

13.0 Appendices

APPENDIX A. TRANSPORTATION IMPROVEMENT PLANS SUMMARY

APPENDIX B. LIST OF REVIEWED DOCUMENTS

APPENDIX C. SUMMARY OF INTERVIEWS WITH STAKEHOLDERS AND LOCAL OFFICIALS

APPENDIX D. NUMERIC RESPONSES FROM INTERVIEWEES

APPENDIX E. REPORT MAPPING

APPENDIX F. SCOPING COORDINATION WITH AGENCIES

APPENDIX G. REFERENCES

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

**Appendix A. Transportation Improvement Plans Summary
Gaston County**

Route/City County	ID. NO./Break	Location - Description - Break	Mileage -	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
Interstate Projects							
I-85 GASTON	I-5000	I-85/US 321. GEOMETRIC SAFETY IMPROVEMENTS TO INTERCHANGE.		PLANNING/DESIGN			2007
				RIGHT-OF-WAY CONSTRUCTION	IM IM	4,700 23,700	FY 13 UNFUNDED
TOTAL PROJECT COST						28,400	
I-85 GASTON	I-5007	MILEPOST 24 TO MILEPOST 27. PAVEMENT REHABILITATION. 3 Miles(s)		CONSTRUCTION	S(M)	585	FY 07
	PB	REPAYMENT OF GARVEE BOND AMOUNT. GARVEE BOND FUNDING \$5,265 MILLION, CONSTRUCTION; PAYBACK FY 2007 - FY 2018		CONSTRUCTION	IM	7,047	FY 07
TOTAL PROJECT COST						7,632	
Rural Projects							
US 321 GASTON	R-2608*	GARDEN PARKWAY, I-85 WEST OF GASTONIA TO US 321 NORTH OF GASTONIA. FOUR LANE DIVIDED HIGHWAY ON NEW LOCATION. 7.5 Miles(s)		RIGHT-OF-WAY CONSTRUCTION	T T	24,400 76,500	UNFUNDED UNFUNDED
STRATEGIC HIGHWAY CORRIDOR						100,900	
NC 16 GASTON LINCOLN CATAWBA	R-2206	SOUTH OF LUCIA IN GASTON COUNTY TO SR 1895 IN CATAWBA COUNTY. FOUR LANES DIVIDED ON NEW LOCATION. 16.9 Mile(s)				101,578	PRIOR YEARS
	A	SOUTH OF LUCIA IN GASTON COUNTY TO NORTH OF NC 73 IN LINCOLN COUNTY. GRADING AND STRUCTURES.		CONSTRUCTION			COMPLETE
	AA	SOUTH OF LUCIA IN GASTON COUNTY TO NORTH OF NC 73 IN LINCOLN COUNTY. PAVING.		CONSTRUCTION			IN PROGRESS
	B	NORTH OF NC 73 TO NORTH OF SR 1386 (EGYPT ROAD-ST. JAMES CHURCH		CONSTRUCTION	STP	7,206	IN PROGRESS
	BA	PAVING, NORTH OF NC 73 TO NORTH OF SR 1386 AND CONSTRUCTION OF		CONSTRUCTION	HP STP	1,462 11,838	FY 08 FY 08
	C	NORTH OF SR 1386 IN LINCOLN COUNTY TO NORTH OF SR 1895 IN CATAWBA COUNTY. GRADING AND		CONSTRUCTION	STP	9,085	IN PROGRESS
	CA	NORTH OF SR 1386 IN LINCOLN COUNTY TO NORTH OF SR 1895 NEAR CHRONICLE IN CATAWBA		CONSTRUCTION	STP	14,800	FY 08
STRATEGIC HIGHWAY CORRIDOR						145,969	
NC 279 GASTON	R-3107	CHERRYVILLE TO US 321. WIDEN TO MULTI-LANES. 11.1 Mile(s)					
	A	CHERRYVILLE TO SR 1626 (BEAM ROAD)		RIGHT-OF-WAY CONSTRUCTION	STP STP	500 5,500	UNFUNDED UNFUNDED
	B	SR 1626 (BEAM ROAD) TO SR 1461 (LAKESIDE STREET).		RIGHT-OF-WAY CONSTRUCTION	STP STP	6,700 35,600	UNFUNDED UNFUNDED
	C	SR 1461 (LAKESIDE STREET) TO US 321.		RIGHT-OF-WAY CONSTRUCTION	STP STP	800 3,400	UNFUNDED UNFUNDED
TOTAL PROJECT COST						52,500	
NEW ROUTE GASTON	R-2720	NC 273 TO NC 16. TWO LANE CONNECTOR WITH TWO FOOT PAVED SHOULDERS ON NEW LOCATION. 0.7		RIGHT-OF-WAY CONSTRUCTION	STP STP	310 2,150	UNFUNDED UNFUNDED
TOTAL PROJECT COST						2,460	
Urban Projects							
NEW ROUTE MECKLENBURG GASTON	U-4705	BELMONT-MOUNT HOLLY NORTHERN LOOP, NC 27 WEST OF MOUNT HOLLY TO TO NC 27 EAST OF MOUNT HOLLY. MULTI-LANES ON NEW LOCATION. 4 Miles(s)		RIGHT-OF-WAY CONSTRUCTION	STP STP	6,100 42,650	UNFUNDED UNFUNDED
TOTAL PROJECT COST						48,750	
BELMONT GASTON	U-3608	NC 7, I-85 TO US 29-74. WIDEN TO FIVE LANES. 0.4 Mile(s)		RIGHT-OF-WAY CONSTRUCTION	STP STP	1,300 2,300	UNFUNDED UNFUNDED
TOTAL PROJECT COST						3,600	

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Break	Mileage -	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
GASTONIA GASTON	U-2408	NC 274, NC 275 TO US 29-74. WIDEN TO MULTI-LANES. 2.8 Mile(s)		PLANNING/DESIGN RIGHT-OF-WAY CONSTRUCTION	STP	10,416 16,099 26,515	PRIOR YEARS IN PROGRESS COMPLETE FY 07
GASTONIA GASTON	U-2523	NC 279, NC 7 TO WEST OF NC 275 IN DALLAS. WIDEN TO MULTI-LANES. 3.6 Mile(s)		CONSTRUCTION		16,075	PRIOR YEARS COMPLETE
	A	NC 7 (OZARK AVENUE) TO NORTH OF SR 2275 (ROBINSON-CLEMMER ROAD).		CONSTRUCTION			
	B	NORTH OF SR 2275 (ROBINSON-CLEMMER ROAD) TO WEST OF NC 275 IN DALLAS.		RIGHT-OF-WAY CONSTRUCTION	STP STP	5,200 5,800	UNFUNDED UNFUNDED
TOTAL PROJECT COST						27,075	
GASTONIA GASTON	U-2713	SR 1131 (LINWOOD ROAD), CROWDER'S CREEK TO US 29-74-NC 274 (FRANKLIN BOULEVARD). WIDEN TO MULTI-LANES, SOME RELOCATION. 2.2 Mile(s)		RIGHT-OF-WAY CONSTRUCTION	STP STP	146 2,500 15,500	PRIOR YEARS UNFUNDED UNFUNDED
TOTAL PROJECT COST						18,146	
GASTONIA CHARLOTTE GASTON MECKLENBURG	U-3321*	GARDEN PARKWAY, I-85 WEST OF GASTONIA TO NC 160 IN MECKLENBURG COUNTY. MULTI-LANES ON NEW LOCATION. 21.5 Mile(s)		PLANNING/DESIGN RIGHT-OF-WAY CONSTRUCTION	T T	8,626 28,000 - 419,000	PRIOR YEARS IN PROGRESS UNFUNDED UNFUNDED
PROJECT CURRENTLY UNDER STUDY BY THE NORTH CAROLINA TURNPIKE STRATEGIC HIGHWAY CORRIDOR AUTHORITY -							
TOTAL PROJECT COST						455,626	
GASTONIA GASTON	U-3425	SR 1136 (MYRTLE SCHOOL ROAD), US 29-74 TO SR 1255 (HUDSON BOULEVARD). WIDEN TO MULTI-LANES. 1.8 Mile(s)		RIGHT-OF-WAY CONSTRUCTION	STP STP	4,400 11,300	UNFUNDED UNFUNDED
TOTAL PROJECT COST						15,700	
GASTONIA GASTON	U-3806	US 29-74 (FRANKLIN BOULEVARD), SR 2200 (COX ROAD) TO SR 2339 (CHURCH STREET). ADD AN ADDITIONAL LANE IN		RIGHT-OF-WAY CONSTRUCTION	STP STP	86 2,400 3,250	PRIOR YEARS UNFUNDED UNFUNDED
TOTAL PROJECT COST						5,736	
GASTONIA GASTON	U-4736	UPGRADE GASTONIA COMPUTERIZED SIGNAL SYSTEM.		CONSTRUCTION CONSTRUCTION	L	4,779 306	PRIOR YEARS IN PROGRESS FY 07 08
TOTAL PROJECT COST						5,085	
MOUNT HOLLY GASTON	U-3633	NC 273 (SOUTH MAIN STREET), SOUTH OF CATAWBA DRIVE TO HIGHLAND STREET AT RANKIN AVENUE. WIDEN TO FIVE LANES. 1 Mile(s)		RIGHT-OF-WAY CONSTRUCTION	STP STP	274 700 4,100	PRIOR YEARS UNFUNDED UNFUNDED
TOTAL PROJECT COST						5,074	
Feasibility Studies							
SR 2478 (TITMAN ROAD) AND SR 2209 (CRAMERTON ROAD) GASTON	FS-0112C	NEW HOPE ROAD TO WOODLAWN AVENUE. WIDEN TO THREE LANES, PART ON NEW LOCATION.					
Feasibility Study in Progress							
Federal Bridge Projects							
SR 1103 GASTON	B-4517	CROWDER'S CREEK. REPLACE BRIDGE NO. 49		RIGHT-OF-WAY CONSTRUCTION	NFA NFA	300 100 1,000	PRIOR YEARS FY 08 FY 09
TOTAL PROJECT COST						1,400	
SR 1800 GASTON	B-4519	LITTLE LONG CREEK. REPLACE BRIDGE NO. 155		RIGHT-OF-WAY CONSTRUCTION	NFA NFA	100 30 300	PRIOR YEARS FY 08 FY 09
TOTAL PROJECT COST						430	
SR 1820 GASTON	B-4117	CREEK. REPLACE BRIDGE NO. 173		RIGHT-OF-WAY CONSTRUCTION	NFA NFA	100 90 1,200	PRIOR YEARS FY 08 FY 09
TOTAL PROJECT COST						1,390	

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

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SR 2014 GASTON	B-4752	SOUTH FORK CATAWBA RIVER. REPLACE BRIDGE NO. 6		RIGHT-OF-WAY CONSTRUCTION	NFA NFA	600 500 5,000	PRIOR YEARS FY 11 FY 12
TOTAL PROJECT COST						6,100	
SR 2439 GASTON	B-4753	DUHART'S CREEK. REPLACE BRIDGE NO. 15		RIGHT-OF-WAY CONSTRUCTION	NFA NFA	160 120 1,200	PRIOR YEARS FY 11 FY 12
TOTAL PROJECT COST						1,480	
Municipal Bridge Projects							
BESSEMER CITY GASTON	B-4575	MICKLEY AVENUE OVER NORFOLK SOUTHERN RAILROAD. REPLACE BRIDGE NO. 165		RIGHT-OF-WAY RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	C NFAM C NFAM	160 16 64 160 640	PRIOR YEARS FY 08 FY 08 FY 09 FY 09
TOTAL PROJECT COST						1,040	
GASTONIA GASTON	B-4344	TULIP DRIVE OVER KAYLOR BRANCH. REPLACE BRIDGE NO. 167		RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	C C NFAM	236 -- 360 1,200	PRIOR YEARS IN PROGRESS FY 07 FY 07
TOTAL PROJECT COST						1,736	
GASTONIA GASTON	B-4860	WEST DAVIDSON AVENUE. REPLACE BRIDGE NO. 421 OVER KAYLOR BRANCH		RIGHT-OF-WAY RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	C NFAM C NFAM	65 8 32 80 320	PRIOR YEARS FY 07 FY 07 FY 08 FY 08
TOTAL PROJECT COST						505	
Mitigation Projects							
VARIOUS CLEVELAND GASTON LINCOLN ALEXANDER IREDELL CATAWBA	EE-4912	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 12 PROJECT MITIGATION.		MITIGATION		1,267	PRIOR YEARS IN PROGRESS
TOTAL PROJECT COST						1,267	
Bicycle and Pedestrian Projects							
CRAMERTON GASTON	EB-5016	DOWNTOWN CRAMERTON-SOUTH FORK RIVER GREENWAY EXTENSION. PEDESTRIAN BRIDGES AND TRAIL.		CONSTRUCTION	STP	375	FY 08
TOTAL PROJECT COST						375	
GASTONIA GASTON	EB-5017	AVON-CATAWBA CREEK GREENWAY TRAIL EXTENSION.		CONSTRUCTION	STP	215	FY 07
TOTAL PROJECT COST						215	
Congestion Mitigation Projects							
GASTONIA GASTON	C-4934	NC 279 (NEW HOPE ROAD), BURTONWOOD DRIVE TO SR 2466 (GARRISON BOULEVARD). WIDEN TO MULTI-LANES.		RIGHT-OF-WAY RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	CMAQ L CMAQ L	75 19 1,562 390	FY 09 FY 09 FY 10 FY 10
TOTAL PROJECT COST						2,046	
Enhancement (Call Projects)							
BELMONT GASTON	E-4572	STREETSCAPE IMPROVEMENTS ALONG US 29-74, CATAWBA RIVER TO THE INTERSECTION. OF WILKINSON BOULEVARD, CATAWBA STREET, AND HAZELINE AVENUE.		CONSTRUCTION		285	PRIOR YEARS IN PROGRESS
TOTAL PROJECT COST						285	
CRAMERTON GASTON	E-4964	EIGHTH AVENUE, NINTH STREET, AND CENTER STREET. STREET SCAPING.		CONSTRUCTION		233	PRIOR YEARS IN PROGRESS
TOTAL PROJECT COST						233	
DALLAS GASTON	E-4959	PHASE II: TRADE, COLLEGE, HOFFMAN AND WILKINS STREETS. STREETSCAPING.		CONSTRUCTION CONSTRUCTION	O STP	14 27 106	PRIOR YEARS FY 07 FY 07
TOTAL PROJECT COST						147	

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Break	Mileage -	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
Hazard Elimination Projects							
I-85 GASTON	W-4840	CLEVELAND COUNTY LINE TO THE MECKLENBURG COUNTY LINE. INSTALL MILLED RUMBLE STRIPS ON THE MEDIAN AND OUTSIDE SHOULDERS.		CONSTRUCTION		103	PRIOR YEARS IN PROGRESS
TOTAL PROJECT COST						103	
US 321 CATAWBA GASTON LINCOLN	W-4838	C. GRIER BEAM BOULEVARD IN GASTON COUNTY TO US 70 IN CATAWBA COUNTY. INSTALL MILLED RUMBLE STRIPS ON THE MEDIAN AND OUTSIDE SHOULDERS.		CONSTRUCTION		218	
TOTAL PROJECT COST						218	
Public Transportation Program (GREEN TEXT INDICATES DELIVERABLE STIP PROJECT) * Indicates Intrastate Prjct							
Route/City County	ID. NO./Break	Location - Description - Break	Mileage -	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
Public Transportation Projects							
GASTONIA GASTON	TA-4926	1 -EXPANSION BUS		CAPITAL	FED	320	FY 12
				CAPITAL	L	40	FY 12
				CAPITAL	STAT	40	FY 12
UNFUNDED PROJECT						400	
GASTONIA GASTON	TG-4744	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	495	FY 07
				CAPITAL	L	124	FY 07
TOTAL PROJECT COST						619	
GASTONIA GASTON	TG-4745	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	495	FY 08
				CAPITAL	L	124	FY 08
TOTAL PROJECT COST						619	
GASTONIA GASTON	TG-4746	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	519	FY 09
				CAPITAL	L	130	FY 09
TOTAL PROJECT COST						649	
GASTONIA GASTON	TG-4747	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	544	FY 10
				CAPITAL	L	136	FY 10
TOTAL PROJECT COST						680	
GASTONIA GASTON	TG-4911	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	544	FY 11
				CAPITAL	L	136	FY 11
TOTAL PROJECT COST						680	
GASTONIA GASTON	TG-4912	ADA SERVICE COSTS, PREVENTIVE MAINTENANCE AND ROUTINE CAPITAL ITEMS		CAPITAL	FUZ	544	FY 12
				CAPITAL	L	136	FY 12
TOTAL PROJECT COST						680	
GASTONIA GASTON	TO-4711	FEDERAL OPERATING ASSISTANCE AND STATE MAINTENANCE		OPERATIONS	FUZ	703	FY 07
				OPERATIONS	L	703	FY 07
				OPERATIONS	SMAP	310	FY 07
TOTAL PROJECT COST						1,716	
GASTONIA GASTON	TO-4712	FEDERAL OPERATING ASSISTANCE AND STATE MAINTENANCE		OPERATIONS	FUZ	738	FY 08
				OPERATIONS	L	738	FY 08
				OPERATIONS	SMAP	310	FY 08
TOTAL PROJECT COST						1,786	
GASTONIA GASTON	TO-4713	FEDERAL OPERATING ASSISTANCE AND STATE MAINTENANCE		OPERATIONS	FUZ	775	FY 09
				OPERATIONS	L	775	FY 09
				OPERATIONS	SMAP	310	FY 09
TOTAL PROJECT COST						1,860	
GASTONIA GASTON	TO-4714	FEDERAL OPERATING ASSISTANCE AND STATE MAINTENANCE		OPERATIONS	FUZ	814	FY 10
				OPERATIONS	L	814	FY 10
				OPERATIONS	SMAP	310	FY 10
TOTAL PROJECT COST						1,938	
GASTONIA GASTON	TO-4909	FEDERAL OPERATING ASSISTANCE AND STATE MAINTENANCE		OPERATIONS	FUZ	814	FY 11
				OPERATIONS	L	814	FY 11
				OPERATIONS	SMAP	310	FY 11
TOTAL PROJECT COST						1,938	

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Cleveland County

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
US 74	R-2222	Dixon Ave, US 74 Bus West of Shelby to US 74 Business East of Shelby	Right of Way	NHS	715	Unfunded
			Construction	NHS	29,350	Unfunded
US 74	R-4005	Mooresboro to Proposed Shelby Bypass (R-2707) Upgrade to Full Control of Access	Planning/Design		100	Prior Years in Progress
			Right of Way	NHS	1200	Unfunded
			Construction	NHS	15000	Unfunded
US 74 BYPASS	R-2707*	SHELBY. FOUR LANE DIVIDED FREEWAY ON NEW LOCATION.	PLANNING/DESIGN MITIGATION	NHS	20,393 10,6667	Prior Years in Progress
	A	WEST OF SR 1162 (PEACHTREE ROAD) TO WEST OF SR 1314 (HOYLE ROAD).	RIGHT-OF-WAY RIGHT-OF-WAY	HP NHS	2,580 5,420	FY 08 FY 08
	AA	WEST OF SR 1162 (PEACHTREE ROAD) TO WEST OF SR 1161 (PLEASANT RIDGE ROAD). GRADING, STRUCTURES, PAVING.	CONSTRUCTION	NHS	24,700	FY 12
	AB	WEST OF SR 1161 (PLEASANT RIDGE ROAD) TO WEST OF SR 1314 (HOYLE ROAD). GRADING AND STRUCTURES.	CONSTRUCTION	NHS	10,100	FY 12
	B	WEST OF SR 1314 (HOYLE ROAD) TO WEST OF NC 226. GRADING AND STRUCTURES.	RIGHT-OF-WAY CONSTRUCTION	NHS NHS	4,300 31,700	FY 09 FY 11
	C	WEST OF NC 226 TO WEST OF NC 150. GRADING AND STRUCTURES.	RIGHT-OF-WAY CONSTRUCTION	NHS NHS	13,000 43,200	FY 12 UNFUNDED
	D	WEST OF NC 150 TO EXISTING US 74 WEST OF SR 2238 (LONG BRANCH ROAD). GRADING AND STRUCTURES.	RIGHT-OF-WAY CONSTRUCTION	NHS NHS	17,500 28,000	UNFUNDED UNFUNDED
	E	US 74 WEST OF SR 2238 TO WEST OF SR 1001 (STONE POINT ROAD). GRADING, STRUCTURES, PAVING.	RIGHT-OF-WAY CONSTRUCTION	NHS NHS	8,900 32,800	UNFUNDED UNFUNDED
	F	WEST OF SR 1161 (PLEASANT RIDGE ROAD) TO WEST OF NC 226. PAVING.	CONSTRUCTION	NHS	15,900	UNFUNDED

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GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
	G	WEST OF NC 226 TO WEST OF NC 150. PAVING.	CONSTRUCTION	NHS	18,500	UNFUNDED
	H	WEST OF NC 150 TO EXISTING US 74 WEST OF SR 2238 (LONG BRANCH ROAD). PAVING.	CONSTRUCTION	NHS	15,800	UNFUNDED
Shelby	U-2221	NC 180, NC 226 TO NC 150.	WIDEN TO MULTI- LANES.	NHS	15,839	PRIOR YEARS
	A	NC 226 TO SR 2200.	RIGHT-OF-WAY CONSTRUCTION	STP STP	1,200 6,100	UNFUNDED UNFUNDED
	B	SR 2200 TO SR 2052.	CONSTRUCTION			COMPLETE
	C	SR 2052 TO NC 150.	RIGHT-OF-WAY CONSTRUCTION	STP STP	1,400 7,400	UNFUNDED UNFUNDED
SHELBY	U-2567	US 74-NC 150 (DEKALB STREET). CONSTRUCT INTERCHANGE.	RIGHT-OF-WAY	NHS	5,500	UNFUNDED
			CONSTRUCTION	NHS	6,200	UNFUNDED
VARIOUS	EE-4912	ECOSYSTEM ENHANCEMENT PROGRAM FOR DIVISION 12 PROJECT MITIGATION.		1,267		Prior Years in Progress
			MITIGATION			
I-85	W-4839	SOUTH CAROLINA STATE LINE TO THE GASTON COUNTY LINE. INSTALL MILLED RUMBLE STRIPS		44		Prior Years in Progress
		ON THE MEDIAN AND OUTSIDE SHOULDERS.	CONSTRUCTION			
US 74	W-4841	I-26 IN POLK COUNTY TO US 74 BUSINESS IN CLEVELAND COUNTY. INSTALL MILLED RUMBLE STRIPS ON THE MEDIAN AND OUTSIDE SHOULDERS.	CONSTRUCTION	HES	10280	Prior Years FY 07
NC 150	SF-4912A	SR 1253 (CHARLES ROAD). CONSTRUCT LEFT TURN LANE.	CONSTRUCTION	HES	10 100	PRIOR YEARS FY 07

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Mecklenburg County

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
		INCLUDES I-4722 - ENTIRE PROJECT CONSTRUCTED UNDER I-4721 A	TOTAL PROJECT COST	2510.00		
I-77	I-3311	CHARLOTTE, 5TH STREET IN CHARLOTTE TO NC 73 (SAM FURR ROAD). ADDITIONAL LANES. 14.4 Mile(s)	PLANNING/DESIGN	98470.00	PRIOR YEARS 2008	
	A	I-85 TO NORTH OF I-485 (CHARLOTTE OUTER LOOP).	CONSTRUCTION	COMPLETE		
	AA	NC 73 (SAM FURR ROAD), WEST OF I-77 TO EAST OF I-77; SR 2136 (GILEAD ROAD), WEST OF I-77 TO EAST OF I-77.	CONSTRUCTION	COMPLETE		
	B	I-485 (CHARLOTTE OUTER LOOP) TO NC 73 (SAM FURR ROAD).	CONSTRUCTION CONSTRUCTION	16,779 20,220	UNFUNDED UNFUNDED	
	C	5TH STREET TO I-85. HIGH OCCUPANCY VEHICLE (HOV) LANES.	CONSTRUCTION	29,000	UNFUNDED	
	D	I-485 (CHARLOTTE OUTER LOOP) TO SR 2136 (GILEAD ROAD).	CONSTRUCTION		COMPLETE	
	E	NORTH OF I-277/NC 16 (BROOKSHIRE FREEWAY) TO SOUTH OF I-85.	CONSTRUCTION	16,000	FY 13	
	RIDOR		TOTAL PROJECT COST	180469.00		
I-77	I-4720	I-277 (EXIT 9) TO THE SOUTH CAROLINA STATE LINE. RESURFACE WITH NOVACHIP.	9.3 Mile(s)	350.00	FY 07	
	PB	REPAYMENT OF GARVEE BOND AMOUNT.		4218.00	FY 07	
		GARVEE BOND FUNDING \$3.15 MILLION, CONSTRUCTION; PAYBACK FY 2007 - FY 2018	TOTAL PROJECT COST	4568.00		
I-77	I-4733	CORNELIUS, SR 5544 (WEST CATAWBA AVENUE). MODIFY INTERCHANGE.	PLANNING/DESIGN RIGHT-OF-WAY RIGHT-OF-WAY RIGHT-OF-WAY CONSTRUCTION	784 1,290 860 4,300 50 27,000	PRIOR YEARS IN PROGRESS FY 10 FY 10 FY 10 UNFUNDED	

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March 31, 2009

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I-485	R-2248*	CHARLOTTE WESTERN OUTER LOOP, WEST OF I-77 TO I-85 NORTH. FREEWAY ON NEW LOCATION. 28 Mile(s)	PLANNING/DESIGN MITIGATION	500,545 1,082	PRIOR YEARS IN PROGRESS FY 11	
	A	WEST OF I-77 SOUTH TO US 29-74.	CONSTRUCTION		COMPLETE	
	BA	NORTH OF US 29-74 (WILKINSON BOULEVARD) TO NORTH OF I-85.	CONSTRUCTION		COMPLETE	
	BB	NORTH OF I-85 TO NORTH OF NC 27.	CONSTRUCTION		COMPLETE	
	C	NORTH OF NC 27 (MOUNT HOLLY ROAD) TO EAST OF SR 2042 (OAKDALE ROAD).	CONSTRUCTION		COMPLETE	
	D	EAST OF SR 2042 (OAKDALE ROAD) TO EAST OF NC 115 (OLD STATESVILLE ROAD).	CONSTRUCTION	30,350	IN PROGRESS	
	E	EAST OF NC 115 (OLD STATESVILLE ROAD) TO I-85 NORTH.	RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	2,500 16,000 3,000 122,600	FY 10 FY 10 FY 13 FY 13	
	F	WEST OF I-77 TO ARROWOOD ROAD-BROWN GRIER ROAD.	CONSTRUCTION		COMPLETE	
	G	INTERCHANGE WITH SR 2042 (OAKDALE ROAD).	CONSTRUCTION	400.00	Unfunded	
	RIDOR		TOTAL PROJECT COST	676477.00		
I-485	R-4902*	US 521 (JOHNSTON ROAD) TO I-77 SOUTH OF CHARLOTTE. WIDEN TO SIX-LANES.	6.6 Mile(s)	NHS NHS NHS	2,000 100 800 42,500	PRIOR YEARS IN PROGRESS FY 11 FY 12 FY 13
	RIDOR			45,400		
US 21	R-4059	CORNELIUS, CATAWBA AVENUE. INTERSECTION IMPROVEMENTS.	0.4 Mile(s)	RIGHT-OF-WAY CONSTRUCTION	STP STP	1,650 1,175
			TOTAL PROJECT COST	2825.00		
US 52, US 74, NC 49	R-4413	NATIONAL HIGHWAY SYSTEM GUARDRAIL REHABILITATION. UPGRADE SUBSTANDARD GUARDRAIL, END TREATMENTS AND	CONSTRUCTION	340	FY 07	

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
		BRIDGE ANCHOR UNITS.				
Urban Area Charlotte	U-2704	US 29-74 (WILKINSON BOULEVARD) AND SR 5901 (BILLY GRAHAM PARKWAY). AREA IMPROVEMENTS. 0.8 Mile(s)	MITIGATION	600 171	PRIOR YEARS UNFUNDED	
	B	CHARLOTTE, US 29-74 (WILKINSON BOULEVARD) AND US 521 (BILLY GRAHAM PARKWAY).	RIGHT-OF-WAY CONSTRUCTION	3,700 5,500	UNFUNDED UNFUNDED	
		PROGRAMMED FOR PLANNING AND ENVIRONMENTAL STUDY ONLY	TOTAL PROJECT COST			
Urban Area Charlotte	U-3411	NC 160 (WEST BOULEVARD) RELOCATION, EAST OF I-485 (CHARLOTTE OUTER LOOP) TO HORSESHOE LANE. MULTI- LANES ON NEW LOCATION. 2.3 Mile(s)	RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION	500 16,400 1,700	FY 07 FY 07 FY 07	
		CONSTRUCTION BY OTHERS - NCDOT TO CONTRIBUTE \$1.7 M TOWARDS CONSTRUCTION COST	TOTAL PROJECT COST	18600.00		
	U-3603	NC 27 (ALBEMARLE ROAD), PIERSON DRIVE TO REDDMAN ROAD. ADD ADDITIONAL EASTBOUND LANE. 0.8 Mile(s)	CONSTRUCTION CONSTRUCTION	550 310 1,240	PRIOR YEARS FY 07 FY 07	
	RIDOR		TOTAL PROJECT COST			
Urban Area Charlotte	U-3850	I-277 (JOHN BELK FREEWAY). ADD WESTBOUND LANE THROUGH I-77 INTERCHANGE. 0.5 Mile(s)		6002, 400		FY 11 FY 11
		PLANNING AND DESIGN BY CITY		3,000		
	U-4401*	SR 2804 (REEDY CREEK ROAD) AND SR 2805 (HARRISBURG ROAD). REALIGN INTERSECTION.	PLANNING/DESIG N RIGHT-OF-WAY CONSTRUCTION	150 600 2,800	PRIOR YEARS IN PROGRESS FY 08 FY 10	
			TOTAL PROJECT COST	3550.00		

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
	U-4441	BICYCLE/PEDESTRIAN CONNECTIONS TO TRAIL SYSTEM. STUDY TO IDENTIFY NEIGHBORHOOD CONNECTIONS FOR NON-MOTORIZED TRANSPORTATION.	STUDY			
		TRANSPORTATION AND COMMUNITY AND SYSTEMS PRESERVATION GRANT	TOTAL PROJECT COST		396.00	
	U-4442	NORTH-SOUTH CORRIDOR TRANSITWAY PROJECT. STUDY TO REVIEW AREA'S LAND USE PATTERNS TO CONCENTRATE DEVELOPMENT WITHIN MAJOR TRAVEL CORRIDORS TO ENHANCE HIGH CAPACITY TRANSIT SERVICE.	STUDY		PRIOR YEARS IN PROGRESS	
MATTHEWS	U-4713	SR 3440 (MCKEE ROAD) EXTENSION, SR 3457 (CAMPUS RIDGE ROAD) TO SR 3448 (PLEASANT PLAINS ROAD). TWO LANES ON MULTI-LANE RIGHT OF WAY ON NEW LOCATION. 1.1 Mile(s)				
A	SR 3448	STP RIGHT-OF-WAY STP CONSTRUCTION	3,900 2,900			
B	SR 1009	RIGHT-OF-WAY STPDA RIGHT-OF-WAY CONSTRUCTION STPDA CONSTRUCTION	340 1,360 260 1,040			
	PLANNING AND DESIGN OF SEGMENT B BY TOWN	TOTAL PROJECT COST	9,800			
MATTHEWS MINT HILL	U-5007	NC 51, US 74 (INDEPENDENCE BOULEVARD) TO SR 3128 (LAWYERS ROAD). WIDEN TO MULTI-LANES. 5.5 Mile(s)	STP RIGHT-OF-WAY STP CONSTRUCTION	UNFUNDED UNFUNDED		
		TOTAL PROJECT COST	58,500			

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
PINEVILLE	U-3447	NC 51, SOUTH CAROLINA STATE LINE TO SR 3645 (DOWNS CIRCLE). WIDEN TO MULTI-LANES. 1 Mile(s)	PLANNING/DESIGN RIGHT-OF-WAY STP MITIGATION STP CONSTRUCTION	PRIOR YEARS IN PROGRESS IN PROGRESS FY 08 FY 09		
		TOTAL PROJECT COST	8,087			
SOUTH BOULEVARD	U-5014	SOUTH BOULEVARD SIGNAL SYSTEM.	CONSTRUCTION DP CONSTRUCTION	FY 07 FY 07 08		
	PROJECT TO BE ADMINISTERED BY CITY OF CHARLOTTE	TOTAL PROJECT COST	1,368			
VARIOUS	U-4744	STPDA IN MECKLENBURG-UNION METROPOLITAN PLANNING ORGANIZATION (MUMPO).	CONSTRUCTION STPDA CONSTRUCTION	FY 12 FY 12		
		TOTAL PROJECT COST	200			
VARIOUS	U-9999C	MECKLENBURG-UNION METROPOLITAN PLANNING ORGANIZATION (MUMPO) PLANNING (PL) SUPPLEMENT.	S(M) ENGINEERING STPDA ENGINEERING	FY 09 10 11 12 13 FY 09 10 11 12 13		
		TOTAL PROJECT COST	3,900			
WEDDINGTON ROAD	U-5025	WEDDINGTON ROAD, TRADE STREET TO I-485	RIGHT-OF-WAY CONSTRUCTION CONSTRUCTION CONSTRUCTION	FY 07 FY 07 FY 07 FY 07		
	"S" REPRESENTS "MOVING AHEAD" FUNDS	TOTAL PROJECT COST	4,808			
FEASIBILITY STUDIES						
I-77	FS-0510A	5TH STREET IN CHARLOTTE TO NC 73 (SAM FURR ROAD). ADD HOV LANES.	14.4 Mile(s)			
	FEASIBILITY STUDY IN PROGRESS					
SR 1501 IDLEWILD ROAD	FS-0210B	SR 1520 (FAIRVIEW ROAD-INDIAN TRAIL ROAD) TO I-485. UPGRADE EXISTING ROADWAY.	1.4 Mile(s)			
	FEASIBILITY STUDY IN PROGRESS					

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Route/City County	ID. NO./Break	Location - Description - Mileage - Break	Work Type	Funding Source	Cost Estimate (Thou)	Schedule (Fiscal Years)
FEDERAL BRIDGE PROJECTS						
B-4779 US 29 SOUTHBOUND LANE	MALLARD CREEK. REPLACE BRIDGE NO. 147	FARIGHT-OF-WAY FACONSTRUCTION	400 300 3,000			
SR 2025	B-4579	MCINTYRE CREEK. REPLACE BRIDGE NO. 134	FARIGHT-OF-WAY FAMITIGATION FACONSTRUCTION	PRIOR YEARS FY 08 FY 08 FY 09		
	PURCHASE ORDER CONTRACT (POC)	TOTAL PROJECT COST	336			
SR 2120	B-4200	GAR CREEK. REPLACE BRIDGE NO. 100	FARIGHT-OF-WAY FACONSTRUCTION	PRIOR YEARS FY 10 FY 11		
		TOTAL PROJECT COST	540			
SR 2804	B-4580	REEDY CREEK. REPLACE BRIDGE NO. 177	NFARIGHT-OF- WAY NFACONSTRUCTION	PRIOR YEARS FY 09 FY 10		
		TOTAL PROJECT COST	850			
SR 3135	B-3677	IRVINS CREEK. REPLACE BRIDGE NO. 36	FARIGHT-OF-WAY FACONSTRUCTION	PRIOR YEARS FY 07 FY 08		
		TOTAL PROJECT COST	1,240			
SR 3168	B-4201	GREASY CREEK. REPLACE BRIDGE NO. 38	FARIGHT-OF-WAY FACONSTRUCTION	PRIOR YEARS FY 10 FY 11		

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

York County

Rock Hill-Fort Mill Area Transportation Study (RFATS)									
(Cost in Thousands)									
Policy Committee Amended - J									
PIN #	Priority	Guideshare Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
7743	1	SC 161 EXT / SC 122 (DAVE LYLE) Extension							
	1	SC 161							
7747		CHERRY RD TO INDIA HOOK RD							
17333		INDIA HOOK RD TO 901 SEG C-2/1							
17335		PENNINGTON RD TO MT GALLANT RD WEST	2,549 C						
		SEG B-2							
23149		SC 161 / SC 901 INTERSECTION							
99222	8	INTERSECTION IMPROVEMENT (EAST MAIN/ EAST WHITE)							
PIN #	Projects Exempt from Guideshare		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
25935	I-77/US 21 (ANDERSON RD) INTERCHANGE (EXIT 77)		1,000 R						
	SC 49 (WIDEN FROM CROWDERS CREEK TO SC 55) (CATAWBA COG GUIDESHARE PROJECT)		4,000 C	3,475 C					
18670	REGENT PARKWAY CONNECTOR (US 21 TO DORMAN RD) (DEVELOPER FUNDED PROJECT)								
	SAFETY PROJECTS (P, R, & C)								SEE 2007 STIP PROGRAM SUMMARIES
	PAVEMENT MARKING & SIGNING PROJECTS								SEE 2007 STIP PROGRAM SUMMARIES
	ITS (INTERSATE)								SEE 2007 STIP PROGRAM SUMMARIES
	INCIDENT RESPONSE PROGRAM								SEE 2007 STIP PROGRAM SUMMARIES
	PAVEMENT PROJECTS								SEE 2007 STIP PROGRAM SUMMARIES
	BRIDGE REPLACEMENT & REHAB PROJECTS								SEE 2007 STIP PROGRAM SUMMARIES
	APPROPRIATION EARMARKS								SEE 2007 STIP APPROPRIATION EARMARKS
PIN #	State Infrastructure Bank Projects		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
23011	INTERCHANGE OF I-77/ SC 161/ US 21								
23395	SC 5 EXT (I-85 TO BEYOND SC 55 IN YORK CO)		15,000 C	10,000 C					
PIN #	SAFETEA-LU Earmark Projects		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	HIGHWAY 901		343 **	170	170	170			
	YORK COUNTY								
	SAFETEA-LU # 4890 *								
PIN #	CMAQ Projects***		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	TRAFFIC SIGNAL CONTROLLER UPGRADES (SC 161, US 21, SC 72 AND SC 122)			500					
	SOUTH POINTE TRAIL (SIDEWALK CONNECTION) (MATCHING SOURCE - YORK COUNTY, CITY, RHSD)			383					
	RAWLINSON ROAD TRAIL - PHASE I (TRAIL CONNECTION) (MATCHING SOURCE - CITY OF ROCK HILL)			400					
	ALTERNATIVE FUEL VEHICLES (PURCHASE CARTS AND HYBRID UPGRADES) (MATCHING SOURCE - CITY OF ROCK HILL)			34					
	ROCK HILL TROLLEY TOWN TOURIST LOOP (DEVELOP AND OPERATE TROLLEY SERVICE) (MATCHING SOURCE - CITY OF ROCK HILL)			1,216					
	DAVE LYLE BOULEVARD (TRAFFIC STUDY) (MATCHING SOURCE - CITY OF ROCK HILL)			28					
	IDLE REDUCTION AWARENESS PROGRAM (AT SCHOOLS IN NON-ATTAINMENT AREA) (CATAWBA COG, SCEO, MUSEUM OF YORK COUNTY)			20					

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

PIN #	Enhancement Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	RFATS ENHANCEMENT PROGRAM		166	166	166			

PIN #	Locally Funded Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	FORT MILL BYPASS (SC 160 TO GOLD HILL RD)	4,407 C	735 C					
	EBENEZER RD (DOTSON TO OLD POINTE)	24 R	899 C					
	SC 274 (SC 161 TO SC 55) (YORK COUNTY 1997 LOCALLY FUNDED PROJECT)	5,943 C	6,483 C	3,782 C				
	SC 901 (SC 72 TO I-77)	838 R						
	SC 72 (BLACK ST TO HECKLE)	3,384 C	5,076 C	2,538 C				
	CHERRY ROAD (YORK TO HECKLE)	296 P	2,712 C	1,695 C				
	FORT MILL SOUTHERN BYPASS	231 R						
	TEGA-CAY GOLD HILL CONN (SC 160 TO GOLD HILL RD)	111 P	2,144 C	429 C				
		172 R	29 R					
		505 P	416 P	2,830 C	4,851 C	4,447 C		
		48 P	903 R	113 R				
		81 R	7P	524 C				
			163 R					
			524 C					

PIN #	Federal Transit Administration	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	CITY OF ROCK HILL	614	660					
	YORK COUNTY COUNCIL ON AGING (CA)		42					
	YORK CO DSN BOARD (CA)		36					

Key: P - PRELIMINARY ENGINEERING, R - RIGHT OF WAY, C - CONSTRUCTION, CA - CAPITAL PURCHASE, OP - OPERATING, PM - PREVENTIVE MAINTENANCE
 * - FEDERAL AMOUNT SHOWN IS THE MAXIMUM AMOUNT IN SAFETEA-LU THAT MAYBE DISTRIBUTED OVER 5 YEARS (FY 2005-2009). ACTUAL FUNDING CURRENTLY AVAILABLE RESULTING FROM FY 2005
 FY 2007-2009 FUNDING SUBJECT TO FUTURE APPROPRIATION ACTS (PROJECTED AT 85% FOR ESTIMATE PURPOSES)
 ** - INCLUDES FY 2005 AND FY 2006 SPENDING LIMITATIONS
 *** - INCLUDES UNPROGRAMMED RFATS NONATTAINMENT FUNDS (\$3,980,418) FROM FY 2005 & FY 2006

Catawba COG

(Cost in Thousands) Revision 4 - June 2

PIN #	Guideshare Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
18670	SC 49 (WIDEN FROM CROWDERS CREEK TO SC 55)	2,524 C						
	SC 55 (SELECTED IMPROVEMENTS FROM SC 557 TO US 321)	425 R		1,900 C	865 C			
	SC 5 BUS (WIDENING TO 5 LANES FROM SC 324 TO SC 5 / SC 161 (EAST OF YORK))	736 C						
22071								
PIN #	Innovative Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
23399	SC 161 / 122 EXTENSION (WIDEN TO 5 LANES FROM SC 161 / SC 121 IN YORK COUNTY TO US 521 IN LANCASTER COUNTY)							
PIN #	York County Locally Funded Projects	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	SC 5 (CHEROKEE CO LINE TO SC 5 BYPASS)							
	SC 274 (SC 161 TO SC 55)							

PIN #	Federal Transit Administration	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	YORK COUNTY (AD, OP)		106					

Key: P - PRELIMINARY ENGINEERING, R - RIGHT-OF-WAY, C - CONSTRUCTION, OP - OPERATING, AD - ADMINISTRATION, CA - CAPITAL, PL - PLANNING, PS - PURCHASE OF SERVICE, VA - VEHICLE ACQUISITION
 * - FEDERAL AMOUNT SHOWN IS THE MAXIMUM AMOUNT IN SAFETEA-LU THAT MAYBE DISTRIBUTED OVER 5 YEARS (FY 2005-2009). ACTUAL FUNDING CURRENTLY AVAILABLE RESULTING FROM FY 2005
 FY 2007-2009 FUNDING SUBJECT TO FUTURE APPROPRIATION ACTS (PROJECTED AT 85% FOR ESTIMATE PURPOSES)
 ** - INCLUDES FY 2005 AND FY 2006 SPENDING LIMITATIONS

Federal Lands Program

(Cost in Thousands) Revision 7 (Correction) - Decer

Project	Owner Agency	Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
KIMO_10(1)	NATIONAL PARK SERVICE, KINGS MOUNTAIN NATIONAL MILITARY PARK	RESURFACE THE MAIN PARK DRIVE.					750		

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

Recreational Trails Program Revision 7 (Correction) - Decer

(Cost in Thousands)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Project	Agency							
WATERFORD TRAIL PROJECT	City of Rock Hill	Federal - \$100 Total - \$125	170,000	170,000	170,000			
CROWDER CONNECTOR TRAIL	SCPRT, SC STATE PARK SERVICE - KINGS MOUNTAIN STATE PARK	Federal - \$58 Total - \$72						
NATION FORD GREENWAY	York County	Federal - \$13 Total - \$16						

SAFETEA-LU Earmarks* Revision 6 - September 20, 2007

Earmark Projects	MPO/COG	Congress District	Spending Limitation **				Total Estimated	SAFETEA-LU Appropriation (2005-2009)
			FY 2005/2006	FY 2007	FY 2008	FY 2009		
HIGHWAY 901	RFATS	5	343,460	170,000	170,000	170,000	\$510,000	FEDERAL -\$1,000,000 MATCH -\$213,365
SC HIGHWAY BYPASS 5 BETWEEN WIDEN SC HIGHWAY 5 BYPASS	CATAWBA	5	549,536	272,000	272,000	272,000	\$816,000	FEDERAL -\$1,600,000 MATCH -\$341,384
WIDEN SC HIGHWAY 5 BYPASS	CATAWBA	5	1,373,840	680,000	680,000	680,000	\$2,040,000	FEDERAL -\$4,600,000 MATCH -\$853,460

Key: * - FEDERAL AMOUNT SHOWN IS THE MAXIMUM AMOUNT IN SAFETEA-LU THAT MAYBE DISTRIBUTED OVER 5 YEARS (FY 2005-2009)
 ** - ACTUAL FUNDING CURRENTLY AVAILABLE RESULTING FROM FY 2005 AND 2006 ANNUAL APPROPRIATION ACTS. FY 2007-2009 FUNDING SUBJECT TO FUTURE APPROPRIATION ACTS (PROJECTED AT 85% FOR ESTIMATE PURPOSES)

Appropriation Earmarks* Revision 1 (Correction) - December 5, 2006

Earmark Projects	MPO/COG	Spending Limitation		Appropriation	Matching Agency
		FY 2006	Total Estimated		
CITY OF ROCK HILL TROLLEY STUDY	RFATS	396,000	\$396,000	FEDERAL -\$400,000 MATCH -\$99,000	ROCK HILL

Key: * - ACTUAL AMOUNT AUTHORIZED WAS REDUCED BY A 1% ACROSS-THE-BOARD RECISSION

Interstate Program Revision 7 (Correction) - December 5, 2007

Projects (PIN#)	COG/MPO (County)	Description	Previous Program FY 2006	FY 2007	TIP Cost (2007-2012)	Remaining Cost (2013+)	Funding

Key: P - PRELIMINARY ENGINEERING, R - RIGHT OF WAY, C - CONSTRUCTION, CA - CAPITAL PURCHASE, OP - OPERATING

Innovative Projects (State Infrastructure Bank)

Projects	Pin#	County	COG/MPO	Description	Length		FY 2006	FY 2007
					Mi	Km		
I-77 / SC 161 / US 21	23011	YORK	RFATS	RECONSTRUCT INTERCHANGE (EXIT 82)				
SC 161 / 122 EXTENSION	23399	LANCASTER YORK	CATAWBA RFATS	WIDEN TO 5 LANES FROM SC 161 / SC 121 IN YORK COUNTY TO US 521 IN LANCASTER COUNTY	20.74	33.37		
SC 5 EXTENSION	23395	CHEROKEE	APPALACHIAN/ RFATS	PHASE 1, WIDEN TO 5 LANES FROM I-85 TO E. OF US 29 AND CONSTRUCT NEW BRIDGE OVER NORFOLK SOUTHERN RAILROAD PHASE 2, WIDEN TO 5 LANES FROM E. OF US 29 TO YORK CO LINE. ALSO INCLUDES A 4 LANE DIVIDED SECT.	8.20	13.19	15,000 C	10,000 C

York County Subtotals: \$15,000 (FY 2006), \$10,000 (FY 2007)

York County Locally Funded Projects Revision 2 Correction - Febru

Projects	Pin#	County	Description	Length		FY 2007	FY 2008
				Mi	Km		
SC 5		YORK	CHEROKEE CO LINE TO SC 5 BYPASS	9.77	15.72		
SC 274		YORK	SC 161 TO SC 55	7.30	11.75		

Appendix B. List of Reviewed Documents

Guidance for Assessing Indirect and Cumulative Effects of Transportation Projects in North Carolina, Volumes I & II, November 2001
"Indirect and Cumulative Effects: A System Primer for Metropolitan Planning Organizations," October, 2007
Gastonia City Council Meeting Minutes for June 19, 2007
Resource Guidebook for Residential and Commercial Development, 2007
2030 Long Range Transportation Plan, GUAMPO Technical Coordinating Committee, May 24, 2005
City of Charlotte Transportation Action Plan Policy Document, 2006
2015 Plan, Planning for Our Future, November, 1997
Strategic Business Plan, Mecklenburg County, 2008-2010
York County Industry Cluster & Target Market Study, 2005
Cleveland County Land Use Plan, 2005
Gaston County Comprehensive Planning Program, 2002
Gaston County Hazard Mitigation Plan, 2004
2025 York County Comprehensive Plan, Land Use Element
Charlotte-Douglas International Airport Written Re-Evaluation, 2006
Watershed Restoration Plan for the Catawba River Basin, 2001
Protecting our Lake Watersheds, City of Mount Holly, 2004
Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, 2004
Macon-Charlotte Southeast High Speed Rail Corridor Plan-Final Report, 2004
Cleveland-Gaston Comprehensive Economic Development Strategy, 2003
York County, Strategic Economic Development Plan, 2007
Cleveland County land Use Development Plan, 2005
The City of Charlotte Transportation Action Plan, 2006
North Carolina Department of Transportation Improvement Programs 2007-2013/2009-2015
2015 Planning For Our Future, Mecklenburg County, 1997
Performance Report, Mecklenburg County, 2006
City Vision 2010, Gastonia's Comprehensive Plan, 1995
Conformity Analysis and Determination Report for the Cabarrus-Rowan MPO, the Gaston Urban Area MPO, and the Mecklenburg-Union MPO 2030 Long Range Transportation Plans and the FY 2007-2013 State Transportation Improvement Programs and for Non-MPO Areas of Lincoln County, Iredell County, Gaston County, and Union County areas, Appendix D: 2010, 2020, and 2030, June 8, 2005
Amendment 2: Conformity Analysis and Determination Report for the Cabarrus-Rowan MPO, the Gaston Urban Area MPO, and the Mecklenburg-Union MPO 2030 Long Range Transportation Plans and the FY 2007-2013 State Transportation Improvement Programs and for Non-MPO Areas of Lincoln County, Iredell County, Gaston County, and Union County areas, May 25, 2007
Statewide Transportation Improvement Program 2007 – 2012, Revision 7, December 5, 2007.

Appendix C. Summary of Interviews with Stakeholders and Local Officials

Charlotte-Douglas International Airport

October 17, 2007

5501 Josh Birmingham Parkway
Charlotte, NC 28208
704.359.4932

Attendees:

Jack Christine (Planner)
Jerry Orr (Director)
Ike Reeves (Associate Planner)
J. Scott Lane (The Louis Berger Group Inc.)
Lisa Murphy (The Louis Berger Group Inc.)

Follow-up Items:

Mr. Reeves will send GIS files for the new road alignments and airport layout. Nelson Ahrens is the CAD manager and he sent those files (neahrens@charlotteairport.com, 704.359.4821).

Individual Comments:

Mr. Christine noted that he had been with the airport and a resident of the area for over 10 years; Mr. Reeves said that he started his current position in February 2007 but has lived in Gaston all of his life; and Mr. Orr noted that he was a fifth-generation resident and had lived in the area almost all of his life.

The airport is building a new runway, immediately west and parallel to current runways, to be open in early 2010. The new runway will require relocation of several roads, which will be done within a year from now.

While many of the road relocation projects are on airport property and will be done by the airport, NCDOT is obligated to relocate West Blvd (the southern border of airport property). This will go to partial bid in spring 2008. Ultimately, West Blvd will be 4-lane divided, like Billy Graham Parkway. There will eventually be an interchange at West Blvd. and Billy Graham to remove the stoplight. NCDOT does not currently have funding to make West Blvd four-lane. The airport is okay with leaving it two-lane, but DOT wants a four-lane cross section.

The freight intermodal facility will be located within the airport, between the current and new runways.

Existing housing near the airport is mostly 1960s and starter homes to the south, mobile homes west, with some nice houses along river. Those nicer houses will remain even with nonresidential development in the area west of the airport, because the nonresidential will have to stay farther away from the river and on higher elevations anyway. East of the airport is lower income housing; South Blvd is Little Mexico. In general, there is substantial Hispanic population in the area around airport.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

There is a noise overlay disclosure zone – people can still build houses, but they can't sue for noise issues. Comments related to future growth in the area follow.

All land south of the airport to Shopton Rd. will be industrial. Some is currently residential but it will convert; there is a lot of undeveloped land in that area. South of Shopton Rd. will be a combination of industrial and office.

All land inside the Dixie River Rd. loop will be industrial – distribution, manufacturing, flex space. Garrison Road is expected to be extended to reach Dixie River Rd.

Berewick is a mixed use development with 1,000 houses, currently under construction. It is south of Dixie River Road.

West of 485, between 74 and the railroad, will be industrial land use. West of 485, between the railroad and Dixie River Rd. will be nonresidential but probably not industrial.

Crescent Resources (Duke Power) owns 1,600 acres of undeveloped land along the river. They may want to put a manufacturing/research park there. It is difficult to get water/sewer to that area, so hard to do residential. For this specific project, there is much bigger potential with the road – rate 1 with the road, three or four without the road. No difference with the toll in place on the proposed project.

The peninsula is currently being developed as a high-value residential neighborhood called The Vineyard.

Three interchanges will provide local access to the 5,000 acres of industrial/nonresidential development west of the airport. These are Garrison Rd/485; 74/485; and the K/Dixie River Rd. interchanges. People can also go on the smaller roads around airport to access that land.

J1 is too close to the Botanical Garden – rich people will object to that location. J2 will have to deal with Duke Energy.

Gaston County Chamber of Commerce

October 17, 2007

601 West Franklin Boulevard
Gastonia, NC 28053
704.864.2621

Attendees:

William Gary, Chamber of Commerce (Director of Public Policy)
Bob Austell, City of Cherryville
Joe Carpenter, Gaston County Commission
Allan Farris, Bessemer City (City Manager)
Jim Long, Bessemer City (Council)
Don Lowe, Gastonia
Barry Webb, Belmont City (Manager)
Rebecca Yarbrough, Centralina Council of Governments
Eric Davis, City of Mount Holly
Kathryn Harrington, Prudential Realty
Donna Lockett, Gaston Together (Executive Director)
J. Scott Lane (The Louis Berger Group Inc.)
Lisa Murphy (The Louis Berger Group Inc.)

Follow-Up Items:

The project team will follow-up with additional information for Elyse Hillegass (Gaston County Chamber of Commerce) to obtain location-specific input on the survey form.

The project team will follow-up with Carolina Thread Trail.Org (Ann Browning) for GIS data that identifies trails and trail crossings.

Send 10 maps to Chamber Staff for distribution, and one to Kathryn Harrington, pending approval from NCTA.

Individual Comments:

The northern continuation of the Gaston East-West Connector was too close to Bessemer City; the group noted that the A2 alignment was preferred. Concerns were expressed that the Northern Section of the Gaston East-West Connector should be included as a part of the current study.

There was a concern at Edgewood Road about the need for an interchange; however, the spacing was too close to allow the interchange to be included in the design of the Gaston East-West Connector.

Bessemer City rezoned a large industrial area to the south of the City.

From Kings Mountain to Edgewood Road is the best area for future industrial development in Gaston County. District 2 would receive a "1" for industrial development.

District 7 has a high potential for residential along the route with supporting retail; closer the airport there is a future potential for industrial development.

In District 8, the only commercial development would be along US 321 (which would receive a "2" for commercial, whereas the remainder of the District would receive a "4").

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

There is high residential development north of I-85 and a planned industrial parkway that would connect industrial development to Bessemer City.

B1 and B2 interchanges have wetlands; less effect in the B2 area. There are many auto salvage operations in this area that would have to be mitigated before redevelopment could occur. Because of restrictions imposed by both factors, there is less potential for development in this area.

Near I and J interchanges, there is a planned, mixed-use residential and commercial development. The location of the interchange would probably hinge on the environmental effect to the Catawba River and floodplain area.

Near K1 and K2 interchanges, there would be mostly industrial development due to the intermodal facility that is proposed along I-85.

J1, J2, and K1 interchanges have more residential potential than K2 and J3 interchanges. J1 and J2 would be preferred by residential development over J3, especially.

District 1 has lots of commercial growth without the roadway happening; some of this is in anticipation of the Shelby Bypass.

District 3 has high residential potential, especially around Spencer Mountain. The proposed Gaston East-West Connector would free up capacity on US 74 and I-85 to allow more development to occur in this District.

There would be little effect on District 5, since this District would likely be built out prior to the proposed Gaston East-West Connector being constructed.

Interchanges C1, C2, and C3 are sparsely populated now, but have a high residential potential, due in part to some existing public water and sewer service provisions in the area.

Interchanges C and D have less potential for rezoning due to the desire to keep the Crowders Mountain State Park area less intense; this is why the industrial development has tended to stay north of I-85. The development, especially residential, has a much greater potential with the proposed Gaston East-West Connector than without it.

There would be more density with the closer route that includes C3 and E2, rather than the longer route including C1, D1, and E1. The longer route would likely lead to sprawling development and is therefore less preferred by this group.

Interchanges F1 and F2 have high residential growth potential, but the same for both interchanges and the same potential with or without the proposed Gaston East-West Connector.

The group would like to see office development in the vicinity of I and J interchanges in order to keep people commuting to destinations in Gaston County (as opposed to Charlotte).

Gaston Urban Area MPO

October 18, 2007

150 South York Street
Gastonia, NC 28053-1748
704.854.6663

Attendees:

Hank Graham (Senior Transportation Planner)
Randi Gates (Transportation Planner I)
J. Scott Lane (The Louis Berger Group Inc.)
Lisa Murphy (The Louis Berger Group Inc.)

Follow-Up Items:

Ms. Gates will send GIS files for: recently developed parcels, new FIRM dataset, location of new proposed C interchanges.

Individual Comments:

Mr. Graham has been with the MPO for 4 years and is a native of the area. Ms. Gates has been with the MPO for 2 years and is also a native of the area.

A1 and A2 – there is some redevelopment and commercial development on a small scale right now. This is not in anticipation of the road.

There will be issues with relocating existing I-85 interchanges with either the A1 or A2 alignment. There would be more takings with A2.

They get inquiries daily for nonresidential development near A and B interchanges. People have heard about the road and want to build, but are waiting for the alignment to be announced.

The County economic development office is pushing industrial growth north of 85. There was a state grant for the Dole Plant.

B1 and B2 will have significant environmental effects due to wetlands.

There are lots of new subdivisions being built currently between B and C.

They have an existing functional design for extending Hudson Blvd to loop around to I-85. They are re-doing this due to the Gaston East-West Connector plans. They have proposed to the Turnpike Authority that the C interchanges be moved to the Hudson Blvd extension rather than the current Lynwood Road. The takings situation is better with the Hudson Blvd. interchanges.

There are sewer pumping issues in the area around the F interchange and points east.

There are existing mobile home parks and new approved/underway residential development near E2.

The railroad corridor parallel to 321 will be an issue with the Gaston East-West Connector. The existing intersection is already a problem with safety and grade separation.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

The "stink plant" affects development near E and F. The road may be a catalyst to move the plant, which would increase potential development in those areas.

I and H are high growth areas even without the road.

They only get one thoroughfare funded per year in the MPO due to budget constraints.

2003 was the last demographic forecast, they are redoing it now. They did assume the Gaston East-West Connector in those forecasts. In general, the factors used in creating those projections have come true, and they are still valid to use.

The attitude toward development is generally "bring it on" but it depends on who the developer is. Some developers have gotten approval for development that others would not have been able to accomplish. 90% of subdivisions use a conditional use process.

People will use the road regardless of tolls because I-85 is currently gridlocked.

City of Gastonia Planning Department

October 17, 2007

150 South York Street
Gastonia, NC 28053-1748
704.854.6632

Attendees:

Jack Kiser (Director)
J. Scott Lane (The Louis Berger Group Inc.)
Lisa Murphy (The Louis Berger Group Inc.)

Follow-Up Items:

The Utilities Dept has water and sewer GIS files. Contact Mike Bynum at City of Gastonia.

Individual Comments:

In general, much of this area will be built out before the road is ever built, especially considering the budget challenges that may delay the project. However, the character and dynamic of development may change with the road. A toll road would have less impact/challenges.

There is generally plenty of water/sewer capacity – if a developer wants to build, they just extend the lines. There are some localized short term issues with getting water/sewer to particular areas, but these will be resolved before the road gets built. Generally water/sewer would not be an impediment to development on any alignment.

The growth hot spots are B1, H1, H2, I2. There is some potential in other places. There would be a lot of redevelopment potential with the road because there is lots of development now in these areas. Without the road, would get primarily residential development.

Development in anticipation of the road is very little. There is some but it is not driven by the road. 5's for all sectors.

B1 will be commercial development due to proximity of 74 and 85.

Industrial development will occur at A1/A2, E1/E2.

D1 – the development form would be different with and without the road, but amount is likely the same.

There could be residential development at F1 and F2, but the smell from the animal processing plant is the constraint on development right now. The road wouldn't necessarily change anything unless it can get rid of that plant in the process, if so could see lots of development there.

G1 G2 will develop within 4-5 years with or without road. The road would change the dynamic.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

H will develop ahead of the road, won't be affected. H1 and H2 are currently developing commercial unrelated to the road. There is a big mixed use development (Presley) that has been approved near there.

H and I (all) – in an area requiring pumping stations for sewer service so that limits the growth there. Eventually they will build another wastewater treatment facility in that part of the county, and this won't be an issue.

I will be mixed use, may be affected by the road with possible redevelopment in that area if the road comes through. Expects I1 and I2 to develop commercial, specifically the hospitality industry. Without the road there will be more residential, with the road less residential more commercial.

J – higher end residential, already developing.

Section in Mecklenburg is still shown on their maps with at-grade crossings, no toll. Is that current?

Road won't affect district 3.

Rates City of Gastonia a 3 on allowing new development. The unincorporated county is less restrictive on growth, but there no water/sewer. Areas must be annexed to get water/sewer.

There is a new comp plan for 2020. Developers do follow the land use plan most of the time. The board/council is becoming increasingly picky about what they will approve, but few projects go through conditional use process.

They are working on a common UDO for Gaston city and county. Belmont is not part of the UDO – they are the most progressive in land use policies

Phase II stormwater rules will be adopted by the City in the next few months. The county already adopted them. The City is also going to third stage stormwater detention. They currently require 20% open space on development, not counting floodplains.

There are concerns about draining retail from downtown; it requires discipline to promote sustainable land use patterns.

With the toll road – less likely to have regional retail centers, more through traffic.

City of Belmont Planning Department

October 18, 2007

37 North Main Street
Belmont, NC 28012
704.901.2067

Attendees:

Elson F. Baldwin (Planning Director)
Adrian T. Miller (Senior Planner)
J. Scott Lane (The Louis Berger Group Inc.)
Lisa Murphy (The Louis Berger Group Inc.)

Follow-Up Items:

Contact Don Simpson at HNTB for GIS files for the land use layer of the new comprehensive plan.

Individual Comments:

Mr. Baldwin stated that he had grown up in Gastonia and had worked for the Planning Department for 11 years; Mr. Miller stated that he had only been working in Belmont for about six months. The familiarity with the study area varied by location for each participant.

A comprehensive land use plan was recently completed for Belmont, but the digital copy is not yet available (waiting for two months from consultant for digital versions). Also, the City of Belmont has previously adopted Phase II stormwater control rules.

The District 4 area has sewer capacity issues due to long distance that sewage must be pumped from southern end of Gaston County.

District 10 is growing because of river-related development with very expensive homes.

Both men thought that interchange J1 would develop as commercial uses; whereas J2 and J3 would be less commercially-oriented.

There is more potential for commercial traffic at K1 and K2 with the Gaston east-West Connector project in place.

The I1 and I2 interchanges are already high-growth areas without consideration of the Gaston East-West Connector.

The "H" interchanges would develop as more mixed-use (residential-retail) than other areas.

The "G" interchanges will have more difficulty in getting public water/sewer services provided to this area.

The "D" interchange is already developing as higher-end residential due to the views afforded of Crowders Mountain; starter homes are also entering this area due to the lower prices of land.

The "A", "B", and "C" interchanges would develop more commercially with the Gaston East-West Connector in place.

York County Government

October 18, 2007

1070 Heckle Boulevard
Rock Hill, SC 29732-2863
803.909.7222

Attendees:

Rebecca Bowyer (Asst. County Engineer)
Phil Leazer (Transportation Manager)
Mark Kettlewell (County Engineer)
Allison C. Love (Transportation Planner)
Anna Wilson (Asst. County Manager)
Susan Britt (Director of Planning & Development)
Jim Baker (County Manager)
J. Scott Lane (The Louis Berger Group, Inc.)

Follow-Up Items:

Mr. Leazer and Mr. Kettlewell will provide Berger with water/sewer information via FTP site (supplementing material purchased, probably more recent)

Ms. Love will provide Berger with information about the Adequate Public Facilities Ordinance and site development guidelines.

Individual Comments:

The individuals were generally familiar with Districts 9 and 10, but not familiar with other areas (with the exception of Ms. Britt, who had worked in Davidson for five years previously). Hence, most of the discussion centered on Districts 9 and 10, which were the only areas evaluated.

A general discussion opened after Mr. Lane explained the purpose of the meeting and the role of the discussion in the Environmental Effect Statement for the Gaston East-West Connector. Ms. Britt and others noted that, in general, the northern reaches of York County are growing without regard to the Gaston East-West Connector, fueled by a favorable climate, other roadway projects (e.g., SC 49 widening to five lanes), lower tax rates than North Carolina (property taxes were recently cut nearly in half), and quality of life issues. Some felt that the Garden Parkway (their term) will reduce North Carolina traffic coming through the area, and the acceleration or rate of growth will be influenced by the Gaston East-West Connector in some areas, but that it would not be a major contributor to that growth.

Some developers are aware of the Gaston East-West Connector, but there is a low level of awareness on the part of the public and media at this point in time.

The Gaston East-West Connector may pull traffic away from local roadways in Clover, SC. When prompted, Mr. Lane described some of the information that he had heard from other interviewees about development proposals and trends in Gaston County and in the proximity of Charlotte-Douglas International Airport.

The [Catawba] River has been a "huge" barrier to growth and development on the west side. District 6 is growing fast now, but is not related to the Gaston East-West Connector.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

While water supplies have traditionally had large surplus capacity (until the recent drought), wastewater capacity is smaller.

An Adequate Public Facilities Ordinance (APFO) is being developed to match the pace of development along with school and water/sewage treatment capacities. The former (schools) is limiting growth to some degree.

District 10 is already growing; it was noted that 40% of York County commuters travel to Charlotte each day. The [Charlotte-Douglas International] Airport and US 321 improvements are driving these changes. District 9 feels less influence from the Gaston East-West Connector than District 10 due to its greater distance. However, some development would be redirected to the north of Clover, SC instead of to the east. Mr. Lane asked if there was any reason that the southern edge of the study could not be moved north to align with the southern edge of Clover; the group did not see any problem with making that change. Clover has been aggressive in its annexation policy.

The group did not believe that there would be any development effect felt from the interchanges; they are generally too far away. This fact is especially true for the northern alignments.

When asked, the group did not think that there would be any difference in the pace or patterns of development if the road were tolled or not.

Without public water and sewer services, densities are seldom greater than one unit per acre.

The group had concerns about both air and water quality issues from development and traffic that would occur in Gaston and Mecklenburg counties as a result of the Gaston East-West Connector. They generally perceived that North Carolina had less stringent controls on stormwater runoff than their own. Mr. Lane mentioned that Gaston County may be adopting Phase II stormwater controls soon, and that Belmont had already done so.

Charlotte-Mecklenburg Planning Department

October 19, 2007

600 East Fourth Street
Charlotte, NC 28202
704.336.8315

Attendees:

Bob Cook
Tim Manes
Alberto Gonzalez
Claire Lyte-Graham
Kent A. Main
J. Scott Lane (The Louis Berger Group Inc.)

Follow-Up Items:

Contact the LUESA department of Charlotte-Mecklenburg County to determine current regulatory and site mitigation requirements for new development.

Individual Comments:

All of the attendees had either worked or lived in the area (or both) for at least five years. The focus of the discussion was only on Districts 3, 5, 6, and 7.

District 6 (southwest Mecklenburg) is a predominantly rural area of the County, and is part of a water supply watershed. The area is riddled with creeks, steep topography and resulting water/sewer supply problems. These factors will inhibit growth initially. There is a general awareness of the Gaston East-West Connector but the proposed project is not propelling growth in the area. Other projects in the vicinity are, however, inducing growth, especially the improvements associated with the Charlotte-Douglas International Airport and intermodal rail terminal. The land use plan calls for flex space, offices, and distribution facilities with neighborhood retail around Western Boulevard. Hotel developers have become interested in the Western Boulevard and K1/K2 interchanges as well. Currently, the Gaston East-West Connector is an inhibitor to new development in close proximity to the alternatives, due to the uncertainty associated with its effects.

District 7 is already "exploding," and may see more flexible (office-warehouse) space as a result of the construction of the Gaston East-West Connector.

The group thought that the J1, J2, and J3 interchange areas are developing and will continue to develop anyway, with or without the Gaston East-West Connector. However, the type and intensity of development may be influenced by the project.

The proximity of the Daniel Stowe Botanical Garden will, in combination with the Gaston East-West Connector's improved access, influence the development of that area towards tourism-related industries. The group agreed that the Botanical Garden has been a long-time supporter of the Gaston East-West Connector due to the vastly improved access that it would afford the property. Mr. Cook stated that the Gaston East-West Connector was not going to be constructed to help a few hundred tourists, and that the roadway is considered an economic development tool.

The group generally gave moderate scores to the ease of development variances granted to private property developers. Members of the group suggested contacting the Land Use and Environmental Services Agency (LUESA, www.charmeck.org/Departments/LUESA/Home.htm) of Charlotte-Mecklenburg County to get more information on development restrictions and regulatory policies in the Mecklenburg portion of the study area.

Gaston Economic Development Commission

October 19, 2007

PO Box 2339
Gastonia, NC 28053-2339
704.825.4046

Attendees:

Donny Hicks (Executive Director)
J. Scott Lane (The Louis Berger Group Inc.)

Follow-Up Items:

The consultant has requested a copy of a confidential economic development study commissioned by the CEEdC to look at development potential at every proposed interchange location along the Gaston East-West Connector.

Individual Comments:

Mr. Hicks noted that he has worked at the CEEdC for his entire career: 23 years total and 21 years as Executive Director. He is highly familiar with "every square inch" of much of the Gaston East-West Connector due to a corridor study that the CEEdC completed approximately six months ago.

District 1 (Cleveland County) has potential for growth primarily because of the cheaper land in that District.

District 4 (Mt. Holly) has development that is more closely tied to the improvements of NC 16 (four-lane divided, median-controlled with limited access) than with the Gaston East-West Connector.

Development is somewhat constrained by the uncertainty of the location of the alignments and interchanges of the proposed Gaston East-West Connector, otherwise, development is generally occurring without much consideration / anticipation of the project. This may change when the final alignment is chosen.

District 6 development depends on the progress of the new intermodal rail terminal and other expansions associated with Charlotte-Douglas International Airport. Flex and office space as well as distribution and manufacturing will occur, not office space or corporate headquarters due to many other, better located office locations in the region (e.g., Morrisville, northern Mecklenburg County).

Residential development will occur in the vicinity of interchanges I1, I2, and I3 but not anything else due to a lack of proximity to major markets.

Large lots and master planned developments can occur in J1 and J2 that would permit mixed-use developments, but J3 vicinity has smaller lots that would be more difficult to assemble and develop.

Real Estate and Building Industry Coalition

October 19, 2007

2923 Audrey Drive
Gastonia, NC 28054
704.867.4826

Attendees:

Elizabeth K. Barnhardt, Charlotte Regional Realtor Association
Jerry Campbell (Regional Director)
Ann G. Drum (CEO)
Lamar Kellar
J. Scott Lane (The Louis Berger Group Inc.)

Follow-Up Items:

Obtain copy of draft Unified Development Ordinance from Gaston County.
Obtain copy of Black and Veatch study from Jerry Campbell.

Individual Comments:

All of the attendees have worked and/or lived in the Gaston area for at least 10 years; several for the majority of their lives (more than 20 years).

Members of the group stated that a Unified Development Ordinance (UDO) would be adopted by the majority of the Gaston County's 13 municipalities by March of 2008. There are plans for "overlays" along the Gaston East-West Connector, and plans for trails along its length from Crowders Mountain State Park to the Daniel Stowe Botanical Gardens.

Mr. Kellar stated that Gaston County is five years behind the development curve of other counties in the Metropolitan Statistical Area (MSA) in terms of large, master-planned developments, growth moratoriums, etc. The [Catawba] River is the major impediment to growth, and has provided a strong, physical barrier separating Gaston from the rest of the Region. Within the past five years, large developers (e.g., Ryan Homes, KB Homes, Crosland) are now entering the Gaston market as they perceive it to be increasingly desirable. In order to help finance growth, a \$175 million school bond is expected to pass in November, and may be followed by a sales tax increase to help keep pace with school capacity issues. The area wants to learn from the experience of other counties in the Region with regard to staying in advance of the growth-related needs of the County.

The Gaston East-West Connector is, generally, an impediment to growth due to the uncertainty of its exact location. This is producing less development in the area and lowered property values. As soon as the exact alignment is known, then the properties will begin to develop and values increase.

Gastonia is thinking more about master planning now than it used to in the past. Regardless of the desires of some to find replacement industries for the textile businesses lost, Gaston is becoming a bedroom community for Charlotte, and its economy is changing towards services and retail commodities.

Mr. Campbell stated that public utilities will be coming first to Districts 3, 4, and 5; followed by District 8 then District 2.

There is a lot of golf course development already occurring in the Crowders Mountain and King's Mountain areas. District 1 is growing near the I-85 corridor, but may not see much influence from the Gaston East-West Connector.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

District 2 will be influenced by the possibility of expanding the existing Dole plant to include a frozen food plant.

District 4 growth is being fueled by proximity to I-85; similarly, District 5 already has good access from other roadway facilities and thus will not be much influenced by the construction of the Gaston East-West Connector.

The growth and development of Districts 6 and 7 will be affected in terms of timing, not intensity.

District 8 does not have public water/sewer anticipated in the near future and hence will develop at a later date and with a lower potential for new development. District 8 development is also hampered by rocky subsurface that is expensive to grade.

District 10 will develop rapidly regardless of the construction of the Gaston East-West Connector.

District 9 is influenced more by the growth policies of the Town of Clover, not by the proposed Gaston East-West Connector.

Several in the group thought that tolling the Gaston East-West Connector would change the quality of the development towards higher-end housing and retail opportunities, but not affect the quantity of development or development potential.

Bessemer City Planning Department

November 7, 2007

City Hall
132 W. Virginia Ave.
704-476-8000

Attendees:

Kevin L. Krouse
Kim Bereis (PBS&J)
J. Scott Lane (The Louis Berger Group Inc.)
Julie Flesch-Pate (The Louis Berger Group Inc.)

Individual Comments:

Mr. Krouse lives in Charlotte and works for Bessemer City Planning Department.

He is most familiar with District 2 which he explained is just starting to feel economic growth. The majority of this growth is due to residential growth but the City has been working with local EDC to attract commercial/industrial entities.

The proposed Gaston E/W Connector would benefit the City of Bessemer to attract more industry and commercial entities but at the same time it has the possibility of "losing" Edgewood Road due to project implementation. Edgewood Road is a gateway to the City. Over 500 acres of land has recently been rezoned along I-85 and Edgewood Road.

Mr. Krouse believes that District 2 will experience residential pressure regardless of the proposed project. The implementation of the project would mean that there would be a possibility that commercial industrial growth would add to that pressure.

The proposed Northern Loop is likely to affect US 321 interchange according to Mr. Krouse.

Bessemer City offers administrative review on mixed use development and it has worked very well. Elected officials trust staff. Some variances are allowed at a staff level.

McAdenville, Cramer ton and Lowell are currently experiencing growth without the proposed project.

Stormwater management is under the jurisdiction of Gaston County.

Mr. Krouse believed that BMP's would be different for residential and commercial development.

Bessemer City approved a new land use plan in August of 2007. According to Mr. Krouse the plan rezoned the entire City.

Mr. Krouse stated that the "No Build" alternative would have no effect on Bessemer City.

Attendees:

CD Collins
Kim Bereis (PBS&J)
J. Scott Lane (The Louis Berger Group Inc.)
Julie Flesch-Pate (The Louis Berger Group Inc.)

Individual Comments:

Mr. Collin's primary concern was the potential cost of the project. He was also concerned that developers are building in the path of the corridors which may drive costs and relocations up. He recommends that that a preferred alternative be selected as soon as possible.

Due to constructability issues Mr. Collins prefers interchanges A1-B1-C1-D1. The other alternatives in this area have the potential to affect Crowders Creek.

Areas near H2/H1 are planned for immediate construction in anticipation of the proposed project.

The northern routes of all alternatives near I3/J3 are preferred due to constructability issues.

Lake Wylie is the 13th worst lake in the nation in regards to water quality according to Mr. Collins.

Mt. Holly has proposed to construct a new wastewater treatment facility with a 25M gallon capacity.

Mr. Collins feels that there are not enough infrastructures of public services to support the amount of growth that the proposed project is likely to bring with its implementation.

Crowders Mountain State Park, Mr. Larry Hyde

November 16, 2007

522 Park Office Lane
Kings Mountain, NC 28086
(704) 853-5375

Attendees:

Larry Hyde
Jill Gurak (PBS&J)
Julie Flesch-Pate (The Louis Berger Group Inc.)

Individual Comments:

Mr. Hyde stated that there are known state and federal protected species near interchange sections C1 and D7.

He greatest concerns regarding the natural resources at the Park are:

- Air pollution generated from the proposed road,
- Urban growth associated with proposed project leading to a fire hazard for the Park,
- Noise pollution, and
- Aesthetics (views affected by the roadway)

Mr. Hyde also believes that if constructed the proposed project would increase the access to the Park which would be good for tourist but may over tax the infrastructure at the Park and wilderness trails and other attractions. He fears that the "Park would be loved to death". He anticipates that if constructed the increased access could increase the numbers of visitors the Park by as much as 50%.

A stream located near Linwood Road that is owned by the Park service is showing signs of degradation. Mr. Hyde believes that more of this stream degradation is likely with urbanization especially if the most southern alternatives are chosen for construction.

Mr. Hyde spoke of some cultural resources in the area; Linwood College and All Health Spring.

Allen Tate Realty, Ms. Ann Finke **November 16, 2007**

117 N. Main Street
Belmont, NC 28012
(704) 829-1207

Attendees:

Anne Finke (Allen Tate)
Julie Flesch-Pate (The Louis Berger Group Inc.)

Individual Comments:

Ms. Finke has lived in the Cramerton area for approximately 20 years and has worked in residential real estate for five of those years.

She is very familiar with the Cramerton, southern portions of Gaston County, and the south western portions of Mecklenburg County. She located several new residential developments in these areas that are either already under construction on the verge of construction.

She is seeing a trend of people that are relocation to Gaston County from Mecklenburg County due to good access to the airport, I-85 and the short commute times to Charlotte. She believes that that trend will continue into the future.

Union Road is one good example of the growth that is happening in Gaston County prior to a project alternative selection.

She believed that future development is being hampered due to the fact that there has not been a decision made in regards to where the Gaston East-West Connector may eventually go. She also believes it is critical to know where the proposed project may go so that schools, utilities and other infrastructure can accommodate the expected growth.

Ms. Finke believes that the proposed Gaston East- West Connector is contributing to the growth in the southern portions of Gaston County, Mecklenburg County and Cramerton, but it is not the only reason for development in this area. She cited that US 485 has attracted new residential development in the Cramerton and Belmont areas and the western portions of Mecklenburg County near the River. Likewise, the proposed SC 321 is anticipated to attract development in southern Gaston County and areas in northern South Carolina.

Gaston East-West Connector Community Characteristics Report-Local Interviews, Conducted by PBS&J on July 11 and 12, 2007:

Donna Lockett, Executive Director of Gaston Together:

- Ms. Lockett does not have any project concerns as it relates to consistency with the Gaston Together mission. She sees the project as having a potentially positive effect, as it will enhance access across the county to community resources such as health services (hospital care, health department services for the underserved and elderly care).
- Ms. Lockett also sees the project supporting the goals/objectives of the Gaston 2012 initiative.

David Williams, Planning Director, Gaston County Planning Department:

- Mr. Williams noted project concerns not only for neighborhoods adjacent to or “in the Path” of the Detailed Study Alternatives, but project induced land use change in the area and increased traffic on area roadways.
- There are no major employment centers in the area within and near the Detailed Study Alternatives.
- There is a large annexation/mixed use development planned for the vacant property in the area of Wilson Farm Road/New Hope Union Road.

Jack Kiser, Planning Director, City of Gastonia:

- Mr. Kiser has some concerns related to land use changes associated with a “bypass” of Gastonia. He believes that the project may act as a catalyst for retail development in the study area.
- Gastonia is moving away from an industrial economy and shifting to service jobs, information related jobs, and healthcare (the hospital is a large employer) with people working all over the region. Gaston County is probably the dominant employer in the region.

Kevin Krouse, Planning Director, Bessemer City, and Jim Long, TAC Chairperson and Councilman (GUAMPO):

- Mr. Krouse and Mr. Long believe that the Southern Parkway project and the widening of NC 274 from 2 lanes to 5 lanes will have a heavy influence on economic development in the area.
- A cargo air strip is planned near Crowders Mountain Road.

Michael Peoples, Cramerton Town Manager, and Steve Baucon, Director of Planning/Zoning/Code Enforcement, Cramerton:

- One of Cramerton’s concerns related to the project in the area of the Town is the potential increase in traffic through Cramerton on New Hope Road. The Town believes that this will necessitate upgrading New Hope Road to four lanes. The town also is concerned about increased traffic on Armstrong Road.
- The Town is concerned with the proposed project’s potential effect on the Greenway Master Plan.
- The Town sees its municipal boundaries expanding on the east side (of New Hope Road).
- The Town estimates that at least half of the residents commute to Charlotte or outside of Gaston County for work.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

- As with other areas of the state, the Town has lost textile industry jobs and has seen an increase in other industries (service, government, schools, auto distribution, and steel specialty).
- The town recently lost Joanne Fabrics due to bankruptcy.

Barry Webb, City Manager, City of Belmont:

- Belmont serves as a bedroom community to Charlotte and Gastonia, with most of the City's residences commuting outward. The City has a mill presence still, but it is very small. Those residents that live closer to town are mill workers.
- The largest employers within the City are Stowe Mills and Belmont Abbey College.
- The City noted the potential for the ETJ to expand, particularly in the Peninsula and Garden areas.
- The City is considering the project in future planning and growth/ development within the City. The City feels that the project will benefit communities in its area because it will essentially decrease traffic on South Point Road.

Jim Parks, Executive Director, Gaston County Schools:

- Growth and development is prevalent in the study area, which is driving the need for the expansion and addition of educational institutions.
- Gaston County Schools is seeking potential new school sites to address the demand for new schools in the area, including in the project vicinity. It was noted that water and sewer infrastructure costs would play a role in which site is ultimately chosen. Sites currently under consideration are not served by water and sewers.

Appendix D. Numeric Responses from Interviewees

In addition to the comments by interviewees recorded in the meeting summaries, interviewees gave numeric responses to several questions directed at specific districts and interchanges of the proposed Gaston East-West Connector (shown in Figure 3.2). The raw numeric responses are shown below. These responses were weighted based on the respondent's level of knowledge of each area, then averaged. The weighted average for each district and interchange was then used as part of the spatial grid analysis.

	Gaston Chamber of Commerce	City of Gastonia	Gaston MPO	Real Estate and Building Industry	Char-Meck Planning Dept.	Gaston Economic Development	York County, SC	Belmont Planning Dept.	Bessemer City Planning	Anne Finke-Tate Realty	Crowder State Park-Larry Hyde
1. Lived here longer than ___ years	31	20	20	11	38	19	7	20	15		
2. Worked here longer than ___ years	31	4	4	5	23	11	6	5	2		
3. Familiarity with: (1=highly familiar, 5=not familiar at all)											
District 1	2	4	4	1	2	1	1	4	5	3	
District 2	1	2	2	1	1	1	3	3	1	3	
District 3	1	2	2	1	2	1	3	3	2	5	
District 4	2	2	2	1	1	1	3	3	2	3	
District 5	2	3	3	1	2	2	3	4	2	3	
District 6	2	4	4	1	1	1	2	4	3	5	
District 7	1	2	2	1	2	1	2	1	4	5	
District 8	1	2	2	1	1	1	2	3	3	5	
District 9	3	4	4	1	2	2	1	5	5	3	
District 10	3	4	4	1	2	2	1	5	5	3	

(Continued on Next Page)

Appendix D. Numeric Responses from Interviewees Cont'd

	Gaston Chamber of Commerce	City of Gastonia	Gaston MPO	Real Estate and Building Industry	Char-Meck Planning Dept.	Gaston Economic Development	York County, SC	Belmont Planning Dept.	Bessemer City Planning	Anne Finke-Tate Realty	Crowder State Park-Larry Hyde
4. Potential for new development with road: (1=very high potential/ongoing and 5=very low potential/constrained)											
District 1	0	1	4	1	0	4		3	1	0	1
District 2	2	1	2	2	0	1		2	1	0	3
District 3	1	2	4	3	0	3		3	1	0	1
District 4	0	1	4	1	0	2		3	1	0	3
District 5	0		2	1	1	2		2	5	0	1
District 6	3		1	1	3	2		2	5	0	3
District 7	2	1	1	2	0	1		1	5	0	3
District 8	2	1	2	3	0	4		3	5	0	1
District 9	2	2		2	0	2	2		5	0	1
District 10	2	2		1	0	1	1	2	5	0	1
A1	1	1	1	2	0	1		2	1	0	1
A2	2	1	1	2	0	2		2	1	0	1
B1	4	1	2	3	0	3		2	2	0	1
B2	4	1	1	3	0	3		2	2	0	1
C1	2	1	1	3	0	3	2	2	5	0	3
C2	2	1	1	3	0	3		2	5	0	1
C3	2	1	1	3	0	3		3	5	0	1
D1	2	1	1	3	0	4		3	5	0	5
E1	4	1	2	2	0	3		2	5	0	2
E2	4	1	3	2	0	3		2	5	0	1
F1	1		1	2	0	1		3	5	0	1
F2	1		1	2	0	1		3	5	0	1
G1	2	1	1	2	0	1		3	5	0	1
G2	2	1	1	2	0	1		3	5	0	1
H1	2	1	1	2	0	4		2	5	2	1
H2	2	1	1	0	0	4		2	5	2	1
I1	3		1	1	2	1		2	5	2	1
I2	3	1	1	1	2	3		2	5	2	1
I3	3		1	1	2	3		2	5	2	1
J1	3		1	1	1	1		1	1	2	1
J2	3		1	1	1	1		1	1	2	1
J3	3		1	1	1	3		1	1	2	1
K1	0		1	1	2	2		2	1	2	1
K2	2		1	1	2	2		2	1	2	1

Appendix D. Numeric Responses from Interviewees Cont'd

	Gaston Chamber of Commerce	City of Gastonia	Gaston MPO	Real Estate and Building Industry	Char-Meck Planning Dept.	Gaston Economic Development	York County, SC	Belmont Planning Dept.	Bessemer City Planning	Anne Finke-Tate Realty	Crowder State Park-Larry Hyde
5. Potential for new development without road: (1=very high potential/ongoing and 5=very low potential/constrained)											
District 1	1	4	4	2	0	4		4	1	0	3
District 2	0	3	3	4	0	2		4	1	0	3
District 3	0	2	4	3	0	3		4	4	0	3
District 4	0	1	3	1	0	2		3	4	0	3
District 5	0		2	2	1	2		2	4	0	3
District 6	0		2	1	1	2		4	1	0	3
District 7	0	1	1	3	0	4		3	5	0	5
District 8	0	2	4	4	0	4		4	5	0	5
District 9	1	3		3	0	3	3	5	5	0	3
District 10	1	3		1	0	2	1	3	5	0	3
A1	0	1	3	2	0	2		3	4	0	3
A2	0	1	1	2	0	2		3	4	0	3
B1	0	1	3	4	0	4		3	2	0	3
B2	0	1	2	4	0	4		3	2	0	3
C1	0	1	3	4	0	2		0	0	0	5
C2	0	2	3	4	0	2		0	0	0	3
C3	0	3	2	4	0	2		0	0	0	3
D1	0	1	4	4	0	4		0	0	0	5
E1	0	2	2	3	0	4		0	0	0	3
E2	0	2	3	3	0	4		0	0	0	3
F1	0		3	3	0	4		0	0	0	3
F2	0		3	3	0	4		0	0	0	3
G1	0	1	3	3	0	4		0	0	0	3
G2	0	1	3	3	0	4		0	0	0	3
H1	0	1	2	3	0	4		2	0	2	3
H2	0	1	2	3	0	4		2	0	2	3
I1	0		2	3	4	4		2	0	2	3
I2	0		2	3	4	4		2	0	2	3
I3	0		2	3	4	4		2	0	2	3
J1	0	1	1	1	1	4		2	1	2	3
J2	0	1	1	1	1	4		2	1	2	3
J3	0	1	1	1	1	3		2	1	2	3
K1	0		2	1	2	3		4	1	2	3
K2	0		2	1	2	3		4	1	2	3

Appendix D. Numeric Responses from Interviewees Cont'd

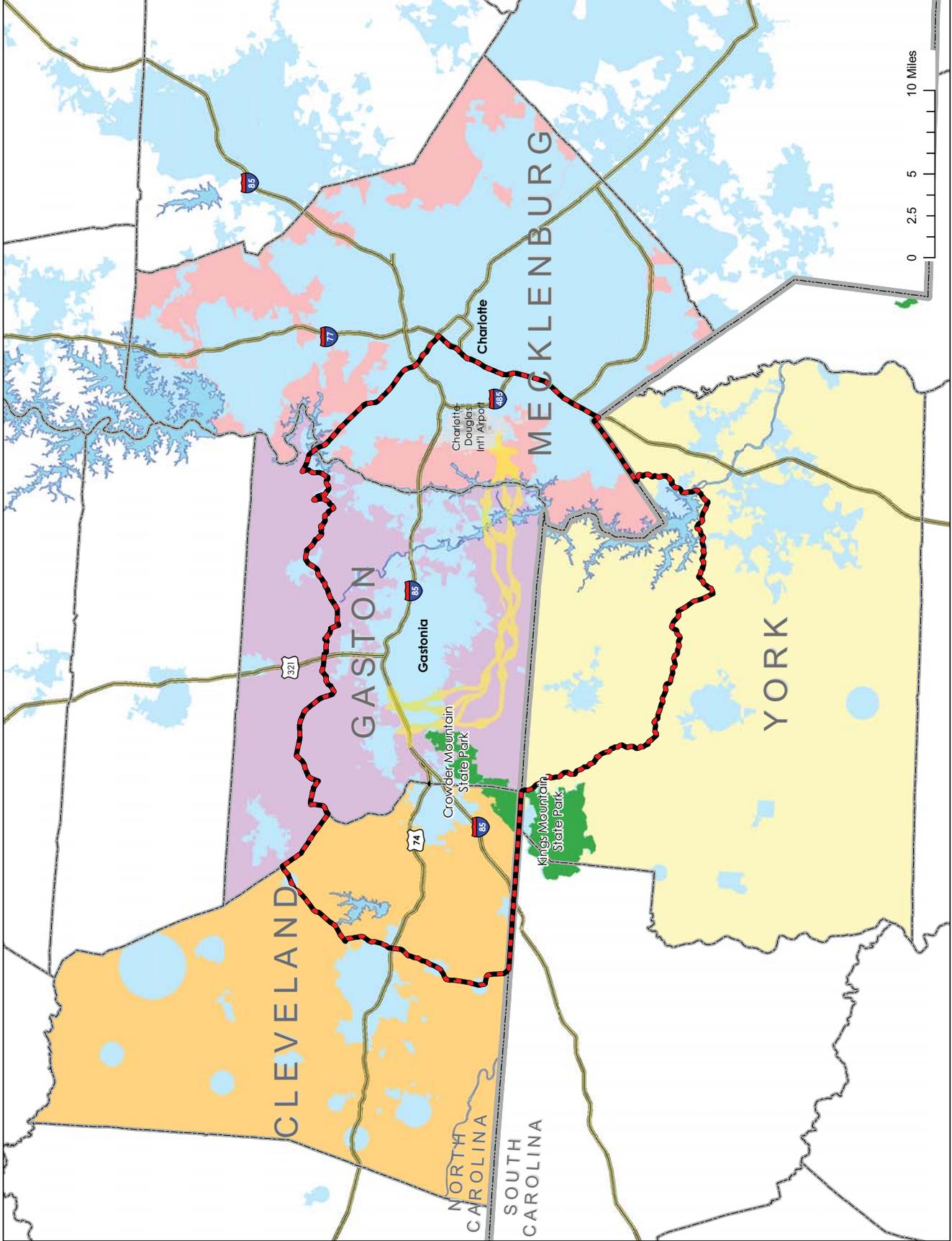
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6. How much development is in anticipation of the road? (1=very high potential/ongoing and 5=very low potential/constrained)											
District 1		5		5	0	5			0	0	3
District 2		5		5	0	5			4	0	3
District 3		5		5	0	5			4	0	3
District 4		5		5	0	5			4	0	3
District 5		5		5	5	5			4	0	3
District 6		5		1	5	3			4	0	3
District 7		5		1	0	1			0	0	1
District 8		5		5	0	5			0	0	1
District 9		5		5	0	5	5		0	0	3
District 10		5		5	0	5	5		0	0	3
A1		5		5	0	5			1	0	3
A2		5		5	0	5			1	0	3
B1		5		5	0	5			4	0	3
B2		5		5	0	5			4	0	3
C1		5		5	0	3			0	0	1
C2		5		5	0	3			0	0	3
C3		5		5	0	3			0	0	3
D1		5		5	0	5			0	0	1
E1		5		5	0	5			0	0	3
E2		5		5	0	5			0	0	3
F1		5		5	0	5			0	0	3
F2		5		5	0	5			0	0	3
G1		5		5	0	5			0	0	3
G2		5		5	0	5			0	0	3
H1		5		5	0	5		3	0	3	3
H2		5		5	0	5		3	0	3	3
I1		5		5	0	2			0	3	3
I2		5		5	0	2		4	0	3	3
I3		5		5	0	2		4	0	3	3
J1		5		5	0	3		4	5	3	3
J2		5		5	0	3		5	5	3	3
J3		5		5	0	3		5	5	3	3
K1		5		5	5	3		5	5	3	3
K2		5		5	5	3		5	5	3	3

Appendix D. Numeric Responses from Interviewees Cont'd

	Gaston Chamber of Commerce	City of Gastonia	Gaston MPO	Real Estate and Building Industry	Char-Meck Planning Dept.	Gaston Economic Development	York County, SC	Belmont Planning Dept.	Bessemer City Planning	Anne Finke-Tate Realty	Crowder State Park-Larry Hyde
7. Likely to grant variance (1=almost always, 5=almost never)											
Gaston County			1								
City of Gastonia		3									
Charlotte-Mecklenburg											
York County							4				
Mt. Holly								4			
Belmont											
Other towns									2		
8. Difficulty of development review process (1=very difficult, 5=very easy)											
Gaston County				4		4					
City of Gastonia				4		3					
Charlotte-Mecklenburg					3						
York County						4					
Mt. Holly				2							
Belmont											
Other towns				3							
9. Rank importance for new development (1=highest; RES = Residential; NONRES = Nonresidential)											
Public water											1
Public water											1
Public sewer											1
Public sewer											1
Roadway capacity											2
Roadway capacity											2
General economic climate											2
General economic climate											2
General economic climate											2
Quality of school system											4
Quality of school system											2
Quality of school system											4
Crime rate											4
Crime rate											5
Other											2
Other											Air quality

Appendix E. Report Mapping

Figure 1.2
Gaston
E-W Connector
Four-County
Study Area



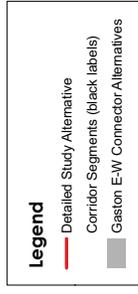
- Legend**
- Limited-access Highway
 - Gaston E-W Connector Alternatives
 - Lakes
 - Parks
 - Charlotte-Douglas Intl Airport
 - Municipalities
 - ICE Study Area Boundary
 - State Boundaries
 - County Boundaries
 - Gaston County
 - Mecklenburg County
 - York County
 - Cleveland County

Data Sources: PBSJ (Alternatives), NCDOT and SCDOT (Roadways), Charlotte-Douglas Airport, York County, NCEMMap (boundaries, parks, hydrology)



Figure 1.3 Gaston E-W Connector Detailed Study Alternatives

Page 1 of 2
(4 - 27)



Data Source: PBSJ

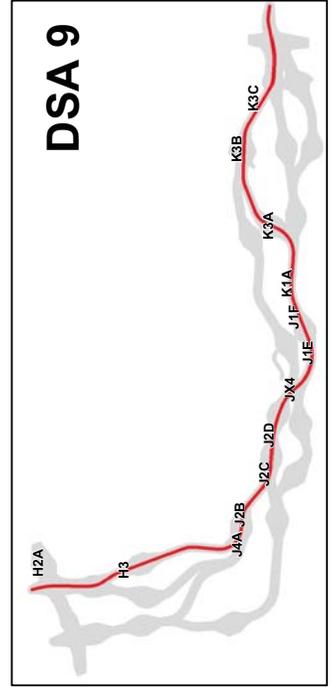
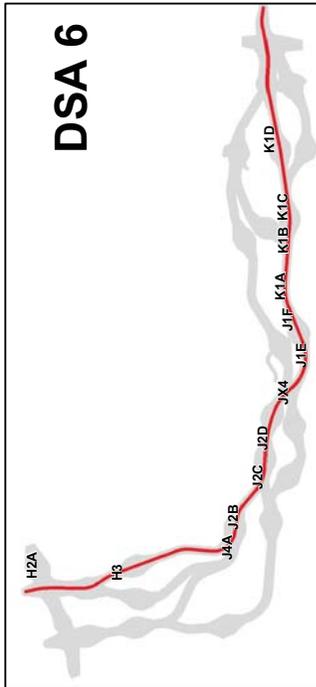
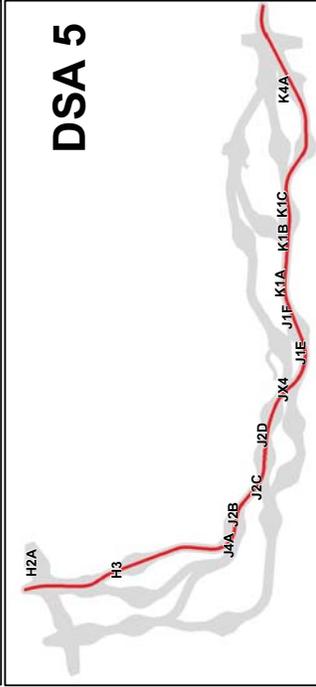
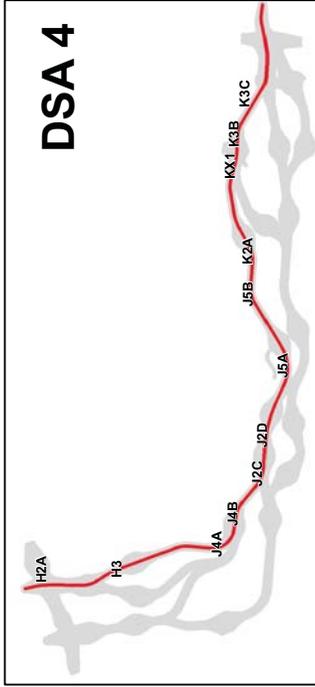
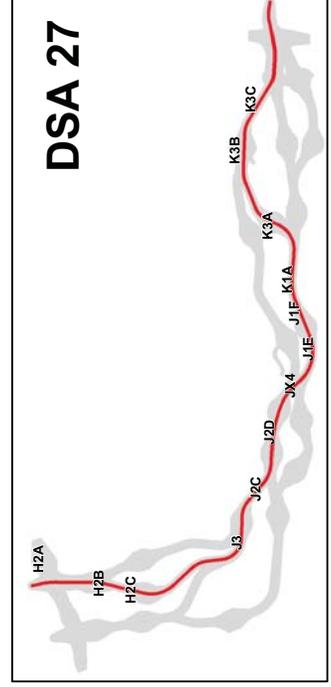
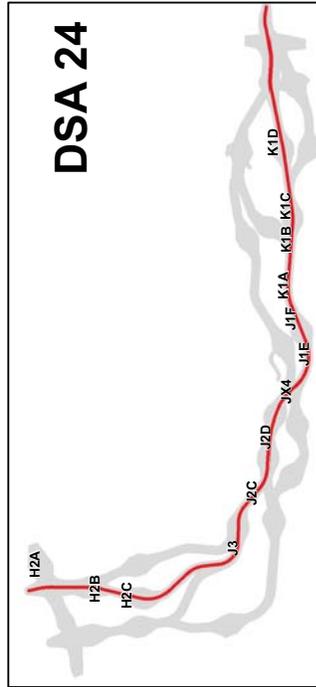
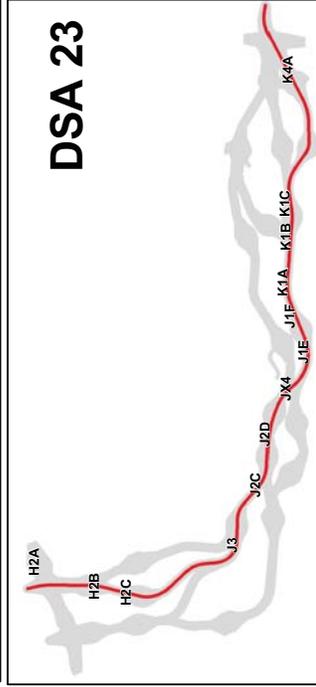
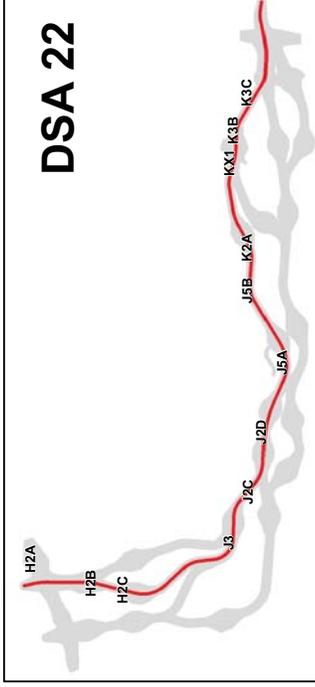
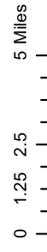
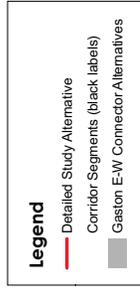


Figure 1.3 Gaston E-W Connector Detailed Study Alternatives

Page 2 of 2
(58 - 81)



Data Source: PBSJ

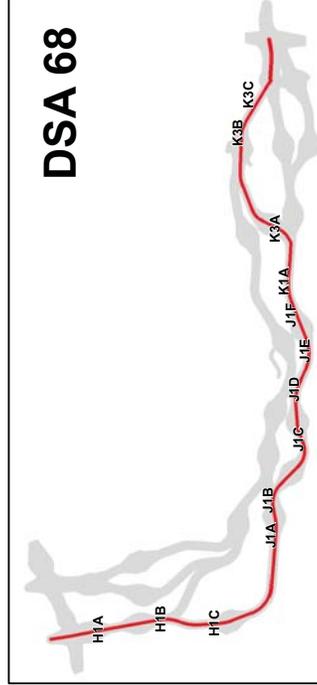
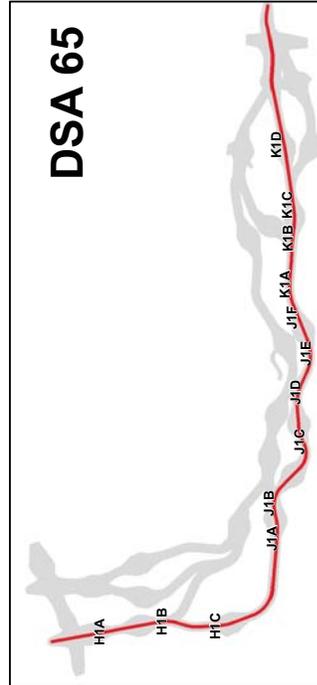
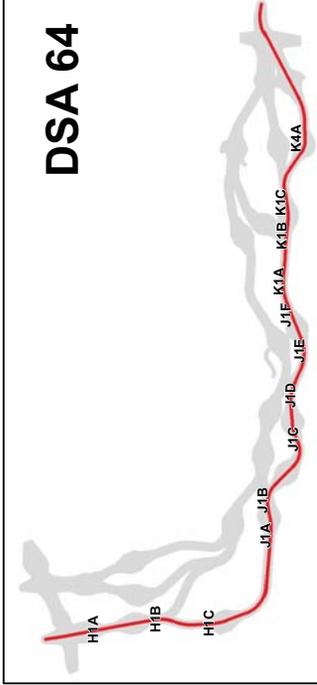
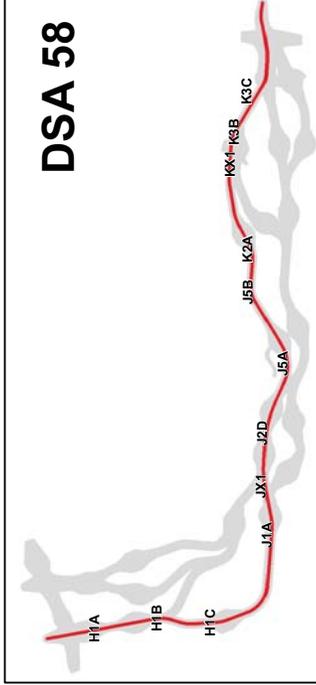
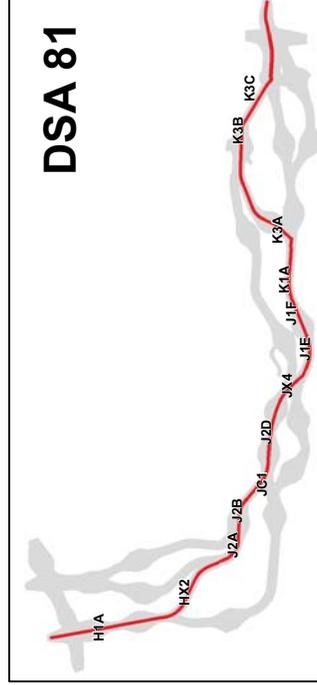
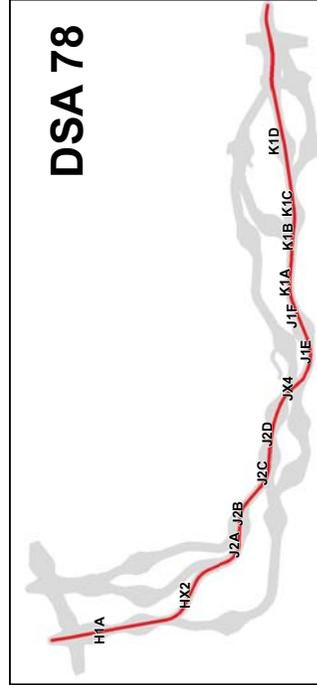
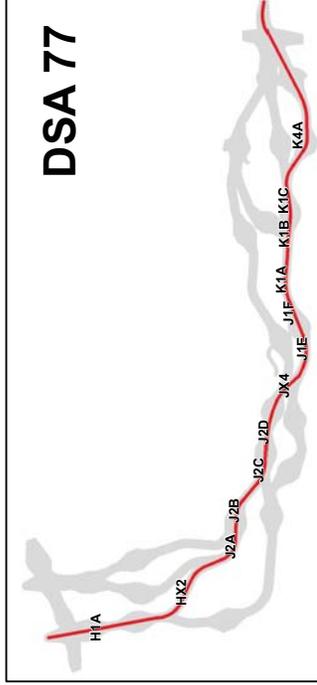
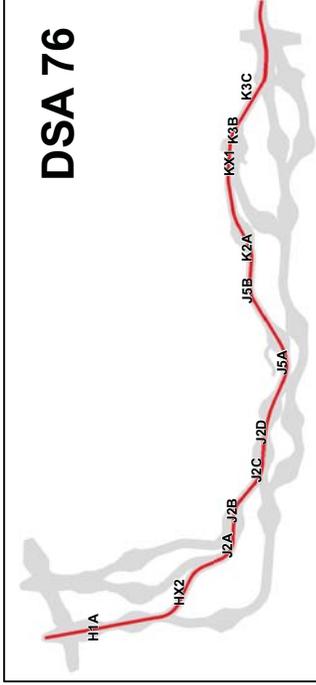
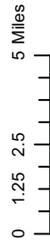
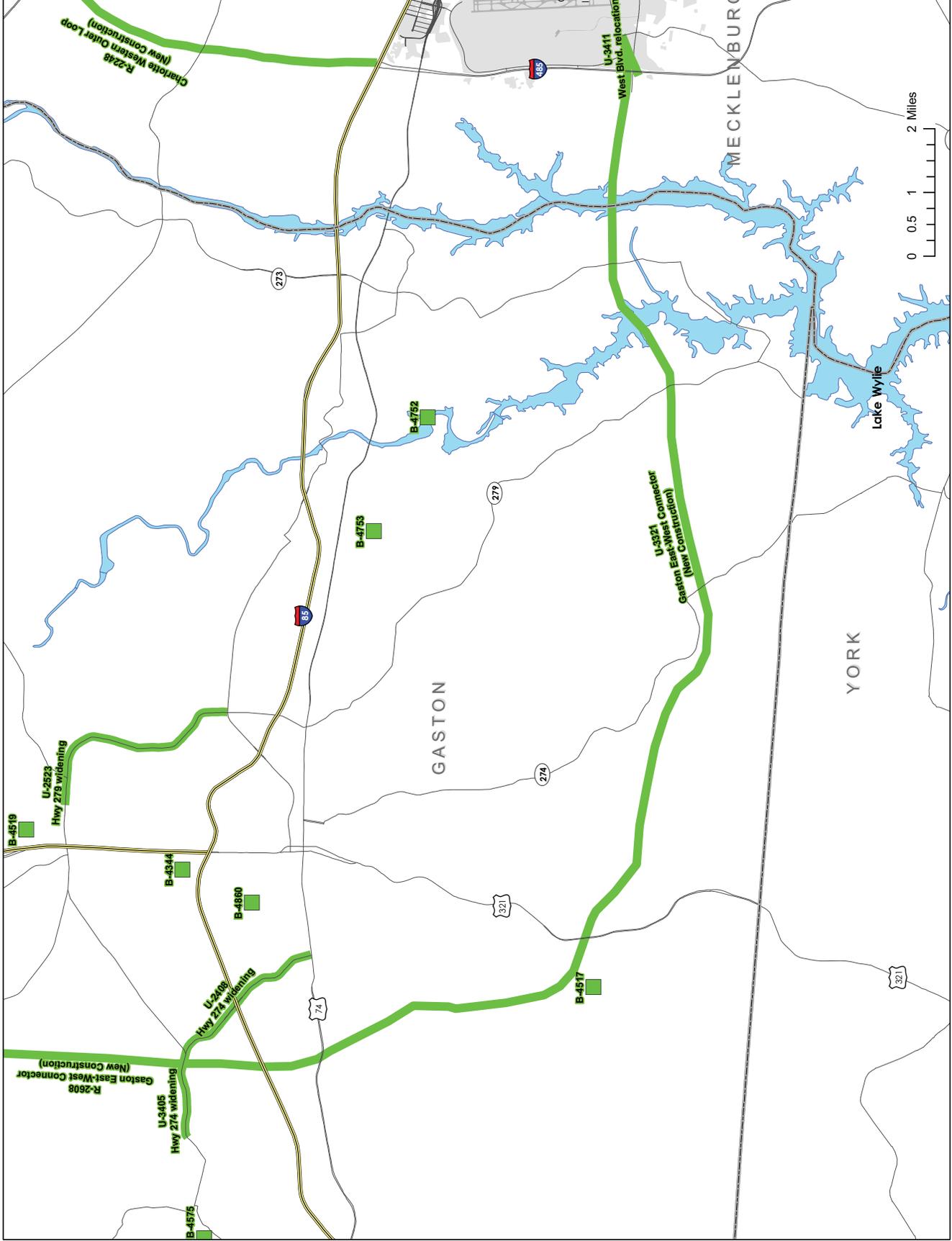


Figure 1.4 Gaston E-W Connector Transportation Improvement Program Projects



Legend

- Limited-access Highway
- Major Roads
- Lakes
- Charlotte-Douglas Intl Airport
- County Boundaries
- TIP Bridges
- TIP Roadways

Data is for North Carolina only.
Data for South Carolina were
not available in spatial format.
Data Source: NCDOT TIP
Projects 2007-2013



Figure 3.2 Gaston E-W Connector Study Areas

Legend

- Limited-access Highway
- Major Roads
- Rivers
- Alternatives Centerline
- Gaston E-W Connector Alternatives
- Interchanges (blue labels)
- School
- College
- Hospital
- Church
- Cemetery
- ▲ Hazardous Waste Disposal Locations
- 100-year Floodplain
- National Wetlands Inventory
- Lakes
- Proposed Park
- Parks
- Charlotte-Douglas Int'l Airport
- Municipal Boundaries
- County Boundaries
- District Boundaries (ICE Study Area)
- Interchange buffers (various colors)

Data Sources: PBSJ (Alternatives), NCDOT and SCDOT (Roadways), Charlotte-Douglas Airport, NC Floodplain Mapping Program, National Wetlands Inventory, York County, NCOneMap (boundaries, community features, hydrology)

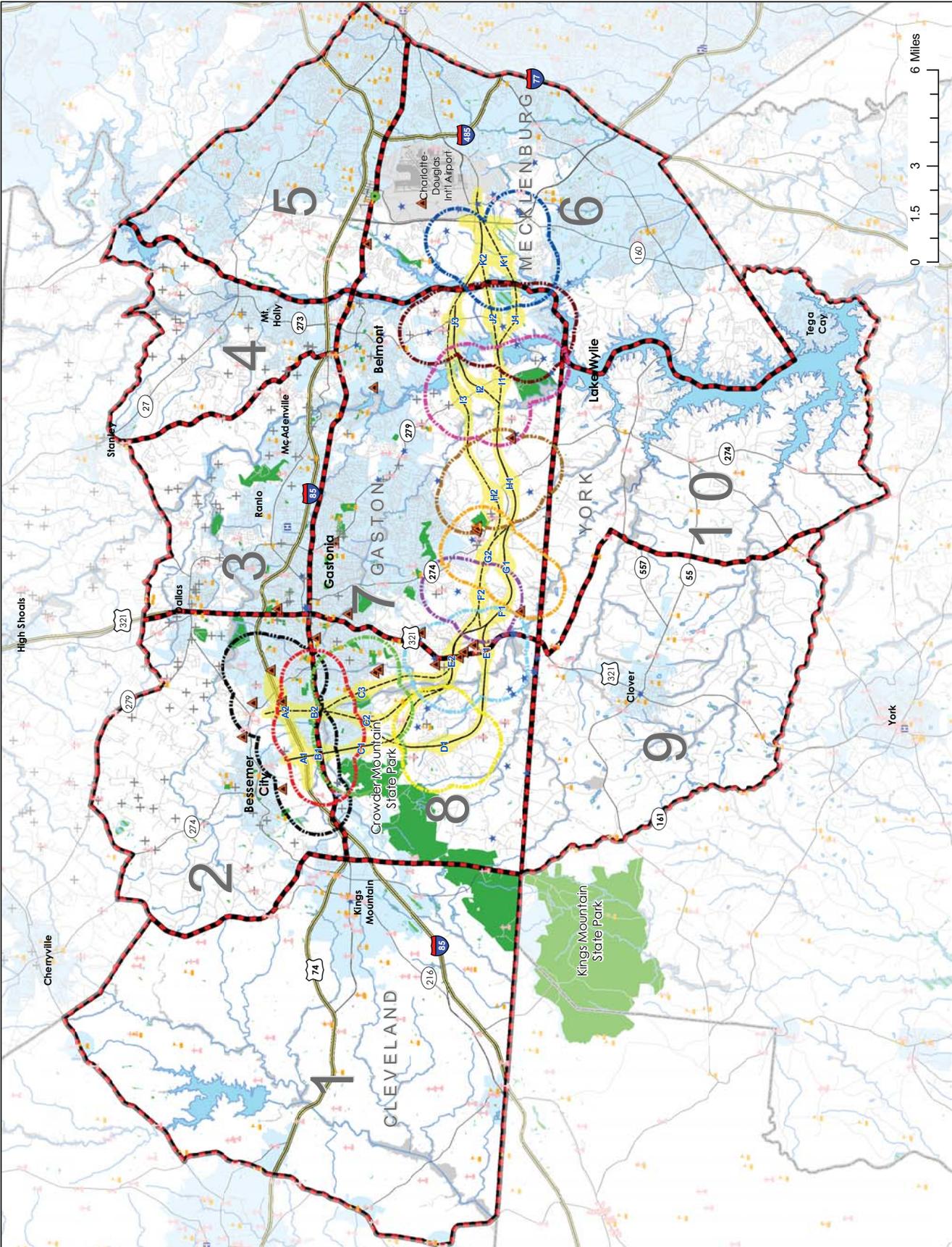


Figure 6.1
Gaston
E-W Connector
ICE Study Area

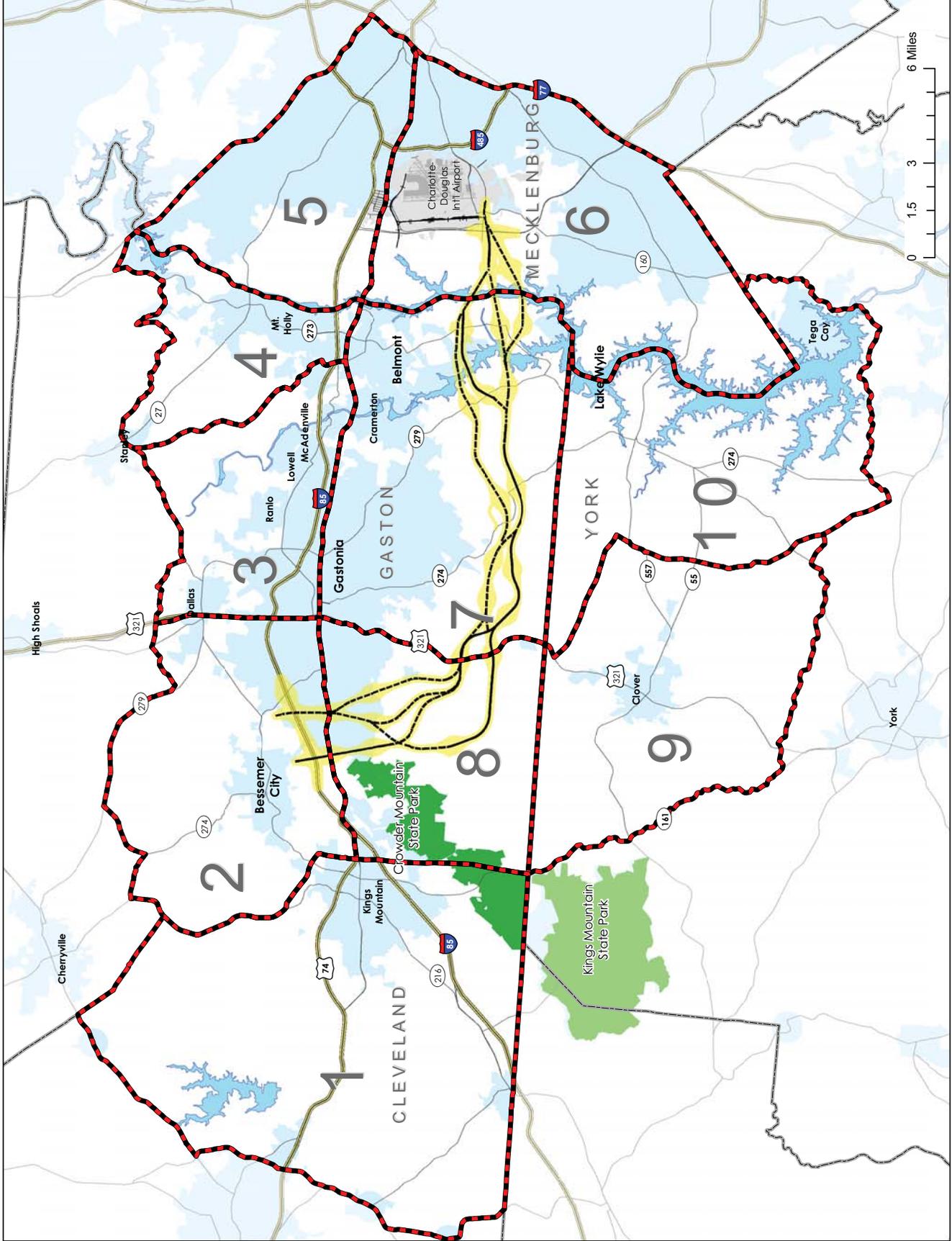
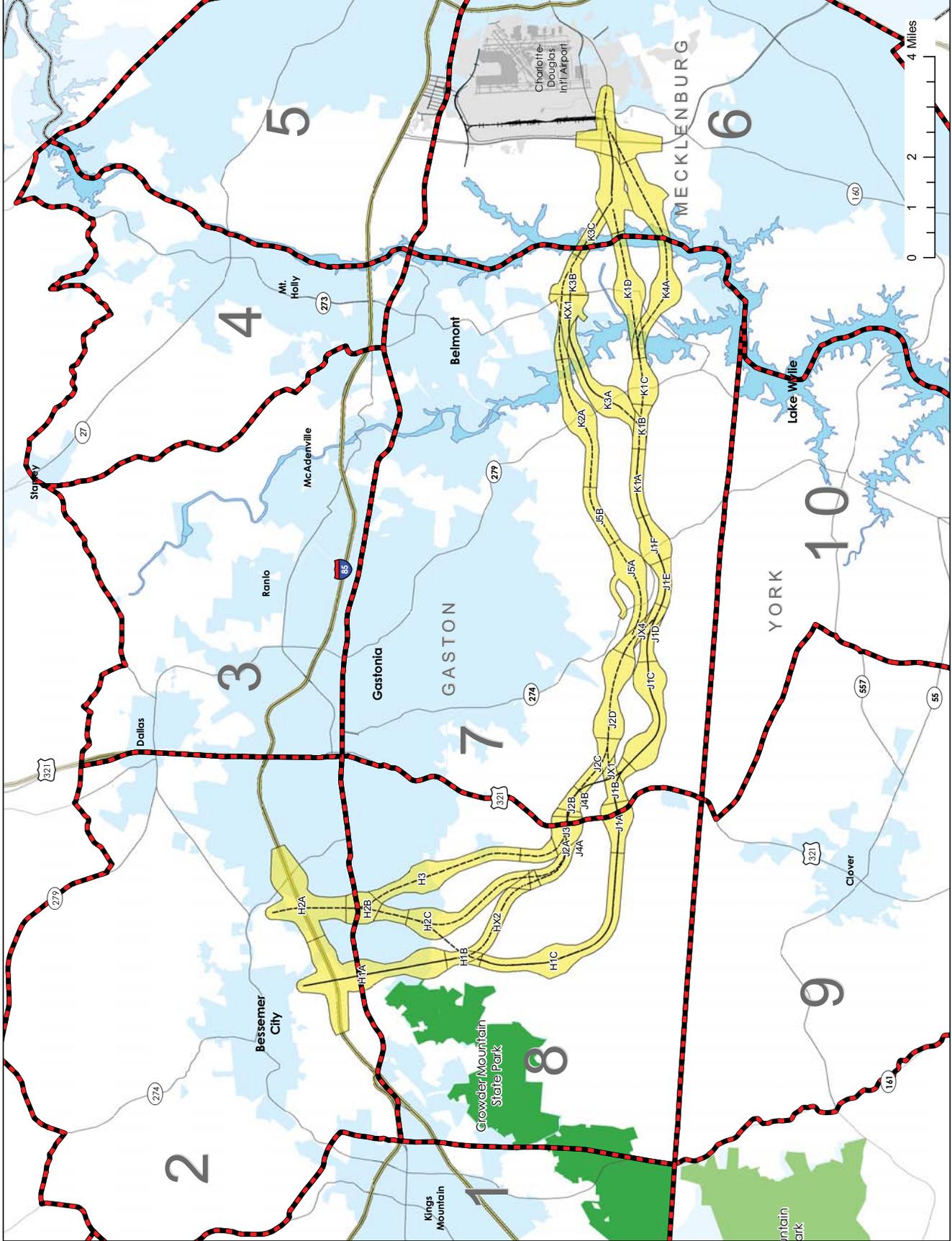


Figure 6.2
Gaston
E-W Connector
Detailed Study
Alternative
Segments



- Legend**
- Limited-access Highway
 - Major Roads
 - Alternative segments (labeled)
 - Alternatives Centerline
 - Lakes
 - Parks
 - Charlotte-Douglas Int'l Airport
 - Municipal Boundaries
 - County Boundaries
 - District Boundaries (ICE Study Area)

Data Sources: PBSJ (Alternatives), NCDOT and SCDOT (Roadways), Charlotte-Douglas Airport, York County, NCOneMap (boundaries, parks, hydrology)



Figure 7.1 Gaston E-W Connector and Elevation and Watersheds

Legend

- Gaston E-W Connector Alternatives
- County Boundaries
- Hydrologic Units

Elevation

High
Low

Labels are NC DWQ hydrologic units in North Carolina, sub-basins in South Carolina.
Data Sources: NCDOT GIS Branch, NCOneMap (watersheds), SC Department of Natural Resources

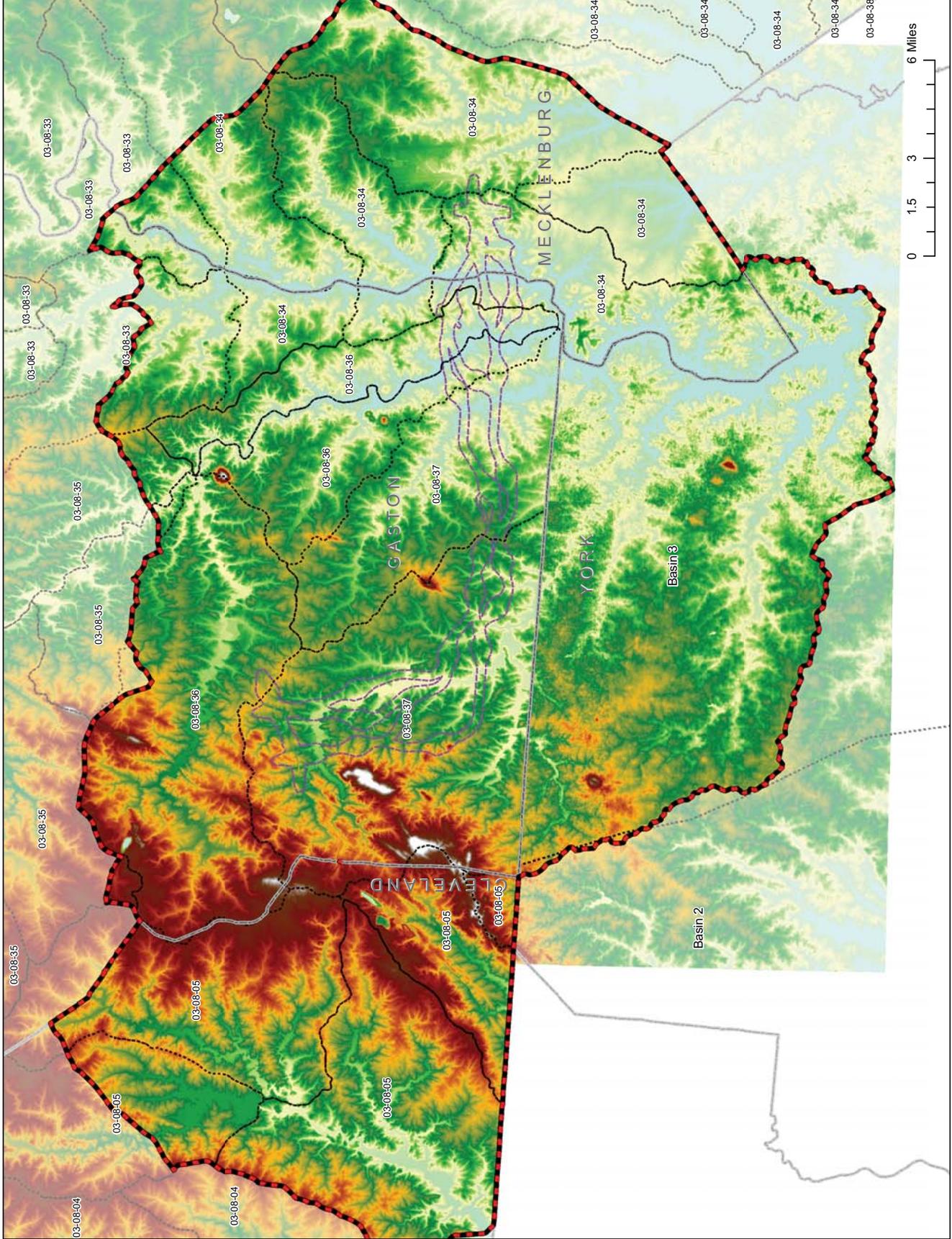
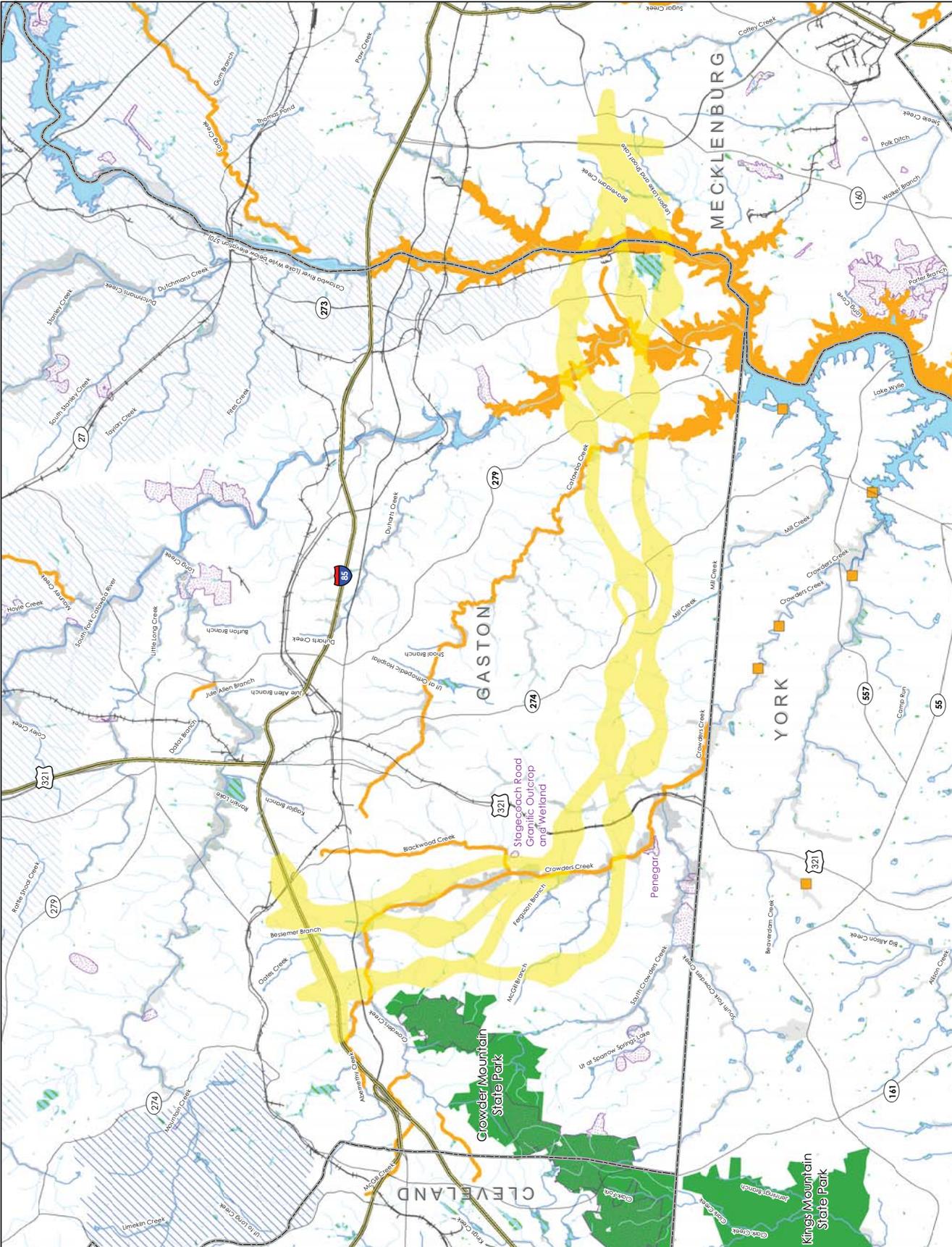


Figure 8.1 Gaston E-W Connector Environmental Features

Legend

- Limited-access Highway
- Major Roads
- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives
- Significant Natural Heritage Areas
- Critical Habitat
- Water Supply Watershed
 - WS-II
 - WS-IV
- 303(d) listed locations (SC)
- 303(d) listed streams (NC)
- 100-year Floodplain
- National Wetlands Inventory
- Lakes
- Parks
- County Boundaries



303(d) data from 2006 final reports from NC DENR and SCDNR.

Data Sources: FBSJ (Alternatives), NCDOT and SCDOT (Roadways), NC Floodplain Mapping Program, National Wetlands Inventory, York County, NC DENR, SCDNR, NCOneMap (boundaries, watersheds, parks, natural heritage areas, hydrology)

Figure 10.1 Gaston E-W Connector Farmland and Prime Agricultural Soils

Legend

- Major Roads
- ICE Study Area Boundary
- County Boundaries
- Gaston E-W Connector Alternatives
- Farmland (corrected)
- Prime agricultural soils (undeveloped land)

Data Sources: Farmland - National Land Cover Database 2001 (corrected for development using updated parcel layers from four counties); Soils - USDA (corrected for development using parcel layers from four counties)

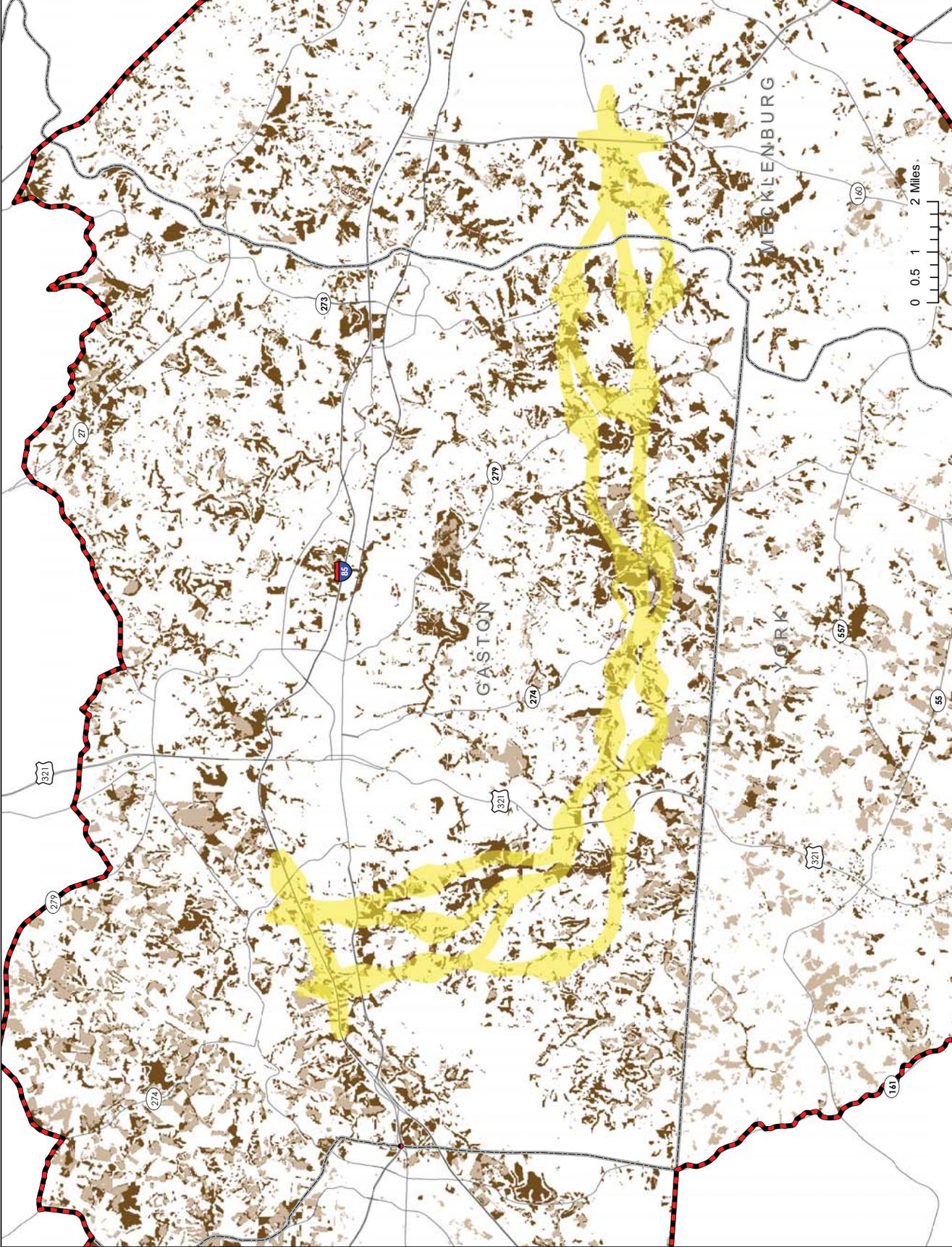
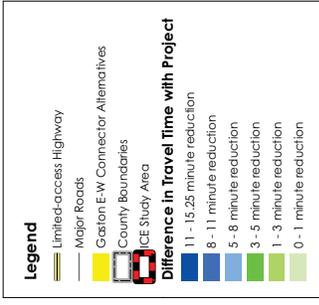


Figure 11.9
Gaston
E-W Connector
Travel Time
Changes (2030)
With and Without
Gaston East-
West Connector



This data was generated using the Metrolina Travel Demand Model, which calculated the difference in average travel time from each location with and without the proposed Gaston East-West Connector. Darker colors indicate greater travel time savings.

Data Sources: 2006 Metrolina Regional Travel Demand Model, The Louis Berger Group, Inc.

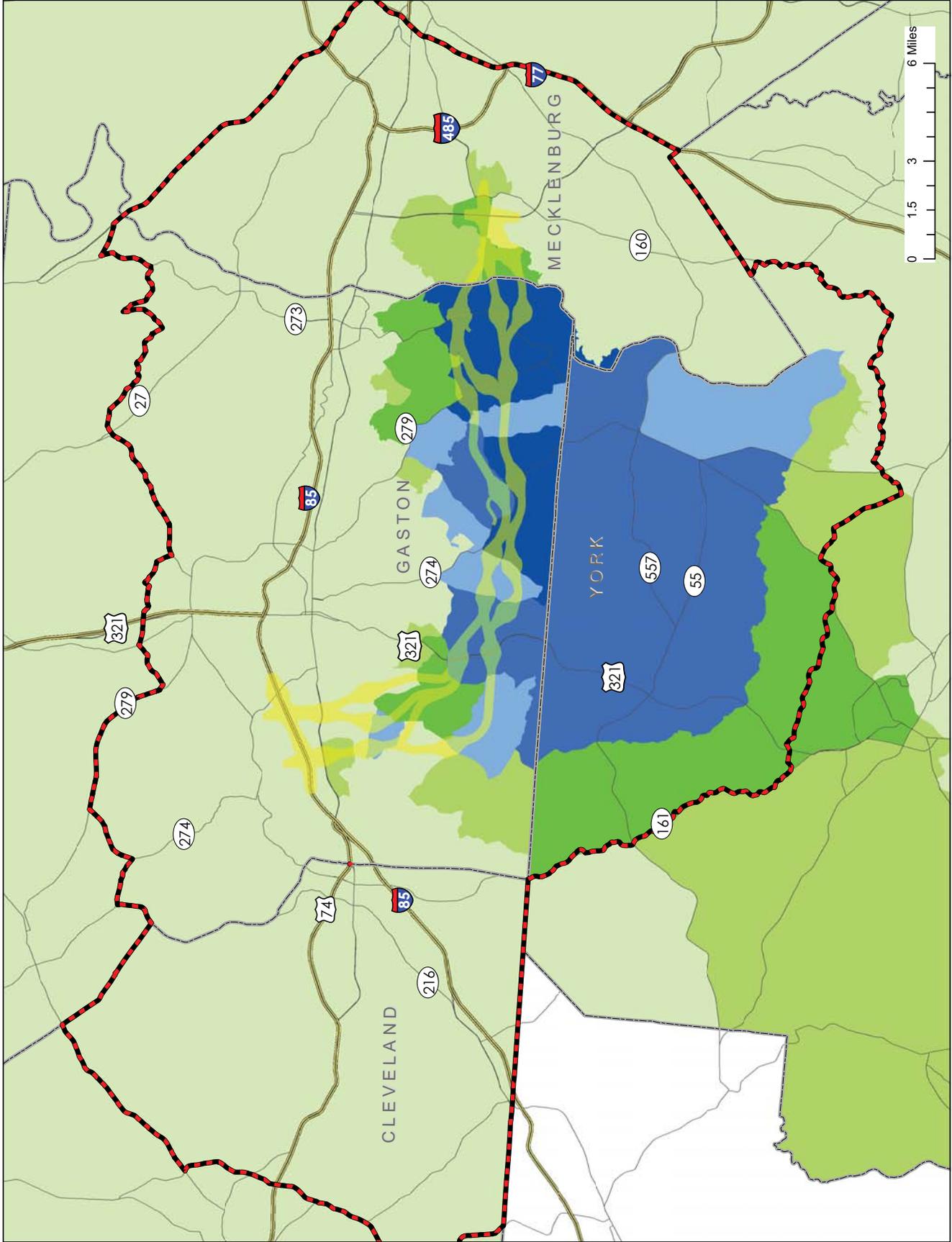
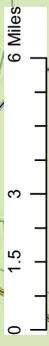
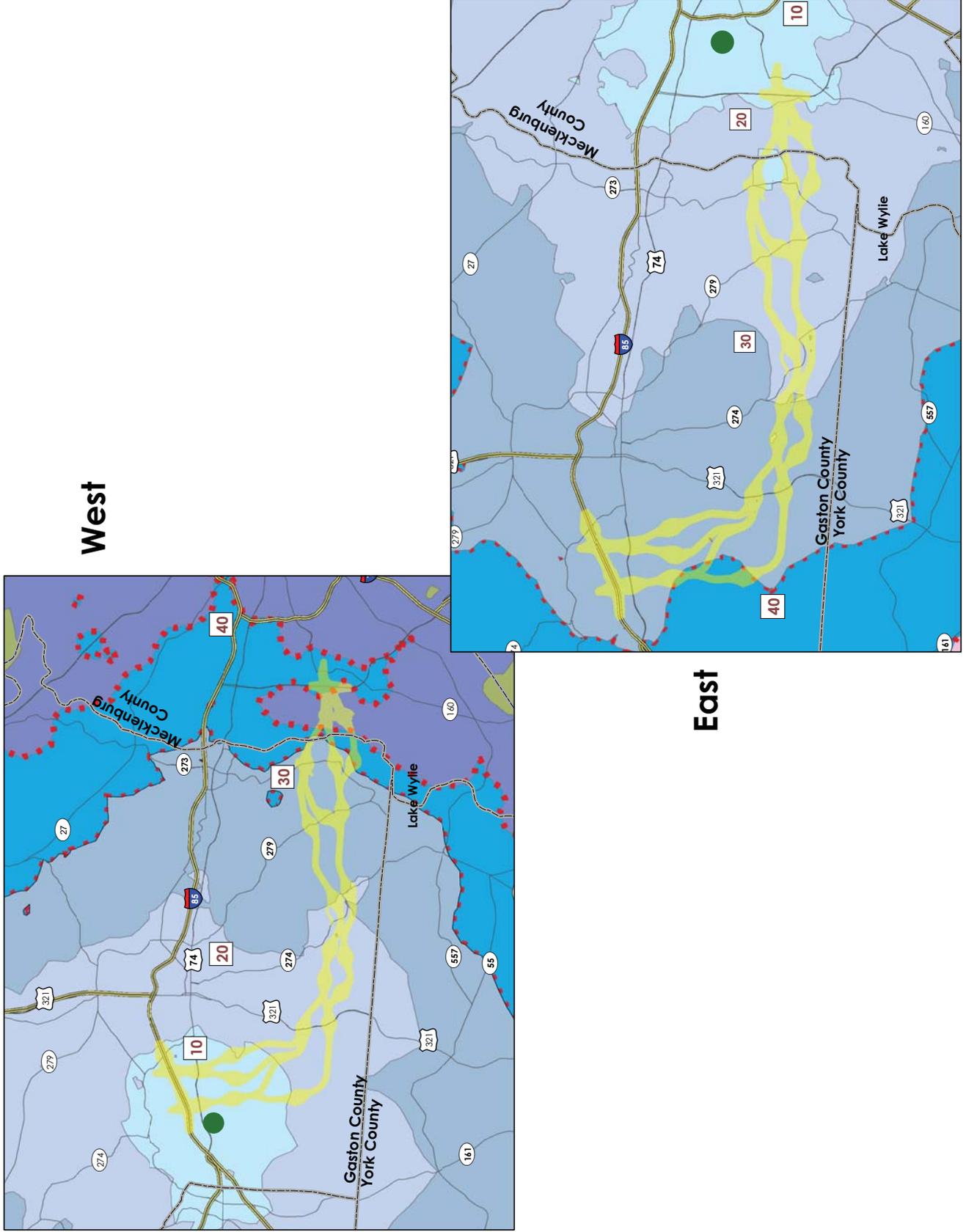


Figure 11.10
Gaston
E-W Connector
10-Minute
Travel Time
Isochrones for
2030



West

East

- Legend**
- Limited-access Highway
 - Major Roads
 - Gaston E-W Connector Alternatives
 - County Boundaries

Travel times are shown for destinations near the east and west ends of the project (origins are green dots). Red line is 40-minute isochrone, illustrating maximum typical commuted.

Data Sources: 2007 Metrolina Regional Travel Demand Model, The Louis Berger Group, Inc.



Figure 12.1 Gaston E-W Connector Human and Natural Environment Sensitivity

Legend

- Limbs-access Highway
- Major Roads
- Gaston E-W Connector Alternatives
- County Boundaries
- ICE Study Area

Human and Natural Environment Sensitivity

- Bottom quintile (0-20%)
- 2nd quintile (20-40%)
- 3rd quintile (40-60%)
- 4th quintile (60-80%)
- Top quintile (80-100%)

The one-mile grid cells were used to summarize many data layers representing human and natural environment sensitivity. Higher values indicate a greater cumulative sensitivity (e.g. presence of wetlands, historic sites, etc.). Values for York County were scaled separately, reflecting a lower potential maximum value due to missing data layers that were present in other counties. Therefore, the maximum value in York County is shown as the same color/ quintile as the maximum value in other counties, even though the numeric values are different. For more information on how the grid values were calculated, please see section 12.1 of the report.

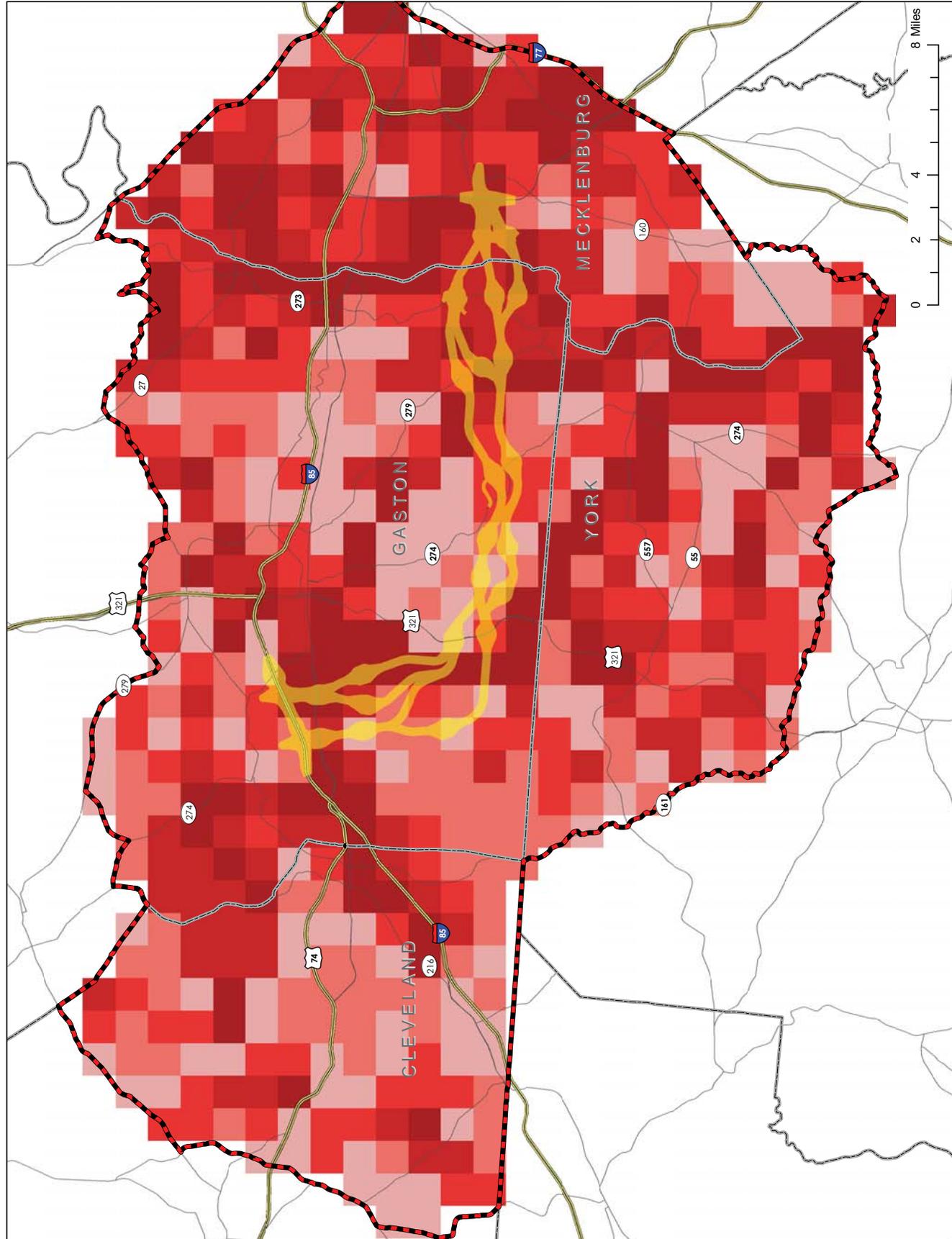


Figure 12.2 Gaston E-W Connector Cumulative Growth Potential

Legend

- Limited-access Highway
- Major Roads
- Gaston E-W Connector Alternatives
- County Boundaries
- ICE Study Area

Growth Potential

- Bottom quintile (0-20%)
- 2nd quintile (20-40%)
- 3rd quintile (40-60%)
- 4th quintile (60-80%)
- Top quintile (80-100%)

The one-mile grid cells were used to summarize many data layers representing cumulative growth potential and growth potential as an indirect effect to the proposed roadway. Higher values indicate a greater cumulative growth potential (e.g. developable land, public utilities, etc). Values for York County were scaled separately, reflecting a lower potential maximum value due to missing data layers that were present in other counties. Therefore, the maximum value in York County is shown as the same color/quintile as the maximum value in other counties, even though the numeric values are different. Permanently protected lands were omitted from the analysis. For more information on how the grid values were calculated, please see section 12.1 of the report.

8 Miles

0 2 4

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January 15, 2009 L. Murphy

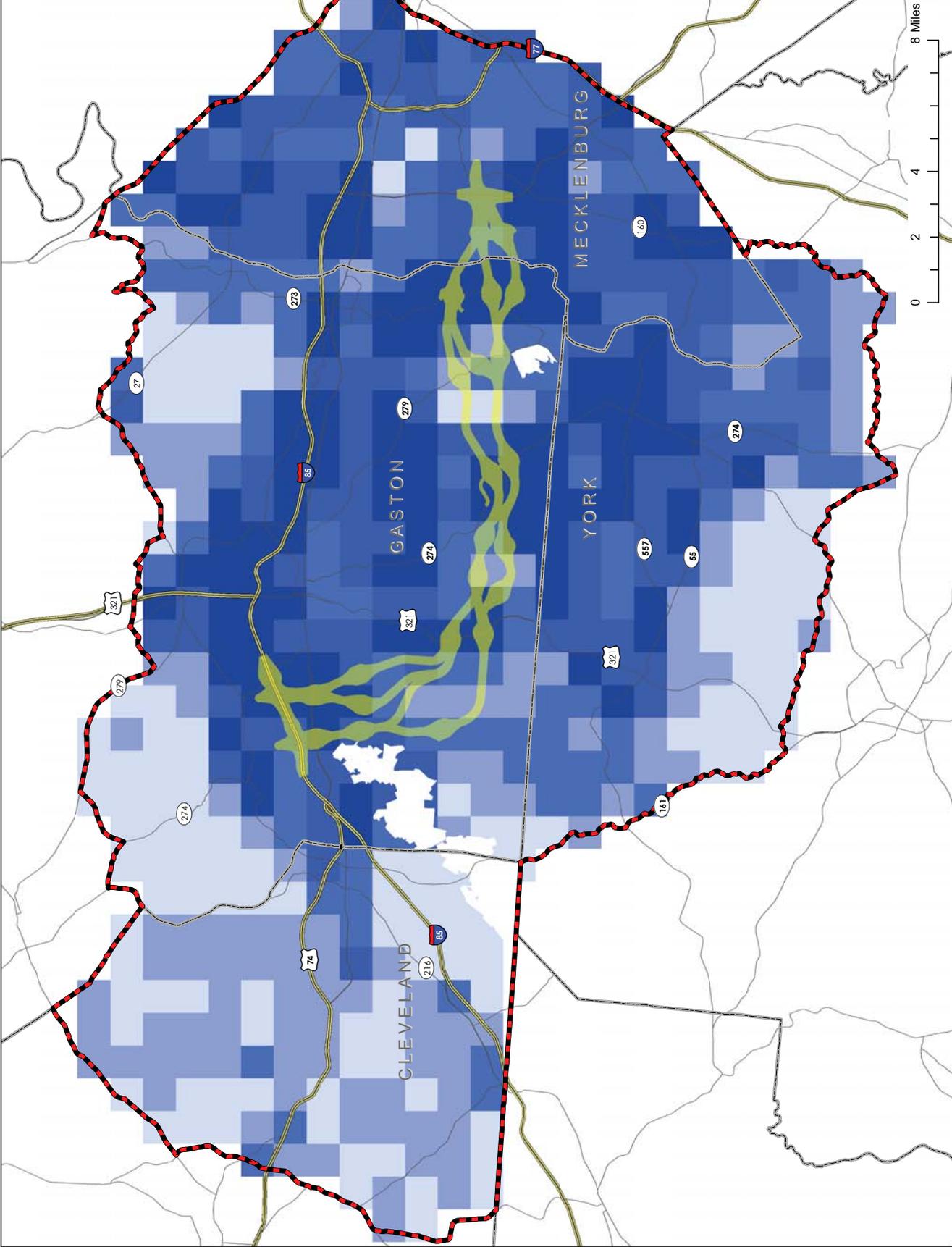
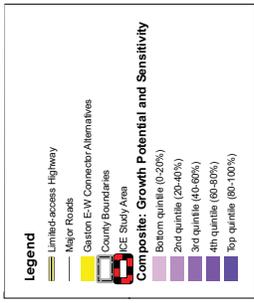
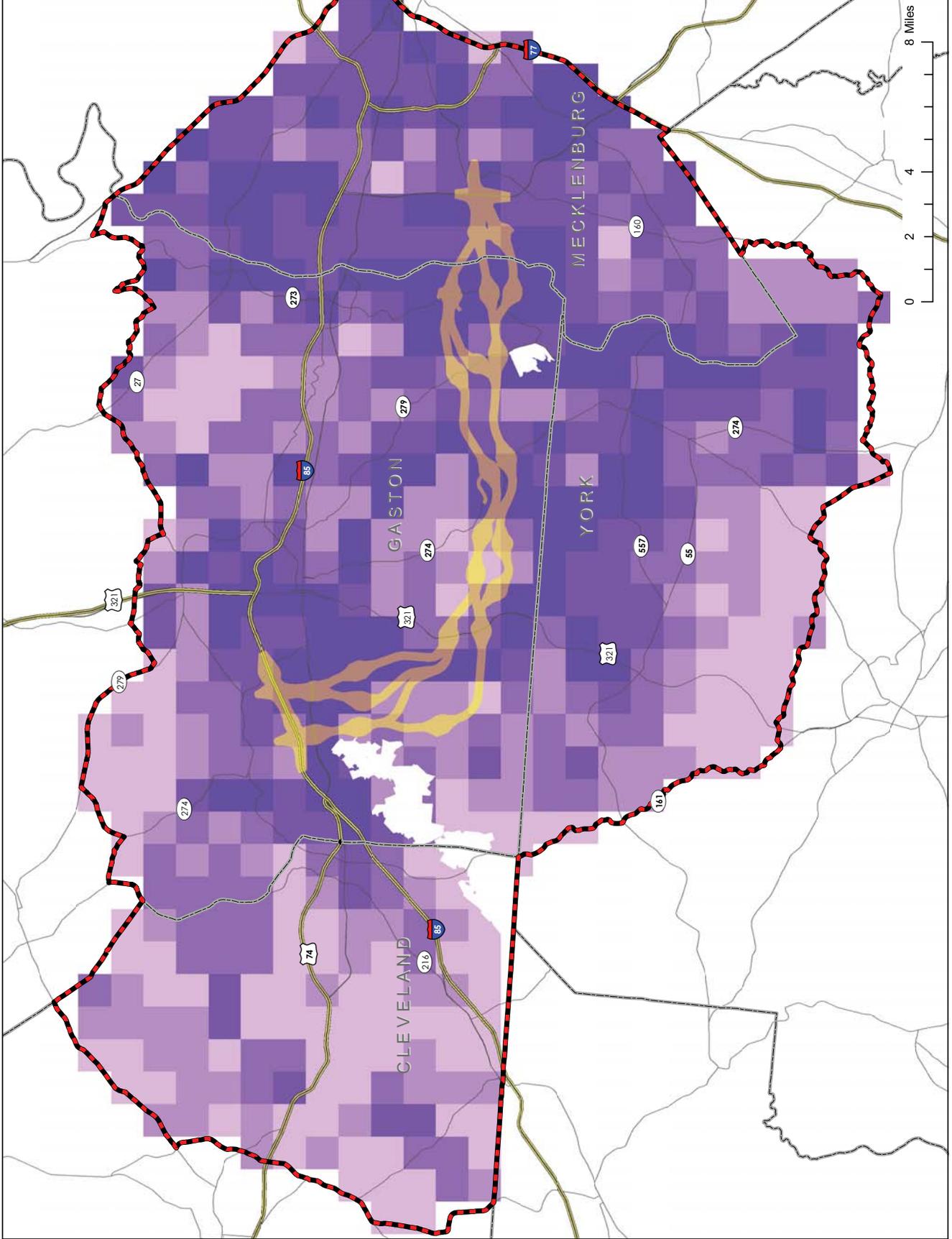


Figure 12.3 Gaston E-W Connector Composite Cumulative Growth Potential and Human/ Natural Environment Sensitivity



The one-mile grid cells were used to summarize many data layers representing both cumulative growth potential and human/natural environment sensitivity. Higher values indicate areas that have both high cumulative growth potential and high environmental sensitivity. Values for York County were scaled separately, reflecting a lower potential maximum value due to missing data layers that were present in other counties. Therefore, the maximum value in York County is shown as the same color/quintile as the maximum value in other counties, even though the numeric values are different. Permanently protected lands were omitted from the analysis. For more information on how the grid values were calculated, please see section 12.1 of the report.



8 Miles

0 2 4

Figure 12.4 Gaston E-W Connector Community Features

Legend

- Limited-access Highway
- Major Roads
- Gaston E-W Connector Alternatives
- School
- College
- Hospital
- Church
- Cemetery
- Historic Sites
- Hazardous Waste Disposal Locations
- Greenways/Trails
- Lakes
- Historic Districts
- Historic Sites
- Duke Power Plant
- Landfill
- Proposed Park
- Charlotte-Douglas Int'l Airport
- Proposed Runway
- Proposed Intermodal Facility
- Municipal Boundaries
- County Boundaries
- Above average % non-white
- Above average % Hispanic
- Lowest 20% of median household income

Demographics are from the 2000 Census, blockgroup level. Averages were calculated for blockgroups within the ICE Study Area.

Data Sources: US Census, NCDOT and SCDOT (roadways), NCOneMap (boundaries, parks, hydrology, community features), ESRI (community features), PBSJ (alternatives, historic sites), City of Gastonia (greenways), Charlotte-Douglas Int'l Airport

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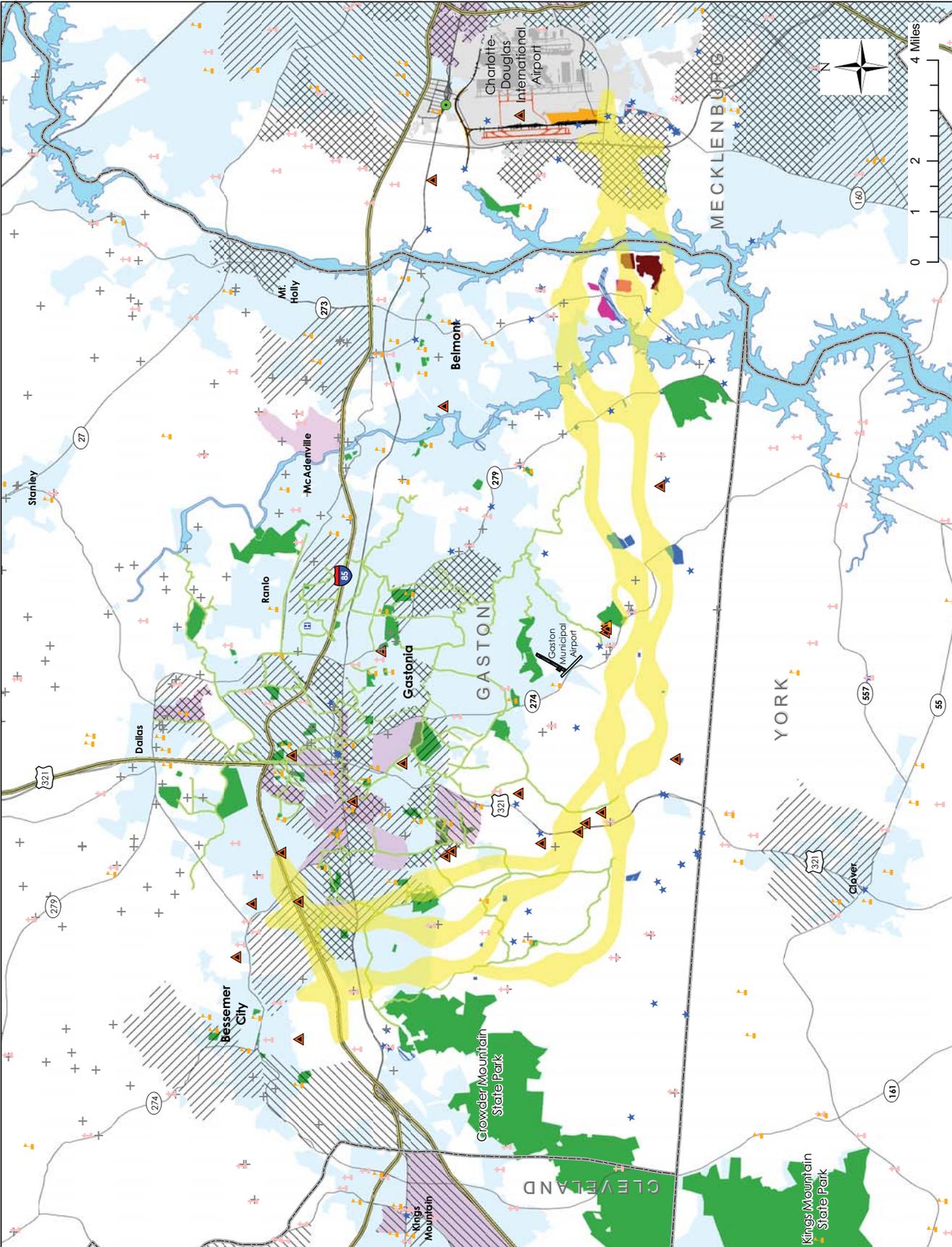


Figure 12.5 Gaston E-W Connector Public Utilities

- Legend**
- Limited-access Highway
 - Major Roads
 - Railroads
 - Gaston E-W Connector Alternatives
 - County Boundaries
 - Lakes
 - Public Water and Sewer Service Area (Current)
 - Public Water Service Area (Current)
 - Public Sewer Service Area (Current)
 - Public Water Service Area (Planned)
 - Public Sewer Service Area (Planned)

The utilities data is a compilation of data from several sources: 2004 Current and Future Public Water and Sewer GIS layers prepared by the NC Center for Geographic Information & Analysis and the NC Rural Center, York County Comprehensive Plan conceptual urban services area, and local utility boundary information acquired from the City of Gastonia, Towns of Clover and Belmont, and Carolina Water Services. In cases where the boundaries of these various sources did not match, the more extensive boundary was used.



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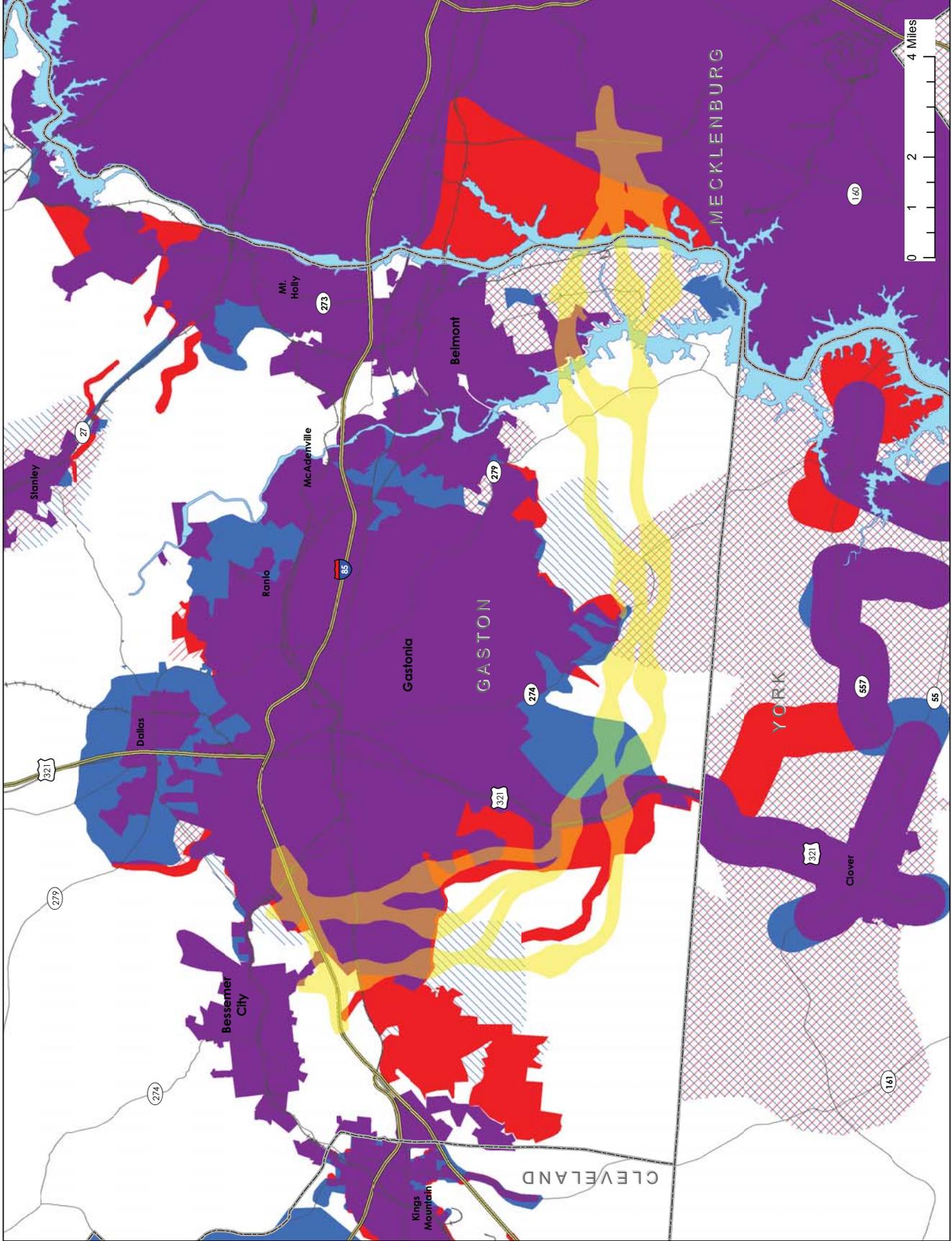


Figure 12.6
Gaston
E-W Connector
Developable
Land

- Legend**
- Limited-access Highway
 - Major Roads
 - Railroads
 - Gaston E-W Connector Alternatives
 - County Boundaries
 - Lakes
 - Conservation Easement
 - Developable Parcels
 - Public Water and/or Sewer Service Area (Current)
 - Public Water and/or Sewer Service Area (Planned)

Updated parcel layers were obtained from Gaston, Mecklenburg, York and Cleveland counties. Parcels identified as developable (undeveloped) are selected in the parcel database as having less than \$1000 in building/improvement value (i.e. there are no substantial buildings present on the parcel); OR greater than 100 acres and less than \$100,000 in building/improvement value. Tax exempt parcels such as airports and state parks were excluded regardless of value. For sources of the public utilities data layers, please see Figure 12.5.

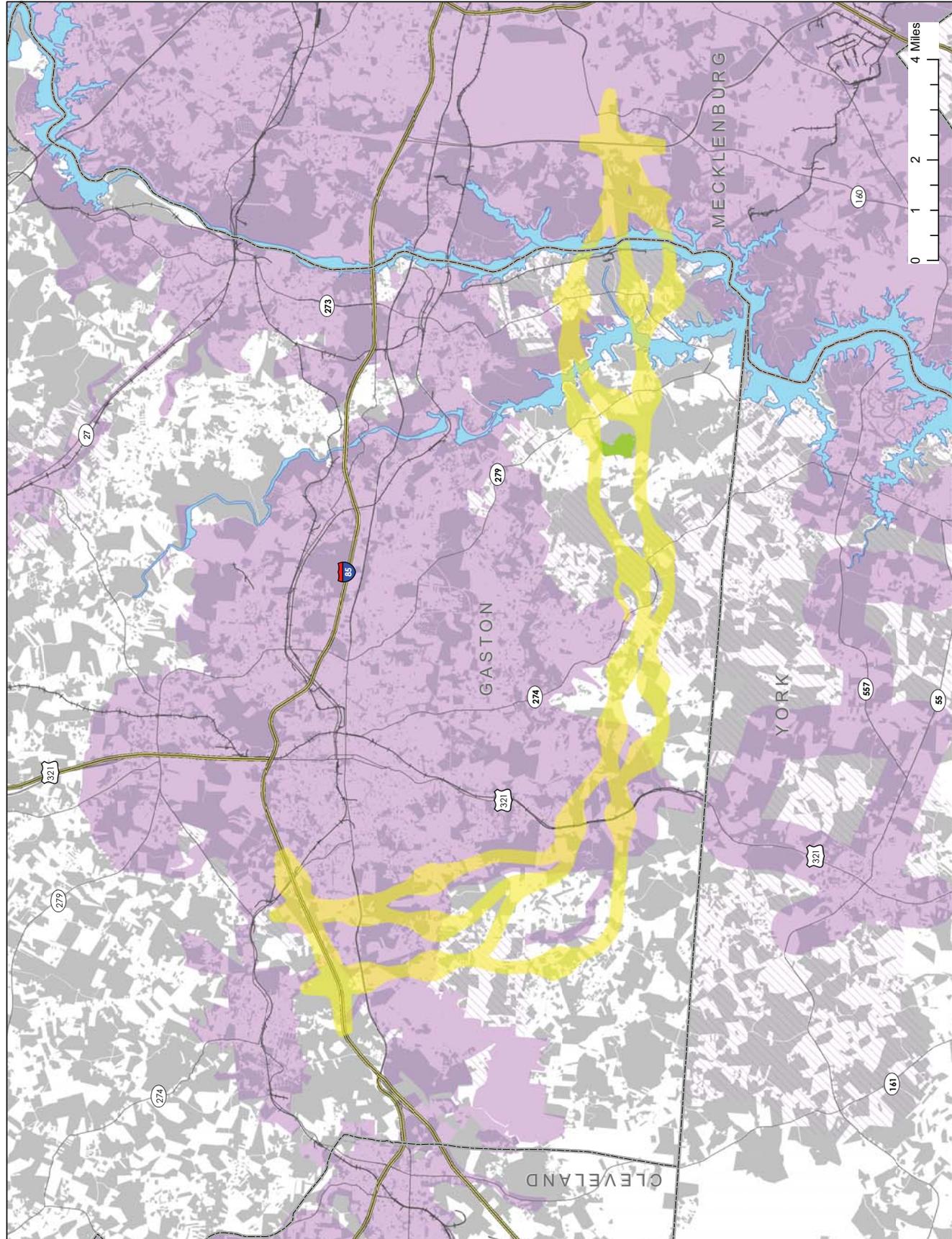
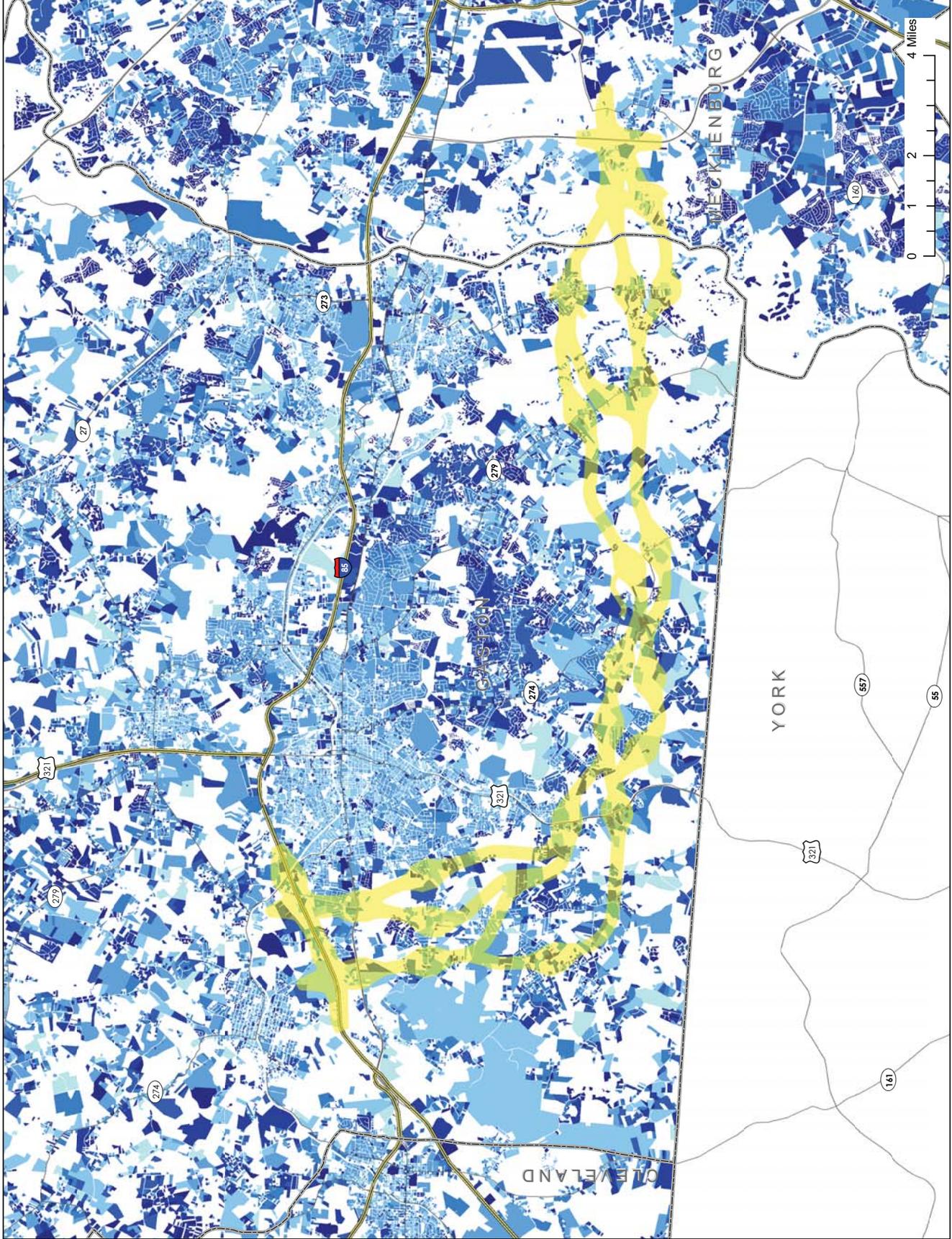


Figure 12.7 Gaston E-W Connector Development Over Time



Legend

- Limited-access Highway
- Major Roads
- Gaston E-W Connector Alternatives
- County Boundaries

Year Parcel was Built

- 1799 - 1900
- 1901 - 1950
- 1951 - 1970
- 1971 - 1980
- 1981 - 1990
- 1991 - 2000
- 2001 - 2007

Data from parcel databases for Gaston, Mecklenburg and Cleveland Counties. Year built data were not available for York County.



0 1 2 4 Miles

Figure 12.8 Gaston E-W Connector Alternative Interchanges

Legend

- Limited-access Highway
- Major Roads
- Alternative_Centerline
- Gaston E-W Connector Alternatives
- Corridor Segments (black labels)
- Interchanges (blue labels)
- Lakes
- Parks
- Charlotte-Douglas Int'l Airport
- Municipal Boundaries
- County Boundaries
- District Boundaries (CE Study Area)

A, B, C, D interchange designations (blue labels) were used during the local expert interviews conducted for this study. They are a simplification of the corridor segments (black labels) that have been used in other study materials.

Data Sources: PBSJ, NCOneMap (boundaries; parks; hydrology), Charlotte-Douglas Int'l Airport

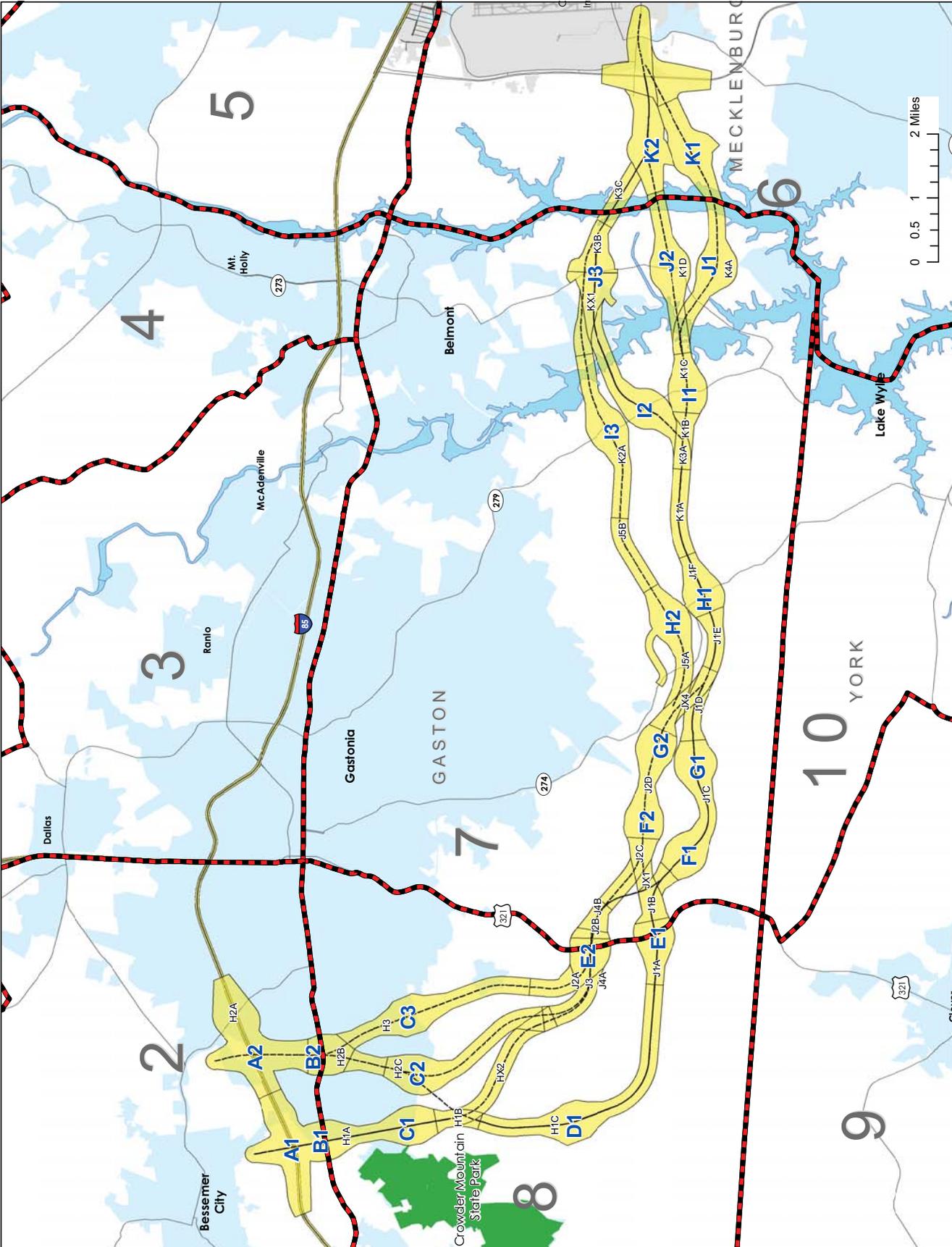
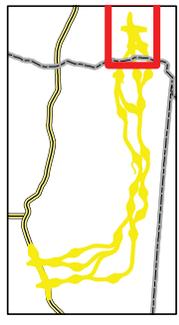


Figure 12.9 Gaston E-W Connector Interchange K

Legend

- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives ROW
- Corridor Segments (black labels)
- Interchanges (blue labels)
- Alternative Centerline
- School
- College
- Church
- Cemetery
- Hospital
- Hazardous Waste Disposal Locations
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- Duke Power Plant
- Proposed Runway
- Proposed Intermodal Facility
- West Blvd/Wellexe Neel Realignment
- County Boundaries

Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSJ (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)



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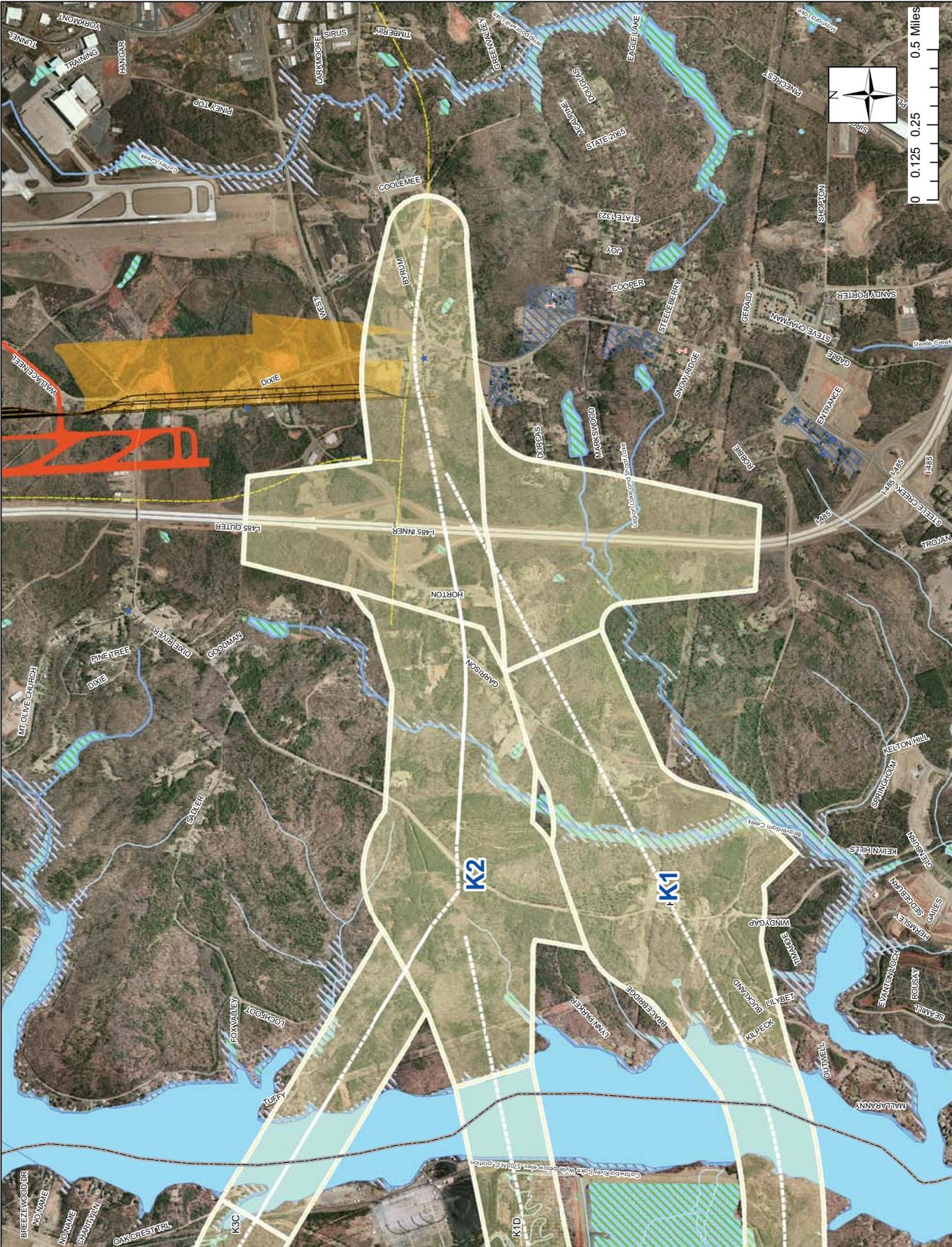
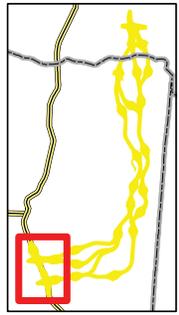


Figure 12.10 Gaston E-W Connector Interchanges A and B

Legend

- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives ROW Corridor Segments (black labels)
- Interchanges (blue labels)
- Alternative Centerline
- School
- College
- Church
- Cemetery
- Hospital
- Hazardous Waste Disposal Locations
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- County Boundaries

Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSU (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)



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L. Murphy



Figure 12.11
Gaston
E-W Connector
Interchange C



Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSJ (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)

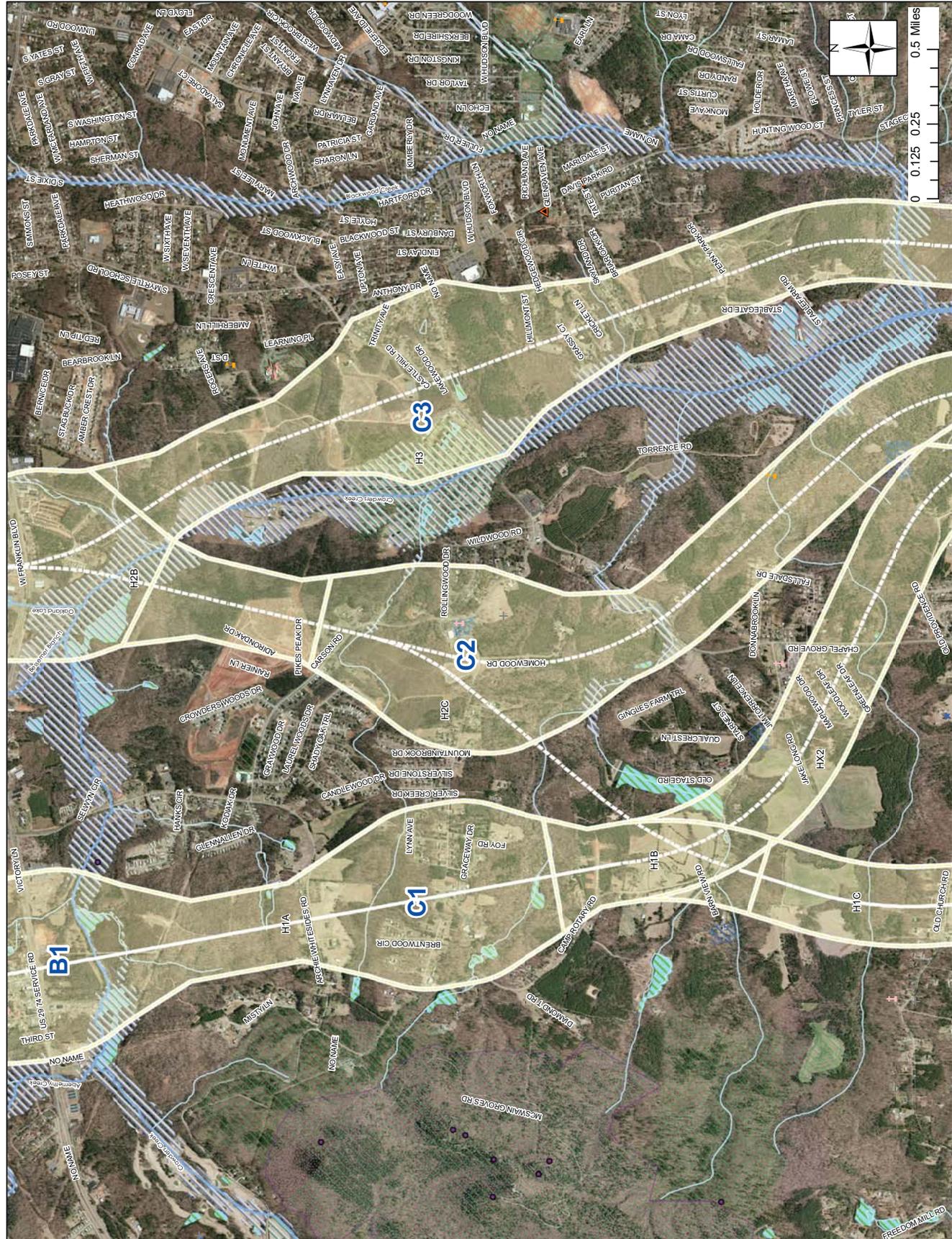
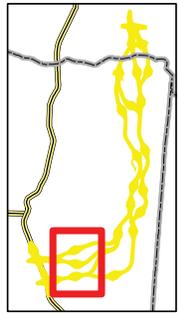


Figure 12.12 Gaston E-W Connector Interchanges D and E

Legend

- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives ROW Corridor Segments (black labels)
- Interchanges (blue labels)
- Alternative Centerline
- School
- College
- Church
- Cemetery
- Hospital
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- County Boundaries
- Hazardous Waste Disposal Locations
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- County Boundaries

Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSU (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)

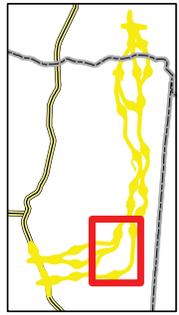


Figure 12.13 Gaston E-W Connector Interchanges F and G

Legend

- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives ROW
- Corridor Segments (black labels)
- Interchanges (blue labels)
- Alternative Centerline
- School
- College
- Church
- Cemetery
- Hospital
- Hazardous Waste Disposal Locations
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- County Boundaries

Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSJ (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)

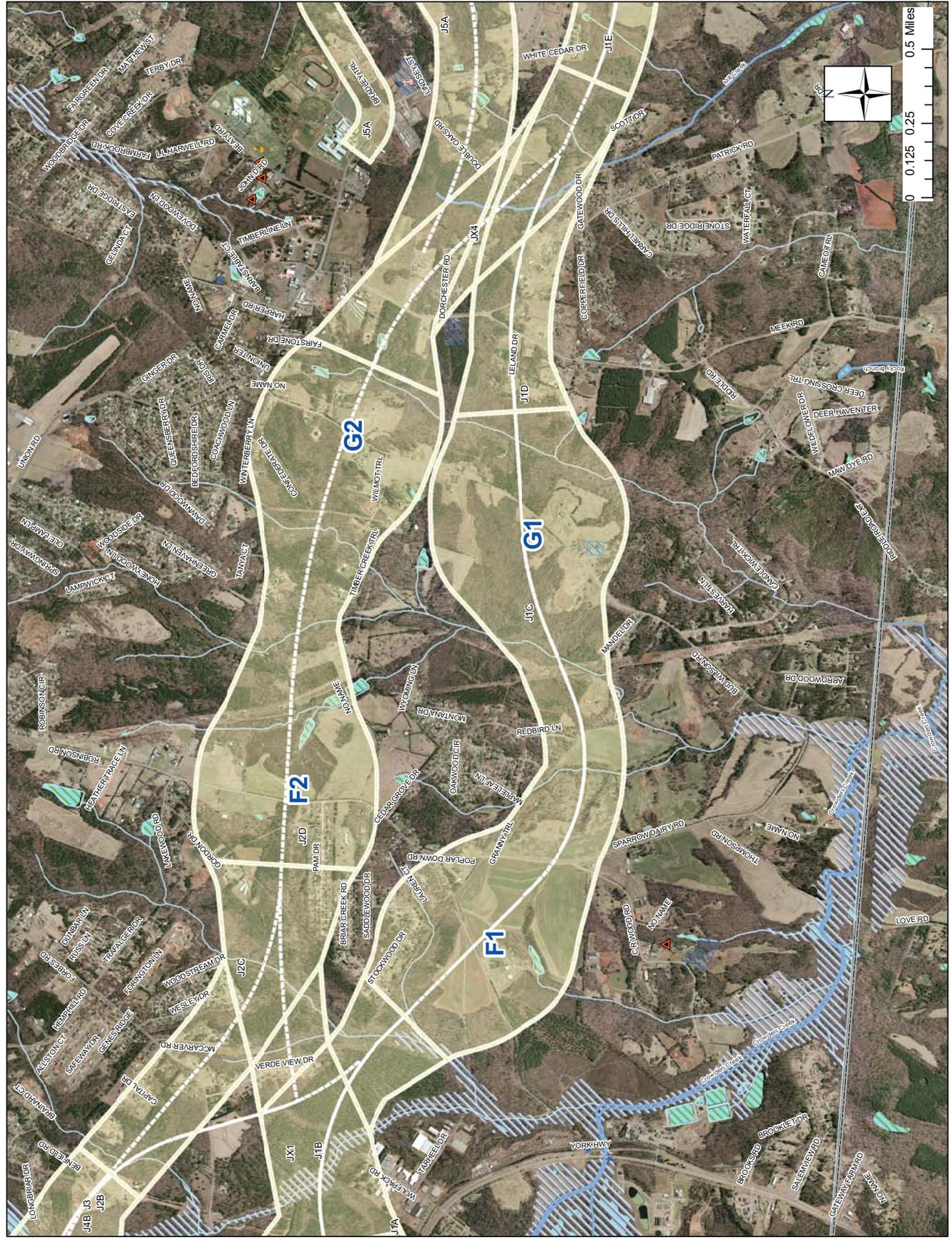
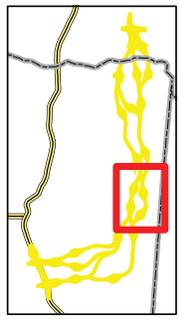


Figure 12.15 Gaston E-W Connector Interchanges I and J

Legend

- Railroads
- Rivers
- Streams
- Gaston E-W Connector Alternatives ROW
- Corridor Segments (black labels)
- Interchanges (blue labels)
- Alternative Centerline
- School
- College
- Church
- Cemetery
- Hospital
- Hazardous Waste Disposal Locations
- Historic Sites
- Natural Heritage Element Occurrences
- Significant Natural Heritage Areas
- Critical Habitat
- Lakes
- 100-year Floodplain
- National Wetlands Inventory
- Parks
- Historic Sites & Districts
- Landfill
- Duke Power Plant
- County Boundaries

Aerial photograph taken in 2005 by Gaston County. Data Sources: PBSJ (alternatives, historic sites), National Wetlands Inventory, NC Floodplain Mapping Program, NC OneMap (boundaries, base map data)

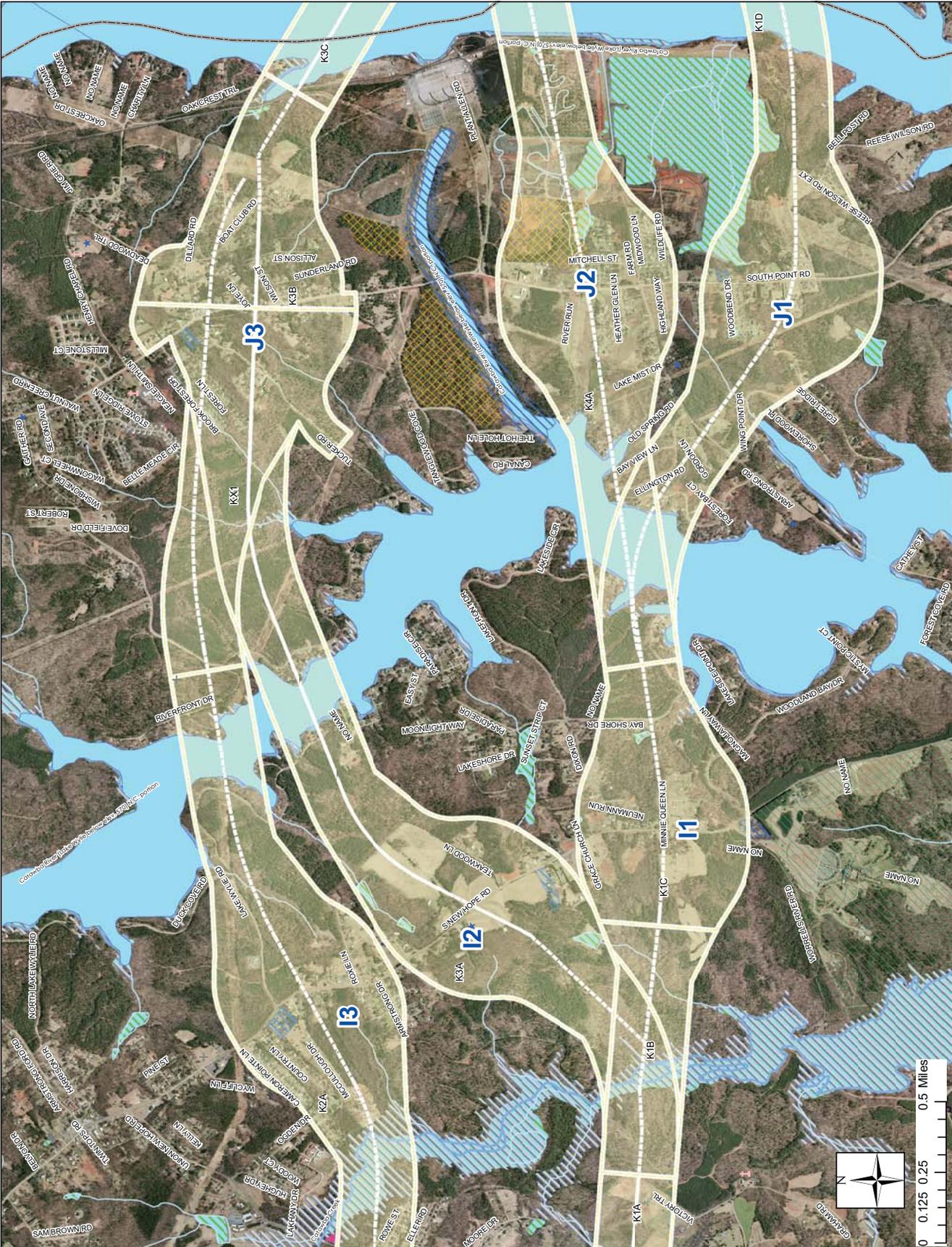
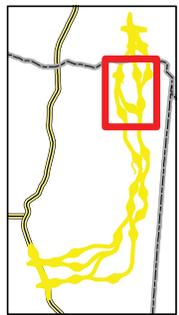
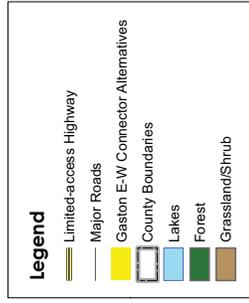
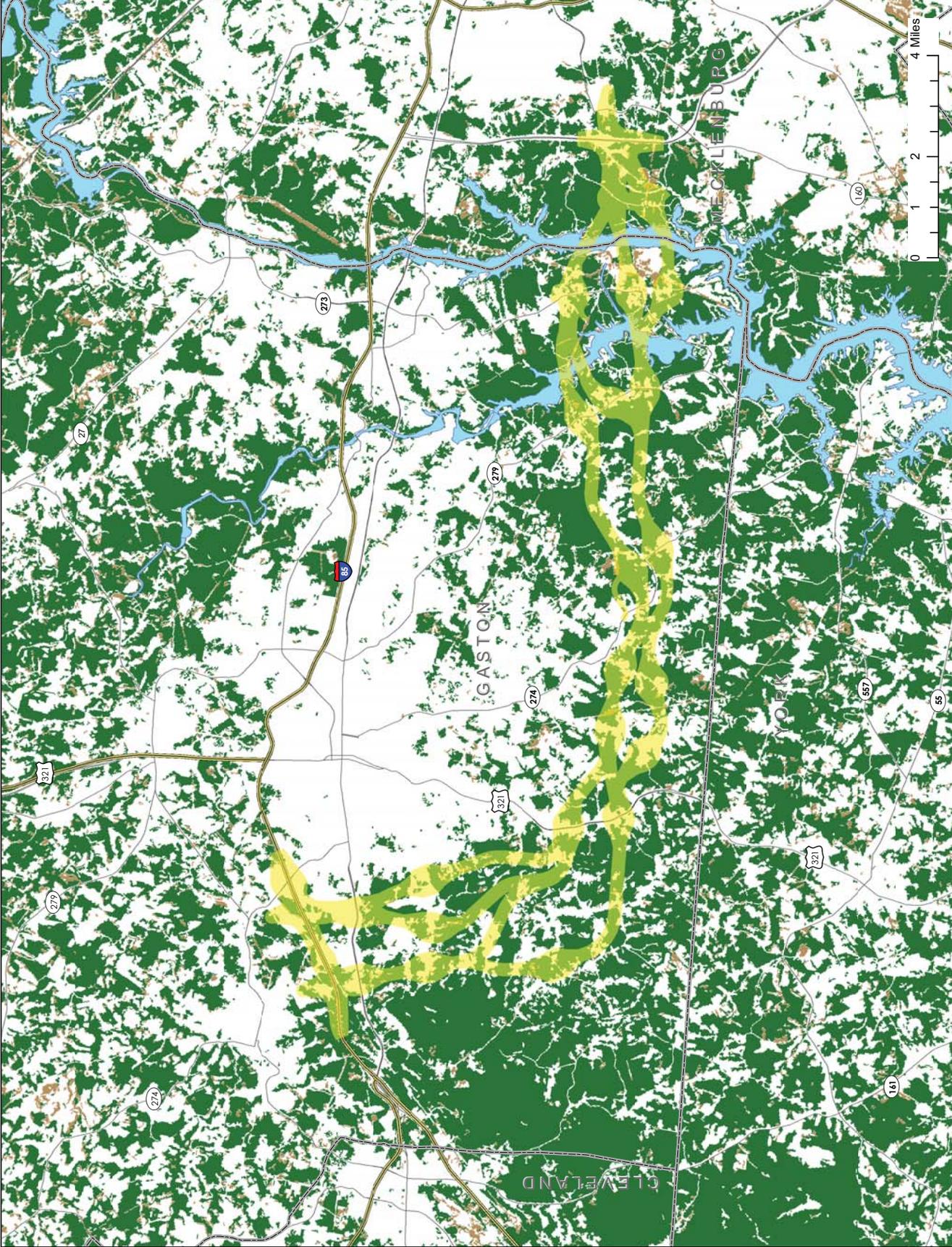


Figure 12.16
Gaston
E-W Connector
Wildlife Habitat



Forested and grassland/shrub areas were adapted from the National Land Cover Database 2001, part of the Multi-Resolution Land Characteristics Consortium. The initial landcover data was created using satellite images from 2000 and 2001. The forested layer was updated using aerial photos from 2005 for Gaston and Mecklenburg counties, and 2006 for York and Cleveland counties. The updates took into account new development that had occurred between the original NLCD satellite images to the date of the newer aerial photographs.



Appendix F. Scoping Coordination with Agencies

GASTON EAST-WEST CONNECTOR – TIP Project U-3321
GASTON AND MECKLENBURG COUNTIES

MEETING MINUTES

DATE: June 29, 2007

LOCATION: NCTA, 5400 Glenwood Ave. Suite 400, Raleigh, 27612

TIME: 9:30 am -10:30 am

ATTENDEES: Rob Ayers - FHWA
George Hoops – FHWA
Jennifer Harris – NCTA
Bob Deaton – NCDOT
Jeff Dayton- HNTB
Anne Redmond – HNTB
Christy Shumate – HNTB
Ross Andrews - Ecoscience
Jill Gurak – PBS&J
Julie Flesch-Pate – Louis Berger Group

By Phone:

Marella Buncick – US Fish and Wildlife Service
Marla Chambers – NC Wildlife Resources Commission
Susan Fisher - HNTB

Meeting Purpose

The purpose of the meeting was to discuss the scope of the indirect and cumulative effects study for the Gaston East-West Connector, particularly relating to issues of concern to the US Fish and Wildlife Service (USFWS) and the NC Wildlife Resources Commission (NCWRC).

Meeting Minutes

The NCTA is planning on conducting a qualitative ICE analysis for the Gaston East-West Connector Detailed Study Alternatives (Detailed Study Alternatives) using the 8-step methodology detailed in the NCDOT's guidance. A quantitative study for the LEDPA is anticipated being needed. Input from resource agencies on issues of concern, identification of critical resources, and study methodologies is needed. In the next several weeks, additional meetings will be held with other resource agencies (including the NC Division of Water Quality).

Ms. Buncick stated there are no designated critical habitats or proposed critical habitats in the study area. There are known bald eagle nests on the Catawba River. Habitat for the Schweinitz's sunflower is a concern since populations exist in the area.

Ms. Gurak stated that based on studies conducted by Earth Tech, bald eagle nests are located to the north and south of the Detailed Study Alternatives, greater than one mile from the Detailed Study Alternatives.

A question was asked regarding the implications of the recent bald eagle delisting. Ms. Buncick did not know, as there are no internal USFWS policies established yet. The Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act may be applicable.

Mr. Deaton stated that listed plants have been addressed in other projects. For a project in Rutherford County, a qualitative ICE analysis was completed. As the project progressed through permitting, a few small populations of an endangered plant were discovered that were not directly affected by the project. These populations were planned to potentially be moved. NCDOT typically does not mitigate for indirect and cumulative effects.

Ms. Buncick noted that the Shelby Bypass project is a good example of what should be done to address endangered plant issues. That project went through a Section 7 consultation.

Ms. Buncick stated that concerns regarding the Gaston East-West Connector ICE analysis include water quality (since there are listed aquatic species downstream in South Carolina), wildlife habitat fragmentation, upland habitat loss, and potential habitat for listed plants.

Ms. Chambers stated her concerns include wildlife habitat fragmentation, water quality, upland habitat loss, and additional effects from improvements to north/south roads. Regarding terrestrial species in general, a road could separate breeding grounds from foraging grounds, having an indirect effect.

Mr. Andrews asked about the Georgia aster. Ms. Buncick stated that there is no legal status for USFWS to consider the aster or other candidate or state-listed species.

Ms. Flesch-Pate asked if there are any models available for evaluating wildlife habitat fragmentation. None of the attendees knew of any specific models.

Clarification on what is included in a qualitative analysis versus a quantitative analysis was provided by Mr. Deaton. A quantitative analysis usually includes water quality modeling for nutrient loading and/or stormwater runoff. If a quantitative analysis of this nature is needed, it is done at the permitting stage for the LEDPA only. This type of analysis is done infrequently.

Qualitative analyses do include a substantial amount of data. Data and numerical evaluations of population, employment, and travel times, among other issues, are included in a qualitative analysis.

Ms. Buncick stated it is helpful to know the directly affected wildlife resources to be able to comment on indirect effects to these resources.

Ms. Chambers stated she has concerns with the effects to Lake Wylie, regarding whether the project would increase lake development or the rate at which it is occurring. Also, research is needed on whether there are any water quality intakes downstream in South Carolina. Mr. Ayers stated that the ICE study would address water quality in South Carolina in accordance with SC's standards.

Ms. Buncick stated that bog turtles have a high potential for being listed and they may occur in the project area. Therefore, they and their habitat should be addressed on a broad scale in the ICE study. A good contact for bog turtle information is Mr. Dennis Herman at NCDOT. There is the potential to mitigate for bog turtle effects if it is known early where suitable habitat is located.

Ms. Redmond stated that at this time, NCTA is planning to start the definition of natural resource ICE study boundaries based on 14-digit HEC code watershed boundaries. The ICE Study Area is typically larger than the direct effect study area boundary.

Ms. Buncick stated that since the regular project study area boundaries contain different geographies (mountain, foothills, and piedmont), then the ICE Study Areas for specific plants or other species can be narrowed down.

Ms. Chambers also requested that previous scoping comments be considered in the ICE study.

ACTION ITEMS

- Louis Berger to draft methodology of upland fragmentation analysis for review.
- NCTA to check on any water supply watersheds downstream of the project area in South Carolina.
- USFWS & NCWRC to review previously submitted scoping comments and revise if necessary.
- USFWS to check on implications of delisting the bald eagle.

GASTON EAST-WEST CONNECTOR – TIP Project U-3321
GASTON AND MECKLENBURG COUNTIES

MEETING MINUTES

DATE: July 26, 2007

LOCATION: NCTA, 5400 Glenwood Ave. Suite 400, Raleigh, 27612

TIME: 2:00 pm -3:00 pm

ATTENDEES:

VIA TELEPHONE

Rob Ayers - FHWA
George Hoops – FHWA
Polly Lespinasse – NC DWQ
Bob Deaton – NCDOT
Susan Fisher - HNTB
Carl Gibilaro – PBS&J
Kim Bereis – PBS&J

AT THE NCTA OFFICE

Jennifer Harris – NCTA
Anne Redmond - HNTB
Jeff Dayton - HNTB
Christy Shumate - HNTB
Ross Andrews - Ecoscience
Mike Gloden - Ecoscience
Jill Gurak – PBS&J
Julie Flesch-Pate – Louis Berger Group

Meeting Purpose

The purpose of the meeting was to discuss with NC DWQ the scope of the indirect and cumulative effects study for the Gaston East-West Connector,

Meeting Minutes

Tentative project schedule:

Preliminary Design: October 2007
Toll Scenario Traffic Forecast: August 2007
Preliminary Draft EIS: June 2008
Community Characteristics Report is underway

DWQ's issues of concern:

High Quality Waters;
Outstanding State Resources;
303d Listed Streams;
Higher quality wetlands and streams identified in the jurisdictional surveys;

Water Supplies (Classifications WSI/WSII);
Crowders Creek; and
Floodplains.

Berger will research both NC and SC regulations, laws, and policies equally during its ICE assessment, but will emphasize coordination and interviewing efforts in NC.

DWQ agreed with the multi-county approach and ICE Study Area boundaries based on watersheds.

General triggers identified by DWQ that may indicate the need for investigation beyond the proposed qualitative approach are as follows:

- Stormwater runoff affecting water uses or designations;
- Threatened / Endangered Species and their critical habitat;
- Violations of the Clean Water Act;
- Notable changes in traffic patterns;
- Land use changes; and
- Effects to impaired waterbodies.

FHWA asked what would trigger analysis of ICE effects beyond the proposed qualitative approach when applying for a Section 401 Water Quality Certification Permit. DWQ was not able to provide a specific trigger but would consider the project as a whole when determining effects.

FHWA also asked what issues DWQ will consider in determining if a 401 Water Quality Certification violation might occur. DWQ said stormwater typically is the issue, but also aquatic-related threatened and endangered species can be issues. Indicators that could be used to determine stormwater changes could include direct effects from the project, changes in land use, changes in traffic, and effects on impaired waters.

Bob Deaton reiterated the need for a tailored qualitative approach that not only leads us to a LEDPA, but sets up areas to focus on should a quantitative assessment of effects on resources become necessary for the Section 401 Water Quality Certification.

FHWA asked if the 16 Detailed Study Alternatives could be considered the only practical alternatives left on the table. DWQ agreed since they were identified through the Merger process as a group effort. She did not know if this would be the case for non-Merger projects.

Belmont is in the process of finalizing their land use plan. It includes land use scenarios with and without the Gaston Connector. It is expected to be adopted in August.

GIS layers should be developed in a fashion that is conducive to quantitative modeling in case we need to conduct such modeling in the future.

FHWA asked about how DWQ defines a practical alternative. DWQ was unable to define what it would consider a practical alternative for this project.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

ACTION ITEMS

- DWQ to review previously submitted scoping comments provide additional comments if necessary.
- PBS&J to provide Louis Berger information collected as part of the community characteristics report.

Appendix G. References

¹ North Carolina Department of Transportation, DRAFT Purpose and Need Statement, Gaston County East-West Corridor Study, T.I.P. Project No. U-3321, May 2008, Page 4.

² <http://h20.enr.state.nc.us/bims/reports/basinandwaterbodies/> Final 2006 303(d) list, accessed on 2/14/08.

³ <http://www.scdhec.gov/environment/water/tmdl/>, State of South Carolina, Integrated Report for 2006-Part 1: Listing of Impaired Water, accessed on 8/14/08.

⁴ NCDOT Department of Environment and Natural Resources, Guidance for Assessing Indirect and Cumulative Effects of Transportation Projects in North Carolina, Volume II: Practitioner's Handbook, The Louis Berger Group, Inc., page III-6.

⁵ Ibid.

⁶ Michael Collins, Frederick Steiner, Michael Rushman, "Land-Use Suitability Analysis in the United States: Historical Development and Promising Technological Achievements." *Environmental Management*, vol. 5, no. 28, pp. 611-621 (2001).

⁷ This is known as a Strabo method, so-named after a Greek philosopher of the Socratic era. Higher degrees of familiarity present a stronger case for the response being accurate relative to responses from those less familiar with a given geographic area.

⁸ Ibid, accessed on 11/1/07.

⁹ Ibid, accessed on 11/1/07.

¹⁰ North Carolina Department of Transportation, "Indirect and Cumulative Effects: A System Primer for Metropolitan Planning Organizations." The Louis Berger Group, Inc., October, 2007, pages 5-6.

¹¹ North Carolina Department of Transportation, Guidance for Assessing Indirect and Cumulative Effects of Transportation Projects in North Carolina, Volumes I & II, November 2001.

¹² www.fs.fed.us/psw/topics/fire_science/craft/craft/resources/Cumulative_effects_annalysis.htm, accessed on 10/19/07.

¹³ www.fs.fed.us/psw/topics/fire_science/craft/craft/resources/Cumulative_effects_annalysis.htm, accessed on 10/19/07.

¹⁴ Environmental protection Agency, Consideration of Cumulative Effects in EPA Review of NEPA Documents, US Environmental Protection Agency, Office of Federal Activities (2252A), EPA 315-R-99-002/May 1999.

¹⁵ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 72.

¹⁶ Ibid. Environmental protection Agency, Consideration of Cumulative Effects in EPA Review of NEPA Documents, US Environmental Protection Agency, Office of Federal Activities (2252A), EPA 315-R-99-002/May 1999.

¹⁷ Gaston County Department of Tourism (www.gastontourism.com), accessed October 7, 2007.

¹⁸ North Carolina Turnpike Authority, Draft Community Characteristics Report, Gaston East-West Connector, PBS&J, August 31, 2007.

¹⁹ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 131.

²⁰ Gaston Urban Area Technical Advisory Committee, "2030 Long-Range Transportation Plan," May 24, 2005. Pages 71-75.

²¹ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 72.

²² PBS&J interview with Jack Kiser, Gaston East-West Connector Community Characteristic Report Local Interviews, July 11, 2007, page 1.

²³ North Carolina State Data Center, 2006 and 2000 Municipal Population Estimates (<http://demog.state.nc.us/>), accessed February 12, 2008.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

-
- ²⁴ Gastonia City Council Meeting Minutes for June 19, 2007, pages 385-386 (www.cityofgastonia.com/elect_office/citycouncil/minutes_agendas/CityCouncilMinutesJune192007.pdf), accessed October 7, 2007.
- ²⁵ Gastonia City Council Meeting Minutes of August 21, 2007, pages 24-25 (www.cityofgastonia.com/elect_office/citycouncil/minutes_agendas/CityCouncilMinutesAugust212007.pdf), accessed October 7, 2007.
- ²⁶ Resource Guidebook for Residential and Commercial Development (www.cityofgastonia.com/dept/planning/_pdf%20files/DevelopmentGuidebook.pdf), August, 2007, accessed October 7, 2007.
- ²⁷ Gastonia City Council Meeting Minutes for June 19, 2007, pages 376-385 (www.cityofgastonia.com/elect_office/citycouncil/minutes_agendas/CityCouncilMinutesJune192007.pdf), accessed October 7, 2007.
- ²⁸ <http://www.cityofbelmont.org/webroff/agendas/index/2/53>, accessed on 11/16/2007.
- ²⁹ <http://www.cityofbelmont.org/webroff/agendas/index/2/53>, accessed on 11/16/2007.
- ³⁰ Charlotte City Council and the Mecklenburg Board of County Commissioners, 2015 Plan, Planning for Our Future, November, 1997, page 5.
- ³¹ Charlotte City Council and the Mecklenburg Board of County Commissioners, 2015 Plan, Planning for Our Future, November, 1997, page 5.
- ³² Charlotte City Council and the Mecklenburg Board of County Commissioners, 2015 Plan, Planning for Our Future, November, 1997, page 1.
- ³³ Mecklenburg County, Strategic Business Plan, 2008-2010, page 22.
- ³⁴ City of Charlotte, The City of Charlotte Transportation Action Plan Policy Document, Adopted by Charlotte City Council, May 22, 2006.
- ³⁵ Charlotte City Council, <http://www.charmeck.org/Departments/City+Council/Focus+and+Priorities/home.htm>, accessed October 12, 2007.
- ³⁶ <http://www.charmeck.org/Departments/County+Managers+Office/Business+Management/Prior+Budgets/FY08+Budget/home.htm>, accessed on 2/13/08.
- ³⁷ Mecklenburg County, Strategic Business Plan, 2008-2010, page 1.
- ³⁸ York County, York County Industry Cluster & Target Market Study, Whittaker Associates, Inc. 2005.
- ³⁹ York County, York County Industry Cluster & Target Market Study, Whittaker Associates, Inc. 2005, page 19.
- ⁴⁰ York County, York County Industry Cluster & Target Market Study, Whittaker Associates, Inc. 2005, page 19.
- ⁴¹ Mecklenburg County, Strategic Business Plan, 2008-2010, page 26.
- ⁴² Mecklenburg County, Strategic Business Plan, 2008-2010, page 23.
- ⁴³ <http://www.yorkcountygov.com/content.aspx?deptID=32&contentID=874>, accessed on Oct 16, 2007.
- ⁴⁴ <http://www.yorkcountygov.com/content.aspx?deptID=32&contentID=874>, accessed on Oct 16, 2007.
- ⁴⁵ Centralina Council of Governments, Cleveland County Land Use Plan, Centralina Council of Governments, April 19, 2005, page 2.
- ⁴⁶ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 3.
- ⁴⁷ Gaston County, Gaston County Hazard Mitigation Plan, Appendix E-Government Profiles, December 2004.
- ⁴⁸ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 1.
- ⁴⁹ Gaston County, Department of Community Development & Technology, *Comprehensive Planning Program*, July 2002, page 9.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

-
- ⁵⁰ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 14.
- ⁵¹ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 31.
- ⁵² Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 31.
- ⁵³ PBS&J interview with Lou Raymond, Gaston East-West Connector Community Characteristic Report Local Interviews, July 11, 2007, page 1.
- ⁵⁴ Scot Sibert, Transportation Planner, Gaston Urban Area Metropolitan Planning Organization, letter to Gregory J. Thorpe, NCDOT Environmental Management Director, May 13, 2003.
- ⁵⁵ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 19.
- ⁵⁶ York County, *2025 York County Comprehensive Plan, Land Use Element*, page LU-11.
- ⁵⁷ North Carolina Turnpike Authority, *Draft Natural Resources Technical Report, Gaston east-West Connector, Gaston and Mecklenburg Counties*, August 2007.
- ⁵⁸ Gaston County, *Gaston County Hazard Mitigation Plan, Appendix E-Government Profiles*, December 2004.
- ⁵⁹ County, *Gaston County Hazard Mitigation Plan, Appendix E-Government Profiles*, December 2004.
- ⁶⁰ Sam C. Rhyne, Mayor, Town of Dallas, letter to Gregory J. Thorpe, NCDOT Environmental Management Director, April 25, 2003.
- ⁶¹ County, *Gaston County Hazard Mitigation Plan, Appendix E-Government Profiles*, December 2004.
- ⁶² County, *Gaston County Hazard Mitigation Plan, Appendix E-Government Profiles*, December 2004.
- ⁶³ Charlotte City Council and the Mecklenburg Board of County Commissioners, *2015 Plan, Planning for Our Future*, November, 1997, page 1.
- ⁶⁴ USDOT, Bureau of Transportation Statistics, Research and Innovative Technology Administration, T-100 International Market All Carriers 2002 and 2007 (www.transtats.bts.gov). Accessed February 13, 2008.
- ⁶⁵ Federal Highway Administration, *Charlotte-Douglas International Airport Written Re-Evaluation*, Landrum & Brown, July 27, 2006.
- ⁶⁶ www.mywire.com/pubs/CharlotteObserver/2007/03/11/2984289?extID=10037&olID=229, (accessed on 8/28/07).
- ⁶⁷ York County, *York County 2025 Comprehensive Plan, Land Use Element*, page LU-5.
- ⁶⁸ York County, *York County 2025 Comprehensive Plan, Land Use Element*, page LU-5.
- ⁶⁹ York County, *York County 2025 Comprehensive Plan, Land Use Element*, page LU-5.
- ⁷⁰ York County, *2025 York County Comprehensive Plan, Land Use Element*, page LU-11.
- ⁷¹ York County, *2025 York County Comprehensive Plan, Land Use Element*, page LU-11.
- ⁷² York County, *York County Industry Cluster & Target Market Study*, Whittaker Associates, Inc. 2005, page 15.
- ⁷³ York County, *York County Industry Cluster & Target Market Study*, Whittaker Associates, Inc. 2005, page 15.
- ⁷⁴ North Carolina Natural Heritage Program, *Executive Summary, natural Heritage Inventory of Gaston County*, North Carolina, 200, page 1.
- ⁷⁵ North Carolina Department of Environment and Natural Resources, *Watershed restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program*, 2001, page 2.
- ⁷⁶ North Carolina Natural Heritage Program, *Executive Summary, Natural Heritage Inventory of Gaston County*, North Carolina, 200, page 1.
- ⁷⁷ Gaston County, Department of Community Development & Technology, *Comprehensive Planning Program*, July 2002, page 7.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

-
- ⁷⁸ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 2.
- ⁷⁹ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 20.
- ⁸⁰ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 22.
- ⁸¹ North Carolina Department of Environment and Natural Resources, Catawba River Basinwide Water Quality Plan, December 1995.
- ⁸² North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 33.
- ⁸³ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 6.
- ⁸⁴ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 6.
- ⁸⁵ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 6.
- ⁸⁶ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 7.
- ⁸⁷ www.scdhec.net/environment/water/shed/text/50101-180.pdf, Accessed September 28, 2008.8,2008.
- ⁸⁸ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 7..
- ⁸⁹ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 5.
- ⁹⁰ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 5.
- ⁹¹ North Carolina Turnpike Authority, Draft Natural Resources Technical Report, Gaston East-West Connector, Gaston and Mecklenburg Counties, August 2007, page 10.
- ⁹² North Carolina Department of Environment of natural Resources, Total Maximum Daily Load for fecal Coliform for Crowders Creek North Carolina and South Carolina, Final Report, June 2004, Approved July 1, 2004, page i.
- ⁹³ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001, page 4.
- ⁹⁴ <http://h2o.enr.state.nc.us/bims/reports/basinandwaterbodies/> Final 2006 303(d) list, accessed on 2/14/08.
- ⁹⁵ <http://www.scdhec.gov/environment/water/tmdl/>, State of South Carolina, Integrated Report for 2006-Part 1: Listing of Impaired Water, accessed on 8/14/08.
- ⁹⁶ http://h2o.enr.state.nc.us/tmdl/General_303d, Draft 2008 303(d) list, accessed on 2/14/08.
- ⁹⁷ North Carolina Turnpike Authority, Draft Natural Resources Technical Report, Gaston East-West Connector, Gaston and Mecklenburg Counties, August 2007, page 11.
- ⁹⁸ Gaston County, Stormwater Ordinance for Gaston County, North Carolina, adopted 4/12/2007.
- ⁹⁹ City of Mount Holly, Mecklenburg County Water Quality Program Land Use and Environmental Services Agency, Protecting our Lake Watersheds, January 2004, page 6.
- ¹⁰⁰ North Carolina Bar Association Foundation, You Can't Always Get What You Want...navigating in the Brave New World of Land use and Environmental Law in the 21st Century, page I-2.
- ¹⁰¹ North Carolina Department of Environment and Natural Resources, Watershed Restoration Plan for the Catawba River Basin, North Carolina Wetlands Restoration Program, 2001.
- ¹⁰² <http://h2o.enr.state.nc.us/nps/catawba.htm>, accessed on 9/27/07.
- ¹⁰³ http://www.ncdot.org/doh/preconstruct/highway/hydro/gl0399web/XII_stormwatermanag.html, accessed on 2/13/08.
- ¹⁰⁴ http://www.ncdot.org/doh/preconstruct/highway/hydro/gl0399web/XII_stormwatermanag.html, accessed on 2/13/08.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

-
- ¹⁰⁵ South Carolina Department of Transportation, Interim Stormwater Control Manual, Ralph Whitehead & Associates, September 1993, page 1.
- ¹⁰⁶ North Carolina Natural Heritage Program, Executive Summary, natural Heritage Inventory of Gaston County, North Carolina, 200, page 1.
- ¹⁰⁷ North Carolina Natural Heritage Program, Executive Summary, natural Heritage Inventory of Gaston County, North Carolina, 200, page 1.
- ¹⁰⁸ North Carolina Natural Heritage Program, Executive Summary, natural Heritage Inventory of Gaston County, North Carolina, 200, page 1.
- ¹⁰⁹ North Carolina Natural Heritage Program, Executive Summary, natural Heritage Inventory of Gaston County, North Carolina, 200, page 2.
- ¹¹⁰ North Carolina Natural Heritage Program, Executive Summary, natural Heritage Inventory of Gaston County, North Carolina, 200, page 2.
- ¹¹¹ <http://epa.gov/oar/oaqps/greenbk/gnca.html>, accessed on 11/15/07.
- ¹¹² Memorandum, PBJ&J, Kim Bereis to Mr. Jeff Dayton, Gaston East-West Connector (TIP No. U-3321), From I-85 west of Gastonia in Gaston County to I-485 in Mecklenburg County. November 2, 2007.
- ¹¹³ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 13.
- ¹¹⁴ Federal Highway Administration, Charlotte-Douglas International Airport Written Re-Evaluation, Landrum & Brown, July 27, 2006.
- ¹¹⁵ www.mywire.com/pubs/CharlotteObserver/2007/03/11/2984289?extID=10037&olID=229, (accessed on 8/28/07).
- ¹¹⁶ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 26.
- ¹¹⁷ www.rlbadc.com/news.shtml. Accessed on 10/30/97.
- ¹¹⁸ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 25.
- ¹¹⁹ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 26.
- ¹²⁰ www.mywire.com/pubs/CharlotteObserver/2007/03/11/298489?extID=10037, (accessed on 8/28/07).
- ¹²¹ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 13.
- ¹²² Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 13.
- ¹²³ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 15.
- ¹²⁴ Federal Railroad Administration, Georgia Department of Transportation, South Carolina Department of Transportation, North Carolina Department of transportation, Macon-Charlotte Southeast High Speed Rail Corridor Plan-Final report, Georgia Rail Consultants, May 2004.
- ¹²⁵ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 67.
- ¹²⁶ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 67.
- ¹²⁷ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 16.
- ¹²⁸ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 3.
- ¹²⁹ North Carolina Turnpike Authority, Draft Community Characteristics Report, Gaston East-West Connector, PBS&J, August 31, 2007.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

-
- ¹³⁰ US Bureau of the Census, http://factfinder.census.gov/home/saff/main.html?_lang=en, (accessed on 10/20/07).
- ¹³¹ US Bureau of the Census, http://factfinder.census.gov/home/saff/main.html?_lang=en, accessed on 10/20/07.
- ¹³² North Carolina Turnpike Authority, Draft Community Characteristics Report, Gaston East-West Connector, PBS&J, August 31, 2007.
- ¹³³ North Carolina Turnpike Authority, Draft Community Characteristics Report, Gaston East-West Connector, PBS&J, August 31, 2007.
- ¹³⁴ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 1.
- ¹³⁵ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 17.
- ¹³⁶ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 13.
- ¹³⁷ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 13.
- ¹³⁸ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, Gaston County, North Carolina, July 2002, page 13.
- ¹³⁹ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 42.
- ¹⁴⁰ Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 42.
- ¹⁴¹ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 4.
- ¹⁴² Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 4.
- ¹⁴³ Ibid, page 21.
- ¹⁴⁴ Ibid.
- ¹⁴⁵ Ibid.
- ¹⁴⁶ Charlotte City Council and the Mecklenburg Board of County Commissioners, *2015 Plan, Planning for Our Future*, November, 1997, page 5.
- ¹⁴⁷ North Carolina Turnpike Authority, Draft Natural Resources Technical Report, Gaston East-West Connector, Gaston and Mecklenburg Counties, August 2007.
- ¹⁴⁸ York County, *2025 York County Comprehensive Plan, Economic Development Element*, page ED-2.
- ¹⁴⁹ Cleveland-Gaston Comprehensive Economic Development Strategy, Lawrimore Communications Inc. and the Corporation for Enterprise Development, July 2003, page 13.
- ¹⁵⁰ Gaston County, Department of Community Development & Technology, *Comprehensive Planning Program*, July 2002, page 13.
- ¹⁵¹ North Carolina Turnpike Authority, Draft Community Characteristics Report, Gaston East-West Connector, PBS&J, August 31, 2007.
- ¹⁵² Gaston Urban Area Metropolitan Planning Organization, *2030 Long Range Transportation Plan*, GUAMPO Technical Coordinating Committee, May 24, 2005, page 40 & 41.
- ¹⁵³ York County, York County, *Strategic Economic Development Plan*, January 2007, page 31.
- ¹⁵⁴ Charlotte City Council and the Mecklenburg Board of County Commissioners, *2015 Plan, Planning for Our Future*, November, 1997, page 1.
- ¹⁵⁵ Charlotte Department of Transportation Planning Division, "Metrolina Regional Travel Demand Model Technical Documentation," September 26, 2005, page 10.

INDIRECT AND CUMULATIVE EFFECTS ASSESSMENT

GASTON EAST-WEST CONNECTOR

STIP No: U-3321

March 31, 2009

¹⁵⁶ Mike Bush, Executive Director, Daniel Stowe Botanical Garden. Letter to Mr. Thorpe, NC Department of Transportation, May 19, 2003.

¹⁵⁷ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 33.

¹⁵⁸ Ibid.

¹⁵⁹ Center for Watershed Protection, Direct and indirect Effects of Urbanization on Wetland Quality, Article 1 of the Wetlands & Watersheds Article Series, Executive Summary, Tiffany Wright, Jennifer Tomlinson, Tom Schueler, Karen Cappiella, Anne Kitchell, and Dave Hirschman, Ellicott City, MD 21043, page 1.

¹⁶⁰ Ibid.

¹⁶¹ Gaston County, Department of Community Development & Technology, *Comprehensive Planning Program*, July 2002, page 7.

¹⁶² North Carolina Turnpike Authority, Draft Natural Resources Technical Report, Gaston East-West Connector, Gaston and Mecklenburg Counties, August 2007, page 14.

¹⁶³ Virginia Department of Transportation, Route 460 Location Study, Indirect and Cumulative Technical Report, May 2005, page 42.

¹⁶⁴ Gaston County Department of Community Development & Technology, *Gaston County Comprehensive Planning Program*, July 2002, page 1.

¹⁶⁵ North Carolina Turnpike Authority, Draft Natural Resources Technical Report, Gaston East-West Connector, Gaston and Mecklenburg Counties, August 2007, page 20.

¹⁶⁶ Ibid., page 31.

¹⁶⁷ Ibid., page 31.

¹⁶⁸ US Fish and Wildlife Service (USFWS). 2003. Michaux's Sumac Species Account, www.fws.gov/endangered/. Accessed on 11/26/07.

¹⁶⁹ Letter: State of North Carolina Turnpike Authority to Mr. Heinz J. Mueller, May 4, 2007, page 2.

¹⁷⁰http://www.crmppo.org/Forms/CRMPO_2009_MTIP_CDR.pdf, accessed on 8/14/08