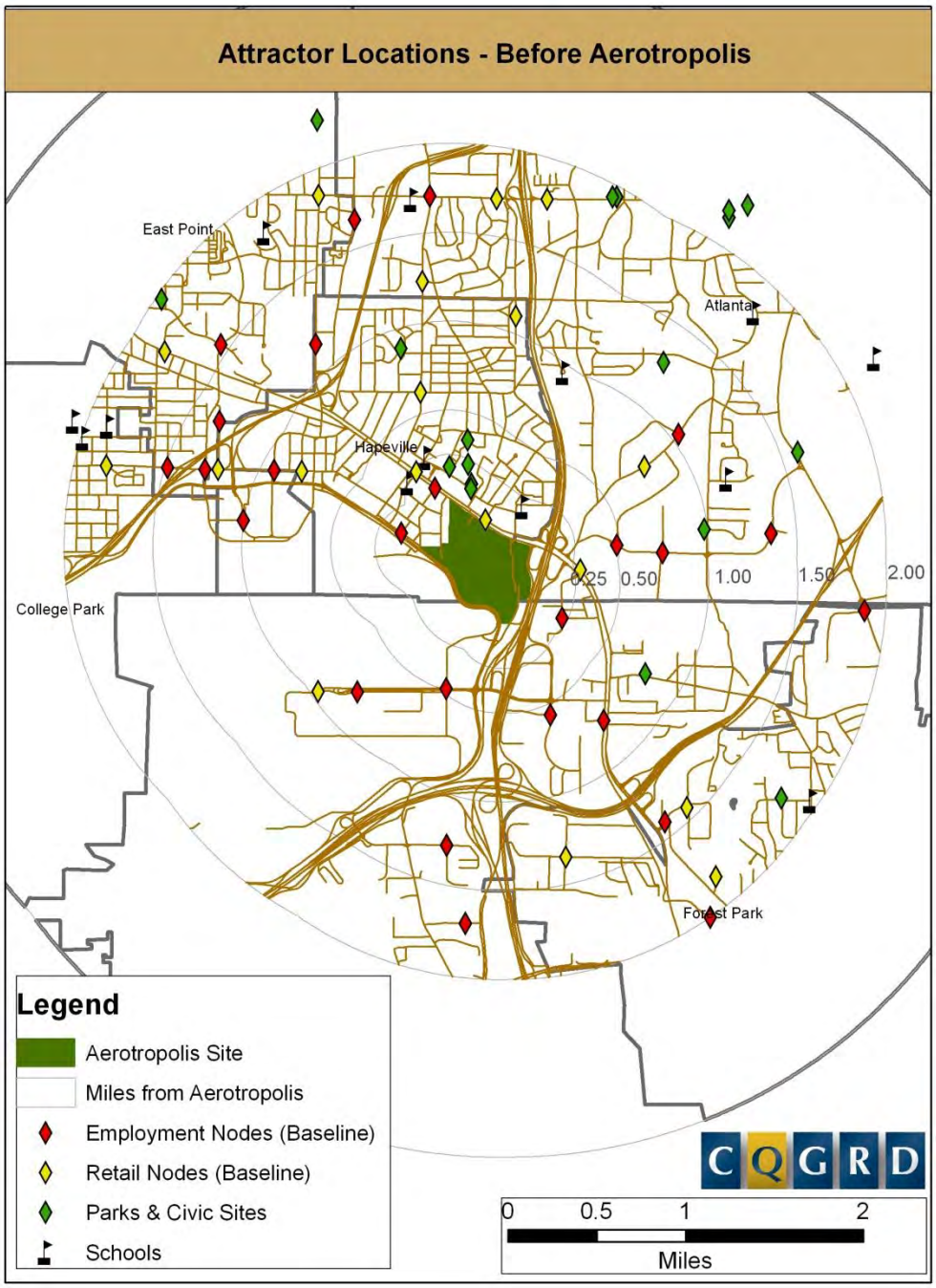

Figure 64: Attractor locations before Aerotropolis

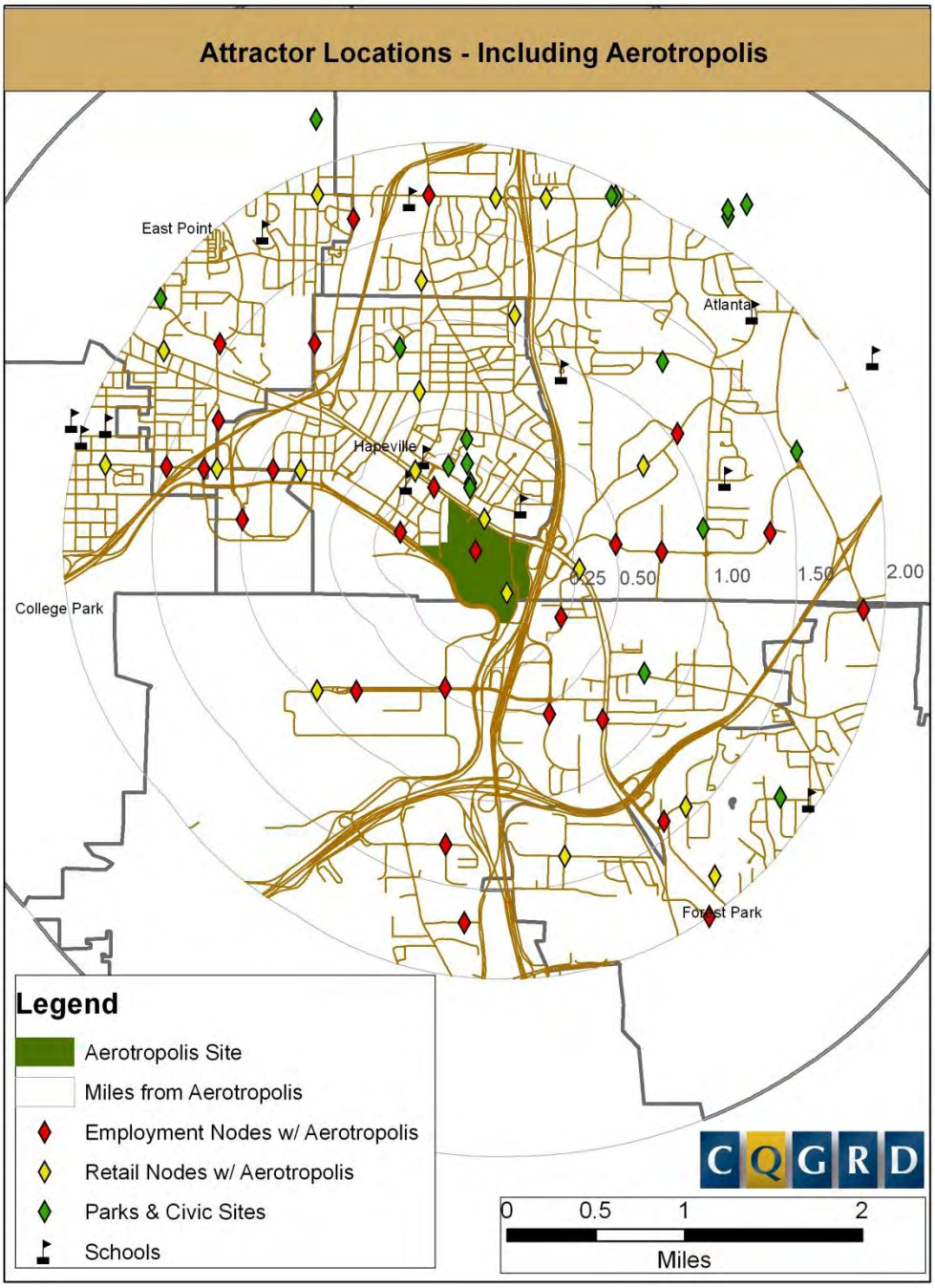

Figure 65: Attractor locations including Aerotropolis

Parks were identified on a map and their acreage was obtained from city documentation (Atlanta and East Point), city GIS records (Hapeville), online search (Forest Park), or estimation (College Park and Clayton County); parks less than 2 acres were excluded (n=15, min.=2, max.=211.44, mean=23.684, median=9.256). Their trip generation value was calculated using the "City Park (411)" weekday rates by acre from ITE Trip Generation 6. No formula was

provided; the manual indicated an average rate of 1.59 trips per acre (SD 1.79). It should be noted that there were only three data points used to calculate the rate; data were primarily from studies conducted in California in the 1970s, and none of the studies looked at very small parks (minimum size was approximately 10 acres). These studies measured vehicle trips, but other studies have suggested that urban parks have a higher mode share of pedestrian and bicycle trips. Additionally, a golf course was identified and assigned a rate using the "Golf Course (430)" rate of 5.04 * X (no fitted curve equation).

Recreation centers, community centers, and libraries were identified by city staff, online city/county records, and online map search. Square footage was obtained from online city and county reports and divided by 1000 to produce the calculation value (n=4, min.=4.8, max.=75, mean=23.075, median=6.25). Their trip generation value was calculated from ITE Trip Generation 6. For recreation and senior centers, the "Recreational Community Center (495)" rate was used. No formula was provided; the manual indicated an average rate of 22.88 trips per thousand square feet gross floor area. It was based on one study. For the library, the "Library (590)" rate was used. A formula was provided for libraries: T = (1.317*X) - 5.343. This result was based on 9 observations.

Schools were identified by city staff, online school system records, and online map search. Enrollment numbers were obtained from online school system records (Fulton County) and other online services (all others) (n=10, min.=193, max.=828, mean=472.6, median=449.5). Their trip generation rates were calculated using the "Elementary School (520)" or the "Middle School/Junior High School (522)" weekday rates by students, respectively, from ITE Trip Generation 6. The elementary school equation was given as Ln(T) = 1.007 * Ln(X) - 0.086. The middle school equation was given as Ln(T) = 1.559 * Ln(X) - 3.507. There was no equation provided for high schools, only an average rate of 1.79 trips per student; the middle school value was used for the high school due to its distance from the Aerotropolis site and its potential to skew the overall mean school rate.

Employment centers were classified under their dominant land uses. This resulted in 5 categories: Office, Industrial (which included manufacturing, warehousing, and logistics), Hotel, Medical, and Mix. Office – General Office Building (710) Avg. Rate 3.32/Employee: Ln(T) = 0.844*Ln(X) + 2.231. Industrial – Industrial Park (130) Avg Rate 3.34/Employee: Ln(T) = 0.796*Ln(X) + 2.572. Hotel – Hotel (310) Avg. Rate 14.34/Employee: Ln(T) = 1.361*Ln(X) + 0.957. Medical – Hospital (610) Avg. Rate 5.17/Employee: T = 4.373*X + 708.069.

Retail was calculated as Specialty Retail Center (814) at 22.36 trips per employee.

To conduct the LDS analysis, the probability of a trip to a particular attractor occurring by biking or walking was determined using data from the 2002 SMARTRAQ survey. SMARTRAQ is a transportation and land use project that was conducted jointly by Georgia Tech Research Institute and the Bombardier Active Transport Research Lab at University of British Columbia. The survey was a component of this project and produced activity based travel data representing travel patterns for all modes in the 13-county Atlanta region.[5] Table 8 shows the distance based probabilities for walking and biking to each trip attractor type.

Table 8: Probability of walking and biking by land use and distance

Trip Attractor Type	Mode	Miles from Attractor		
		0.5	1.0	1.5
Parks/Recreation	Walking	.62	.36	.21
	Biking	.28	.23	.20
School	Walking	.69	.34	.17
	Biking	.36	.29	.23
Employment	Walking	.71	.32	.15
	Biking	.28	.24	.20
Shopping	Walking	.72	.32	.14
	Biking	.29	.25	.21

Using GIS, buffers in 0.5 mile increments up to 1.5 miles were created around each attractor. Next, the buffers were overlaid on to the road system. Each road in the system was divided into segments, which are individual segments of road between intersections. For each segment a sum of each type of attractor that is within 0.5 mile, 1 mile, and 1.5 miles was calculated. These sums were input into the LDS equation (Figure 61), along with the trip probabilities (Table 8) to calculate a score for each road segment. Then the road segment LDS were compiled into separate area-wide maps for bicycle and pedestrian latent demand. The initial attractors were mapped and scored for the existing condition; that is, without any development on the Aerotropolis site.

[5] A complete overview of the SMARTRAQ project can be found at http://www.act-trans.ubc.ca/smartraq/pages/.

There are several important caveats to the LDS analysis. First, this analysis measures demand under existing conditions. Therefore, the creation of new attractors can increase demand in particular areas. For this reason, it is important to examine future land use plans to determine future needs for facilities (see street typology assessment in the following section). Second, the scores present relative demand for bicycle and pedestrian facilities. Therefore, all segments in the analysis have at least some demand for non-motorized facilities, but those segments in red simply indicate lesser demand and may require less intensive facilities (e.g. "share the road" signs instead of bike lanes, narrower sidewalks or sidewalks on only one side of the street). Third, the LDS analysis provides a framework, along with the other technical studies, to set priorities for improvements and new facilities. The LDS, when combined with level of service analysis of biking and walking facilities and community input can be effectively used to set standards and priorities for future facilities.

Next, locations and scores were entirely recalculated for the Aerotropolis case. The analysis was repeated after adding an employment and shopping estimate for Aerotropolis. Trip generation estimates were based on the DRI study, but divided in half due to market conditions in concordance with the developer's revised projections.

Table 9: Gross trip generation (DRI Study)

DRI: Gross Trip Generation									
Land Use	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour		Saturday MD	
		Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Build-Out (Year 2020)									
Data Center (Utilities)	*170*	1,900	1,900	220	180	171	209	37	31
Hotel	*310*	6,258	6,258	681	435	451	399	664	589
Office	*710*	6,907	6,907	1,872	255	410	2,000	233	199
Retail	*820*	21,101	21,101	515	330	1,920	2,081	2,797	2,582
Convention Center	*N/A*	9,114	9,114	439	237	194	2,227	194	2,227
Airport Parking Lot	*N/A*	1,225	1,225	238	27	142	194	148	80
Total		**46,505**	**46,505**	**3,965**	**1,464**	**3,288**	**7,110**	**4,073**	**5,708**

The analysis suggests that Aerotropolis will have a very large effect on latent pedestrian demand – the number of people who would walk to the site if good walking conditions were provided. From the baseline to Aerotropolis scenario, we see scores above .5 increase from a few central streets to nearly the entire city of Hapeville and along several corridors towards the office and industrial parks to the east. Demand for walking trips also increase significantly towards the airport. Bicycle demand

appears to increase along North Central and South Central/Henry Ford II Avenues. From this, it is possible to conclude that bicycle and pedestrian infrastructure will become considerably more important with the development of the Aerotropolis project.

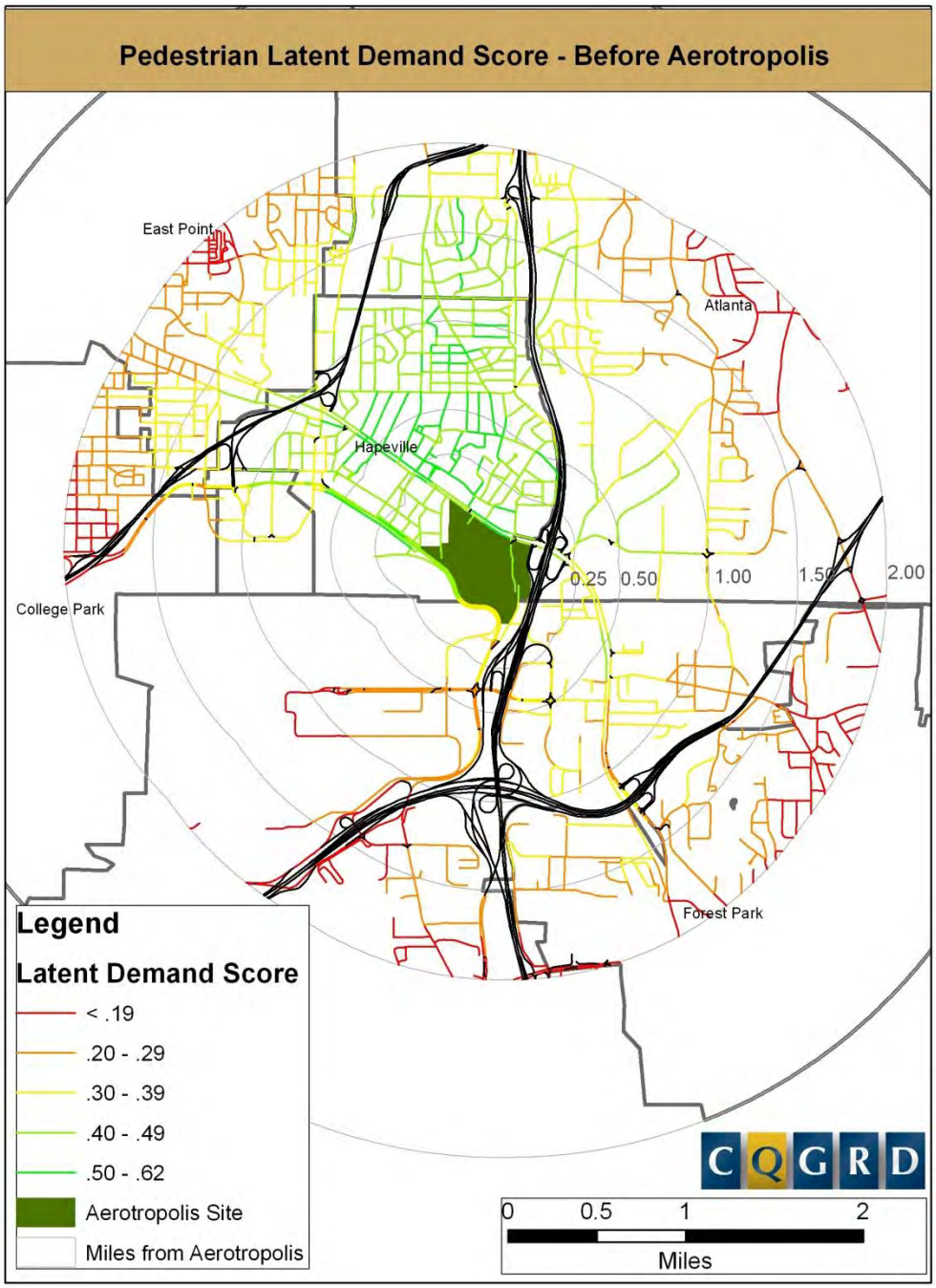

Figure 66: Pre-Aerotropolis pedestrian Latent Demand Score

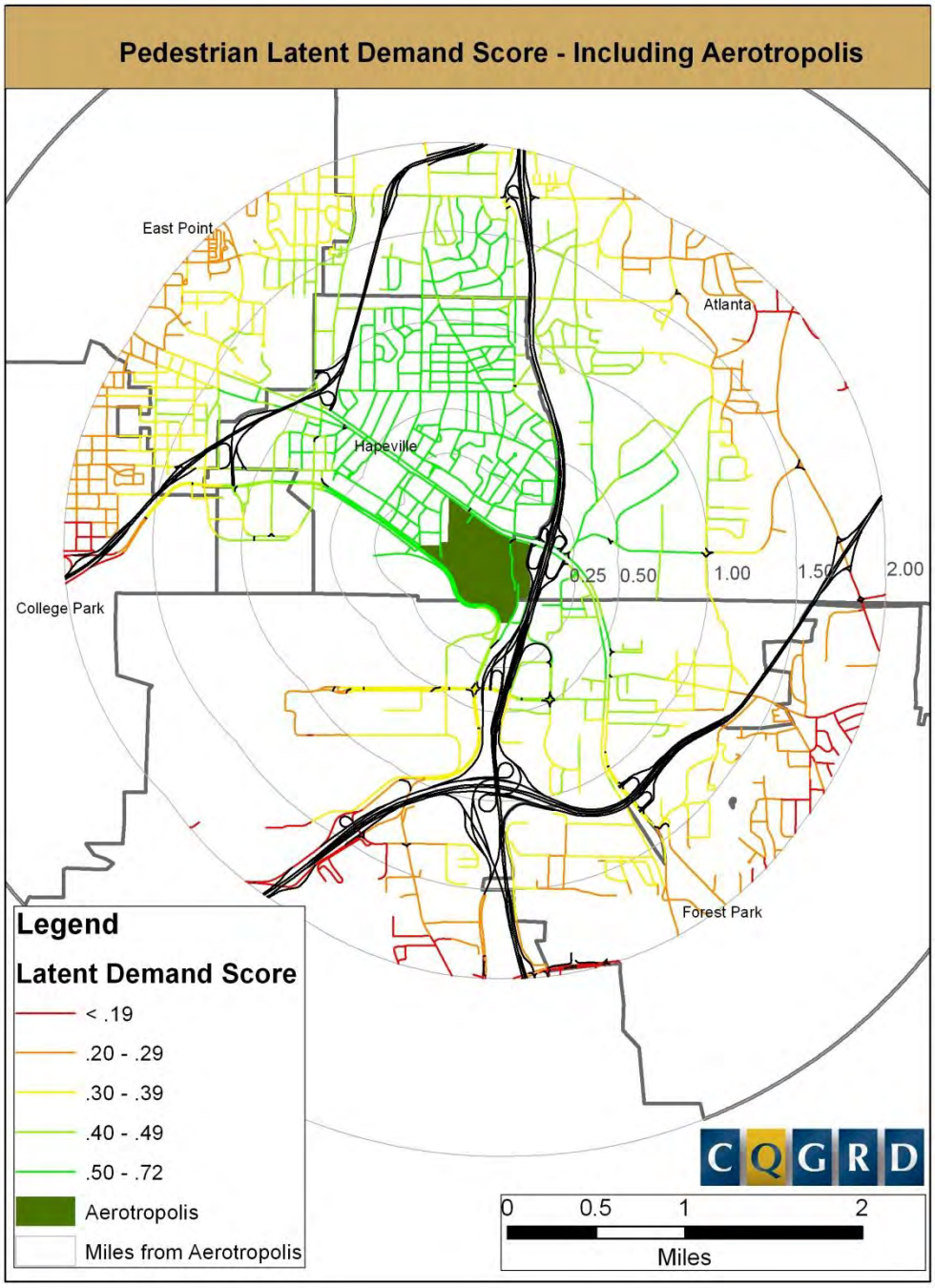

Figure 67: Post-Aerotropolis pedestrian Latent Demand Score

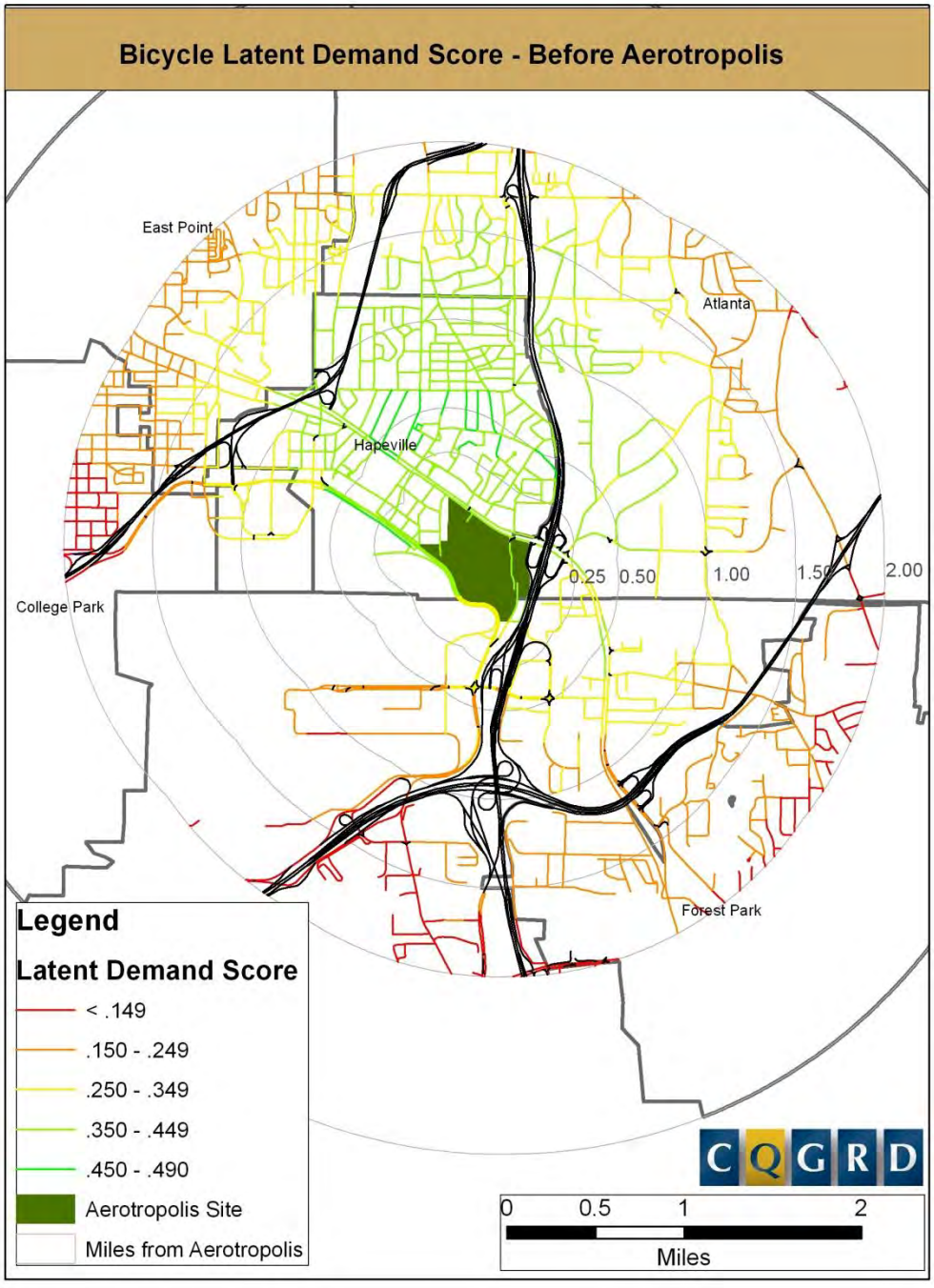

Figure 68: Pre-Aerotropolis bicycle Latent Demand Score

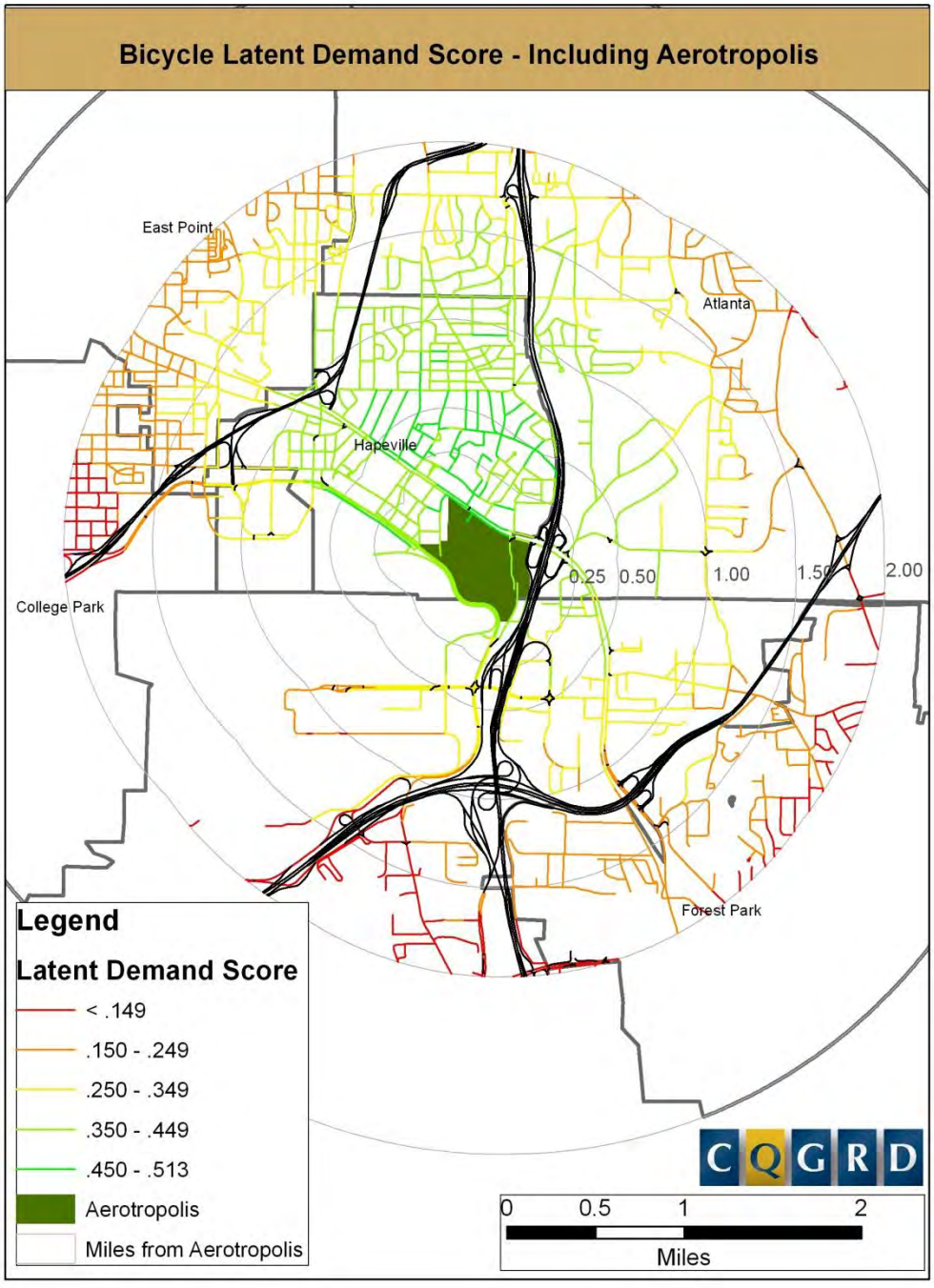

Figure 69: Post-Aerotropolis bicycle Latent Demand Score

A-4. Walkability Audit

Members of the community who live and work around the Aerotropolis site have expressed considerable interest in having a walkable, interconnected city where daily amenities and social activities can be accessed without a car. As part of this Health Impact Assessment, the research team conducted a "Walkability Audit" to determine how suitable the existing streets are for foot travel, and how policy changes could improve conditions.

A large number of studies limit their measures of the environment to data that are readily available and comparable across US locations through secondary sources, such as the U.S. Census Bureau (Crane, 1996; Berrigan and Troiano, 2002). These generally consist of measures of population or employment density, land use mix calculated by residential to employment ratios, and street network connectivity from street network files at some aggregate spatial unit such as zip code areas, traffic analysis zones, census tracts or block groups. Geographic information systems (GIS) now permit these land use and urban form variables to be computed at more disaggregate spatial units, such as buffer zones around an individual residence or destination, calculated at some radial distance (either straight line or network) from the location of interest. Despite these advances, it is likely the micro-features in the environment that largely shape how accommodating an area is for pedestrian travel. Because of the slow speed and nature of walking, a pedestrian is typically much more aware of and exposed to the environment than a driver. These features are likely to be important in determining behavioral patterns, but are rarely ascertained because of the difficulty in acquiring and accessing these data (Talen, 2002). For these reasons, the HIA team conducted a "walkability audit" of the study area to get a personal feel of what it is like to be a pedestrian in the neighborhood.

Figure 70. Pleasant walking conditions in downtown Hapeville

A walkability audit was completed on the afternoon of Friday, April 8, 2011. The study used the audit instrument referred to as the Pedestrian Environmental Data Scan (PEDS). PEDS was designed to capture a range of elements of the built and natural environment efficiently and reliably. The audit instrument includes a checklist of ranking criteria, as well as a detailed description of audit protocol. The full audit tool used is located in the appendix. Each audit item was designed to assess individual elements of the built and natural environment with respect to pedestrian activity. Audit items include sections on the macro-scale environment, pedestrian facilities, road attributes, and the micro-scale features of the walking/cycling environment. In recognition that the overall quality of the walking (and cycling) environment may not be adequately reflected by the sum of the individual parts, four subjective evaluation items were added as a separate section to rate the environment as a whole.

The PEDS form prompted for characteristics that affect walkability, including sidewalk condition and quality, presence of a planting or furniture zone to buffer the walkway from the roadway, traffic volume, presence of traffic control devices and pedestrian crossing treatments, amenities such as benches and lighting, and driveways. It also measured key land use indicators, such as building frontage along the sidewalk, architectural interest of adjacent structures, and presence of parking lots. An additional metric, noise, was added to the audit sheets in this study. Auditors noted

significant differences in the quality of the pedestrian environment related to levels exposure to noise from airplanes, trucks, trains, and heavy traffic, which varied throughout the audit area. The audit was conducted on a weekday afternoon with temperatures in the mid-80s, high humidity, and partly cloudy sky cover.

Loop Road (Segments 1, 3, and 4)

Loop Road is one of the gateways to Hapeville, and in the future it will become the gateway to Aerotropolis and the International Terminal as well. Currently, it serves as the key connector between the major employment centers along Aviation Boulevard, the International Tradeport, downtown Hapeville, and the hotels and headquarters in the Virginia Avenue area. Wide shoulders and a grassy tree-lined median give it a parkway feel and attract a few joggers. However, high-speed traffic and significant freight movement, guardrails, generous turning lanes with a large radius, and an absence of any sidewalks or crosswalks are effective at discouraging pedestrians from this area. This is likely to suppress a considerable amount of latent economic impact and revitalization from the Aviation Boulevard area and the future International Terminal, and also likely to contribute to traffic congestion and crash rates as well as missed opportunities for utilitarian physical activity. In their DRI, Jacoby Development proposed adding through lanes and turn lanes to Loop Road, but did not describe any pedestrian or bicycle facilities.

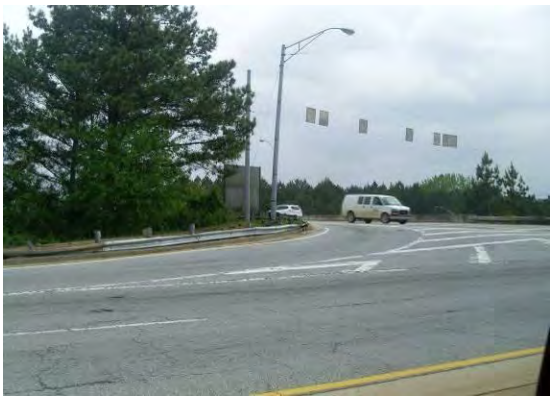

Figure 71: Absent sidewalks and crosswalks

Figure 72: Absent sidewalks and crosswalks

Leslie Drive (Segment2)

This road will be one of the main entrances to Aerotropolis, and will be rebuilt. While the area is vacant and overgrown currently, the audit team found the shade and greenery unexpectedly pleasant. This street represents an opportunity to preserve some greenspace (even with cleanup and clearing of underbrush) and create a unique pedestrian experience at their entrance. The

intersection of Convoy Road and Loop Road is currently unsafe for pedestrians due to the lack of traffic controls, high-speed traffic, lack of crosswalks, wide turn radii, and lack of pedestrian-scale lighting.

Figure 73: A neglected street

Figure 74: A neglected street

Atlanta Avenue (Segment 5)

The northern end of Atlanta Avenue is a pleasant area for pedestrians, although the sidewalks are not generous. Traffic volume was light and moving slowly, and there were marked crosswalks and pedestrian signals at the intersection with South Central Ave.. Buildings were at or within a few feet of the lot line, highly articulated (presenting a detailed façade of attractive materials), nicely maintained and landscaped, and have pedestrian walkways from the sidewalk to the building. The street was framed by a fenced public park on the western side. The sidewalk itself had a few obstructions and maintenance problems, such as bumps and cracks. On the northern end, there was pedestrian-scale lighting, trees, a planting zone that varies from one to four feet, benches, and garbage cans to reduce litter. The Wells Fargo headquarters building had a pedestrian entrance, but also a high volume driveway and very large parking lot; the block on which it sat was twice as long as the eastern side of the street. Pedestrian traffic decreases significantly as block size increases, so Hapeville may have sacrificed some walkability in this area, especially if part of College Street was abandoned to create the Wells Fargo/Delta parcel.

Moving south, the walkability slowly degrades. Building setbacks increased and surface parking lots became prevalent, and the sidewalk became less well maintained. Halfway between College Street and Chesnut/Doug Davis, the character changes to automobile-dominated. There were no more pedestrian ways to the building entrances or buffers between sidewalk and roadway. Also there were fewer shade trees, landscaping became more rudimentary, and buildings were lower and less

articulated. There were no crosswalks at College Street or Chesnut/Doug Davis Drive, and the audit team had trouble crossing Doug Davis Drive safely. Cross streets did have sidewalks, creating a network of walking routes. There was a bus route along this segment. The sidewalk ended about 30 feet before the intersection with Loop Road (Segment 4). This area could have felt more pedestrian-friendly simply by placing adjacent structures (such as Wells Fargo, Concentra, and the police station) at the edge of the sidewalk with their parking behind or to the side. Crosswalks, sidewalk repair, and cohesive streetscaping are necessary to create an attractive and safe pedestrian environment. The street itself could be narrowed and bicycle lanes added, and the intersection with Chesnut/Doug Davis could be reconfigured or narrowed.

Figure 75: Amenities

Figure 76: Access points

Figure 77: Unique spaces

Figure 78: Unique spaces

Figure 79: Varying walkway quality

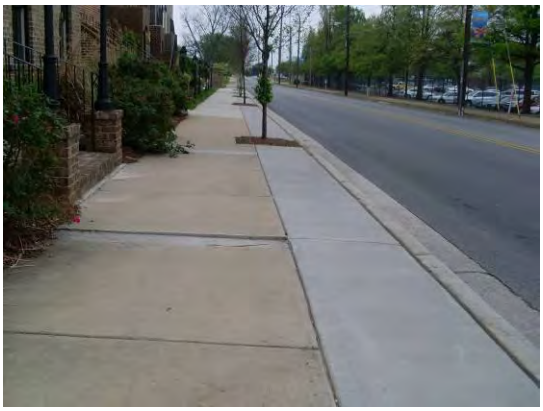

Figure 80: Varying walkway quality

Figure 81: Varying walkway quality

Figure 82: Varying walkway quality

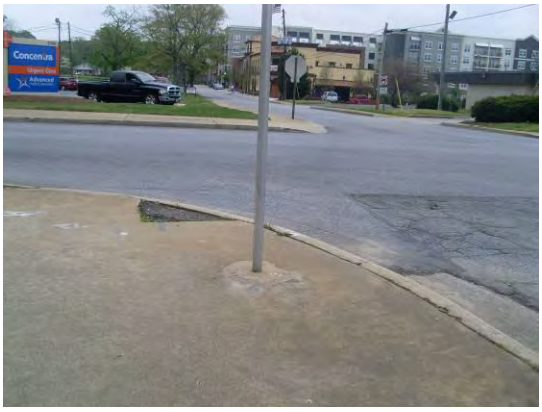

Figure 83: An automobile-oriented area

Figure 84: An automobile-oriented area

Chestnut Street, Oak Street, and streets between (Segment 6)

Segment 6 comprised three small blocks around the Oxford at Asbury Park apartments. The audit team found considerable variation in this segment. Until recently, structures in this area had consisted of small commercial businesses and older homes along low volume streets, with

pedestrian facilities that were overgrown or absent. The initial construction of the Asbury Park development has changed the character of several blocks, adding new street-fronting buildings, sidewalks, and streetscape. There was considerable noise from aircraft. Starting along Oak Street from Atlanta Avenue, no pedestrian facilities were available. There was blacktop extending from the street up to the front of the Choice Care Occupational Medicine building, which was positioned about 20 feet from the street edge, and pedestrian traffic traveled behind a row of parked cars, which reduced perceived safety for the pedestrian. Chesnut Street and South Fulton Avenue in this segment each had sidewalks along the roadway with occasional gaps. The easternmost block of Oak Street and the block of Georgia Avenue in this segment had no sidewalks at all, and Forrest Street's sidewalk was nearly overgrown. The blocks along Oxford had new sidewalks of five feet or wider and two-foot planting zones in front of a multi-story apartment building. The design of the building and landscaping was detailed and attractive with seating at the corner of South Fulton Ave and Chestnut Street. This created a pleasant and safe environment for pedestrians.

However, Americans with Disabilities Act Accessibility Guidelines (ADAAG) compliance was insufficient. Curb ramps at corners were present in front of recently-redeveloped parcels, and generally had tactile strips. However, the ramps were not always placed correctly to guide vision-impaired pedestrians across the street in the correct direction. Additionally, tactile strips had been placed at each driveway crossing, which is erroneous and can confuse pedestrians who use them for navigation. There were a few obstructions which protruded lower than seven feet but did not extend all the way to the ground, which violates ADAAG. Walkway slope and cross-slope occasionally exceeded the permitted amount – four foot planting zones are recommended, rather than two feet, as this allows all of the cross-slope at driveways to occur between the through zone of the sidewalk and the curb. Some sidewalks contained inaccessible gaps. In front of parcels that had not been redeveloped, ramps and tactile strips were absent and sidewalks were unmaintained to the point of impassibility.

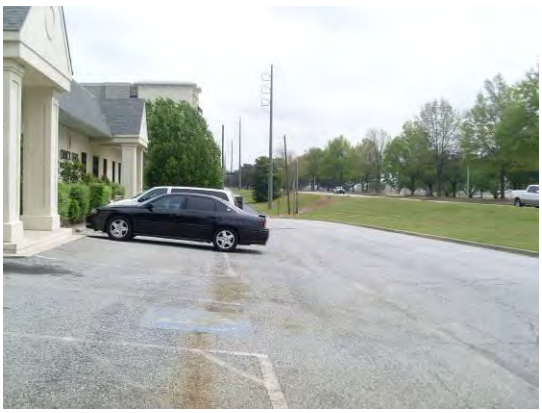

Figure 85: Missing sidewalks and crosswalks

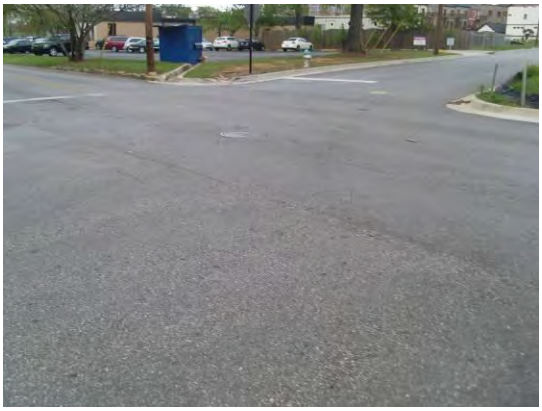

Figure 86: Missing sidewalks and crosswalks

Figure 87: Missing sidewalks and crosswalks

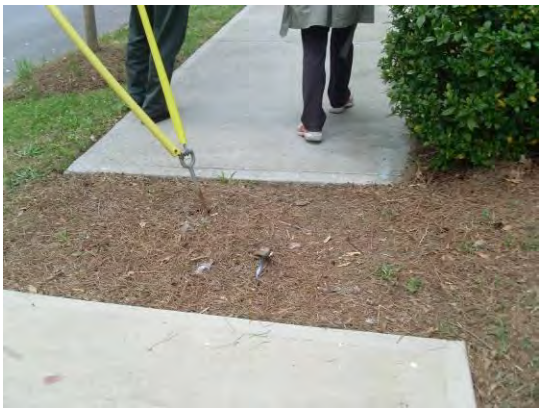

Figure 88: Missing sidewalks and crosswalks

Figure 89: Sidewalk obstructions

Figure 90: Sidewalk obstructions

Figure 91: Sidewalk obstructions

Figure 92: Sidewalk obstructions

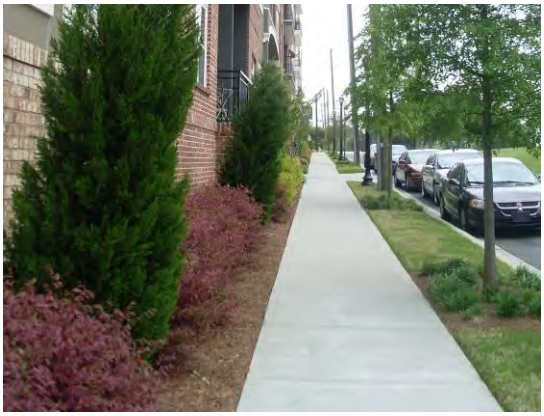

Figure 93: Attractive new infrastructure

Figure 94: Attractive new infrastructure

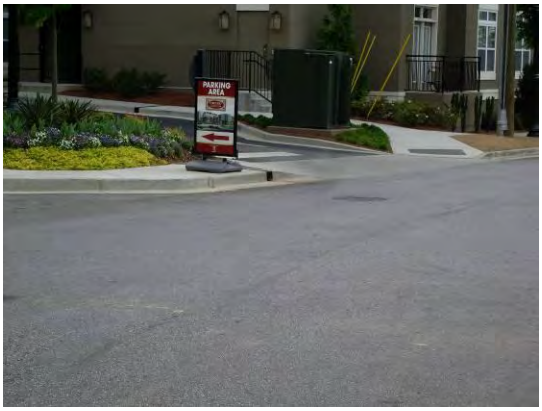

Figure 95: ADA accessibility concerns

Figure 96: ADA accessibility concerns

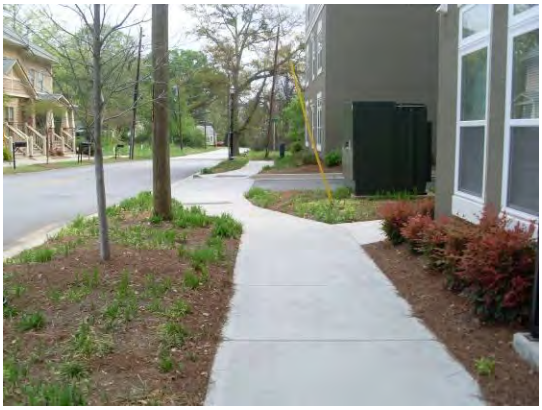

Figure 97: ADA accessibility concerns

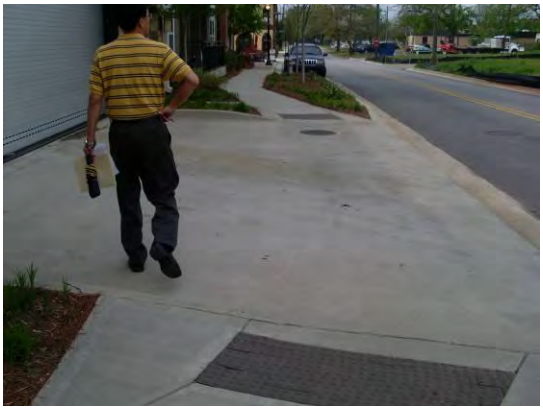

Figure 98: ADA accessibility concerns

First Baptist Church area: College/South Fulton/Georgia/Perkins (Segment 7)

Segment 7 comprised the First Baptist Church and its grounds, a few single family homes and townhomes, and the Odyssey Counseling Center. There were vacant lots prepped for redevelopment lining several blocks. Sidewalks were absent along some blocks. Existing sidewalks were four to five

feet wide and in fair condition, but felt narrow relative to the overall dimensions of the street. On College Street, it appeared that the street had been widened at the expense of sidewalk width. The only marked crosswalk was a midblock crossing for the church. While the area felt quiet, attractive, and safe for walking, the proportion of undeveloped parcels and parking was unsettling. The area felt much further from the center of town than it was. New sidewalks and landscaping were present in front of two redeveloped properties. Sidewalks were not buffered from the street. College Street was shaded by large trees; Perkins Court and the lower end of Georgia and South Fulton Avenues were unshaded and very uncomfortable on the warm day on which the audit team visited. A 15 MPH school zone was posted.

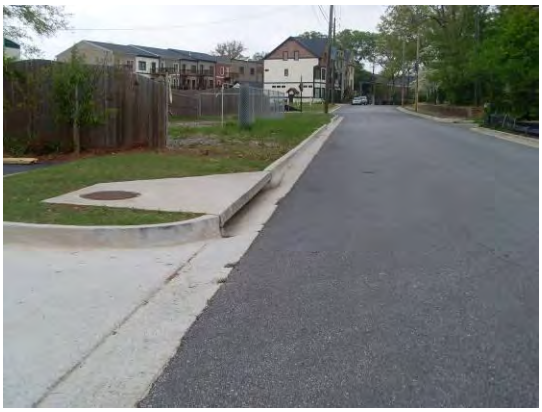

Figure 99: Sidewalk conditions

Figure 100: Sidewalk conditions

Figure 101: Sidewalk conditions

Figure 102: Sidewalk conditions

Figure 103: Extensive vacant land and parking lots

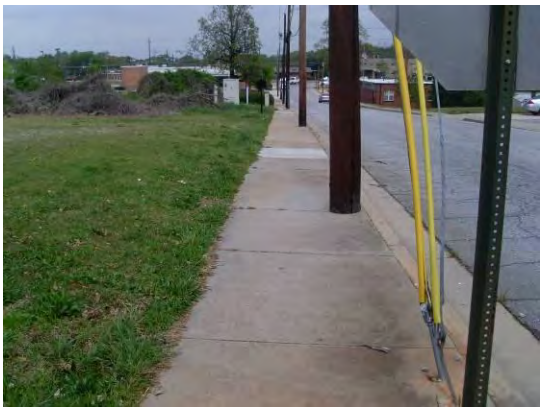

Figure 104: Extensive vacant land and parking lots

Figure 105: Extensive vacant land and parking lots

Figure 106: Extensive vacant land and parking lots

Union Street/Elm Street (Segment 8)

Segment 8 is characterized by single and multi-family housing, generally occupied by households of lower socio-economic status, and a few industrial or institutional parcels. Some of this segment may also be programmed for redevelopment. Noise from aircraft was quite loud in this segment and some chemical odors were noticed by the audit team. The streets carried very little car traffic; a few other pedestrians were observed. Most roads and sidewalks were in poor condition, and sidewalks were mostly absent from Chestnut, College, and Elm Streets. A dirt footpath was observed on the northern end of Elm Street. No facilities were present for persons with disabilities. There was one crosswalk, but it did not connect to existing sidewalks. No public amenities were observed. Single-family homes had traditional design with walkways from the sidewalk and driveways. The multi-family housing included some walkways but was set back from the street, detracting from a sense of enclosure. The area was mostly shaded. The posted speed limit was 25 MPH.

Figure 107: Condition of pedestrian facilities

Figure 108: Condition of pedestrian facilities

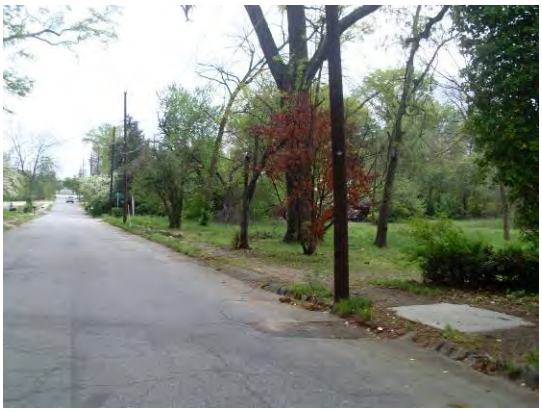

Figure 109: Lack of pedestrian facilities

Figure 110: Lack of pedestrian facilities

Figure 111: Poor condition of pedestrian facilities

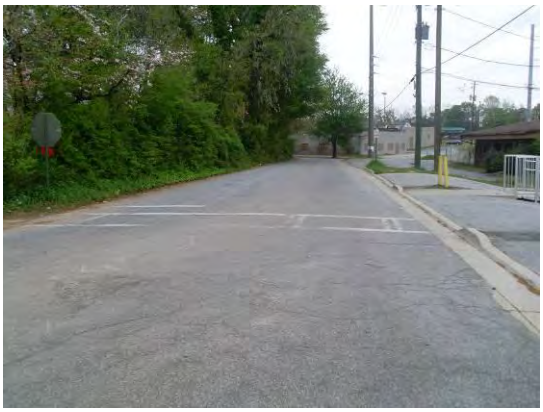

Figure 112: Lack of pedestrian facilities

South Central Avenue –Aerotropolis/Downtown Connector (Segment 9)

Segment 9 consists of South Central Avenue/Henry Ford II Avenue from Perkins Court to the unnamed crossing near Holder Tire, and just reaching the northwestern corner of the Aerotropolis site. The audit team deemed the part of this segment east of Elm Street too dangerous to walk, so

part of the audit was conducted from a vehicle. This segment was generally without sidewalks. There was some paving along the southern side of the roadway between Perkins Court and Elm Street which allowed the audit team to walk this section. One building was placed less than 20 feet from the roadway and had concrete paving in front. The remaining buildings were 50 feet or more from the road and had blacktop from the road to the front of the buildings. The roadside southeast of Elm Street consisted of tall grasses and no sidewalk, and several businesses located behind parking lots. There was no sidewalk on the northern side, abutting the train tracks. There were no crosswalks for crossing South Central/Henry Ford II Avenue, nor any pedestrian facilities for crossing the train tracks. A dirt footpath was worn across the tracks near Elm Street, indicating pedestrian travel demand at this location. This segment has bus service. The posted speed limit was 35 MPH.

Figure 113: Lack of pedestrian infrastructure

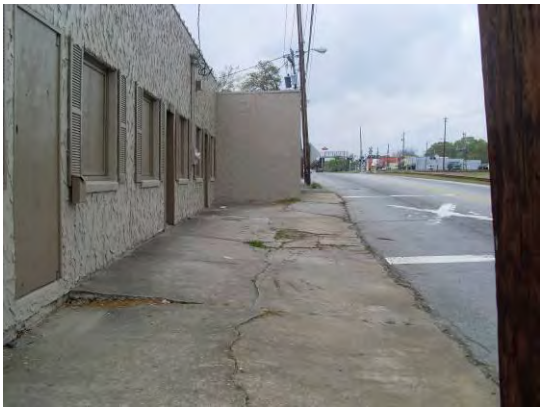

Figure 114: Lack of pedestrian infrastructure

Figure 115: Lack of pedestrian infrastructure

Figure 116: Lack of pedestrian infrastructure

Figure 117: Lack of pedestrian infrastructure

Figure 118: Lack of pedestrian infrastructure

South Central Avenue/Henry Ford II Avenue –Aerotropolis Frontage (Segment 10)

Segment 10 was defined as South Central Ave from the easternmost railroad crossing near South Street to the westernmost access ramp to I-75. The audit team viewed this segment by car due to poor pedestrian infrastructure and high-speed traffic. They observed a concrete strip approximately two to three feet wide at the side of the road, although it was not determined whether this was intended for pedestrian use. A sidewalk was present from Convoy Road to the I-75 ramp. There was no sidewalk on the northern side of the road, along the railroad tracks. No crosswalks or other pedestrian facilities were observed. This segment is served by a bus route. Noise levels were high. Traffic was moderate in volume but had a high proportion of truck traffic and traveled at higher speeds. Overall, the segment was deemed highly unsafe and unattractive for travel on foot.

Figure 119: Automobile-oriented corridor

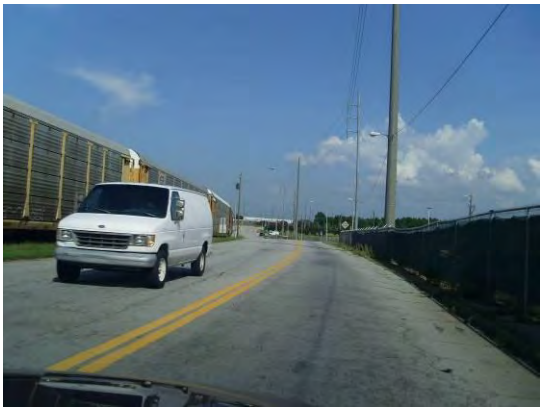

Figure 120: Automobile-oriented corridor

Figure 121: Automobile-oriented corridor

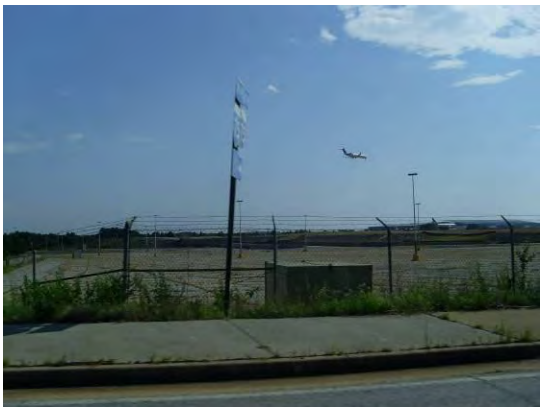

Figure 122: Automobile-oriented corridor

South Central Avenue/Henry Ford II Avenue – Aerotropolis/Tradeport Connector (Segment 11)

Segment 11 represented South Central Avenue/Henry Ford II Avenue from the southeastern corner of the Aerotropolis site, crossing I-75, and terminating at the entrance to the Tradeport business park. The audit team also drove this segment rather than walking, due to intermittent pedestrian facilities and higher-speed traffic. There was a sidewalk along the southern side of the street where it crossed I-75. There was a crosswalk on the eastern ramp but not the westerly one. No sidewalk was present between the Interstate and Tradeport Boulevard. High speed turning traffic entering and exiting the Interstate, combined with very wide intersections with painted refuge islands (rather than hardscape) made the area unsafe for walking. Noise levels were high. Although the Tradeport area itself is relatively good for walking, a pedestrian trip between Tradeport and Aerotropolis would be highly unsafe and unattractive.

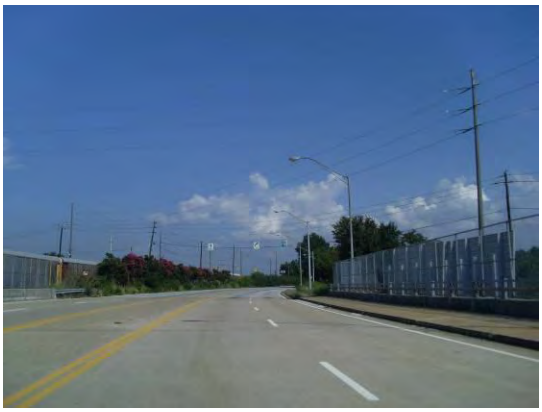

Figure 123: Design for trucks and cars

Figure 124: Design for trucks and cars

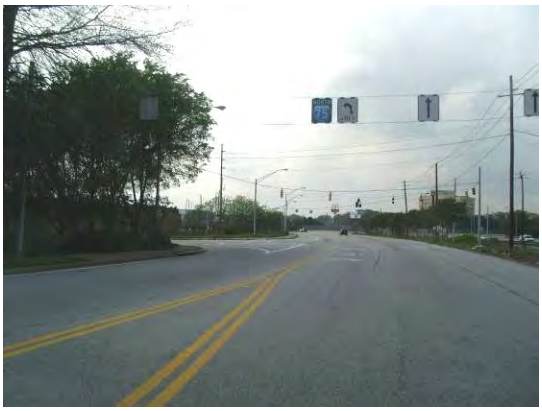

Figure 125: Design for trucks and cars

Figure 126: Design for trucks and cars

North Central Avenue at I-75 (Segment 12)

This segment comprised North Central Avenue/Old Dixie Road from Browns Mill Road to Sunset Avenue. There was a continuous sidewalk along the northern side of this segment; there was no sidewalk along the railroad tracks on the southern side. The sidewalk was approximately six feet wide and in fairly good condition. However, lack of buffers between the sidewalk and six-lane roadway, frequent high-volume driveways, and lack of building enclosure, landscaping, or shade trees resulted in a noisy, uncomfortable pedestrian experience. Crosswalks were provided across both Interstate ramps and at Browns Mill Rd (four to six lanes). However, the crosswalks at Browns Mill Rd and I-75 northbound were not ADAAG compliant, as they changed direction at a painted traffic island, which does not provide guidance to blind pedestrians. Turn radii were large, and turning traffic traveled at high speed with a low rate of compliance relative to pedestrians using the crosswalk. These intersections also featured a long crossing distance which was difficult to complete during the pedestrian phase. There were no crosswalks across North Central Ave nor pedestrian routes to building entrances. The posted speed limit was 35 MPH.

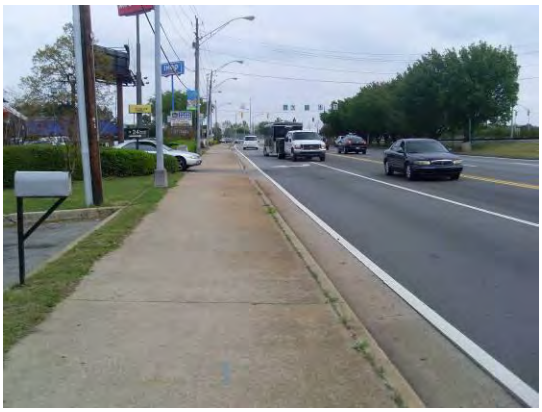

Figure 127: Uncomfortable pedestrian spaces

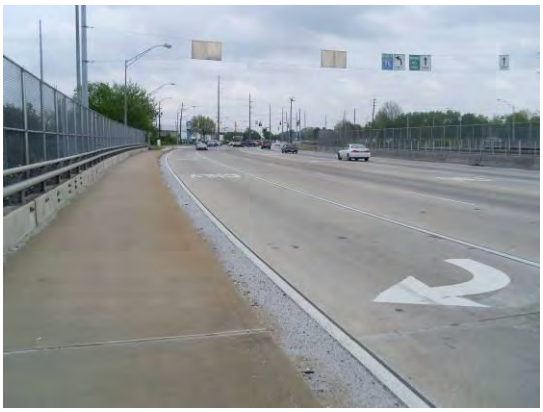

Figure 128: Uncomfortable pedestrian spaces

Figure 129: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

Figure 130: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

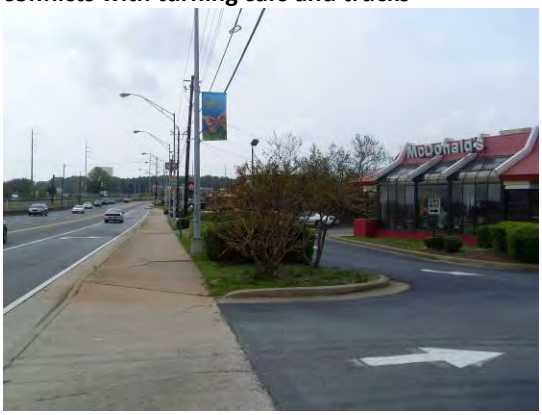

Figure 131: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

Figure 132: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

Figure 133: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

Figure 134: Pedestrian infrastructure does not reduce conflicts with turning cars and trucks

Figure 135: Missing pedestrian connections

Figure 136: Missing pedestrian connections

North Central Avenue – Sherman to Sunset (Segment 13)

This segment consists of two blocks of North Central Avenue, starting at Sherman Road and continuing to Sunset Avenue. The audit team found this section slightly more amenable to walking. The sidewalk was five feet wide and continuous, and bounded by a one-foot grass planting furniture strip next to the roadway and some landscaping along the fronting lots. Detracting from its walkability were large parking lots fronting the street without dedicate pedestrian access to store and restaurant entrances, and inadequate treatment of pedestrian crossings. There were no marked crossings at Sherman, Lavista Drive, or across North Central Avenue and the railroad tracks; the crossing at Sunset Ave was marked ladder-style but too wide. Driveway crossings were frequent and there was poor compliance amongst drivers to yield to pedestrians on the sidewalk. A paved bus stop with bench and trashcan was provided, although the bus no longer stopped at that location. Some portions of the sidewalk were well maintained while others were deteriorating. There were two to five lanes of traffic with a speed limit of 35 MPH. Several properties were vacant or in poor condition. Noise levels were high, and the temperature was uncomfortable due to lack of shade and large expanses of pavement which reflected heat.

Figure 137: Vehicle-pedestrian conflict

Figure 138: Vehicle-pedestrian conflict

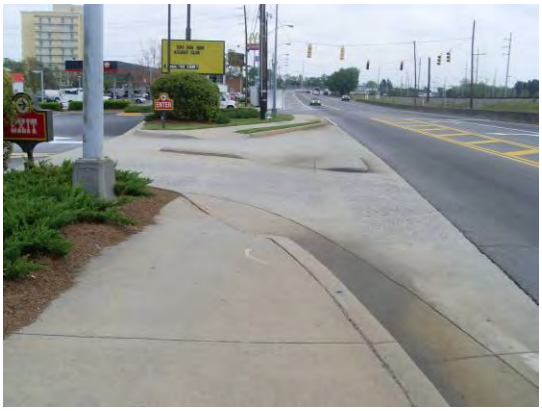

Figure 139: Vehicle-pedestrian conflict

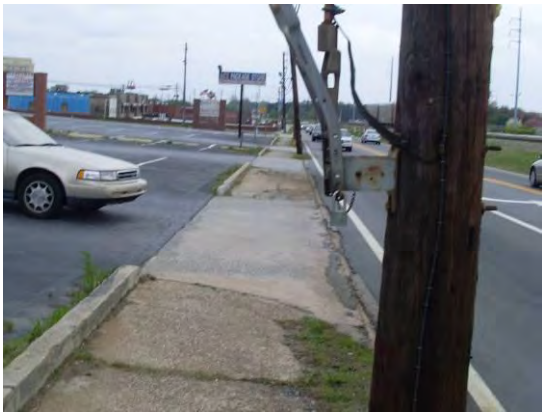

Figure 140: Vehicle-pedestrian conflict

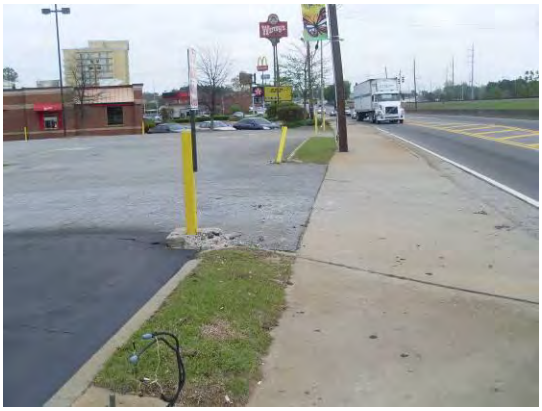

Figure 141: Land use lacking pedestrian scale

Figure 142: Land use lacking pedestrian scale

Figure 143: Walkway conditions

Figure 144: Walkway conditions

King Arnold Street, Sunset Avenue, Lavista Drive (Segment 14)

Segment 14 includes two blocks of King Arnold St and the two sidestreets between it and North Central Ave. King Arnold St had a sidewalk on both sides of the street; Sunset Ave lacked a sidewalk on the eastern side which may affect access to St. John the Evangelist Church and School. There was a school zone signal with flashing lights that reduced the speed limit to 15 MPH during school traffic hours, but use of the roadside for driveways and pull-in parking contributed to an unsafe walking environment overall. There were horizontal bar-style crosswalks on the northern and western legs of the three-way intersection, but they were faded. An enhanced bus stop with shelter, concrete pad, and dedicated turn lane was positioned at the corner of King Arnold St and Sunset Ave, which provided MARTA Route 95 with a suitable layover site. Both of these streets had two very wide lanes with marked centerlines. Sunset Ave included a turn lane at North Central Ave. The sidewalk was approximately four feet wide and in fair condition with some deterioration. The northern side of King Arnold St was fronted with homes and apartments approximately 20 feet from the lot line, set mostly behind grass lawns. The southern side fronted on vacant lots and the back entrances of buildings, set more than 20 feet from the sidewalk behind paved parking. Lavista Dr had a sidewalk on one side of the street and paved parking up to the curb on the other. Speed limits were posted at 25 MPH. This segment is served by a bus route. Conditions were quiet with light traffic, and no shade. Side streets to the north had no sidewalks, and there were no further marked crosswalks. The segment felt fairly safe for walking but not attractive.

Figure 145: New sidewalks

Figure 146: New sidewalks

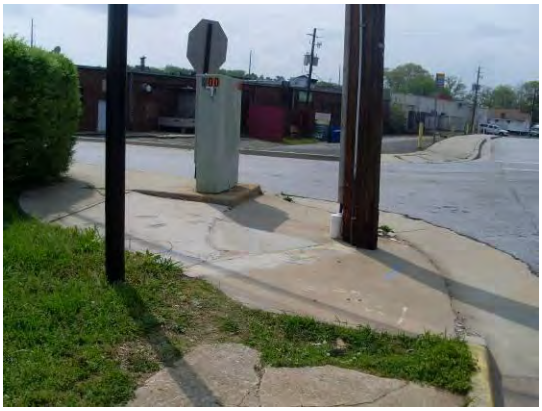

Figure 147: Broken or missing sidewalks

Figure 148: Broken or missing sidewalks

Figure 149: Big roads, small pedestrian accommodations

Figure 150: Big roads, small pedestrian accommodations

North Central Avenue – Sherman Road to Dearborn Plaza (Segment 15)

This segment consists of North Central Ave between Sherman Rd and Dearborn Plaza, a high-volume, two lane corridor lined with businesses. The fronting land uses were automobile-oriented,

consisting of a gas station, fast food and fast-casual restaurants, and some offices, each with its own high-volume driveway and parking lot. Buildings were at least 20 feet from the lot line. Only one building did not have parking between the sidewalk and the business entrance; it had landscaping and mature shade trees which the audit team described as more attractive and pleasant for walking. None of the fronting businesses had a pedestrian walkway to the entrance. The sidewalk averaged four feet in width, and had a buffer of one foot or less consisting of grass, stone, or telephone poles. The roadway had been visually narrowed with a white stripe that marked the outside of the lane, about a foot from the curb; this can help control traffic speed. The posted speed limit was 25 MPH, making this segment feel safer than higher-speed areas, but traffic was heavy and the resulting noise and odor were obtrusive. The segment was served by a bus route, and a bench and trashcan had been placed at one bus stop. There was some decorative streetscaping, but sidewalks were uncomfortably narrow and the audit team experienced multiple conflicts with vehicles at busy driveways. Sidewalks were in poor condition, with numerous cracks and patches. There was minimal height difference at the curb, suggesting that the roadway had been repaved without reconstructing the roadside area, gradually raising the road surface to the level of the sidewalk. The road surface was in much better condition than the sidewalk. There were no marked crosswalks or other crossing aids in this segment. Several customers were observed visiting local businesses on foot. A “Hapeville Historic District” marker was observed at the corner of Sherman Rd.

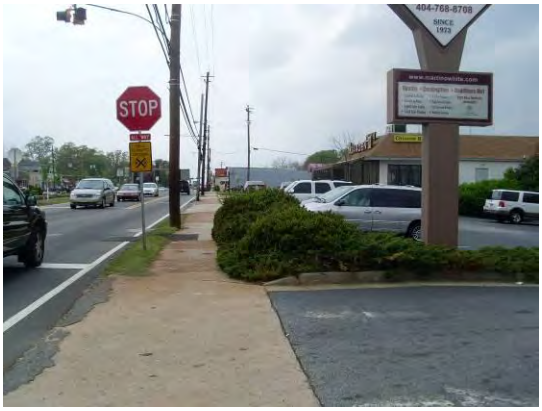

Figure 151: Incursions into the sidewalks

Figure 152: Incursions into the sidewalks

Figure 153: Proximity to traffic, pavement conditions

Figure 154: Proximity to traffic, pavement conditions

Figure 155: Attractive roadside conditions

Figure 156: Unattractive roadside conditions

King Arnold Street, Sherman Road (Segment 16)

This segment includes Sherman Rd from North Central Ave to King Arnold St, and along King Arnold St to North Fulton Ave. Walking on Sherman Rd was not a safe or attractive option. The entire roadside on the western side of the street had been developed for parking by the Chick-fil-A restaurant. The eastern side had an incomplete sidewalk that was partly overgrown and partly used for parking access. King Arnold St had sidewalks in good condition on both sides of the street, however they were narrow and obstructed by telephone poles. The audit team was forced to walk partially in the street to continue their discussion of the audit form. The sidewalk was too narrow at points to enable a person in a wheelchair to use it, which violates ADAAG. There was no pedestrian connection to Dearborn Plaza. At North Fulton Ave, the sidewalk was under repair. The design of the repaired sidewalk was not fully apparent from the construction site. The roadway consisted of two extremely wide travel lanes with a 25 MPH posted speed limit. A 15 MPH school zone sign was also present. There were marked crosswalks at Central Park Dr and Clair Dr. Adjacent land uses included garden apartments, houses, a school, a park, and some other community buildings. The park did not

appear to have a pedestrian entrance. Most of the community buildings and apartments had pedestrian walkways. Most buildings were at least 20 feet from the sidewalk. The street was quiet and carried little traffic. King Arnold St is served by a bus route, with trashcans and shelters available at some stops.

Figure 157: Buildings connect to the sidewalk

Figure 158: Buildings connect to the sidewalk

Figure 159: Squeezed pedestrian spaces

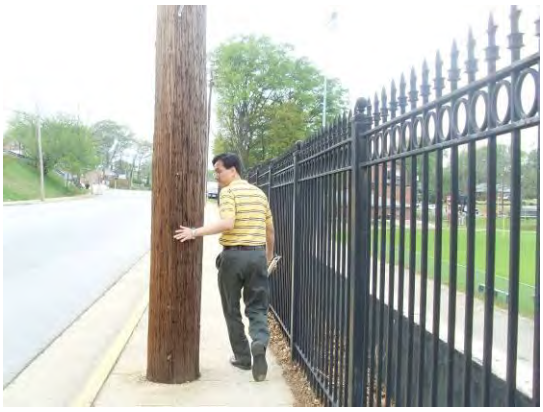

Figure 160: Squeezed pedestrian spaces

Figure 161: Some gaps in the walkway

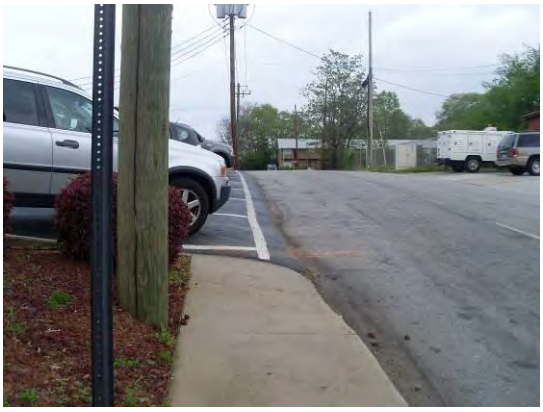

Figure 162: Some gaps in the walkway

North Fulton Avenue, King Arnold Street, Dogwood Drive (Segment 17)

This segment comprises three blocks, along North Fulton Ave from North Central Ave to King Arnold St, continuing one block west along King Arnold St, and then one block south along Dogwood Dr. It passes in front of Hapeville city hall and other civic buildings. Approximately half of the adjacent properties were dedicated to parking. Active and vacant commercial properties were located along Dogwood Dr. The sidewalk was mostly continuous, except where it gave way to parking access. The sidewalk was missing on the western side of Dogwood Dr, and the eastern side was in poor condition. Areas with extensive parking did not feel safe or attractive for walking. Obstructions along the southern side of King Arnold St created narrow places that violated ADAAG. Cross-slope was ADAAG non-compliant along King Arnold St parking lots. There were marked crosswalks at all four legs of the intersection at North Fulton Ave and King Arnold St. Pedestrian signals at this location required the pedestrian to push a button to request the signal, without a request the walk phase did not activate. Pedestrian facility planning guidelines discourage this design. There were marked crosswalks at two of the three legs of Dogwood Dr and King Arnold St. The crossing at Estelle St was not marked. The posted speed limit was 35 MPH, with a 15 MPH marked school zone.

Figure 163: Opportunities to upgrade pedestrian infrastructure

Figure 164: Opportunities to upgrade pedestrian infrastructure

Figure 165: Opportunities to upgrade pedestrian infrastructure

Figure 166: Opportunities to upgrade pedestrian infrastructure

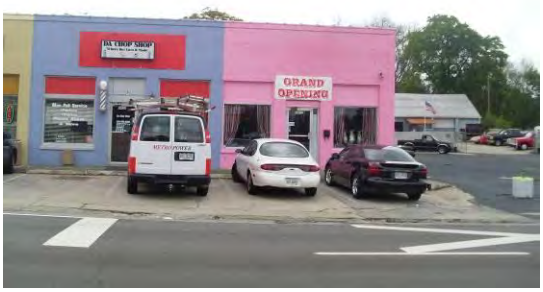

Figure 167: Variations in property access

Figure 168: Variations in property access

North Central Avenue – Downtown (Segment 18)

Segment 18 consists of two blocks of North Central Ave from Dogwood Dr to Dearborn Plaza. This is the heart of Hapeville's downtown commercial district. The sidewalk was wide and continuous, ranging from approximately six feet up to twenty feet or more. Areas were designated for sidewalk dining for the adjacent restaurants. Benches, flowering plants, newsstands, street trees, awnings, and public art contributed to a pedestrian-friendly setting. Buildings were at the lot line, or set back behind ten or more feet of sidewalk dining area. The building façades were detailed and shop windows decorated to stimulate the interest of passing pedestrians. Signs and telephone poles were mostly contained in a furniture zone next to the roadway, although there were a few items in the central walkway. Public trashcans were spaced along the segment. Buildings were mostly contiguous and there were only two midblock driveways leading to a small parking lots. The audit team observed many other pedestrians. Traffic was moderate; parking was available on both sides of the street. There was not a complete sidewalk on the southern side of the street. A ladder-style crosswalk was marked across Dogwood Dr, but no crosswalks were marked across North Central Ave at that intersection. All crosswalks were marked at the intersection with North Fulton Ave and there was a pedestrian signal. However, the audit team was not able to activate the crossing phase across North Central Ave using the request button. Two pedestrian crossings across the railroad track were provided here, one at grade accessed by a few stairs or a ramp and one overpass bridge with stairs to it. There were no marked crosswalks at the intersection with Dearborn Plaza.

Figure 169: A retail district that appeals to multiple modes of travel

Figure 170: A retail district that appeals to multiple modes of travel

Figure 171: A retail district that appeals to multiple modes of travel

Figure 172: A retail district that appeals to multiple modes of travel

Figure 173: A retail district that appeals to multiple modes of travel

Figure 174: A retail district that appeals to multiple modes of travel

Figure 175: Some missing connections

Figure 176: Some missing connections

Figure 177: Railroad crossing options for pedestrians

Figure 178: Railroad crossing options for pedestrians

South Central Avenue – Downtown (Segment 19)

Segment 19 consists of three blocks of South Central Ave from Dogwood Dr to Perkins Ct. This segment included several public facilities: the historic train depot, historic chapel, post office, community park, and some public beautification and parking areas. Several restaurants, banks, and other businesses line the segment. Most buildings are at the lot line or less than ten feet from it, and have pedestrian-oriented entrances that connect to the sidewalk. The setback area, where present, is predominantly landscaped, although one row of attached businesses had pull-in parking spaces instead. The block between South Fulton Ave and Perkins Ct was crossed by many driveways. Sidewalks were continuous and well-maintained on the southern side of the street, except where the parking in front was allowed. Sidewalks were approximately six feet wide and unbuffered near Perkins Ct, and narrowing or briefly disappearing as one approached North Fulton Ave. The sidewalks around the intersection with North Fulton Ave looked new and featured brick accents. West of Atlanta Ave, the sidewalk was approximately five feet wide, older, and in good condition. The street edge was lined with telephone poles. There was a short length of sidewalk along the northern side

adjacent to the pedestrian railroad crossings and depot. Crosswalks were marked at the southern and eastern legs of the intersection with Atlanta Ave, but not the western side. Crosswalks were marked on all three legs of the junction with South Fulton Ave, and across Perkins Ct. A new accessibility ramp with tactile strip had been installed at Perkins Ct. Crosswalks were not marked for crossing South Central Ave at Perkins Ct. A faded crosswalk and ramp aided pedestrians crossing South Central Ave on the western side of Dogwood Dr, but not the eastern side. The posted speed limit was 25 MPH. Traffic and noise were moderate.

Figure 179: Public investments have contributed to pedestrian-friendly location

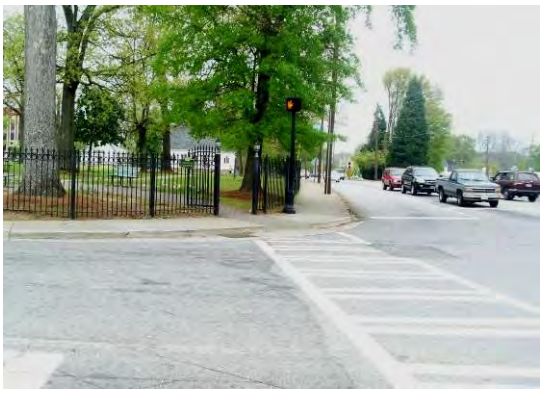

Figure 180: Public investments have contributed to pedestrian-friendly location

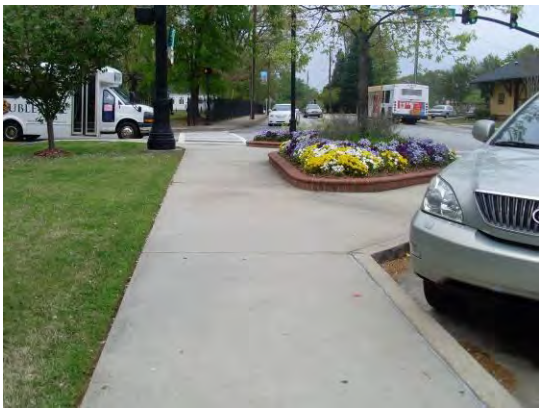

Figure 181: Public investments have contributed to pedestrian-friendly location

Figure 182: Public investments have contributed to pedestrian-friendly location

Figure 183: Pedestrians encounter varying roadside conditions

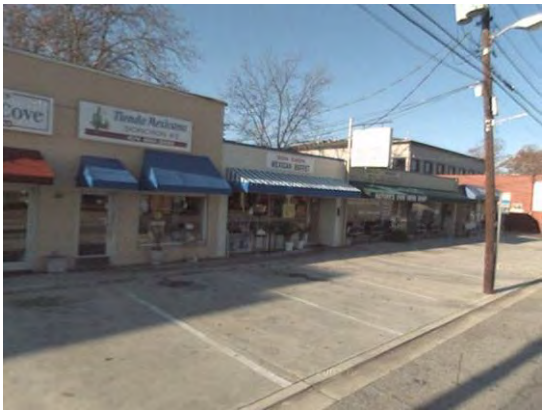

Figure 184: Pedestrians encounter varying roadside conditions

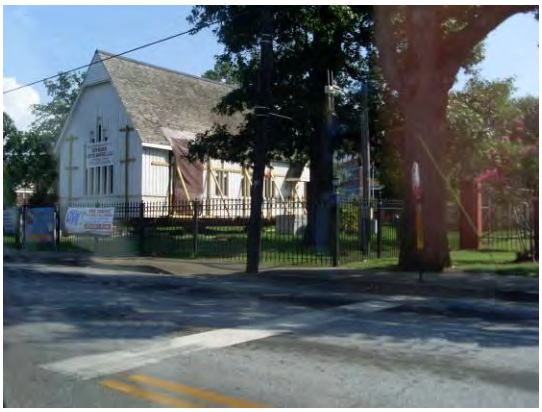

Figure 185: Pedestrians encounter varying roadside conditions

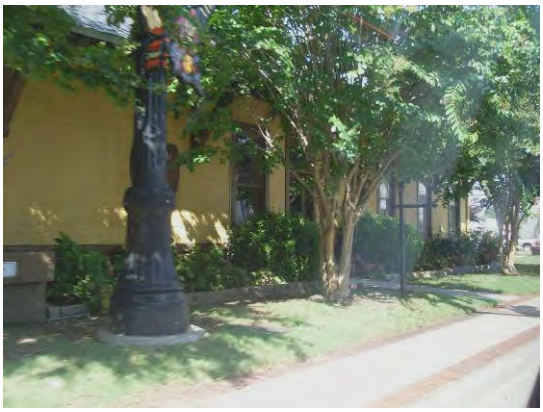

Figure 186: Pedestrians encounter varying roadside conditions

Conclusions

Walkability

The area around Aerotropolis will not support walkability without targeted effort from Hapeville, Atlanta, and the state of Georgia. Hapeville is already undertaking pedestrian and streetscape projects on Doug Davis Drive, Virginia Ave, and North Fulton Ave. They have also been awarded a grant to conduct a bicycle and pedestrian study. It will take careful and consistent investment, as well as the changes described in the Healthy Places Audit, to make walking a safe and pleasant option for intown trips.

Many local streets have a 25 MPH limit, which provides actual and perceived safety for walkers and promotes walkability in those residential and retail areas. However, higher speed limits on major roads can create barriers between different parts of town for longer walking trips. This will be

particularly important around Aerotropolis, which is located between 45 MPH Loop Road and 35 MPH South Central Ave, and close to the 35 MPH section of North Central Ave. It is highly unlikely that people will walk along or across these streets to visit Aerotropolis (or to walk from Aerotropolis to visit local stores and restaurants) without targeted investment in pedestrian facilities, streetscape, and pedestrian-friendly traffic operations (e.g. speed zones, narrowed lanes and turn radii, and capacity optimization). The Latent Demand Score section offers more guidance on priority pedestrian streets.

Access management was the other element that affected overall walkability. Frequent driveways and extensive parking infrastructure interfered with the quality and safety of the roadside environment. This was observed along the southern end of Atlanta Avenue, along North Central Avenue from Dearborn Plaza to Browns Mill Road, and in some areas of South Central Avenue and College Street. Centralized parking accessed by a rear alley or a restricted number of driveways leaves pedestrians with an undisrupted walking environment, and often reduces congestion caused by turning traffic as well. Some cities have funded centralized parking with a small business fee in lieu of waived minimum parking requirements. In areas with extensive freight movement, special care should be taken to minimize the risk of conflicts between trucks and pedestrians and to improve perceived safety.

Neglected or missing pedestrian infrastructure prevents latent pedestrian activity in a given location, and may discourage economic development. Small businesses, such as those in downtown Hapeville, tend to require higher levels of foot traffic than larger stores because shoppers are less likely to make an intentional trip for a few items. An environment where shoppers can park once or walk from home and then visit a series of shops and restaurants is critical for success in this type of retail setting. The gaps in the audit area created by vacant sites, parking lots, and low-quality pedestrian environments are likely preventing business from flourishing and discouraging individuals from walking to destinations. The relative success of businesses along North and South Central Avenue near Fulton Avenue likely indicates the preference of shoppers for continuous sidewalks, attractive streetscape, lot-line buildings, and public or shared parking that allows them to patronize several stores during their visit. The wide right-of-way on certain streets, such as King Arnold St, creates opportunities to install wider sidewalks and attractive planting/furniture zones.

Connectivity

Both the intersection density analysis and this walkability audit highlighted significant gaps in the transportation network, especially for walking and bicycling. Long blocks make walking trips feel

much longer than they are and effectively increase the distance that must be traveled. Long blocks can be created by large land use complexes (including schools, warehouses, and the Wells Fargo campus), utilities, or transportation facilities (such as the Interstates and railroads). In order to create a walkable district around the Aerotropolis project, local jurisdictions must emphasize shorter blocks and new connections – adding new streets instead of widening the existing ones, favoring four-way intersections and passages between parcels or developments, creating additional safe crossing at existing barriers to travel, building new infrastructure for non-motorized travel, and exploring innovative ways to make walking around town quick and convenient.

Bikeability

Bicycling can be an effective way to accommodate trips longer than half a mile without exacerbating traffic volume, noise, or emissions. It provides similar physical activity and social interaction benefits as walking, but also depends on the presence of safe and attractive facilities. No bicycle facilities were observed anywhere in the audit area, although the audit team rated most of the residential areas appropriate for riding a bicycle. Several people were observed riding bicycles, on Oak Street, King Arnold Street, and South Central Avenue. The rider on South Central Avenue, a woman, was observed illegally riding on the sidewalk, which supports conclusions that demand for safe bicycling conditions is not being met by the existing road design.

A-5: Health Data

Table 10: Number and Percent of Deaths for the Hapeville Area[1] and Georgia, by Aggregated Years 1998-2002 and 2003-2007

	1998-2002				2003-2007			
	Hapeville Area		Georgia		Hapeville Area		Georgia	
Cause of Death	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Septicemia	37	2.7	5,726	1.8	39	3.4	6,777	2.0
Human Immunodeficiency Virus (HIV) Disease	71	5.2	3,616	1.1	55	4.8	3,371	1.0
All other Certain Infectious and Parasitic Diseases	10	0.7	1,581	0.5	11	1.0	1,963	0.6
In Situ and Benign Neoplasms	7	0.5	1,588	0.5	9	0.8	1,700	0.5
Malignant Neoplasms of Lip, Oral Cavity and Pharynx	*	*	*	*	6	0.5	1,110	0.3
Malignant Neoplasm of Esophagus	8	0.6	1,564	0.5	*	*	*	*
Malignant Neoplasm of Stomach	*		*		5	0.4	1,457	0.4
Malignant Neoplasms of Colon, Rectum and Anus	26	1.9	6,303	2.0	18	1.6	6,647	2.0
Malignant Neoplasms of Liver and Intrahepatic Bile Ducts	8	0.6	1,392	0.4	7	0.6	1,777	0.5
Malignant Neoplasm of Pancreas	9	0.7	3,447	1.1	6	0.5	3,977	1.2
Malignant Neoplasms of the Trachea, Bronchus and Lung	71	5.2	20,358	6.5	49	4.3	21,713	6.5
Malignant Neoplasm of the Breast	22	1.6	5,116	1.6	16	1.4	5,511	1.7
Malignant Neoplasm of the Cervix Uteri	*	*	*	*	8	0.7	622	0.2
Malignant Neoplasm of Prostate	18	1.3	3,876	1.2	17	1.5	3,663	1.1
Malignant Neoplasm of Bladder	*	*	*	*	6	0.5	1,380	0.4
Malignant Neoplasms of Kidney and Renal Pelvis	*	*	*	*	6	0.5	1,529	0.5
Leukemia	6	0.4	2,381	0.8	*	*	*	*
All other Malignant Neoplasms	49	3.6	12,467	4.0	38	3.3	12,455	3.7
All other Anemia's	7	0.5	507	0.2	*	*	*	*
All other Blood and Blood-Forming Organs	*	*	*	*	5	0.4	787	0.2
Diabetes Mellitus	26	1.9	7,375	2.3	38	3.3	8,268	2.5
All other Endocrine, Nutritional and Metabolic Diseases	15	1.1	3,414	1.1	10	0.9	3,531	1.1
Mental and Behavioral Disorders due to Psychoactive Subst	12	0.9	1,253	0.4	9	0.8	1,578	0.5
All other Mental and Behavioral Disorders	14	1.0	5,457	1.7	32	2.8	9,446	2.8
Alzheimers Disease	13	1.0	5,947	1.9	20	1.7	8,687	2.6
All other Diseases of the Nervous System	6	0.4	3,215	1.0	13	1.1	4,019	1.2

	1998-2002				2003-2007			
	Hapeville Area		Georgia		Hapeville Area		Georgia	
Cause of Death	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Cerebrovascular Disease	89	6.5	21,492	6.8	64	5.6	19,703	5.9
Essential Hypertension and Hypertensive Renal Disease	18	1.3	3,049	1.0	27	2.4	4,533	1.4
Hypertensive Heart Disease	33	2.4	3,534	1.1	46	4.0	5,037	1.5
Acute Myocardial Infarction	64	4.7	21,988	7.0	30	2.6	16,518	5.0
Other Forms of Chronic Ischemic Heart Disease	149	10.9	29,029	9.2	103	9.0	26,255	7.9
Other Heart Disease	119	8.7	33,472	10.6	78	6.8	33,623	10.1
All other Diseases of Heart	*	*	*	*	5	0.4	466	0.1
Aortic Aneurysm and Dissection	8	0.6	1,795	0.6	6	0.5	1,553	0.5
All other Diseases of Circulatory System	19	1.4	1,295	0.4	*	*	*	*
All other Diseases of the Circulatory System	8	0.6	668	0.2	*	*	*	*
Pneumonia	45	3.3	8,019	2.5	*	*	*	*
Pneumonia	5	0.4	2,655	0.8	26	2.3	7,507	2.3
All other Chronic Lower Respiratory Diseases	35	2.6	11,552	3.7	32	2.8	13,822	4.2
All other Diseases of the Respiratory System	13	1.0	6,403	2.0	16	1.4	7,409	2.2
All other Diseases of Digestive System	32	2.3	7,954	2.5	26	2.3	8,702	2.6
Alcoholic Liver Disease	5	0.4	1,094	0.3	*	*	*	*
All other Chronic Liver Disease and Cirrhosis	10	0.7	2,081	0.7	5	0.4	2,261	0.7
Nephritis, Nephrotic Syndrome and Nephrosis	42	3.1	5,938	1.9	26	2.3	7,734	2.3
All other Diseases of the Genitourinary System	16	1.2	2,559	0.8	8	0.7	2,224	0.7
Diseases of the Musculoskeletal System and Connective Tissue	6	0.4	1,684	0.5	13	1.1	1,812	0.5
Disorders Per Short Gest and LBW, not elsewhere classified	*	*	*	*	6	0.5	1,101	0.3
All other Certain Conditions Originating in Perinatal Period	18	1.3	1,369	0.4	*	*	*	*
All other Congenital Mal-Deformations Chromosomal Abnormality	8	0.6	1,459	0.5	6	0.5	1,357	0.4
All other Symptoms, Signs, Abnormal Clinical, and Lab Findings	11	0.8	4,165	1.3	19	1.7	7,777	2.3
Intentional Self-Harm (Suicide)	7	0.5	4,343	1.4	11	1.0	4,679	1.4
Assault (Homicide)	51	3.7	3,270	1.0	39	3.4	3,428	1.0
Motor Vehicle Accidents	22	1.6	7,185	2.3	19	1.7	7,780	2.3
Falls	6	0.4	2,059	0.7	15	1.3	2,696	0.8
Accidental Poisoning and Exposure to Noxious Substances	9	0.7	1,702	0.5	13	1.1	3,048	0.9

	1998-2002				2003-2007			
	Hapeville Area		Georgia		Hapeville Area		Georgia	
Cause of Death	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
All other Accidents	9	0.7	3,442	1.1	9	0.8	3,287	1.0
All other Causes	8	0.6	799	0.3	8	0.7	788	0.2
Total All Deaths	1,367		314,993		1,146		332,187	

* Less than 5 events within Hapeville Area

[1] Hapeville Area defined as Fulton County Census Tracts 72.00, 73.00, 74.00, 108.00, 109.00, and 110.00 and Clayton County Census Tracts 401.00 and 403.01

Table 11: Number and Percent of Deduplicated Discharges for the Hapeville Area[1] and Georgia, by Aggregated Years 2003-2007

	Hapeville Area		Georgia	
Cause	**Number**	**Percent**	**Number**	**Percent**
Septicemia	518	3.7	54,021	1.3
Human Immunodeficiency Virus (HIV) Disease	310	2.2	16,827	0.4
Infections with a Predominantly Sexual Mode of Transmission	9	0.1	698	0.0
Tuberculosis	7	0.0	1,335	0.0
All other Certain Infectious and Parasitic Diseases	145	1.0	49,169	1.2
In Situ and Benign Neoplasms	199	1.4	69,431	1.7
Malignant Neoplasms of Lip, Oral Cavity and Pharynx	11	0.1	2,070	0.1
Malignant Neoplasm of Stomach	8	0.1	2,042	0.1
Malignant Neoplasms of Colon, Rectum and Anus	34	0.2	16,452	0.4
Malignant Neoplasms of Liver and Intrahepatic Bile Ducts	7	0.0	1,337	0.0
Malignant Neoplasm of Pancreas	5	0.0	2,913	0.1
Malignant Neoplasms of the Trachea, Bronchus and Lung	47	0.3	14,850	0.4
Malignant Neoplasm of the Breast	25	0.2	9,231	0.2
Malignant Neoplasm of the Cervix Uteri	6	0.0	1,598	0.0
Malignant Neoplasms of Corpus Uteri and Uterus, Unspecified	12	0.1	3,277	0.1
Malignant Neoplasm of Ovary	8	0.1	2,661	0.1
Malignant Neoplasm of Prostate	15	0.1	8,055	0.2
Malignant Neoplasms of Kidney and Renal Pelvis	12	0.1	4,351	0.1
Malignant Neoplasms of Meninges, Brain, and other pts of CNS	6	0.0	2,896	0.1
Leukemia	8	0.1	3,211	0.1
All other Malignant Neoplasms	104	0.7	33,769	0.8
Sickle Cell Trait and Disease	63	0.4	9,003	0.2
All other Anemias	116	0.8	24,497	0.6
All other Blood and Blood-Forming Organs	31	0.2	12,363	0.3
Diabetes Mellitus	326	2.3	59,091	1.5
All other Endocrine, Nutritional and Metabolic Diseases	356	2.5	98,413	2.4
Mental and Behavioral Disorders due to Psychoactive Subst	72	0.5	18,751	0.5
All other Mental and Behavioral Disorders	556	3.9	165,863	4.1
Alzheimers Disease	21	0.1	7,196	0.2
All other Diseases of the Nervous System	157	1.1	37,327	0.9
Cerebrovascular Disease	274	1.9	82,493	2.0
Atherosclerosis	63	0.4	16,852	0.4
Essential Hypertension and Hypertensive Renal Disease	175	1.2	26,716	0.7
Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	16	0.1	4,584	0.1
Hypertensive Heart Disease	58	0.4	10,753	0.3
Acute Myocardial Infarction	204	1.4	65,508	1.6
Other Acute Ischemic Heart Diseases	26	0.2	8,043	0.2
Other Forms of Chronic Ischemic Heart Disease	209	1.5	126,546	3.1
Other Heart Disease	651	4.6	199,848	4.9

	Hapeville Area		Georgia	
Cause	**Number**	**Percent**	**Number**	**Percent**
All other Diseases of Heart	35	0.2	6,592	0.2
Aortic Aneurysm and Dissection	10	0.1	6,652	0.2
All other Diseases of Circulatory System	41	0.3	11,007	0.3
All other Diseases of the Circulatory System	178	1.3	57,486	1.4
Pneumonia	444	3.1	157,361	3.9
Bronchitis and Chronic Unspecified	178	1.3	60,705	1.5
Emphysema	5	0.0	1,119	0.0
Asthma	232	1.6	48,655	1.2
All other Chronic Lower Respiratory Diseases	13	0.1	3,552	0.1
All other Diseases of the Respiratory System	352	2.5	112,346	2.8
All other Diseases of Digestive System	978	6.9	334,357	8.3
Alcoholic Liver Disease	22	0.2	5,557	0.1
All other Chronic Liver Disease and Cirrhosis	12	0.1	3,824	0.1
Nephritis, Nephrotic Syndrome and Nephrosis	264	1.9	41,098	1.0
Infections of Kidney	56	0.4	16,733	0.4
All other Diseases of the Genitourinary System	413	2.9	154,311	3.8
Diseases of the Musculoskeletal System and Connective Tissue	361	2.6	203,916	5.0
Pregnancy, Childbirth and the Puerperium	2,761	19.6	757,288	18.7
All other Certain Conditions Originating in Perinatal Period	32	0.2	11,516	0.3
All other Congenital Mal-Deformations Chromosomal Abnormality	45	0.3	17,259	0.4
All other Symptoms, Signs, Abnormal Clinical, and Lab Findings	908	6.4	221,942	5.5
Intentional Self-Harm (Suicide)	39	0.3	16,488	0.4
Assault (Homicide)	119	0.8	9,816	0.2
All other External Causes of Morbidity	34	0.2	4,373	0.1
Motor Vehicle Accidents	121	0.9	40,979	1.0
Falls	189	1.3	82,346	2.0
Accidental Discharge of Firearms	23	0.2	1,682	0.0
Accidental Exposure to Smoke, Fire and Flames	7	0.0	2,640	0.1
Accidental Poisoning and Exposure to Noxious Substances	57	0.4	11,051	0.3
All other Accidents	77	0.5	29,846	0.7
All other Causes	659	4.7	189,143	4.7
Total All Deduplicated Discharges	14,110		4,048,309	

* Less than 5 events within Hapeville Area

[1] Hapeville Area defined as Fulton County Census Tracts 72.00, 73.00, 74.00, 108.00, 109.00, and 110.00 and Clayton County Census Tracts 401.00 and 403.01

Deduplicated Discharges - The number of persons discharged live from non-Federal acute-care inpatient facilities (Hospitals) for illness. Persons are counted only once if readmitted for the same chronic condition during a calendar year. Causes are based on the principal diagnosis, except in cases where an External (E-code) cause supersedes the principal diagnosis. Deduplicated Discharges also excludes people discharged dead, healthy newborn infants, and healthy mothers giving birth to newborn infants. Since the number and rate are derived only from hospitalizations, they do not include all existing cases (prevalence) or new cases (incidence) among residents of Georgia.

Table 12: Number and Percent of Deduplicated Emergency Room (ER) Visits for the Hapeville Area[1] and Georgia, by Aggregated Years 2003-2007

	Hapeville Area		Georgia	
Cause	**Number**	**Percent**	**Number**	**Percent**
Septicemia	8	0.0	1,727	0.0
Human Immunodeficiency Virus (HIV) Disease	40	0.1	3,677	0.0
Infections with a Predominantly Sexual Mode of Transmission	110	0.2	8,708	0.1
All other Certain Infectious and Parasitic Diseases	1,965	3.6	420,747	2.9
In Situ and Benign Neoplasms	50	0.1	8,623	0.1
Malignant Neoplasms of the Trachea, Bronchus and Lung	7	0.0	1,827	0.0
Malignant Neoplasm of the Breast	5	0.0	626	0.0
Malignant Neoplasm of Prostate	5	0.0	451	0.0
All other Malignant Neoplasms	8	0.0	2,411	0.0
Sickle Cell Trait and Disease	88	0.2	10,508	0.1
All other Anemias	49	0.1	13,726	0.1
All other Blood and Blood-Forming Organs	43	0.1	15,549	0.1
Diabetes Mellitus	370	0.7	71,659	0.5
All other Endocrine, Nutritional and Metabolic Diseases	499	0.9	120,809	0.8
Mental and Behavioral Disorders due to Psychoactive Subst	29	0.1	12,556	0.1
All other Mental and Behavioral Disorders	943	1.7	298,695	2.1
Alzheimers Disease	10	0.0	2,112	0.0
Parkinsons Disease	6	0.0	599	0.0
All other Diseases of the Nervous System	475	0.9	162,150	1.1
Cerebrovascular Disease	32	0.1	14,321	0.1
Essential Hypertension and Hypertensive Renal Disease	555	1.0	102,301	0.7
Hypertensive Heart Disease	7	0.0	1,351	0.0
Acute Myocardial Infarction	12	0.0	11,546	0.1
Other Acute Ischemic Heart Diseases	19	0.0	8,340	0.1
Other Forms of Chronic Ischemic Heart Disease	34	0.1	17,797	0.1
Other Heart Disease	201	0.4	77,565	0.5
All other Diseases of Circulatory System	8	0.0	3,814	0.0
All other Diseases of the Circulatory System	273	0.5	68,537	0.5
Influenza	178	0.3	50,000	0.3
Pneumonia	467	0.9	131,340	0.9
Bronchitis and Chronic Unspecified	479	0.9	158,941	1.1
Asthma	1,361	2.5	191,717	1.3
All other Chronic Lower Respiratory Diseases	47	0.1	10,417	0.1
All other Diseases of the Respiratory System	4,526	8.3	1,132,677	7.9
All other Diseases of Digestive System	3,029	5.5	814,624	5.7
Alcoholic Liver Disease	5	0.0	1,063	0.0
Nephritis, Nephrotic Syndrome and Nephrosis	22	0.0	4,491	0.0
Infections of Kidney	192	0.4	36,898	0.3
All other Diseases of the Genitourinary System	2,825	5.2	677,920	4.7

	Hapeville Area		Georgia	
Cause	**Number**	**Percent**	**Number**	**Percent**
Diseases of the Musculoskeletal System and Connective Tissue	3,032	5.5	816,518	5.7
Pregnancy, Childbirth and the Puerperium	1,179	2.2	337,951	2.4
Infections Specific to the Perinatal Period	13	0.0	2,520	0.0
All other Certain Conditions Originating in Perinatal Period	65	0.1	13,264	0.1
All other Congenital Mal-Deformations Chromosomal Abnormality	14	0.0	3,717	0.0
All other Symptoms, Signs, Abnormal Clinical, and Lab Findings	12,086	22.1	3,146,560	21.9
Intentional Self-Harm (Suicide)	77	0.1	27,727	0.2
Assault (Homicide)	982	1.8	146,086	1.0
Legal Intervention	59	0.1	4,650	0.0
All other External Causes of Morbidity	71	0.1	18,208	0.1
Motor Vehicle Accidents	1,460	2.7	553,379	3.9
Falls	2,267	4.1	920,155	6.4
Accidental Discharge of Firearms	64	0.1	7,347	0.1
Accidental Exposure to Smoke, Fire and Flames	27	0.0	12,586	0.1
Accidental Poisoning and Exposure to Noxious Substances	155	0.3	41,995	0.3
All other Accidents	5,060	9.2	1,852,340	12.9
All other Causes	8,232	15.0	1,503,741	10.5
Total All Deduplicated ER Visits	54,722		14,338,043	

* Less than 5 events within Hapeville Area
[1] Hapeville Area defined as Fulton County Census Tracts 72.00, 73.00, 74.00, 108.00, 109.00, and 110.00 and Clayton County Census Tracts 401.00 and 403.01

Deduplicated Emergency Room Visits (Deduplicated ER Visits) -The number of ER patients discharged live from non-Federal acute-care inpatient facilities (Hospitals) for illness. Persons are counted only once if readmitted for the same chronic condition during a calendar year. Causes are based on the principal diagnosis, except in cases where an External (E-code) cause supersedes the principal diagnosis. Deduplicated visits also exclude people discharged dead, healthy newborn infants, and healthy mothers giving birth to newborn infants.