

Greenville-Pickens Area
Transportation Study

HORIZON 2050 LONG RANGE TRANSPORTATION PLAN

OCTOBER 2026





APPENDICES

APPENDIX A: RANKED PROJECT LISTS

Bike & Pedestrian Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
166	Stakeholder Feedback	Greenville County, Greenville	Pine Knoll Rd	Wade Hampton & Waddel Rd	S:35 P:0 M:16 E:10 C:4 G:15	80
10	Local Plans	Greenville County, Greer	Poinsett St	US 29 to N Line St	S:35 P:0 M:11 E:10 C:8 G:15	79
167	-	Greenville County, Greenville	Orchard Park	Haywood to Patewood	S:35 P:0 M:16 E:10 C:0 G:15	76
4	Greenville DTMP	Greenville County, Greenville	Greenline Connection off South Side of Laurens Rd	At Swamp Rabbit Trail	S:35 P:0 M:10 E:10 C:4 G:15	74
154	Stakeholder Feedback	Greenville County, Mauldin	Greenline SUP	CU-ICAR Downtown Mauldin	S:28 P:0 M:20 E:10 C:0 G:15	73
5	Greenville DTMP	Greenville County, Greenville	McDaniel Avenue Trail	McBee Ave to Ridgeland Dr	S:28 P:0 M:16 E:10 C:4 G:15	73
165	Stakeholder Feedback	Greenville County, West Greenville	Textile Crescent	Extend Current TAP Project from Easley Bridge Rd to Anderson Rd	S:28 P:0 M:16 E:10 C:4 G:15	73
7	Stakeholder Feedback	Greenville County, Greenville	Unity Park Connector	Unity Park to Village of West Greenville	S:35 P:0 M:12 E:10 C:0 G:15	72
161	Stakeholder Feedback	Greenville County	Moreview Greenway	Connect Blue Ridge Dr to East Marion with Path Along Moreview St	S:28 P:0 M:10 E:10 C:8 G:15	71
8	Local Plans	Greenville County, Greenville	US 276 (Poinsett Hwy)	Rutherford Rd & US 25	S:35 P:0 M:16 E:0 C:4 G:15	70
157	Stakeholder Feedback	Greenville County, Greer	Rocky Creek SUP	Pelham Rd at Beacon to Hwy 14	S:35 P:0 M:6 E:10 C:4 G:15	70
153	Stakeholder Feedback	Greenville County, Greenville	Orange Line SUP	Greenline to Whitehorse Rd Corridor	S:28 P:0 M:12 E:10 C:4 G:15	69
12	Interactive Comment Map	Greenville County, Mauldin	Miller Rd	Bridges Rd to Woodruff Rd	S:28 P:0 M:10 E:10 C:4 G:15	67
151	Stakeholder Feedback	Greenville County, Taylors	Orange Line SUP	Greenlink to Taylors	S:28 P:0 M:20 E:0 C:4 G:15	67

Table 28 | Bicycle & Pedestrian Ranked Project List

KEY

S = Safety & Security

P = Systems Preservation & Efficiency

M = Mobility & Accessibility

E = Economic Value

C = Culture & Environment

G = Growth & Development

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
170	Stakeholder Feedback	Greenville County, Fountain Inn	Hellams or Duckett to Downtown	SRT Ext	S:28 P:0 M:10 E:10 C:4 G:15	67
11	Local Plans	Greenville County, Greer	Pelham St	Mayfield St to S Main St	S:28 P:0 M:6 E:10 C:8 G:15	67
156	Stakeholder Feedback	Greenville County, Simpsonville	Mauldin to Simpsonville Swamp Rabbit Trail Ext	Downtown Mauldin to Simpsonville	S:35 P:0 M:16 E:0 C:0 G:15	66
6	Staff	Greenville County, Greenville	SRT Blue Line Gap	Cleveland St to Parkins Mill	S:28 P:0 M:10 E:10 C:0 G:15	63
2	Stakeholder Feedback	Pickens & Greenville Counties, Easley & Greenville	Doodle Trail Ext	Easley to Greenville	S:28 P:0 M:16 E:0 C:4 G:15	63
14	Stakeholder Feedback	Greenville County, Mauldin & Simpsonville	Swamp Rabbit Trail Ext	Bridgeway Station to Simpsonville	S:28 P:0 M:16 E:0 C:0 G:15	59
155	Stakeholder Feedback	Greenville County, Fountain Inn	Greenline SUP	Downtown Simpsonville to Dt FI	S:28 P:0 M:16 E:0 C:0 G:15	59
19	Interactive Comment Map	Greenville County	Northbound Ext of Swamp Rabbit Trail	Travelers Rest to Marietta	S:28 P:0 M:6 E:10 C:0 G:15	59
16	Staff	Greenville & Spartanburg Counties, Taylors & Greer	SRT Orange Line	Arcadia Dr to SC-80	S:14 P:0 M:16 E:10 C:4 G:15	59
18	Stakeholder Feedback	Greenville County, Travelers Rest	Pedestrian/Bicycle Bridge Over US 25	Downtown Travelers Rest to Commercial Area Along Benton Rd	S:35 P:0 M:6 E:0 C:0 G:15	56
149	Stakeholder Feedback	Greenville County, Greenville	Brushy Creek Shared Use Path	Pleasant Valley Rd to Blue Line SRT	S:21 P:0 M:6 E:10 C:4 G:15	56
17	CMP	Greenville County, Travelers Rest	Hwy 25	US 276/Poinsett Hwy to Locust Hill Rd	S:28 P:0 M:11 E:0 C:0 G:15	54
15	Interactive Comment Map	Greenville County, Simpsonville	Standing Springs Rd	Ashmore Bridge Rd to W Georgia Rd	S:21 P:0 M:6 E:10 C:0 G:15	52
152	Stakeholder Feedback	Greenville County, Travelers Rest	Gold Line SUP	YMCA to Saluda Confluence Park	S:21 P:0 M:6 E:10 C:0 G:15	52

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
3	Interactive Comment Map	Anderson & Pickens Counties, Easley & Powdersville	Doodle Trail Ext	Easley to Powdersville	S:28 P:0 M:6 E:0 C:0 G:15	49
160	Stakeholder Feedback	Greenville County, Greer	Wade Creek Connector	Connect New Words Creek Greenway to Wade Hampton at Walmart	S:14 P:0 M:6 E:10 C:4 G:15	49
1	Local Plans	Pickens County, Easley	Gilder Creek Multi-Use Trail	East Butler Rd to Corn Rd	S:14 P:0 M:6 E:10 C:0 G:15	45
9	Interactive Comment Map	Greenville County, Greer	S Tyger River Greenway Ext	Tyger River Greenway to Downtown Greer & Up to Lake Robinson	S:14 P:0 M:10 E:0 C:0 G:15	40

Corridor Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
27	CMP	Greenville County, Five Forks	Hwy 14	Woodruff Rd to Batesville Rd	S:18 P:12 M:23 E:18 C:1 G:10	82
39	CMP	Greenville County, Greenville	Mills Ave/Church St	Henrydale Ave to Academy St	S:20 P:10 M:20 E:18 C:3 G:10	80
32	CMP	Greenville County, Greenville	Buncombe/North St & College St/Beattie	Butler Ave to Church St	S:20 P:12 M:20 E:16 C:1 G:10	79
35	CMP	Greenville County, Greenville	Haywood Rd	Laurens Rd to North St	S:20 P:12 M:20 E:16 C:0 G:10	78
21	CMP	Pickens County, Easley	Calhoun Memorial Hwy	Brushy Creek Rd to Hwy 153	S:20 P:12 M:15 E:20 C:0 G:10	77
40	CMP	Greenville County, Greenville	Stone Ave	Rutherford St to North St/I-385	S:20 P:10 M:20 E:16 C:1 G:10	77
29	CMP	Greenville County, Greenville	Laurens Rd/Main St	Woodruff Rd to Main St	S:20 P:12 M:18 E:16 C:1 G:10	77
64	CMP	Greenville County, Simpsonville	Main St	Curtis St to Fairview Rd	S:20 P:12 M:18 E:16 C:1 G:10	77

Table 29 | Corridor Ranked Project List

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E = Economic Value

C = Culture & Environment

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
62	CMP	Greenville County, Simpsonville	Fairview Rd	Main St to Hwy 418	S:20 P:12 M:16 E:16 C:1 G:10	75
37	CMP	Greenville County, Greenville	S-1077 Washington St	Trescott St to Pettigru St	S:20 P:12 M:13 E:18 C:3 G:10	75
36	CMP	Greenville County, Greenville	Faris Rd/ S. Washington Ave	Anderson Rd to Pleasantburg Dr	S:20 P:10 M:19 E:14 C:3 G:10	75
65	CMP	Greenville County, Simpsonville	Harrison Bridge Rd	Fairview Rd to Main St	S:20 P:12 M:18 E:14 C:1 G:10	75
34	CMP	Greenville County, Greenville	Pelham Rd	North St to Hudson Rd	S:20 P:12 M:15 E:16 C:1 G:10	74
72	CMP	Greenville County, Taylors	Howell/Edwards Rd	E North St to Wade Hampton Blvd	S:20 P:12 M:18 E:14 C:0 G:10	74
45	CMP	Greenville County, Greenville	Augusta St/Rd	Faris Rd to Pleasantburg Dr	S:20 P:12 M:13 E:16 C:3 G:10	73
74	CMP	Greenville County, Taylors	Brushy Creek Rd/ Old Spartanburg	Cunningham Rd to Batesville Rd	S:20 P:12 M:13 E:16 C:1 G:10	73
50	CMP	Greenville County, Greer	Wade Hampton Blvd	Ried School Rd to Buncombe Rd	S:20 P:9 M:14 E:18 C:1 G:10	73
30	CMP	Greenville County, Greenville	Academy St	College St to North St	S:20 P:12 M:13 E:16 C:1 G:10	72
41	CMP	Greenville County, Greenville	Augusta Rd	Sandy Springs Rd to I-185	S:18 P:7 M:17 E:18 C:1 G:10	71
43	CMP	Greenville County, Greenville	Augusta Rd/ Pleasantburg Dr	White Horse Rd to Mauldin Rd	S:20 P:12 M:20 E:16 C:1 G:2	71
44	CMP	Greenville County, Greenville	Pleasantburg Dr/ State Park Rd	Poinsett Hwy to Wade Hampton Blvd	S:20 P:12 M:18 E:18 C:1 G:2	71
76	CMP	Greenville County	White Horse Rd	Anderson Rd to I-85	S:20 P:12 M:18 E:8 C:3 G:10	70

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
28	CMP	Greenville County, Five Forks	Woodruff Rd	Hwy 14 to Batesville Rd	S:20 P:12 M:11 E:16 C:1 G:10	70
90	CMP	Greenville County, Greenville	I-85	US 25 to Roper Mountain Rd	S:20 P:10 M:18 E:10 C:1 G:10	69
31	CMP	Greenville County, Greenville	Pleasantburg Dr	Faris Rd to Wade Hampton Blvd	S:20 P:12 M:20 E:6 C:1 G:10	69
71	CMP	Greenville County, Taylors	Main St	Wade Hampton Blvd to Taylors Rd	S:18 P:12 M:11 E:16 C:1 G:10	68
56	Needs Assessment	Greenville County, Mauldin	East Butler Road	Bridges Rd to Woodruff Rd	S:20 P:5 M:15 E:16 C:1 G:10	67
20	CMP	Pickens County, Easley	Pendleton St	Main St to 5th St/ Walker Ellison Rd	S:18 P:12 M:8 E:16 C:3 G:10	66
48	Staff	Greenville County, Greenville	W. Blue Ridge Dr	White Horse Rd to Poinsett Hwy	S:25 P:5 M:8 E:16 C:1 G:10	66
73	CMP	Greenville County, Taylors	North St/Old Spartanburg Rd/ Brushy Creek Rd	Howell Rd to Taylors Rd	S:20 P:12 M:8 E:14 C:1 G:10	65
89	CMP	Greenville County, Greenville	I-385	East North St to I-85 Alternative	S:13 P:3 M:17 E:18 C:1 G:10	62
54	Interactive Comment Map	Greenville County, Mauldin	Bridges Rd	E Butler Rd to Holland Rd	S:23 P:5 M:9 E:14 C:1 G:10	62
46	Greenville DTMP	Greenville County, Greenville	Pete Hollis Blvd/ Buncombe St	Briggs Ave to College St	S:13 P:5 M:15 E:16 C:3 G:10	61
78	Staff	Greenville County	Fork Shoals Rd	Conestee Rd to W. Georgia Rd	S:18 P:5 M:12 E:16 C:0 G:10	61
93	Local Plans	Greenville County, Greenville	US 123 (Academy St)	Pendleton St and Washington Ave	S:13 P:5 M:13 E:18 C:1 G:10	60
55	Needs Assessment	Greenville County, Mauldin	Ashmore Bridge Rd	Fork Shoals to W Butler Rd	S:23 P:5 M:12 E:10 C:0 G:10	60

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63	CMP	Greenville County, Simpsonville	Georgia Rd	Fork Shoals Rd to I-385	S:18 P:12 M:13 E:6 C:1 G:10	59
58	Stakeholder Feedback	Greenville County, Mauldin	Bridges Rd	I-385 to Hwy 14	S:23 P:5 M:7 E:14 C:0 G:10	59
26	CMP	Anderson & Pickens Counties, Easley & Powdersville	Hwy 153	Old Easley Bridge Rd to I-85	S:20 P:10 M:9 E:8 C:1 G:10	58
68	Needs Assessment	Greenville County, Simpsonville	SC Hwy 14	E Curtis St to Harts Ln	S:13 P:5 M:13 E:16 C:1 G:10	58
42	CMP	Greenville County, Greenville	Roper Mountain Rd	Woodruff Rd to Hwy 14	S:20 P:9 M:12 E:14 C:0 G:2	57
94	Interactive Comment Map	Greenville County, Greenville	I-185	White Horse Rd (US 25)	S:13 P:3 M:8 E:20 C:3 G:10	56
66	Needs Assessment	Greenville County, Simpsonville	Harrison Bridge Rd	Neely Ferry Rd to Fairview Rd	S:13 P:3 M:15 E:14 C:1 G:10	56
53	Interactive Comment Map	Greenville County, Mauldin	Hamby Drive	Forrester Dr to Miller Rd	S:20 P:5 M:5 E:14 C:1 G:10	56
83	Staff	Greenville County	Woodruff Rd	S. Bennetts Bridge Rd to Enoree River	S:10 P:5 M:9 E:18 C:1 G:10	53
33	CMP	Greenville County, Greenville	Pendleton St	Lois Ave to Main St	S:20 P:9 M:6 E:14 C:1 G:2	53
144	Stakeholder Feedback	Greenville County, Greenville	Richburg Rd	WHB to E. North St	S:18 P:5 M:3 E:14 C:1 G:10	51
92	CMP	Greenville County	I-85	Roper Mountain Rd to S-12	S:13 P:0 M:18 E:10 C:0 G:10	51
80	Staff	Greenville County	Hudson Rd	Pelham to Brushy Creek	S:10 P:3 M:13 E:14 C:0 G:10	51
79	Staff	Greenville County	Stallings Rd	Rutherford Rd to Reid School Rd	S:10 P:0 M:12 E:16 C:3 G:10	50

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51	Interactive Comment Map	Greenville County, Mauldin	Log Shoals Rd	US 276 to Fork Shoals Rd	S:23 P:5 M:3 E:16 C:1 G:2	50
81	Staff	Greenville County	SC 418	Saluda River to Durbin Rd	S:10 P:5 M:3 E:20 C:1 G:10	50
69	Staff	Greenville County, Simpsonville	Hwy 14	Woodruff Rd to NE Main St (Simpsonville)	S:10 P:5 M:15 E:16 C:0 G:2	49
61	SC 81 Corridor Study	Anderson County, Powdersville	SC 81	Piedmont Rd to Wren School Rd	S:10 P:5 M:5 E:16 C:0 G:10	47
87	Staff	Pickens County	SC 8	St. Paul Rd to Anderson Hwy (SC 135)	S:10 P:5 M:6 E:14 C:1 G:10	46
85	Staff	Greenville County	Roper Mountain Rd	Roper Mtn Ext to Woodruff Rd	S:13 P:5 M:3 E:14 C:1 G:10	46
86	Staff	Greenville County	SC-253 (E. Mtn Crk/ Sandy Flat Rds)	State Park Rd to Locust Hill Rd	S:10 P:5 M:3 E:16 C:1 G:10	46
22	Needs Assessment	Pickens County, Easley	Old Easley Bridge Rd	SC 153 to US 123	S:10 P:5 M:10 E:8 C:3 G:10	46
84	Staff	Greenville County	Scuffletown Rd	Woodruff Rd to SC 418	S:10 P:3 M:6 E:16 C:0 G:10	45
38	CMP	Greenville County, Greenville	Dairy Dr	Ridge Rd to Confluence Outdoors	S:10 P:0 M:12 E:20 C:1 G:2	45
23	Staff	Pickens County, Easley	SC 153 Phase 3	Phase 2 to SC 183	S:10 P:5 M:3 E:14 C:3 G:10	45
75	Staff	Greenville County, Taylors	St. Mark Rd	E. Main (Taylors) to Locust Hill Rd	S:10 P:5 M:3 E:14 C:1 G:10	44
67	Needs Assessment	Greenville County, Simpsonville	Harts Ln	Hwy 14 to Jonesville Rd	S:8 P:0 M:10 E:14 C:0 G:10	42
91	CMP	Greenville County, Greer	I-85	Pelham Rd to Brockman McClimon Rd	S:13 P:0 M:13 E:4 C:1 G:10	41

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
60	Staff	Anderson & Greenville Counties, Piedmont	SC 86	SC 81 to SC 20	S:10 P:5 M:3 E:18 C:1 G:2	40
59	Stakeholder Feedback	Pickens County, Pickens & Liberty	US 178	Pickens to Liberty	S:10 P:5 M:3 E:16 C:3 G:2	39
148	Stakeholder Feedback	Anderson County, Piedmont	Major Rd From Hwy 86 to Hwy 81	From Hwy 86 to Hwy 81	S:8 P:0 M:3 E:8 C:0 G:10	29

Intersection Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
143	Stakeholder Feedback	Greenville County, Greenville	Pleasantburg/WHB	Pleasantburg Rd at Wade Hampton Blvd	S:18 P:5 M:20 E:18 C:3 G:10	73
105	Greenville DTMP	Greenville County, Greenville	Augusta Street/Mills Ave	Church St	S:13 P:3 M:20 E:18 C:1 G:10	65
104	Greenville DTMP	Greenville County, Greenville	Academy St	Church St	S:10 P:5 M:15 E:18 C:1 G:10	59
115	Interactive Comment Map	Greenville County, Mauldin	US 276 (N Main St)	Owens Ln	S:15 P:5 M:13 E:14 C:1 G:10	58
112	Interactive Comment Map	Greenville County, Greer	Wade Hampton Blvd	W. Pointsett St	S:13 P:5 M:10 E:18 C:1 G:10	57
128	Local Plans	Greenville County, Travelers Rest	SC 253 (State Park Rd)	Altamont Rd	S:18 P:5 M:6 E:16 C:3 G:10	57
113	Interactive Comment Map	Greenville County, Mauldin	W Butler Rd	Fowler Cir. at Laurel Meadows Parkway	S:18 P:5 M:8 E:14 C:1 G:10	56
47	Haynie-Sirrione Neighborhood Plan	Greenville County, Greenville	Dunbar	At Augusta St	S:15 P:3 M:8 E:18 C:1 G:10	56
119	Interactive Comment Map	Anderson County, Powdersville	SC 81 (Anderson Rd)	SC 153	S:15 P:5 M:6 E:18 C:1 G:10	55

Table 30 | Intersection Ranked Project List

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
102	Stakeholder Feedback	Pickens County, Easley	US 123 at Hwy 124	US 123 at Hwy 124	S:15 P:5 M:5 E:18 C:1 G:10	55
127	Interactive Comment Map	Greenville County, Travelers Rest	US 25	State Park Rd	S:15 P:0 M:10 E:18 C:1 G:10	54
110	Interactive Comment Map	Greenville County, Greer	Brushy Creek Rd	Alexander Rd	S:13 P:0 M:13 E:16 C:1 G:10	54
98	Need Assessment	Pickens County, Easley	SC Hwy 8	West End School	S:15 P:5 M:6 E:16 C:1 G:10	53
124	Interactive Comment Map	Greenville County, Simpsonville	I-385	Old Stage Rd	S:18 P:5 M:1 E:18 C:1 G:10	53
123	Interactive Comment Map	Greenville County, Simpsonville	Harrison Bridge Rd	Fairview Rd	S:13 P:3 M:10 E:16 C:1 G:10	53
118	Needs Assessment	Pickens County, Pickens	SC 178	SC 183	S:15 P:3 M:3 E:18 C:3 G:10	52
108	Greenville DTMP	Greenville County, Greenville	Washington St	McBee Ave	S:13 P:5 M:6 E:16 C:1 G:10	51
132	Local Plans	Anderson County	SC 81 at Dunham Bridge Rd	Dunham Bridge Rd	S:15 P:5 M:4 E:14 C:3 G:10	51
114	Interactive Comment Map	Greenville County, Mauldin	Butler Rd	Ashmore Bridge Rd	S:10 P:5 M:10 E:14 C:1 G:10	50
106	Greenville DTMP	Greenville County, Greenville	Church St	E Coffee	S:13 P:0 M:7 E:18 C:1 G:10	49
117	Interactive Comment Map	Greenville County, Mauldin	Bethel Rd	Tanner Rd	S:15 P:5 M:1 E:16 C:1 G:10	49
129	Local Plans	Greenville County, Travelers Rest	Tigerville Rd	Jackson Grove Rd	S:15 P:5 M:1 E:16 C:1 G:10	49
133	Local Plans	Anderson County	SC 81 at McNeely Rd	McNeely Rd	S:15 P:5 M:3 E:14 C:1 G:10	49

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
134	Local Plans	Anderson County	SC 81 at Cely Ln	Cely Ln	S:15 P:5 M:3 E:14 C:1 G:10	49
125	Local Plans	Greenville County, Simpsonville	West Georgia Rd	East Standing Springs Rd	S:15 P:0 M:6 E:16 C:1 G:10	48
111	Interactive Comment Map	Greenville County, Greer	Dillard Rd	Gibbs Shoals Rd	S:15 P:5 M:1 E:14 C:1 G:10	47
131	Staff	Greenville County	Augusta	Old Augusta & Fork Shoals	S:0 P:5 M:16 E:14 C:1 G:10	46
96	Need Assessment	Pickens County, Easley	Brushy Creek Rd	Peason Rd	S:13 P:3 M:3 E:16 C:1 G:10	46
97	Need Assessment	Pickens County, Easley	Brushy Creek Rd	Sheriff Mill Rd	S:13 P:5 M:1 E:16 C:1 G:10	46
171	Stakeholder Feedback	Laurens County, Fountain Inn	Exit 22 I-385	Exit 22	S:8 P:3 M:8 E:16 C:1 G:10	46
126	Interactive Comment Map	Greenville County, Travelers Rest	US 25	Edwards St	S:15 P:0 M:3 E:16 C:1 G:10	46
168	Stakeholder Feedback	Greenville County, Fountain Inn	Exit 24 I-385	Exit 24	S:10 P:5 M:3 E:16 C:1 G:10	46
121	Stakeholder Feedback	Anderson County, Powdersville	Old Mill Rd	Three Bridges Rd/ Brushy Creek Rd	S:15 P:5 M:1 E:12 C:1 G:10	45
116	Interactive Comment Map	Greenville County, Mauldin	Bethel Rd	Bridges Rd	S:15 P:0 M:1 E:16 C:1 G:10	44
95	Interactive Comment Map	Pickens County, Easley	Fleetwood Dr	Wilbur St	S:13 P:5 M:3 E:10 C:3 G:10	44
103	Stakeholder Feedback	Greenville & Laurens Counties, Fountain Inn	SC 418/Cullivan St	Durbin Rd	S:13 P:0 M:3 E:16 C:1 G:10	43
100	Need Assessment	Pickens County, Easley	SC Hwy 9	At E 3rd Ave & S C St	S:13 P:3 M:3 E:12 C:1 G:10	42
99	Need Assessment	Pickens County, Easley	SC Hwy 8	Pope Field	S:15 P:0 M:1 E:14 C:1 G:10	42

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
107	Greenville DTMP	Greenville County, Greenville	McDaniel Ave	Woodland Way & Univeristy Ridge	S:15 P:0 M:3 E:12 C:1 G:10	42
101	Need Assessment	Pickens County, Easley	Saluda Dam Rd	Olive Street/Pace Valley Rd	S:13 P:5 M:1 E:10 C:1 G:10	40
109	Haynie-Sirrine Neighborhood Plan	Greenville County, Greenville	Haynie St	Howe St	S:15 P:0 M:3 E:10 C:1 G:10	40
120	Stakeholder Feedback	Anderson County, Powdersville	SC 81 at Old Williamston Rd	SC 81 at Old Williamston Rd	S:18 P:0 M:1 E:6 C:1 G:10	36
130	Staff	Anderson County	Powdersville Rd	At Three Bridges Rd	S:13 P:0 M:1 E:10 C:1 G:10	35

Signal Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
137	CMP	Greenville County, Greenville	Laurens Rd/Main St	Pleasantburg Dr to Woodruff Rd	S:20 P:12 M:18 E:16 C:3 G:10	78
136	CMP	Greenville County, Greenville	Poinsett Hwy	Stone Ave to Pleasantburg Dr	S:20 P:12 M:13 E:16 C:3 G:2	65
139	CMP	Greenville County, Greenville	Washington Ave	White Horse Rd to Easley Bridge Rd	S:20 P:12 M:11 E:14 C:3 G:2	62
138	CMP	Greenville County, Greenville	Park Ave/North St	Church St to Pleasantburg Dr	S:20 P:12 M:9 E:16 C:0 G:2	59
141	Needs Assessment	Greenville County, Greenville	Pelham Road	E North Street to Batesville Rd	S:20 P:12 M:6 E:16 C:0 G:2	56
142	CMP	Greenville County, Mauldin	W Butler Rd	Main St to Conestee Rd	S:20 P:12 M:6 E:14 C:1 G:2	55
135	CMP	Pickens County, Easley	Main St	Liberty Dr to Dennis Dr	S:10 P:12 M:6 E:18 C:1 G:2	49
140	CMP	Greenville County, Greenville	Roper Mountain Rd Ext	Pelham Rd to Roper Mountain Rd	S:18 P:7 M:6 E:14 C:0 G:2	47

Table 31 | Signal Ranked Project List

KEY

S = Safety & Security

P = Systems Preservation & Efficiency

M = Mobility & Accessibility

E = Economic Value

C = Culture & Environment

G = Growth & Development

APPENDIX B: PROJECT PRIORITIZATION & SCORING TOOL

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INTRODUCTION

The purpose of this memorandum is to describe the inputs and methodology of the project scoring tool and prioritization approach. This tool and results support the prioritization effort as part of the GPATS Horizon 2050 Long-Range Transportation Plan (LRTP), corresponding to goals and objectives established in that effort.

The project scoring tool produces scores of prioritized projects by asset class using multi-criteria analysis and calculates scores for each goal as well as a total score across all goals for each project in each asset class. Project measures by asset class are scored to assess each project's alignment with each of the goals. Project measures are informed by data that was collected using publicly available spatial data summarized by project area and manual input. Geospatial data were transformed and translated to a common scale in the project scoring tool to reduce skew, maintain contrast, and ensure congruent apples-to-apples comparisons across project measures. Manual inputs were entered on this common scale.

Within the project scoring tool, a full list of scored and ranked projects by asset class are available in the "Interface" and "Score Summary" tabs. The User Quick Reference Guide section of this memo provides instructions on how to navigate and utilize these tabs.

Data informing the project scoring tool and the subsequent calculation of project scores represents aspects of the goals, including problems that have transportation-related solutions. The assumption is that analyzed projects will resolve the problems represented by the data and, for this reason, should be prioritized. Some measures are informed by manual entry to help properly characterize a project's alignment with a goal. Additionally, project readiness is not reflected in the scores or rankings produced. All project scores and rankings should be reviewed and discussed through the lens of what solutions projects may provide. Similarly, the project prioritization results should always be supplemented with implementation priority and complexity considerations in prioritization, funding, and implementation discussions.

Scoring Tool Methodology and Inputs

As noted above, project measures were selected to evaluate each project's alignment with each of the goals established in the Horizon 2050 LRTP. To inform these project measures, geospatial data was gathered, summarized, and transformed. Manual entry was used to cover measures that didn't have publicly available data to inform scores (for example, the safety improvements measure tracked how well the project would improve safety and provide safety benefit and was represented by manual entry score). Within the project scoring tool, data are translated to a common scale for the purpose of congruent comparison. Scores for each project are calculated from these measures, weighted, and converted to a 1 to 100 scale for each goal and across all goals.

Horizon 2050 LRTP Goals

As part of the Horizon 2050 LRTP, GPATS identified six goals and guiding statements to support decision-making that align with both federal requirements and local priorities. These goals and guiding statements are listed in Table 1 and correspond with Chapter 3 of the Horizon 2050 LRTP. The prioritization process also adds to the score for emphasized projects or corridors, those that the public reported as important during public engagement meetings for the 2050 LRTP.

Table 1: Horizon 2050 LRTP Goals

Goal	Definition
Safety & Security	Promote a safe transportation system by reducing crashes, increasing reliability, and enhancing emergency response.
Systems Preservation & Efficiency	Extend the lifespans of transportation systems by promoting fiscal responsibility and prioritizing maintenance and operational efficiency.
Mobility & Accessibility	Create a transportation system that encourages biking, walking, and using public transit.
Economic Value	Enhance regional economic vitality by simplifying the movement of people and freight within and across the region.
Culture & Environment	Improve the area's quality of life by protecting and promoting its valued places and natural resources.
Growth & Development	Enhance travel efficiency by aligning transportation investments with land use planning.

Project Measures

Using the above goals listed in Table 1, the project team, in consultation with GPATS, identified project measures for each asset class to evaluate projects against each of the identified goals. For example, “Pavement Condition” is a project measure of the quality of roadway asphalt. This project measure is used with other measures to assess projects against the “Systems Preservation & Efficiency” goal for all asset classes. A full list of project measures for each asset class is provided in the “Inputs” tab of the attached prioritization tool. The User Quick Reference Guide section provides additional information on navigating the “Inputs” tab of the attached prioritization tool. In total, 14 unique project measures (GIS-based and Manual) were identified to assess projects by asset class against the six goals listed in Table 1. A crosswalk of goals, measures, the relevant asset category, and more information on data for the prioritization is detailed in the “Inputs” tab of the prioritization tool.

Table 2: Project Measures and Goals

Measure	Asset Category	Data Source Type	Definition
Safety and Security			
Safety Improvements	Corridors & Intersections	Manual	Safety Improvements: Project serves the purpose of improving safety and/or has safety benefits.
Traffic Crashes	All Asset Classes	GIS data	Traffic Crashes: Based on the crash severity – including fatal, injurious, and property damaging – and the occurrence of these types of crashes.
Systems Preservation and Efficiency			
Pavement Condition	All Asset Classes	GIS data	Pavement Condition: Measure of the quality of roadway asphalt.
TSMO	All Asset Classes	Manual	TSMO: Project improves system management capabilities
Mobility and Accessibility			
LoS Level of Service	Corridors & Intersections	GIS data	Level of Service (LoS): Existing/Future estimate of vehicle to capacity (V/C) ratio.

Travel Reliability on the NHS	Corridors & Intersections	GIS data	Travel Reliability on the NHS: Current NPMRDS estimate of LOTTR.
Bicycle and Pedestrian Connections	All Asset Classes	Manual	Bicycle and Pedestrian Connections: Bicycle and pedestrian infrastructure included in project
Bus Service	All Asset Classes	Manual	Bus Service: Measure of bus service frequency in project corridor.
CMP Project	All Asset Classes	Manual	CMP Project: Project identified in CMP
Economic Value			
%Truck Usage	Corridors & Intersections	GIS data	Percentage Truck Usage: Measure the percentage of vehicles that are trucks traversing the roadway.
Cost	All Asset Classes	GIS data	Cost: Measures whether cost is expected to exceed Guidesshare funding
Culture and Environment			
Poverty Measure	All Asset Classes	GIS data	Poverty Measure: MPO Poverty Measure (was Average Median Income (AMI) \$60,040 as of 2020 5-year Est)
Floodplain and Wetlands	All Asset Classes	GIS data	Floodplain and Wetlands: Measures whether a project is expected to impact a floodplain or wetland area
Growth and Development			
Impacts to Built Environment	All Asset Classes	Manual	Impacts to Built Environment: Project compatibility with neighborhoods and business districts.
Emphasis			
Public Emphasis	All Asset Classes	Manual	Emphasis: These are projects or corridors that the public report as important during public engagement meetings for 2050 LRTP.

GIS Data Collection

Quantitative data informing project measures were gathered using a GIS overlay analysis. This overlay analysis used data layers from publicly available data sources including sources at the city, regional, and state level.. For the purpose of extracting and calculating project-level data from these sources, the team developed a set of buffers, filters, and assumptions. Information on each project measure as well as scoring keys (to translate raw data to scores) are provided in the “Inputs” tab of the attached prioritization tool.

GIS Data Translation to Scores

Data gathered from the GIS analysis is translated in the project prioritization tool to project measures and scores. These transformations occur through one of two methods: 1) scoring keys and 2) skew transformations and scaling.

Scoring keys (1) are utilized to translate raw data to scores; this ensures consistency and, where necessary, aggregates multiple data fields to inform a single project measure. For corridor, intersection, or signal projects,

for example, data on existing and future vehicle-to-capacity (V/C) ratios were gathered. A scoring key was used to first score based on the existing V/C ratio, and for projects with low ratios, then score based on the future V/C ratio. All scoring keys are defined in the “Inputs” tab and by definition generate a score following the common scale (discussed further below). Translations are available beginning in column AA of the “GIS_Data” tab in the attached prioritization tool.

Skew transformations and scaling (2) are performed to reduce skew within project measures, ensuring a more even distribution and robust contrast between projects, and then translations are made to a common scale score. Two types of skew transformations are available in the tool, only one employed. Information about each of these transformation types is listed below and transformation selections for each project measure are available in the “GIS_DataScaling” tab of the attached prioritization tool:

- “None”: No project measure skew transformation is applied because the data already exhibits a normal distribution or in the common scale. This means that there are no significant outliers and contrast between projects is maintained without this step.
- “Square Root”: A square root transformation is performed to reduce the right-skew of the project measure range, where more values are clustered toward the upper end of the scale. This helps to maintain contrast for high values and enhances contrast for lower and mid-range values, improving the meaningful, analytical differences between projects. This transformation is not used in the current iteration of the prioritization tool.
- “Logarithmic”: A logarithmic transformation is performed to reduce extreme right skew where project measures exhibits significant outliers. This helps to maintain contrast for high values and enhance contrast for lower and mid-range values, improving the meaningful, analytical differences between projects.

After performing the skew translations, measures are translated to a common scale (0 to 5) using even bin criteria created from the range of values in the transformed project measures. Project measures prior to this step exhibit a variety of units of measurement and magnitudes, creating an apples-to-oranges comparison problem and making any comparison between project measures nonsensical. For example, comparing (or adding or averaging) truck percentages (%) with traffic crashes (crash counts in project area) without first translating to a common scale, would lead to a false interpretation, weighting the truck percentage measure significantly lower than the traffic crash measure.

Importantly, translations to a common scale do not have a significant impact on contrast within project measures. Distributions are maintained such that the relative priority and importance across projects is preserved but project measures become comparable. Translations to a common scale are available for GIS-based data measures in the “GIS_DataScaling” tab of the attached prioritization tool and all result in scores ranged from 0 to 5.

Table 3: Summary of GIS-based Project Measures, Translations, and Scoring Keys

Measure	Asset Category	Data Translation to Score	Scoring Key
Traffic Crashes	All Asset Classes	Continuous data translated with logarithmic transformation and common scaling	5: High density of existing crashes 3: Medium density of existing crashes 0: Low density of existing crashes

Pavement Condition	All Asset Classes	Continuous data translated with scoring key	5: Poor pavement condition (0-2.64). 3: Fair pavement condition (2.65-3.34). 0: Good pavement condition (3.35-5) / no data available because it's a nonexistent roadway.
LoS Level of Service	Corridors & Intersections	Continuous data translated with scoring key using existing and future estimate of vehicle-to-capacity (V/C) ratio.	Project addresses capacity issues in corridor where: 5: Existing V/C ratio is greater than 1.0. 4: Existing V/C ratio is between 0.8 and 1.0 V/C ratio. 3: No existing V/C over 0.8, but future V/C ratio is 1.0 or higher. 2: No existing V/C over 0.8, but future V/C ratio is between 0.8 and 1.0. 0: Existing and future V/C ratios less than 0.8.
Travel Reliability on the NHS	Corridors & Intersections	Continuous data translated with scoring key	Project addresses reliability issues in an NHS corridor where: 5: Existing LOTTR is greater than 1.5. 3: Existing LOTTR is between 1.25 and 1.5. 0: Existing LOTTR is less than 1.25.
%Truck Usage	Corridors & Intersections	Continuous data, logarithmic transformation and common scaling	5: 100th-75th Percentile. 3: 75th-50th Percentile. 0: 50th-0 Percentile.
Cost	All Asset Classes	Cost data translated to binary score	5: Less than or equal to one year of Guidesshare funding by mode 0: Greater than one year of Guidesshare funding by mode
Poverty Measure	All Asset Classes	Continuous data translated to with scoring key	5: Project improves access to area that meets threshold for low income. 0: Project does not improve access for low income area.
Floodplain and Wetland	All Asset Classes	Binary data translated to common scaling	5: Project does not touch a floodplain or wetland 0: Project touches a floodplain or wetland

Manual Scores

Some project measures are informed by manual entry to help properly characterize a project's alignment with a goal, usually due to lack of publicly available GIS-based data. Some manual inputs are informed by review of qualitative planning documents and project information or based on the assessment of a subject matter expert. Manual inputs are entered directly as scores on the common scale (0 to 5), informed by qualitative scoring keys. Scoring keys for manual entry data are listed in the "Inputs" tab of the prioritization tool.

Table 4: Summary of Manual Project Measures and Scoring Keys

Measure	Asset Category	Scoring Key
---------	----------------	-------------

Safety Improvements	Corridors & Intersections	5: Project purpose is safety 3: Project purpose is not primarily safety but would provide safety benefits 0: Project provides no safety benefits.
TSMO	All Asset Classes	5: Project includes new TSMO assets 3: Project upgrades existing TSMO assets 0: Project includes no TSMO elements
Bicycle and Pedestrian Connections	All Asset Classes	5: Project includes new Bike / Ped infrastructure that closes a system gap 3: Project upgrades or enhances existing bike / ped assets OR is a new bike / ped asset that does not close a gap 0: Project includes no Bike / Ped elements
Bus Service	All Asset Classes	5: Project improves transit service or amenities in a high frequency transit service corridor (headways of 30 minutes or less) 3: Project improves transit service in a transit corridor. 0: Project does not improve transit service.
CMP Project	All Asset Classes	5: Project is identified in the CMP. 0: Project is not Identified in the CMP.
Impacts to Built Environment	All Asset Classes	5: Street project enhances compatibility with neighborhoods through reduced speeds, less noise, or improved aesthetics (or other). 0: No data available because no one lives in the census block group.
Public Emphasis	All Asset Classes	5: Corridor or Project emphasized. 0: Corridor or Project not emphasized.

Calculation of Scores

The project scoring tool captures the weights entered for measures and goals to create an overall project score. Goals are described in the Horizon 2050 LRTP Goals section. Weights were discussed between GPATS and the South Carolina Department of Transportation (SCDOT). Table 5 presents weights as provided by GPATS and discussed with SCDOT. The weights for criteria discussed and provided were not a one-to-one match with project scoring input requirements, thus, these weights were mapped to measures used in the prioritization tool, shown in Table 5. The results of these translations are shown in Table 6. Measure weights can be changed on the “Interface” tab of the attached prioritization tool, described in the User Quick Reference Guide section.

Table 5: Goal Weights as Provided by GPATS

Criteria	Mapped GPATS Measures	Goal Weights			
		Bike/Ped	Corridor	Intersection	Signal
Traffic Volume and Congestion	LOS, Travel Reliability, TSMO	0%	35%	35%	35%

Located on a Priority Network	CMP	5%	25%	15%	15%
Public Safety	Safety Improvements, Traffic Crashes	35%	10%	25%	25%
Economic Development	Economic Development	10%*	7%	5%	5%
Truck Traffic	Percent Truck Usage	0%	10%	10%	10%
Financial Viability	Cost	10%	5%	5%	5%
Pavement Quality Index	Pavement Condition	0%	3%	0%	0%
Environmental Impacts	Poverty Measure, Floodplain and Wetlands	15%	5%	5%	5%
Alternative Transportation Solutions	Bicycle and Pedestrian, Bus Service	10%	0%	0%	0%
Consistency with Local Land Use Plans	Impacts to Built Environment	15%	0%	0%	0%

*For the Bike/Ped Asset class, the weights provided and discussed with SCDOT for the Economic Development criteria map to the Bicycle and Pedestrian and Bus Service measures in the tool, rather than the Economic Development measure.

Table 6: Measure Weights in the Prioritization Tool

Measure Weights					
Measure	Asset Category	Bike/Ped	Corridor	Intersection	Signal
Safety Improvements	Corridors & Intersections	18%	13%	13%	13%
Traffic Crashes	All Asset Classes	18%	13%	13%	13%
Safety and Security					
Pavement Condition	All Asset Classes	0%	5%	5%	5%
TSMO	All Asset Classes	0%	7%	7%	7%
Systems Preservation and Efficiency					
LoS Level of Service	Corridors & Intersections	0%	7%	7%	7%
Travel Reliability on the NHS	Corridors & Intersections	0%	7%	7%	7%
Bicycle and Pedestrian Connections	All Asset Classes	10%	5%	5%	5%
Bus Service	All Asset Classes	10%	5%	5%	5%

CMP Project	All Asset Classes	5%	5%	5%	5%
Mobility and Accessibility					
%Truck Usage	Corridors & Intersections	0%	10%	10%	10%
Cost	All Asset Classes	10%	10%	10%	10%
Economic Value					
Poverty Measure	All Asset Classes	8%	3%	3%	3%
Floodplains and Wetlands	All Asset Classes	8%	3%	3%	3%
Culture and Environment					
Impacts to Built Environment	All Asset Classes	15%	15%	15%	15%
Growth and Development					
Public Emphasis	All Asset Classes	0%	0%	0%	0%
Emphasis					

Scores for each goal by asset class are calculated as the average of project measures for that goal and asset class, then weighted by the Measure Weights defined in Table 6 and in the “Inputs” tab. Once scores are calculated for each goal, scores for goals and across all goals (overall project scores) are normalized to a scale of one to 100, for ease of understanding and interpretation.

In this methodology, a score of one is associated with the lowest possible score (zeros across all measures), and 100 represents the highest possible score (fives across all measures). Realized project scores fall between these two extremes.

Project measure scores, scores for each goal, and the total score across goals are summarized in the “ScoreSummary” and can also be seen in the “Interface” tab of the project scoring tool. The User Quick Reference Guide section of this memo provides detailed instructions on how to navigate and utilize these tabs.

APPENDIX C: ACOG TRAVEL DEMAND MODEL REVIEW

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Background

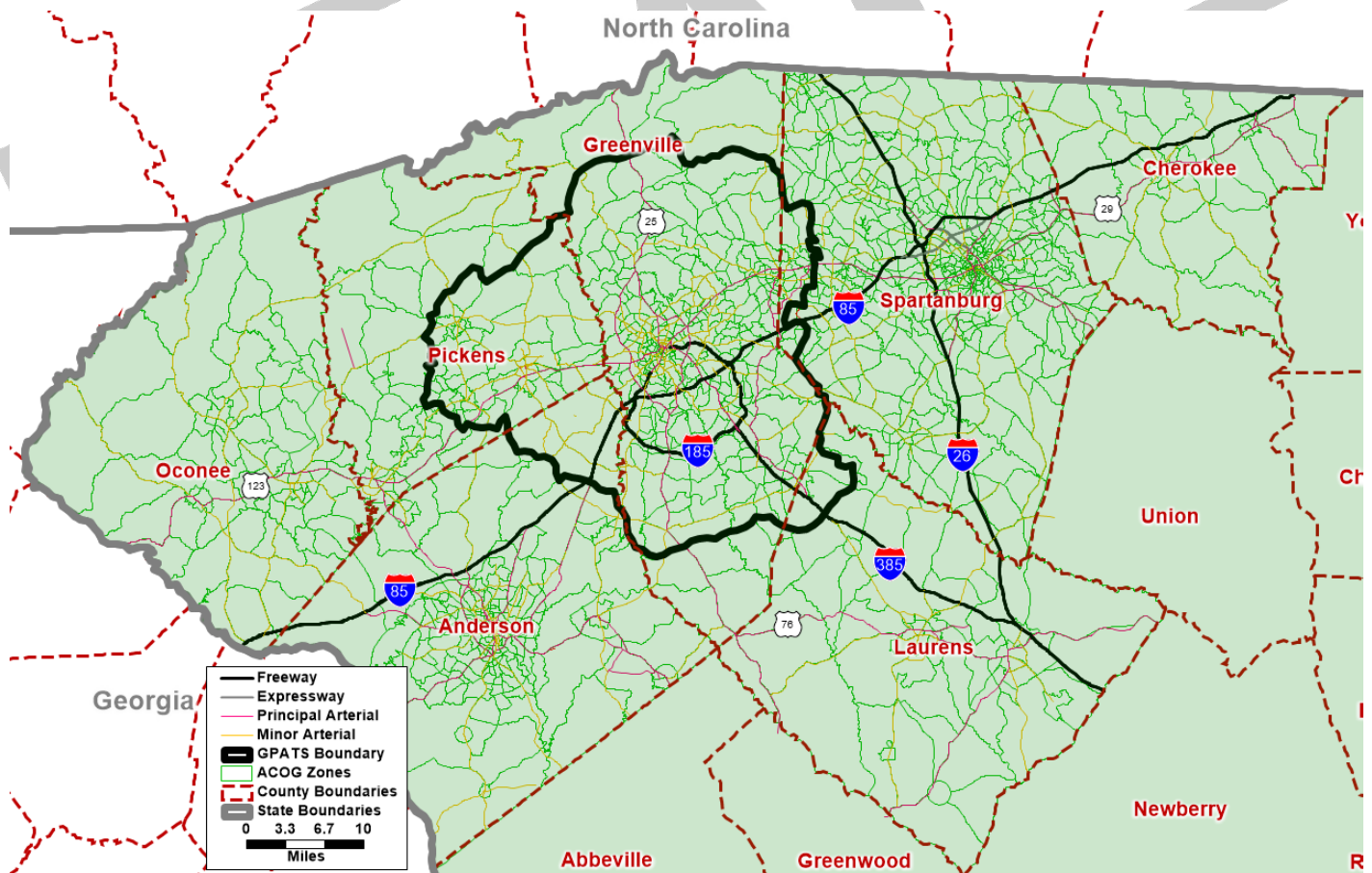
The ACOG (Appalachian Council of Governments) travel demand model (TDM) files were received from the Greenville-Pickens Area Transportation Study (GPATS) Metropolitan Planning Organization (MPO) and ACOG. The model, referred to as ARM (Appalachian Regional Model), was developed by CDM Smith in 2025 and includes a 2022 base year and 2050 forecast year. The ARM was developed to run in Version 9 of TransCAD and is the 2nd version of ARM.

HDR reviewed the ARM modeling procedures, inputs and outputs for the GPATS portion of the model in preparation for the GPATS Long-Range Transportation Plan (LRTP). The findings from that review are summarized in this memorandum.

Model Structure

The ARM model is a traditional trip-based TDM that includes the four standard steps of Trip Generation, Trip Distribution, Mode Choice, and Traffic Assignment. Please note that the Mode Choice procedure splits person trips into auto, transit and other trips using static percentages and not a logit procedure that can dynamically model transit trips that adjust for service and demographic changes giving it limited ability to model transit trips. The model represents a seven-county area with the GPATS MPO near the center as shown in **Figure 1**.

Figure 1 - GPATS MPO Boundary within ARMv2 Model



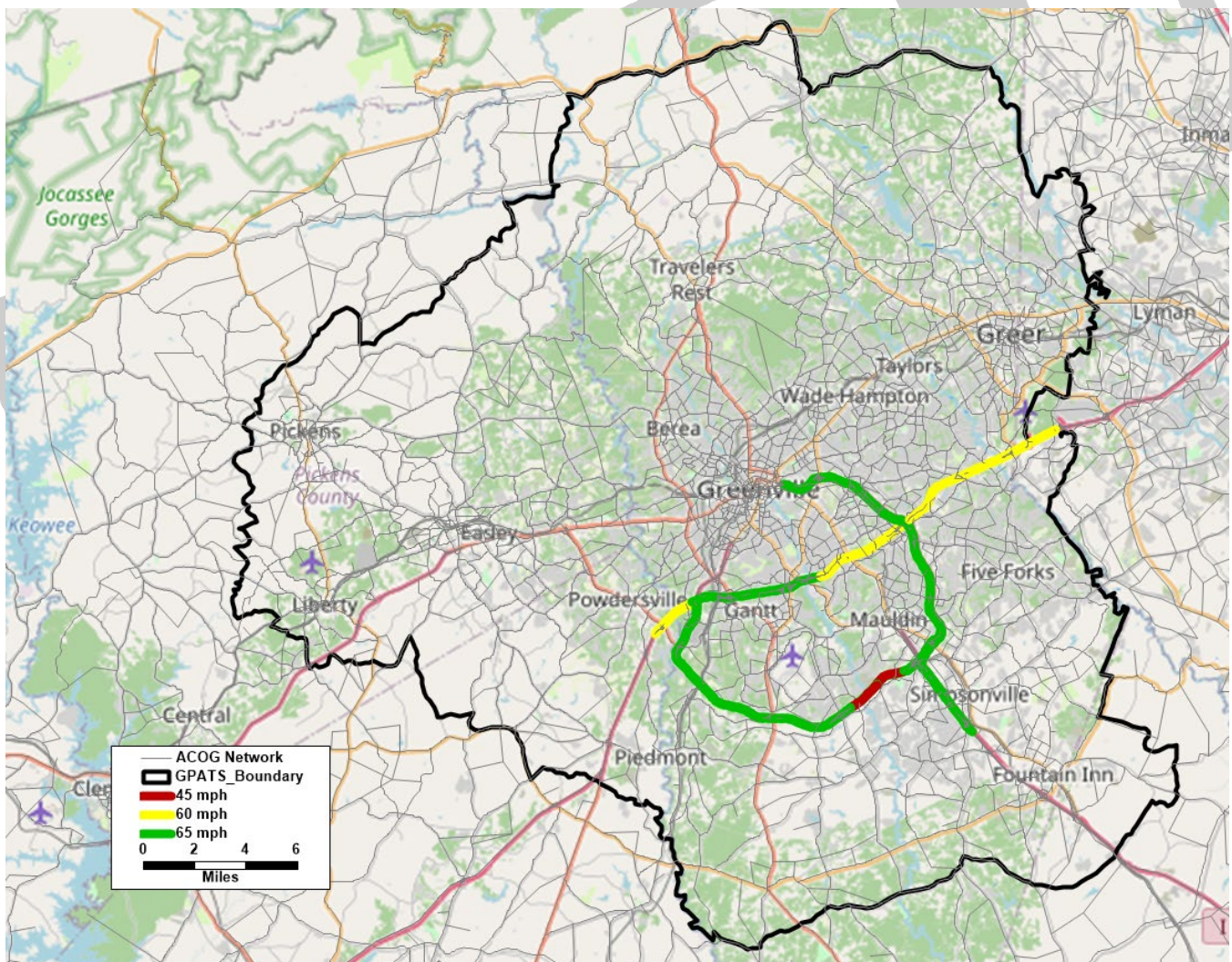
Road Network

The primary network inputs, including speeds, capacities, lanes, counts, and functional class were reviewed within the GPATS boundary. The “No-Build” future road projects were also identified and reviewed.

Speeds

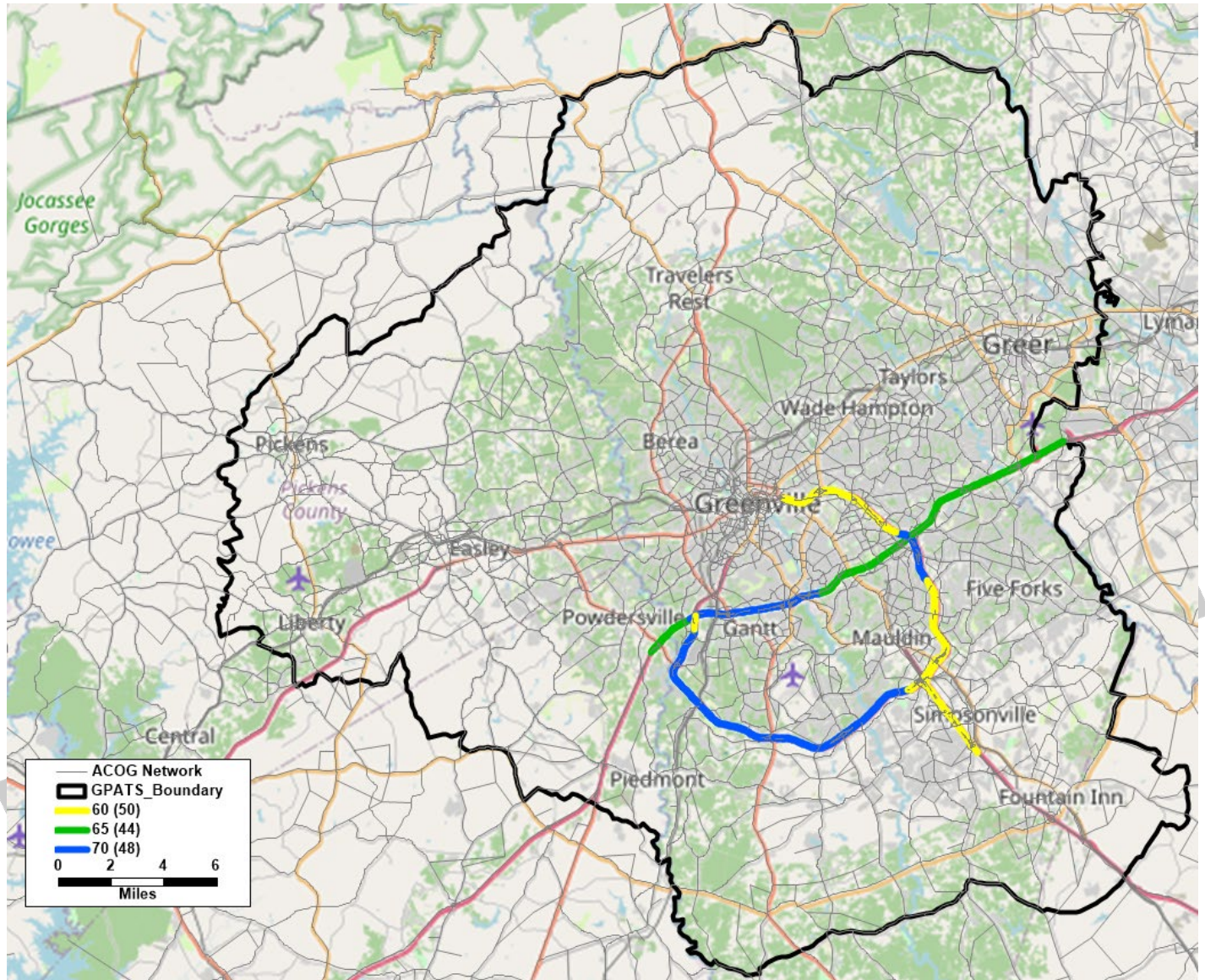
The speeds were reviewed for accuracy within the GPATS portion of the ARM. The input speeds used by the model were spot-checked by comparing with posted speed limit signs found on Google Street View. In most cases, the model input speeds matched the speed limit signs. When reviewing the speeds on the interstate, there was a uniform difference of 5 mph between the speeds posted (observed in Google Street View) and the speeds in the base_speed field on the ACOG network. This difference was only noticed on the interstates (I-85, I-185, and I-385). The real-world observed speeds are visualized in **Figure 2**, and speeds shown on the ACOG base_speed field are visualized in **Figure 3**. Note the 45 mph change in **Figure 2** is due to the toll booth (Southern Connector Toll road).

Figure 2 - Real World Observed Speeds



*Note the two links with a 45 mph speed link is due to the toll booth on I-185 (Southern Connector Toll Road).

Figure 3 - ACOG Base_Speed



Capacities

The model capacities and associated volume delay function coefficients used during highway assignment were determined based on SCDOT input according to the model documentation. These capacities were reviewed and compared to other TDMs and published daily planning model capacities from the 2009 Florida Department of Transportation Quality / Level-of-Service Handbook (FDOT QLOS). A comparison of the model capacities versus FDOT QLOS Level-of-Service E planning capacity values is shown in **Table 1**.

The ARM daily capacity values are consistently higher than the FDOT QLOS values, particularly on Principal Arterial roads. No changes to these capacities are recommended as an input to the model because the model has been calibrated using these values, but FDOT QLOS values were added to the network to show more congestion for mapping purposes.

Table 1 - ACOG Model Capacities Versus FDOT Quality Level-of-Service Handbook Capacities

Functional Class / Lanes	ACOG Model (Undivided-Divided)	FDOT QLOS
Freeway		
2	42,000	39,700
4	84,000	79,400
6	126,000	122,700
Principal Arterial		
2	31,000 - 35,650	17,500
4	62,000 - 71,300	38,600
6	93,000 - 106,950	58,100
Minor Arterial		
2	26,000 - 29,900	16,200
4	52,000 - 59,800	35,100
6	78,000 - 89,700	53,100
Collector		
2	17,000 - 19,550	14,900
4	34,000 - 39,100	31,900

The FDOT QLOS daily capacity values do not represent a maximum number of vehicles that can use the roadway in 24 hours. Instead, the capacity values represent the highest number of vehicles that can use the roadway to meet a particular Level-of-Service threshold. For example, during a 24-hour timeframe there are many hours that a road is underutilized but during peak hours it may be overutilized resulting in a lower Level-of-Service. The daily values used thus approximate a peak hour limitation on the roadway but can be compared to model daily volumes.

Future Road Network

The user can select various sets of future road projects to include in a future model run including EC (existing roadways and committed future road projects), LRP (fiscally constrained long-range plan road projects), SWM (projects included in the South Carolina DOT statewide model), and Vision (fiscally unconstrained future road projects). The EC and SWM projects together represent the “No Build” scenario projects, which are projects that are anticipated to be completed even if no fiscally-constrained dollars are allocated to them in the LRTP.

Figure 4 shows the locations of these projects in the GPATS portion of the TDM and **Table 2** provides a description of the projects.

Figure 4 – “No Build” Future Road Projects

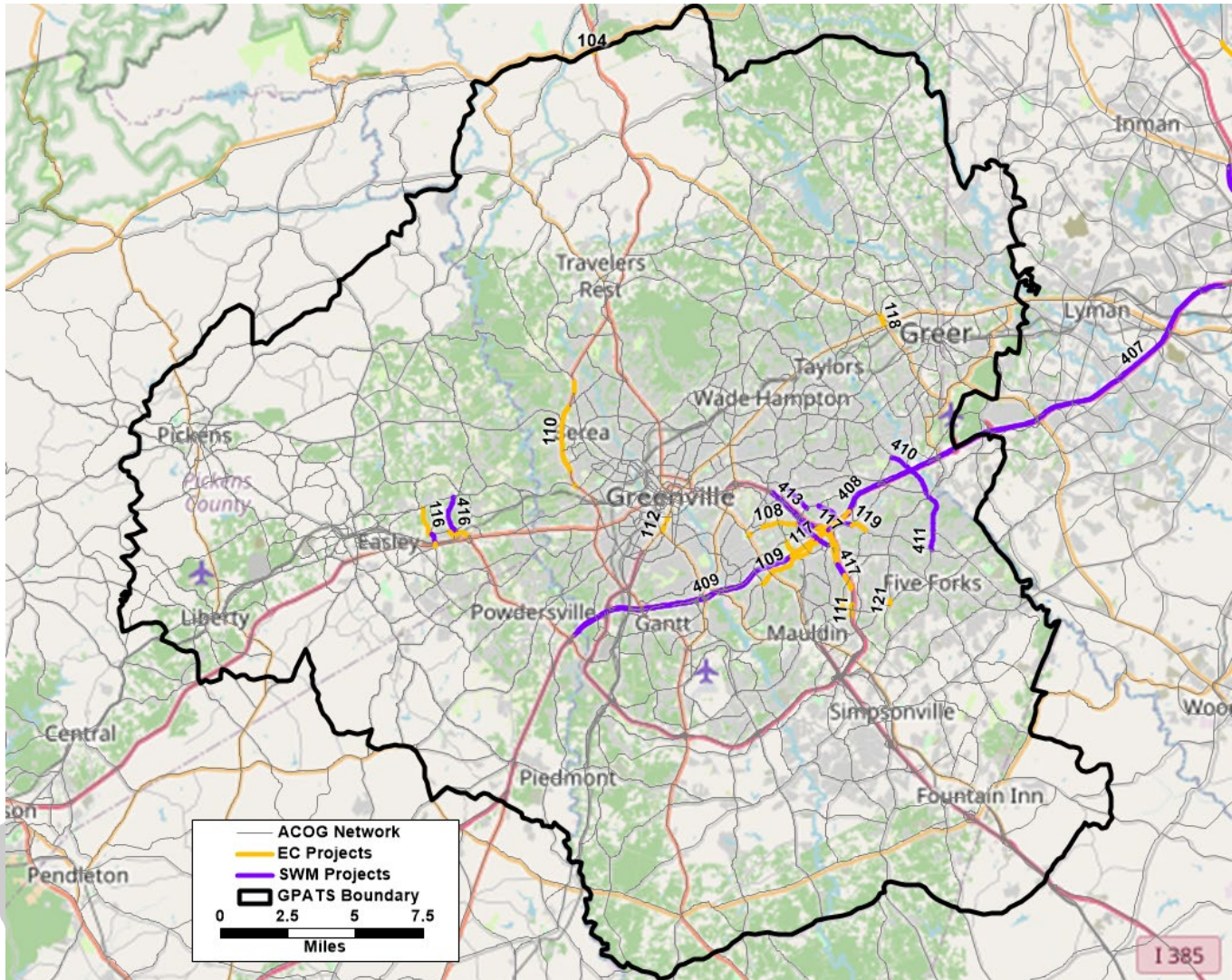


Table 2 - EC and SWM Future Road Projects in GPATS Area

Project Number	Project Group	Year	Road	Description
104	EC	2020	US 25/SC11 interchange	Add loop to interchange & turn lanes on SC11
106	EC	2020	S-23-434/Fairforest Way	Widen to 4 lanes
108	EC	2020	Woodruff Road	Widen to 5 lanes divided (with medians)
109	EC	2020	Millenium Blvd	New 4 lane divided
110	EC	2020	US 25 (White Horse Rd)	Widen to 7 lanes
111	EC	2020	I-385	Widen to 6 lanes
112	EC	2020	US 29 (Church St)	40 to 45 mph
113	EC	2020	Butler Road (S-107)	Widen to 4ln divided
114	EC	2020	Prince Perry Rd (S-135) / US 123	Intersection improvement
116	EC	2020	SC 153 Extension	Extension / New Construction of 2 lane road
117	EC	2020	I-385/I-85	New interchange
118	EC	2020	SC 101/290	Widen to 5 lanes
119	EC	2020	S-23-548	Widen to 3 lanes
120	EC	2020	S-23-326/127/Local Road	Widen to 4L w/ raised median
121	EC	2020	SC 14	Widen to 5 lanes
407	SWM	2025	I-85	Widen 1 lane/direction
408	SWM	2020	I-85	Widen 1 lane/direction
409	SWM	2025	I-85	Widen to 8 lanes
410	SWM	2025	Batesville Road (S-23-164/312)	3 Lane C&G
411	SWM	2022	Batesville Road (S-23-164/312)	3 Lane C&G
412	SWM	2025	Woodruff Road Parallel	4 Lane raised median
413	SWM	2050	I-385	Widen one lane in either direction
414	SWM	2020	S-23-547	Widen to 3 lanes
415	SWM	2020	S-23-548/183	Widen to 3 lanes
416	SWM	2020	Price Perry Rd/ Rock Springs Rd	Change from Undivided to Divided Highway
417	SWM	2050	I-385	Widen one lane in either direction

Socioeconomic Data

Base year (2022) and horizon forecast year (2050) socioeconomic data was reviewed for reasonableness in the GPATS portion of the model using thematic mapping and spot-checking individual zones against aerial photos.

Base Year Socio Economic Data

Household and employment densities were calculated for each TAZ as shown in **Figure 5** and **Figure 6**. Employment density is highest near the central business district and along major corridors including the interstates, Wade Hampton Boulevard, and Calhoun Memorial Highway while population is more evenly dispersed but primarily toward the eastern half of the GPATS boundary.

Figure 5 – Base Year Household Density

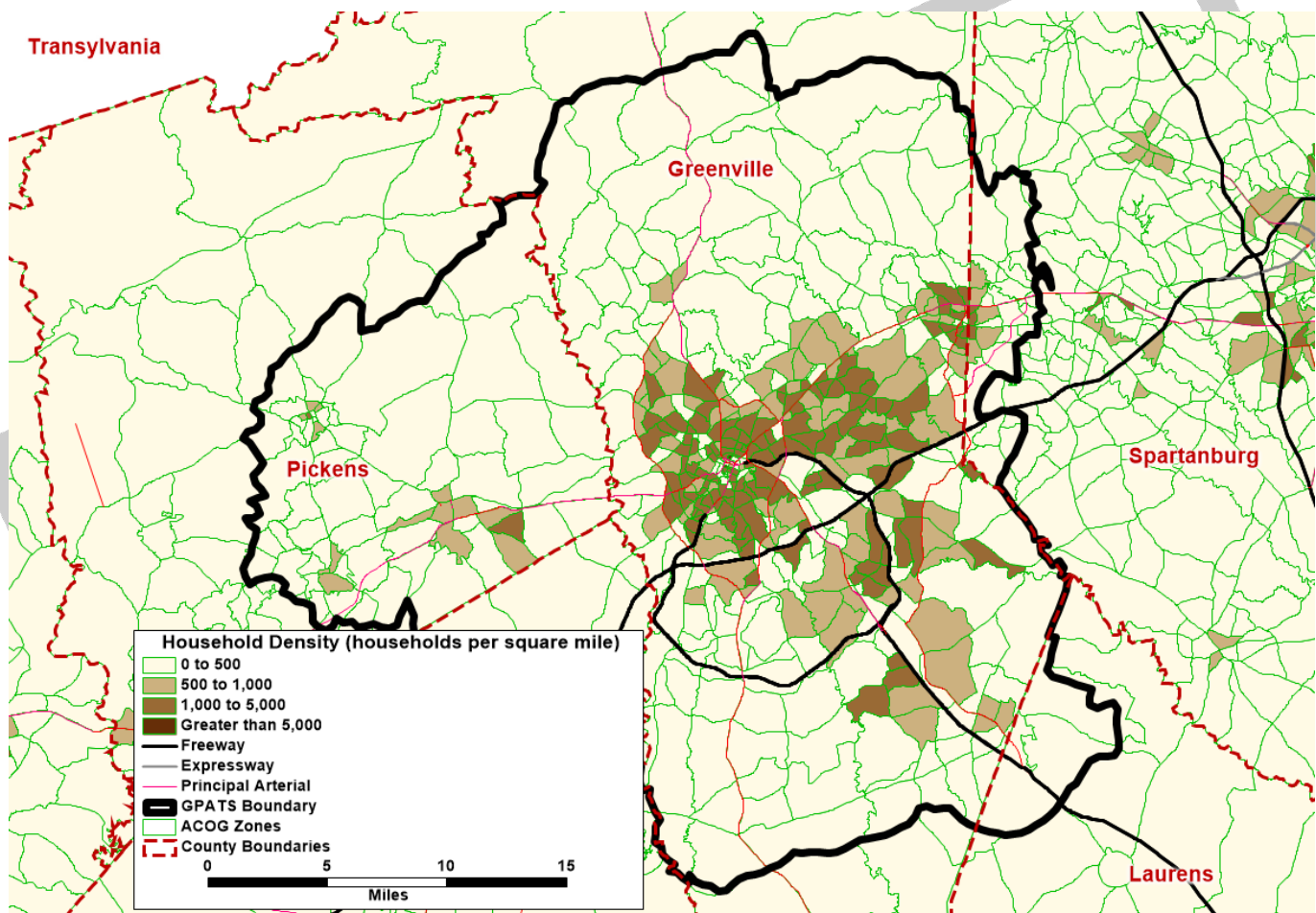
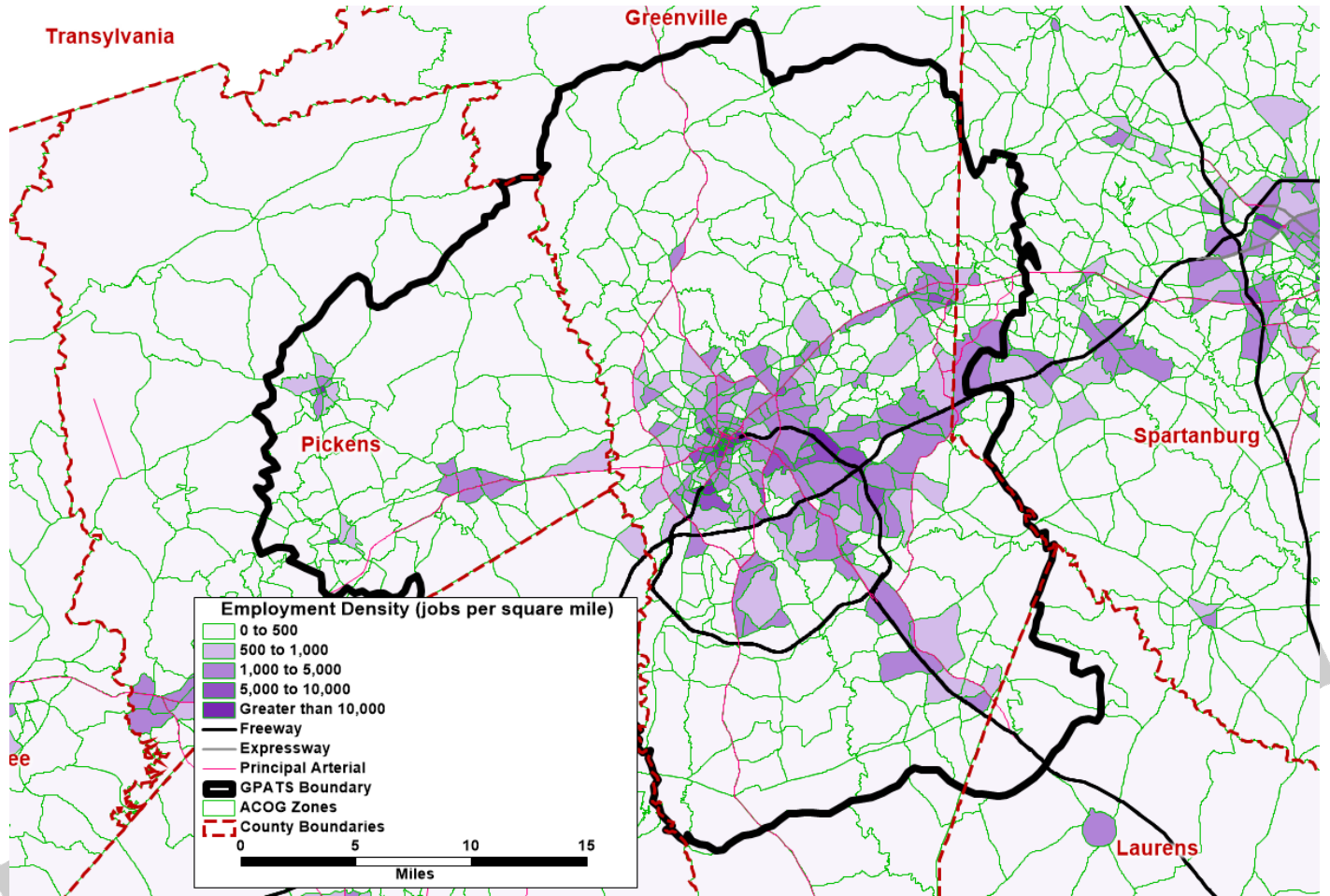


Figure 6 – Base Year Employment Density



Socioeconomic Data Growth

Figure 7 and Figure 8 show the absolute growth in households and jobs from the 2022 model base year to 2050. Household growth is widely dispersed but more heavily concentrated outside of the I-185 / I-385 loops and near the periphery of the GPATS boundary. Employment growth is also widely dispersed throughout the GPATS boundary but is more heavily concentrated along interstate corridors.

Figure 7 – Household Growth (2022 to 2050)

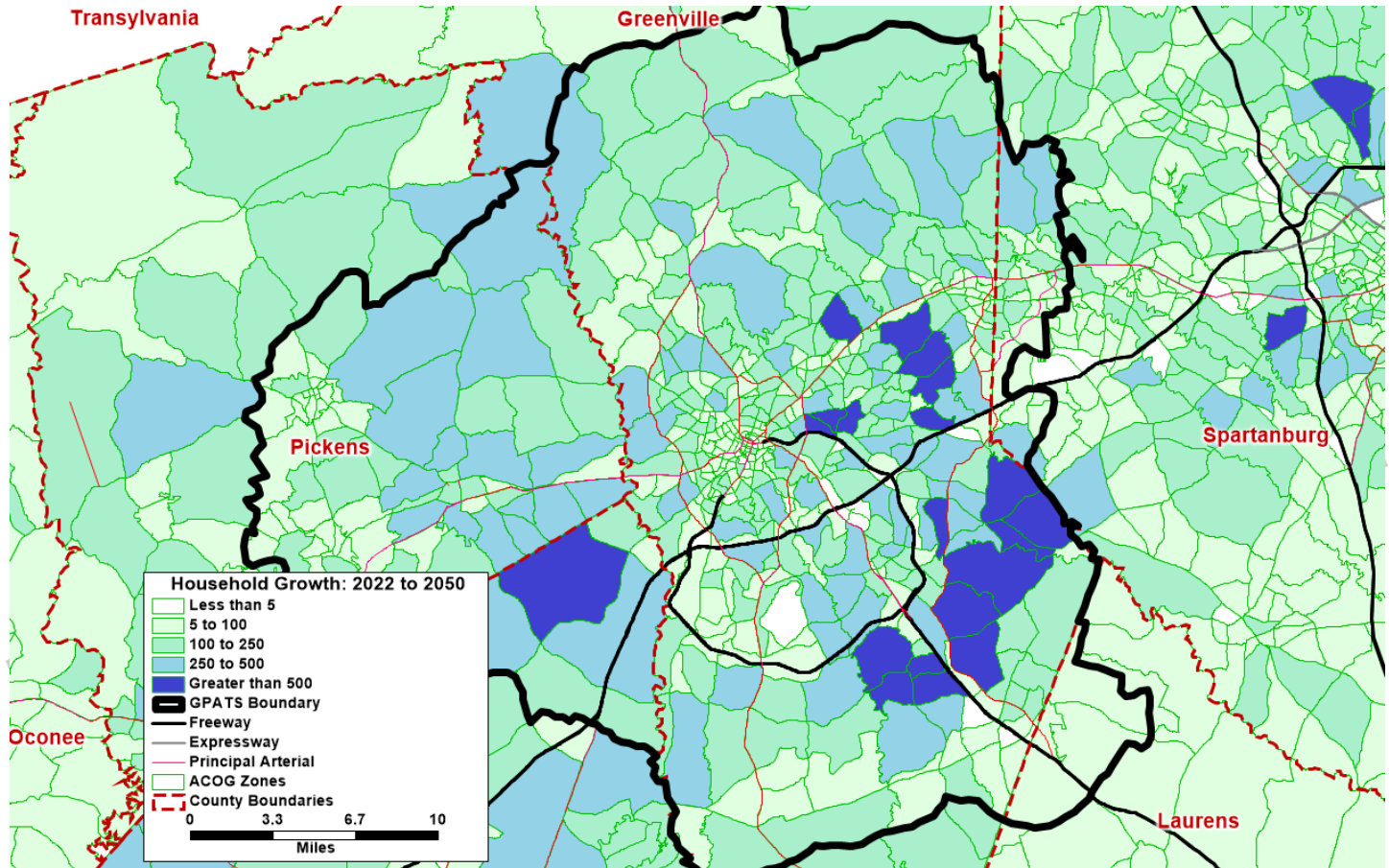


Figure 8 – Employment Growth (2022 to 2050)

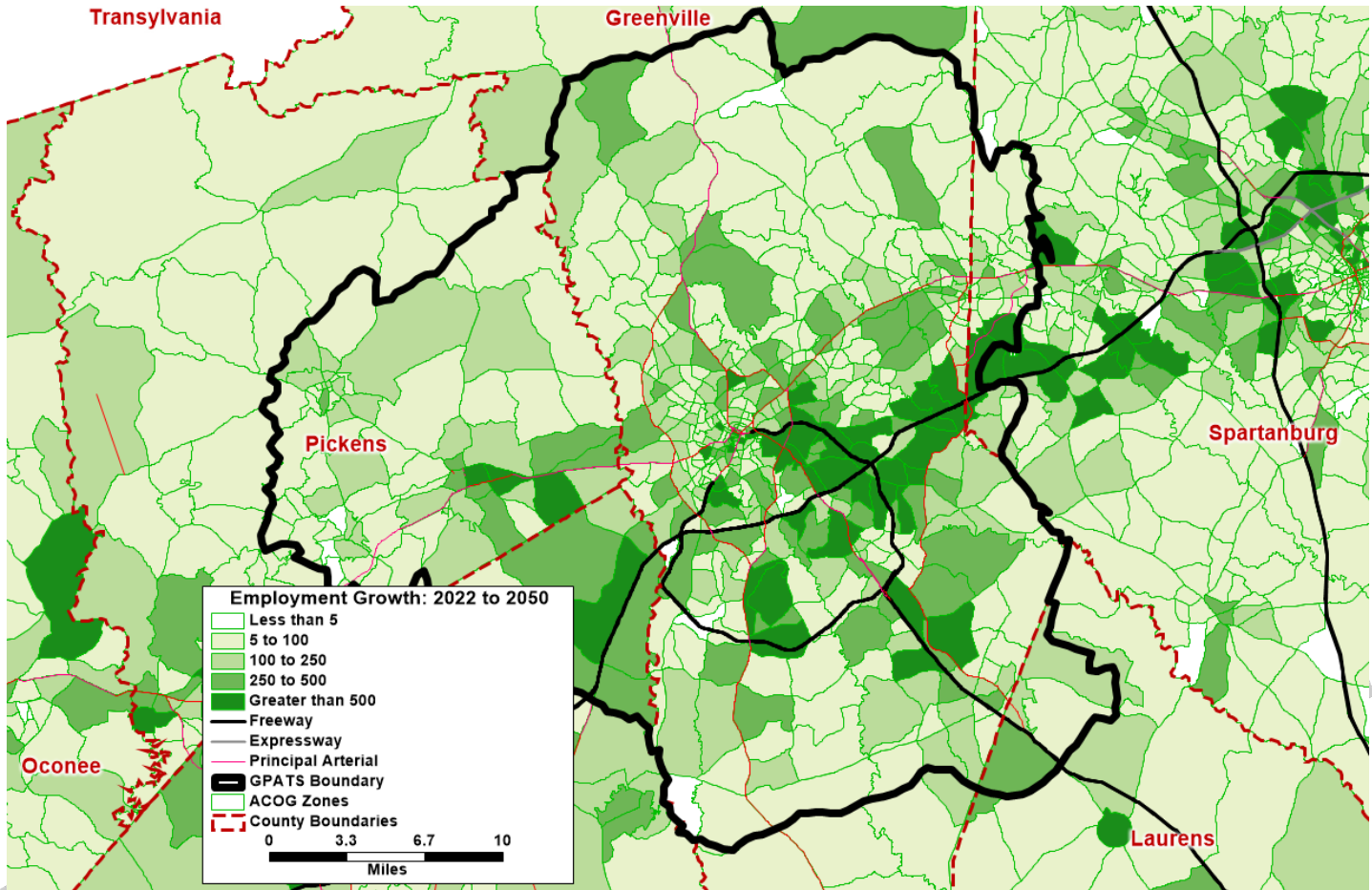


Table 3 summarizes both household and employment growth for the GPATS area and the entire model and includes a comparison with the previous model (2010-2045) annual growth as well as data from Census American Community Survey for the GPATS area. The forecasted household growth is more conservative than the previous model, but employment growth is more aggressive. For the GPATS MPO area only, the household growth is forecasted to be higher than the average for the entire model but employment growth is lower. Forecast household growth in the model is also more conservative than recent growth in the GPATS area according to the Census data. This suggests that the model predicts growth may slow compared to the most recent decade.

Table 3 – Compound Annual Growth Rate (CAGR) for Entire Model (2022-2050) and GPATS Area Only in Current (2022-2050) and Previous (2010-2045) Models and Census Data (2014-2025)

	Entire Model	GPATS Area Only	Previous Model Entire Model	Previous Model GPATS Area Only	GPATS Area Census Data
Households	0.95%	1.02%	1.14%	1.18%	1.53%
Employment	1.36%	1.22%	1.15%	1.14%	N/A

Outputs

Final model assignment results were reviewed for both the entire model area and the GPATS area only to try to identify large differences or any potential calibration improvements that could be made to the GPATS area.

Validation

The model-estimated volumes compared to counts were calculated for both the entire model and for the GPATS portion of the model. **Table 4** summarizes the results. Please note that the percentages for the entire model are nearly identical to the values shown in the model documentation but may differ because of slight differences in rounding or because of slight differences in the inputs being used for the model at the time that the original model documentation was prepared. Please also note that the model does not include any counts less than 1,000.

Both the percent RMSE and the volume error are similar for each volume group and generally within the benchmark thresholds defined in the model documentation with minor exceptions. For example, the volume error percentage for the GPATS Area in the 50,000-59,999 volume class is higher than for the entire model area and outside of the benchmark. Yet, this is because of a limited number of counts (8) compared to the number of counts in this volume class for the entire model area (22) which leads to more volatile results.

Table 4 – Percent RMSE and Volume Error by Volume Group for Entire Model and GPATS Area Only

Volume Class	%RMSE			Volume Error		
	Entire Model	GPATS Area Only	Benchmark*	Entire Model %Error	GPATS Area Only %Error	Benchmark*
>1,000-4,999	72%	81%	<= 100%	-1%	-2%	+/-25%
5,000-9,999	53%	56%	<= 45%	2%	2%	+/-25%
10,000-14,999	37%	38%	<= 35%	3%	-2%	+/-20%
15,000-19,999	36%	40%	<= 30%	6%	-10%	+/-20%
20,000-29,999	25%	29%	<= 27%	2%	-4%	+/-15%
30,000-49,999	17%	18%	<= 25%	4%	8%	+/-15%
50,000-59,999	13%	18%	<= 20%	5%	15%	+/-10%
60,000+	16%	16%	<= 19%	16%	16%	+/-10%
Overall	38%	37%	<= 45%	3%	2%	+/-5%

*Benchmark values obtained from ACOG Regional Travel Demand Model Update Report (ARMv2 build 20250808)

In terms of functional class, the percent RMSE is very similar for the entire model and just the GPATS area (Table 5).

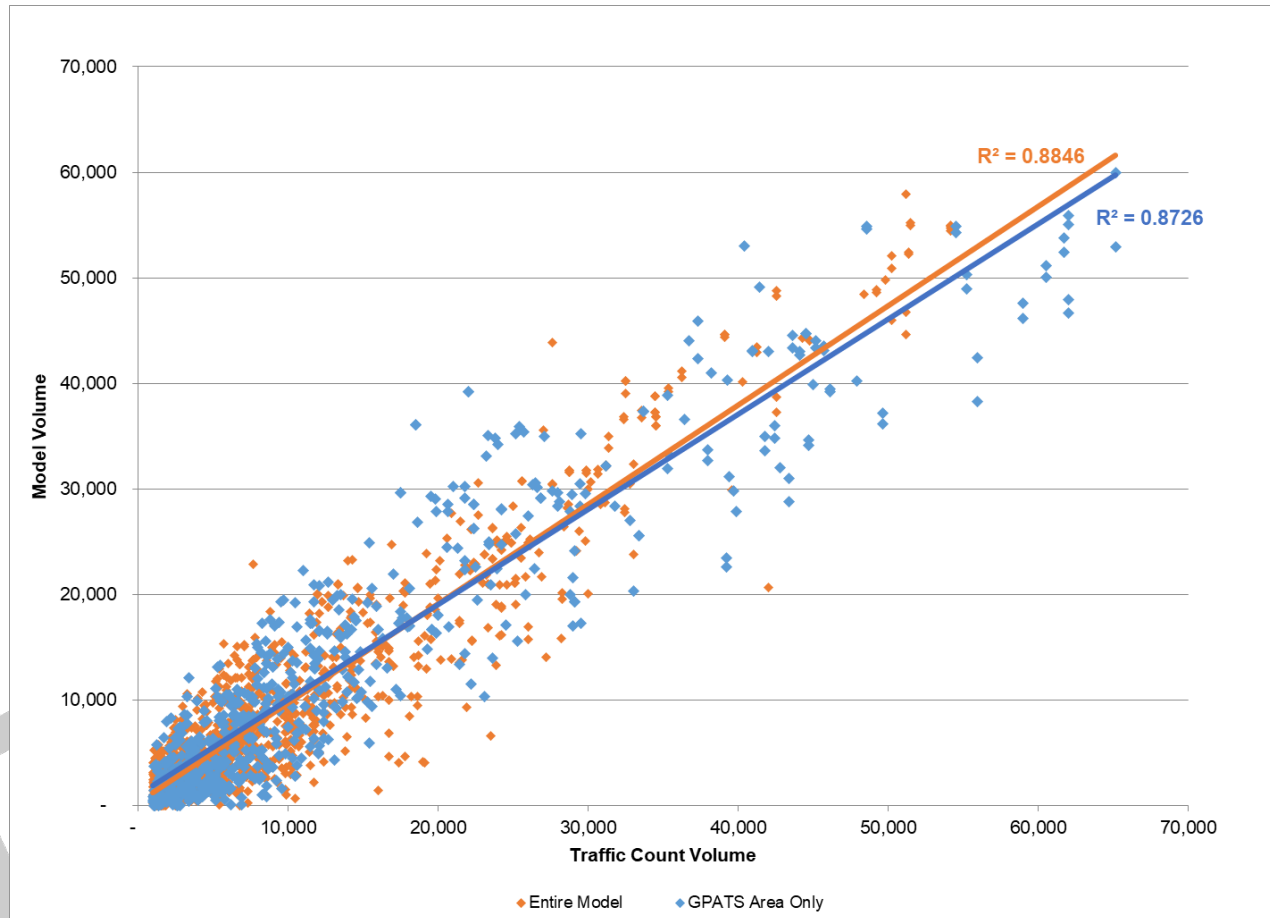
Table 5 – Percent RMSE by Functional Class for Entire Model and GPATS Area Only

Facility Type	Entire Model	GPATS Area Only
Freeway/Expressway	16.69%	18.88%
Principal Arterial	31.72%	28.64%
Minor Arterial	48.66%	43.75%
Collector	65.25%	59.85%
Total	38.01%	37.38%

A graphical comparison of the model assignment results compared to counts for the GPATS area versus the entire model area is shown in **Figure 9**. The R² values measure how well the trendlines fit the data. An R² of 1

would mean that the model-estimated volumes and the count data are a perfect match. The entire ARM model has an R^2 of 0.88 and the GPATS area only has an R^2 of 0.87 which both indicate an acceptable fit. The similar R^2 values suggests that there is not significantly more error within the GPATS boundary as compared to the rest of the model.

Figure 9 – Coefficient of Determination for Entire Model and GPATS Area Only



Level of Service

The model capacities and associated volume delay function coefficients used during highway assignment were determined based on SCDOT input according to the model documentation. Level-of-Service letter grades are calculated by the model script during a model run using the volume to capacity ratio for each roadway link. No changes were made to these model inputs, but initial Level-of-Service maps showed less congestion than anticipated.

The capacities were compared with other models and industry-standard values and ultimately updated to values consistent with the FDOT QLOS which ensures that the model volume to capacity ratios will display an approximated peak hour constraint. The lower FDOT QLOS capacities are rooted in the Highway Capacity Manual methodology and represent a better picture of peak hour conditions. The LOS letter grade thresholds were also updated to use more even and rounded volume-to-capacity ratio (V/C ratio) values. **Table 6** summarizes the alterations.

Table 6 – Level-of-Service Grade Alterations

Level-of-Service Grade	Original (V/C Ratio)	Revised (V/C Ratio)
A	0.00 – 0.50	0.00 – 0.60
B	0.50 – 0.75	0.60 – 0.70
C	0.75 – 1.00	0.70 – 0.80
D	1.00 – 1.15	0.80 – 0.90
E	1.15 – 1.35	0.90 – 1.00
F	Greater than 1.35	Greater than 1.00

The model output volumes were divided by the revised capacities to calculate revised V/C ratios. The updated LOS V/C ratio thresholds were then used to assign a letter grade for each road. **Figure 10** shows the 2022 base year and **Figure 11** shows the 2050 scenario with existing and committed projects (EC) and statewide model road projects (SWM).

Figure 10 – 2022 Base Model Revised Capacities Level-of-Service

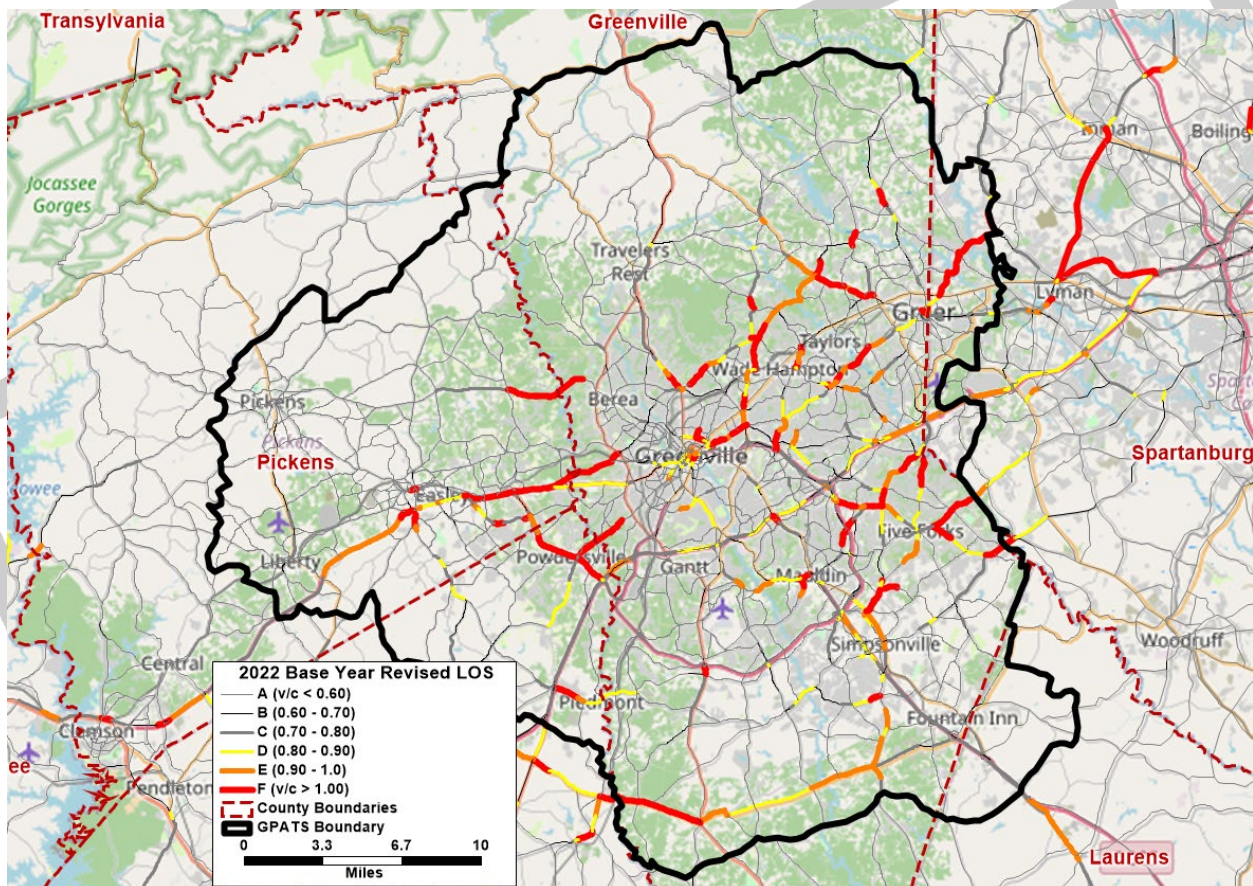
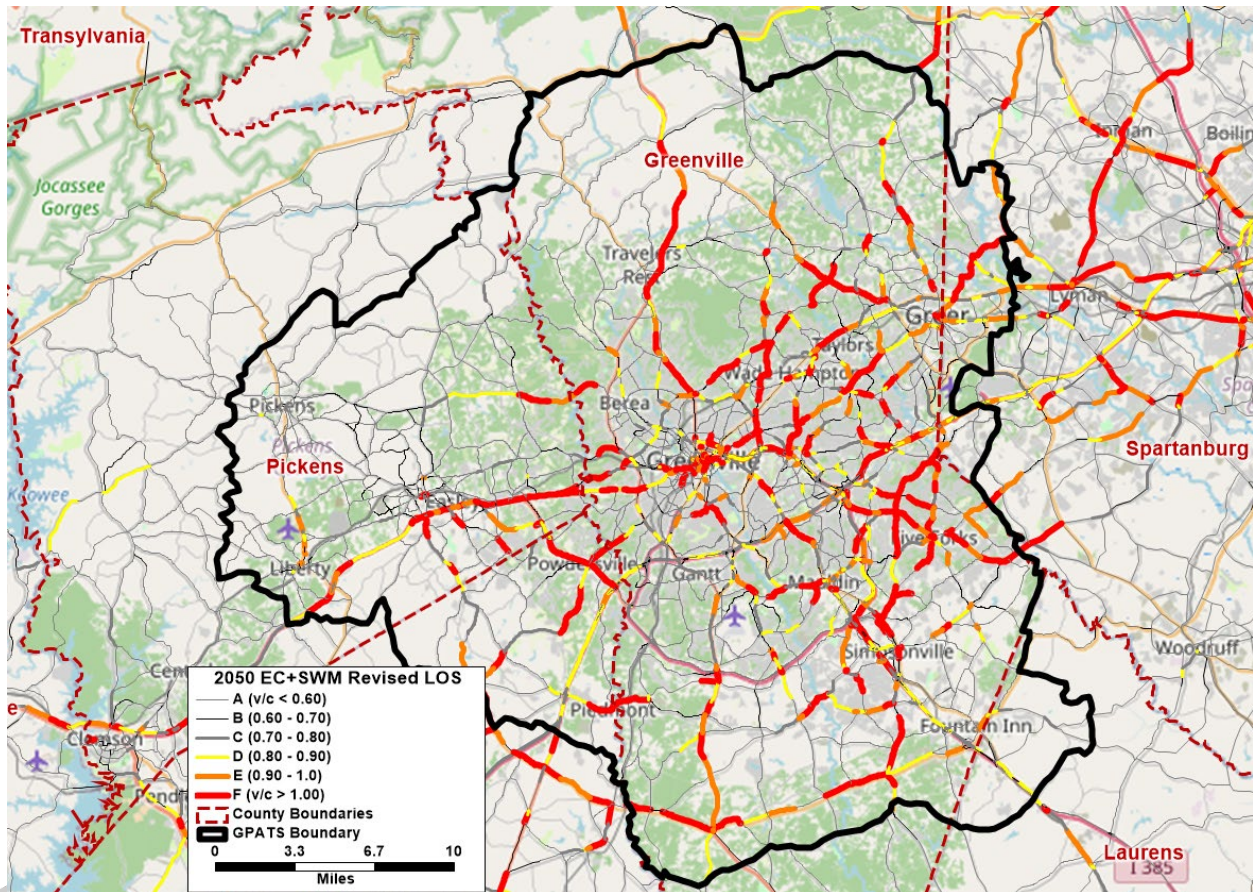


Figure 11 – 2050 EC + SWM Revised Capacities Level-of-Service



Another method to identify congestion is to find roads that have the largest decrease in speeds from freeflow conditions to the most congested peak time period. **Figure 12 and Figure 13** show the decrease in speeds from what is posted to the most congested peak. In both the base year and 2050, I-85 has the largest decrease in speed. Most other locations with the largest speed reductions are on other interstates and highways with arterial and collector roads not showing as frequent speed reductions.

Figure 12 - Average Speed Reduction from Posted to Peak Time Period Speeds in 2022 Base Scenario

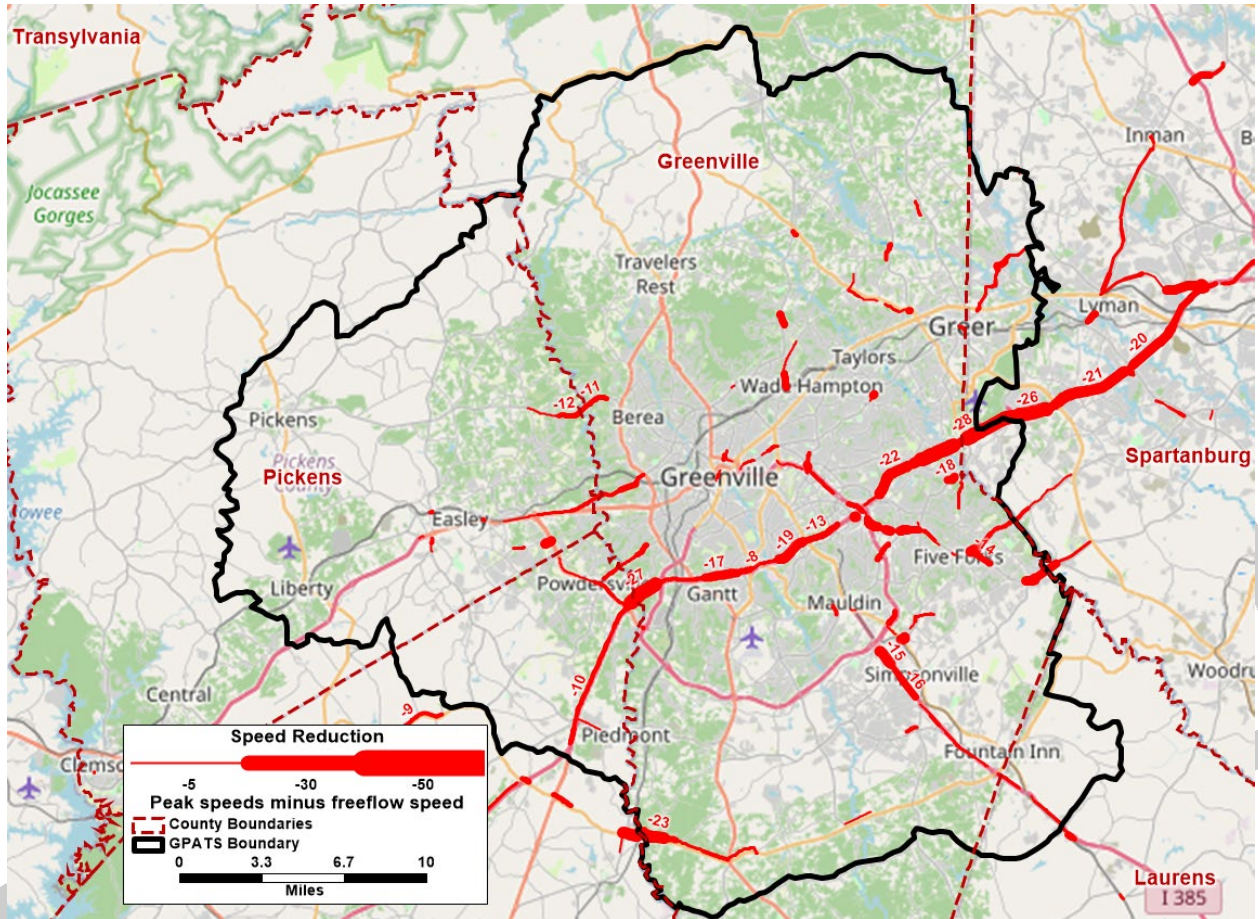
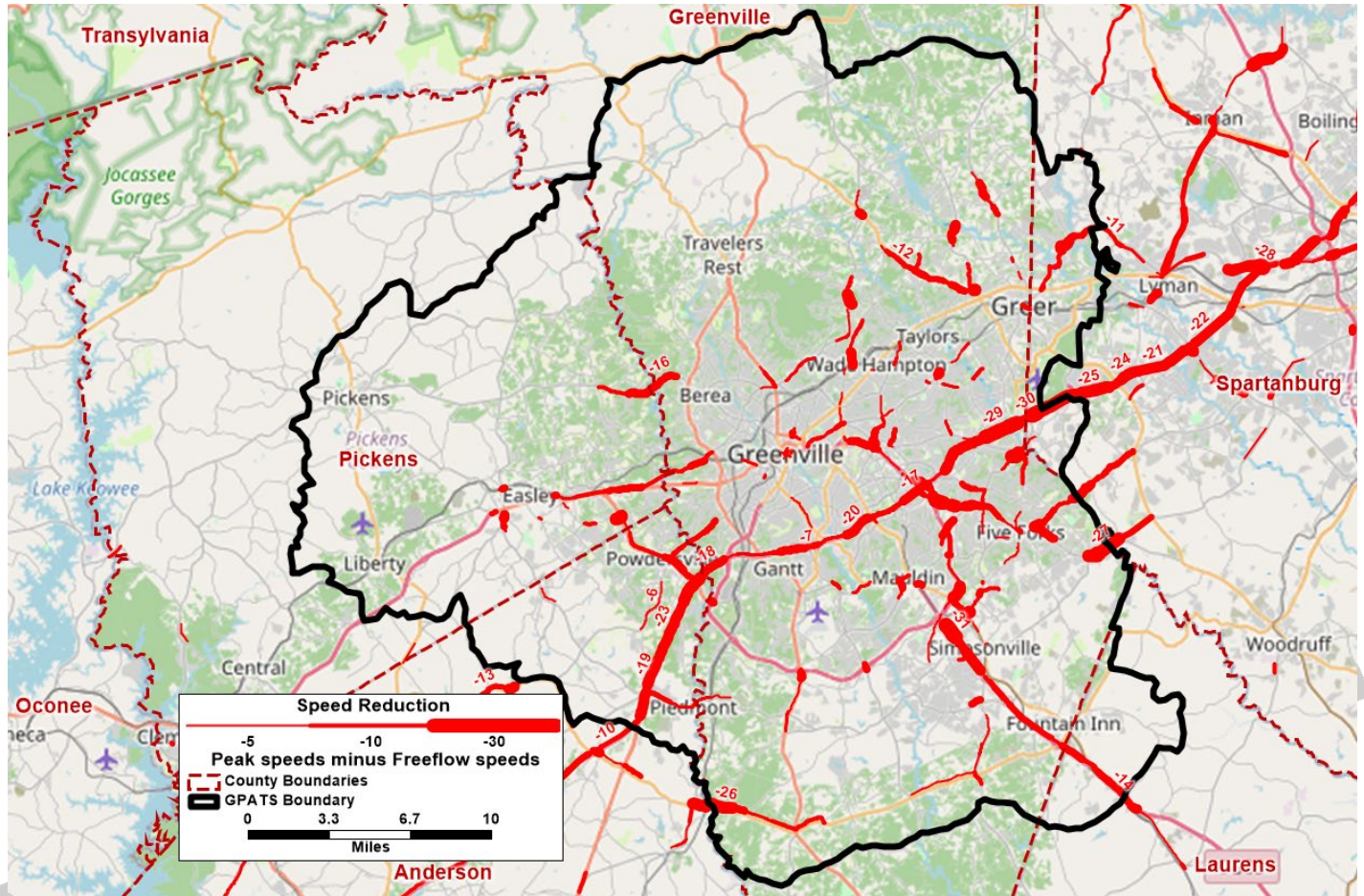


Figure 13 – Average Speed Reduction from Posted to Peak Time Period Speeds in 2050 EC + SWM Scenario



As a time period reasonableness check, each of the three time periods were compared to determine which time period had the slowest speeds (**Table 7**). The PM time period (4 - 7 pm) shows the most congestion, followed by the off-peak time period (9 am – 4 pm, 7 pm – 6 am). Typically, the AM time period (6 - 9 am) has more congestion in most communities. This may be a result of the household travel survey data sampled or the time period capacity factors used. While the time period distribution of trips likely has only a small impact on overall daily model volumes, it is recommended that the time period inputs be reviewed during the next model update.

Table 7 – Links with most Delay in GPATS area by Time Period

Time Period	Number of Links	Percent
AM Slowest	586	16%
PM Slowest	1738	46%
Off-Peak Slowest	933	25%
Same Speeds (no delay)	517	14%
Sum	3774	100%

Growth Summary

A summary of the growth in the model is shown in **Table 8**. Households and trips in the GPATS area grow by slightly more than the ARM model on the whole. Employment growth is higher than household growth for the entire model and the GPATS area only but because most trip purposes balance to household-generated productions, the trip growth more closely aligns with households. VMT typically grows more than households and trips in models because household growth tends to be highest on the fringes of the urban area and therefore trips must travel farther to reach city centers where there is the most employment activity. In the GPATS area, VMT growth is slightly *lower* than trip growth. This may be the case because the model has a large amount of employment growth near the fringes of the urban area, thus the model distributes a large number of trips to suburban employment centers in the future year making average trip lengths shorter. VHT typically grows faster than VMT growth because more congestion is expected in the future. Both the entire ARM model area and the GPATS area only suggest that to be the case.

Table 8 – Growth Summary for the Entire Model and the GPATS Area Only

	Entire Model			GPATS Area Only		
	2022	2050 EC+SWM	Growth	2022	2050 EC+SWM	Growth
Population	1,394,097	1,816,155	30%	646,926	859,640	33%
Households	535,852	697,743	30%	249,405	331,465	33%
Total Employment	688,452	1,004,170	46%	334,839	470,252	40%
Balanced Trips	4,899,229	6,424,582	31%	2,402,066	3,200,621	33%
VMT	39,026,614	52,762,590	35%	14,819,006	19,410,730	31%
VHT	835,101	1,178,504	41%	327,996	451,098	38%
Average Household Size	2.60	2.60		2.59	2.59	
Trips per Household	9.14	9.21		9.63	9.66	
Average Trip Speed	46.73	44.77		45.18	43.03	
Average Trip Length	7.97	8.21		6.17	6.06	
Average Trip Time	10.23	11.01		8.19	8.46	

Overall, the data indicate that both the GPATS area and the ACOG area on the whole are expected to grow at a moderate to high growth rate with more congestion expected in 2050 if only committed and statewide model projects are built.



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