Hinesville Area
Metropolitan Planning Organization

MULTIMODAL PLAN:

TRANSIT COORDINATION and BICYCLE/PEDESTRIAN FACILITIES

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I. Introduction

In 2005, the Hinesville Area Metropolitan Planning Organization (HAMPO) initiated a Transit Implementation Study which built on the earlier Transit Feasibility Study conducted in 2004. The Transit Implementation Study focused on the identification and recommendation of initial service routes and transit stop locations; identification of equipment options; estimated operating and capital costs for each option; and the identification of potential management alternatives.

This multimodal study builds on the previous transit efforts and focuses on the integration of other alternative modes with the potential transit service. This study also includes a review of the recommended management and organizational structure and strategies, as well as the identification of preliminary funding strategies for the transit service.

Long term, sustainable transportation solutions are built on a truly integrated multimodal transportation system. The recognition of the need for an integrated multimodal network comes with the understanding that with the limited financial resources available for transportation, the ability to build out of automotive congestion is not a feasible, nor viable solution. A sustainable network includes a variety of viable modes of transportation that are integrated and connected in order to provide a range of transportation choices and meets the mobility needs of the population.

An interconnected, multimodal transportation network designed to meet the needs of the transportation user, as well as to encourage and facilitate walking, bicycling and transit usage, is essential. This transportation network must provide a convenient, connected transportation system, connectivity between modes and to regional intermodal facilities, as well as minimum desirable levels of service for bicyclists, pedestrians and transit riders.

A multimodal transportation network also includes the creation and promotion of proper patterns of roadways. The street pattern should promote efficient and continuous circulation that maximizes the efficiency of transit usage and provides the greatest accessibility for pedestrians and bicyclists. Transit stations and stops should be located within walking distances of activity centers and the access routes for pedestrians and bicycles to transit should be as direct as possible. Street systems should support pedestrian usage by providing continuous sidewalks, shade tree canopies or covered walkways, and traffic buffers and separations wherever possible. While arterial roadways should provide greater mobility to automobiles and transit, amenities should also be

provided to support transit station accessibility and pedestrian and bicycle usage, including protection at major roadway crossings. Safety and ease of crossing major automobile and truck routes for pedestrians and bicyclists should be a priority.

The understanding of the need for a viable, multimodal transportation network was proactively pursued by the Hinesville Area Metropolitan Planning Organization (HAMPO) when they initiated the Transit Implementation Study to incorporate transit into their transportation system. This proactive approach has been carried through with this Phase II study as HAMPO focuses on the interdependency and symbiotic relationship with pedestrian and bicycle facilities to transit facility.

II. Process

The first step in the multimodal analysis is the review of the previous transit feasibility and implementation studies. The Transit Implementation Study includes various options for an organizational and management structure for a transit system in Hinesville. These options were reviewed and evaluated in the context of current conditions and a realistic assessment of the opportunity for successful implementation. In addition, it was also reviewed with the consideration of pedestrian and bicycle access to the potential transit service.

In addition, data and information on other successful transit systems of a similar size and scope were collected and reviewed. This review specifically includes transit systems that cooperatively operate with military installations. This information gathering effort provides a summary of best practices and approaches successfully utilized in similar areas and can be used to identify potential pitfalls as well as appropriate approaches.

Various funding options and opportunities were also explored, building on the options outlined in the earlier study, as well as any other potential funding opportunities identified through the best practices review and a review of other resources and strategies.

Upon review of all pertinent information, recommendations were developed that identify the most appropriate management, organizational structure, and staffing requirements for the transit service. The most viable and appropriate financial and funding structure will also be included in these recommendations.

Other Successful Transit Systems

Two existing transit systems in communities that include military installations were identified and researched. The first example is located in Clarksville, Tennessee which serves Ft. Campbell, while the second example is in Colorado Springs, which includes service to several military installations.

Clarksville, Tennessee

Clarksville, TN is located on the border between the States of Tennessee and Kentucky and is home to Ft. Campbell, a U.S. Army base. This transit system is operated by the City of Clarksville, but also falls under the jurisdiction of the regional planning commission of Clarksville and Montgomery County. The area is also a designated Metropolitan Planning Organization. The Clarksville transit system provides services to the military installation.

The funding for this system is fairly straight forward. Though the system serves the military, no funding comes from Ft. Campbell. The soldiers who wish to ride the bus simply pay the standard fair. Despite its use by a majority of military personnel and their families, there is no military discount. The system is traditionally funded, although because it is located on the border and the MPO is bi-state, the transit system receives funding from both Tennessee and Kentucky.

The operation of the system is relatively simple. The city buses go onto the base and complete a 15 minute circulator route. Security is a paramount issue. The security clearance process includes a visible search and then a military guard boards the bus at the gate, checks the identification badges of all passengers on board, and accompanies the transit users on the transit route through the base. The guard exits the bus at the return to the gate as the bus exits the installation.

Colorado Springs, Colorado

Colorado Springs in another example of a city operated transit system that serves a military base. The Mountain Metropolitan Transit (Metro) system is a large and very extensive bus service. Metro provides two loops through Ft. Carson, one through Peterson Air Force Base and an express service out to Schriever Air Force Base. The system also serves the Air Force Academy and University of Colorado-Colorado Springs, as well as the downtown area and some closer suburbs. The security issues are managed in much the same was as Ft. Campbell, and again there is no military discount given to soldiers.

III. Methodology

The process to create multimodal methodology included integrating multimodal concepts, conducting an independent desktop multimodal analysis followed by field survey that reviewed the recommendations of the desktop analysis, and made appropriate adjustments to the recommendations.

Multimodal Integration

The integration of all modes is a critical element in the provision of an interconnected, efficient and effective transportation system. As the Hinesville area continues to grow, this integration becomes even more crucial in the ability to maintain mobility and accessibility for citizens. A connected, multimodal network of roadways, transit, and bicycle and pedestrian facilities will not only serve the transportation needs, but enhance the quality of life within the community.

Every transit trip begins and ends with the utilization of another mode and those connections are critical in the success of a transit system. The primary focus of this effort is to ensure the appropriate multimodal connections are provided.

Existing data records from GDOT, local governments and previous studies/surveys, were utilized and examined to determine the location, type, and existing deficiencies of modal facilities throughout the MPO planning area and to identify the connectivity, or lack of connectivity, with the initial and future transit routes and stops. The results of this desk data collection effort was verified by a field survey.

Along with the review and verification of infrastructure data, existing and future attractions and generators were also identified. These attractions and generators include recreational centers and facilities, senior citizen facilities, shopping areas, cultural resources, public and governmental services, and health related facilities. The location of educational facilities was identified, as well as the connectivity with the recommended initial and future transit stops. This analysis of connectivity and transit usability were incorporated into the Safe Ways to School program.

The ability of the population to access the multimodal facilities and transit stops is an important element in the “usability” of the facilities and the transit system. Population, by census block, was determined, including information regarding auto ownership and age. The existing facilities were combined with this demographic analysis to determine if the location of existing facilities adequately serves dependent, young and aged populations.

Geographic Information Systems (GIS) was utilized extensively in the determination of existing conditions. The locations of existing facilities and transit stops were combined with the demographic data and the school data to fully assess the existing conditions. The GIS maps were used to determine deficiencies in network connectivity and the connectivity with the transit service. In addition to the assessment and identification of needs in network connectivity and transit connectivity, the physical needs of the existing infrastructure were identified.

The deficiencies and connectivity needs were utilized to develop logical projects. These projects are designed to address the identified needs, including infrastructure deficiencies, lack of service, and connectivity. A list of projects was developed and prioritized to ensure adequate connections with both the identified transit stops and those transit stops identified in future service lines. "Quick Fix" projects, which include those projects that can easily be addressed, were also identified and focused on those areas surrounding the identified transit stops. Examples of these types of projects include repair of existing pavement, small connectivity issues, and painted crosswalks.

In addition to the identified projects focusing on connectivity and quick fix projects, recommendations were also developed for the appropriate multimodal amenities for recreational needs, and Safe Routes to school.

Desktop Multimodal Analysis

The focus of the desktop analysis was on multimodal impact of transit, bicycle, and pedestrian facilities as integral parts of the transportation system and to ensure the appropriate connections are provided. The task included the identification of the current social-economic patterns throughout Liberty County, Georgia and how these patterns related to the need for a connected multimodal system.

The goals of the desktop analysis and the study overall include:

1. Provide a social-economic profile of the citizens and their preferences.
2. Develop a methodology in determining the need for a multimodal network consistent with the social-economic profiles and goals of related policy.
3. Identify existing multimodal connectivity, and deficiencies.
4. Recommend and show a multimodal network that shows a positive correlation between neighborhood cores and other neighborhood cores; and a positive correlation between neighborhood cores and Safe Routes to School (SRTS) Zones.

Integration of all modes requires an understanding of the transportation system current condition, identifying its deficiencies and matching those deficiencies with related policy. Therefore, to analyze the existence and affects of the current conditions, a current social-economic profile needs to be defined, and the conditions of the attributes that make-up an interconnected network needs to be identified.

Methodology

A review of related policy and studies was conducted to gain an understanding of the current condition of the transportation system, identifying its deficiencies and matching those deficiencies with related policy. The methodology included:

- Identifying the study area;
- Analyzing the current profile of transportation system users;
- Developing an ordinal system to standardizing how the current transportation system is used;
- Developing an ordinal system to compute the deficiencies within the transportation system.

Study Area

Our study focused on the existing roadway network systems starting from a macro view down to a micro view. The analysis began with identifying the US Census Blocks and then capturing a collection of attractors/generators, as well as a commercial build-up in close proximity to residential dwellings.

US Census Blocks 2000

The study area is made-up of twenty-two US Census Block-groups containing citizens varying in ages. Within each of these block-groups, citizens use the existing transportation system to commute to work, for recreation, and for other travel needs. They use multiple modes of mobility including motorized vehicles, non-motorized bicycles, and walking. Some own the vehicles while others use public means to commute to work within and outside of the county.

Attractors and Generators

Information with regard to the major employers with 100 or more employees, community facilities such as government, hospitals, schools, police and fire, parks and recreation, and entertainment facilities was gathered. These attractors and generators provide essential information about the study area given that they are considered to have a significant impact on the creation of traffic and also an influence on use of the transportation system. The maps of attractors and generators in the study area are found in the Appendix.

Safe Routes to School Zones and Neighborhood Cores

In association with the attractors and generators, the geographical location of each neighborhood core within selected Census blocks was determined. To determine the locations, the boundary and distance definitions were identified. This identification was done in three steps:

1. In accordance with guidance by Federal Highway Administration (FHWA) & SAFETEA_LU, a SRTS Boundary made up of a two mile radius surrounding elementary and middle public schools was determined.

2. Once the SRTS boundary was determined, the neighborhood cores that were affected by the SRTS was identified:
    a. The generally accepted design size of [1]1500 feet radius from the center to the periphery was used. In addition, to account for the possible occurrence of variation in the core size given the impact of other attributes that may encourage distance including:
        i. Transit stops that fall inside the core within close proximity of the core periphery;
        ii. Residences within close proximity of the core periphery that own no vehicle;
        iii. Residences within close proximity of the core that have a short commute to work;
        iv. Residences within close proximity of the core periphery that prefer to walk or bike as a means of transportation.

    b. The location of the optimum mix of residential and non-residential land usage and identified the commercial centers was identified. Within selected blocks, non-vacant residential parcels were located and spatially analyzed the densities in correlation to densities of non-vacant commercial parcels that were in close proximity to the residential densities.

    c. The design size was used and compared it with the optimum mix location to determine the SRTS and Neighborhood core boundaries.

The maps of the SRTS and neighborhood core boundaries are found in the Appendix.

[1] 1500 ft from the center of the core periphery equates for a five minute walk from origin to destination.

Current Profile of Transportation Users

Dependent Group

The US Census Block 2000 data was used to identify the social-economic parameters related to a complete transportation system. Starting with the total population, the total population was separated into the following age groups:

- 21 and below = dependent young
- 22 thru 39 = young adult
- 40 thru 64 = middle adult
- 65 and above = dependent aged

Efforts focused on analyzing the blocks and identifying those who did not depend on others for motorized transportation and those who did depended on others to provide privately owned motorized transportation. The analysis included both dependent and independent groups; however, the focus was placed on the highest percentage of those who depended on others for the reason that their dependency makes these groups more inclined to fully use a multimodal transportation system. Within the dependent groups we identified the following:

- Ages 21 and below – will walk, ride a bike, or take a transit to school, commercial centers, or community facilities if motorized transportation is not provided by the independent associate; and

- Ages 65 and above – will take a transit to commercial centers or community facilities if motorized transportation is not provided by the independent associate.

The percentage was calculated that represented the distribution within the block and for the total county population. From theses calculation, the top three for the block sample and the top three for the county population were selected, converted to a shapefile and spatially analyzed.

Other than Dependent Group

After defining the study area and determining the current profile on the use of the transportation system, an ordinal point system was developed to express a degree of contribution the attributes, other than dependent system users, had on the study area from a multimodal perspective. First, the attributes were quantified to identify its contribution as positive, negative, or neutral impact. The quantification process included:

- Identifying sub-category samples in each census block that contained attributes essential to a complete transportation system:

- Commute Time to Work – represents the time citizens consumed commuting to work:
  - Short Commute Time = 20 minutes or less, or
  - Long Commute Time = greater than 20 minutes

- Means of Transportation to Work – represents what type of transportation citizens used for mobility needs:
  - Walk, Bike, Taxi or Bus, or
  - Car or Work at Home

- Work Location – represents job proximity for citizens
  - Work in County, or
  - Work out of County

- Auto Ownership – represents the number of citizens that own and used motorized vehicles for mobility needs:
  - Low Car Ownership = the higher number of citizens who fall outside of the "own less than one auto or more" group;
  - High Car Ownership = the higher number of citizens who fall within the "own one auto or more" group

- Analyzing each census block sub-category samples and determining the distribution by block, by tract, and by population

- Testing the distribution to find an unbiased threshold that falls higher than central tendencies – threshold fall within the top seventieth percentile of the distribution.

- Analyzing the distribution to determine the contribution of the attributes by identifying the blocks that meet or exceed the unbiased threshold at the seventieth percentile

- Assigning a numeric value that weighs the type of impact the contribution provided:
  - Blocks that were greater than or equal to the seventieth percentile threshold denote that a positive impact is contributed and were given a value of "1"

  - Blocks less than the threshold denote that a negative or neutral impact is contributed and were given a value of "0" for "Commute Time to Work" and "Means of Transportation to Work, and given a value of "-1" for [2]"Work Location" and "Auto Ownership":

[2] Greater distances for work location and auto ownership weighs heavier on the citizen's ability and desire to walk or bike to work.

70th Percentile Threshold

Attribute	Margin	Contribution Weight
Commute Time to Work		
Short Commute Time	≥ 70th percentile	1
Long Commute Time	< 70th percentile	0
Means of Transportation to Work		
Walk, Bike, Taxi or Bus	≥ 70th percentile	1
Car or Work @ Home	< 70th percentile	0
Work Location		
Work in County	≥ 70th percentile	1
Work out of County	< 70th percentile	-1
Auto Ownership		
Low Car Ownership	≥ 70th percentile	1
High Car Ownership	< 70th percentile	-1

Next, the assigned numbers were summed into an aggregated value to represent the overall impact of the combined attributes. The values ranged from 4 to -2:

- 4 = best contribution – all positive attributes;
- 3 = good contribution – three positive attributes;
- 2 to1 = average contribution – two positive attributes;
- 0 = poor contribution – one positive attribute;
- -1 to -2 = poorest contribution – no positive attribute.

The following figure contains an example of the calculation process.

Calculation Example:

Short Commute (1) + Car or Work @ Home (0) + Work in County (1) + Low Car Ownership (1) = Overall Impact (3)

Attributes Numeric Value		Aggregated Value	Overall impact
1+0+1+1	=	3	3, good contribution

This represents a group that has a short commute time to work, chooses to drive or work at home with a job located within the county, and who owns fewer automobiles. Therefore, a complete transportation system containing bike lanes, sidewalks, and transit stops is supported within this group given that there commute time is 20 minutes or less within the county and fewer of them own

autos. Notwithstanding their choice to drive, the dependency on a single mode is offset when given additional mode options.

Summary of Method

The transportation system in the study area is primarily made up of roadways, few sidewalks, no bike lane, and no transit stops. Therefore, the focus was to identify an area that generates the greater usage of the transportation system, determine who used this transportation system, and formulate how these transportation system users would use this system from a single mode perspective and a multimode perspective. With US Census data, Federal and State policy, and local social-economic data the type and location of SRTS zones and neighborhood cores were identified. Also with this data, the determination was made with regard to the current mode usage and fit it into a multimodal usage approach. This methodology identifies current conditions that accounts for deficiencies and assimilates related policy to promote multimodal practice.

Findings

Using the desktop methodology, the existing multimodal connectivity and deficiencies were identified, where the needs are generated was prioritized, and recommendations for a more complete multimodal network were developed. In addition, maps depicting the multimodal connectivity both existing and recommended were created. From this desktop study, twenty-one miles of existing sidewalks within a study area containing eleven (SRTS) school zones, and twenty-nine neighborhood cores were identified.

Existing Transportation System

The Liberty County transportation system encompasses a large network of roadways including Interstate, principal arterials, and collectors. This network contains 92,629 miles of road and provides connectivity for primarily a single mode choice of automobiles usage. Overall, the major corridors promote travel within the county and thru the county, and provide connectivity for this mode choice; however, connectivity is promoted less between the roadways and other modes. Maps of the transportation network are found in the Appendix.

Liberty County transportation system provides connectivity for primarily a single mode choice of automobile usage. Therefore, the transportation system is deficient for multiple mode choices of roadway, transit, bike-lane and sidewalk usage. Although the roadway network contains 92,629 miles of road, there are 0 miles for transit, a few miles of bike lanes, and 21 miles of existing sidewalks. In addition, 9,004 miles of roadway is provided for bike use, but there are no defining bike lanes that are marked for usage except for one facility. Overall, the transportation system is primarily for single mode choice of automobile usage.

Block Group Prioritization

To ensure recommendations address the need for connectivity and service, prioritization was developed by:

- Identifying the block groups that contained the highest percentage of dependent young and aged population when population was compared within the block and when block population was compared to total population;

- Identifying the block groups, other than dependent population, that exceeded the minimum threshold of the methodology when population was compared within the block and when block population was compared to total population; then

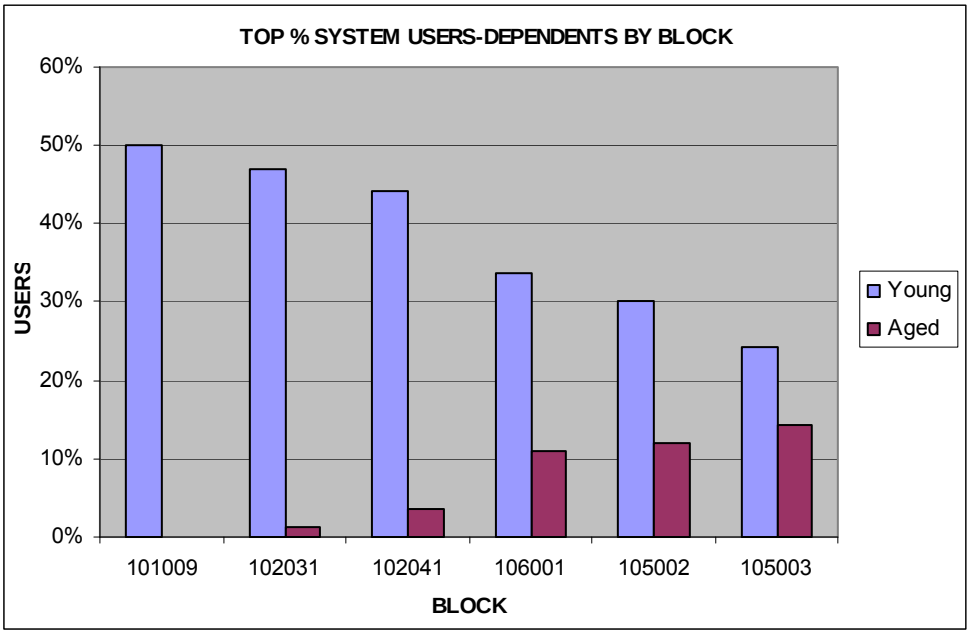
- Selecting the top three block groups for the dependent groups and selecting the block groups that exceeded the minimum threshold for the other than dependent population block groups.

Both set of block groups were selected for a more detailed analysis to capture relative SRTS zones and neighborhood cores. Maps of the following block group analyses and the transportation network are found in the Appendix.

Analysis of Dependent Users Block Group

Detailed analysis of the dependent users group determined that the following block groups, when compared within the blocks, captures ten of the eleven SRTS zones; and when block population is compared to total population, captures all eleven of the SRTS zones.

Dependent Users Block Comparison



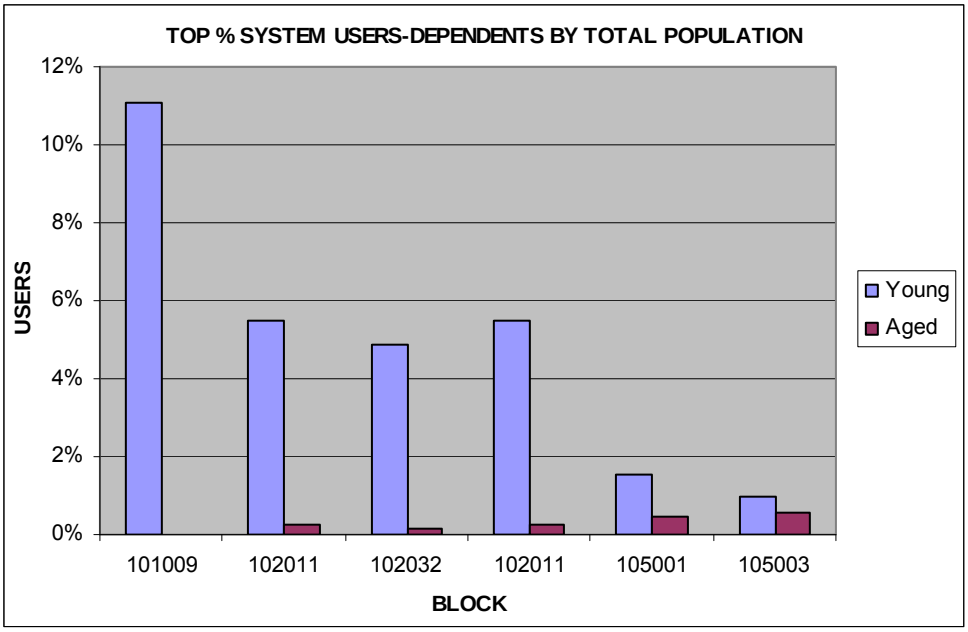
The first three sets of bars from left to right represent the top three block groups with the highest percentage of dependent young when population is compared within the block:

1. Block Group 9, Census Tract 101, Liberty County, Georgia
2. Block Group 1, Census Tract 102.03, Liberty County, Georgia
3. Block Group 1, Census Tract 102.04, Liberty County, Georgia

The last three sets of bars from left to right represent the top three block groups with the highest percentage of dependent aged when population is compared within the block:

1. Block Group 1, Census Tract 106, Liberty County, Georgia
2. Block Group 2, Census Tract 105, Liberty County, Georgia
3. Block Group 3, Census Tract 105, Liberty County, Georgia

Dependent User Total Population Comparison



The first three sets of bars from left to right represent the top three block groups with the highest percentage of dependent young when the block population is compared to total population:

1. Block Group 9, Census Tract 101, Liberty County, Georgia
2. Block Group 1, Census Tract 102.01, Liberty County, Georgia
3. Block Group 2, Census Tract 102.03, Liberty County, Georgia

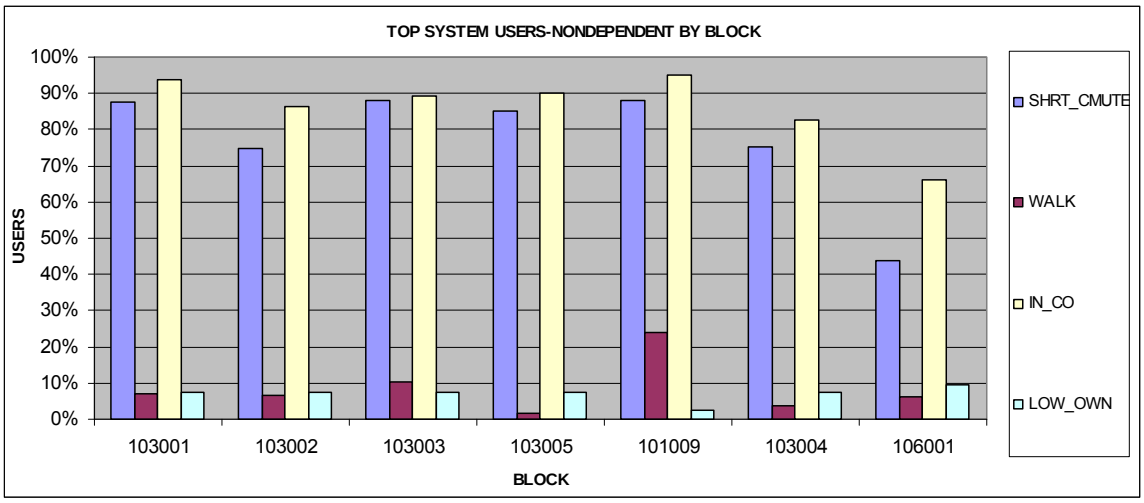
The last three sets of bars from left to right represent the top three block groups with the highest percentage of dependent aged when the block population is compared to total population:

1. Block Group 1, Census Tract 102.01, Liberty County, Georgia
2. Block Group 1, Census Tract 105, Liberty County, Georgia
3. Block Group 3, Census Tract 105, Liberty County, Georgia

Analysis of Other than Dependent Users Group

Detailed analysis of the user groups, other than dependents, determined that the following block groups captures nine of the eleven SRTS zones when compared within the blocks, and captures ten of the eleven the SRTS zones when block population is compared to total population.

Other than Dependent User Block Comparison



1. Block Group 1, Census Tract 103, Liberty County, Georgia
2. Block Group 3, Census Tract 103, Liberty County, Georgia
3. Block Group 2, Census Tract 103, Liberty County, Georgia
4. Block Group 5, Census Tract 103, Liberty County, Georgia
5. Block Group 9, Census Tract 101, Liberty County, Georgia
6. Block Group 4, Census Tract 103, Liberty County, Georgia
7. Block Group 1, Census Tract 106, Liberty County, Georgia

Block Groups 1, 2, & 3, Census Tract 103

The first three sets of bars, from left to right, represent the top three block groups that exceed the minimum threshold. Located mostly in Hinesville, these block groups have a positive contribution by all four attributes, and represent a profile of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county and own fewer automobiles.

Block Group 5, Census Tract 103

The forth set of bars, from left to right, represents the top fourth block group that exceeds the minimum threshold. Located mostly in Hinesville, these block groups have a positive contribution by three of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to drive to work or work at home within the state/county and own fewer automobiles.

Block Group 9, Census Tract 101

The fifth set of bars, from left to right, represents the top fifth block group that exceeds the minimum threshold. Located mostly in Ft Stewart, these block

groups have a positive contribution by three of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county but own more automobiles.

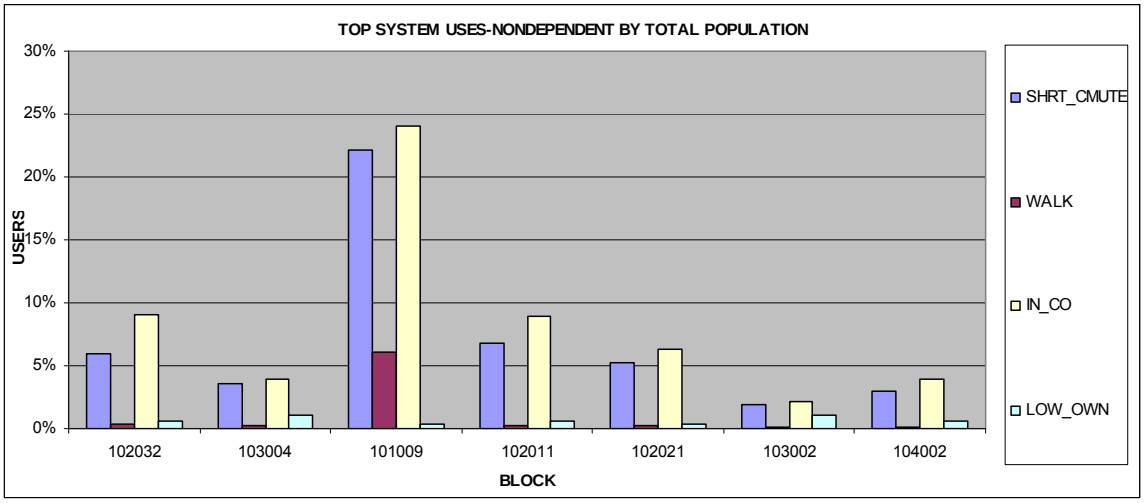
Block Group 4, Census Tract 103

The sixth set of bars, from left to right, represents the top sixth block group that exceeds the minimum threshold. Located mostly in Hinesville and portions in Flemington, these block groups have a positive contribution by two of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to drive to work, work outside of the state/county and own fewer automobiles.

Block Group 1, Census Tract 106

The seventh set of bars, from left to right, represents the top seventh block group that exceeds the minimum threshold. Located mostly in Riceboro and portions in Walthourville, these block groups have a positive contribution by two of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a long commute time to work, prefer to walk or bike to work, work outside of the state/county and own fewer automobiles.

Total Population Comparison



1. Block Group 2, Census Tract 102.03, Liberty County, Georgia
2. Block Group 4, Census Tract 103, Liberty County, Georgia
3. Block Group 9, Census Tract 101, Liberty County, Georgia
4. Block Group 1, Census Tract 102.01, Liberty County, Georgia
5. Block Group 1, Census Tract 102.02, Liberty County, Georgia
6. Block Group 2, Census Tract 103, Liberty County, Georgia
7. Block Group 2, Census Tract 104, Liberty County, Georgia

Block Group 2, Census Tract 102.03
The first set of bars, from left to right, represents the top block group that exceeds the minimum threshold. Located mostly in Hinesville and portions in Walthourville, these block groups have a positive contribution by all four attributes, and represent a profile of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county and own fewer automobiles.

Block Group 4, Census Tract 103
The second set of bars, from left to right, represents the top second block group that exceeds the minimum threshold. Located mostly in Hinesville and portions in Flemington, these block groups have a positive contribution by all four attributes, and represent a profile of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county and own fewer automobiles.

Block Group 9, Census Tract 101
The third set of bars, from left to right, represents the top third block group that exceeds the minimum threshold. Located in Fort Stewart, these block groups have a positive contribution by three of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county but own more automobiles.

Block Group 1, Census Tract 102.01
The fourth set of bars, from left to right, represents the top fourth block group that exceeds the minimum threshold. Located in mostly Hinesville and portions in Gum Branch, these block groups have a positive contribution by three of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county but own more automobiles.

Block Group 1, Census Tract 102.02
The fifth set of bars, from left to right, represents the top fifth block group that exceeds the minimum threshold. Located in Hinesville, these block groups have a positive contribution by three of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to walk or bike to work within the state/county but own more automobiles.

Block Group 2, Census Tract 103
The sixth set of bars, from left to right, represents the top sixth block group that exceeds the minimum threshold. Located Hinesville, these block groups have a positive contribution by two of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a long commute

time to work, prefer to walk or bike to work, work outside of the state/county and own fewer automobiles.

Block Group 2, Census Tract 104
The seventh set of bars, from left to right, represents the top seventh block group that exceeds the minimum threshold. Located mostly in Hinesville with portions in Flemington and Allenhurst, these block groups have a positive contribution by two of the four attributes with a profile consisting of transportation users in the top seventieth percentile that have a short commute time to work, prefer to drive to work and work within the state/county but own more automobiles.

Preliminary Recommendations

Given the findings generated by our desktop method analysis, we compiled lists of recommendations that will promote a more complete/multimodal transportation system for the study area. The lists provide direction and distances that correspond with a map geographically depicting the listed information. Our preliminary recommendations are as follows:

Bicycle Lanes and Sidewalks

The preliminary recommendations cover 40 miles of proposed new bike lanes and sidewalks, which are listed in the table below.

Name	Description	Condition	Distance (miles)
US84	Existing sidewalks west on US 84 to connect Liberty High on US 84 to Airport Rd	Existing sidewalks	9.51
Kings Rd	Follow Kings Road southeast on Martin Road and take Stacey Drive south to General Stewart Way	Recommended new bike/ped	1.00
Main St	From Martin Road south on Main Street to existing sidewalks	Recommended new bike/ped	.21
Main St	Existing sidewalks on Main Street	Existing sidewalks	.18
Main St	From existing sidewalks south on Main Street to US 84	Recommended new bike/ped	3.62
Gen Stewart Way	From US 84 west on General Stewart Way to General Screven Way	Recommended new bike/ped	1.75

Gen Screven Way	From Fort Stewart south on General Screven Way to US 84	Recommended new bike/ped	1.66
Hwy 196	From General Screven Way southwest on Highway 196 to fork with Rye Patch Road	Recommended new bike/ped	5.26
Airport Rd	From Highway 196 south on Airport Road to Talmadge Rd	Recommended new bike/ped	7.29
Shaw Rd	From Main Street south on Shaw Road to Airport Road	Recommended new bike/ped	2.63
Barry McCaffrey Blvd	From Shaw Road west on Barry McCaffrey Boulevard to Airport Road	Recommended new bike/ped	1.38
Pineland Ave	From Highway196 south on Pineland Avenue to Kelly Drive	Recommended new bike/ped	1.07
Frank Cochran Dr	From Fort Stewart south on Frank Cochran Drive to US 84	Recommended new bike/ped	3.04
Kacey Dr	From US 84 west on Kacey Drive to Main Street	Recommended new bike/ped	.2
Wallace Martin Dr	Coates Road to Martin Wallace Drive south to US 84	Recommended new bike/ped	1.56
Glenn Bryant Rd	Existing sidewalks west on Glenn Bryant Road connects Main street to Pineland Avenue	Existing sidewalks	.89
Washington Ave	Existing sidewalks west on Washington Avenue connects US 84 to Main Street	Existing sidewalks	.39
Gause St	Existing sidewalks south on Gause Street connects General Stewart Way with General Screven Way	Existing sidewalks	.8
Taylor Rd	Existing sidewalks on Taylor Road south to General Stewart Way	Existing sidewalks	.35
Tupelo Tr	Starting at Sandy Run Dr east on Tupelo Trl to end	Existing sidewalks	.12
Desert Storm	Starting at Main west on Desert Storm Dr to Woodcrest Cir	Existing sidewalks	.63
Ralph Quarterman	Starting at US 84 west on Ralph Quarterman Dr to Pointe South Dr	Existing sidewalks	.37

Willowbrook	Starting at EG Miles northwest to Pacific	Existing sidewalks	.13
Weeping Willow	Starting at Willowbrook northeast on Weeping Willow Dr to Frank Cochran Dr	Existing sidewalks	.19
Pacific	Starting at Willowbrook northeast on Pacific Pl to Frank Cochran Dr	Existing sidewalks	.15
Palm	Starting atEG Miles northwest on Palm Dr to Oak St	Existing sidewalks	.4
Grassway	Starting at EG Miles northwest on Grassway St to end	Existing sidewalks	.11
Norwood	Starting at Grassway St southwest and west to end	Existing sidewalks	.1
Arlington	Starting at EG Miles northwest on Arlington Dr to Wellington Way	Existing sidewalks	.5
Deen	Starting at Main heading west to Dykes St	Existing sidewalks	.07
Sandy Run	Starting at US 84 southeast on Sandy Run Dr to end	Existing sidewalks	1.15
Grayfox	Starting at Forest St northeast on Gray Fox Rd to Sandy Run Dr	Existing sidewalks	.21
Hendry	Starting atE Gen Screven northeast on W Hendry St to Main St	Existing sidewalks	.17
Grovepoint	Starting at Frank Cochran Dr west on Grove Point Dr to Black Willow Dr	Existing sidewalks	.31
Marylou	Starting at Tupelo Trl north on Mary Lou Dr to Patriots Trl	Existing sidewalks	.25
Bradwell	Starting at Washington Ave south on Bradwell to E Court St	Existing sidewalks	.14
Court	Starting at Main west on Court St to Gause St	Existing sidewalks	.3
West	Starting at Court north on West St to Memorial Dr	Existing sidewalks	.07
Olive	Starting at Gen Screven west on Olive St to Madison Dr	Existing sidewalks	.52
Commerce	Starting at Washington Ave south to Caswell St	Existing sidewalks	.09

Memorial	Starting at N Main northwest on Memorial Dr to Gen Stewart Way	Existing sidewalks	.65
Bradwell	Starting at Washington north on Bradwell to end	Existing sidewalks	.53
Madison	Starting at Olive northeast and east on Madison Dr to Pineview St	Existing sidewalks	.37
Pafford	Starting at Gen Screven east on Pafford St to Fraser Cir	Existing sidewalks	.08
Fraser	Starting at Pafford north and east on Fraser Cir to Gen Screven Way	Existing sidewalks	.16
Hall	Starting at Pafford north on Hall St to end	Existing sidewalks	.16
Mills	Starting at Bradwell west on Mills Ave to Rebecca St	Existing sidewalks	.36
Jackson	Starting at Mills Ave north on Jackson St to Booker St	Existing sidewalks	.04
Shipman	Starting at Gause St east to Rebecca St	Existing sidewalks	.1
Floyd	Starting at Bradwell St west to end	Existing sidewalks	.11
Olmstead	Starting at Main St northwest on Olmstead Dr to Ft Stewart boundary	Existing sidewalks	.49
Main West	Starting at Main west to West St	Existing sidewalks	.05
US84	From Highway 17 west on US 84 to Robinson Street	Recommended new bike/ped	6.55
Bradwell	Starting at Washington north on Bradwell to end	Recommended new bike/ped	.85
Forest St	Starting at US 84 southeast on Forest St to end	Recommended new bike/ped	1.13
Industrial Blvd	Starting at US 84 southwest on Industrial Blvd to end	Recommended new bike/ped	.5

Desktop Analysis Conclusion

Within this desktop analysis study, the current social-economic patterns throughout Liberty County, Georgia and how these patterns relate to policy and the need of a complete transportation system were identified. Based on the understanding that an integration of all modes of transportation in a system creates a system of interconnectivity, and efficiency, the focus was on multimodal impact of transit, bicycle, and pedestrian facilities as integral parts of the

transportation system, the identification of goals to help assist facilitation of this integration, and the development of a methodology to accomplish these goals. The methodology allowed the development of a transportation user profile, the identification of the current connectivity and deficiencies, and the development of recommendations that promote a more complete multimodal transportation system and capture SRTS zones and neighborhood cores. The study efforts provide an understanding of the current condition and accounts for some future condition of the study area; however, this analysis alone is not sufficient to determine a multimodal network. A field survey was undertaken to augment and verify the recommendation of the desktop study. The next section reflects the efforts of this next phase.

Field Verification

A field survey was conducted to evaluate the data used to analyze the transportation system during the desktop multimodal analysis, review the existing transportation network, collect additional data necessary to identify projects especially refurbishment or Quick Fix projects, and to physically observe the existing transportation network to provide additional insight into potential projects. The field survey was conducted utilizing a windshield survey over a three day period and resulted in field notes and corresponding photo log, which are found in the Appendix.

The process of the windshield survey included the verification of existing data set used during the desktop survey. Specifically the Geographic Information Systems (GIS) data files or "shapefiles" provided by various local and state sources were mapped and their existence and location was physically double-checked during the field review. The windshield survey also allowed the reviewer the observe first-hand the traffic patterns in the study area including automotive, bicycle and pedestrian movements. The field survey served many purposes, providing the opportunity to gain local knowledge and experience, identifying some specific multimodal projects, and reviewing the data leading to the evaluation of the preliminary desktop analysis based on existing data. This verification of existing data allows for a more accurate analysis of the transportation system its multimodal deficiencies, and provides the Hinesville Area Metropolitan Planning Organization (HAMPO) with additional data sets to use on future reports & analyses.

IV. Findings & Recommendations

The "Findings" section of this study includes sections dedicated to establishing the multimodal improvement types utilized during the analysis; identification of the roadway facilities where multimodal improvements are recommended; identification of recommended improvement types along roadway facilities; a preliminary prioritization of these projects; inclusion of some of the specific

observations of the reviewer during the field survey; and identification of three specific types of possible improvements.

Multimodal Improvement Classifications

Determining the appropriate classification designations for multimodal improvements was one of the most challenging tasks of this study. The goal of the classification system was to identify multimodal needs and identify potential multimodal projects. In order to identify specific detailed projects, there is the need to examine the improvement area more closely and conduct various design analysis such as existing right-of-way, avoidance of environmental impacts, and other project design issues. However, it was important to identify general types of multimodal improvements needed.

The classification designations used to classify multimodal needs were:

- **Share the Road**: This classification denotes that while no physical improvements may be necessary to the facility. The minimum effort would be to install "Share the Road" signs along the roadway to warn and advise automotive users that bicyclist may be utilizing the facility.

- **Refurbishment**: This designation denotes that there are existing sidewalks on either one or both sides of the roadway facility and that a portion sidewalk is in need of attention. Attention may include either and or both general repair and re-striping at intersections. However, it is important to note that while the designation of refurbishment was identified during the windshield survey, the reviewer did not classify all minor improvements needed to existing sidewalks as in need of attention or refurbishment. Facilities only received this designation when the reviewer noticed a significant need.

- **Add Bike Lane/Bike Path**: This classification suggests the need to add some level of bicycle treatment to the roadway facility including an assigned bike lane on either one or both sides of the facility or a separate bike path.

- **Add Bike Lane & Refurbish**: This classification suggests the need to add some level of bicycle treatment to the roadway facility including an assigned bike lane on either or on both sides of the facility, but also suggests to the need to refurbish existing sidewalks.

- **Add sidewalk**: This designation denotes the general need to add a sidewalk to facilitate the safe travel of pedestrians. This designation was used where there is no existing sidewalk or where there is an existing sidewalk and an additional one is needed.

- **Add two sidewalks**: This designation denotes the general need to add sidewalks to both sides of the roadway to facilitate the safe travel of pedestrians.

- **Full facilities**: This is the most significant level of multimodal improvement needed. It suggests the need to add both sidewalks and bicycle improvements in some configuration to the roadway facility. Configuration can include duel sidewalks with dual bicycle lanes, or a single sidewalk with a single bike lane, or some combination.

Multimodal Recommendations

In order to better understand interconnection between existing roadway facilities and recommended multimodal improvements and how these multimodal improvements interact with the existing transportation system, GIS maps were created. The following map set of the general recommendations for multimodal treatments along with the study area's existing transportation system are found in the Appendix.

Improvement Highlights & the Hinesville Downtown Multimodal District

While determining and selecting the appropriate multimodal improvements to highlight and single out can be daunting, and because just a list and corresponding maps may not be enough, here are just three of the recommended multimodal improvements that should be highlighted.

The first highlight that needs to be identified in the multimodal improvement list is the transit route and the amount of recommended bicycle and pedestrian projects along the existing proposed transit route. The project team recognized the importance of identifying an interconnected multimodal transportation network designed to meet the needs of the transportation user, and that encourages and facilitates walking, bicycling and transit usage.

The second highlight is the focus of providing a regional multimodal system by identifying and including bicycle and pedestrian multimodal improvement projects throughout the study area. Improvements were identified and recommended in the cities of Walthourville, Allenhurst, Hinesville, Flemington, Midway, and in the area of Sunbury. Projects were not identified in the City of Riceboro, but were instead focused around the US 84 corridor.

The third highlight was the project team's goal of establishing a Hinesville downtown multimodal district. The project team identified the need to recommend bicycle and pedestrian multimodal improvements to assist HAMPO in providing the full range of multimodal transportation options to users in the downtown area. The downtown area identified by the project team includes the area enclosed by US 84, General Screven Way, and General Stewart Way.

Over fourteen bicycle and pedestrian projects were recommended in this downtown district.

Final Recommendations

The goal of this section is not to necessarily point out the differences, omissions or other in the desktop analysis, but to stress the importance and need of the field survey. The field survey compliments the desktop analysis. Utilizing both analysis techniques, assists HAMPO obtain a clearer picture of the multimodal needs.

The updating of the existing sidewalk facilities data as a product of the field survey did influence and produce many of the differences between the desktop analysis and the final recommendations. For example, when existing facilities were added to the data many of the preliminary recommendations were no longer needed, or the need might have changed from addition of a new sidewalk to the refurbishment of an existing one.

In addition, development, land use and coordination with other projects and plans were also considered. The final recommendations and prioritization included all of these components. The maps of these recommended improvements are found in the Appendix.

Multimodal Project Prioritization

This section focuses the prioritization of the identified multimodal projects. These projects are grouped into priority tiers based on the following metrics: coordination with other projects and plans, SRTS, and access to major attractors and generators. In addition to the prioritization process, general cost estimates for the proposed projects were also developed.

The first step in the prioritization process focused on the stratification of the projects into ranges based on the estimated costs. The four cost bands included:

- ✓ < $100,000
- ✓ $100,000 - $499,999
- ✓ $500,000 - $999,999
- ✓ $1,000,000

The next step was to prioritize the projects within the cost bands listed above; however, prioritizing solely on cost would not necessarily result in true priorities. Reasons suggest that one project may be over one million dollars and seem important based on costs, but may not serve any or other facilities. In order to validate priorities, other conditions and landmarks within proximity of the proposed facility is implemented, thus a matrix was created. The project matrix

consisted of points associated with a SRTS (Safe Routes To School); connections to Community Facilities, Major Employers, and Parks; and coordination with Existing Plans. Each of these elements received a point and then the points were totaled within each project creating a column of Total Facility Points.

To determine whether to attribute a facility with a SRTS tally, a map with all the schools was assembled and reviewed with regard to each identified project. A one mile buffer surrounding each school was identified and if the project was within the buffer, a point was allocated. Even though an avid pedestrian or bicyclist may advocate that one mile is too close, the distance is appropriate for the average citizen. The metrics identified as Community Facilities, Major Employers, and Parks were divided into two columns: one for Bike and the other for Pedestrian. A ½- mile buffer was identified for Pedestrian and a 1 ½ mile buffer for Bicycle was identified. If the distance from the point location to the facility was within these buffers, a point was awarded. Typically, if a Pedestrian point was awarded, the bicycle point was also awarded. The final column of this matrix was for existing plans or projects that are already being conducted. The points within the matrix were totaled to identify which facilities met the majority of the identified attributes.

Based on the metrics described above, the priority projects were established and grouped into priority tiers. In addition to the identified metrics and point totals, professional judgment was also used in the prioritization process. The majority of the facilities in Priority Tiers 1 and 2 are higher cost, indicating a SRTS or coordination with an existing plan. For example, a project costing $200,000 that is one mile with 3 points is important, but associated with a project already planned may have a higher priority than another project that costs less, shorter length, and has more points.

Below are four tables that incorporate all four priority tiers. Within each tier, each project is identified, along with the project Termini, the Proposed Improvement, Length, Cost Estimate, Total Facility Points, and Existing Plans. Based on all factors, each facility was prioritized within the tier.

Tier 1 Priority

Facility	From	To	Proposed Improvement	Length	Cost Estimate ($)	Total Facility Points	Existing Plans
US 84	Flemington	Midway	Add Bike Lane/Path	8.8	2,904,000	4	|
US 84	Dunlevie	Frank Cochran	Add Bike Lane/Path	2.87	947,100	5	|
US 84	Arnold Dr.	Kent	Refurbish	0.96	158,400	8	|
US 84	Arnold Dr.	Airport Rd	Add Full Facilities	0.1	49,500	7	|
US 84	Kent	Dunlevie	Add Full Facilities	0.59	292,050	6	|
US 84	Midway	I-95	Add Bike Lane/Path	3.66	1,207,800	3	|
US 84	Frank Cochran	Brewton Parker	Refurbish	3.53	582,450	5	|
Airport Rd	Barry McCaffery Blvd	Taylor Creek Middle School	Add Full Facilities	1.35	668,250	4	|
Dasher Rd	US 84	Midway Middle School	Add Full Facilities	0.57	282,150	5	
Shaw Rd/S. Main	Barry McCaffery Blvd	Frank Cochran	Add Full Facilities	2.55	1,262,250	5	

Tier 2 Priority

Facility	From	To	Proposed Improvement	Length	Cost Estimate ($)	Total Facility Points	Existing Plans
SR 119	US 84	Barry McCaffrey Blvd	Add Bike Lane/Path	1.16	382,800	4	|
Island Hwy	Ft. Morris Rd	Youmans Rd	Add Bike Lane/Path	5.47	1,805,100	2	|
Island Hwy	I-95	Trade Hill Rd	Add Bike Lane/Path	3.89	1,283,700	2	|
South Main	Frank Cochran	General Screven	Add Full Facilities	1.06	524,700	5	
Main St.	General Screven	General Stewart	Add/Upgrade Sidewalk	1.05	173,250	5	
General Stewart Ext.	General Stewart	General Screven	Add/Upgrade Sidewalk	0.4	66,000	5	
Harrison Dr.	General Stewart	Martin Rd	Add/Upgrade Sidewalk	0.2	33,000	6	
Shaw Rd	Airport Rd	Barry McCaffrey Blvd	Add Bike Lane/Path	1.62	534,600	3	
Wallace Martin	US 84	Joseph Martin	Add Bike Lane/Path	0.81	267,300	4	
Bradwell	Washington	Bradwell Saint Ext	Add/Upgrade Sidewalk	1.15	189,750	4	
Deal Street	S. Main	SR 196	Add Full Facilities	0.48	237,600	4	

Tier 3 Priority

Facility	From	To	Proposed Improvement	Length	Cost Estimate ($)	Total Facility Points	Existing Plans
Fort Morris Rd	Trade Hill Rd	Sunbury Rd	Add Bike Lane/Path	2.8	924,000	2	|
Trade Hill	Island Hwy	Fort Morris	Add Bike Lane/Path	0.78	257,400	2	|
W. Mills	Rebecca	Main	Refurbish	0.17	28,050	4	
Sandy Run	US 84	Gray Fox Rd	Add Bike Lane/Path	0.59	194,700	4	
Commerce	MLK	Liberty	Add/Upgrade Sidewalk	0.08	13,200	5	
Taylor Rd	General Stewart	Olmstead Dr.	Add/Upgrade Sidewalk	0.6	99,000	3	
SR 196	Pineland	Frank Cochran	Refurbish	0.51	84,150	4	
General Stewart	Main St.	S. Gause	Add/Upgrade Sidewalk	0.27	44,550	4	
Martin Rd	Harrison Dr.	Kings Rd	Add/Upgrade Sidewalk	0.26	42,900	4	
Rebecca	Memorial	Shipman	Add/Upgrade Sidewalk	0.25	41,250	4	
SR 119	Dunlevie	US 84	Add Bike Lane/Path	2.04	673,200	4	
Gause		Memorial	Refurbish	0.35	57,750	4	
Forest St.	US 84	Gray Fox Rd	Add Full Facilities	0.59	292,050	2	
SR 196	Frank Cochran	Main	Refurbish	1.31	216,150	3	
Patriots Trail	US 84	Mary Lou	Add Bike Lane/Path	0.37	122,100	3	
Tupelo Trail	Sandy Run	Mary Lou/end	Add Bike Lane/Path	0.35	115,500	3	
Kings Rd	Martin Rd	end	Add/Upgrade Sidewalk	0.52	85,800	3	
Dunlevie	US 84	SR 119	Add Full Facilities	1.97	975,150	2	

Tier 4 Priority

Facility	From	To	Proposed Improvement	Length	Cost Estimate ($)	Total Facility Points
S.Main St.	Darsey Rd.	US 84	Add Bike Lane/Path	0.53	174,900	2
Rye Patch	Miller Ln	SR 196	Add Bike Lane/Path	0.47	155,100	2
Darsey Rd.	Shaw Rd.	US 84	Add Bike Lane/Path	0.14	46,200	2
Main	General Stewart	Lakeview Dr.	Add/Upgrade Sidewalk	0.35	57,750	3
Bradwell Saint Ext	end	end	Add/Upgrade Sidewalk	0.3	49,500	3
Lakeview Dr.	Main St.	Kings Rd	Add/Upgrade Sidewalk	0.28	46,200	2
Gray Fox Rd	Forest	Sandy Run/US84	Add Bike Lane/Path	0.77	254,100	2
Mary Lou	Tupelo Trail	Patriots Trail	Add Bike Lane/Path	0.26	85,800	2
SR 196	SR 119 (Airport Rd)	Joyner Rd	Add Full Facilities	1.55	767,250	1
Brewton Parker	US 84	Old Hines	Add Full Facilities	0.54	267,300	1
SR 196	Joyner Rd	Pineland Ave	Add Full Facilities	0.45	222,750	1
Old Hines	Brewton Parker	US 84	Add Full Facilities	0.35	173,250	1
Old Sunbury	US 84	Baker Beal Lane	Add Full Facilities	0.33	163,350	1
Glenn Bryant Rd	South Main	Pineland Ave	Add/Upgrade Sidewalk	0.87	143,550	1
Kacey Dr	US 84	South Main	Add/Upgrade Sidewalk	0.2	33,000	1

Preliminary Cost Estimates

To determine the cost of each project, a cost estimating tool provided by the Hinesville Area Metropolitan Planning Organization, was utilized. This tool incorporates an average cost estimate per mile. The average construction costs of a Bicycle/Pedestrian facility per mile is roughly $300,000 while the average construction cost of Sidewalk improvements is roughly $150,000. Preliminary Engineering (PE) and Contingency costs are also included with the construction costs. PE costs are usually 10 percent of the construction cost while Contingency costs are 10 percent of the PE costs. Adding the Construction, Preliminary Engineering, and Contingency costs resulted in the total cost of the project.

An example of the cost estimation process is General Stewart Way from Main St. to Gause St. The length of this road segment is 0.27 miles and proposed road improvement of adding/upgrading sidewalks only. Thus, $150,000 X 0.27 miles = $40,500. To determine the Preliminary Engineering cost, $40,500 X 0.10 = $4,050 and the contingency cost, $4,050 X 0.10 = $405. The total cost of creating or refurbishing a sidewalk along this road would cost, $40,500 + $4,050 + $405 = $44,550

APPENDIX

US 84/38 TRANSIT IMPLEMENTATION PHASE II

ATTRACTORS & GENERATORS MAJOR EMPLOYERS

Bryan

Chatham

Long

McIntosh

FORT STEWART

FLEMINGTON

GUM BRANCH

HINESVILLE

MIDWAY

ALLENHURST

WALTHOURVILLE

RICEBORO

LEGEND

- Major Employers 100+
- Major Roadways
- Interstate
- Cities
- Liberty Block
- Surrounding Counties

0 1.25 2.5 5 7.5

Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

Attractors & Generators
Comunity Facilities

LEGEND

- Airport
- Educational
- Government
- County Jail
- Healthcare
- Library
- East Coast Greenway
- Coastal Georgia Greenway
- Major Roads
- RailRoad

0 1 2 3 4
Miles

Bryan
Chatham
Long
McIntosh
Atlantic Ocean
FLEMINGTON
HINESVILLE
GUM BRANCH
ALLENHURST
WALTHOURVILLE
MIDWAY
RICEBORO

US 84/38 TRANSIT IMPLEMENTATION PHASE II

ATTRACTORS & GENERATORS PARKS

Bryan

Chatham

Long

McIntosh

FORT STEWART

FLEMINGTON

GUM BRANCH

HINESVILLE

ALLENHURST

WALTHOURVILLE

MIDWAY

RICEBORO

LEGEND

- Y — Hiking Parks
- Q — Non-Hiking Parks
- Major Roadways
- Interstate
- Cities
- Liberty Block
- Surrounding Counties

0 1.25 2.5 5 7.5

Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

SAFE ROUTES TO SCHOOLS ZONES

Bryan

Chatham

Long

McIntosh

FORT STEWART

FLEMINGTON

GUM BRANCH

HINESVILLE

ALLENHURST

WALTHOURVILLE

MIDWAY

RICEBORO

LEGEND

- SRTS Schools
- SRTS Zone
- Major Roadways
- Interstate
- Cities
- Liberty Block
- Surrounding Counties

NOTE:
In accordance with guidance by FHWA & SAFETEA_LU, we determined a Safe Routes to Schools Boundary made up of a two mile radius surrounding elementary and middle public schools.

0 1.25 2.5 5 7.5
Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

NEIGHBORHOOD CORES

Bryan

Chatham

Long

McIntosh

FORT STEWART

FLEMINGTON

GUM BRANCH

HINESVILLE

ALLENHURST

WALTHOURVILLE

MIDWAY

RICEBORO

LEGEND

- Neiborhood Core
- Major Roadways
- Interstate
- Cities
- Liberty Block
- Surrounding Counties

0 1.25 2.5 5 7.5

Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

OVERVIEW:
SYSTEM USER PROFILE
TOP % AGED

Bryan

Chatham

Long

McIntosh

FLEMINGTON

GUM BRANCH

HINESVILLE

MIDWAY

ALLENHURST

WALTHOURVILLE

RICEBORO

LEGEND

- Top % Aged Block
- Top % Aged Total Pop
- Major Roadways
- Interstate
- Liberty Block
- Surrounding Counties

0 1.25 2.5 5 7.5

Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

OVERVIEW:
SYSTEM USER PROFILE
TOP % YOUNG

Bryan

Chatham

Long

McIntosh

FLEMINGTON

GUM BRANCH

HINESVILLE

MIDWAY

ALLENHURST

WALTHOURVILLE

RICEBORO

LEGEND

- Top % Young Block
- Top % Young Total Pop
- Major Roadways
- Interstate
- Liberty Block
- Surrounding Counties

0 1.25 2.5 5 7.5

Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

Proposed Transit and Dependent Blocks

Bryan

Chatham

Long

McIntosh

FORT STEWART

FLEMINGTON

GUM BRANCH

HINESVILLE

MIDWAY

ALLENHURST

WALTHOURVILLE

RICEBORO

LEGEND

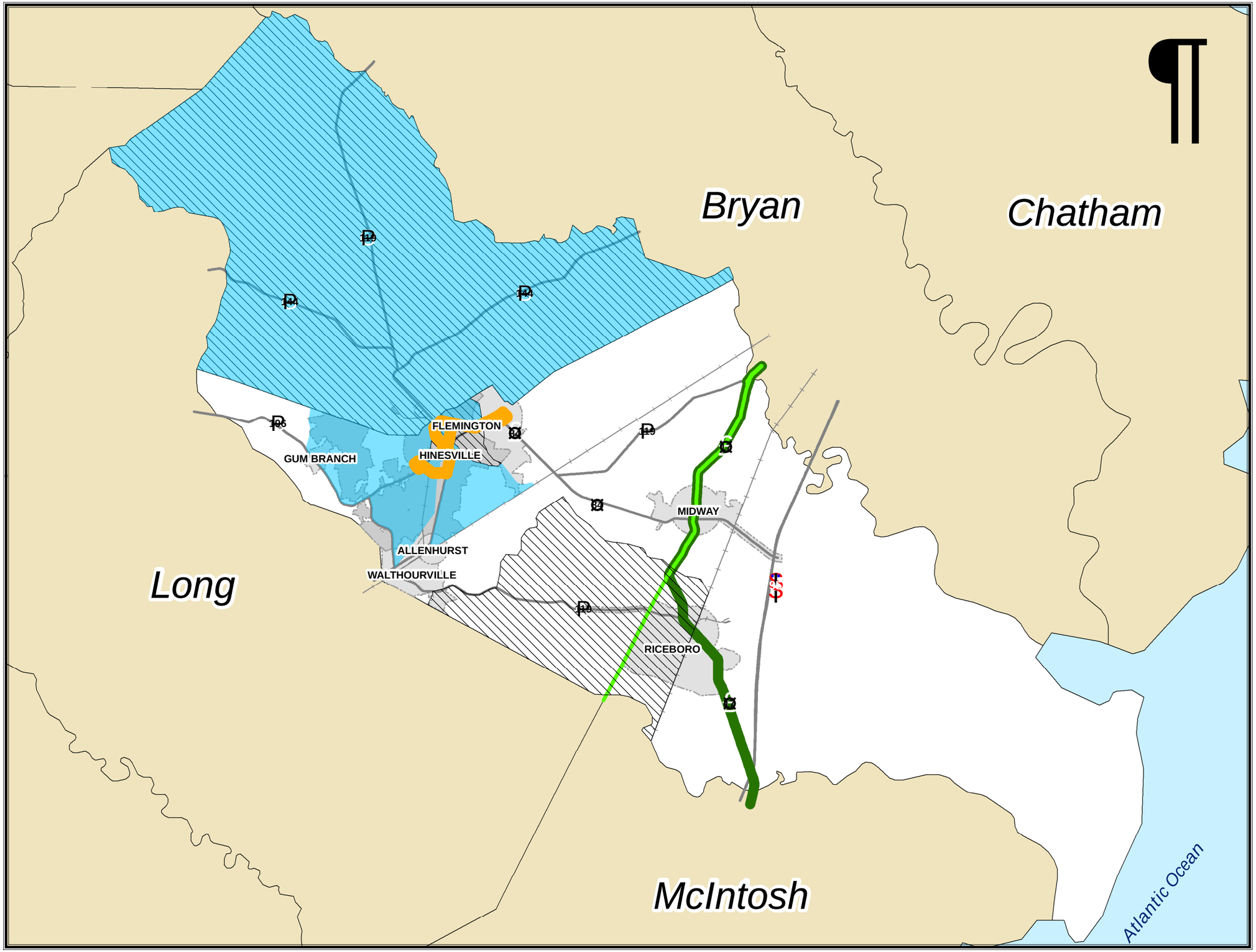
- Transit
- Top % Young Block
- Top % Aged Block
- Cities
- Liberty Block
- Surrounding Counties

NOTE:
In accordance with guidance by FHWA & SAFETEA_LU, we determined a Safe Routes to Schools Boundary made up of a two mile radius surronding elementary and middle public schools.

0 1.25 2.5 5 7.5
Miles

US 84/38 TRANSIT IMPLEMENTATION PHASE II

Overview
System User Profile
Non-Dependents and Transit



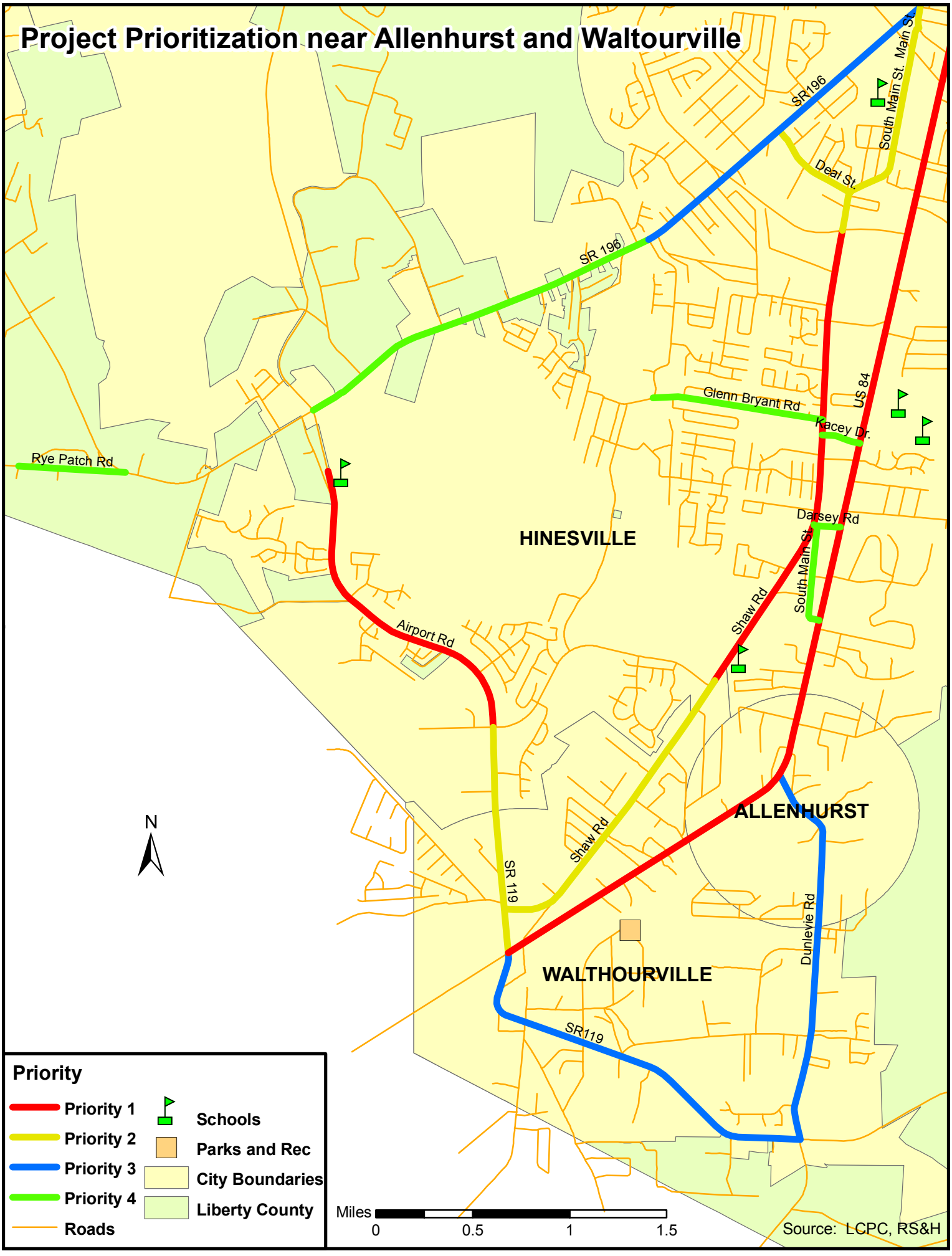
LEGEND

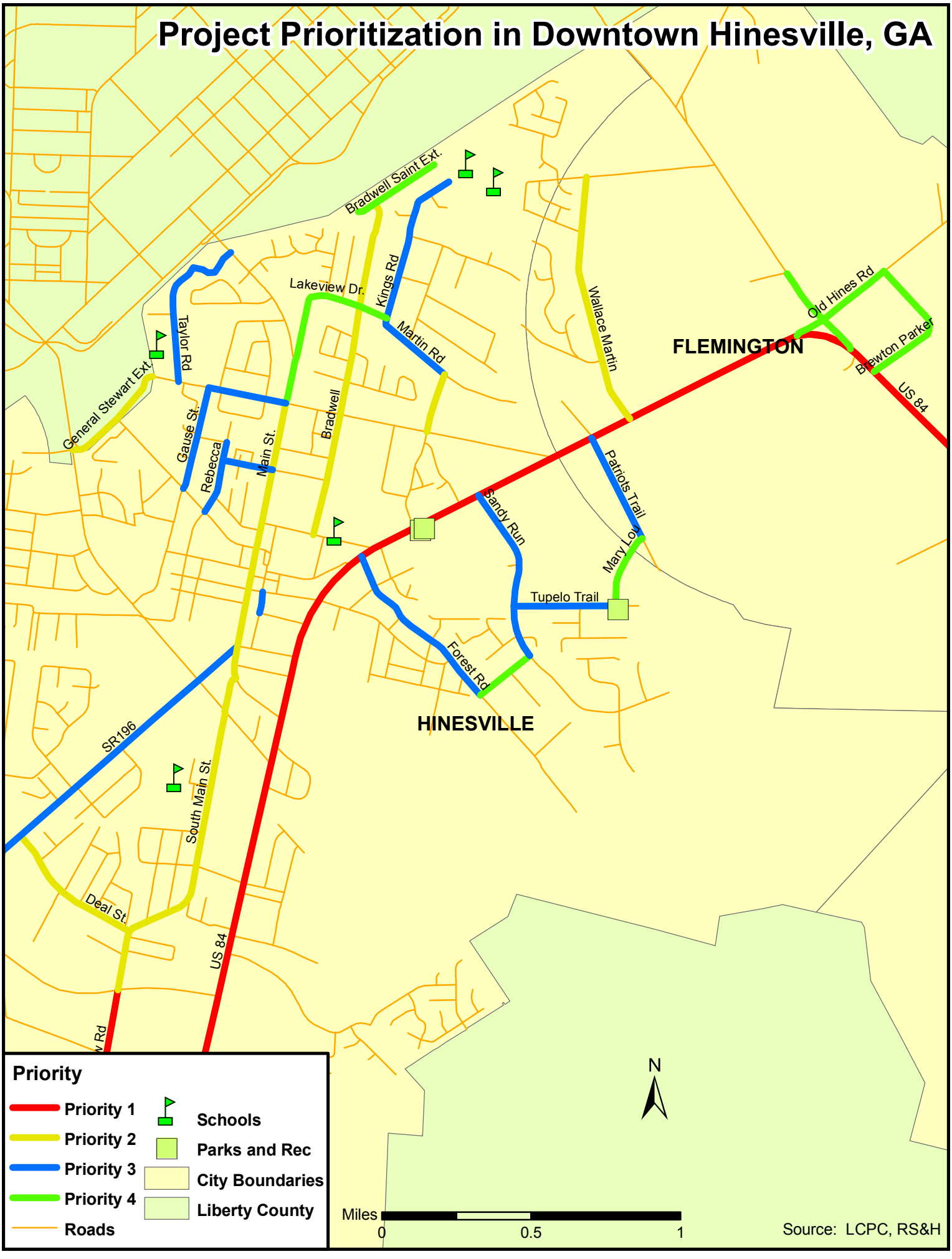
- Transit
- 70th % Population*
- 70th % Block^
- East Coast Greenway
- Coastal Georgia Greenway
- Major Roads
- RailRoad

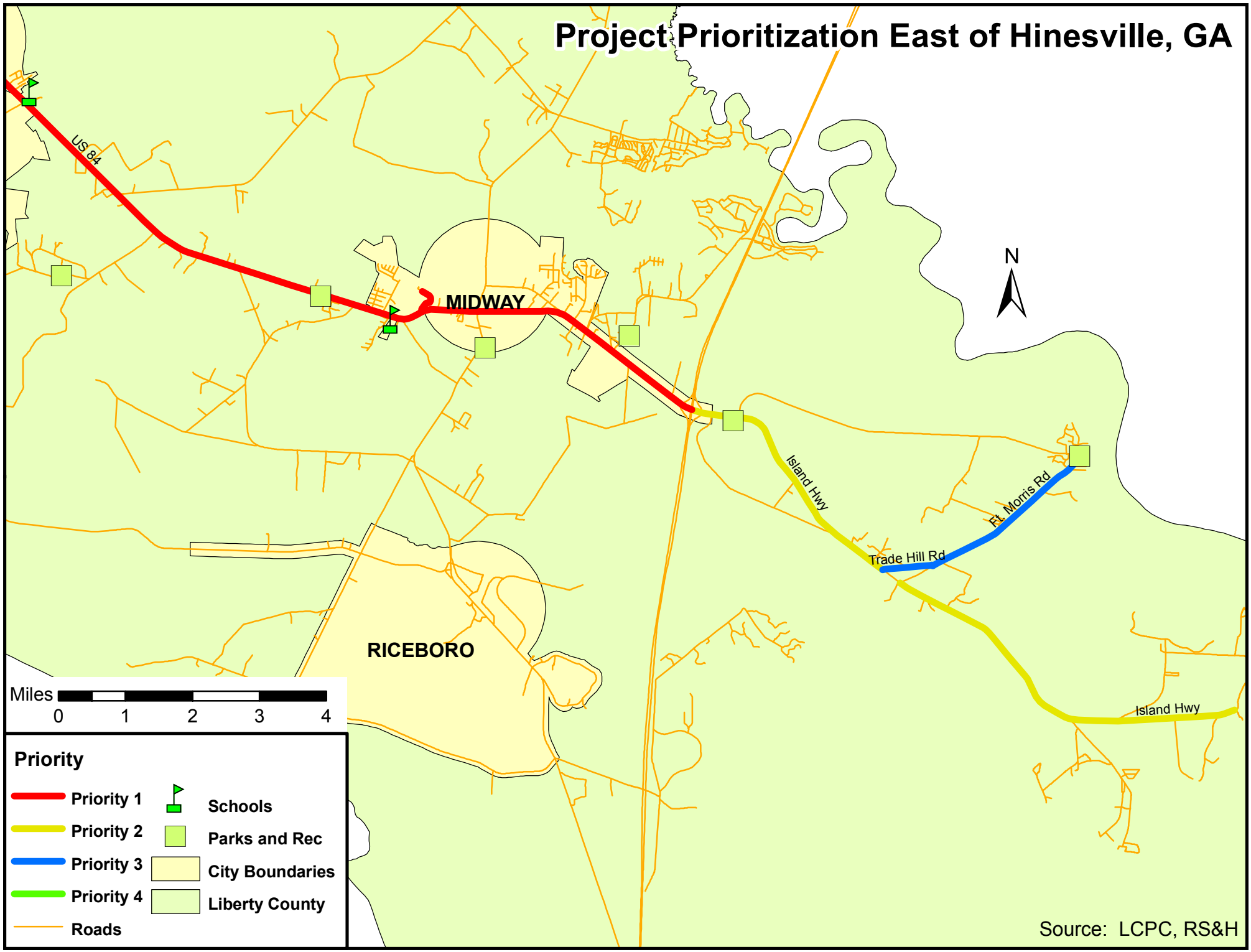
*Blocks that have the highest percent of Liberty County's non-dependents

^Blocks that have the highest percent of non-dependents

0 1 2 3 4
Miles


Project Prioritization near Allenhurst and Waltourville
SR196
South Main St.
Main St.
Deal St.
SR 196
US 84
Glenn Bryant Rd
Kacey Dr.
Rye Patch Rd
HINESVILLE
Darsey Rd
South Main St.
Shaw Rd
Airport Rd
ALLENHURST
Shaw Rd
SR 119
Dunlevie Rd
WALTHOURVILLE
SR119
N
Priority
Priority 1
Priority 2
Priority 3
Priority 4
Roads
Schools
Parks and Rec
City Boundaries
Liberty County
Miles
0
0.5
1
1.5
Source: LCPC, RS&H


Project Prioritization in Downtown Hinesville, GA
Bradwell Saint Ext.
Kings Rd
Lakeview Dr.
Martin Rd
Wallace Martin
Old Hines Rd
Brewton Parker
FLEMINGTON
US 84
Taylor Rd
General Stewart Ext.
Gause St.
Rebecca
Main St.
Bradwell
Patriots Trail
Sandy Run
Mary Lou
Tupelo Trail
Forest Rd
HINESVILLE
SR196
South Main St.
Deal St.
US 84
Priority
Priority 1
Priority 2
Priority 3
Priority 4
Roads
Schools
Parks and Rec
City Boundaries
Liberty County
N
Miles
0
0.5
1
Source: LCPC, RS&H


Project Prioritization East of Hinesville, GA
US 84
MIDWAY
RICEBORO
N
Island Hwy
Ft. Morris Rd
Trade Hill Rd
Island Hwy
Miles
0 1 2 3 4
Priority
Priority 1
Priority 2
Priority 3
Priority 4
Roads
Schools
Parks and Rec
City Boundaries
Liberty County
Source: LCPC, RS&H

US 84 Transit/Bike/Ped Plan – Field Review

Field Notes

- US 84 extend existing sidewalk from Walthourville Market to SR 119 on Westbound
- No existing facility on SR 119 from US 84 to Barry McCaffrey Blvd.
    - Need to widen for bike lane or build sidewalk (Low priority)
- Westchester Lane across Airport (SR 119)
    - Sidewalk ends @ SR 119
    - Other side of Deveraux Rd.
- On SR 196 West of SR 119 there is eroded grass from makeshift pathways
- SR 196 looking West just pass Live Oak
    - Existing small sidewalk starting at Joyner Rd. on both sides of SR 196
- Pineland Ave. looking South just off of Elma G. Miles PKWY (SR 196)
    - Existing small sidewalk on East side of Pine Ave.
- On Glenn Bryant just pass Pineland Ave.
    - Small sidewalk on both sides for only a few hundred feet on the one side
- Desert Storm Dr. @ Tomahawk Tr.
    - Small sidewalk on both sides of Desert Storm Dr.
- Existing small sidewalks on S. Main St. from Glenn Bryant Rd. to Frank Cochran Dr. on Northside of street
- First Street looking East on S. Main
    - S. Main – small sidewalk on Northside
    - Expanded street size and available Right of Way starting @ First Street
- On Wedgewood way looking North on S. main
    - Bicyclist utilizing small sidewalk
- On Shaw (S. Main) past Tower Dr. looking South
    - No pedestrian facility
    - Person walking on grass
- Fairington Subdivision on Wayfair lane off of Barry McCaffrey Blvd.
    - Existing small sidewalks on both sides of all streets
- Existing sidewalks on both sides of Barry McCaffrey Blvd. from Shaw to Kelly St.
    - Southern sidewalk ends at Kelly St., but continues on North side to Airport Rd. (SR 119)
- Jonnie Frasier Park on Shaw Rd. looking North
    - Park and children play ground across from Frasier Rd.

- Noticed numerous logging trucks on this road (SR 119) heading towards US 84 and turning West on US 84 away from Hinesville.
- On US 84 there are sidewalks on Both sides from Dunlevie Rd. to S. Main and all through town
- At SR 119 on US 84 there are no facilities @ intersection
- On US 84 looking @ Lewis Frasier and Frank Long schools
    - No sidewalk facility from US 84 to schools – Needs facility for safety
    - No apparent cross walk over US 84 to neighborhoods
- On US 84 @ Kacey looking North towards S. Main
    - No sidewalk of pedestrian facility – Needs facility to access neighborhoods on S. Main
- Greyhound Bus Depot @ Maple Dr. and US 84
    - Explore possibility to link Greyhound to potential local bus route
- Existing Facilities on Ralph Quarterman Dr.on West side of road only past gas station not all the way to US 84
- Existing Facilities on Eunice Rd. on North side only on both sides but stops @ RR tracks
- Existing Facilities on both sides of SR 119
- Existing Facilities off of SR 119 on Pacific Pl. on North side only, but on both sides of Willowbrook Dr. & on both sides of Weepingwillow Dr.
- Existing Facilities off of Frank Cochran Dr. on Grove Point Dr. on both sides from Frank Cochran Dr. to Black Willow Dr.
- Frank Cochran has protected small sidewalks from Hinesville City Limits just south of fort gate down to construction just N. of SR 119 (SR 196) on both sides
- Frank Cochran is currently a 2 lane North of SR 119 (SR 196)
- Existing Facilities off of SR 119 (SR 196) on Palm Dr. on East side only up to Oak St.
- Existing Facilities off on SR 119 (SR 196) on Arlington Dr. up to Yellow Pine St. on East side only
- Existing Facilities off of SR 119 (SR 196) on Gassaway St. on East side only
- Existing Facilities off of EG Miles PKWY (SR 119/SR 196) & Gassaway St. on Northwood Dr. on South side only
- Existing Facility on S. Main on North side
- Existing Facility off of S. Main on Deen St. on West side only up to Jordye M. Bacon Elementary School
- Since Frank Cochran is under construction from S. Main to EG Miles PKWY (SR 119 & SR 196) there seems to be increased traffic on Deal St. as a connection between S. Main to EG Miles PKWY (SR 119 & SR 196)
    - Needs to add pedestrian facility improvement on Deal St. because it is a small road with no existing facilities
- Existing Facility on S. Main @ General Screven Way on South side and continues around to Ryon Ave. on East side only part of the way down

- Existing Facilities on S. Main @ East Hendry St. on both sides
- Existing facilities on both sides on West Hendry that turn in to EG Miles PKWY heading West
- S. Main @ East Hendry St. looking West
    - Existing facility on S. Main (down Ryon Ave.) & Existing on West Hendry
    - Need to Fix sidewalk, add stripped crossover and add pedestrian safety medians. There is no place for pedestrians using Eastern side of sidewalk on W. Hendry to cross over either to other side of street or to S. Main (Ryon Ave.)
    - There are no facilities on East Hendry St.
- Existing Facilities on Martin Luther King Jr. Dr on West side up to Wilcox St. and then on both sides up to S. Main.
- Existing Facilities on General Screven Way that are separated & protected from US 84 up to Fort.
- Existing Facilities on Memorial Dr. that are separated and protected on both sides from N. Main to Beverly St.
- Existing Facilities on Martin Luther King Jr. Dr North of S. Main St.
    - Needs repair to public parking lot on East side of Martin Luther King Jr. Dr
- Existing Facility on West Court St. from Main St. to Gause St. is on West side only
    - Needs repair
- Existing Facility on Gause St. from Memorial Dr. to General Steward Way on North side
    - Needs repair
- Existing Facilities on General Steward Way that are separated & protected on both sides from US 84 to N. Main St.
- Existing Facilities on General Steward Way West of N. Main St. vary
    - North Side - Existing Facilities on General Steward Way from N. Main St. to Taylor Rd in front of Burton Gwinett Elementary School
    - South Side – Existing Facilities on General Steward Way from N. Main St. to Eastern most section of Steward Terrace
- General Steward is a 4-laned facility from US 84 to Ogden Ave. just north of N. Main St. and 2 –laned facility from Ogden Ave. to General Screven Way
    - There are no facilities on General Steward Way from Burton Gwinett Elementary School around to General Screven Way
- Existing Facilities on Main St. from Memorial St. to General Steward Way on Both sides
- Existing Facilities on Rebecca St. from Memorial St. to West Mills. St. is on one side, but alternates

- Existing Facilities on Shipman Ave. from Rebecca St. to Gause St. on East side only

- Existing facilities on Taylor Rd from General Steward to Button Gwinett Elementary School
- Mobile class room on the sidewalk at Button Gwinett Elementary School
    - Need to fix sidewalk from General Steward to school
- General Steward 4 laning ends @ Ogden St.
- Existing Facilities on Olmstead Dr. from General Steward to Fort that are separated and protected on both sides
- Olmstead Dr. looking North @ N. Main St. veer off
    - Need to improve pedestrian cross-over over N. Main, built pedestrian protective islands
- N. Main looking passed Olmstead Dr. towards Lakeview Dr.
    - No facilities - pedestrians walking in the street
- Lakeview Dr. @ Bradwell St. looking West on Lakeview towards N. Main St.
    - No facilities – need sidewalk
    - During field review saw between 5-10 pedestrians walking on this road
- Need for sidewalk facilities on Bradwell St. & Bradwell St. Extension
- On Bradwell St. @ General Steward looking North towards Lakeview Dr.
    - Need pedestrian facility
- At Stacy Dr. and Martin Dr.
    - Existing Facility on Stacy Dr. from Martin Dr. to General Steward Way on East side only
- Stacy Dr. looking South towards General Steward
    - Need to widen existing facility on Stacy & potential new facility on other side
- Existing Facility on Wallace Martin Dr. from US 84 to Joseph Martin Rd. on West side
- Existing facility on Coates Rd. from Wallace Martin Dr. to Joseph Martin Ave. on North side
- Existing Facility on Joseph Martin Rd. from Wallace Martin Dr. to school
- Existing Facility on Tanglewood Dr. on East side
- Existing Facility on Sandy Run Dr. from Tupelo Tr. To US 84 that is separated and protected on both sides
- Tupelo Tr. looking West at Sandy Run Dr.
    - Need Pedestrian curb ramps to cross from existing West side on Sandy Run Dr. to existing North side on Tupelo Tr.
- Existing Facility – a small recreation path on outside ring of James Brown Park
- Existing Facility on Mary Lou Dr. from Tupelo Tr. to Patriots Tr. that is a separated and protected on West side only
- Existing Facility on Patriots Tr. from James Brown Park to US 84 that is separated and protected on East side only
- Existing Facility on Gray Fox Rd. from Sandy Run Dr. to Forest St. that is separated and protected on both sides.

- There are no facilities on Sandy Run Dr. from Gray Fox Rd. to Tupelo Tr.
- Existing Facility on Eunice Rd. from S. Main St. to railroad tracks on North side only
- Pedestrian Facility does not cross rail road tracks to Bacon Rd.
    - Potential Facility to connect Eunice Rd. at railroad tracks to Bacon Rd. then to McDowell Rd. and up to EG Miles Pkwy
- Frank Cochran Dr. is currently closed from S. Main St. to EG Miles Pkwy
    - Potential separated and protected facility
- Existing Facility on Frank Cochran has protected small sidewalks from Hinesville City Limits just south of fort gate down to construction just N. of SR 119 (SR 196) on both sides
- Existing Facility on Inwood Dr. from Frank Cochran Dr. to Madison Dr. that is not separated and not protected on both sides
- Existing Facility on Madison Dr. from Inwood Dr. to just north of Ivy Lane @ the end of the subdivision
- Existing Facility on Olive St. from railroad tracks to General Screven Way that is not protected or separated on North side
- Existing Facility on Azalea St. from General Screven to rail road tracks
- Existing Facility on Lee St. from Fennell St. bending around to Lee St. on South side
- Existing facility that is separated on Arlington Dr. from EG Miles PKWY to Yellow Pine St. on East side only
- Martin Luther King Jr. Dr. just North of S. Main St. looking South at S. Main St.
    - Existing facility on Martin Luther King Jr. Dr. on both sides
    - Needs repair
- Existing Facility on Court St. from N. Main St. to Gause St. on South side needs repair
- Existing Facility on Gause St. from General Screven Way to General Steward Way on North side
- Existing facility on Rolland St. around on Griffin St. from Gause St. to Memorial Dr. on North side only
- Rebecca St. @ West Mills Ave. looking South on Rebecca St. towards Memorial Dr.
    - Sidewalk switches sides
- Existing facility on West Mills Ave. from N. Main St. to Rebecca St. on North side only
    - Sidewalk needs refurbishment
- West Mills Ave. @ N. Main St. looking at East Mills Ave.
    - Sidewalk mostly OK
- Existing Facility on East Mills Ave. from Bradwell St. to N. Main St. on South side only
- Existing facility on Bradwell St. from West Washington Ave. to just North of East Mills Ave. on East side only

- Existing Facility on Bradwell St. from just North of Martin St. to just S. of General Steward Way on both sides
    - This is a very small segment of sidewalk in front of recently built townhomes on Bradwell St.
- Existing Facility on Bradwell St. from Court St. to West Washington Ave. on both sides
- Bradwell St. near Liberty County Pre-K Center
    - Existing Sidewalk needs repair due to tree growth
- Existing Facility that is separated and protected on Court St. from E. Oglethorpe Highway to Commerce St. on both sides
- Existing Facility on Commerce St. from Martin Luther King Jr. Dr. to just short of Liberty County Court House on East side in front of City Hall
- On General Steward Way @ Taylor Rd. in front of Button Gwinett Elementary School looking North at Mobile class room on existing sidewalk
- Mobile class room on the sidewalk at Button Gwinett Elementary School
    - Need to fix sidewalk from General Steward to school
- General Steward Way @ Gause St. looking East towards Bradwell St.
    - Existing School crosswalk sign
- General Steward Way @ Bradwell St. looming East towards US 84
    - Existing School crosswalk sign and pavement markings near Olvey Field
- US 84 just West of Wallace Martin Dr. looking South at green way used as a recreational trail