018 Sheet 3 of 35

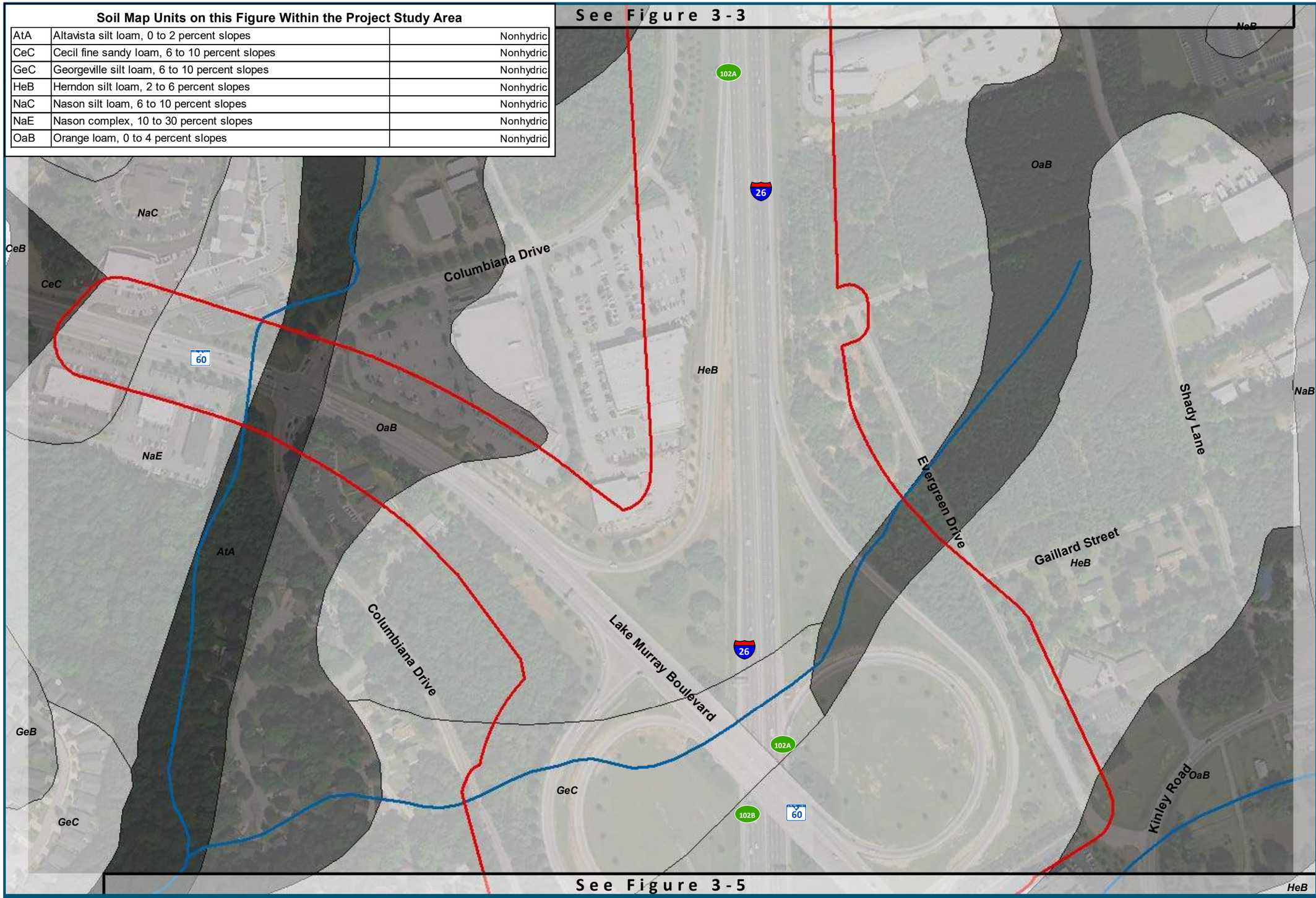
SCDOT South Carolina Department of Transportation

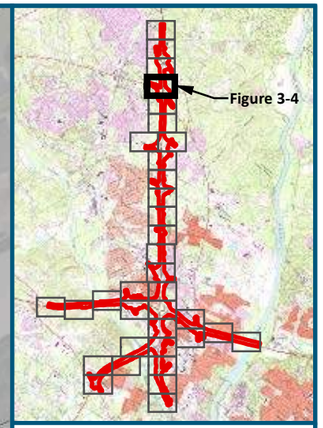
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric
NaE	Nason complex, 10 to 30 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-4
NRCS Soil Map Unit Map

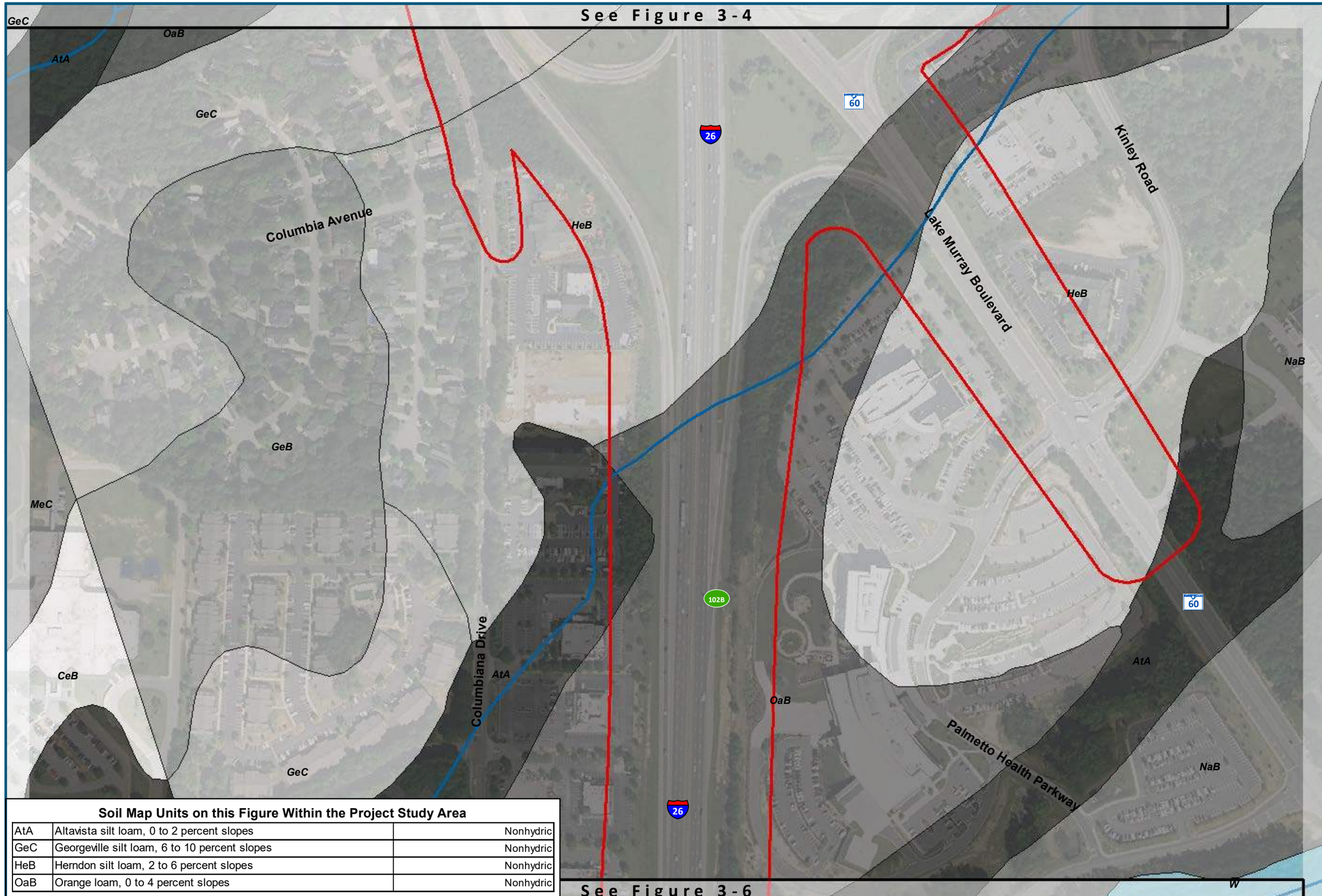
11/15/2018 Sheet 4 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

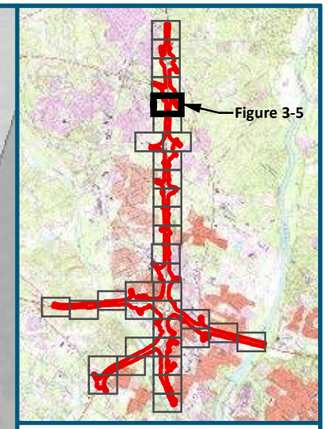
See Figure 3-4



See Figure 3-6

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-5
NRCS Soil Map Unit Map

11/15/2018 Sheet 5 of 35

SCDOT South Carolina Department of Transportation

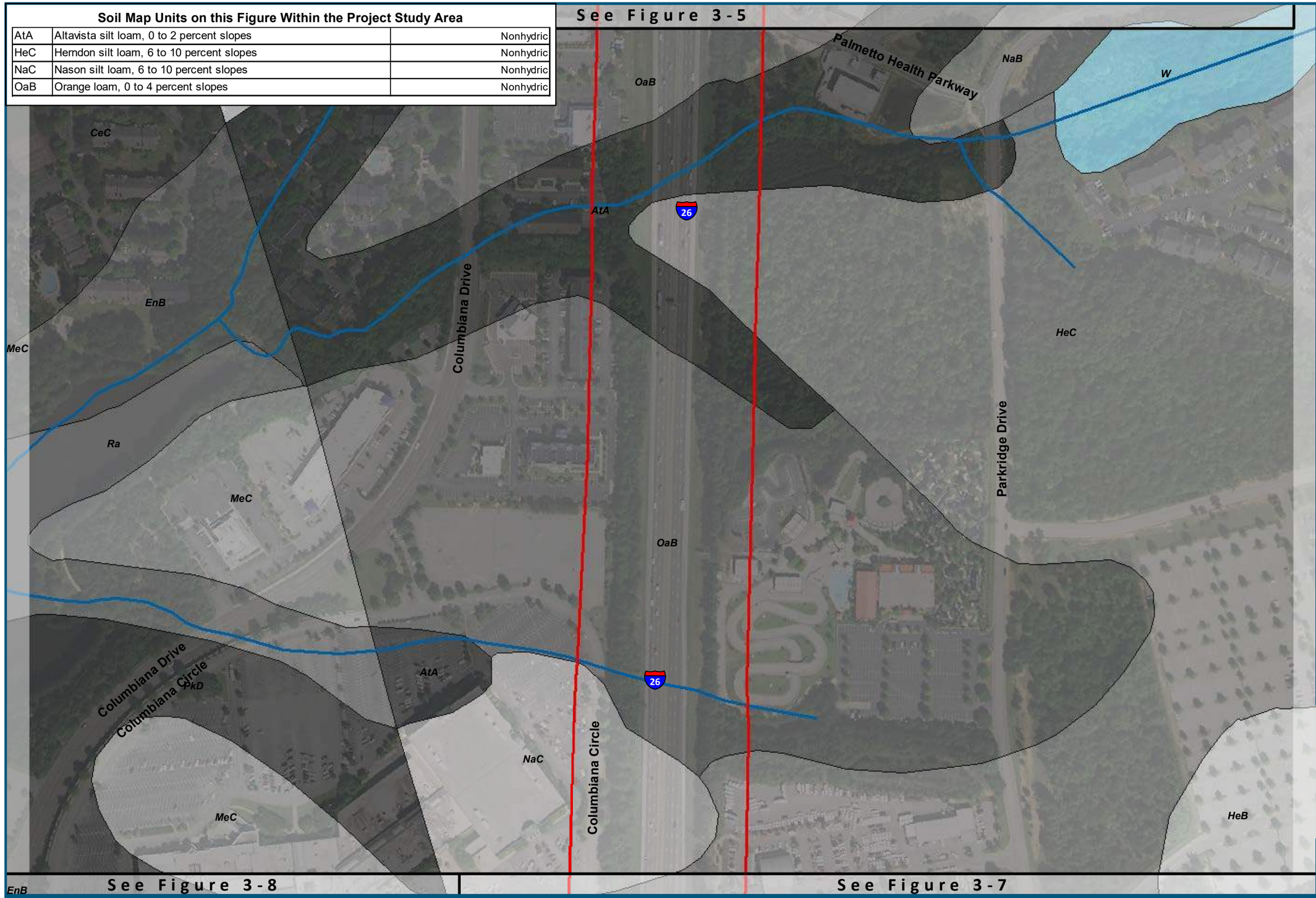
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

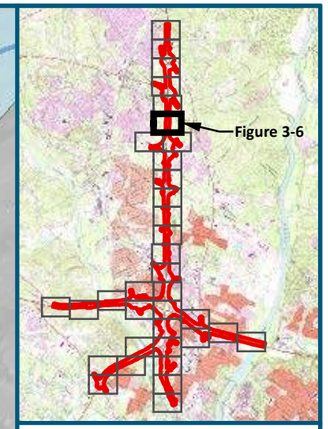
AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
HeC	Herndon silt loam, 6 to 10 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric

See Figure 3-5



See Figure 3-8

See Figure 3-7



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-6
NRCS Soil Map Unit Map

11/15/2018 Sheet 6 of 35

SCDOT South Carolina Department of Transportation

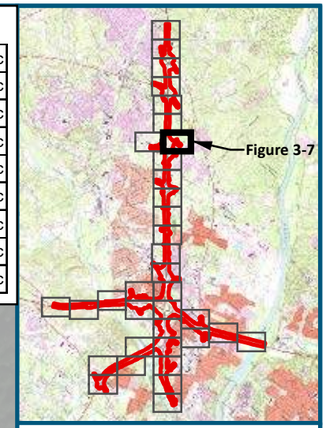
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS



Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
HeC	Herndon silt loam, 6 to 10 percent slopes	Nonhydric
HrB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
NaC	Nason silt loam, 6 to 10 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric
PkD	Pickens slaty silt loam, 6 to 15 percent slopes	Nonhydric



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-7
NRCS Soil Map Unit Map

11/15/2018 Sheet 7 of 35

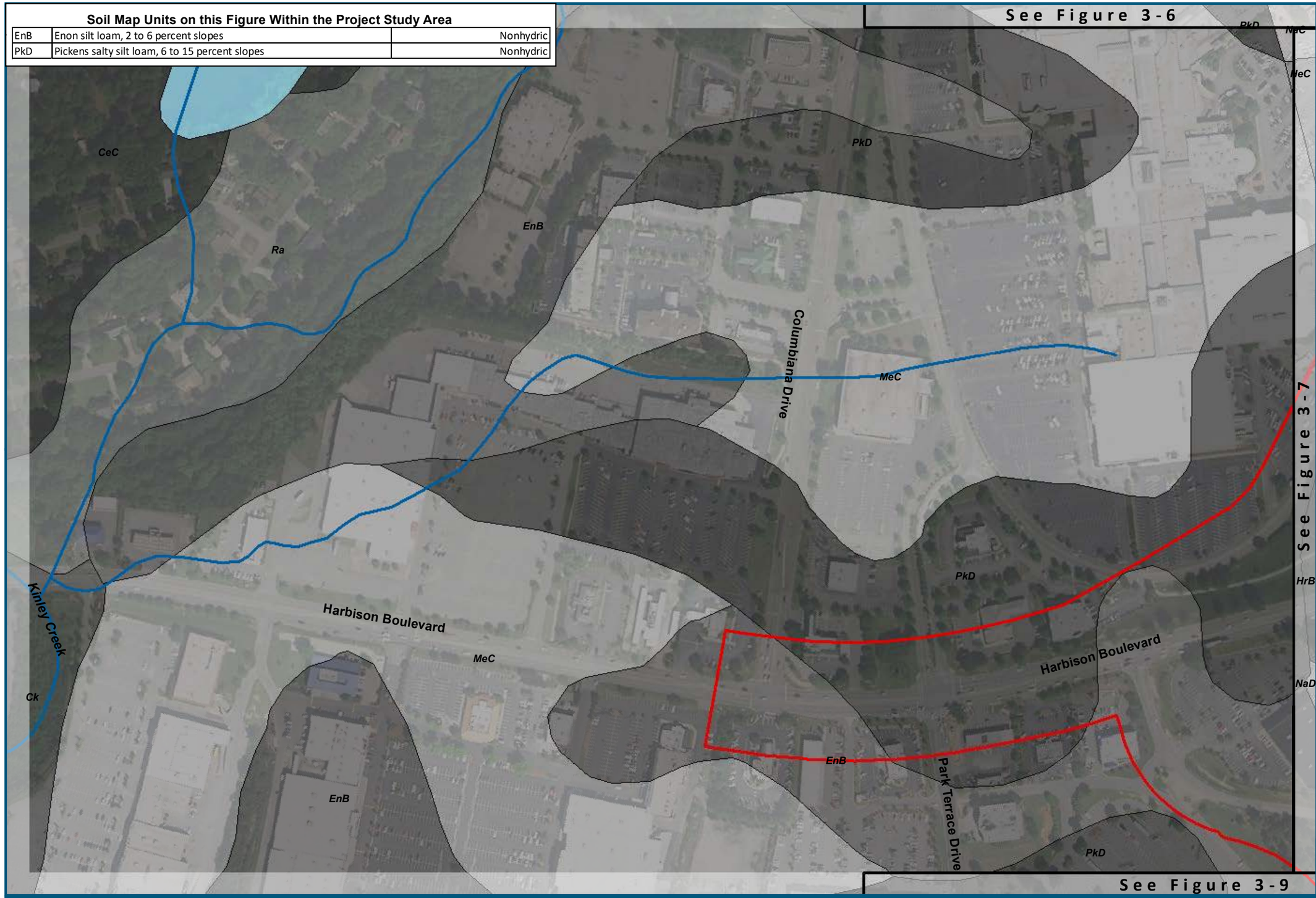
SCDOT South Carolina Department of Transportation

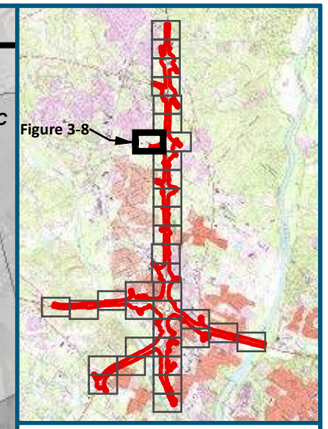
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
PkD	Pickens salty silt loam, 6 to 15 percent slopes	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

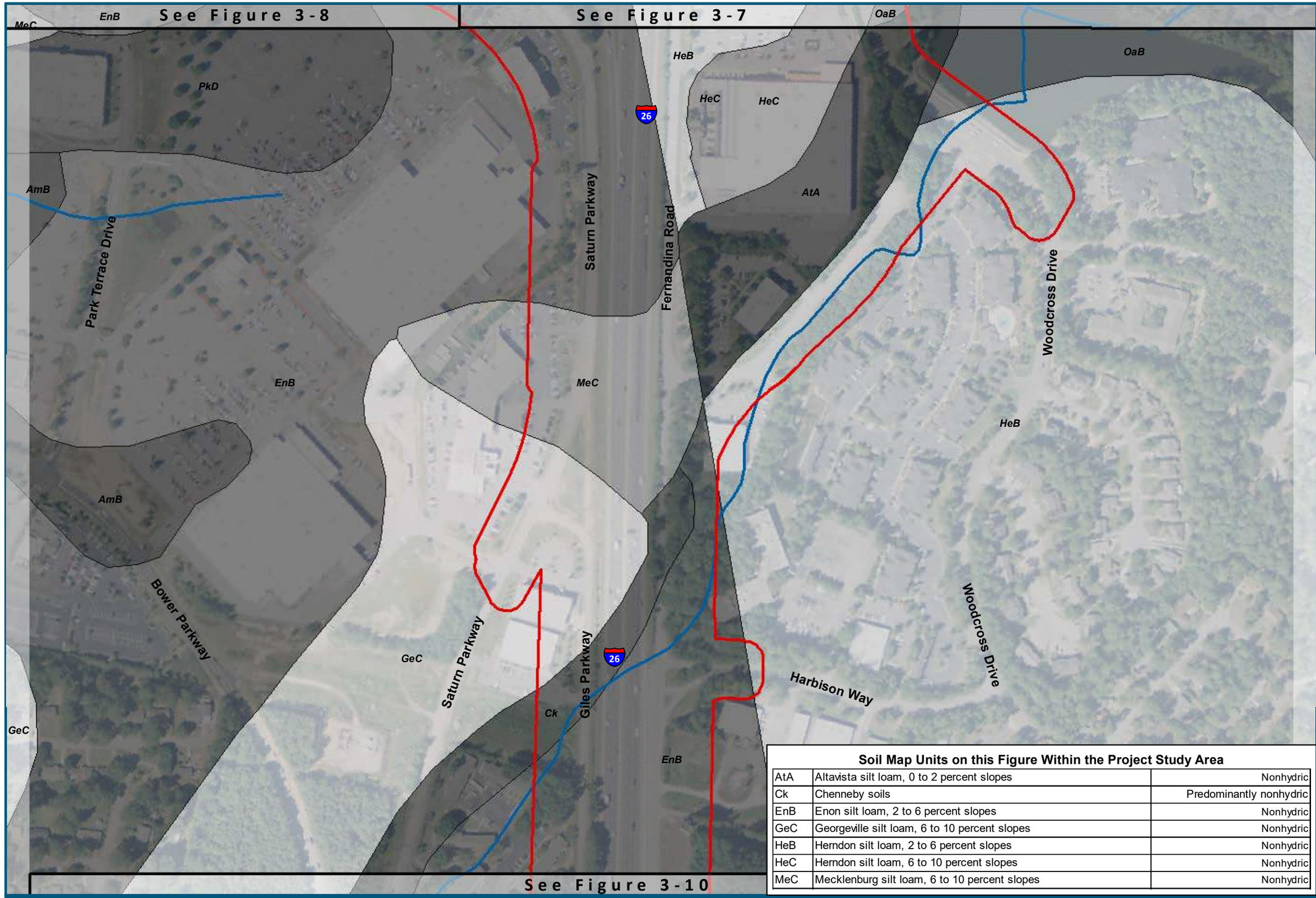
Figure 3-8
NRCS Soil Map Unit Map

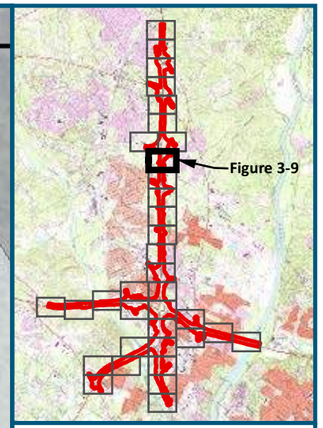
11/15/2018 Sheet 8 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
Ck	Chenneby soils	Predominantly nonhydric
EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
HeC	Herndon silt loam, 6 to 10 percent slopes	Nonhydric
MeC	Mecklenburg silt loam, 6 to 10 percent slopes	Nonhydric

Figure 3-9
NRCS Soil Map Unit Map

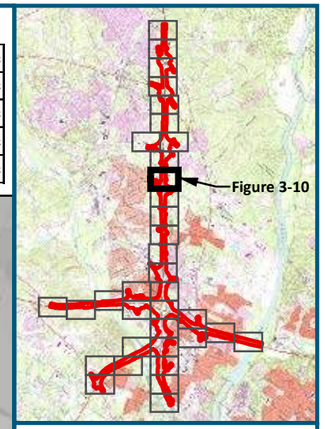
11/15/2018 Sheet 9 of 35

SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS

See Figure 3-9

Soil Map Units on this Figure Within the Project Study Area

EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
MeC	Mecklenburg silt loam, 6 to 10 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric



0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-10
NRCS Soil Map Unit Map

11/15/2018 Sheet 10 of 35

See Figure 3-11

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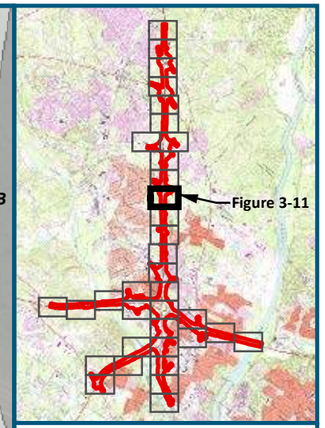
CAROLINA CROSSROADS

See Figure 3-10

MeC
EnB
Jamil Road
26
Piney Grove Road
OaB
HrB
Fernandina Road
Shadowbrook Drive
HeB
Piney Woods Road
GeD
GeC
104
Paris Road
EnB
Jamil Road
Fernandina Road
26
GeC
Steward Drive

See Figure 3-12



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

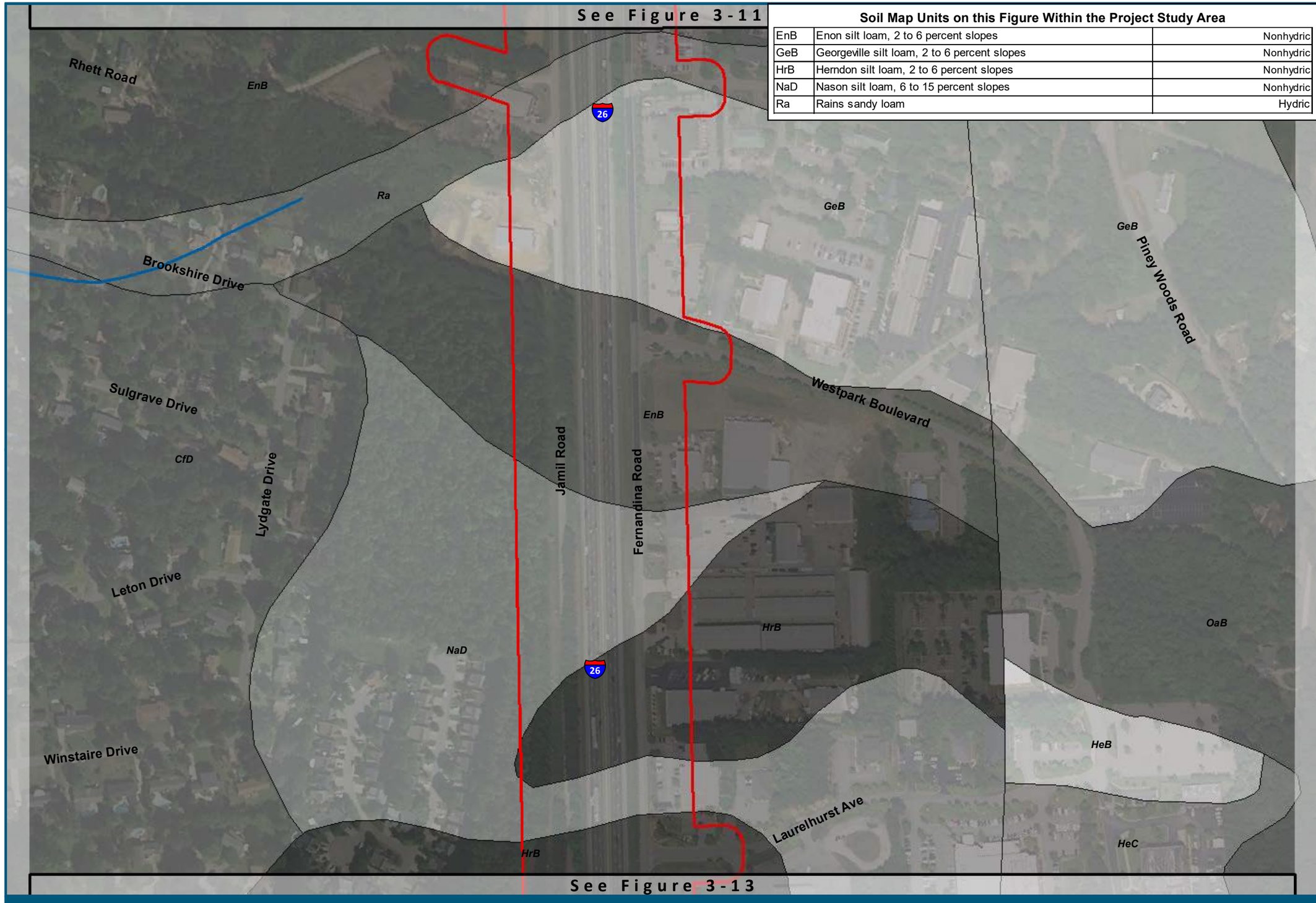
Soil Map Units on this Figure Within the Project Study Area

EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
GeD	Georgeville very fine sandy loam, 10 to 15 percent slopes	Nonhydric
HeB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
HrB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
MeC	Mecklenburg silt loam, 6 to 10 percent slopes	Nonhydric
OaB	Orange loam, 0 to 4 percent slopes	Nonhydric

Figure 3-11
NRCS Soil Map Unit Map

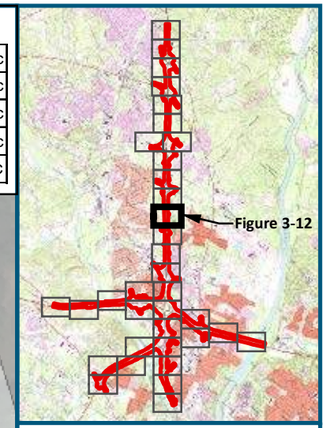
11/15/2018 Sheet 11 of 35

SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS



Soil Map Units on this Figure Within the Project Study Area

EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
GeB	Georgeville silt loam, 2 to 6 percent slopes	Nonhydric
HrB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-12
NRCS Soil Map Unit Map

11/15/2018 Sheet 12 of 35

SCDOT South Carolina Department of Transportation

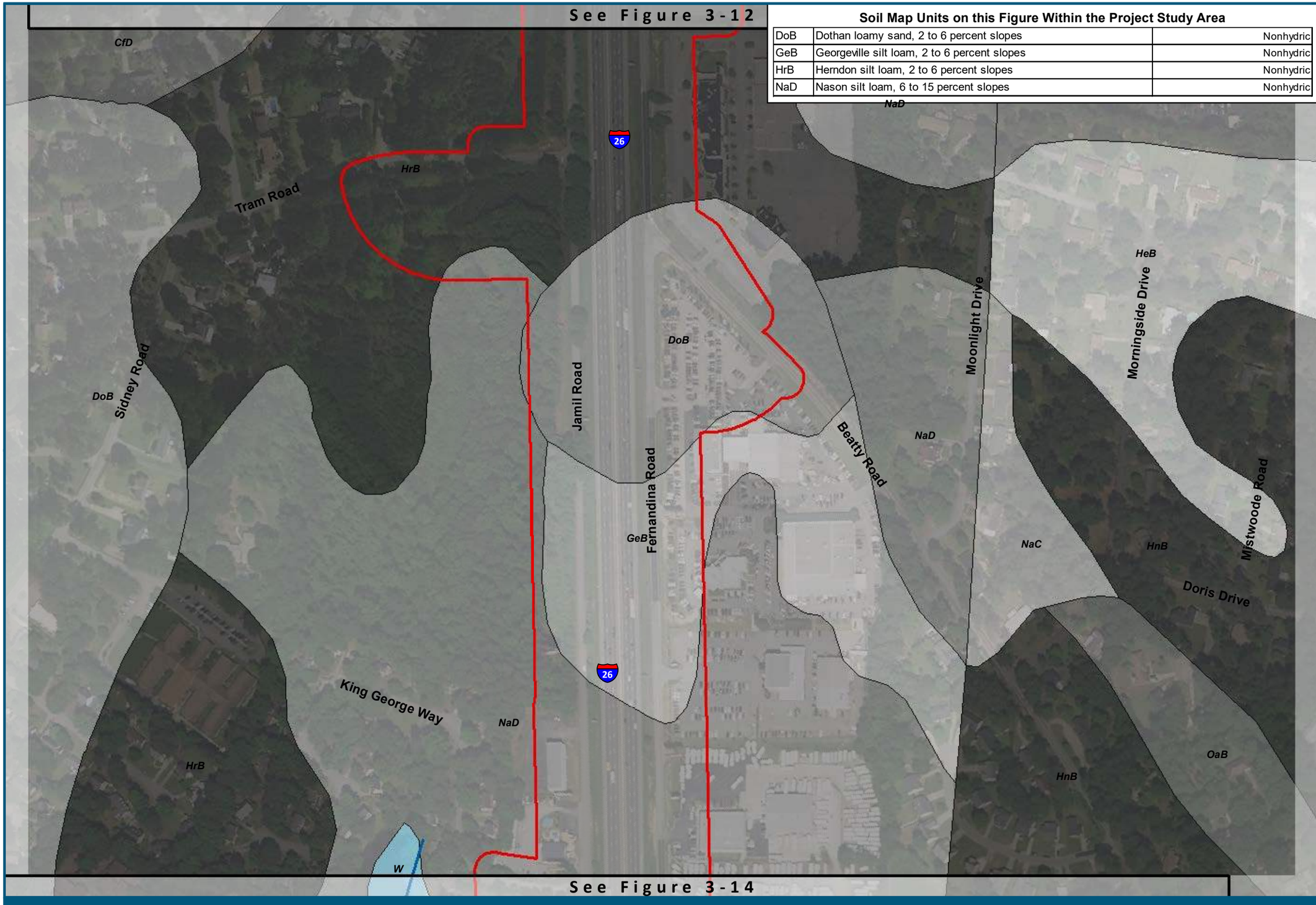
U.S. Department of Transportation Federal Highway Administration

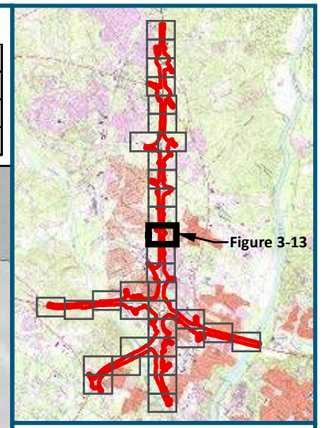
CAROLINA CROSSROADS

See Figure 3-12

Soil Map Units on this Figure Within the Project Study Area

DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
GeB	Georgeville silt loam, 2 to 6 percent slopes	Nonhydric
HrB	Herndon silt loam, 2 to 6 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-13
NRCS Soil Map Unit Map

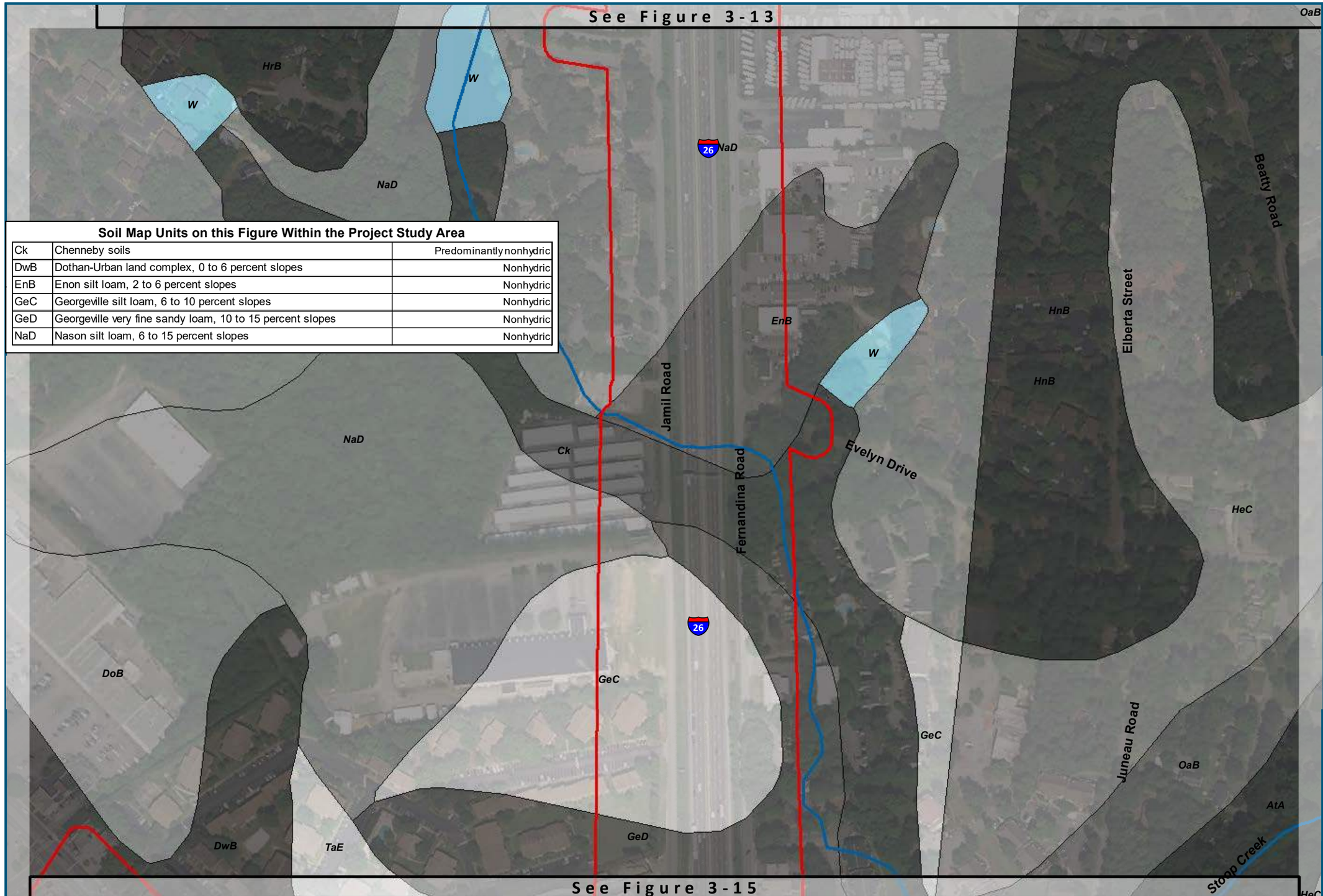
11/15/2018 Sheet 13 of 35

See Figure 3-14

SCDOT South Carolina Department of Transportation

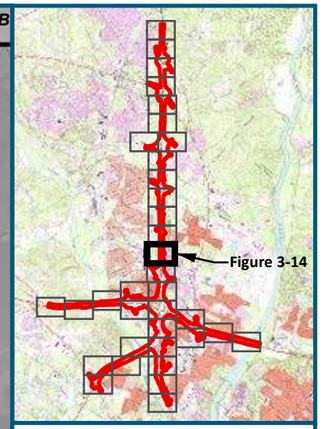
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS



Soil Map Units on this Figure Within the Project Study Area

Ck	Chenneby soils	Predominantly nonhydric
DwB	Dothan-Urban land complex, 0 to 6 percent slopes	Nonhydric
EnB	Enon silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
GeD	Georgeville very fine sandy loam, 10 to 15 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-14
NRCS Soil Map Unit Map

11/15/2018 Sheet 14 of 35

SCDOT South Carolina Department of Transportation

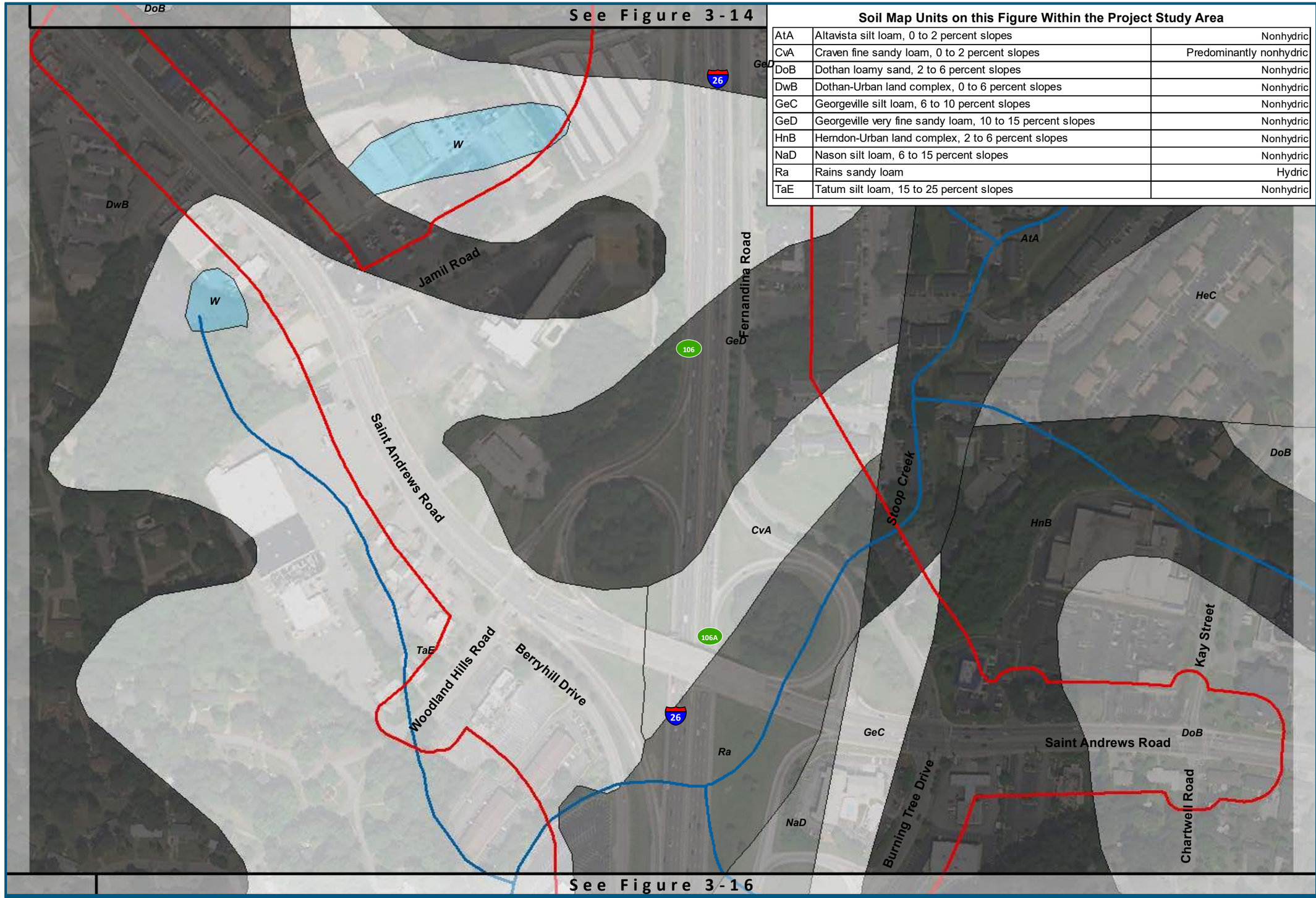
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

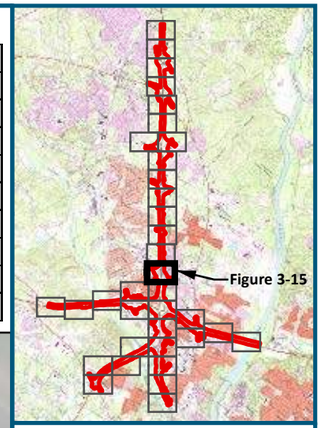
See Figure 3-14

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
CvA	Craven fine sandy loam, 0 to 2 percent slopes	Predominantly nonhydric
DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
DwB	Dothan-Urban land complex, 0 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
GeD	Georgeville very fine sandy loam, 10 to 15 percent slopes	Nonhydric
HnB	Herndon-Urban land complex, 2 to 6 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
TaE	Tatum silt loam, 15 to 25 percent slopes	Nonhydric



See Figure 3-16



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-15
NRCS Soil Map Unit Map

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SCDOT South Carolina Department of Transportation

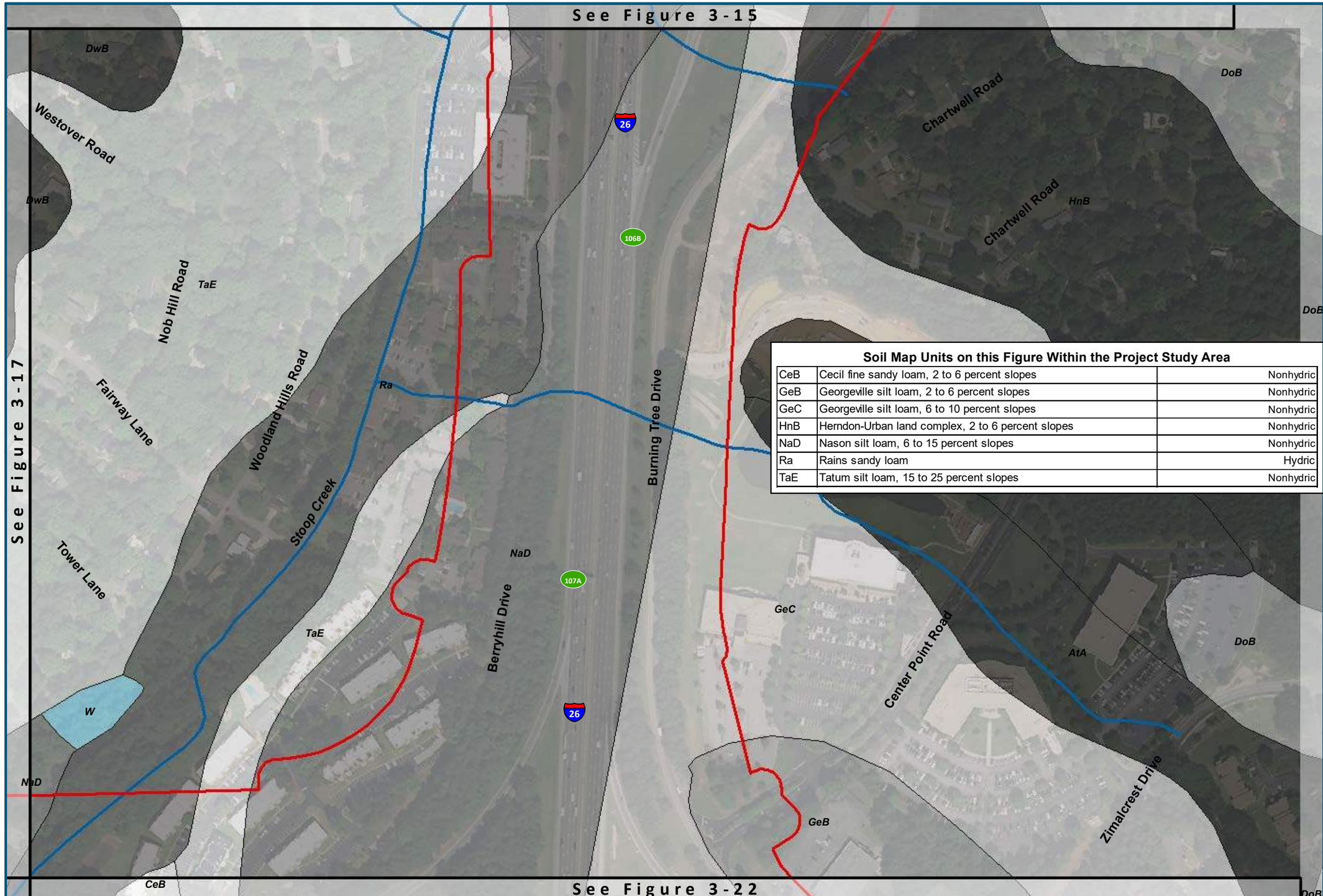
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 3-15

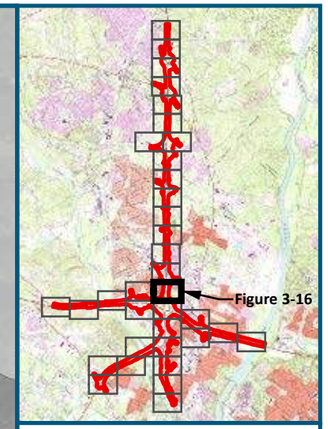
See Figure 3-17

See Figure 3-22



Soil Map Units on this Figure Within the Project Study Area

CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
GeB	Georgeville silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
HnB	Herndon-Urban land complex, 2 to 6 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
TaE	Tatum silt loam, 15 to 25 percent slopes	Nonhydric



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-16
NRCS Soil Map Unit Map

11/15/2018 Sheet 16 of 35

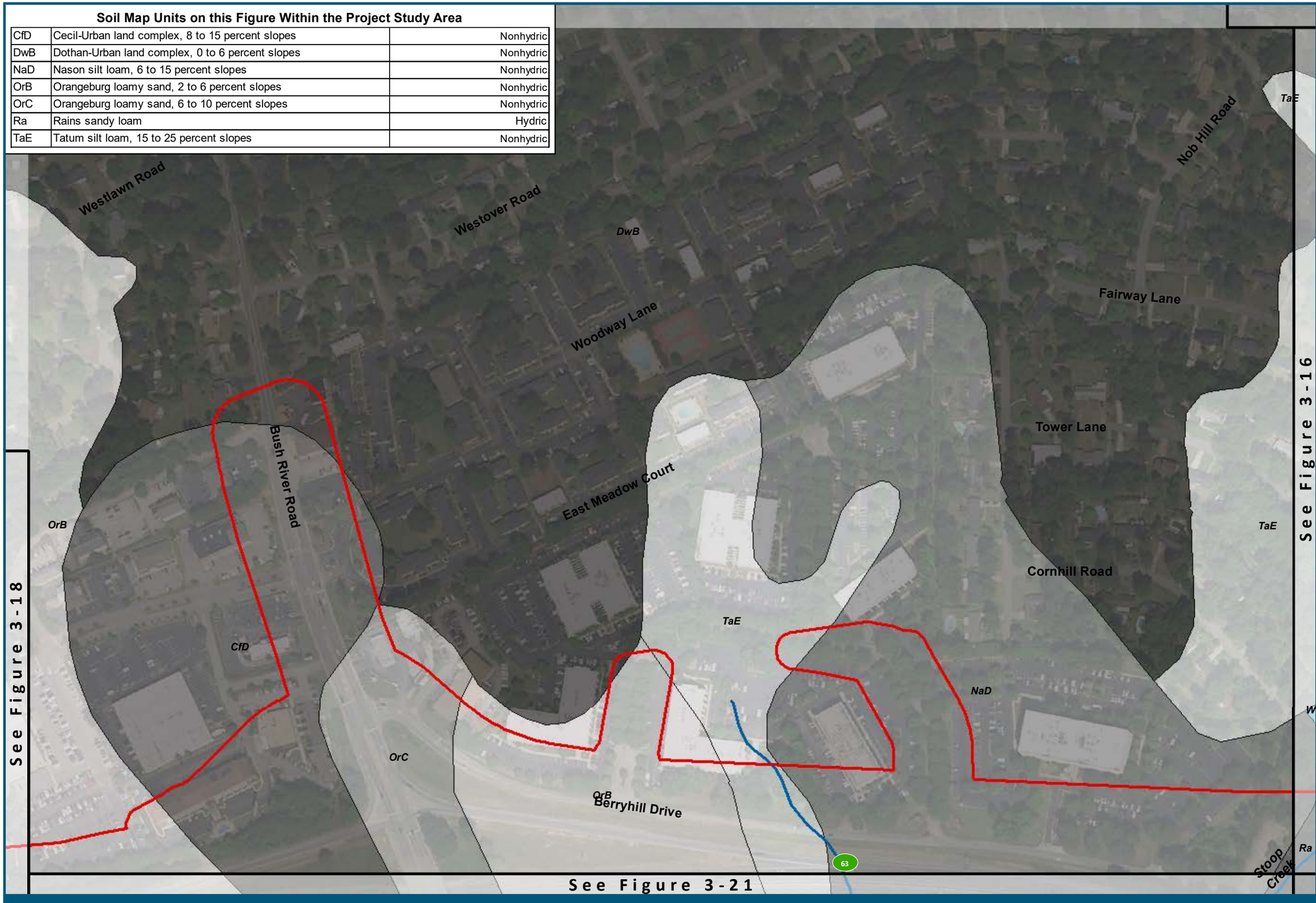
SCDOT South Carolina Department of Transportation

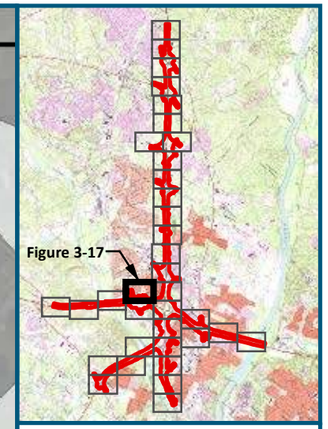
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

CfD	Cecil-Urban land complex, 8 to 15 percent slopes	Nonhydric
DwB	Dothan-Urban land complex, 0 to 6 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
OrB	Orangeburg loamy sand, 2 to 6 percent slopes	Nonhydric
OrC	Orangeburg loamy sand, 6 to 10 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
TaE	Tatum silt loam, 15 to 25 percent slopes	Nonhydric





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-17
NRCS Soil Map Unit Map

11/15/2018 Sheet 17 of 35

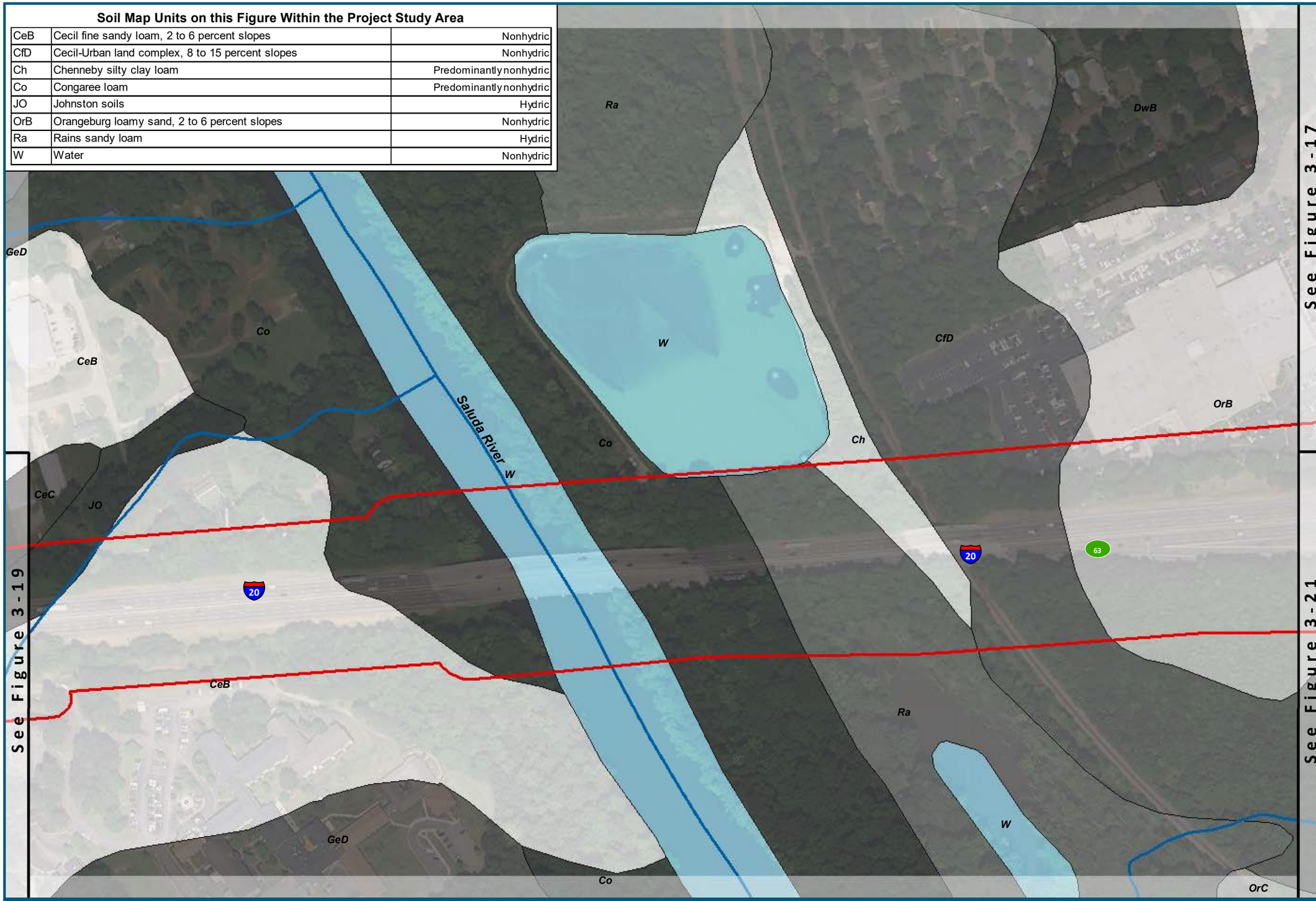
SCDOT South Carolina Department of Transportation

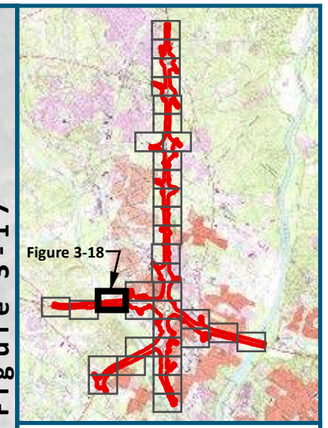
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
CfD	Cecil-Urban land complex, 8 to 15 percent slopes	Nonhydric
Ch	Chenneby silty clay loam	Predominantly nonhydric
Co	Congaree loam	Predominantly nonhydric
JO	Johnston soils	Hydric
OrB	Orangeburg loamy sand, 2 to 6 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
W	Water	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-18
NRCS Soil Map Unit Map

11/15/2018 Sheet 18 of 35

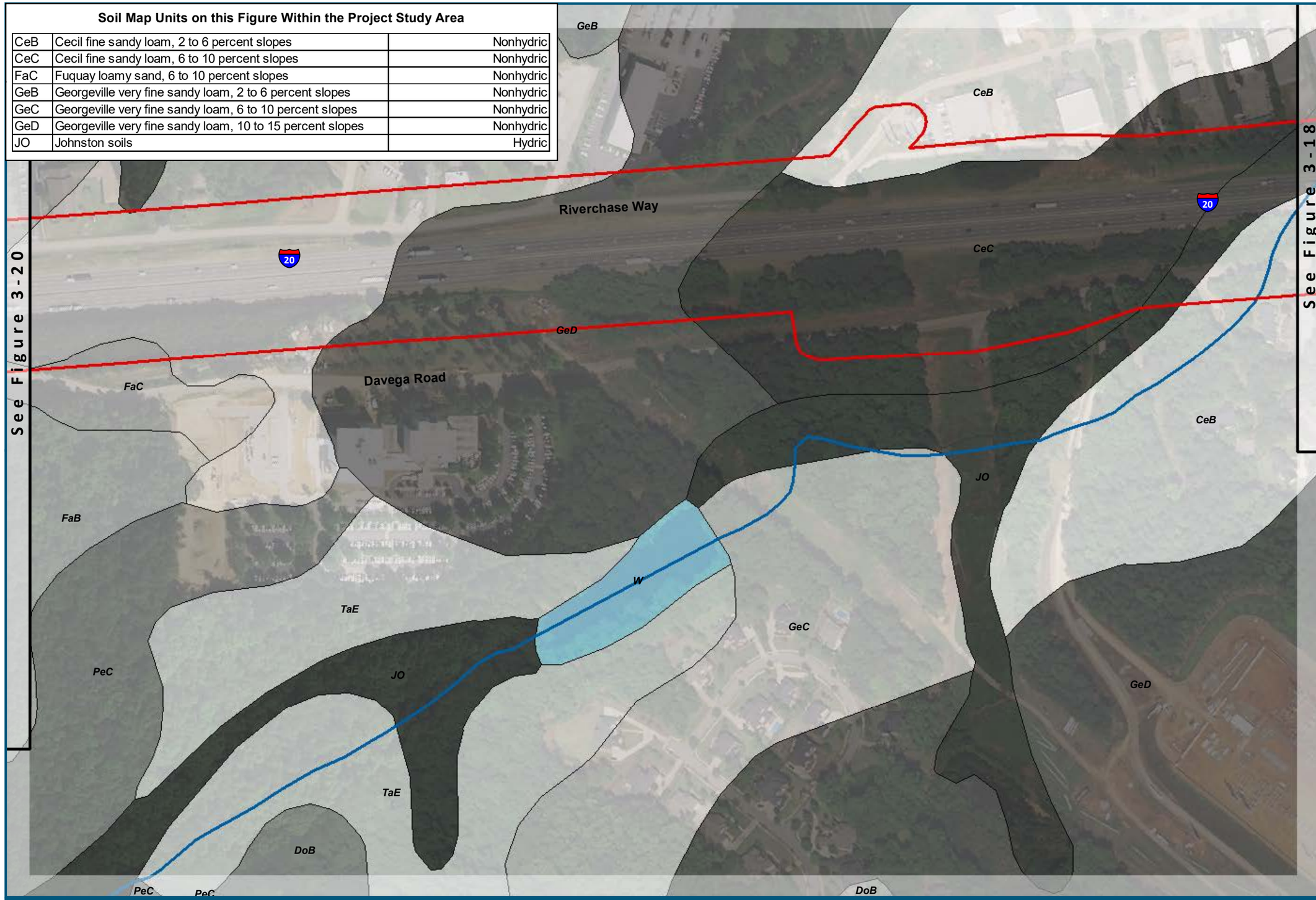
SCDOT South Carolina Department of Transportation

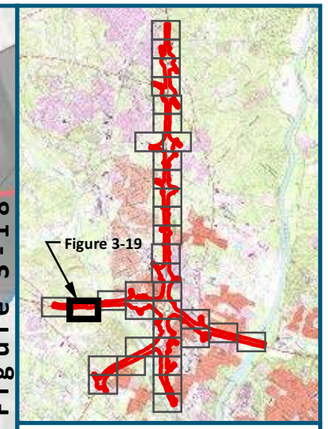
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Nonhydric
FaC	Fuquay loamy sand, 6 to 10 percent slopes	Nonhydric
GeB	Georgeville very fine sandy loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville very fine sandy loam, 6 to 10 percent slopes	Nonhydric
GeD	Georgeville very fine sandy loam, 10 to 15 percent slopes	Nonhydric
JO	Johnston soils	Hydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-19
NRCS Soil Map Unit Map

11/15/2018 Sheet 19 of 35

SCDOT South Carolina Department of Transportation

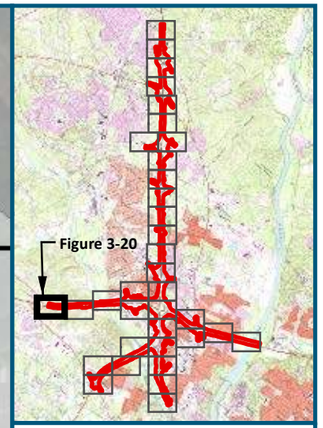
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

FaB	Fuquay loamy sand, 0 to 6 percent slopes	Nonhydric
FaC	Fuquay loamy sand, 6 to 10 percent slopes	Nonhydric
GeB	Georgeville very fine sandy loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville very fine sandy loam, 6 to 10 percent slopes	Nonhydric
GeD	Georgeville very fine sandy loam, 10 to 15 percent slopes	Nonhydric
JO	Johnston soils	Hydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-20
NRCS Soil Map Unit Map

11/15/2018 Sheet 20 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 3-17

See Figure 3-18

See Figure 3-22

20

20

OrB

OrB

NaD

CfD

OrC

Ra

Bush River Road

Rockland Road

TaE

Ra

W

CeB

Stoop Creek

TaE

GoA

OrC

Independence Avenue

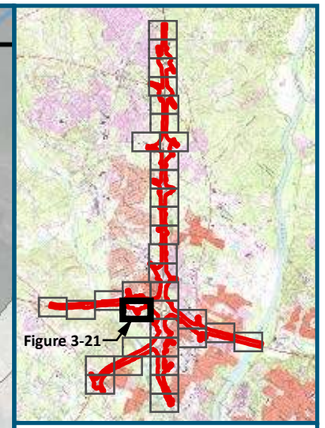
EnB

EnB

Nottingwood Drive

CeB

EnB



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Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

CfD	Cecil-Urban land complex, 8 to 15 percent slopes	Nonhydric
GoA	Goldsboro sandy loam, 0 to 2 percent slopes	Predominantly nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
OrB	Orangeburg loamy sand, 2 to 6 percent slopes	Nonhydric
OrC	Orangeburg loamy sand, 6 to 10 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
TaE	Tatum silt loam, 15 to 25 percent slopes	Nonhydric

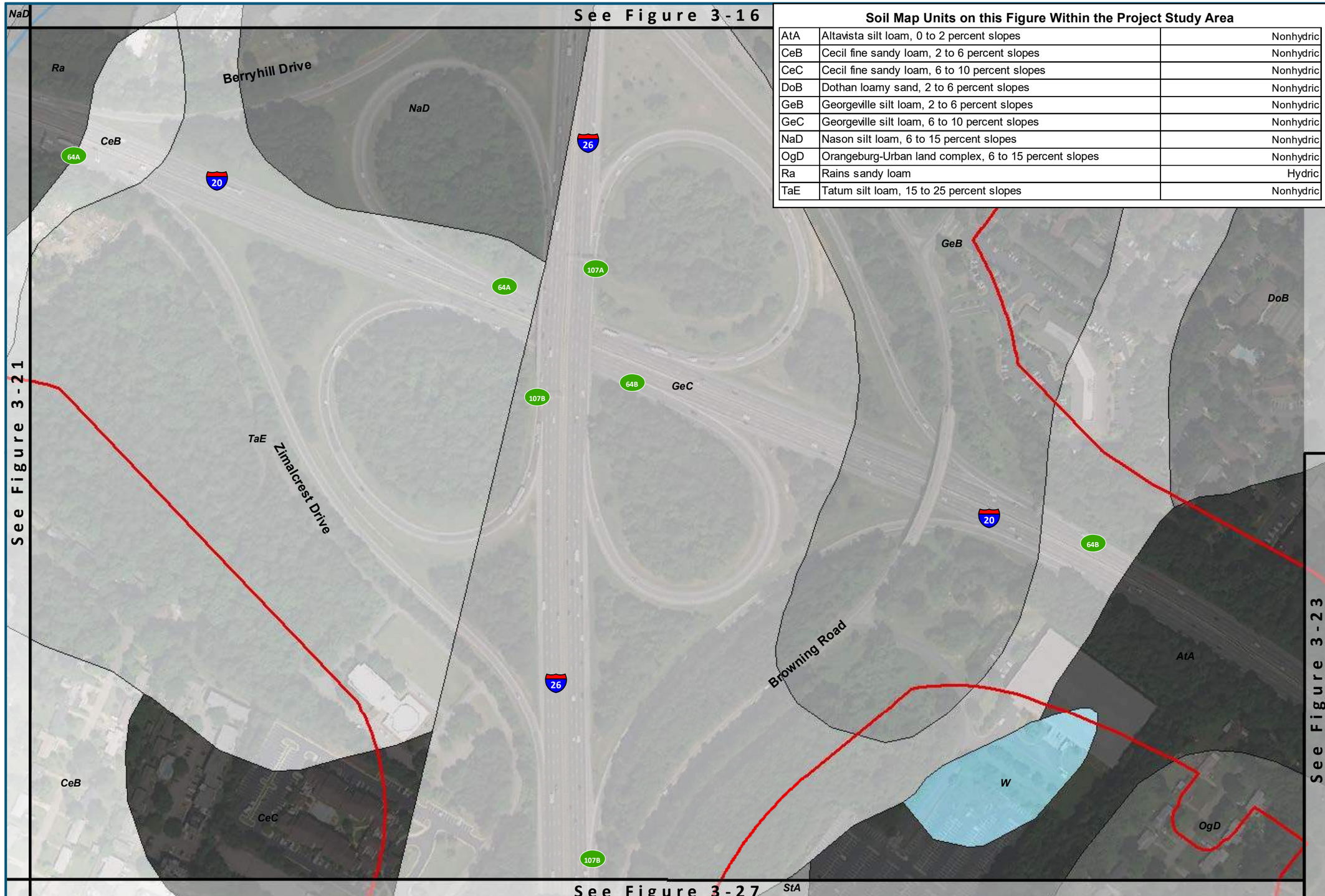
Figure 3-21
NRCS Soil Map Unit Map

11/15/2018 Sheet 21 of 35

SCDOT South Carolina Department of Transportation

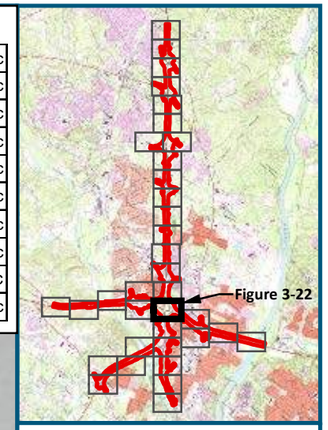
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS



Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Nonhydric
DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
GeB	Georgeville silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
NaD	Nason silt loam, 6 to 15 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric
Ra	Rains sandy loam	Hydric
TaE	Tatum silt loam, 15 to 25 percent slopes	Nonhydric



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Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

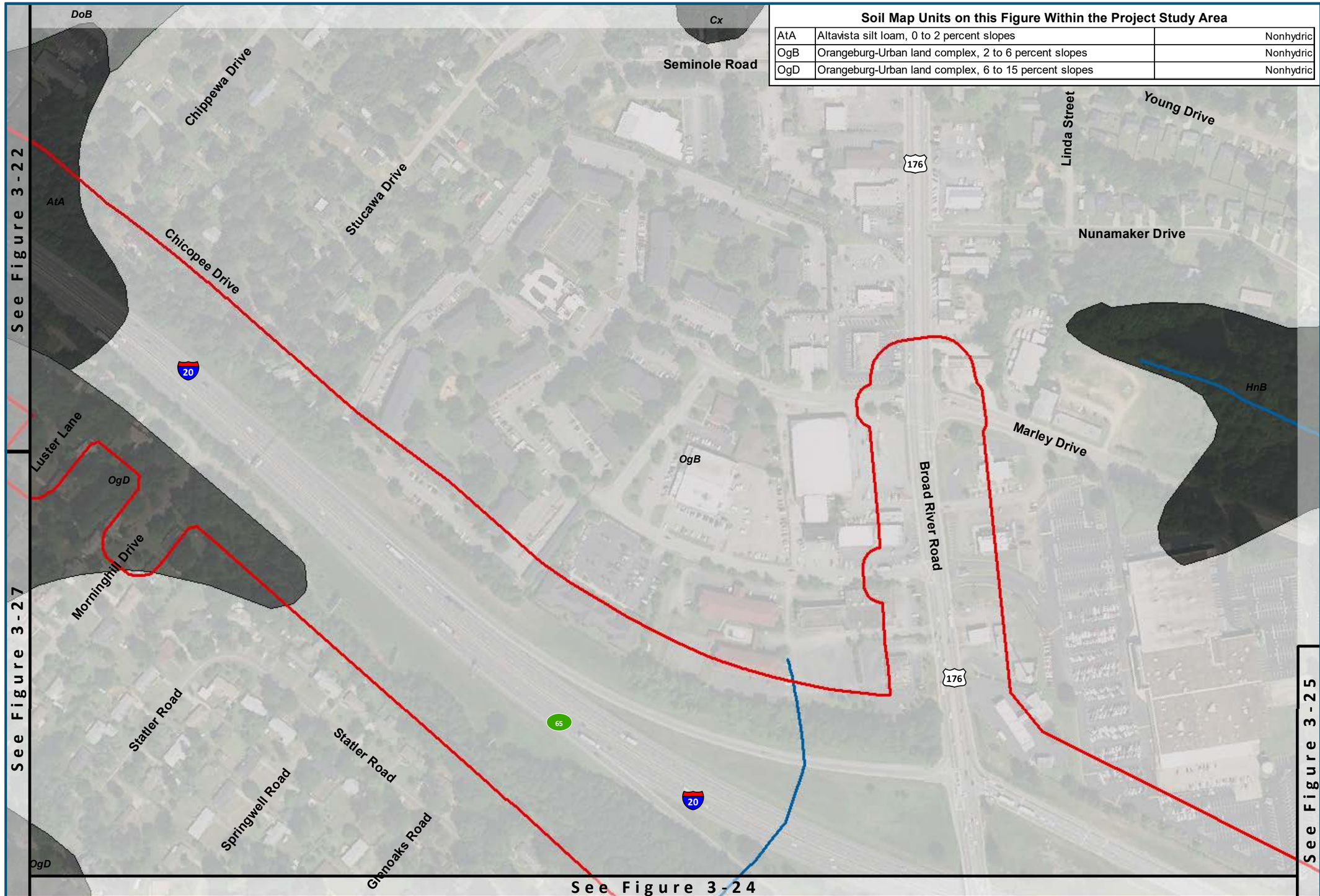
Figure 3-22
NRCS Soil Map Unit Map

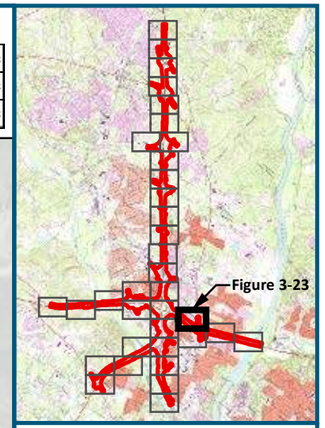
11/15/2018 Sheet 22 of 35

SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric





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Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-23
NRCS Soil Map Unit Map

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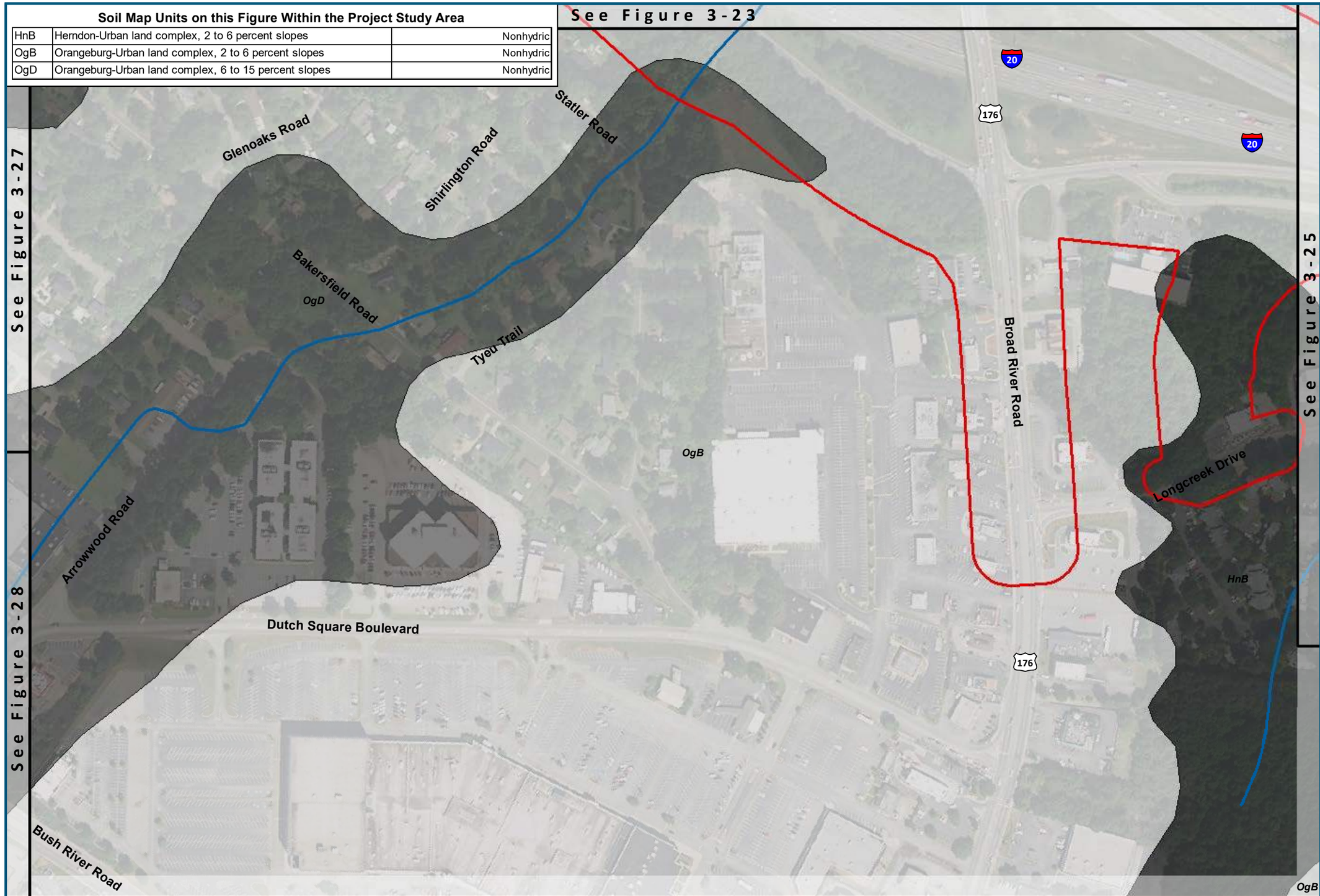
SCDOT South Carolina Department of Transportation

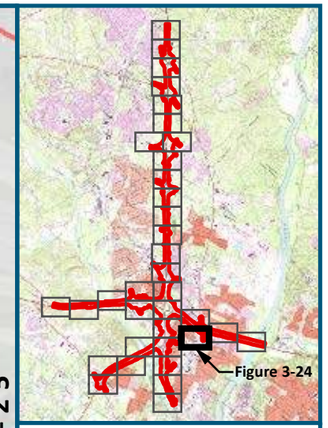
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

HnB	Herndon-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-24
NRCS Soil Map Unit Map

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SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS

See Figure 3-23

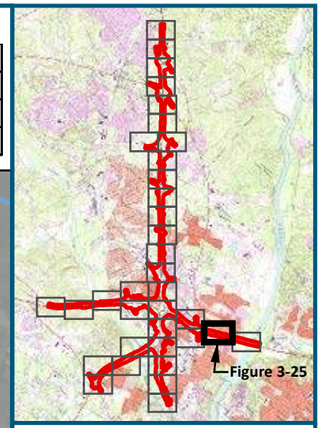
See Figure 3-24

See Figure 3-26

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
HnB	Herndon-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
StA	State sandy loam, 0 to 2 percent slopes	Nonhydric

Sapling Drive
Marley Drive
Ripplerock Road
Emerald Valley Road
OgB
20
Garner Lane
65
Spotswood Drive
HnB
AtA
20
Longcreek Drive
StA
OgB
NaE



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-25
NRCS Soil Map Unit Map

11/15/2018 Sheet 25 of 35

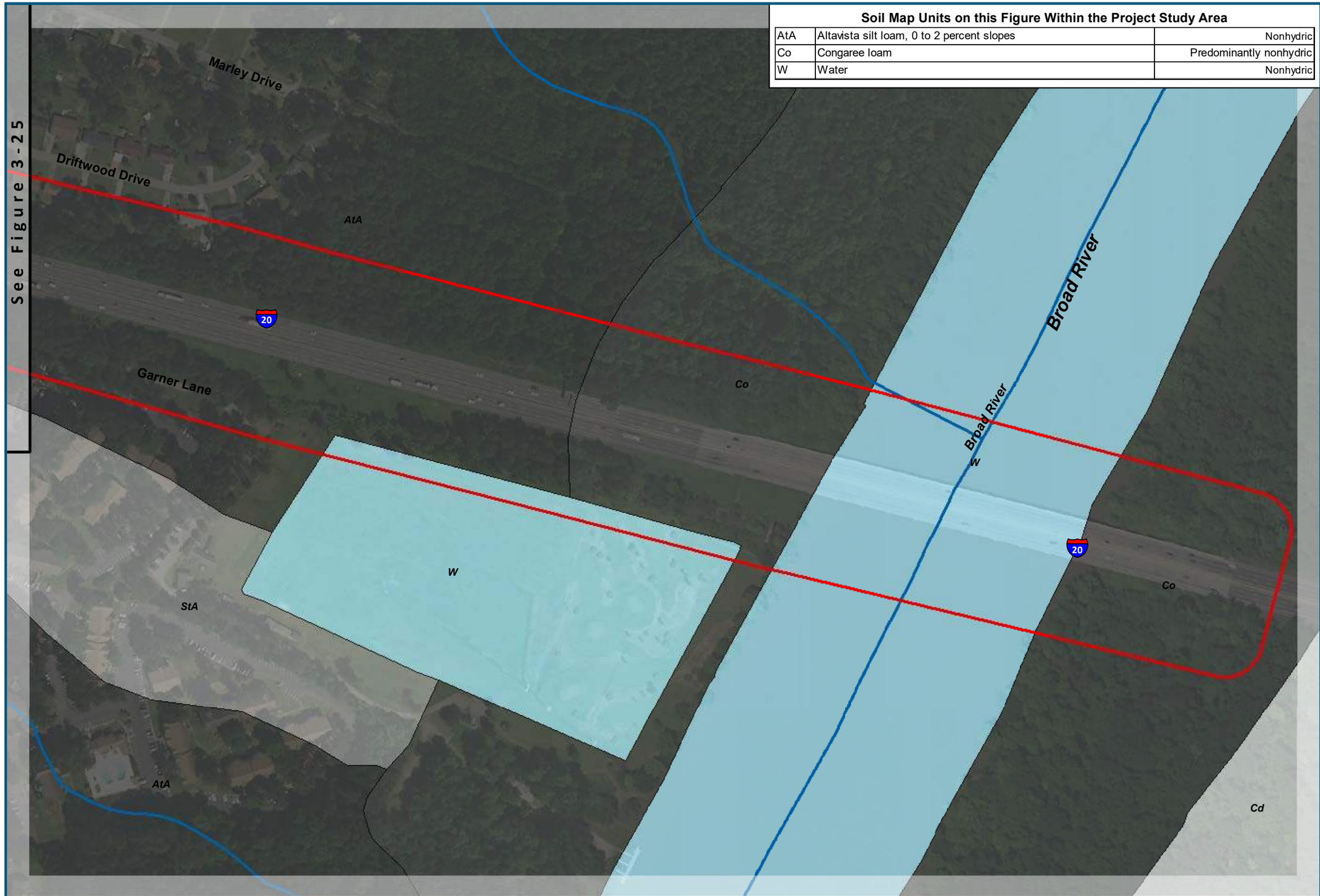
SCDOT South Carolina Department of Transportation

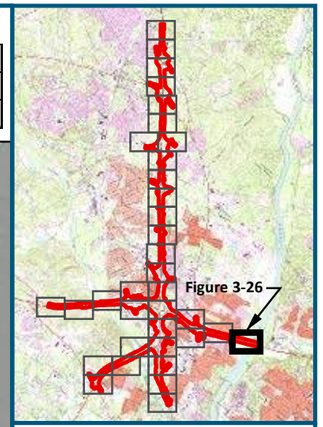
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

AtA	Altavista silt loam, 0 to 2 percent slopes	Nonhydric
Co	Congaree loam	Predominantly nonhydric
W	Water	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-26
NRCS Soil Map Unit Map

11/15/2018 Sheet 26 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 3-22

Soil Map Units on this Figure Within the Project Study Area

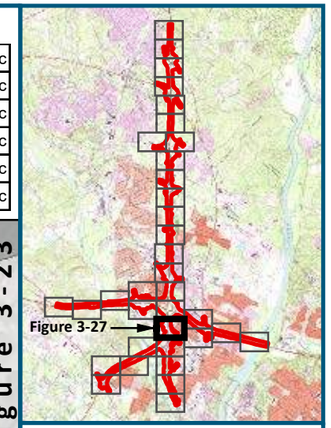
CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
GeB	Georgeville silt loam, 2 to 6 percent slopes	Nonhydric
GeC	Georgeville silt loam, 6 to 10 percent slopes	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric
StA	State sandy loam, 0 to 2 percent slopes	Nonhydric



See Figure 3-23

See Figure 3-24

See Figure 3-28



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-27
NRCS Soil Map Unit Map

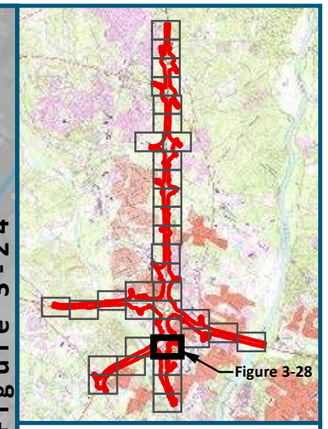
11/15/2018 Sheet 27 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric
Sm	Smithboro loam	Predominantly nonhydric
StA	State sandy loam, 0 to 2 percent slopes	Nonhydric
To	Toccoa loam	Nonhydric
W	Water	Nonhydric

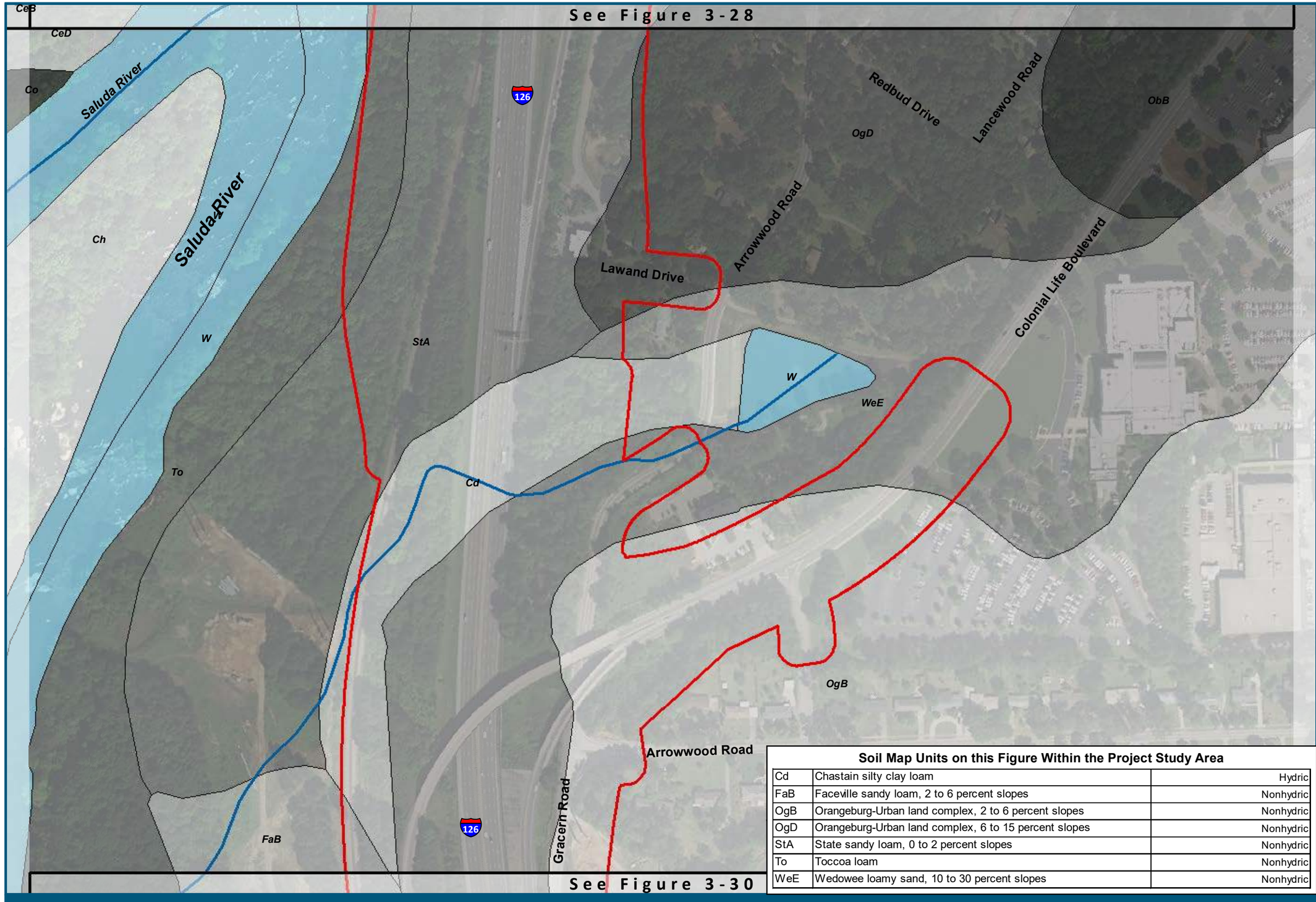
Figure 3-28
NRCS Soil Map Unit Map

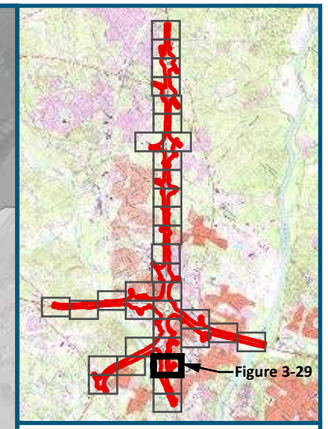
11/15/2018 Sheet 28 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

Cd	Chastain silty clay loam	Hydric
FaB	Faceville sandy loam, 2 to 6 percent slopes	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
OgD	Orangeburg-Urban land complex, 6 to 15 percent slopes	Nonhydric
StA	State sandy loam, 0 to 2 percent slopes	Nonhydric
To	Toccoa loam	Nonhydric
WeE	Wedowee loamy sand, 10 to 30 percent slopes	Nonhydric

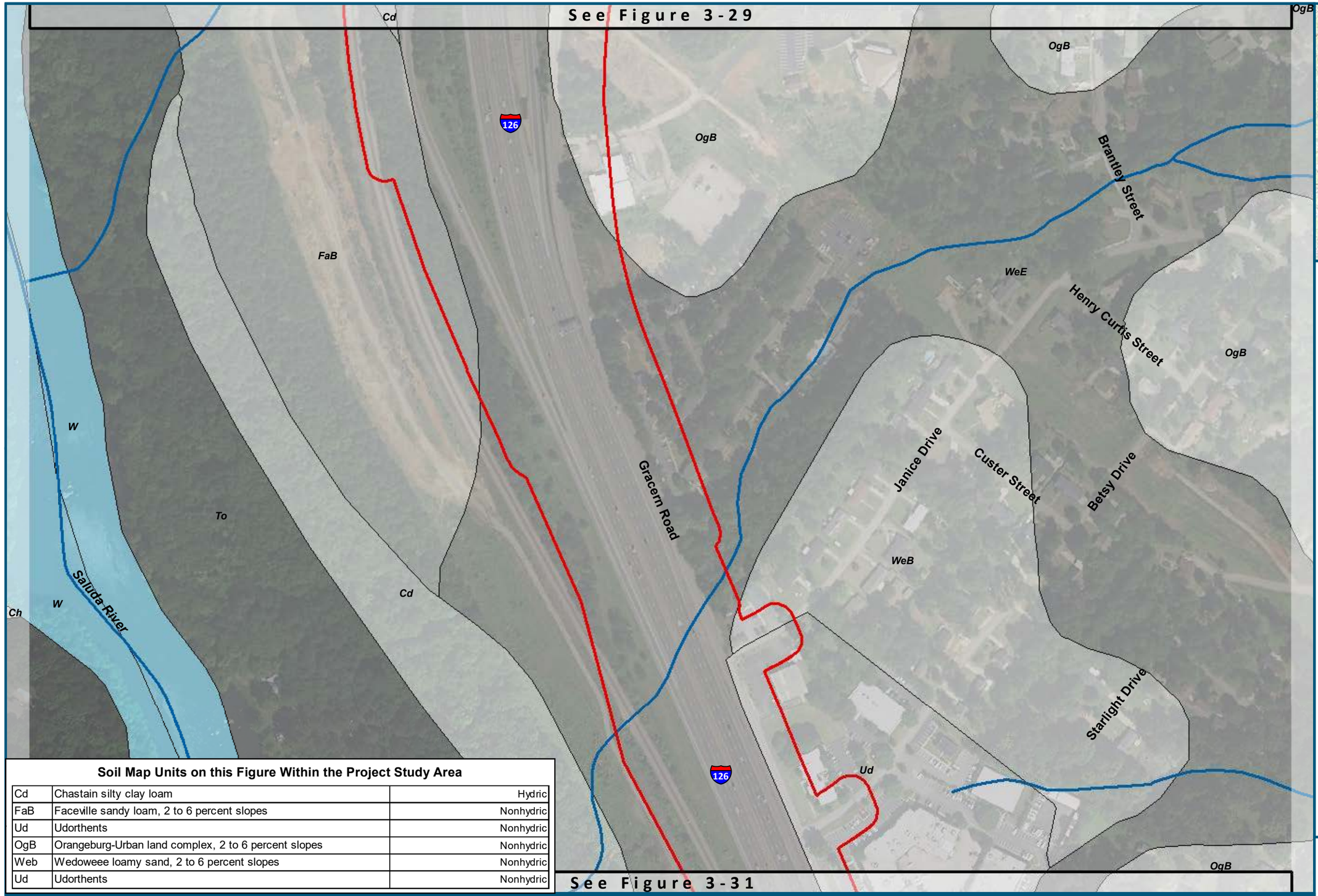
Figure 3-29
NRCS Soil Map Unit Map

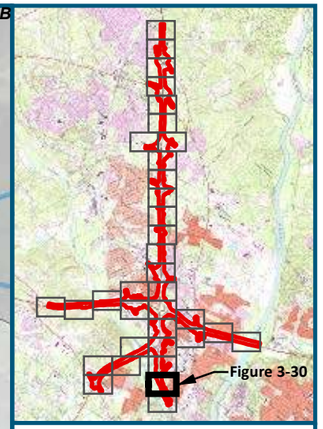
11/15/2018 Sheet 29 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO)
Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

Cd	Chastain silty clay loam	Hydric
FaB	Faceville sandy loam, 2 to 6 percent slopes	Nonhydric
Ud	Udorthents	Nonhydric
OgB	Orangeburg-Urban land complex, 2 to 6 percent slopes	Nonhydric
Web	Wedoweee loamy sand, 2 to 6 percent slopes	Nonhydric
Ud	Udorthents	Nonhydric

Figure 3-30
NRCS Soil Map Unit Map

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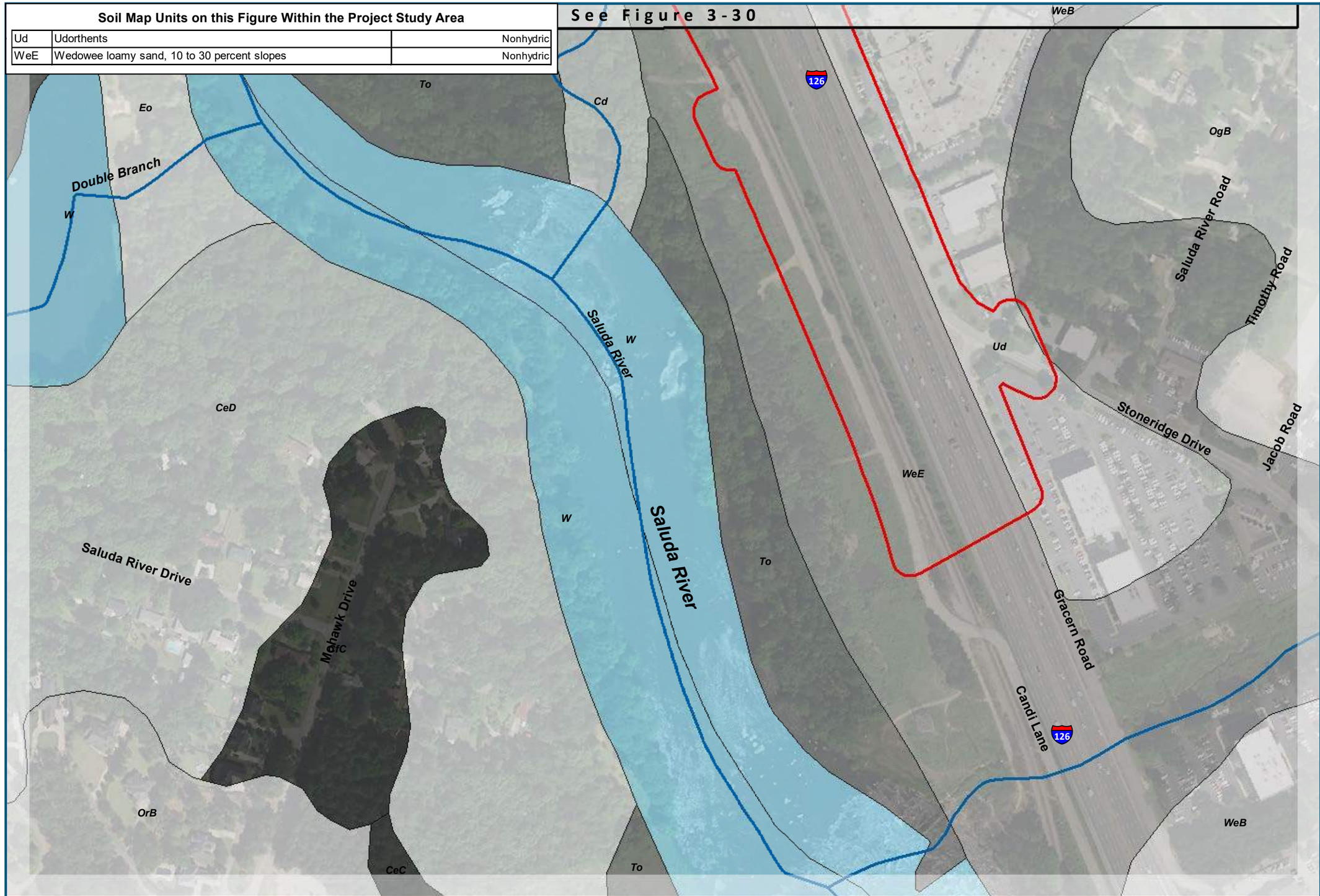
SCDOT South Carolina Department of Transportation

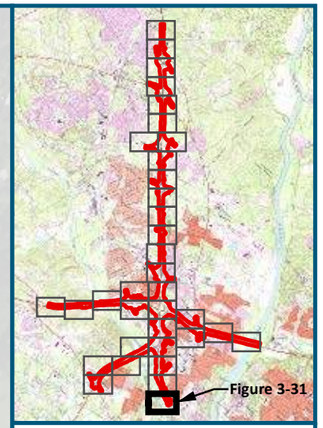
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

Ud	Udorthents	Nonhydric
WeE	Wedowee loamy sand, 10 to 30 percent slopes	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-31
NRCS Soil Map Unit Map

11/15/2018 Sheet 31 of 35

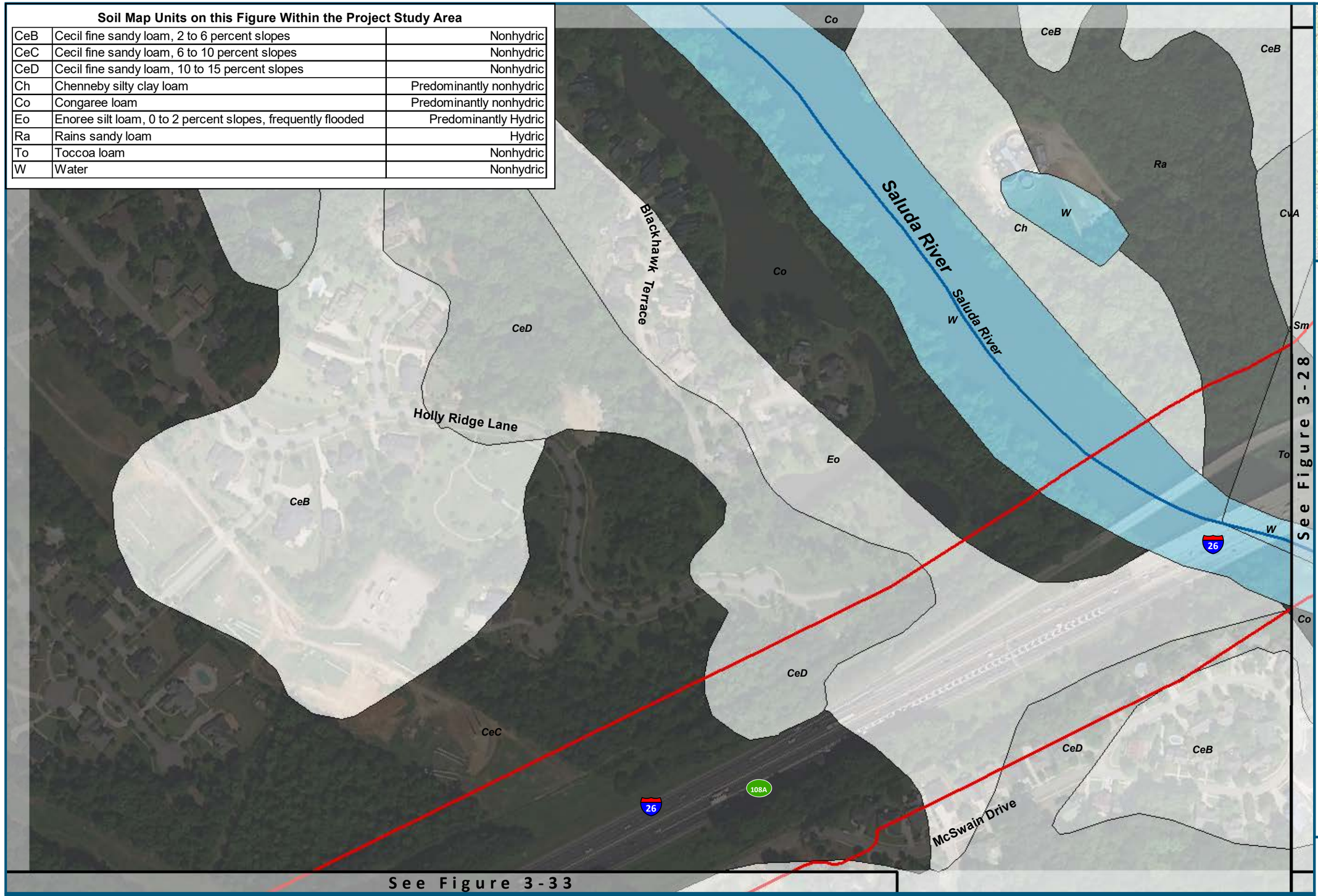
SCDOT South Carolina Department of Transportation

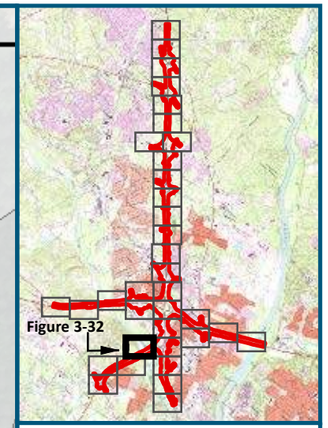
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Nonhydric
CeD	Cecil fine sandy loam, 10 to 15 percent slopes	Nonhydric
Ch	Chenneby silty clay loam	Predominantly nonhydric
Co	Congaree loam	Predominantly nonhydric
Eo	Enoree silt loam, 0 to 2 percent slopes, frequently flooded	Predominantly Hydric
Ra	Rains sandy loam	Hydric
To	Toccoa loam	Nonhydric
W	Water	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

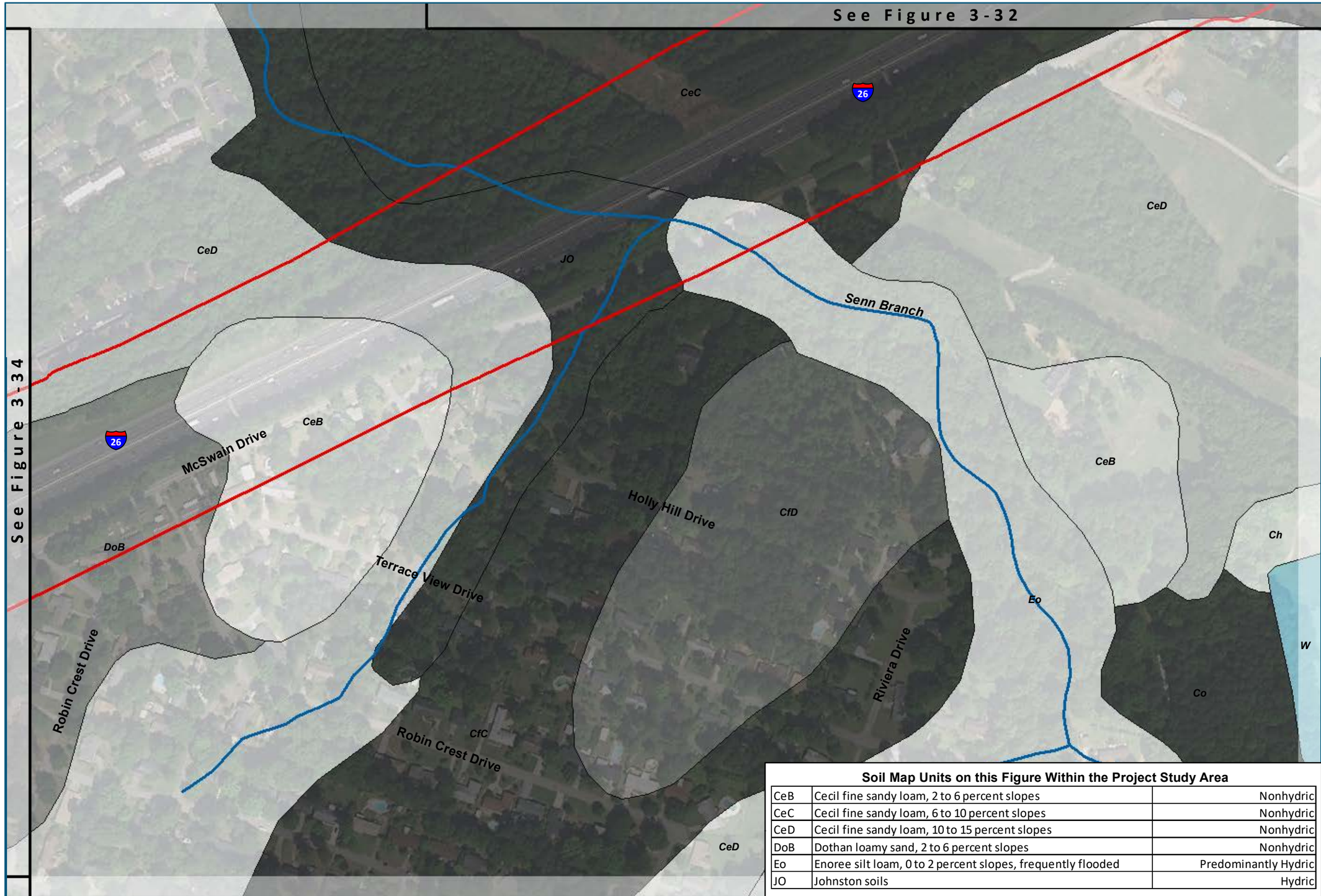
Figure 3-32
NRCS Soil Map Unit Map

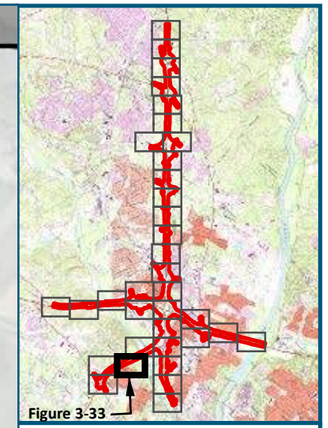
11/15/2018 Sheet 32 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

CeB	Cecil fine sandy loam, 2 to 6 percent slopes	Nonhydric
CeC	Cecil fine sandy loam, 6 to 10 percent slopes	Nonhydric
CeD	Cecil fine sandy loam, 10 to 15 percent slopes	Nonhydric
DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
Eo	Enoree silt loam, 0 to 2 percent slopes, frequently flooded	Predominantly Hydric
JO	Johnston soils	Hydric

Figure 3-33
NRCS Soil Map Unit Map

11/15/2018 Sheet 33 of 35

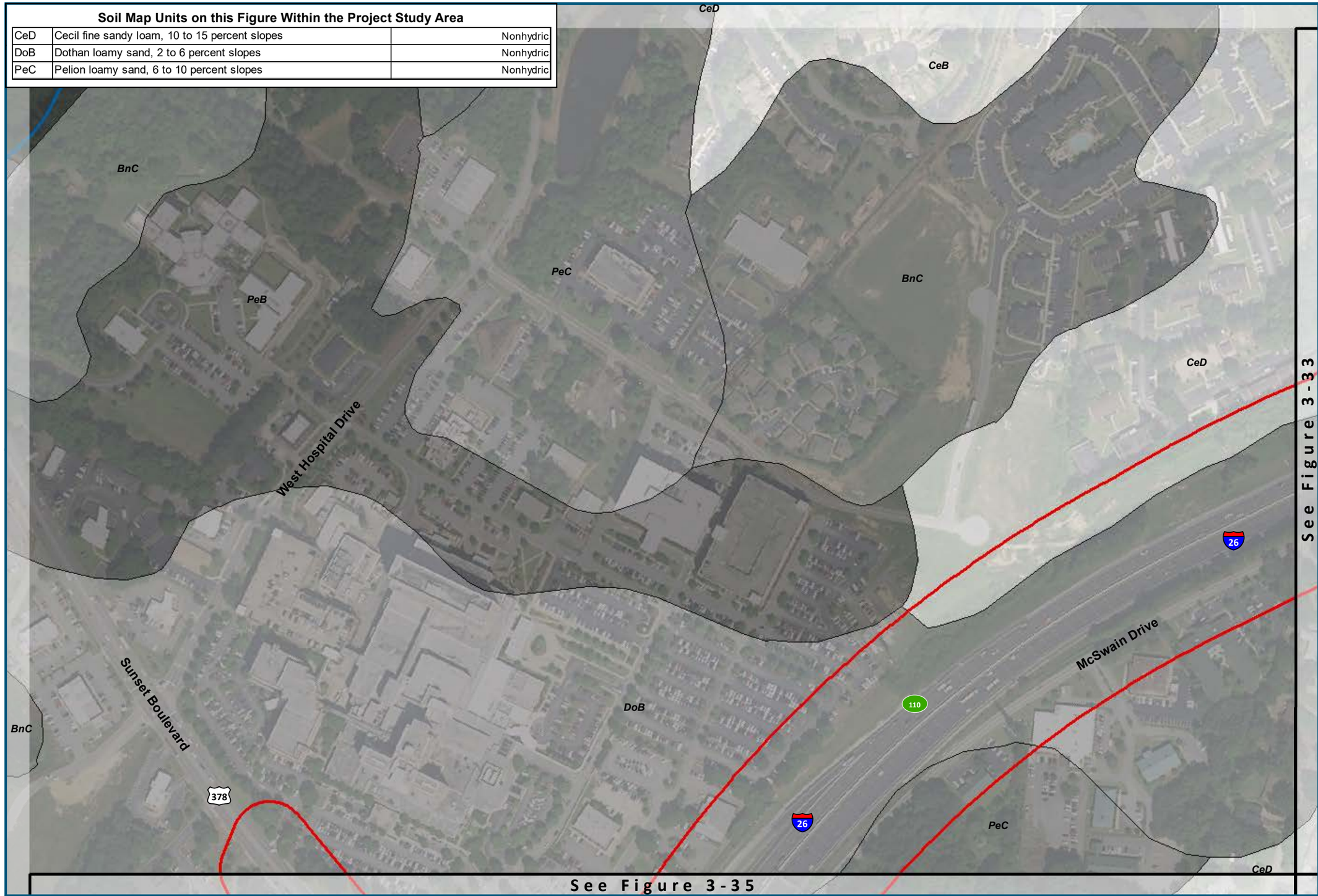
SCDOT South Carolina Department of Transportation

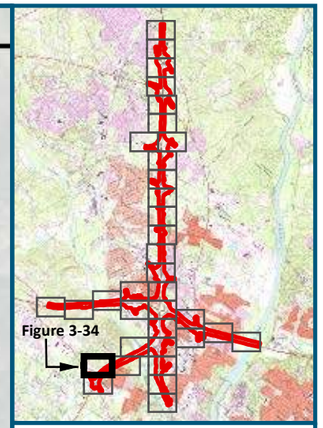
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Soil Map Units on this Figure Within the Project Study Area

CeD	Cecil fine sandy loam, 10 to 15 percent slopes	Nonhydric
DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
PeC	Pelion loamy sand, 6 to 10 percent slopes	Nonhydric





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 3-34
NRCS Soil Map Unit Map

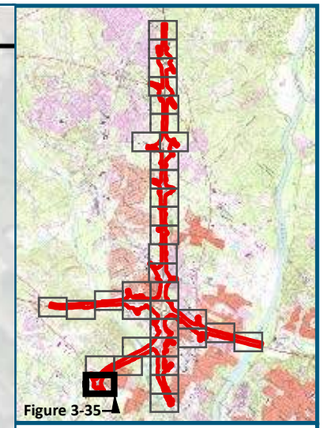
11/15/2018 Sheet 34 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 3-34



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NRCS Soil Survey Geographic (SSURGO) Database [Statewide (2015)]

Legend

- Project Study Area (1,482 acres)
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Soil Map Units on this Figure Within the Project Study Area

DoB	Dothan loamy sand, 2 to 6 percent slopes	Nonhydric
JO	Johnston soils	Hydric
PeC	Pelion loamy sand, 6 to 10 percent slopes	Nonhydric

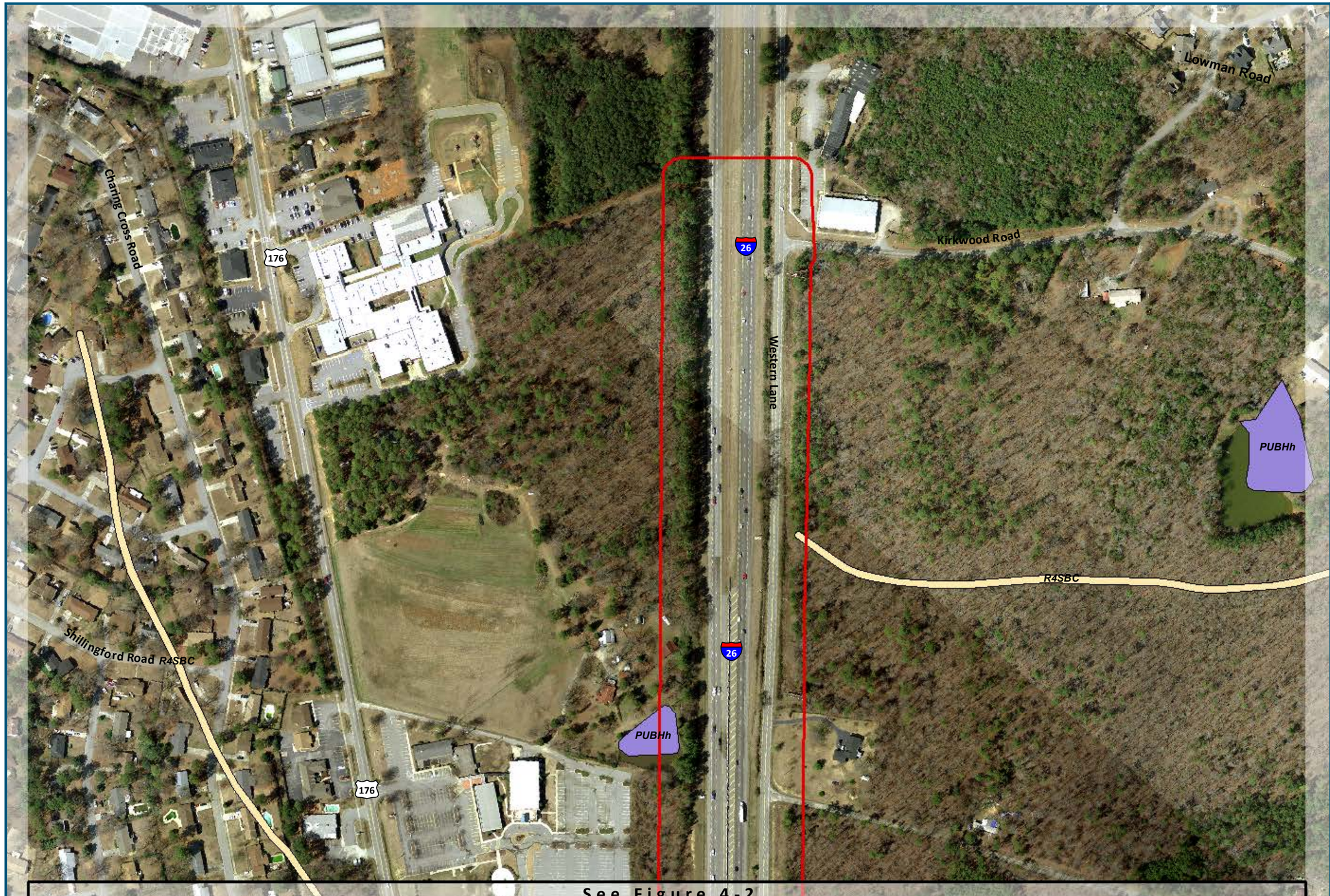
Figure 3-35
NRCS Soil Map Unit Map

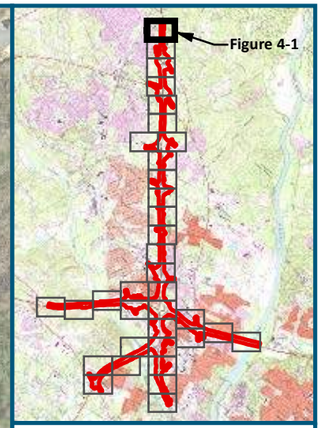
11/15/2018 Sheet 35 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUBHh - Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-1
National Wetland Inventory (NWI) Map

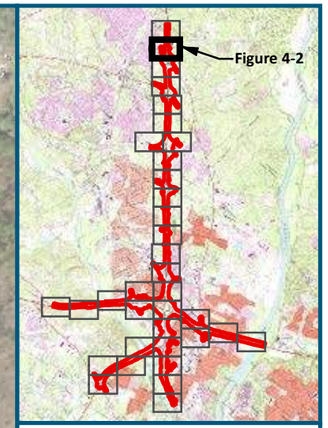
11/15/2018 Sheet 1 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PAB4Kx - Palustrine, Aquatic Bed, Floating Vascular, Artificially Flooded,Excavated
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-2
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 2 of 35

SCDOT South Carolina Department of Transportation

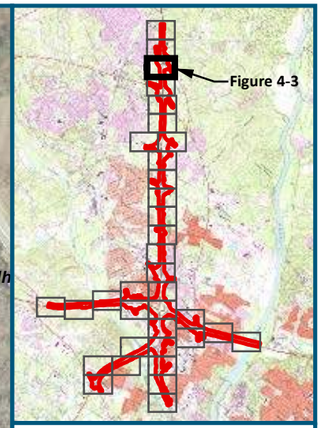
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-2



See Figure 4-4



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PEM1Fx - Palustrine, Emergent, Persistent, Semipermanently Flooded, Excavated

Figure 4-3
National Wetland Inventory (NWI) Map

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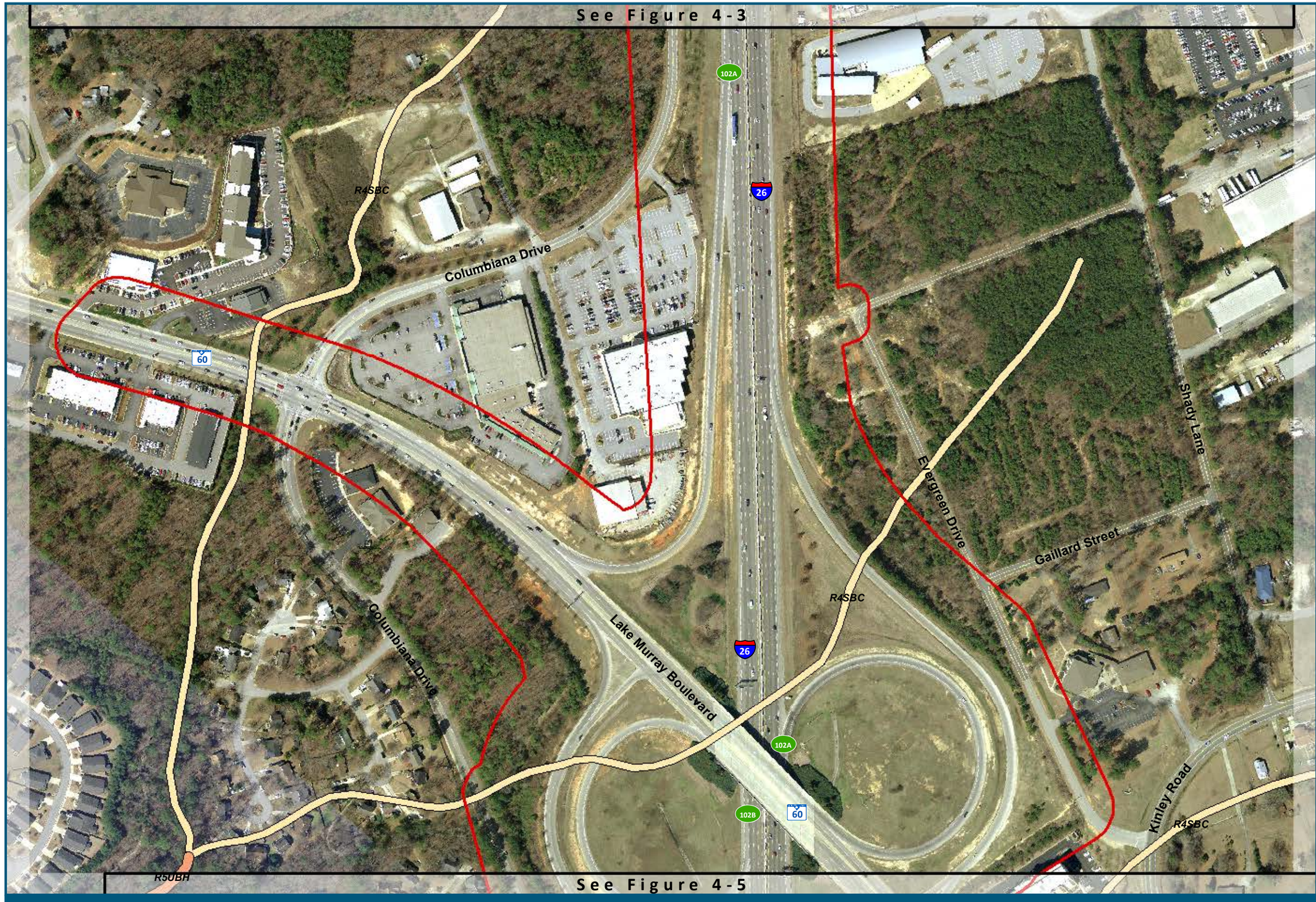
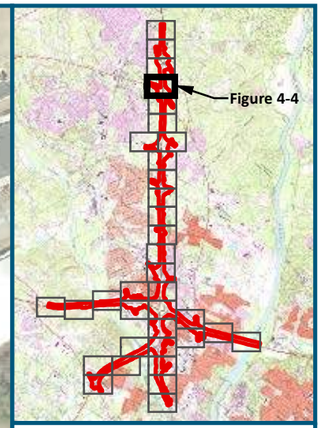
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-4
National Wetland Inventory (NWI) Map

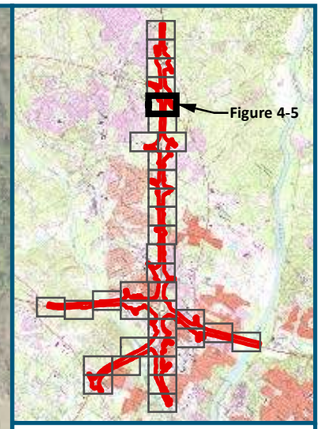
11/15/2018 Sheet 4 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-5
National Wetland Inventory (NWI) Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

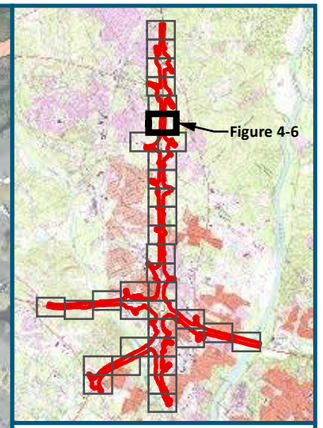
CAROLINA CROSSROADS

See Figure 4-5

R4SBC
R4SBC
R5UBH
R5UBH
R5UBH
PUBHh
Columbiana Drive
26
Palmetto Health Parkway
R5UBH
PUBHh
PUBHh
Parkridge Drive
R4SBC
R4SBC
Columbiana Drive
Columbiana Circle
26
Columbiana Circle

See Figure 4-8

See Figure 4-7



0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

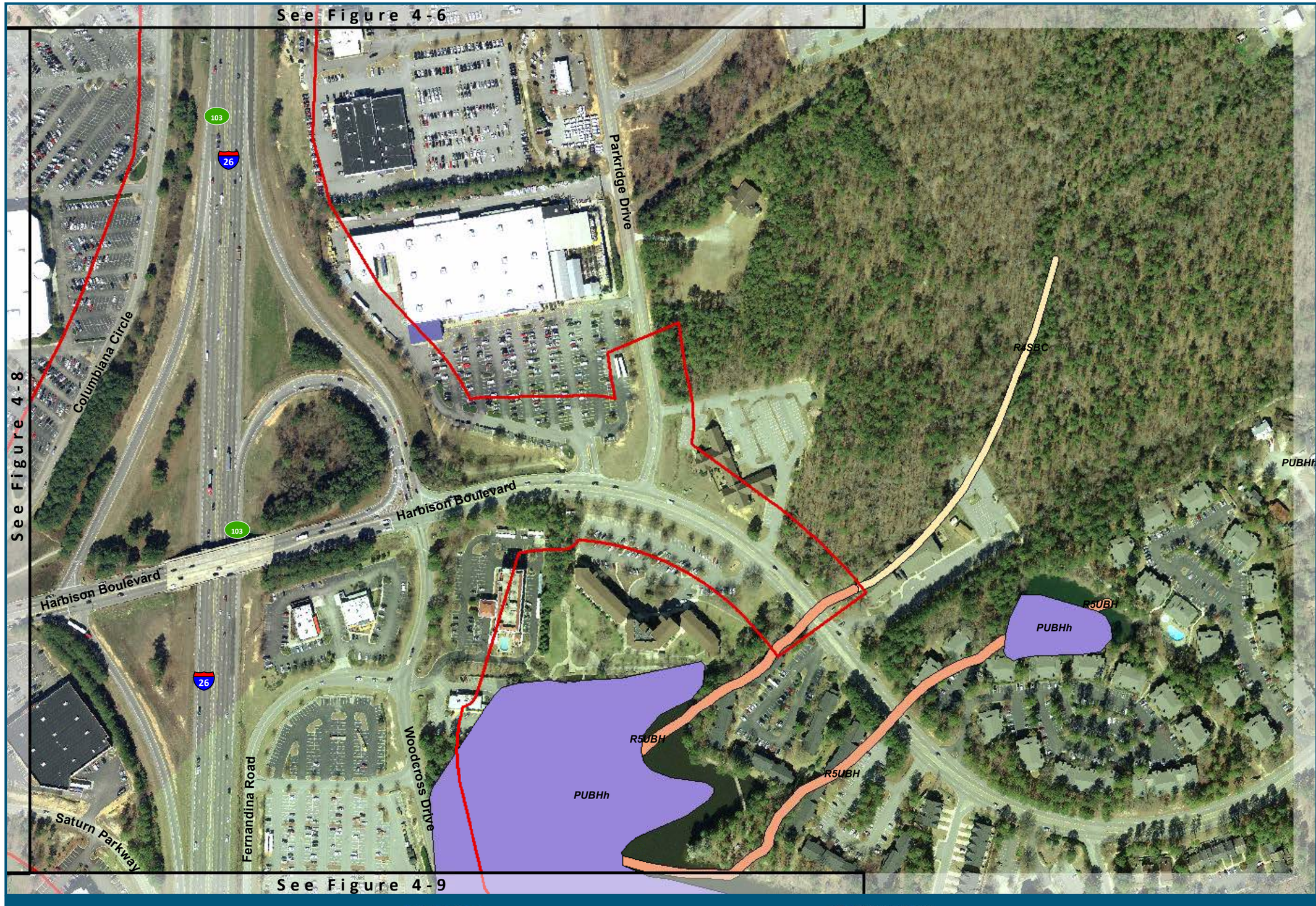
Figure 4-6
National Wetland Inventory (NWI) Map

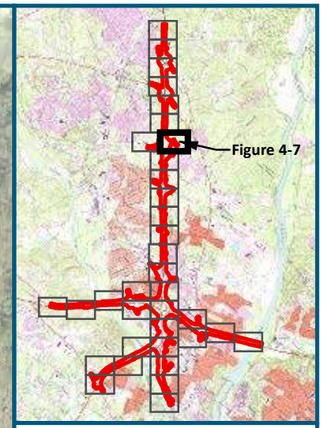
11/15/2018 Sheet 6 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUBHh - Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

Figure 4-7
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 7 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-6

PUBHh

Sheath Drive

Hunters Blind Drive

R5UBH

R2UBH

R5UBH

R4SBC

Columbiana Circle

Columbiana Drive

R4SBC

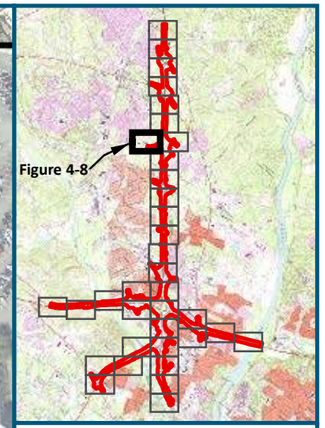
Harbison Boulevard

Columbiana Circle

Park Terrace Drive

See Figure 4-7

See Figure 4-9



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

Figure 4-8
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 8 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-8

See Figure 4-7

R5UBH

PUBHh

PUBHh

R4SBC

Park Terrace Drive

Saturn Parkway

Fernandina Road

Woodcross Drive

26

R4SBC

Bower Parkway

Saturn Parkway

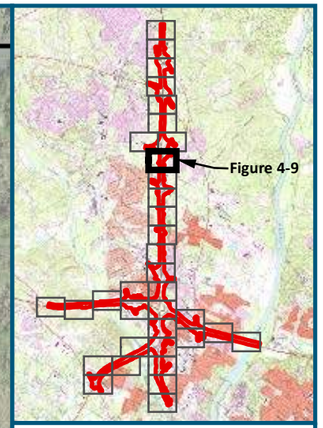
Giles Parkway

26

Harbison Way

Woodcross Drive

See Figure 4-10



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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUBHh - Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-9
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 9 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-9

Saturn Parkway

Baffin Bay Road

Fernandina Road

26

104

R4SBC

R5UBH

R4SBC

R5UBH

Bower Parkway

R4SBC

Piney Grove Road

Foxfire Drive

Fernandina Road

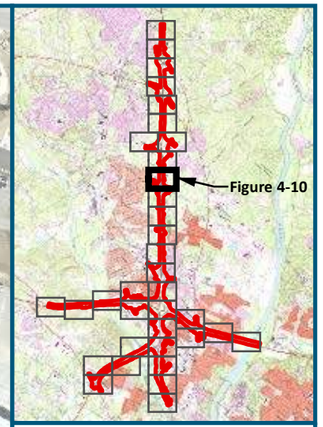
Jamil Road

Piney Grove Road

R4SBC

Piney Woods Road

See Figure 4-11



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-10
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 10 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-10

R4SBC

Jamil Road

Shadowbrook Drive

26

Piney Grove Road

Fernandina Road

Piney Woods Road

104

Paris Road

Jamil Road

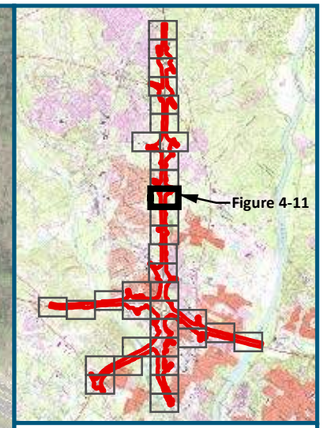
Fernandina Road

PUBHh

Steward Drive

26

See Figure 4-12



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-11
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 11 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-11

Rhett Road

26

R4SBC

Brookshire Drive

Sulgrave Drive

Lydgate Drive

Leton Drive

Winstaire Drive

Jamil Road

Fernandina Road

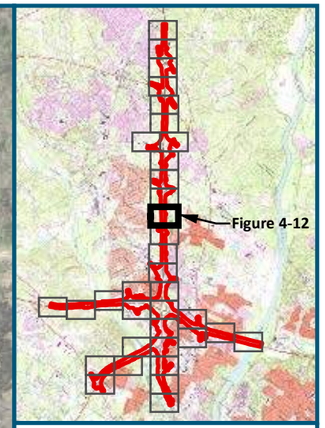
Westpark Boulevard

Piney Grove Road

Laurelhurst Ave

26

See Figure 4-13



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

Figure 4-12
National Wetland Inventory (NWI) Map

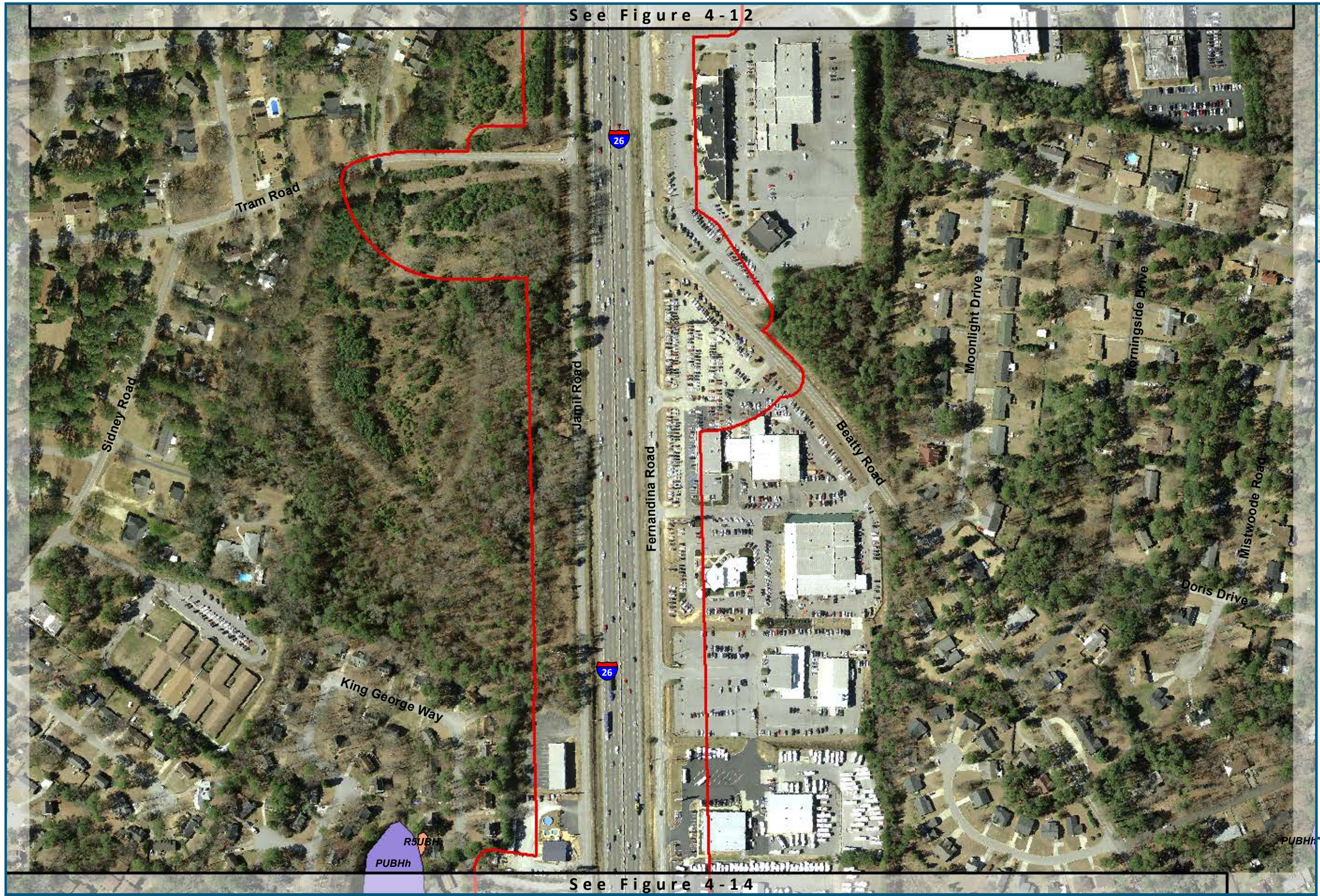
11/15/2018 Sheet 12 of 35

SCDOT South Carolina Department of Transportation

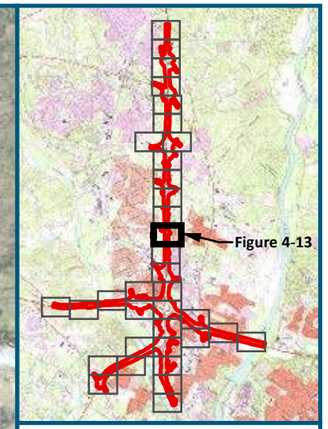
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-12



See Figure 4-14



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

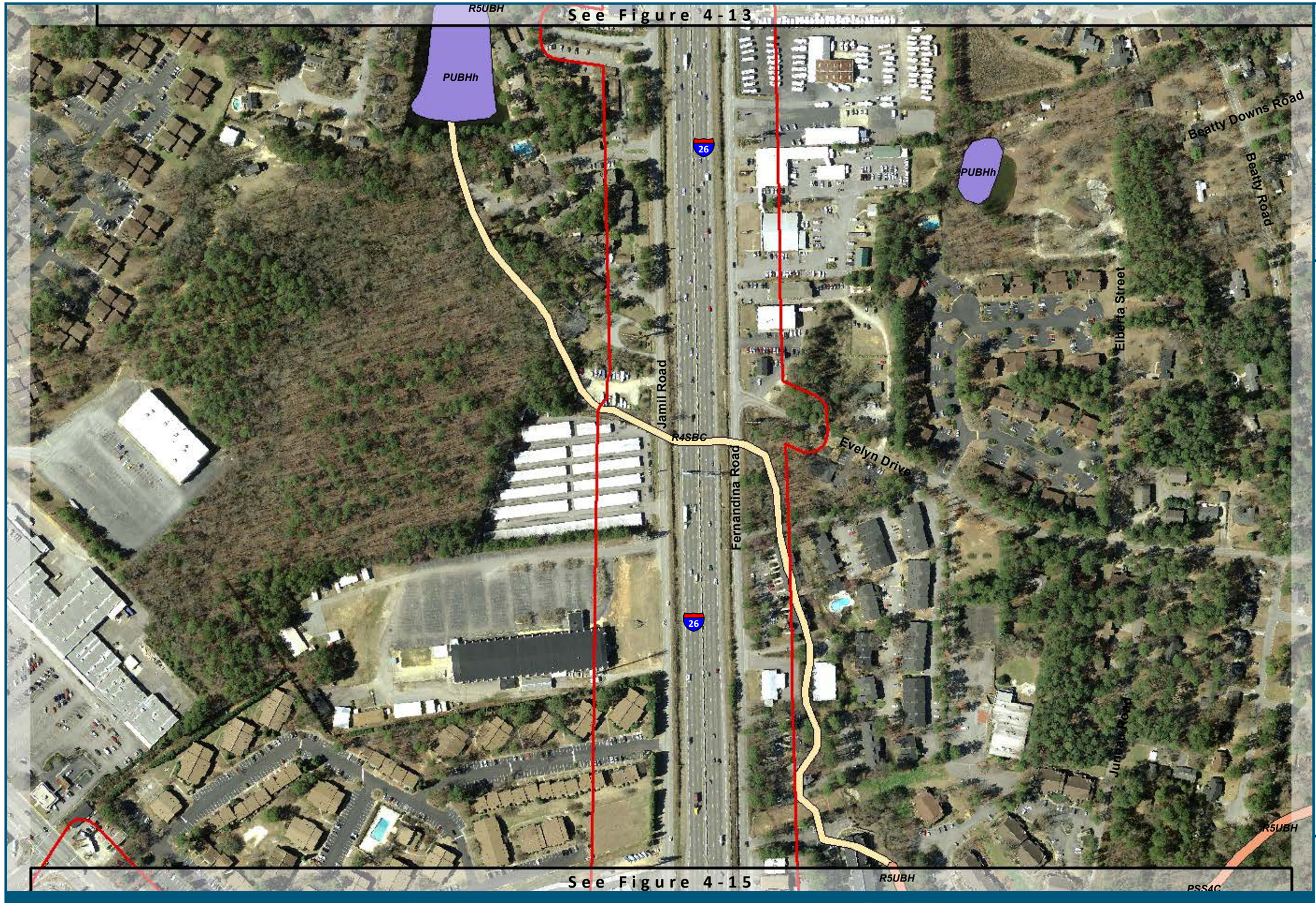
Figure 4-13
National Wetland Inventory (NWI) Map

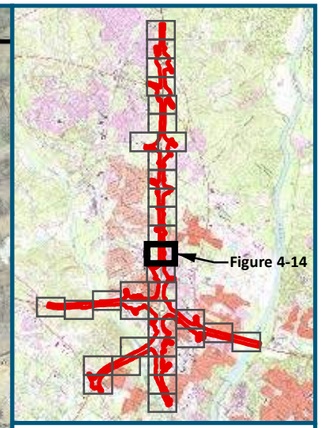
11/15/2018 Sheet 13 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

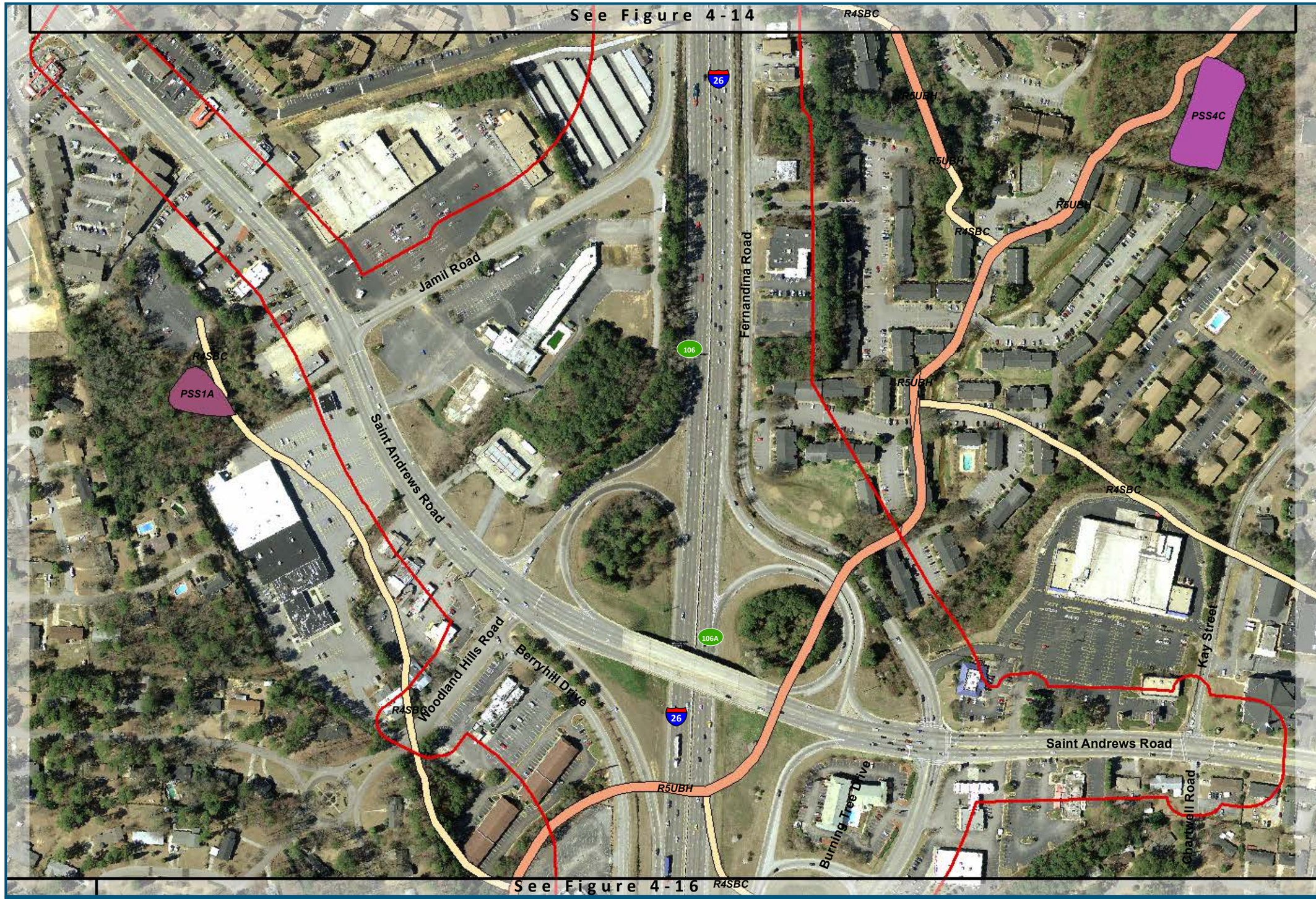
Figure 4-14
National Wetland Inventory (NWI) Map

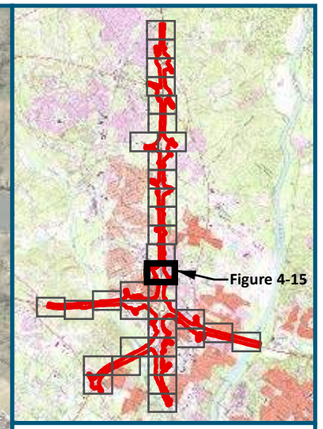
11/15/2018 Sheet 14 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

Figure 4-15
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 15 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-15

See Figure 4-17

See Figure 4-22

R4SBC

R5UBH

R4SBC

R4SBC

R4SBC

PUBHh

PUSAx

Westover Road

Knob Hill Road

Fairway Lane

Woodland Hills Road

Tower Lane

Berryhill Drive

Burning Tree Drive

Chartwell Road

Chartwell Road

Center Point Road

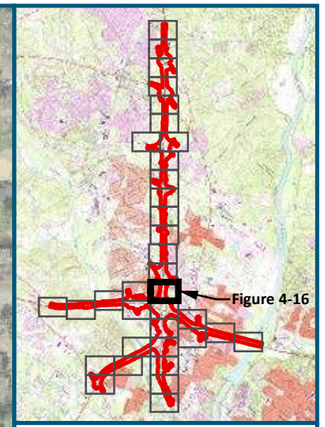
Zimalcrest Drive

26

106B

107A

26



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUBHh - Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

Figure 4-16
National Wetland Inventory (NWI) Map

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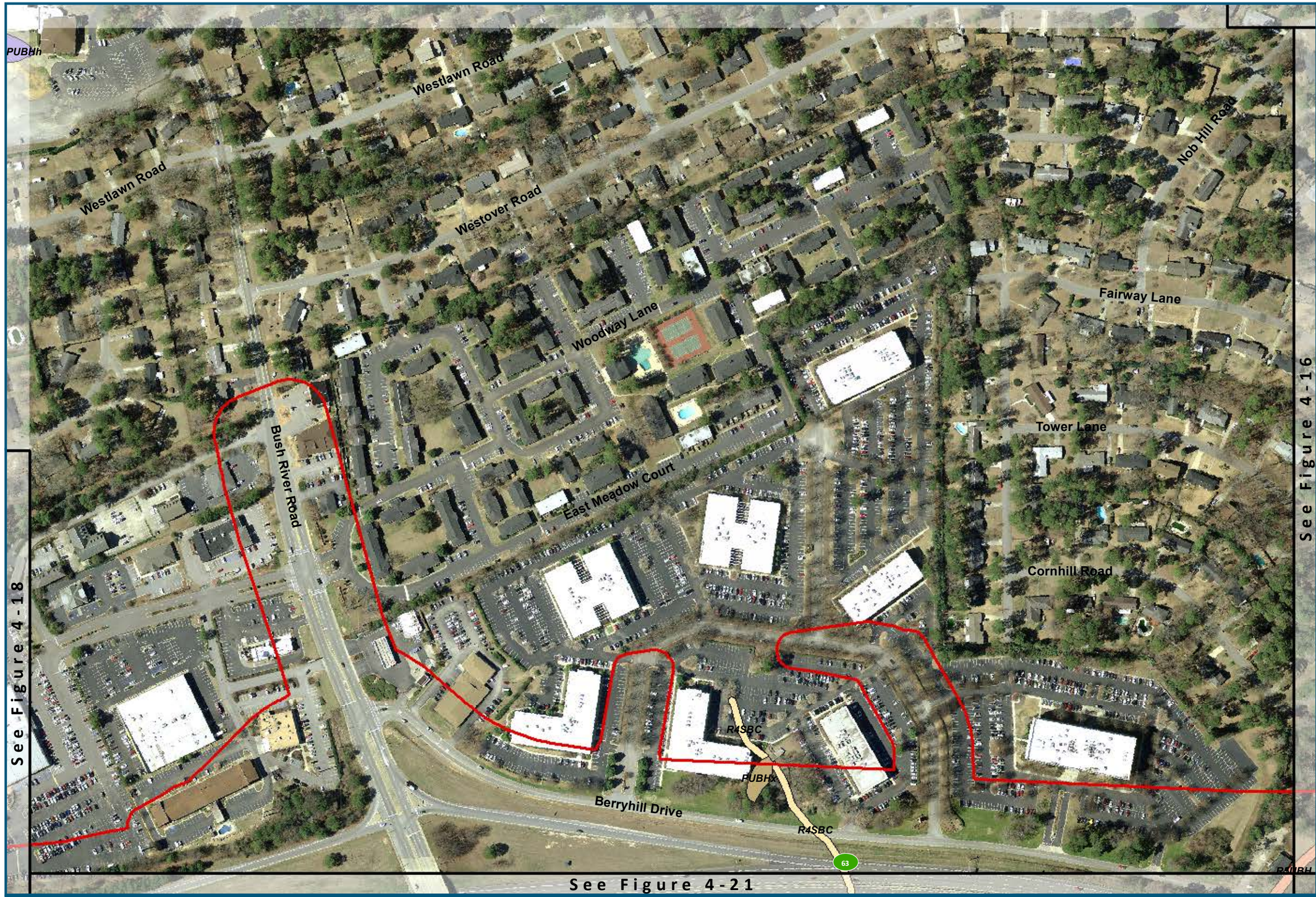
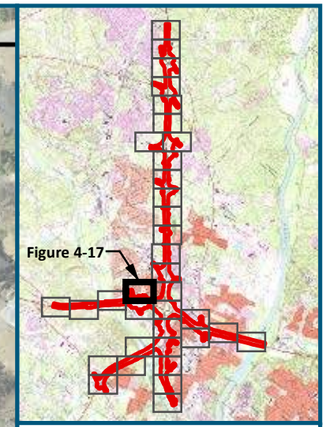
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUBHx - Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

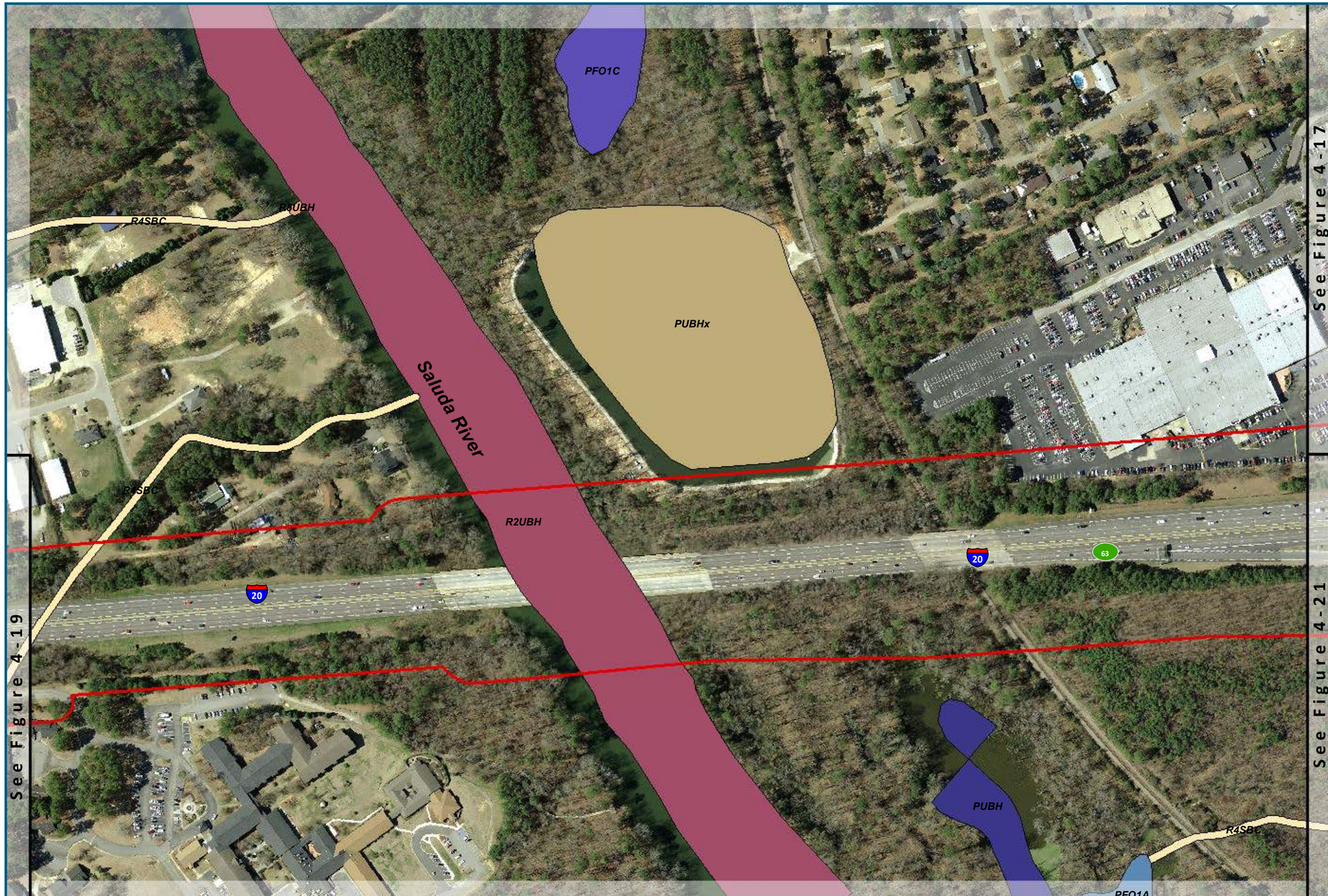
Figure 4-17
National Wetland Inventory (NWI) Map

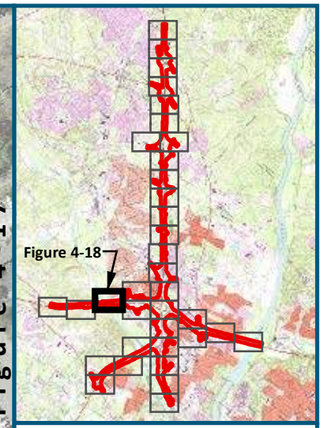
11/15/2018 Sheet 17 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

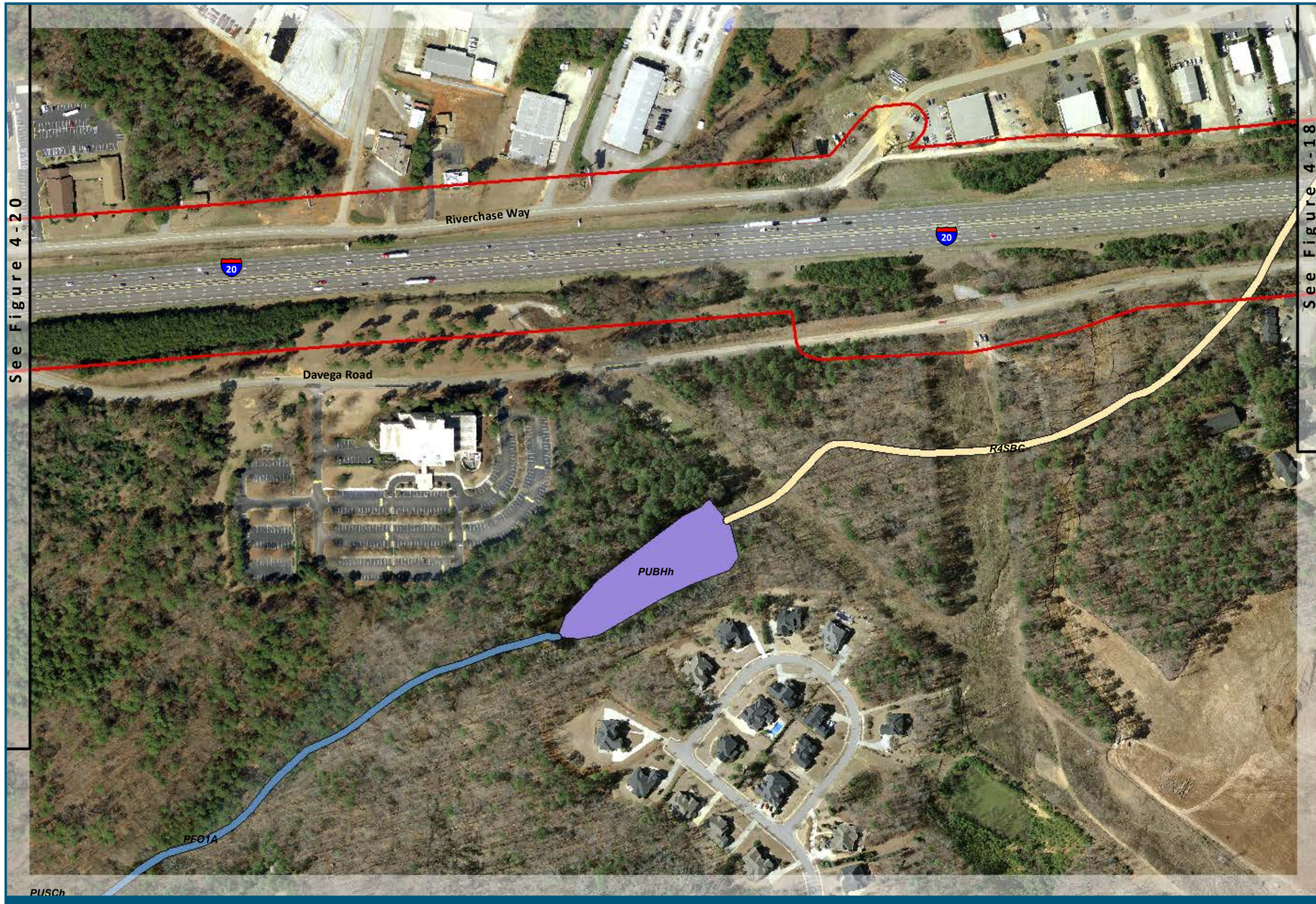
Figure 4-18
National Wetland Inventory (NWI) Map

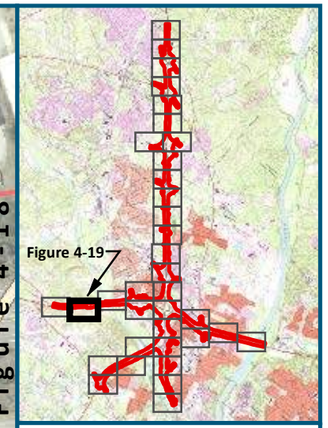
11/15/2018 Sheet 18 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-19
National Wetland Inventory (NWI) Map

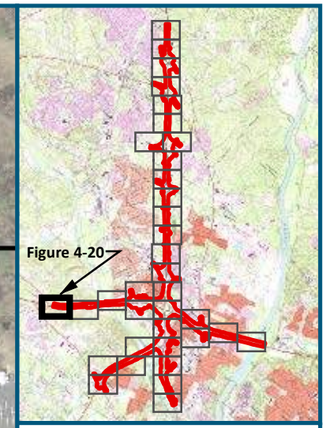
11/15/2018 Sheet 19 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-20
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 20 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-17

See Figure 4-18

See Figure 4-22

20

20

Rockland Road

Bush River Road

Independence Avenue

Nottingwood Drive

R4SBC

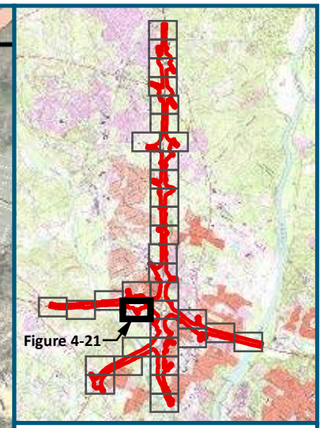
R4SBC

R5UBH

R5UBH

PUBHx

PFO1C



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

Figure 4-21
National Wetland Inventory (NWI) Map

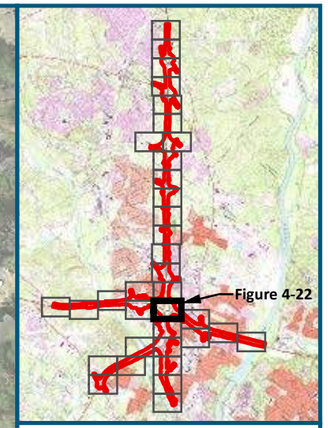
11/15/2018 Sheet 21 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

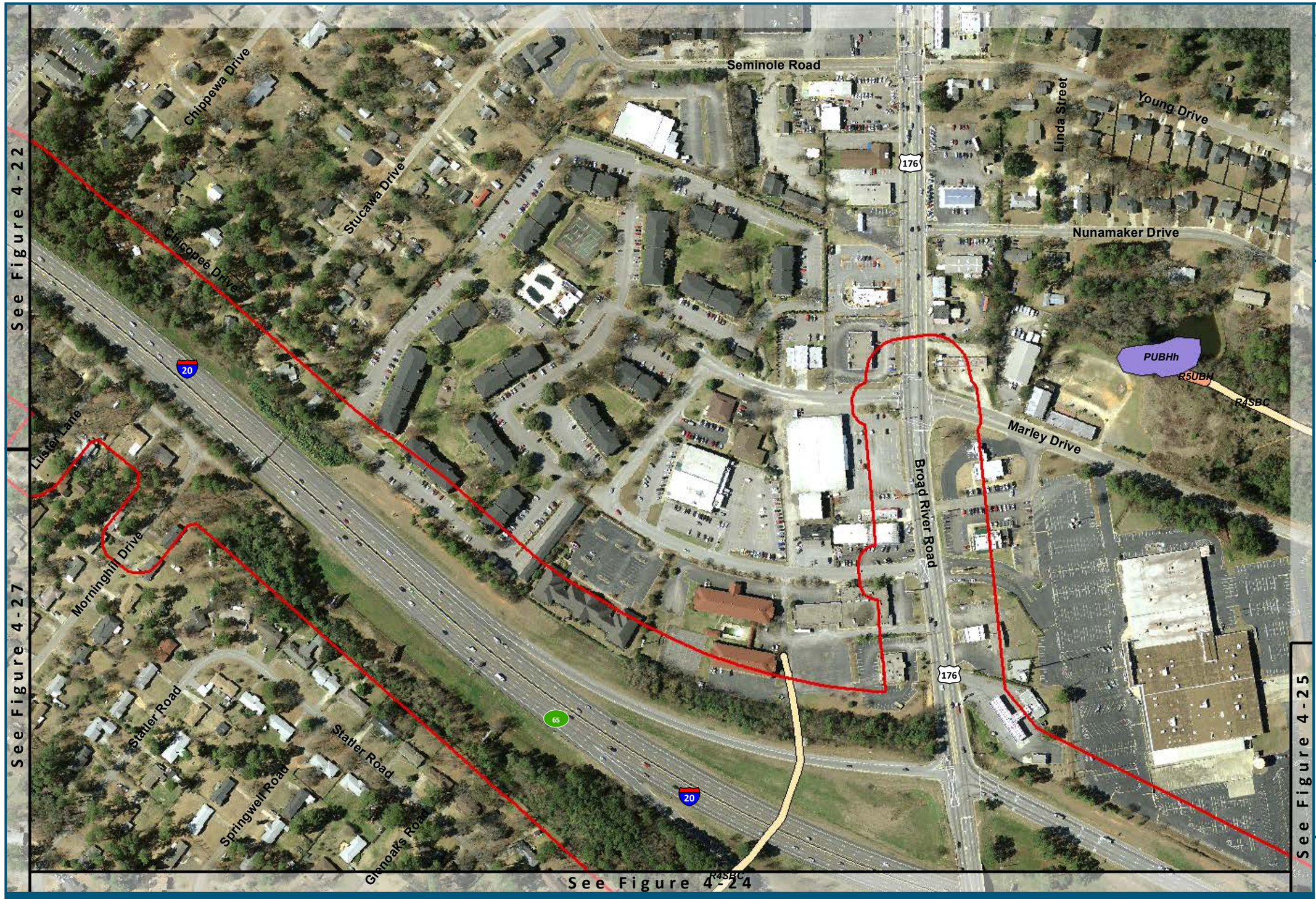
Figure 4-22
National Wetland Inventory (NWI) Map

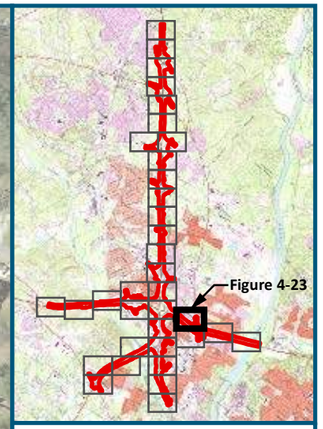
11/15/2018 Sheet 22 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

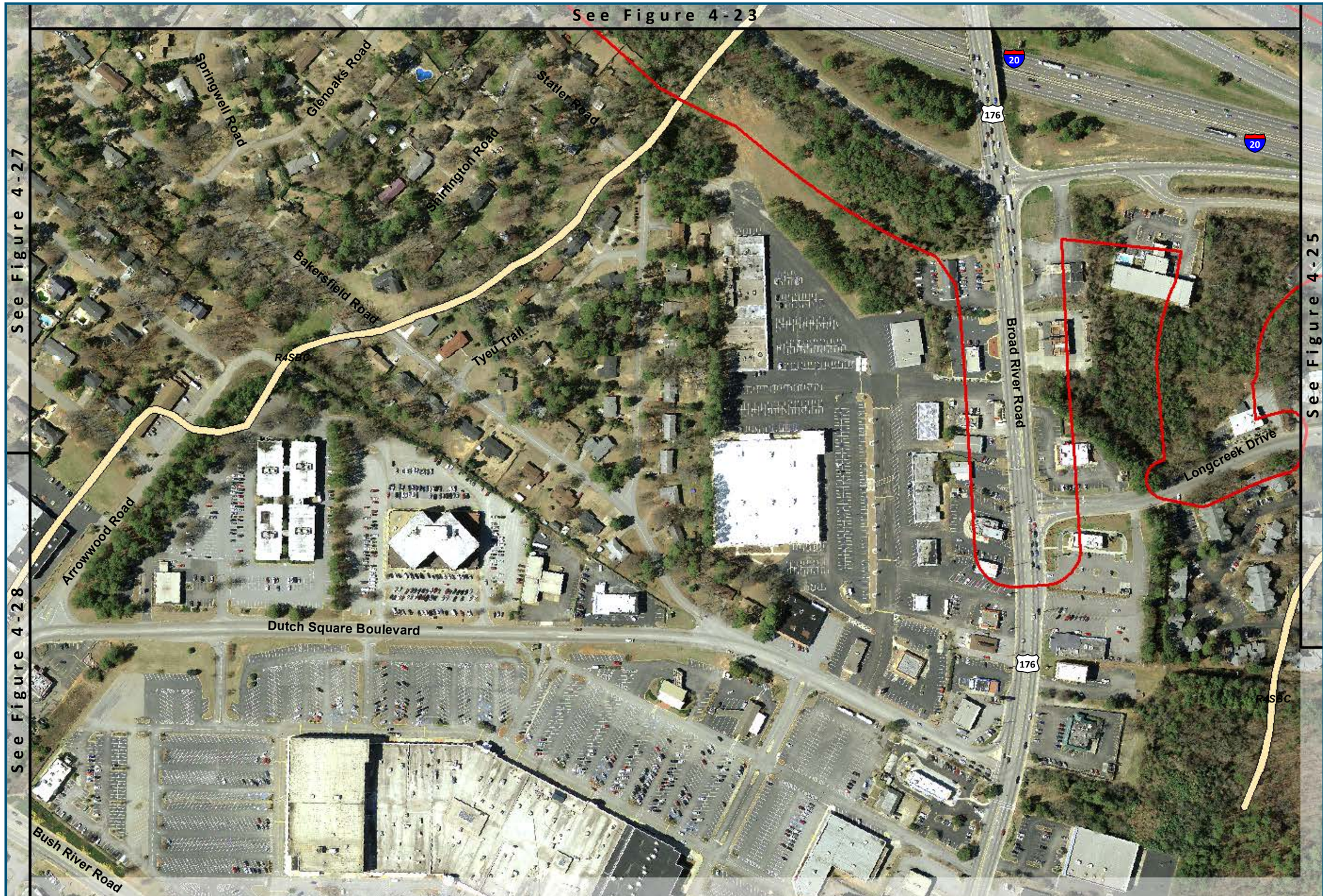
Figure 4-23
National Wetland Inventory (NWI) Map

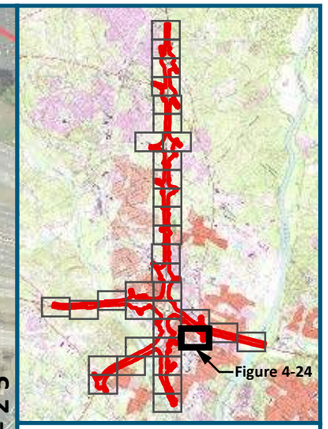
11/15/2018 Sheet 23 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-24
National Wetland Inventory (NWI) Map

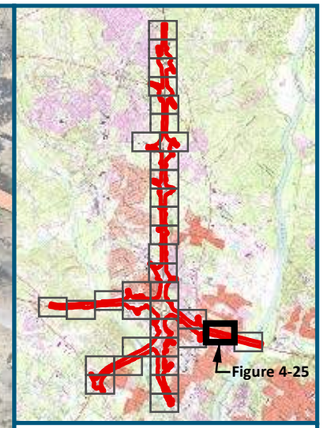
11/15/2018 Sheet 24 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

Figure 4-25
National Wetland Inventory (NWI) Map

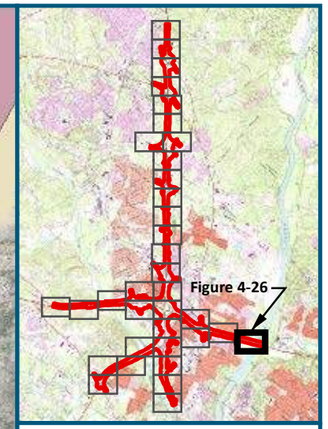
11/15/2018 Sheet 25 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded
- L1UBHh - Lacustrine Limnetic, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded

Figure 4-26
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 26 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-22

See Figure 4-23

See Figure 4-24

See Figure 4-28

Bush River Road

Zimalcrest Drive

108A

26

Browning Road

Fairhaven Drive

Hollingsworth Drive

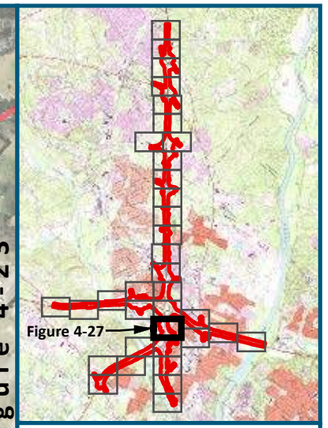
Luster Lane

Morninghill Drive

Burnette Drive

PUSCx

R4SBC



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PUSCx - Palustrine, Unconsolidated Shore, Seasonally Flooded, Excavated
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-27
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 27 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

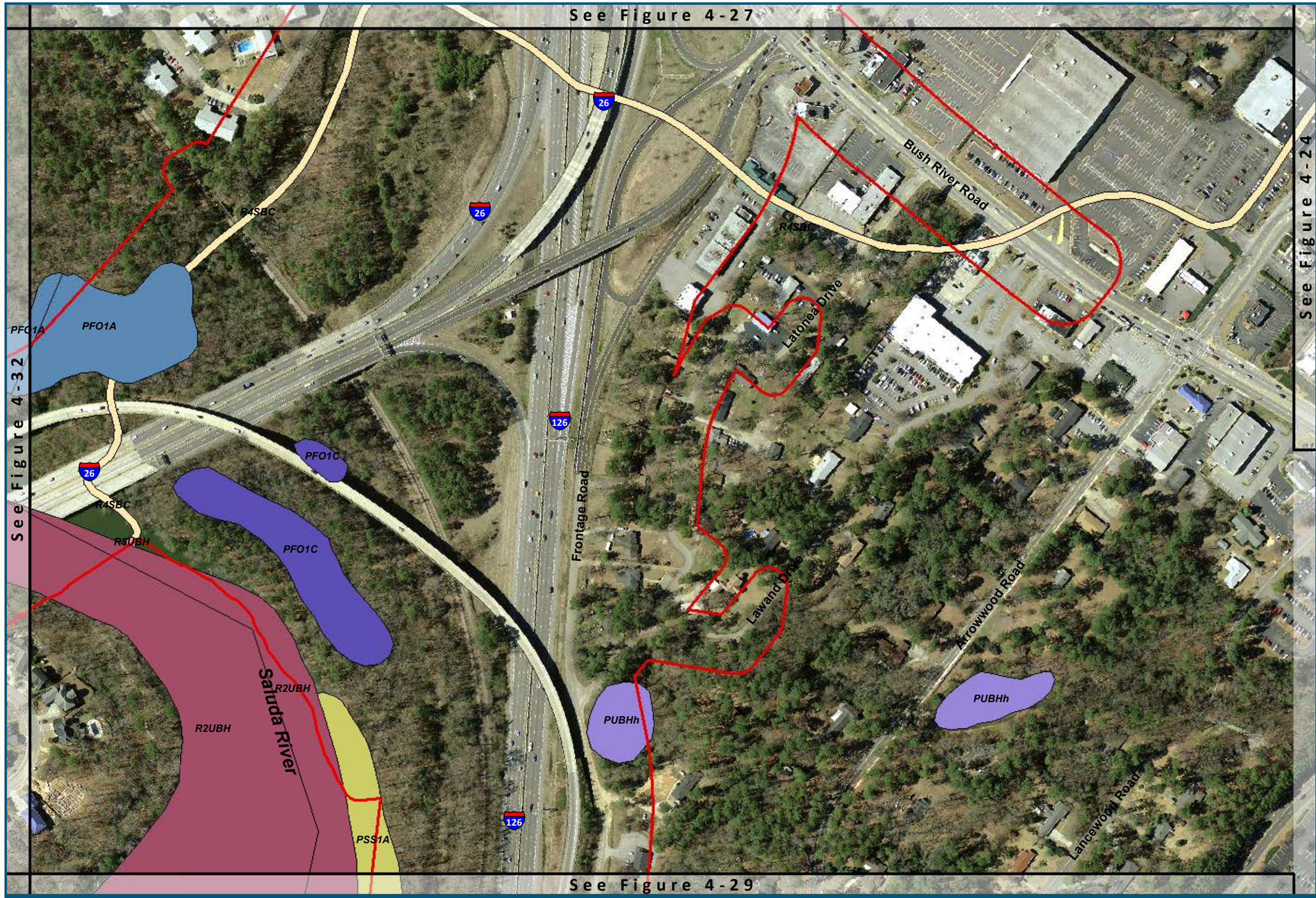
CAROLINA CROSSROADS

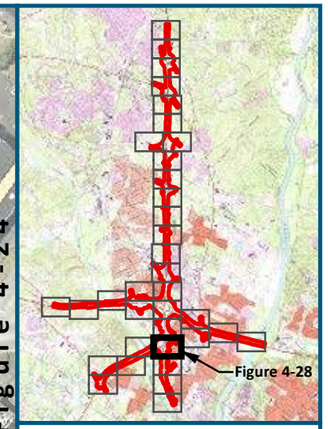
See Figure 4-27

See Figure 4-32

See Figure 4-24

See Figure 4-29





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded
- PUBHh - Palustrine, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded
- PFO1A - Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded
- PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
- PSS1A - Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Temporary Flooded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-28
National Wetland Inventory (NWI) Map

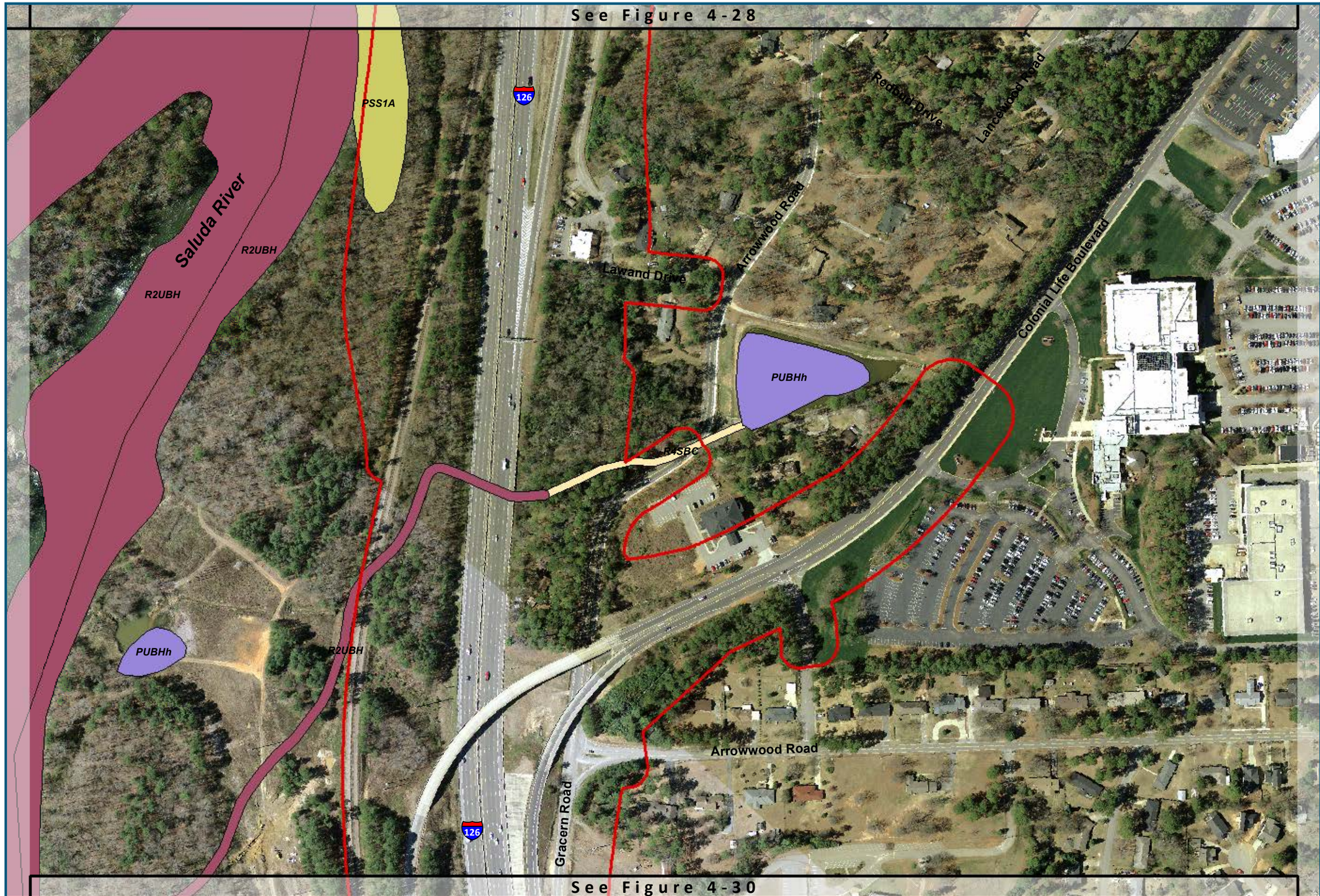
11/15/2018 Sheet 28 of 35

SCDOT South Carolina Department of Transportation

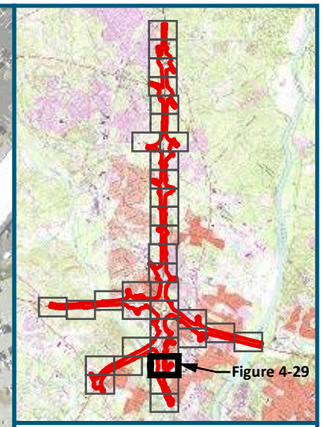
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-28



See Figure 4-30



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- PSS1A - Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Temporary Flooded
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded

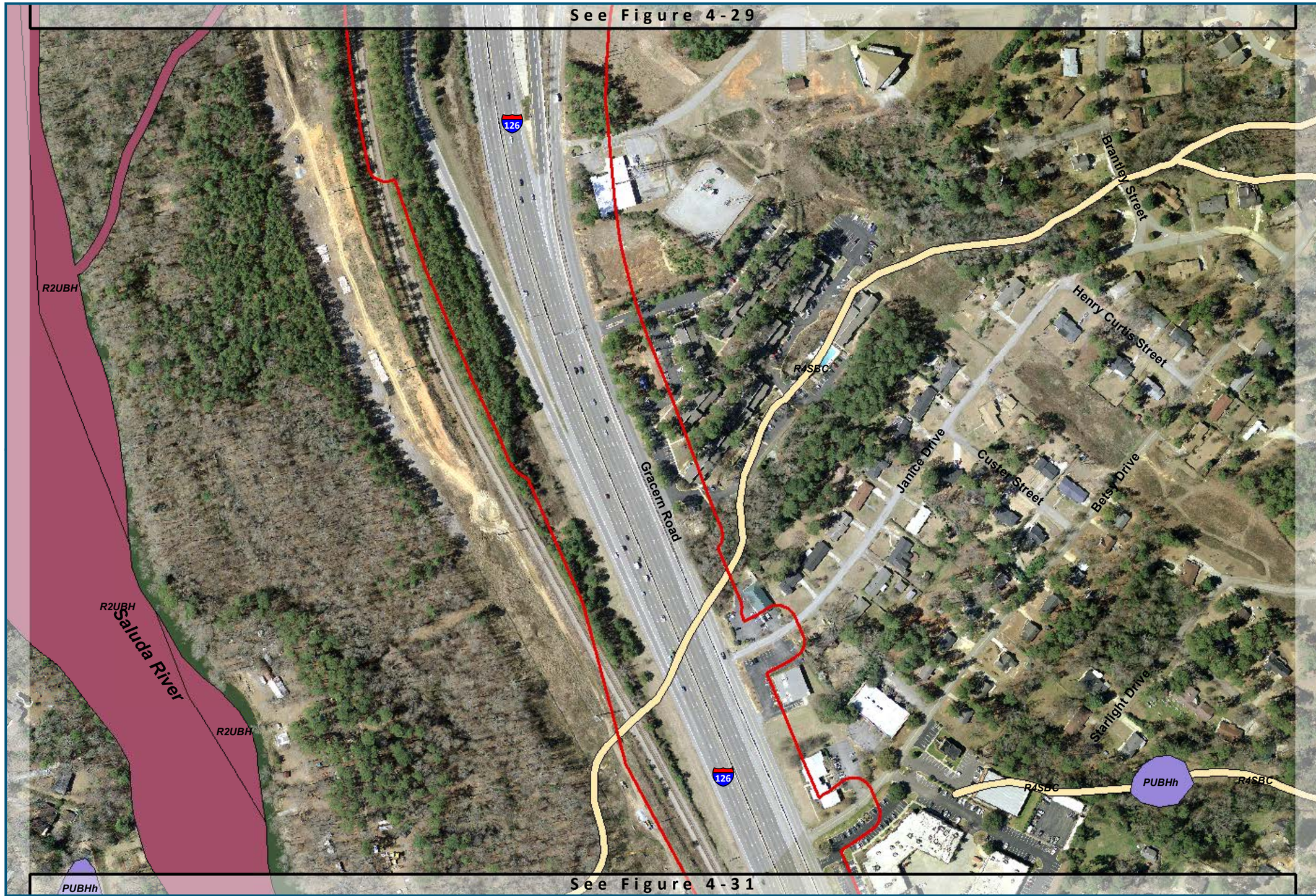
Figure 4-29
National Wetland Inventory (NWI) Map

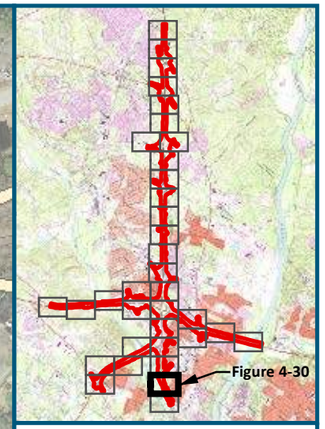
11/15/2018 Sheet 29 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded

Figure 4-30
National Wetland Inventory (NWI) Map

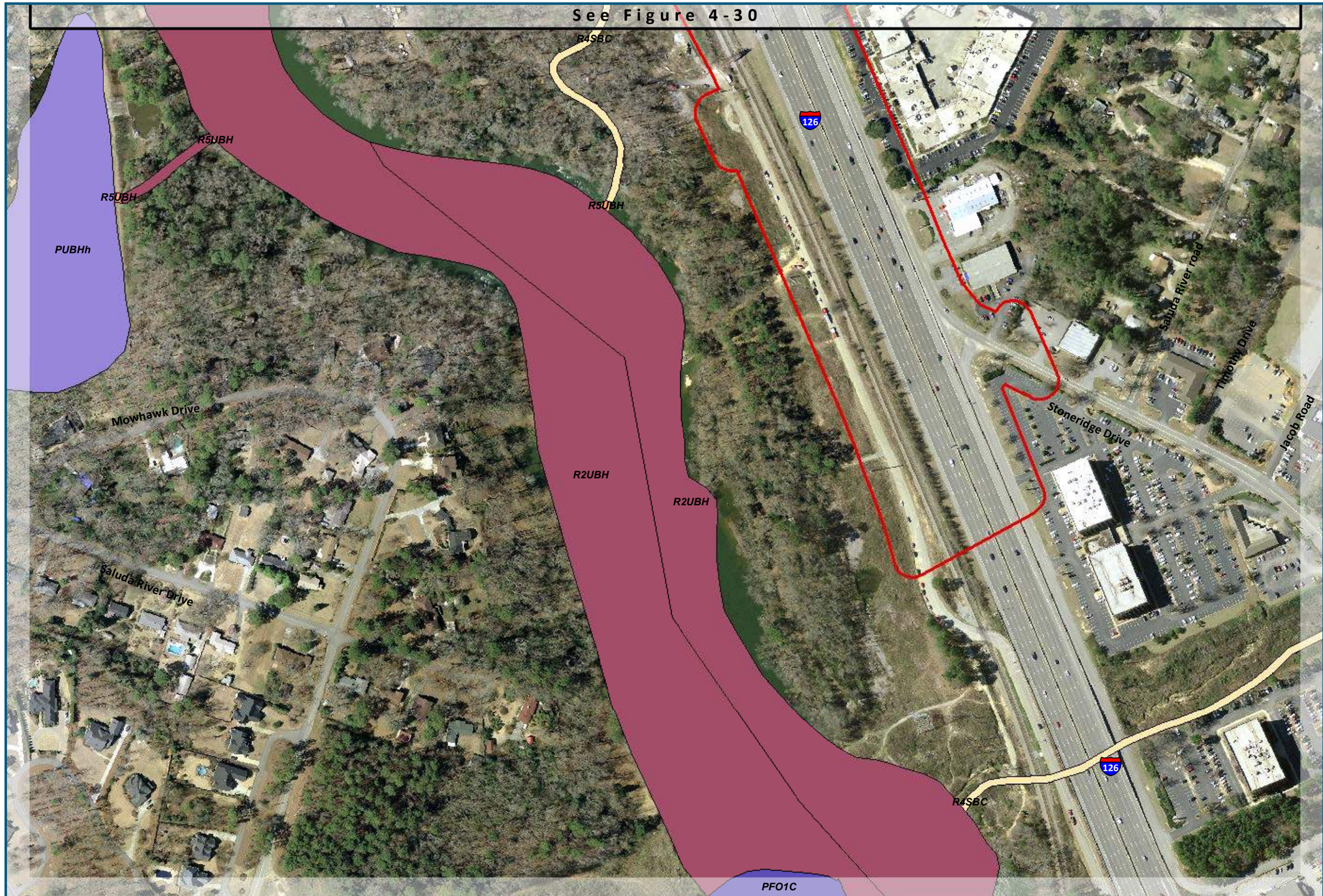
11/15/2018 Sheet 30 of 35

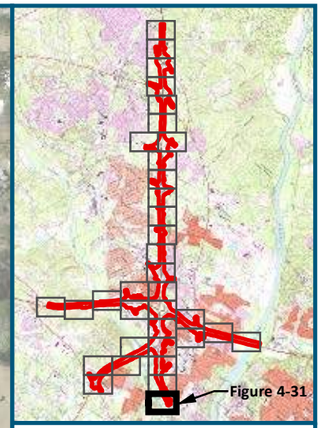
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-30





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

Figure 4-31
National Wetland Inventory (NWI) Map

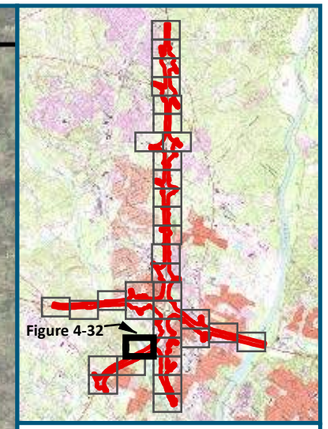
11/15/2018 Sheet 31 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded
- PFO1A - Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded

Figure 4-32
National Wetland Inventory (NWI) Map

11/15/2018 Sheet 32 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-32

See Figure 4-34

26

McSwain Drive

R4SBC

Holly Hill Drive

Terrace View Drive

Robin Crest Drive

Riviera Drive

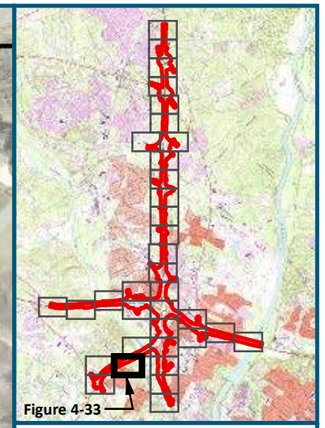
Robin Crest Drive

R5UBH

PEM1Fx

PUBHx

R2UBH



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

- Project Study Area (1,482 acres)
- 83 Exit Location/Number
- R4SBC – Riverine, Intermittent, Streambed, Seasonally Flooded
- R5UBH – Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

Figure 4-33
National Wetland Inventory (NWI) Map

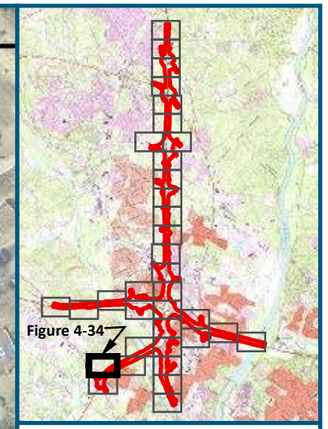
11/15/2018 Sheet 33 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

Figure 4-34
National Wetland Inventory (NWI) Map

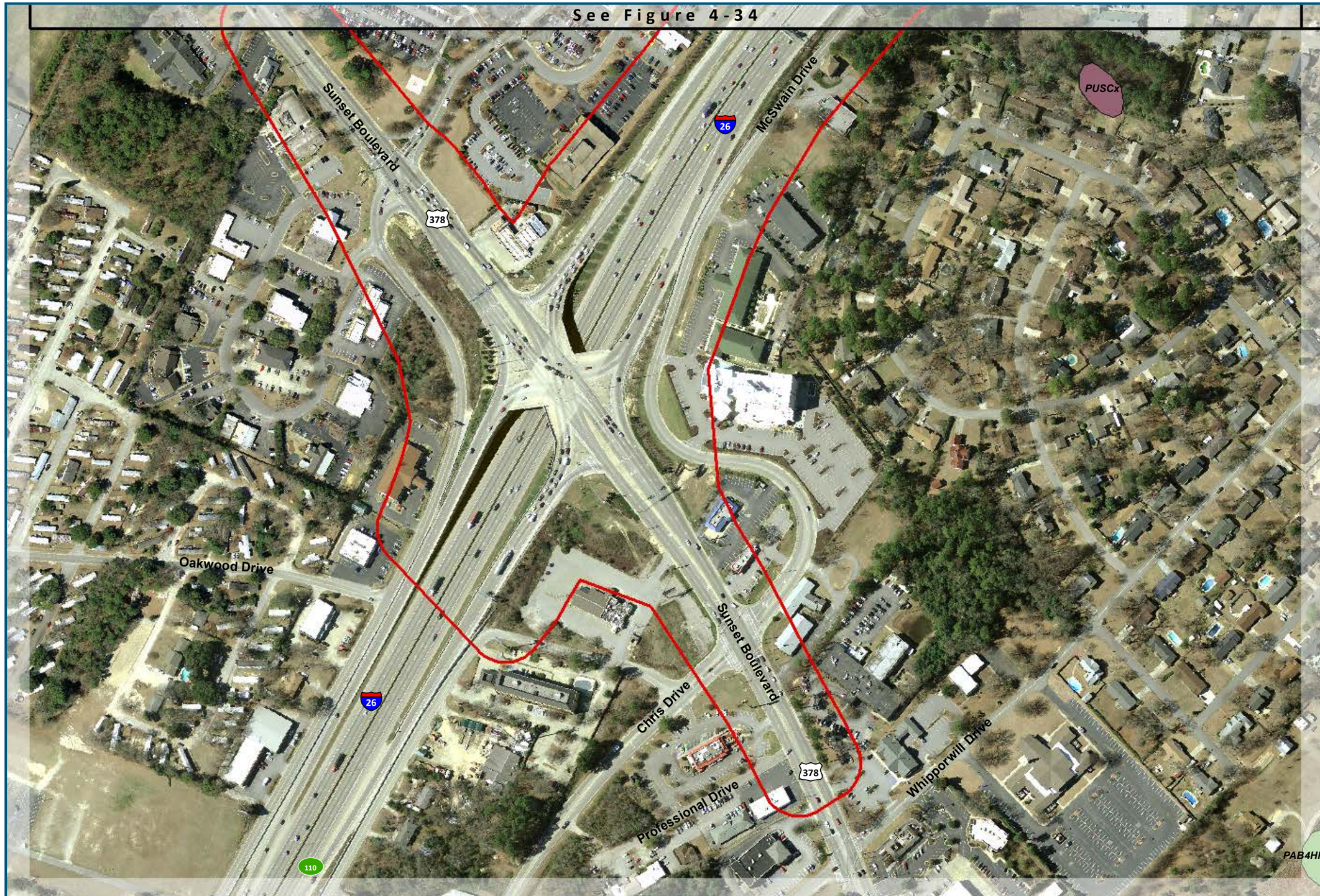
11/15/2018 Sheet 34 of 35

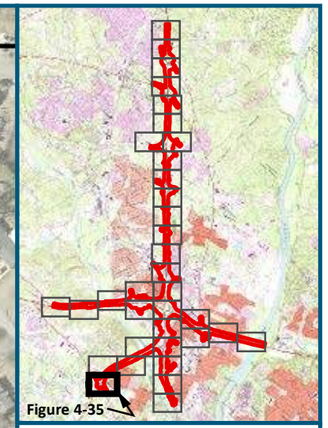
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 4-34





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USFWS CONUS Wetland Data [Statewide (2017)]

Legend

Project Study Area (1,482 acres)

83 Exit Location/Number

No National Wetland Inventory (NWI) Elements Are Found On This Figure Within The Project Study Area

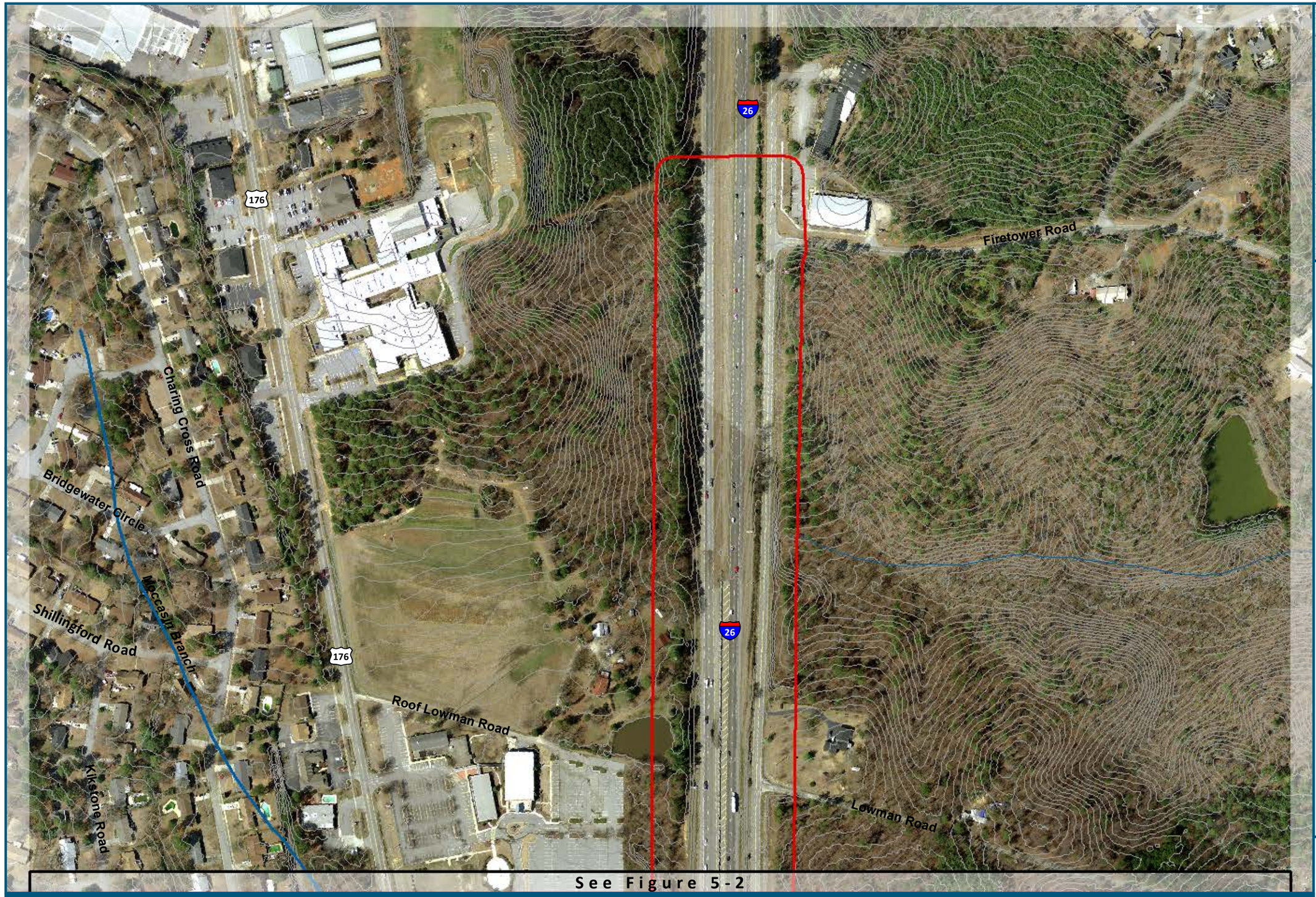
Figure 4-35
National Wetland Inventory (NWI) Map

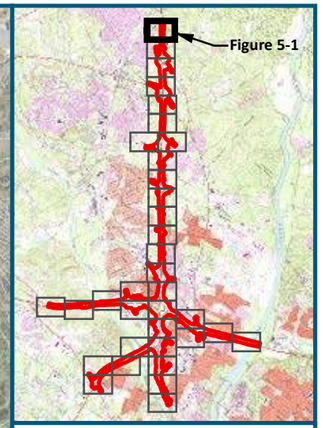
11/15/2018 Sheet 35 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-1
Two-Foot Contour Map

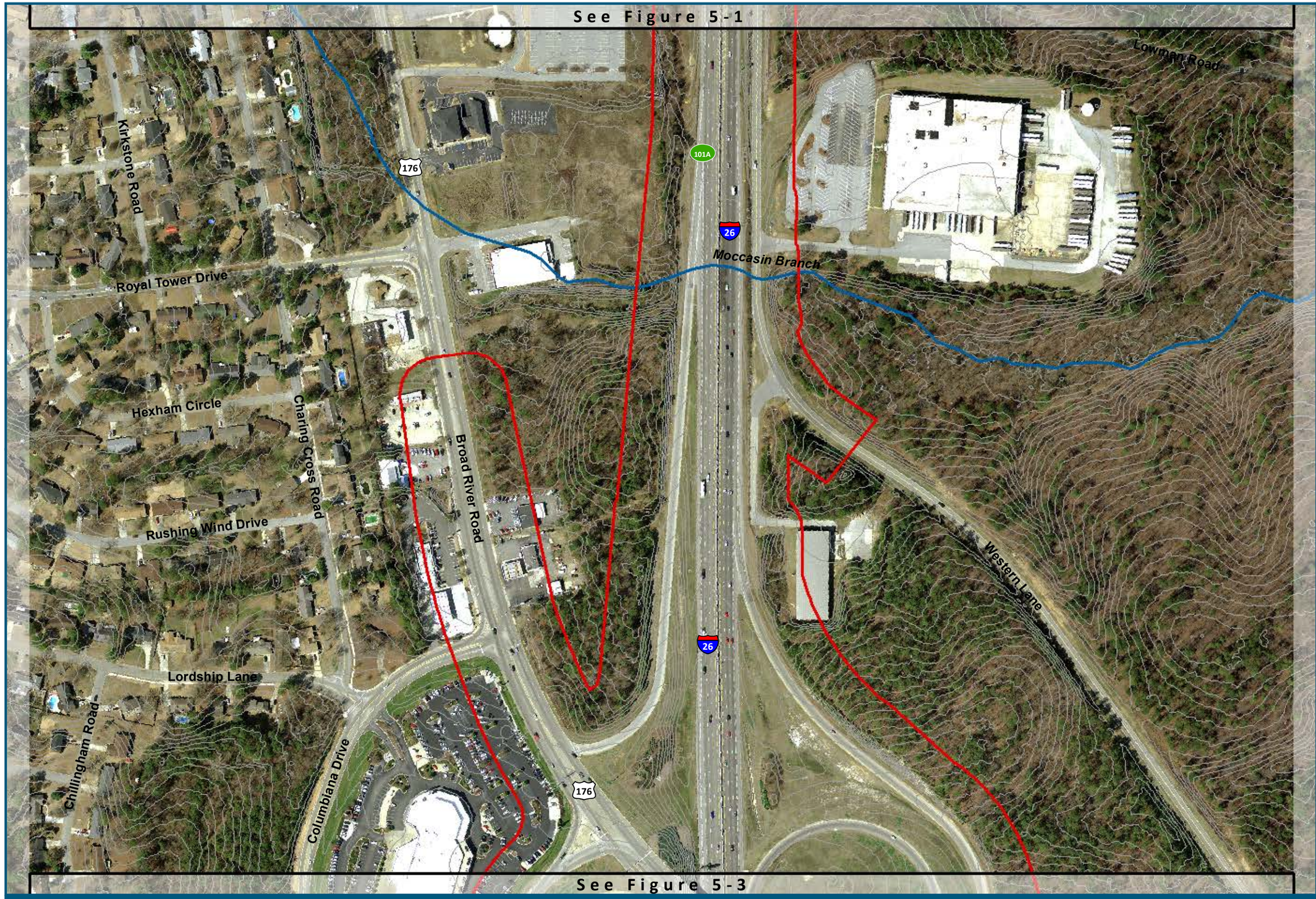
11/15/2018 Sheet 1 of 35

SCDOT South Carolina Department of Transportation

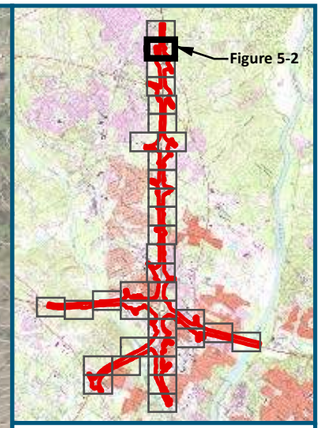
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-1



See Figure 5-3



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-2
Two-Foot Contour Map

11/15/2018 Sheet 2 of 35

SCDOT South Carolina Department of Transportation

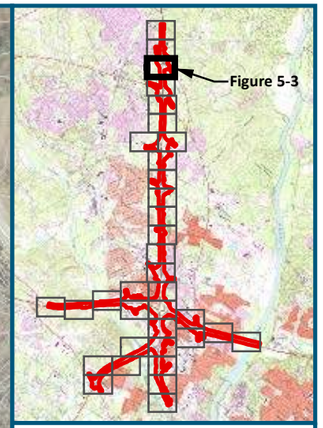
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-2



See Figure 5-4



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-3
Two-Foot Contour Map

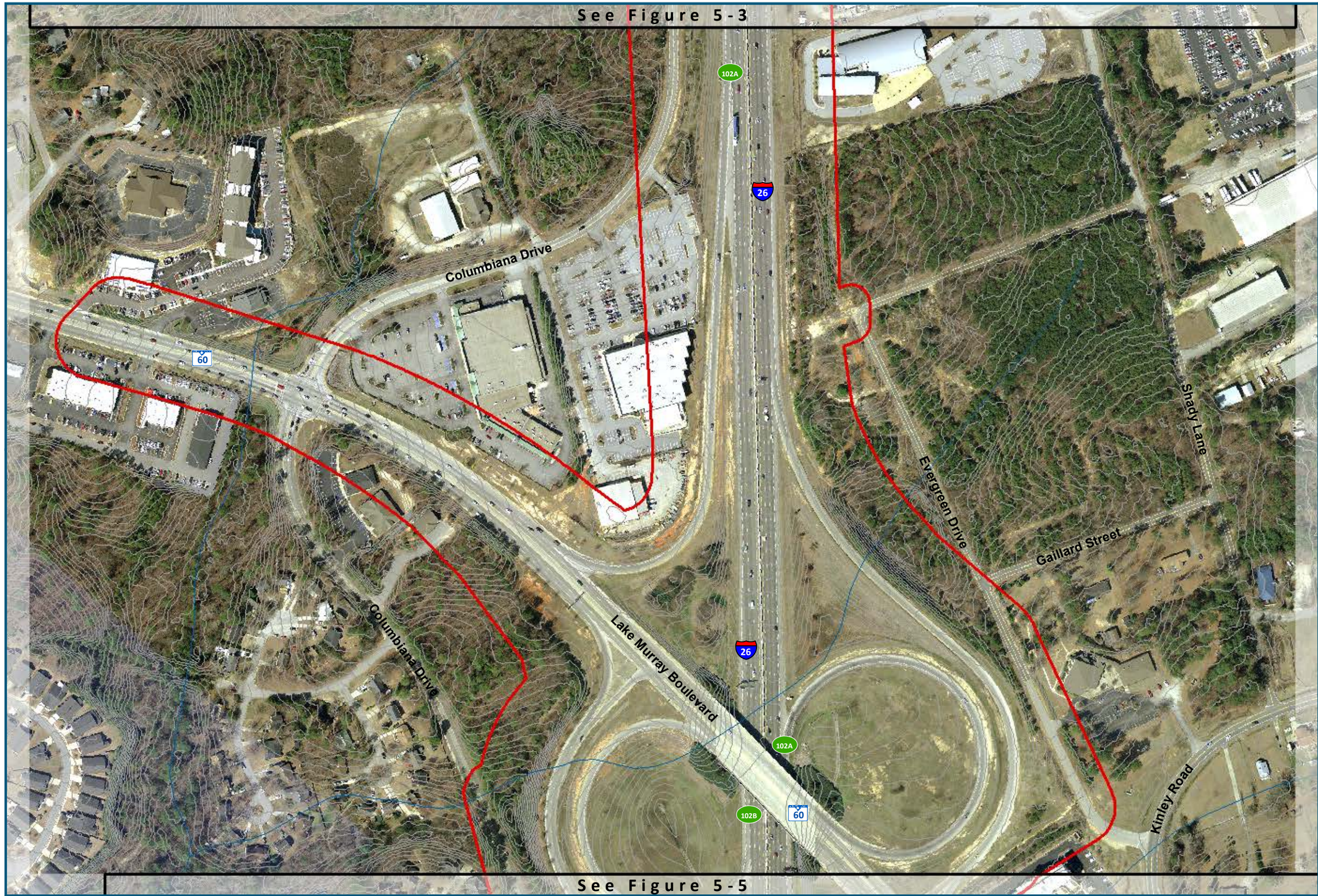
11/15/2018 Sheet 3 of 35

SCDOT South Carolina Department of Transportation

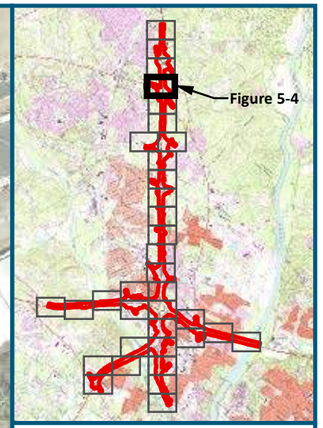
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-3



See Figure 5-5



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-4
Two-Foot Contour Map

11/15/2018 Sheet 4 of 35

SCDOT South Carolina Department of Transportation

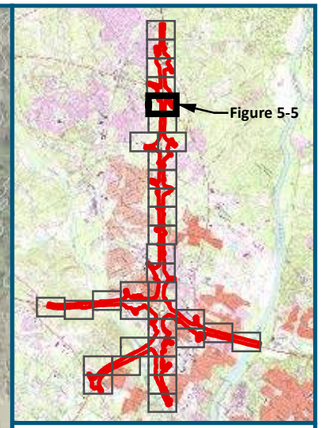
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-4



See Figure 5-6



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-5
Two-Foot Contour Map

11/15/2018 Sheet 5 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-5

Palmetto Health Parkway

Columbiana Drive

26

Parkridge Drive

Columbiana Drive

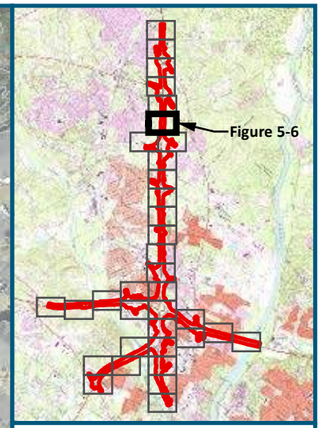
Columbiana Circle

26

Columbiana Circle

See Figure 5-8

See Figure 5-7



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-6
Two-Foot Contour Map

11/15/2018 Sheet 6 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-6

See Figure 5-8

See Figure 5-9

Columbiana Circle

Parkridge Drive

Harbison Boulevard

Harbison Boulevard

Fernandina Road

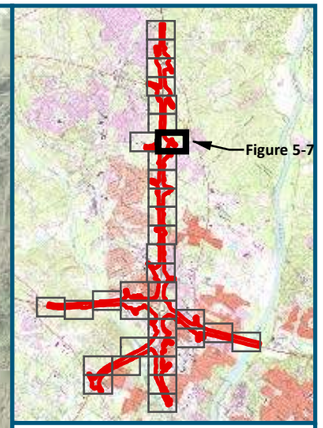
Woodcross Drive

103

26

103

26



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-7
Two-Foot Contour Map

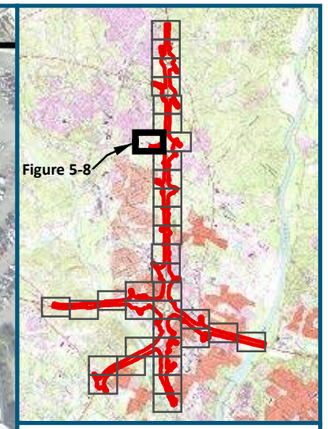
11/15/2018 Sheet 7 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-8
Two-Foot Contour Map

11/15/2018 Sheet 8 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-8

See Figure 5-7

Park Terrace Drive

Saturn Parkway

26

Fernandina Road

Woodcross Drive

Bower Parkway

Saturn Parkway

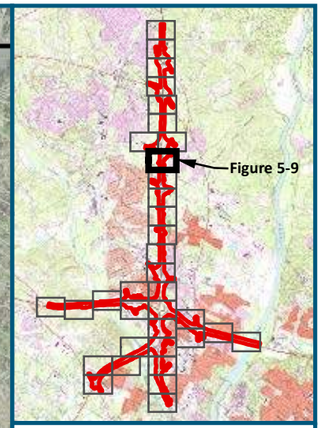
Giles Parkway

26

Harbison Way

Woodcross Drive

See Figure 5-10



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

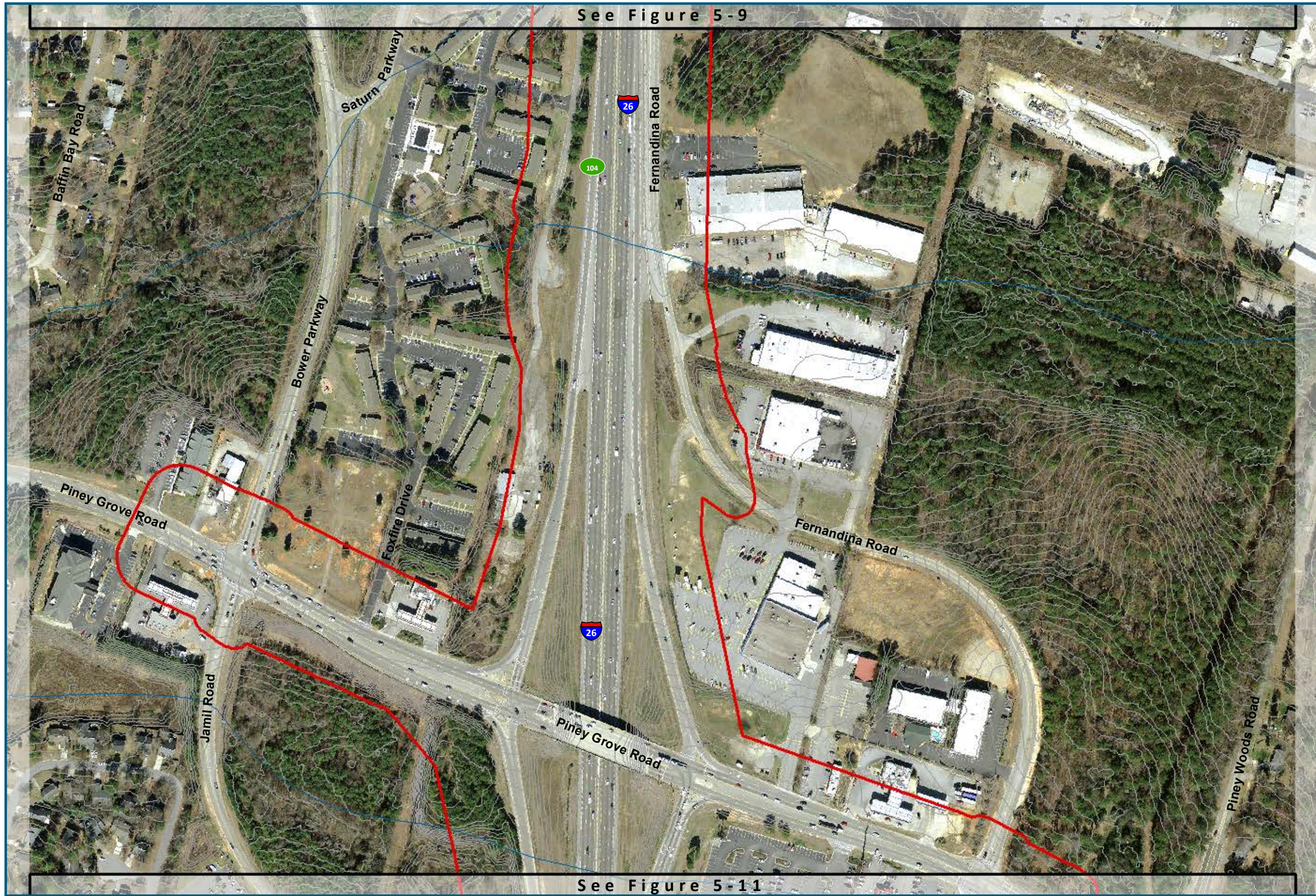
Figure 5-9
Two-Foot Contour Map

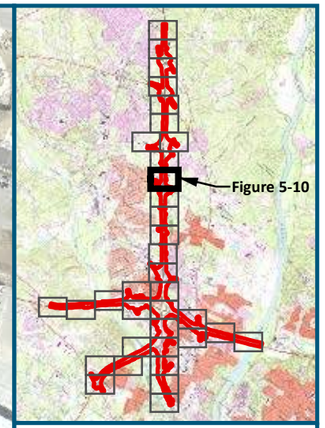
11/15/2018 Sheet 9 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

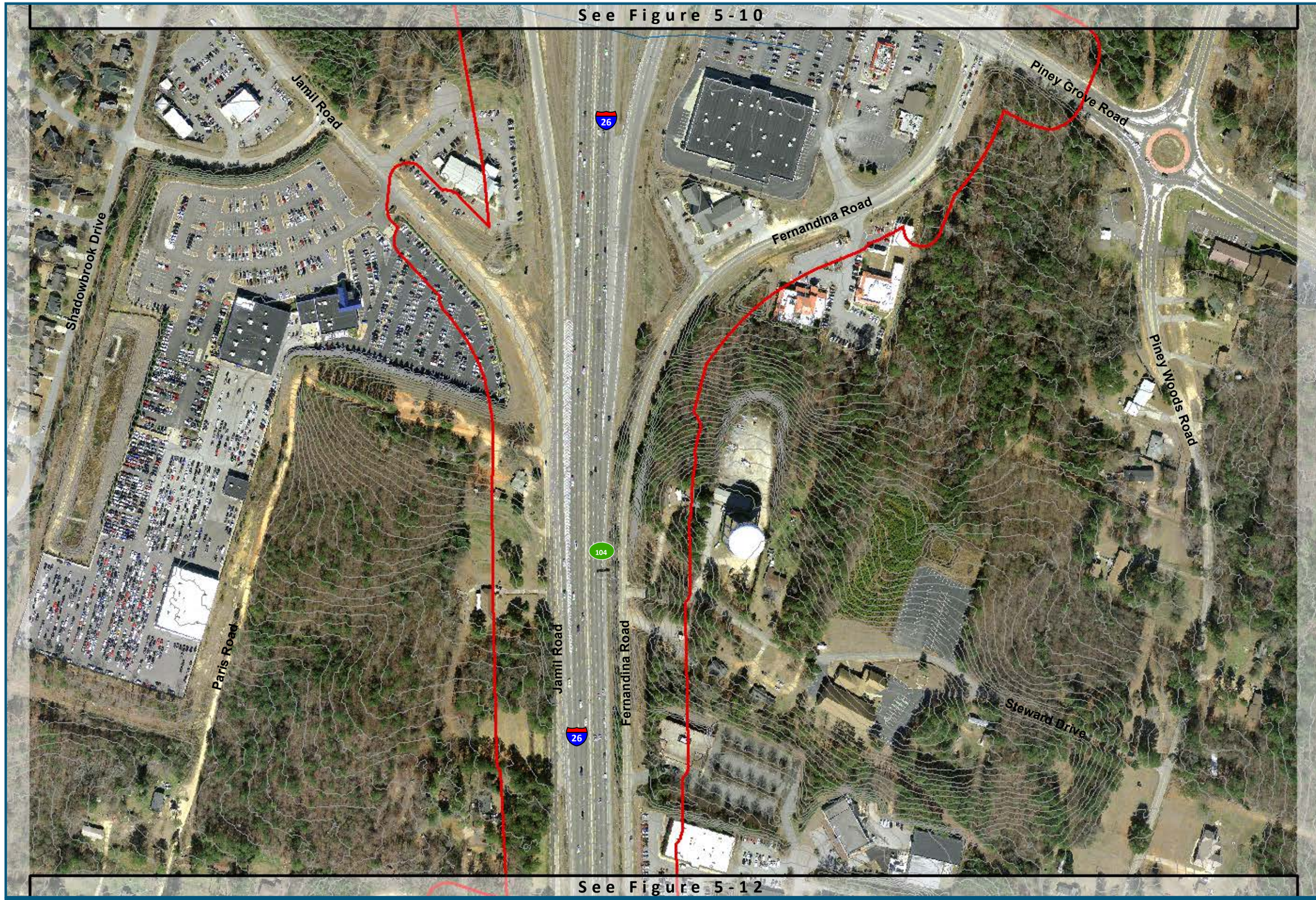
Figure 5-10
Two-Foot Contour Map

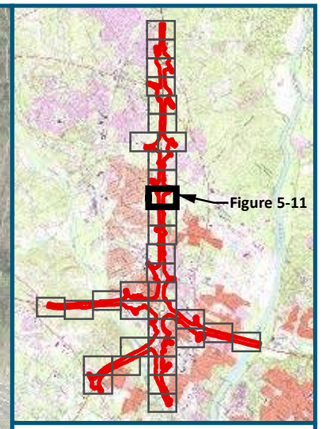
11/15/2018 Sheet 10 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-11
Two-Foot Contour Map

11/15/2018 Sheet 11 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-11

Rhett Road

Brookshire Drive

Sulgrave Drive

Lydgate Drive

Leton Drive

Winstaire Drive

Jamil Road

Fernandina Road

Westpark Boulevard

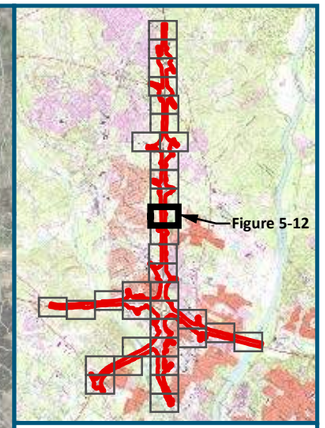
Piney Grove Road

Laurelhurst Ave

26

26

See Figure 5-13



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-12
Two-Foot Contour Map

11/15/2018 Sheet 12 of 35

SCDOT South Carolina Department of Transportation

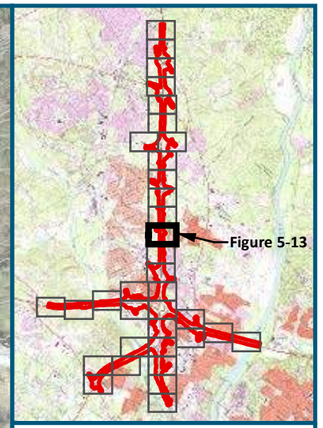
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-12



See Figure 5-14



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

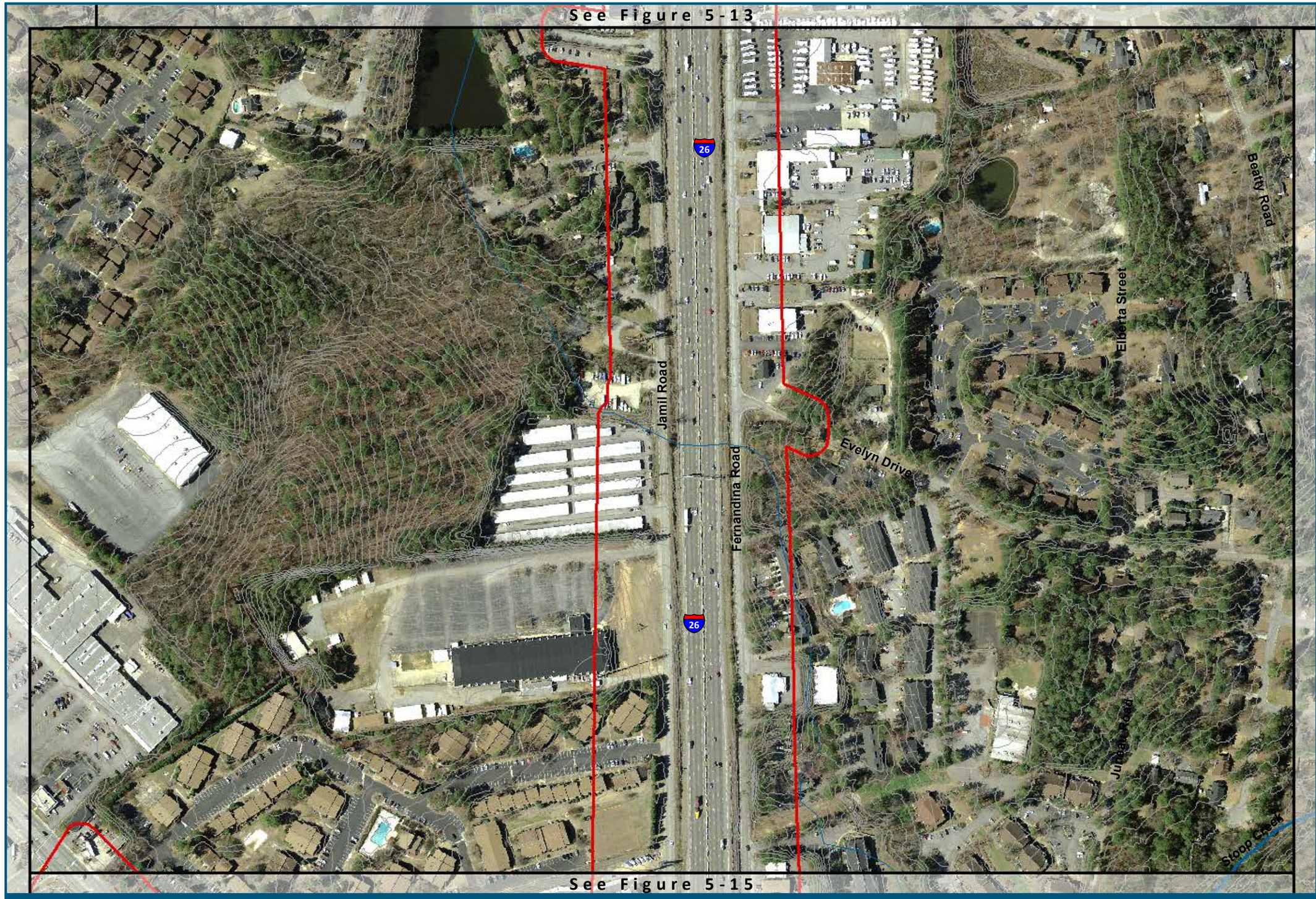
Figure 5-13
Two-Foot Contour Map

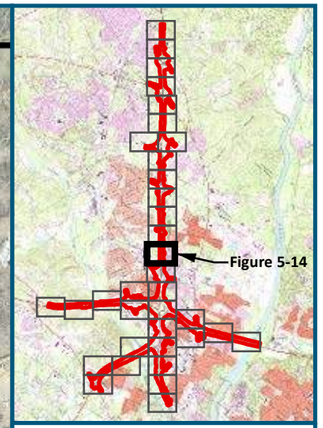
11/15/2018 Sheet 13 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

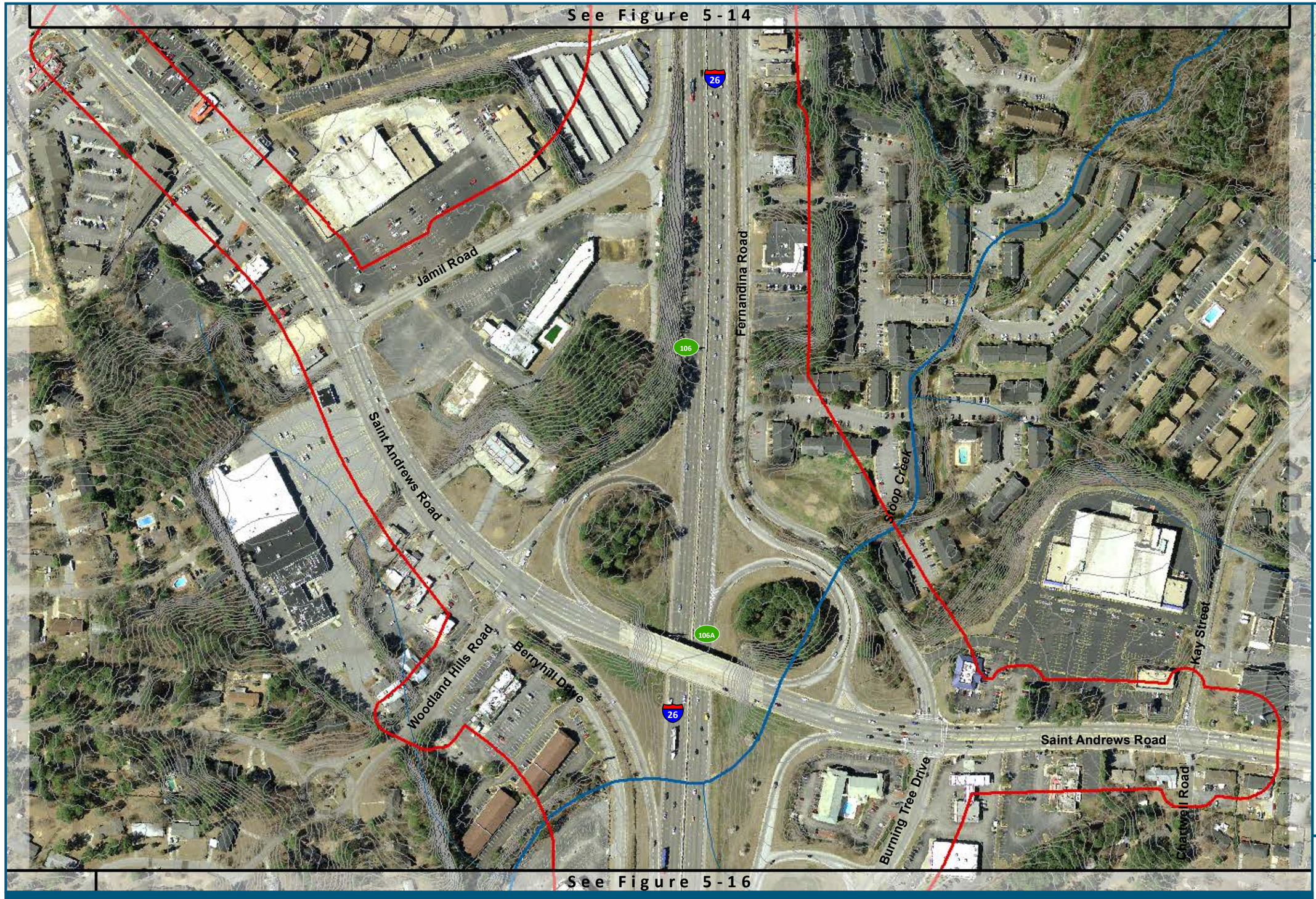
Figure 5-14
Two-Foot Contour Map

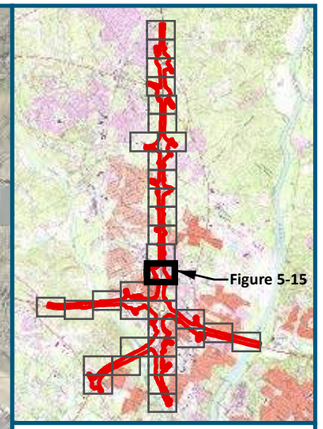
11/15/2018 Sheet 14 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-15
Two-Foot Contour Map

11/15/2018 Sheet 15 to 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

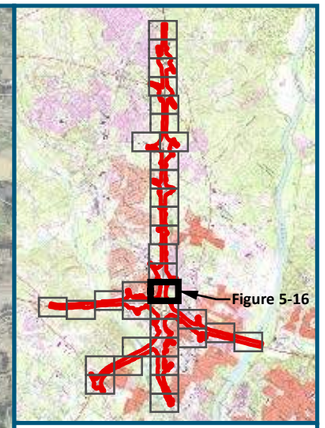
CAROLINA CROSSROADS

See Figure 5-15

See Figure 5-17

See Figure 5-22

Westover Road
Rob Hill Road
Fairway Lane
Woodland Hills Road
Stoop Creek
Tower Lane
Berryhill Drive
Burning Tree Drive
Chartwell Road
Chartwell Road
Center Point Road
Zimalcrest Drive
26
1068
107A
26



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-16
Two-Foot Contour Map

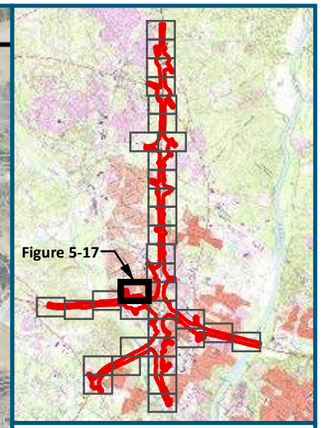
11/15/2018 Sheet 16 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-17
Two-Foot Contour Map

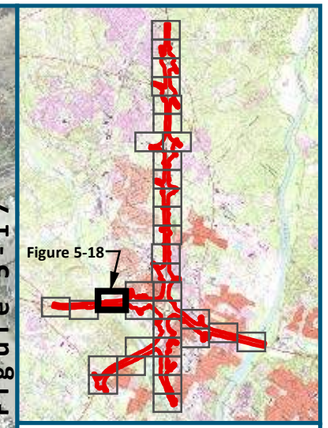
11/15/2018 Sheet 17 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

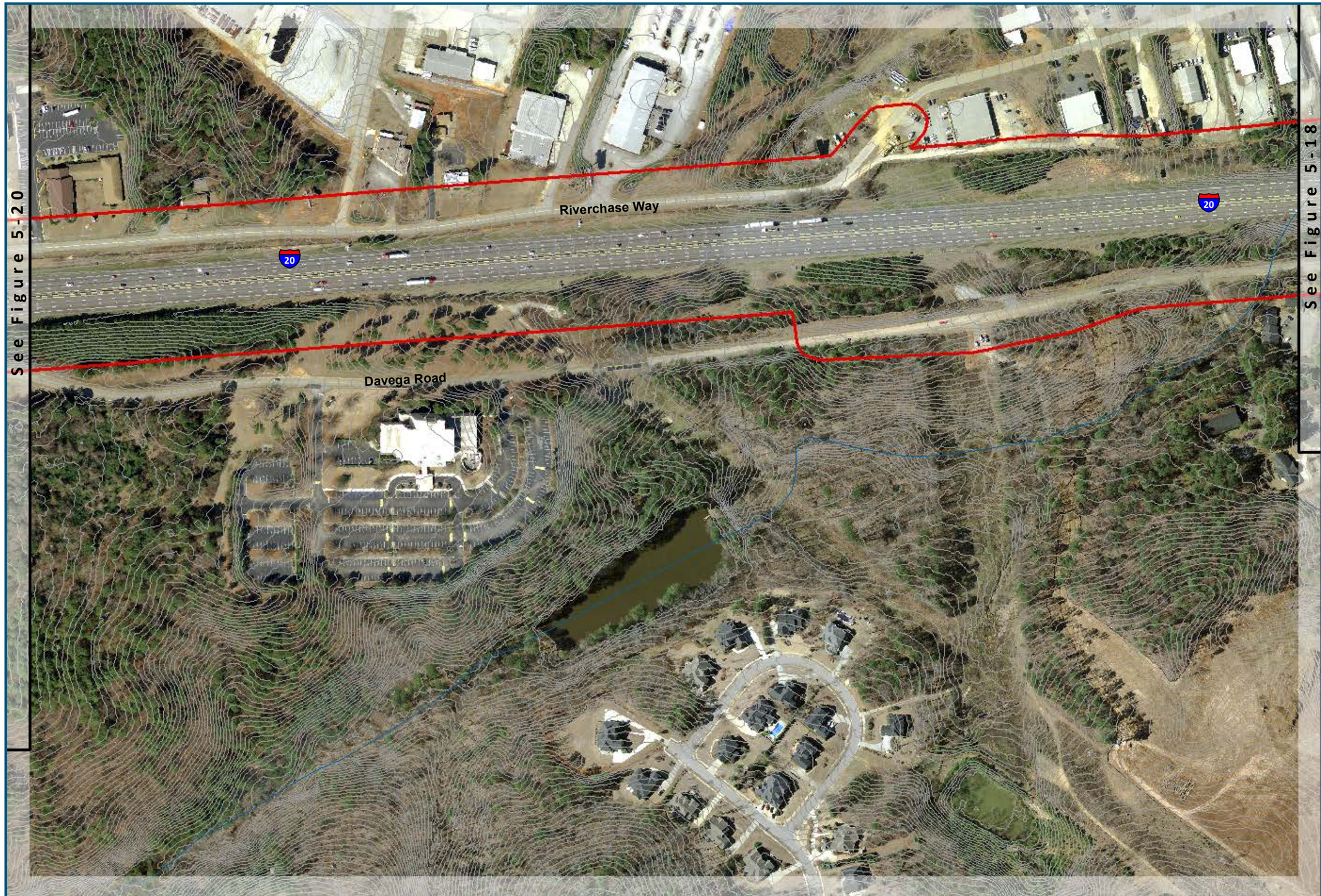
Figure 5-18
Two-Foot Contour Map

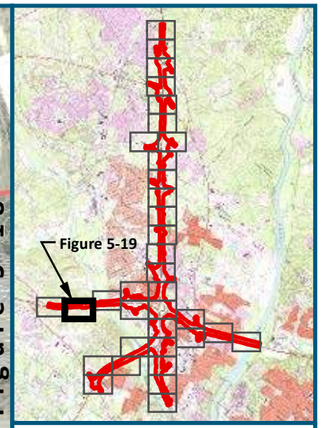
11/15/2018 Sheet 18 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

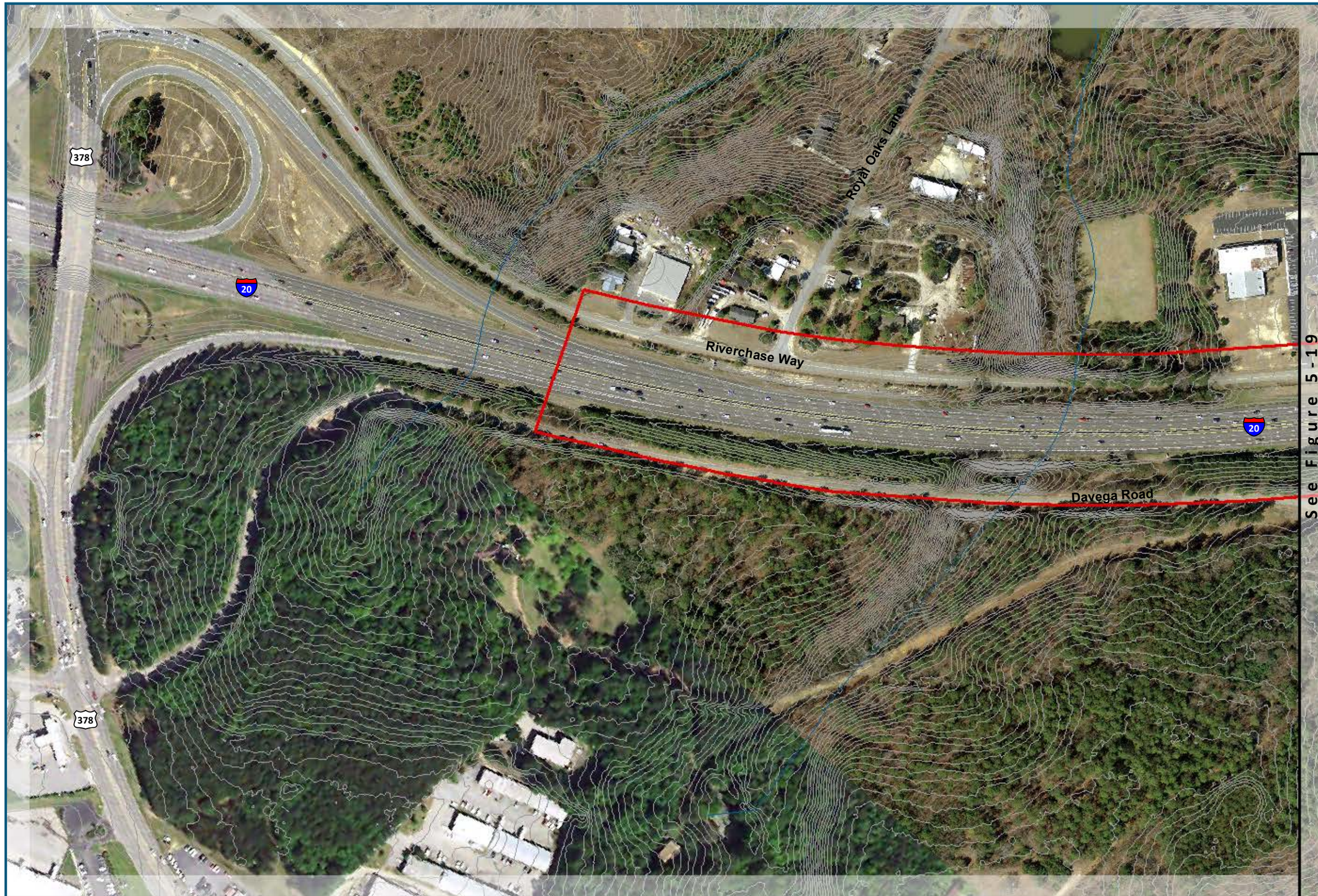
Figure 5-19
Two-Foot Contour Map

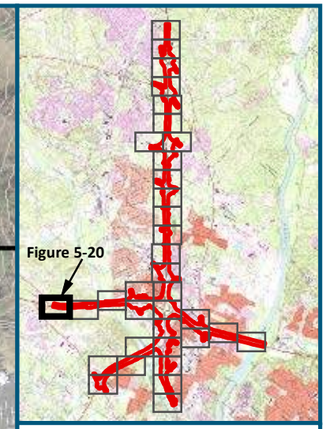
11/15/2018 Sheet 19 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-20
Two-Foot Contour Map

11/15/2018 Sheet 20 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-17

See Figure 5-18

See Figure 5-22

20

20

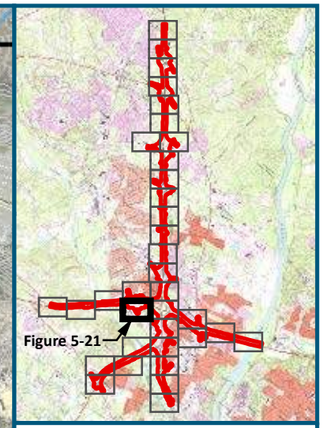
Rockland Road

Bush River Road

Stoop Creek

Independence Avenue

Nottingwood Drive



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-21
Two-Foot Contour Map

11/15/2018 Sheet 21 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-16

Berryhill Drive

Browning Road

Zimalcrest Drive

64A

20

26

107A

64A

107B

64B

See Figure 5-21

Zimalcrest Drive

20

64B

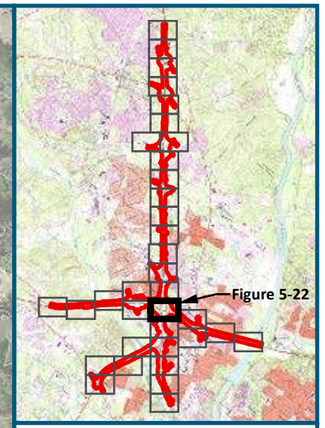
Browning Road

26

107B

See Figure 5-23

See Figure 5-27



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

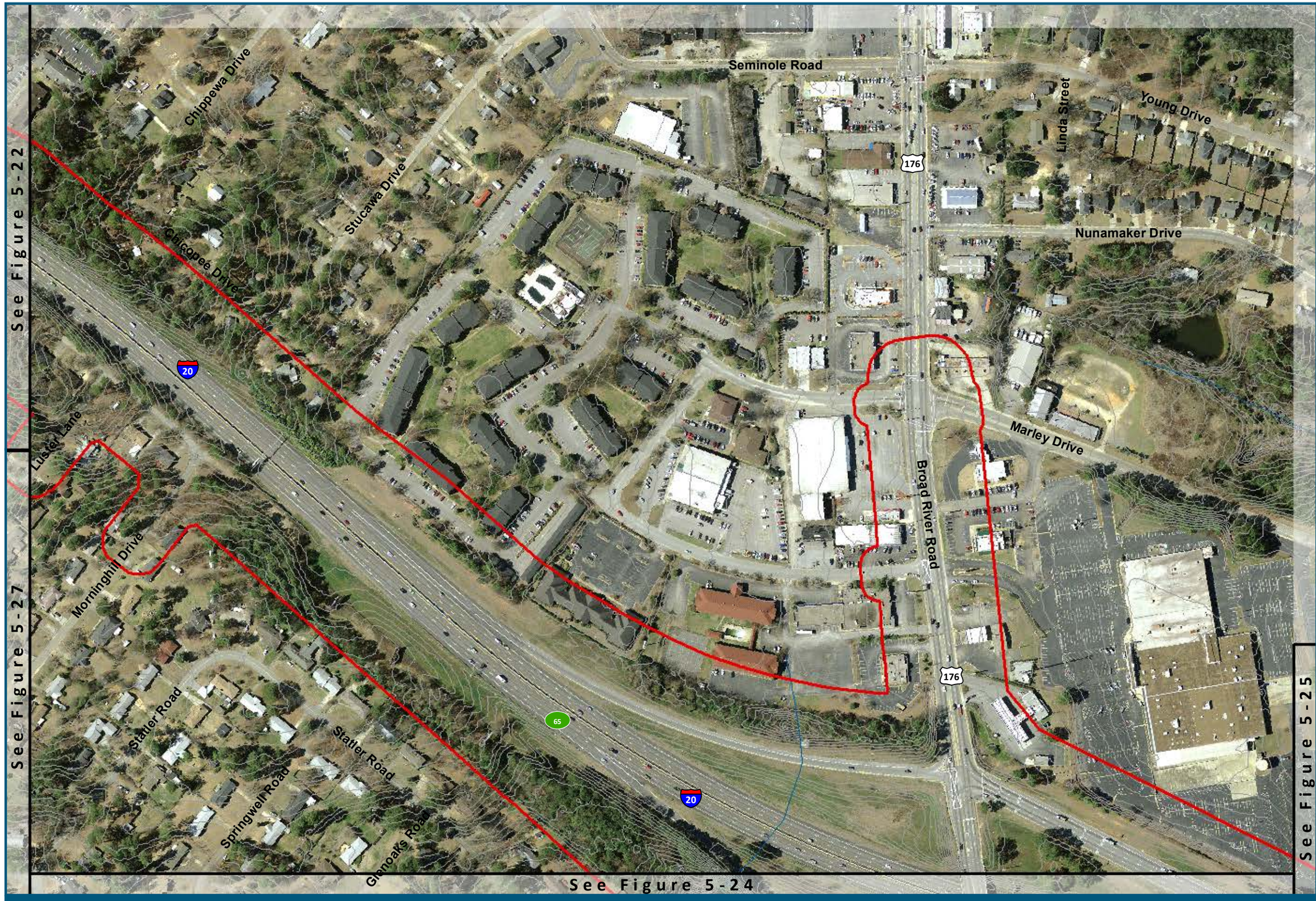
Figure 5-22
Two-Foot Contour Map

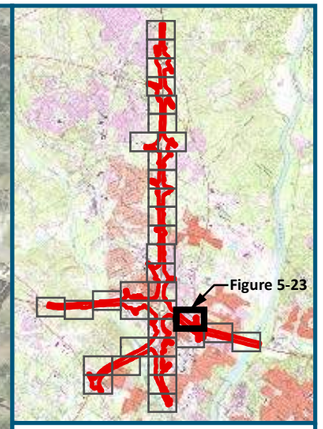
11/15/2018 Sheet 22 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

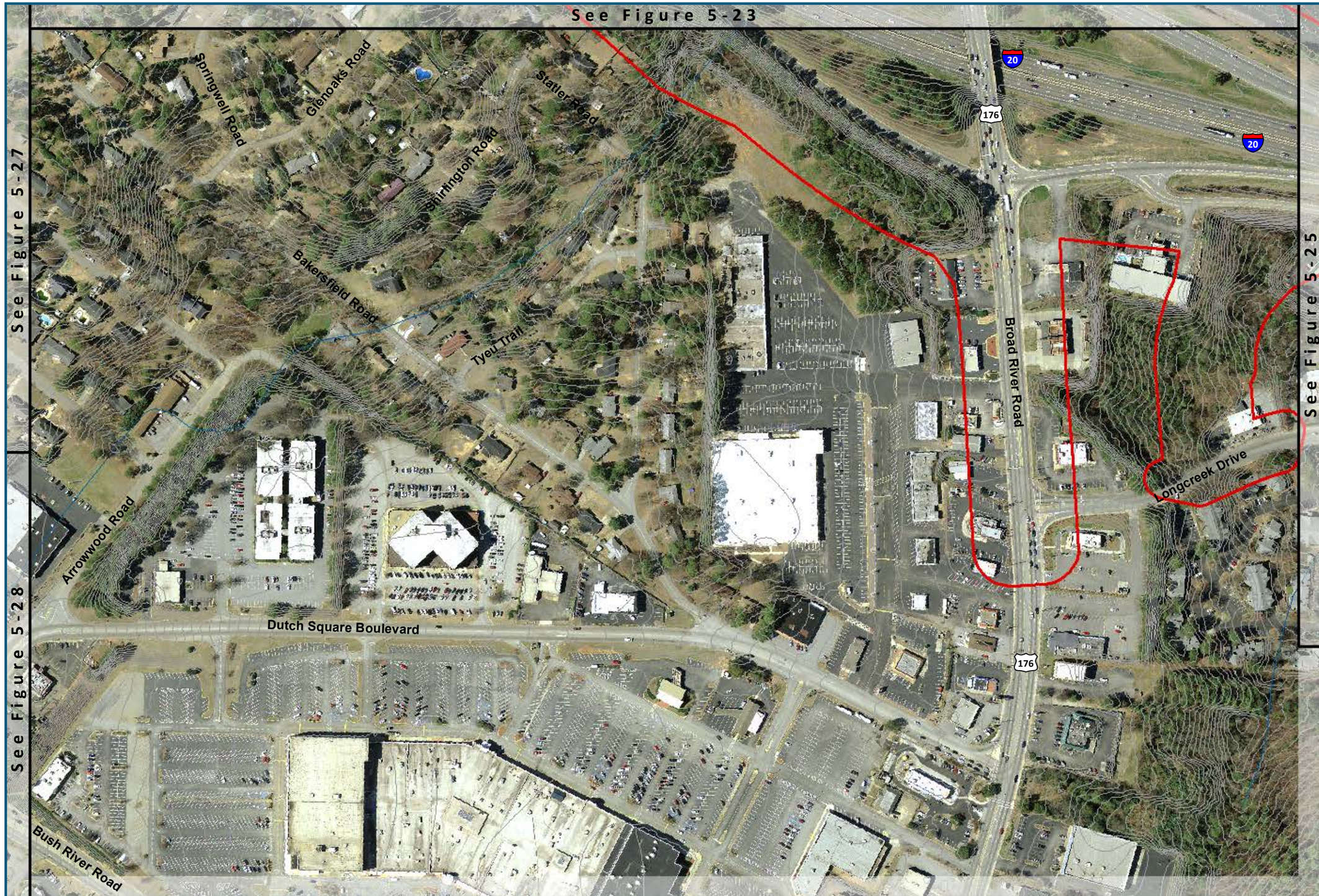
Figure 5-23
Two-Foot Contour Map

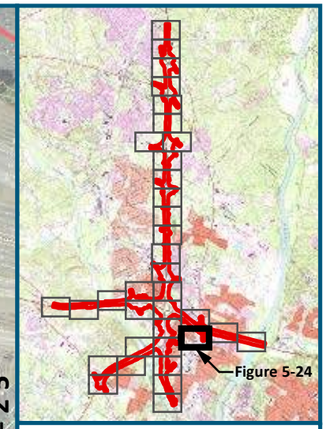
11/15/2018 Sheet 23 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-24
Two-Foot Contour Map

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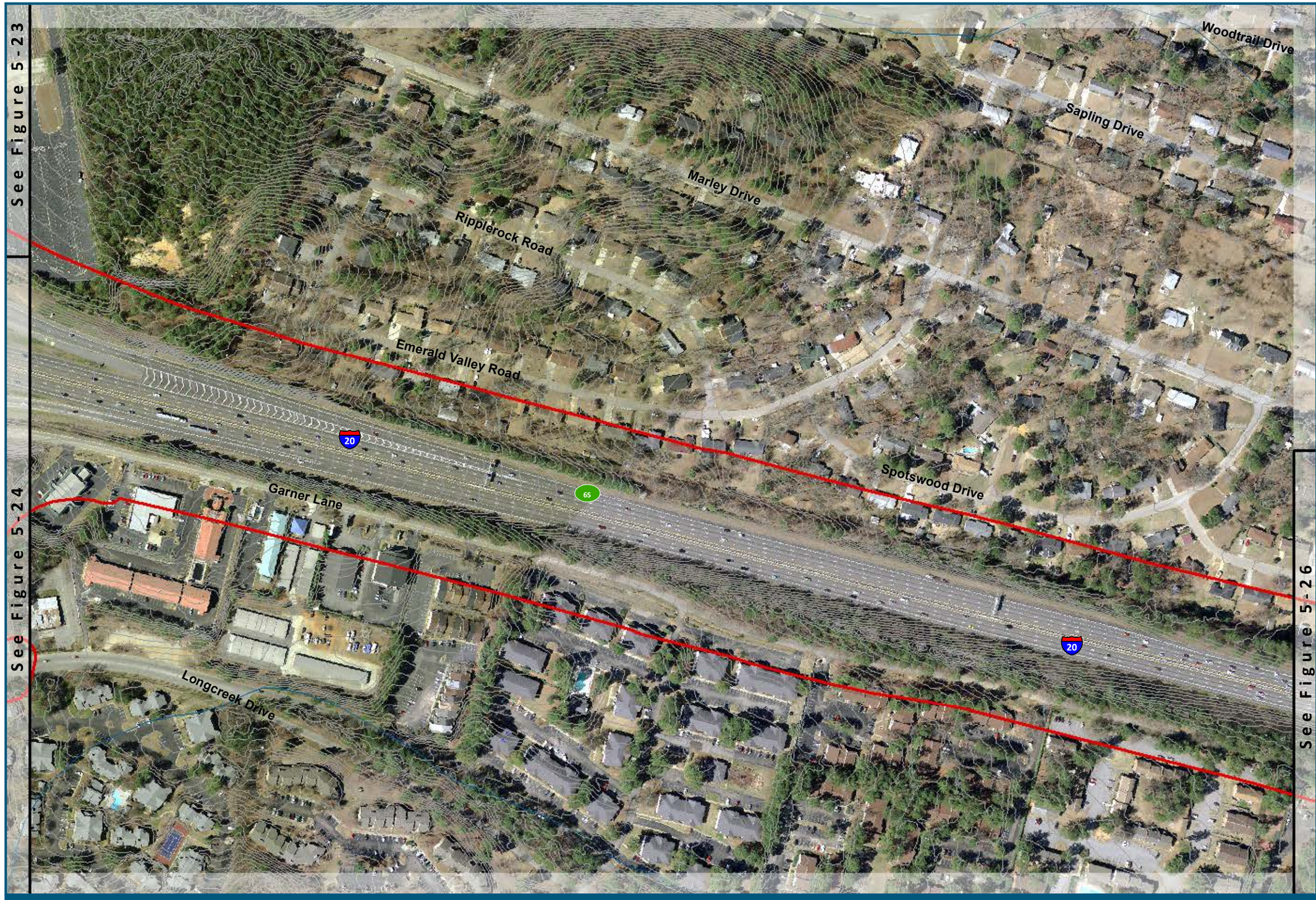
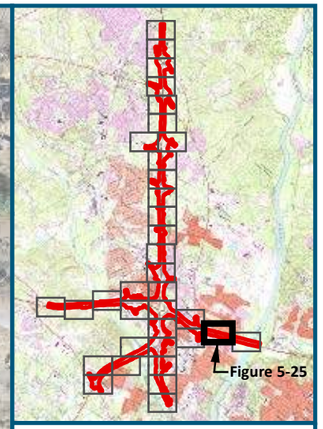
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

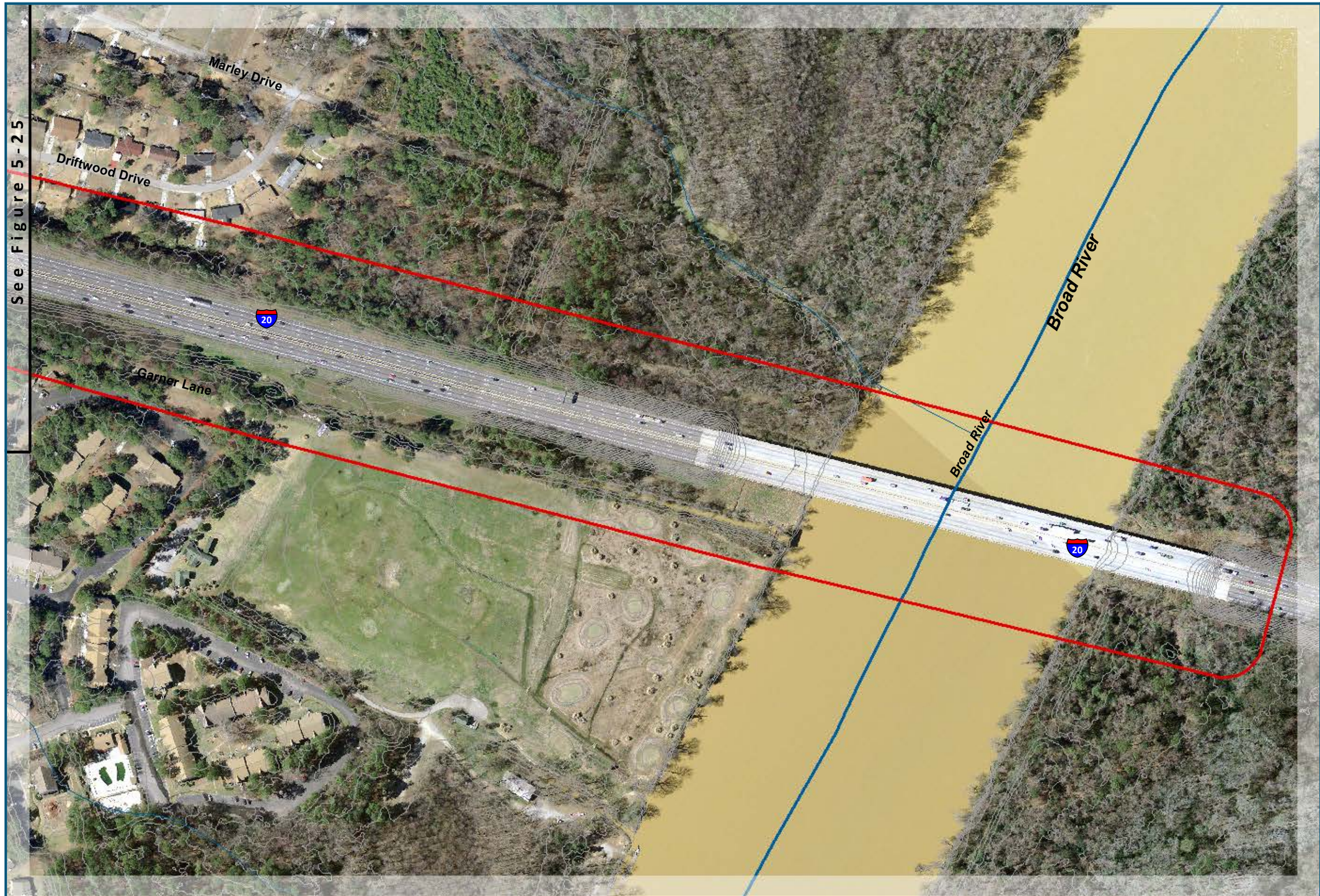
Figure 5-25
Two-Foot Contour Map

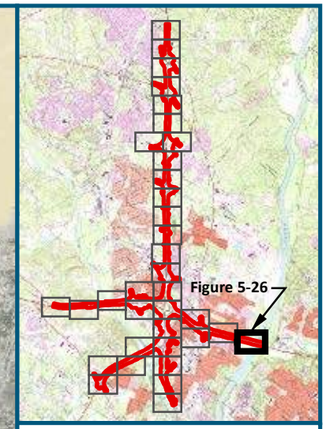
11/15/2018 Sheet 25 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-26
Two-Foot Contour Map

11/15/2018 Sheet 26 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-22

See Figure 5-23

See Figure 5-24

See Figure 5-28

Bush River Road

Zimalcrest Drive

108A

26

Browning Road

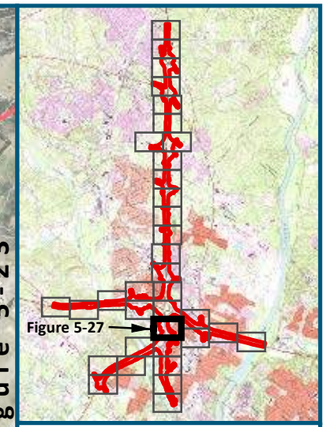
Fairhaven Drive

Hollingsworth Drive

Luster Lane

Morninghill Drive

Burnette Drive



0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-27
Two-Foot Contour Map

11/15/2018 Sheet 27 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-27

See Figure 5-32

See Figure 5-24

See Figure 5-29

Bush River Road

Latonea Drive

Frontage Road

Lawand Drive

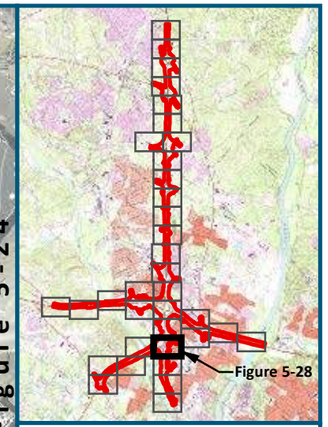
Arrowwood Road

Lancewood Road

Saluda River

26

126



0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-28
Two-Foot Contour Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-28

Saluda River

Saluda River

126

Lawand Drive

Arrowwood Road

Redbird Drive

Lancewood Road

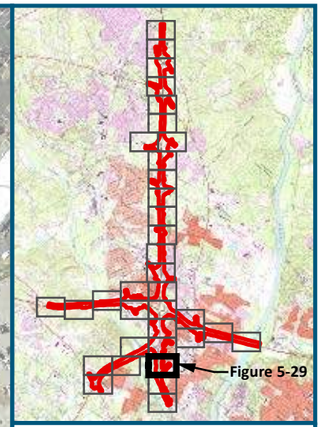
Colonial Life Boulevard

Arrowwood Road

Gracern Road

126

See Figure 5-30



0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-29
Two-Foot Contour Map

11/15/2018 Sheet 29 of 35

SCDOT South Carolina Department of Transportation

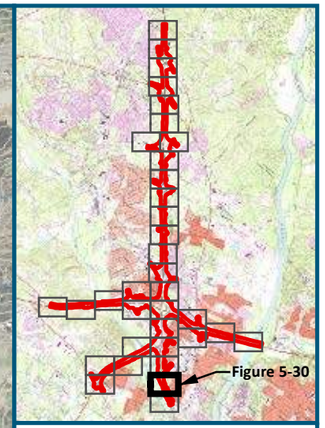
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-29



See Figure 5-31



0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-30
Two-Foot Contour Map

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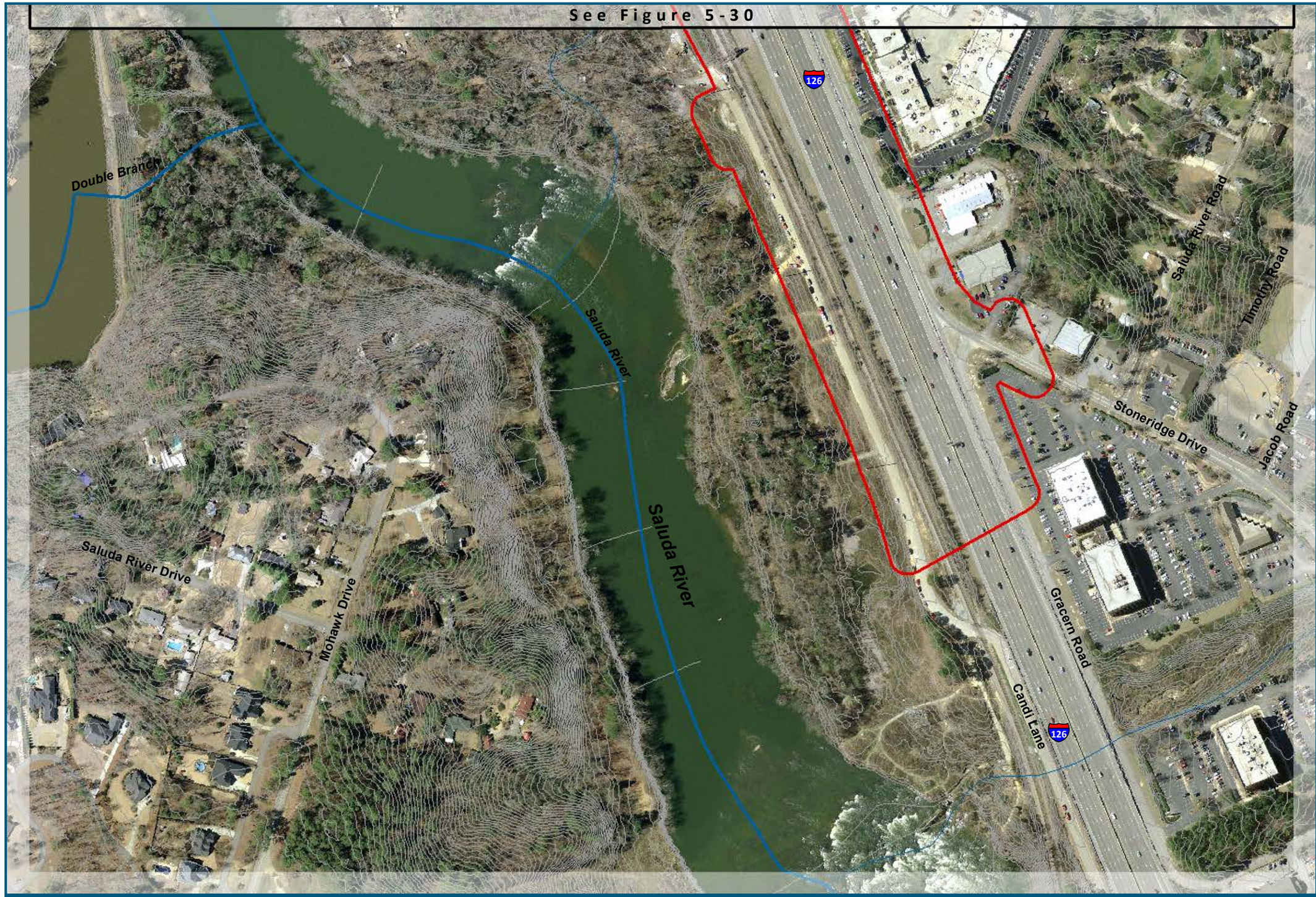
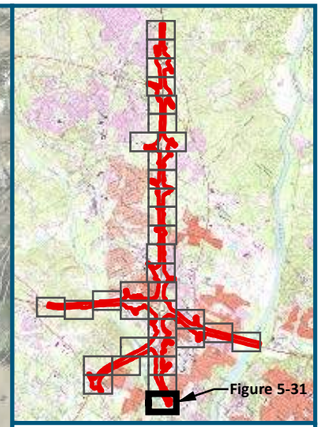
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-30





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Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-31
Two-Foot Contour Map

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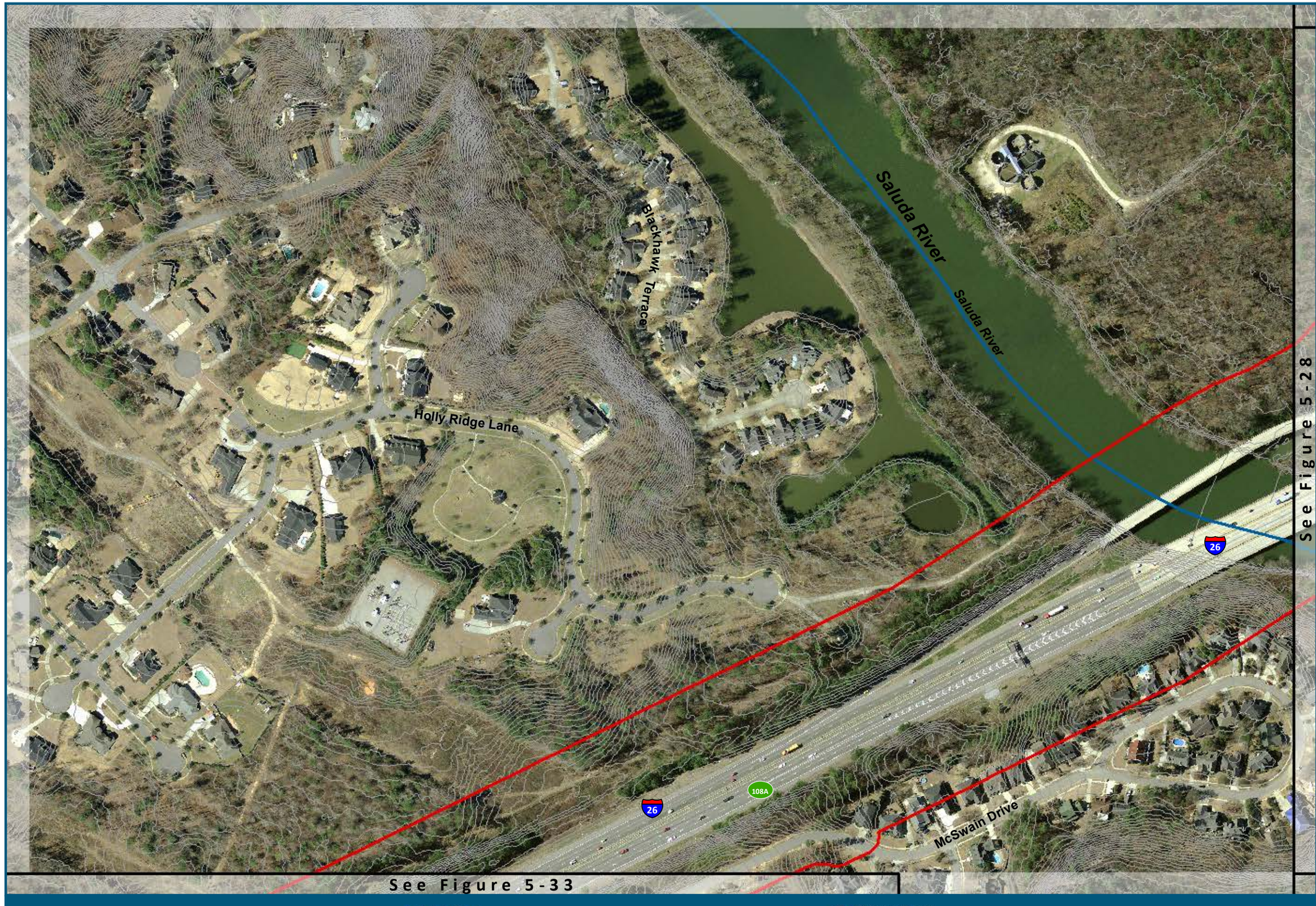
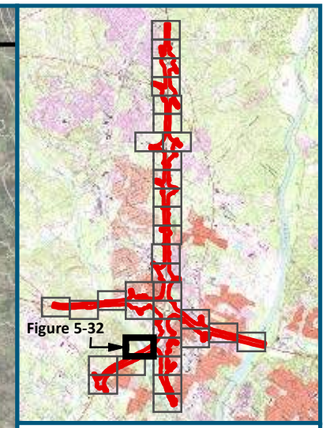
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-32
Two-Foot Contour Map

11/15/2018 Sheet 32 of 35

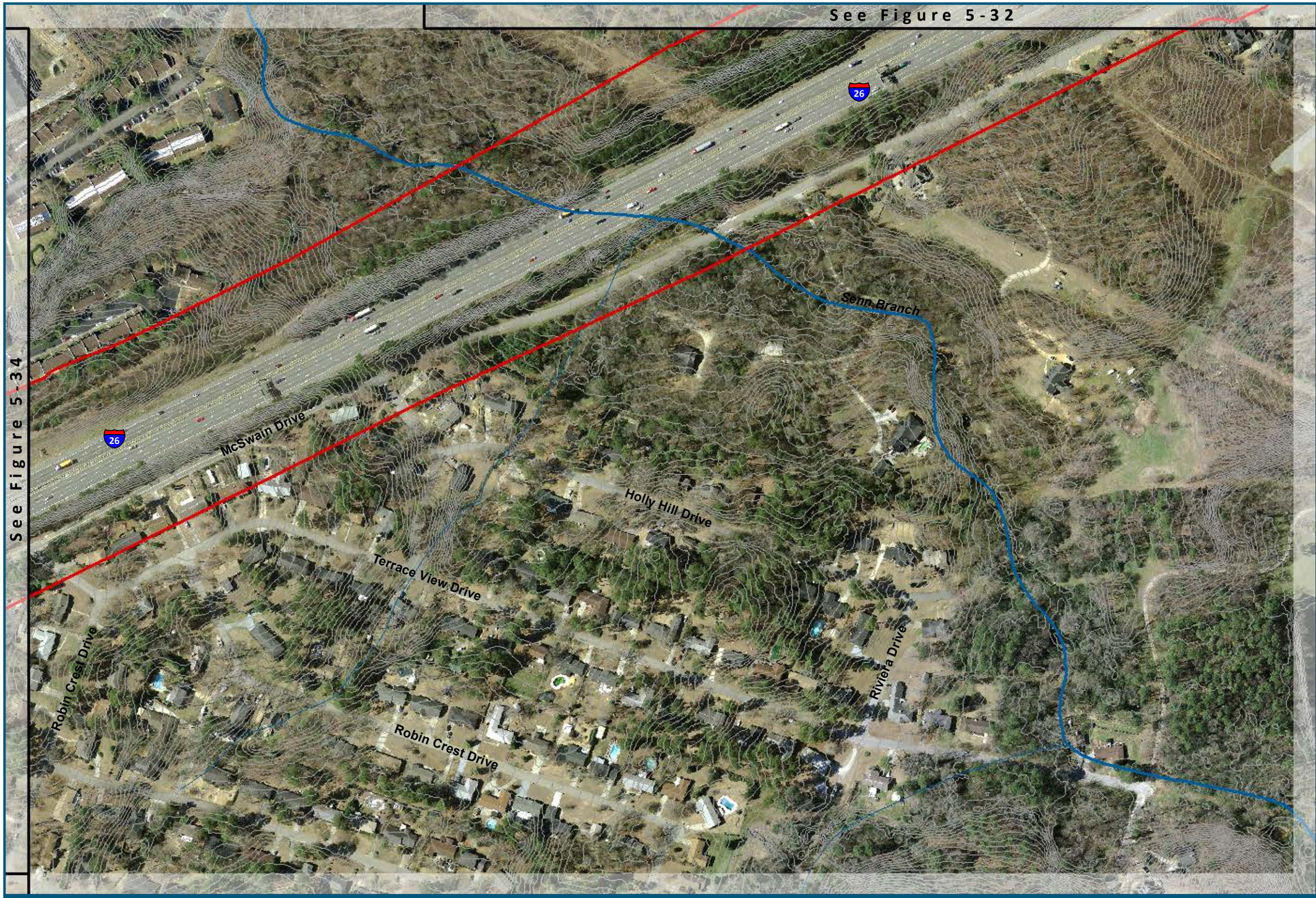
SCDOT South Carolina Department of Transportation

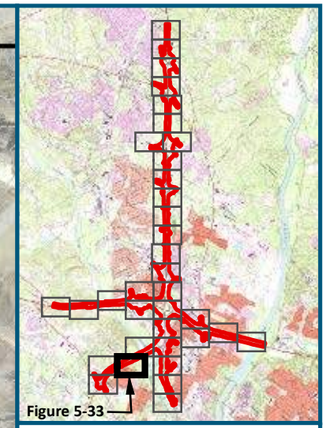
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-32

See Figure 5-34





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

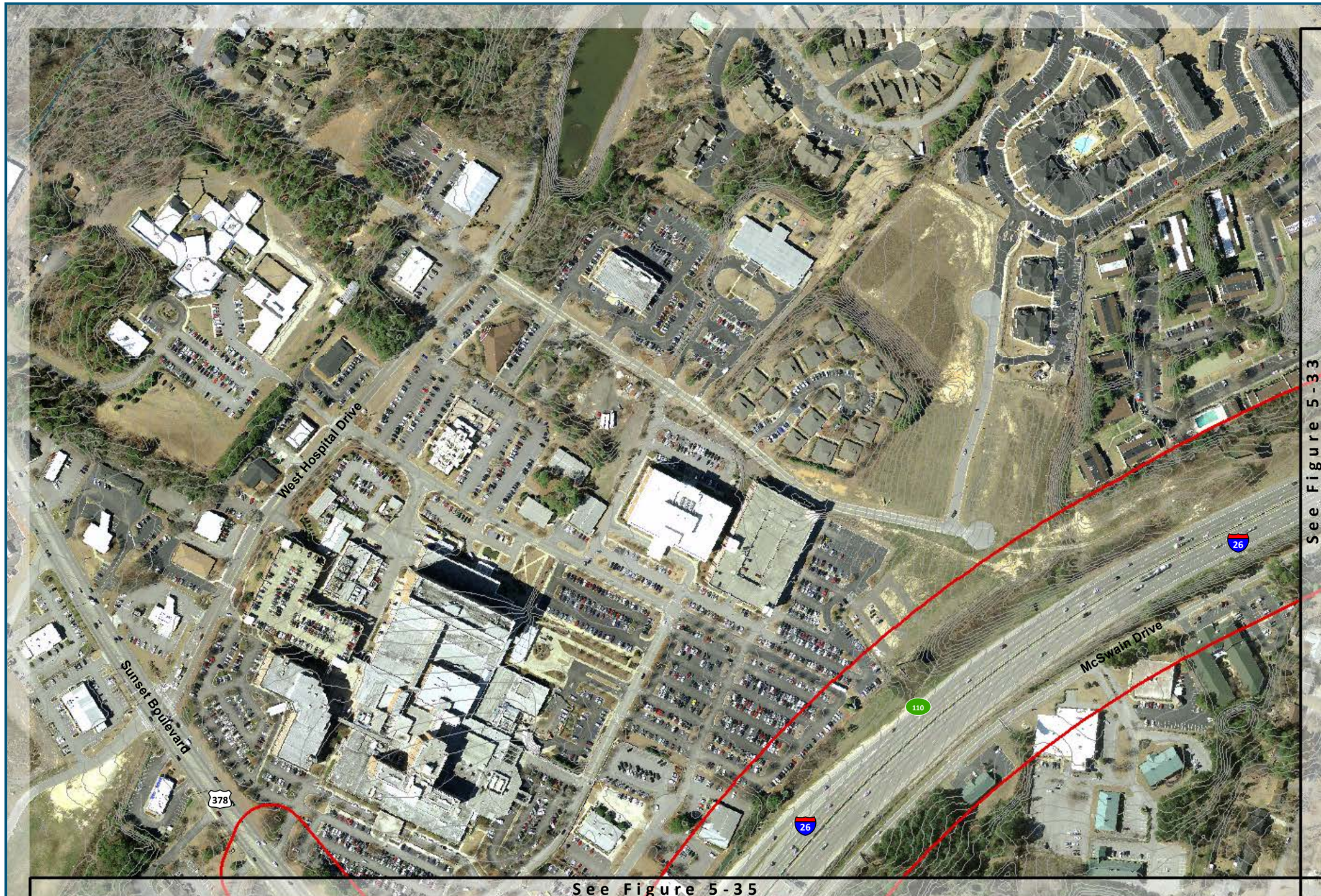
Figure 5-33
Two-Foot Contour Map

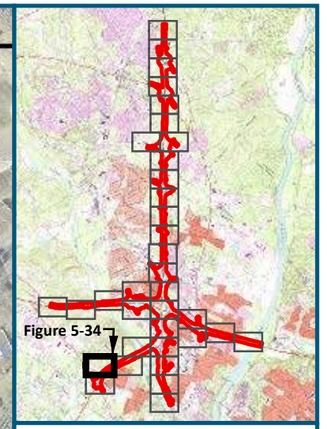
11/15/2018 Sheet 33 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-34
Two-Foot Contour Map

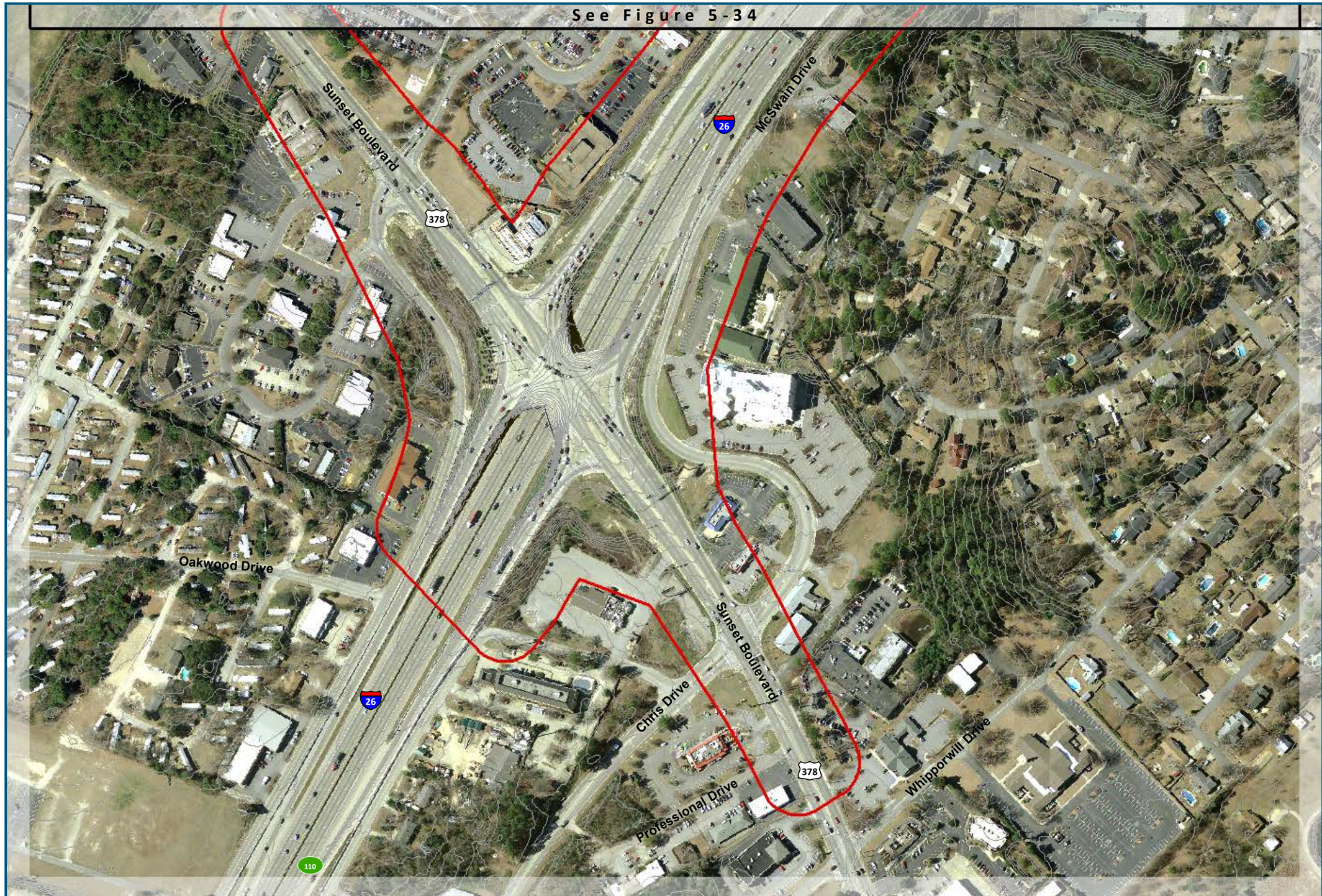
11/15/2018 Sheet 34 of 35

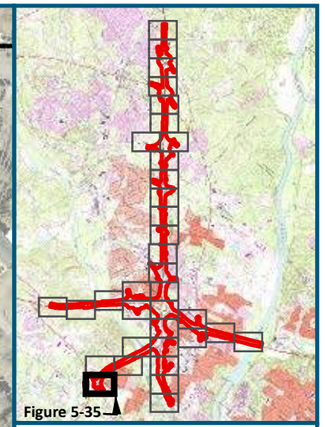
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 5-34





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: Two-Foot Contours Derived from
SCDNR LiDAR Data (2010)

Legend

- Project Study Area (1,482 acres)
- 2-foot Contour
- National Hydrography Dataset (NHD) Flowline
- 83 Exit Location/Number

Figure 5-35
Two-Foot Contour Map

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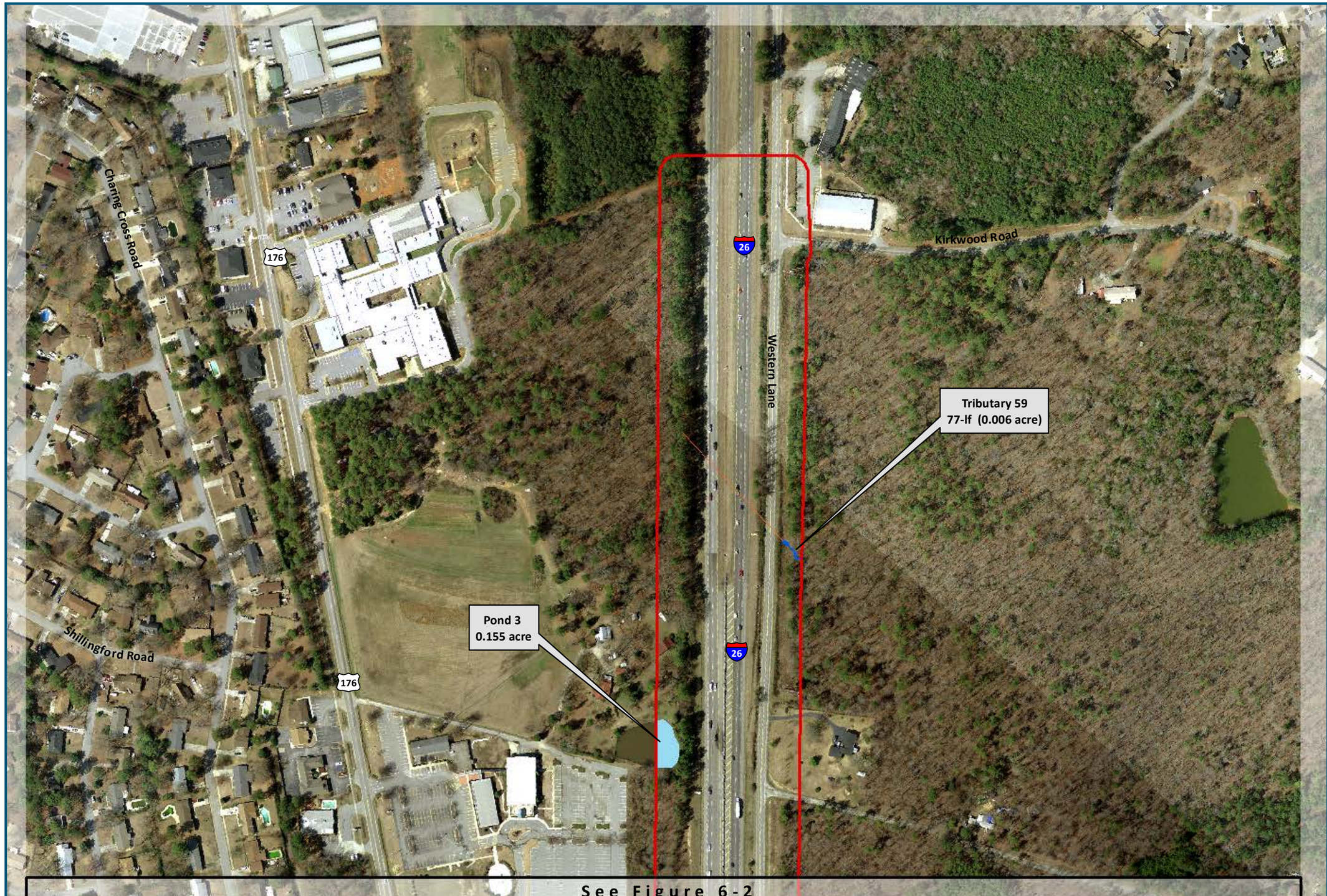
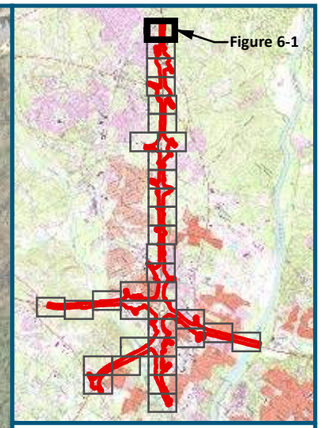
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water (0.155 acre)
- Tributary (77-lf / 0.006 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-1
Delineated Waters of the U.S.

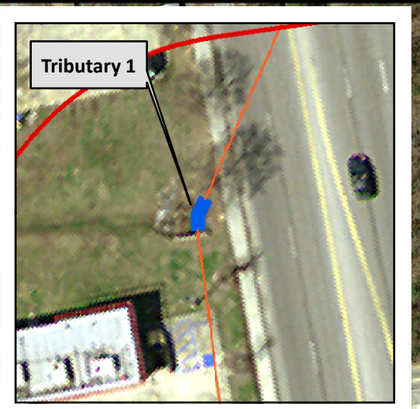
11/15/2018 Sheet 1 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

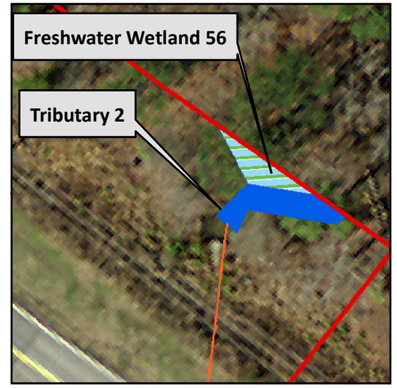
CAROLINA CROSSROADS

See Figure 6-1



Tributary 1
11-lf (0.001 acre)

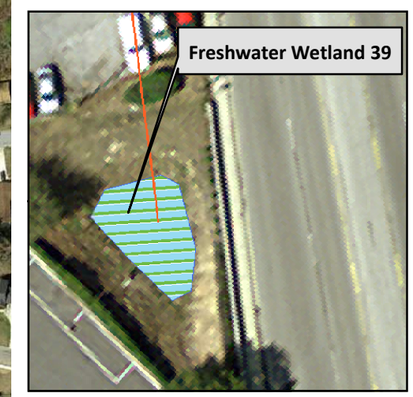
Tributary 60, aka
Moccasin Branch
195-lf (0.030 acre)



Freshwater Wetland 57
0.075 acre

Freshwater Wetland 56
0.004 acre

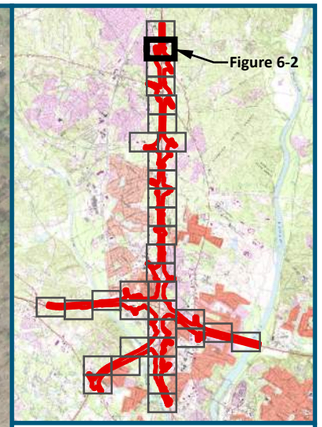
Freshwater Wetland 39
0.020 acre



Tributary 2
273-lf (0.029 acre)

Broad River Road
Hexham Circle
Chillingham Road
Columbiana Drive
Western Lane
Lowman Rd
176
101A
26

See Figure 6-3



0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.099 acre)
- Pond / Water
- Tributary (479-lf / 0.060 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-2
Delineated Waters of the U.S.

11/15/2018 Sheet 2 of 35

SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS

See Figure 6-2

Freshwater Wetland 40*
0.240 acre

Non-Jurisdictional
Linear Conveyance

Freshwater Wetland 1
0.045 acre

Tributary 3
440-lf (0.046 acre)

Chillingham Road

Shetford Road

Columbiana Drive

Western Lane

Broad River Road

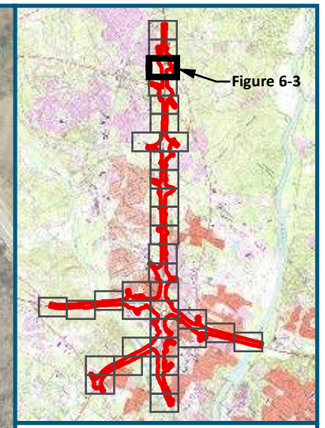
North Wingard Road

Columbiana Drive

176

* Freshwater Wetland 40 was inaccessible during field reviews due to an encompassing fence. The boundary of the wetland is based on aerial interpretation, contour data, and field observations.

See Figure 6-4



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.285 acre)
- Pond / Water
- Tributary (440-lf / 0.046 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- Exit Location/Number

Figure 6-3
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-3

Freshwater Wetland 2
0.061 acre

Freshwater Wetland 41
0.011 acre

Tributary 4
160-lf (0.019 acre)

Tributary 5
157-lf (0.022 acre)

Freshwater Wetland 3
0.014 acre

Tributary 6
22-lf (0.003 acre)

Columbiana Drive

Lake Murray Boulevard

Gaillard Street

Evergreen Drive

Shady Lane

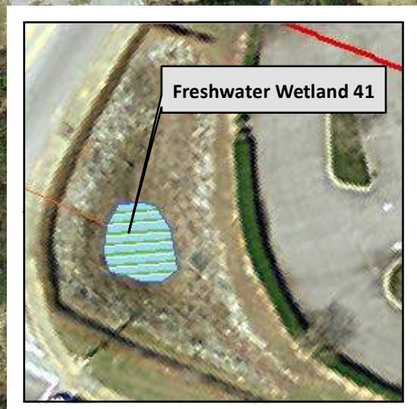
Kinley Road

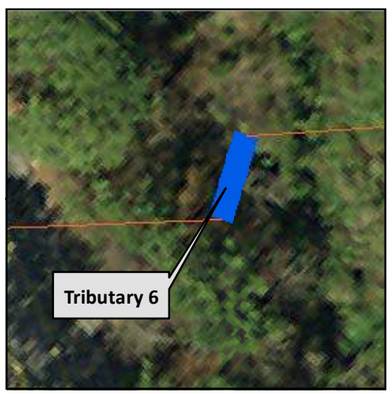
102A

102B

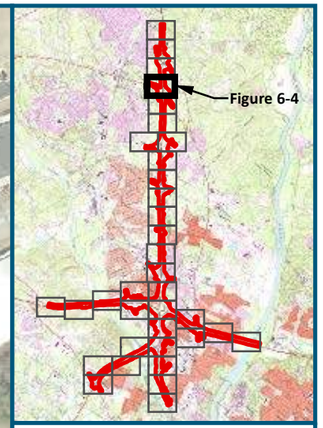
26

60





See Figure 6-5



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.086 acre)
- Pond / Water
- Tributary (339-lf / 0.044 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-4
Delineated Waters of the U.S.

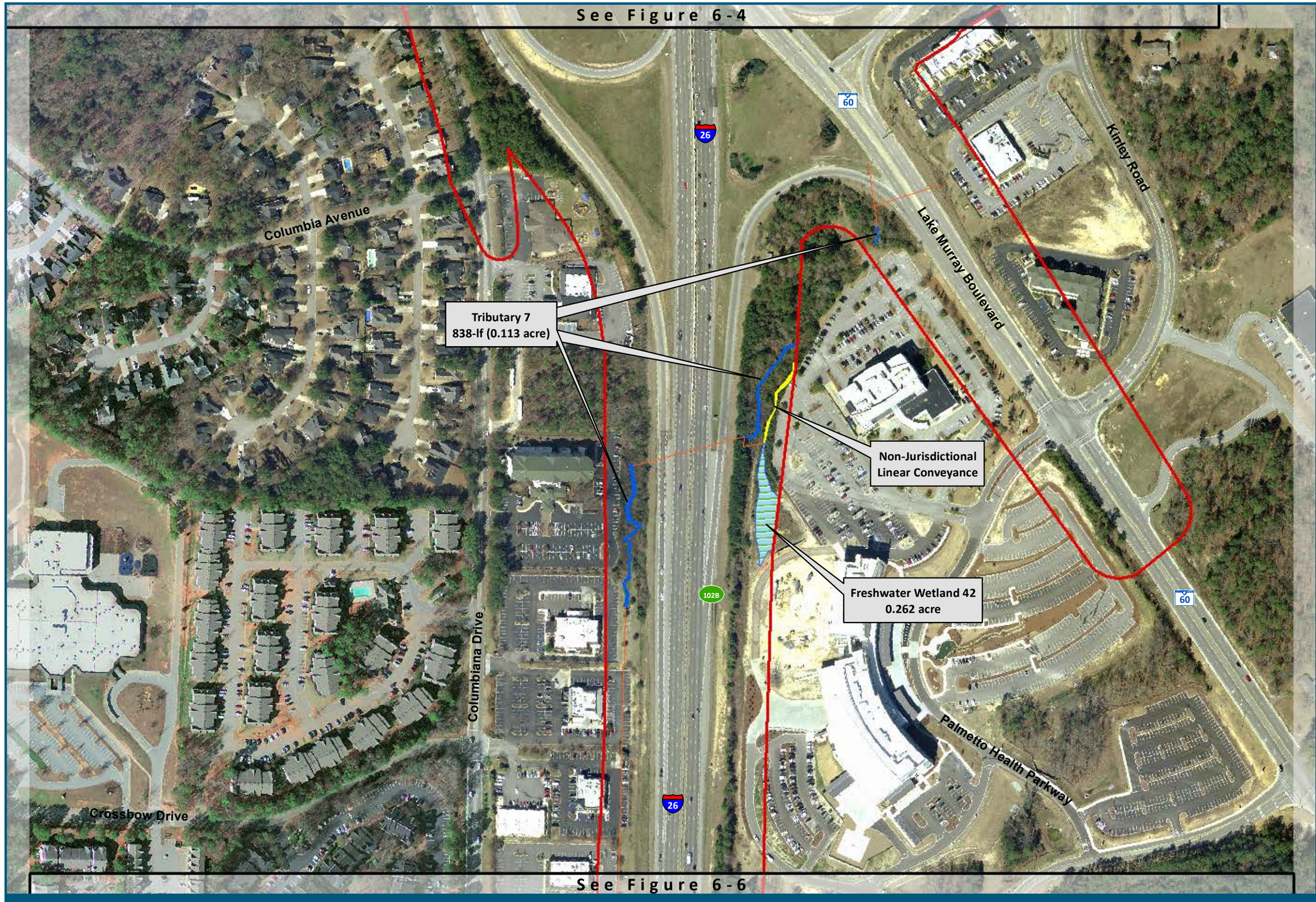
11/15/2018 Sheet 4 of 35

SCDOT South Carolina Department of Transportation

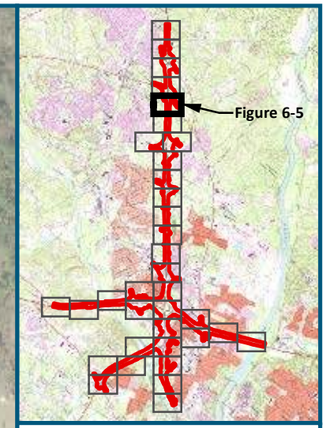
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-4



See Figure 6-6



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.262 acre)
- Pond / Water
- Tributary (838-lf / 0.113 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-5
Delineated Waters of the U.S.

11/15/2018 Sheet 5 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-5

Tributary 7
132-lf (0.017 acre)

Freshwater Wetland 43
0.034 acre

Tributary 8
571

Pond 1
0.035 acre

Tributary 9
188-lf (0.014 acre)

Palmetto Health Parkway

Columbiana Drive

Columbiana Drive

Columbiana Circle

Columbiana Circle

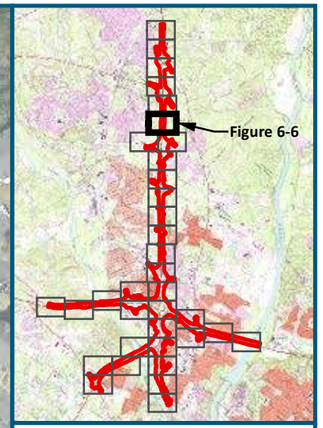
Parkridge Drive

26

26

See Figure 6-8

See Figure 6-7



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.034 acre)
- Pond / Water (0.035 acre)
- Tributary (891-lf / 0.101 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-6
Delineated Waters of the U.S.

11/15/2018 Sheet 6 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-6

See Figure 6-8

See Figure 6-9

Freshwater Wetland 44
0.040 acre

Freshwater Wetland 58
0.043 acre

Tributary 10
186-lf (0.028 acre)

Columbiana Circle

Parkridge Drive

Harbison Boulevard

Harbison Boulevard

Fernandina Road

Woodcross Drive

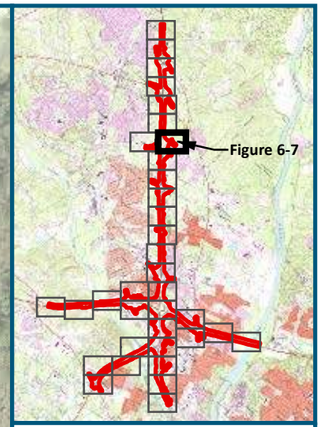
Saturn Parkway

103

26

103

26



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.083 acre)
- Pond / Water
- Tributary (186-lf / 0.028 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-7
Delineated Waters of the U.S.

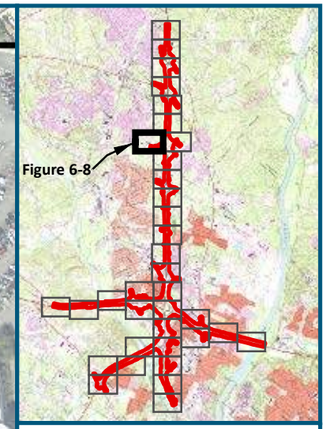
11/15/2018 Sheet 7 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.040 acre)
- Pond / Water
- Tributary
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-8
Delineated Waters of the U.S.

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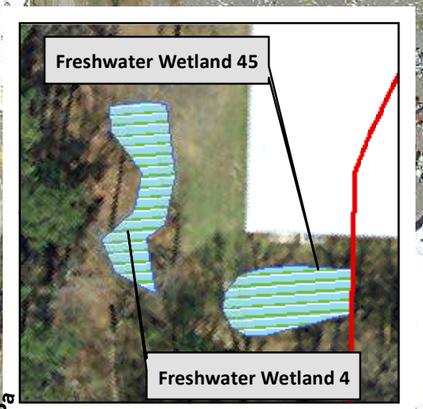
SCDOT South Carolina Department of Transportation

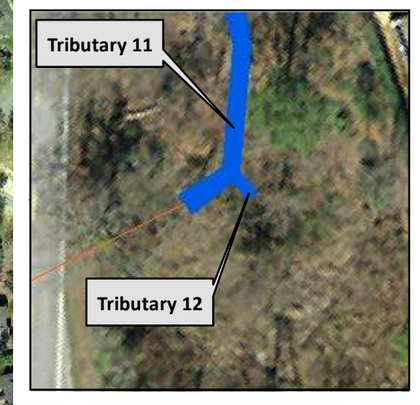
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-8

See Figure 6-7





Pond 4
0.365 acre

Freshwater Wetland 4
0.020 acre

Freshwater Wetland 45
0.018 acre

Tributary 11
1,755-lf (0.308 acre)

Tributary 12
10-lf (0.001 acre)

Woodcross Drive

Saturn Parkway

Fernandina Road

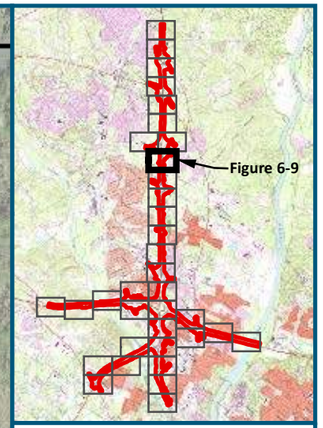
Bower Parkway

Giles Parkway

Harbison Way

26

See Figure 6-10



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.038 acre)
- Pond / Water (0.365 arce)
- Tributary (1765-lf / 0.308 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-9
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-9

Tributary 13
14-lf (0.001 acre)

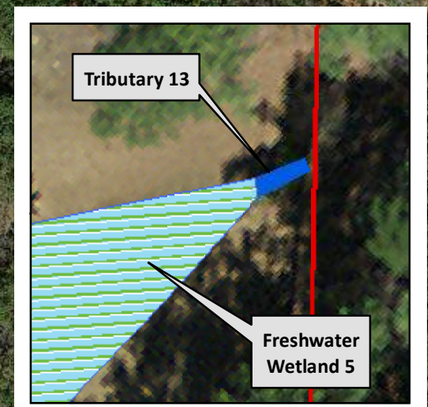
Freshwater Wetland 5
0.092 acre

Tributary 14
195-lf (0.035 acre)

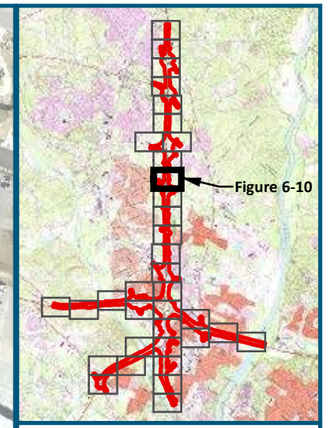
Tributary 15
164-lf (0.015 acre)

Freshwater Wetland 46
0.023 acre

Baffin Bay Road
Saturn Parkway
Bower Parkway
Fernandina Road
Piney Grove Road
Foxfire Drive
Jamil Road
Piney Woods Road
26
104



See Figure 6-11



0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.115 acre)
- Pond / Water
- Tributary (373-lf / 0.051 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-10
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS

See Figure 6-10

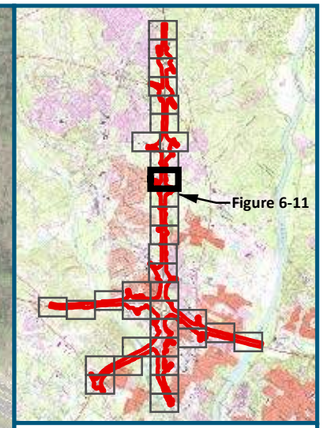
Freshwater Wetland 46
0.028 acre

Freshwater Wetland 6
0.051 acre

Jamil Road
Shadowbrook Drive
Piney Grove Road
Fernandina Road
Piney Woods Road
Paris Road
Jamil Road
Fernandina Road
Steward Drive

26
104
26

See Figure 6-12



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.079 acre)
- Pond / Water
- Tributary
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-11
Delineated Waters of the U.S.

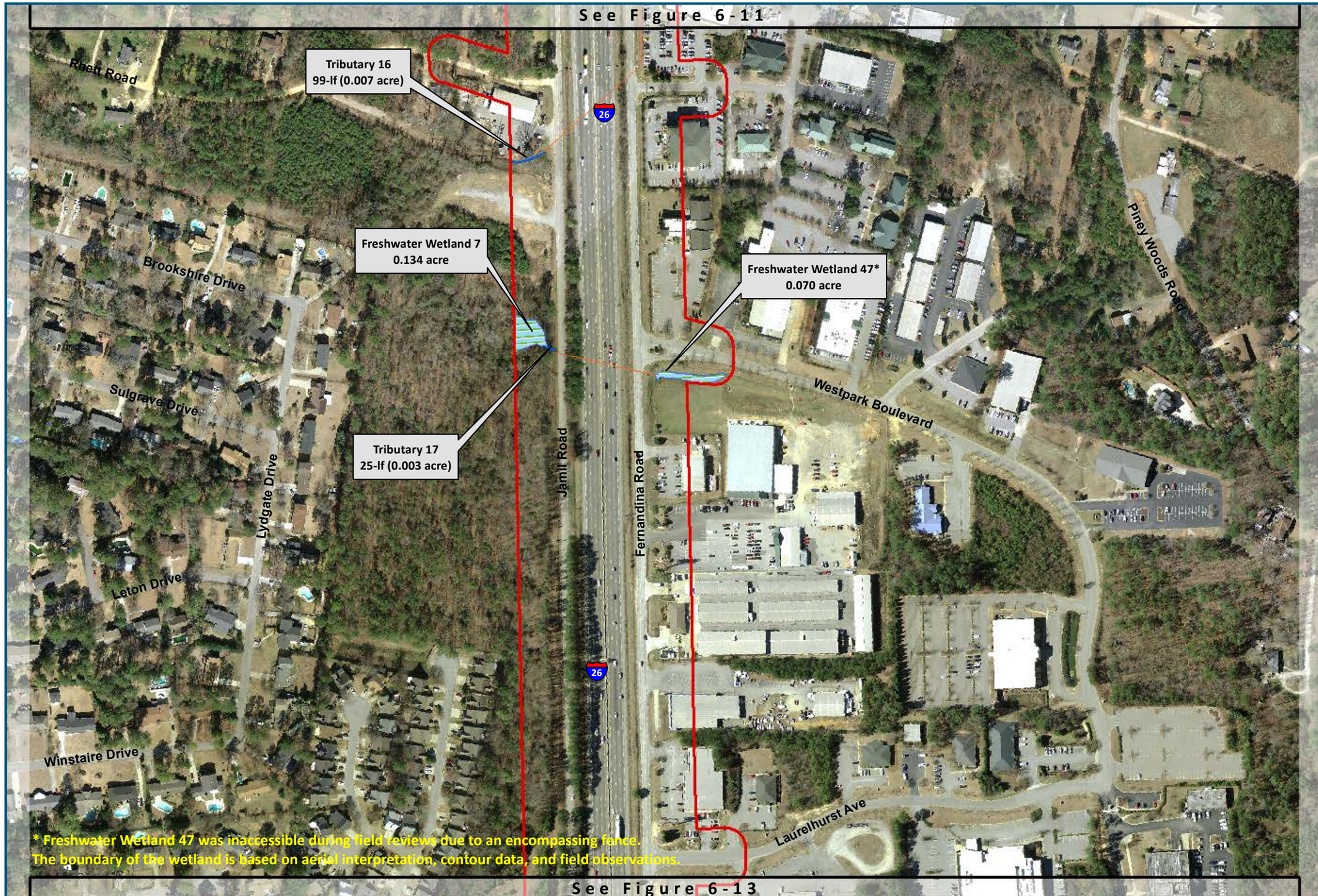
11/15/2018 Sheet 11 of 35

SCDOT South Carolina Department of Transportation

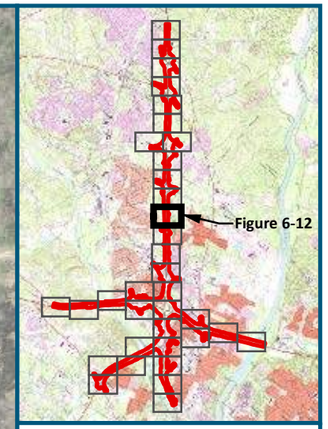
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-11



See Figure 6-13



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.204 acre)
- Pond / Water
- Tributary (124-lf / 0.010 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-12
Delineated Waters of the U.S.

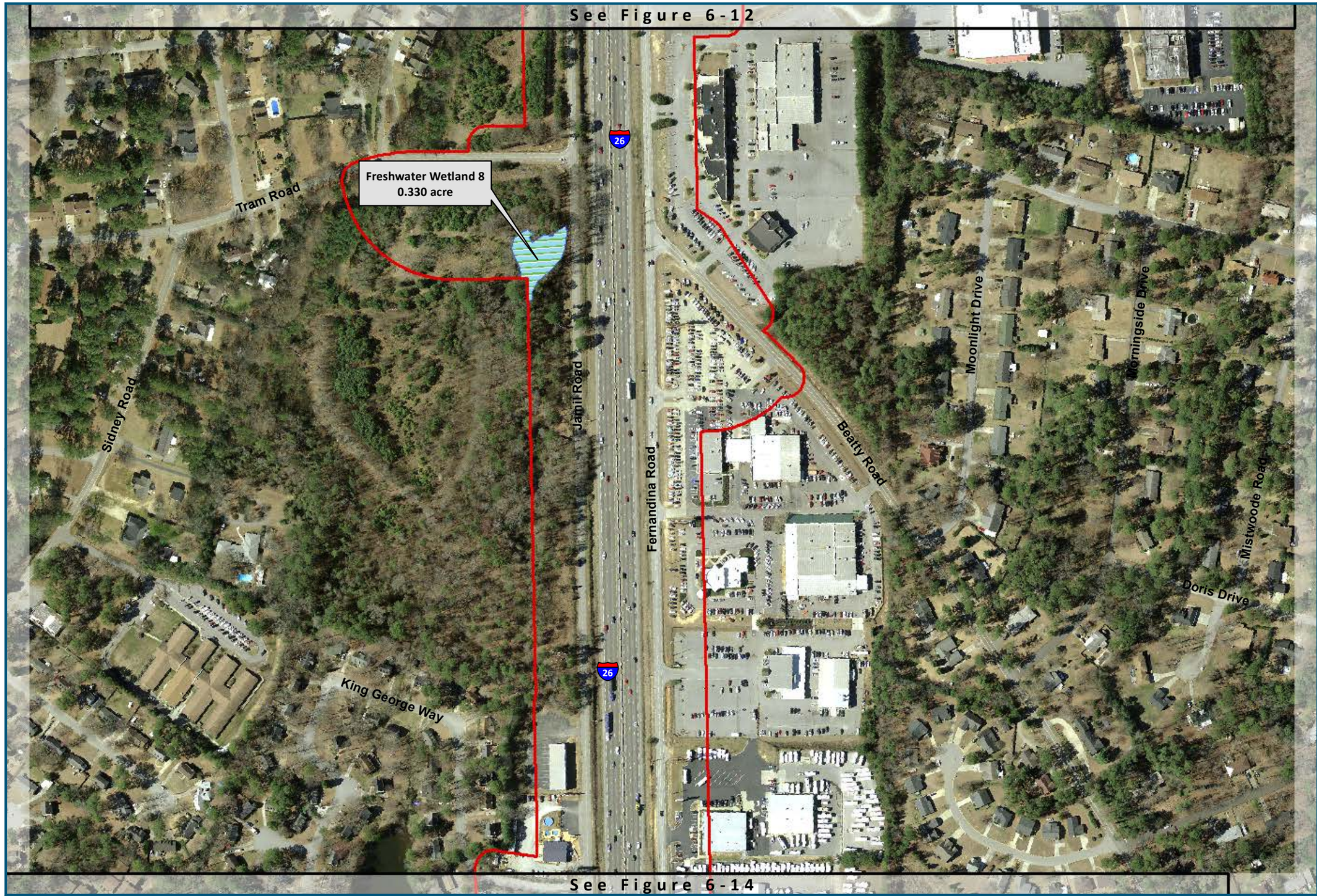
11/15/2018 Sheet 12 of 35

SCDOT South Carolina Department of Transportation

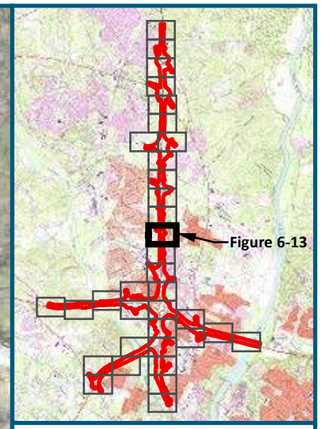
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-12



See Figure 6-14



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.330 acre)
- Pond / Water
- Tributary
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-13
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-13

Beatty Downs Road

Beatty Road

Elberta Street

Jamil Road

Evelyn Drive

Fernandina Road

Julian Road

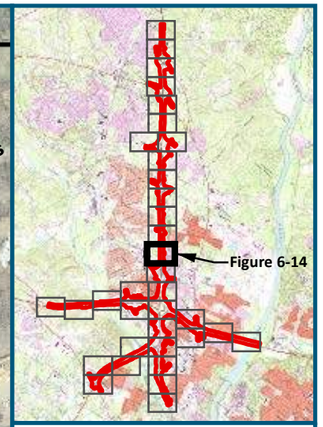
26

Tributary 18
485-lf (0.084 acre)

Tributary 19
166-lf (0.017 acre)

Tributary 20
101-lf (0.015 acre)

See Figure 6-15



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (752-lf / 0.116 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-14
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-14

Jamil Road

Saint Andrews Road

Woodland Hills Road

Berry Hill Drive

Tributary 21, aka
Stoop Creek
331-lf (0.135 acre)

Saint Andrews Road

Burning Tree Drive

Chartwell Road

Kay Street

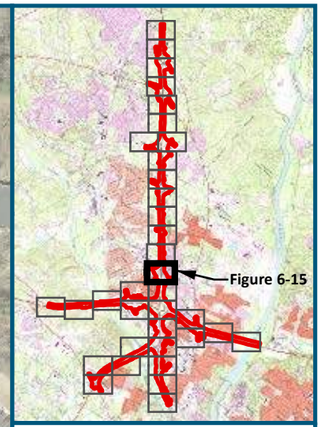
26

106

106A

26

See Figure 6-16



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (331-lf / 0.135 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-15
Delineated Waters of the U.S.

11/15/2018 Sheet 15 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-15

See Figure 6-17

Westover Road

Nob Hill Road

Fairway Lane

Woodland Hills Road

Tower Lane

Tributary 21, aka
Stoop Creek
340-lf (0.128 acre)

Bergyhill Drive

Burning Tree Drive

Chartwell Road

Chartwell Road

Tributary 22
143-lf (0.031 acre)

Center Point Road

Zimalcrest Drive

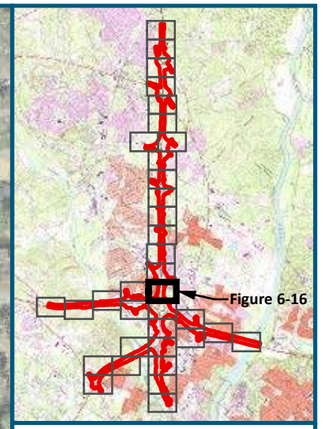
26

1068

107A

26

See Figure 6-22



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (483-lf / 0.159 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-16
Delineated Waters of the U.S.

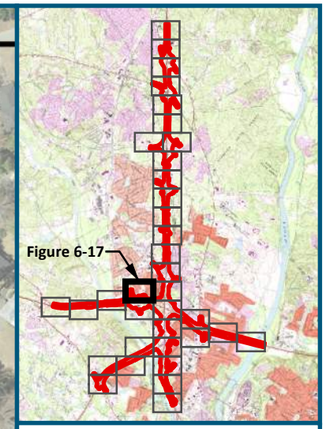
11/15/2018 Sheet 16 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (841-lf / 0.080 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

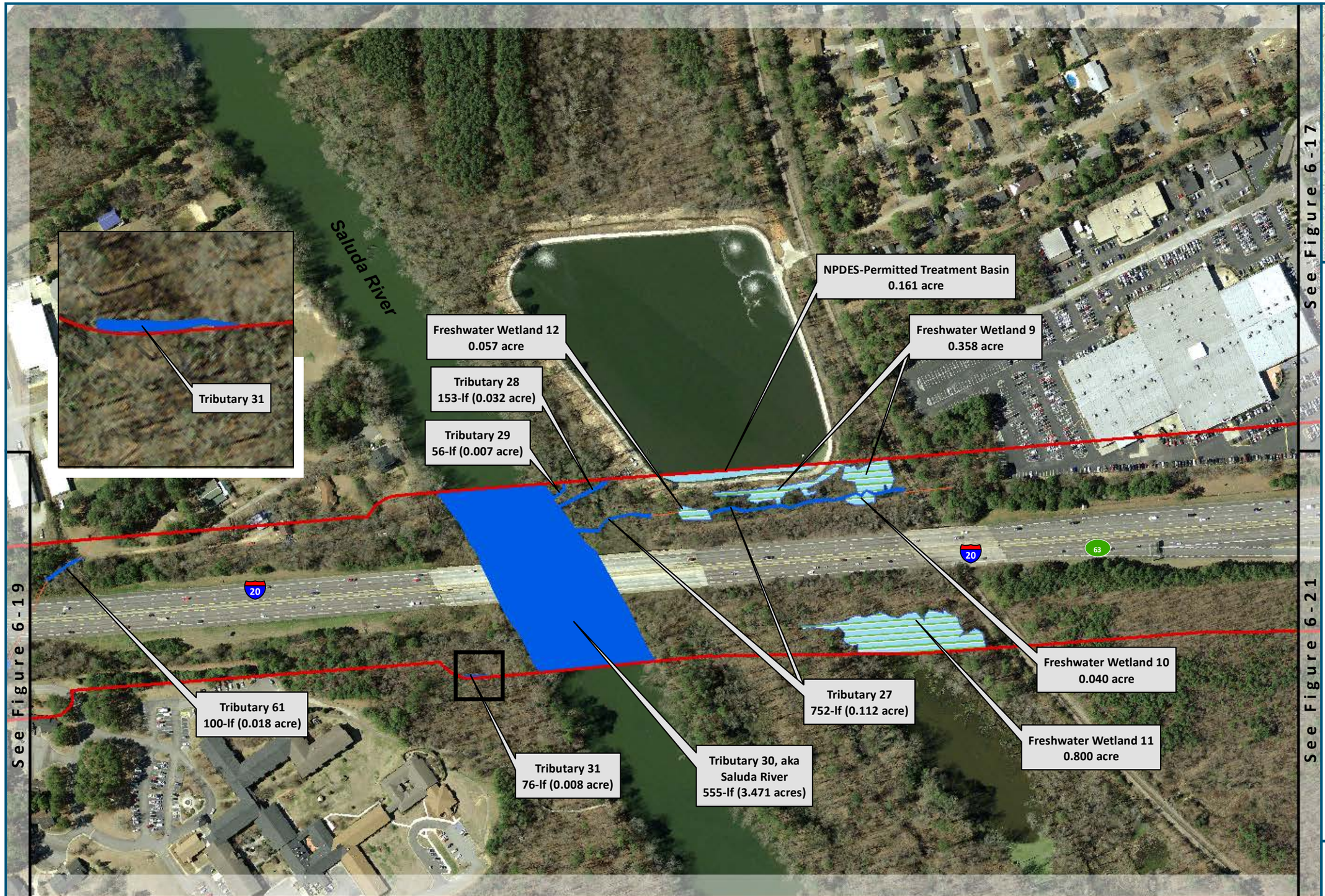
Figure 6-17
Delineated Waters of the U.S.

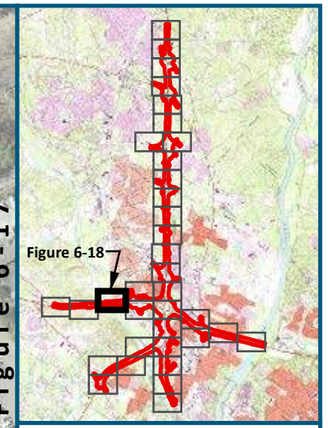
11/15/2018 Sheet 17 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (1.255 acres)
- Pond / Water (0.161 acre)
- Tributary (1,692-lf / 3.648 acres)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

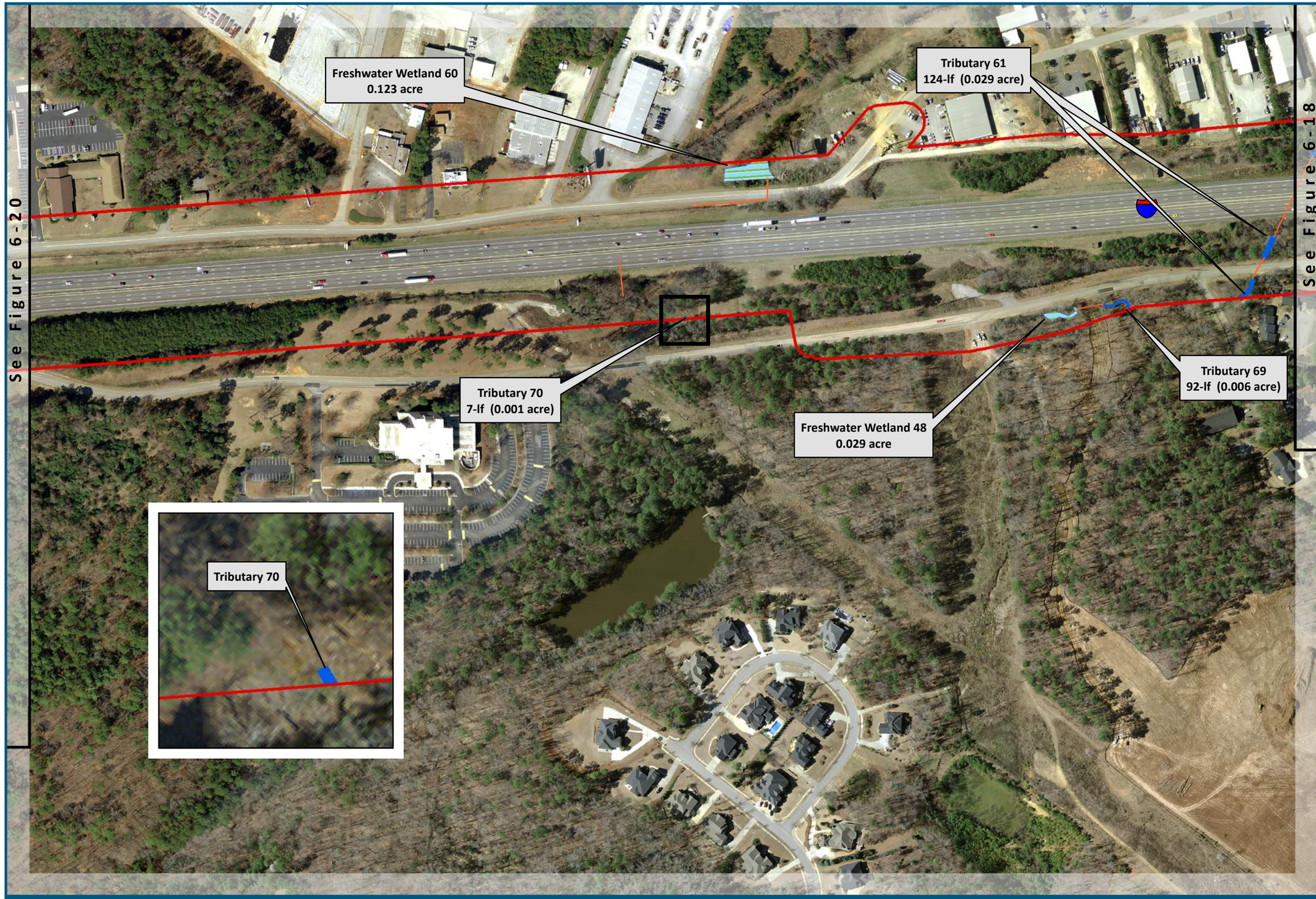
Figure 6-18
Delineated Waters of the U.S.

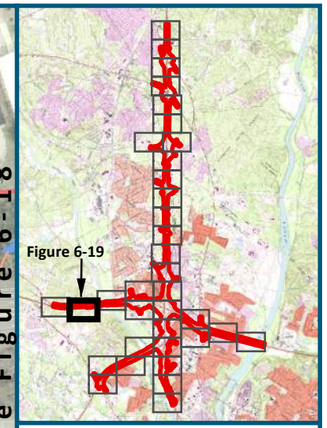
11/15/2018 Sheet 18 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 18,333 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.152 acre)
- Pond / Water
- Tributary (223-lf / 0.036 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-19
Delineated Waters of the U.S.

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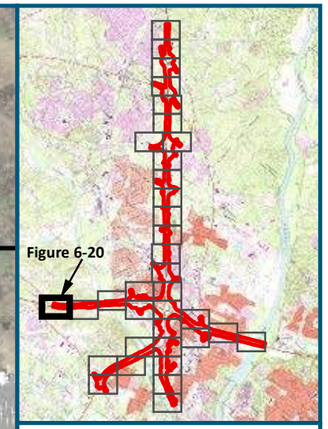
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (202-lf / 0.012 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-20
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-17

See Figure 6-18

See Figure 6-22

Freshwater Wetland 49
0.017 acre

Non-Jurisdictional
Linear Conveyance

Tributary 23
902-lf (0.129 acre)

Tributary 32
70-lf (0.008 acre)

Rockland Road

Bush River Road

Tributary 21, aka
Stoop Creek
580-lf (0.311 acre)

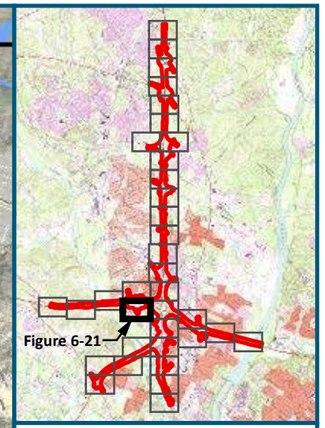
Tributary 33
101-lf (0.010 acre)

Independence Avenue

Nottingwood Drive

20

20



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.017 acre)
- Pond / Water
- Tributary (1,653-lf / 0.458 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-21
Delineated Waters of the U.S.

11/15/2018 Sheet 21 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-16

Tributary 21, aka Stoop Creek
30-lf (0.020 acre)

Berryhill Drive

Tributary 34
382-lf (0.043 acre)

Browning Road

Zimalcrest Drive

Freshwater Wetland 13
0.066 acre

Freshwater Wetland 14
0.024 acre

Tributary 35
522-lf (0.052 acre)

Tributary 36
76-lf (0.005 acre)

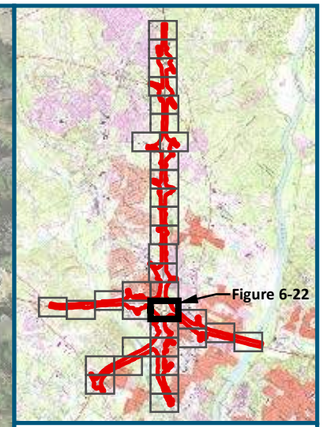
Tributary 37
372-lf (0.034 acre)

Freshwater Wetland 14

See Figure 6-21

See Figure 6-23

See Figure 6-27



0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

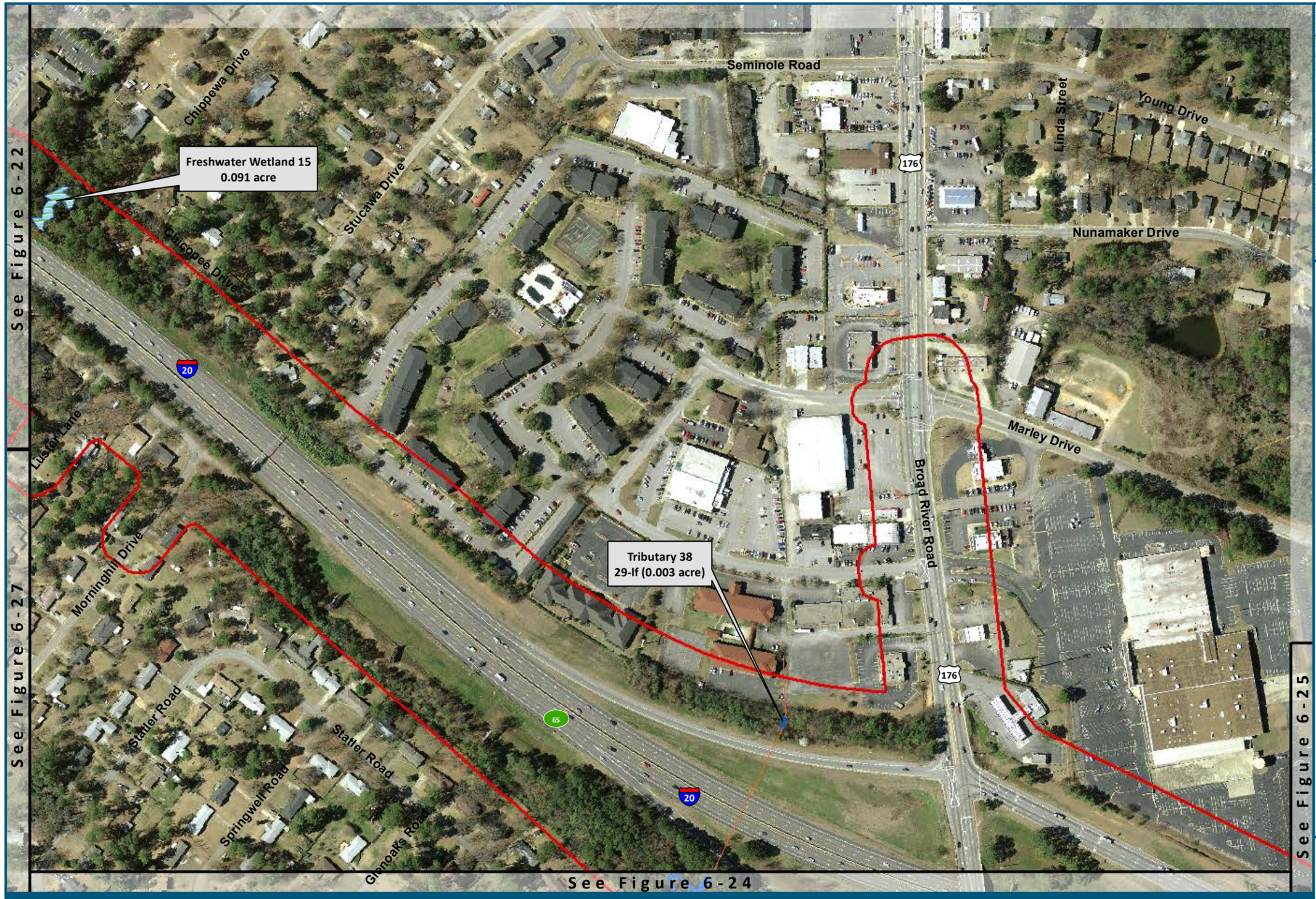
Legend

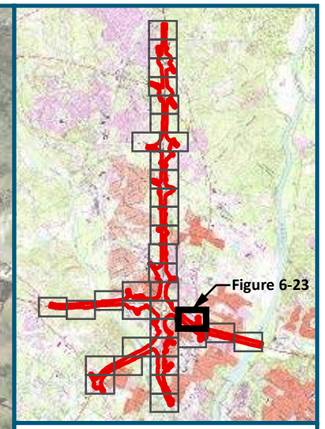
- Project Study Area (1,482 acres)
- Freshwater Wetland (0.090 acre)
- Pond / Water
- Tributary (1.382-lf / 0.154 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- Exit Location/Number

Figure 6-22
Delineated Waters of the U.S.

11/15/2018 Sheet 22 of 35

SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.091 acre)
- Pond / Water
- Tributary (29-lf / 0.003 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-23
Delineated Waters of the U.S.

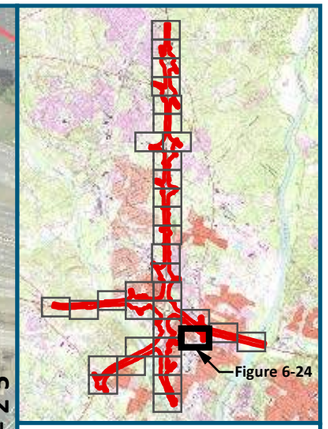
11/15/2018 Sheet 23 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.371 acre)
- Pond / Water
- Tributary (313-lf / 0.061 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-24
Delineated Waters of the U.S.

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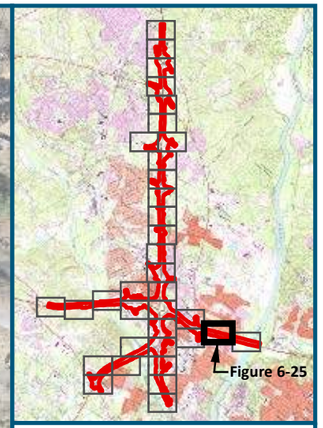
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (1,790-lf / 0.234 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

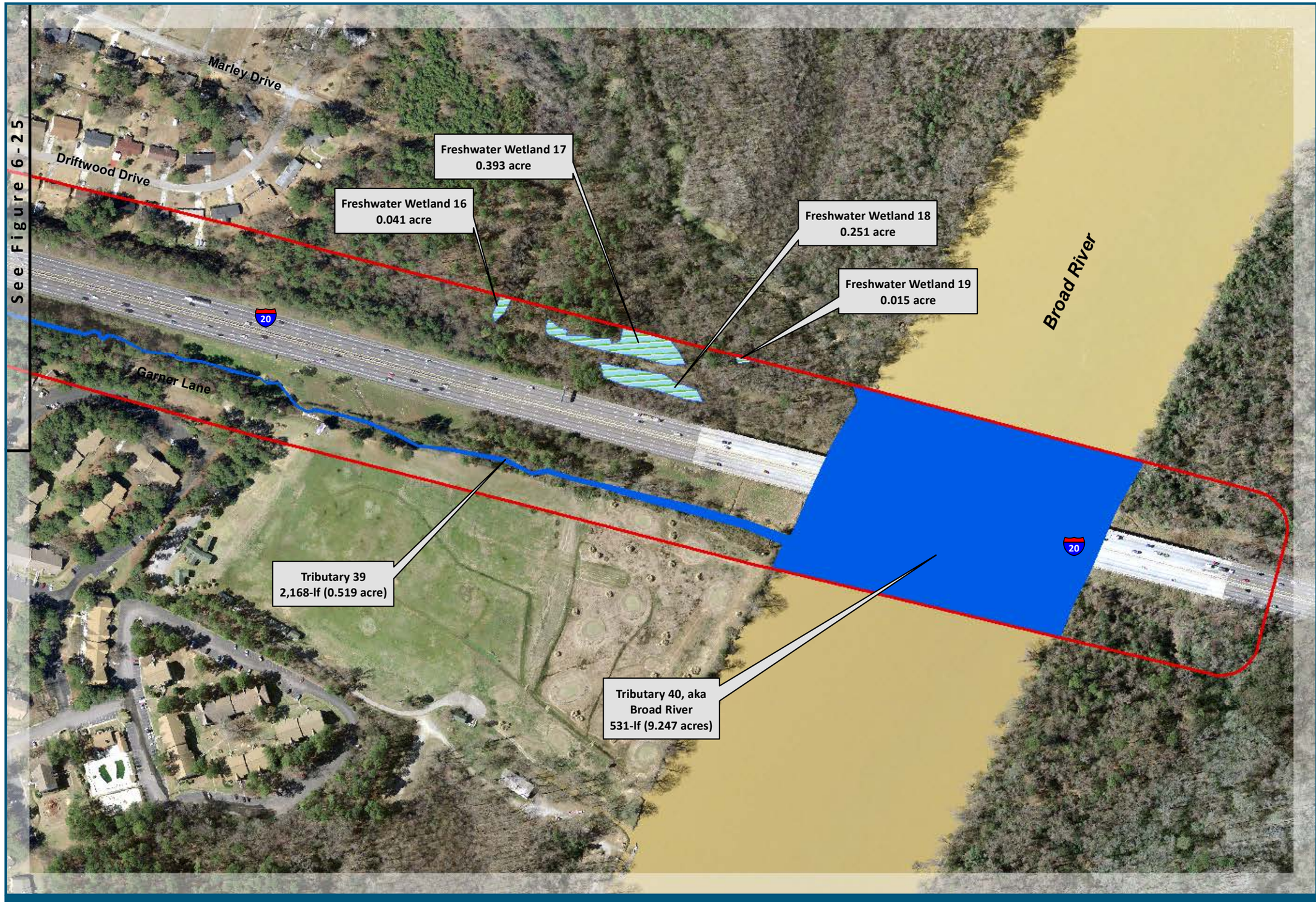
Figure 6-25
Delineated Waters of the U.S.

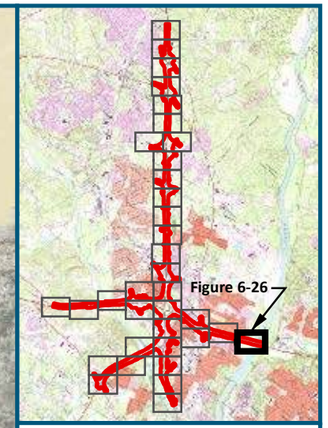
11/15/2018 Sheet 25 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.700 acre)
- Pond / Water
- Tributary (2,699-lf / 9.766 acres)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-26
Delineated Waters of the U.S.

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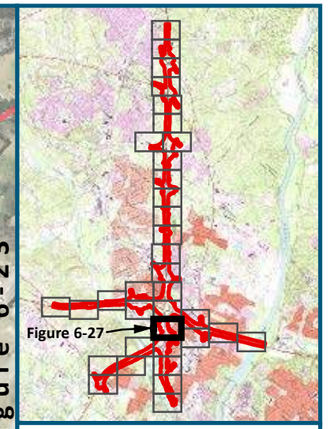
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.063 acre)
- Pond / Water
- Tributary (1,925-lf / 0.355 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

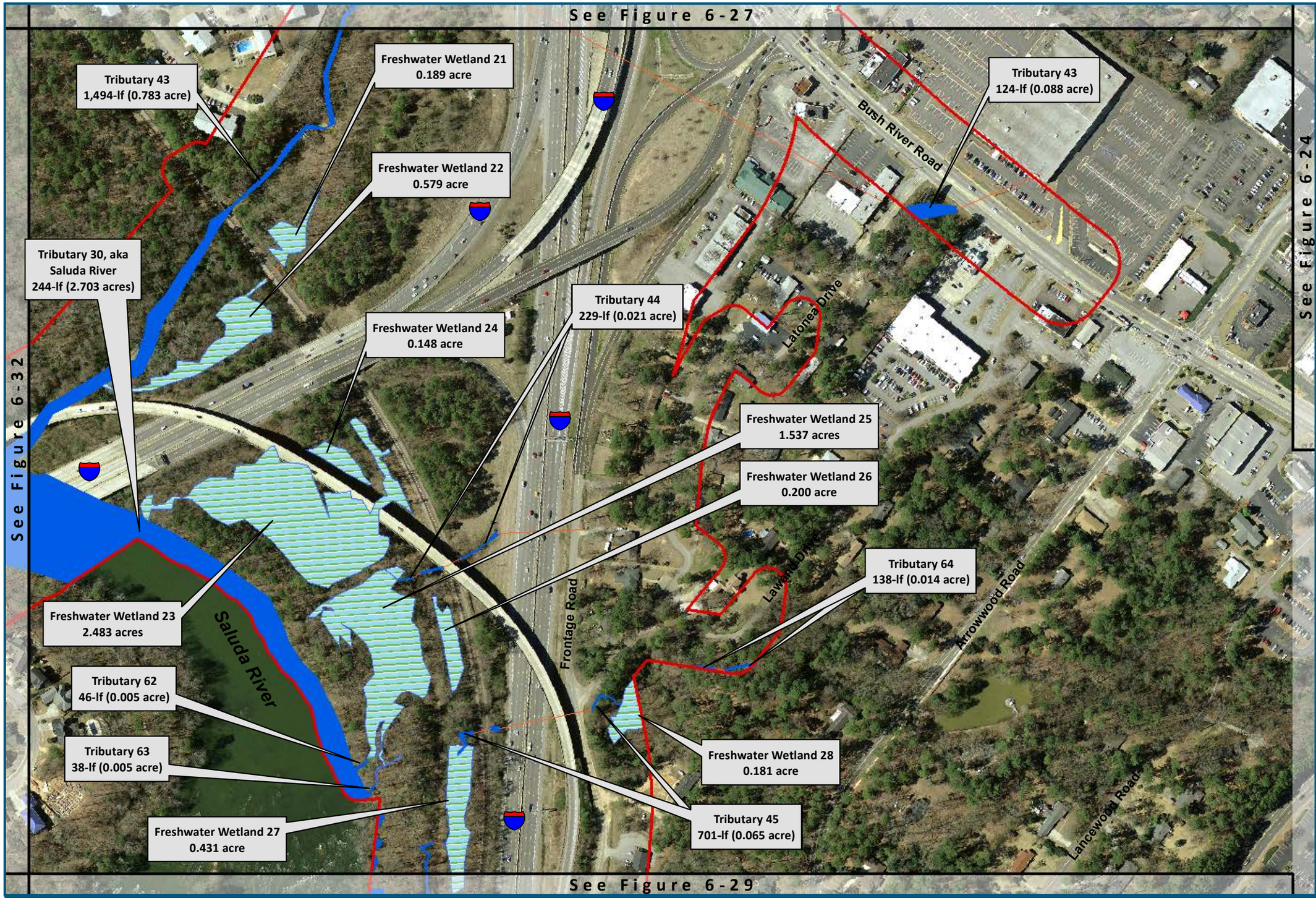
Figure 6-27
Delineated Waters of the U.S.

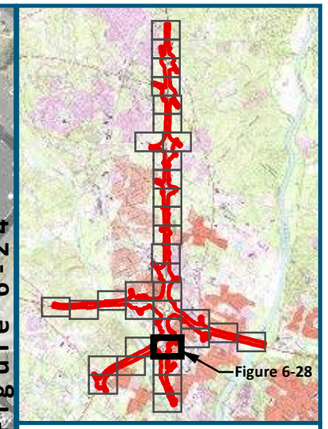
11/15/2018 Sheet 27 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (5.748 acres)
- Pond / Water
- Tributary (3,014-lf / 3.684 acres)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- Exit Location/Number

Figure 6-28
Delineated Waters of the U.S.

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-28

Tributary 45
233-lf (0.023 acre)

Freshwater Wetland 27
0.039 acre

Freshwater Wetland 52
0.037 acre

Freshwater Wetland 53
0.098 acre

Tributary 46
322-lf (0.026 acre)

Freshwater Wetland 29
0.039 acre

Tributary 47
1,052-lf (0.292 acre)

Freshwater Wetland 54
0.021 acre

Tributary 48
29-lf (0.010 acre)

Freshwater Wetland 30
0.311 acre

Tributary 49
298-lf (0.024 acre)

Freshwater Wetland 31
0.068 acre

Saluda River

Redbud Drive

Lancewood Road

Lawand Drive

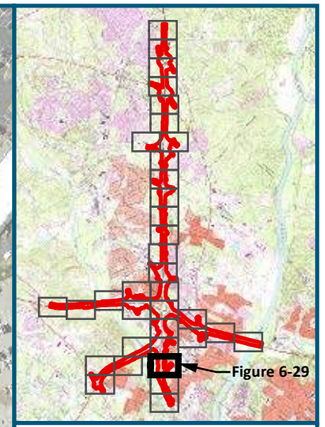
Colonial Life Boulevard

Arrowwood Road

Gracern Road

126

See Figure 6-30



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.613 acre)
- Pond / Water
- Tributary (1,934-lf / 0.375 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-29
Delineated Waters of the U.S.

11/15/2018 Sheet 29 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-29

Freshwater Wetland 31
0.038 acre

Tributary 65
205-lf (0.041 acre)

Tributary 66
60-lf (0.004 acre)

Freshwater Wetland 55
0.015 acre

Gracern Road

Brantley Street

Henry Curtis Street

Janice Drive

Custer Street

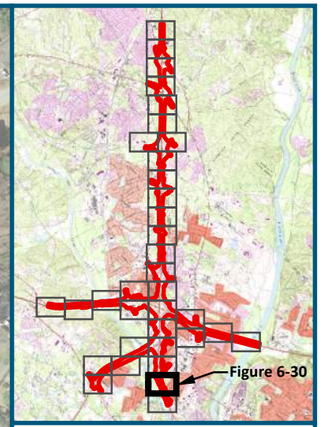
Betsy Drive

Starlight Drive

Saluda River

126

See Figure 6-31



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.053 acre)
- Pond / Water
- Tributary (265-lf / 0.045 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-30
Delineated Waters of the U.S.

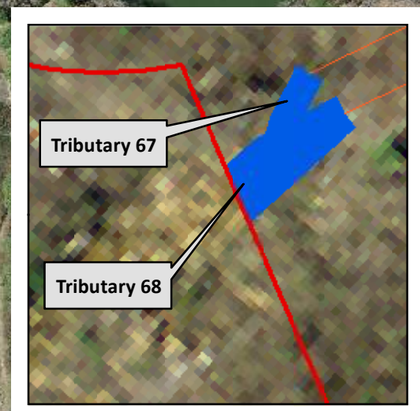
11/15/2018 Sheet 30 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-30



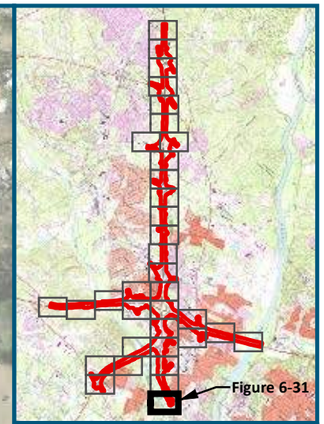
Tributary 67
8-lf (0.001 acre)

Tributary 68
19-lf (0.003 acre)

126

Saluda River

126



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (27-lf / 0.004 acres)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

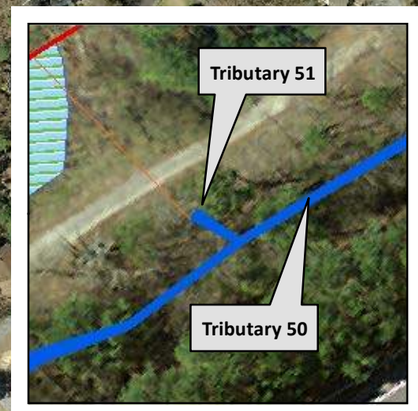
Figure 6-31
Delineated Waters of the U.S.

11/15/2018 Sheet 31 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS



Tributary 30, aka Saluda River
546-lf (3.782 acres)

Tributary 43
92-lf (0.087 acre)

Pond 2
0.023 acre

Tributary 51
21-lf (0.002 acre)

Freshwater Wetland 32
0.166 acre

Freshwater Wetland 33
0.085 acre

Tributary 52
35-lf (0.002 acre)

Tributary 50
889-lf (0.098 acre)

Freshwater Wetland 34
0.026 acre

Saluda River

Blackhawk Terrace

Holly Ridge Lane

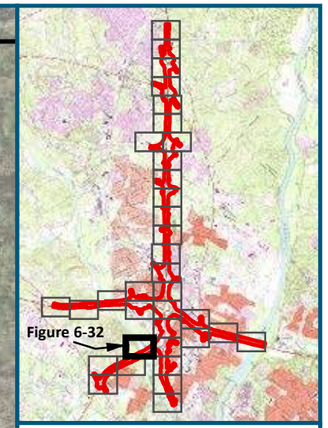
McSwain Drive

26

108A

See Figure 6-28

See Figure 6-33



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (0.277 acre)
- Pond / Water (0.023 acre)
- Tributary (1,583-lf / 3.971 acres)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-32
Delineated Waters of the U.S.

11/15/2018 Sheet 32 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-32

Freshwater Wetland 36
0.168 acre

Freshwater Wetland 35
0.470 acre

Freshwater Wetland 37
0.022 acre

Freshwater Wetland 38
0.474 acre

Tributary 54
46-lf (0.004 acre)

Tributary 53, aka
Senn Branch
933-lf (0.279 acre)

Tributary 57
187-lf (0.027 acre)

Tributary 56
20-lf (0.001 acre)

Tributary 55
70-lf (0.005 acre)

26

McSwain Drive

Holly Hill Drive

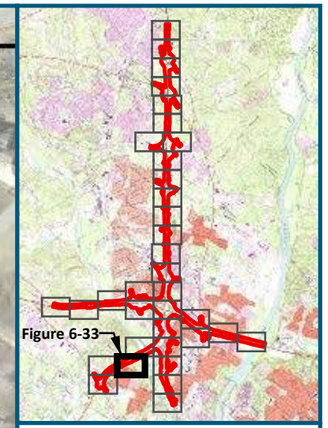
Terrace View Drive

Robin Crest Drive

Riviera Drive

Robin Crest Drive

See Figure 6-34



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland (1.134 acres)
- Pond / Water
- Tributary (1,256-lf / 0.316 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

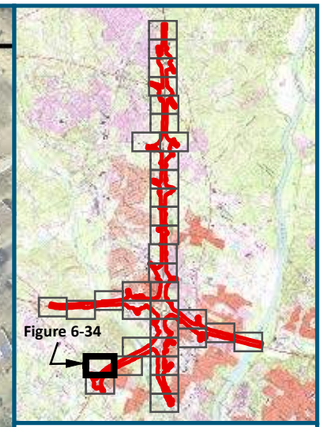
Figure 6-33
Delineated Waters of the U.S.

11/15/2018 Sheet 33 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

Figure 6-34
Delineated Waters of the U.S.

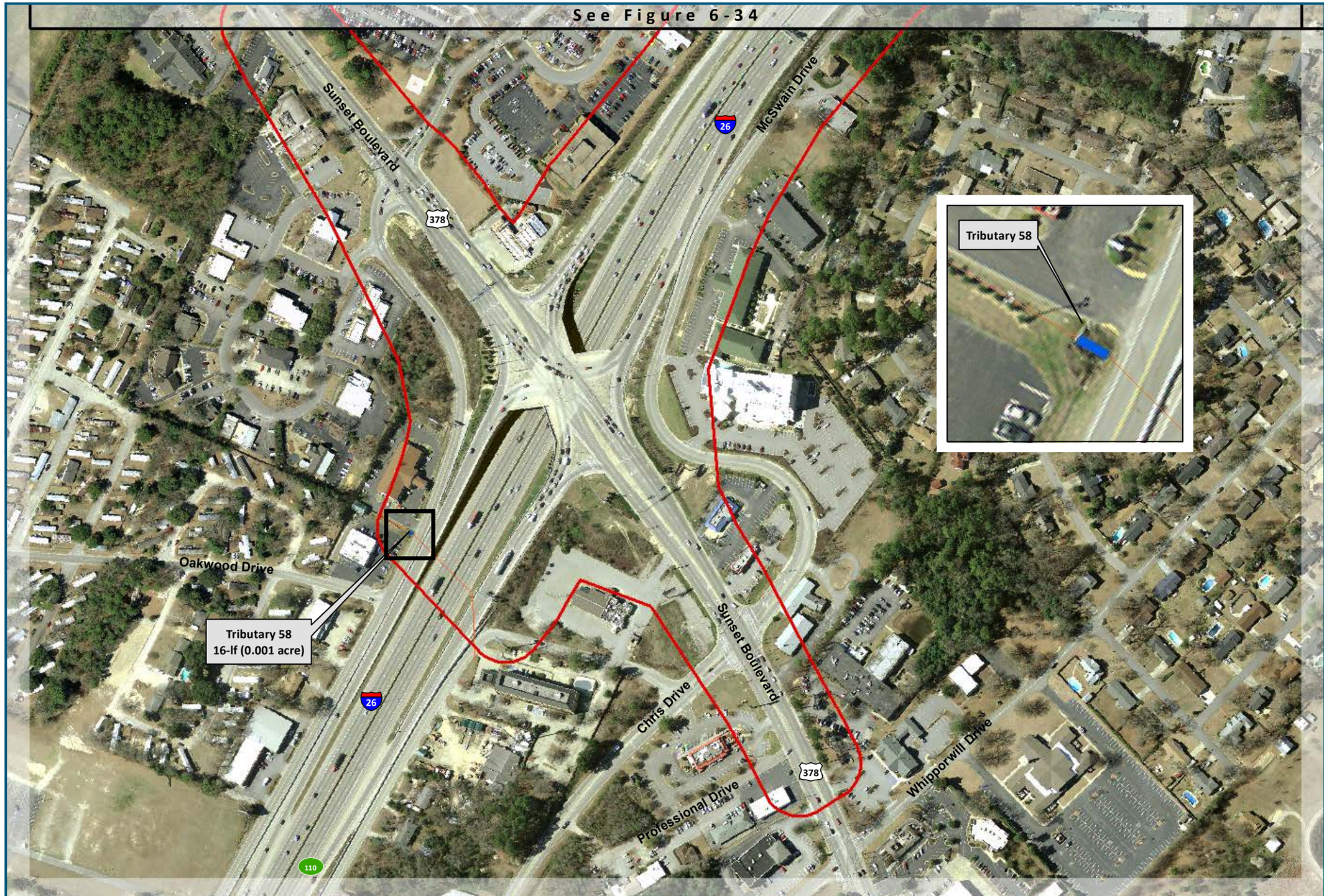
11/15/2018 Sheet 34 of 35

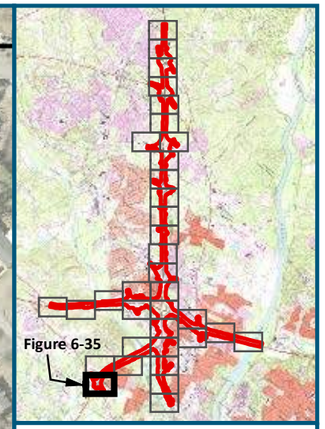
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 6-34





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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: USGS High Resolution Orthoimagery
for Columbia, SC (2014)

Legend

- Project Study Area (1,482 acres)
- Freshwater Wetland
- Pond / Water
- Tributary (16-lf / 0.001 acre)
- Conveyance / Non-Water
- Culvert / Pipe / Flume
- 83 Exit Location/Number

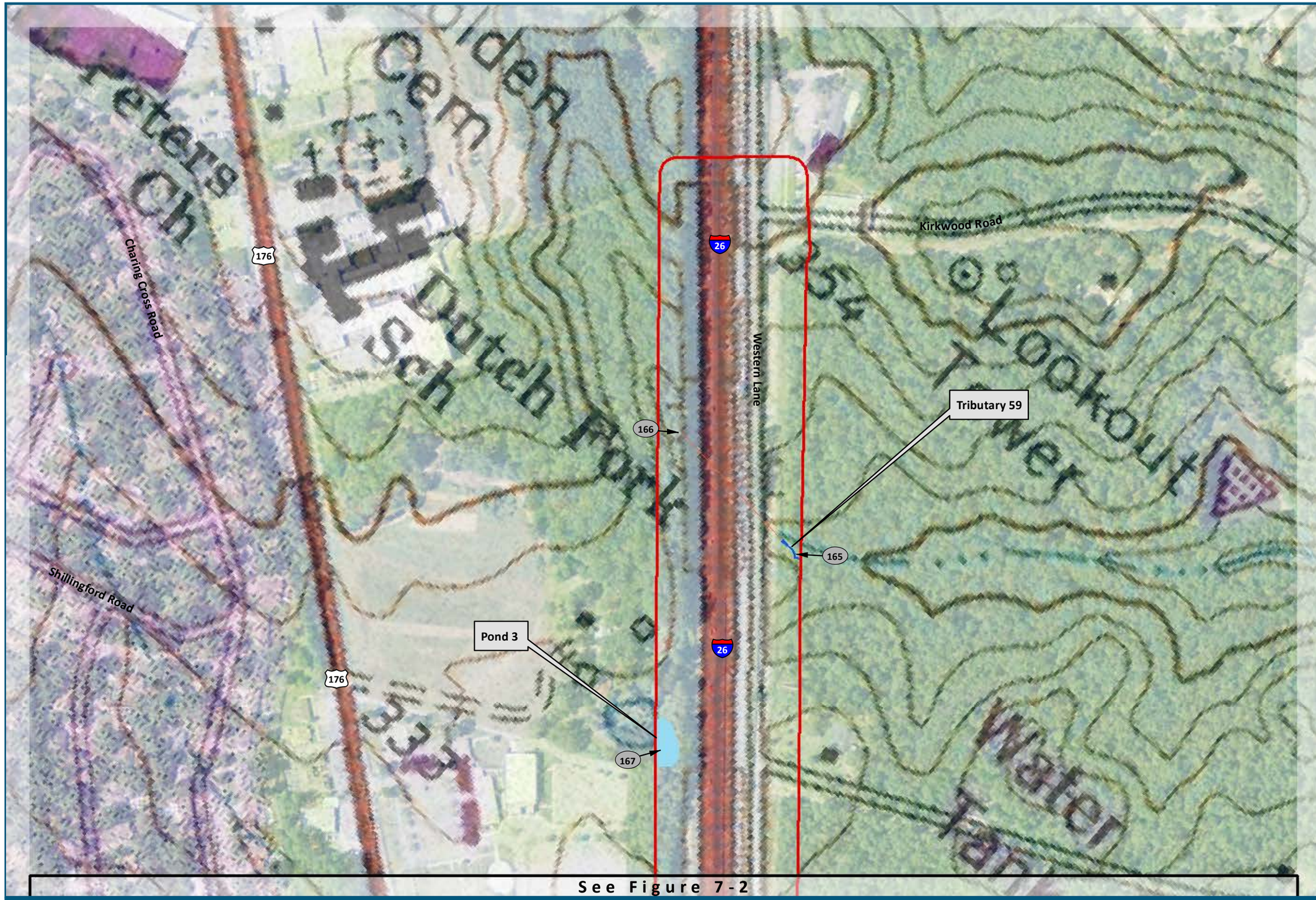
Figure 6-35
Delineated Waters of the U.S.

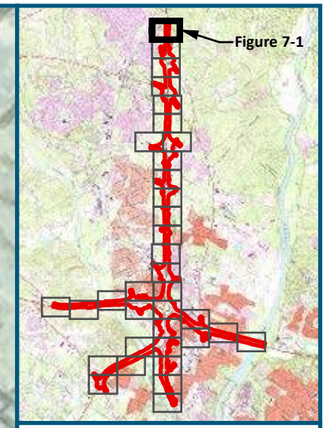
11/15/2018 Sheet 35 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-1
Surface Hydrology Connectivity / Data Form / Photograph Location Map

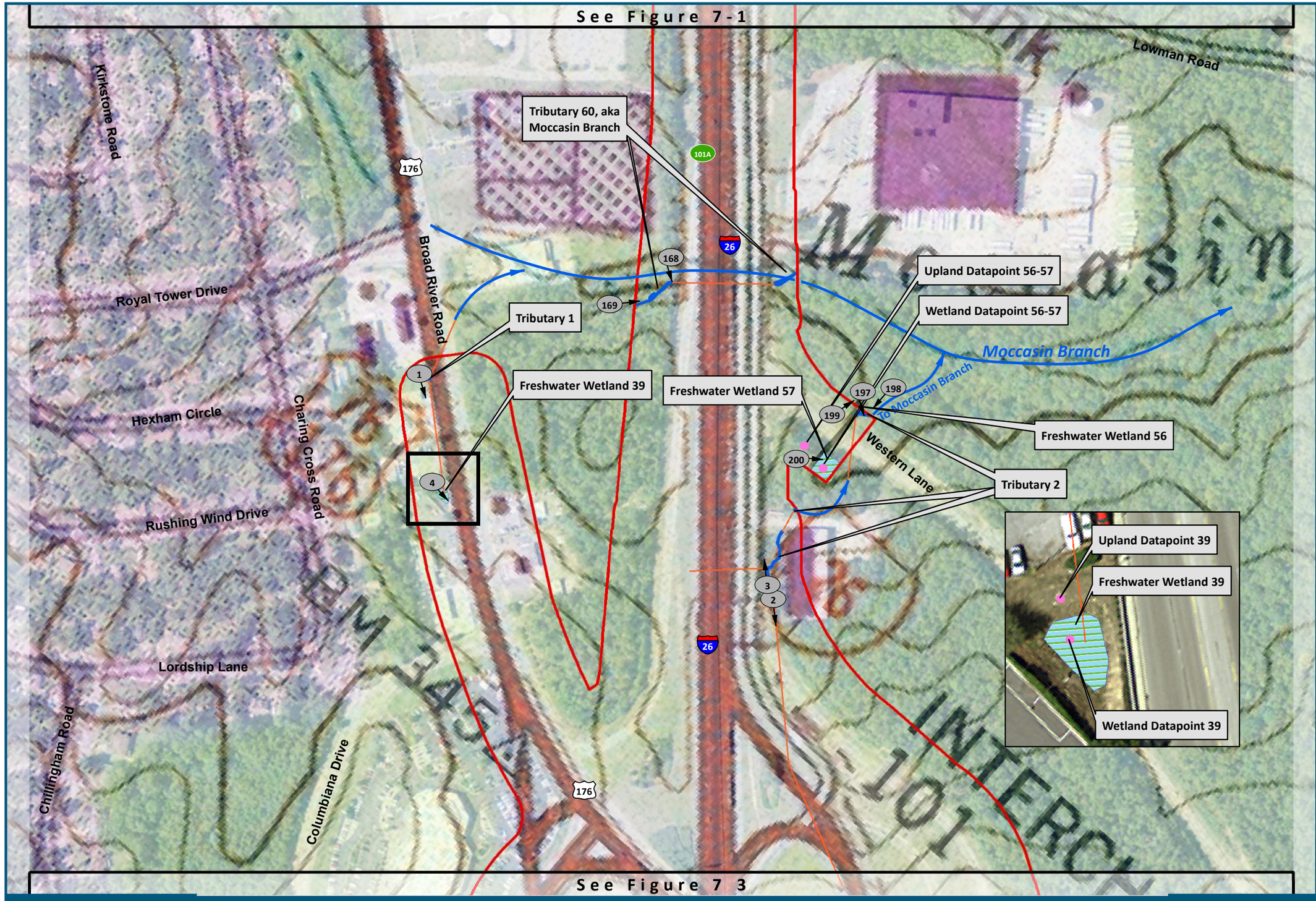
11/15/2018 Sheet 1 of 35

SCDOT South Carolina Department of Transportation

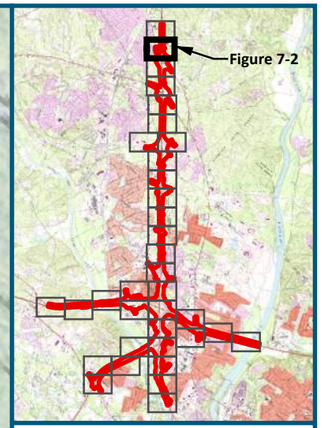
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-1



See Figure 7 3



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-2
Surface Hydrology Connectivity / Data Form / Photograph Location Map

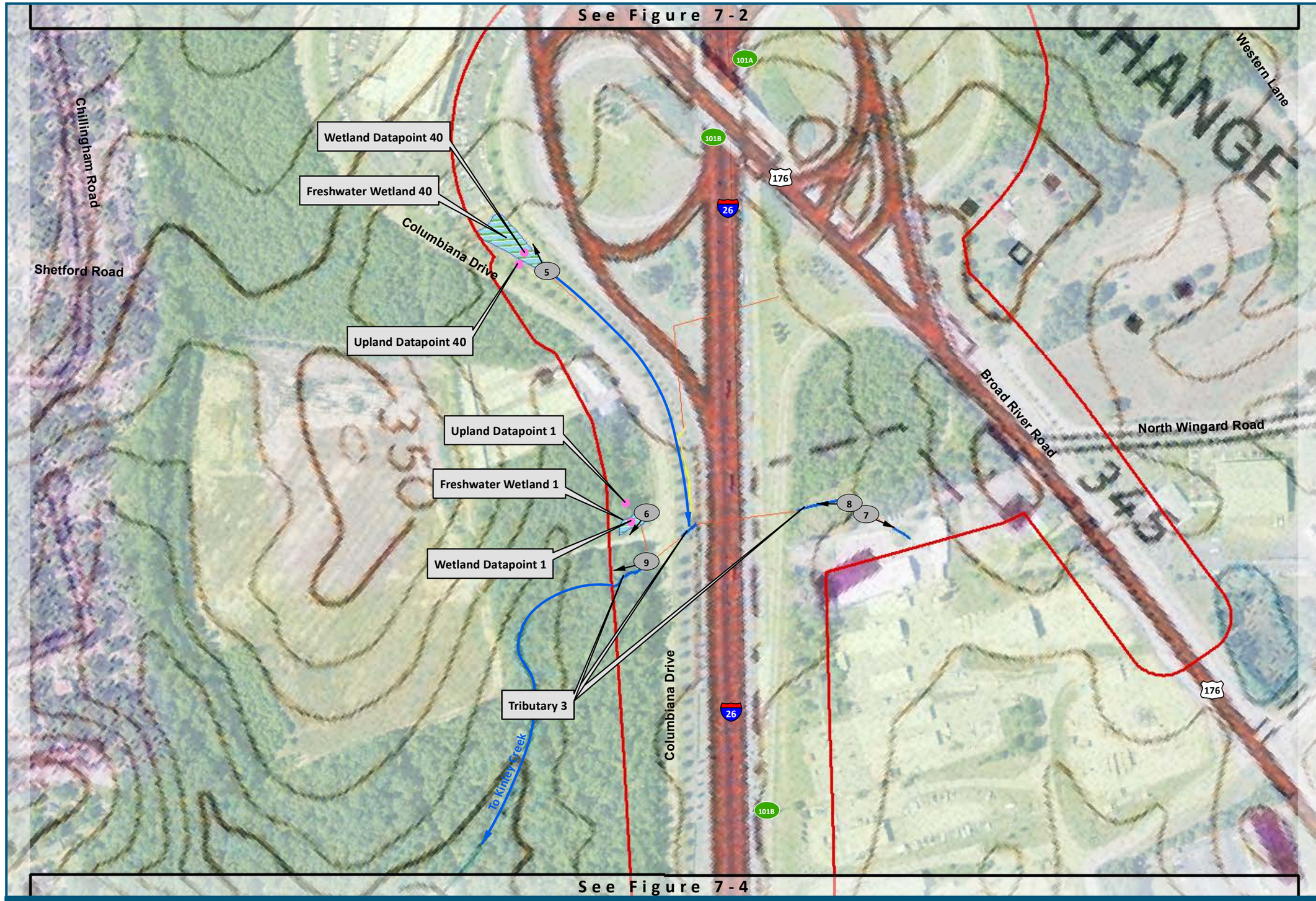
11/15/2018 Sheet 2 of 35

SCDOT South Carolina Department of Transportation

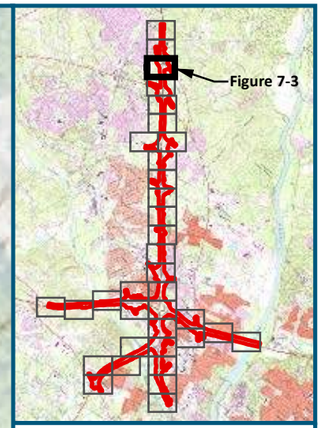
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-2



See Figure 7-4



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-3
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 3 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-3

Freshwater Wetland 2

Wetland Datapoint 2

Columbiana Drive

Freshwater Wetland 41

Upland Datapoint 2

Tributary 4

To Kinley Creek

Upland Datapoint 3

Wetland Datapoint 3

Tributary 5

Evergreen Drive

Shady Lane

Gaillard Street

Freshwater Wetland 3

Upland Datapoint 41

Freshwater Wetland 41

Wetland Datapoint 41

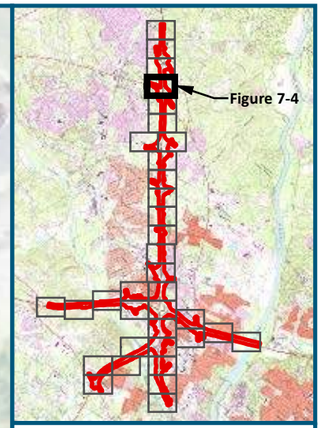
Tributary 6

Columbiana Drive

Lake Murray Boulevard

Kinley Road

See Figure 7-5



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-4
Surface Hydrology Connectivity / Data Form / Photograph Location Map

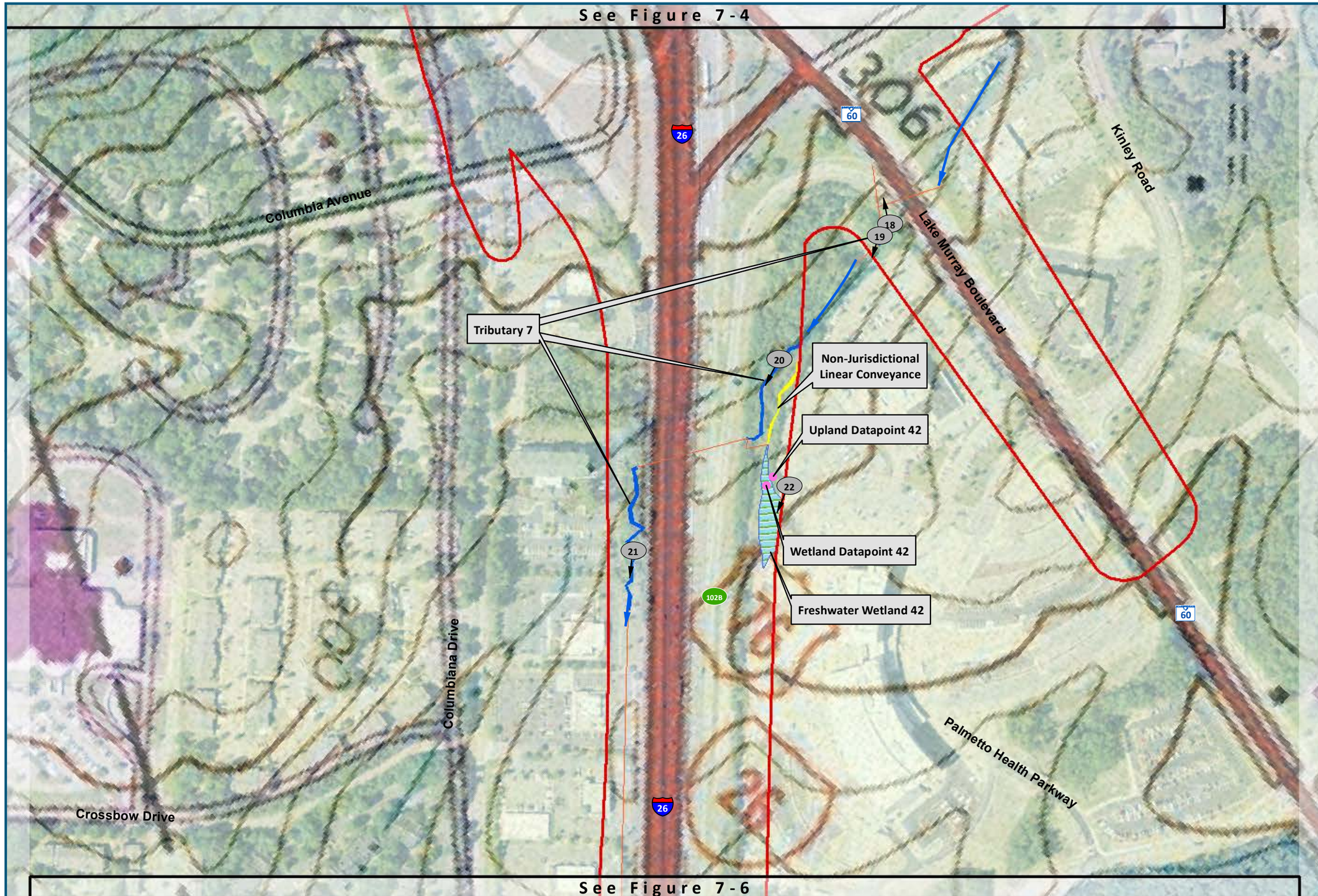
11/15/2018 Sheet 4 of 35

CAROLINA CROSSROADS

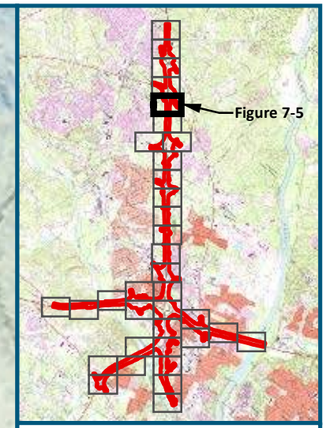
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

See Figure 7-4



See Figure 7-6



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-5
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 5 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-5

Palmetto Health Parkway

Tributary 7

Freshwater Wetland 43

Tributary 8

To Kinley Creek

Columbiana Drive

Parkridge Drive

Upland Datapoint 43

Wetland Datapoint 43

Freshwater Wetland 43

To Kinley Creek

Columbiana Drive

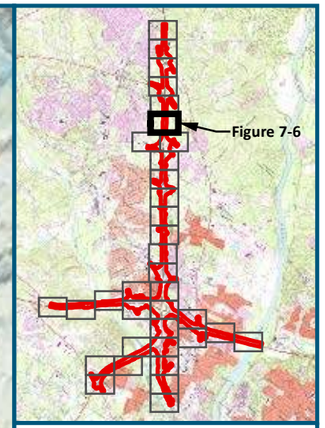
Columbiana Circle

Pond 1

Tributary 9

See Figure 7-8

See Figure 7-7



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-6
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 6 of 35

SCDOT South Carolina Department of Transportation

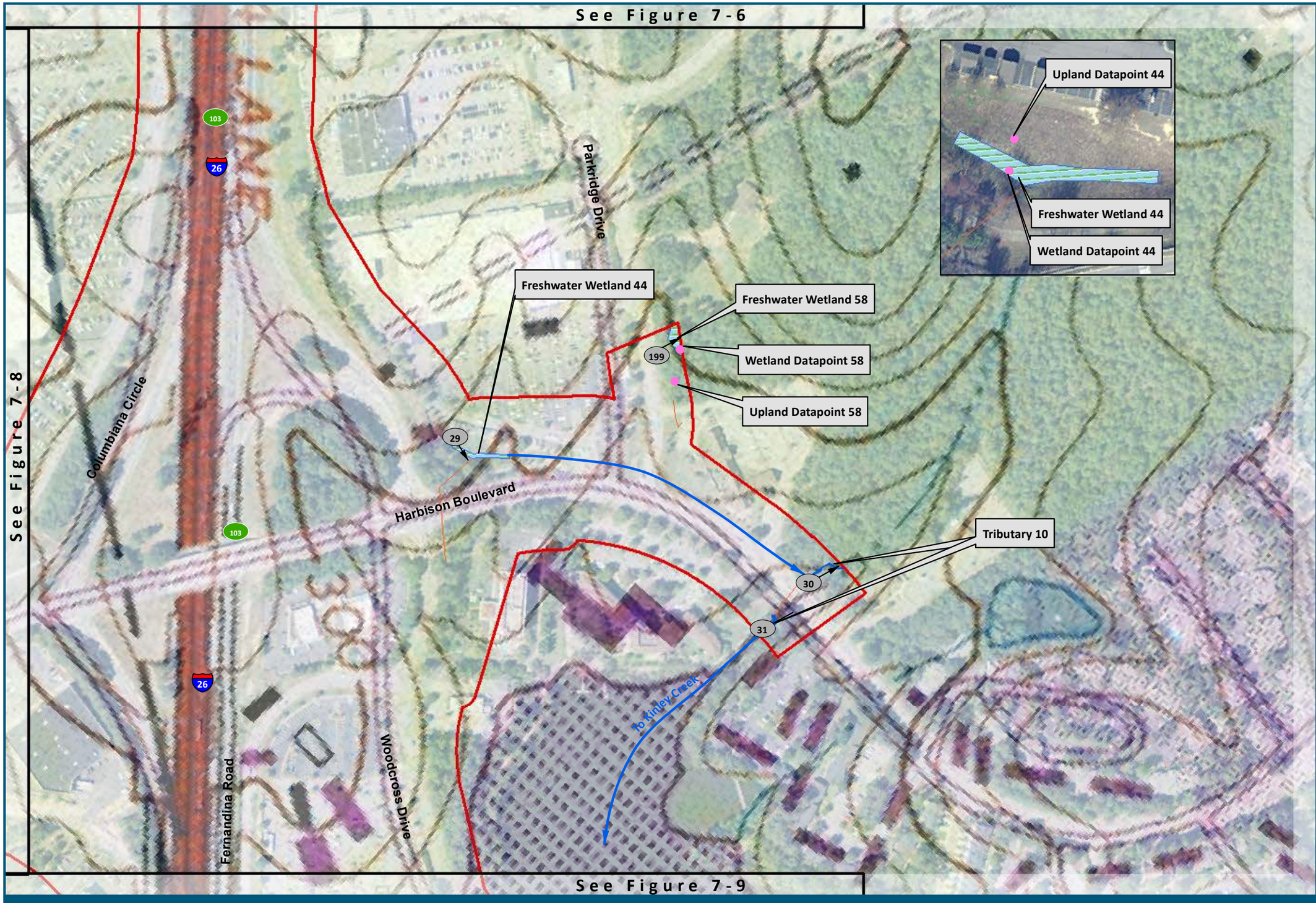
U.S. Department of Transportation Federal Highway Administration

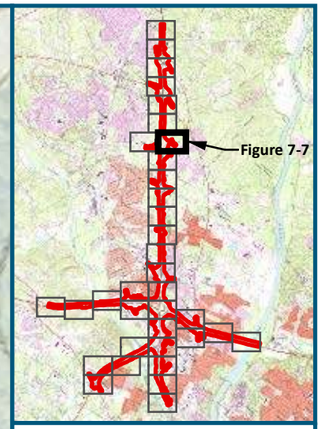
CAROLINA CROSSROADS

See Figure 7-6

See Figure 7-8

See Figure 7-9





0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-7
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 7 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-6

Sheath Drive

Hunters Blind Drive

Columbiana Circle

Columbiana Drive

Columbiana Circle

See Figure 7-7

Harbison Boulevard

Upland Datapoint 59

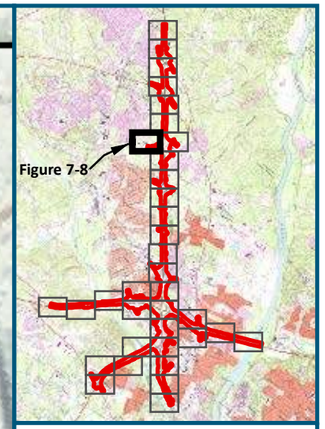
202

Freshwater Wetland 59

Wetland Datapoint 59

Park Terrace Drive

See Figure 7-9



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-8
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 8 of 35

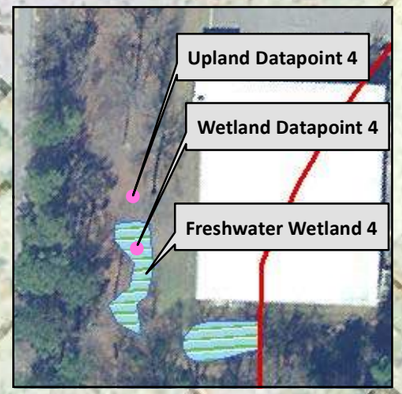
SCDOT South Carolina Department of Transportation

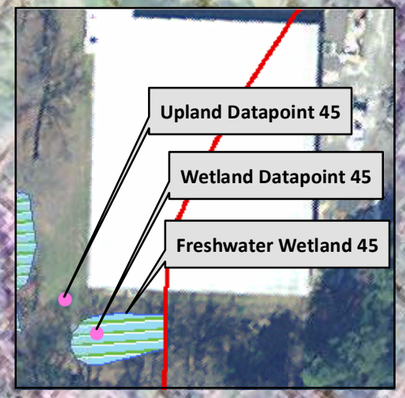
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-8

See Figure 7-7





Park Terrace Drive

Saturn Parkway

Fernandina Road

Woodcross Drive

Bower Parkway

Saturn Parkway

Giles Parkway

Harbison Way

Woodcross Drive

To Kinley Creek

Substation

26

170

171

172

32

33

34

36

35

Pond 4

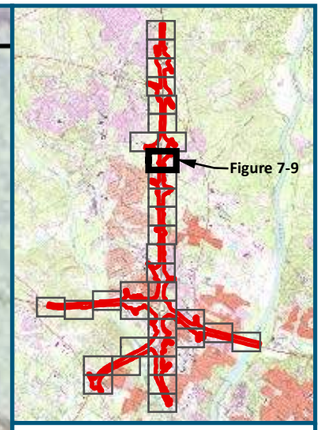
Freshwater Wetland 4

Freshwater Wetland 45

Tributary 11

Tributary 12

See Figure 7-10



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-9
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 9 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-9

Lower Piney Grove Creek

Baffin Bay Road

Saturn Parkway

To Kinley Creek

To Kinley Creek

Bower Parkway

Fernandina Road

26

104

37

38

39

40

Tributary 13

Upland Datapoint 5

Wetland Datapoint 5

Freshwater Wetland 5

Tributary 14

Piney Grove Road

Foxfire Drive

Fernandina Road

26

Piney Grove Road

Piney Woods Road

To Kinley Creek

Jamil Road

Tributary 15

Freshwater Wetland 46

41

42

Freshwater Wetland 46

Upland Datapoint 46

Wetland Datapoint 46

See Figure 7-11

Figure 7-10

0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

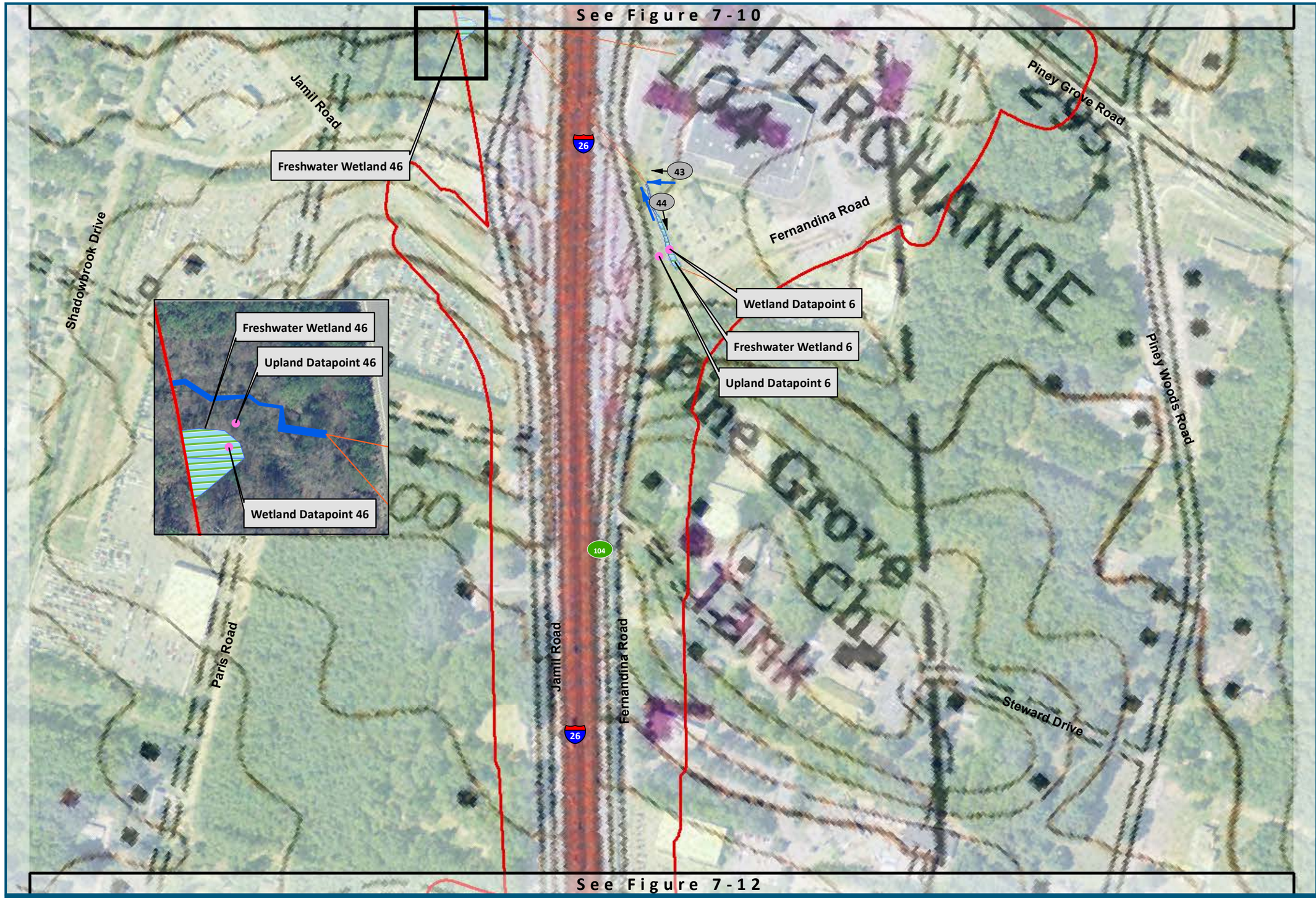
Figure 7-10
Surface Hydrology Connectivity / Data Form / Photograph Location Map

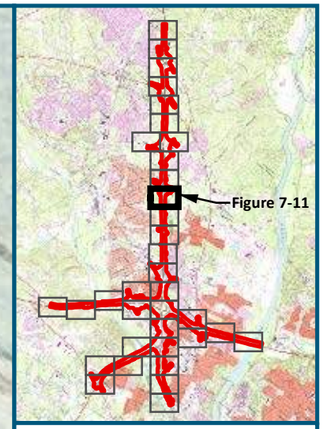
11/15/2018 Sheet 10 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-11
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018 Sheet 11 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-11

Rhett Road

Tributary 16

To Kinley Creek

Brookshire Drive

Sulgrave Drive

Lydgate Drive

Leton Drive

Winstaire Drive

Upland Datapoint 7

Wetland Datapoint 7

Freshwater Wetland 7

Tributary 17

Freshwater Wetland 47

Westpark Boulevard

Piney Woods Road

Jamil Road

Fernandina Road

Laurelhurst Ave

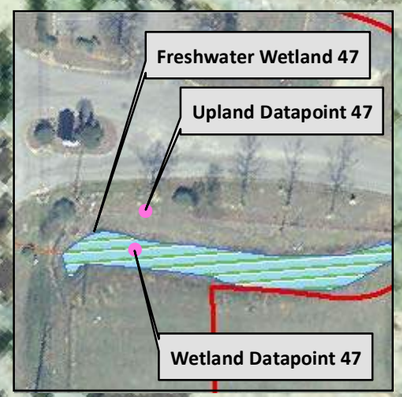
45

46

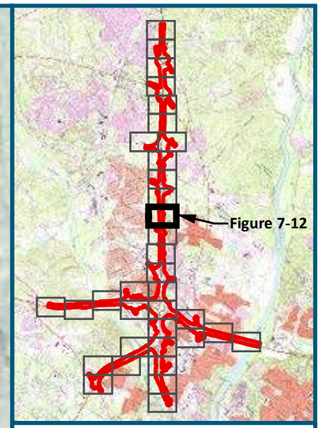
47

48

26



See Figure 7-13



0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-12
Surface Hydrology Connectivity / Data Form / Photograph Location Map

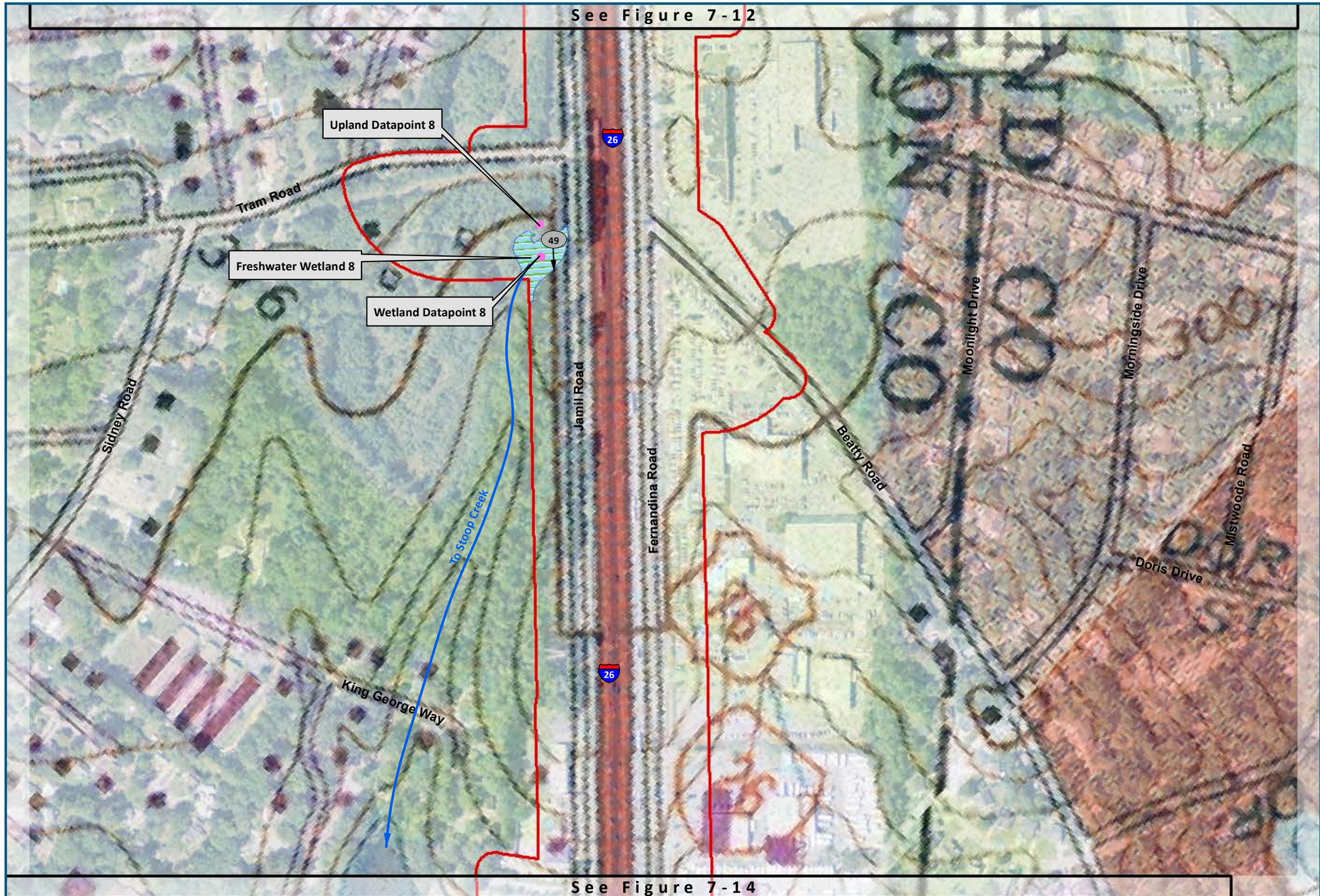
11/15/2018 Sheet 12 of 35

SCDOT South Carolina Department of Transportation

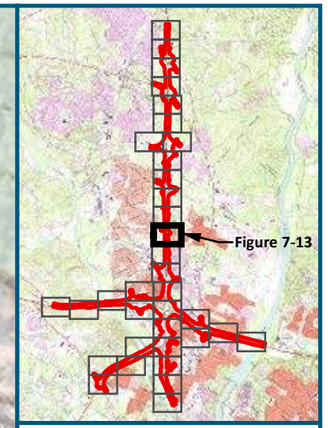
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-12



See Figure 7-14



0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-13
Surface Hydrology Connectivity / Data Form / Photograph Location Map

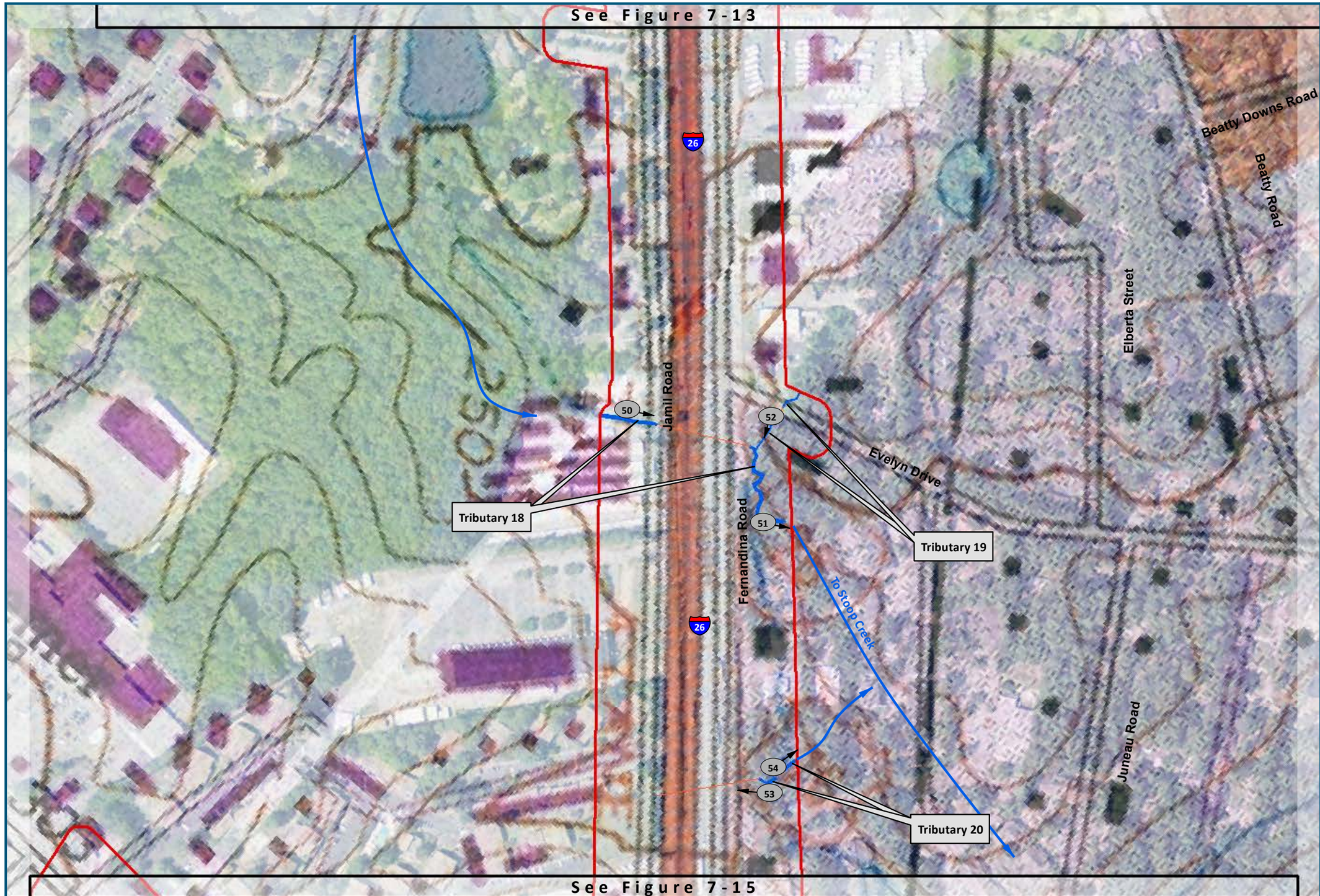
11/15/2018 Sheet 13 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-13



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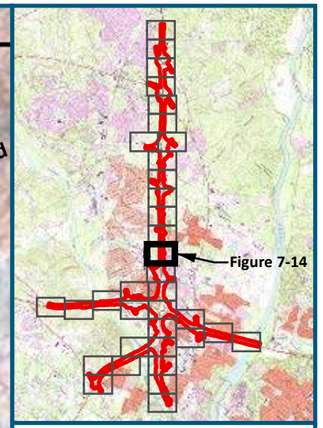

0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-14
Surface Hydrology Connectivity / Data Form / Photograph Location Map

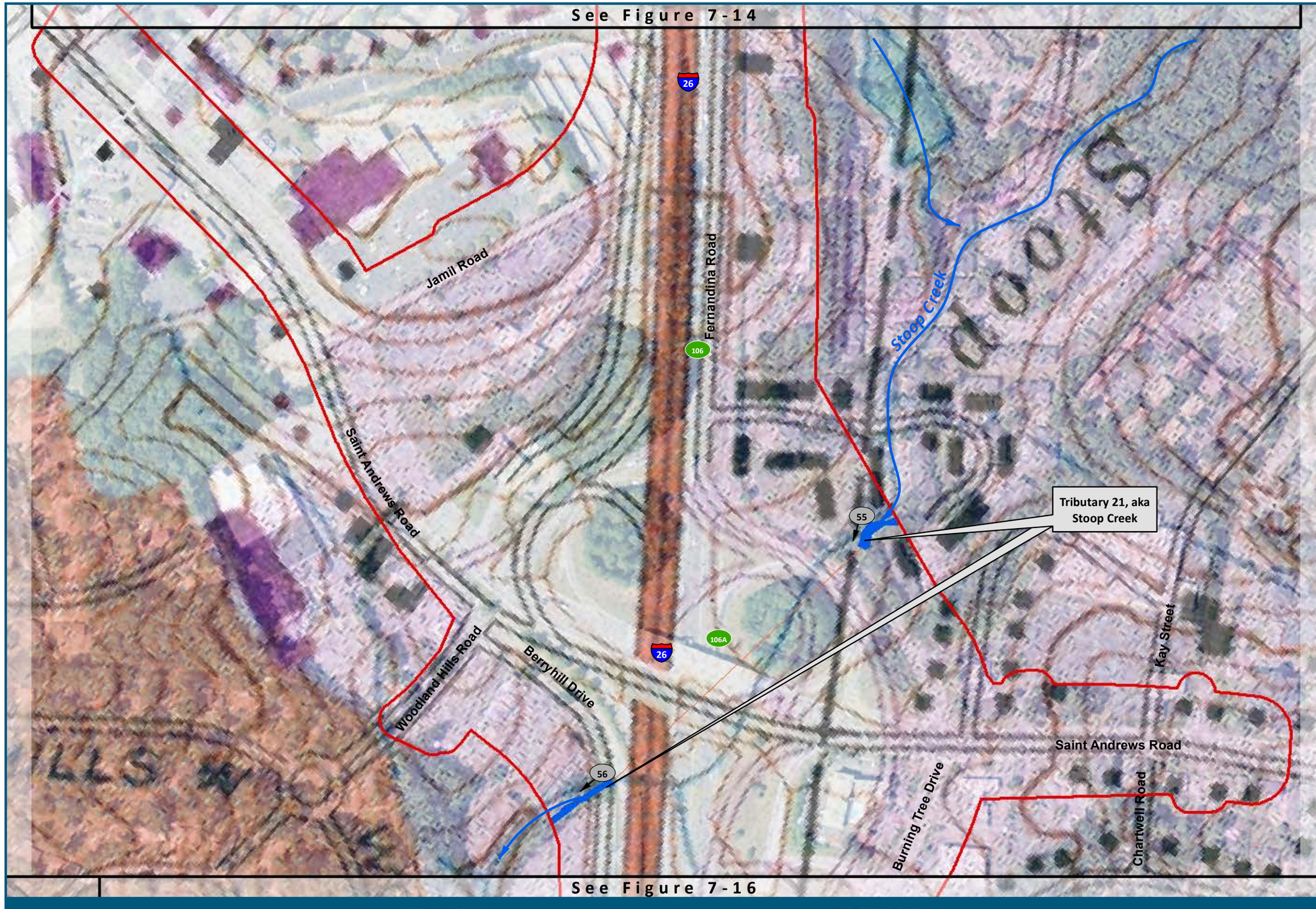
11/15/2018 Sheet 14 of 35

SCDOT South Carolina Department of Transportation

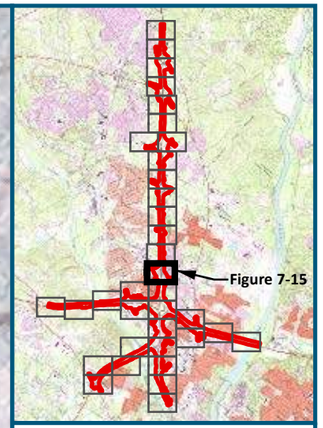
U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-14



See Figure 7-16



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Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-15
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-15

See Figure 7-17

Westover Road

Nob Hill Road

Fairway Lane

Woodland Hills Road

Tower Lane

Stoop Creek

Tributary 21, aka Stoop Creek

58

26

Burning Tree Drive

Berryhill Drive

107A

1068

Chartwell Road

Chartwell Road

Tributary 22
90-lf (0.015 acre)

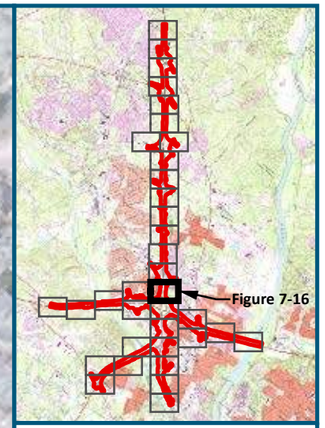
57

Center Point Road

Zimalcrest Drive

250

See Figure 7-22



0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-16
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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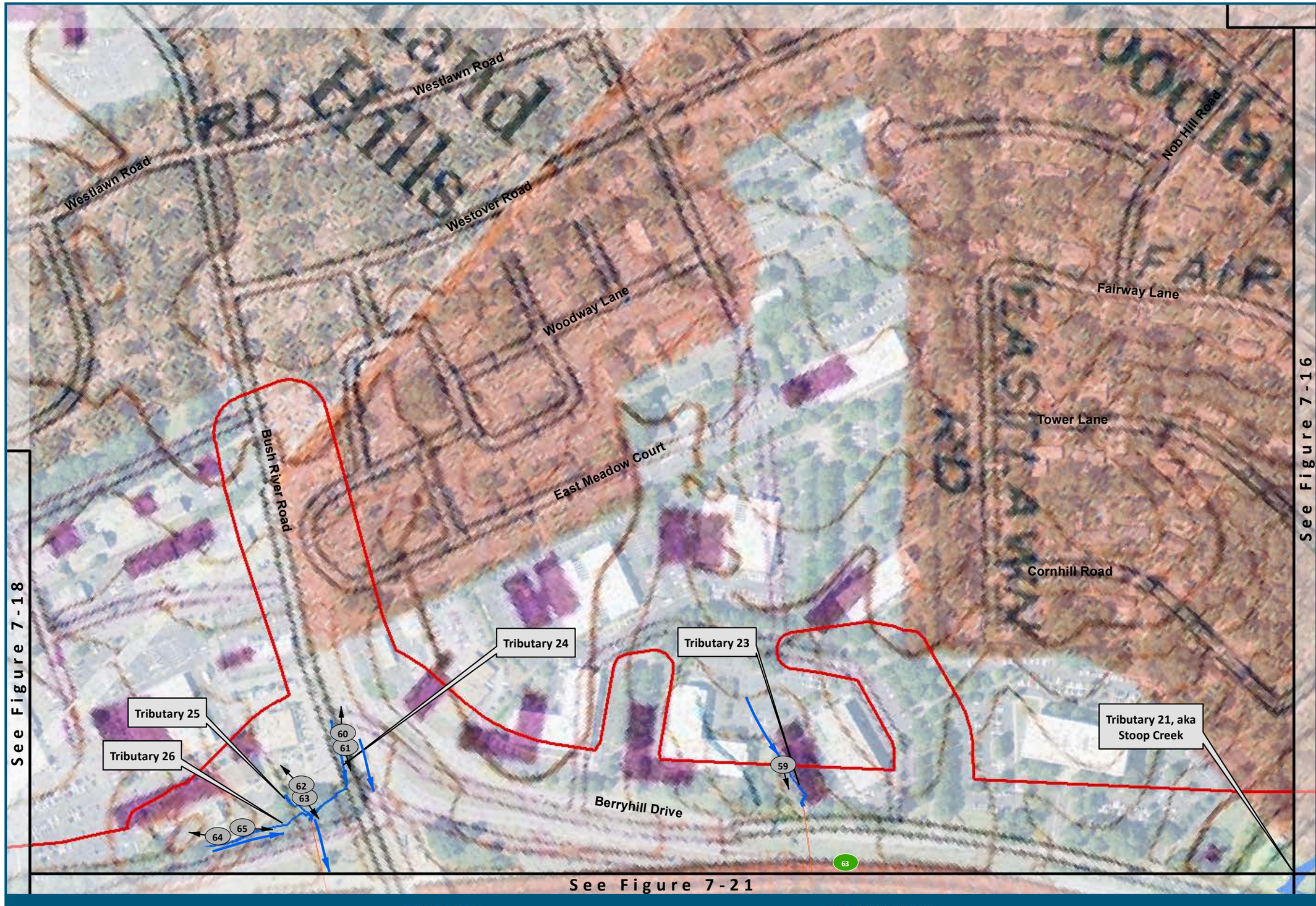
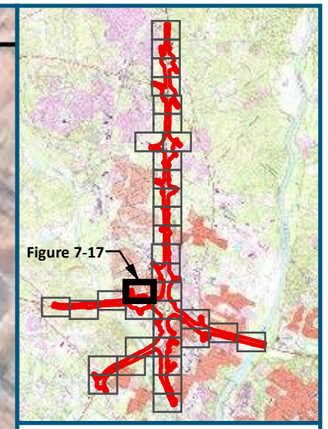
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-17
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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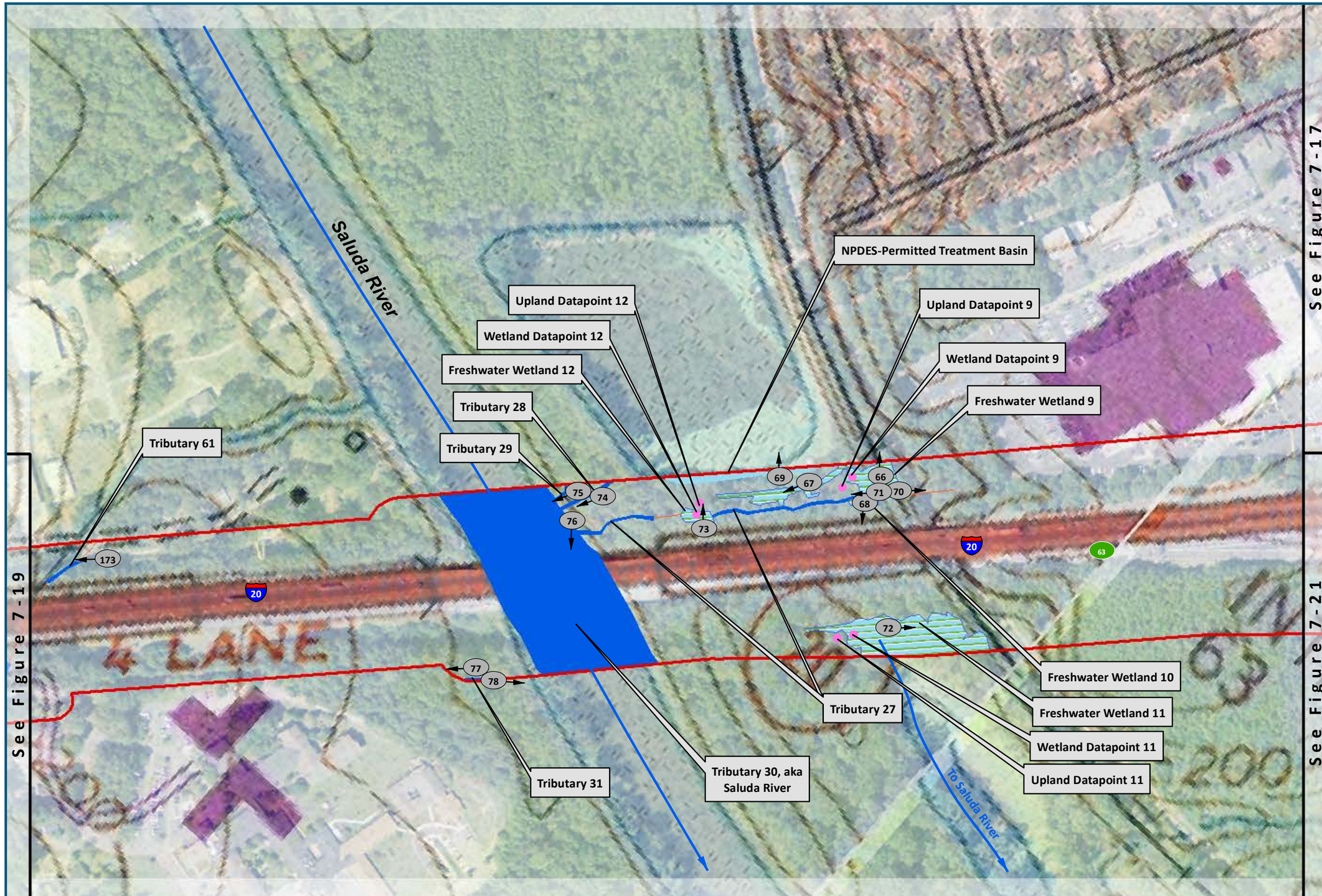
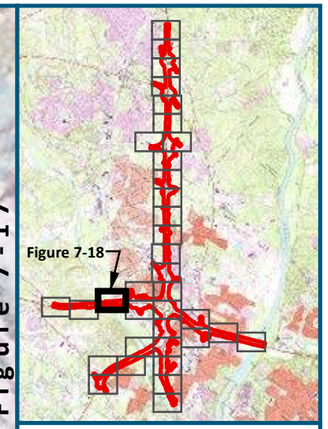
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-18
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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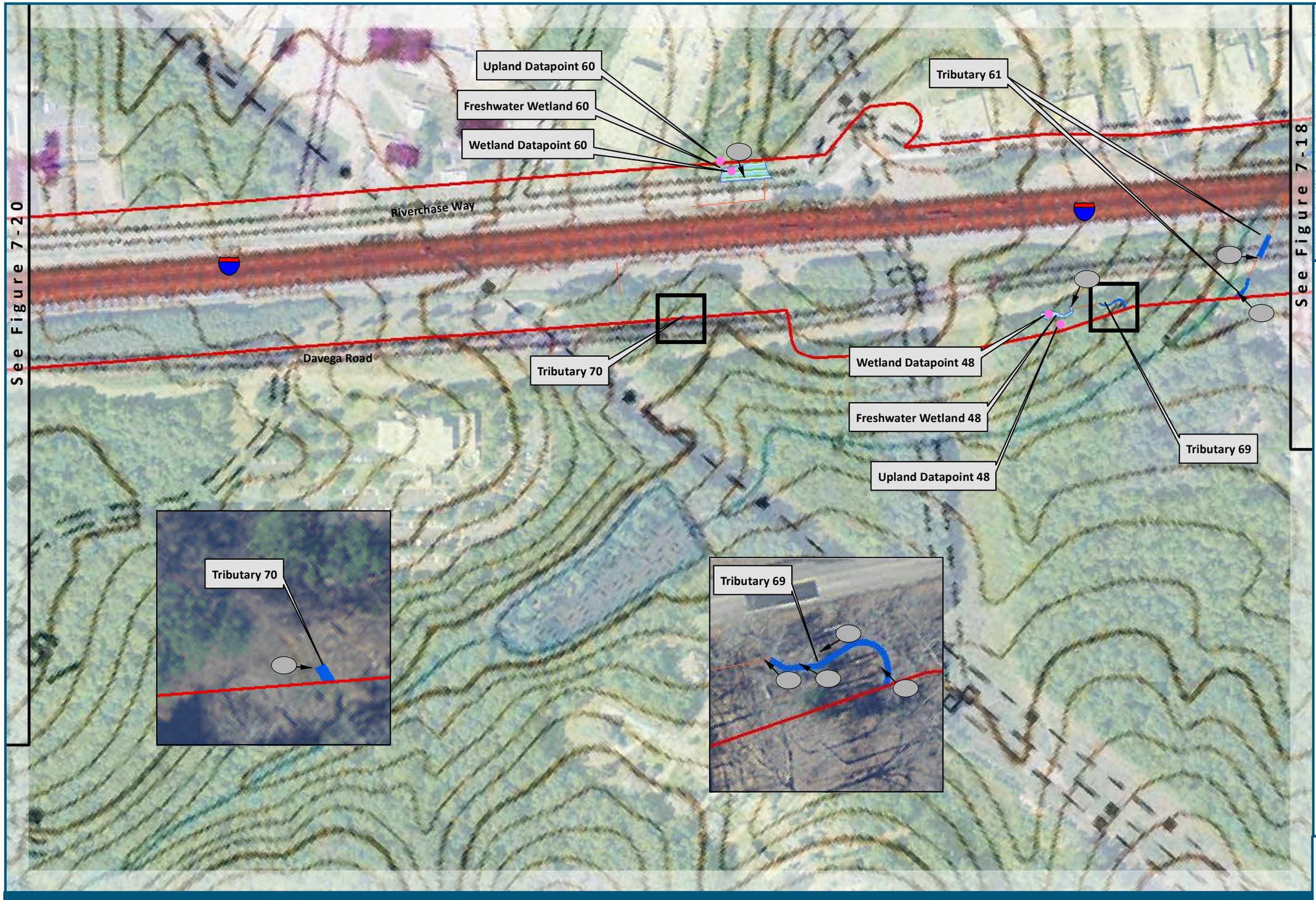
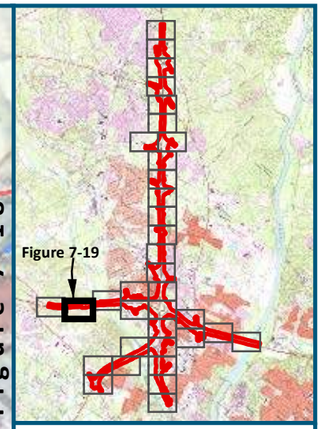
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- Photograph Number / Direction
- Wetland Determination Data Form Location
- Exit Location/Number

Figure 7-19
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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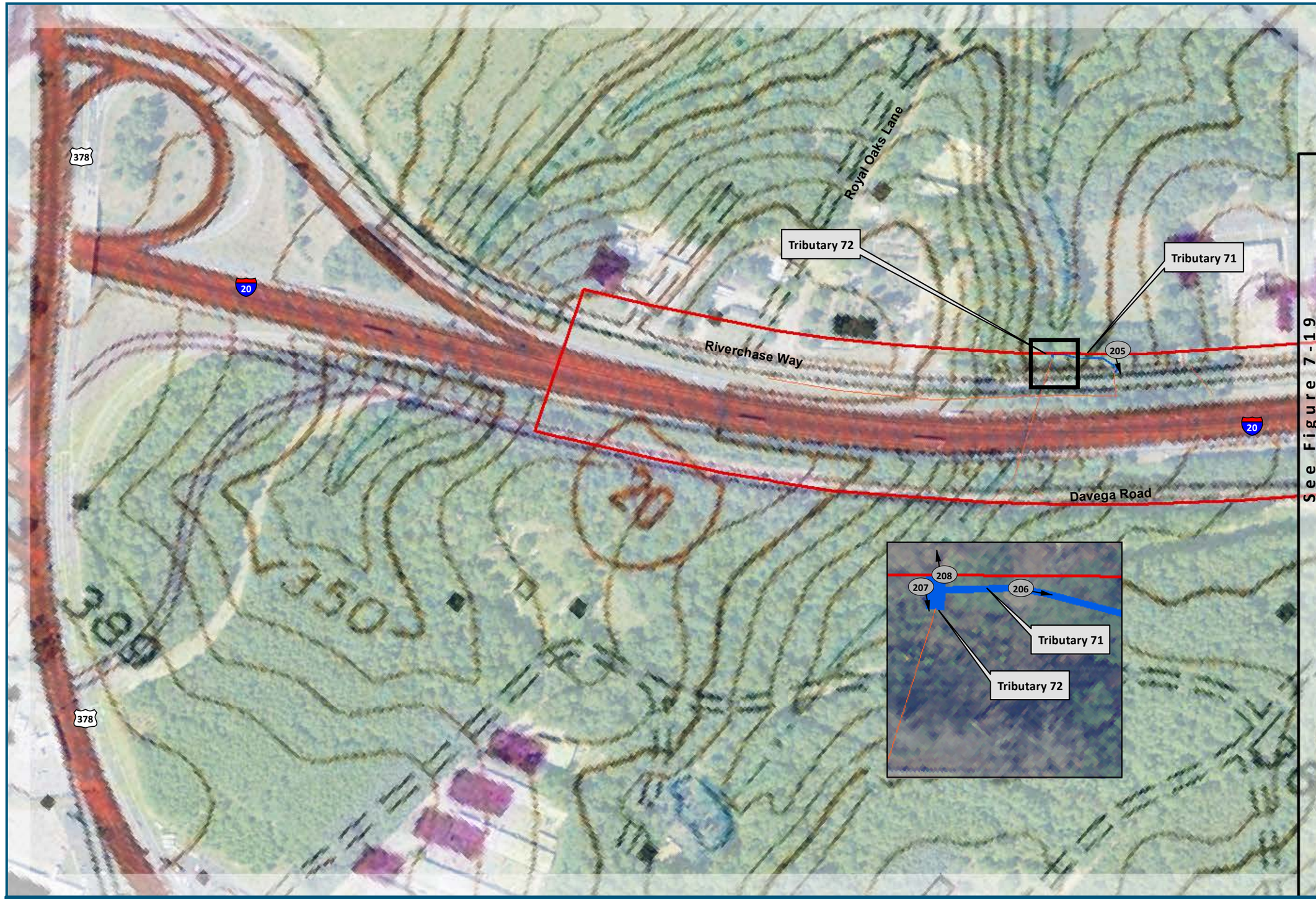
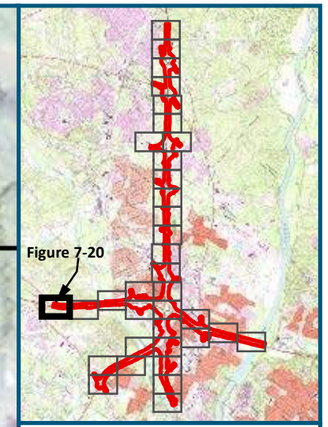
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-20
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-17

See Figure 7-18

See Figure 7-22

20

20

Freshwater Wetland 49

Non-Jurisdictional Linear Conveyance

79

177

80

81

83

84

2

To Stoop Creek

Tributary 23

Tributary 32

Tributary 33

Tributary 21, aka Stoop Creek

Rockland Road

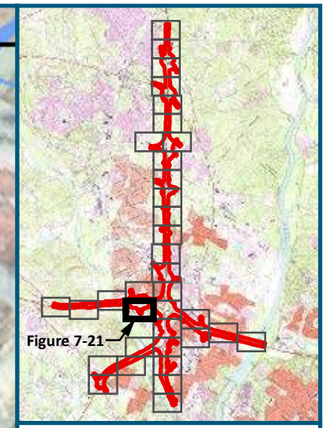
Bush River Road

Independence Avenue

Nottingwood Drive

To Saluda River

Stoop Creek



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Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-21
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

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CAROLINA CROSSROADS

See Figure 7-16

Tributary 21, aka Stoop Creek

Tributary 34

Berryhill Drive

Browning Road

Zimalcrest Drive

Upland Datapoint 13

Wetland Datapoint 13

Freshwater Wetland 13

Tributary 35

To Stoop Creek

Freshwater Wetland 14

Upland Datapoint 14

Wetland Datapoint 14

Tributary 36

Tributary 37

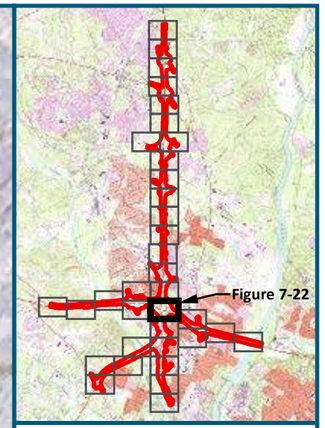
To Saluda River

See Figure 7-21

See Figure 7-23

See Figure 7-27

87 85 86 64A 20 26 107A 64A 89 107B 64B 90 88 91 92 93 94 95 64B 107B



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Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

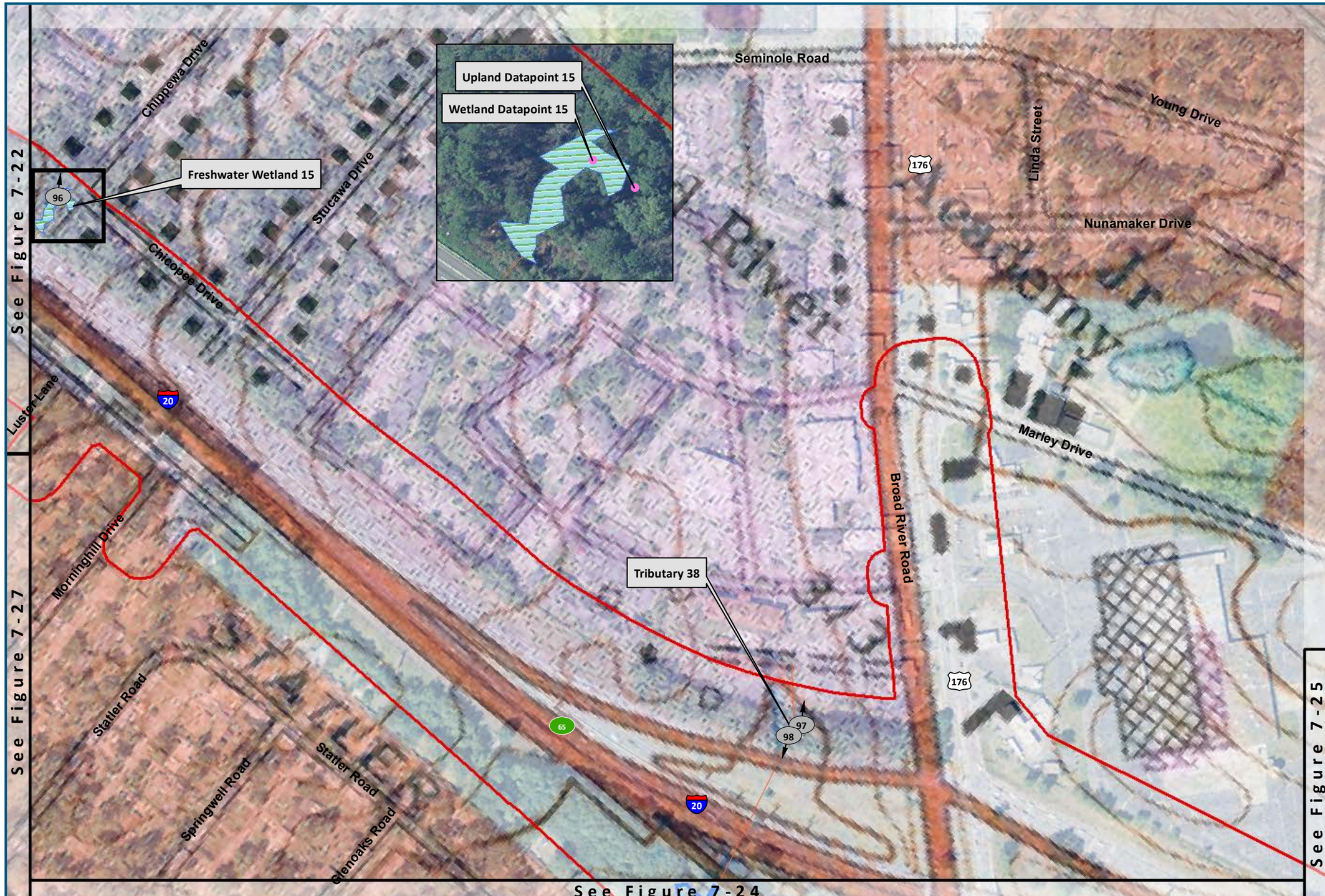
Figure 7-22
Surface Hydrology Connectivity / Data Form / Photograph Location Map

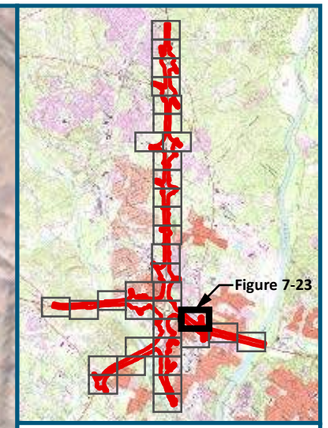
11/15/2018 Sheet 22 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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North American Datum of 1983
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Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-23
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

See Figure 7-23

See Figure 7-27

See Figure 7-28

See Figure 7-25

Springwell Road

Glenoaks Road

Shirlington Road

Statler Road

Bakersfield Road

Tyed Trail

Arrowwood Road

Dutch Square Boulevard

Bush River Road

Broad River Road

Longcreek Drive

Tributary 38

To Saluda River

Upland Datapoint 50

Freshwater Wetland 50

Wetland Datapoint 50

99

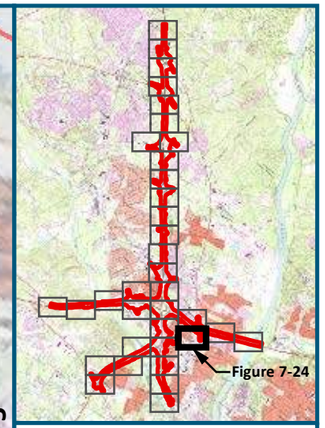
176

20

178

179

180



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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-24
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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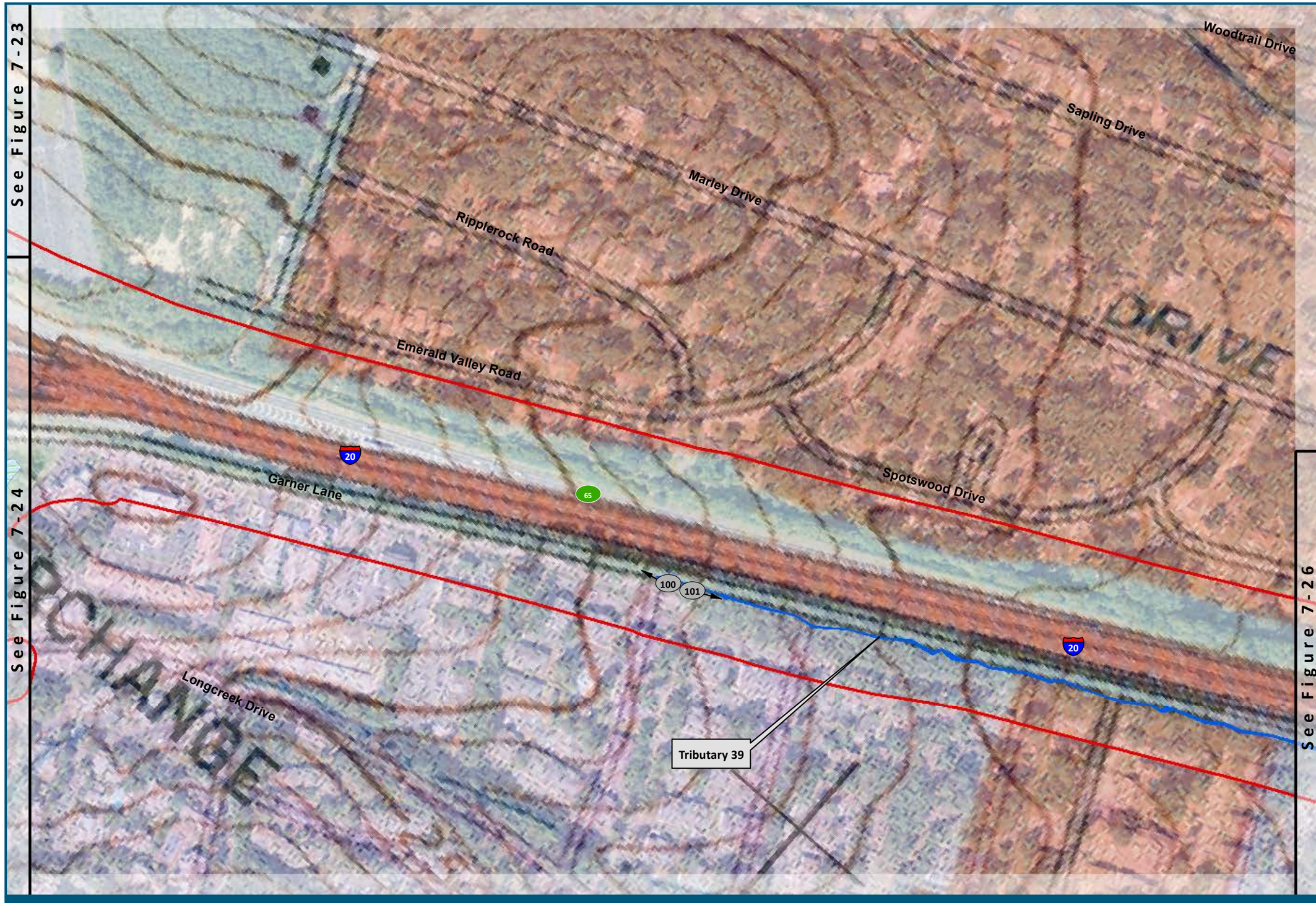
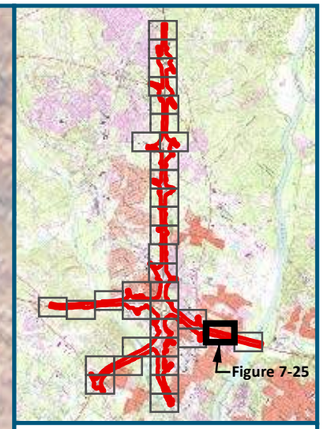
SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





0 125 250

Feet

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Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

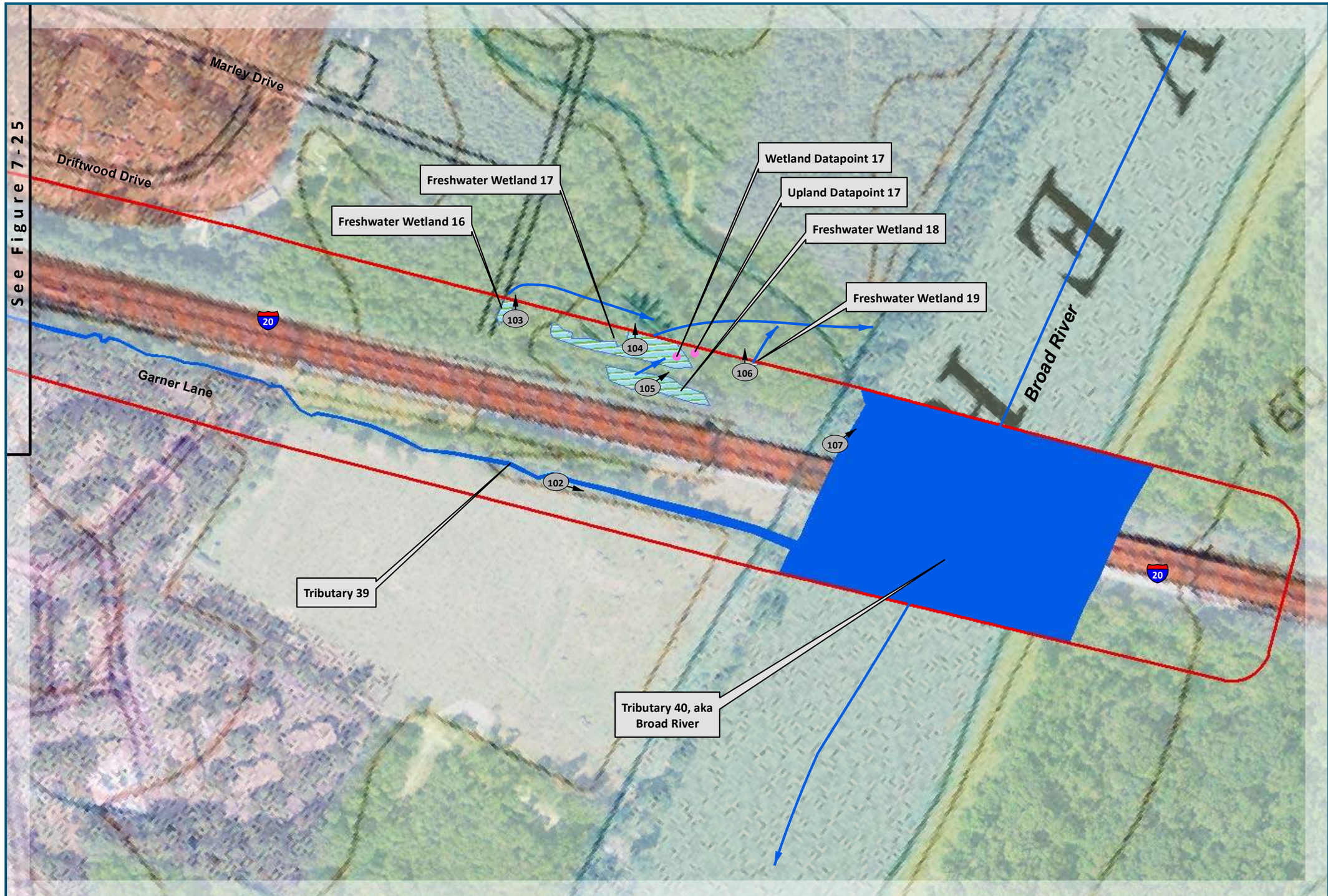
Figure 7-25
Surface Hydrology Connectivity / Data Form / Photograph Location Map

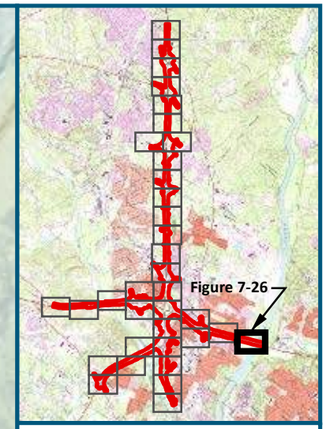
11/15/2018 Sheet 25 of 35

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS





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State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
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Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-26
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

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CAROLINA CROSSROADS

See Figure 7-22

See Figure 7-23

See Figure 7-24

See Figure 7-28

Bush River Road

Zimalcrest Drive

Tributary 41

Tributary 42

Tributary 43

Freshwater Wetland 51

Freshwater Wetland 20

Browning Road

Fairhaven Drive

Burnette Drive

108

109

110

111

112

113

186

26

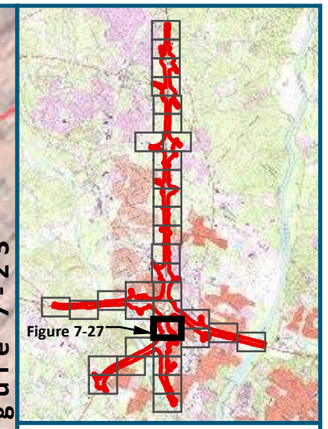
108A

Upland Datapoint 51

Wetland Datapoint 51

Upland Datapoint 20

Wetland Datapoint 20



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Feet

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North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

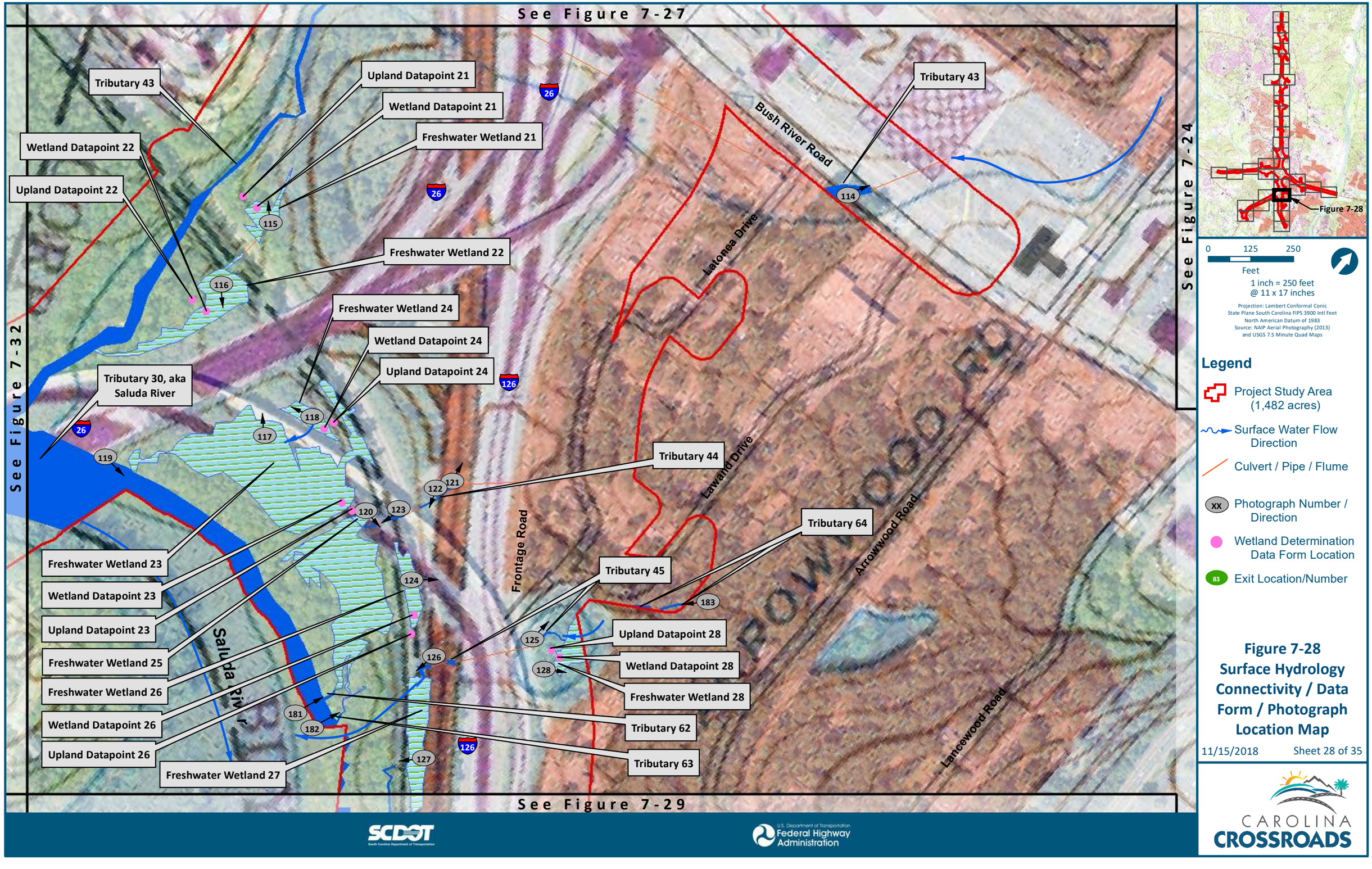
Figure 7-27
Surface Hydrology Connectivity / Data Form / Photograph Location Map

11/15/2018

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS



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Source: NAIP Aerial Photography (2013)
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Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-28
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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SCDOT South Carolina Department of Transportation

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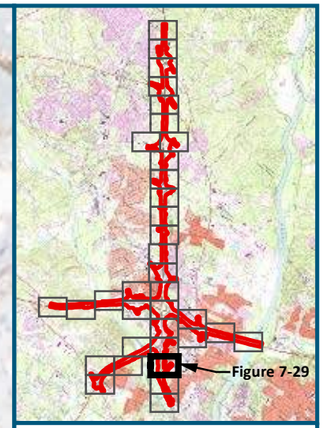
CAROLINA CROSSROADS

See Figure 7-28

Tributary 45
Freshwater Wetland 27
Tributary 46
Freshwater Wetland 52
Freshwater Wetland 53
Salu[illegible] River
Redbud Drive
Lancewood Road
Arrowwood Road
Lawand Drive
Colonial Life Boulevard
Tributary 47
Freshwater Wetland 29
Tributary 48
Freshwater Wetland 54
Freshwater Wetland 30
Wetland Datapoint 54
Upland Datapoint 54
Tributary 49
Freshwater Wetland 31
Arrowwood Road
Gracern Road
Wetland Datapoint 29
Upland Datapoint 29
187
126
130
129
188
130
135
133
132
134
189
126
136
138
137

See Figure 7-30



0 125 250
Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-29
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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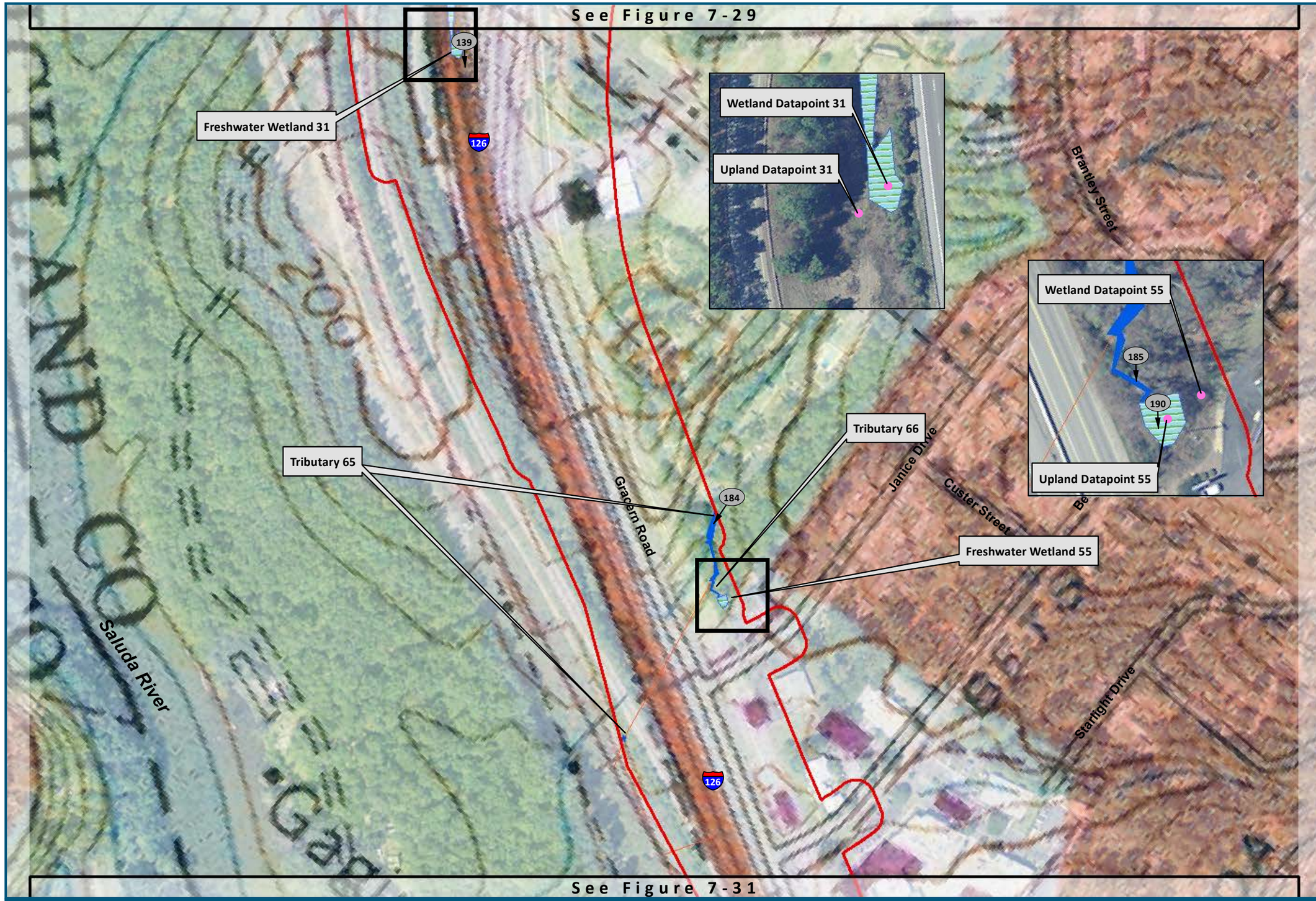
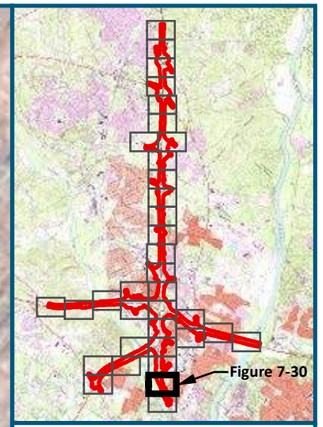
SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS





0 125 250

Feet

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@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-30
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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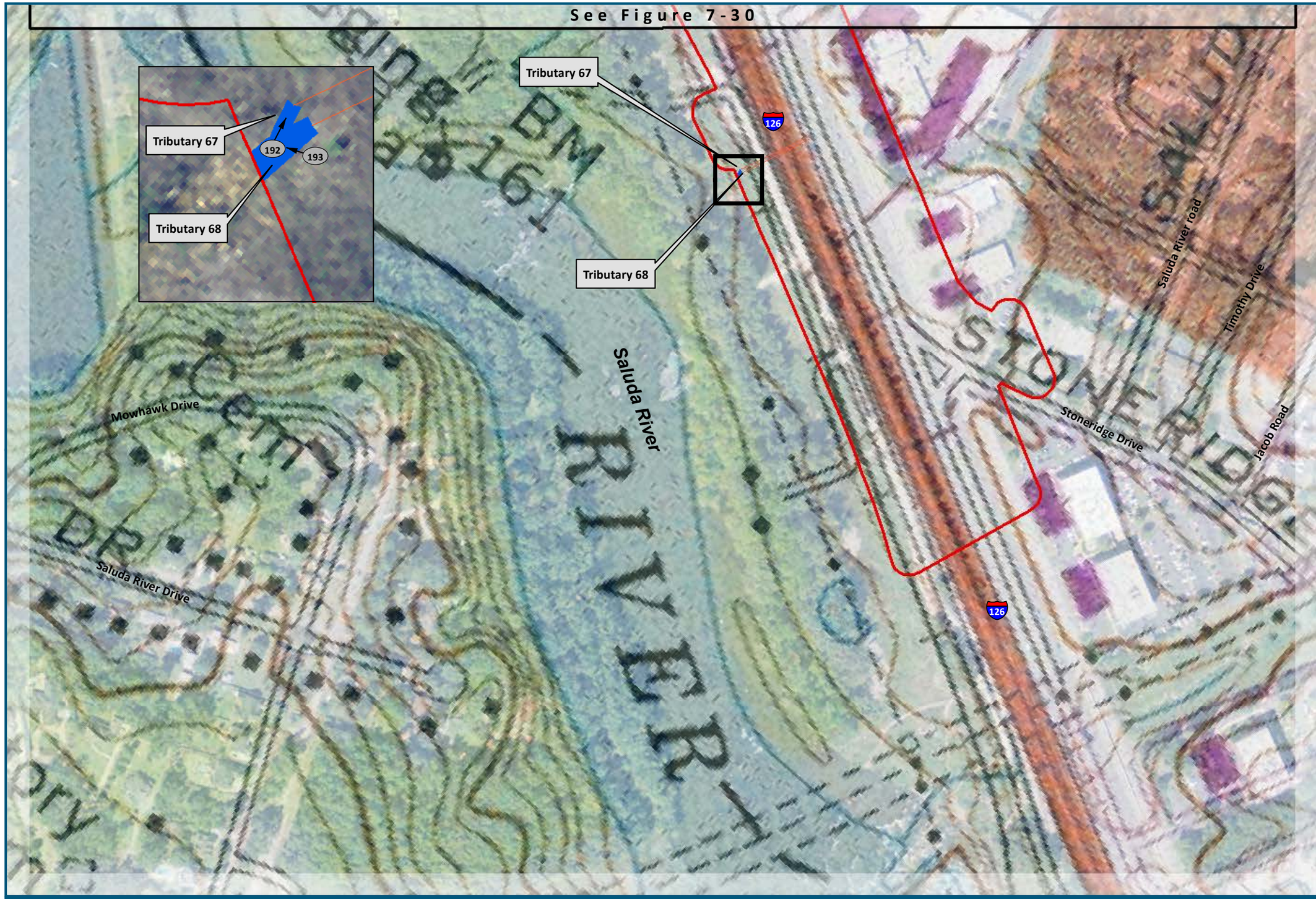

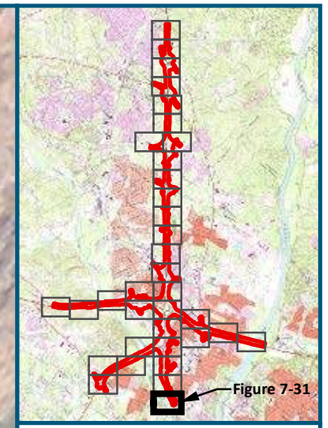

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Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-31
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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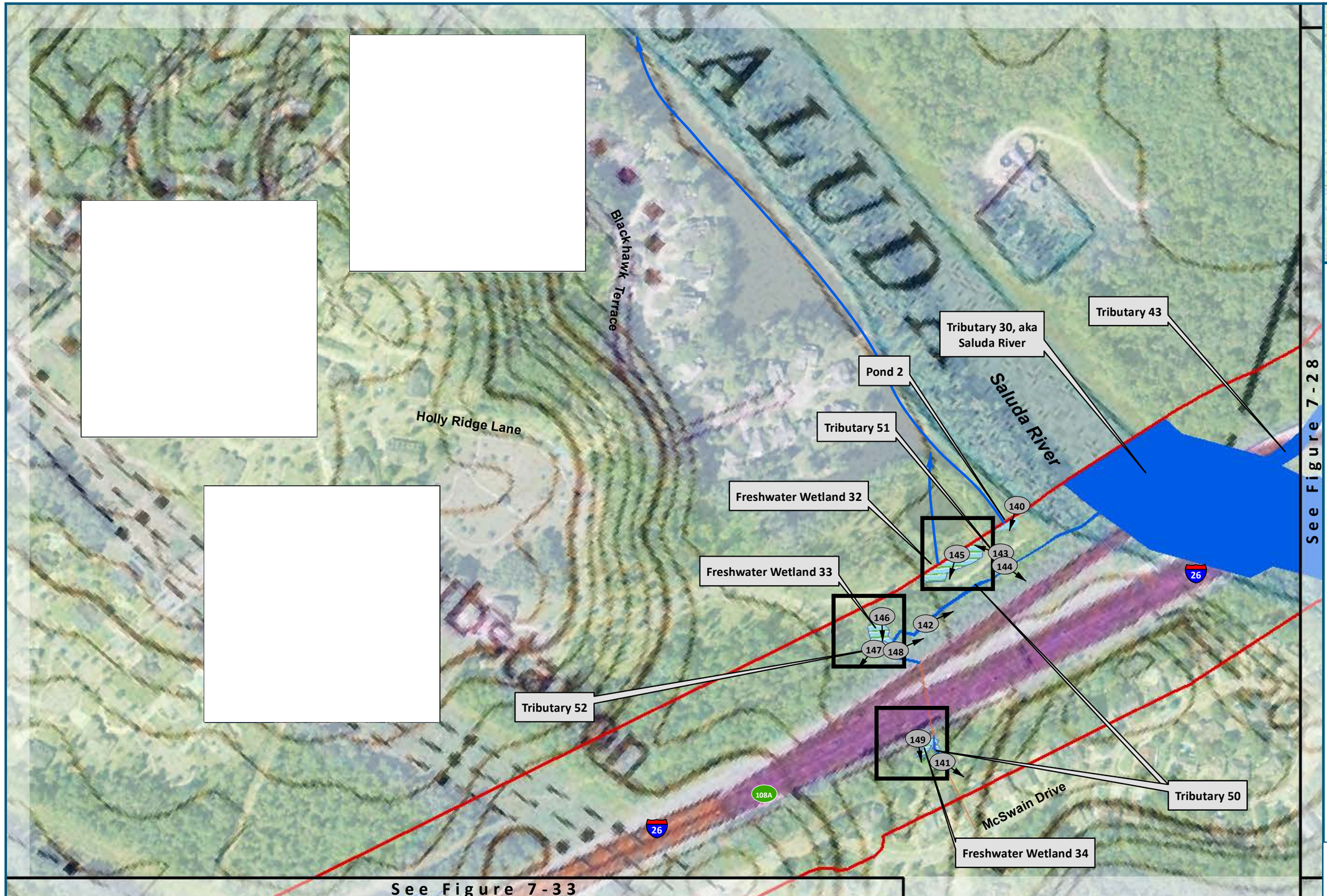
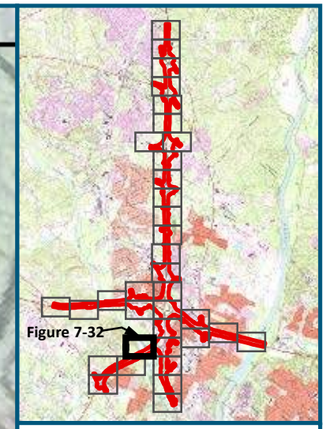
CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-32
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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See Figure 7-32

See Figure 7-34

Freshwater Wetland 36
Freshwater Wetland 35
Freshwater Wetland 37
Freshwater Wetland 38
Tributary 54
Tributary 53, aka Senn Branch
Tributary 57
Tributary 56
Tributary 55
150
151
152
153
154
156
157
158
159
160
161
162
McSwain Drive
Holly Hill Drive
Terrace View Drive
Robin Crest Drive
Riviera Drive
Senn Branch
Upland Datapoint 35
Wetland Datapoint 35
Upland Datapoint 36
Wetland Datapoint 36
Wetland Datapoint 38
Upland Datapoint 38

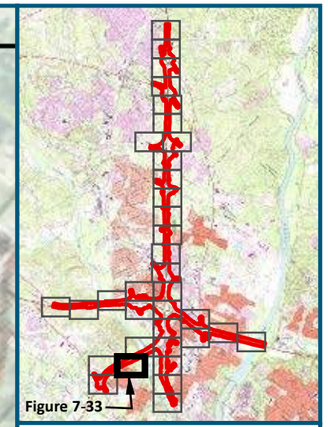
Figure 7-33

0 125 250
Feet
1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-33
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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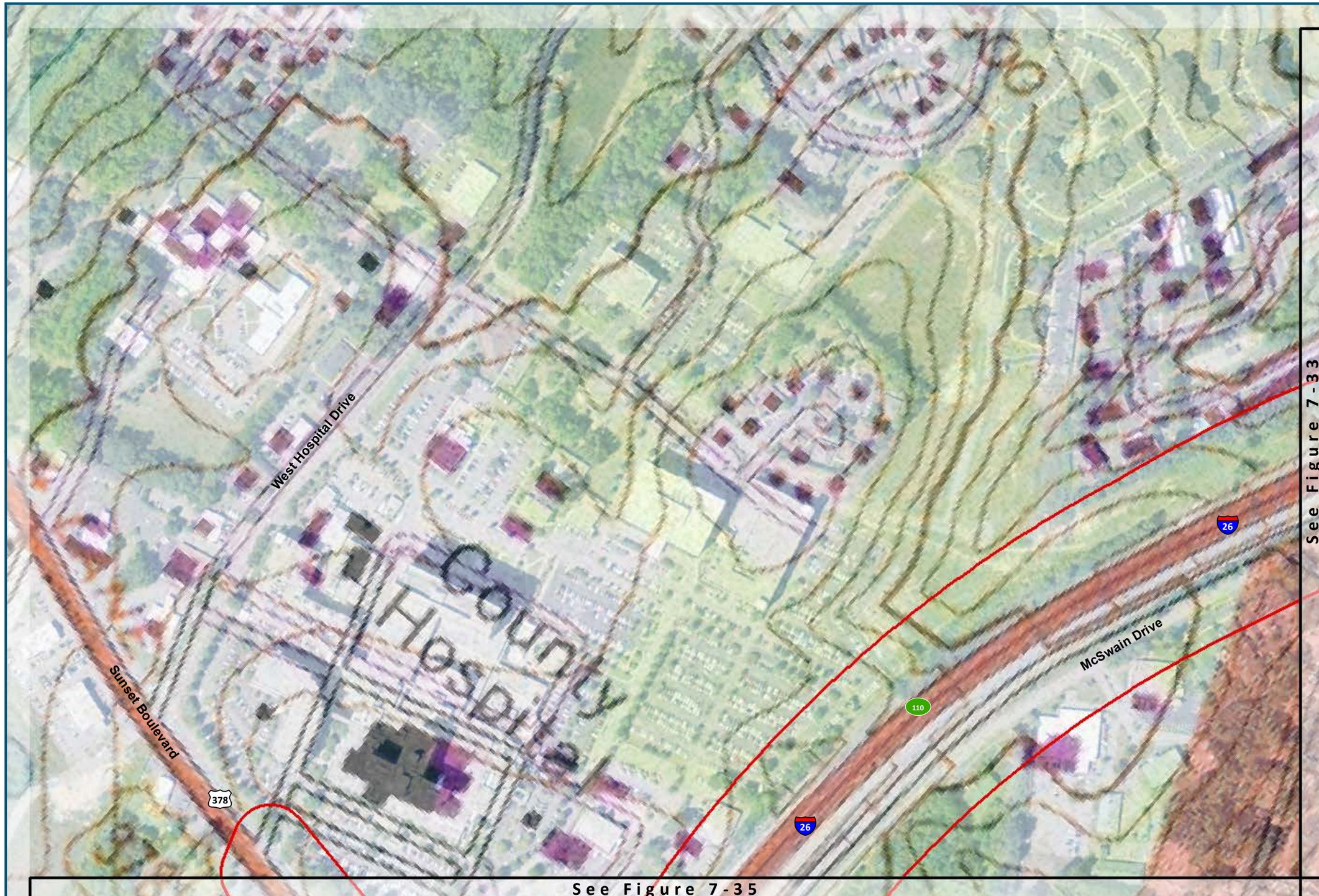
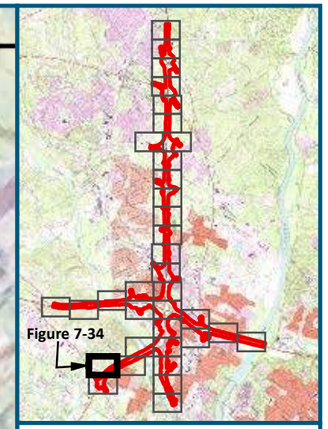
SCDOT South Carolina Department of Transportation
U.S. Department of Transportation Federal Highway Administration
CAROLINA CROSSROADS





0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-34
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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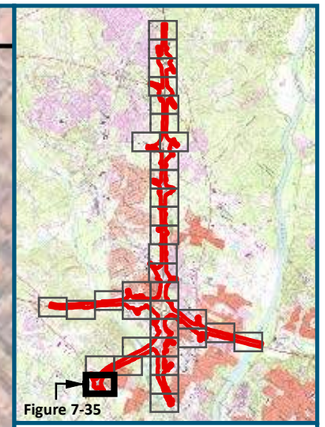
CAROLINA CROSSROADS

See Figure 7-34



Sunset Boulevard

McSwain Drive

26

378

INTERCHANGE

I-10

Sunset Boulevard

163

164

Oakwood Drive

Tributary 58

26

To Double Branch

Chris Drive

Sunset Boulevard

Professional Drive

378

Whipporwill Drive

110

0 125 250

Feet

1 inch = 250 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: NAIP Aerial Photography (2013)
and USGS 7.5 Minute Quad Maps

Legend

- Project Study Area (1,482 acres)
- Surface Water Flow Direction
- Culvert / Pipe / Flume
- XX Photograph Number / Direction
- Wetland Determination Data Form Location
- 83 Exit Location/Number

Figure 7-35
Surface Hydrology Connectivity / Data Form / Photograph Location Map

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CAROLINA CROSSROADS

ID	Latitude	Longitude
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52	34.05946704000	-81.13288773950
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55	34.05640832110	-81.12835762090
56	34.05526342920	-81.13252198030
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66	34.04274748370	-81.11970524740
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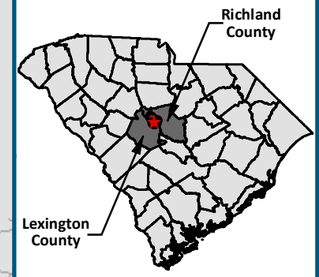

0 0.5 1

Miles

1 inch = 5,280 feet
@ 11 x 17 inches

Projection: Lambert Conformal Conic
State Plane South Carolina FIPS 3900 Intl Feet
North American Datum of 1983
Source: TIGER Road Data, TIGER County Boundaries, and TIGER Municipality Data (2010)

Legend

- Project Study Area (1,482 acres)
- Municipality
- Lake
- Major River
- County Boundary
- Coordinate Location / Number

Figure 8
Area for Jurisdictional Determination

11/15/2018 Sheet 1 of 1

SCDOT South Carolina Department of Transportation

U.S. Department of Transportation Federal Highway Administration

CAROLINA CROSSROADS

Attachment D

Wetland and Upland Dataforms for Additional Wetlands

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Wet. 56-57

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-4%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.102714 Long: -81.177063 Datum: NAD83

Soil Map Unit Name: NaC - Nason silt loam, 6 to 10 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland 56 and 57 are separated by Western Lane, but share similar hydrology, vegetation, and soil profiles. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes ✓	No _____	Depth (inches): 4"
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary and secondary indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Wet. 56-57

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus phellos	30%	YES	FAC
2. Pinus taeda	25%	YES	FAC
3. Acer rubrum	10%	NO	FAC
4. Fagus grandifolia	10%	NO	FACU
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Quercus phellos	15%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Campsis radicans	10%	YES	FAC
2. Toxicodendron radicans	10%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	20	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL

Sampling Point: Wet. 56-57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 3/2						sandy clay loam	
4-18"	7.5YR 4/2	75%	10YR 5/6	25%	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Soils meet criteria for F3 Depleted Matrix

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Up. 56-57

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 2-4%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.102214 Long: -81.177404 Datum: NAD83

Soil Map Unit Name: NaB - Nason silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks:

Up. 56-57 was sampled in an upland area associated with Freshwater Wetland 56-57. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Up. 56-57

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus alba	20%	YES	FACU
2. Acer rubrum	15%	YES	FAC
3. Liquidambar styraciflua	10%	YES	FAC
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Fagus grandifolia	10%	YES	FACU
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Poa pratensis	20%	YES	FACU
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Campsis radicans	10%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	3	x 3 =	9
FACU species	3	x 4 =	12
UPL species		x 5 =	
Column Totals:	6 (A)		21 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation does not pass either the dominance or prevalence test for hydrophytic vegetation.

SOIL

Sampling Point: Up. 56-57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	7.5YR 4/3						sandy clay loam	
4-18"	7.5YR 5/4						clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators are present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Wet. 58

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Linear Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.081357 Long: -81.150921 Datum: NAD83

Soil Map Unit Name: HeC - Herndon silt loam, 6 to 10 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland 58 is a paluistrine forested wetland. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes ✓	No _____	Depth (inches): 2"
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary and secondary indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Wet. 58

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	25%	YES	FAC
2. Liquidambar styraciflua	15%	YES	FAC
3. Quercus phellos	10%	NO	FAC
4. Ilex opaca	10%	NO	FACU
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Pinus taeda	15%	YES	FAC
2. Quercus phellos	5%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	20	= Total Cover	

Herb Stratum (Plot size: 5')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. Vitis rotundifolia	10%	YES	FAC
2. Toxicodendron radicans	10%	YES	FAC
3. Gelsemium sempervirens	5%	YES	FAC
4.		-	-
5.		-	-
6.		-	-
	25	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL Sampling Point: Wet. 58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 5/3						clay loam	
2-10"	10YR 6/1	85%	10YR 5/6	15%	C	M	clay loam	
10-18"	10YR 4/2	90%	7.5YR 4/8	10%	C	M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Soils meet criteria for F3 Depleted Matrix

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Up. 58

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.081096 Long: -81.150658 Datum: NAD83

Soil Map Unit Name: HeC - Herdon silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Up. 58 is an upland area associated with Freshwater Wetland 58. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Up. 58

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	60%	YES	FAC
2. Liquidambar styraciflua	10%	NO	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Pinus taeda	20%	YES	FAC
2. Ilex opaca	10%	YES	FACU
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	30	= Total Cover	
Herb Stratum (Plot size: 5')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Toxicodendron radicans	10%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL

Sampling Point: Up. 58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 5/3						clay loam	
4-18"	7.5YR 5/5						clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators are present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Wet. 59

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Linear Depression Local relief (concave, convex, none): Concave Slope (%): 0-2%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.073199 Long: -81.156663 Datum: NAD83

Soil Map Unit Name: Enon Silt Loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation ✓, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland 59 is an emergent wetland located in a drainage area. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 2"
Water Table Present?	Yes ✓	No _____	Depth (inches): 0"
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary and secondary indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Wet. 59

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pyrus calleryana	25%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Morella cerifera	50%	YES	FAC
2. Pyrus calleryana	10%	NO	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	60	= Total Cover	
Herb Stratum (Plot size: 5')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Smilax rotundifolia	60%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	60	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL

Sampling Point: Wet. 59

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 3/2						clay loam	
4-18"	10YR 5/2	80%	7.5YR 5/5	20%	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Soils meet criteria for F3 Depleted Matrix

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Up. 59

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.073391 Long: -81.156906 Datum: NAD83

Soil Map Unit Name: Enon Silt Loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Up. 59 is an upland area associated with Freshwater Wetland 59. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Up. 59

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	0 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Poa pratensis	95%	YES	FACU
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.		-	-
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation does not pass either the dominance or prevalence test for hydrophytic vegetation.

SOIL

Sampling Point: Up. 59

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 5/3						clay loam	
4-18"	7.5YR 4/6						clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators are present

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Wet. 60

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-4%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.020409 Long: -81.135461 Datum: NAD83

Soil Map Unit Name: GeD - Georgeville very fine sandy loam, 10 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Wetland 60 is an emergent wetland. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 3"
Water Table Present?	Yes ✓	No _____	Depth (inches): 0"
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Primary and secondary indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Wet. 60

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Liquidambar styraciflua	10%	YES	FAC
2. Quercus nigra	5%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Carpinus caroliniana	50%	YES	FAC
2. Quercus phellos	5%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	55	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Saururus cernuus	60%	YES	OBL
2. Microstegium vimineum	10%	NO	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Vitis rotundifolia	10%	YES	FAC
2. Campsis radicans	10%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	20	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL

Sampling Point: Wet. 60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	10YR 3/1						clay loam	
2-12"	10YR 5/2	90%	7.5YR 4/4	10%	C	M	clay loam	
12-18"	10YR 4/1						clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Soils meet criteria for F3 Depleted Matrix

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Carolina Crossroads City/County: Lexington Sampling Date: 11/16/2018

Applicant/Owner: SCDOT State: SC Sampling Point: Up. 60

Investigator(s): Conor Makepeace Section, Township, Range: West Columbia

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-2%

Subregion (LRR or MLRA): MLRA 136 Lat: 34.020399 Long: -81.135607 Datum: NAD83

Soil Map Unit Name: GeD - Georgeville very fine sandy loam, 10 to 15 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Up. 60 is an upland area associated with Freshwater Wetland 60. There was moderate rain in the days preceding field reviews.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No indicators of wetland hydrology are present.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: Up. 60

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus alba	25%	YES	FACU
2. Liquidambar styraciflua	15%	YES	FAC
3. Pinus elliottii	10%	YES	FACW
4. Carya tomentosa	10%	YES	FAC
5.		-	-
6.		-	-
7.		-	-
8.		-	-
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. Quercus alba	10%	YES	FACU
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
	10	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Microstegium vimineum	15%	YES	FAC
2.		-	-
3.		-	-
4.		-	-
5.		-	-
6.		-	-
7.		-	-
8.		-	-
9.		-	-
10.		-	-
11.		-	-
12.		-	-
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. Toxicodendron radicans	10%	YES	FAC
2. Campsis radicans	10%	YES	FAC
3.		-	-
4.		-	-
5.		-	-
6.		-	-
	20	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation passes the dominance test for hydrophytic vegetation

SOIL

Sampling Point: Up. 60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

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- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

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- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

No hydric soil indicators are present