EXECUTIVE SUMMARY

S.1 FEDERAL HIGHWAY ADMINISTRATION

Administrative Action Environmental Impact Statement

() Draft

(X) Final

S.2 CONTACTS

The following individuals may be contacted for additional information concerning this Environmental Impact Statement:

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S.3 DESCRIPTION OF THE PROPOSED ACTION

The proposed action involves construction of a four-lane, controlled access freeway on new location to bypass the existing four-lane section of US 74 through Shelby; and the improvement to a full control of access facility of existing US 74 from 0.6 mile west of SR 1162 to the western bypass terminus, and from the eastern bypass terminus to SR 1001. Exhibit 1-1 shows the study area for the project.

The concept of a US 74 Bypass of Shelby was introduced in the 1979 Thoroughfare Plan for Shelby as a route to the north of the city. In November, 1991, a feasibility study for the US 74 Bypass was prepared by the North Carolina Department of Transportation (NCDOT) recommending a southern bypass location. The Shelby Thoroughfare Plan adopted in 1994 by the City of Shelby and by the North Carolina Department of Transportation included a northern bypass of Shelby based on the greater traffic volumes anticipated north of town and on input received from Shelby officials in favor of a northern bypass location. The NCDOT State Transportation Improvement Program – 2007–2013 lists TIP Project Number R-2707 as a part of the US 74 Intrastate Corridor This Corridor is considered to be a key economic development corridor for North Carolina, and will connect three major North Carolina cities: Asheville (via I-26), Charlotte, and Wilmington.

The Draft Environmental Impact Statement for Project R-2707 was approved on October 1, 1998.

In the earlier stages of the project (those that predated the NEPA/404 process), coordination with agencies was achieved through several steering committee/interagency meetings. This project was formally included in the Concurrence process at Concurrence Point #3 (CP #3), Selection of Least

Environmentally Damaging Alternative; this meeting, which was held on May 5, 1999, resulted in the selection of Alternative 21 as the Preferred Alternative. On January 17, 2001, the Concurrence Point #4 meeting was held, and avoidance and minimization measures were agreed upon (Note: Concurrence Point #4 is now referred to as Concurrence Point #4A).

S.4 ACTIONS REQUIRED BY OTHER AGENCIES

A Section 404 Individual Permit from the US Army Corps of Engineers (COE) will be required. A 401 Water Quality Certification from the North Carolina Department of Environment and Natural Resources, Division of Water Quality (DWQ), will also be required.

S.5 MAJOR ALTERNATIVES CONSIDERED

The Build alternatives considered for this project included the Bypass (new location) alternatives, established as a result of preliminary studies and public input, and the Upgrade (improve existing facility) alternative. For planning purposes, the corridors for the Build alternatives were a minimum 1,000 feet wide. Since right-of-way for the project will be a minimum of 325 feet in width, the wider corridor allowed flexibility in the preliminary design phase for avoidance of important manmade and natural features.

<u>Bypass Alternatives</u> - The Bypass alternatives consist of improvement of existing US 74 to a full control access facility, from the proposed western project terminus 0.6 mile west of SR 1162 to the proposed western bypass terminus; construction of a four-lane divided full control of access facility on new location north of the City of Shelby; and improvement of existing US 74 to a full control

access facility from the proposed eastern bypass terminus to the existing full control of access section near SR 1001.

<u>Upgrade Alternative</u> - The Upgrade alternative considered for this project would consist of improvement of existing US 74 to a full control of access facility, from approximately 0.6 mile west of SR 1162 to SR 1001 east of Shelby (a distance of approximately 16.2 miles). In conjunction with the access control-related improvements, US 74 would also be widened as necessary between the western junction of US 74 Business in Shelby and the eastern project terminus, a distance of approximately 10.0 miles.

In addition to the Build alternatives, several other options were examined for their potential to fulfill the transportation, social, economic, and environmental goals of the proposed action:

- 1. No Build (do nothing) alternative
- 2. Mass Transit alternative
- 3. Transportation System Management (TSM) alternative

S.6 TIER 2 DETAILED STUDY ALTERNATIVES

(Note: The DEIS used different nomenclature to distinguish between levels of detailed study alternatives. What are termed as "Tier 1 detailed study alternatives" in this document were referenced in the DEIS as simply "detailed study alternatives." The Tier 2 detailed study alternatives in this document [see below] were previously described in the DEIS as "reasonable and feasible alternatives.")

Twenty-five (25) Tier 1 detailed study alternatives consisting of the Bypass alternatives and the Upgrade alternative were studied in detail (see Exhibit 2-9). The Bypass alternatives consisted of a northern corridor, a southern corridor and five crossover corridors which could be combined to create 24 various corridor and crossover combinations.

Following the detailed studies of the alternatives, the northern and southern corridors and Crossover N-P (see Exhibit 2-9) were merged into a single northern/southern corridor segment west of Moss Lake, between NC 150 and SR 2047, to minimize impacts to the Light Oak community. The combination of the northern/southern corridors with Crossover N-P in this location reduced the total possible corridor/crossover combinations to 17.

The Upgrade alternative and the Bypass alternatives utilizing Crossovers A-A'-B and D-K' (see Exhibit 2-9) were eliminated from further consideration based on the following reasons:

<u>Upgrade Alternative</u> (Note: Some US 74 upgrade segments included as a part of the various Bypass alternatives are still considered as viable.)

- Higher construction and right-of-way costs.
- Higher residential and business relocation impacts.
- Adverse effect on three National Register-eligible historic architectural properties.
- Greater impacts to existing roadway network and to existing traffic patterns.
- Higher impacts to hazardous materials sites.

Crossover A-A'-B (Any Alternative Utilizing Crossover A-A'-B)

• Impacts to existing residential and business development in the vicinity of Peachtree Road (SR 1162).

- Impacts to the Sandy Run tributary floodplain.
- Higher construction costs.

Crossover D-K' (Any Alternative Utilizing Crossover D-K')

- Higher construction and right-of-way costs.
- Higher business relocation impacts.

For a complete comparison of impacts of the alternatives studied in detail see Table 2-6 in Chapter 2.

The Northern and Southern corridors and Crossovers C'-J and J-K were retained for further consideration and were combined to form ten (10) Tier 2 detailed study alternatives (see Exhibit 2-14).

The Mass Transit and TSM alternatives were eliminated from further consideration also due to their inability to solve the traffic problems identified in the study area. The No Build alternative was retained for further consideration as the baseline against which the Tier 2 detailed study alternatives would be measured. It assumes that in the year 2020, the existing transportation system would evolve as currently planned, but without improvement of existing US 74 or the construction of a US 74 Bypass of Shelby. It also assumes future typical sections on existing US 74 similar to current typical sections, including partial control of access between the eastern terminus of US 74 Business and SR 1001, and no control of access over the remainder of the facility.

S.7 PREFERRED ALTERNATIVE

The Least Environmentally Damaging Practicable Alternative (LEDPA), or Preferred Alternative, is Alternative 21 (as described in Section 2.4.7 of this document).

S.8 SUMMARY OF IMPACTS

The following is a summary of impacts for the ten (10) Tier 2 detailed study alternatives, including Alternative 21 (LEDPA). Table S-1 following the Executive Summary shows the impacts of these alternatives (see Exhibit 2-14). The impacts at this level of study were prorated to approximate right-of-way impacts. Table S-2 shows the impacts for the Preferred Alternative based on the proposed right-of-way established by the preliminary design for this alternative.

<u>Relocations</u> – Based on the earlier DEIS studies, the Tier 2 detailed study alternatives would result in an estimated 187 to 308 relocations; this would include between 166 and 272 residential relocations, 9 to 42 business relocations, and 3 to 5 relocations of churches. Based on preliminary design for this project, the Preferred Alternative would include a total of 192 relocations: 165 residences, 25 businesses, and 2 churches. Last Resort Housing will be considered and administered in accordance with State law, as applicable.

<u>Agricultural Impacts</u> - Approximately 255 to 316 acres of agricultural/cleared land would be impacted by the Tier 2 detailed study alternatives. The Preferred Alternative would impact an estimated 258 acres of agricultural/cleared land, based on prorated corridor data.

<u>Schools</u> - None of the study area schools are anticipated to be adversely impacted by the Tier 2 detailed study alternatives (including the Preferred Alternative). The improved access to area schools and elimination of some traffic from the existing US 74 highway resulting from construction of the Preferred Alternative could provide benefit to area educational facilities.

<u>Parks and Recreational Facilities</u> - No publicly-owned parks or recreational facilities would be affected by any of the proposed Tier 2 detailed study alternatives (including the Preferred Alternative).

Architectural Resources - A total of five architectural resources identified in the area of potential effect for this study are eligible for inclusion in the National Register of Historic Places: the Charles C. Hamrick House, the Burwell Blanton House, the Coleman Blanton Farm (a.k.a. Brushy Creek Dairy Farm), Cleveland County Bridge No. 79 (First Broad River Bridge), and the Hamilton-McBrayer Farm. There will be an effect to the Coleman Blanton Farm from Alternatives 1, 3, 7, and 9, but the effect would not be adverse. There would be an effect to the Hamilton-McBrayer Farm for Alternatives 13, 15, 16, 18, 19, and 21 (Preferred), but the effect will not be adverse, provided that highway improvements remain within current right-of-way limits. Appendix A.2 includes the NC HPO September 11, 1997 and October 19, 2000 effects concurrence forms for these five properties.

<u>Archaeological Resources</u> - There are no archaeological sites eligible for the National Register of Historic Places (NRHP) located within the Preferred Alternative. An archaeological survey of the Preferred Alternative was conducted from October 1999 to March 2000 and identified 17 archaeological sites, including two cemeteries, within the corridor. The archaeological survey report recommended all 17 sites ineligible for the NRHP. The North Carolina State Historic Preservation

Office (HPO) agreed with the recommendation on March 21, 2001. No further archaeological work is required for this project.

Community Facilities - Between 7 and 11 churches would be affected by any of the Tier 2 detailed study alternatives, either through relocation or through environmental impacts such as air or noise impacts. Between one and four known cemeteries would potentially be affected by the Tier 2 detailed study alternatives; additional unmapped or unmarked cemeteries could also be present. Seven churches and four known cemeteries are included within the Preferred Alternative corridor. Lithia Springs would be proximate to Alternatives 7, 9, 16, and 18, with potential aesthetic effects; disruption of access to the site could result from Alternatives 19 and 21 (Preferred). The NCDOT facilities on Kempers Road (SR 2063) could be affected by the Preferred Alternative. None of the other community facilities identified would be impacted by the Preferred Alternative.

<u>Utilities</u> - Several major electric transmission and distribution lines would be crossed by some or all of the Tier 2 detailed study alternatives (including the Preferred Alternative); these lines would include facilities belonging to Duke Power. One sewer line under the jurisdiction of the City of Shelby would be crossed by the Tier 2 detailed study alternatives (including the Preferred Alternative). Existing City of Shelby and Cleveland County major water distribution facilities would be crossed by some or all of the Tier 2 detailed study alternatives (including the Preferred Alternative). Gas lines owned by the City of Shelby would be crossed by all the alternatives except Alternatives 7, 9, 16, and 18. Fiberoptic, copper toll, exchange, and distribution telephone lines belonging to BellSouth would be crossed by some or all of the Tier 2 detailed study alternatives (including the Preferred Alternative).

<u>Air Quality</u> - Air quality in the study area is not anticipated to change considerably with construction of the Preferred Alternative. None of the sites studied in the air quality analysis is projected to exceed either the one-hour or eight-hour carbon monoxide concentrations set forth by the National Ambient Air Quality Standards.

Noise — Based on the DEIS analysis, noise impacts from any of the Tier 2 detailed study alternatives would range from 137 to 205 receptors; the Preferred Alternative would affect 147 receptors. Between 57 and 99 receptors would approach or exceed established FHWA Noise Abatement Criteria (67 dBA for residential development and 72 dBA for commercial development); the Preferred Alternative would have 84 receptors in this category. Between 81 (Preferred Alternative) and 150 receptors would experience a substantial noise increase (based on the criterion in effect at the time of that noise analysis). Between 137 and 205 receptors would exceed either one or both criteria. Based on the preliminary design of the Preferred Alternative, a total of 34 receptors would approach or exceed the 67/72 dBA criterion, and 49 receptors would experience a substantial increase (based on the newer noise increase criterion). Sixty-eight receptors would exceed either one or both criteria for the Preferred Alternative based on preliminary design. A total of seven noise barriers were examined for the Preferred Alternative; two of these potentially appear to be feasible.

Hazardous Materials Sites/Underground Storage Tanks (USTs) - Between 6 and 9 potential hazardous materials sites/UST sites could be affected by the various alternatives, primarily UST sites. Alternatives 7, 9, 16, 18, 19, and 21 (Preferred) could impact two junkyards; Alternatives 1, 3, and 15 could impact three junkyards. Alternatives 1, 7, 13, 16, and 19 could be involved with the Kings Mountain Landfill. Alternatives 13, 15, 16, 18, 19 and 21 (Preferred) could be involved with an abandoned household landfill.

Prime, Important and Unique Farmlands - An estimated 298 to 414 acres of prime farmland would

be impacted by the Tier 2 detailed study alternatives. Between 248 and 326 acres of state and locally

important farmland would be affected. No unique farmlands would be impacted by any of the

alternatives (including the Preferred Alternative). The Preferred Alternative would impact an

estimated 298 acres of prime farmland and 268 acres of important farmland, based on prorated

corridor data.

Mineral Resources - Two active mines would be potentially affected by the Tier 2 detailed study

alternatives: one would be impacted by Alternatives 3, 9, 15, 18, and 21 (Preferred), and the other

would be impacted by the Alternatives 1, 3, 7, and 9.

<u>Upland Plant Communities</u> - Approximately 261 to 351 acres of forest land would be impacted by

the Tier 2 detailed study alternatives. Approximately 255 to 316 acres of agricultural/cleared land

would be impacted by the alternatives. The Preferred Alternative would impact an estimated 277

acres of forest land and 258 acres of agricultural/cleared farmland, based on prorated corridor data.

Wetlands - Based on the DEIS studies, the following ranges of impacts would occur to surface

waters/wetlands (note: wetlands impact data reflect bridging of either of two Beaverdam Creek

wetland sites identified on the project):

Wetlands:

0.000 - 0.526 acres

Palustrine Open Waters:

1.688 - 2.437 acres

Surface Waters (Streams):

3.259 - 5.158 acres

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Based on the preliminary design for the project, the Preferred Alternative will impact 2.393 acres of wetlands (within the construction limits); 0.02 acres of that total will be bridged wetlands. A breakdown of the 2.373 acres of wetlands impacts is provided in Table S-2. The wetlands for the Preferred Alternative were identified in the field using strict delineation methods and preliminary design plans, in lieu of the generalized determination method and prorating of corridor-wide impacts to approximate right-of-way width used for the ten Tier 2 detailed study alternatives. Therefore, the Preferred Alternative delineation yielded different results than the determination. This is common when using delineation, a more detailed approach.

Permits will be required for the projected wetlands impacts. A Section 404 Individual Permit will be required from the US Army Corps of Engineers. A 401 Water Quality Certification from NCDENR will be required also.

<u>Wildlife</u> - Fragmentation and loss of wildlife habitat would result from construction of any of the Tier 2 detailed study alternatives (including the Preferred Alternative). Short-term displacement of local wildlife populations would occur during initial construction on the facility. Several of the proposed waterway bridges for the Preferred Alternative would provide opportunities for wildlife passage.

<u>Floodplains</u> - Between 4 and 11 floodplain encroachments would be required in conjunction with the Tier 2 detailed study alternatives. The Preferred Alternative will include six floodplain encroachments.

<u>Water Resources</u> – Between 34 and 38 stream crossings would be required for the 10 Tier 2 detailed study alternatives, based on information available during that phase of the study; the Preferred Alternative would include 35 stream crossings, based on this earlier information. The Preferred Alternative will impact 18,389 feet of streams (within the construction limits plus ten feet for equipment staging). Two stream relocations have been identified for the Preferred Alternative:

- An approximately 1,100-foot segment of a tributary of Buffalo Creek between SR 2063 and the Light Oak community will require relocation, most likely to the east of its existing location.
- An approximately 950-foot segment of a tributary of the First Broad River just to the west of Lithia Springs Road will be relocated, to the north of the existing stream bed.

Implementation of the NCDOT <u>Guidelines for Erosion and Sediment Control During Construction</u> and <u>Best Management Practices for Protection of Surface Waters</u> would reduce siltation and other stream crossing impacts.

<u>Protected Species</u> - One Federally listed species, the dwarf-flowered heartleaf (*Hexastylis naniflora*), exists within the project area. The Preferred Alternative will impact 36 dwarf-flowered heartleaf sites, and a total of 4.067 acres (within the construction limits plus ten feet for equipment staging) of these sites.

<u>Visual Impacts</u> - Visual effects are anticipated due to current lack of development in the study area, but would be limited to few people due to sparseness of population. Interchange areas would likely have the greatest effect on visual values in the study area.

S.9 COORDINATION

This project has included the following coordination and public participation activities to date:

Notice of Intent - A Notice of Intent was published in the Federal Register in May 1996 at the onset of the project, in accordance with the National Environmental Policy Act.

<u>Scoping Letters</u> - Scoping letters were sent to federal, state, and local agencies at the beginning of the project to obtain information on study area concerns.

<u>Steering Committee/Interagency Meetings</u> - Six steering committee/interagency meetings have been held to review and discuss the Build alternatives under consideration and/or to gain concurrence at various points in the study. Decisions regarding the retention/elimination and/or modification of the various alternatives were made at these meetings. Membership of the committee includes representatives of NCDOT, FHWA, federal and state environmental resource agencies, and Cleveland County and City of Shelby officials.

<u>Public Officials Meetings</u> - Two public officials meetings were held to apprise local officials of project status and to obtain input for the study. These meetings were held prior to each set of citizens workshops.

<u>Citizens Informational Workshops</u> - Four citizens informational workshops were held to update local citizens on project progress and to allow citizens an opportunity to provide verbal and written comments on the project.

<u>Corridor Public Hearing</u> - A Corridor Public Hearing was held for the project on January 26, 1999 to receive formal comments from the public following the publication of the DEIS.

<u>Written Comments</u> - Written comments were received throughout the study from local organizations and citizens regarding alternatives preferences and local issues of concern; these are summarized in Chapter 4 and Section 6.2.4.

<u>Small Group Informational Meetings</u> - The following groups met with NCDOT to discuss local concerns and project progress:

- Chagrin Farms/Williams Creek Subdivision Homeowners' Meeting
- Eskridge Grove Baptist Church

<u>Newsletters</u> - Five project newsletters were distributed to apprise interested parties of project progress and to provide notification of upcoming events. A mailing list is maintained and regularly updated for this purpose.

S.10 ANTICIPATED DESIGN EXCEPTIONS

There have been two anticipated design exceptions identified for this project, based on the preliminary design performed for the Preferred Alternative. These are as follows:

- 1) <u>Vertical Alignment on Existing US 74 at Western Project Terminus</u> The vertical grade along existing US 74 between the western project terminus and Peachtree Road (SR 1162) will be approximately 5 percent, versus the design criterion maximum of 4 percent.
- 2) <u>Vertical Alignment on Existing US 74 Along Eastern Portion of Project</u> The vertical grade along existing US 74 between Buffalo Creek and Bethlehem Road (SR 2245) will be approximately 5 percent, versus the design criterion maximum of 4 percent.

Table S-1 **SUMMARY OF IMPACTS FOR 10 TIER 2 DETAILED STUDY ALTERNATIVES**

SUIVINART			277-277-27-27-27-2							na
MPACT	4	3		zá:		ernative	12	18	19	21
Community Facilities Potentially	<u> Piritiri di Piritiri</u>		3+3+3+1+1+1+1+1+1+	(1111111111111111111111111111111111111	er production		**************************************	(1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1404040494040404	
Affected (1)	7	9	8	10	8	10	9	11	8	10
/ incoccu (1)										
Residences Relocated	202	219	166	183	255	272	219	236	218	235
Businesses Relocated	9	25	17	33	16	32	24	40	26	42
Churches Relocated	3	4	4	5	3	4	4	5	3	4
Total Relocations	214	248	187	221	274	308	247	281	247	281
Parks and Recreational Sites										
Affected (2)	1	1	0	0	1	1	0	0	0	0
Historic Sites Adversely Affected	o	0	0	0	0	0	0	0	0	0
Noise Receptors with 10 or 15 dBA										
Minimum Increase	150	100	149	99	141	91	140	90	131	81
Noise Receptors Equal to or Exceeding 66/71 dBA Criterion	74	63	68	57	99	88	93	82	95	84
Total Impacted Noise Receptors	14	- 63	0	- 57	33	00	93	02	35	04
Without Barriers	188	141	184	137	205	158	201	154	194	147
Total Impacted Noise Receptors With										
Barriers	112	105	109	102	116	109	113	106	117	110
Hazardous Materials Sites Potentially	_			_	_		_		_	
Affected	7	8	6	7	8	9	7	8	7	8
Prime Farmland (3): Acres	414	395	401	382	356	337	343	324	317	298
State and Locally Important							0.0		017	
Farmland (3): Acres	326	322	305	301	273	269	252	248	272	268
Stream Crossings	38	36	36	34	38	36	36	34	37	35
Floodplain Encroachments	8	4	8	4	11	7	11	7	10	6
Forest Land (3):										
Acres	351	303	343	295	318	270	310	261	326	277
Agricultural/Cleared Land (3): Acres	313.0	315.5	302.4	304.9	277.4	279.9	266.8	269.3	255.2	257.7
Acres	313.0	313.3	302.4	304.9	211.4	215.5	200.0	203.5	200.2	231.1
Wetlands (3), (4): Acres	0.526	0.000	0.526	0.000	0.526	0.000	0.526	0.000	0.526	0.000
Palustrine Open Water (3):		-								
Acres	2.437	2.108	2.363	2.034	2.091	1.762	2.017	1.688	2.042	1.713
Surface Waters (3):	5 450	2044	4 400	2 205	E 400	2040	4 472	2.050	4 400	2.204
Acres	5.158	3.944	4.499	3.285	5.132	3.918	4.473	3.259	4.498	3.284
Right-of-Way Cost: Millions	\$33.613	\$39.598	\$28.768	\$34.753	\$38.644	\$44.629	\$33.799	\$39.784	\$37,579	\$43.564
Construction Cost: Millions	\$167.000	\$163.100	\$164.800	\$160.900	\$164.900	\$161.000	\$162.700	\$158.800	\$159.800	\$155.900
Total Cost: Millions	\$200.613	\$202.698	\$193.5 <u>6</u> 8	\$195.653	\$203.544	\$205.629	\$196.499	\$198.584	\$197.379	\$199.464

ALTERNATIVE IDENTIFICATION LEGEND
1: A-J-M-N-S (a) (b)
3: A-J-M-N-P-S (b) (c)
7: A-J-K-M-N-S (a) (b)
9: A-J-K-M-N-P-S (b) (c)
13: A-C'-J-M-N-S (a) (d)
15: A-C'-J-M-N-P-S (c) (d)
16: A-C'-J-K-M-N-S (a) (d)
18: A-C'-J-K-M-N-P-S (c) (d)
19: A-C'-K-M-N-S (a) (d) (e)
21: A-C'-K-M-N-P-S (c) (d) (e)

Notes:

- (1) "Community Facilities Potentially Affected" include all facilities which fall within the corridors; these are not necessarily all relocatees. There were no schools within the corridors, so there are no schools included in these totals, although schools may sustain other impacts from highway proximity. A total of 11 churches and 3 cemeteries were identified within the various Tier 2 detailed alternative corridors. Shelby Seventh Day Adventist Church was not included in the totals because it was not in existence at the time of the Tier 2 analyses.
- (2) The one recreational facility identified is a privately owned golf facility and is not a Section 4(f) parkland property.
- (3) This quantity is prorated from corridor-wide data to represent a typical average right-of-way width impact.
- (4) Reflects bridging of either of the two wetland sites on Beaverdam Creek.

- Notes: (a) Segment M-N was shifted and is somewhat different from the Segment M-N shown on Exhibit 2-9 (in Alternatives 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, and 23 of the Tier 1 detailed study alternatives).
 - (b) Segments A-B and B-J from the original alternatives were consolidated into a single Segment A-J for those alternatives remaining as Tier 2 detailed study alternatives.
 - (c) Due to shifts in the detailed study alternative segments, former Segment M-P became a combination of revised Segment M-N (as described in footnote (a) and revised Segment N-P (which is not the same as the Tier 1 detailed study alternative Crossover N-P).
 - (d) Segments A-C and C-C' from the original alternatives were consolidated into a single Segment A-C' for those alternatives remaining as Tier 2 detailed study alternatives.
 - (e) Segments C'-K' and K'-K from the original alternatives were consolidated into a single Segment C'-K for those alternatives remaining as Tier 2 detailed study alternatives.

Table S-2
SUMMARY OF IMPACTS FOR PREFERRED ALTERNATIVE

12 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SUMMARY OF IMPACTS FOR PREFERRED ALTERNATIVE				
CATEGORY OF IMPAC	Γ		IMPA	CT	
		Perennial	12,347	lf	
	Right-of-Way Limits	Intermittent	11,707	1f	
	Right-of- way Limits	TOTAL	24,054	lf	
Streams (Length Taken)		Mitigable	21,940	lf	
Streams (Eength Taken)		Perennial	9,148	lf	
	Construction Limits	Intermittent	9,241	lf	
	Constitution Limits	TOTAL	18,389	lf	
		Mitigable	16,786	lf	
		PSS1	1.340	acres	
		PFO1	1.514	acres	
	Right-of-Way Limits	PEM1	0.216	acres	
	Right-of-way Limits	PEM2	0.050	acres	
		TOTAL	3.120	acres	
Wetlands		Mitigable	3.070	acres	
(Area Taken) ¹	Construction Limits	PSS1	1.160	acres	
		PFO1	0.999	acres	
		PEM1	0.214	acres	
		PEM2	0.020	acres	
		TOTAL	2.393	acres	
		Mitigable	2.373	acres	
Dwarf-Flowered	Right-of-Way Limits		5.275	acres	
Heartleaf Sites	Construction Limits		3.714	acres	
(Area Taken)	Construction Limits + 10-I	Foot Buffer	4.067	acres	
	Residences	165			
Relocations	Businesses	25			
Relocations	Churches ²	2			
	Total		192		
	Receptors with Substantial	Increase	49		
	Receptors Approaching or	Exceeding 67/72	34	-	
Noise	dBA				
	Total Impacted Receptors		68		
	Total Impacted Receptors	with Barriers	40		
2	Right-of-Way		\$ 51,600	0,000	
Costs ³	Construction	\$196,300,000			
	Total		\$247,900	0,000	

See Section 4.13.1 for wetland definitions.

Total churches does not include Eskridge Grove Church

See Section 2.4.7 for derivation of cost data.

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