



REGIONAL BICYCLE AND PEDESTRIAN STUDY

*A Strategic Vision for Walking and Bicycling in the
Greater Nashville Region*

Objectives & Strategies

Technical Memorandum 3A

November 2009



TABLE OF CONTENTS

1.0	Introduction	1
2.0	Process	2
2.1	Stakeholder and Public Input	2
2.2	Online Survey Results	3
2.3	Peer Community Practices	7
2.4	BPAC Member Input	8
3.0	Recommended Objectives & Strategies	9
3.1	Regional Issues	9
3.2	Objectives & Strategies	10

1.0 INTRODUCTION

In 2008, the Nashville Area Metropolitan Planning Organization (MPO), the regional transportation planning organization in the Middle Tennessee area, initiated the development of the region's first comprehensive Bicycle and Pedestrian Study for the greater Nashville region. The Regional Bicycle and Pedestrian Study is intended to establish a strategic vision for walking and bicycling in the region. This strategic vision will feed into the MPO's overall Long Range Transportation Plan and provide the basis by which future funding priorities of the MPO are established for bicycle and pedestrian accommodations within Davidson, Rutherford, Sumner, Wilson and Williamson counties, plus the cities of Spring Hill and Springfield.

Working with local governments, businesses, non-profit organizations, and the general public the Nashville Area MPO developed the Regional Bicycle and Pedestrian Study as a mechanism to foster a better understanding of bicycle and pedestrian needs within the region. The Study is also intended to serve as a means of guiding policies, programs, and investments intended to maximize opportunities for greater walking and biking activity now and in the future within the greater Nashville region.

In general, the Regional Bicycle and Pedestrian Study:

- Provides a comprehensive inventory of existing and currently proposed on and off-road bicycle and pedestrian facilities in the greater Nashville region
- Increases the region's understanding of how non-motorized modes add to system-wide capacity by improving connectivity between residential areas, employment centers, schools, retail centers, recreational centers, and other attractions
- Serves as a framework for identifying and selecting bicycle/pedestrian projects for the region's Long Range Transportation Plan and Transportation Improvement Program; and
- Provides guidance for engineering, education, enforcement, encouragement, and evaluation activities to help improve the safety of non-motorized travel modes.

This Technical Memorandum presents the process and results of establishing recommended objectives and strategies for the Regional Bicycle and Pedestrian Study in support of the MPO's overall regional planning goals. These objectives and strategies are intended to establish the framework for advancing non-motorized accommodations in the greater Nashville region and serve as the foundation to further walking and biking opportunities within the Nashville MPO area.

2.0 PROCESS

Developing a common set of objectives and strategies is an important part of any planning process as it is the foundation for which policies, resources, and other actions are based upon.

Objectives are clear, realistic, specific, and measurable statements of action which when completed will move towards goal achievement. Objectives describe future expected outcomes or states. They provide programmatic direction and focus on ends rather than means. Strategies are the specific activities that will be conducted to achieve the stated objective.

For the Regional Bicycle and Pedestrian Study objectives and strategies were developed based on four key components:

- Stakeholder and Public Input
- Online Survey Results
- Peer Community Practices, and
- BPAC Member Input.

For purposes of illustrating how each component fed into the development of the proposed objectives and strategies, highlighted aspects of each of these items are described within this Technical Memorandum. Greater details of each specific component can be found in Technical Memorandum 1 and 2.

2.1 STAKEHOLDER AND PUBLIC INPUT

In the initial stage of this project two efforts were undertaken to obtain an overall understanding of the level of activity, interest, and obstacles relative to the provision of non-motorized accommodations.

The first effort included a series of meetings, one in each of the MPO's member counties (Davidson, Rutherford, Sumner, Williamson, and Wilson) with local stakeholders. These stakeholder meetings were conducted in December 2008 and were held with representatives from each local school system, college and university, parks department/greenway commission, planning department, public works department, transit agency, local public health agency, and local law enforcement agency within each respective county.

In total, 50 representatives participated in the stakeholder meetings providing valuable insight into local efforts to improve walking and biking conditions within their respective areas. Stakeholders were asked what types of programs and initiatives are occurring locally with regards to walking and biking, what if any funding programs they have or use in advancing non-motorized modes, the opportunities and constraints they see with regards to promoting greater provisions for walking and biking, and what they are hearing from constituents and local residents relative to these topics.

The second effort included a series of public meetings, one in each of the MPO's member counties (for a total of five public meetings) in which the general public was invited. In total, 212 residents from the MPO region participated in the first round of public meetings which were held in late February 2009. At each of these meetings participants were asked to share information on the types of walking and biking facilities they use today, for what purposes (e.g.

transportation, exercise, etc.), what obstacles they encounter when using these facilities, and lastly, what improvements they see for improving walking and biking conditions.

These two efforts resulted in common themes of obstacles and challenges which included:

- Accommodation Provisions – Facilities, Design, and Maintenance
- Education, Awareness, and Enforcement
- Vehicular Traffic and Cultural Environment
- Connectivity - Land Use Patterns and Crossing Major Features
- Funding

From these identified obstacles and challenges, a common theme emerged of potential solutions which fell into the following categories:

- Facilities
- Connectivity
- Awareness, Support, and Collaboration
- Policies and Programs
- Mapping and Information
- Education and Enforcement

These themes of obstacles, challenges, and solutions were consistent throughout the region and held true both between the stakeholder involvement process and the public involvement process. The development of the proposed objectives and strategies for the Regional Bicycle and Pedestrian Study build upon these themes and input.

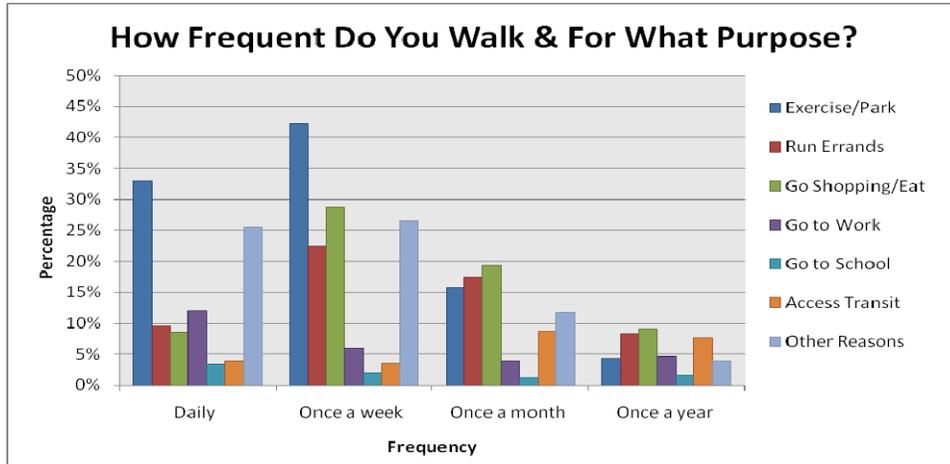
2.2 ONLINE SURVEY RESULTS

In January 2009 an online survey was initiated for the project. Approximately nineteen questions were part of the survey which was intended to gain insight into individuals walking and biking habits as well as obstacles and opportunities for improving non-motorized accommodations within the greater Nashville region.

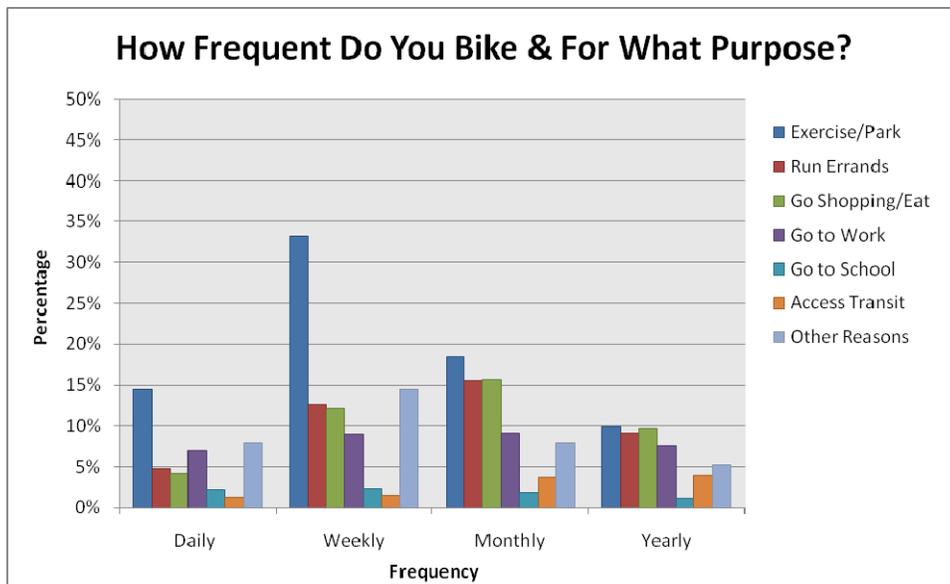
The survey link was placed on the MPO's website homepage. Media news releases, emails, and a project brochure were used to spread the word of the online survey. At the end of April 2009, nearly 1,700 surveys were completed. Of these completed surveys approximately 1,100 were completed by Davidson County residents, 250 by Williamson County residents, and nearly 100 by each Rutherford, Sumner, and Wilson County residents. The results of the survey provided additional insight for the establishment of the objectives and strategies for the Regional Bicycle and Pedestrian Plan.

The following highlights some key findings of the survey:

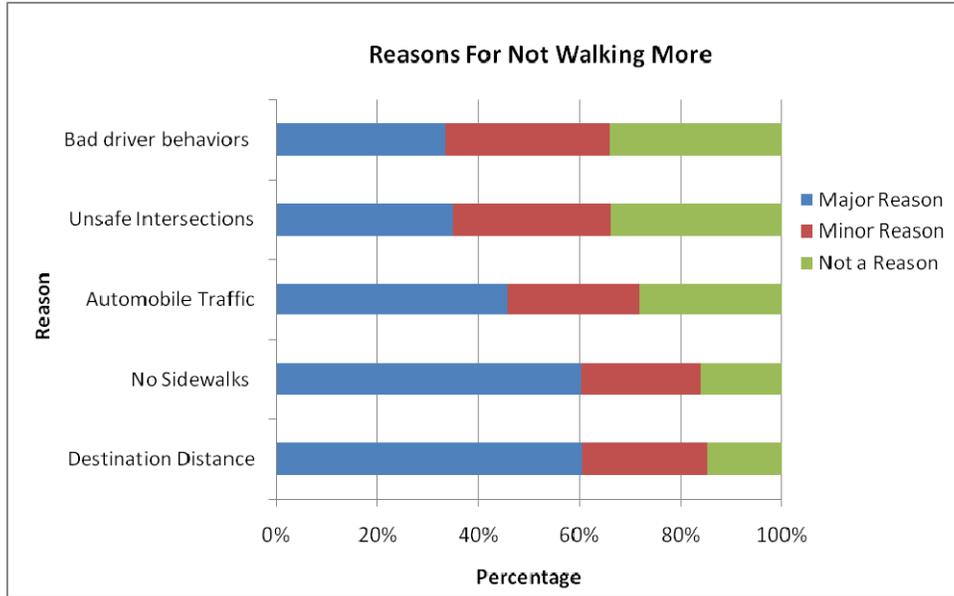
- Walking for Exercise or to the Park was stated as the top walking trip purpose
- Errand Trips and Shopping/Eat Trips were the second most stated walk trip purpose



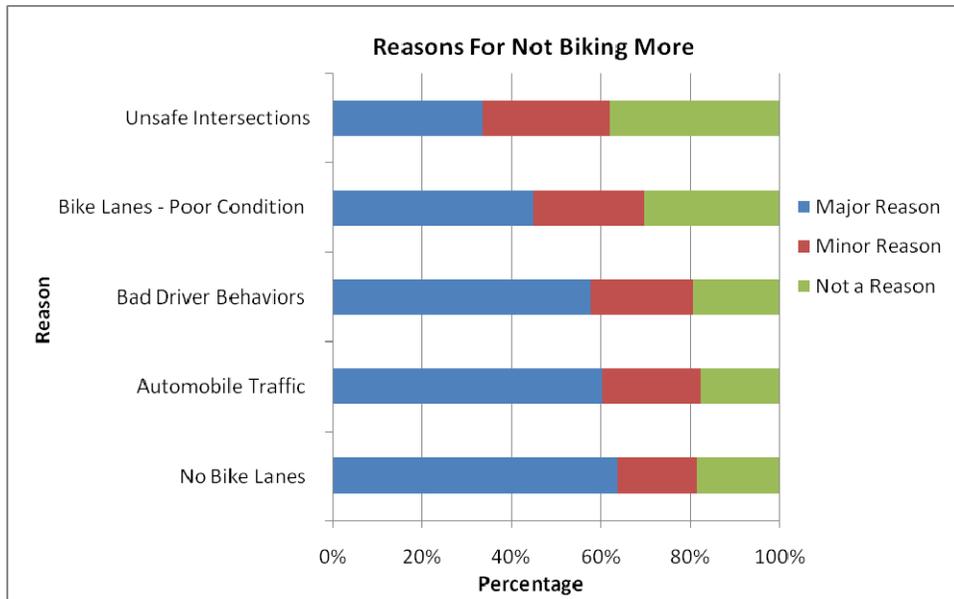
- Biking for Exercise or to the Park was stated as the top biking trip purpose
- Errand Trips and Shopping/Eat Trips were the second most stated bike trip purpose



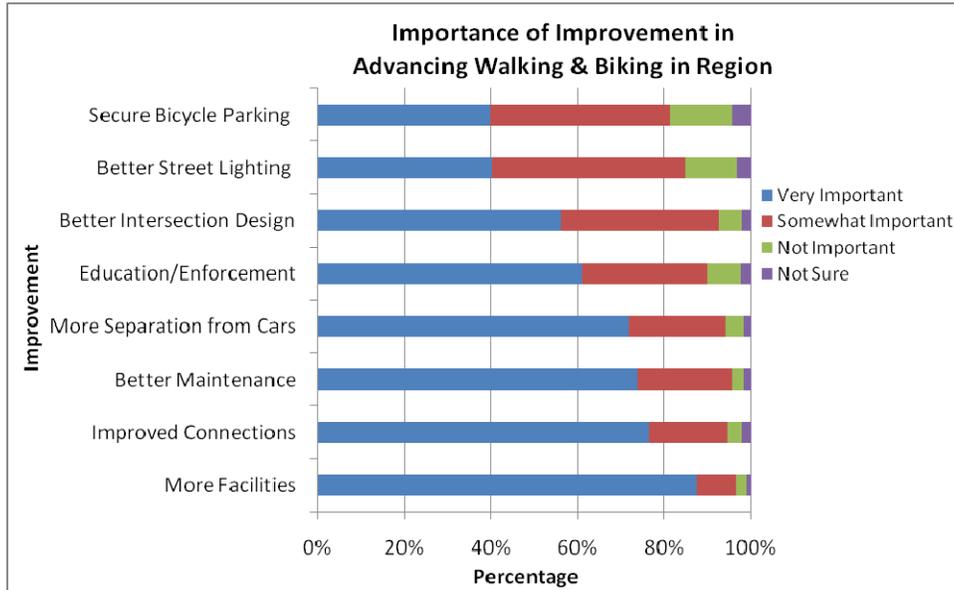
- The distance of the destination and the lack of sidewalks were the top two stated reasons for not walking more often
- Automobile traffic, unsafe intersections, and bad driver behavior were stated as the next highest reasons



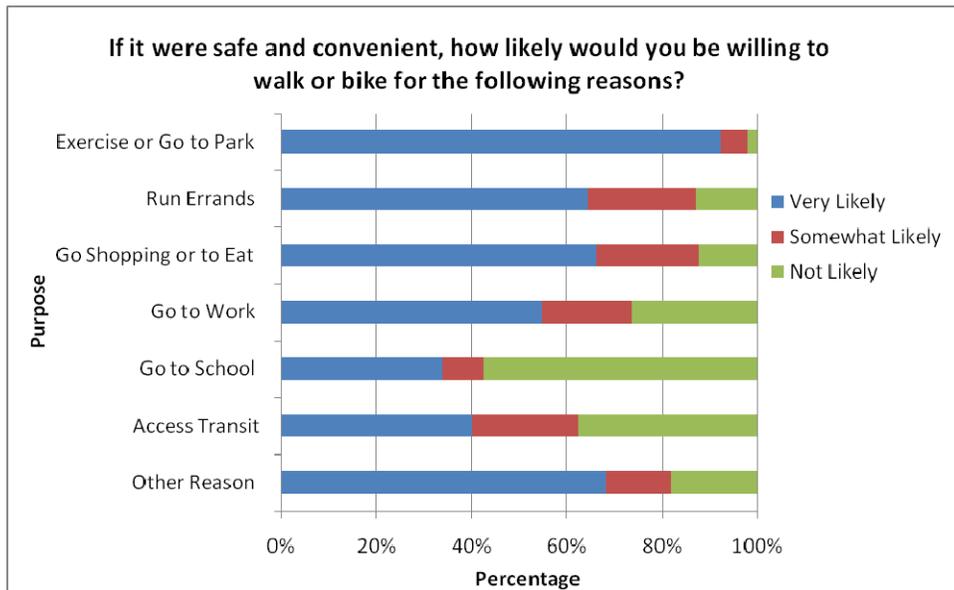
- Lack of bike lanes and automobile traffic were the top two stated reasons for not bicycling more often
- Bad driver behavior, poor conditions of existing bike lanes, and unsafe intersections were stated as the next highest reasons



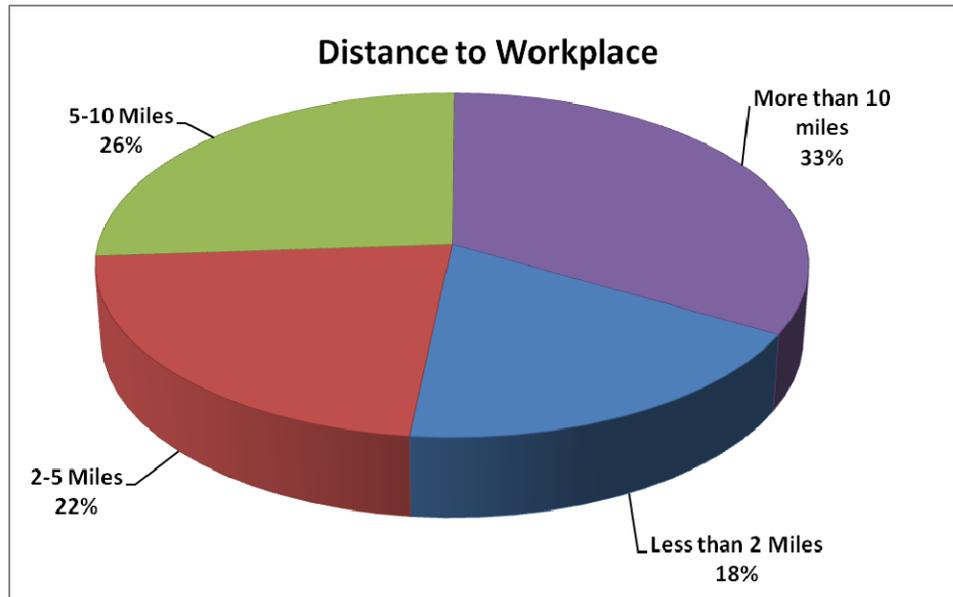
- Providing more facilities (bike lanes, bike routes, sidewalks, greenways, etc.) was the most frequently stated improvement needed in order to advance walking and biking in the region
- Improving connections between facilities and transit and better maintenance of facilities were stated as the next highest improvements for advancing walking and biking



- Trips for Exercise or to the Park were stated as the most likely walking and biking trip if conditions were safe and convenient
- Errand Trips and Shopping/Eat Trips were the second most stated trip purpose if conditions were safe and convenient



- Over 18% of respondents indicated their workplace was less than 2 miles from their home and nearly 40% of all respondents stated their workplace was less than 5 miles from their home, a distance that can be walked or bicycled in a timely manner.



The results of the survey were combined with the stakeholder and public involvement process findings and used in solidifying the draft objectives and strategies of the Regional Bicycle and Pedestrian Plan.

2.3 PEER COMMUNITY PRACTICES

As part of the Regional Bicycle and Pedestrian Study six peer communities were identified for the purposes of determining bicycle and pedestrian accommodation practices of more established walk and bike friendly communities.

Communities selected for the peer review included:

- Charlotte, NC
- Chattanooga, TN
- Chicago, IL
- Denver, CO
- Louisville, KY
- Phoenix, AZ

As part of the peer review effort, current and innovative solutions employed in the peer communities were reviewed and regional practices and strategies employed by these communities were documented as described in Technical Memorandum #1.

In general, findings of the peer review were compared to input received as part of the stakeholder and public involvement processes. From the peer review six categories were identified which captured the essences of each peer practice. These categories included:

- Policies
- Programs
- Design and Engineering
- Funding
- Practices, and
- Planning and Programming

These categories were then cross-referenced against the public meeting comment categories.

Peer Review Categories	Public Meeting Categories
Policies	- Policies and Programs
Programs	- Awareness, Support, and Collaboration - Policies and Programs - Mapping and Information - Education, Encouragement, and Enforcement
Design and Engineering	- Facilities - Connectivity
Funding	- Policies and Programs
Practices	- Facilities - Connectivity - Awareness, Support, and Collaboration
Planning and Programming	- Facilities - Connectivity - Policies and Programs - Education and Enforcement

The categorization of these practices and the public input were then shared with the MPO's Bicycle and Pedestrian Advisory Committee (BPAC).

2.4 BPAC MEMBER INPUT

At the third meeting of the Bicycle and Pedestrian Advisory Committee (BPAC) which was held on April 2, 2009 members of the BPAC were presented information from the stakeholder and public meetings as well as the finding of the peer review effort. At this meeting BPAC members were guided through a process of discussion in which the formation of objective statements and strategies were crafted. Following the meeting, BPAC members were contacted via email and requested to share their individual thoughts on additional potential strategies.

Information gathered from the BPAC meeting and from the follow-up email feedback was used to formulate a final set of objectives and strategies.

3.0 RECOMMENDED OBJECTIVES & STRATEGIES

The following section presents the recommended objectives and strategies of the Regional Bicycle and Pedestrian Plan.

3.1 REGIONAL ISSUES

Specific regional issues as stated below have been identified by the Nashville Area MPO. The objectives and strategies of the Regional Bicycle and Pedestrian Study provide direct and indirect benefits in addressing these issues.

Objectives	Regional Issues								
	Congestion	Land Use Patterns	Safety	Environmental Conservation & Quality	Sustainability	Health	Quality of Life	Mobility & Accessibility	Maintenance/ Construction Costs
Provide Facilities - Provide a comprehensive, safe, and convenient bicycle and pedestrian system for a wide range of skill levels that is interconnected and accessible making it easier for individuals to choose to walk and bicycle	●	●	●	●	●	●	●	●	●
Build Support - Build a collaborative and cooperative environment within the region among stakeholders and communities that supports more non-motorized transportation choices	●	●	●	●	●	●	●	●	●
Create Policies & Programs - Integrate walking and biking within the region through policies and programs that foster accommodations for improved safety, mobility, and health	●	●	●	●	●	●	●	●	●
Increase Awareness - Elevate the level of understanding and awareness of the benefits, uses, and needs of non-motorized transportation choices through comprehensive educational, enforcement, and outreach programs	●	●	●	●	●	●	●	●	●

- – Primary issue addressed by objective/strategy
- ◐ – Secondary issue that benefits from achievement of objective/strategy

3.2 OBJECTIVES & STRATEGIES

The following are the recommended objectives and strategies of the Regional Bicycle and Pedestrian Plan. In total there are four objectives and 43 strategies.

Objective - Provide Facilities

Provide a comprehensive, safe, and convenient bicycle and pedestrian system for a wide range of skill levels that is interconnected and accessible making it easier for individuals to choose to walk and bicycle

Strategies:

1. Designate and implement a regional bicycle network of bicycle commuter corridors and community connections.
2. Require sidewalk accommodations along all arterial roadways for which pedestrians are allowed as well as for roadways within 1 mile of all schools, parks, community centers, and transit routes/stations.
3. Construct new bicycle and pedestrian facilities to meet current AASHTO standards.
4. Use innovative designs, as appropriate, to expand and enhance walking and biking opportunities in the region.
5. Work with local municipalities, counties, and the state to devise appropriate maintenance practices to ensure safe use of facilities.
6. Create, fund, and implement spot improvement programs so that minor walking and biking improvement needs can be quickly addressed.
7. Increase the availability of bicycle parking and support facilities at destinations, transit stations, and transit stops across the region.
8. Fully integrate bicycling with all public transit facilities and services.
9. Develop strategic connections for traditional neighborhoods and areas having characteristics that are conducive to bicycling and walking.
10. Connections should link neighborhoods and activity areas such as commercial areas, schools, parks, transit service.
11. Prioritize connections according to the trip characteristics and demographics that are most likely to increase the number of walking and biking trips.
12. Develop school siting and child school zoning recommendations to ensure that bicycling and walking are options for children.
13. Promote and encourage land use decisions that provide a meaningful and context-appropriate mixture of uses that are supportive of increased walking and bicycling.
14. Ensure that new and refurbished bridges and underpasses are designed and constructed to be safe for walking and bicycling.
15. Develop a consistent wayfinding and route signing program for bike lanes, bike routes, and greenways throughout the region.

Objective - Build Support

Build a collaborative and cooperative environment within the region among stakeholders and communities that supports more non-motorized transportation choices

Strategies:

1. Continue with regular meetings of the MPO's BPAC to advise on regional issues to the MPO TCC and Executive Board regarding non-motorized transportation choices
2. Hold monthly meetings with local and state bicycle and pedestrian coordinators.

3. Hold annual walking and cycling regional summits in order to enhance awareness and report on progress made on increasing non-motorized transportation throughout the region.
4. Foster relationship between the public and private sector as a means of building awareness and support for non-motorized accommodations and programs.
5. Create and maintain a multi-jurisdictional GIS of bicycle and pedestrian facilities for technical use by jurisdictions and for educational use and mapping by residents. This GIS should also be capable of being integrated with transit routes.
6. Partner with local planning and transit agencies on integrated transportation and land use corridor studies, small area plans, and transit-oriented developments.
7. Establish an annual report on the state of walking and biking improvements and activities in the region whereby municipalities report annually on their local activities. Information can be used to prepare a package to present throughout the region to mayors and elected officials, community organizations (i.e. YMCA, health depts., churches, bike clubs, parks depts., etc.), and other stakeholders detailing the benefits, projects, and practices for the year related to walking and biking in the region.

Objective - Create Policies & Programs

Integrate walking and biking within the region through policies and programs that foster accommodations for improved safety, mobility, and health

Strategies:

1. Designate a local (City and County) bicycle and pedestrian coordinator in every jurisdiction within the MPO.
2. Require continuing education in sustainable transportation for public staffs that are involved in capital improvements and/or transportation programs.
3. Create a dedicated funding source for bicycling and pedestrian facilities improvements.
4. Integrate consideration of walking and bicycle travel into all transportation planning, design, construction and maintenance projects as well as in local community and transportation plans.
5. Regionally establish a Complete Streets Policy and work with all MPO member jurisdictions to adopt similar policies and practices.
6. Implement bicycle and pedestrian facilities as a part of other projects, such as roadway repaving, construction and reconstruction. Annually work with local municipalities and the state to identify roadways where bicycle accommodations can be made as part of a resurfacing project or through a Road Diet (e.g. restriping).
7. Integrate the recommendations of the Regional Bicycle and Pedestrian Plan, as appropriate, into local ordinances, plans, and guidelines.
8. Effectively link project funding and approval decisions to priorities identified in the bicycle and pedestrian components of local, regional and state transportation plans.
9. Tie MPO and other funding to the inclusion of bicycle and pedestrian facilities as part of projects.
10. Give guidance to local communities on methods for establishing developer incentives for inclusion of sidewalks, bike lanes, and transit accommodations as part of all projects, and for inclusion of bike racks, lockers, showers, and other facilities in commercial and public building projects.
11. Create, fund, and implement a regional bike parking program to increase the amount of bike racks within communities throughout the region.

Objective - Increase Awareness

Elevate the level of understanding and awareness of the benefits, uses, and needs of non-motorized transportation choices through comprehensive educational, enforcement, evaluation, and outreach programs

Strategies:

1. Emphasize a greater importance of pedestrian and bicyclist laws on the driver's licensing exam.
2. Establish an informational website showing routes and locations of bicycle facilities as well as printable PDF maps.
3. Publicize successful bicycle and pedestrian projects and events.
4. Partner with existing organizations to establish a Bicycling Ambassadors Program to educate more bicyclists and motorists about safe and responsible road use.
5. Integrate bicycle and pedestrian skills training into appropriate school curricula and annually fund school-based education programs on bicycling and walking safety.
6. Train transportation engineers, planners, and other stakeholders on the principles of Complete Streets, Road Diets, and other accommodation practices as a means of accommodating pedestrian and bicycling improvements into projects.
7. Create, fund, and implement pedestrian and bicycle media campaigns and promotional materials to promote walking and bicycling as a safe, healthy, cost effective, environmentally beneficial transportation choice. Identify partners to provide bicycle and pedestrian education, enforcement, and encouragement programs.
8. Partner with local media outlets to educate people about walking and bicycling.
9. Increase safety and create mutual respect among all system users by working with local police departments to establish enforcement strategies such as increasing enforcement of bicycle and pedestrian safety laws equally among bicyclists, pedestrians, and motorists.
10. Establish an annual bicycle and pedestrian count program.
11. Analyze crash data in order to identify locations with high bicycle and pedestrian crash rates and evaluate and implement countermeasures for crashes.
12. Conduct annual surveys of bicyclists and pedestrians.