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0.0 EXECUTIVE SUMMARY

The purpose of the MPO Bikeway Plan is to make Lafayette a more bikeable community by achieving the following goals:

- Promote bicycling and reduce dependency on single-occupant vehicles
- Provide safe bicycle transportation
- Plan, construct, and maintain connected bikeway facilities

Bikeways help build a progressive community and improve the quality of life in the community. A bikeable community significantly impacts the economy by attracting the growing number of cycling tourists, retirees and sporting events. Cycling also helps reduce parking congestion, vehicle congestion and air pollution. Cycling is great family activity and most kids have a bike.

State and local laws serve to facilitate and protect bicyclists on public roads. The Bikeway Plan includes safety and educational programs. The Bikeway Plan also provides for signs and kiosks that not only mark and map routes but also provide safe cycling information to cyclists.

This Bikeway Plan includes a project list based upon estimated roadway capital improvement plans for the Lafayette Parish. The plan lists multiple projects and ranks the projects based upon need, funding and timing with roadway projects. The focus of the bikeways presented on the plan is to connect schools, libraries, museums, parks and business districts within the Lafayette area.

Most bikeways are striped while others paths are separated from the road. The projects also consider the installation of bike and pedestrian bridges over the Vermilion. The plan also includes bikeways for the future developments of parks within the area.

Funding for the bikeways is designated by Federal and State laws under several acts and statutes, including the Intermodal Surface Transportation Efficiency Act (ISTEA). In addition to the governmental funding the Bikeway Plan sets forth funding options through private, non-profit, and other civic organizations.

1.0 INTRODUCTION

1.1 Importance of Bikeways

Bikeways provide citizens of a community with a safe and efficient environment in which to travel. Bikeways are of utmost importance in densely populated urban areas. The properly planned bikeway provides several benefits to the population. Adequate paths serve as incentive for citizens to travel via bicycle, which has several positive effects. Bicycling is beneficial on an individual level for health purposes, as shown through countless scientific studies. It is also beneficial on a larger scale because it has the potential to reduce air and noise pollution, decrease traffic congestion, slow the wear and tear of roadways, and decrease the community's dependence on natural and economic resources. Bikeways attract tourist and retirees who provide an economic benefit. Bicycling facilities are part of a progressive community and new businesses are attracted to progressive communities. A city with bikeway facilities provides employees with an alternative means of getting to work. For these benefits to come to fruition, proper bikeways must be sufficiently integrated into the Metropolitan transportation system.

1.2 Goals and Objectives of the Bikeway Plan

The Bikeway Plan is designed to serve as a guide for the development and improvement of a safe, interconnected, and efficient bikeway transportation system, which would ensure the mobility of the Lafayette population in such a way that would have a positive impact in the urban area.

In striving to accomplish this goal, the Bikeway Plan provides a necessary list of objectives and strategies for consideration and adoption by the Metropolitan Planning Organization and the Planning Commission. The plan also offers the technical information concerning bikeways that is fundamental for proper administration and implementation. Finally, this document will serve as a list of possible resources and options for reference by the MPO committees and the Planning Commission.

The goals of the Bikeway Plan are set to broadly define the destination that the community is attempting to reach through the plan. The objectives posed by this plan are designed to provide direction for the development of the bikeway system in order to reach those goals. Both the goals and objectives are essential to the Bikeway Plan and to the development of the metropolitan area's bikeway system.

Goals & Objectives

Goal 1: Adopt the Bikeway Plan

- Objective 1: Adoption by Citizen Advisory Committee (CAC)
- Objective 2: Adoption by Transportation Technical Committee (TTC)
- Objective 3: Adoption by Transportation Policy Committee (TPC)
Adoption by local Planning Commissions (PC)

Objective 4: Adoption by Metropolitan Planning Organization (MPO)

Objective 5: Adoption by Lafayette Consolidated Government, Area Municipalities, and parishes.

Goal 2: Promote bicycling and reduce dependency on single-occupant vehicles

Objective 1: Organize a bicycle program

Objective 2: Appoint a volunteer bicycle coordinator for the metropolitan area to oversee programs, plans, and designs for bicycle facilities

Objective 3: Utilize programs to increase public awareness and participation

Objective 4: Adopt land use patterns, zoning requirements, and urban design guidelines that are compatible with non-motorized travel

Objective 5: Provide appropriate accommodations for bicycle travel and parking at locations such as schools, transit stops, parks, etc.

Goal 3: Provide safe bicycle transportation

Objective 1: Enforce laws and regulations pertaining to bicyclists

Objective 2: Utilize bicycle programs to encourage safety and provide education for the proper use of bicycles through brochures, seminars, posters, radio, etc.

Objective 3: Reduce the rate of bicycle-pedestrian and bicycle-vehicle conflicts

Objective 4: Collect and analyze accident and injury data and apply findings in implementation of the Bikeway Plan

Objective 5: Identify and correct immediate risks to bicyclists associated with such features as inlet grates, rail crossings, pavement joints, etc.

Goal 4: Plan, construct, and maintain connected bikeway facilities

Objective 1: Integrate bicycling into local transportation planning, such as requirements for bike paths in new street construction in appropriate areas

Objective 2: Identify and allocate funding for implementation and maintenance of facilities and programs

Objective 3: Ensure the availability of a comprehensive set of design guidelines for bicycle facilities, as well as the compliance of all projects to the guidelines

Objective 4: Provide and replace adequate signage for the bikeway system

Objective 5: Construct connecting routes between existing bike facilities

Objective 6: Seek partnerships with local entities (businesses, universities, non-profit organizations, etc.) to assist in planning and implementation

Objective 7: Conduct bicyclist surveys to assist in prioritizing development plans

Objective 8: Develop a set of maintenance guidelines

Objective 9: Encourage bikeway users and neighbors to report maintenance problems

Objective 10: Develop performance measures for implementation of the Bikeway Plan

1.3 The Problem Defined

In most locations within the Lafayette Metropolitan Study Area, the problem with bikeways is that there are none. Development of bikeway facilities is of paramount significance for accomplishing the desired effects of this plan. In many areas, the problem is complicated due to the nature of the area not being readily receptive to the incorporation of a bikeway.

One particular illustration of this problem is found on one of Lafayette's most-traveled roadways, Johnston Street. The street is bordered on each side by only thin shoulders, and, at spots, these shoulders disappear entirely. This puts current bicyclists in danger. A great number of Lafayette citizens travel down Johnston Street at some point during the day. Because of the nature of Johnston St., many of these citizens who may otherwise travel by bicycle choose to take their car, which adds to the traffic congestion. The problem with Johnston Street is not an isolated one. Many other arterials possess these problems.

There are other streets that have sidewalks, but which are not wide enough to allow for bicycle traffic. These sidewalks are intended for pedestrian traffic only and bicyclists are prohibited from using them. These types of problems need to be addressed and corrected to secure an adequate bikeway system throughout the urban growth area.

1.4 The Resolution

There are several steps to rectifying the current condition of the area's bikeway system. The incorporation of bikeways into both major and minor arterials will prove quite challenging. Creative methods must be formulated in order to make such a change environmentally and economically possible.

First, funding must be identified, applied for, and utilized. There are numerous grants that are designed for such a project. It is also recommended that partnerships be created with local entities in order to best effectuate the plan. Such partnerships can be made with local universities, businesses, and organizations. The architecture and design department of the University of Louisiana at Lafayette has worked with city planning on previous occasions. The civil engineering department would also serve as a valuable partner. Architecture and civil engineering firms could also provide assistance.

The incorporation of various other programs could be incorporated into the Bikeway Plan to resolve the area's bikeway problems more quickly. Regarding the insufficient paths of Johnston Street, there is a plan to redesign Johnston Street that coincides with the goals of the Bikeway Plan. Programs could also be initiated to inform the community of this plan, as well as reach out for any support that may be provided. Community participation will be extremely important to the success of the Bikeway Plan. These resolutions, as well as strategies for placing them into effect, will be discussed in more depth in following sections.

2.0 REGULATIONS AND CONTROLS

In many cases, the practices that are outlined in the Bikeway Plan are subject to other guidelines and codes. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act of the 21st century (TEA-21) are pieces of legislation that charge the

Metropolitan Planning Organization with preparing and maintaining the Long-Range Transportation Plan for the Lafayette Metropolitan Study Area. In addition, the Americans with Disabilities Act (ADA) provide guidelines that must be adhered to for providing the disabled community with access to services and facilities.

There are also several Louisiana statutes that directly affect and pertain to bicyclists. Louisiana revised statutes 32:194, 195, 197, 263, and 329 specifically place regulations on the use of bicycles within the state of Louisiana. Lafayette has also implemented several codes concerning bicycles. Compliance with these standards is an absolute necessity, and serves to complete one objective of the Bikeway Plan in pursuit of an improved area bikeway system.

2.1 Louisiana Revised Statutes

-Louisiana Revised Statutes Section 32:194:

Every person riding a bicycle on a highway of this State shall be granted all of the rights and shall be subject to all the duties applicable to the driver of a vehicle.

-Louisiana Revised Statutes Section 32:195:

- a) A person propelling a bicycle shall ride upon or astride an attached seat.
- b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped.
- c) A person operating a bicycle shall at all times keep at least one hand upon the handlebars.

-Louisiana Revised Statutes Section 32:197:

- a) Every person operating a bicycle on a roadway shall ride as near to the right side of the roadway as practicable, exercising care when passing a standing vehicle or one proceeding in the same direction.
- b) Persons riding bicycles on a roadway shall not ride more than two abreast except on paths or parts of roadways set aside for the exclusive use of bicycles.
- c) Whenever a usable path for bicycles has been provided adjacent to a roadway, bicycle riders shall use such path and shall not use the roadway. (We can not remove an item from the state statues locally though we can add to or make something more restrictive locally. i.e. bike tags.

-Louisiana Revised Statutes Section 32:263:

The use of any LA interstate highway by pedestrians, bicycles, or other non-motorized vehicles is prohibited.

-Louisiana Revised Statutes Section 32:329:

Every bicycle when in use at or after dark shall be equipped with a lamp on the front, a red reflector on the rear and a reflector on each side, which shall be visible from all distances within 600 feet to 100 feet to the rear.

Every bicycle shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement.

2.2 Lafayette Codes

-According to Lafayette Codes, by definition, the word "bicycles" includes tricycles, and shall be deemed to mean any vehicle propelled by human power by action of the feet upon the pedals, upon which a person may ride, having wheels with a diameter of sixteen (16) inches or larger.

-It is unlawful for any person to operate or use a bicycle upon any of the streets, alleys, sidewalks, lanes, parking lots, or highways of the City of Lafayette, unless such bicycle has been properly registered.

-For all purchases of bicycles from retail dealers of bicycles in the City of Lafayette on and after January 1, 1989, the registration of bicycles is the responsibility of the retail dealer who shall register the bicycle with Revenue Collections at 291-8272 on behalf of the owner. The dealer will collect the registration fee and affix a license tag to the frame.

-It shall be unlawful to ride a bicycle at night without a visible rear reflective device and a properly operating headlamp.

-The Department of Administration and the Police Department of the Lafayette Consolidated Government shall keep a complete record of all bicycles registered, showing the names and address of the owner thereof, the make, class and frame number of such bicycle, the number of the registration plate or tag issued therefore, and such other information.

-Any person purchasing or acquiring a bicycle from other than a retail dealer shall have the registration transferred to the new owner within ten days of acquisition of the bicycle.

-The license tags are issued for a period of three (3) years and expire three (3) years from the date they were issued, at which time they shall be renewed for a fee of five dollars (\$5.00). It is the responsibility of the owners of bicycles to provide the Department of Administration for the Lafayette Consolidated Government with a current address so they can be notified by mail to renew license tags. It shall be the responsibility of the Department of Administration of the Lafayette Consolidated Government to notify, by mail, the owners of bicycles and make them aware of the need to renew their license tags at least one month prior to the date that owner license tags will expire.

-When a bicycle is registered, there should be paid the sum of five dollars (\$5.00). When the registration is changed from one person to another, there shall be paid the sum of five dollars. When a numbered plate or tag is issued replacing one that has been mutilated, lost, stolen, or misplaced, there shall be paid the sum of five dollars.

-Any person who shall remove, change, alter or mutilate any bicycle registration tag and/or registration number without authority of the Department of Administration shall, upon conviction thereof, be fined not more than fifty dollars and/or ten days in jail and/or both for each offense.

-Any police officer shall be given the authority to impound a bicycle if the rider is unable to establish ownership of the bicycle. The bicycle which has been impounded will be released to the rider only after proof of ownership is provided.

3.0 CURRENT CONDITIONS & RECOMMENDATIONS

3.1 Introduction

Current Condition: In 1973, the Lafayette Regional Planning Commission developed a bikeway plan. The plan had several purposes: to recognize the bicycle as an important and functional part of transportation planning; to identify specific streets, roads, and other corridors for a Bicycle Safety Network; to develop an Area-wide Bicycle Code; to establish a committee to promote and educate the public to the proper use of the bicycle; to propose Bicycle Safety Routes; and to detail cost estimates for bikeway facility construction for some 68 locations in the metropolitan area. Though attempts were made to construct a network of bicycle paths, the paths were never completed and existing paths have been poorly maintained over the years.

Developing areas of Lafayette continue to expand and new construction fails to accommodate for bicyclists. Subdivisions are built without access to bikeways. Many area streets and roads lack shoulders that provide even the smallest opportunity for a bicyclist to use. Existing facilities are in need of adequate signage. Commercial developments give little or no consideration to bicycle transportation or parking facilities. Current local projects do not allow for the construction of bikeways. There are schools that are not equipped to provide for bicycle transportation and/or storage. Transit stops and buses do not accommodate for bicyclists who would otherwise use the public transportation system.

Recommendation: The metropolitan bikeway system can be completely reinvented to the benefit of the population by taking an efficient, systematic approach to solving the current bicycling problems in the area. Necessary repairs and adequate maintenance of existing facilities will help to increase the use of bicycling as a mode of transportation, thus, helping to reach several objectives of the Bikeway Plan. Better access to bike paths will help achieve those same objectives. Additions to public property that encourage bicycling, such as racks on buses, parking at bus stops, schools and parks, and necessary signage on existing trails will also improve the bicycling experience in the urban area.

3.2 Existing Facilities

Current Condition: Currently, there are portions of the 1973 Lafayette Area Bikeways Plan still in use within the City of Lafayette, though many of the 1973 paths are obsolete. The only other remaining facility is an underpass at the T-intersection of South College and West Bayou Parkway in Lafayette. The underpass allows pedestrians and cyclists to make a left turn from West Bayou Parkway onto South College. It also allows them to turn left onto West Bayou Parkway from South College. These left turns are prohibited to motor vehicles. While the underpass meets a need for non-motorized traffic, it is very narrow, lighting does not exist, and incorporates stairs, which are inconvenient for cyclists to use.

The Lafayette Areawide Planning Commission prepared a map of bicycle routes in Lafayette Parish in the early 1990s, which supersedes the 1973 plan. The map consisted of primary north-south and east-west routes with commuter and recreation variations through the Parish. The map did not indicate any specific design standards, but the intention was to reclaim and incorporate some of the sidewalk/bike paths from the 1970's.

Recommendation: The remnants of the bike paths from the 1973 Lafayette Area Bikeways Plan can be utilized as an effective starting point in developing Lafayette's new bikeway system. Much of the abandoned bike paths from the 1973 plan can be put back into use by replacing the necessary signage. This is a comparatively low cost with a high output of usable bike trails. The replacement of the bikeway signs on these old bike paths should be considered, where such replacement is congruent with the rest of the Bikeway Plan.

Likewise, the map prepared by the Planning Commission will serve as a potential resource in developing new bike paths. Design specifications of the map's bike paths should be added.

3.3.1 Major Arterials

Current Condition: Major arterials are designed for the movement of large amounts of vehicles over relatively long distances (i.e. Johnston Street). They are designed to carry traffic volumes of 20,000 to 25,000 vehicles per day. Thus, there is no room on an arterial roadbed for bicyclists. Added to this dilemma is the multitude of turning movements that result from significant commercial development on both sides of the arterials. For these reasons, bikeways are needed on both sides of major arterials.

Recommendation: Major arterials in the area, such as Ambassador Caffery Parkway and Johnston Street, are used by thousands of vehicles per day. These major arterials are the sites of many of the areas businesses and places of employment. While the task to have adequate bikeways on these streets seems most daunting, it also promises the most payback. The major arterials of the metropolitan area are becoming increasingly congested. Proper bike facilities may serve to decrease this congestion which can reduce vehicle emissions. Bike lanes are contingent on lower speed roadways where bike paths are constructed separate from the roadways on higher speed roadways. This provides citizens with a safe means to travel by bicycle along the area's busiest streets.

3.3.2 Collector Streets

Current Condition: Collector streets serve to filter traffic from local streets onto arterials. Traffic volumes on collectors range from approximately 2,000 to 8,000 vehicles per day. Collectors also serve to filter pedestrian traffic from local streets to the collector and through to the arterial. Because traffic volumes can be relatively high on these streets, separate bikeways are needed.

Recommendation: Collector streets, like Dulles Drive and West St. Mary, see less traffic than major arterials do. However, the demand for bicycle routes can be very high due to location. W. St. Mary, for example, runs through the University of Louisiana at Lafayette campus. While less

protection from motorists may be in order on these streets, bikeways must be adequate to safely support a relatively large number of cyclists.

3.4 Connections

Current Condition: Many of the bikeways that do exist within the metropolitan area fail to connect to other bike routes. These paths merely end at seemingly random points. This does not encourage use of the existing bicycle facilities or promote cycling in general.

Recommendation: Placing connections within the existing bikeway and pedestrian facilities is greatly important to the incorporation of the Bikeway Plan. To efficiently implement a bikeway system throughout the metropolitan area, placing these connections should be a priority. Connecting the existing bikeways of the area is the quickest way for an interconnected bikeway system to take effect. These areas in need of connections should be identified, prioritized, and implemented to proficiently reach the goals of this Bikeway Plan. New developments must connect to existing as well as proposed facilities.

3.5 Funding

Current Condition: Lack of funds is a problem that the local governments face in the development of bicycle projects. Currently, there is no allocation of money for the construction and development of a bikeway system.

Recommendation: Local governments must take better advantage of federal and state programs. The Intermodal Surface Transportation Efficiency Act (ISTEA) is one piece of federal legislation that provides funding for bicycling facilities. The Transportation Enhancement Program is a Louisiana state program directed toward bicycle and pedestrian projects. A list of various federal and state programs is provided later within this document. Another possibility is for local governments to allocate funds for the bikeway system through a Capital Improvement Program each year. Funding sources must be researched, identified, applied for, and utilized in order to integrate a bikeway system into the metropolitan transportation system.

“14.3 Possible grant programs include the following:

- Community Lottery Board Grant
- Community Facility Enhancement Program (CREP)
- Red Deer and District Community Foundation
- Provincial Centennial project funding – 2005 – program and granting funding criteria to be determined
- Shell Environment Fund
- Eco Trust

14.4 A number of the grants and foundation funding sources are only available to non-profit organizations. In order to maximize the potential funding sources it will be advantageous to establish a non-profit organization that would be a registered society and in a position to seek out funding opportunities to augment tax based resources.

14.5 Specific user groups will be approached for donations or contributions including clubs, schools, and community agencies.

14.6 Corporate Sponsorship will be solicited. This could be a role wherein a “Trail Committee”, in conjunction with local Recreation Departments, would establish a strategy for involving corporate and business support.

14.7 Federal and Local Employment Programs may be sought to provide additional labor for specific trail projects during the spring and summer months.”

3.6 Public Awareness

Current Condition: One of the major hindrances on bikeway construction throughout the metropolitan area is public awareness and acceptance. There is a lack of programs to elevate the stature and acceptance of bicycling as a legitimate means of travel. Public awareness and encouragement toward the benefits of a less-motorized community is absolutely necessary for the implementation of this plan.

Recommendation: Increasing public awareness of bicycling can take many forms. It can be listed as a topic at various public committee meetings. Informational seminars can be arranged through the proposed bicycle program. Fundraisers and training sessions may be organized by the volunteer program commissioner. Flyers and maps placed at public spots to inform citizens of the Lafayette Metropolitan Bikeway System are strongly recommended. Information regarding the various incentives of traveling by bicycle can also be provided. In addition, the improvement of bike ways, signage, and biking facilities around the area will, in itself, serve as a note to the public that bicycling is a legitimate and accepted form of transportation.

4.0 IMPLEMENTATION

Actual implementation of the Bikeway Plan requires a certain commitment from the community and government that will provide several positive effects including: the reduction of air and noise pollution, decreased traffic congestion, slow the wear and tear on roadways, decrease the community’s dependence on natural and economic resources and provide recreation. To install a connected network of bikeways throughout the study area will require a working knowledge of bicycling and bikeways. Funding will be a major issue in the development of the bikeway system. Decisions will have to be made regarding the prioritization of development and the location of new facilities. Performance measures will need to be created and checked in order to ensure that the Bikeway Plan is operating at a rate that the MPO desires.

4.1.1 Types of Bicyclists

When designing a bikeway system, it is important to realize there are several types of cyclists. Attention must be given to the type of group the bikeway is planning to accommodate. The Statewide Bicycle and Pedestrian Master Plan classify bicyclists into three groups.

- Class A- This class consists of advanced cyclists. Riders in this group are generally adults who are experienced in riding in urban traffic conditions.
- Class B- This class consists of the adult and teenager basic cyclists with less developed riding skills, requiring more maneuvering room and preferring lower volume streets.
- Class C- This class is composed of child cyclists. This group prefers minor streets or well-defined bicycle facilities with good separation from motorized traffic.

4.1.2 Types of Bicycle Facilities

Knowledge of the various types of bike trails is necessary for the proper and efficient implementation of a bikeway system. There are several types of bicycle facilities, each having specific design standards, as determined by the American Association of State Highway and Transportation Officials.

- I. Class 3
- A. Shared Lanes- A shared lane is a roadway where conditions permit the operation of bicycles and motor vehicles within a single lane without the addition of any special features. A standard lane width of 12 feet is sufficient for use as a shared lane where traffic volumes are less than 3,000 vehicles per day or average travel speeds are less than 30 miles per hour.
 - B. Wide Curb Lanes- A wide curb lane allows for shared use by motorized vehicles and bicycles usually without the need for the acquisition of additional right-of-way. The lane of traffic that can safely accommodate an automobile and a bicycle is a minimum of 14 feet and a maximum of 15 feet. The reason for the maximum width is to discourage two vehicles from taking the same lane, especially when turning. Lane width must accommodate for drainage grates, gutters, parking, or any other obstructions that might confront the cyclist. Traffic lanes should be striped to allow a fifteen-foot wide outside lane so that bicyclists have adequate space to ride safely.
 - C. Paved Shoulders- A paved shoulder is just as it sounds. It is a shoulder that can serve the needs of bicyclists. Signage can be used to designate a formal bicycle route or to alert motorists of the presence of bicyclists. The minimum width for a paved shoulder where bicycle traffic is expected is 4 feet. This minimum should be increased with heavier traffic. A 4"- 6" white edge line of skid resistant material should be used to mark the shoulder area.
- II. Class 2
- A. Bicycle Lanes- A bicycle lane is a marked and designated lane for bicycle travel and use. Pavement markings and signage clearly establish the bicyclist's position on the roadway and right of operation. The recommended width for a bicycle lane is 5 feet. Bicycle lanes are one-

way facilities, running with the direction of the adjacent vehicle lane. The bicycle lane should be designated by a 6”-8” edge stripe of skid resistant material.

III. Class 1

A. Sidewalk/Bike path-These are sidewalks that are widened and are able to accommodate pedestrians and bicyclists. The absolute minimum for a sidewalk-bikepath combination is 12 feet. This should only be used when on-street cycling is not an option. Generally, sidewalks are considered not acceptable for bicycling due to an increase chance of pedestrian/bicycle conflicts and bicycle/vehicle collisions at intersections.

B. Bicycle Paths- A bicycle path provides a separate, protected route for the exclusive use of bicycles. Bicycle paths should be separated not only from parallel motorized traffic but from cross traffic as well. Bicycle paths are more costly than other alternatives but are generally safer for all types of bicyclists. The absolute minimum width for a two-way bicycle path is 8 feet, with the recommended width being 10 feet. When a bicycle path is less than 5 feet from adjacent motorized traffic, a physical divider at least 4.5 feet high may be considered. A graded area can be placed along the bicycle path to accommodate pedestrians and joggers. Otherwise, a bicycle path used by both bicyclists and pedestrians is considered a multi-use trail.

Table: Bicycle Facility Types

Type of Facility	Width	Location
Shared Lane	12 feet	Existing roadway shared between motorist and bicyclist; local streets, minor collectors, rural areas, low speed/volume streets
Wide Curb Lane	Min 14 feet Max 15 feet	Right-hand lane widened to accommodate bicyclists and motorists without markings or signage
Paved Shoulder	4-6 feet Min 4 feet	Rural areas where sufficient right-of-way is available
Bicycle Lane	5 feet	Urban arterials with traffic volumes over 10,000 vehicles per day and travel speeds over 30 mph; one-way path
Bicycle Path Multi-Use Trail	10 feet Min 8 feet 12 feet Min 10 feet	Separate, protected route from parallel motorized traffic as well as cross traffic; two-way paths
Sidewalk/Bikepath	Min 12 feet	Widened sidewalk used as a two-way path to accommodate bicyclists and pedestrians
Bicycle Route	Varies	Along roadways with bike lanes, paved shoulders, wide curb lanes, or low volume/speed traffic

4.2.1 Adherence to General Roadway Improvements

The American Association of State Highway and Transportation Officials and the Federal Highway Administration require adherence to the following roadway improvements when constructing bikeway facilities:

Drainage Grates

- Do not use a parallel bar grate
- Advance pavement marking

Railroad Crossings

- Crossing angle: ideally cross at 90 degree angle
- Widen travelway if less than 45 degree angle
- Warning signs not less than 315 feet before crossing
- Pavement markings not less than 265 feet before crossing

Traffic Control Devices

- Clearance interval: bicycle speed of 10 mph with 2.5-second braking time
- Actuation light should be set to detect cyclists

Signage

- Lateral placement: two foot minimum/twelve foot maximum
- Height: not less than five feet
- Placement of signage notifying motorist that bicycles have the same rights as motor vehicles

Maintenance Practices

- Bikeway standards: same or greater maintenance standard than vehicular travelway

4.2.2 Adherence to Functional Classification Standards

In the event that the option to expand sidewalks to accommodate bicyclists is exercised, any changes made should be in accord with the functional classification standards. The functional classification plan for streets/roads/highways in Lafayette Parish, which was adopted November 4, 1997, contains recommended standards established by the Metropolitan Planning Organization. The following table serves as a guide for any sidewalk/bike path combinations to be developed, but it must be reiterated that the American Association of State Highway Officials only recommend this type of bikeway if there is no other option available.

Table: Functional Classification Standards

Design Classification	Recommended Standards	Bikeway Facilities
Freeway	When applicable Service Road Shoulder 15'	Paved Shoulder
Major Arterial-Curb and Gutter	2' added to sidewalk	Sidewalk/bikepath combination
Major Arterial-Open Ditch	2' added to sidewalk or shoulder where designated	Sidewalk/bikepath combination; shoulder
Minor Arterial-Curb and Gutter	2' added to sidewalk	Sidewalk/bikepath combination
Minor Arterial-Open Ditch	6' added to outside shoulder where required	Paved Shoulder
Major Collector-Curb and Gutter	2' added to sidewalk	Sidewalk/bikepath combination
Major Collector-Open Ditch	2' added to shoulder	Paved Shoulder
Minor Collector-Curb and Gutter	2' added to sidewalk	Sidewalk/bikepath combination
Minor Collector-Open Ditch	6' added to outside lane	Wide Curb Lane

4.3 Prioritization and Location Criteria

One of the most important and reoccurring issues that will be posed when implementing the Bikeway Plan is the order in which to develop the bikeway system. What area needs bikeways the most? Where can the least amount of money be invested for the largest improvement? Should rural or urban areas have priority? There are many things to consider when prioritizing city development, as well as many ways to reach a decision.

Economic feasibility is always of utmost importance when considering development. The amount of return from the investment (i.e. the amount of bicycle use/ reduction of traffic/ promoting of bicycling) is also a consideration. The degree of demand for facilities can be measured from polls or organized meetings. Safety is another major factor to consider when prioritizing. The areas that pose the most danger to bicyclists should be addressed quickly. Input can be taken from civil engineering groups or other entities with knowledge concerning the subject. The renovation of the 1973 plan, in combination with the overlying map created in the 1990's, can produce a considerable start on implementing the bikeway system. The incorporation of bikeway facilities into developing areas and new arterial projects, such as in the Ambassador Caffery Parkway South project, is also recommended in order to avoid any difficulties that would otherwise arise later when trying to incorporate bikeways into already developed areas.

Bicycle planning and engineering studies have established criteria that should be considered when selecting the proper location and cost evaluation for bicycle travel facilities:

1. Increase accessibility by considering:
 - The number of points of access to the facility
 - The directness of the route between trip origins and destinations
 - The presence of any physical barriers, such as interstate highways and railroad tracks
 - The number of delays along the route, such as the frequency and location of stop signs
2. Promote bicycle safety by considering:
 - The number of potential conflicts (accidents) between the bicyclist and others using the same facility, such as motor vehicles and pedestrians
 - Traffic volumes and speeds along the proposed bicycle facility
 - The number of large trucks and buses using the proposed bicycle facility
 - The pavement surface quality
 - Whether proper maintenance can be provided
 - Whether parking is allowed along the road
 - Encourage bike safety classes
3. Improve security for bicyclists by providing:
 - Adequate and secure bicycle parking facilities
 - Adequate lighting
 - Enforcement of bicycle regulation
 - Encourage enforcement of traffic laws for both cyclist and motorist
4. Improve the riding environment for bicyclists by considering:
 - The proximity to concentrations of air pollution
 - The scenic value along a particular route
 - The presence of steep grades along the route (such as bridge approaches, underpasses, etc.) since steep uphill grades can be a deterrent to using the facility and steep downhill grades can cause accidents

4.4 Funding Sources

Implementation/Funding Strategy

Project Implementation

The translation of a bikeway system map to actual improvements in the field is generally under the purview of the local Departments of Public Works and/or Traffic and Transportation Departments. Aside from meeting specific design standards for bicycle, pedestrian, and motor vehicle traffic, these Departments must consider on-street parking, drainage, pedestrian movement, signals, traffic volumes and speeds, roadway capacity and level of service, mixture of trucks, maintenance, among a variety of items. Details for the recommended design and operational standards for the Lafayette Metropolitan Area Bikeway System, along with implementation guidelines for on and off-street facilities will need to be the next part of the bikeway master plan focus.

Project Cost and Funding Breakdown

The total cost of the Lafayette Metropolitan Area Bikeway System over the next 20 years is estimated at \$20.0 million. The costs do not include numerous bike lanes and shoulder improvements that will be constructed as a part of new roadway projects. The attached table presents a more detailed breakdown of the projects, listed in phases for a immediate to 5 years, 5 to 15, 15 to 25 years, along with phasing, responsibility, funding sources, and total development cost. It is important to note that while many of the projects can be funded with federal, state, and regional transportation, safety, and/or air quality grants, others are recreational in nature and must be funded by local or private sources.

These projects are scheduled to be implemented over the next 5 years, or as funding is available. It also presents a “best case” scenario for local governments, providing a network of bicycle facilities within the short term. Some of the more expensive projects may take longer to implement.

Funding Sources

There are a variety of potential funding sources including local, state, regional, and federal funding programs that can be used to construct the proposed bicycle improvements. Many of the federal, state and regional programs are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for bicycle projects typically comes from Transportation Development Act (TDA) funding, which is prorated to each community based on gasoline taxes. Funding for many of the programs listed in the attached table would need to be funded either with TDA, general fund (staff time), or possibly private grants. Following is a summary of available funding along with timing, criteria, and funding agency.

Federal Funding			
Funding Program	Modes (Bicycle, pedestrian-walkways, trails)	Trip Types (Commute/Transportation or Recreational)	Project Types (Construction or Non-Construction)
Transportation Enhancement Program www.dotd.louisiana.gov	Both	Transportation	Construction
Congestion Mitigation and Air Quality Improvement Program	Both	Transportation	Both
National Highway System (NHS) www.fhwa.dot.gov/environment/bikeped/bp-broch.htm	Both	Transportation	Construction
Federal Lands Highway Program www.fhwa.dot.gov/environment/bikeped/bp-broch.htm	Both	Transportation	Construction

National Scenic Byways Program www.fhwa.dot.gov/environment/bp-broch.htm	Both	Both	Construction (including planning and design and development)
National Recreational Trails Program (NRTP)	Both	Both	Both
Job Access and Reverse Commute Grants www.fhwa.dot.gov/environment/bikeped/bp-broch.htm	Bicycle	Transportation	Non-construction
Highway Safety Program www.fhwa.dot.gov/environment/bikeped/bp-broch.htm	Both	Transportation	Non-construction
Federal Transit Program www.fhwa.dot.gov/environment/bikeped/bp-broch.htm	Both	Both	Both
Recreational and Public Purpose Act www.blm.gov/nhp/what/lands/realty/rppa.htm	Both	Recreational	Construction (Land Acquisition)
Land and Water Conservation Fund	Both	Both	Construction (including land acquisition)
State Funding			
Funding Program	Modes (Bicycle, pedestrian-walkways, trails)	Trip Types (Commute/Transportation or Recreational)	Project Types (Construction or Non-Construction)
Environmental Enhancement and Mitigation Program	Both	Transportation	Construction
Habitat conservation Fund Grant Program	Both	Both	Construction
Local Transportation Fund	Both	Both	Both
Office of Traffic Safety Program (OTS)	Both	Transportation	Non-Construction
Safe Routes to School Program (SR2S)	Both	Transportation	Both
State Transportation Improvement Program (STIP)	Both	Transportation	Construction
Hazard Elimination Safety Program (HES)	Both	Both	Construction (including planning design and development)
Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Acts	Both	Recreational	Construction
Local Air District Projects Funded by Vehicle Registration Fees	Bicycle	Transportation	Both

Private Funding through Non-Profits			
Interested Organizations	Modes (Bicycle, pedestrian-walkways, trails)	Trip Types (Commute/Transportation or Recreational)	Project Types (Construction or Non-Construction)
TRAILS	Both	Both	Both
Extra Mile	Both	Both	Both

Federal

TEA-21

Federal funding through the TEA-21 (Transportation Equity Act for 21st Century) program will provide the bulk of the outside funding. TEA-21 currently contains three major programs, STP (Surface Transportation Program), TEA (Transportation Enhancement Activities), and CMAQ (Congestion Mitigation and Air Quality Improvement) along with other programs such as the National Recreational Trails Program, Section 402 (safety) funds, Scenic Byways funds, and Federal Lands Highway funds.

TEA-21 funding is administered through the state (LaDOTD or Resources Agency). Most, but not all, of the funding programs are transportation versus recreational oriented, with an emphasis on (a) reducing auto trips and (b) providing an inter-modal connection. Funding criteria often includes completion and adoption of a bicycle master plan, quantification of the costs and benefits of the system (such as saved vehicle trips and reduced air pollution), proof of public involvement and support, LDEQ compliance, and commitment of some local resources. In most cases, ISTEA provides matching grants of 80 to 95 percent -- but prefers to leverage other moneys at a lower rate.

With an active and effective regional agency, local governments within the MPO should be in a good position to secure more than their fair share of TEA-21 funding. It will be critical to get the local state representatives and senators briefed on these projects and with the LA DOTD.

State

Per RS 48:163.1, "Bicycle paths may be established wherever a highway, road, or street is being constructed, reconstructed, or relocated." The Revised Statutes continues to state that "...one percent of total funds appropriated to the transportation trust fund per year may be expended.. "

Regional

Clean Air Funds

Clean Air funds are generated by a surcharge on automobile registration. The Council may allocate some of these funds for external projects. Projects must be shown to have a direct and positive effect on the air quality from the transportation sector with Lafayette Parish.

Local

New Construction

Future road widening and construction projects are one means of providing bike lanes. To ensure that roadway construction projects provide bike lanes where needed, it is important that an

effective review process is in place to ensure that new roads meet the standards and guidelines presented in this master plan.

Impact Fees

Another potential local source of funding is developer impact fees, which are typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for an on and off-site bikeway improvements which will encourage residents to bicycle rather than drive. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

Other

Local sales taxes, fees, and permits may be implemented, requiring a local election. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of conservation groups can greatly reduce the project costs. Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right of way where needed. A local construction company as well as landscape company may donate or offer discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and/or maintain the facility. Along the multi-use pathways, including dedication plats, paid by local persons is another form of funding for maintenance. Other opportunities for implementation will appear over time, which may be used to implement the system.

Recommendation:

1. Adopt the Bikeway Master Plan of the MPO.
2. Complete a Design Guidelines Manual for Bikeways in the MPO Study Area.
3. Begin Public Service Announcements on the adopted plan.
4. Resolution to earmark one percentage of State funding for bicycle pathways for local governments.
5. Clearly identify incentives for developers, requiring connectivity to proposed and existing bike lanes and paths of the adopted bikeway master plan.
6. Beginning grant applications for 2005 funding from State and Federal identified programs.

4.5 Performance Measures

Monitoring and Maintenance

Once the Bikeway Master Plan has been adopted, a monitoring effort is required to ensure that the recommendations are enforced and the system is maintained over time. The following are suggested actions to be implemented:

Recommendation:

1. Plan review ~ All development and infrastructure improvement plans should be reviewed by local Public Works and Traffic and Transportation departments to ensure that the bikeway segments are implemented, developer requirements are being met, and design standards are adhered to.
2. Commercial Driveway Sight Distance ~ Driveway sight distance to provide appropriate visibility to see bicycles riding on sidewalks should be reviewed as part of the plan review process.
3. Incident monitoring ~ Bicycle related incident data should be collected annually and evaluated to determine areas of concern.
4. Web Page ~ A web page be developed for bicyclist and pedestrians indicating routes within the Metropolitan Study Area, forms to complete as for maintenance, and listing of events.

Maintenance

The total annual maintenance cost of the proposed Class I bikeway system is estimated to be \$8,843.00 per mile, which includes labor, supplies, and amortized equipment costs for weekly trash removal, monthly sweeping, and bi-annual resurfacing and repair patrols. Repairs includes cleaning, resurfacing and re-striping the asphalt path, crossings, cleaning drainage systems, landscape maintenance, underbrush and weed abatement (performed once in the late spring and again in mid-summer.)

Class II maintenance is approximately \$4,200 per mile annually.

Recommendation:

1. Maintenance ~ The Local Recreation and Park Departments should track long term bike path and lane maintenance, schedule repairs on bike facilities, and respond to calls from the public or staff regarding maintenance needs.
2. Funding ~ Identify a reliable source of funding to cover all new Class I bike path construction. All proposed designs should be closely examined to minimize future maintenance costs.

Security

Security may be an issue along portions of the proposed Class I bike paths. The following actions are recommended to address these concerns.

Recommendation:

1. The local Police Departments, using both bicycles and vehicles will perform enforcement of applicable laws on bike paths. Enforcement of vehicle statutes relating to bicycle operation will be enforced on Class II and Class III bikeways as part of the department's normal operations. No additional manpower or equipment is anticipated for Class II or Class III segments.

2. Normal bike path (Class I) hours of operation should be 6 AM to 9 PM, unless otherwise specified.

Promoting and Encouraging Bicycle Travel

Bicycle Safety Education Programs

The Lafayette MPO Bikeway Master Plan provides both physical recommendations (such as bike lane) and program recommendations. This section covers future efforts to educate bicyclists and motorists, and efforts to increase the use of bicycles as a transportation alternative.

Education

Education plays a vital role in the safety of those who use a bikeway system. The lack of education for bicyclists, especially younger students, is a leading cause of incidents. For example, the most common type of reported bicycle incident in the nation involves a younger person (between 8 and 16 years of age) riding on the wrong side of the road in the evening hours. Studies of incident locations throughout the nation consistently show the greatest concentration of incidents are directly adjacent to elementary, middle, and high schools. Many less-experienced adult bicyclists are unsure how to negotiate intersections and make turns on city streets.

Motorist education on the rights of bicyclists and pedestrians is virtually non-existent. Many motorists mistakenly believe, for example, that bicyclists do not have a right to ride in travel lanes in some circumstances and that they should be riding on sidewalks. Many motorists do not understand the concept of 'sharing the road' with bicyclists, or why a bicyclist may need to ride in a travel lane if there is no shoulder or it is full of gravel or potholes.

Existing education programs in schools are generally taught on an as needed basis, at the request of the school. Curriculum taught by the Police Department focuses on observing bicycle regulations such as complying with any helmet ordinance and keeping bicycles off of sidewalks, where they are prohibited. Formal adult bicycle education is non-existent.

Recommendation:

1. Establish School Safety Committee Program

A Joint Parish and School District Safety Committee should be implemented. The Committee would consist of appointed parents, teachers, administrators, police, and public works staff whose task would be to identify problems and solutions, endure implementation, and submit

recommendations to the School Board or Lafayette Consolidated Government.

2. Develop Educational Program Materials and Curriculum

4.6 Conclusion

This plan is an element of the 2035 Transportation Plan for the Lafayette MPO Area. The purpose in drafting this document was to prepare the ground work for the governing body and the citizens of the Lafayette MPO Area to begin working toward a more bike friendly

community. This plan offers various options to follow and resources which, if taped, can create the opportunities necessary to reach this goal.

This plan which is an element of the 2035 Transportation Plan is a working document and, as such, it is not static. Thus opportunities for implementation may change, and the plan may require an update and/or amendments. However, complete implementation of this plan can have the desired result.

For successful implementation, there must be assurance that the proposed plan has community support and that recommendations will allow planners to successfully compete for resources. This can occur only if the community develops ownership in the plan by being involved in the adoptions process. In other words, the first step toward implementation is Citizen support.