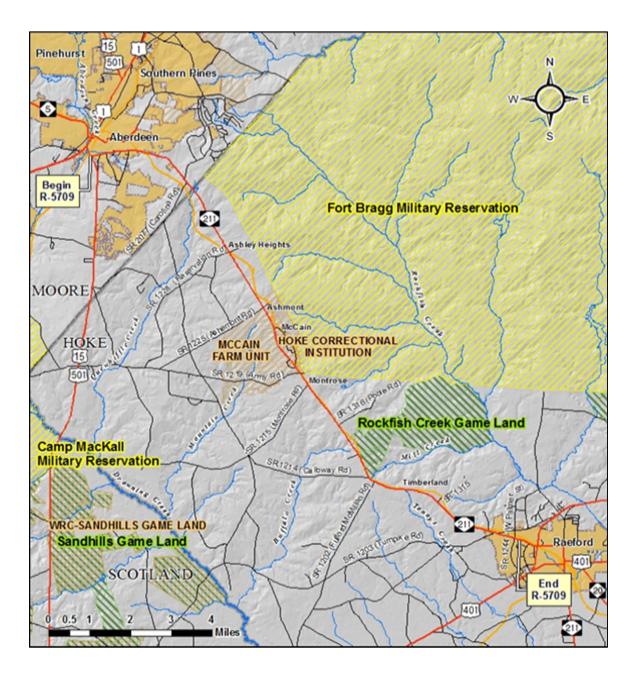
## Concurrence Point 3: LEDPA/Preferred Alternative Selection Concurrence Point 4A: Avoidance and Minimization

### NC 211

from US 15-501 in Aberdeen to east of SR 1244 (West Palmer Street) / SR 1311 (Mockingbird Hill Road) in Raeford Moore and Hoke Counties

> STIP Project R-5709 WBS No. 50205.1.1

March 27, 2020



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## **1. Purpose of Meeting**

The purpose of today's meeting is to discuss the Least Environmentally Damaging and Practicable Alternative (LEDPA) (CP 3) and Avoidance and Minimization (CP 4A). Concurrence will be requested on LEDPA and Avoidance and Minimization during today's meeting.

## 2. Project Description

The NCDOT proposes to widen NC 211 to a four-lane divided roadway with a grass median from US 15-501 in Aberdeen (Moore County) to east of SR 1244 (West Palmer Street) / SR 1311 (Mockingbird Hill Road) in Raeford (Hoke County), a distance of approximately 15.4 miles.

In Moore County, the roadway will have a 30-foot-wide raised median. In Hoke County, the roadway will have a 46-foot-wide depressed median. The proposed median widths are based on the posted speed limits, which will not change with the project (45 mph in Moore County and 55 mph in Hoke County). There will be curb and gutter with sidewalks along NC 211 in Aberdeen. The plans do not include bicycle lanes.

Widening is proposed primarily along the existing alignment. Hills/crests and valleys/sags will be flattened to correct problems with the existing alignment such as sight distance and ponding issues. In Hoke County, NC 211 will be realigned to eliminate the existing at-grade railroad crossing at Reservation Road. The new section of the roadway will include dual bridges over the Aberdeen & Rockfish Railroad. Dual bridges will also carry NC 211 over the railroad just east of Central Drive in Aberdeen.

The improved roadway will have Reduced Conflict Intersections. Traffic from most side streets and driveways will be directed to turn right (no left turns). A motorist desiring to cross NC 211 or go in the opposite direction will make a U-turn at designated areas. (U-turn bulbs are designed to accommodate up to 68-foot tractor-trailers.) At the NC 211 intersections with E. Indiana Avenue and Carolina Road, right and left-turns will be permitted onto NC 211 but motorists along NC 211 will only be permitted to turn right onto those side streets. Instead of making a left turn onto those side streets, motorists traveling along NC 211 would utilize a U-turn bulb followed by a right turn.

In Raeford, a section of Turnpike Road (north of NC 211) near Mockingbird Hill Road will be redesigned to tie to a proposed roundabout at the intersection with NC 211 and the section of Turnpike Road between NC 211 and Mockingbird Hill Road will be closed, eliminating the existing at-grade railroad crossing.

The project is included in the 2020-2029 State Transportation Improvement Program (STIP) and is state funded. Right of way acquisition and construction are scheduled for October 2020 and September 2023, respectively.

1				
	Total	Right-of-Way	Utilities	Construction
	\$172,400,428	\$51,823,970	\$4,976,458	\$115,600,000

#### Table 1. Cost Estimate

## 3. Project Status

A Minimum Criteria Determination Checklist will be prepared in compliance with North Carolina's State Environmental Policy Act (SEPA). Public meetings were held in July 2016 and July 2019. Public involvement activities also included local officials' meetings and small group meetings. A combined Concurrence Point 1 / Concurrence Point 2 meeting was held on June 15, 2017 and a combined Concurrence Point 2-Revisited / Concurrence Point 2A meeting was held on February 20, 2019. Concurrence is summarized below.

#### Concurrence Point 1 (June 15, 2017)

**Project Purpose:** The purpose of the proposed project is to reduce traffic congestion and travel delays, and correct roadway deficiencies along NC 211 within the project limits.

**Screening Criteria:** The following performance measures explain how alternatives that meet the Purpose stated above will be evaluated. Specifically, alternatives considered for the project must achieve the following along NC 211 within the project limits:

provide additional traffic capacity in order to achieve a level of service "C" or better for the NC 211 roadway (mainline) segments during the peak hours in 2040;

• improve traffic operations by reducing travel delays and queue lengths and achieving an overall level of service "D" or better at signalized intersections during the peak hours in 2040;

 improve NC 211's horizontal and vertical alignment, clear zones and sight distance to reduce, mitigate or eliminate existing design deficiencies; and

 provide at least minimum acceptable standards for lane and shoulder widths based on the current NCDOT Roadway Design Manual.

Secondary Benefits: Additional benefits of the proposed project include:

 potential traffic safety improvements by reducing the number and type of conflict points as compared to the existing conditions and

 operational improvements by providing the opportunity for motorists to pass slower-moving or stopped vehicles.

#### Concurrence Point 2 (June 15, 2017)

Options for widening NC 211 on either side of the roadway were presented at the June 2017 merger meeting, as well as options for grade-separated railroad crossings and/or the realignment of intersecting roadways. The widening options were presented in 15 sections for evaluation individually. Selected options could be combined to provide an overall "best fit" alternative, in addition to asymmetrical widening. Following discussion of each section and option, several were eliminated from further consideration. However, more than one widening option was carried forward for 10 of the 15 project sections.

#### Concurrence Point 2-Revisited (February 20, 2019)

Following the Concurrence Point 2 meeting, preliminary design was developed and a best-fit alternative, which included a combination of north and south widening, was identified by NCDOT. Recommendations for each section were presented at a combined Concurrence Point 2-Revisited / Concurrence Point 2A meeting on February 20, 2019. At the meeting, the merger team concurred on the detailed study alternative to carry forward by selecting an option for each section.

#### Concurrence Point 2A (February 20, 2019)

The project includes no bridges over jurisdictional features; however, new bridges are proposed over the Aberdeen & Rockfish railroad tracks.

## 4. Public Involvement

### Open House Public Meetings and Local Officials' Informational Meetings

The best-fit alternative was presented to the public at open house public meetings in July 2019. Two public meetings were held:

- July 23, 2019 at West Hoke Middle School Gymnasium
- July 25, 2019 at the Aberdeen Elementary School Cafeteria

The same project information was available at both meetings. Maps showing the preliminary roadway design were also available on the project website: publicinput.com/NC-211-AberdeenToRaeford. Local officials' meetings preceded each public meeting. A total of 263 people, including ten local officials, signed into the meetings. NCDOT collected 55 comments during the comment period. Comments are summarized below:

- Concern about specific impacts to properties such as loss of structures, parking, driveways, and land (11)
- Questions regarding right of way acquisition (10)
- Design requests or questions including U-turn bulb placement, turn lanes, signals, roadway design (22)
- Questions about drainage improvements (3)
- Barrier and landscaping requests (6)
- Utility questions and placement (3)
- General comments (3)

Note: Several people submitted multiple comments that were recorded in different categories.

### **Small Group Meetings**

An open house small group meeting was scheduled for March 17, 2020 in Aberdeen to present the revised design at the railroad tracks; however, the meeting was canceled in response to the coronavirus threat. NCDOT provided updated project information in a newsletter instead of holding an in-person meeting at a later date. The newsletter was mailed on March 24 and input was requested April 10, 2020. In addition, the small group meeting map was posted to the project website.

In addition, five small group meetings have been held with property owners as requested since the July 2019 public meetings.

### 5. Concurrence Point 3: Least Environmentally Damaging and Practicable Alternative

Based on CP 2 and CP 2-Revisited decisions, one best-fit alternative was carried forward for detailed study. Rationale for selecting the preferred alternative is summarized by section in Table 2.

Section/Option	Widening Side Selected	Reason For Selection
1	South	Fewer total relocations, Avoids church relocation (New Hope Church of God in Christ), Less stream/wetland impacts
2B	South <sup>1</sup>	Fewer relocations, Grade-separates railroad crossing There are no jurisdictional streams or wetlands in this section.
3A	North	Fewer relocations; Better traffic operations <sup>2</sup> There are no jurisdictional streams or wetlands in this section.
4	North	Fewer residential relocations; Less wetland impacts
5	South	Avoids a dam; Less stream/wetland impacts
6C	South	Avoids business relocations; Minimizes impacts to Ashley Heights Baptist Church buildings (avoids relocation of sanctuary) and Church supports this option; Grade-separates railroad crossing
7	North	Fewer relocations; Less impact to RCW foraging partitions (minus non-RCW habitat) and creates fewer acres of noncontiguous habitat <i>There are no jurisdictional streams or wetlands in this section.</i>
8	South	Less impact to the Hoke Correctional Institution Property; Less RCW foraging habitat impacted
9	South	Less impact to RCW foraging partitions (minus non-RCW habitat); Avoids railroad realignment There are no jurisdictional streams or wetlands in this section.
10-11	South	Fewer residential relocations; Less stream impacts; Avoids railroad realignment There are no jurisdictional streams or wetlands in section 10.
12	South	Avoids impacts to Calloway Nature Park There are no jurisdictional streams or wetlands in this section.
13	South	Avoids impacts to Calloway Nature Park
14	South	Reduce impacts to the railroad; Better tie-in with Section 13 There are no jurisdictional streams or wetlands in this section.
		Less wetland impact; Avoids railroad realignment

Table 2. Widening Options Selected for the Preferred Alternative

1 – The alignment was revised to shift a portion of this section to the north side of NC 211, which transitions to north widening in section 3.

2 – The decision to align E. Indiana Avenue with Carolina Road was made prior to incorporating Reduced Conflict Intersection design.

Design refinement included transitions between north and south widening and incorporation of Reduced Conflict Intersection (RCI) design elements (e.g., U-turn bulbs, control of access, left-overs). As noted in the March 2020 merger team update (Section 404/NEPA Merger Process Update), design revisions included:

- Section 2 Shift a portion of NC 211 to the north side of the existing roadway retaining the proposed bridge over the railroad, and
- Section 3 Maintain the current off-set alignment of the NC 211 intersections with E. Indiana Avenue and Carolina Road with reverse RCI design.

### Summary of Potential Impacts

Table 3 summarizes resources and anticipated impacts for the preferred alternative for the NC 211 improvements project. Impacts are calculated based on preliminary design slope stakes with a 25-foot buffer. Preliminary design incorporates horizontal and vertical design elements and cross sections. The

preliminary designs do not include hydraulic design or utilities design, which are being completed during the next phase of final design.

Resource	Preferred Alternative			
Human Environment				
Residential Relocations	80			
Business Relocations	20			
Church Relocations	5 <sup>1</sup>			
Community Facility Relocations	2 – Aberdeen Transfer Station No. 4, Canyon Hills Treatment Facility			
Environmental Justice (low income or minority communities)	Impacts to minority and low-income populations do <u>not</u> appear to be disproportionately high and adverse. Benefits and burdens resulting from the project are anticipated to be equitably distributed throughout the community.			
Level of Public Controversy	Moderate (overall supportive of project but with concern for relocations / property acquisition)			
Cemeteries (grave relocations)	<ul><li>3 – Faith Cemetery (6), Shiloh Presbyterian Church cemetery (5), cemetery adjacent to Total Praise Holiness Church (5)</li></ul>			
Cemeteries (right of way impacts, no grave relocations identified)	1 – unnamed cemetery adjacent to the Moore/Hoke County line			
Cultural Resources	No historic properties present or affected; No National Register listed or eligible archaeological sites present within the project's area of potential effects			
Farmland Soils	95 acres – prime agricultural and forest land expected to be converted into non-farmland use			
UST	17 - sites with low concern <sup>2</sup>			
Natural Environment				
Stream Crossings (number)	3			
Streams (linear feet)	1,470 linear feet – total for 9 streams; stream impacts are individually under 300 linear feet with the exception of one stream [312 lf])			
Ponds (acres)	0 acres			
Wetlands (acres)	3.2 acres			
Conservation Properties (CP) or Natural Heritage Program Site (acres)	25.59 acres 3.14 acres - Crowley Tract (TNC) 2.78 acres - Bowling Tract (TNC) 2.78 acres - Cedar Hall (TNC – easement 3.91 acres - Moses Tract (TNC) 12.98 acres - McCain Tract (NHP/NCDA)			
Federally Protected Species	No effect – Saint Francis' Satyr butterfly, Cape Fear shiner, American chaffseed, Michaux's sumac, Rough-leafed loosestrife; May affect, not likely to adversely affect – Red-cockaded woodpecker (RCW) <sup>3</sup>			

Table 3. Anticipated Impacts of the Preferred Alternative	Table 3.	Anticipated Im	pacts of the	Preferred Alternative
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1 – In addition, three buildings associated with Ashley Heights Baptist Church would also be relocated.

2 - Sites identified in the GeoEnvironmental Phase I Report, October 15, 2019.

3 – No RCW cavity trees will be taken and the project does not come within 200 feet of any known RCW cavity trees. The project will remove approximately 17.92 acres of RCW foraging habitat and result in 18.90 acres of noncontiguous habitat collectively from within three affected RCW partitions. Each partition will still meet the Standard for Managed Stability guidelines post-project when both suitable and potentially suitable habitat are considered. The Section 7 Concurrence Letter from the USFWS was received on February 19, 2020.

Stream Name	Map ID	Figure Number	Classification	Length in Study Area (If)	Length of Impact (If)
UT to Devil Gut Branch	SA	1	С	509	139
UT to Devil Gut Branch	SB	1	С	32	0
Devil Gut Branch	SC	1	С	1,698	137
UT to Devil Gut Branch	SD	1	С	202	34
Quewhiffle Creek	SE	4	С	56	56
UT Quewhiffle Creek, (including pond)	SF	5	С	189	189
UT to Mountain Creek	SG	11	С	228	167
UT to Buffalo Creek	SH	14	С	538	298
UT to Toneys Creek	SI	20	C; Sw	251	0
UT Quewhiffle Creek	SJ	6, 8	С	475	139
UT to Rockfish Creek	SK	20	В	141	0
UT to Rockfish Creek	SL	20	В	382	0
UT to Toneys Creek	SM	19, 20	C; Sw	448	312
Total				5,149	1,471

### Table 4. Stream Impacts

### Table 5. Wetland Impacts

Map ID	Figure Number	NCWAM Classification	NCDWQ Rating	Area in Study Area (acres)	Area of Impact (acres)
WA	1	Bottomland Hardwood Forest	65	0.77	0.11
WB	1	Bottomland Hardwood Forest	52	0.07	0.01
WC	1	Bottomland Hardwood Forest	65	0.07	0
WD	1	Bottomland Hardwood Forest	59	0.06	0
WE	1	Seep	25	0.13	0
WF	1	Bottomland Hardwood Forest	73	0.75	0.11
WG	1	Bottomland Hardwood Forest	71	4.46	0.22
WH	1	Seep	45	0.33	0.11
WI	4	Bottomland Hardwood Forest	64	0.96	0.24
WJ	4	Basin Wetland	62	0.34	0.06
WL	5 Bottomland Hardwood Forest		69	0.46	0.34
WM	WM 5 Basin wetland		47	0.33	0.14
WN	WN 5 Seep		61	0.05	0
WO			28	0.03	0
WP			54	1.88	1.07
WQ	WQ 14 Bottomland Hardwood Forest/Seep		66	1.33	0.70
WR	WR 16 Basin Wetland -Isolated		29	0.03	0.03
WS	WS 18 Bottomland Hardwood Forest		60	0.11	0
WT	19, 20 Basin Wetland		20	2.09	0.05
WU	19	Basin Wetland	45	0.63	0
WV	WV 6, 7 Non-Tidal Freshwater Marsh		28	0.1	0
WW	WW 6, 7 Non-Tidal Freshwater Marsh		15	0.21	0
WY	20	Bottomland Hardwood Forest	47	0.5	0
Total				15.48	3.19

## 6. Concurrence Point 4A: Avoidance and Minimization

Avoidance and minimization of impacts were incorporated throughout the project development process. Project development included selection of one best-fit alignment, which compared potential impacts of widening on each side of the roadway for 15 project sections. Table 2 lists avoidance and minimization measures that were the basis for selecting widening options in each section. After the widening side was selected, additional avoidance and minimization measures were explored through design refinements.

The following discussion identifies additional ways in which NCDOT has avoided and minimized impacts. Impacts listed in Table 3 include avoidance and minimization to date. Once hydraulic design, utilities design, and geotechnical recommendations are complete, there may be minor refinements at CP 4B – 30 Percent Hydraulic Review and CP 4C– Permit Drawing Review for each project section.

### Additional Avoidance and Minimization Measures

- To minimize impacts to a business (Thermal Metal Treating), a U-turn bulb was removed and a driveway from Glasgow Street was added at this property. (*Figure 1*)
- The NC 211 alignment was shifted to the north side of the existing roadway at the existing railroad crossing in Aberdeen to avoid impacts to a USEPA Superfund site and an active groundwater remediation system. The revised design would relocate a similar number of homes and businesses, as compared to the previous design, and would avoid the potential relocation of a church. (*Figures 2 and 3*)
- The design of the proposed cul-de-sac at Central Drive was revised to avoid the relocation of a home. (*Figure 2*)
- The current off-set alignment of the NC 211 intersections with E. Indiana Avenue and Carolina Road will be maintained. Impacts will be reduced compared to the previous option that shifted E. Indiana Avenue to align with Carolina Road. Public input did not support the realignment of E. Indiana Avenue primarily due to potential property impacts. (*Figure 4*)
- Based on input from property owners following the July 2019 public meetings, the locations of several U-turn bulbs were shifted to avoid impacts. With full access control at U-turn bulbs, relocations could be avoided depending on the specific location and property configuration. By eliminating a U-turn bulb in proximity to Arthur Lane, right of way impacts would be reduced and the proposed NC 211 alignment would be shifted farther from a home and several businesses. (*Figure 8*)
- The design includes freeway gutter in front of the Shiloh Presbyterian Church and cemetery to avoid relocation of the church and minimize impacts to grave sites. (*Figure 12*)
- A roundabout is proposed at the NC 211 intersection with W. Palmer Street/Mockingbird Hill Road (future Turnpike Road). Compared to an RCI design, the roundabout design would reduce impacts to a business, church, and several homes east of the intersection. (*Figure 20*)

