NEPA/Section 404 Concurrence Point 3: Least Environmentally Damaging Practicable Alternative

CP 3 Meeting February 19, 2020

STIP Project R-2553 Kinston Bypass Project

North Carolina Department of Transportation



Prepared By



701 Corporate Center Drive, Suite 475 Raleigh, North Carolina 27607

NEPA/Section 404 Concurrence Point 3: Least Environmentally Damaging Practicable Alternative

CP 3 Meeting February 19, 2020

Purpose of Meeting

The purpose of today's meeting is to achieve Merger Team concurrence on identifying Concurrence Point (CP) 3 (Least Environmentally Damaging Practicable Alternative (LEDPA)/Preferred Alternative Selection) for the proposed Kinston Bypass Project (STIP No. R-2553).

1.0 Project Description and Purpose and Need

The North Carolina Department of Transportation (NCDOT) proposes to construct an approximately 22-mile long project in Craven, Jones, and Lenoir Counties. The project area is shown on Figure 1 (located within Section 4). The project is included in the 2018-2027 State Transportation Improvement Program (STIP) as the proposed Kinston Bypass Project (STIP Project No. R-2553). The Kinston Bypass Project would involve upgrading existing US 70 or constructing a roadway on new location, depending on the alternative selected. Twelve alternatives are being studied in detail for the project.

The need for the Kinston Bypass Project is to address traffic congestion, capacity deficiencies, and through-traffic delays on US 70 between La Grange and Dover. The purpose of the project is to improve regional mobility, connectivity, and capacity for US 70 between La Grange and Dover in a manner that meets the intent of the North Carolina Strategic Transportation Corridors policy (previously the Strategic Highway Corridors policy).

2.0 Project Status

Since the last correspondence with the Merger Meeting at CP 2A, held on February 20, 2014, the following major milestones have occurred:

- Updated Functional Designs September 2017
- Historic Architecture Eligibility Evaluation Report October 2017
- Revised Terrestrial Archaeological Resources Predictive Model October 2017
- Hydraulic Analysis Report October 2017
- GIS-Based Natural Resources Technical Report November 2017
- Traffic Capacity Analysis Report November 2017
- Relocation Reports December 2017
- Agency Coordination Plan January 2018
- Public Involvement Plan January 2018
- Air Quality Report January 2018
- Traffic Noise Report January 2018
- Community Impact Assessment June 2019
- Economic Impact Assessment June 2019
- Land Use Scenario Assessment June 2019
- Draft Environmental Impact Statement published—July 2019
- Public Open Houses and Public Hearing—August 2019

Projected Next Steps

A portion of the project is funded for right-of-way acquisition and construction in the 2020-2029 STIP.

- Final Environmental Impact Statement released Spring 2021
- Record of Decision issued Fall 2021
- Right of way acquisition begins 2023
- Construction begins 2027

3.0 Summary of Merger Concurrence Points to Date

• Concurrence Point 1 – The NEPA/Section 404 Merger Team defined the Purpose and Need and Study Area on September 14, 2010. The Purpose and Need Statement was defined as:

The purpose of the Kinston Bypass project is to improve regional mobility, connectivity, and capacity for US 70 between La Grange and Dover in a manner that meets the intent of the North Carolina Strategic Transportation Corridors policy (previously the Strategic Highway Corridors policy).

The need for the Kinston Bypass Project is to address traffic congestion, capacity deficiencies, and through-traffic delays on US 70 between La Grange and Dover.

- **Concurrence Point 2** The NEPA/Section 404 Merger Team defined 12 Detailed Study Alternatives to carry forward on January 16, 2014. The Alternative carried forward are:
 - Alternative 1 Upgrade Existing (1UE)
 - Alternative 1 Shallow Bypass (1SB)
 - Alternative 11
 - Alternative 12
 - Alternative 31
 - Alternative 32

- Alternative 35
- Alternative 36
- Alternative 51
- Alternative 52
- Alternative 63
- Alternative 65
- **Concurrence Point 2A** The NEPA/Section 404 Merger Team completed "Bridging Decisions and Alignment Review" on February 20, 2014.
- **Pre-Concurrence Point 3 Informational Meeting**—The NEPA/Section 404 Merger Team discussed concerns and questions regarding the project that were pertinent to the decision-making process for Concurrence Point 3. The informational meeting was held on November 13, 2019. The action items generated during the meeting and actions taken to address them are as follows:

	Action Item	Action Taken
1	Project team to provide endangered species data on the soon to be listed species to USFWS prior to CP3.	AECOM provided Gary Jordan elemental occurrence GIS data layers for Carolina Madtom, Neuse River Waterdog, and Atlantic Pigtoe. Gary Jordan stated he had the information he needed to move forward.
		Travis Wilson requested the data provided to Gary Jordan. Kory Wilmot provided that information to him the same day.
2	Project team to add riparian buffer and AFSA numbers to impact table and provide to NCDWR.	Added to impact table to be included in CP3 Packet.
3	Project team to post Comment Response Memo to the project website.	The Comment Response Memo was added to the project website under "Project Documents".
		https://www.ncdot.gov/projects/kinston-bypass/Documents/comment-responses-deis.pdf
	Project team to address elements of Executive Order 80.	NCDOT's Environmental Policy Unit developed the following response to the question as it pertains to the Kinston Bypass project:
		Governor Roy Cooper's Executive Order 80 (EO80) directs state cabinet agencies to evaluate the effects of climate change on their policies, programs, and operations and integrate climate change mitigation and adaptation practices into their programs and operations. Section 9 of EO80 specifically directs NCDEQ, with the support of the cabinet agencies, to prepare a North Carolina Climate Risk Assessment and Resiliency Plan. This plan, and the North Carolina specific climate data upon which it will be based, is scheduled for submission to the Governor by March 1st, 2020.
4		NCDOT resilience planning, policies, and design considerations will be founded in the initiatives and recommendations outlined in this plan and the data on which is based. NCDOT will also use any applicable engineering guidelines and recommendations outlined by FHWA, AASHTO, or other regulatory agencies. All relevant resilience policies and best practices will be incorporated into the design and construction of the selected Kinston Bypass alternative.
		As part of an effort to better inform and warn the public during storm events, NC Division of Emergency Management developed the Flood Inundation Mapping and Alert Network (FIMAN). FIMAN uses over 550 gages across the state to provide real-time rain and stage gage data, flood inundation maps, flooding impacts and alerts to support risk-based decisions regarding flooding. NCDOT has produced a test version of FIMAN that incorporates specific information on transportation infrastructure, assets and resources (FIMAN-T). The initial test area for FIMAN-T was on the Neuse River

		in the vicinity of Kinston. While flood mitigation and resilience were not specifically defined as a
		purpose or need of the Kinston Bypass project, the project team reviewed the FIMAN-T data for known
		flooding concerns of adjacent roadways that had been raised by local officials and reiterated under the
		umbrella of resilience and EO80 by NCDCM. The information was compared with the Kinston Bypass
		Detailed Study Alternatives; roads and bridges around Kinston flooded during Hurricane Matthew; "low
		points" identified by local officials; and 100-yr and 500-yr floodplains.
		Flooding issues exist across the study area that would affect all of the detailed study alternatives during a major storm event like Hurricane Matthew; therefore, there were no definitive determinations that would eliminate the consideration of an alternative or effect the selection of a preferred alternative. However, as the preferred alternative progresses through the design process, NCDOT will continue to incorporate resiliency strategies to the extent reasonable and feasible in alignment with NCDOT policy.
	USACE to continue working with HPO to	A draft protocol is under review by USACE.
_	develop a policy or plan to address	
5	potential unmarked graves related to the	
	Battle of Wyse Forks.	
	USEPA requested more information on	The requested information was provided to Amanetta Somerville of EPA.
6	the impacts to the potential	
О	Environmental Justice communities	
	associated with Alternative 1SB	

4.0 Detailed Study Alternatives

The DEIS studied twelve (12) alternatives in detail (see Figure 1). The purpose of the Kinston Bypass project is to improve regional mobility, connectivity, and capacity for US 70 between La Grange and Dover in a manner that meets the intent of the North Carolina Strategic Transportation Corridors policy (previously the Strategic Highway Corridors policy). The need for the Kinston Bypass Project is to address traffic congestion, capacity deficiencies, and through-traffic delays on US 70 between La Grange and Dover.

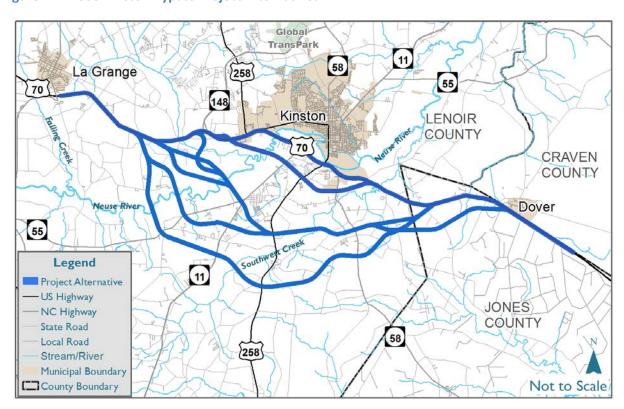
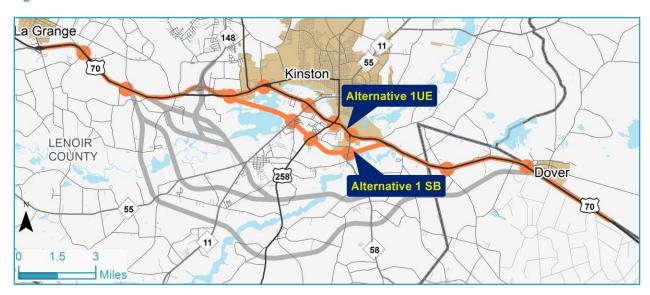


Figure 1: R-2553 Kinston Bypass Project Alternatives

Figure 2: Alternatives 1UE and 1SB



Alternatives 1UE and 1SB begin at the western terminus of the project at the N.C. 903/US 70 interchange south of La Grange.

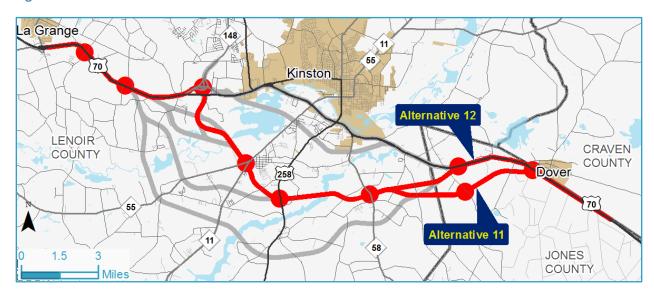
Alternative 1UE follows existing U.S. 70 from the N.C. 903/U.S. 70 interchange south of La Grange to the project terminus east of Dover and would upgrade the existing U.S. 70 to a full control of access highway. The definition of upgrading an existing facility refers to a widening of the roadway to include adequate capacity to handle the forecasted traffic and provide for full control of access. Interchanges would provide access to other major roads and would be located at the following points:

- Willie Measley Road/Jim Sutton Road
- Albert Sugg Road/Barwick Station Road
- N.C. 148 (C.F. Harvey Parkway)
- U.S. 258
- U.S. 258/U.S. 70 Business (West Vernon Avenue)
- N.C. 11/N.C. 55
- U.S. 258 (South Queen Street)
- U.S. 58 (Trenton Highway)
- Wyse Fork Road /Caswell Station Road
- Old U.S. 70 (West Kornegay Street)

Alternative 1SB also begins at the N.C. 903/U.S. 70 interchange in La Grange and would follow existing U.S. 70 for approximately 7 miles to just east of N.C. 148 (C.F. Harvey Parkway). Interchanges would be located at Willie Measley Road/Jim Sutton Road, Albert Sugg Road/Barwick Station Road, and N.C. 148. A new interchange east of N.C. 148 would provide access to the shallow bypass section of Alternative 1SB, which would parallel existing U.S. 70 to the south on new location for approximately 6.5 miles.

Interchanges along Alternative 1SB would be located at N.C. 11/N.C. 55, U.S. 258 (South Queen Street), and N.C. 58 (Trenton Highway). A new interchange east of Lenoir Community College would connect the shallow bypass back to existing U.S. 70. Alternative 1SB would follow existing U.S. 70 from this interchange east to the project terminus east of Dover and would upgrade U.S. 70 to a full control of access highway with interchanges at Wyse Fork Road (S.R. 1002)/Caswell Station Road (S.R. 1309) and Old U.S. 70 (West Kornegay Street).

Figure 3: Alternatives 11 and 12

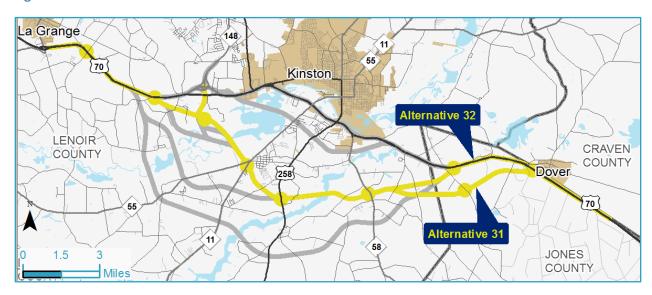


Alternatives 11 and 12 begin at the western terminus of the project at the N.C. 903/U.S. 70 interchange south of La Grange and follow existing U.S. 70 for approximately 7 miles to the N.C. 148/U.S. 70 interchange. Interchanges would be located at Willie Measley Road/Jim Sutton Road, Albert Sugg Road/Barwick Station Road, and N.C. 148. At N.C.148, both alternatives turn south and then east on new location for approximately 9.5 miles with interchanges at N.C. 11/N.C. 55, U.S. 258, and N.C. 58. The alternatives cross N.C. 58 just south of Southwood Elementary School before diverging east of N.C. 58.

Alternative 11 continues eastward on new location with an interchange at Wyse Fork Road (S.R. 1002), approximately 1.25 miles south of existing U.S. 70, before interchanging with existing U.S. 70 near Old U.S. 70 just west of Dover. Alternative 11 would include upgrades to existing U.S. 70 between this interchange and the project terminus east of Dover.

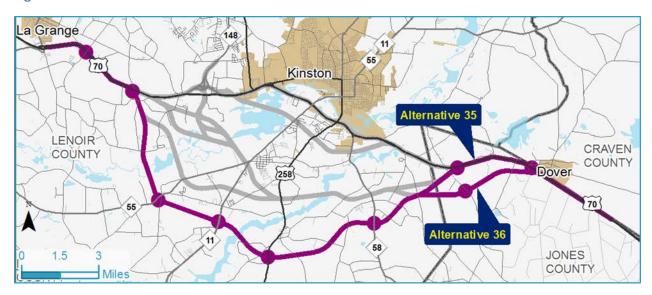
Alternative 12 would turn back to the north to interchange with existing U.S. 70 just east of the Lenoir/Jones county line at Wyse Fork Road (S.R. 1002) and would upgrade existing U.S. 70 to the project terminus east of Dover with an interchange at Old U.S. 70 (West Kornegay Street).

Figure 4: Alternatives 31 and 32



Alternatives 31 and 32 begin at the western terminus of the project at the N.C. 903/U.S. 70 interchange south of La Grange and follow existing U.S. 70 for approximately 4.5 miles, with an interchange at Willie Measley Road/Jim Sutton Road, to near where Harold Sutton Road intersects with existing U.S. 70. At this point, a new interchange would provide access to the new location alternatives, which would travel southeast on new location. A new connector approximately 1.5 miles long would connect north to the U.S. 70/N.C. 148 interchange. From the Neuse River crossing to U.S. 58, Alternatives 31 and 32 are the same as Alternatives 11 and 12, including interchanges at N.C. 11/N.C. 55, U.S. 258, and N.C. 58. East of N.C. 58, Alternative 31 is the same as Alternative 11, and Alternative 32 is the same as Alternative 12.

Figure 5: Alternative 35 and 36



Alternatives 35 and 36 begin at the western terminus of the project at the N.C. 903/U.S. 70 interchange south of La Grange and follow existing U.S. 70 for approximately 2.25 miles, with an interchange at Willie Measley Road/Jim Sutton Road, to Albert Sugg Road. A new interchange here would allow both alternatives to diverge onto new location and travel to the south. Interchanges would be located at N.C. 55 (about 4 miles west of the split with N.C. 11), N.C. 11 (about 2.75 miles south of the split with N.C. 55), US 258 (just north of Woodington Middle School), and N.C. 58 (just south of Southwood Road). The alternatives swing back to the north before diverging at Cobb Road. East of Cobb Road, Alternative 36 is the same as Alternatives 11, 31, 65, and 51. Alternative 35 continues northeast on new location, and from Wyse Fork Road eastward is the same as Alternatives 12, 32, 63, and 52.

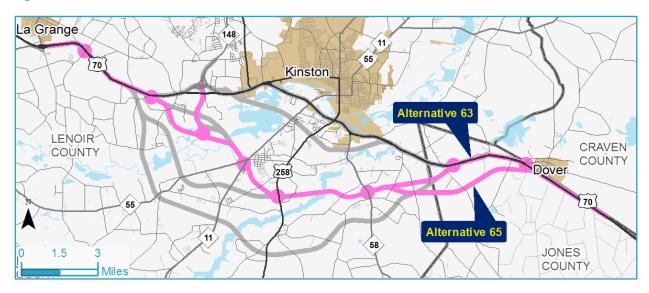
Figure 6: Alternatives 51 and 52



Alternatives 51 and 52 begin at the western terminus of the project at the N.C. 903/U.S. 70 interchange south of La Grange and follow existing U.S. 70 for approximately 2.25 miles, with an interchange at Willie Measley Road/Jim Sutton Road, to Albert Sugg Road. A new interchange here would allow both alternatives to diverge onto new location and travel to the south.

Interchanges would be located at N.C. 55 (about 2.75 miles west of the split with N.C. 11), N.C. 11 (about 1.5 miles south of the split with N.C. 55), and U.S. 258. East of U.S. 258, Alternative 51 is the same as Alternatives 11, 31, and 65, and Alternative 52 is the same as Alternatives 12, 32, and 63.

Figure 7: Alternatives 63 and 65



Alternatives 63 and 65 begin at the western terminus of the project at the N.C. 903/U.S. 70 interchange south of La Grange and follow existing U.S. 70 for approximately 4.5 miles, with an interchange at Willie Measley Road/Jim Sutton Road, to near where Harold Sutton Road intersects with existing U.S. 70. At this point, a new interchange would provide access to the new location alternatives, which would travel south and then east on new location. A new connector approximately 2 miles long would connect north to the U.S. 70/N.C. 148 interchange. From east of the Neuse River crossing, Alternative 63 is the same as Alternatives 12 and 32, and Alternative 65 is the same as Alternatives 11 and 31.

5.0 Alternative Impacts ComparisonEstimated environmental impacts associated with the alternatives are provided in Table 1.

Table 1: DSA Comparison Matrix

	Alternative 1UE	Alternative 1SB	Alternative 11	Alternative 12	Alternative 31	Alternative 32	Alternative 35	Alternative 36	Alternative 51	Alternative 52	Alternative 63	Alternative 65
General												
Length (miles)	21.2	21.2	23.2	23.4	22.0	22.1	25.3	25.0	22.6	22.7	22.2	22.1
Intelligent transportation system cost (\$)	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000	\$450,000
Utility cost (\$)	\$12,830,000	\$10,800,000	\$9,130,000	\$9,430,000	\$7,840,000	\$8,080,000	\$8,620,000	\$7,980,000	\$7,930,000	\$9,880,000	\$7,880,000	\$7,630,000
Right-of-way cost (\$)	\$183,070,000	\$123,710,000	\$78,330,000	\$85,050,000	\$63,340,000	\$66,990,000	\$65,490,000	\$64,200,000	\$54,560,000	\$57,380,000	\$64,010,000	\$61,180,000
Construction cost (\$)	\$245,900,000	\$292,800,000	\$284,100,000	\$299,000,000	\$284,200,000	\$288,900,000	\$290,400,000	\$297,800,000	\$296,200,000	\$275,800,000	\$355,900,000	\$358,900,000
Mitigation cost (\$)	\$12,940,000	\$12,250,000	\$12,130,000	\$13,390,000	\$12,290,000	\$13,550,000	\$13,940,000	\$12,810,000	\$11,720,000	\$12,980,000	\$13,440,000	\$12,180,000
Total cost (\$)	\$455,190,000	\$440,010,000	\$384,140,000	\$407,320,000	\$368,120,000	\$377,970,000	\$378,900,000	\$383,240,000	\$370,860,000	\$356,490,000	\$441,680,000	\$440,340,000
Socioeconomic Resources												
Residential (#)	125	162	95	101	76	92	130	113	97	113	98	80
Business (#)	137	67	35	40	30	37	32	27	26	32	36	30
Non-Profit (#)	0	0	0	0	0	0	0	0	0	0	0	0
Total (#)	262	229	130	141	106	129	162	140	123	145	134	110
Communities (#)	3	3	2	3	3	3	5	5	3	3	3	3
Environmental Justice residential areas (#)	4	6	2	3	2	3	5	4	4	5	4	3
Minority block groups (#)	2	0	0	0	0	0	0	0	0	0	0	0
Low Income block groups (#)	6	3	3	3	3	3	3	3	3	3	3	3
Schools (#)	1	1	0	0	0	0	0	0	0	0	0	0
Hospitals (#)	0	0	0	0	0	0	0	0	0	0	0	0
Churches (#)	9	6	1	1	1	1	1	1	0	0	1	1
Fire departments (#)	1	1	1	2	1	2	1	0	1	2	2	1
Emergency Medical Services stations (#)	0	0	0	0	0	0	0	0	0	0	0	0
Airports (#)	0	0	0	0	0	0	0	0	0	0	0	0
Parks and recreational areas (#)	1	0	0	0	0	0	0	0	0	0	0	0
Cemeteries (#)	2	1	1	0	1	0	2	2	1	0	0	1
VADs (#)	0	0	0	0	0	0	1	1	0	0	0	0
VADs (ac)	0	0	0	0	0	0	2.6	2.6	0	0	0	0
NCNHP managed areas (ac)	6	2.3	0	0	6.1	6.1	0	0	0	0	0	0

	Alternative 1UE	Alternative 1SB	Alternative 11	Alternative 12	Alternative 31	Alternative 32	Alternative 35	Alternative 36	Alternative 51	Alternative 52	Alternative 63	Alternative 65
Prime farmland (ac)	282.2	302.3	392.5	422.4	404.3	434	432.4	415.2	410.3	440.1	420.5	390.6
Farmland of statewide importance (ac)	172.2	222.5	236.8	210.2	263.7	236.6	203.4	225.6	224.4	198.3	218.2	243.7
Farmland of unique importance (ac)	53.3	53.3	56.8	56.8	51.7	51.7	47.3	47.3	48.8	48.8	51.7	51.7
Economic Resources												
Annual total net benefits (quantified 2040)	\$22.5 million	\$23.4 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million	\$4.9 million
Physical Resources												
Noise receptors impacted	38	56	34	37	41	44	23	21	24	27	41	38
Hazardous materials sites (#)	18	9	9	10	7	8	6	5	5	6	8	7
Cultural Resources												
Section 106 adverse effects	2	2	3	4	6	7	2	1	1	2	6	5
Archaeological sites - high probability (ac)	649.8	829.3	628.9	753.6	590.3	714.3	626.1	526.3	516.8	641.8	668.4	542.8
Archaeological sites - low probability (ac)	570.6	480.1	684.4	583.9	688	588.4	816.9	883.1	756.4	657.2	664.7	763.9
Natural Resources												
Maintained/Disturbed (ac)	706.2	516.6	264.2	346.3	242.3	324.3	312.7	230.1	214.9	297.6	315.5	232.8
Agriculture (ac)	317.9	507.9	672.2	689.6	664.6	682.3	714.1	699.9	637.3	655.6	667.8	648.9
Pine Plantation (ac)	73	148.5	246.7	193	242.6	188.7	265.3	305.1	266.1	212.4	211.3	265.1
Forested Upland (ac)	21.5	25.3	28	19.9	27.9	19.7	29.7	38	34.2	26	19.4	27.6
Palustrine Wetland (ac)	98.3	97.4	98.2	86.6	97	85.4	117.3	130.7	115.1	103.5	114.8	126.3
Open Water (ac)	3.5	13.7	3.9	2.3	3.9	2.3	4	5.6	5.6	4	4.3	5.9
Total biotic resources (ac)	1220.4	1309.4	1313.2	1337.7	1278.3	1302.7	1443.1	1409.4	1273.2	1299.1	1333.1	1306.6
Stream crossings (#)	43	44	45	50	41	45	42	40	38	42	45	41
Stream length (ft)	32,057	33,112	26,771	33,864	26,620	33,699	31,295	24,888	23,638	30,717	31,368	24,289
Riparian Buffers (lf)	25,652	26,370	21,812	25,642	21,782	24,912	23,310	20,344	18,647	21,777	18,524	20,814
ASFA (lf)	47,473	16,401	11,688	12,388	13,086	13,086	10,253	9,629	7,955	7,955	9,629	10,754
100-year floodplain (ac)	358.6	147.7	95.2	83.9	109	97.7	52.1	62.3	73.4	62.1	139.1	150.4
500-year floodplain (ac)	75	130.8	23.9	23.9	21.7	21.7	40.2	40.2	46.2	46.2	29.2	29.2
Total floodplains (ac)	433.6	278.5	119.1	107.8	130.7	119.4	92.3	102.5	119.6	108.3	168.3	179.6
Floodway (ac)	35.6	0.6	1.8	1.9	1.1	1.1	0.1	0.1	1.1	1.1	1.2	1.2
Riparian wetland	74.1	41.2	68.5	55.1	66.5	53.2	41.6	55.4	60.4	47.1	74.5	87.9
Non-riparian wetland	11.8	24.2	49.4	37.4	60.1	48.1	107.4	116.4	81.8	69.8	37.7	49.7
Total wetland impacts (ac)	85.9	65.4	117.9	92.5	126.6	101.3	149	171.8	142.2	116.9	112.2	137.6

Section 6.0 Alternative Impact Summary

Alternative	Pros/ Cons Description
Alternative 1UE	PROS: Alternative 1UE (along with 1SB) has the shortest project length. Since 1UE follows existing 70, it impacts the least farmland soil, active agricultural lands, and pine plantations. 1UE has moderate impacts to potential environmental justice areas of concern (along with Alternatives 36, 51, and 63). 1UE has moderate to low impacts to residences and moderate to high impacts on NCNHP managed lands. CONS: 1UE has the highest cost, impacts to businesses, and churches of all the alternatives. The 1UE corridor touches the most acreage of floodplains and is the only alternative that is flooded during a Hurricane Matthew level flood event according to preliminary flood study. In addition, 1UE would have impacts on the Wyse Fork Battlefield. PUBLIC: 17% (12) of the public selected 1UE as their preferred alternative.
Alternative 1SB	PROS: Alternative 1SB (along with 1UE) has the shortest project length. 1SB has the highest projected economic benefit (opportunity for economic growth). 1SB impacts the least number of wetlands. Alternative 1SB has moderate impacts to NCNHP managed areas, number of stream crossings, and overall linear feet of streams. Regardless of the affected acreage of floodplain, the alternative will remain dry during a Hurricane Matthew level flood event according to the preliminary flood study. CONS: 1SB has moderate to high impacts to businesses, churches, and acres of floodplains. 1SB has high impacts to residences, potential environmental justice areas of concern, and open water. In addition, 1SB would have impacts on the Wyse Fork Battlefield. PUBLIC: 63% (45) of the public selected 1SB as their preferred alternative. This alternative received the most support among the public during the public comment period following the publication of the DEIS and public hearing. 1SB is a popular choice for the public as they believe it will do the least damage to the Kinston economy since the alternative is only a few miles from existing businesses.
Alternative 11	PROS: Alternative 11 impacts the least amount of potential environmental justice areas of concern (along with Alternative 31) and has no impacts to NCNHP managed areas (along with Alternatives 12, 35, 36, 51, 52, 63, and 65). Alternative 11 has moderate impacts to forested uplands (28 acres). Alternative 11 would impact 1 church (along with Alternatives 12, 31, 32, 35, 36, 63, and 65). CONS: Alternative 11 has a moderate to high amount of stream crossings. Alternative 11 (along with alternatives 12, 31, 32, 35, 36, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 6% (4) of the public selected Alternative 11 as their preferred alternative.

Alternative 12	PROS: Alternative 12 has no impacts to NCNHP managed areas (along with Alternatives 11, 35, 36, 51, 52, 63, and 65) and impacts the least acreage of open water Alternative 12 moderately impacts businesses and agricultural lands. Alternative 12 would impact 1 church (along with Alternatives 11, 31, 32, 35, 36, 63, and 65). CONS: Alternative 12 has a high amount of stream crossings and impacts the longest total length of streams. Alternative 12 (along with alternatives 11, 31, 32, 35, 36, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 1% (1) of the public selected Alternative 12 as their preferred alternative.
Alternative 31	PROS: Alternative 31 impacts the least amount of residential and potential environmental justice areas of concern (along with Alternative 11). Alternative 31 would impact 1 church (along with Alternatives 11, 12, 32, 35, 36, 63, and 65). CONS: Alternative 31 has moderate to high impacts on farmland soil and moderate to high Section 106 adverse effects (along with Alternative 63). Alternative 31 has the highest impacts to NCNHP managed areas. Alternative 31 (along with alternatives 11, 12, 32, 35, 36, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 6% (4) of the public selected Alternative 31 as their preferred alternative.
Alternative 32	PROS: Alternative 32 impacts the least acreage of Open water and would impact 1 church (along with Alternatives 11, 12, 31, 35, 36, 63, and 65). CONS: Alternative 32 has a moderate to high amount of stream crossings and affects a moderate length of streams. Alternative 32 has the highest impacts to NCNHP managed areas, farmland soils, and has the most adverse effects to Section 106 properties. Alternative 32 (along with alternatives 11, 12, 31, 35, 36, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 0% (0) of the public selected Alternative 32 as their preferred alternative.
Alternative 35	PROS: Alternative 35 would impact the least number of floodplains and has no impacts to NCNHP managed areas (along with Alternatives 11, 12, 36, 51, 52, 63, and 65). Alternative 35 has moderate impacts to pine plantations and would impact 1 church (along with Alternatives 11, 12, 31, 32, 36, 63, and 65). CONS: Alternative 35 has moderate to high impacts to residences, potential environmental justice residential areas, and wetlands. Alternative 35 has the longest length and impacts the most agricultural land. Alternative 35 is also the furthest south from existing 70 and has the longest travel time. Alternative 35 (along with alternatives 11, 12, 31, 32, 36, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 1% (1) of the public selected Alternative 35 as their preferred alternative.

Alternative 36	PROS: Alternative 36 (along with Alternative 51) has the least adverse effects to Section 106 properties. Alternative 36 moderately impacts potential environmental justice areas of concern (along with Alternatives 1UE, 51, and 63) and open water. Alternative 36 would impact 1 church (along with Alternatives 11, 12, 31, 32, 35, 63, and 65) and has no impacts to NCNHP managed areas (along with Alternatives 11, 12, 35, 51, 52, 63, and 65). CONS: Alternative 36 has moderate to high impacts on agricultural lands and is the 2 nd longest alternative of the 12. Alternative 36 has the highest impacts to pine plantations, forested upland, and wetlands. Similarly to Alternative 35, Alternative 36 is furthest south from existing 70 and has the longest travel time. Alternative 36 (along with alternatives 11, 12, 31, 32, 35, 51, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 6% (4) the public selected Alternative 35 as their preferred alternative.
Alternative 51	PROS: Alternative 51 has the least amount of impacts to businesses, Section 106 properties (along with Alternative 36), stream crossings, and total length of streams. It also has no impacts to NCNHP managed areas (along with Alternatives 11, 12, 35, 36, 52, 63, and 65) and no impacts to churches (along with Alternative 52). Alternative 51 has moderate impacts to potential environmental justice areas of concern (along with Alternatives 1UE, 36, and 63) and open water. CONS: Alternative 51 has moderate to high impacts to pine plantations and forested uplands. Alternative 51 (along with alternatives 11, 12, 31, 32, 35, 36, 52, 63, and 65) has the least annual total net economics benefits. PUBLIC: 1% (1) of the public selected Alternative 51 as their preferred alternative.
Alternative 52	PROS: Alternative 52 has the least amount of notable impacts. This alternative is the least expensive total cost, no impacts to churches (along with Alternative 51), and no impacts to NCNHP managed areas (along with alternatives 11, 12, 35, 36, 51, 63, and 65). CONS: Alternative 52 has moderate to high impacts on potential environmental justice residential areas. Alternative 52 (along with alternatives 11, 12, 31, 32, 35, 36, 51, 63, and 65) has the least annual total net economics benefits. PUBLIC: 0% (0) of the public selected Alternative 52 as their preferred alternative.
Alternative 63	PROS: Alternative 63 has the least impacts to forested uplands. Alternative 63 has moderate impacts to potential environmental justice areas of concern (along with Alternatives 1UE, 36, and 51) and farmland soil. It would impact 1 church (along with Alternatives 11, 12, 31, 32, 35, 36, and 65) and has no impacts to NCNHP managed areas (along with Alternatives 11, 12, 35, 36, 51, 52, and 65). CONS: Alternative 63 is the second-most expensive alternative, has a moderate to high number of stream crossings, and moderate to high adverse effects on Section 106 properties (along with Alternative 31). Alternative 63 (along with alternatives 11, 12, 31, 32, 35, 36, 51, 52, and 65) has the least annual total net economics benefits PUBLIC: 0% (0) of the public selected Alternative 63 as their preferred alternative.

	PROS: Alternative 65 would impact 1 church (along with Alternatives 11, 12, 31, 32, 35, 36, and 63), and has no impacts to NCNHP managed areas (along with Alternatives 11, 12, 35, 36, 51, 52, and 63). Alternative 65 has a moderate cost, moderate impacts to floodplains, wetlands, and has a moderate number of adverse effects on Section 106 properties	
Alternative 65	CONS: Alternative 65 has moderate to high impact on open water acreage. Alternative 65 (along with alternatives 11, 12, 31, 32, 35, 36, 51, 52, and 63) has the least annual total net economics benefits	

PUBLIC: 0% (0) of the public selected Alternative 65 as their preferred alternative.

7.0 Local Agency and Public Comments

Statistical Overview of Comments

Comments Received

- 116 total comments were received since the distribution of the August 2019 postcard identifying the availability of the DEIS and the dates of the public open houses and public hearing. 99 of these comments were from the public and 17 were from local officials or governmental agencies.
- 59 public comments were received by mail, email, phone, or at the public hearing (16 of which are transcripts)
- 40 public comments were received through the NCDOT Public Input Site

Comment Source

• NCDOT Public Input Site: 40

Email/Letter: 27Comment Form: 33

• Public Hearing Transcript: 16

NCDOT Contact Us: 1

Comment Subjects

Comments expressed opinions pertaining to multiple subjects. The number of comments representing each subject matter are included below.

Alternative choice: 47
Economic impacts: 24
Property impacts: 22
Business impacts: 17

• Historic and archaeological resources: 11

Farm impacts: 10Flooding impacts: 8Right-of-way: 8

Community impacts: 7Alternative suggestion: 6Environmental impacts: 5

Project costs:5

• Project / construction schedule: 5

• Access concerns: 2

Other: 2Traffic: 2

• Noise pollution: 1

• Habitat/endangered & threatened species: 0

• Safety: 0

Alternative Preferences

The provided comment form and the NCDOT Public Input Site requested the public rank their preferences for the 12 detailed study alternatives. 72 of the public elected to rank the alternatives. The statistics below represent the first preference identified.

- Alternative 1SB: 45Alternative 1UE: 12
- Alternative 11: 4
- Aiternative 11. 4
- Alternative 31: 4
- Alternative 36: 4
- Alternative 12: 1
- Alternative 35: 1
- Alternative 51: 1
- Alternative 32: 0
- Alternative 52: 0
- Alternative 63: 0
- Alternative 65: 0

The full Public Comment Response Memo can be found at https://www.ncdot.gov/projects/kinston-bypass/Documents/comment-responses-deis.pdf.

8.0 Applicant's Preferred Alternative

NCDOT considered that all of the detailed study alternatives meet the purpose and need of the project. NCDOT recommends moving forward with Alternative 1SB.

Alternative 1SB impacts the least amount of wetlands. Alternative 1SB has moderate impacts to NCNHP managed areas, number of stream crossings, and overall linear feet of streams. Regardless of the affected acreage of floodplain, the alternative will remain dry during a Hurricane Matthew level flood event according to the preliminary flood study.

Alternative 1SB was generated as a result of the public involvement process. Alternative 1SB (along with 1UE) has the shortest project length and highest projected economic benefit (opportunity for economic growth). The economic impact assessment was completed in response to concerns from the local business community. The results of the economic impact assessment showed that Alternative 1SB would have a greater economic benefit to the local economy when compared to the other new location detailed study alternatives.

Lenoir County Commissioners unanimously support Alternative 1SB. Alternative 1SB has the most public support with over 63% (45) of the public supporting the alternative as their preferred. The alternative remains close to existing businesses, thus allowing for easy access while preserving the rural character of southern Lenoir County.