



## **GHMPO Bicycle and Pedestrian Plan**

Adopted: March 14, 2006

Prepared for:  
Gainesville-Hall  
Metropolitan Planning Organization

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In association with:  
The Jaeger Company



# GHMPO Bicycle and Pedestrian Plan

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## 1. Introduction

### 1.1 Background

Residents and leaders in Hall County have consistently acted to maintain and enhance the quality of life for its residents and employees. This is evidenced by the excellent park system, the local public transportation system, the Rock Creek Greenway, improvements to the Gainesville square, and ongoing sidewalk and street improvements. During the recent completion of the Gainesville-Hall County Metropolitan Planning Organization's (GHMPO's) first long-range transportation plan, study participants identified the need and desire for walking and bicycling facilities throughout the county.<sup>1</sup> In response, the GHMPO initiated a bicycle and pedestrian study for the entire county.

The GHMPO Bicycle and Pedestrian Plan is a result of this effort. The plan includes an overall vision as well as specific projects/actions and supporting policies for the development of a countywide pedestrian and bicycle system. The plan was developed in 2005 by the GHMPO with staff participation and community input from Hall County; the cities of Gainesville, Oakwood, Flowery Branch, Lula, Clermont, and Gillsville; the Georgia Department of Transportation; and the Georgia Mountains Regional Development Center. Technical assistance was provided by ARCADIS and The Jaeger Company.

### 1.2 Study Purpose

Hall County is a rapidly growing and changing area. Some bicycle and pedestrian facilities exist in Hall County, with others proposed or planned. However, Hall County does not have a comprehensive inventory or plan for bicycle and pedestrian facilities nor does it have any documents clarifying the growing demand for such facilities countywide. The GHMPO Bicycle and Pedestrian Plan identifies a comprehensive network of bicycle and pedestrian facilities designed to serve growing demand, with supporting policies, programs, and projects, as well as specific design standards and actions for implementation.

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<sup>1</sup>Hall County was designated as a Metropolitan Planning Organization in 2003.



## GHMPO Bicycle and Pedestrian Plan

### Introduction

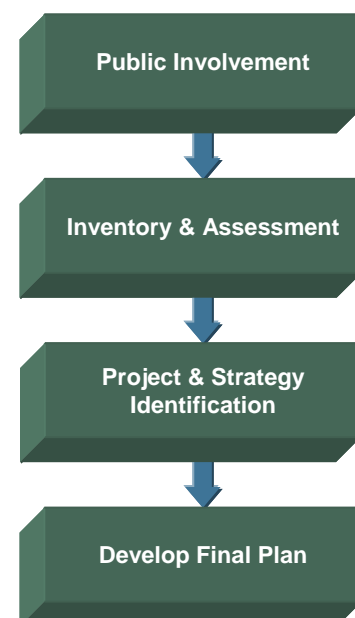
The specific goals of the bicycle and pedestrian study were to:

- ✓ Identify a comprehensive system of bicycle/pedestrian facilities to serve a variety of users.
- ✓ Integrate a bicycle/pedestrian network with the GHMPO's plans for state and federally funded transportation projects.
- ✓ Identify design standards that provide for consistent and safe design of facilities.
- ✓ Identify when projects will be implemented and how they will be funded.
- ✓ Base goals and objectives for future bicycle and pedestrian mobility on a comprehensive public involvement program.

This document summarizes the study process, data, methodologies, community participation, agency coordination, bicycle and pedestrian networks, design standards, costs, and implementation priorities. This plan is accompanied by a summary report that provides an easy-to-understand overview of the study.

### 1.3 Study Scope and Process

The study scope included both technical and non-technical analyses. The technical analysis concentrated on identifying and analyzing existing conditions that influence pedestrian or bicycle travel, including pedestrian and bicycle facilities, socioeconomic conditions, policies/programs, existing and proposed land use patterns, the existing and proposed transportation network, and organizations. The non-technical analysis concentrated on engaging the community in identifying issues and opportunities, developing goals and objectives, and selecting and prioritizing projects, programs, and policies for implementation. To engage the community during the development of the GHMPO Bicycle and Pedestrian Plan, an innovative public involvement program (PIP) tailored specifically for the GHMPO was created. The PIP, which is described in Appendix A, included a variety of tasks designed to encourage feedback and participation from the larger community. The project process is shown to the right.





## GHMPO Bicycle and Pedestrian Plan

### Introduction

#### 1.4 Plan Components

The GHMPO Bicycle and Pedestrian Plan includes the following components:

- √ Section 2 – Existing Conditions: Includes an overview of existing conditions and the identification of community issues, opportunities, and needs.
- √ Section 3 – Project and Strategy Identification: Includes goals and objectives, design standards, and applicable policies and programs.
- √ Section 4 – Plan Implementation: Includes a list of recommended projects, policies, and programs with supporting funding strategies, regional coordination, and plan monitoring.



## 2. Existing Conditions

The first task in preparing the GHMPO Bicycle and Pedestrian Plan included gathering, reviewing, and inventorying existing conditions that may impact bicycle and pedestrian mobility, including community needs, issues, and desires, as well as policies, plans, ordinances, and state statutes. This information provides the foundation for projects and also aids in the identification of relevant policies and strategies.

This section provides an overview of existing conditions and a baseline – or snapshot of the area – from which to build future recommendations.

### 2.1 Issues and Challenges

Assessing issues and opportunities is an initial step in identifying barriers and/or constraints that must be overcome and potential avenues for implementation. It is critical to identify what the community sees as issues/barriers and potential opportunities. Through communitywide public meetings and the GHMPO Bicycle and Pedestrian Task Force, several issues and/or barriers as well as potential outcomes for the bicycle and pedestrian plan were identified.

The community identified user safety as a primary issue to be addressed by the plan. Specifically, the community noted the existing conflict between pedestrians/bicyclists and vehicles caused by a lack of facilities, the limited separation of sidewalks from roadways, and a limited awareness of both bicyclists and drivers as to the rights of bicyclists on roadways. The community stated that the plan should address these issues by providing safe facilities and educating pedestrian/bicycle network users and drivers on the safe use of facilities and the rights of users of all systems.

The community also identified funding as a key issue. The community noted that limited funding is available to fix problems with the existing network, including roads and existing bicycle/pedestrian facilities, and that it may be difficult to justify spending money on new facilities. The community noted that the plan needs to clearly identify how bicycle and pedestrian facilities will help to alleviate current transportation problems as well as how to leverage existing funding and new avenues for funding. This could help obtain community support and understanding regarding need, desire, and usefulness of a bicycle and pedestrian system. In addition, the community identified maintenance as a funding issue, because inadequate funding for maintenance will result in deteriorated facilities, thus inhibiting use.





## GHMPO Bicycle and Pedestrian Plan

### Existing Conditions

The presence of physical barriers, including Lake Lanier and the rolling topography of the area, was also identified as a key issue. The community noted that existing bridges over Lake Lanier will be hard to retrofit for sidewalk and/or bicycle facilities and that the rolling and in some cases steep topography, a key characteristic throughout Hall County, may be perceived as an obstacle to riding and walking in the county.

The lack of existing bicycle and pedestrian facilities was also identified as a major issue to be addressed. The community noted a lack of facilities in key areas, including the Athens Street area, the Atlanta Highway area, and downtown areas. The community stated that identifying a comprehensive network of facilities that connects key origins/destinations will help those areas already in need of these facilities and will help to promote future use. In addition, the community noted that new facilities should be prioritized for areas where they would benefit existing economic development efforts.

Jurisdictional coordination was identified as another element that may prevent successful implementation of the plan. Hall County includes seven jurisdictions, and at this time, grants and facility locating are not coordinated, and/or policies for design and construction are not consistent. The competition for grants could limit funding for this area, the lack of continuous facilities could hinder accessibility, and the lack of consistent design standards could create unsafe conditions because users may be confused as to how to travel correctly. In addition, the lack of consistent policies among different jurisdictions requiring pedestrian and/or bicycle facilities could foster competition for development.

In summary, the community stated that the primary outcome of the study should be a strategic action plan that identifies projects with realistic time frames and designated funding to be incorporated into the regional planning process.

Community input also provided direction for the plan by indicating potential benefits. These benefits, as listed below, also provide an indicator of desired outcomes from implementing this plan:

- √ Improved health
- √ Improved air quality
- √ Reduced traffic congestion



## GHMPO Bicycle and Pedestrian Plan

Existing Conditions

- ✓ Mobility for non-drivers (including children and the elderly)
- ✓ Increased economic development opportunities
- ✓ Increased social interaction
- ✓ Road and parking facility savings
- ✓ Improved quality of life
- ✓ Sustainable development

### 2.2 Socioeconomic Conditions

Similar to much of north and central Georgia, Hall County has changed significantly over the past 20 years. Hall County has had an influx of different cultures and population growth, which are changing the community's needs. Socioeconomic conditions provide insight to identify concentrations of potential origins and destinations, as well as persons with a higher-than-average propensity to use bicycle and pedestrian facilities. In addition, future transportation needs are affected by socioeconomic conditions in the study area.

#### 2.2.1 Population

According to the 2000 Census, there are 139,277 persons in Hall County living in 47,389 housing units. This results in slightly less than 2.9 persons per household. Population density in Hall County is 354 persons per square mile, more than double the statewide density of 141 persons per square mile. Concentrations of population and/or employment, such as those typically found in municipalities, are often key origins of bicycle and pedestrian facility users. Nine jurisdictions fall completely or partially within Hall County as shown in the following table.



## GHMPO Bicycle and Pedestrian Plan

Existing Conditions

| Jurisdiction <sup>2</sup> | Population <sup>3</sup> | Households |
|---------------------------|-------------------------|------------|
| Braselton                 | 23                      | 8          |
| Buford                    | 140                     | 53         |
| Clermont                  | 419                     | 161        |
| Flowery Branch            | 1,806                   | 706        |
| Gainesville               | 25,578                  | 8,537      |
| Gillsville                | 195                     | 79         |
| Lula                      | 1,438                   | 531        |
| Oakwood                   | 2,689                   | 1,031      |
| Rest Haven                | 151                     | 57         |

Walking and cycling can comprise a significant amount of travel for work, school, and other trips for younger and older members of the population. Hall County has a significant number of young and elderly persons who are likely to rely on walking or cycling. The young age group, defined as 10 to 20 years old, includes 22,254 persons, or 16 percent of the population. Another 13,067 persons, or 9.4 percent of the population, are aged 65 or older. Together, these two groups make up 35,321 persons, or 25.4 percent of the Hall County population.

### 2.2.2 Journey to Work

Of the 139,277 persons residing in Hall County, 65,402, or 47 percent, are in the workforce. The private automobile is the primary mode of travel used to commute to work, making up 94.3 percent of commuter travel. In addition, drive-alone commuters make up 76.4 percent of all work trips, while carpooling accounts for 17.9 percent of all commuters. Public transportation accounts for very little of the mode share, with only 112 persons, or 0.2 percent of the workforce, using it. The total bicycle and pedestrian mode share is 1.4 percent. Very few persons, 59 persons, or 0.1 percent of all workers, bicycle to work. Significantly more persons walk to work, with 838 persons, or 1.3 percent of the workforce, traveling by foot.

Although single-occupancy vehicles clearly dominate Hall County commutes, there is evidence of bicycle/pedestrian work-related travel, indicating a need for facilities.

<sup>2</sup>Figures for Braselton, Buford, and Rest Haven include the Hall County portions only.

<sup>3</sup>All baseline data was obtained from the 2000 U.S. Census.



## GHMPO Bicycle and Pedestrian Plan

### Existing Conditions

Although single-occupancy vehicles clearly dominate Hall County commutes, there is evidence of bicycle/pedestrian work-related travel, indicating a need for facilities. In addition, the data suggest a potential for more walking and/or biking if additional facilities were available.

Commute time is another potential indicator of bicycle and pedestrian demand. As shown in the following table, the commute time for the majority of Hall County residents is less than 30 minutes; 26.7 percent have a commute time in the 0- to 14-minute range. Persons with shorter commute times, especially in the 0- to 14-minute range, are more likely to switch from private automobile to bicycle or pedestrian modes of transportation.

| Commute Time    | Population <sup>4</sup> | Percentage |
|-----------------|-------------------------|------------|
| 0 – 14 minutes  | 17,485 <sup>5</sup>     | 26.7       |
| 15 – 29 minutes | 26,356                  | 40.3       |
| 30 – 44 minutes | 11, 083                 | 16.9       |
| 45 – 59 minutes | 4,639                   | 7.1        |
| 60 – 89 minutes | 4,053                   | 6.2        |
| 90+ minutes     | 1,786                   | 2.7        |

#### 2.2.3 Household Income

Household income can correlate with the propensity to use alternate modes of transportation, such as bicycling, walking, or transit. Residents with lower household incomes have fewer resources available for operating and maintaining private automobiles and are therefore more likely to meet their transportation needs through alternate modes.

The statewide median household income is \$42,433,<sup>6</sup> with Hall County's slightly higher at \$44,908. Statewide per capita income is \$21,154, while Hall County's is

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<sup>4</sup>2000 U.S. Census.

<sup>5</sup>Includes 1,428 persons who work at home.

<sup>6</sup>All household income numbers are from the 2000 Census and are for 1999, unless otherwise noted.



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slightly lower, at \$19,690. The poverty rate in Georgia, 13.0 percent, is slightly higher than for Hall County, where 12.4 percent of the population is in poverty.

### 2.2.4 Vehicle Availability

An additional way to identify populations that may benefit more from and be more inclined to use bicycle and/or pedestrian facilities is to use the average number of vehicles available per occupied household. A lower number of vehicles per occupied household may indicate that residents are more likely to choose alternate modes to meet their demand for transportation.

Of the occupied households in Hall County, only 6.1 percent (2,897 households) do not have a vehicle, which is lower than the statewide rate of 8.3 percent. Another 27.7 percent (13,127) have only one vehicle available. The majority of occupied households in Hall County, 66.2 percent (31,357 occupied households), have two or more vehicles available. The data suggest that many or most of those households lacking vehicle ownership are concentrated in south Gainesville. In addition, it is highly likely that some residents and employees were not documented in the Census based on recent in-migration and local observations.

## 2.3 Relevant Studies, Programs, and Projects

Several bicycle- and pedestrian-related studies, programs, and projects are ongoing or have been completed at the state, regional, and local levels. Agencies and jurisdictions responsible for these efforts include Georgia Department of Transportation (DOT), the GHMPO, Georgia Mountains Regional Development Center (GMRDC), and the City of Gainesville. Documents resulting from these efforts provided a baseline from which to build the GHMPO Bicycle and Pedestrian Plan.

### 2.3.1 State

The 1997 Georgia Bike and Pedestrian Plan identifies the need for a statewide bicycle and pedestrian system. The system envisioned in the plan includes 14 routes totaling 2,943 miles. In the short term, each of the 14 routes will be signed as a bicycle route. To complete the long-term route enhancements recommended in the plan, Georgia DOT is implementing internal procedures for road designers to incorporate bicycle- and pedestrian-friendly elements into state-programmed improvements. By including bicycle and pedestrian elements in programmed improvements, it is anticipated that the



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### Existing Conditions

plan will be implemented within the next 20 years. The plan includes one route, Route 55, that runs through Hall County.

In November 2003, Georgia DOT published the Pedestrian & Streetscape Guide, which provides a toolbox of design standards aimed primarily at implementation of projects identified in the 1997 Georgia Bike and Pedestrian Plan. The principal audience of the guide includes traffic and transportation engineers, site development and building permit review staff, planners and designers, and developers.

Completed in March 2005, Georgia Bike Sense is a Georgia DOT publication that is an educational resource for both cyclists and motorists. Topics include safely and legally sharing the road, rules of the road, and trail etiquette.

The Georgia Guide to Local Pedestrian Planning is currently being developed and is expected to be completed in February or March 2006. This document will primarily provide guidance on how and why local communities should perform pedestrian planning and will include guidance on funding and project prioritization.

#### 2.3.2 Regional

The Gainesville-Hall Transportation Study Transportation Improvement Program (TIP) includes a bicycle and pedestrian project as part of the I-985 Exit 16 Split Diamond Interchange project (project ID 10400). Because the Atlanta Highway portion of the project from I-985 to Mundy Mill Road is on state bicycle route 55, the widening of Atlanta Highway will accommodate recommendations made in the state bicycle plan (i.e., it is likely to include a bicycle lane).

The Gainesville-Hall Transportation Study 2030 Long Range Transportation Plan (LRTP) alludes to bicycle and pedestrian needs through the goal of exploring and promoting congestion relief with the use of alternate modes of transportation. The following projects in the LRTP include bicycle and pedestrian improvements:

| Project  | Description  |
|--|--|
| Flowery Branch Streetscape                               | Streetscape improvement from Main Street to Railroad Avenue in downtown Flowery Branch |
| Friendship Road (SR 347) Widening to Lake Lanier Islands | Sidewalks from I-985 to Lake Lanier Islands  |
| Browns Bridge Road (SR 369) Widening                     | Sidewalks from McEver Road (SR 53) to Forsyth County Line                              |



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| Project  | Description  |
|--|--|
| Cleveland Highway (U.S. 129/ SR 11) Road Widening              | Sidewalks from Park Hill Drive/Limestone Parkway to Sutton Road  |
| Atlanta/Buford Highway (SR 23) Road Widening                   | Sidewalks from Thompson Mill Road (Gwinnett County) to Friendship Road (SR 347)  |
| Martin Luther King, Jr. Boulevard Road Widening                | Bicycle route on Martin Luther King, Jr. Boulevard from Queen City Parkway (SR 60) to E.E. Butler Parkway (U.S. 129/SR 11)                           |
| Spout Springs Road Widening                                    | Sidewalks from Hog Mountain Road to Gwinnett County Line   |
| Midtown Greenway   | Intown bicycling and hiking trail from Jesse Jewel Parkway to Martin Luther King, Jr. Boulevard (2011–2020)  |
| Atlanta Highway (SR 13)/ Falcon Parkway Road Widening          | Sidewalks will be incorporated from Radford Road to Winder Highway (SR 53) (2021–2030)   |
| McEver Road Widening (SR 53)                                   | Sidewalks on Jim Crow Road to Mundy Mill Road (2021–2030)  |
| Park Hill Drive Widening                                       | Sidewalks from South Enota Drive to Limestone Parkway (U.S. 129) (2021–2030)   |
| South Enota Drive Widening                                     | Sidewalks from Park Hill Road to Downey Boulevard (2021–2030)  |
| Winder Highway to Jackson County Road Widening                 | Sidewalks from Jackson County Line to Tanners Mill Road (SR 211) (2021–2030)   |
| Old Cornelia Road to Joe Chandler Road Road Widening           | Sidewalks from Jesse Jewel Parkway (SR 369) to Joe Chandler Road (2021–2030)   |
| Hog Mountain Road Widening                                     | Sidewalks from Gwinnett County Line to Atlanta Highway/Falcon Parkway (2021–2030)  |
| John Morrow Parkway/ Dawsonville Highway (SR 53) Road Widening | Sidewalks from Ahaluna Drive to Washington Street (2021–2030)  |
| Shallowford Road Widening                                      | Sidewalks from Dawsonville Highway (SR 53) to Pearl Nix Parkway (2021–2030)  |
| Limestone Parkway Extension and I-985 Interchange              | Sidewalks from Jesse Jewel Parkway (SR 369) to I-985 (2021–2030)   |
| Candler Road Widening (SR 60)                                  | Sidewalks from Lee Land Road to the existing multi-lane section (2021–2030)  |
| Clarks Bridge Road (SR 284) Bridge Replacement                 | Bicycle route along Clarks Bridge Road will be accommodated when the bridge on Clarks Bridge Road at the Chattahoochee River is replaced (2021–2030) |



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### 2.3.3 Georgia Mountains Regional Development Center

The GMRDC produced the Georgia Mountains Regional Bicycle and Pedestrian Plan in 2005. This plan seeks to build on the Georgia DOT statewide plan and to promote intercounty connectivity with the Georgia Mountains region. It represents a first step toward integrating bicyclists and pedestrians into the infrastructure and land development process in the region. As such, the proposed regional routes presented in the plan are conceptual and require more detailed study. Due to the conceptual nature of the routes, engineering and cost feasibility is uncertain and will be determined through further study by local jurisdictions. The GHMPO Bicycle and Pedestrian Plan network is largely based on the identified routes.

The Georgia Mountains Regional Bicycle and Pedestrian Plan notes that tourism of the region is a significant contributor to local economies, bringing in more than \$534 million in 2003. The plan also provides examples of multiuse trails in other areas that have generated millions of dollars in tourism revenue annually. Trails in California, Florida, Iowa, and Ohio have an economic impact between \$1.5 and \$2.0 million per year. In contrast, the Great Allegheny Passage from Pittsburgh, Pennsylvania, to Cumberland, Maryland, generates \$8.9 million per year, despite not yet being complete.

A key point of the Georgia Mountains Regional Bicycle and Pedestrian Plan is a projected influx of population and automobiles into the region over the next 20 years, which could have a significant impact on air quality and quality of life. Bicycle and pedestrian improvements are intended to contribute to the mitigation of potential negative impacts, while enhancing transportation options.

### 2.3.4 Local Initiatives

#### 2.3.4.1 Hall County Beautification Plan

The Hall County Beautification Plan was initiated in 1996 as a result of Gainesville being selected for the Olympic Rowing and Springs Canoe/Kayak event. This plan identified countywide beautification efforts both for preparation for the Olympics and for long-term community improvement. This plan identifies landscape requirements, road improvement opportunities, trail systems, and greenways. The plan provides information useful in determining appropriate design standards as well as opportunities to coordinate future bicycle and pedestrian projects with ongoing efforts.





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#### 2.3.4.2 Hall County Open Space Plan

The Hall County Open Space Plan, initiated as a result of the Governor's Greenspace Program, identifies potential land acquisitions for greenspace preservation and parks as well as potential stream greenspace corridors. The information in this plan helped to identify potential multiuse trails and origins/destinations for future recreational users.

#### 2.3.4.3 Park Facilities Master Plan

The Park Facilities Master Plan, updated in 2005, provides an implementation strategy and capital improvement programs for parks and facilities over a nine-year time span. The purpose of this plan is to identify both passive and active recreational needs and how the county will meet these needs. Information relevant to this planning study was the identified demand for trails, bikeways, and linkages between parks and county activity centers. In addition, a key objective of the plan is to "acquire land along abandoned railroad rights-of-ways or within utility easements as a means to adding to the county's green space to provide greenways, trails, linkage and bikeways." Greenways recommended in this plan include one between Williams Mill to Healen/Head Mill and an extension of the Central Hall recreation and multiuse trail. The plan notes that both of these projects are slated for long-term implementation as a result of limited funding. The plan also identifies a statewide effort to purchase land along the Chattahoochee River for an additional greenway, which would also allow for trail development.

#### 2.3.4.4 Friends of the Park Initiatives

Friends of Gainesville Parks and Greenways (Friends of the Parks) is a local, nonprofit group that partners with the City of Gainesville and the Gainesville Parks and Recreation Board to enhance, preserve, restore, maintain, and connect parks and greenways. A key goal of Friends of the Parks is to connect the community through parks and greenspace. This group is working toward this goal by raising funds to fill gaps in the existing sidewalk network and to construct new sidewalks that connect schools and parks to commercial districts and neighborhoods. These sidewalks will connect several neighborhoods, four city parks, Lake Lanier, the Green Street area, and the Square.



## 2.4 Existing Design Standards and Guidelines

### 2.4.1 State

Georgia uses the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities and the Federal Highway Administration (FHWA) publication titled Selecting Roadway Design Treatments to Accommodate Bicycles for designing bicycle facilities. However, Georgia DOT has established a standard for rural bike lanes that is slightly different than the urban section bike lane recommended by AASHTO's guide. The most significant difference from AASHTO's standard bike lane is the addition of a rumble strip between the vehicular travel lane and the bicycle lane. Georgia DOT encourages the placement of a 16-inch-long by 4-inch-wide milled rumble strip that begins 1 foot from the edge of the travel lane on rural roads. The milled rumble strips are to have a 12-foot gap every 28 feet to allow cyclists to enter/exit the vehicular travel lane.

Georgia DOT has also completed a Pedestrian and Streetscape Guide (2003) that provides specific standards for the design, construction, and maintenance of pedestrian facilities. Specific standards are provided for general accessibility, children and school zones, trails and multiuse paths, sidewalks, walkways, intersections, crossings, traffic calming, access to transit, site design, and safety in work zones.

### 2.4.2 Regional

The Georgia Mountains Regional Bicycle and Pedestrian Plan includes elements of several design guidelines from various studies. This plan also establishes guidelines for bicycle lane widths and construction standards, bicycle lane location within the street cross section, bicycle lane pavement markings, bicycle lane signage, diagonal parking, intersections, and multiuse trails.

### 2.4.3 Local

Hall County and the cities of Gainesville and Oakwood require sidewalks in newly constructed areas. Oakwood recently amended its ordinance to require sidewalks on both sides of internal streets in all single-family subdivisions, along the street from which a multi-family development has access, and along all other adjoining streets and all streets adjoining a nonresidential development. Hall County requires sidewalks in subdivisions with lots of 1.25 acres or less. None of the communities maintain detailed design standards.



## 2.5 Existing Bicycle and Pedestrian Facilities/Networks

### 2.5.1 Bicycle

Existing bicycle routes in Hall County are limited to one state-designated bicycle route and a few local routes (e.g., Rock Creek Greenway) in the City of Gainesville. Several agencies, municipalities, and citizen groups have proposed various bicycle improvements, which range in scope from signing existing roads, to constructing on-street bicycle lanes, to building off-road multiuse trails.

State-designated Route 55 runs north to south through Hall County, connecting to White County on the north end and to Gwinnett County on the south end. The route enters Hall County on the north on SR 254 and then follows SR 284 (Clarks Bridge Road), Pine Valley Road, White Sulphur Road, SR 369, SR 11 (Downey Boulevard), Myrtle Street, Bradford Street, Industrial Boulevard, SR 13 (Atlanta Highway), and Hog Mountain Road.

Gainesville is the only municipality in Hall County with existing local bike routes. These signed routes include the following:

- ▼ Thompson Bridge Road to Oakland Drive to Woodland Drive to Montrose Drive to Wessell Road to Dixon Drive to Wilshire Road to Ivey Terrace to Northside Drive to Main Street, ending at Industrial Boulevard
- ▼ Enota Avenue to Riverside Drive to Glenwood Drive to Prior Street to Hunter Street to Fair Street to Martin Luther King, Jr. Boulevard to McDonald Street to Dunbar Place to DeSota Street, ending at Harvey Street
- ▼ Glenwood Drive to Green Street to Spring Street, ending at Main Street
- ▼ Academy Street and Spring Street from Main Street and Green Street
- ▼ Bradford Street between Academy Street and Spring Street
- ▼ Ridgewood Avenue
- ▼ Jesse Jewell Parkway from Main Street to Bradford Street, then along Bradford Street from Jesse Jewell Parkway to Martin Luther King, Jr. Boulevard



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### 2.5.1.1 Bicycle Suitability Assessment

Another critical component in identifying current conditions is analyzing the existing transportation network for suitability for bicycle travel. This assessment not only can identify the suitability of existing roadways for bicyclists, but also can provide a basis to identify and prioritize future bicycle construction projects.

The criteria used to assess the suitability of existing corridors (taken from technical research) were applied to each roadway in Hall County classified as a collector or above.<sup>7</sup> This analysis was supplemented with input from the Bicycle and Pedestrian Task Force and with the geographic information system (GIS). The criteria, shown in the table below, are based on a Type B user as described in the Guide for Development of Bicycle Facilities, published by AASHTO (further information on bicycle users is included in Section 3).

| Criteria                                       | Ranking       | Rating |
|--|---------------|--------|
| <b>Traffic volume (observed)</b>               |               |        |
| Light  | Most Suitable | 2      |
| Medium   | Suitable      | 1      |
| Heavy  | Not Suitable  | 0      |
| <b>Roadway width</b>                           |               |        |
| Existence of shoulders (at least 2 feet wide)  | Most Suitable | 2      |
| No shoulders wider than 11 feet                | Suitable      | 1      |
| Less than 11 feet                              | Not Suitable  | 0      |
| <b>Driveways</b>                               |               |        |
| Very few driveways                             | Most Suitable | 2      |
| Mainly residential driveways                   | Suitable      | 1      |
| Numerous driveways, with some being commercial | Not Suitable  | 0      |

<sup>7</sup> Functional classification is based on Georgia DOT standards.



## GHMPO Bicycle and Pedestrian Plan

Existing Conditions

| Criteria  | Ranking       | Rating |
|---|---------------|--------|
| <b>Automobile traffic speed (posted and observed)</b> |               |        |
| Less than 35 miles per hour                           | Most Suitable | 2      |
| Between 35 and 45 miles per hour                      | Suitable      | 1      |
| More than 45 miles per hour                           | Not Suitable  | 0      |
| <b>Truck traffic (observed)</b>                       |               |        |
| Light   | Most Suitable | 2      |
| Medium  | Suitable      | 1      |
| Heavy   | Not Suitable  | 0      |
| <b>Terrain</b>  |               |        |
| Smooth grades, excellent sight distance               | Most Suitable | 2      |
| Moderate grades, moderate sight distance              | Suitable      | 1      |
| Severe grades, short sight distance                   | Not Suitable  | 0      |
| <b>Pavement surface</b>                               |               |        |
| Smooth  | Most Suitable | 2      |
| Some uneven surfaces                                  | Suitable      | 1      |
| Uneven, cracked surface, drainage grates              | Not Suitable  | 0      |

Corridors were assessed further using relevant GIS data by assigning a rating for each of the bicycle suitability criteria. After all criteria had been evaluated for a corridor, the ratings were totaled and an overall ranking was assigned based on the following scheme:

- √ Most suitable (10 to 14 points)
- √ Suitable (5 to 9 points)
- √ Least suitable (0 to 4 points)

The results of this analysis are illustrated on the Bicycle Suitability Index included in the Figures section of this document.



#### 2.5.1.2 Proposed Bicycle Routes

Both Hall County and the City of Gainesville have proposed bicycle routes that will expand the existing network. The recently funded Central Hall multiuse trail will provide a valuable connection between Gainesville College and downtown Gainesville. In addition, citizen groups, including members of the Southern Off Road Bicycle Association (SORBA), have proposed routes. SORBA-proposed routes are recreational in nature and were reviewed and considered in the development of the recommended bicycle network.

#### 2.5.2 Pedestrian Facilities

The project team conducted a general field assessment of sidewalk conditions within the county and identified specific existing gaps in sidewalks within all downtown areas (Gainesville, Flowery Branch, Oakwood, Lula, and Clermont). Gaps in the sidewalk networks were evaluated based on the following criteria:

- ✓ Existence of worn walking path along a roadway
- ✓ Pavement gap between two existing sidewalks
- ✓ No facility between existing sidewalk facilities and key pedestrian destination points (e.g., libraries, post offices, neighborhood stores, and churches)

It is important to note that this evaluation did not take into account sidewalk location preferences, only gaps within an existing network.

To further document existing gaps in the sidewalk network, the project team also reviewed data supplied by the Gainesville Public Works Department that depicted existing and proposed sidewalks. The sidewalk network in Gainesville is robust; however, gaps exist. The sidewalk networks in the other jurisdictions were not as complete; however, minimal gaps were identified based on the above criteria.

Although the remainder of Hall County was outside the scope of this plan, it was generally noted that sidewalks are located in some subdivisions and along a few commercial corridors (primarily those recently constructed or repaved).

An added component of evaluating existing conditions for pedestrian facilities includes identifying potential demand, as identified by the community through the public meetings and the Task Force. The majority of the community indicated a need for



## GHMPO Bicycle and Pedestrian Plan

### Existing Conditions

sidewalks around schools, around park/recreational facilities, in downtowns, and in residential communities. Furthermore, most people indicated they are more likely to walk to entertainment venues and around their neighborhoods than to work, school, and/or to shop. This may indicate the identification of walking as a form of exercise rather than a form of transportation and/or a lack of facilities to employment, school, and/or shopping areas. When asked to what destinations they would like to walk if facilities were available, the majority of meeting participants indicated recreational areas, schools, residential areas, and work.

#### 2.5.3 Roadway Network

Gainesville's historic role as the regional economic center resulted in a radial pattern of multiple federal and state highways converging on the city. Hall County's location between Atlanta and Charlotte led to the construction of northeast to southwest routes through the center of the county. Uneven topography in the county limited opportunities to build parallel alternate routes. Additionally, Lake Sidney Lanier runs along a substantial portion of the western side of the county and presents a major geographic challenge.

Hall County has an extensive roadway system with 66 lane miles of interstate, 230 lane miles of arterial roads, and 291 miles of collectors. Significant corridors, those that provide connections outside the county, include the following:

- √ I-985/SR 365
- √ U.S. 129 (Athens Highway/Cleveland Highway)
- √ SR 13 (Atlanta Highway)
- √ SR 60 (Thompson Bridge Road/Candler Road)
- √ SR 369 (Browns Bridge Road)
- √ SR 53 (Winder Highway/Dawsonville Highway)

Future transportation improvements are included in the GHMPO long range transportation plan (LRTP), the short range transportation improvement program (TIP), and the Hall County SPLOST program. Improvements include signal improvements, intersection improvements, road widenings, road re-pavings, and some new roadways.



Each improvement project provides an opportunity to incorporate bicycle and/or pedestrian facilities.

#### 2.5.4 Transit Service

Fixed guideway and demand-response transit services are available in Hall County. Because of the relatively low population density of Hall County and the small size of the transit system, options are somewhat limited. The transit agency serving Hall County is Hall Area Transit (HAT), also known as Red Rabbit Transit. HAT offers bus service for three fixed routes in the City of Gainesville and four transit vans for demand-response shared-ride service in the outlying areas of Hall County. HAT also offers paratransit service for persons with disabilities.

The Hall Area Transit Comprehensive Operations Analysis, produced in 2004, includes short-term and long-term recommendations. Key recommendations include reconfiguration of the fixed-route transit service to provide more direct service and reduce passenger trip times.

Funding for future transit service is included in both the TIP and LRTP. The TIP incorporates \$6.8 million in transit funding from 2005 to 2010, which includes funds for access to jobs, operating assistance, and capital improvements. Additionally, the LRTP includes funding of \$13.4 million from 2011 to 2020 and \$17.2 million in funding dedicated to transit from 2021 to 2030.





## GHMPO Bicycle and Pedestrian Plan

Project and Strategy  
Identification

### 3. Project and Strategy Identification

The result of the GHMPO Bicycle and Pedestrian Plan is the identification and selection of bicycle and pedestrian projects, policies, and programs that support a regional bicycle and pedestrian system. As stated, existing conditions provide a base from which to start identifying needed projects, programs, and policies. However, identifying the community's vision for future mobility is equally important. The following section identifies the community's goals and objectives for future bicycle and pedestrian mobility, demand for facility types and locations, and preferences for those programs that will support an interconnected network.

#### 3.1 Goals and Objectives

Goals and objectives provide the basis for the type of recommendations that should be a result of this plan and provide a mechanism, through performance measures, to evaluate the effectiveness of the plan over time. The following goals and objectives are based on public input and provide the vision for future bicycle and pedestrian mobility.

**Goal One:** Implement an interconnected bicycle and pedestrian network that meets community needs in a cost-effective and coordinated manner.

*Objectives:*

1. Promote projects that provide bicycle and pedestrian access to key origins and destinations, including but not limited to, schools, downtowns, Lake Lanier, transit stops, parks, and health centers, thereby providing for both transportation and recreational needs.
2. Provide a system that serves the transportation needs of the transportation disadvantaged.
3. Prioritize projects that eliminate existing gaps within the bicycle and pedestrian network and connect neighborhoods to nearby destinations, with future phases to provide cross-county connections.
4. Adopt local development ordinances and guidelines that support the community's desired level of bike and pedestrian facilities.
5. Develop a forum that provides for ongoing bicycle and pedestrian planning.



## GHMPO Bicycle and Pedestrian Plan

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6. Maximize resources through the use of public rights-of-way (with proper retrofitting) and corridors such as roadways, utility lines, rail lines, and easements, and by coordinating with planned projects.

**Goal Two: Create and maintain a safe, accessible, and convenient environment for bicycling and walking.**

*Objectives:*

1. Develop design standards that ensure safety, accessibility, and convenience for all users.
2. Support training and enforcement of regulations to ensure safe and proper use of facilities.
3. Increase public education of pedestrians, bicyclists, and drivers of the proper use of the entire transportation network (roadways, pedestrian facilities, and bicycling facilities) by each group.
4. Promote the maintenance of facilities through dedicated funding and scheduling of maintenance activities.

**Goal Three: Improve the quality of life through the provision of a bicycling and pedestrian network with supporting amenities.**

*Objectives:*

1. Coordinate the provision of bicycling and walking facilities with designated destinations in land use plans, and especially in high-growth areas, schools, and key destinations.
2. Maximize economic development potential through provision of strategically located bicycle and sidewalk facilities.
3. Provide ancillary facilities such as bicycle parking and storage, lighting, landscaping, and signalization where appropriate and encourage funding participation toward amenities.
4. Support education and awareness programs that increase awareness of walking and bicycling benefits, including health, recreation, and energy savings.



## GHMPO Bicycle and Pedestrian Plan

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### 3.2 Project Selection and Prioritization

Identifying the most appropriate pedestrian and bicycle networks to meet the goals and objectives identified above and the needs for Hall County is dependent on a variety of elements. A sidewalk network generally provides access for short trips, usually less than  $\frac{1}{4}$  mile in length. Therefore, most facilities radiate from specific origins/destinations and/or districts and usually connect other travel modes (i.e., the bicycle and/or the car). A single sidewalk network does not necessarily have to connect to other sidewalk networks. A bicycle network, on the other hand, provides access for longer trips,<sup>8</sup> is more comprehensive in nature, and generally radiates from a single trunk line. Hall County's bicycle network is connected countywide. While an interconnected bicycle system is ideal, it is important to note that unlike pedestrians, bicyclists are permitted to use travel lanes on all public surface streets.

A variety of considerations were factored into creating project evaluation criteria to select and prioritize projects for the bicycle and pedestrian network. These include predominant user types in Hall County, conditions along existing roadways, and facility type. The following describes each of these considerations, followed by the actual criteria used to evaluate project locations and the time frame for implementation.

#### 3.2.1 System Users

Hall County has many types of cyclists, ranging from experienced riders who use the bicycle as their primary form of transportation and want the most direct route to their destination to casual riders who prefer the safest route to their destination. For example, the large percentage of recreational users need both access to recreational facilities (Lake Lanier) and facilities for recreational purposes alone. In addition, Hall County has a variety of pedestrians, ranging from children to the elderly and from those who walk out of necessity to those who walk for recreational purposes. Most cyclists in Hall County are recreational users. However, pedestrians include both recreational users as well as those without other options. The following definitions of users provided a basis from which the project team began to identify the types and locations of facilities needed.

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<sup>8</sup>Most bicycle trips are less than 5 miles and connect to specific origins and destinations. Recreational users may ride much longer distances; however, their facility locations are not dependent on specific origin/destination.



## GHMPO Bicycle and Pedestrian Plan

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### 3.2.1.1 Pedestrian Users

The Atlanta Regional Commission's 2002 Regional Transportation and Pedestrian Walkways Plan defines adult pedestrians, child pedestrians, environmental justice community participants, and pedestrians with disabilities. These definitions, adapted for applicability in Hall County, provided a basis for identifying to whom this plan is intended, facility types, project locations, and project prioritization. Definitions are provided below.

- ▼ **Adult Pedestrians:** Adult pedestrians use facilities for commuting, recreation, and exercise. Adult pedestrians are aware of the rules of vehicular traffic. Adult pedestrians can have difficulty crossing high-speed, multi-lane streets that lack median refuge islands or pedestrian signals.
- ▼ **Child Pedestrians:** Child pedestrians see and hear the world differently than adults. Children often have trouble judging traffic speed, gaps in traffic, or whether a car is coming, going or standing still. Children are shorter than adults and have limited peripheral vision. Neighborhood streets with sidewalks and shared-use facilities can accommodate child pedestrians.
- ▼ **Non-English Reading Pedestrians:** This category is of particular importance in Hall County because of the influx of residents of various cultures who may not read English, a high percentage of which may rely on alternate modes of transportation. Those who cannot read the English language well may not be able to read warning signs written in English. Therefore, safety and directional signage should be shown in symbols, rather than in written words, in areas with a high concentration of non-English speaking residents. The Manual on Uniform Traffic Control Devices (MUTCD) offers several options for regulating the flow of vehicular and pedestrian traffic. Symbols within those standards that are graphic, rather than written, should be encouraged for safety.
- ▼ **Pedestrians with Disabilities:** The Americans with Disabilities Act (ADA) prohibits discrimination of pedestrians with disabilities. Pedestrians who are blind, deaf, or rely on wheelchairs have needs very specific to their type of disability. For instance, people who are deaf need visible warnings about crossing vehicular traffic. People with vision impairments need tactile indications that they are approaching an intersection or other hazard. Because they cannot see safety signs, they need audible indicators to inform them of proper times to cross the street.



## GHMPO Bicycle and Pedestrian Plan

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Pedestrians in wheelchairs are unable to negotiate curbs or maneuver through rough, narrow, or steep surfaces.

### 3.2.1.2 Bicycle Users

For the purpose of this plan, a bicycle is a two-wheeled, human-powered vehicle. The Guide for Development of Bicycle Facilities, developed by AASHTO, recognizes the following three types of bicycle facility users, which provide the basis for this plan:

**Type A Cyclists** – These are advanced adult cyclists aware of the road and skilled at maneuvering a bicycle through vehicular traffic. Typically commuters or other cyclists confident in their skills are interested in the shortest path to any given destination. These cyclists will use any road legally open to bicycle traffic.

**Type B Cyclists** – Typical adults are Type B cyclists. These cyclists know the rules of the road and how to ride a bicycle. The main distinction from Type A cyclists is that Type B cyclists prefer less-traveled routes to and from their destinations and are less confident along roadways with a high volume of vehicular traffic. These cyclists may use facilities for transportation purposes, but will forego the most direct and fastest route in favor of a less highly traveled, safer, or more scenic route. Type B cyclists need facilities that are safer and less intimidating than those required by Type A cyclists.

**Type C Cyclists** – Children are the prototypical Type C cyclists. These cyclists may be very skilled cyclists. Having never legally driven a motorized vehicle in traffic, they are unaware of the rules of the road. These cyclists ride for both recreation and transportation; the most obvious destination is an academic institution, such as a school or library. Type C cyclists should not travel along with motorized vehicles.

### 3.2.2 Existing Network

Along many corridors in Hall County, existing roadways will continue to be shared by bicycles and automobiles. In addition, sidewalks generally will be located along existing roadways. Most facilities will follow the existing roadway network for many reasons, including existing right-of-way, which can reduce project cost, and the access they generally provide to key origins and destinations. Development along existing key streets or evidence of need (worn paths along roadways) should be a primary basis for creating a sidewalk network. As such, the existing and proposed roadway network in Hall County greatly factored into the identification of needed pedestrian networks. For



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example, evidence of worn footpaths along sections of Atlanta Highway illustrates the need for sidewalks. For the bicycle network, the existing (and signed) designated state bicycle route became the trunk line from which to build the remaining bicycle network.

The existing transportation network was surveyed for the following characteristics, based on both technical analysis and community input, to determine the most appropriate facility improvement, if any, for that segment of the network:

- √ Evidence of worn path
- √ Missing link in the existing network (sidewalk)
- √ Traffic volume
- √ Traffic speed
- √ Roadway width (available right-of-way)
- √ Frequency of connecting streets/driveways
- √ Grade (hilly or flat)
- √ Sight distance

### 3.2.3 Facility Location and Type Considerations

#### 3.2.3.1 Pedestrian

The majority of areas in need of sidewalks to provide a complete network are those where no existing sidewalk is present and either there is evidence of a worn path, such as along Athens Street, or a sidewalk would provide much-needed access to a specific destination, such as to employment destinations along Industrial Boulevard. In addition, sidewalk locations were selected based on the need to complete an existing leg of a network, such as in the downtown areas of Lula, Flowery Branch, and Oakwood.

Regarding facility type, it is acceptable to locate sidewalks directly adjacent to automobile lanes, if pedestrians are protected by a curb. However, it is preferable to incorporate a vegetative buffer, turf or other low-growing plants to separate pedestrians



## GHMPO Bicycle and Pedestrian Plan

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from the roadway, particularly along higher-speed roadways such as McEver Road and Jesse Jewell Parkway. In many rural areas requiring new pedestrian facilities, a curb may not be present. In these instances, the roadway will likely be separated from the sidewalk by a drainage ditch.

### 3.2.3.2 *Bicycle*

As stated, the state-designated bicycle route along Hog Mountain Road, Atlanta Highway, and Clarks Bridge Road provided a trunk line from which to build the remainder of the bicycle network. The remainder of the network was selected to provide the best access to schools, parks, and downtowns. For example, a bicycle facility is proposed along Timberidge Road to provide access to a proposed park; this links to bicycle facilities that provide access to schools located on East Hall Road and Joe Chandler Road.

Separate striped bike lanes are recommended for roads with adequate right-of-way width, rolling topography, and relatively high traffic volumes and/or speeds, as is the case along Thompson Bridge Road. Wide curb lanes are recommended only in cases of lower automotive traffic volume and/or inadequate adjacent right-of-ways (e.g., Union Circle or Cash Road). Multiuse paths are recommended primarily as a means to make connections between corridors for which facilities adjacent to existing roadways were deemed inappropriate or when an opportunity existed to enhance other community initiatives, including open space preservation, economic development, and/or recreational needs.

### 3.2.4 Project Criteria

Results from the analysis described above, Task Force meetings, and public meetings were used to create publicly accepted bicycle and pedestrian project criteria and to assess the current planned program and existing roadway system, including projects contained in the Long-Range Transportation Plan. Every effort was made to ensure that proposed bicycle facilities, on-road and off-road, and pedestrian facilities were coordinated with existing and planned greenways (such as Rock Creek), pedestrian corridors, planned and programmed road improvement projects, and the transit system.



## GHMPO Bicycle and Pedestrian Plan

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The following criteria were used to identify potential sidewalk and bicycle projects:

### *Sidewalk:*

- ✓ Completes gap between existing sidewalks.
- ✓ There is evidence of pedestrian activity, but no sidewalks.
- ✓ Connects to parks, schools, and other community resources.
- ✓ Provides facility for transportation disadvantaged.<sup>9</sup>
- ✓ Provides facility where compatible with surrounding land uses and patterns.

### *Bicycle Path/Lane:*

- ✓ Connects to parks, schools, and other community resources and key destinations.
- ✓ Creates an overall bicycle network (connects to main trunk line).
- ✓ Serves a recreational purpose.

### 3.2.5 Prioritization Criteria

Projects identified for the suggested networks are individual projects that must be constructed over time. The following criteria, based on public input and technical analysis, provided a mechanism to schedule individual projects. The resulting phasing plan was presented to the community for review and comment. The community indicated demand and cost as the most important criteria for determining project phasing.

- ✓ Existing demand for facility
- ✓ Cost

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<sup>9</sup>Transportation disadvantaged in this context refers to persons without other transportation options.





## GHMPO Bicycle and Pedestrian Plan

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- ✓ System connectivity
- ✓ Timing with currently planned roadway improvements
- ✓ Safety/accident history

The resulting recommended network, including priorities, is illustrated in the Figures section: Proposed Bicycle Network, Proposed Pedestrian Network, and Proposed Pedestrian Network – Gainesville.

Two projects deserve mention. While the community highly recommended both the Dawsonville Highway and Winder Highway corridors for short-term bicycle improvements, each of these roadways was already in the design phase for widening and design had progressed to a stage where incorporating bicycle facilities was not feasible. Therefore, these projects are designated as long-term improvements.

### 3.3 Supporting Policies and Programs

Hall County offers numerous possibilities for bicycle and pedestrian travel. Many roadways have existing pavement that may be restriped for bike lanes; existing town centers have sidewalks that can be expanded; and natural waterways and abandoned rail corridors provide multiuse trail opportunities. In addition, the community is motivated to improve conditions for bicycle and pedestrian travel. However, providing facilities alone does not make a complete network. Supporting programs and policies are needed to meet the goals and objectives established by the community. The following section identifies potential policies and programs that were identified through community participation as supportable mechanisms to meet the community's overall vision for bicycle and pedestrian mobility. Overall, the proposed funding policies received the most support from the community.

#### 3.3.1 Funding

Bicycle and pedestrian projects can be funded as standalone projects, for which local governments identify and select projects that either meet pedestrian facility criteria or are included in the list of bicycle projects in this plan. Projects can also be funded as part of road improvements. Because low-cost projects can become more costly when funded by state or federal sources due to the regulatory conditions for their use, local or private sources may be more appropriate for funding standalone projects. More complex and costly projects are often better funded by state or federal sources because



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the amount of funding available outweighs the expense of meeting regulatory conditions. Additionally, these larger projects may benefit from being funded as part of programmed road or transit improvements. A variety of funding sources are available to the GHMPO, including federal, state, local, and private organizations (summarized in Appendix B). The GHMPO must decide how to appropriate available funds in the most efficient and effective manner.

The following proposed local policies received support from the Task Force and the public:

- ✓ Set aside a percentage of future SPLOST funds for bicycle/pedestrian improvements.
- ✓ Officially suggest that local governments amend local development regulations to require pedestrian and bicycle facilities during construction of new development.

Two mechanisms received limited support: “Continue the Bike/Pedestrian Task Force to coordinate grant opportunities” and “Update project evaluation sheets that include ‘bonus points’ for projects that incorporate bicycle/pedestrian facilities into the road design.” This may have been due to a limited understanding of what the Task Force is, what the Task Force can accomplish, and how projects move through the planning process to construction.

### 3.3.2 Safety

Programs receiving the most support include increasing the safe use of facilities for children walking to school, teaching all levels of cyclists how to be “effective” riding in an urban environment, and increasing driver awareness and respect for other modes of transportation. Each of the programs/projects will require coordination with various organizations.

### 3.3.3 Awareness/Education

Although walking and bicycling are increasingly becoming viable forms of transportation and recreation choices, there is still a need to raise awareness of the benefits associated with walking and biking, including improved air quality, health benefits, and reduced congestion. Those programs receiving the most support to increase awareness/education in Hall County include:



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- ✓ Distribute Suitability Index.
- ✓ Distribute “Did You Know” posters at key locations.
- ✓ Institute a Walk and/or Bike to School Day.
- ✓ Update the bicycle and pedestrian web page with highlights of the health, fitness, economic, and environmental benefits associated with walking and/or biking.

### 3.3.4 Design Standards/Maintenance

Bicycle and pedestrian designs should be constantly reevaluated for the most desirable and safe practices available. Roadway design should always incorporate bicycle and pedestrian facilities, when allowed, and railroad and bridge crossings should be updated to incorporate these transportation modes. Maintenance is another key consideration when selecting a design. Bicycle and pedestrian facilities are particularly sensitive to problems associated with maintenance, which can lead to a sense that these facilities are not viable options for travel. The following programs received the most support from the community:

- ✓ Extend shoulders during local roadway resurfacing projects.
- ✓ Provide a telephone number or web page comment section to provide cyclists and pedestrians with the opportunity to suggest improvements.

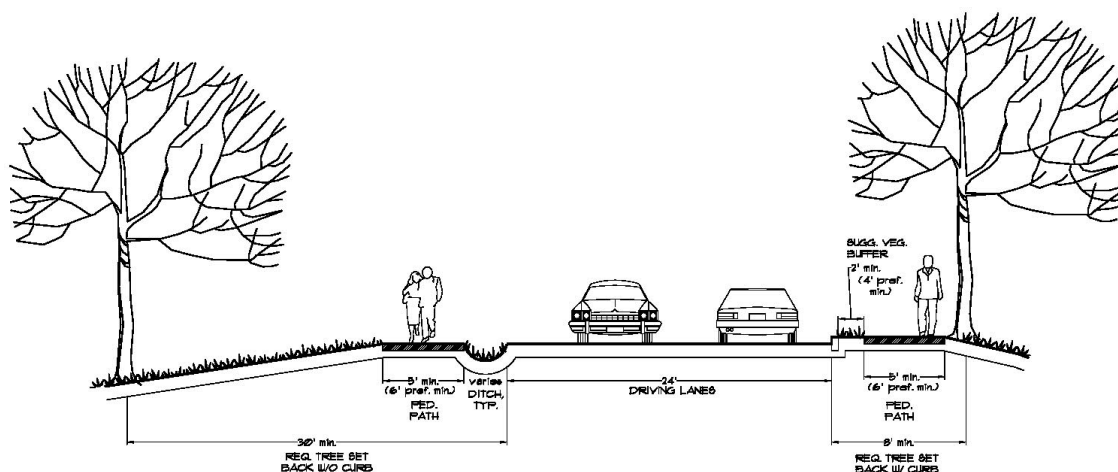
As an added component to these types of programs, the planning process included the development of minimum design standards for bicycle and pedestrian facilities. Adoption of these standards, which would involve each jurisdiction individually adopting the standards, also received support.

The minimum design standards presented on the following pages are based on standards of Georgia DOT, AASHTO, and the FHWA. The primary documents that influenced the selected standards are Georgia DOT’s Pedestrian and Streetscape Guide, AASHTO’s Guide for the Development of Bicycle Facilities, and FHWA’s Selecting Roadway Design Treatments to Accommodate Bicycles. The minimum standards were further refined by incorporating input from the Bicycle and Pedestrian Task Force members and observed needs of the community. The product of this process is a set of several recommended combinations of automobile, bicycle, and pedestrian facilities that will fit the needs of Hall County as transportation routes continue to develop and improve.



## GHMPO Bicycle and Pedestrian Plan

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### Sidewalk With or Without Curb

Georgia DOT's Pedestrian and Streetscape Guide establishes a 5-foot minimum width for new sidewalks in the state. Although 5 feet is the established minimum, 6 feet of width is preferable, with 8 feet or more desirable in more urbanized areas. A 6-foot sidewalk width provides ample room for pedestrians to pass and for two people to walk side by side.

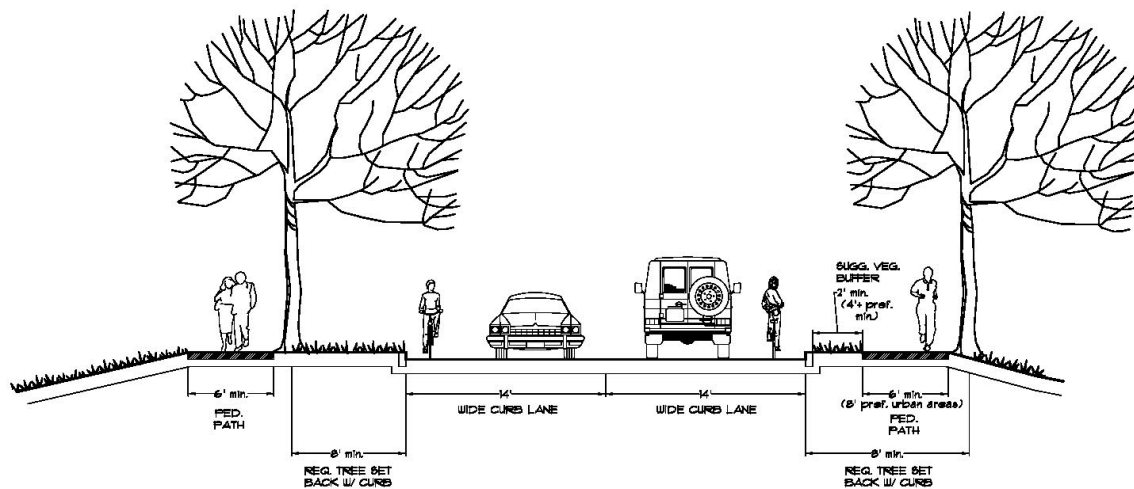
Some type of separation between the pedestrian and automobile traffic is necessary when no curb is present. Otherwise, the pedestrian would fall within the designated clear zone, a dangerous location for a pedestrian because it is intended to allow an errant automobile the opportunity to regain control and return to the roadway. This standard should apply to those areas outside of the town centers.

It is extremely important to make the pedestrian environment as comfortable as possible. The inclusion of shade trees, particularly in urban areas, can reduce temperatures in Georgia's often hot climate. Georgia DOT requires a minimum of an 8-foot setback from the curb of the driving lane to the center of street trees. Where curbs are not present, trees must be set back approximately 30 feet from the edge of the driving lane to maintain a safe clear zone. These setbacks apply only to designated state routes. Standards are typically more flexible for local roads.



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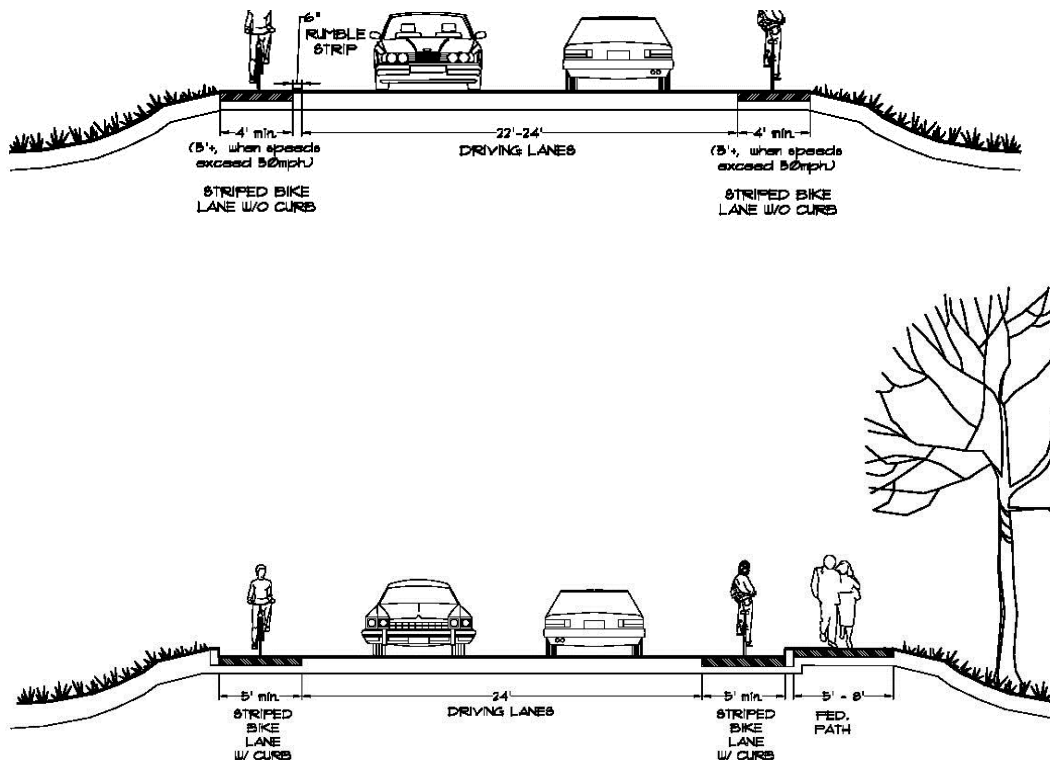
Project and Strategy Identification



### Wide Curb Lane

The AASHTO recommended minimum width for such a wide curb lane is 14 feet. This configuration is less costly than a 4-foot bicycle lane and tends to remain clear of debris. If space allows for a bicycle facility wider than 2 feet, the roadway should be striped to separate the bikeway from the driving lanes. In conjunction with bikeways, pedestrian paths may be created adjacent to driving lanes with wide curb lanes.

Although the Georgia DOT minimum width for sidewalks is 5 feet, 6-foot sidewalks are recommended for comfortable pedestrian use and 8-foot widths are preferred for urban areas. Where additional space is available, it may be desirable to separate the pedestrian pathway from the roadway with a vegetative buffer. The buffer may contain shade trees as long as the center of the trunk is 8 feet from the curb of the travel lane.



## Bicycle Lanes

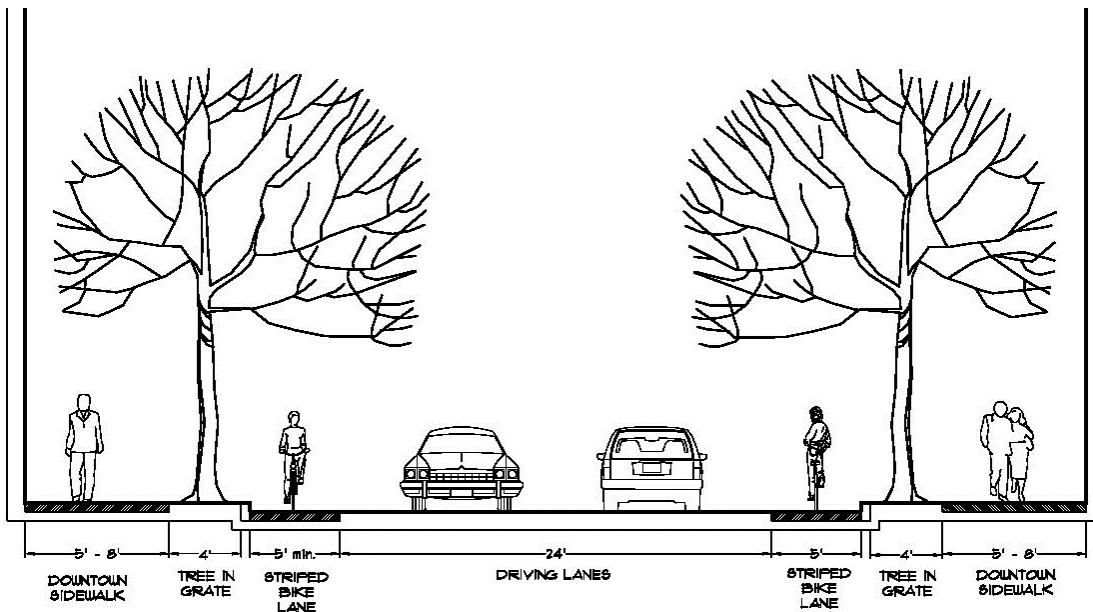
For areas without curbing, AASHTO's 1999 Guide for the Development of Bicycle Facilities defines the minimum width of a separated bike lane to be 4 feet. Five feet is the preferred width for separated bike lanes in areas where the speed limit exceeds 50 miles per hour or on roads with heavy truck traffic.

For separate bike lanes along curbed roadways, AASHTO defines the minimum width of the lane to be 5 feet. As in the previous example, an additional foot of width is desirable along corridors with high volumes and/or heavy truck use. This bike lane is to be free of drainage inlet grates, which are not safe for bike tires, and rumble strips. A painted strip should be used to separate the bike lane from automobile traffic. In this scenario, the bike lane will also satisfy much of the required clear zone between the automobile travel lanes and the pedestrian path.



## GHMPO Bicycle and Pedestrian Plan

Project and Strategy Identification



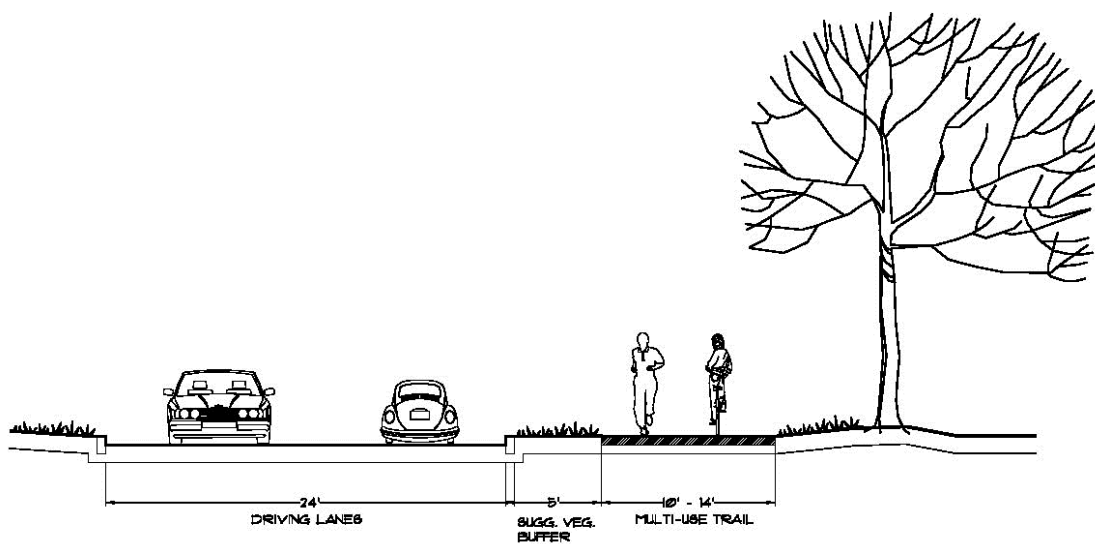
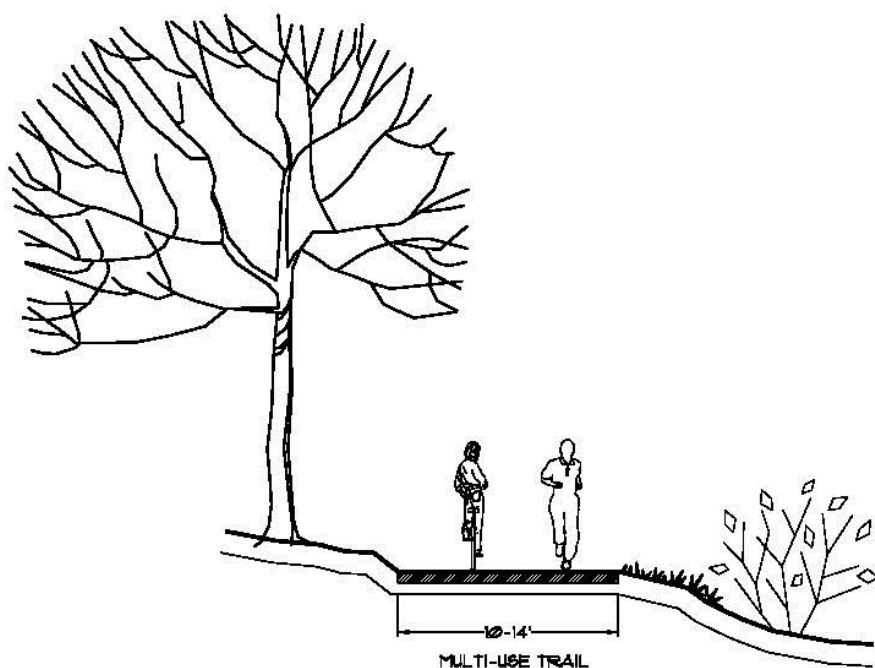
### Bicycle Lane and Sidewalk

This section illustrates a typical urban section. Bike lanes are separated from the roadway with striping, and sidewalks are separated from bike lanes by curb and gutter and street trees. Five feet is the suggested width for these bike lanes, and a minimum sidewalk width of 6 feet is desirable for urban areas. In most urban areas a sidewalk width of 8 feet is more suitable, and if space allows, the width should be increased. Sidewalks in most Georgia downtown areas range from 10 to 15 feet in width. This would be appropriate along Thompson Bridge Road or McEver Road (below Browns Bridge).



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### Multiuse Trails

A multiuse trail should be wide enough to accommodate two-way bicycle and pedestrian use without conflict. Ten to 14 feet is the suggested width for a trail that will





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Project and Strategy  
Identification

accommodate such mixed uses. Trails built in Georgia are typically 12 feet wide, which is usually the minimum required for projects receiving Georgia DOT funding. High-demand corridors, such as Cobb County's Silver Comet Trail, are experiencing demands that warrant a wider facility. Five feet of separation is required to buffer the trail from the roadway. An 8-foot setback is necessary to incorporate street trees along a designated state route. This would be appropriate for the proposed Midtown Greenway. In this example, the trail is independent of an automotive roadway and can be useful in connecting existing bike and pedestrian ways. Additionally, these paths can be located along scenic creeks or other natural areas for recreational use as well as for transportation corridors, similar to Alpharetta's Big Creek Greenway. This is appropriate along McEver Road between Browns Bridge Road and Dawsonville Highway. Another consideration in identifying routes appropriate for multiuse trails is evidence of multiple driveways, a conflict that should be avoided.

### 3.3.5 Programs

A key component in promoting multimodal accessibility is providing the actual facilities along which to walk and/or bike. However, there are additional programs that can help to create a multimodal environment. The following received the most community support:

- ✓ Walkable Communities Programs
- ✓ A program whereby local residents can call and recommend bicycle parking locations on public land

The Federal Highway Administration developed the Walkable Communities Programs to provide training for MPO staff and technical assistance to conduct pedestrian planning workshops in local communities. Such workshops can be used to highlight street design and land use strategies to improve "walkability" in a neighborhood as well as to generate political support for the changes necessary.



## 4. Implementation

This section identifies the policies, programs, and projects that will create a bicycle and pedestrian system that supports the goals and objectives identified by the community. This section also includes funding recommendations, regional coordination, and plan monitoring, which are essential to accomplish the goals and objectives of the bicycle and pedestrian plan. Demands on the region's resources are high and funding is often scarce. The GHMPO and its partners must demonstrate that they are willing to undertake significant implementation measures. Interest from the private sector and nonprofit organizations is also required to ensure long-term success. The following action items are the initial responsibility of the GHMPO and are separated into short- and long-term actions based on the available staffing and funding of the MPO.

### 4.1 Projects<sup>10</sup>

#### *Short-term:*

- ✓ Adopt the GHMPO Bicycle and Pedestrian Plan, and incorporate it into the LRTP.
- ✓ Work with agencies and jurisdictions to implement the projects identified as short-term in Appendix C.
- ✓ Initiate discussions with local jurisdictions and the Technical Coordinating Committee (TCC) regarding implementation of the projects identified in this plan (see the network figures and project list in Appendix C) through a combination of local, regional (MPO), and/or private actions.
- ✓ Establish a web-based comment form on the GHMPO web site that allows citizens to request bicycle parking at desired locations; set aside funding for bicycle parking facilities.

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<sup>10</sup> The specific facility types designated in this plan are based on analysis and discussion at the time of this study. It is the intent of this Plan that facility type be re-examined at the time a specific project is proposed or related road corridor improvements go into preliminary engineering. Final analysis should consider changes in land use, traffic characteristics, and parallel facilities, as well as any financial or design constraints.



## GHMPO Bicycle and Pedestrian Plan

### Implementation Framework

#### *Long-term:*

- Work with agencies and jurisdictions to implement the projects identified as mid-term and long-term in Appendix C.

## 4.2 Policies and Programs

### Safety

#### *Short-term:*

- Initiate discussions with Hall County and Gainesville school boards on the Safe Routes to School Program (SR2S), provide materials describing the project, and identify an entity to lead implementation of SR2S.
- Create a list of national/federal safety publications and provide to schools, county/city offices, libraries, police stations, and the Department of Motor Vehicles office; make available (or link to) the list or the materials on the MPO web site.

#### *Long-term:*

- Create project evaluation worksheets for the TIP process. Give extra consideration to intersection improvements at pedestrian/bicyclist crash sites.

### Awareness/Education

#### *Short-term:*

- Provide the Suitability Index Map on the GHMPO web site with a legal disclaimer.
- Initiate discussions with local bicycle shops regarding funding for the distribution of hard copies of the suitability map.
- Encourage the distribution of information on safety/legal requirements and/or benefits of walking/biking (e.g., “Did You Know” posters) by providing this information to local bicycle shops, grocery stores, banks, doctor/dentist offices, and park and recreational centers.



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### Implementation Framework

- ✓ Initiate discussions with the Gainesville and Hall County school boards regarding the Walk and/or Bike to School Day; this should be coordinated with the Safe Routes 2 School Program, if successful.
- ✓ Maintain a section of the GHMPO web site that highlights the progress of the bicycle and pedestrian plan, the benefits associated with walking/biking, and national bicycle/pedestrian resources/links.

### Funding

#### *Short-term:*

- ✓ Initiate discussions with Hall County regarding setting aside a percentage of future SPLOST funds for bicycle/pedestrian improvements.
- ✓ Encourage local jurisdictions to require sidewalks in subdivisions, commercial areas, and redevelopment areas (new construction) in support of this plan.

#### *Long-term:*

- ✓ Create project evaluation worksheets for the TIP process that give special consideration to projects included in this plan.

### Design Standards/Maintenance

#### *Short-term:*

- ✓ Initiate discussions with local government regarding adopting the minimum design standards in support of this plan.
- ✓ Initiate discussions with Hall County about extending shoulders during roadway resurfacing projects (Local Assistance Road Program) to allow room for bicycle travel. Provide cost/benefit analysis.
- ✓ Establish a web-based comment form on the GHMPO web site that allows citizens the opportunity to identify maintenance issues in Hall County; initiate discussions with local jurisdictions regarding establishing procedures to address the comments.



#### 4.3 Plan Monitoring

Active monitoring is critical to successful implementation of the bicycle and pedestrian plan. Performance measures are important for tracking the progress of the plan and how well projects are meeting the plan goals and objectives. Data associated with the performance measures must be collected on a regular basis. The plan should be updated regularly, based on analyses of performance measures, as transportation conditions in the GHMPO area change.

##### 4.3.1 Performance Measures

Performance measures provide a mechanism to evaluate the effectiveness of the existing bicycle and pedestrian system and the success of the GHMPO Bicycle and Pedestrian Plan over time. The following performance measures are based on the goals and objectives of the plan and should be quantifiable – meaning actual data is available or can be collected to evaluate changing conditions:

- √ Number of key origins and destinations connected by bicycle and pedestrian facilities. Key origins and destinations include:
  - Lake Lanier
  - Schools
  - Downtowns and activity centers
  - Government offices
  - Parks
  - Health care centers
- √ Percentage of population or employment within 1 mile of a bicycle facility and percentage within ¼ mile of a sidewalk
- √ Number of Census blocks with a lower-than-average vehicle-per-household rate within ¼ mile of bicycle or pedestrian facilities
- √ Amount of funding dedicated to bicycle/pedestrian facilities
- √ Percentage of jurisdictions that adopt recommended design standards
- √ Number of pedestrian crashes, injuries, and fatalities



## GHMPO Bicycle and Pedestrian Plan

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#### 4.3.2 Data Collection Needs

A variety of data must be collected and maintained to evaluate the performance measures. A GIS database that includes population, employment, bicycle and pedestrian facility locations, jurisdictional boundaries, and transit facilities is an ideal tool for assessing performance measures, since most have a geographic component. This information is currently available. Bicycle and pedestrian accident data should be collected to assess the safety of the system. This information can be collected annually from Georgia DOT. A key data collection need to measure performance of the plan is tracking and reporting development and construction of bicycle and pedestrian facilities. To track local government activity, a survey requesting information on bicycle and pedestrian improvements should be distributed yearly to each local jurisdiction.

#### 4.3.3 Updating the Plan

As projects are implemented and new projects are conceived, the GHMPO Bicycle and Pedestrian Plan must be updated. Also, as transportation challenges evolve, projects may be reprioritized based on performance measures to meet the changing needs of constituents. Finally, plan updates should be timed to feed into the established LRTP/TIP update process.

## **Appendix A**

Public Involvement

## **Appendix B**

Financial Resources



## **Appendix C**

Bicycle and Pedestrian Project List

## **Appendix D**

Bicycle/Pedestrian  
Task Force Guidelines