

**Concurrence Points 3 and 4A**  
*LEAST ENVIRONMENTALLY DAMAGING AND PRACTICABLE ALTERNATIVE (LEDPA) &  
AVOIDANCE AND MINIMIZATION*

**FOR**

**Proposed Improvements to US 70 from US 70 Business to the Neuse River Bridge  
Johnston County  
TIP Project W-5600**

**June 15, 2016**

**PURPOSE OF TODAY'S MEETING**

The purpose of today's meeting is to discuss the preferred alternative for the project. Impacts of and public comments on the alternatives presented at the public meeting will be discussed. Concurrence on the LEDPA (Concurrence Point 3) and Avoidance and Minimization (Concurrence Point 4A) will be requested.

**PROJECT DESCRIPTION**

The North Carolina Department of Transportation (NCDOT) proposes to convert the existing intersections at SR 1501 (Swift Creek Road) and SR 1913 (Wilson's Mills Road) with US 70 to interchanges. The project would upgrade US 70 to a freeway and includes the closure of median openings and eliminating direct access to US 70 from adjacent properties. Access to adjacent properties will be provided via service roads. The project location is shown in Exhibit 1. The project is approximately 4.7 miles long.

**PURPOSE AND NEED**

The purpose of the proposed project is to improve safety and mobility of vehicular travel along US 70 within the project limits.

The proposed project is intended to address the following needs:

- The fatal crash rate for the subject section of US 70 is higher than the statewide average for similar facilities (although it is slightly lower than the critical crash rate).
- The existing signalized intersections within the project limits present concerns regarding driver expectancy given the rural, high-speed and free-flow nature of the adjoining sections of US 70.
- The existing signalized intersections within the project limits result in delay to traffic along the subject section of US 70. These conflict points cause the substantial regional through traffic on US 70 to stop or slow down to accommodate vehicles crossing and turning onto US 70, as well as vehicles turning from US 70. The mobility of US 70 will continue to erode as traffic volumes increase on US 70 and intersecting roadways. In addition, the speed limit can only be set to 55 miles per hour (mph)

because of the at-grade intersections. The speed limit of the adjoining freeway section of US 70 to the west is 70 mph.

## **PROJECT STATUS AND HISTORY**

- Merger Screening Meeting: July 17, 2014
- Concurrence Point 2A: November 18, 2015

## **CURRENT STUDY ALTERNATIVES**

Along with the No-Build alternative, a total of four alternatives have been considered for the project. All four build alternatives will upgrade US 70 within the project limits to a freeway and consist of a combination of interchange options developed for the Swift Creek Road and Wilson's Mills Road at-grade intersections and variations of service roads providing access to adjacent properties. The individual interchange options are shown in Exhibit 3 and are described below:

### **Swift Creek Road Option 1 (SC1)**

SC1 proposes to construct a half-cloverleaf interchange with ramps and loops in the northwest and southwest quadrants along a new location alignment of Swift Creek Road. The proposed interchange would include a new bridge carrying the realigned Swift Creek Road over US 70. The proposed interchange would be located approximately 0.5 mile west of the existing US 70/Swift Creek Road intersection. The new location section of Swift Creek Road will leave the existing alignment just south of the Wilson's Mills Baptist Church and connect to Wilson's Mills Road just east of Pear Tree Lane.

### **Swift Creek Road Option 2 (SC2)**

SC2 proposes to construct a modified diamond interchange with ramps and loops in the northeast and southwest quadrants at the existing US 70/Swift Creek Road intersection. The proposed interchange would include a new bridge carrying Swift Creek Road over US 70.

### **Wilson's Mills Road Option A (WMA)**

WMA proposes to construct a compressed diamond interchange at the intersection of US 70 and Wilson's Mills Road. WMA would realign US 70 slightly to the south of the intersection and would include two bridges carrying US 70 over Wilson's Mills Road.

### **Wilson's Mills Road Option B (WMB)**

WMB proposes to construct a modified diamond interchange with ramps and loops in the northeast and southwest quadrants at the intersection of US 70 and Wilson's Mills Road. The proposed interchange would include a new bridge carrying Wilson's Mills Road over US 70.

These interchange options can be combined into four alternatives for the project. These detailed study alternatives are listed below:

- **Alternative 1A:** Swift Creek Option 1 and Wilson's Mills Option A (Exh. 4A, 4B,4C1,4D1)
- **Alternative 1B:** Swift Creek Option 1 and Wilson's Mills Option B ( Exh. 4A, 4B,4C2,4D2)
- **Alternative 2A:** Swift Creek Option 2 and Wilson's Mills Option A (Exh. 5A, 5B,5C1,5D1)
- **Alternative 2B:** Swift Creek Option 2 and Wilson's Mills Option B (Exh. 5A, 5B,5C2,5D2)

### Detailed Study Alternative Comparison

Resources		Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B
Relocations	Residential	3	5	5	7
	Business	6	9	6	9
	Total	9	14	11	16
Minority / Low Income Populations (Disproportionate Impacts)		No	No	No	No
Historic Resources (Adverse Effects)		No	No	No	No
Community Facilities Impacted*		0	0	1	1
Section 4(f) Impacts		N/A	N/A	N/A	N/A
Prime Farmland (acres)		68.0	73.4	64.4	69.8
Wetlands (acres)		8.2	8.0	8.1	7.9**
Streams (linear feet)		3,060	2,770	3,300	3,010
Riparian Buffers (square feet)	Zone 1	74,050	65,340	52,270	43,560
	Zone 2	82,760	77,540	34,850	30,490
	Total	156,810	143,880	87,120	74,050
Floodplain (acres)		0	0	0.1	0.1
Federally Protected Species		No Effect	No Effect	No Effect	No Effect
Construction Cost (millions)		\$44.900	\$39.700	\$43.300	\$38.100
Utility Relocation Cost (millions)		\$0.894	\$0.997	\$0.926	\$0.939
Right of Way Cost		\$9.875	\$15.80	\$10.550	\$16.800
Stream/Wetland Mitigation Cost***		\$3.710	\$3.420	\$3.790	\$3.520
Total Cost (millions)		\$59.379	\$59.917	\$58.566	\$59.359

\*Impacts to Wilson's Mills Cemetery

\*\*Impacts updated since CP2A to account for rounding error

\*\*\*Mitigation cost based on NCDEQ fees (<https://deq.nc.gov/about/divisions/mitigation-services/dms-customers/fee-schedules>)

### LOCAL OFFICIALS MEETING / PUBLIC INFORMATIONAL MEETING

A Local Officials Meeting was held at the Wilson's Mills Town Hall on February 2, 2016. NCDOT presented maps of each of the four detailed study alternatives. Based off of the impacts to businesses in the vicinity of the proposed Wilson's Mills Road interchange and concerns about connectivity and access along Swift Creek Road, on February 16, 2016, the Wilson's Mills Town Council passed a resolution in favor of Alternative 2A.

A Public Informational Meeting was held on February 2, 2016 at the Wilson's Mills Elementary School. Approximately 180 citizens attended the meeting. Alternatives 1A, 1B, 2A, and 2B were presented at the meeting. All of the meeting attendees were provided a meeting handout providing a description of each interchange option, impacts and costs of each alternative, project mapping and a comment sheet.

Seventy-seven comment forms were either submitted at the meeting or received via email or mail after the meeting. Below is a summary of the alternative preferences on the comment sheets received:

Alternative 1 A	Alternative 1B	Alternative 2A	Alternative 2B	No Preference
12	2	58	8	5

The primary concerns noted at the meeting and on the comment sheets are summarized below. Other concerns not listed included future land use changes and property values.

- Property Impacts/Relocations: Twelve comment forms noted concerns due to property impacts and relocations. Of primary concern was the potential impact of Wilson's Mills Interchange Option B, which is a component of Alternatives 1B and 2B, on the Handy Mart/White Swan restaurant and the Family Dollar store. Also, of concern was the potential relocation of elderly community members due to new location alignments. Citizens noting concern for the project's impact to businesses generally preferred either Alternative 1A or 2A.
- EMS Access and Response Times: Eleven comments were received expressing concern about EMS access and response times. Members of the Wilson's Mills Fire Department, including the Fire Chief, and citizens in attendance noted the project would have impacts to EMS routing and response times. The Wilson's Mills Fire Station is located north of US 70 and closing the at-grade crossings of US 70 would limit EMS routing to incidents south of US 70 to the new interchanges and the service roads. Most attendees noting concerns about EMS access selected Alternative 2A as their preference due to its use of the existing Swift Creek Road.
- Access: Fourteen comment forms noted concern about changes to access. Citizens and business owners stated the project would have a direct impact on daily routines and access to and from businesses, schools, and other community resources. Attendees noted that Swift Creek Option 1, a component of Alternatives 1A and 1B, resulted in a much longer route for travel between the community resources on opposite sides of US 70. The single access proposed by the project to the Uzzle Industrial Park also gave concern. Business owners and community leaders noted additional travel time and transportation costs associated with single access to the industrial park could result in business closures or relocations. Comments received also expressed concerns related to extended travel times for farm equipment due to the removal of the at-grade intersections and new routing via service roads.

## NCDOT RECOMMENDED ALTERNATIVE

Alternative 2A has been identified as the preferred alternative by NCDOT because it would best serve the project's purpose and need while balancing environmental concerns and costs with the concerns of the citizens and leaders of the Town of Wilson's Mills.

Alternative 2A was selected for the following reasons:

- Based on comments received at the February 2016 public meeting, Alternative 2A was preferred by the public. Over four times as many people who stated a preference preferred Alternative 2A over the next most popular alternative (Alternative 1A).
- The Town of Wilson's Mills passed a resolution supporting Alternative 2A.
- Alternative 2A would require less total relocations than two of the other alternatives. The alternative with the least number of relocatees, Alternative 1A, would affect the most wetlands and the most riparian buffers and has the second highest cost.
- Alternative 2A would affect less wetlands than Alternative 1A. Alternative 2A would affect 0.2 acre more wetlands and 13,070 square feet more riparian buffer than Alternative 2B, the alternative with the least impact on either of these resources. However, Alternative 2B would relocate the most homes and businesses of any of the alternatives, and would affect more prime farmland than Alternative 2A.
- Alternative 2A would affect 530 feet more streams than the alternative with the least impact on streams, Alternative 1B. However, Alternative 1B would have more total relocations than Alternative 2A, would affect the most prime farmland of any of the alternatives, had the least support from the public and had the highest total cost of any of the alternatives.
- Alternative 2A would affect less prime farmland than any of the other alternatives.
- Alternative 2A has the least total cost of any of the other alternatives.
- Alternative 2A provides the most direct access to US 70, allowing Emergency Services to respond faster to incidents that require them to travel east or west along US 70.

## AVOIDANCE AND MINIMIZATION

### Section 404 Resources

- In order to reduce stream and wetland impacts along the western end of the project, Service Roads 1A\* and 2 were realigned closer to US 70, utilizing a concrete barrier to provide the separation. **These minimization efforts resulting in reducing the stream and wetland impacts for all alternatives by 230 feet and 0.5 acres, respectively.**

*\*More detail on Service Road 1A is found under Human Environment Impacts*

- Where practical and safe, steeper slopes (no greater than 3:1) will be utilized. During project design, special consideration will be given to slopes in wetland areas and near streams.

Human Environment Impacts

- In order to minimize impacts of Alternatives 2A and 2B on the Wilson's Mills Cemetery, the proposed right of way along eastern side of Swift Creek Road, adjacent to the cemetery was reduced by 20'.
- In response to concerns regarding reduced access to businesses along Uzzle Industrial Drive, Service Road 1A, which extends Sadisco Road eastward to Uzzle Industrial Drive, was added to all alternatives.
- In order to minimize the impacts on businesses along the western end of the project, Service Roads 1A and 2 were realigned closer to US 70, utilizing a concrete barrier to provide separation. **These minimization measures will reduce the number of relocations for all alternatives by three businesses.**

The table below compares the impacts of the original design for Alternative 2A to the design with implementation of the listed minimization measures.

Resources		Original Alt. 2A	Minimized Alt. 2A
Relocations	Residential	5	4*
	Business	6	3*
	Total	11	7*
Prime Farmland (acres)		64.4	60.4
Wetlands (acres)		8.1	7.6
Streams (linear feet)		3,300	3,070
Riparian Buffers (square feet)	Zone 1	52,270	43,990
	Zone 2	34,850	28,750
	Total	87,120	72,740

\*Estimated revised relocations based off of minimization. Updated relocation estimate has been requested.



Neuse Golf Club

CLAYTON

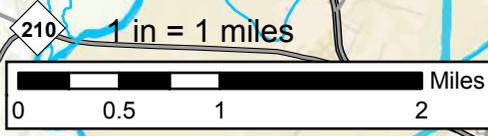
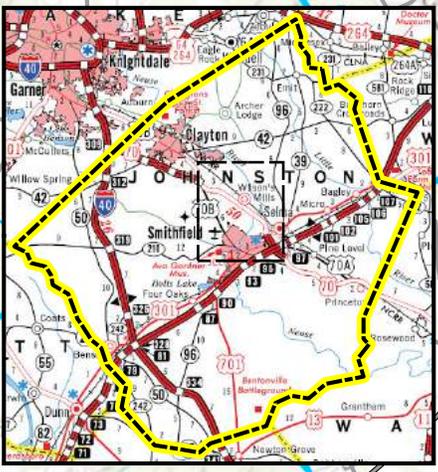
WILSON'S MILLS

SELMA

SMITHFIELD

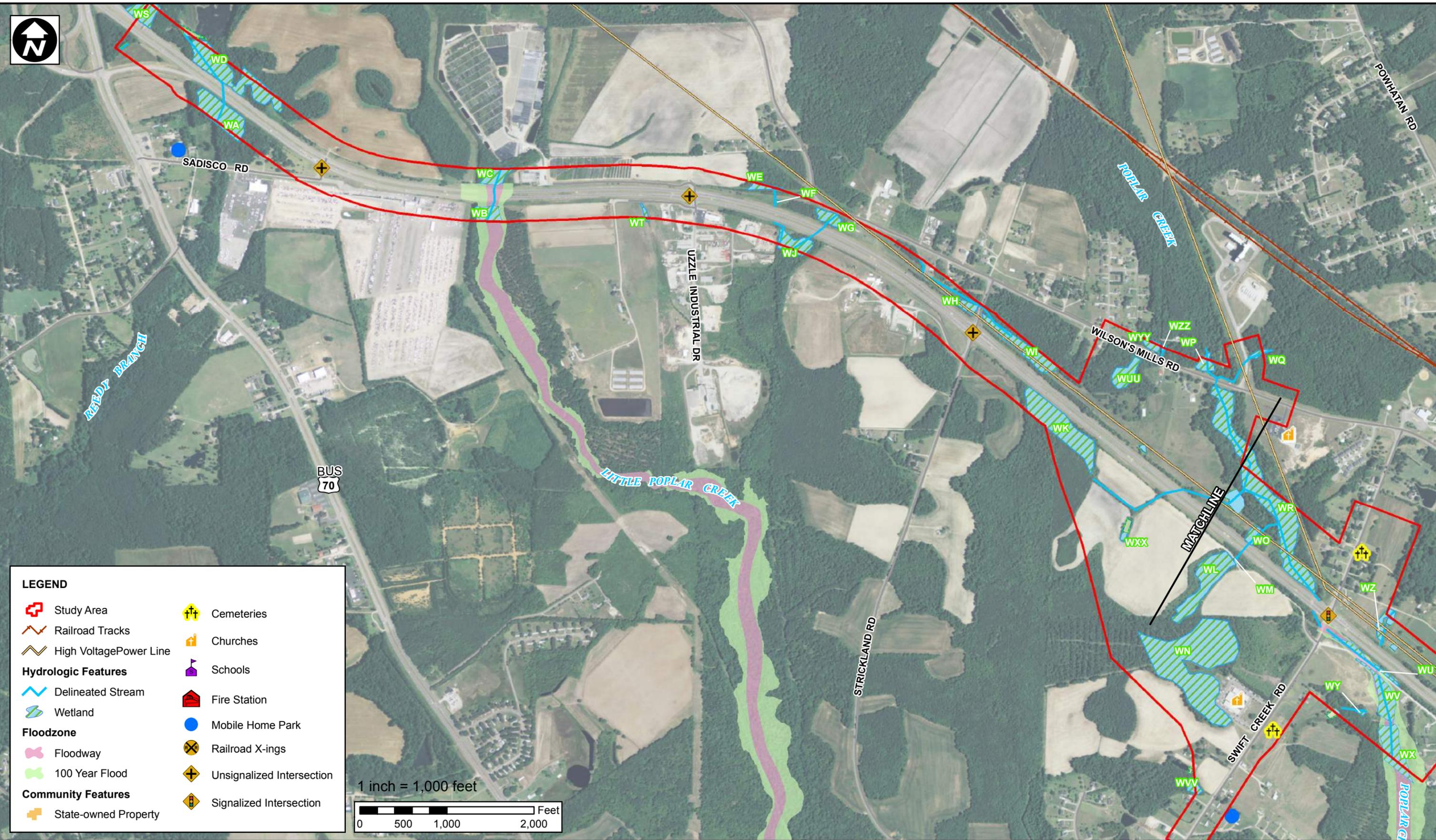
**LEGEND**

-  Study Area
-  Railroad Tracks
-  Municipal Boundaries
-  Streams



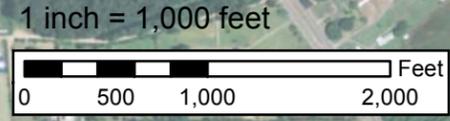
**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Exhibit 1  
 Vicinity Map



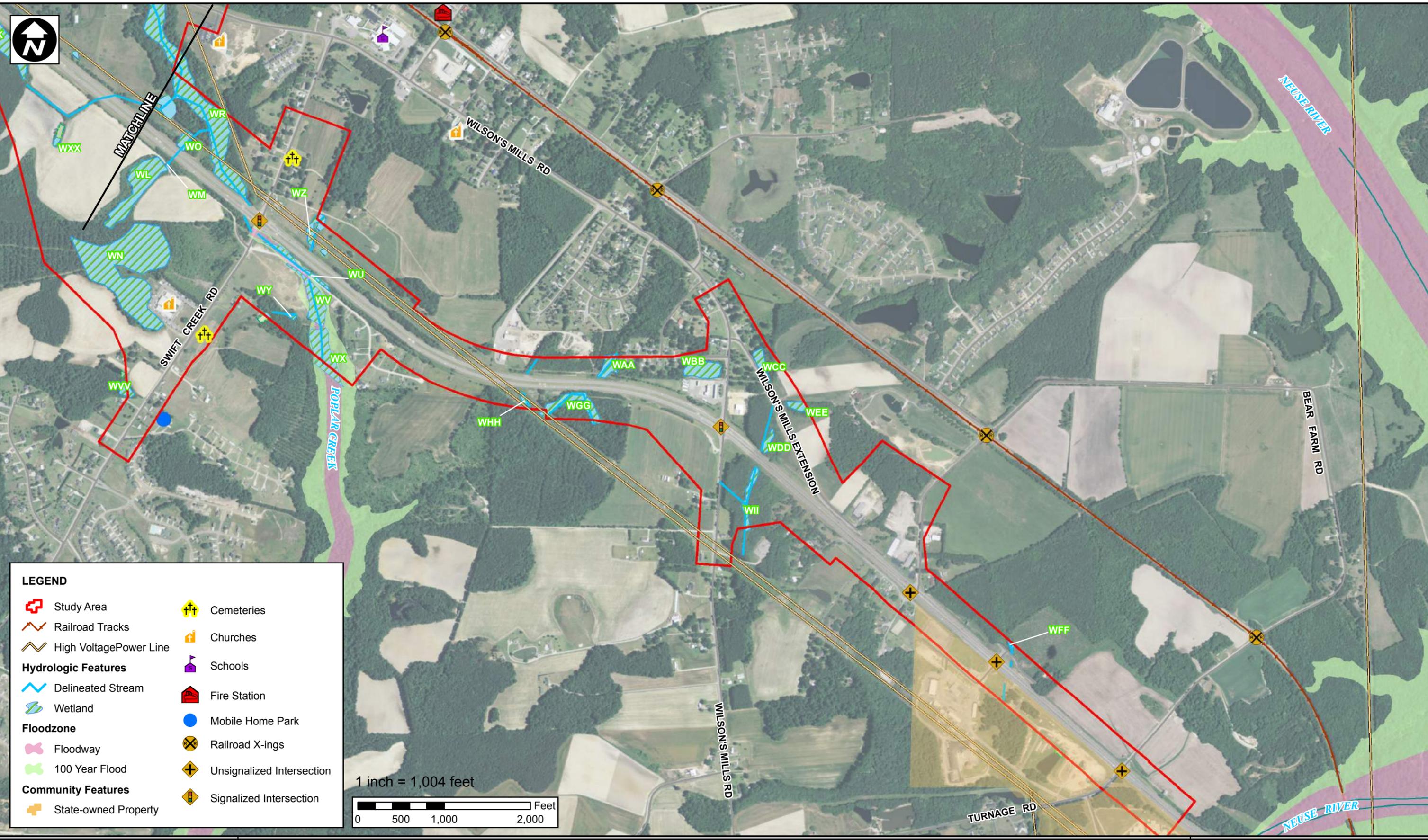
**LEGEND**

Study Area	Cemeteries
Railroad Tracks	Churches
High Voltage Power Line	Schools
<b>Hydrologic Features</b>	Fire Station
Delineated Stream	Mobile Home Park
Wetland	Railroad X-ings
<b>Floodzone</b>	Unsignalized Intersection
Floodway	Signalized Intersection
100 Year Flood	State-owned Property



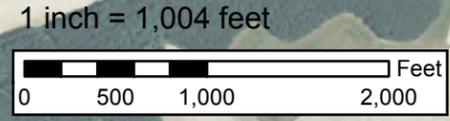
**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Exhibit 2A  
Environmental Features



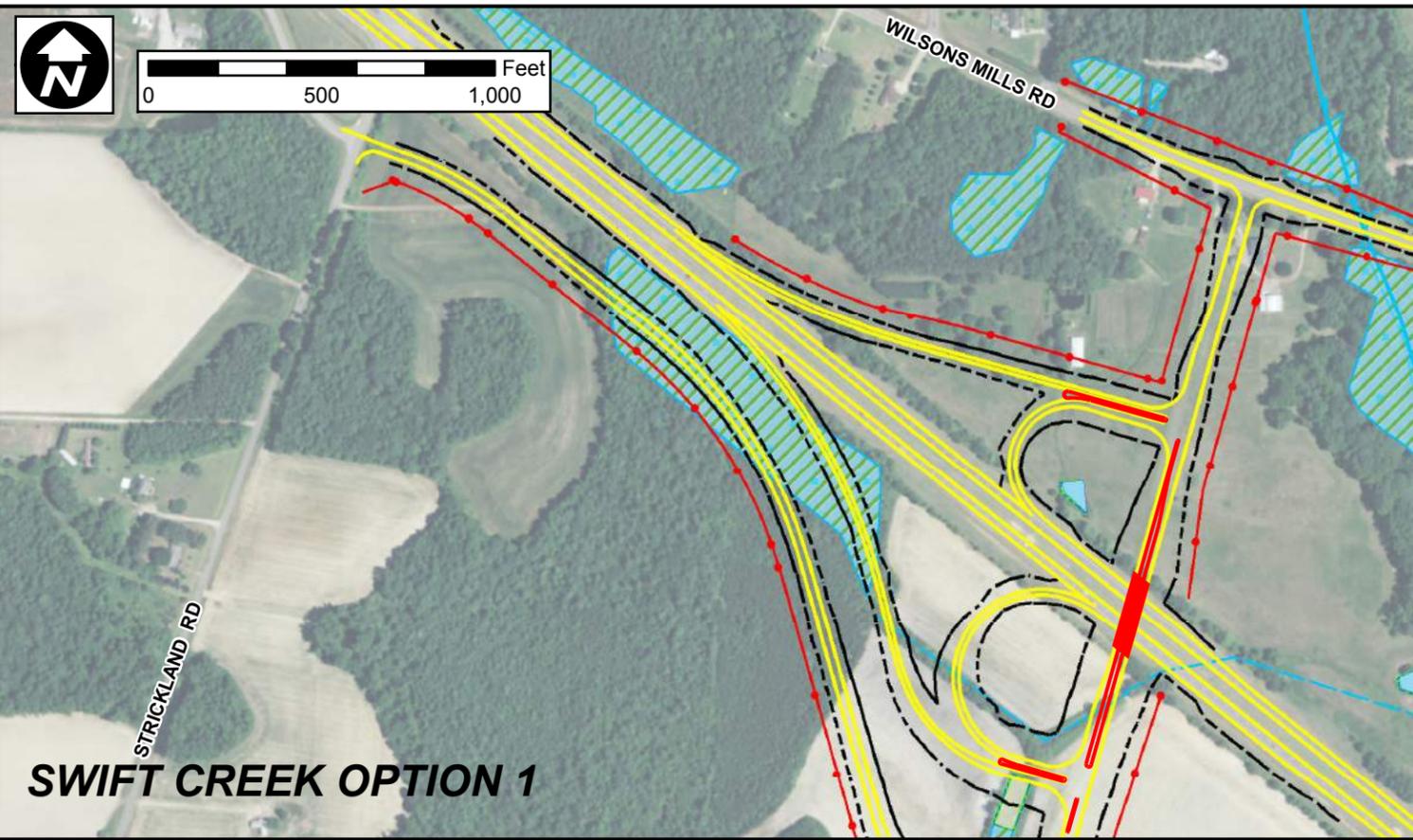
**LEGEND**

Study Area	Cemeteries
Railroad Tracks	Churches
High Voltage Power Line	Schools
<b>Hydrologic Features</b>	
Delineated Stream	Fire Station
Wetland	Mobile Home Park
<b>Floodzone</b>	
Floodway	Railroad X-ings
100 Year Flood	Unsignalized Intersection
<b>Community Features</b>	
State-owned Property	Signalized Intersection

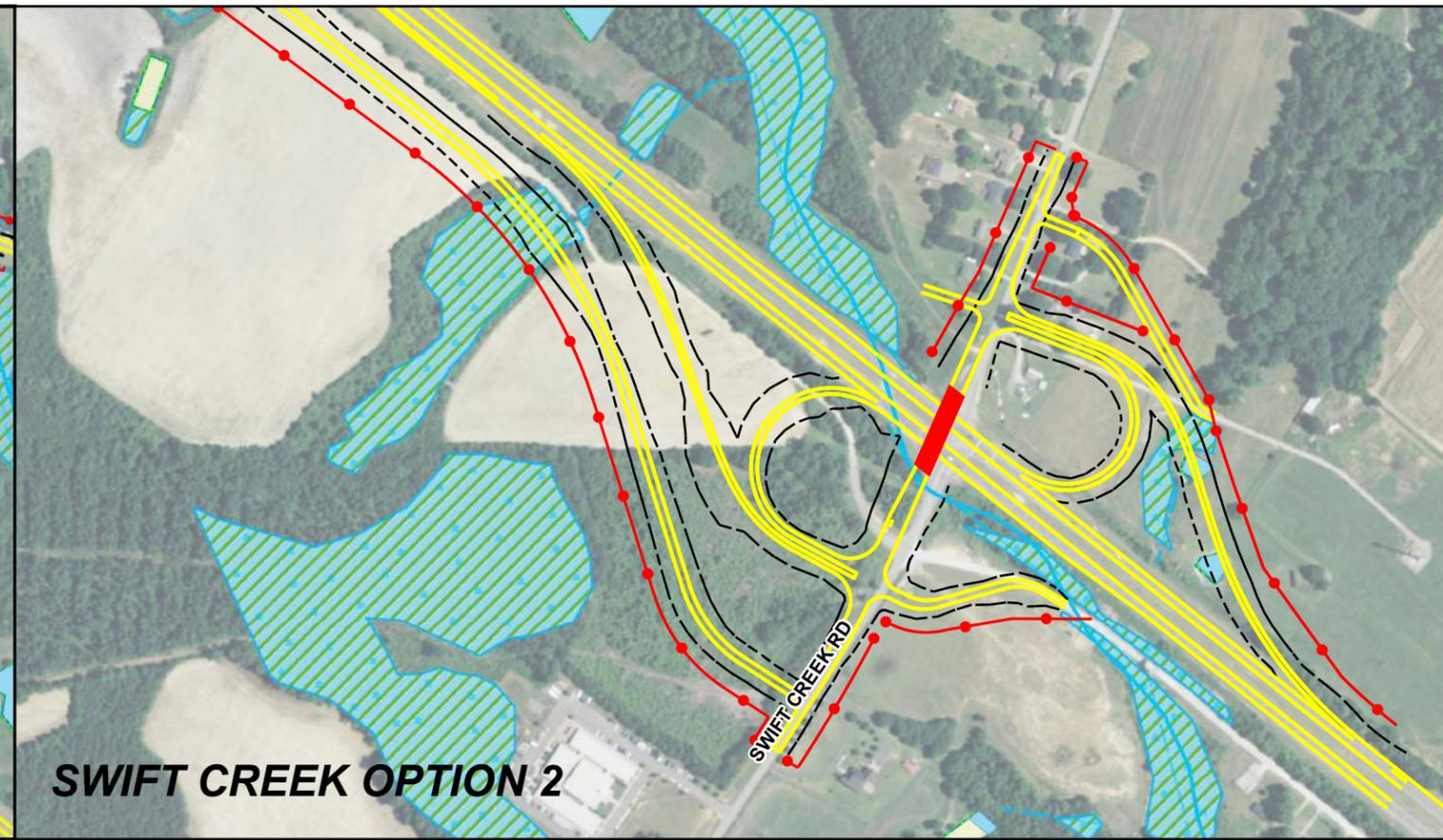


**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
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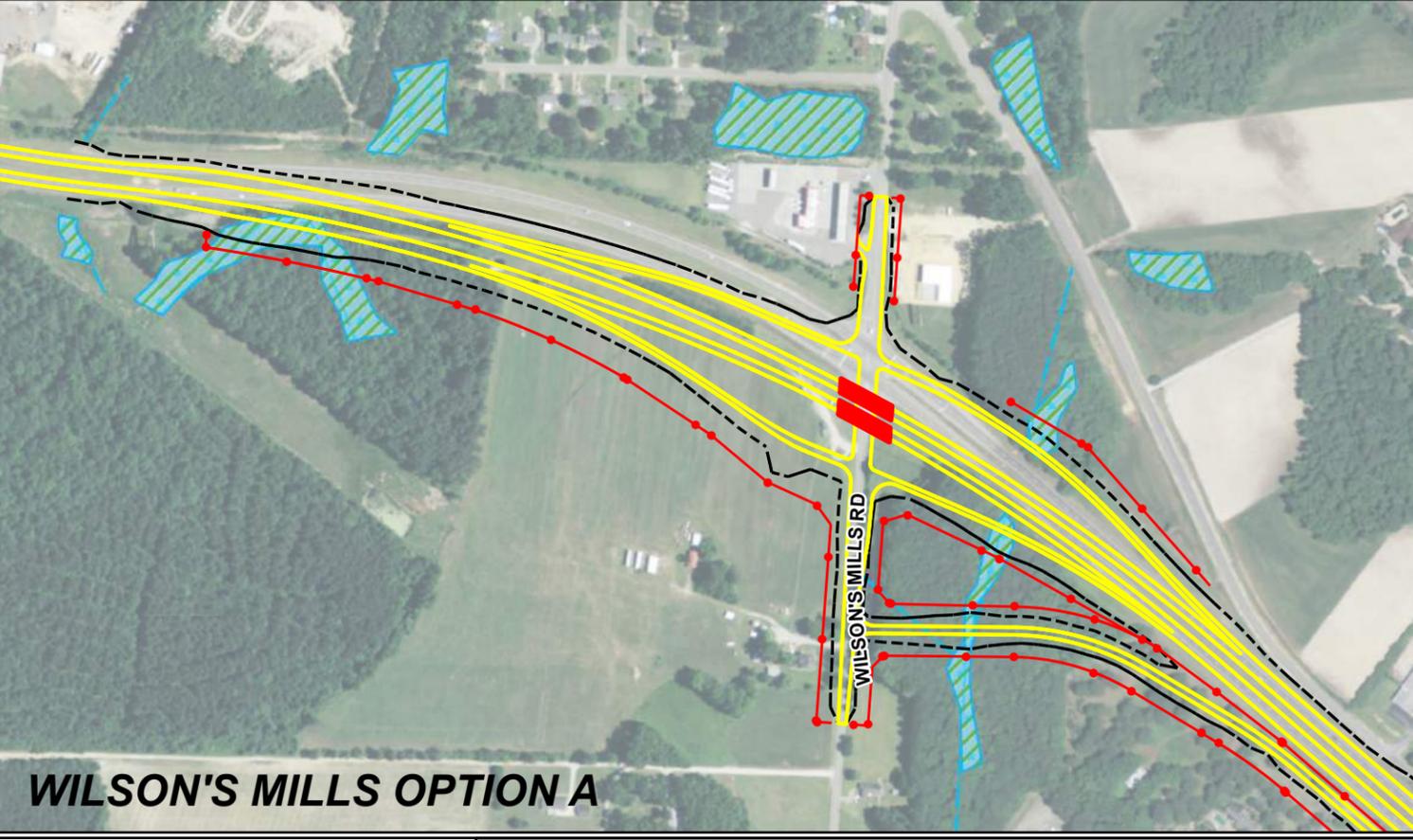
Exhibit 2B  
Environmental Features



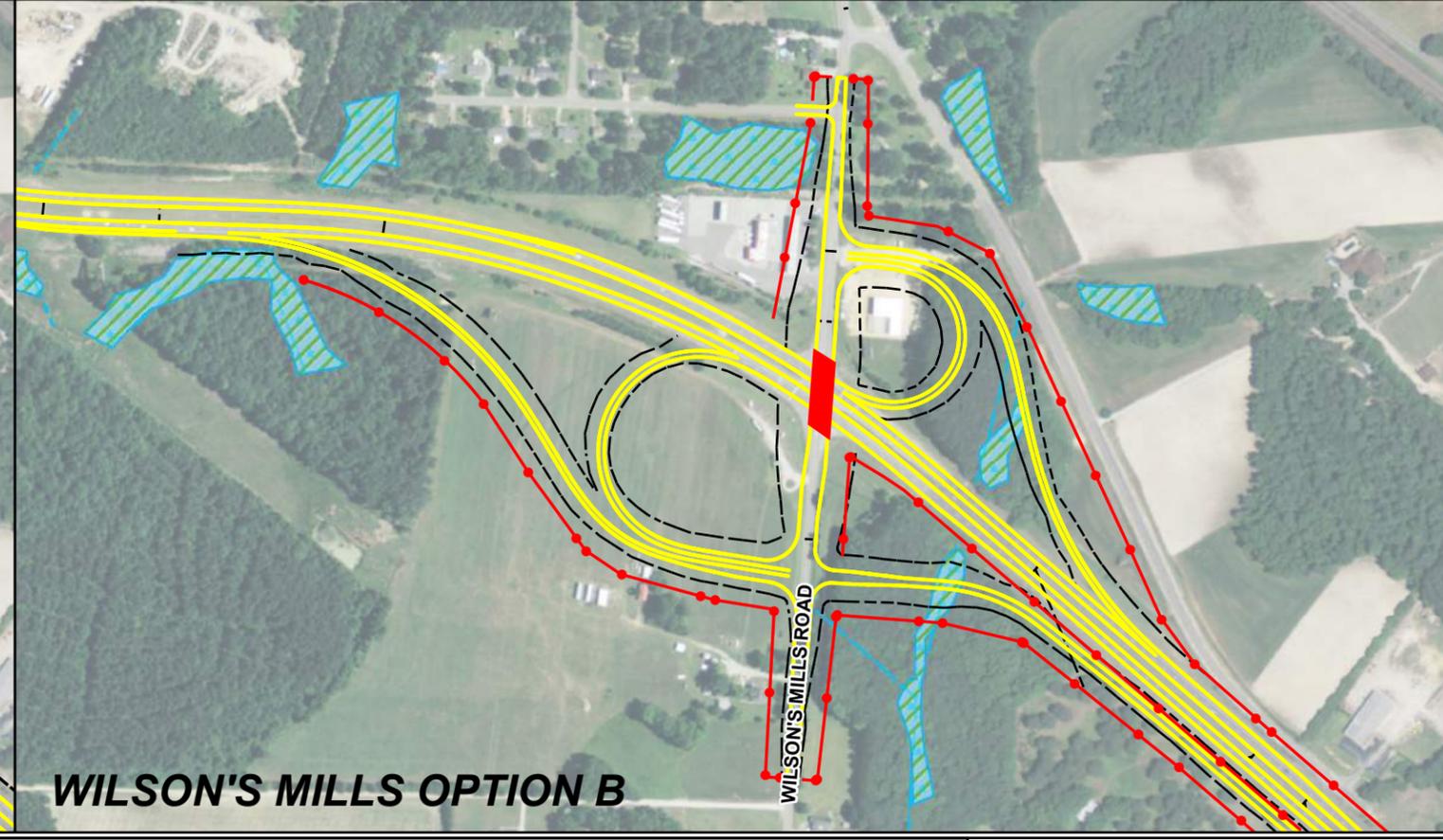
**SWIFT CREEK OPTION 1**



**SWIFT CREEK OPTION 2**



**WILSON'S MILLS OPTION A**



**WILSON'S MILLS OPTION B**

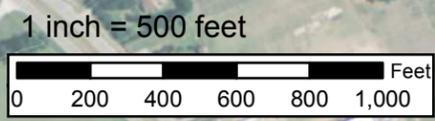
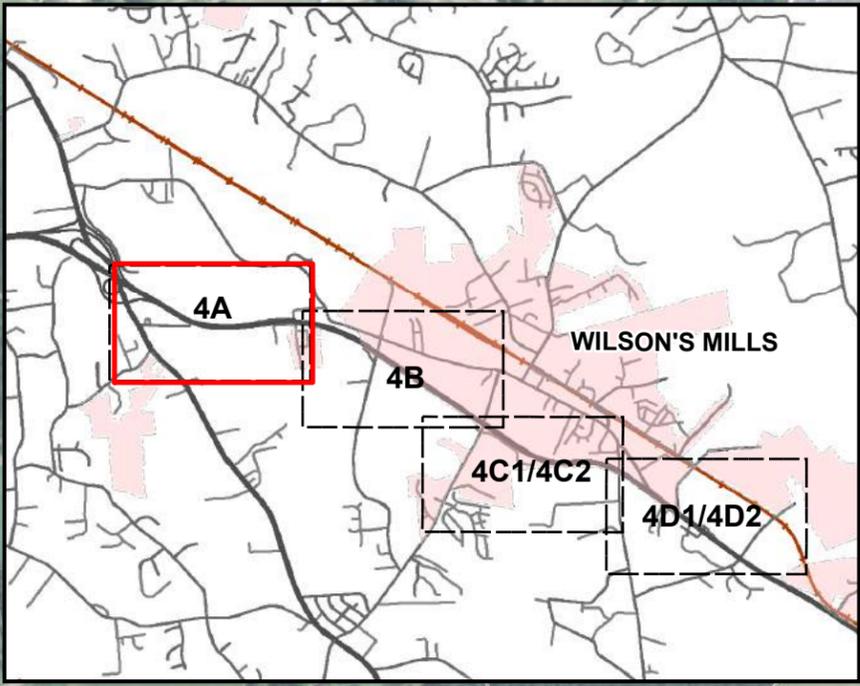
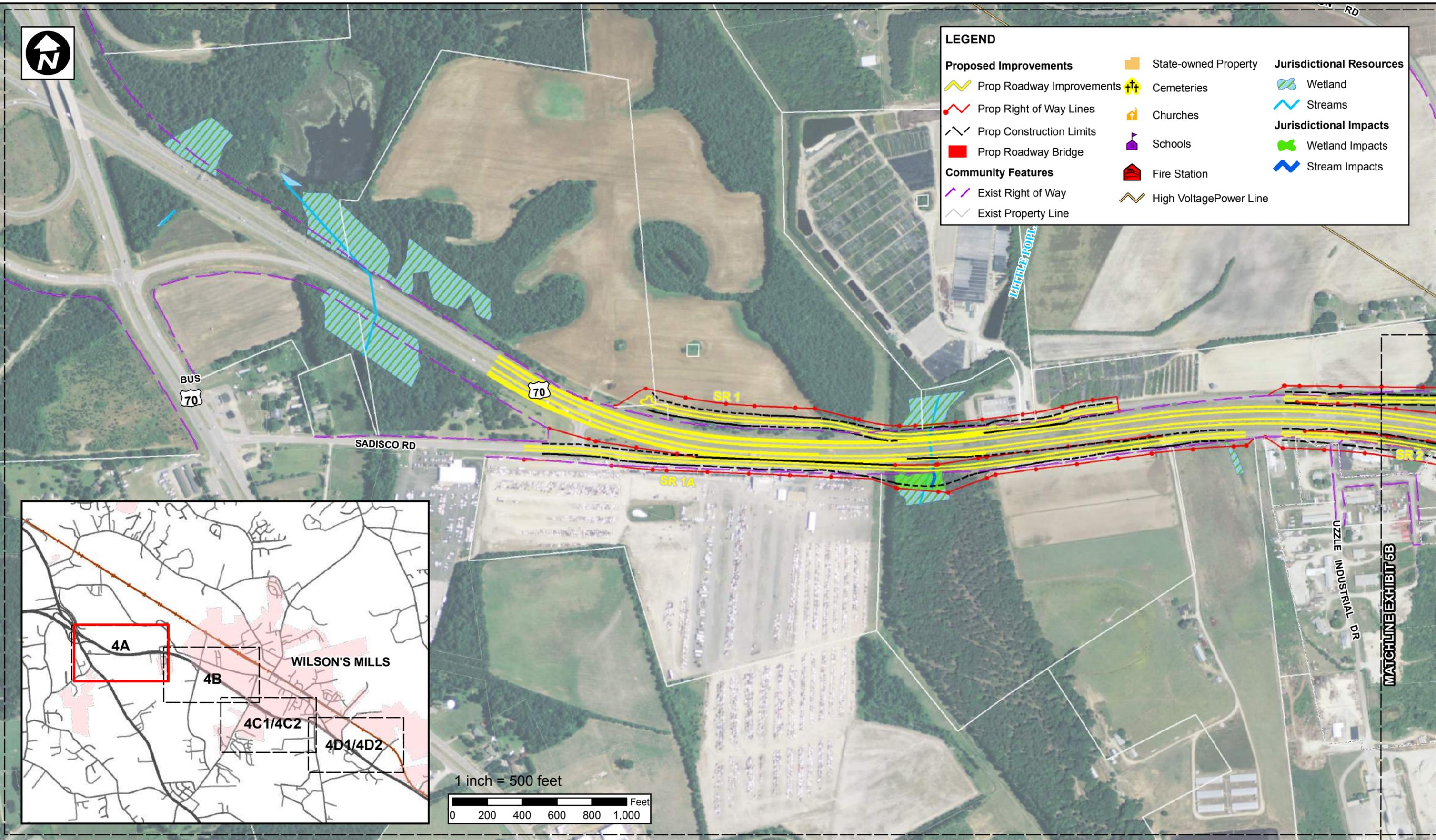


**US 70 Improvements  
From US 70 Business to the Neuse River  
Johnston County  
TIP W-5600**

Exhibit 3  
Interchange Options

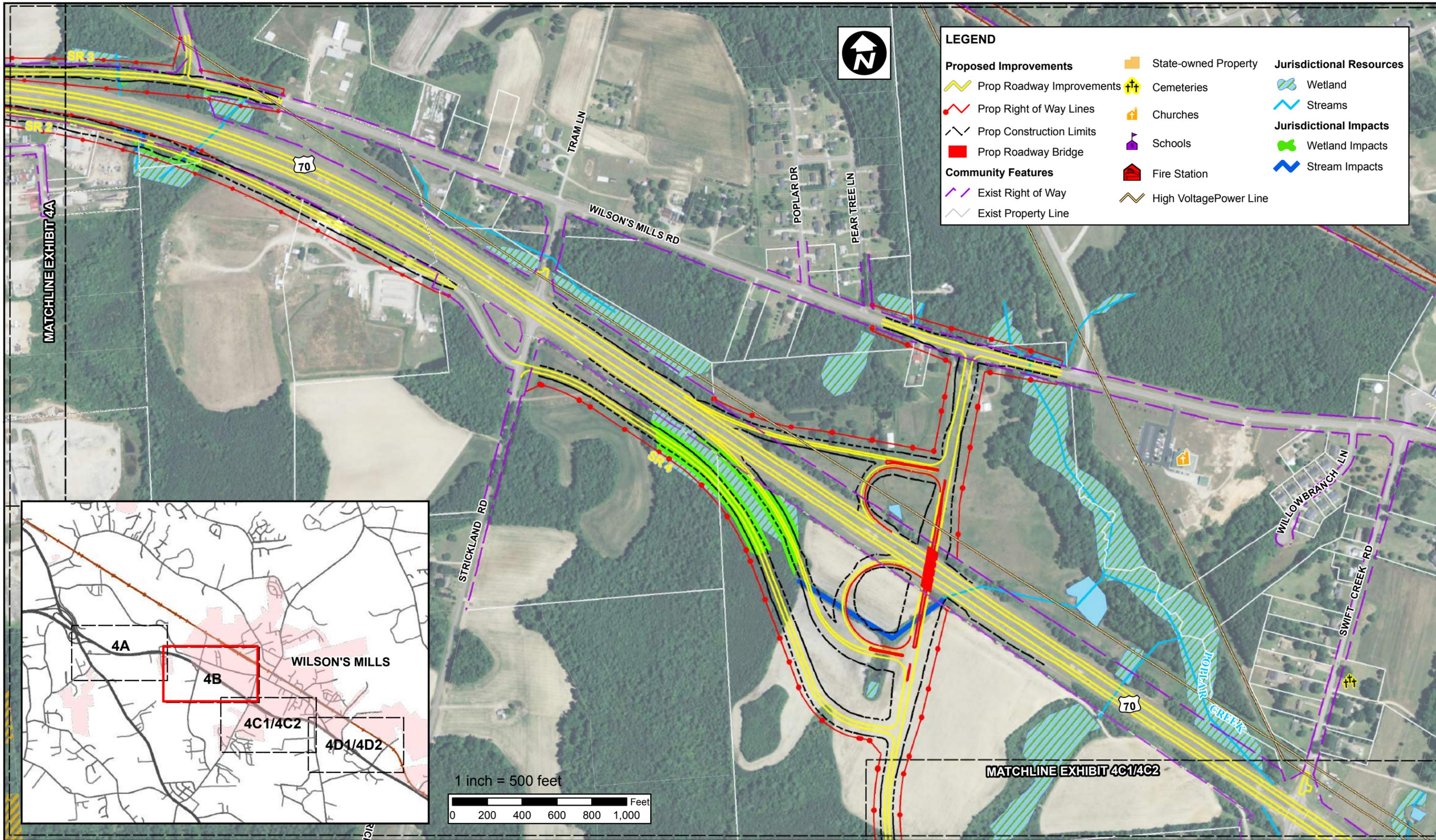


LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

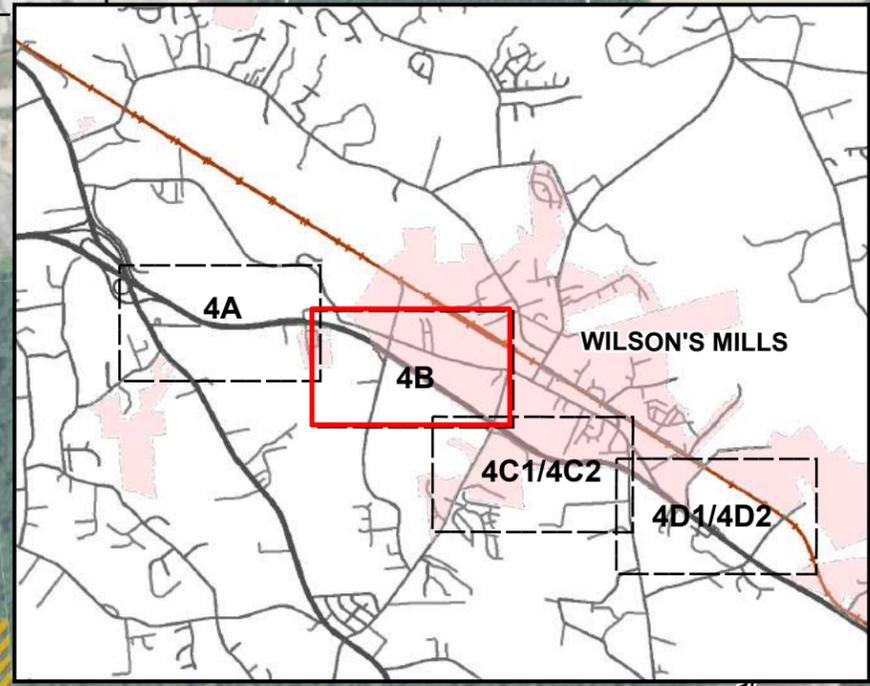


**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
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Exhibit 4A  
Alternatives 1A and 1B



LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

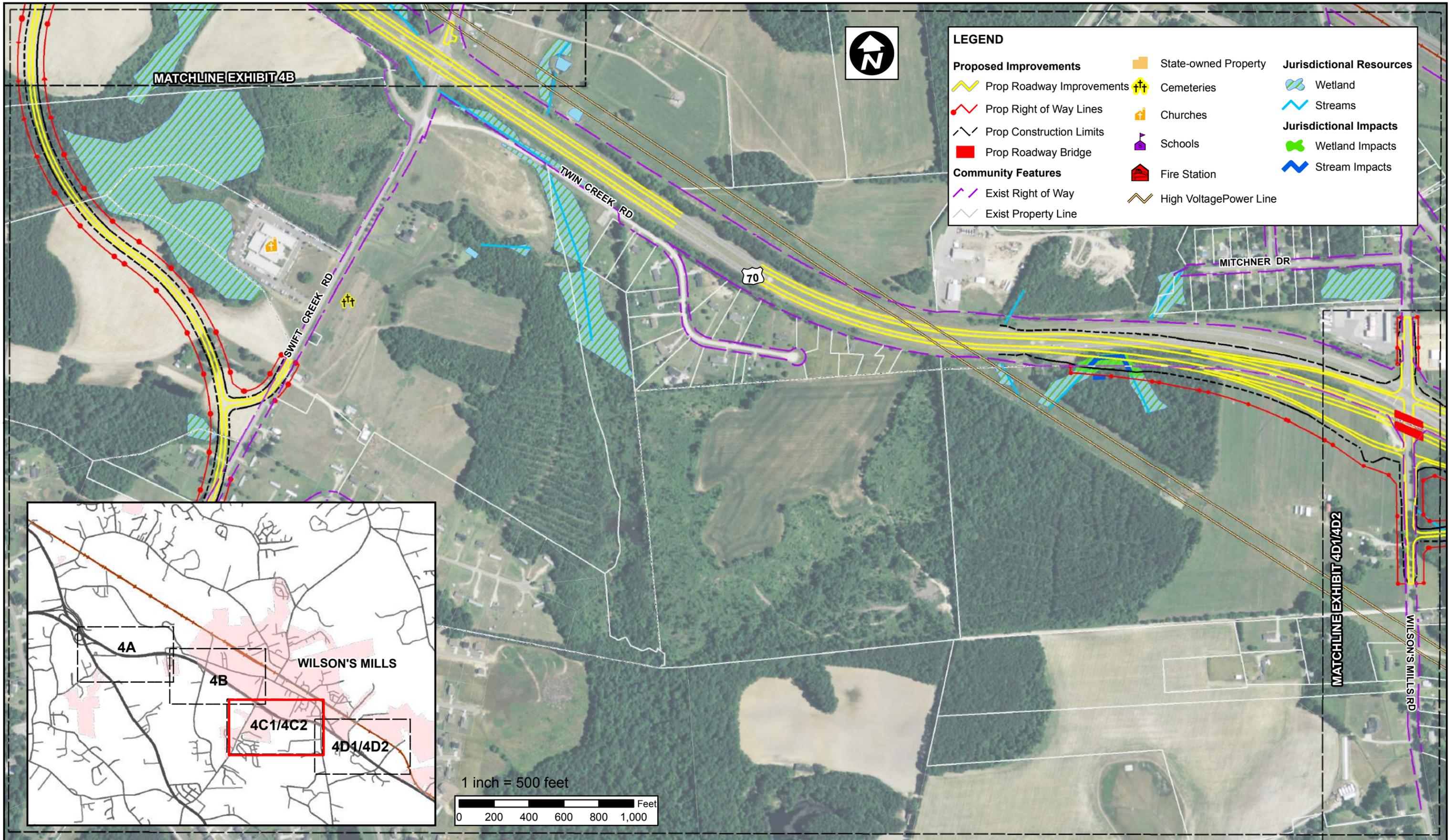


MATCHLINE EXHIBIT 4C1/4C2

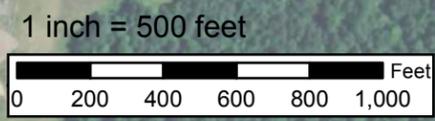
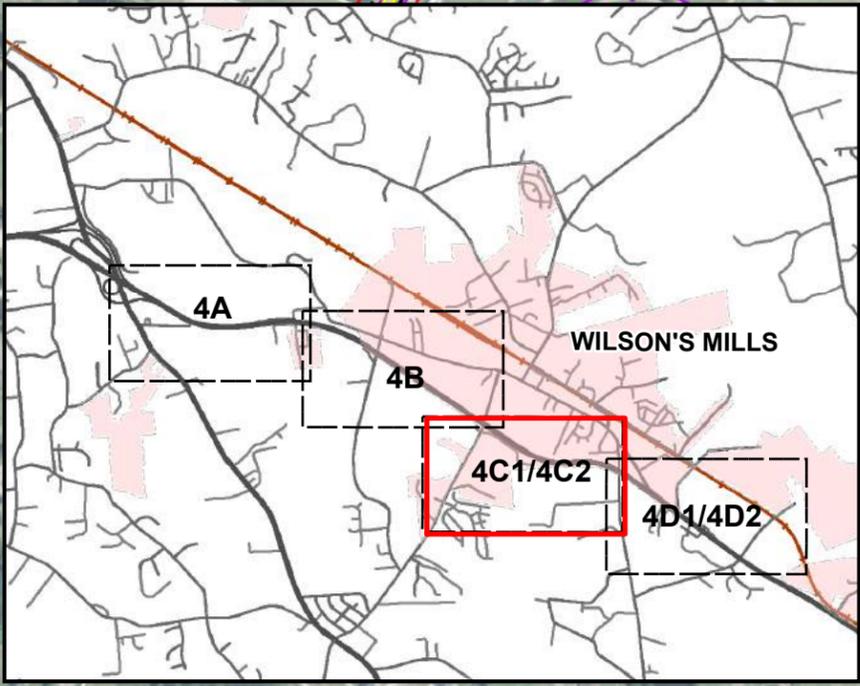


**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Exhibit 4B  
Alternative 1A

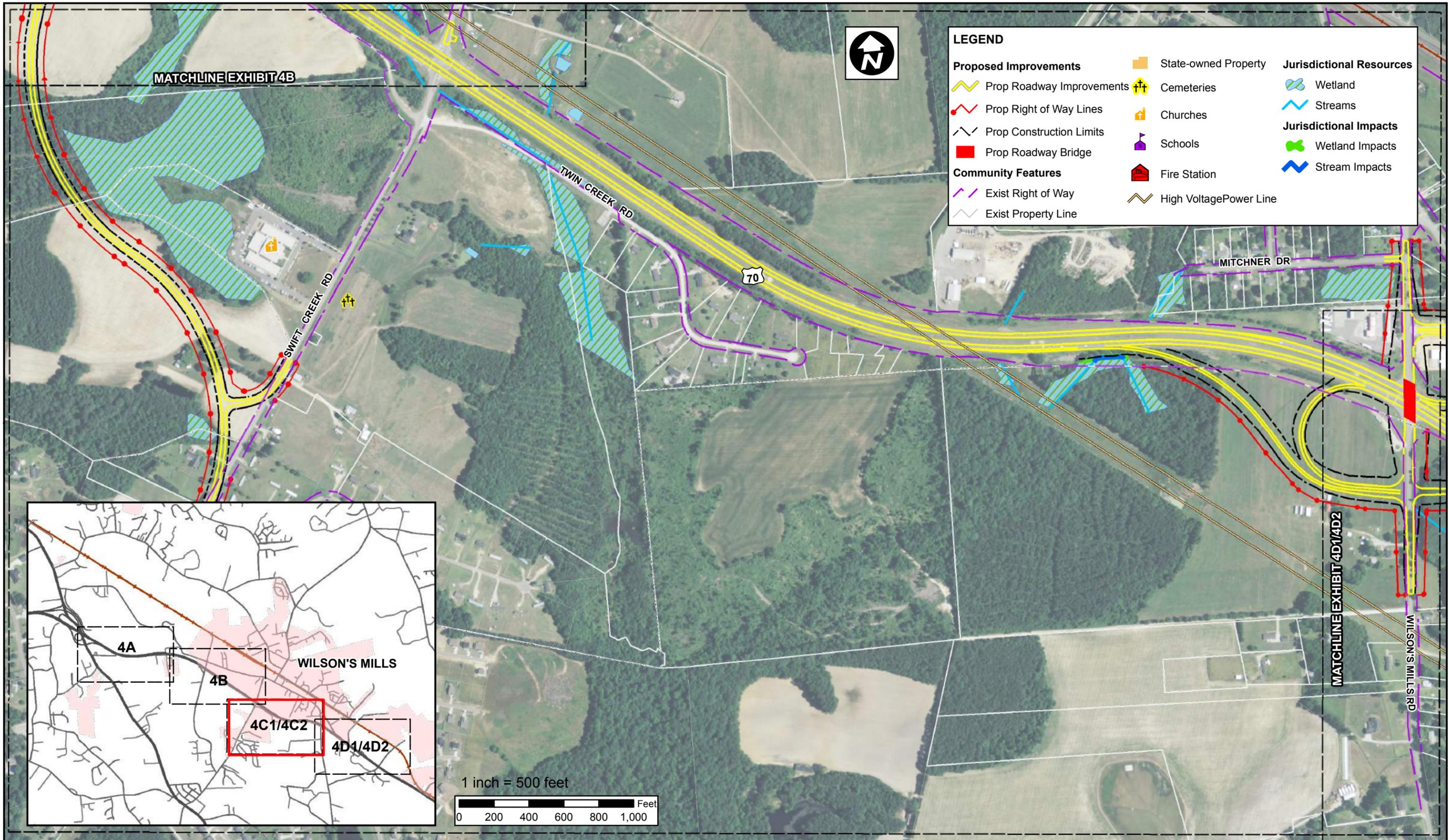


LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

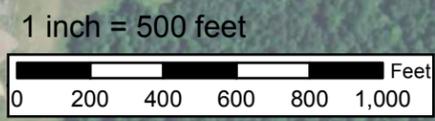
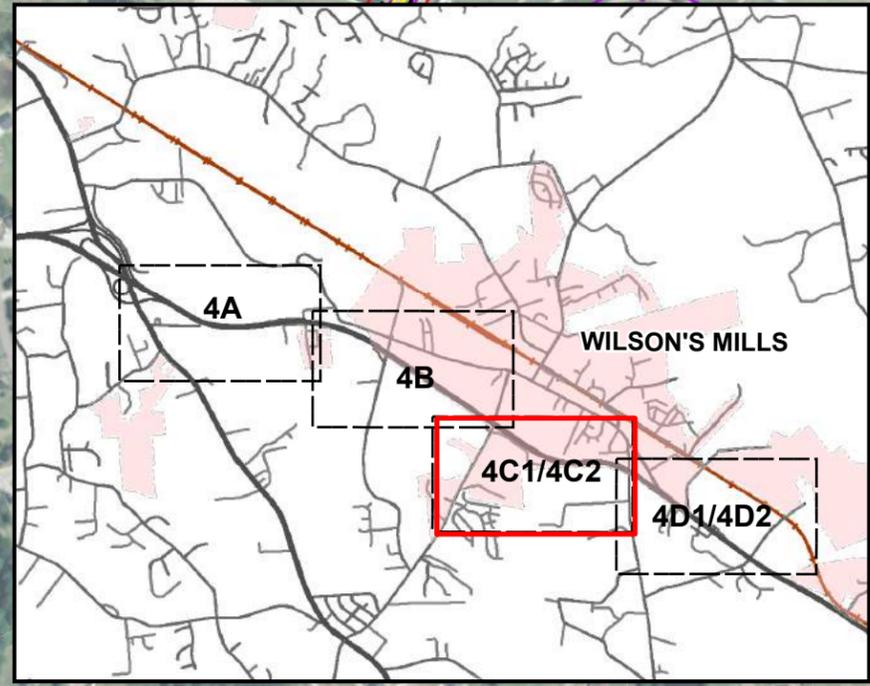


**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
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Exhibit 4C1  
Alternative 1A

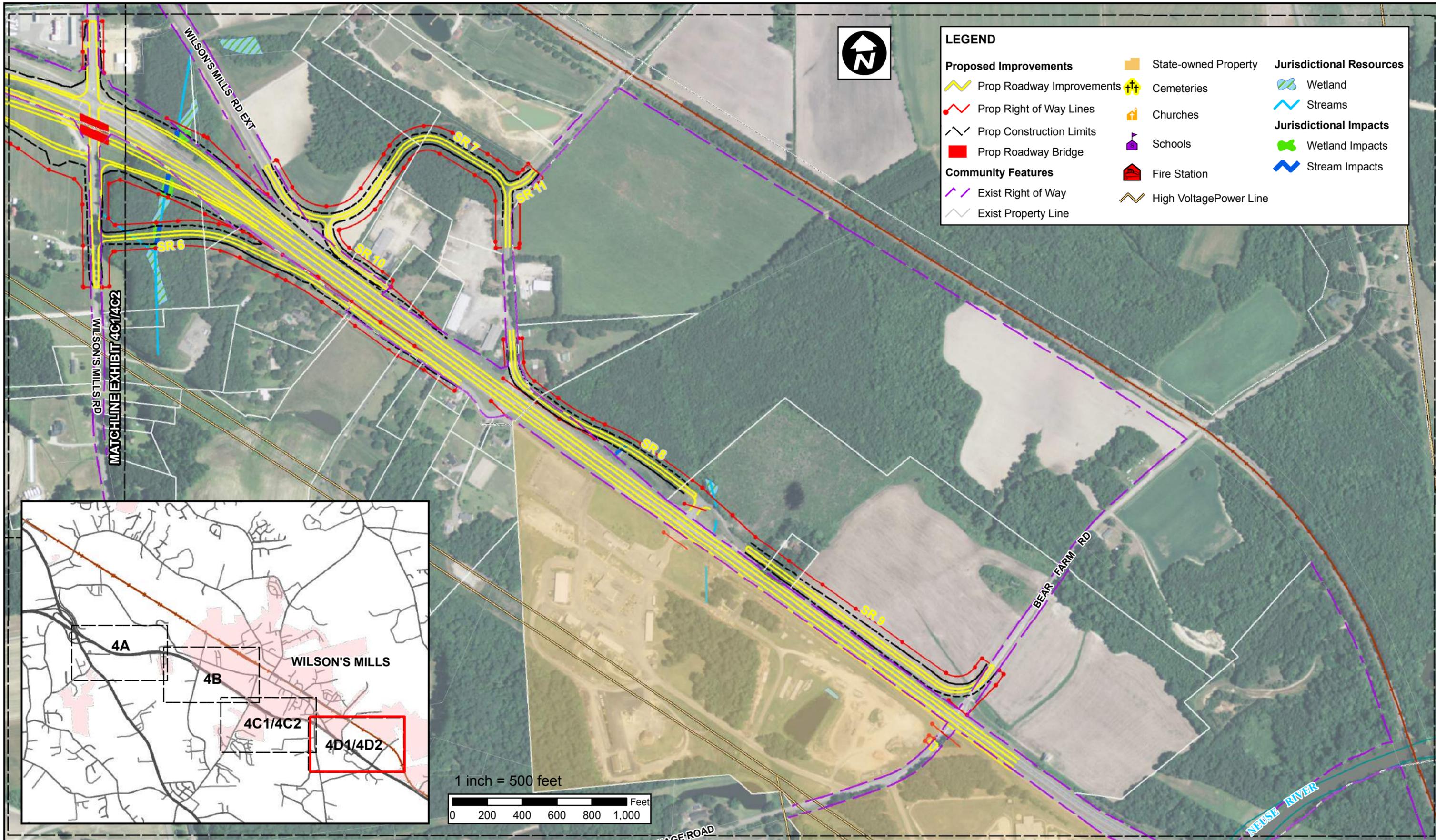


LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		



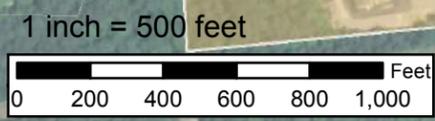
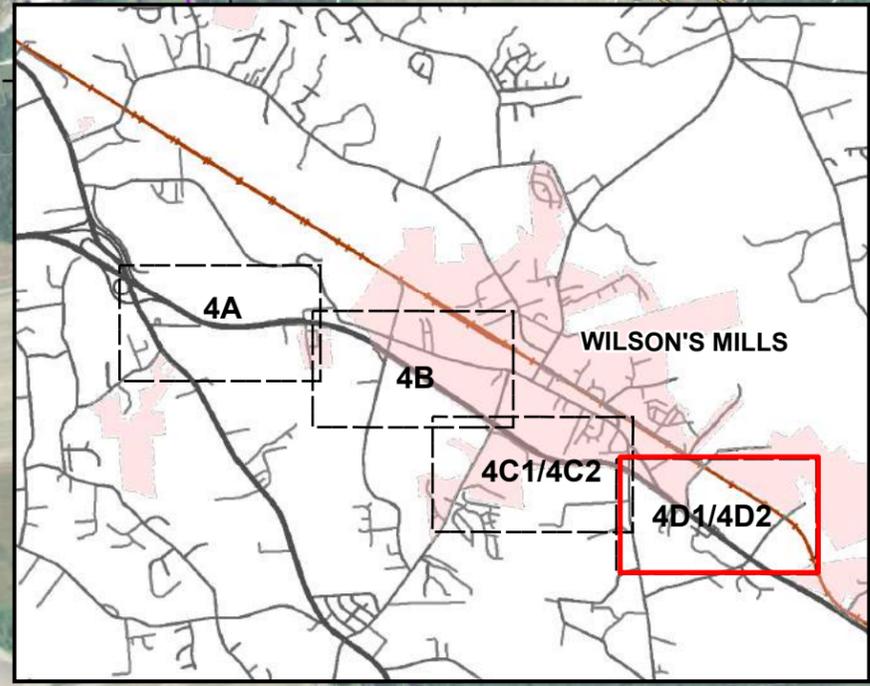
**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
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Exhibit 4C2  
 Alternative 1B



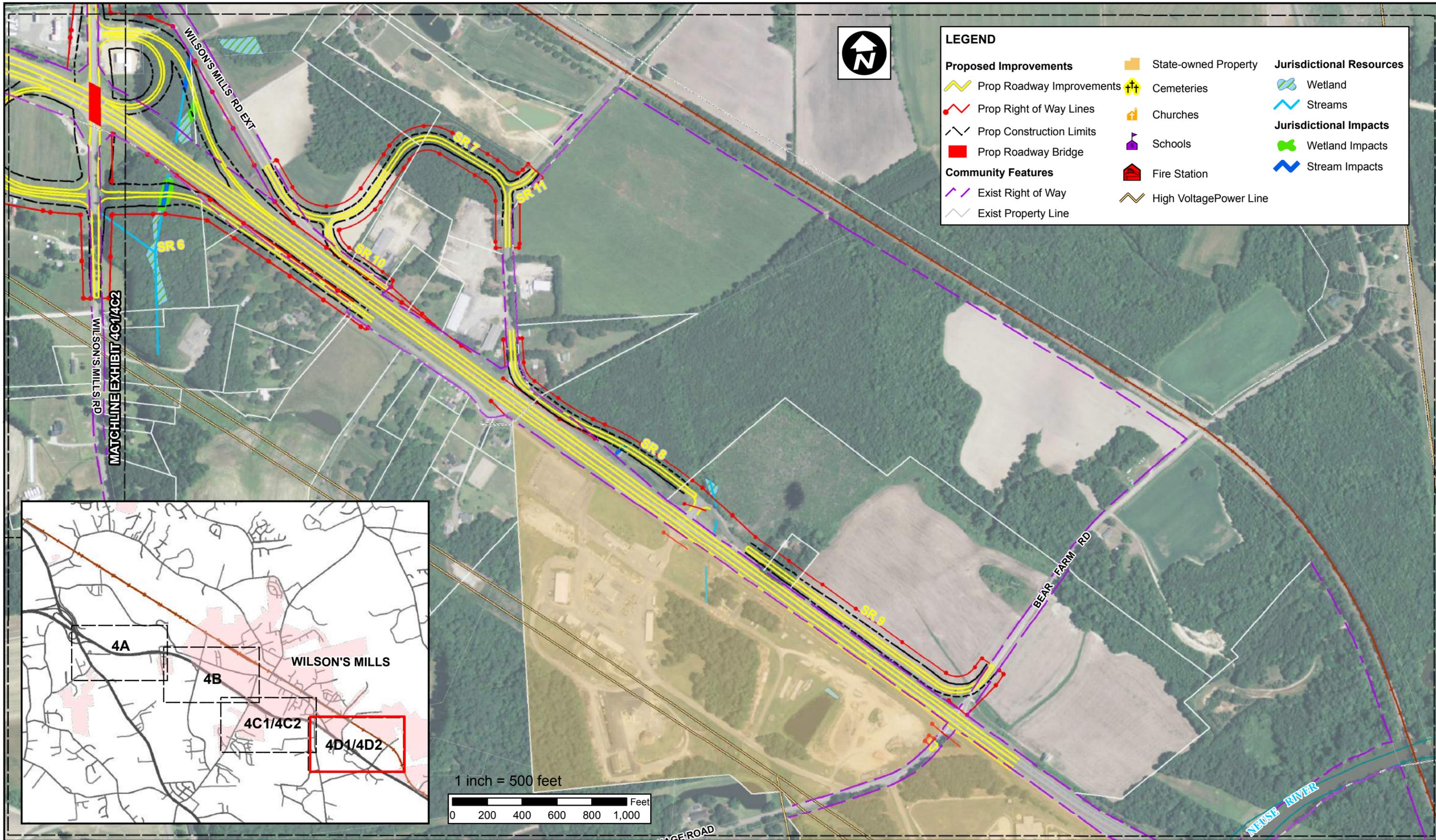
**LEGEND**

<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

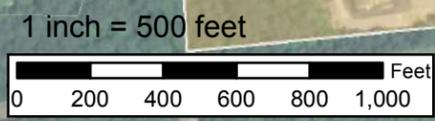
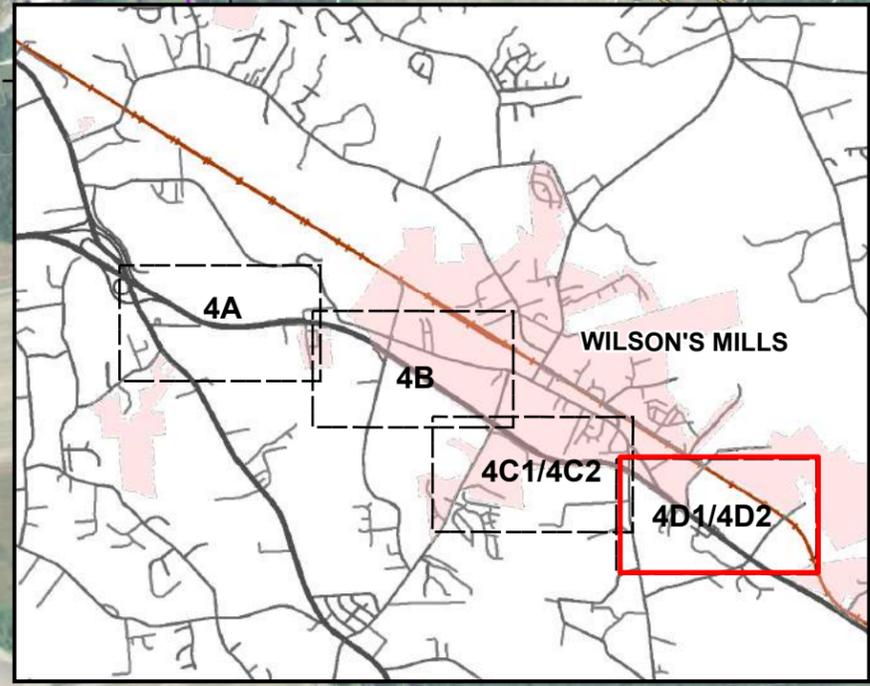


**US 70 Improvements**  
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Exhibit 4D1  
 Alternative 1A



LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		



**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
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Exhibit 4D2  
 Alternative 1B



**LEGEND**

**Proposed Improvements**

- Prop Roadway Improvements
- Prop Right of Way Lines
- Prop Construction Limits
- Prop Roadway Bridge

**Community Features**

- Exist Right of Way
- Exist Property Line

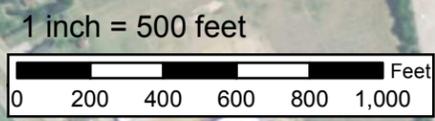
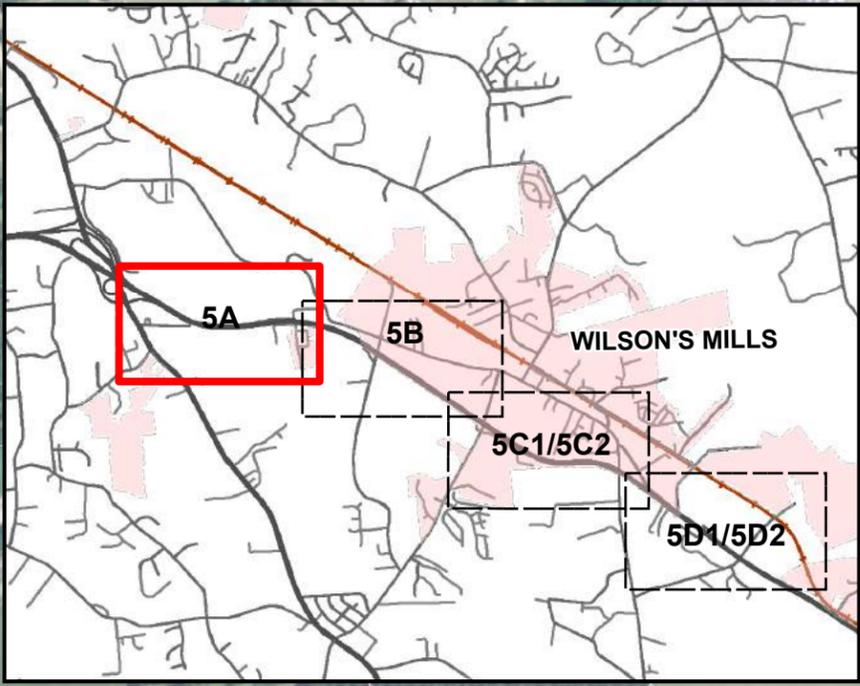
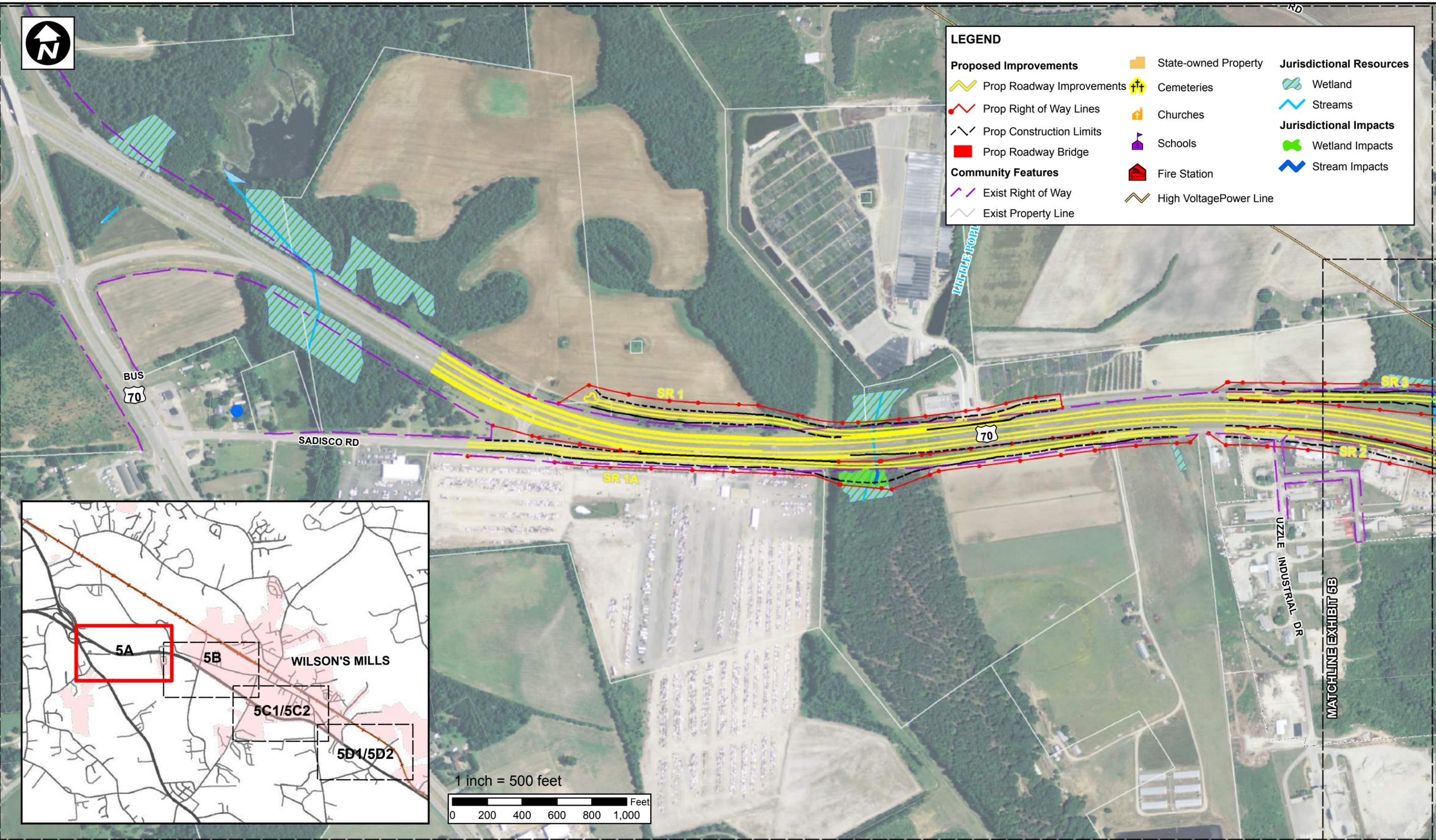
- State-owned Property
- Cemeteries
- Churches
- Schools
- Fire Station
- High Voltage Power Line

**Jurisdictional Resources**

- Wetland
- Streams

**Jurisdictional Impacts**

- Wetland Impacts
- Stream Impacts

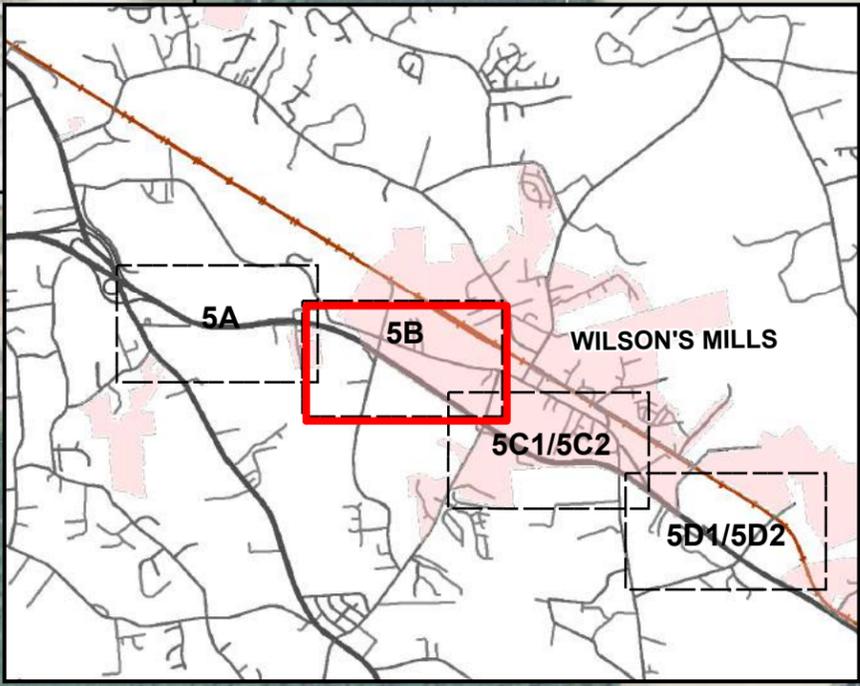
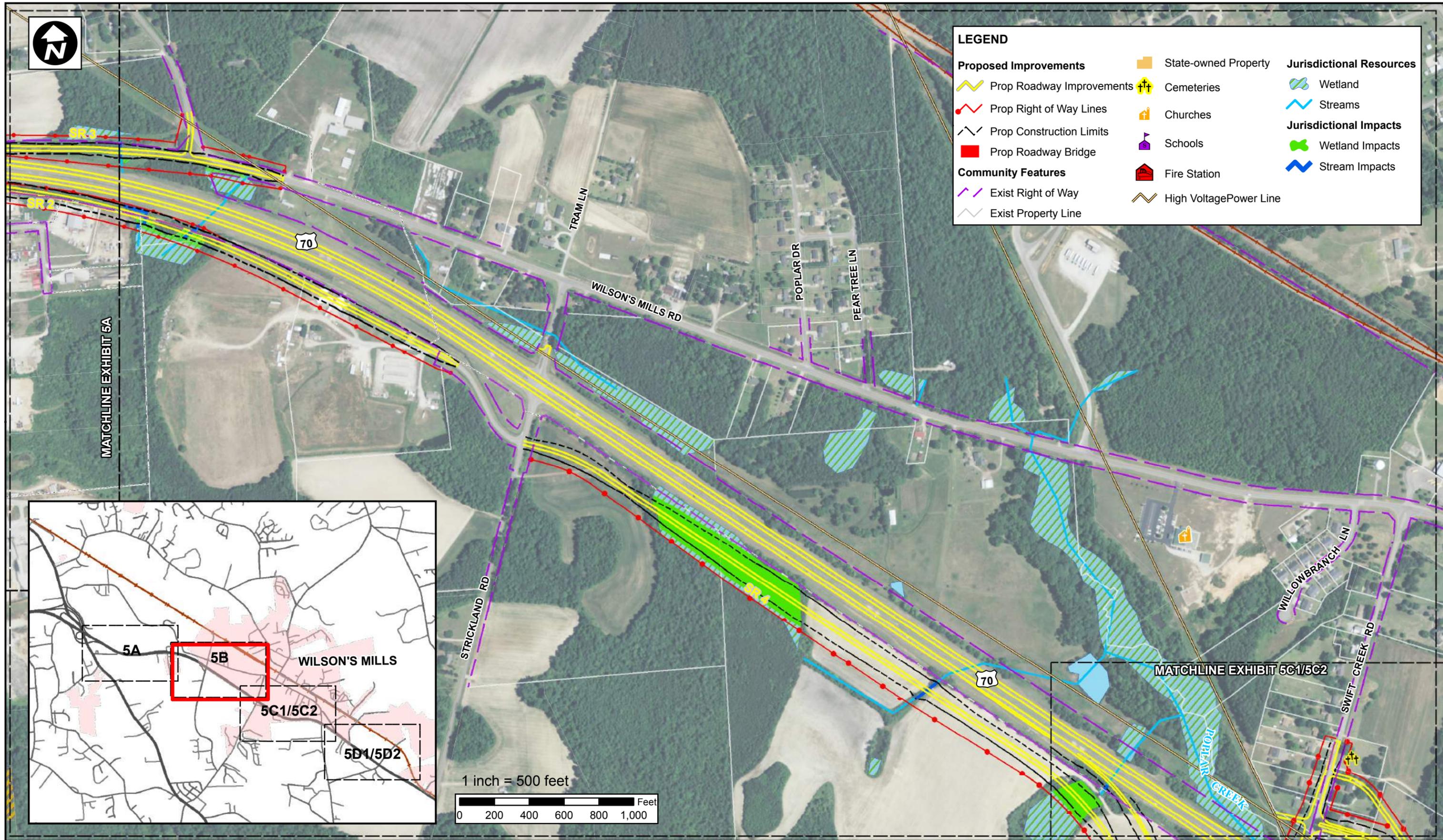


**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
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Exhibit 5A  
Alternatives 2A and 2B



LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

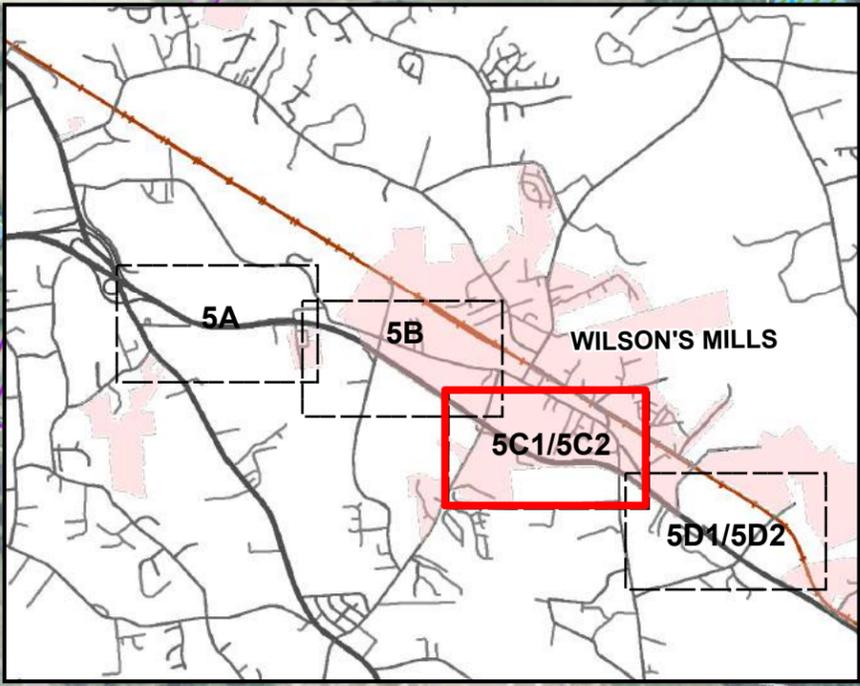
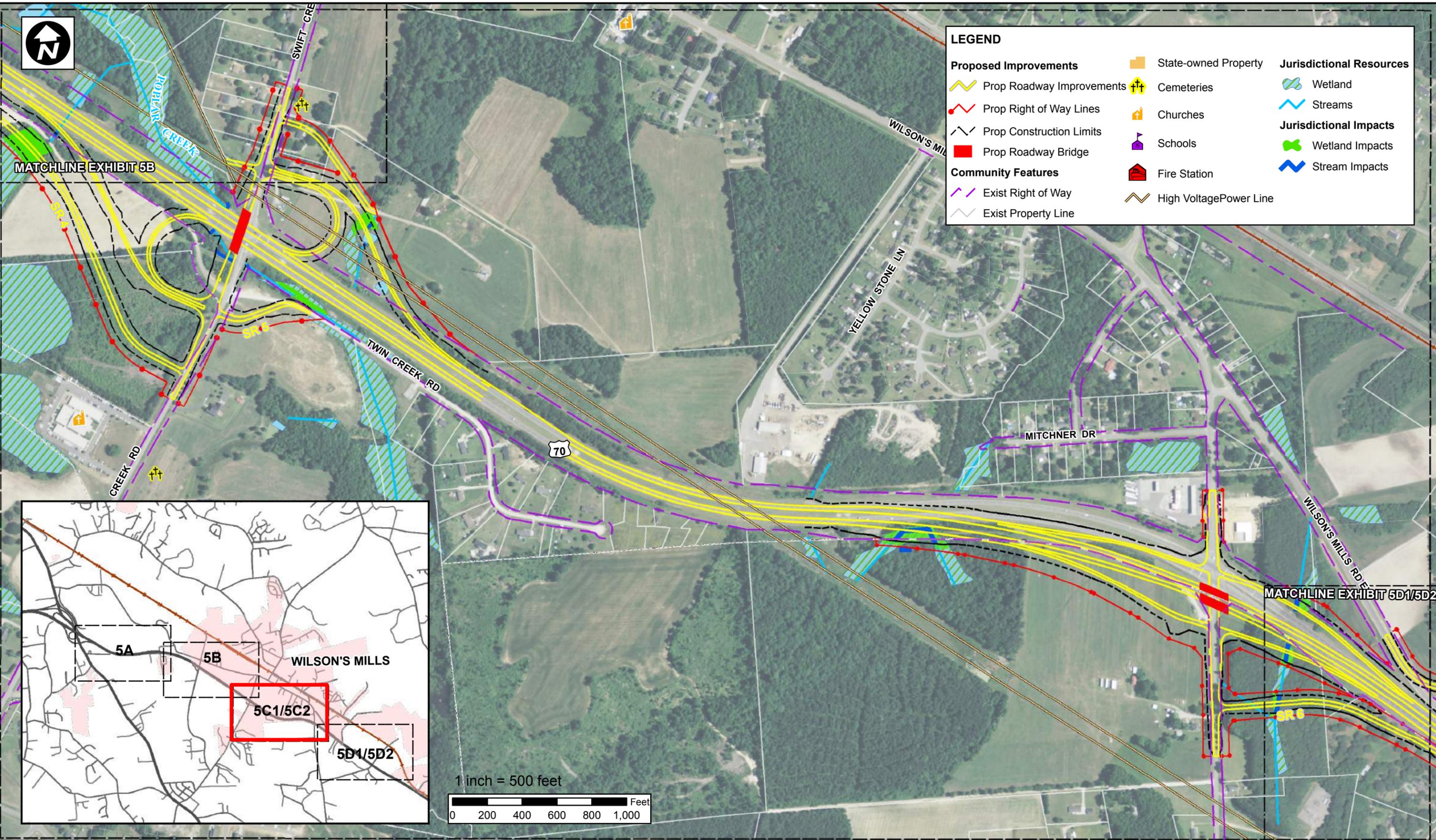


**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Exhibit 5B  
Alternatives 2A and 2B



LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

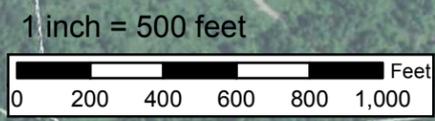
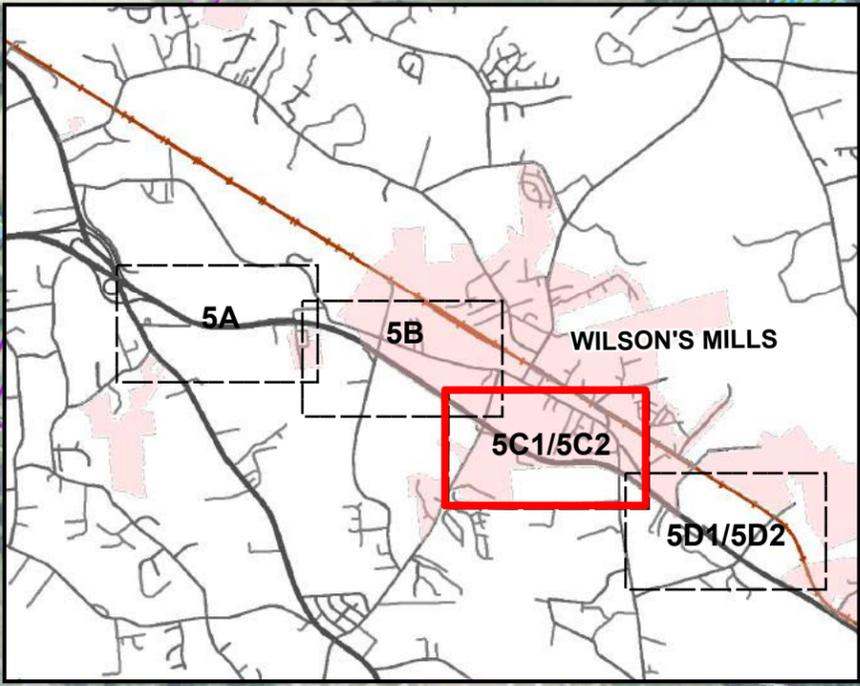
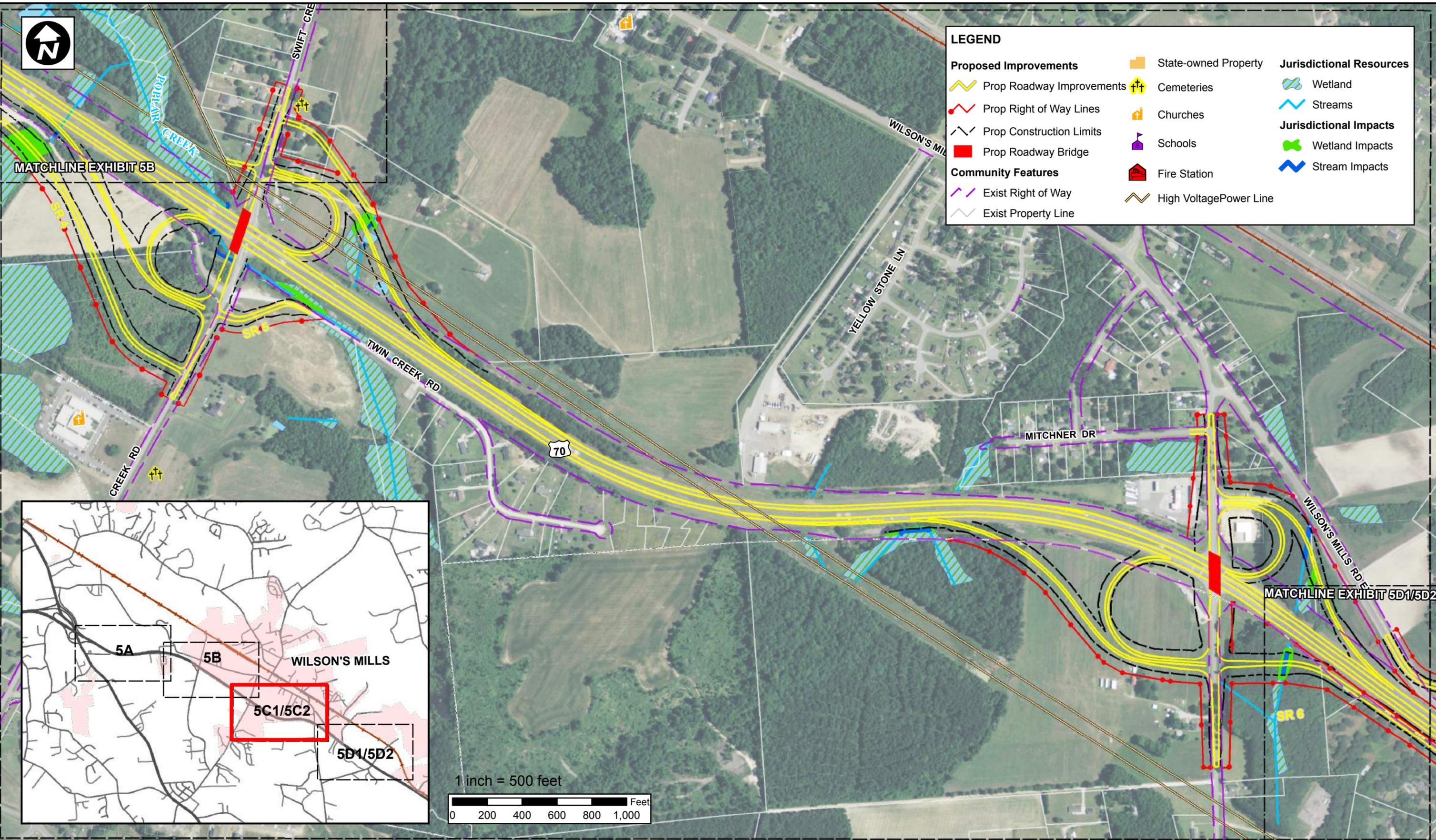


**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Exhibit 5C1  
 Alternative 2A

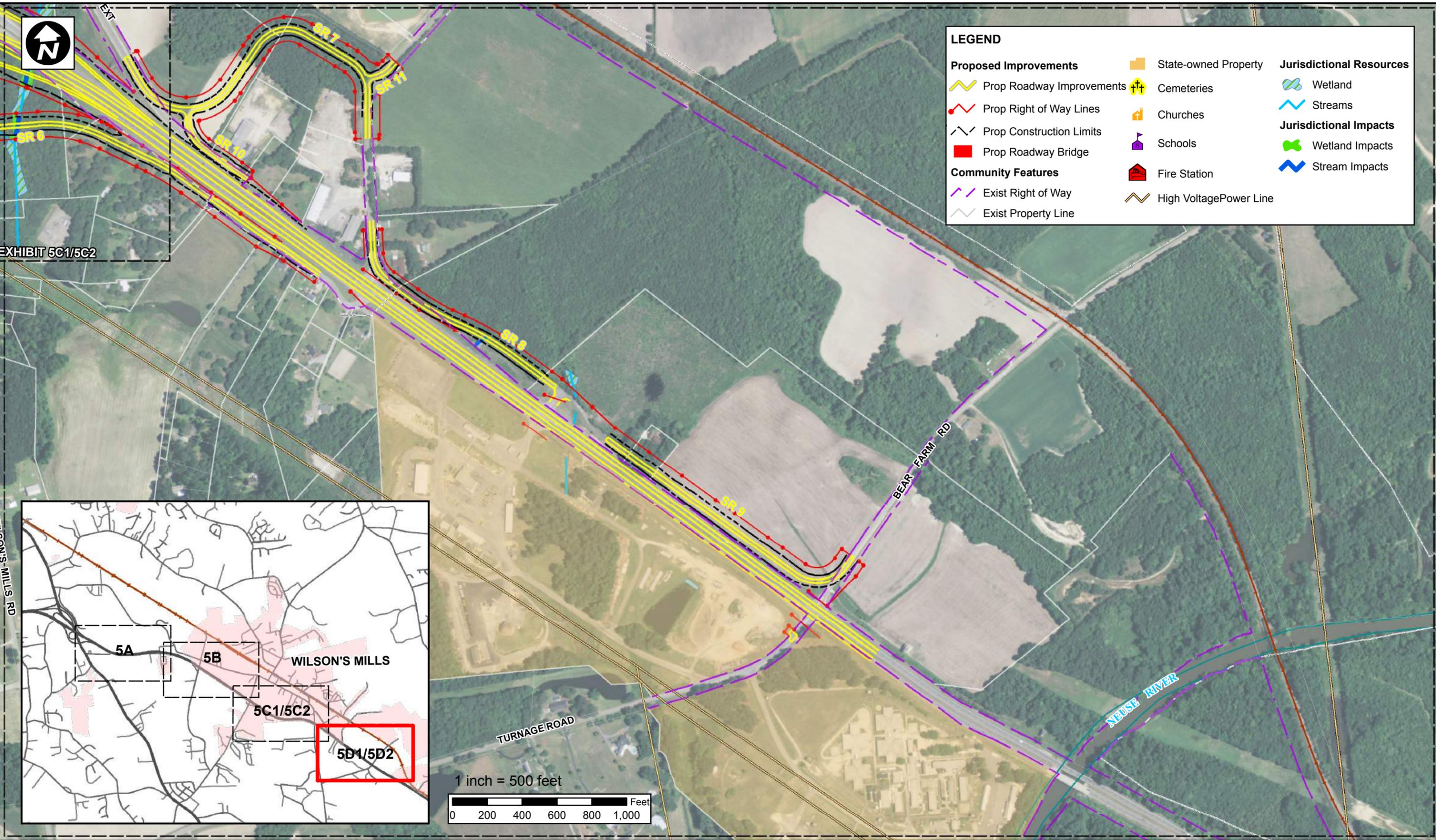


LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		



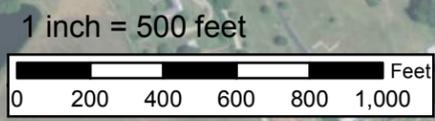
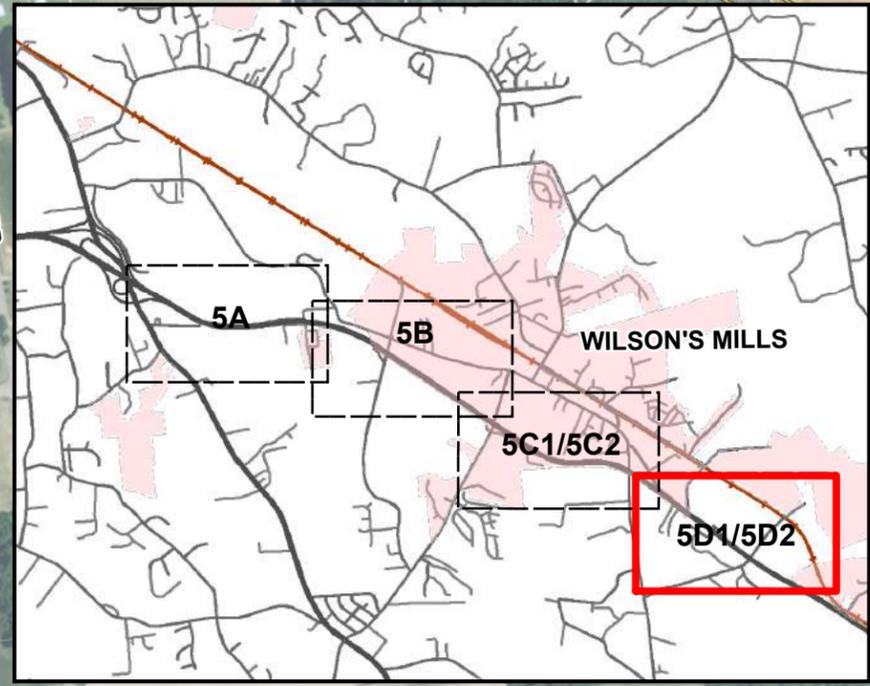
**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Exhibit 5C2  
Alternative 2B



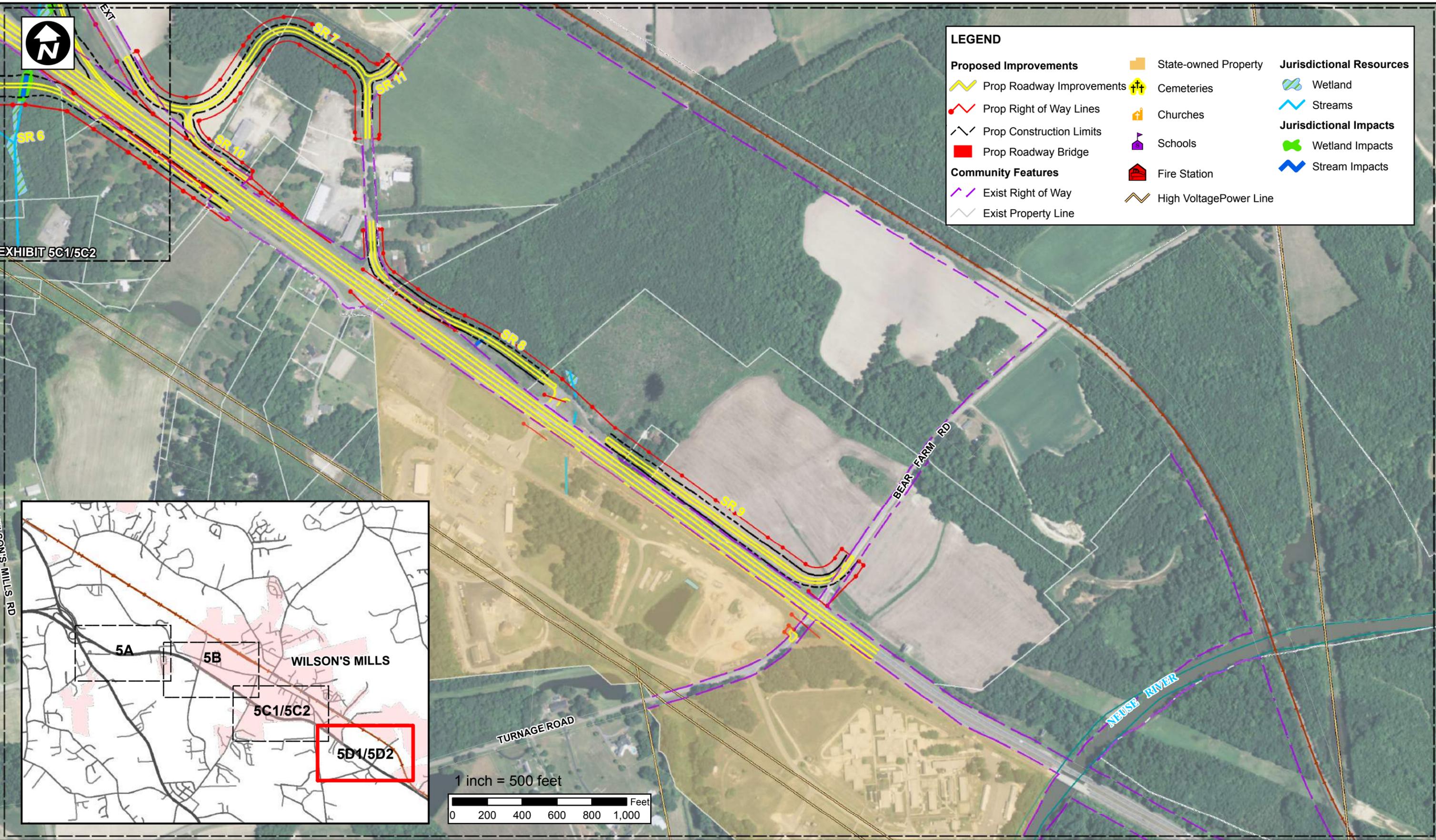
LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

EXHIBIT 5C1/5C2



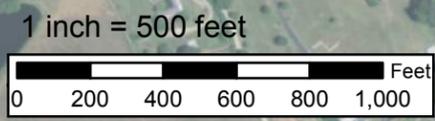
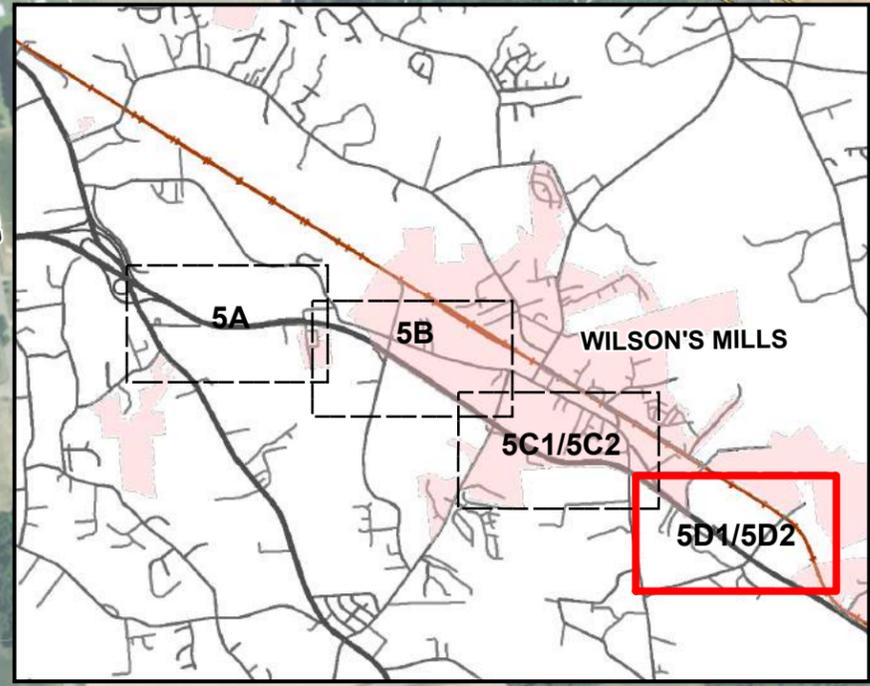
**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Exhibit 5D1  
Alternative 2A



LEGEND		
<b>Proposed Improvements</b>	State-owned Property	<b>Jurisdictional Resources</b>
Prop Roadway Improvements	Cemeteries	Wetland
Prop Right of Way Lines	Churches	Streams
Prop Construction Limits	Schools	<b>Jurisdictional Impacts</b>
Prop Roadway Bridge	Fire Station	Wetland Impacts
<b>Community Features</b>	High Voltage Power Line	Stream Impacts
Exist Right of Way		
Exist Property Line		

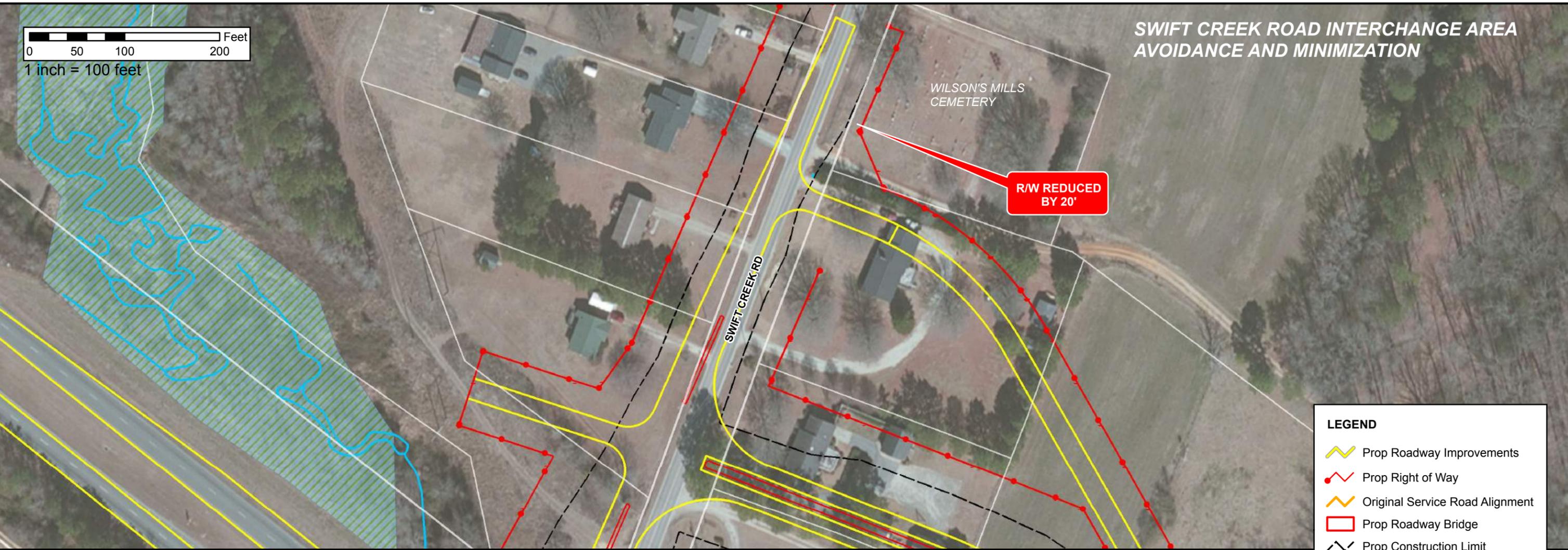
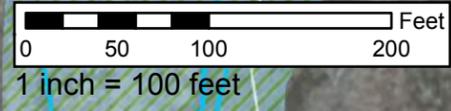
EXHIBIT 5C1/5C2



**US 70 Improvements**  
**From US 70 Business to the Neuse River Bridge**  
**Johnston County**  
**TIP W-5600**

Exhibit 5D2  
Alternative 2B

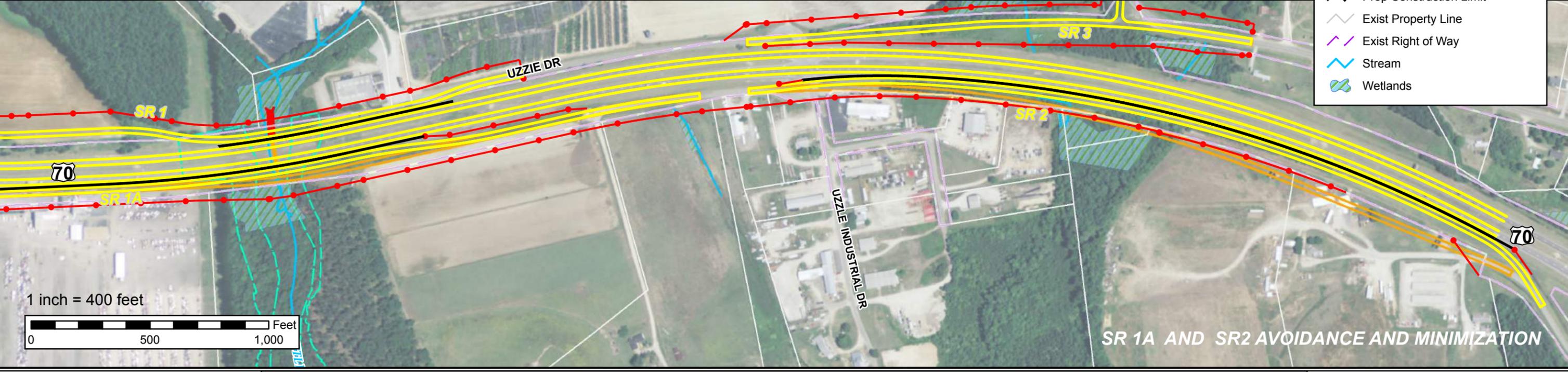
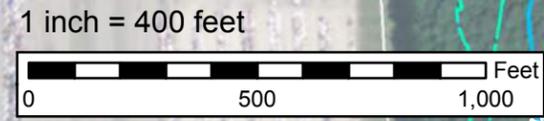
**SWIFT CREEK ROAD INTERCHANGE AREA  
AVOIDANCE AND MINIMIZATION**



**LEGEND**

- Prop Roadway Improvements
- Prop Right of Way
- Original Service Road Alignment
- Prop Roadway Bridge
- Prop Construction Limit
- Exist Property Line
- Exist Right of Way
- Stream
- Wetlands

**SR 1A AND SR2 AVOIDANCE AND MINIMIZATION**



**US 70 Improvements  
From US 70 Business to the Neuse River Bridge  
Johnston County  
TIP W-5600**

Exhibit 6  
Avoidance and Minimization