CITY OF NATCHITOCHES

Bicycle & Pedestrian Master Plan

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This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409.

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Note:

This is pre-release draft and subject to minor editorial changes, prior to being officially submitted for public comments and final adoption.

This information is embargoed until further notice.

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Chapter 1

INTRODUCTION

Chapter 1: Introduction

The Natchitoches Bicycle and Pedestrian Plan (Plan) is intended to serve as a guide for improving bicycle and pedestrian activities in the City of Natchitoches, Louisiana. The Plan is a first for a document of this scale and context for the city.

The plan outlines education, promotion, policy, and projects to integrate biking and walking into the existing transportation environment. This plan aims to connect existing facilities through new routes with signage, propose a robust network of walkways / bicycle routes, and ensure safe, efficient, and effective alternate modes of transportation. It provides a coordinated, multi-jurisdictional strategy for enhancing conditions and providing inter-jurisdictional links for biking and walking in support of the urban area's transportation, quality of life, tourism and economic development goals. It does this by addressing all types of biking and walking trips—from a short walk across the street, to a longer bike trip following the Cane River Creole National Heritage Trail, or Isle Brevelle Trail or across Cane River Lake. The plan aims to balance the needs of non-motorized accessibility and connectivity of students, urban residents, and tourists alike.

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1.1 Why Develop A Master Plan?

Regions, cities, and towns across Louisiana are increasingly recognizing that bicycle and pedestrian infrastructure offers multiple quality-of-life benefits in terms of tourism, economic development, environment, sustainability, and multi-modal transportation choice. RAPC and the City of Natchitoches have recognized that providing multimodal transportation choices is important to ensuring that the transportation system of the future is equitable, safe, and sustainable.

The historic City of Natchitoches is committed to improving the quality of life for residents and visitors by providing walking and bicycling as convenient, comfortable, and healthy modes of transportation and recreation. As the oldest permanent settlement in the Louisiana Purchase, Natchitoches has served as the heart of the Cane River region for over three hundred years. Nationally recognized as a Preserve America Community, Natchitoches draws visitors from across the country and around the world. The Plan is a critical tool for guiding city staff and the development community in building a balanced system that is pedestrian and bicycle friendly. It strives to address the unmet needs of existing and future Natchitoches bicyclists and pedestrians by identifying a network for all types of bicycle travel (leisure or employment based) and recommending other key improvements – including education and encouragement programs – to make active transportation a viable, everyday option for more people.

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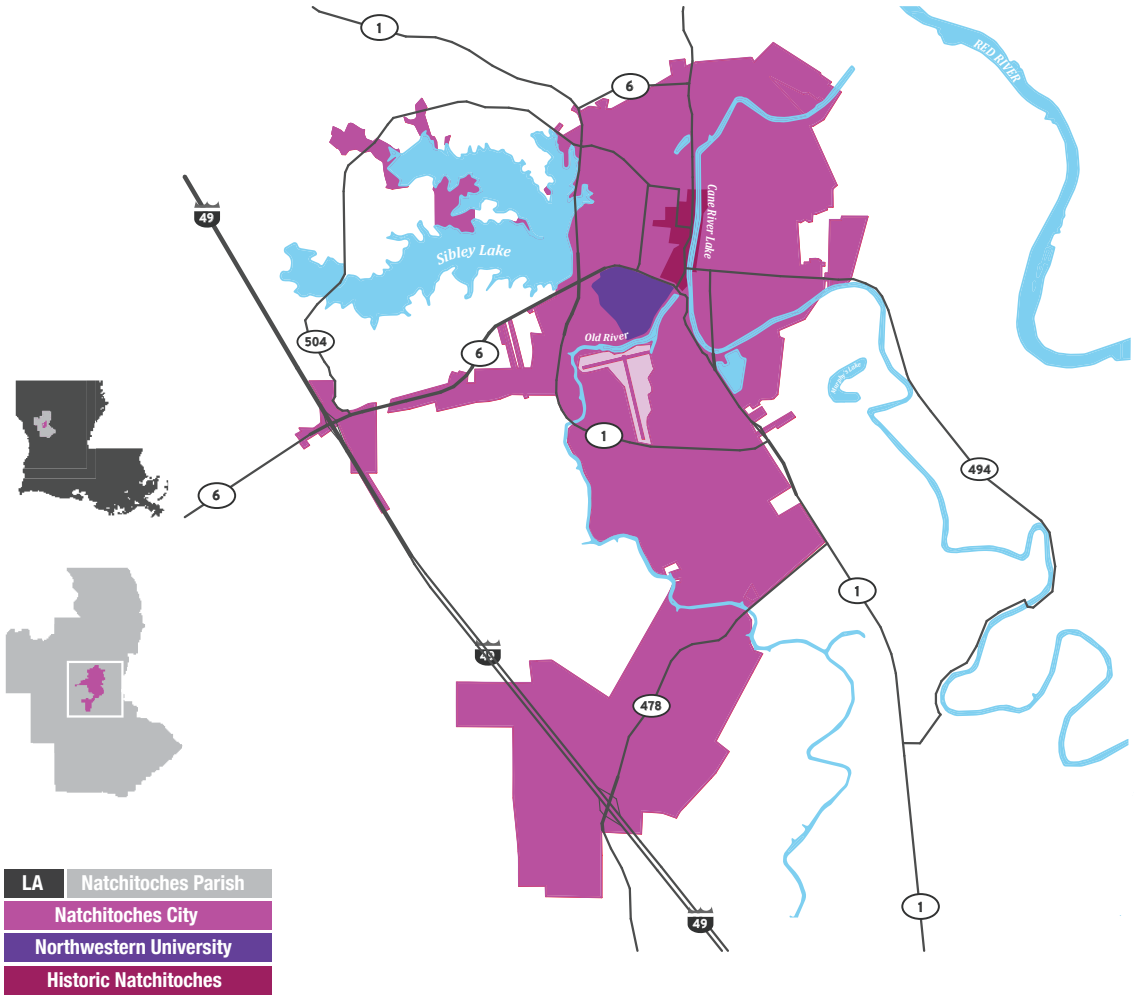
Figure 1-3: Natchitoches Parish and City



1.2 What is the purpose of the Plan?

The Natchitoches Bicycle and Pedestrian Plan (Plan) is locally focused and intended to help build and implement bicycle and pedestrian infrastructure. The Plan seeks to encourage implementation by providing a focused list of local bicycle and pedestrian projects that enhance connectivity and provide routes to important residential, historic, and economic centers. These network improvements are paired with education, encouragement, enforcement, and evaluation programs. This document also identifies a plan to implement these projects and programs through prioritization and phasing to ensure implementation is manageable and fundable. The Plan represents a long-term, aspirational vision for walking and bicycling in Natchitoches, and recognizes that limited funding and resources will require phased implementation of the proposed improvements over many years.

The Plan process provided opportunities for elected and appointed members of the City's Boards, Commissions, and the public to participate in the development process of the Plan by evaluating, commenting, and suggesting ideas for walking and bicycling.

With this plan, the City of Natchitoches is taking a holistic approach to community wellbeing and enhancing quality of life. This Plan will reinforce these values and support design to serve all users, including children, the elderly, persons with disabilities, and those who prefer use of non-motorized travel modes for commuting. The Plan ensures implementation through recommendations which include details describing the types of improvement, approach for implementation, and the probable cost of construction

1.3: Why plan for bicycle and pedestrian facilities?

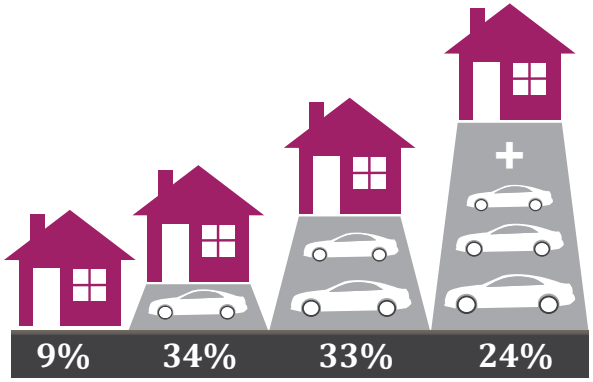
According to the 2009 National Household Travel Survey, 8.7% of all U.S. households did not own a vehicle, equivalent to one in every 12 households (Figure 1-4). Approximately 11.4% of total person trips were walking or biking trips, and the total number of walking and biking trips have steadily increased when compared to results from the 1995, 2001 survey(Figure 1-5). Table 1 shows that children bike and walk more than other age groups.

Table 1-1: Walking and Biking Trip Percentage, 2017 National Household Travel Survey

					(Millions)
Age	**Total Person Trip**	**Walk trip**	**Bike Trip**	**Walk Trip Percentage**	**Bike Trip Percentage**
10-15	42,091	4,726	678	11.2%	1.6%
16-20	22,161	2,596	294	11.7%	1.3%
21-25	24,366	2,846	225	11.7%	0.9%
26-30	26,570	3,616	370	13.6%	1.4%
31-35	30,619	3,589	347	11.7%	1.1%
36-40	30,668	2,900	316	9.5%	1%
41-45	27,745	2,652	235	9.6%	0.8%
46-50	27,015	2,401	211	8.9%	0.8%
51-55	28,721	2,802	214	9.8%	0.7%
56-60	29,248	2,768	254	9.5%	0.9%
61-65	27,751	2,747	162	9.9%	0.6%
66-70	21,800	2,292	135	10.5%	0.6%
71-75	13,432	1,248	33	9.3%	0.2%
76-80	7,718	751	21	9.7%	0.3%
81-85	4,384	373	9	8.5%	0.2%
86-88	1,507	146	4	9.7%	0.3%

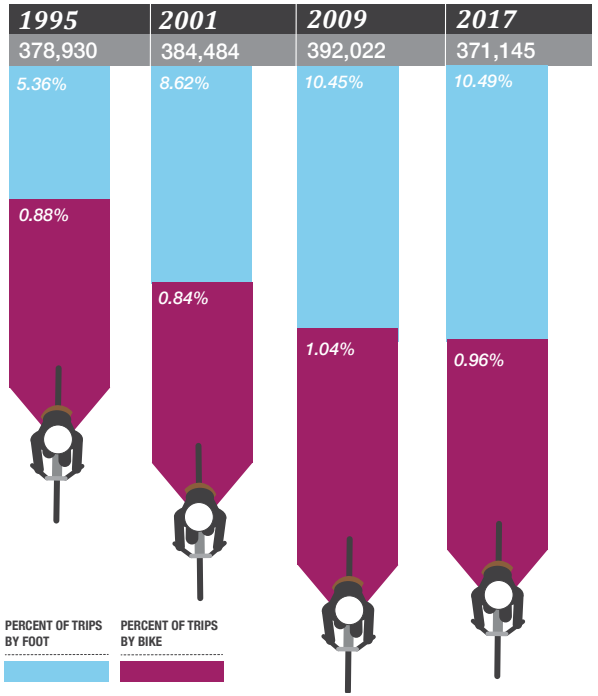
SOURCE: *U.S. Department of Transportation, Federal Highway Administration, 2017 National Household Travel Survey. URL: http://nhts.ornl.gov*

Figure 1-4: Household Vehicle Availability in U.S.



SOURCE: *National Household Travel Survey, 2017*

Figure 1-5: Total Number of Bike & Walk Trips

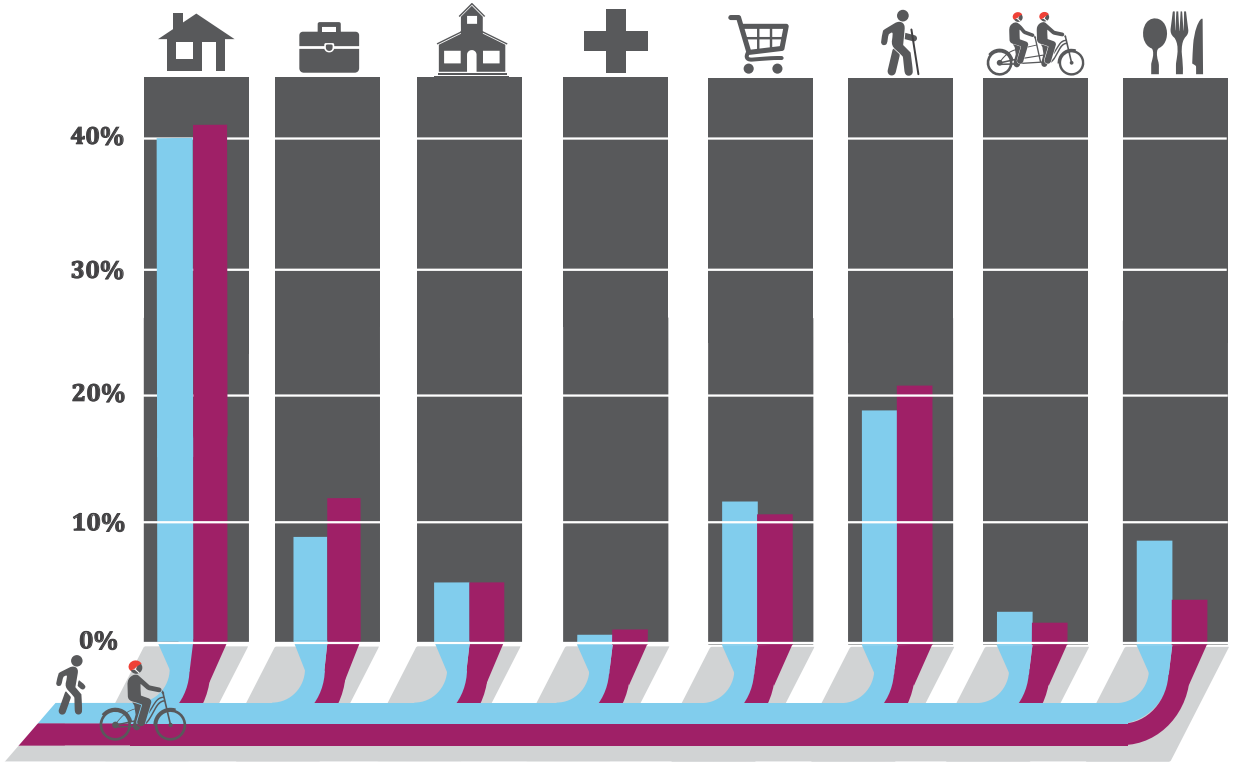


SOURCE: *National Household Travel Survey, 2017*

For U.S. road users, the purpose of walking and biking remain largely social and recreational, despite an increase in both when making trips to "earn a living" (Figure 1-6). Improving comfort levels and safety for biking and walking create an integrated and intermodal transportation system that provides travelers with a real choice of transportation. As stated by U.S. Department of Transportation, it is vital for bicyclists and pedestrians to have safe and convenient access to airports, ports, ferry services, transit terminals, and other intermodal facilities as well as access to jobs, education, health care, and other essential services.

A wide variety of research have revealed the positive impact from walking and biking on health, well-being, and safety (Alliance for Biking & Walking, 2016). Because of the special functions and its high connection with personal health and recreation, well- planned bicycle and pedestrian facilities are crucial to the rebuilding of social street, retrofitting suburbia for safety, feeding healthy commerce, and brining joy to daily life. Furthermore, it may yield the greatest impact on low-income communities, youth, elderlies, and female, thus adding social equity in transportation infrastructure.

Figure 1-6: Purpose of Bike & Walk Trips



SOURCE: *National Household Travel Survey, 2017*

1.4: What warrants a bicycle and pedestrian plan?

On March 11th, 2010, The U.S. Department of Transportation (DOT) issued the "United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations", which states:

> ***"The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes."***[2]

Under the bicycle and pedestrian policy guidelines, Citys and States should consider incorporating the needs of bicyclists and pedestrians and the bicycle and pedestrian transportation network. In 2012, Moving Ahead for Progress in the 21st Century Act (MAP-21) established a new program to fund a variety of alternative transportation projects - the Transportation Alternative Programs, which replaced Transportation Enhancements, Recreational Trails, and Safe Routes to School, wrapping them all into one single funding source. The 2015 Fixing America's Surface Transportation Act (FAST Act) reauthorized Federal surface transportation programs for FY 2016 through 2020.

[2] *http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/guidance_2015.cfm#bp7*

Pedestrian and bicycle infrastructure projects remain broadly eligible across Federal-aid highway and transit programs. U.S. Department of Transportation (USDOT), States, MPOs, and cities should continue to promote and adopt design criteria and standards that provide for the safe and adequate accommodation of pedestrians, bicyclists, and motorized users.

The NBPP is essentially a pro-active approach of City of Natchitoches to create a safer, more connected, and pro-equity built environment. Based on city-wide concerns, needs assessment, and priority-setting, this plan proposes strategies and guidelines for future capital investment and policies on bicycle and pedestrian facilities. An officially adopted master plan is crucial for cities to secure state, federal, and other grants to fund bicycle and pedestrian projects, by demonstrating support from the citizen advisory committee and data analysis.

Table 1-2: Five E's of Bicycle & Pedestrian Planning

	Strategies	Actions
Evaluation & Planning	Planning for biking and walking as a safe and viable transportation option. Monitoring and documenting outcomes, quantifying impacts, and trends at the beginning of the planning process, during implementation, and post improvement.	*Measure the growth of bicycle/pedestrian facilities in the region* *Measure # of users on a specific facility* *Evaluating crash data for patterns or frequency*
Engineering	Creating improvements to the physical infrastructure that establishes safe and convenient places to walk and bike. Engineering recommendations are typically divided into short, medium and long-term priorities based on cost, ease of implementation, and other factors.	*Off-street paths, sidewalks, and crosswalk improvements* *Directional and wayfinding signage* *Complete Street Policies (MPA wide)*
Encouragement	Using events and activities which promote biking and walking with students, parents, staff and surrounding communities. Focusing on efforts seek to demonstrate that biking and walking are valid transportation modes.	*Bike to Work Week/ Bike and Walk to School Day activities* *Ciclovias (closing a street for a few hours and allowing biking, walking, skating, etc.)* *Maps, brochures, and online engagement tools* *Bike Train (Riding as a group)*
Education	Teaching all transportation users (drivers, bicyclists and pedestrians) how to safely interact.	*Bike and Walk Festivals* *Public Service Announcements (PSAs)* *Driver's education*
Enforcement	Partnering with law enforcement officials to ensure that traffic laws for all transportation modes are obeyed.	*Efforts to reduce speeding* *Efforts to increase yielding to pedestrians* *Efforts to reduce bicycle/pedestrian crash types* *New training programs for law enforcement officers*

1.5: How to develop a bicycle and pedestrian plan.

The Plan was developed through collaboration with the City, the project Steering Committee representing City agencies, LA-DOTD District 8, Northwestern State University, Cane River National Heritage Area, Natchitoches Parish, National Park Service, Historic Business District Association, Convention & Visitors Bureau, Bike Natchitoches, and the community. Steering Committee members and stakeholder groups are listed at the beginning of the Plan. This group met throughout the planning process, both as a committee of the whole and in sub-committees focused on specific policy recommendations.

The Steering Committee actively participated in all aspects of the planning process, from the pedestrian and bicycle demand and needs analysis, through the development of street types, and pedestrian and bicycle network recommendations.

Based on the "Five E's" of bicycle and pedestrian planning, the Plan provides a thorough understanding of the issues at hand and lead to the development of comprehensive strategies to improve safety, enhance mobility, accessibility as well as connectivity, and increase the number of people walking and biking.

1.6: What is the structure of BPP?

Following **Chapter 1 Introduction**, the plan consists of five other chapters and appendix which references information mentioned in all six chapters:

Chapter 2 Planning Process, explains how the plan was created.

Chapter 3 Existing Conditions, examines demographic and Geographic Information Systems (GIS) data and review current plans to assess needs and priorities for biking and walking.

Chapter 4 Goals and Strategies, details the formulation of the Citizen Project Steering Committee, public participation, set goals and strategies for future capital improvement and policies.

Chapter 5 Recommendation for Improvements, provides design guidelines and recommendation for improvements address common challenge with bicycle and pedestrian facilities in the region.

Chapter 6 Implementation, Prioritization and Funding Sources, includes implementation approach for bicycle and pedestrian facilities, project list, and estimated post as well as prioritization, and a list of potential funding sources.

Finally, the Plan concludes with reference and a set of appendix.

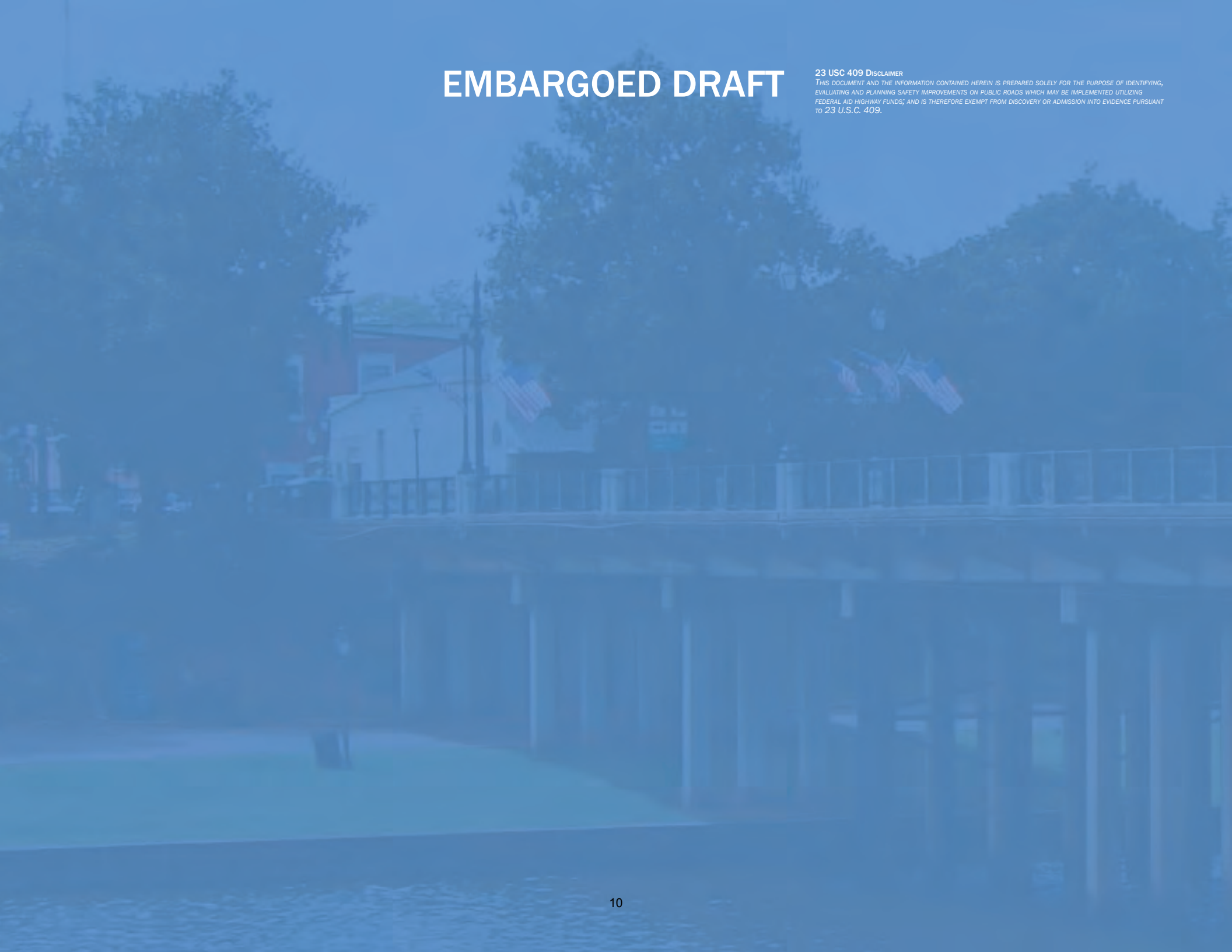
1.6: Beyond this Plan

This Plan focuses on the creation of bicycle and pedestrian infrastructure, yet there are many other opportunities to make bicycling and walking safer and more desirable. Local and regional education programs that ensure widespread awareness of the responsibilities of motorists, bicyclists, and pedestrians are of primary importance. Appropriate enforcement of laws and policies will also be important for achieving the bicycle and pedestrian safety targets set by DOTD and the City. Installing appropriate lighting along roadways and adequate bicycle parking throughout the City are additional steps that would allow for safe and convenient active transportation. All of these aspects may become increasingly important as bikeshare and scooter programs have the potential to increase the number of people using bicycle and pedestrian infrastructure in the City.

SUMMARY

The City of Natchitoches is well positioned to increase walking and bicycling for transportation. It has a mild climate most of the year, is relatively flat, and has a network of existing sidewalks, and growing network of recreational trails.

These investments and natural assets provide a foundation upon which the City can continue to build a high-quality citywide network for bicycling and walking—one that is accessible and comfortable for everyday use by residents and visitors of all ages and abilities.



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Chapter 2

Planning Process

Chapter 2: Planning Process

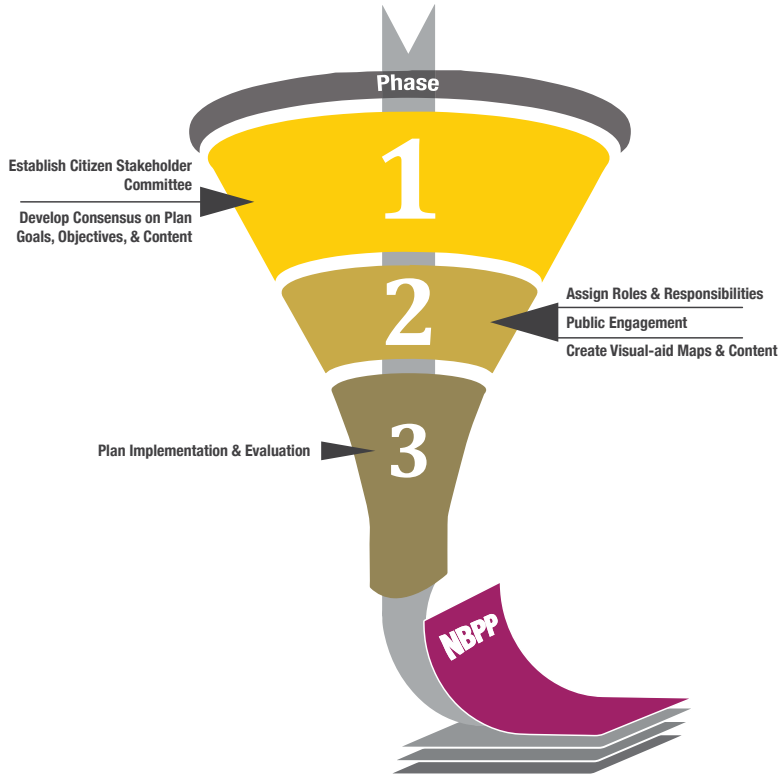
This chapter covers the planning process to develop the NBPP, which includes all planning elements and how each element was fulfilled; followed by a description of the public participation process to explain how the NBPP mets Title VI requirements. Planning allows for implementation to incorporate elements of the plan as development happens. Ultimately, it is less expensive than attempting to retrofit areas to have good facilities or access points.

2.1: Planning Elements

In the report Creating a Roadmap for Producing & Implementing a Bicycle Master Plan (Lagerwey, 2009) ,Peter Lagerwey suggested three phases to develop a bicycle master plan (BMP):

- **Phase I** takes place prior to the development of the plan to grow stakeholder buy-in, including "setting up a citizen advisory committee, developing a consensus on plan goals, objectives, and content."
- **Phase II** involves roles and responsibilities assignment, public engagement, and create visual-aid maps and plan content.
- **Phase III** covers implementation and evaluation of BMP, which includes "accountability, political will, and stakeholder involvement."

Figure 2-1: Lagerway BMP Planning Phases



SOURCE: Creating a Roadmap for Producing & Implementing a Bicycle Master Plan, Lagerway 2009

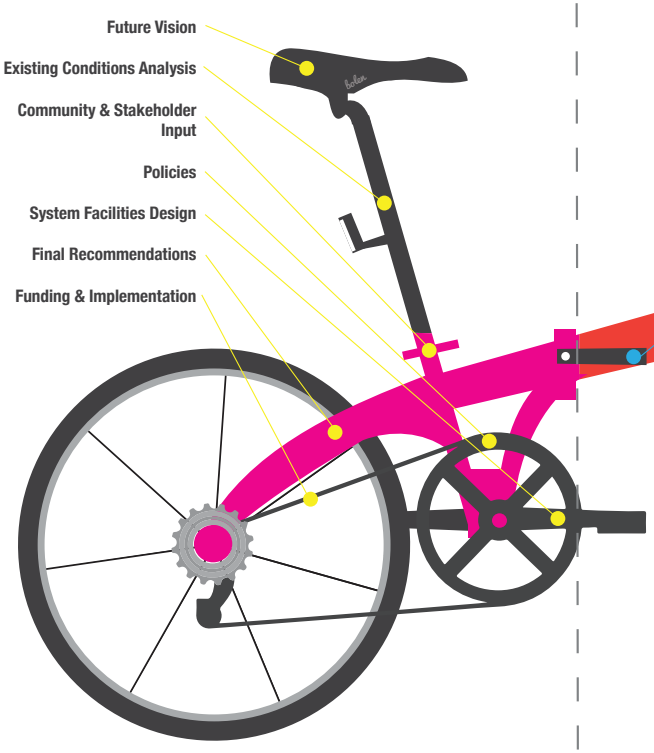
Based on the suggested three phases of BMP development, Portland State University's Initiative for Bicycle and Pedestrian Innovations proposed the following elements to be included in a bicycle and pedestrian master plan[1] (Figure 2-2):

- Vision for the future
- Existing Condition Analysis
- Input from Community and Stakeholders
- Policies
- System Facilities and Design
- Final Plan Recommendations
- Implementation & Funding Strategies
- Appendices

As per federal transportation policy requirement to promote the increased use and safety of bicycling and walking as transportation modes, a fully integrated bicycle and pedestrian considerations in a transportation planning process and plan should include (Figure 2-3):

1. Vision and Goal Statements, and Performance Criteria
2. Assessment of Current Conditions and Needs
3. Identification of activities required to meet the vision and goals developed above
4. Implementation of the bicycle and pedestrian elements in the statewide and MPO transportation plans and transportation improvement programs
5. Evaluation of progress
6. Public Involvement
7. Transportation Conformity Requirements for Air Quality

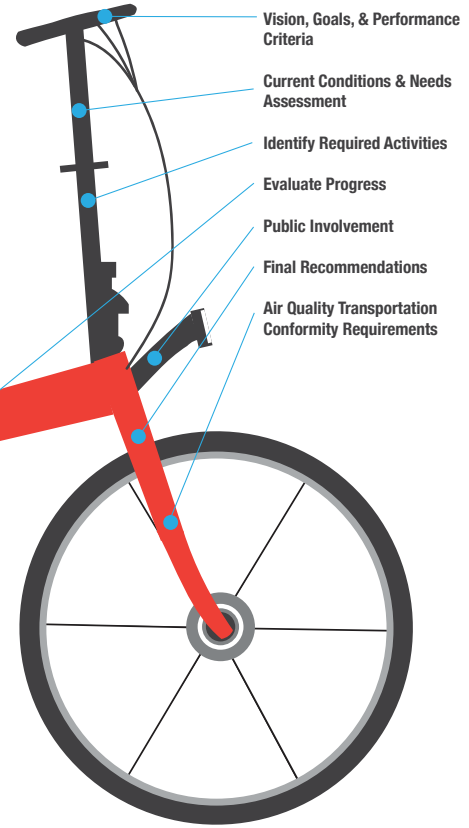
Figure 2-2: University of Portland Bike & Pedestrian Planning Elements



University of Portland Bike & Pedestrian Planning Elements

SOURCE: Portland State University's Initiative for Bicycle & Pedestrian Innovations

Figure 2-3: University of Portland Bike & Pedestrian Planning Elements



Federal Transportation Bike & Pedestrian Planning Elements

SOURCE: Federal Highway Administration (FHWA)

[1] *https://www.pdx.edu/ibpi/sites/www.pdx.edu.ibpi/files/Bicycle%20%26%20Pedestrian%20Master%20Plans%20Lecture%20Notes.pdf*

Based on literature review, RAPC has developed the following planning process for the City of Natchitoches BPP:

1. Research Existing Conditions – review current plans and demographic data to identify needs, demands and purpose for biking and walking activities, develop a GIS database for existing bicycle and pedestrian facilities, counts, and crash hotspots.

2. Form a Bicycle and Pedestrian Stakeholder Committee (BPSC) – invite key stakeholders and advocates to form a citizen advisory committee that provide input, forge alliance, and build partnerships for future projects.

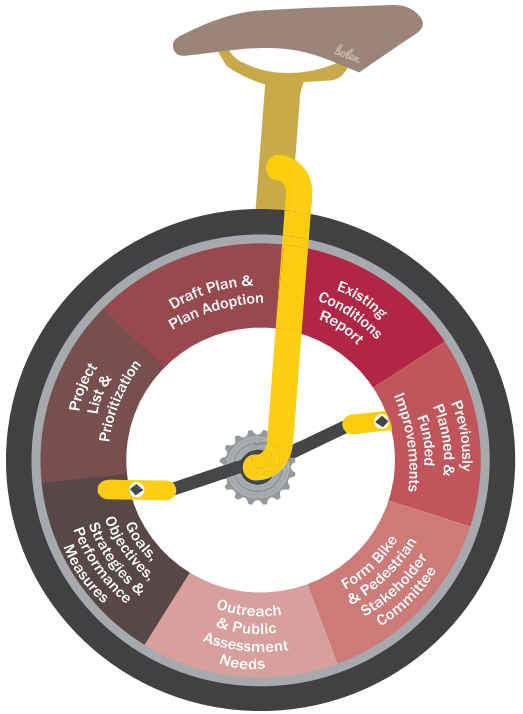
3. Assess Needs and Public Outreach – solicit public needs through:
   a. Survey – an online survey was designed and distributed among the public
   b. Committee Input – one-one meetings between RAPC staff and Committee members
   c. Meetings – three meetings were hosted by RAPC during the development of the plan for in-depth discussions

4. Identify Goals, Objectives, and Strategies – identify a regional vision, goals, objectives, and to address and overcome common concerns, strategies were recommended by planners, and BPSC to achieve these goals.

5. List Project, Priority, and Estimate Costs – NBPP has listed desired projects and sorted by priorities of "low, medium, and high", with estimated costs associated with each project.

6. Identify Potential Funding Sources – a comprehensive list of potential funding sources, addressing current federal transportation bill.

Figure 2-4: Bike & Pedestrian Planning Elements



Alexandria-Pineville MPO
Bike & Pedestrian Planning Elements

SOURCE: Alexandria/Pineville MPO, 2019

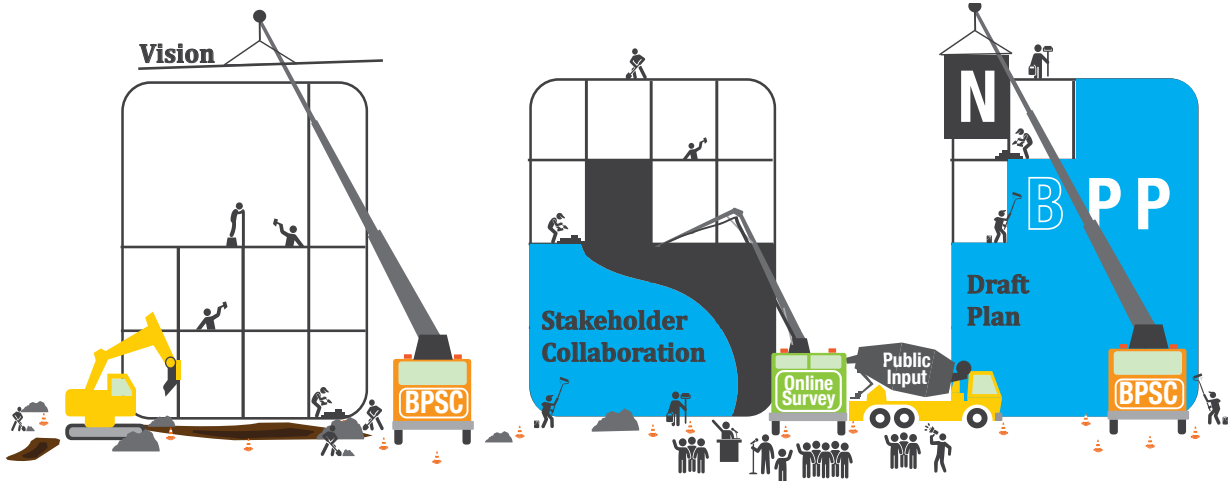
2.2: Public Participation

The Plan is committed to engage the public in the development of all transportation plans and programs. It is the overall goal of the Plan that the transportation planning process is open, accessible, transparent, inclusive, and pro-active. The Plan's Public Participation Plan (PPP) supports Title VI compliance by enabling and encouraging all members of the public to actively participate in the development of the NBPP.

Key relevant requirements of the Plan's PPP include:

- Adequate public notice of activities and time for public review and comment.
- Timely notice and access to information.
- Employment of visualization techniques to describe plans and programs.
- Make information available electronically and on the internet.
- Hold meetings at convenient times and easily accessible venues.
- Consider and respond to public input in a timely fashion.
- Seek out and consider the needs of the traditionally under-served in the community, such as low-income and minority populations.
- Provide additional opportunity for public comment on all plans, and changes to plans, following initial agency and public reviews during development.
- Coordination with statewide public involvement and consultation processes.
- Periodically review procedures and effectiveness of plan strategies.

Figure 2-5: NBPP Public Engagement



Besides abiding to PPP requirements, the development of NBPP has followed additional procedures:

- Meeting notices, planning activities, and
- campaigns were published on social media for outreach to a wider array of demographic groups.
- Public surveys were displayed in various public locations and community centers to ensure access to internet for completing the survey, including all Rapides Parish Public Libraries.
- Online public survey platform was used to capture responses.
- Presentation to local civic groups, tourism
- partners, and at statewide and national
- conferences were made available upon request.
- Meetings were held at locations with ADA
- compliance, accessible to the disabled, and near bus routes.
- Establishing and maintaining email lists of BPSC and various interested individuals and
- organizations to provide notifications about upcoming meetings, events, and opportunities related to active transportation.

Bicycle and Pedestrian Stakeholder Committee (BPSC)

In March 2018, RAPC staff began interviewing a list of stakeholders and recruiting BPSC members from the following organizations and interested groups:

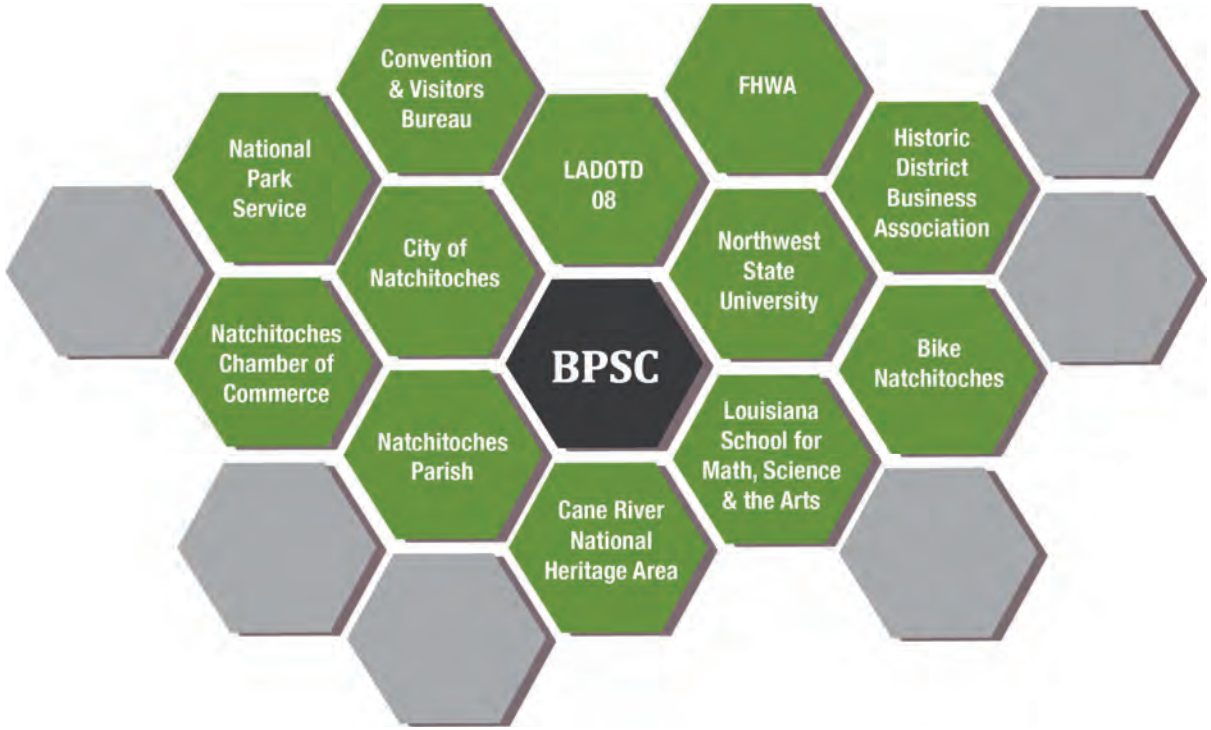
1. Elected officials
2. Parish and city employees
   a. Planning and engineering
   b. Public Works
   c. Grant Writing
3. Bike Natchitoches
4. DOTD and FHWA
5. Transit providers
6. Convention and Visitor Bureau
7. Natchitoches Area Chamber of Commerce

In May 2018, BPSC members met in Natchitoches and reviewed the planning process and initial findings with RAPC staff. Committee members attended committee meetings and/or individual meetings included the following:

Partner Organizations

- City of Natchitoches
- Northwestern State University
- Bike Natchitoches
- National Park Service
- Convention & Visitors Bureau
- Natchitoches Parish
- LA DOTD - District 08
- Cane River National Heritage Area
- Louisiana School for Math, Science, & the Arts
- Historic District Business Association
- Chamber of Commerce
- Federal Highway Adminstration

Figure 2-6: BPSC Members



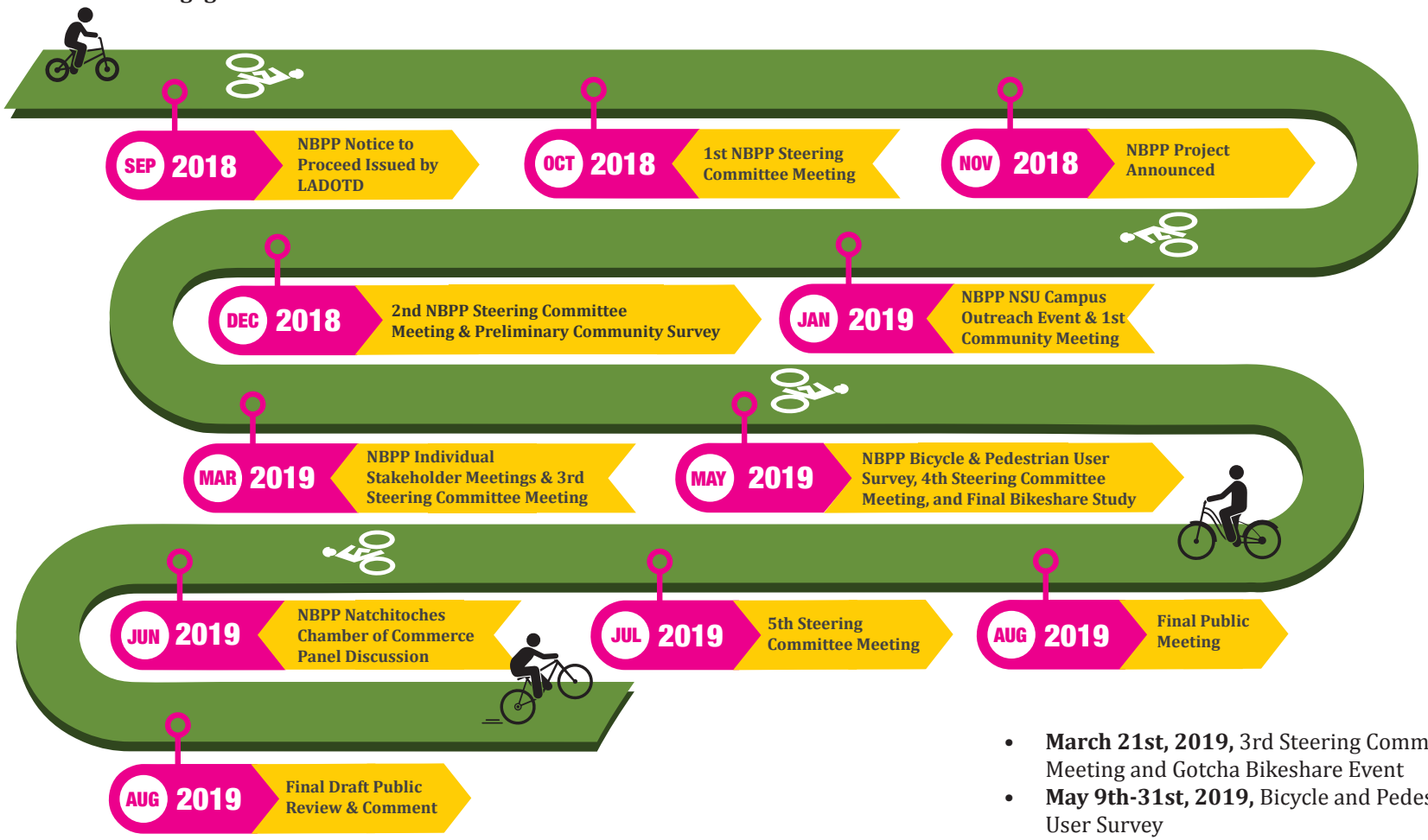
Steering Committee Members

- Lee Posey, Mayor - *City of Natchitoches*
- Randy LaCaze, *City of Natchitoches*
- Edd Lee, *City of Natchitoches*
- Nick Verret, *City of Natchitoches*
- Jonathan Lachney, *LADOTD District 8*
- Dale Craig, *LADOTD District 8*
- Keith Sayer, *LADOTD District 8*
- *Laura Phillips, FHWA*
- Jessica Deville, *FHWA*
- Kelly West, *Natchitoches Area CVB*
- Lydia Lyles, Natchitoches Chamber of Commerce
- Carrie Mardoff, National Park Service
- Rebecca Blankenbaker, Care River Heritage Area
- Carey Blanchard, *Bike Natchitoches*
- Van Erikson, *Northwestern State University*
- Marcus Jones, *Northwestern State University*
- Chris Maggio, *Northwestern State University*
- Jacob Ellis, *Northwestern State University*

RAPC Staff

- Matt Johns, *Executive Director*
- Sooraz Patro, *Director of Transportation*
- Jonathan Bolen, *Special Projects Planner*

Figure 2-7: NBPP Public Engagement Timeline



Committee Recruiting, Meeting, Stakeholder Consultation, and Presentation Timeline

- **September 7th, 2018,** LA-DOTD issued Notice to Proceed
- **October 2nd, 2018,** 1st NBPP Steering Committee Meeting
- **November 13th, 2018,** NBPP Project Kickoff Announced
- **December 11th, 2018,** 2nd NBPP Steering Committee Meeting & Preliminary Community Survey
- **January 31st, 2019,** NSU Campus Outreach Event and First Community Meeting
  March 20th-22nd, 2019, Individual Stakeholder Meetings
- **March 21st, 2019,** 3rd Steering Committee Meeting and Gotcha Bikeshare Event
- **March 21st, 2019,** 3rd Steering Committee Meeting and Gotcha Bikeshare Event
- **May 9th-31st, 2019,** Bicycle and Pedestrian User Survey
  May 29th, 2019, 4th Steering Committee Meeting and Final Bikeshare Study Presentation
- **June 19th, 2019,** Natchitoches Chamber of Commerce Panel Discussion
- **July 25th, 2019,** 5th Steering Committee Meeting
- **August 28, 2019,** Final Public Meeting
- **September 2019,** Final Draft Plan Public Comment and Plan Adoption

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Chapter 3

Existing Condition

Chapter 3: Existing Condition

As the building block for the Natchitoches Bicycle and Pedestrian Plan (the Plan), it is essential to gather, review, and inventory existing conditions that may impact bicycle and pedestrian mobility, including community needs, issues, and desires, as well as policies and plans. Chapter 3 provides an overview of existing conditions related to bicyclists and pedestrians and a snapshot of the area, from which future recommendations are built.

The chapter compares common and distinctive characteristics of non-motorized users to define demographic data needed for research. First, the Plan researches demographic data from the American Community Survey (ACS) and Strava Metro ride and run count data to reveal latent demand from bicyclists and pedestrians. The Plan then focuses on safety by studying bicycle and pedestrian related crash data, which reveals safety concerns for biking and walking in the region. The Plan also compares results from the Long Range Bicycle Map Statewide (LRBMS) to complement local plans. Furthermore, a summary of the public survey is provided to review strength, weakness, opportunities, and needs for improvements in the study area perceived by survey respondents. Finally, this chapter concludes with the result from the Bicycle and Pedestrian Suitability Index model, which is developed upon the above factors.

3.1 Non-Motorized User Characteristics

Planning for bicyclists and pedestrians requires an understanding of their characteristics. Bicyclists and pedestrians have different characteristics that guide the design of safe and appropriate facilities.

Characteristics of Pedestrians

Pedestrians are defined in the Plan as people who travel on foot or who use assistive devices, such as wheelchairs, for mobility. Every trip on the road involves some form of pedestrian activities, whether walking to the transit station, walking through the parking lot, or the walking the entire trip. Although physical fitness and age may vary from person to person, many people have conditions that limit their abilities to negotiate public sidewalks and trails. Carrying items, pushing children in stroller may thrust additional challenge on pedestrians. Accessibility is of vital importance in designing and constructing pedestrian facilities for the disabled population. Moreover, older adults, children, and people with mobility impairments require the design of sidewalk and walking trial to be extremely careful and comprehensive.

Older Adults

The aging process frequently causes a general deterioration of physical, cognitive, and sensory abilities. These changes intensify over time and are most pronounced for individuals over 75 years of age:

- Vision problems, such as degraded acuity, poor central vision, and reduced ability to scan the environment
- Reduced range of joint motion
- Reduced ability to detect, localize, and
- differentiate sounds
- Limited attention span, memory, and cognitive abilities
- Reduced endurance
- Reduced tolerance for extreme temperature and environments
- Decreased agility, balance, and stability
- Inability to quickly avoid dangerous situations
- Excessive trust that fellow drivers will obey traffic rules
- Slower reflexes
- Impaired judgment, confidence, and decision-making abilities

Children

Children have fewer capabilities than adults because of their developmental immaturity and lack of experience. Compared to adults, children tend to exhibit the following characteristics:

- One-third less peripheral vision
- Less accuracy in judging speed and distance
- Difficulty localizing the direction of sounds
- Overconfidence
- Inability to read or comprehend warning signs and traffic signals
- Unpredictable or impulsive actions
- Lack of familiarity with traffic patterns and expectations
- Trust that others will protect them
- Inability to understand complex situations

Disabled

Per U.S. Census Bureau's 2017 American Community Survey, the overall percentage of people with disabilities in the U.S. in 2017 was 13.2%. There are three types of disabilities when considering sidewalk design: mobility impairment, sensory impairment, and cognitive impairment. People with mobility impairment often travels with aids of wheelchairs and scooters. It is especially challenging for wheelchair and scooter users to move uphill. Their stability and control can be affected by surfaces with cross-slopes, grades, or rough terrain. Wheelchair and scooter users require a wider path of travel than ambulatory pedestrians. Therefore, sufficient passing space should be provided to allow wheelchair users to pass one another and to turn around.

People with visual impairment face the following impediments in mobility:

- Limited perception of the path ahead (preview);
- Navigation with limited information about surroundings, providing less protection against obstacles, and other dangers;
- Reliance on memory and unchanging conditions in familiar terrain; and
- The need to assimilate information obtained through non-visual sources such as texture and sound[2].

On the other hand, cognitive disabilities can hinder the ability to think, learn, respond, and perform coordinated motor skills. People with cognitive disabilities also might have difficulty navigating through complex environments such as city streets and might become lost more easily than other people. In addition, to benefit people with cognitive impairment, such design approaches might benefit children and adults who do not read English.

In conclusion, a good pedestrian system entails a good understanding of how all pedestrians, including disabilities, older people, and children and their challenges when using sidewalk, trails, ramps, and signals, which is continuous and connected for people to reach their desired destination. Detailed design specifications and recommendations are provided in Chapter 5.

[2] https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalks/chap2.cfm

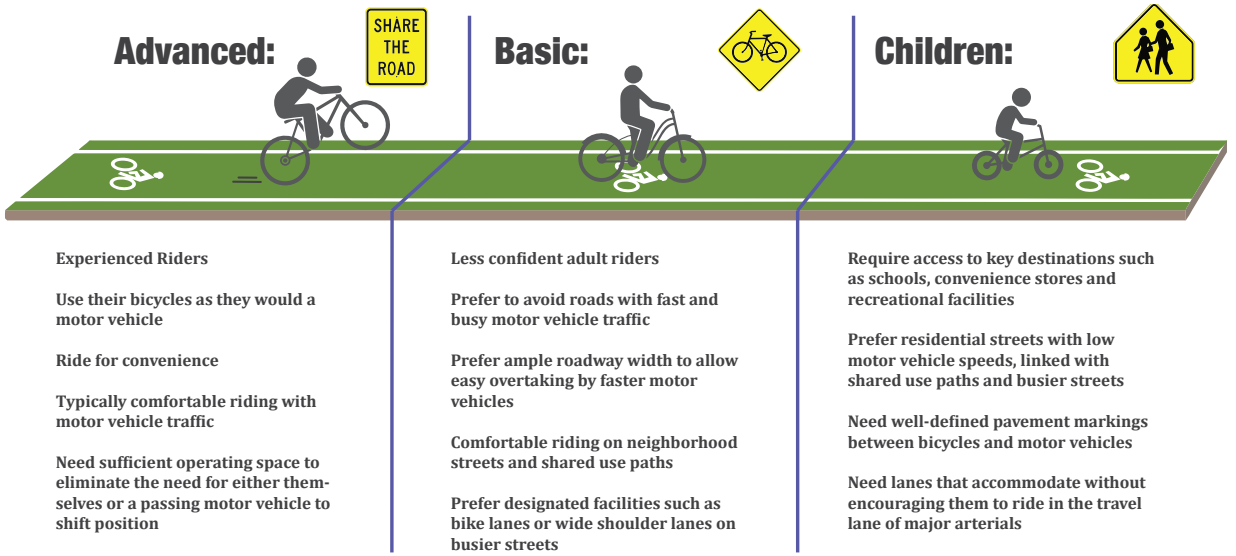
Characteristics of Bicyclists

While bicyclists and pedestrians are often considered together as alternative transportation mode users, they are in fact vastly distinctive. Although both compared to drivers, they tend to suffer more serious, sometimes fatal, injuries when crashing with motor vehicles. However, bicycle is considered a type of vehicle and share the same roles and responsibilities on all streets and roadways, unless prohibited by law (e.g. on sidewalks). According to the American Association of State Highway and Transportation Officials (AASHTO) (American Association of State Highway and Transportation Officials, 1999) and FHWA, there are three types of bicyclists (Figure 3.1):

Planner from the City of Portland, Oregon, developed another classification of bicyclists based on survey collected since 2005 to 2009, which provides an alternative approach addressing bicyclists' attitudes towards biking on the streets[3]:

- Strong and Fearless – bicyclists typically ride anywhere, anytime, prefer direct routes, and choose roadway connections over separated bicycle facilities.
- Enthused and Confident – bicyclists fairly comfortable riding but usually choose low traffic streets or shared use paths. Including commuters, racers, and recreational bicyclists.
- Interested but Concerned – approximately the majority of the population, typically only use low traffic street or trails under good weather condition.
- No way, No How – population who prefer not to bike and consider safety issues when riding in traffic.

Figure 3-1: Characteristics of Bicyclists



SOURCE: American Association of State Highway and Transportation Officials, FHWA, 1999

Figure 3-3: Household Vehicle Availability in City of Natchitoches

SOURCE: 2017 American Community Survey (ACS), 5-year Estimates

3.2 Potential Users of the Non-Motorized Transportation System

Chapter 3.1 listed basic characteristics of typical bicyclists and pedestrians, which provides insight to the derived demand for walking and biking from several group of people. Understanding this population draws a clearer picture for alternative travel demand in the study area. While the term "alternative mode" may indicate that cycling and walking are "second choices" as compared to driving; to many people, biking and walking are the only option for mobility. They could fall under:

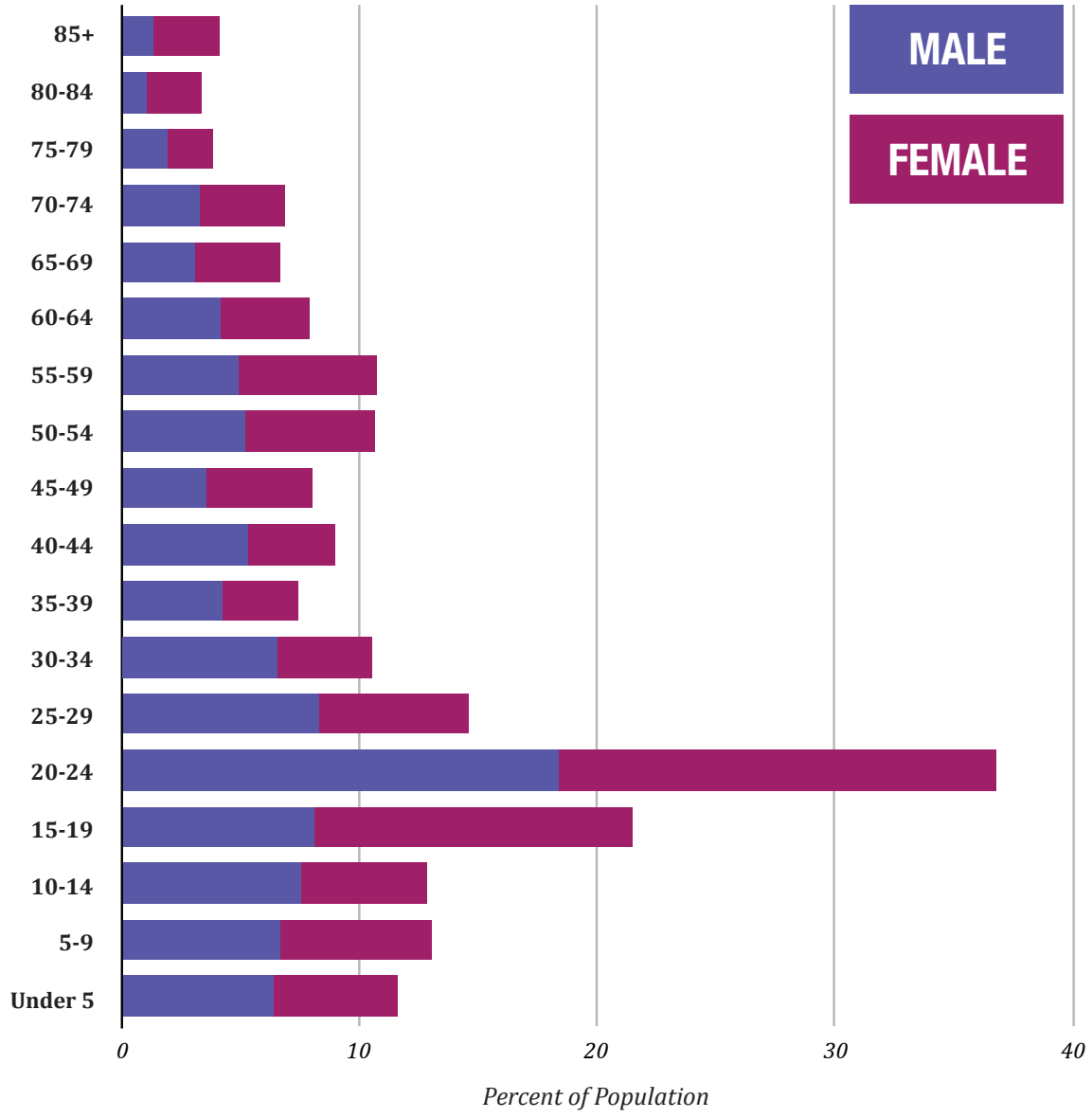
- Population age below 15 and over 65
- In households with zero motor-vehicles
- Population below 100% poverty and 150% poverty line
- Population with disabilities
- Students & Tourists

According to the 2017 American Community Survey (ACS) 5-year estimate, there are 18,176 living in census block groups within the City of Natchitoches (the City). Nearly 5,816 of which, or 32%, are over age 64 or under the age of 15, making them potentially too old or too young to drive an automobile (Figure 3-2).

ACS estimated a total of 6,485 households, both owned and rented units, in census block groups inside the City. Approximately 18.5% of those households have no vehicle available for work and 39.6% have only one vehicle (Figure 3-3).

Additonally, NSU had 10,155 students enrolled for the 2019 Spring Semester and LSMSA had 365 students enrolled for the 2019 Fall Semester.

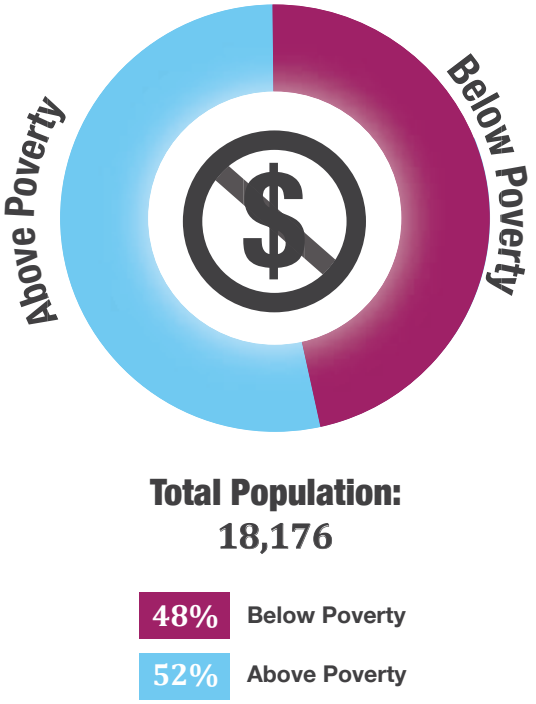
Figure 3-2: Population by Age Cohort & Gender



SOURCE: 2017 American Community Survey (ACS), 5-year Estimates

Another variable to consider is population living below poverty. Of the total population (18,176) living in the City, the 2017 ACS 5-year estimate indicates that roughly 7,797 individuals (44.7% of population) lived below the national poverty level during the previous twelve-month period (Figure 3-4). This percentage is above the United States national average (14.6%) and the State of Louisiana average (19.6%). The number of households received food stamps/SNAP in the past 12 months in census block group in the city is 2,201 (33.9%), this percentage is above the national average (12.6%).

Figure 3-4: Natchitoches Population Below Poverty Line

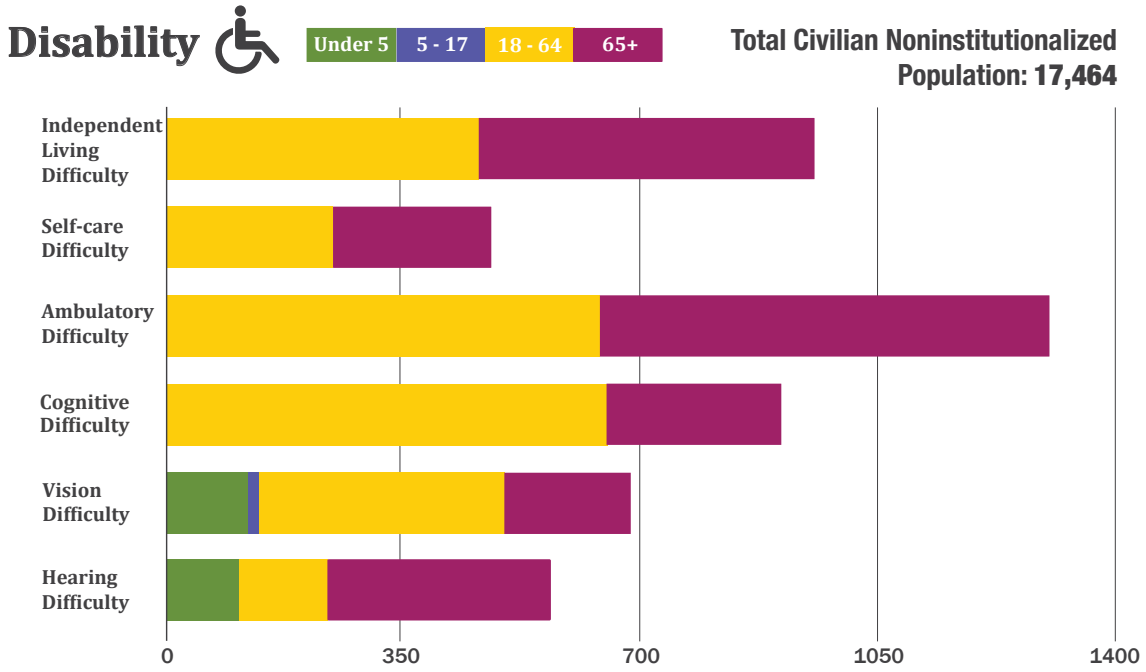


SOURCE: 2017 American Community Survey (ACS), 5-year Estimates

In the City of Natchitoches, the total number of zero vehicle household may seem less significant; however, the proportion of population living below or nearly poverty line is substantial. Comparing the two datasets, a larger number of population, while struggling with poverty, would inevitably make huge expenses related to driving. For instance, motor-vehicle purchase, fuel, insurance, and maintenance are all added cost for driving to have basic access work and other essential activities. One way of making bicycling and walking more desirable is to plan for adequate facilities that provide a safe and comfortable level of service. This will ultimately result in a healthier lifestyle as well as aid in travel demand management in the transportation network.

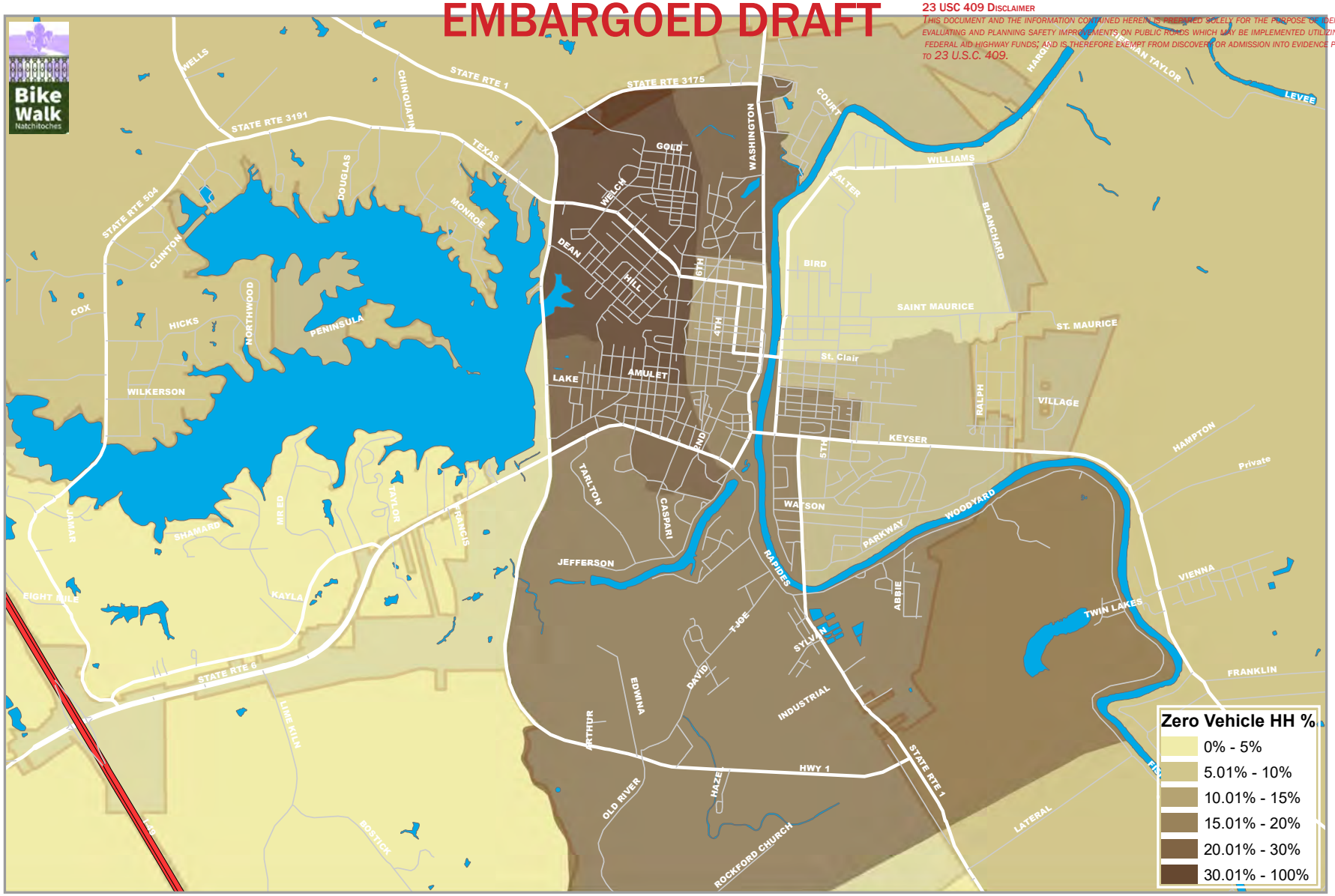
The fourth demographic factor is disability. Table 3-1 and Figure 3-5 shows and compares estimated number of people with disabilities, divided by age group in the City of Natchitoches. As indicated in Figure 3-5, the majority of disabled population would need ambulatory assistance. Map 3-3 shows percentage of population with disability by census block group within the city.

Figure 3-5: Natchitoches Disabled Population



SOURCE: 2017 American Community Survey (ACS), 5-year Estimates

EMBARGOED DRAFT



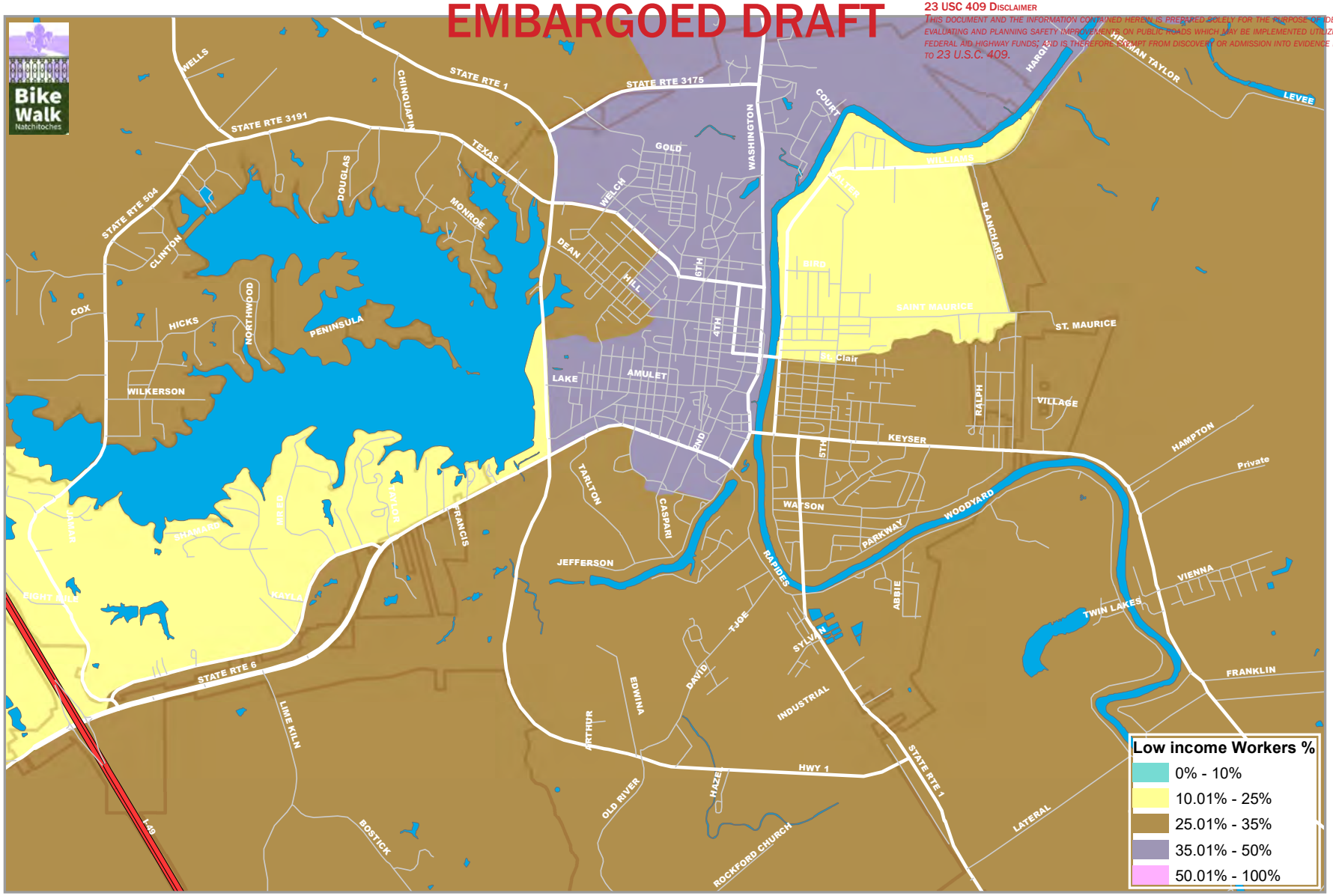
Source: EPA Smart Location Database, US Census

Map 3-1
Zero Vehicle Households
% Distribution

0 0.25 0.5 1 Miles

RAPC

Note:
The map showcases Zero Vehicle Households as a percentage of all Households based on Census Block Groups.



Source: EPA Smart Location Database, US Census

Map 3-2
Low Income Workers
% Distribution

0 0.25 0.5 1 Miles

RAPC

Note:
The map showcases Low Wage Workers as a percentage of all Workers based on Census Block Groups

PEDESTRIAN

BICYCLE

Pedestrian Counts
- 5 - 15
- 16 - 30
- 31 - 50
- 51 - 75
- 76 - 100

Bicycle Counts
- 5
- 6 - 10
- 11 - 30
- 31 - 55
- 56 - 70

Natchitoches City Limits
Water Bodies

0 0.25 0.5 1 Miles

Map 3-3
Strava Density Map

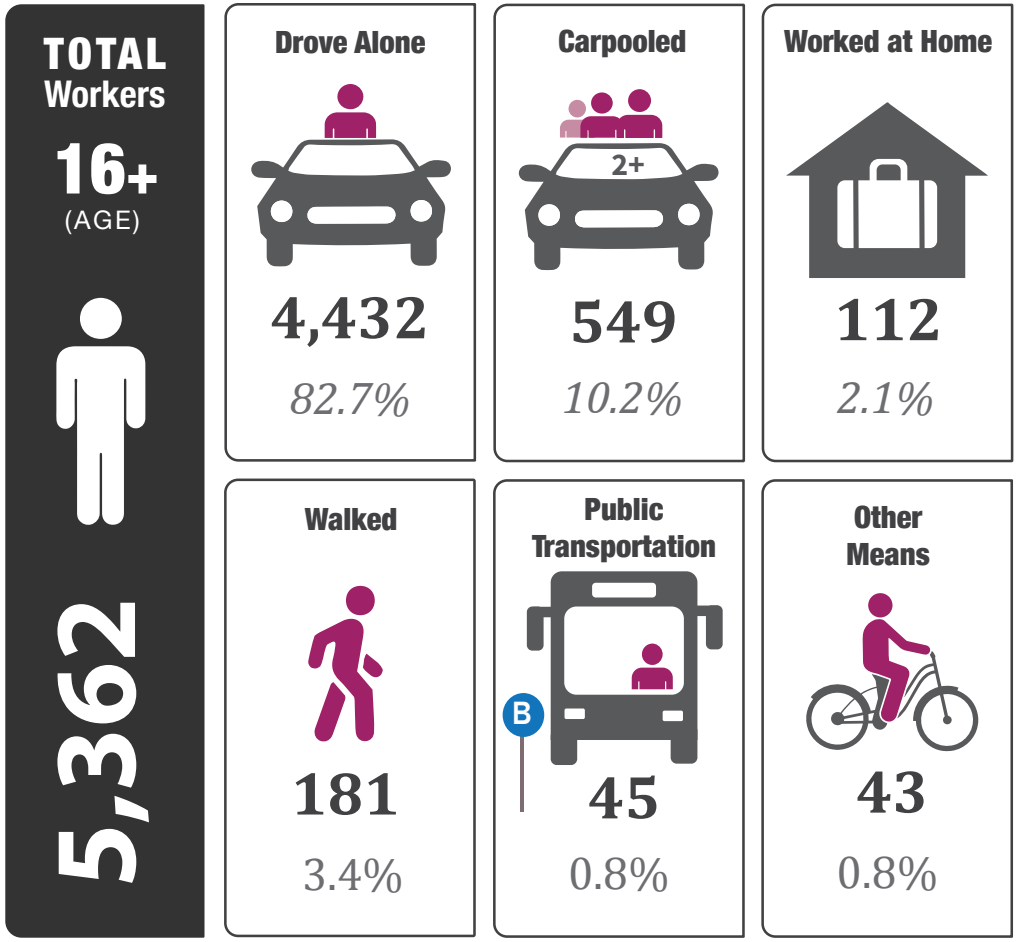
Note:
The two maps showcase Strave users density analysis of pedestrian (L) & bicycle (R) from 12/2016 - 11/2017 within City of Natchitoches.

3.3 Commute, Travel Pattern, & Safety

Daily Commute

According to the 2017 ACS 5-year estimates, approximately 181 residents living in census tracts in the City, or 3.4% of the total workforce population, walk to work each day. 43 people commute to work by biking. Map 3-4 illustrates existing land use within the city by census block group.

Figure 3-6: City of Natchitoches Daily Commute Pattern



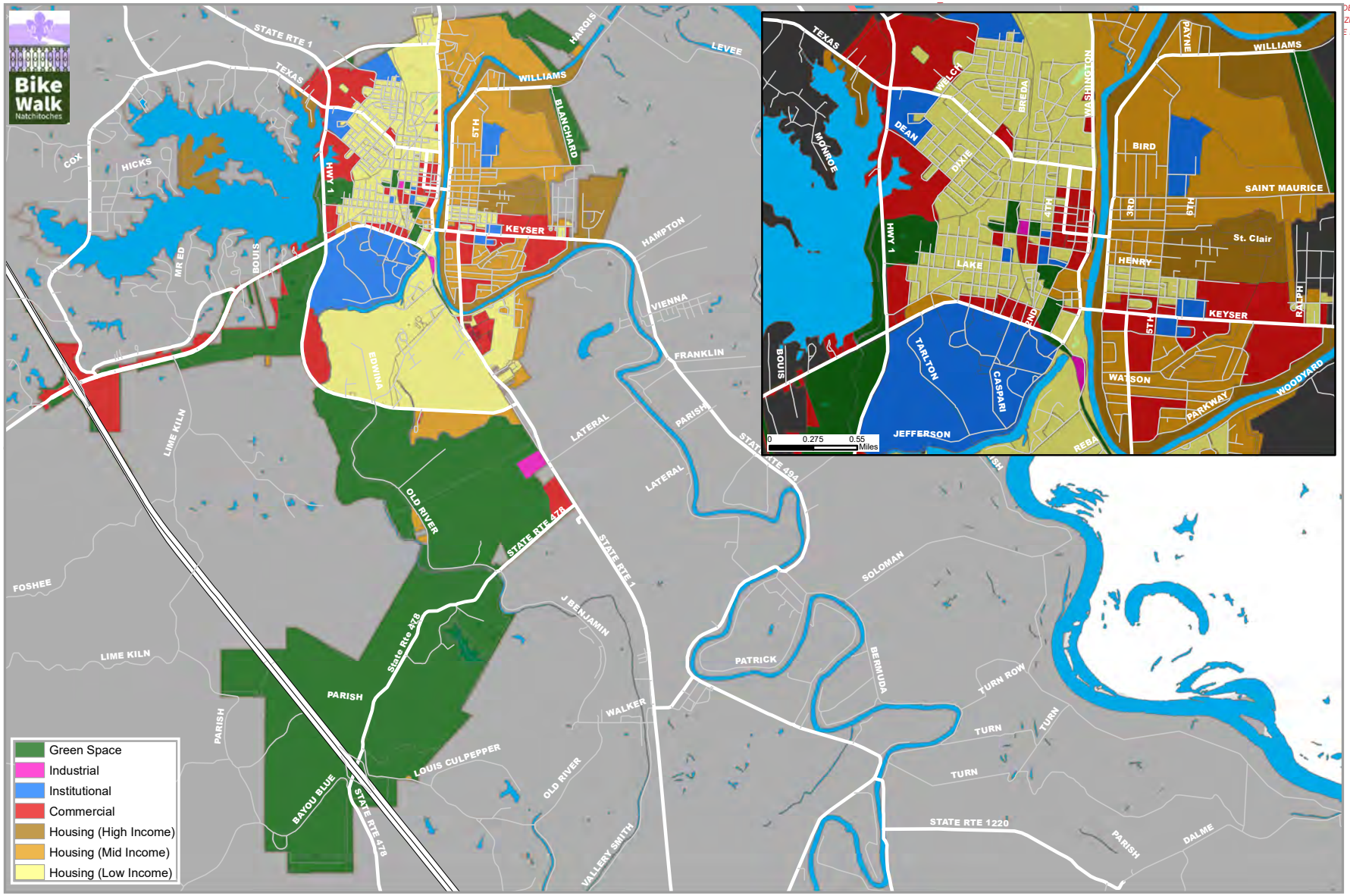
SOURCE: 2017 American Community Survey (ACS), 5-year Estimates

Recreation Trips

Although, some people use cycling and walking as a commuting method, there are many who use purely for recreational purposes. RAPC and the Louisiana Department of Transportation and Development (LADOTD) have provided Strava Metro bicycle and pedestrian count data to facilitate the needs assessment process with greater geographic accuracy for the Plan.

Strava is a smartphone app that individual users can track their rides, runs, walks, and hikes. The application processes individual input in the GIS environment, thus enabling further analysis of biking and walking activities. Studies in the Plan focus on the number of bicyclists or pedestrian trips on each segment of road to determine the most frequently used roads as part of the bicycle and pedestrian suitability index. This helps to have a better understanding on how people choose to interact with the network of roads, bike paths, and intersections. The resulting data analysis provides for informed decision-making, smarter planning, and safer streets.

The data mining of Strava data-set for the area, reveals interesting recreational patterns (Map 3-3), as roads connected to higher education and tourism resources, i.e. Northwestern State University, Cane River Creole National Heritage Trail, or Downtown Historic District, are more frequently logged by users (dark green lines in Map3-3).



Map 3-4
Land Use by Census Blocks

BM_Water_Bodies
Natchitoches City Limits

0 0.25 0.5 1 Miles

Source: US Census Bureau, RAPC, City of Natchitoches.

Note:
The map identifies the various land uses within the incorporated City of Natchitoches limits with Census Blocks as unit of Analysis.

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Bicycle and Pedestrian Crashes

As previously stated, planning for bicyclists and pedestrians requires an understanding of their vulnerability in crashes with motor vehicles. Both groups are susceptible to suffering major and sometimes fatal injuries in incidents, even when the vehicles are traveling at relatively lower speeds. Overall, 75% of all crash fatalities were related to walking or bicycling on State roads within Natchitoches Parish from 2012 to 2018.

The Louisiana Highway Safety Research Group provided data supporting the CenLA Highway Safety Coalition, which covers a ten-parish region in Central Louisiana. The Plan study area is within the Safety Coalition. The next series of maps illustrate bicycle and pedestrian related crashes from 2012 to 2018, selected and sorted by level of severity. Map 3-5 displays pedestrian and bicyle related crash distibution within the City of Natchitohces. Map 3-6 shows bicycle and pedestrian related crash density.

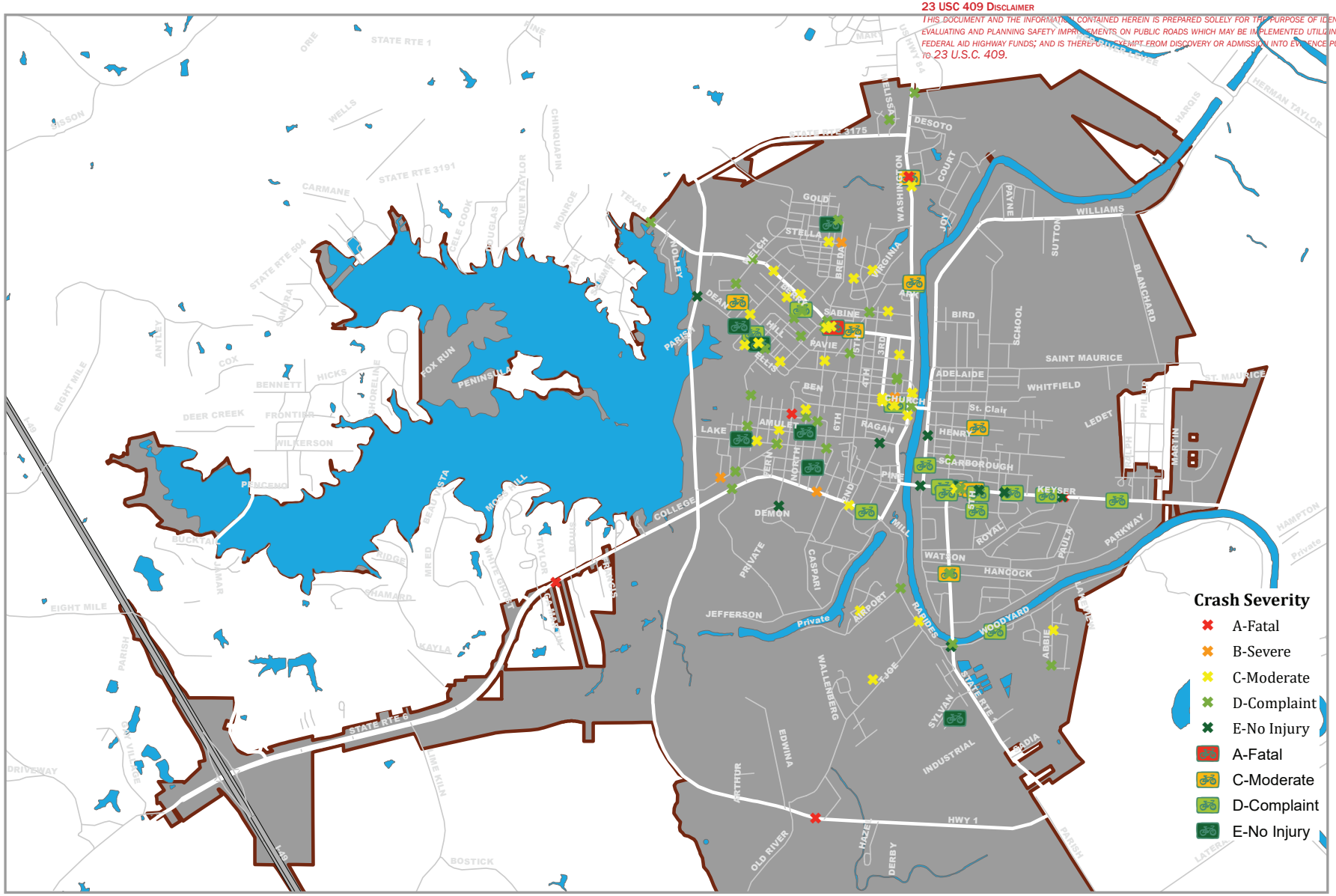
Almost 38% (33 out of 88) of pedestrian crashes occurred at intersections, with Second Street at Church Street, and Keyser Avenue at East Fifth Street having the highest frequency of crashes.

Almost 55% (17 out of 31) bicycle related crashes occurred at intersections, with Washington Avenue at Highland Park Drive having the highest frequency of crashes.

Table 3-1: Bike & Pedestrian Injury & Fatality Data, City of Natchitoches

	BICYCLIST			
YEAR	Fatal	Percent of All LA Traffic Fatalities	Injury	Percent of All Traffic Injuries (b+c)
2012	0	0.00%	3	3.75%
2013	0	0.00%	0	0.00%
2014	0	0.00%	0	0.00%
2015	0	0.00%	1	1.13%
2016	0	0.00%	2	2.30%
2017	1	50.00%	1	1.07%
2018	0	0.00%	1	1.27%
	PEDESTRIAN			
YEAR	Fatal	Percent of All LA Traffic Fatalities	Injury	Percent of All Traffic Injuries (b+c)
2012	1	50.00%	13	16.25%
2013	1	100.00%	13	18.84%
2014	0	0.00%	10	20.83%
2015	0	0.00%	16	18.18%
2016	0	0.00%	6	6.90%
2017	0	0.00%	11	11.70%
2018	3	100.00%	5	6.33%

SOURCE: Louisiana Highway Research Group, Crash Reports 2012-2018, City of Natchitoches



Source: LADOTD Crash 3 Database

Map 3-5
Pedestrian & Bicycle Crash Distribution

Note:
The map showcases both pedestrian & bicycle crashes from 2012 - 2018 within City of Natchitoches.

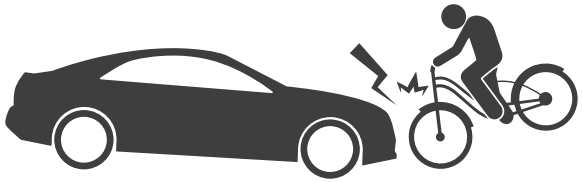
Crash Data Density Analysis

One way to identify locations with high potential for safety improvements for bicycle and pedestrian facilities is through the so-called density analysis, also known as "hot spots" analysis to find areas with clustered crashes. For this plan, ArcGIS Kernel Density Tool in the Spatial Analyst Tool sets were applied to crashes presented in Map 3-6. Density map shows hot spots of bicycle and pedestrian related crash data in the city that are statistically clustered at the 95% (>=1.96) confidence interval using crash severity as a weighted value. The following values were given to different severity types as identified in the crash reports:

- Fatal:20
- Severe:15
- Moderate:10
- Complaints:5
- No Injury:1

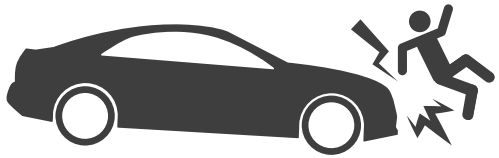
By applying the Kernel Density Tool, which calculates the density of features in a search radius around those features, a raster layer was created with each cell given the value calculated through ArcGIS , based on the distance between the cell and point feature indicating level of severity for every bicycle and pedestrian crash in the study area from 2012 to 2018. Map 3-6 shows the result of the Density Analysis.

Based on the map, the following locations are identified "hotspots" for bicyclists and pedestrians with pressing concerns:



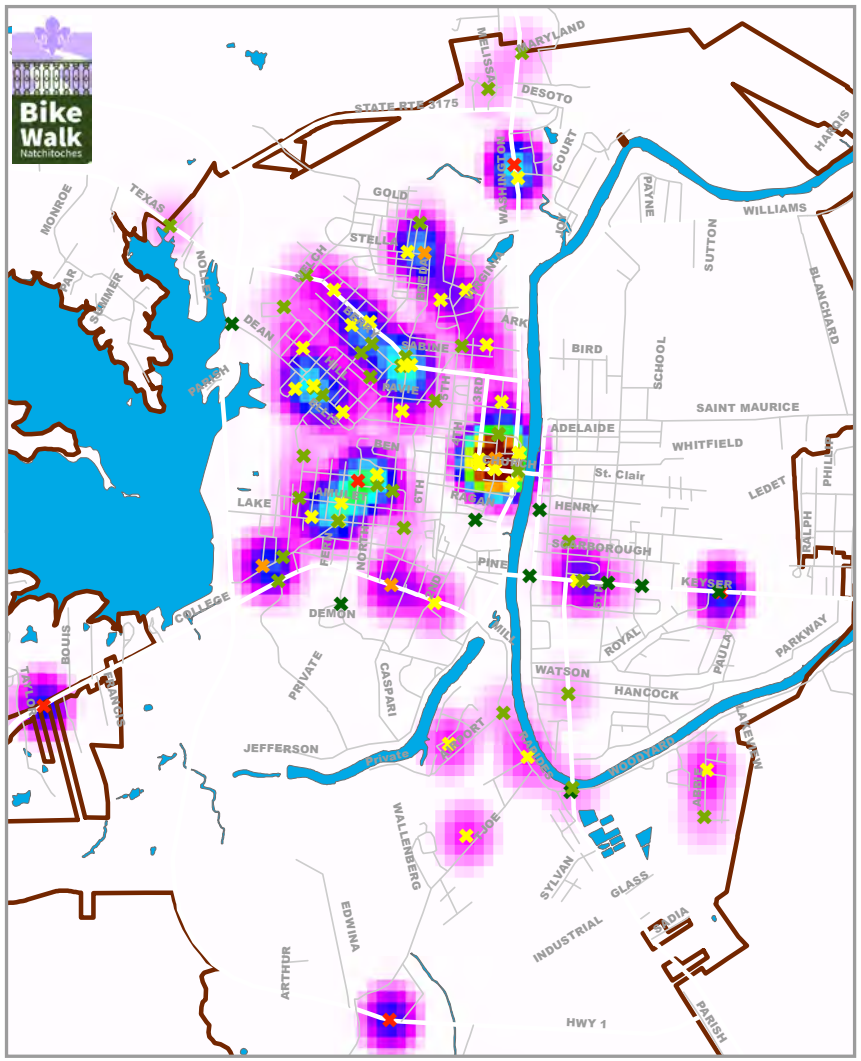
Bicycle Crashes:

- Washington Avenue at Highland Park Drive
- Texas Steet at Berry Avenue
- Posey Street at Jeansonne Street
- Keyser Avenue at East Sixth Street
- Texas Street at Sixth Street
- University Boulevard at Cypress Avenue

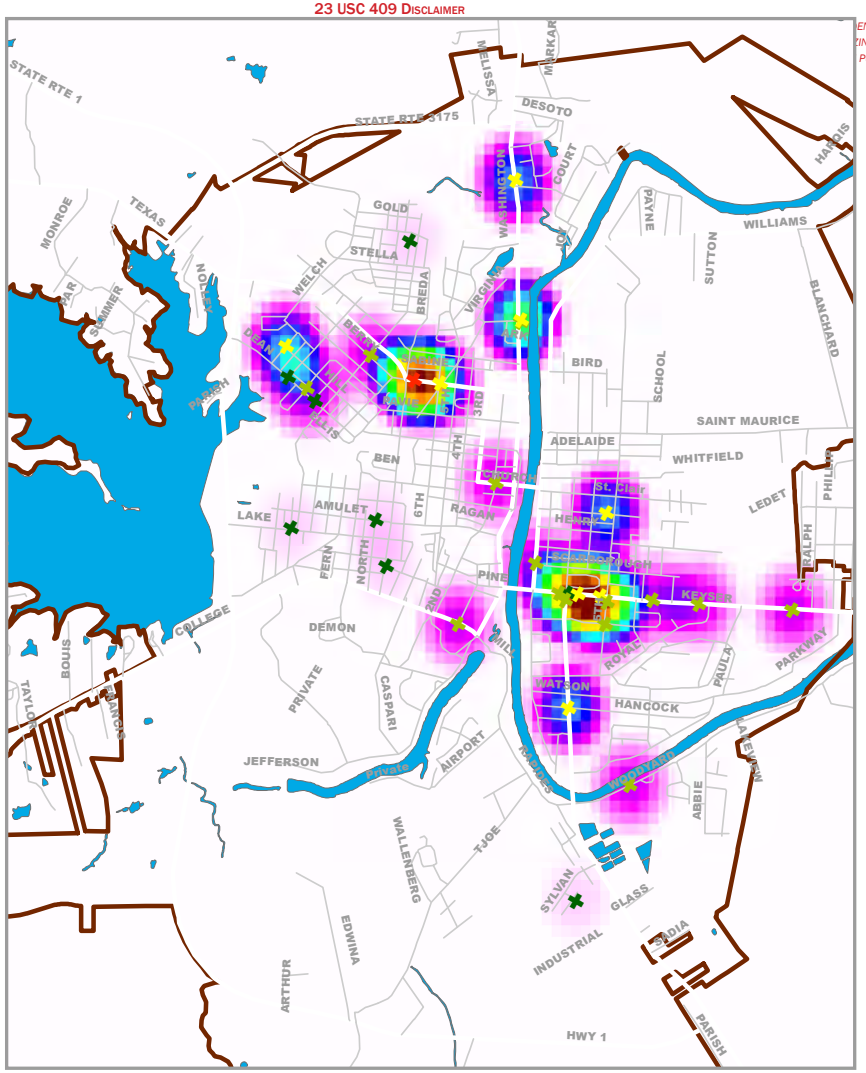


Pedestrian Crashes:

- Second Street at Chruch Street
- Keyser Avenue at East Fifth Street
- LA Hwy. 1 Bypass at LA Hwy. 6
- Washington Avenue at Flora Street
- Keyser Avenue at North Melrose Avenue
- University Avenue at Chester Lane



PEDESTRIAN



BICYCLE

Map 3-6
Crash Density Analysis

Crash Severity
- A-Fatal
- B-Severe
- C-Moderate
- D-Complaint
- E-No Injury

Crash Density
High
Low

Natchitoches City Limits
Water Bodies

0 0.25 0.5 1 Miles

Source: LADOTD Crash 3 Database, RAPC

Note:
The two maps showcase hotspot analysis of pedestrian (left) & bicycle (right) crashes from 2012 - 2018 within City of Natchitoches.

3.4 Long-Range Bicycle Map

In December 2015, LADOTD developed the Long-Range Bicycle Map Statewide (LRBMS) as a reference tool for funding decisions regarding bicycle facilities selection on the state routes system. LRBMS consists of two GIS shapefiles which indicates the priority level for bicycle improvements and recommended bicycle facility on the entire state route network. The result serves as a guideline for facility selection, however, it does not replace the final design decisions.

A variety of input were selected to create the LRBMS, including a 12 factor GIS overlay model. These factors are:

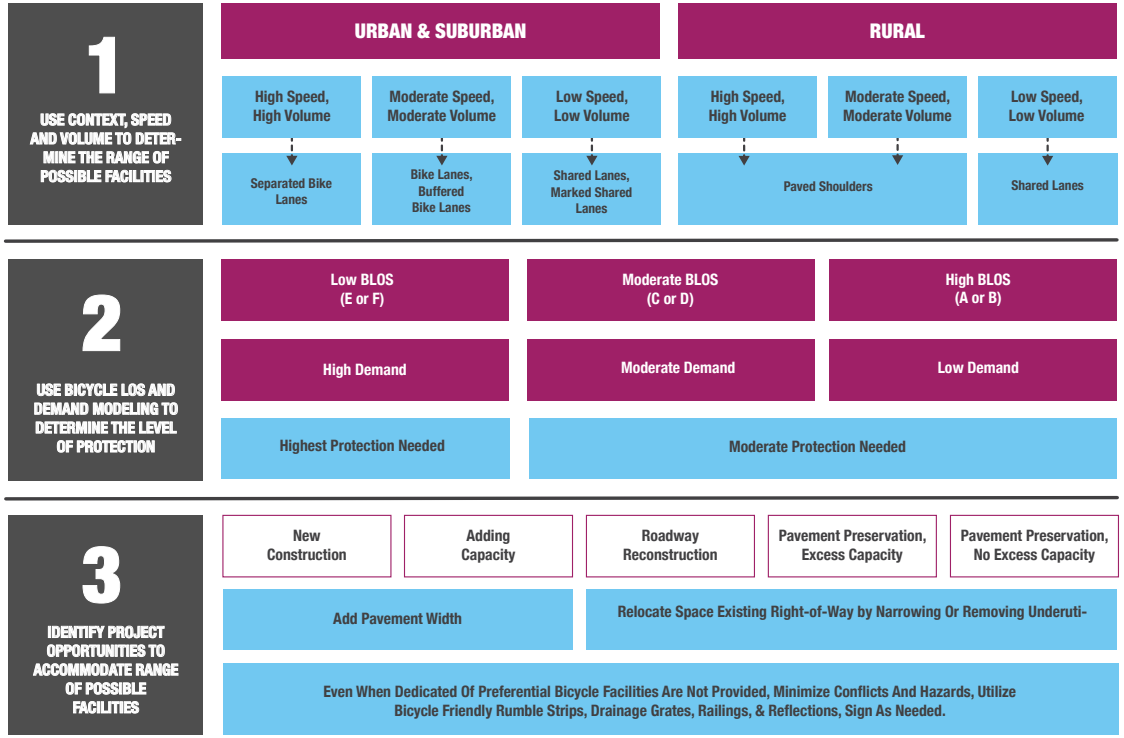
- Strava
- Routes of Statewide Significance
- Link to Adjacent States
- Preferred Routes by cycling groups and advocacy groups
- Local and regional bike plans
- Existing Facilities
- Population Density
- Intersection Density
- Zero-Vehicle Households
- Commute to Work by Bicycle
- Context
- Community Destinations

LRBMS also suggested a three-step model for bicycle facility selection as one application (Figure 3-7):

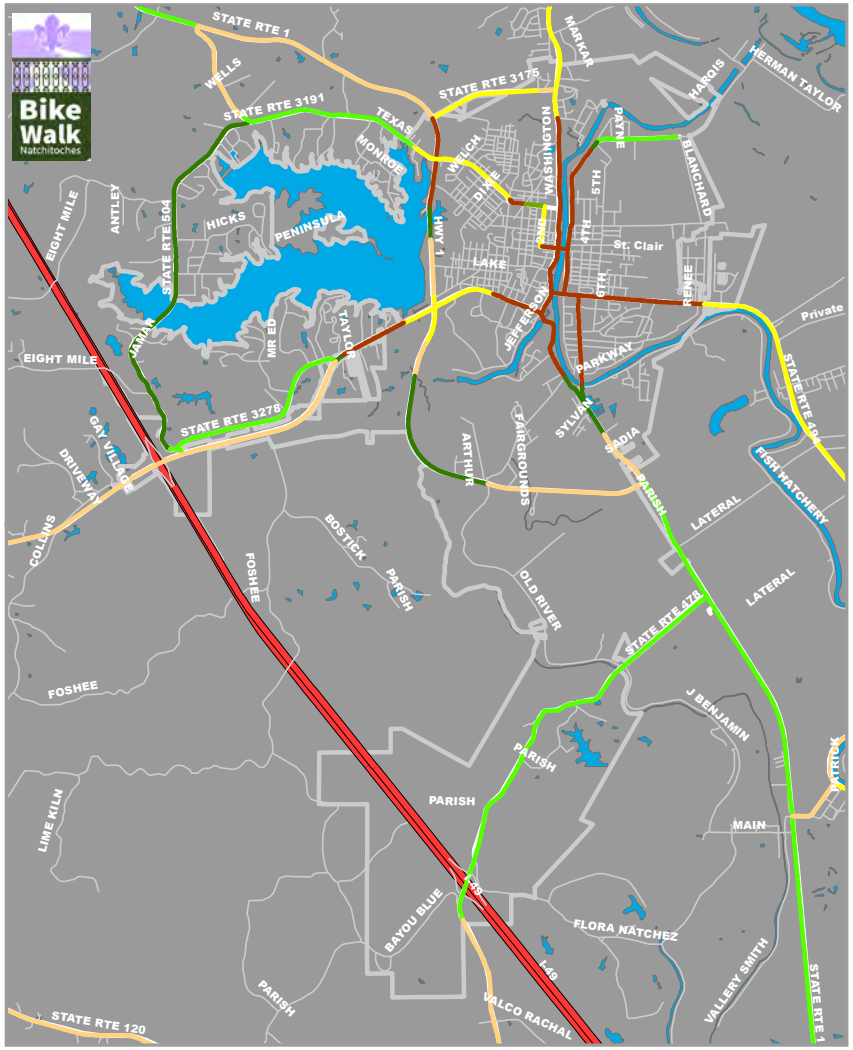
- Step 1: Use context, speed, and volume to determine the range of possible facilities
- Step 2: Use bicycle level of service and demand modeling to determine the level of protection
- Step 3: Identify project opportunities to accommodate range of possible facilities.

Map 3-10 and 3-11 shows priority level and suggested improvements, respectively, recommended by LRBMS on the state route system. The methodology of LRBMS was developed to focus attention on those road segments that have a high demand for bicycle facilities but currently provide poor bicycle infrastructure (orange to red dotted lines in Map 3-10). In this way, areas of low use and low demand become lower priorities than those with many riders utilizing insufficient infrastructure.

Figure 3-7: Three Step Bicycle Facility Selection



SOURCE: Louisiana Long Range Bicycle Map Statewide, 2015



PEDESTRIAN

State Bike Network Analysis

- Good BLOS and High Demand
- Good BLOS and Moderate Demand
- Good BLOS and Low Demand
- Avg BLOS and High Demand
- Avg BLOS and Moderate Demand
- Avg BLOS and Low Demand
- Poor BLOS and High Demand
- Poor BLOS and Moderate Demand
- Poor BLOS and Low Demand

Map 3-7
State Bike Plan

State Recommendation Type

- Shared Lane
- Marked Shared Lane
- Paved Shoulder
- Bike Lane or Buffered Bike Lane
- Separated Bike Lane
- No Bikes Allowed - Interstate or Expressway

BICYCLE

- Natchitoches City Limits
- Water Bodies

Note: 0 0.5 1 2 Miles

The two maps showcase hotspot analysis of pedestrian (left) & bicycle (right) crashes from 2012 - 2018 within City of Natchitoches.

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3.5 Bicycle & Pedestrian User Survey

RAPC partnered with the City of Natchitoches Mayor's Office to distribute a bicycle and pedestrian user survey. The online survey was created to gauge public perception and experience with walking and biking in the City.

In the survey, a total of 10 questions were asked (See Appendix X for full details of the survey). 362 people responded the survey and results were aggregated and summarized below (for a copy of survey and result, refer to Appendix X).

Roughly 82% of respondents (296) indicated that additional sidewalks, bike lanes, bike routes, and greenways were "Very important" in supporting walking and biking in the City. When asked to rate reasons they do not walk, 59% of respondents rated "No sidewalks" was a major reason with another 58% rating "Unsafe intersections" as a major reason.

The survey continued to ask the reason behind those who "find it difficult to bike or walk" in their communities. The results indicated that for bicyclists and pedestrians, it is not necessarily separated or protected trails, but rather space, such as shoulder or bike lanes that limits their bicycling or walking activities.

Almost 62% (220) respondents rated "No bike lanes" as a reason they do not bicycle more frequently, followed by "Unsafe intersections" and "Bad driver habits". The results indicate that for bicyclists and pedestrians, it is not necessarily separated or protected trails, but rather space, such as lack of facilities, and connectivity that limits their bicycling or walking activities.

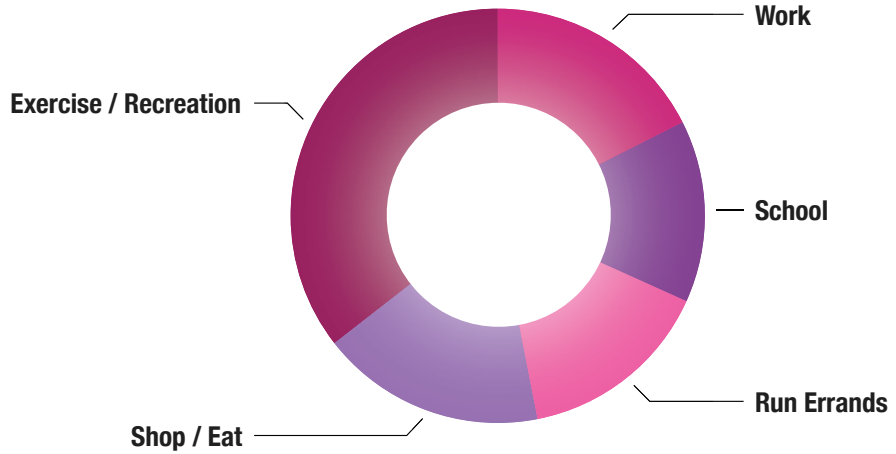
Figure 3-8 illustrates types of activities respondents would likely walk and bike to, if it was safe and convenient. A majority of respondents were "Very likely" to bike or walk for exercise or recreation if it were safe and convenient. Also, 37% of the respondents were "Very likely" to walk or bike to go to work, shop, or eat if it were safe and convenient.

Respondents were also asked to rank improvements that would make it easier and encourage them to walk and bike by priority. Almost all (357) ranked "Provide additional pedestrian facilities" first, with bicycle facilities second, followed by improvements to existing facilities, safety, enforcement, and education respectively.

Finally, all respondents were invited to identify their ideal locations for improvements. The following streets were identified across multiple responses (Map 3-12):

- Williams Avenue
- Keyser Avenue
- Jefferson Street
- University Parkway
- Parkway Drive

Figure 3-8: Bicycle & Pedestrian User Survey Results - Activites



SOURCE: NBPP Bike & Pedestrian User Survey, 2019

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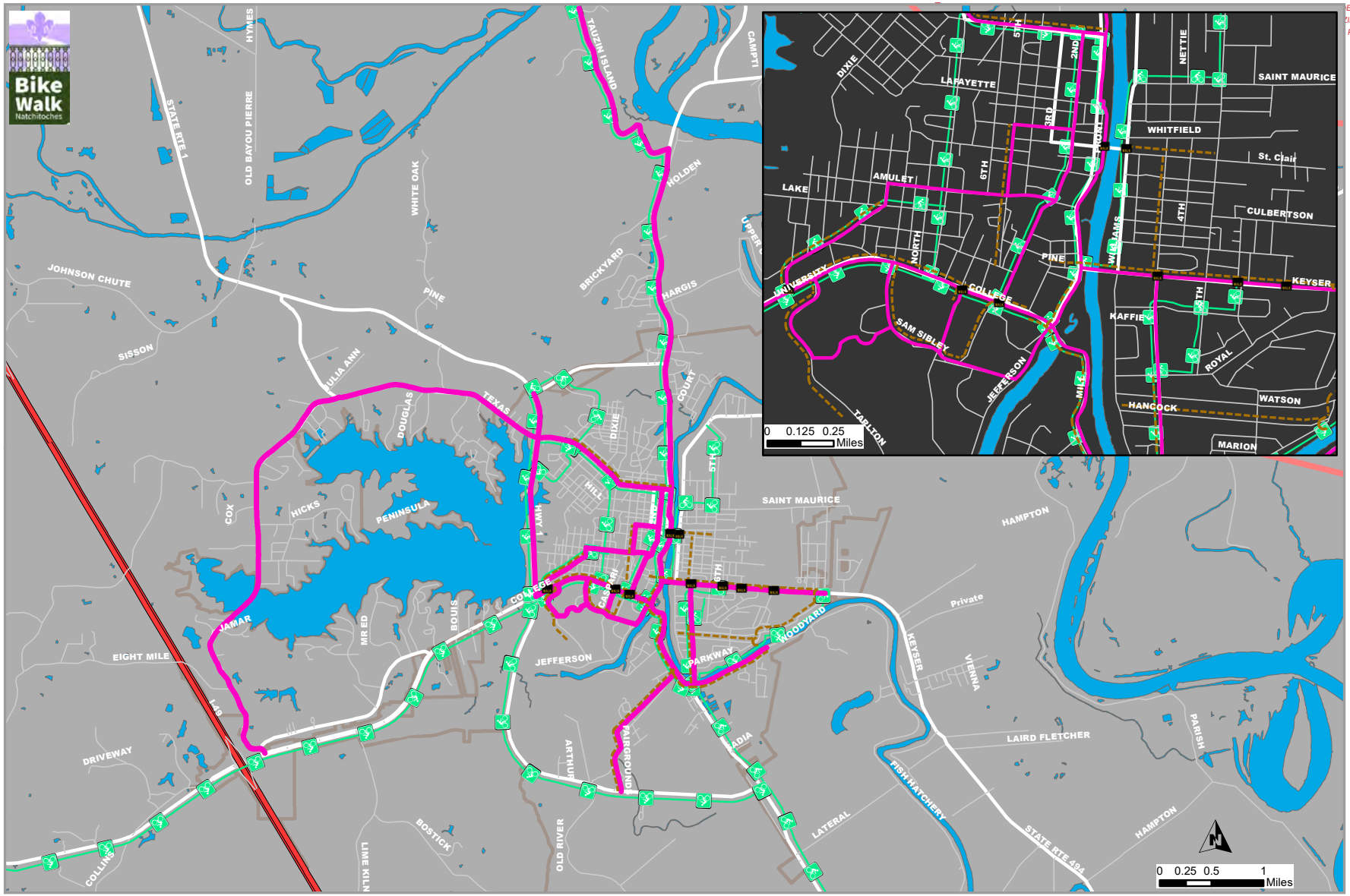

Map 3-8 User Survey Results

- Steering Committee Potential Crosswalks
- User Survey Pedestrian Paths
- User Survey Bike Paths
- Steering Committee Potential Bike Recommendations

Source: Public Meeting Survey (01/2019) + Online Survey (05/2019)

Note:
The map showcases all the information captured during Public meeting survey conducted in January 2019 and Online Survey conducted in May 2019.

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3.6 Bicycle & Pedestrian Connectivity

Existing travel surveys show that most walking trips are under one mile. Attributes such as safety, connectivity, and travel time apply equally to both access and mobility for all transportation modes in the city. Map 3-8 shows quarter-mile, half-mile, and one mile buffers, or aggregate areas to measure travel between destinations on the non-motorized network.

Gaps in connectivity are apparent where there are no facilities, such as across Cane River Lake or connecting development around I-49 to the city, or where destinations are disconnected from the network by parking lots and undeveloped land.

POINTS OF INTEREST

- Key Attractions
  - 1/4 mile buffer
  - 1/2 mile buffer
  - 1 mile buffer
- Schools & Colleges
  - 1/4 mile buffer
  - 1/2 mile buffer
  - 1 mile buffer

EDUCATIONAL

- Natchitoches City Limits
- Water Bodies

Source: LDHH LDOE 2007 (Updated)

Note:
The key attractions includes: museums, libraries, parks, grocery stores, historic buidlings, etc. as well as anything with tourism potential.

Map 3-9
Buffer Analysis for Key Attractors

0 0.25 0.5 1 Miles

RAPC

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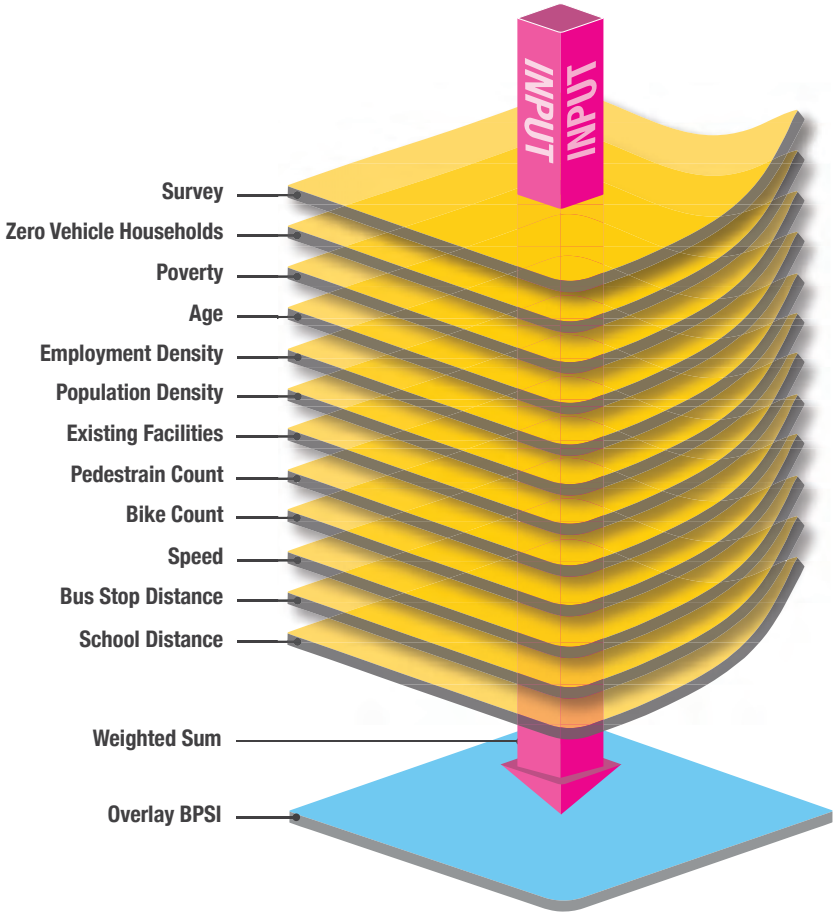
3.7 Bicycle & Pedestrian Suitability Index

The Utah Collaborative Active Transportation Study (UCATC) has developed a Latent Demand Model for bicycle and pedestrian demand, based on a US Environmental Protection Agency (EPA) report on the relationship between land use, transportation and environmental quality (EPA, 2001), and subsequent studies. The study variables were selected from the "4Ds" of travel behavior framework: Density, Diversity, Destination, and Design (Utah Collaborative Active Transportation Study, 2013).

Similarly, RAPC has developed a Bicycle and Pedestrian Suitability Index Model (BPSI), which includes additional three factors: transit, demographics, and community input. The analysis uses GIS Spatial Analyst tool sets, assigning scores based on each variable. The variables are outlined in the following table (Table 3-4). These variables are subjected to ranking criteria to create a scoring index for each street segment within the study area. All layers are then overlaid using the ArcGIS Weighted Overlay Tool with equal weight[7].

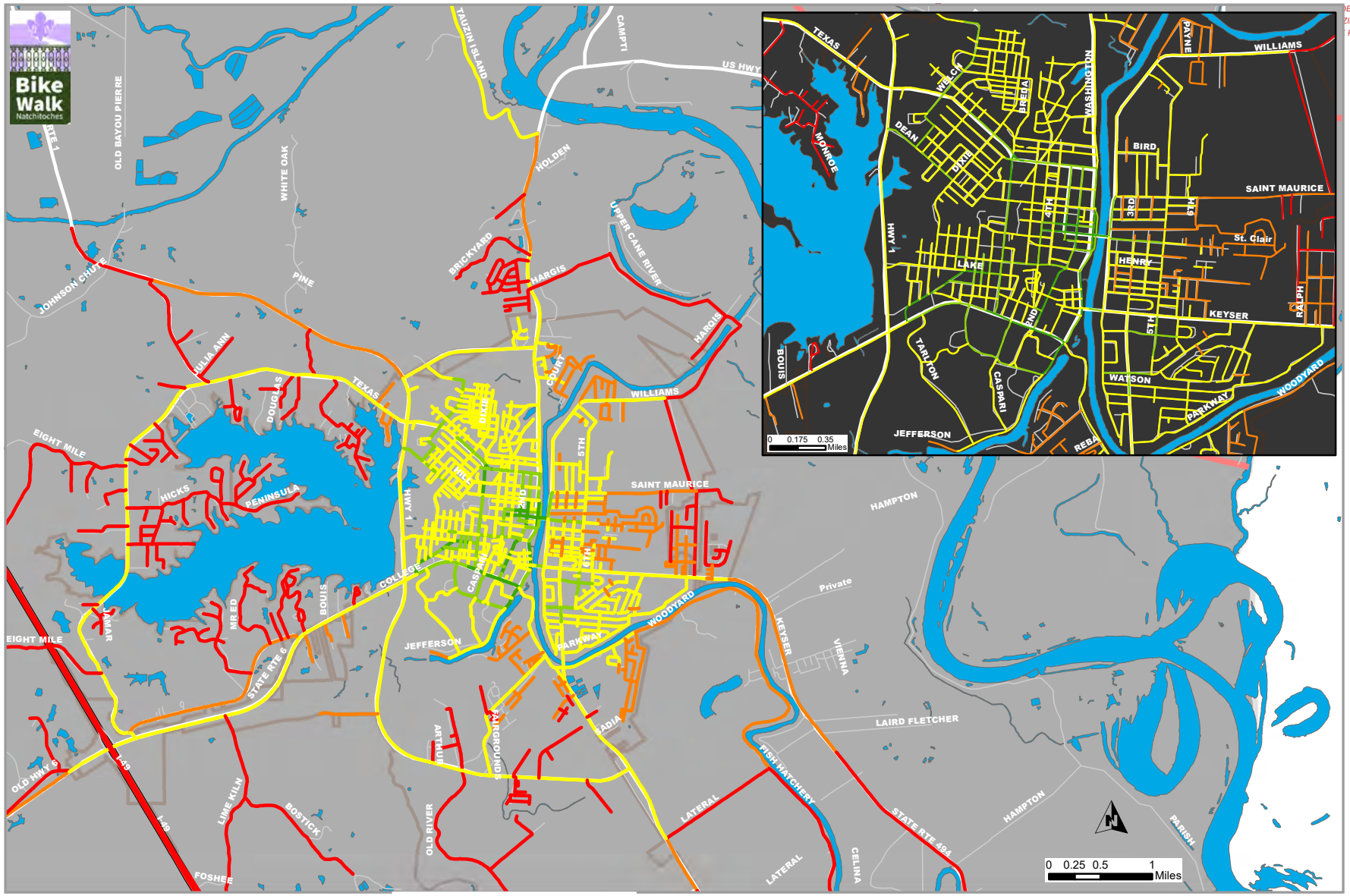
The BPSI model was developed for the entire City. Walking and bicycling demand scores were calculated for all street segments within the City. The results are shown in Map 3-9. A higher index score (represented in blue) indicates a higher likelihood of pedestrian and bicycling activity, based on the analysis of factors identified in the tables. Some key areas of high activity include the downtown areas of the City, as well as streets in and around Northwestern State University.

Figure 3-9: Bicycle and Pedestrian Suitability Index Model (BPSI)



SOURCE: RAPC, 2019

[7]http://desktop.arcgis.com/en/arcmap/10.3/tools/spatial-analyst-toolbox/overlay-analysis-approaches.htm



Map 3-10
Bicycle & Pedestrian Suitability Index

Bicycle / Pedestrian Suitability Index

- (Not Suitable) <=85
- (Some Potential) >86 and <=115
- (Suitable) >116 and <=175
- (Potenital) >176 and <=205
- (High Potential) >206

Source: EPA Smart Database, US Census Bureau, RAPC, LADOTD Fugro /GIS database

Note:
The map showcases the weighted scoring for roadway segments based on key identified factors such as: Crash 3 Data, Strava Counts, Zero Vehicle HHs, Lane Width, Speed Limits, Acitivty Density, etc.

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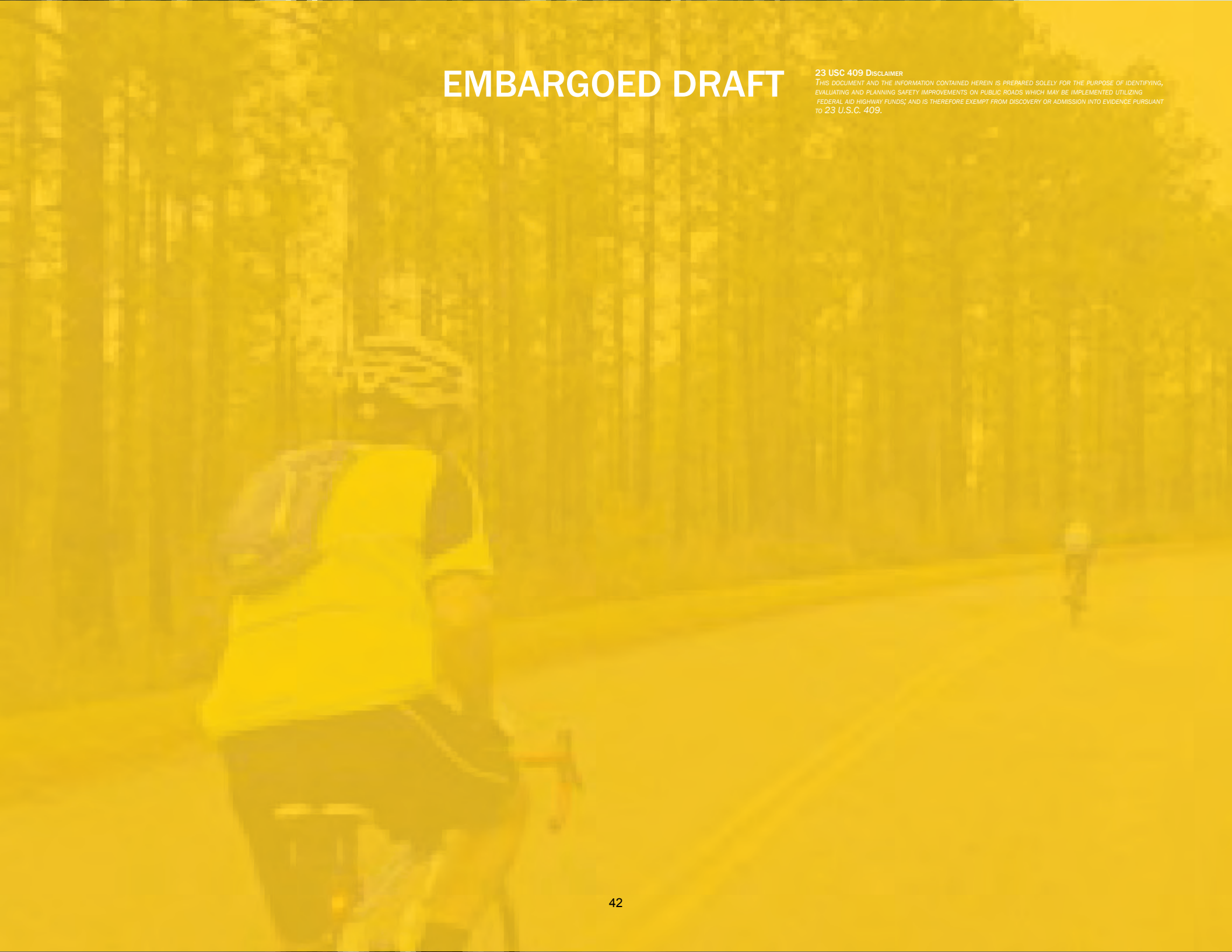

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Chapter 4

Goals & Strategies

Chapter 4: Goals & Strategies

Chapter 4 focuses on the vision, goals, and strategies of the Bicycle and Pedestrian Plan. FHWA recommends Performance-Based Planning, which could be effectively implemented by organizing a bicycle and pedestrian planning process for transportation agencies around goals and strategies (FHWA, 2014). For the City of Natchitoches Bicycle and Pedestrian Plan (Plan), the vision statement, goals, and strategies have been identified from citizen steering committee meetings, input from RAPC staff, online survey, public meetings, and agency consultations.

4.1 Vision Statement

Having a vision that guides a community to incorporate active transportation is the first step in seeing a plan to be implemented. It acts as a blueprint and direction to improve walking and biking facilities in our community, allowing for the city and citizenry to move forward on seeing a network of bike paths, pedestrian facilities, and access to a wide range of transportation options. Knowledge gained from the planning process have been combined, condensed, and crafted into the vision statement for the Plan. The statement below builds upon current walking and bicycling conditions in the City of Natchitoches and expresses the desired outcome of the plan.

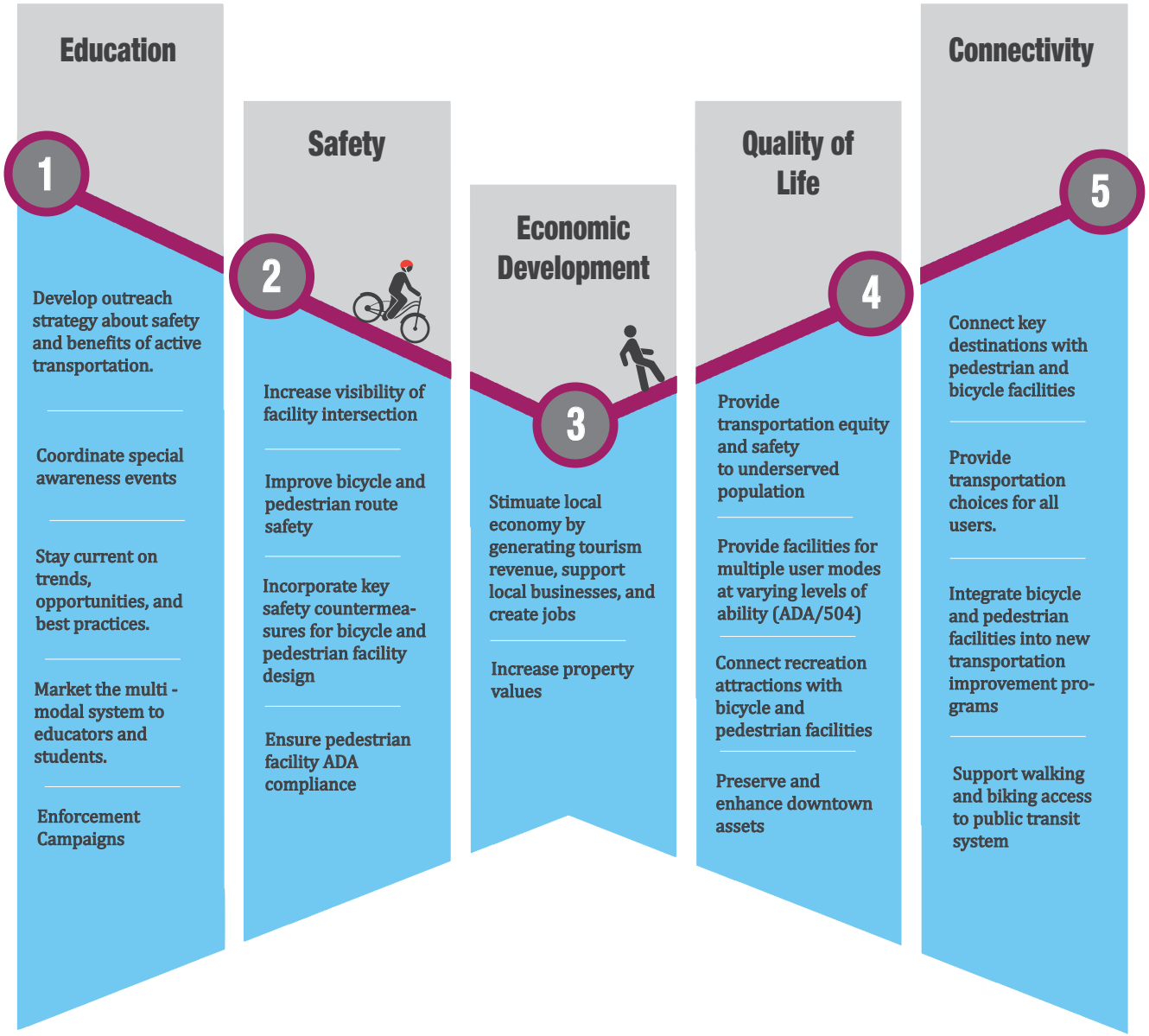
4.2 Goals & Strategies

Goals and strategies support and promote the vision statement in addition to providing a framework when developing recommendations, projects, and priorities (Chapter 5&6).

To initiate awareness, build partnerships, consider vulnerabilities of existing conditions, the plan proposes four key components for goal setting, outlined in Figure 4-1.

Figure 4-0: NBPP Vision Statement

Figure 4-1: NBPP Goals & Strategies



GOAL 1: Increase accessibility for all road users by providing a connected bicycle and pedestrian network.

A well-connected bicycle network where people have access to trails, sidewalks, bicycle lanes, and multi-use trails requires intentional planning and enables communities to leverage accrued benefits of focused investments.

The Revised LADOTD Complete Street Policy (April 2016) states that "the intent…is to create a comprehensive, integrated, connected transportation network that balances access, mobility and safety needs of motorists, transit users, bicyclists, and pedestrian of all ages and abilities". Filling the gap in the sidewalk and bicycle network will make it easier to walk or bike to neighborhood destinations and to make connections with the transit system.

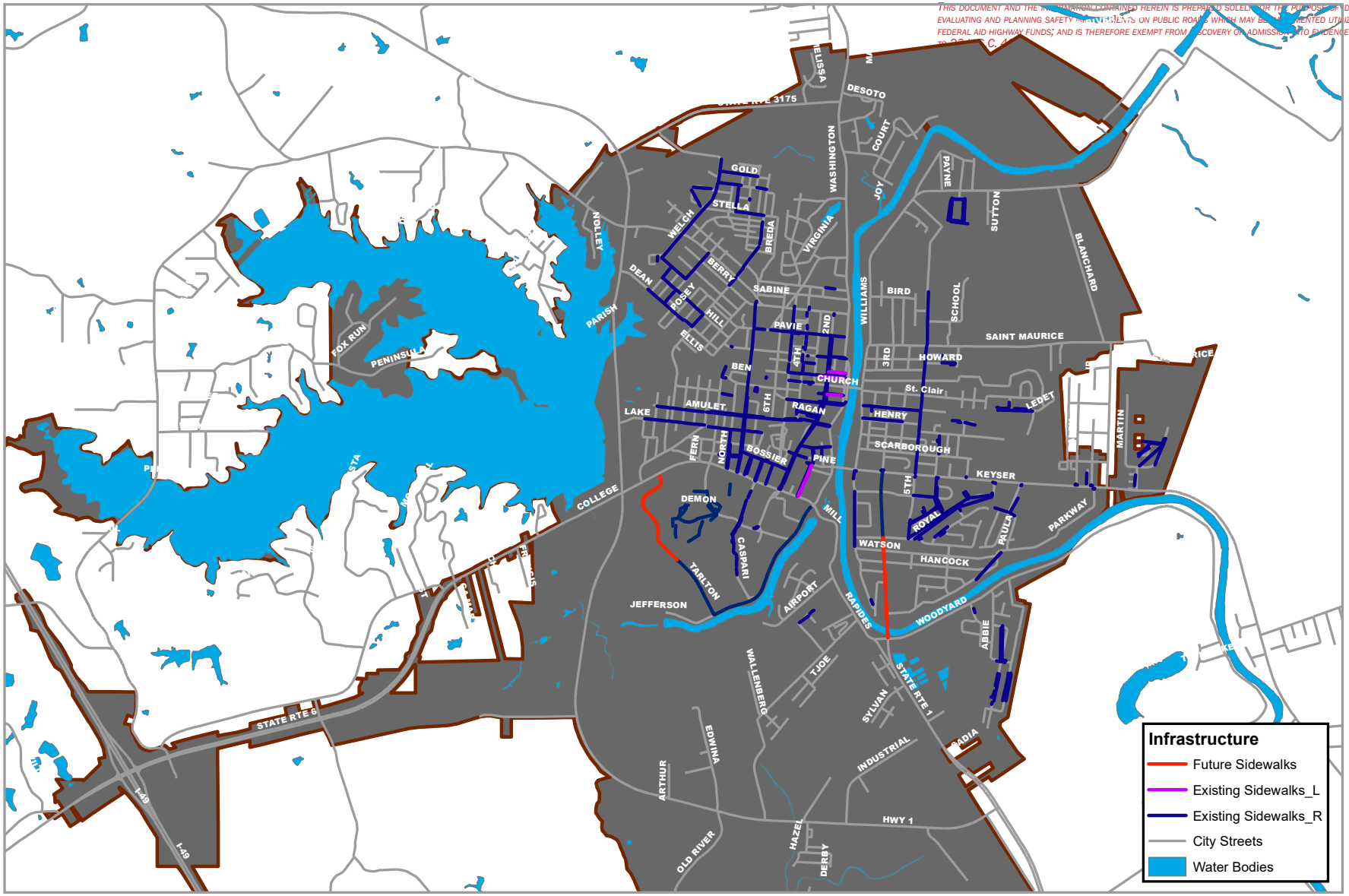
Furthermore, extending the bicycle and pedestrian network will alleviate traffic congestion for motorists, mitigate travel demand management, and reduce air pollution from auto vehicle emissions. When planning for future routes and projects (red lines in Map 4-1), it is essential to plan and design around fixing connectivity and accessibility issues.

In addition, the Plan proposes the following strategies and measures to fulfill this goal:

- *Strategy 1* - Develop a comprehensive GIS inventory for existing bicycle and pedestrian facilities; design and prioritize future improvements to connect with or fill the gap of existing conditions.
- *Strategy 2* - Connect neighborhoods, parks, shopping centers, schools, employment centers, levee trails, and local destinations with a greater number and broader range of pedestrian and bicycle facility choices for users of all abilities and comfort levels.
- *Strategy 3* - Promote public transit and connect public transit to biking and walking.
- *Strategy 4* - Consider bicycle and pedestrian facilities for new construction projects.
- *Strategy 5* - Maintain and improve existing trails, bike lanes, and sidewalk; encourage use of existing facilities.
- *Strategy 6* - Develop, adopt, and implement a Complete Streets Policy for the city.

Measures:

- Miles of bike lanes and sidewalk added
- Gaps of bicycle and pedestrian facilities connected
- Number of intersections improved for pedestrian crossing
- Number of projects implemented accommodating Complete Streets



Source: LADOTD Fugro Database, RAPC

Map 4-1
Connectivity

0 0.5 1 Miles

Note:
The map showcases existing & future improvements planned within the City of Natchitoches.

GOAL 2:Increase safety for bicyclists and pedestrians.

Safety is one of the highest concerns based on inputs from the BPSC and the survey respondents. To provide safe and convenient transportation choices to all people is one of the criteria for livable communities. 75% of fatal crashes in the City of Natchitoches involved bicycle or pedestrian or both from 2012 to 2018.

In 2012, FHWA issued an updated "Guidance Memorandum on Promoting the Implementation of Proven Safety Countermeasures", which listed nine proven safety countermeasures to be applied when considering safety improvements. Three of the nine countermeasures are directly related to pedestrian and bicyclists, which are: Medians and Pedestrian Crossing Islands in Urban and Suburban Areas, Pedestrian Hybrid Beacon and "Road Diet".

Additionally, the Pedestrian and Bicycle Safety Guide and Countermeasure Selection System listed respectively 67 and 46 engineering, education, and enforcement countermeasures for pedestrian and bicycle safety (Figure 4-2).

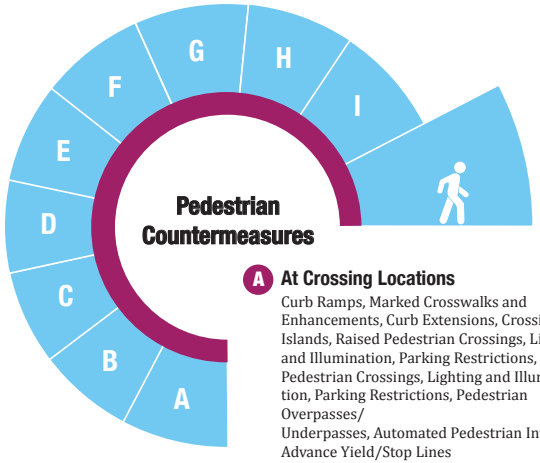
The Plan proposes the following strategies as recommendations to reach its safety goal:

- *Strategy 1* - Analyze crash reports and understand crash trends while engage public workshop, safety coalition, and law enforcement to identify safety problems before crashes occur.
- *Strategy 2* - Identify appropriate countermeasures and implement in problematic location.
- *Strategy 3* - Increase visibility for high crash intersections, roadways, and neighborhoods.
- *Strategy 4* - Collaborate with law enforcement agencies to enforce at school zone, right-of way preservation, speed monitoring, and education.

Measures:

- Reduce in bicycle and pedestrian fatalities and serious injuries
- Number of bicycle and pedestrian safety projects implemented
- Number of traffic safety education for all users and enforcement agencies

Figure 4-2: Bike & Pedestrian Safety Countermeasures



A At Crossing Locations
Curb Ramps, Marked Crosswalks and Enhancements, Curb Extensions, Crossing Islands, Raised Pedestrian Crossings, Lighting and Illumination, Parking Restrictions, Pedestrian Crossings, Lighting and Illumination, Parking Restrictions, Pedestrian Overpasses/
Underpasses, Automated Pedestrian Interval, Advance Yield/Stop Lines

B Intersection Design
Roundabouts, Modified T-Intersections, Intersection Median Barriers, Curb Radius Reduction, Modify Skewed Intersections, Pedestrian Accommodations at Complex Interchanges

C Signals & Signs
Traffic Signals, Pedestrian Signals, Pedestrian Signal Timing, Traffic Signal Enhancements, Right-Turn-on-Red Restrictions, Advanced Stop Lines at Traffic Signals, Left Turn Phasing, Push Buttons & Signal Timing, Pedestrian Hybrid Beacon (PHB), Rectangular Rapid Flash Beacon (RRFB), Puffin Crossing, Signing

D Roadway Design
Bicycle Lanes, Lane Narrowing, Lane Reduction (Road Diet), Driveway Improvements, Raised Medians, One-way/Two-way Conversions, Improved Right-Turn Slip-Lane Design

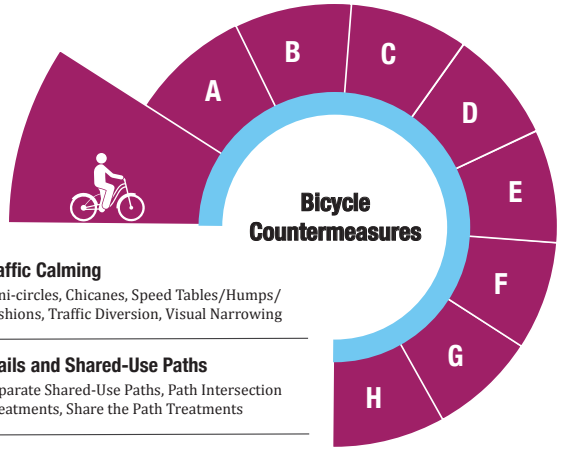
E Along the Roadway
Sidewalks, Walkways and Paved Shoulders, Street Furniture/Walking Environment

F Traffic Calming
Temporary Installations for Traffic Calming, Chokers, Chicanes, Mini-Circles, Speed Humps, Speed Tables, Gateways, Landscaping, Specific Paving Treatments, Serpentine Design

G Traffic Management
Diverters, Full Street Closure, Partial Street Closure, Left Turn Prohibitions

H Transit
Transit Stop Improvements, Access to Transit, Bus Bulb Outs

I Other Measures
School Zone Improvement, Neighborhood Identity, Speed-Monitoring, On-Street Parking Enhancements, Pedestrian/Driver Education, Police Enforcement, Automated Enforcement Systems, Pedestrian Streets/Malls, Pedestrian Detours at Work Zones, Pedestrian Safety at Railroad Crossings, Shared Streets, Streetcar Planning and Design



A Shared Roadway
Roadway Surface Improvements, Bridge and Overpass Access, Tunnel and Underpass Access, Lighting Improvements, Parking Treatments, Median/Crossing Island, Driveway Improvements, Lane Reductions (Road Diet), Lane Narrowing, Streetcar Track Improvements

B Markings, Signs, Signals
Optimizing Signal Timing for Bicyclists, Bike-activated Signal Detection, Sign Improvements for Bicyclists, Pavement Marking Improvements, School-zone Improvements, Rectangular Rapid Flashing Beacons (RRFB), Pedestrian Hybrid Beacon, Bicycle Signal Heads

C On-Road Bike Facilities
Bike Lanes, Wide Curb Lanes, Paved Shoulders, Shared Bus-Bike Lanes, Contraflow Bike Lanes, Separated Bike Lanes

D Intersection Treatments
Curb Radius Reduction, Roundabouts, Intersection Markings, Sight Distance Improvements, Turning Restrictions, Merge and Weave Area Redesign

E Maintenance
Repetitive/Short-term Maintenance, Major Maintenance, Hazard Identification Program

F Traffic Calming
Mini-circles, Chicanes, Speed Tables/Humps/ Cushions, Traffic Diversion, Visual Narrowing

G Trails and Shared-Use Paths
Separate Shared-Use Paths, Path Intersection Treatments, Share the Path Treatments

H Other Measures
Law Enforcement, Bicyclist/Motorist Education, Transit Access, Wayfinding, Landscaping/ Aesthetics

SOURCE: www.pedbikesafe.org, FHWA 2016

Goal 3: Invest in walking and bicycling paths to stimulate the local economy by generating tourism revenue, support local business, and create jobs in addition to increasing property values.

Bicycle and pedestrian improvements have potential to generate a high return on investment, attracting homebuyers, workers, and visitors who increase local revenue and support jobs and businesses year after year.

"The best way to attract people who ride bikes and accrue all of these benefits is by building infrastructure that makes it more attractive for people to ride. Building that infrastructure creates jobs, and it does so extremely cost-effectively."[1]

Tourism
Many tourists seek out places that they can experience outside of thier cars, where they feel comfortable walking and bicycling to explore a new area. Moreover, quality bicycling conditions played a major part in many tourists' choice of destination and duration of stay.

Economic Revitalization
Public projects that make walking safer and more appealing, such as improving sidewalks, reducing traffic speed, adding streetlights or street trees, and beautifying the streetscape, have had a quantifiable benefit on sales, occupancy, and business activity in many communities.[2]

1 *League of American Cyclists, 2009.*

2 *"Complete Streets Spark Economic Revitalization." Undated.*

Price Premium
Realtors sell not just houses, he said, they sell communities. Increasing transportation choice increases livability.[1]

Compact, walkable development projects, especially those with good transit access, have an established record of generating higher rents and sales prices for developers and investors because buyers are willing to pay a premium for them. [2]This premium translates into higher tax revenues for local governments.

The walkability premium exists for commercial real estate as well. An analysis of more than 4,200 properties found that walkability was associated with higher property values and higher net operating incomes for offices, retail spaces, and industrial properties.[3]

Homeowners are willing to pay an average of 11% more for homes as compared with similar houses in nearby neighborhoods in four new urbanist communities studied. They were willing to pay 13% more in Kentlands, Maryland; 25% more in Harbor Town, Tennessee; 4% more in Laguna West, California; and 9% more in Southern Village, North Carolina.[4]

1 *National Bike Summit,, 2009.*

2 *Investing in a New American Dream. 2007.*

3 *Real Estate Economics. 2011.*

4 *Urban Land Institute, 1999.*

Based on these recommendations, the Plan proposes the following strategies:

- *Strategy 1* - Promote walking and bicycling
- *Strategy 2* - Expand Main Street Program to include Complete Streets design elements
- *Strategy 3* - Build partnerships between LA-DOTD, Louisiana Economic Development, Convention and Visitors Bureau, Cane River Hertiage Area, National Park Service, Chamber of Commerce, City/Parish of Natchitoches, NSU, and private sector
- *Strategy 4* - Diversify the funding stream that supports investment in bicycle and pedestrian facility and program development
- *Strategy 5* - Leverage effective funding strategies for active transportation investment to meet long-term needs
- *Strategy 6* - Establish evaluation/benchmarking program

Measures:

- Return-on-investment measures: tourism, property values, job creation, small business development
- Percentage of active transportation project costs supported by local funding, public-private partnerships, and/or other cost recovery mechanisms
- New business start-ups due to walkability and bikeability of community

Goal 4: Raise awareness of the necessity and responsibilities for active transportation modes and promote the benefits of multi-modal transportation system.

Members of the BPSC have identified "awareness" as one of the biggest challenges for bicyclists and pedestrians in the area. Providing education, outr each, and training is a key strategy in increasing bicyclist and motorist awareness and improving interactions among various travel modes. Not only do bicyclists need safe places to ride, they need to know how to ride safely and responsibly with motorists. Motorists should be educated about how to share the road with bicyclists, which is especially important for motorists who are not bicyclists themselves. Beyond sharing information, the primary goal of an educational strategy is to motivate people to taking a second perspective and reduce the possibilities of reckless actions.

Several broad approaches can assist the Plan to achieve its goal in the education aspect, include:

- Highlighting bicycle accommodations when introducing new infrastructure;
- Conducting internal campaigns within the organization to build staff support for bicycle safety programs;
- Incorporating bicycle safety messages into public relations efforts;
- Developing relationships with relevant state agencies and statewide consumer groups; and;
- Marketing alternative travel modes.

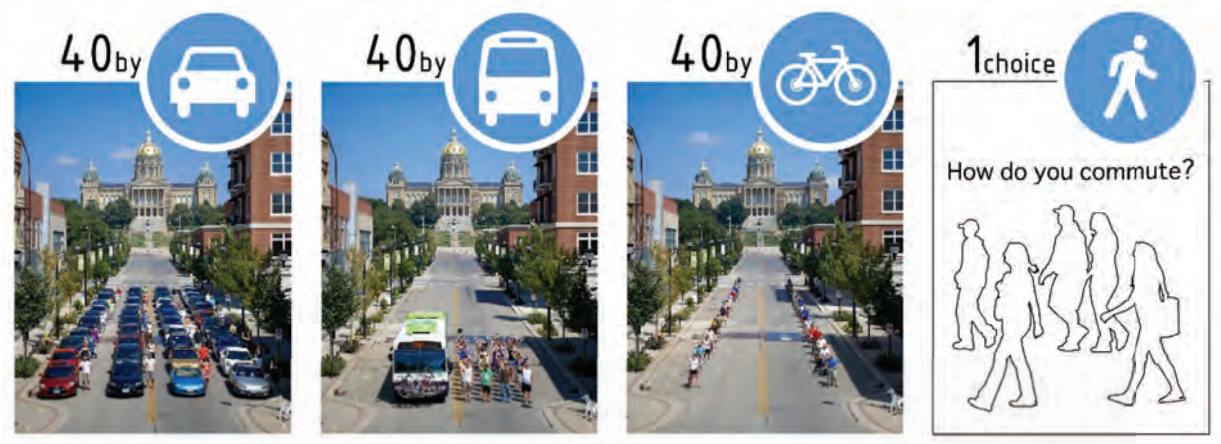
Based on these recommendations, the Plan proposes the following strategies:

- *Strategy 1* - Provide education, outreach, and training to increase pedestrian, bicyclists, and motorists' awareness in sharing roles and responsibilities on the road
- *Strategy 2* - Coordinate special events to raise awareness
- *Strategy 3* - Participate in national, statewide, and local media campaigns
- *Strategy 4* – Partnering with the Travel Demand Management and other transportation programs to initiate regional bicycle and pedestrian safety education programs to schools and major employers

Measures:

- Number of bicycle and pedestrian programs implemented
- Number of campaigns participated
- Number of campaigns initiated
- Number of public outreach programs completed

Figure 4-3: Space Required to Transport Passengers Using Multi-modal Transportation



SOURCE: Urban Ambassadors, Des Moines, Iowa, 2010

Goal 5: Improve the overall quality of life by connecting biking and walking to its health, environment, and economic benefits.

In his book about happiest places in the world, Dan Buettner concluded that one of the key factors for a happy life is health and cities that "build sidewalk, add bike lanes…increase the activity levels of residents" (Buettner, 2010). On the other hand, Atlanta's SMARTRAQ analysis states that travel patterns of residents in the region's least walkable neighborhoods generated about 20 percent higher CO2 emissions than those who live in the most walkable neighborhoods (EESI, 2016). While walking and biking are affordable means of transportation, studies have also showed active transportation increase property values, support local business, and spur economic development in communities.

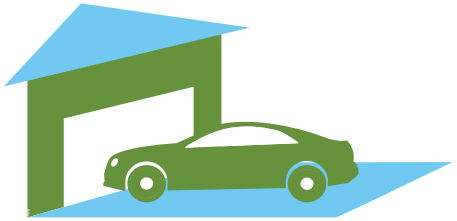
The following strategies are proposed by the Plan to coordinate bicycle and pedestrian resources and future improvements to forge a stronger economy, improve mobility options, community health and quality of life:

- *Strategy 1* - Prioritize projects that connects community destinations, recreation resources, schools and downtown local businesses.
- *Strategy 2* - Design bicycle and pedestrian facilities that enhances tourism and supports active transportation for college students.
- *Strategy 3* - Design bicycle and pedestrian facilities that fulfills regional economic goals, support mixed use development and small businesses.
- *Strategy 4* - Provide facilities to disadvantaged neighborhoods and users with varied level of abilities.
- *Strategy 5* – Collaborate with community activists, property owner and Natchitoches Levee and Drainage District to connect a levee trail system along the river.

Measures:

- Increase in commuting mode share for biking and walking
- Increase in bicyclists and pedestrian counts

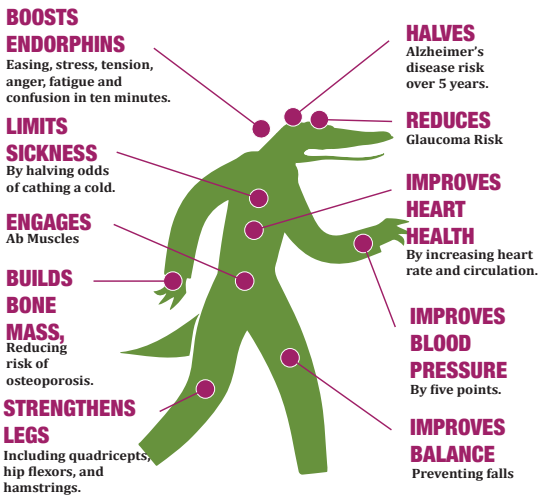
Figure 4-5: Average Vehicle Ownership & Maintenance Cost Vehicle

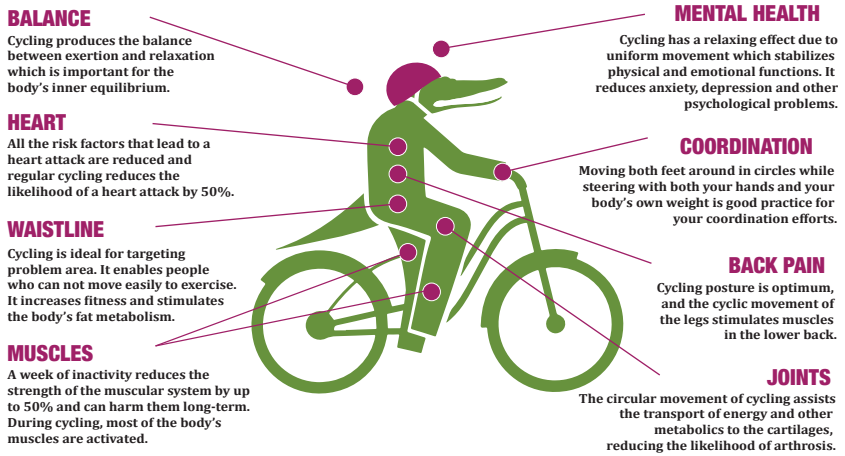


The average American household spends $9,049 per year owning and driving their cars.

SOURCE: Bureau of Transportation Statistics, 2017

Figure 4-4: Health Benefits of Bicycling & Walking





SOURCE: Cycling and Health: What's the Evidence? Cycling England, 2007; www.everybodywalk.org, 2016

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Chapter 5

Recommendations for Improvements

Chapter 5: Recommendation for Improvements

This chapter presents an overview of general design standards for bicycle and pedestrian facilities based on national and state guidance. Next, challenges in the pedestrian and bicycle network are identified and grouped into intersection and roadway issues. Recommendations are provided to address common issues such as complex intersection, lighting, and excessive auto-orientation. This chapter concludes with a set of recommendations for bicyclists and pedestrian improvements and policies.

5.1 Elements & Design Guidelines

The American Association of State Highway and Transportation Officials (AASHTO) published the Guide for the development of Bicycle Facilities, 4th Edition in 2012, known as the Green Book for bicycle transportation systems. The National Association of City Transportation Officials (NACTO) developed the Urban Bikeway Guide for design guidelines and real-world cases from around the world. The size and use of signs and markings are specified in the Manual of Uniform Traffic Control Devices (MUTCD). Such standardizations eliminate confusions from inter-judicial and even international travels.

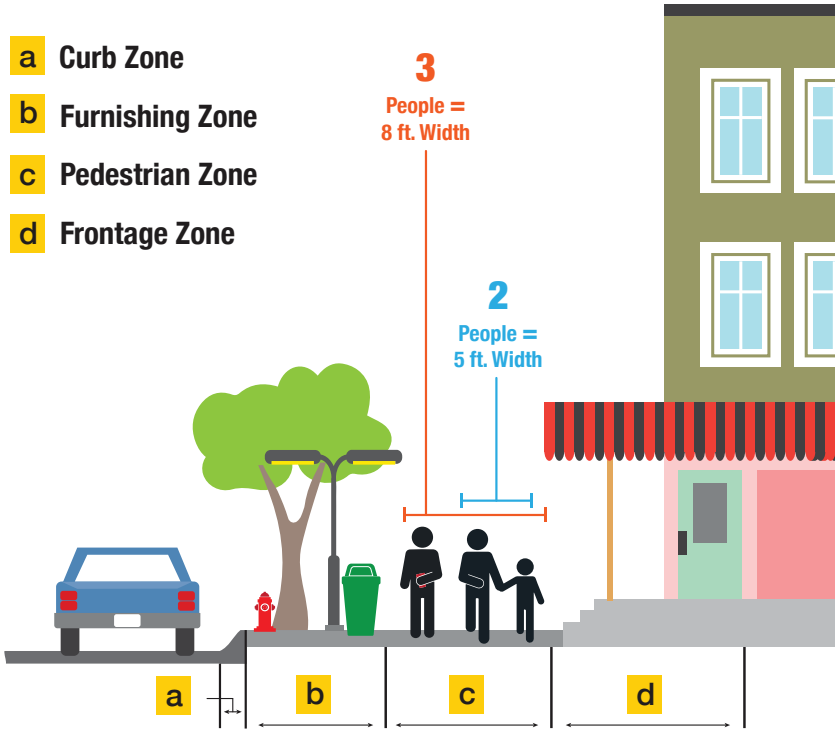
Table 5-1 lists AASHTO minimum standards for bicycle facilities. Table 5-2 summarizes prevalent bicycle and pedestrian types, descriptions, and their salient features. Table 5-3 summaries AASHTO minimum standards for pedestrian systems. AASHTO recommends landscape buffers between sidewalks and streets. The minimum recommended width for local road or collectors is 2 to 4 feet whereas 5 to 6 feet for arterial or major streets.

Table 5-1: Summary of AASHTO Minimum Standards for Bicycle Facilities

Bike Lanes	• 4 feet clear width from the lip of the gutter • 5 feet clear width between travel lane and parking lane
Shared Lanes	14 feet minimum outside lane
Signs	Should provide timely information to motorists and bicyclists where and when bicyclists may be present - should not impede clear path for bicyclists
Parking	Bicyclists should be able to secure the frame, front, and back tires

SOURCE: AASHTO, 2012

Figure 5-1: Sidewalk Zones



SOURCE: Philadelphia Bicycle and Pedestrian Plan, 2012

Table 5-2: Bicycle & Pedestrian Facilities

FACILITY TYPE	DESCRIPTION	SILENT FEATURES (min./max. dimensions)	SAMPLE PICTURES
Paved Shoulder	Paved shoulders provide separated space for the operation of bicycles. However, paved shoulders are not considered travel lanes, and therefore may be used for temporary storage of disabled vehicles and vehicle parking, unless prohibited.	Shoulder widths are typically a function of the amount of bicycle usage, motor vehicle speeds, topography, percentage of truck and bus traffic, etc., although widths are sometimes purely a function of available right-of-way.	
Bike Lane	Designated by a white stripe, a bicycle symbol, and signage that alerts all road users that a portion of the roadway is for exclusive use by bicyclists.	• Min 4 feet, preferable 5 feet • Conventional bike lanes and buffered bike lanes are usually placed by the right side	
Bike Routes/ Marked Shared Lanes	All roadways, except where prohibited by law, are shared by bicycles and motor vehicles. A shared-lane pavement marking can also be used to provide a higher level of guidance to bicyclists and motorists.	• Signs that say SHARE THE ROAD or BICYCLES MAY USE FULL LANE help alert motorists that they may encounter bicyclists and encourage them to be respectful. • A lane width of 14 - 15 feet for vehicles to pass bicyclists without switching lanes. • Low traffic volume, neighborhood roads are safer and comfortable than major roadways for bicyclists.	
Bike Trail/ Shared-Use Paths/Side-paths	Shared-use paths provide off-road connections that can be used for recreation and commuting.	These paths are often found along waterways, abandoned or active railroad and utility rights-of-way, limited access highways, or within parks and open space areas.	
Sidewalk/ Walkways	Sidewalks and walkways are "pedestrian lanes" that provide people with space to travel within the public right-of-way that is separated from roadway vehicles.	Minimum width of 5 feet for a sidewalk or walkway, which allows two people to pass comfortably or to walk side-by-side. Preferred 6 feet - FHWA	

SOURCE: Pedestrian and Bicycle Information Center; FHWA Bicycle and Pedestrian Program Guidance

PHOTO SOURCE: Rural California, cycling made more pleasant with bike lanes or cycle able paved shoulders. Half Moon Bay CA. ©Photograph by H-JEH Becker, 2012/ 40th Street/MacArthur BART Bicycle Access Project, City of Oakland http://www2.oaklandnet.com/government/o/PWA/o/EC/s/BicycleandPedestrianProgram/OAK043755/ http://www.streetsblog.org/2006/11/13/birth-of-a-class-iii-bike-route/http://www.chron.com/news/houston-texas/article/Grant-money-to-string-beads-of-city-s-bike-paths-3656812.php/ http://www3.alexandriava.gov/freedmens/photos/neighborhood/TypicalOldTownSidewalkPaving.JPG

Table 5-3: AASHTO Minimum Standards for Pedestrian Facilities

SIDEWALK	
Effective Width	4 feet, 5 feet periodically for passing
Shy Distance	2 feet from buildings, less for less massive objects
Buffer Width	2-4 feet from local or collector road
Grade	• 5-6 feet from arterial or major street • Cross slopes should not exceed 2%
Stairs	Minimum width of 42” with handrail on one side that extends 12” beyond top and bottom stair
Ramps	Minimum 4 feet clear path ending in at least 2 feet of tactile warning
GRADE-SEPARATED CROSSING	
Bridges	• Open bridge for pedestrian only - 8 feet minimum width • Open bridge for pedestrian & bicyclists - 14 feet minimum • Enclosed bridge - 14 feet minimum
TUNNELS	
	• Rural - 12 feet minimum • Urban < 60 feet long - 14 feet minimum width, 8 feet minimum height • Urban > 60 feet long - 16 feet minimum width, 10 feet minimum height
PEDESTRIAN-FRIENDLY SIGNALS	
	Moving to “countdown” signals
SIGNS	
	Should provide timely information to motorists and pedestrians where and when pedestrians may be present – should not impede clear path for pedestrians
LIGHTING & OTHER AMENITIES	
	All elements should be scaled for pedestrians and not impede the clear path

SOURCE: AASHTO, 2012

5.2 Recommendations

The recommendations listed in this chapter are based on current best practices, keen observations, and knowledge from the local advisory committee to address several common issues along roadways and at intersections for bicycle and pedestrian facilities. Special emphasis is placed on safety as the primary challenge; however, the overall goal is to provide a safe, convenient, and comfortable transportation system for all users..

Pedestrian Network

In May 2008, FHWA published the “Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes” containing estimates of the crash reduction that might be expected if a specific countermeasure or group of countermeasures is implemented with respect to pedestrian crashes. Crash reduction estimates are presented as Crash Reduction Factors (CRFs) and can be positive or negative.

The CRFs for pedestrian crashes are presented in three groups: signalization countermeasures; geometric countermeasures; signs / markings / operations countermeasures. CRFs are presented in Table 5-4.

Table 5-4: Crash Reduction Factor for Pedestrian Countermeasures

- (*) Blank cells mean that no information reported in the source document.
- (**) Only applies to "walking along the roadway" crashes.
- (***) Only applies to night-time crashes.

	Countermeasures	Crash Severity	Left-Turn Crashes	Pedestrian Crashes
Signalization Countermeasures	Add exclusive pedestrian phasing	All	*	34[4]
	Improve signal timing	Fatal/Injury		37[8]
	Replace existing WALK / DON'T WALK signals with pedestrian countdown signal heads	All		25[5]
	Modify signal phasing (implement a leading pedestrian interval)	All		5[4]
	Remove unwarranted signals (one-way street)	All		17[7]
	Convert permissive or permissive/protected to protected only left-turn phasing	All	99[10]	
	Convert permissive to permissive/protected left-turn phasing	All	16[10]	
Geometric Countermeasures	Convert unsignalized intersection to roundabout	Fatal/Injury		27(12)[2]
	Install pedestrian overpass/underpass	Fatal/Injury		90[3]
		All	86[3]	
	Install pedestrian overpass/underpass (unsignalized intersection)	All		13[4]
	Install raised median	All		25[3]
	Install raised median (marked crosswalk) at unsignalized intersection	All		46[9]
	Install raised median (unmarked crosswalk) at unsignalized intersection	All		39[9]
	Install raised pedestrian crossing	Fatal/Injury	36(54)[1]	
		All	30(67)[1]	
	Install refuge islands	Fatal/Injury	36(54)[1]	Install refuge islands
	Install sidewalk (to avoid walking along roadway)	All		88[6]**
	Provide paved shoulder (of at least 4 feet)	All		71[3]**
	Narrow roadway cross section from four lanes to three lanes (two through lanes with center turn lane)	All	29[10]	
Signs/Markings/ Operational Countermeasures	Add Intersection Lighting	Injury	27[10]***	
		All	27[10]***	
	Add segment lighting Injury	Injury	23[10]***	
		All	20[10]***	
	Improve pavement friction (skid treatment with overlay)	Fatal/Injury		23[11]
	Increase enforcement	All		23[11]
	Prohibit right-turn-on-red	All	3[10]	
	Prohibit Left-turns	All		10[3]

SOURCE: See Pedestrian Countermeasure CRF Reference Appendix XX

Through crash data analysis, field studies and recommendations from the BPSC, the Plan identified the following general recommendations to improve the overall level of comfort and safety for pedestrian road users:

Along the Road:

- ***Insufficient Sidewalk Capacity –*** some roads lack sidewalk altogether while others have gaps. In area with high levels of pedestrian use, there may not be wide enough sidewalk to accommodate all users (e.g. wheelchair). Pedestrians are forced to walk on the street, posing risks to themselves and to traffic flow. Recommendation in such area is to resolving sidewalk gaps, especially near schools, transit, public parks, and other public places.

- ***Maintenance –*** some sidewalks are blocked by vegetation erosion or badly maintained, making it difficult for pedestrian, especially wheelchair users to pass. Maintenance recommendation include keeping minimum clear width standards. There are examples of cities who have successfully implemented the "Point-Of-Sale" program to require sidewalk repairs before sale (Shoup, 2010), which has proven effective to ensure sidewalk maintenance in communities[2].

- ***Exposure to High Speed/Volume Vehicular Traffic -*** Pedestrians walking along streets with excessive auto-orientation usually feel unsafe, especially if the sidewalks are not buffered from traffic by a landscaped strip or parked cars. The heavier the traffic volume and the higher the speed of adjacent traffic, the less comfortable pedestrians will feel. Recommendations in areas with high vehicular traffic are widening sidewalks; installing buffers; using traffic calming treatment; access management; installing speed cameras and speed feedback signs (especially in school zones).

Intersection:

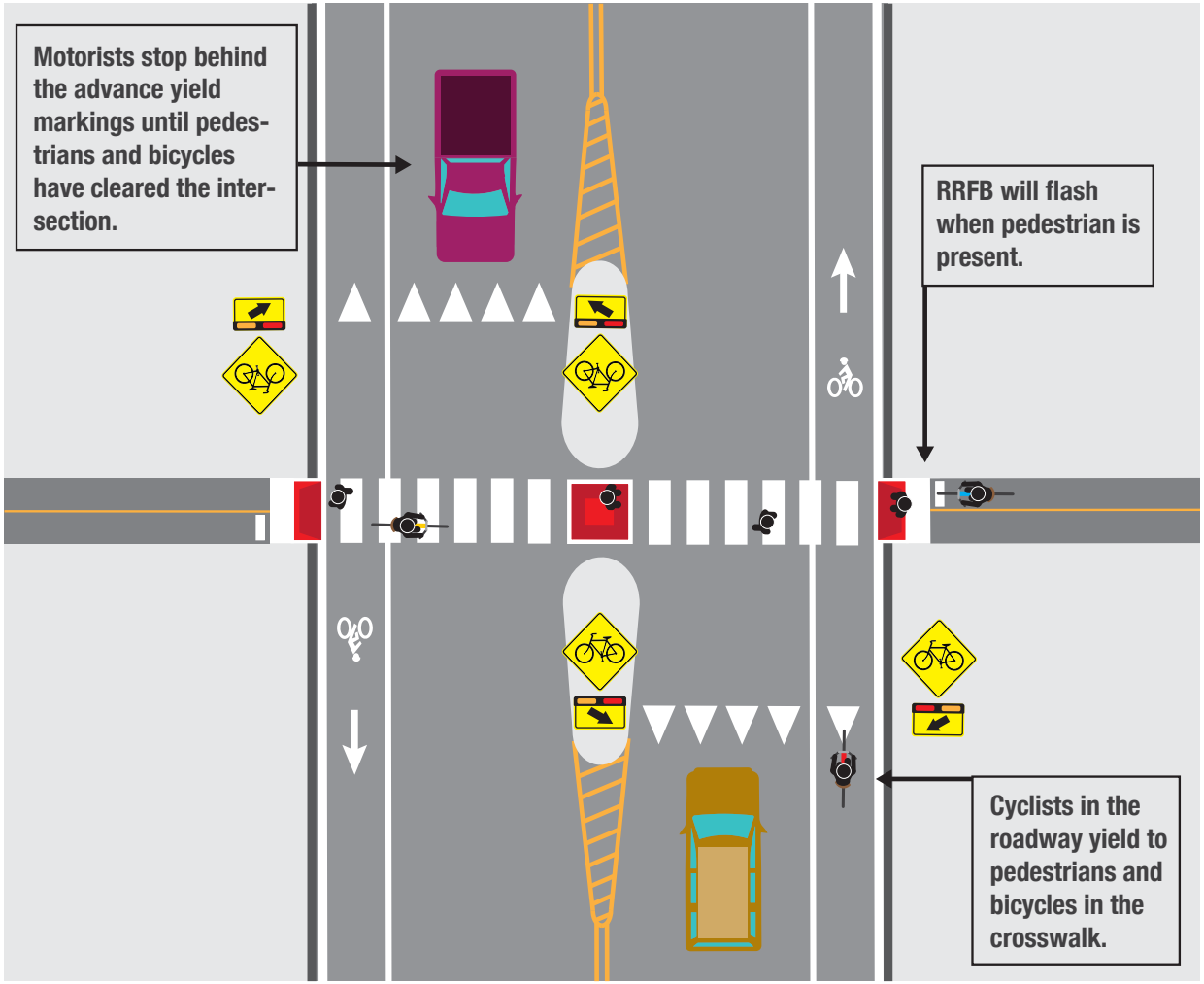
- ***Auto-Orientation –*** From the perspective of a pedestrian crossing, excessively auto-oriented streets typically have a speed limit of 35 mph or higher, four or more travel lanes and over 10,000 traffic count per day Pedestrians have the legal right-of-way while walking across all driveways unless traffic signals control available. However, motorists are unlikely to yield to pedestrians crossing wide driveways that allow vehicles to turn into them at speeds over 10-15 mph. Modifications include curb extensions, clear pedestrian crossings, planted buffers, ADA ramps, and pedestrian countdown signals.

- ***Lighting –*** In City of Natchitoches, 53% (47 out of 88) of the pedestrian related and 55% (17 out of 31) bicycle related crashes from 2012 to 2018 happened from 6PM to 6 AM; 61.5% of all pedestrian related fatal crashes occurred during this time. Examining areas where crashes are highly concentrated, it is a common trend that crashes involving pedestrians are more likely to occur in poor lighting areas. Even though consistent lighting is provided along the arterial roads; however, lighting on the service roads needs improvements, especially when pedestrians are more likely to utilize service roads. Furthermore, lighting is extremely essential to commercial areas. Proper street lighting illuminates pedestrian crosswalks and reduces glare to motorists. It can enhance commercial districts and improve nighttime security. The Plan recommends that pedestrian walkways and crosswalks to be well-lit and to install lighting on both sides of streets in commercial and peripheral residential areas.

[2]*Point of Sale Program - A city can require that the escrow documents at sale include a certificate of compliance with the sidewalk ordinance. The process starts when an owner requests the city to inspect a sidewalk. If the sidewalk is in good repair, the inspector issues a compliance certificate. If the sidewalk is damaged, the inspector estimates what the city would charge to repair it. The owner has several options: Pay the city to repair the sidewalk; Accept a lien on the property for the estimated cost of the repair; the owner chooses to have a private contractor).*

- ***Inadequate or Missing Crossing Facilities*** – Several high pedestrian crash locations, as identified in Chapter 3, can be improved by adding pedestrian space, crossing islands, and alert systems. Newer treatments, such as the Rapid Rectangular Flashing Beacons (RRFB, Figure 5-2), can be installed independently of an intersection signalization system to provide additional protection for pedestrians. They are especially effective in shopping areas, school zones, near bus stops, and other facilities. Signage with high visibility can work as an alert to motorists as well. Multi-lane roadways present challenges to both pedestrians and motorists. The BPP recommends including access management in future review and approval process.

Figure 5-2: Rapid Rectangle Flashing Beacon



SOURCE: RAPC, 2019

Table 5-6: Challenges and Recommended Pedestrian Improvements

ISSUE	RECOMMENDATION
Along the Road	
Insufficient Sidewalk Capacity and Maintenance	• Fill sidewalk gaps, especially near neighborhood destinations such as school, transit stops and parks. • Prevent parking on the sidewalk by adding bike racks or bollards. • Implement public-private partnership between city/parish with property owner or developer through redevelopment process to ensure sidewalk availability and maintenance. • Maintain minimum clear width standards through encroachment redevelopment process.
Exposure to High Speed/ Volume Vehicular Traffic	• Widen sidewalks • Install buffers between sidewalk and travel lane • Use traffic calming devices in areas with high pedestrian volume • Include access management in the long run for plan review and requirement • Install speed cameras and speed feedback signs
Pedestrian Crossing	
Auto-Orientation	• Create mid-block crossing with appropriate warning for motorists • Narrow travel lanes at intersections and reduce turning radii, where possible • Install pedestrian refuge in median • Stripe high-visibility crosswalks and alerting signs • Install enforcement cameras • Install warning signs reminding pedestrian right of way
Inadequate or missing crossing facilities/Lighting	• Add pedestrian signals where missing, if possible • Upgrade devices where such pedestrian crossing signals were outdated • Install pedestrian refuge in median and install second pedestrian signals • Install curb extensions to decrease crossing distance • Add stop signs where appropriate • Install the Rectangular Rapid Flashing Beacons at desired locations • Increase lighting conditions for pedestrians, especially in commercial area and peripheral residential areas
Complex Intersections/Wide or diagonal intersections	• Install medians and provide pedestrian refuge • If more than two phase signal, allow pedestrian to cross on all phases • Add warning signs and signals to alert motorists for pedestrian crossing • Stripe high-visibility crosswalks

Table 5-6 is a summary of common challenges related to pedestrian improvements and recommendations.

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Table 5-7: Bicycle & Pedestrian Facility Cost Estimates

		2013				2019			
Infrastructure Facility	Cost Unit	Median	Average	Minimun	Maximum	Median	Average	Minimun	Maximum
Bicycle Locker	Each	$2,140	$2,090	$1,280	$2,680	$2,353	$2,298	$1,407	$2,947
Bicycle Lane 5'	Mile	$89,470	$133,170	$5,360	$536,680	**$98,372**	$146,420	$5,893	$590,080
Bollard	Each	$650	$730	$62	$4,130	$715	$803	$68	$4,541
Signed Bicycle Route with Improvements	Mile	$241,230	$239,440	$42,890	$536,070	**$265,232**	$263,264	$47,158	$589,409
Bicycle Rack	Each	$540	$660	$64	$3,610	$594	$726	$70	$3,969
Concrete Sidewalk	Linear Foot	$27	$32	$2.09	$410	**$30**	$35	$2	$451
Curb and Gutter	Linear Foot	$20	$21	$1.05	$120	$22	$23	$1	$132
Curb Extension/ Choker/ Bulb-Out	Each	$10,150	$13,000	$1,070	$41,170	$11,160	$14,294	$1,176	$45,266
Crossing Island	Each	$10,460	$13,520	$2,140	$41,170	$11,501	$14,865	$2,353	$45,266
Crossing Island	Sq. Foot	$10	$10	$2	$26	$11	$11	$3	$29
Flashing Beacon	Each	$5,170	$10,010	$360	$59,100	$5,684	$11,006	$396	$64,980
High Visibility Crosswalk	Each	$3,070	$2,540	$600	$5,710	$3,375	$2,793	$660	$6,278
Multi-Use Trail - Paved	Mile	$261,000	$481,140	$64,710	$4,288,520	**$286,970**	$529,013	$71,149	$4,715,228
Multi-Use Trail - Unpaved	Mile	$83,870	$121,390	$29,520	$412,720	$92,215	$133,468	$32,457	$453,786
Pedestrian Crossing	Each	$310	$360	$240	$1,240	$341	$396	$264	$1,363
Pedestrian Hybrid Beacon	Each	$51,460	$57,680	$21,440	$128,660	$56,580	$63,419	$23,573	$141,462
Pedestrian Rail	Linear Foot	$95	$100	$7.20	$690	$104	$110	$8	$759
Pedestrian Signal	Each	$980	$1,480	$130	$10,000	$1,078	$1,627	$143	$10,995
Raised Crosswalk	Each	$7,110	$8,170	$1,290	$30,880	$7,817	$8,983	$1,418	$33,953
Rapid Rectangular Flashing Beacon	Each	$14,160	$22,250	$4,520	$52,310	**$15,569**	$24,464	$4,970	$57,515
Shared Lane/BicycleMarking	Each	$160	$180	$22	$600	**$176**	$198	$24	$660
Signed Bicycle Route	Mile	$27,240	$25,070	$5,360	$64,330	$29,950	$27,564	$5,893	$70,731
Speed Bump	Each	$1,670	$1,550	$540	$2,300	$1,836	$1,704	$594	$2,529
Speed Hump	Each	$2,130	$2,640	$690	$6,860	$2,342	$2,903	$759	$7,543
Speed Table	Each	$2,090	$2,400	$2,000	$4,180	$2,298	$2,639	$2,199	$4,596
Speed Trailer	Each	$9,480	$9,510	$7,000	$12,410	$10,423	$10,456	$7,697	$13,645
Stop/Yield Signs	Each	$220	$300	$210	$560	$242	$330	$231	$616
Streetlight	Each	$3,600	$4,880	$310	$13,900	$3,958	$5,366	$341	$15,283
In-pavement Lighting	Total	$18,250	$17,620	$6,480	$40,000	$20,066	$19,373	$7,125	$43,980
Street Trees	Each	$460	$430	$54	$940	$506	$473	$59	$1,034
Striped Crosswalk	Each	$340	$770	$110	$2,090	$374	$847	$121	$2,298
Wheelchair Ramp	Each	$740	$810	$89	$3,600	$814	$891	$98	$3,958

SOURCE: http://www.pedbikeinfo.org/cms/downloads/Countermeasure_Costs_Summary_Oct2013.pdf. Adjusted Using Current Inflation Rates, 2013-2019.

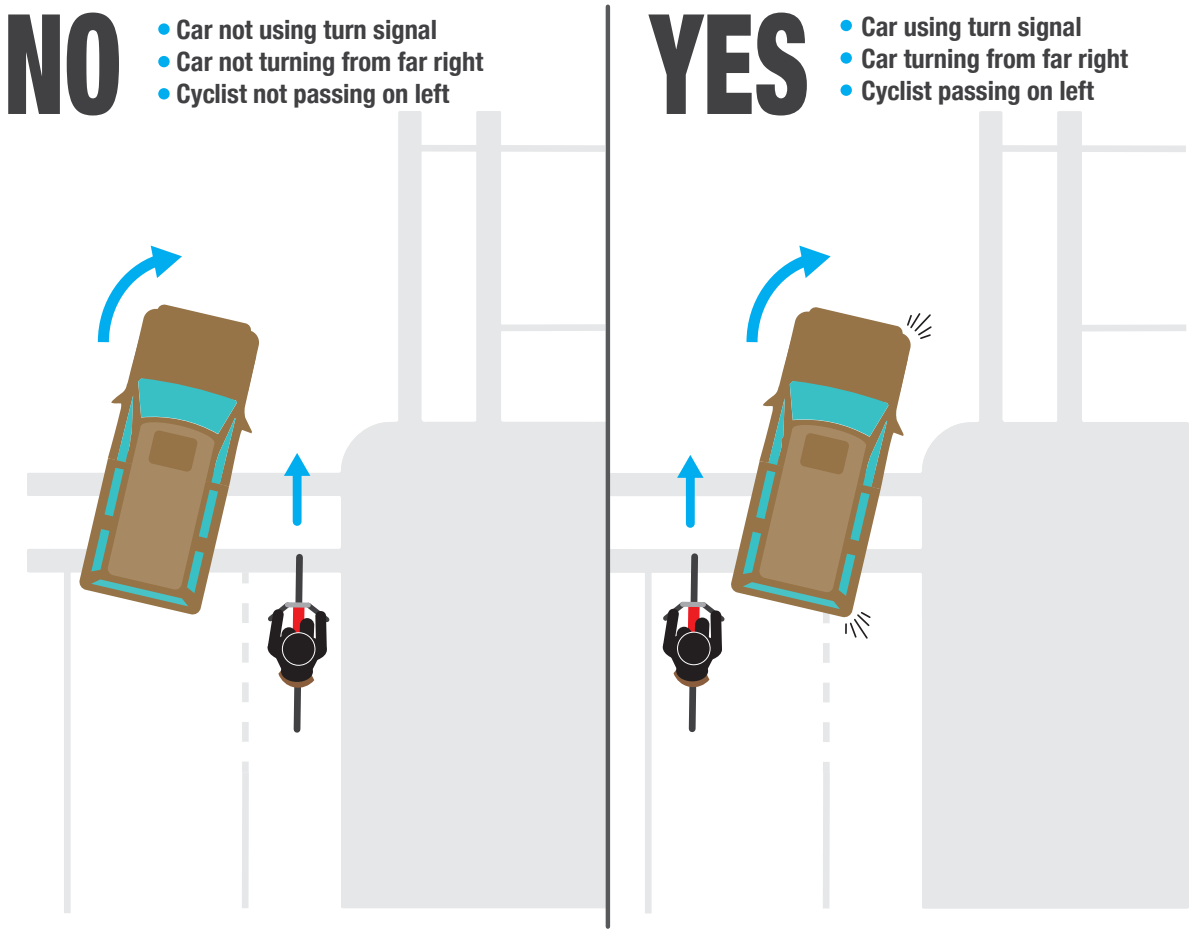
Bicycle Network

Through the planning process, the BPP has identified some key issues to be addressed when planning and implementing bicycle facilities. The issues focus on the overall level of comfort, safety, accessibility, and ease of use for bicycle infrastructure to be implemented and should be considered into all planning and designing efforts. These issues include:

- Intersection Improvements
- Conflicts with On-street Parking
- Riding on Sidewalk
- Bicycle and Transit
- Bicycle Specific Signage

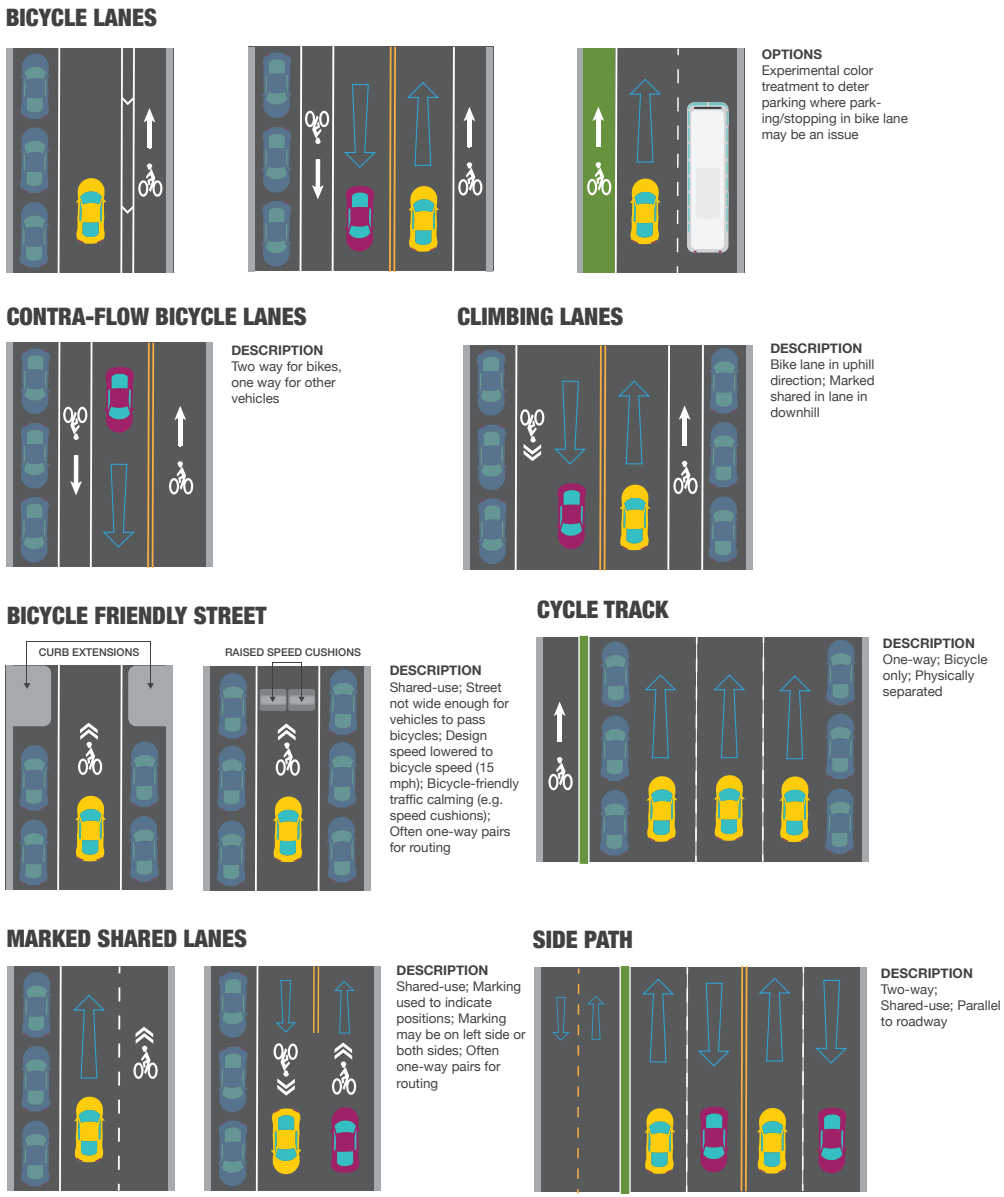
Intersection improvements – The majority of bicycle related crashes occurred in Natchitoches Parish from 2012 to 2018 were intersection crashes (42%, or 50 out of 119, Map 5-1). Good intersection design makes biking more attractive and reduces the number crashes and severity of injury. A clear and obvious path for bicyclists should be provided at intersections. If there are turning conflicts or longer time for crossings, extend the bicycle markings. Removal of parking spaces may be required to provide visibility for bike lanes. In addition to bike lanes, consider dedicated turning lanes to reduce conflicts between through bicyclists and turning motor vehicles (Figure 5-4). Another consideration could be to add bicycle signals at locations with high conflicts. Such signals should coordinate with pedestrian movements to increase safety and minimize delay; however, conflicts between bicyclist and pedestrians should also be minimized.

Figure 5-4: Right Turn Conflict Reduction



SOURCE: http://blog.esurance.com/bike-lanes-what-are-the-rules-exactly/

Figure 5-5: Bike Facility Types



SOURCE: Philadelphia Bicycle and Pedestrian Plan, 2012

Conflicts with On-street Parking – Bicyclists experience problems with motorists' double parking in bike lanes or shared lanes. Parking in curb-side bike lanes and open doors pose danger to bicyclists. To combat this conflict, it requires a multi-disciplinary approach through education, enforcement, and engineering. Motorists need to be educated on laws and regulations about parking in bike lanes and/or on streets while bicyclists should be educated to wear proper safety harness equipment to alleviate the risk of serious injuries and even fatalities. Left-side bike lanes leave bicyclists with fewer threats to open motor vehicle doors. Bicycle safety campaigns, for instance, NHTSA's Bicycle Safety Month, Louisiana's "Be a 'Roll' Model" or local bicycle events/campaigns are great opportunities to raise awareness. Enforcement plays a key role in reducing improper parking in bike lanes while well-defined bike lanes by contrasting colors or cycle tracks helps motorists, especially those who are unfamiliar with the area, identify travel lanes and parking area.

Riding on Sidewalks – The City of Natchitoches Code of Ordinances specifically states, "no person fifteen (15) years, or more, shall ride a bicycle upon any sidewalk in any district" (City of Natchitoches, Ord. No. 448, § XXIV, 4-8-42). Biking on sidewalk poses potential risks to both pedestrians and bicyclists. Although bicyclists may perceive it "safer to bike on sidewalk", due to potential increase of conflicts at driveways, riding on sidewalks could be more dangerous. Even though sidewalk may appear as safer and faster route to many bicyclists when both traffic volume and speed are high, it is regulation and safety concerns make riding on sidewalks illegal and risky. Well-marked bikeways tend to reduce the temptation to bike on sidewalks; while targeted enforcement should also be considered. Upon planning and designing projects linking destinations routes, bike lanes, or appropriate facilities should be considered as potential increase in biking activities.

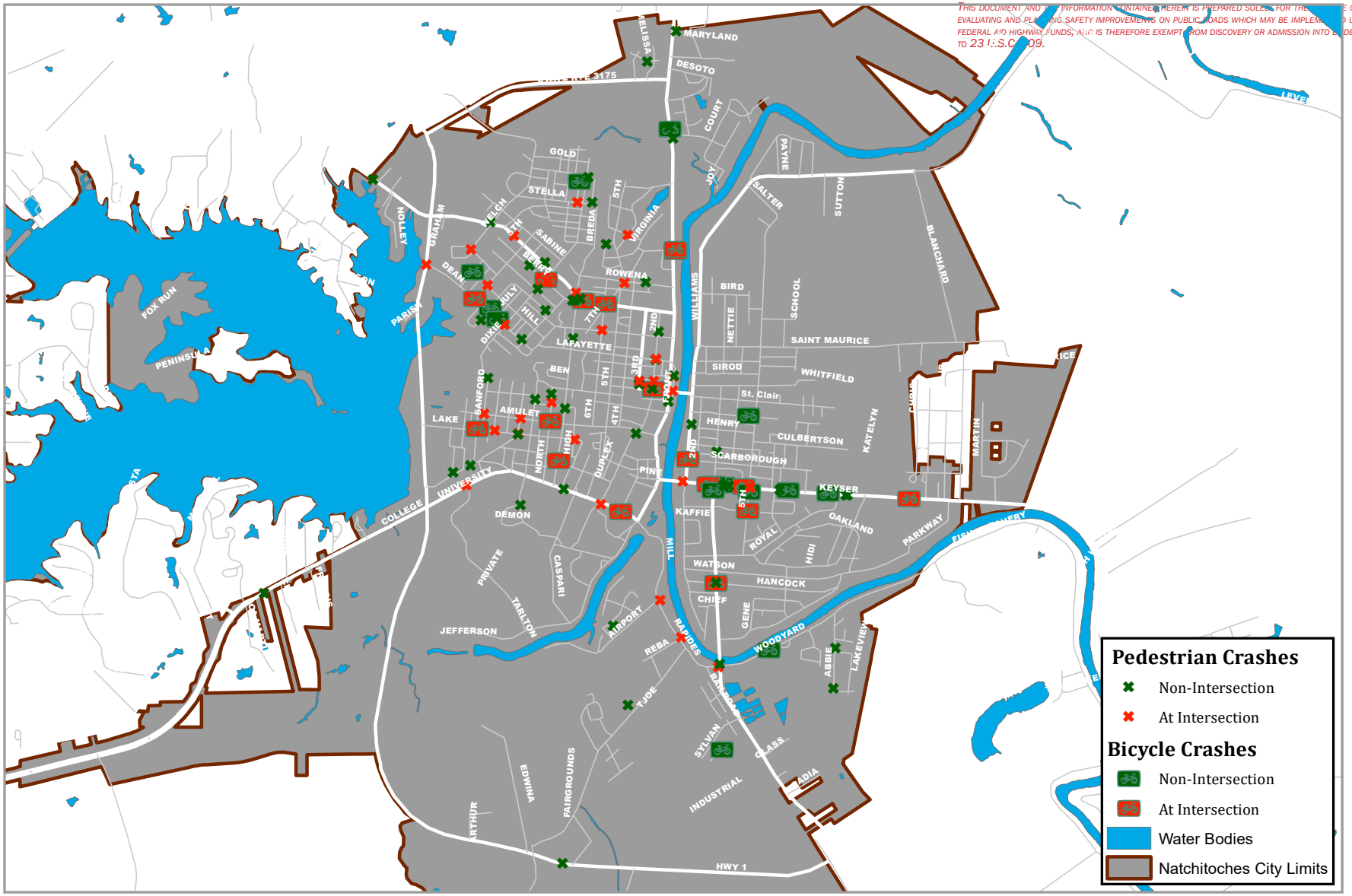
Bicycle Signage –Properly placed signs alert users to change of condition, address safety issues and assist in wayfinding. Lines, symbols, and arrows are identifier for bike lanes. Signs such as "Share the Road" or "May Use Full Lane" may also carry educational influence. When installing signs, it is vital to maintain MUTCD standard.

Map 5-1
Pedestrian & Bicycle Crashes @ Intersections

Source: LADOTD Crash 3 Database

Note:
The map showcases both pedestrian (33/88) & bicycle (17/31) crashes at intersections from 2012 - 2018 within City of Natchitoches.

Disclaimer:
"This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409."



Source: LADOTD Crash 3 Database

Map 5-2
Pedestrian & Bicycle Crashes

0 0.25 0.5 Miles

Note:
The map showcases both pedestrian (33/88) & bicycle (17/31) crashes at intersections from 2012 - 2018 within City of Natchitoches.

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Chapter 6

Implementation, Prioritization & Funding Sources

Chapter 6: Implementation, Prioritization, & Funding Sources

Chapter 6 focuses on the implementation of the Plan (NBPP), featuring a project list with estimated cost, prioritization, and a comprehensive list of funding sources as of September 2019. Projects were identified using a combination of GIS analysis, community, stakeholder, and Steering Committee input to address major goals outlined in Chapter 4: safety, connectivity, economic development, education, and quality of life. Recommendation for treatments are based on countermeasures discussed in the prior chapter to promote a safe, comfortable, efficient and connected alternative transportation network. The project list and recommendations assist decision makers to prioritize improvements, however, it is not intended to supersede engineering judgment or new information that may be revealed at the time of project development.

6.1 Implementation

General Approaches for Implementation for bicycle and pedestrian project:

- Coordinate pedestrian and bicycle recommendations to avoid potential conflicts and take advantage of opportunities for dual improvements;
- Act on opportunities to make pedestrian and bicycle network improvements, whether as part of corridor projects (such as resurfacing, restriping, or streetscape projects), as part of development/redevelopment projects, or through specific spot improvements;
- Design bicycle and pedestrian facilities that enchance tourism and improve student quality of life; and
- Pursue additional funding to program the design and construction of pedestrian and bicycle improvements on a regular basis.

LADOTD adopted the Complete Street Policy in 2009, which suggested transportation agencies responsible for projects that involve federal or state funding to follow the same provision:

- Plan, fund, and design sidewalks and other pedestrian facilities on all new and reconstruction roadway projects that serve adjacent areas with existing or reasonably foreseeable future development or transit services.
- Provide Bicycle accommodations appropriate to the context of the roadway – in urban and suburban areas – on all new and reconstruction roadway projects. The preferred facility is bike lane, however, depending on the context, paved shoulder with sufficient width, shared used trail, or marked shared use lanes may be adequate.
- Exception for not accommodating bicyclists, pedestrians, and transit users will require the approval of the LADOTD Chief Engineer[1].

The Complete Street Policy Final Report also provided a list of actions and tools to "advance Complete Street in Louisiana", including administrative, legislative strategies and through coordinating and collaborating with local agencies.

[1] http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Highway_Safety/Complete_Streets/Misc%20Documents/Complete%20Streets%20Final%20Report%2007292010.pdf

6.2 Prioritization

As in many places, pedestrian and bicycle improvements are often not accomplished as stand-alone projects, but rather as part of a larger roadway and streetscape improvement project. For this reason, it is difficult to develop precise phasing strategies for recommendations listed in the Plan. However, RAPC has consistently consulted key stakeholders, for instance, Steering Committee, LADOTD and City of Natchitoches to develop the following implementation strategies and prioritization. The Bolton Avenue Streetscape project in the City of Alexandria proved that it is effective to consider alternatives for bicycle and pedestrian activities at planning and design stage.

Sidewalk Prioritization Model

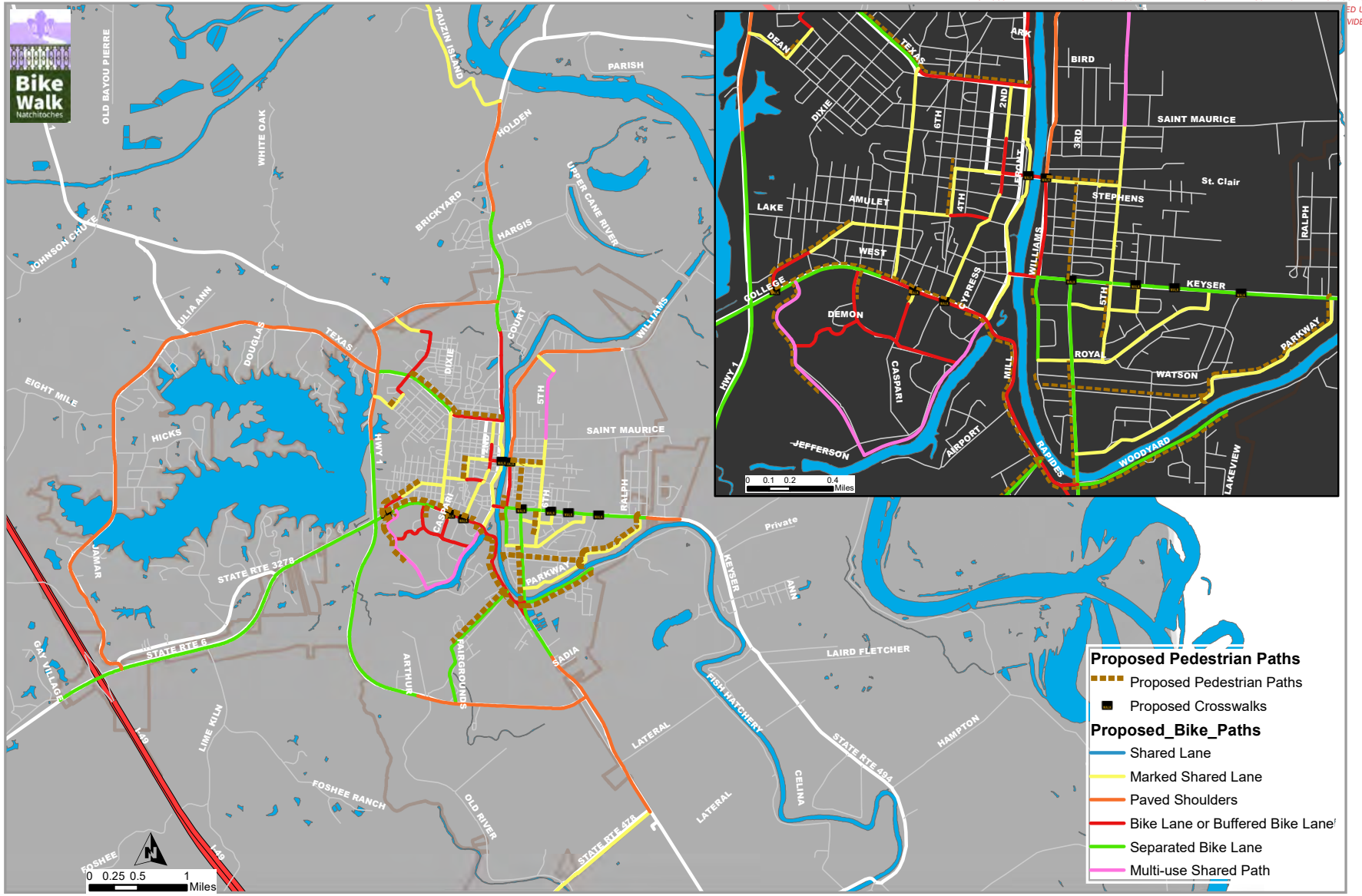
Similar to the Bicycle and Pedestrian Suitability Index Model in Chapter 3, a sidewalk prioritization model is a recommended approach to quantify prioritization for each project. The first step of the Sidewalk Prioritization Model is the Inventory System, which requires a complete database for sidewalk geometric and geographic information, such as location, condition, length, width, etc.

Few cities have detailed data on sidewalks; however, LADOTD Fugro data was used to collect road feature data for asset inventory, which can be used to develop a GIS based public roadway inventory. Data pertaining bicycling and walking facilities to be collected and delivered by this project including:

- Number of travel lanes
- Start and end location of sidewalk on both sides of road
- Street Signs
- Striping

The second step is to develop a scoring system using pedestrian trip generators as part of the input, as well as current sidewalk characteristics to identify priorities for future projects.

Figure 6-1: Existing Pedestrian Facilities



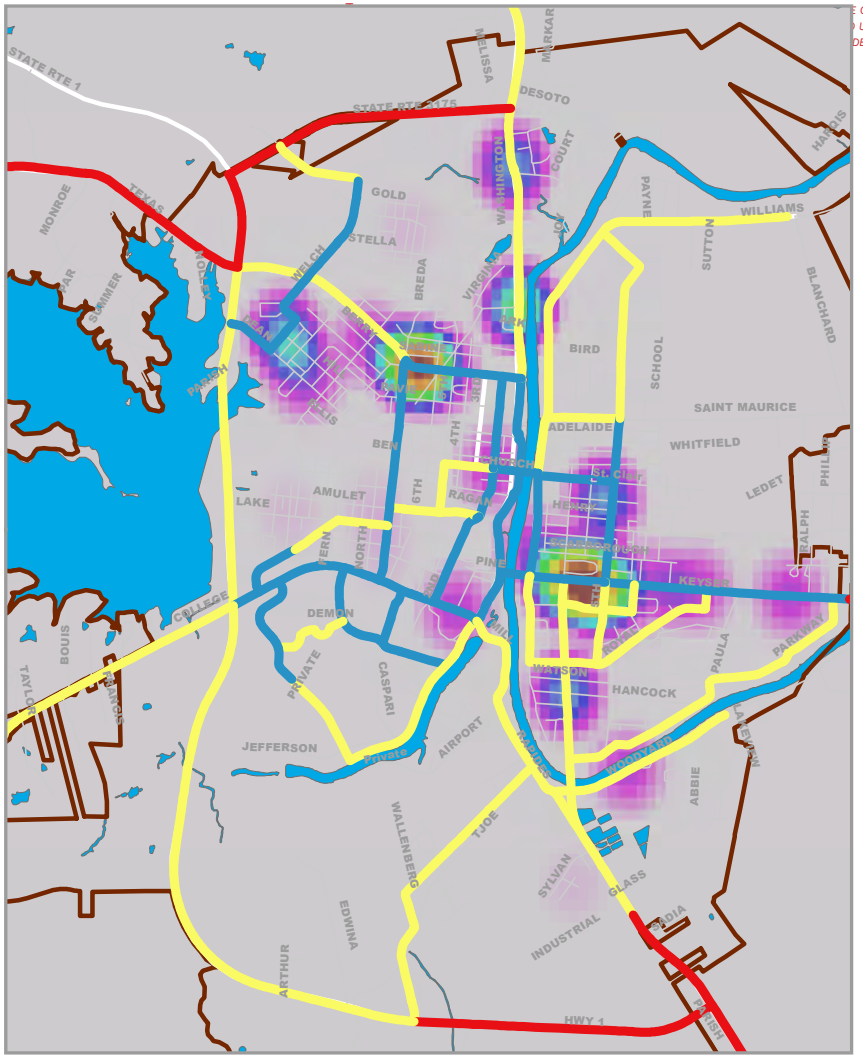
Source: EPA Smart Database, US Census Bureau, RAPC, LADOTD Fugro /GIS database

Map 6-1
Proposed Bicycle & Pedestrian Network

BM_Water_Bodies
Natchitoches City Limits
Natchitoches_Parish_Boundary

RAPC

Note:
The map showcases the proposed pedestrian and bicycle network recommendations.
The inlet focuses on the City Core.



Map 6-2
Project Priority with Crash Density Analysis

Note:
The two maps showcase hotspot analysis of pedestrian (left) & bicycle (right) crashes from 2012 - 2018 within City of Natchitoches along with proposed recommendations.

Bicycle Network Prioritization

Recommended prioritization for bikeways in the Plan is based on assessments and analysis of current conditions (Chapter 3), recommended improvements and costs (Chapter 5), related plan recommendations (Louisiana LRBMS) and public participation (Steering Committee and City of Natchitoches Bike and Pedestrian User survey). While providing the highest level of bicyclists comfort might be the most desirable, for instance, bike lanes as recommended by the LADOTD Complete Street policy, it is often not feasible considering right of way issues, current width and traffic, which poses demand for parking or loading. Ideally, increase in the number of bicyclists and changes in travel/commuting patterns may make bicycle design options more feasible.

To provide on-street bike facilities on existing streets may be achieved by the following recommendations:

- Reduce the number of travel lanes, also known as Road Diet;
- Narrow the width of travel and parking lanes;
- Remove or consolidate on-street parking;
- Re-striping and reconfiguration of existing traffic regulations; and
- Design existing shoulders or excess roadway space for bicycle use.

Figure 6-2: Typical Road Diet Basic Design

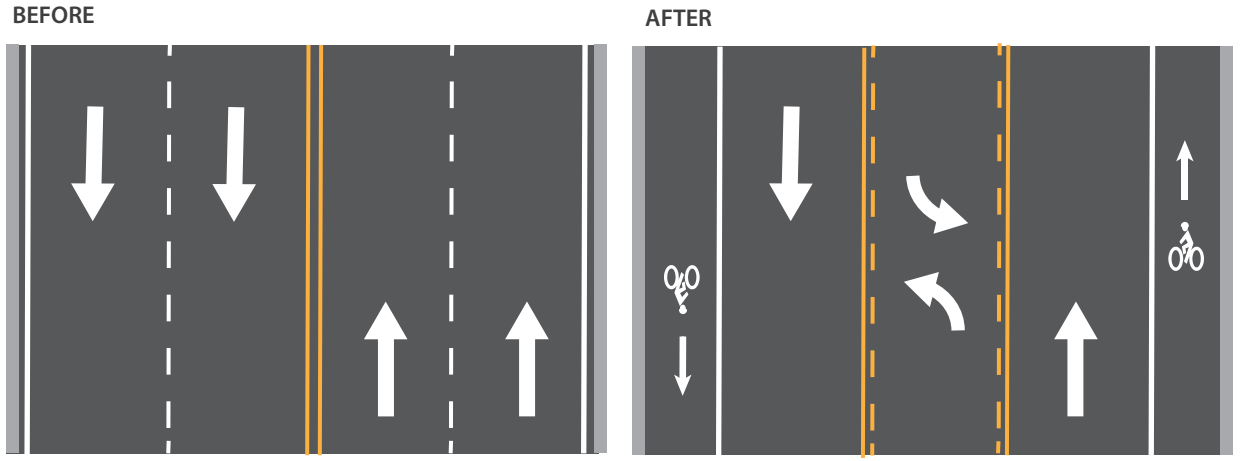


Figure 6-3: Mid-block Conflict Points for Four-Lane Undivided Roadway & Three-Lane Cross Section

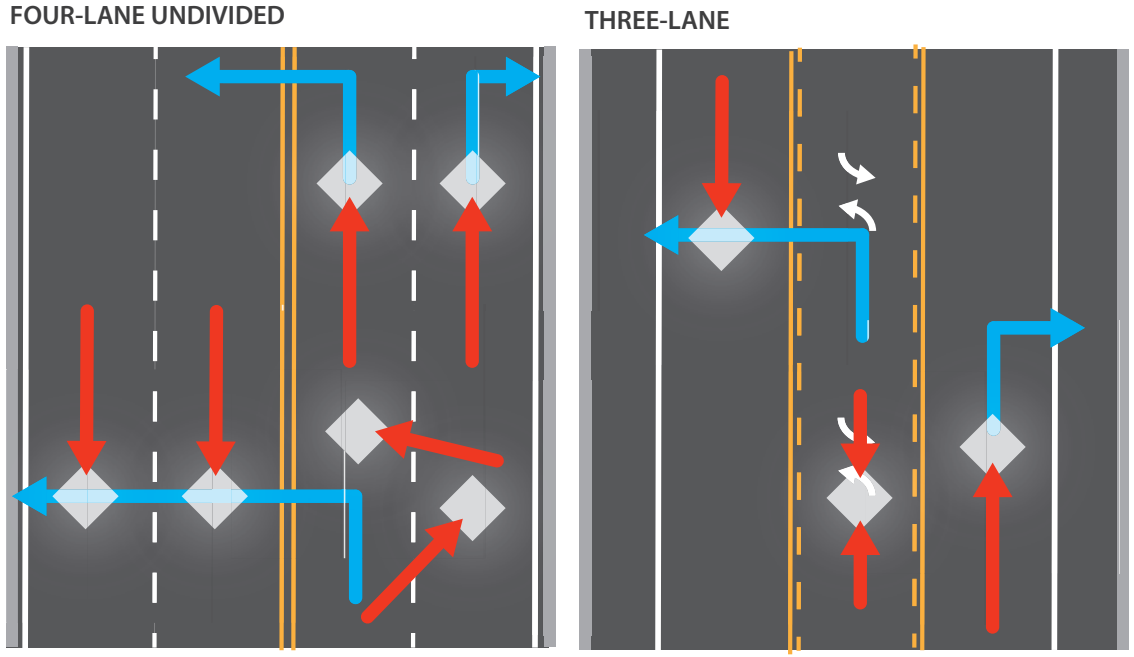
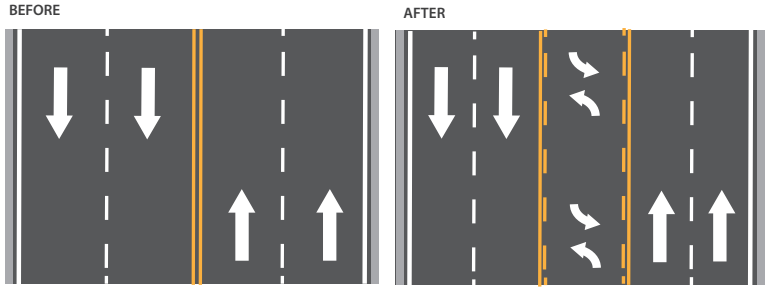
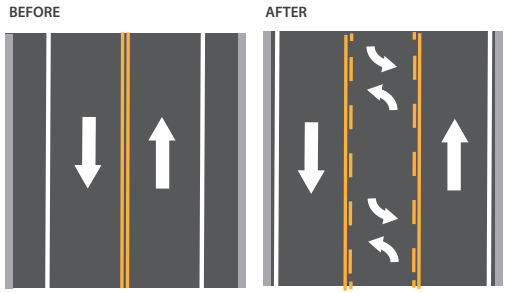


Figure 6-4: Other Roadway Reconfigurations

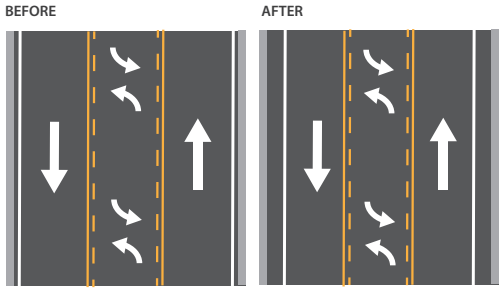
4-lane to 5-lane:
In some cases it is necessary to keep two lanes in each direction for capacity purposes. Narrowing lane width to provide a TWLTL introduces the benefits of separating turning vehicles and reducing operating speeds.



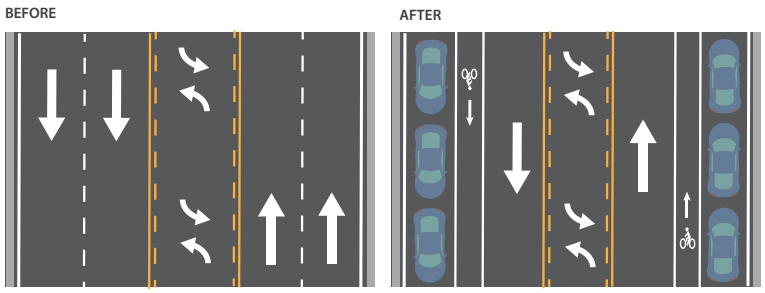
2-lane to 3-lane:
If a capacity expansion of an existing two-lane road is desired, in some cases a three-lane cross section can provide similar operational benefits to a four-lane cross section while maintaining the safety benefits of the three-lane configuration.



3-lane to 3-lane:
In some cases practitioners could reduce the width of each lane instead of reducing the number of lanes. Converting an existing three-lane roadway to a three-lane cross section with narrowed lanes can accommodate bicycle lanes or parking, and provide some traffic calming benefit.



5-lane to 3-lane:
In some cases ijurisdictions have reconfigured five-lane sections to three lanes, adding features such as diagonal parking and protected bicycle lanes with the extra cross section width.



In addition, as suggested by public survey in Chapter 3, signs and symbols such as “Share the Road” or “May Use Full Lane” are encouraged to be placed along roadways more frequently visited by bicyclists. Such signs not only alert motorists but also carry an educational message to inform the public about rules, regulations, and right-of-way for vulnerable road users. It is important to follow MUTCD rules when placing signs.

Map 6-1 shows proposed bicycle network and recommendations in the Plan’s study area, followed by two maps indicating the level of priority for each project in comparison to crash density and the BPSI result. Table 6-3 estimated costs for projects identified by the Plan based on recommended costs listed in Chapter 5.

Figure 6-5: BPP Road Signs & Signals

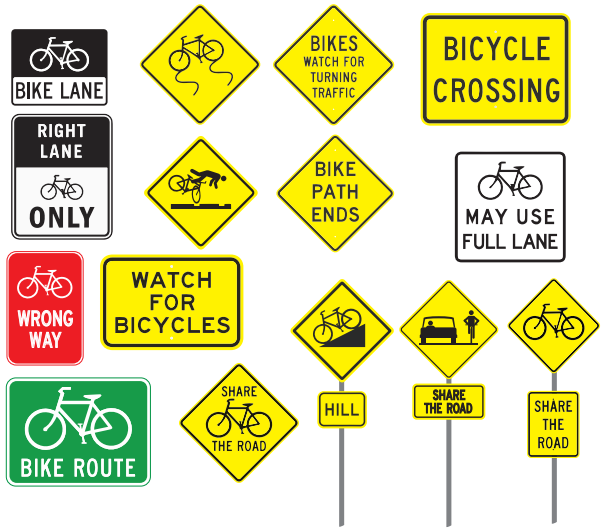
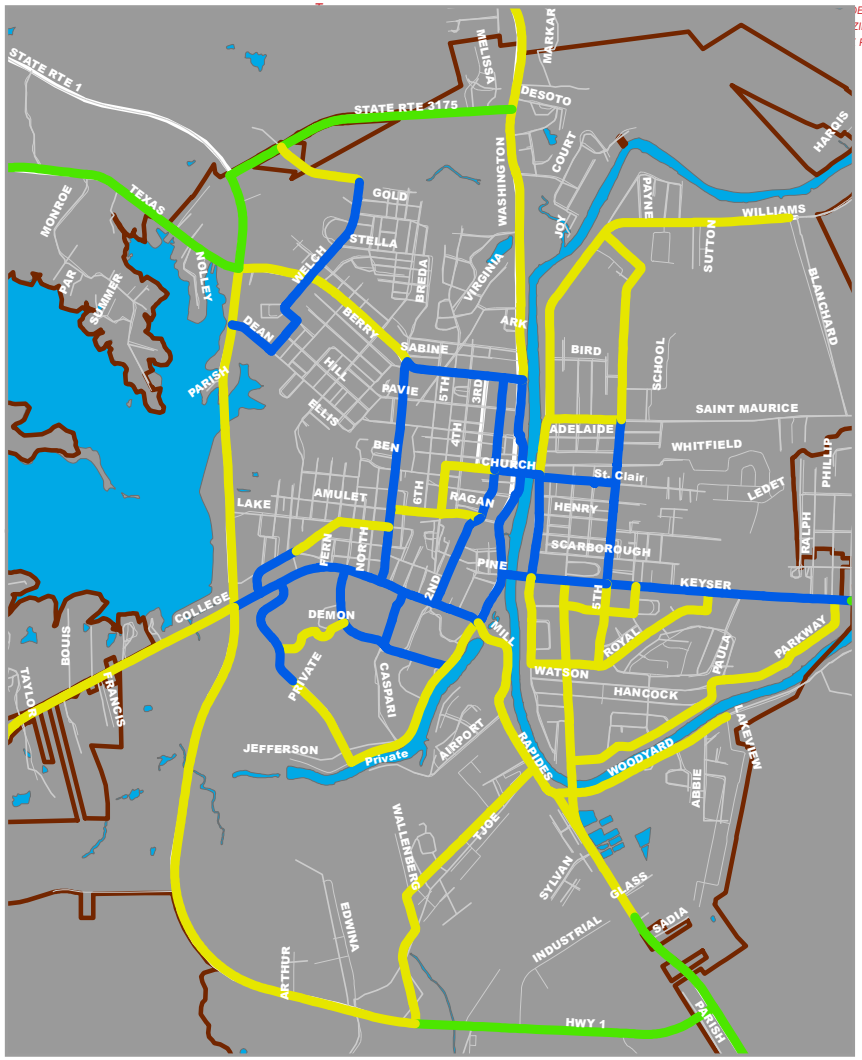


Table 6-3: Bicycle & Pedestrian Project Prioritization & Project Cost Estimates

			Local			State		
		Type of Recommendation	# of Projects	Length (miles)	Total Cost	# of Projects	Length (miles)	Total Cost
Bike Projects	Type of Projects	Bike Lane or Buffered Bike Lane	16	6.987	$687,325.16	9	2.942	$289,410.43	7	4.045	$397,914.74
		Marked Shared Lane	20	17.238	$127,354.34	14	9.612	$71,013.46	6	7.626	$56,340.89
		Multi-use Shared Path	3	2.632	$755,305.05	3	2.632	$755,305.05	0	0	$0.00
		Paved Shoulders	6	16.059	$2,328,555.01	0	0	$0.00	6	16.059	$2,328,555.01
		Separated Bike Lane	10	15.517	$4,115,604.96	3	2.607	$691,459.83	7	12.91	$3,424,145.13
		Total	**55**	**58.433**	**$8,014,144.52**	**29**	**17.793**	**$1,807,188.76**	**26**	**40.64**	**$6,206,955.76**
	Phasing	Short Term (0 - 5 years)	22	11.418	$1,162,256.66	13	5.762	$403,776.65	8	5.656	$758,480.02
		Mid Term (5- 10 years)	24	25.733	$4,734,845.33	15	10.032	$1,388,643.50	10	15.701	$3,346,201.83
		Long Term (10 -20 years)	9	21.282	$2,117,042.53	1	1.999	$14,768.61	8	19.283	$2,102,273.91
		Total	**55**	**58.433**	**$8,014,144.52**	**29**	**17.793**	**$1,807,188.76**	**26**	**40.64**	**$6,206,955.76**

			Local			State		
		Type of Recommendation	# of Projects	Length (miles)	Total Cost	# of Projects	Length (miles)	Total Cost	# of Projects	Length (miles)	Total Cost
Pedestrian Projects	Type of Projects	Sidewalk	21	10.116	$1,602,374.38	13	6.028	$954,835.19	8	4.088	$647,539.19
		Raised Crosswalk @ per unit cost of $7,817	1		$7,817.00				1		$7,817.00
		RRHB @ per unit cost of $15,569	2		$31,138.00				2		$31,138.00
		Pedestrian Crossing @ per unit cost of $10,000	6		$60,000.00				6		$60,000.00
		Total	**30**	**10.116**	**$1,701,329.38**	**Total**	**6.028**	**$954,835.19**	**17**		$746,494.19
	Phasing	Short Term (0 - 5 years)	21	4.429	$800,508.59	5	0.924	$146,361.60	16	3.505	$654,146.99
		Mid Term (5- 10 years)	7	4.053	$641,995.19	6	3.47	$549,647.99	1	0.583	$92,347.20
		Long Term (10 -20 years)	2	1.634	$258,825.60	2	1.634	$258,825.60			
		Total	**30**	**10**	**$1,701,329.38**	**13**	**6.028**	**$954,835.19**	**17**	**4.088**	**$746,494.19**



PEDESTRIAN

Bike/Ped. Suitability Index

- (Not Suitable)
- (Some Potential)
- (Suitable)
- (Potenital)
- (High Potential)

Proposed Bicycle Paths

- High Prioirty
- Medium Prioirty
- Low Priority

BICYCLE

- Natchitoches City Limits
- Water Bodies

0 0.25 0.5 1 Miles

Map 6-3
Project Priority with Bike/Ped. Suitability Index

Note:
The two maps showcase bicycle/pedestrian suitability index (left) and prioritization of proposed recommendations.

23 USC 409 Disclaimer

Disclaimer:
"This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409."

Table 6-4: Bicycle & Pedestrian Project Prioritization & Project Cost - HIGH

Priority Level	Project Location	Description	Recommendation	Length (mile)	Cost Multiplier	Final Cost	Bike/Ped
High	University Parkway	Old Robeline Road to Cypress Street	Sidewalk	0.974	$158,400	$154,281.60	Pedestrian
High	Cypress Street	Parking Lot to University Parkway	Sidewalk	0.06	$158,400	$9,504.00	Pedestrian
High	Rapides Drive / Mill Street	Fairgrounds Road to Cypress Street	Sidewalk	0.891	$158,400	$141,134.40	Pedestrian
High	Texas Street	Welch Street to Washington Street	Sidewalk	1.128	$158,400	$178,675.20	Pedestrian
High	5th Street	Bossier Street to St. Denis Street	Sidewalk	0.271	$158,400	$42,926.40	Pedestrian
High	St. Clair avenue	Williams Avenue to E 5th Street	Sidewalk	0.35	$158,400	$55,440.00	Pedestrian
High	Rapides Drive	Fairgrounds Road to South Drive/LA 1	Sidewalk	0.233	$158,400	$36,907.20	Pedestrian
High	Williams Avenue	Hancock Avenue to Watson Drive	Sidewalk	0.083	$158,400	$13,147.20	Pedestrian
High	Williams Avenue	Bienville Street to S of Keyser avenue	Sidewalk	0.074	$158,400	$11,721.60	Pedestrian
High	Williams Avenue	Keyser avenue to St. Clair Avenue	Sidewalk	0.122	$158,400	$19,324.80	Pedestrian
High	Sam Sibley Drive	University Parkway to .144 mi S of University Parkway	Sidewalk	0.144	$158,400	$22,809.60	Pedestrian
High	Koonce Street	Dean Street to Hill Avenue	Sidewalk	0.099	$158,400	$15,681.60	Pedestrian
High	University Parkway	University Parkway @ Central Avenue	Raised Crosswalk			$7,817.00	Pedestrian
High	University Parkway	University Parkway @ Caspari Street	RRHB			$15,569.00	Pedestrian
High	Keyser Avenue	Keyser Avenue @ E 6th Street	RRHB			$15,569.00	Pedestrian
High	Front street	Front Street @ Church Street	Crosswalk			$10,000.00	Pedestrian
High	Williams Avenue	Church Street @ Williams Avenue	Crosswalk			$10,000.00	Pedestrian
High	Keyser Avenue	Keyser Avenue @ E 3rd Street	Crosswalk + Pedestrian Signal			$10,000.00	Pedestrian
High	Keyser Avenue	Keyser Avenue @ George Street	Crosswalk			$10,000.00	Pedestrian
High	Keyser Avenue	Keyser Avenue @ N Melrose Avenue	Crosswalk			$10,000.00	Pedestrian
High	University Parkway	University Parkway @ Old Robeline Road	Crosswalk + Pedestrian Signal			$10,000.00	Pedestrian
High	2nd Street	Touline Street to Lafayette Street	Bike Lane or Buffered Lane	0.266	$98,372	$26,166.95	Bicycle
High	2nd Street	Lafayette Street to Texas Street	Marked Shared Lane	0.257	$3,694	$949.36	Bicycle
High	2nd Street	University Parkway to Touline Street	Marked Shared Lane	0.575	$3,694	$2,124.05	Bicycle
High	Breazelle Springs St	LP Vaughn Elementary + Middle School to Gold Street	Bike Lane or Buffered Lane	0.075	$98,372	$7,377.90	Bicycle
High	Caspari Street	University Parkway to .187 mi S of Univeristy Parkway	Bike Lane or Buffered Lane	0.187	$98,372	$18,395.56	Bicycle
High	Caspari Street	Sam Sibley Drive to .187 mi S of University Parkway	Marked Shared Lane	0.068	$3,694	$251.19	Bicycle
High	Church Street	2nd Street to Williams Avenue	Bike Lane or Buffered Lane	0.206	$98,372	$20,264.63	Bicycle
High	Dean Street	LA 1/ Hwy 1 Loop to Koonce Street	Marked Shared Lane	0.219	$3,694	$808.99	Bicycle
High	E 5th Street	Keyser Avenue to St Maurice Lane	Marked Shared Lane	0.75	$3,694	$2,770.50	Bicycle
High	Grayson Street/Welch Street	Grayson Street to Texas Street	Bike Lane or Buffered Lane	0.264	$98,372	$25,970.21	Bicycle
High	Jefferson Street	S of Lafayette Street to Texas Street	Marked Shared Lane	0.285	$3,694	$1,052.79	Bicycle
High	Jefferson Street Riverfront/Rue Beauport Street	Touline Street to S of Lafayette Street	Marked Shared Lane	0.262	$3,694	$967.83	Bicycle
High	Keyser Avenue	Jefferson Street to Williams Avenue	Bike Lane or Buffered Lane	0.133	$98,372	$13,083.48	Bicycle
High	Keyser Avenue	Williams Avenue to Blanchard Rd	Separated Bike Lane	1.454	$265,232	$385,647.33	Bicycle
High	Koonce Street	Dean Street to Grayson Street	Marked Shared Lane	0.18	$3,694	$664.92	Bicycle
High	MLK Drive	University Parkway to Texas Street	Marked Shared Lane	1.007	$3,694	$3,719.86	Bicycle
High	Old Robeline Road/Hedges Street	University Parkway to College avenue	Bike Lane or Buffered Lane	0.292	$98,372	$28,724.62	Bicycle
High	Sam Sibley Drive	University Parkway to S Jefferson Street	Bike Lane or Buffered Lane	0.769	$98,372	$75,648.07	Bicycle
High	St. Clair Avenue	Williams Avenue to E 5th Street	Marked Shared Lane	0.362	$3,694	$1,337.23	Bicycle
High	Tarlton Drive	S of of University Commons to University Parkway	Multi-Use Shared Path	0.549	$286,970	$157,546.53	Bicycle
High	Texas Street	Highway 1 Bypass to MLK Drive	Bike Lane or Buffered Lane	0.531	$98,372	$52,235.53	Bicycle
High	University Parkway	Highway 1 Bypass to E of North Street	Separated Bike Lane	0.665	$265,232	$176,379.28	Bicycle
High	University Parkway	E of North Street to Jefferson Street	Bike Lane or Buffered Lane	0.533	$98,372	$52,432.28	Bicycle
High	Washington Street	University Parkway to Touline Street	Marked Shared Lane	0.63	$3,694	$2,327.22	Bicycle
High	Welch Street	Texas Street to Gold Street	Bike Lane or Buffered Lane	0.43	$98,372	$42,299.96	Bicycle
High	Williams Avenue	Keyser Avenue to St. Clair Avenue	Bike Lane or Buffered Lane	0.469	$98,372	$46,136.47	Bicycle

Table 6-5: Bicycle & Pedestrian Project Prioritization & Project Cost - MEDIUM & LOW

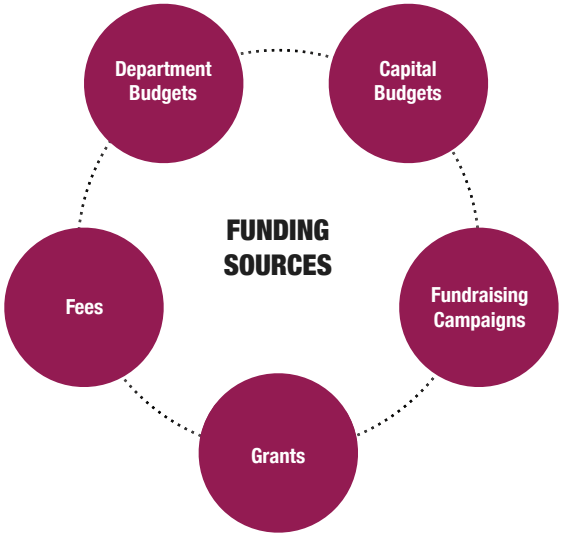
Priority Level	Project Location	Description	Recommendation	Length (mile)	Cost Multiplier	Final Cost	Bike/Ped
Medium	Tralton Drive	University Columns to University Parkway	Sidewalk	0.636	$158,400	$100,742.40	Pedestrian
Medium	South Drive	Woodyard Drive to Royal Street	Sidewalk	0.583	$158,400	$92,347.20	Pedestrian
Medium	Woodyard Drive	Lakeview Drive to South Drive	Sidewalk	0.787	$158,400	$124,660.80	Pedestrian
Medium	E 3rd Street	Keyser Avenue to St. Clair Avenue	Sidewalk	0.459	$158,400	$72,705.60	Pedestrian
Medium	Old Robeline Road	University Parkway to Lake Street	Sidewalk	0.53	$158,400	$83,952.00	Pedestrian
Medium	E 5th Street	Tahoe Avenue to Keyser Avenue	Sidewalk	0.261	$158,400	$41,342.40	Pedestrian
Medium	Fairgrounds Road	Wallenberg Drive to Rapides Drive	Sidewalk	0.797	$158,400	$126,244.80	Pedestrian
Medium	5th Street	Amulet Street to Church Street	Marked Shared Lane	0.222	$3,694	$820.07	Bicycle
Medium	Amulet Street	5th Street to 2nd Street	Bike Lane or Buffered Lane	0.184	$98,372	$18,100.45	Bicycle
Medium	Amulet Street	MLK Drive to 5th Street	Marked Shared Lane	0.227	$3,694	$838.54	Bicycle
Medium	Bienville Street	South Drive to Isadore Drive	Marked Shared Lane	0.319	$3,694	$1,178.39	Bicycle
Medium	Breazelle Springs St	LP Vaughn Elementary + Natchitoches Central HS	Bike Lane or Buffered Lane	0.103	$98,372	$10,132.32	Bicycle
Medium	Breazelle Springs St	LA 3175 Bypass to Natchitoches Central HS	Marked Shared Lane	0.303	$3,694	$1,119.28	Bicycle
Medium	Church Street	5th Street to 3rd Street	Marked Shared Lane	0.223	$3,694	$823.76	Bicycle
Medium	E 5th Street	Royal Street to Keyser Avenue	Marked Shared Lane	0.384	$3,694	$1,418.50	Bicycle
Medium	E 5th Street	Williams Avenue to .216 mi SW	Marked Shared Lane	0.216	$3,694	$797.90	Bicycle
Medium	E 5th Street	St Maurice Lane to .216 mi S of Williams Avenue	Multi-Use Shared Path	0.723	$286,970	$207,479.31	Bicycle
Medium	Fairgrounds Rd	Hwy 1 Bypass to Rapides Drive	Separated Bike Lane	1.425	$265,232	$377,955.60	Bicycle
Medium	Highway 1 Loop	N of Lake Street to LA 6	Paved Shoulders	0.729	$145,000	$105,705.00	Bicycle
Medium	Highway 1 Loop	.396 mi W to Fairgrounds Rd	Paved Shoulders	0.396	$145,000	$57,420.00	Bicycle
Medium	Highway 1 Loop	N of Lake Street to E of Edwina Drive	Separated Bike Lane	3.078	$265,232	$816,384.10	Bicycle
Medium	Isadore Drive	Bienville Street to Keyser Avenue	Marked Shared Lane	0.124	$3,694	$458.06	Bicycle
Medium	LA 1	S of Hill Street to S of Glass Street	Separated Bike Lane	0.46	$265,232	$122,006.72	Bicycle
Medium	Lake Street	Hedges Street to MLK Drive	Marked Shared Lane	0.225	$3,694	$831.15	Bicycle
Medium	Mill Street/Rapides Drive	Jefferson Street to South Drive	Bike Lane or Buffered Lane	1.218	$98,372	$119,817.10	Bicycle
Medium	Old Robeline Road/Hedges Street	College Avenue to Lake Street	Marked Shared Lane	0.238	$3,694	$879.17	Bicycle
Medium	Parkway Drive	South Drive to Keyser Avenue	Marked Shared Lane	1.536	$3,694	$5,673.98	Bicycle
Medium	Royal Street	S Williams Avenue to Keyser Avenue	Marked Shared Lane	0.96	$3,694	$3,546.24	Bicycle
Medium	S Jefferson Street	Tarlton Drive to University Parkway	Multi-Use Shared Path	0.902	$286,970	$258,846.94	Bicycle
Medium	South Drive/ LA 1	S of Hill Street to Keyser Avenue	Separated Bike Lane	1.143	$265,232	$303,160.18	Bicycle
Medium	Tarlton Drive	S Jefferson Street to S of University Commons	Multi-Use Shared Path	0.458	$286,970	$131,432.26	Bicycle
Medium	Texas Street	MLK Drive to Washington Street	Separated Bike Lane	0.922	$265,232	$244,543.90	Bicycle
Medium	University Columns	Tarlton Drive to Sam Sibley Drive	Bike Lane or Buffered Lane	0.372	$98,372	$36,594.38	Bicycle
Medium	University Parkway / LA 6	LA 504 to Highway 1 Bypass	Separated Bike Lane	3.173	$265,232	$841,581.14	Bicycle
Medium	US Hwy 84	N of Brickyard Road to Tauzin Island Road	Separated Bike Lane	1.299	$265,232	$344,536.37	Bicycle
Medium	Washington Street	Texas Street to N of Flora Street	Bike Lane or Buffered Lane	0.955	$98,372	$93,945.26	Bicycle
Medium	Williams Avenue	St. Clair Avenue to Blanchard Road	Paved Shoulders	2.034	$145,000	$294,930.00	Bicycle
Medium	Williams Avenue	Royal Street to Keyser Avenue	Separated Bike Lane	0.395	$265,232	$104,766.64	Bicycle
Medium	Woodyard Drive	South Drive to Lakeview Drive	Separated Bike Lane	0.787	$265,232	$208,737.58	Bicycle
Low	Hancock Avenue	Williams Avenue to Parkway Drive	Sidewalk	0.767	$158,400	$121,492.80	Pedestrian
Low	Parkway Drive	Hancock Avenue to Keyser Avenue	Sidewalk	0.867	$158,400	$137,332.80	Pedestrian
Low	Highway 1 Loop	Fairgrounds Rd to South Drive	Paved Shoulders	1.815	$145,000	$263,175.00	Bicycle
Low	Keyser Avenue	Blanchard Rd to Eastern City Limits	Paved Shoulders	0.338	$145,000	$49,010.00	Bicycle
Low	LA 1	S of Glass St to LA 478	Paved Shoulders	1.907	$145,000	$276,515.00	Bicycle
Low	LA 3175	Hwy 1 Bypass to Washington Street	Paved Shoulders	1.342	$145,000	$194,590.00	Bicycle
Low	LA 478	Valco Rachal Rd to LA 1	Marked Shared Lane	5.667	$3,694	$20,933.90	Bicycle
Low	Tauzin Island Road	LA 6 to Rufus Morgan Rd	Marked Shared Lane	1.999	$3,694	$7,384.31	Bicycle
Low	Texas Street/Old Grove Road	University Parkway to Highway 1 Bypass	Paved Shoulders	6.344	$145,000	$919,880.00	Bicycle
Low	University Parkway / LA 6	E of I-49 to LA 504	Separated Bike Lane	0.716	$265,232	$189,906.11	Bicycle
Low	US Hwy 84	N of Flora Street to N of Brickyard Street	Paved Shoulders	1.154	$145,000	$167,330.00	Bicycle

Funding Sources

The City of Natchitoches and its partners will need to fund improvements from a variety of funding sources and partners in order to achieve the goals of this plan.

The 2012 Cape Coral Bicycle + Pedestrian Master Plan outlines a funding strategy consisting of five primary sources illlustrated in Figure 6-5.

Figure 6-5: Plan Implementation Funding Sources



Capital Budgets

The City can use the concepts presented in this Plan to implement it through reguarly scheduled captial projects, such as streetscape projects, street resurfacing, or new public or private property construction.

Fundraising Campaigns

Fundraising through local or neighborhood groups, advocacy groups, or event crowd-funding can help generate additional resources for projects, programs, and grant matching funds.

Grants

Competitive grants through public agencies or through private or non-profit foundations can generate additional resources for projects and programs.

Fees

User fees for development impact fees provide an opportunity to generate revenue to fund infrastructure projects, such as sidewalk construction, and programs, such as bicycle education and enforcement.

Department Budgets

Departments like Public Works or Parks and Recreation can use thier maintenance resources and staff to support programs and infrastructure maintenance.

Local Funding Resources

Local jurisdictions have various options for funding pedestrian and bicycle improvements. The first option is for a municipality to dedicate a portion of their general funds to support the costs of upgrading and maintaining the non-motorized transportation network. Likewise, local governments can issue general obligation bonds, which require a voter referendum. Special assessment districts, Tax Increment Financing, impact fees, dedicated sales and property taxes can also be local sources of funding for bicycle and pedestrian facilities. In addition, developers can be encouraged to integrate bicycle and pedestrian facilities into new developments.

State Funding Resources

There are no dedicated bicycle and pedestrian funding programs funded by the State of Louisiana. Federally funded programs are administered by LADOTD, which may provide local match funding for incidental bicycle and pedestrian projects as part of its Complete Streets Policy. The State's capital outlay budget has also historically provided funding for certain bicycle and pedestrian projects.

Federal Funding Resources

There are various Federal sources of funding for non-motorized projects and programs. The U.S. Department of Transportation (USDOT) is the largest source of this funding, channeling financial assistance for bicycle and pedestrian facilities through the FHWA and FTA. Most of these grant programs require an 80 percent Federal share and 20 percent non-Federal match. However, other federal agencies also provide funding sources for bicycle and pedestrian projects.

EMBARGOED DRAFT

Table 6-4: Pedestrian Funding Sources

Key: $ = Funds may be used for this activity (restrictions may apply). S* = See program-specific info for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.

	Pedestrian Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds															
Activity or Project Type	**BUILD**	**INFRA**	**TIFIA**	**FTA**	**ATI**	**CMAQ**	**HSIP**	**NHPP**	**STBG**	**TA**	**RTP**	**SRTS**	**PLAN**	**NHTSA 402**	**NHTSA 405**	**FLTTP**
Pedestrian plans				$					$	$		$	$			$
Recreational trails	~$	~$	~$						$	$	$					$
Road Diets (pedestrian and bicycle portions)	$	~$	$				$	$	$	$						$
Road Safety Assessment for pedestrians and bicyclists							$		$	$			$			$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety									$SRTS	$SRTS		$	$*	$*	$*	
Safety education positions									$SRTS	$SRTS		$		$*		
Safety enforcement (including police patrols)									$SRTS	$SRTS		$		$*	$*	
Safety program technical assessment (for peds/bicyclists)									$SRTS	$SRTS		$	$*	$		
Separated bicycle lanes	$	~$	$	$	$	$	$	$	$	$		$				$
Shared use paths / transportation trails	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Sidewalks (new or retrofit)	$	~$	$	$	$	$	$	$	$	$	$	$				$
Signs / signals / signal improvements	$	~$	$	$	$	$	$	$	$	$		$				$
Signed pedestrian or bicycle routes	$	~$	$	$	$	$		$	$	$		$				$
Spot improvement programs	$	~$	$	$			$	$	$	$	$	$				$
Stormwater impacts related to pedestrian and bicycle projects	$	~$	$	$	$		$	$	$	$	$	$				$
Traffic calming	$	~$	$	$			$	$	$	$		$				$
Trail bridges	$	~$	$			$*	$	$	$	$	$	$				$
Trail construction and maintenance equipment									$RTP	$RTP	$					
Trail/highway intersections	$	~$	$			$*	$	$	$	$	$	$				$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see guidance)	~$*	~$*	~$*						$*	$*	$*					$
Training						$	$		$	$	$	$	$*	$*		
Training for law enforcement on ped/bicyclist safety laws									$SRTS	$SRTS		$			$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	$	~$	$	$	$	$*	$	$	$	$	$	$				$

SOURCE:Pedestrain & Bicycle Funding Opportunities, U.S. Department of Transportation Transit, Highway, and Safety Funds, August 2018.

Abbreviations

- **ADA/504:** Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
- **BUILD:** Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
- **INFRA:** Infrastructure for Rebuilding America Discretionary Grant Program
- **TIFIA:** Transportation Infrastructure Finance and Innovation Act (loans)
- **FTA:** Federal Transit Administration Capital Funds
- **ATI:** Associated Transit Improvement (1% set-aside of FTA)
- **CMAQ:** Congestion Mitigation and Air Quality Improvement Program
- **HSIP:** Highway Safety Improvement Program
- **NHPP:** National Highway Performance Program
- **STBG:** Surface Transportation Block Grant Program
- **TA:** Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
- **RTP:** Recreational Trails Program
- **SRTS:** Safe Routes to School Program / Activities
- **PLAN:** Statewide Planning and Research (SPR) or Metropolitan Planning funds
- **NHTSA 402:** State and Community Highway Safety Grant Program
- **NHTSA 405:** National Priority Safety Programs (Nonmotorized safety)
- **FLTTP:** Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands, and Tribal Projects)

Table 6-5: Bicycle Funding Sources

Key: $ = Funds may be used for this activity (restrictions may apply). S* = See program-specific notes for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.

	Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds															
Activity or Project Type	**BUILD**	**INFRA**	**TIFIA**	**FTA**	**ATI**	**CMAQ**	**HSIP**	**NHPP**	**STBG**	**TA**	**RTP**	**SRTS**	**PLAN**	**NHTSA 402**	**NHTSA 405**	**FLTTP**
Access enhancements to public transportation (includes benches, bus pads)	$	~$	$	$	$	$		$	$	$						$
ADA/504 Self Evaluation / Transition Plan									$	$	$		$			$
Bicycle plans				$					$	$		$	$			$
Bicycle helmets (project or training related)									$	$SRTS		$		$*		
Bicycle helmets (safety promotion)									$	$SRTS		$				
Bicycle lanes on road	$	~$	$	$	$	$	$	$	$	$		$				$
Bicycle parking	~$	~$	~$	$	$	$		$	$	$	$	$				$
Bike racks on transit	$	~$	$	$	$	$			$	$						$
Bicycle Repair Station (air pump, simple tools)	~$	~$	~$		$	$				$						
Bicycle share (capital and equipment; not operations)	$	~$	$	$	$	$		$	$	$						$
Bicycle storage or service centers (example: at transit hubs)	~$	~$	~$	$	$	$			$	$						$
Bridges / overcrossings for pedestrians and/or bicyclists	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Bus shelters and benches	$	~$	$	$	$	$		$	$	$						$
Coordinator positions (State or local)						$ 1 per state			$	$SRTS		$				
Crosswalks (new or retrofit)	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Curb cuts and ramps	$	~$	$	$	$	$*	$	$	$	$	$	$				$
Counting equipment				$	$		$	$	$	$	$	$	$*			$
Data collection and monitoring for pedestrians and/or bicyclists				$	$		$	$	$	$	$	$	$*			$
Historic preservation (pedestrian and bicycle and transit facilities)	$	~$	$	$	$				$	$						$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	~$	~$	~$	$	$			$	$	$						$
Lighting (pedestrian and bicyclist scale associated with pedestrian/ bicyclist project)	$	~$	$	$	$		$	$	$	$	$	$				$
Maps (for pedestrians and/or bicyclists)				$	$	$			$	$		$	$*			$
Paved shoulders for pedestrian and/ or bicyclist use	$	~$	$			$*	$	$	$	$		$				$

Table 6-4 & 6-5 Cross-cutting Notes

- FHWA Bicycle and Pedestrian Guidance: http://www.fhwa.dot.gov/environment/bicycle_pedestrian/
- **Applicability of 23 U.S.C. 217(i) for Bicycle Projects:** 23 U.S.C. 217(i) requires that bicycle facilities "be principally for transportation, rather than recreation, purposes". However, sections 133(b)(6) and 133(h) list "recreational trails projects" as eligible activities under STBG. Therefore, the requirement in 23 U.S.C. 217(i) does not apply to recreational trails projects (including for bicycle use) using STBG funds. Section 217(i) continues to apply to bicycle facilities other than trail-related projects, and section 217(i) continues to apply to bicycle facilities using other Federal-aid Highway Program funds (NHPP, HSIP, CMAQ). The transportation requirement under section 217(i) is applicable only to bicycle projects; it does not apply to any other trail use or transportation mode.
- There may be occasional DOT or agency incentive grants for specific research or technical assistance purposes.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.

SOURCE:Pedestrain & Bicycle Funding Opportunities, U.S. Department of Transportation Transit, Highway, and Safety Funds, August 2018.

Table 6-4 & 6-5 Program Specific Notes

Federal-aid funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis.

- **BUILD:** Subject to annual appropriations. See https://www.transportation.gov/BUILDgrants for details.
- **INFRA:** See https://www.transportation.gov/buildamerica/infragrants for details. Focus on projects that generate national or regional economic, mobility, and safety benefits.
- **TIFIA:** Program offers assistance only in the form of secured loans, loan guarantees, or standby lines of credit, but can be combined with other grant sources, subject to total Federal assistance limitations.
- **FTA/ATI:** Project funded with FTA transit funds must provide access to transit. See Bicycles and Transit and the FTA Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law.
  - Bicycle infrastructure plans and projects funded with FTA funds must be within a 3 mile radius of a transit stop or station, or if further than 3 miles, must be within the distance that people could be expected to safely and conveniently bike to use the particular stop or station.
  - Pedestrian infrastructure plans and projects funded with FTA funds must be within a ½ mile radius of a transit stop or station, or if further than ½ mile, must be within the distance that people could be expected to safely and conveniently walk to use the particular stop or station.
  - FTA funds cannot be used to purchase bicycles for bike share systems.
  - FTA encourages grantees to use FHWA funds as a primary source for public right-of-way projects.
- **CMAQ** projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. Several activities may be eligible for CMAQ funds as part of a bicycle and pedestrian-related project, but not as a highway project. CMAQ funds may be used for shared use paths, but may not be used for trails that are primarily for recreational use.
- **HSIP** projects must be consistent with a State's Strategic Highway Safety Plan and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem.
- **NHPP** projects must benefit National Highway System (NHS) corridors.
- **STBG and TA Set-Aside:** Activities marked "$SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 8th grade. Bicycle transportation non-construction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)).
- **RTP** must benefit recreational trails, but for any recreational trail use. RTP projects are eligible under TA and STBG, but States may require a transportation purpose.
- **SRTS:** FY 2012 was the last year for SRTS funds, but SRTS funds are available until expended.
- **Planning** funds must be used for planning purposes, for example:
  - Maps: System maps and GIS;
  - Safety education and awareness: for transportation safety planning;
  - Safety program technical assessment: for transportation safety planning;
  - Training: bicycle and pedestrian system planning training.
- **Federal Lands and Tribal Transportation Programs (FLTTP)** projects must provide access to or within Federal or tribal lands:
  - Federal Lands Access Program (FLAP): Open to State and local entities for projects that provide access to or within Federal or tribal lands.
  - Federal Lands Transportation Program: For Federal agencies for projects that provide access within Federal lands.
  - Tribal Transportation Program: available for federally-recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.
- **NHTSA 402** project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details: http://www.ghsa.org/html/about/shsos.html
- **NHTSA 405** funds are subject to State eligibility, application, and award. Project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details: http://www.ghsa.org/html/about/shsos.html

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23 USC 409 Disclaimer

This document and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409.

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Appendices

Appendix A: Bicycle & Pedestrian User Survey

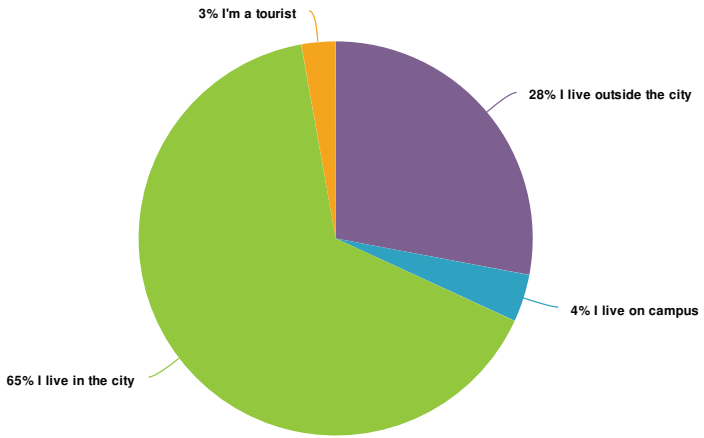
Report for City of Natchitoches Bicycle & Pedestrian User Survey

Response Counts

Completion Rate:	97%		
	Complete		351
	Partial		11

Totals: 362

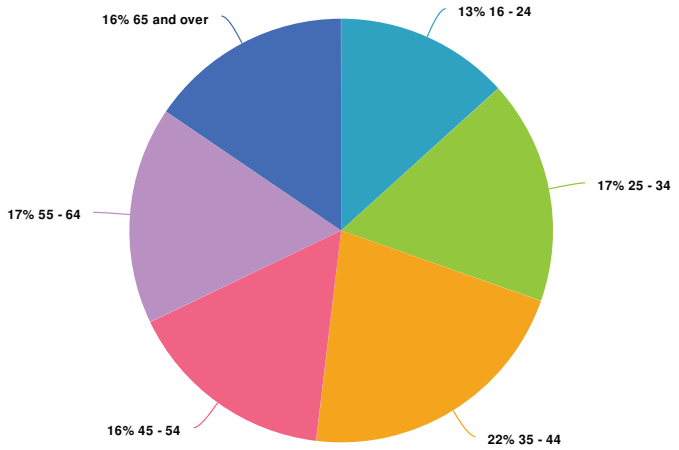
1. Which best describes you?



Value		Percent	Responses
I live outside the city		28.0%	101
I live on campus		3.9%	14
I live in the city		65.4%	236
I'm a tourist		2.8%	10

Totals: 361

2. What's your age range?



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Value	Percent	Responses
16 - 24	13.3%	48
25 - 34	17.1%	62
35 - 44	21.5%	78
45 - 54	16.0%	58
55 - 64	16.6%	60
65 and over	15.5%	56
	Totals: 362	

3. On average, how frequently do you WALK outside for the following reasons?

	Daily	At least once a week	At least once a month	At least once a year	Never	Responses
Go to work Count	94	42	17	20	187	360
Row %	26.1%	11.7%	4.7%	5.6%	51.9%	
Go to school Count	43	15	14	13	274	359
Row %	12.0%	4.2%	3.9%	3.6%	76.3%	
Run errands Count	61	80	40	18	161	360
Row %	16.9%	22.2%	11.1%	5.0%	44.7%	
Go shopping or to eat Count	47	93	59	38	122	359
Row %	13.1%	25.9%	16.4%	10.6%	34.0%	
Exercise or go to the park Count	122	105	63	31	41	362
Row %	33.7%	29.0%	17.4%	8.6%	11.3%	
Totals Total Responses						362

4. On average, how frequently do you BICYCLE for the following reasons?

	Daily	At least once a week	At least once a month	At least once a year	Never	Responses
Go to work Count	17	15	14	24	290	360
Row %	4.7%	4.2%	3.9%	6.7%	80.6%	
Go to school Count	13	11	14	13	309	360
Row %	3.6%	3.1%	3.9%	3.6%	85.8%	
Run errands Count	13	19	24	25	278	359
Row %	3.6%	5.3%	6.7%	7.0%	77.4%	
Go shopping or to eat Count	13	25	21	25	276	360
Row %	3.6%	6.9%	5.8%	6.9%	76.7%	
Exercise or go to the park Count	39	51	43	37	192	362
Row %	10.8%	14.1%	11.9%	10.2%	53.0%	
Totals Total Responses						362

5. How would you rate the following as reasons that you do not WALK more frequently?

	Major reason	Minor reason	Not a reason	Responses
No sidewalks Count	213	81	68	362
Row %	58.8%	22.4%	18.8%	
Sidewalks in poor condition Count	179	104	79	362
Row %	49.4%	28.7%	21.8%	

Appendix A: Bicycle & Pedestrian User Survey

	Major reason	Minor reason	Not a reason	Responses
Unsafe intersections				
Count	212	87	62	361
Row %	58.7%	24.1%	17.2%	
Bad driver habits				
Count	195	92	74	361
Row %	54.0%	25.5%	20.5%	
Vehicle traffic				
Count	165	113	83	361
Row %	45.7%	31.3%	23.0%	
Personal safety				
Count	184	102	75	361
Row %	51.0%	28.3%	20.8%	
I do not have the time				
Count	58	109	194	361
Row %	16.1%	30.2%	53.7%	
Destinations too far away				
Count	134	105	121	360
Row %	37.2%	29.2%	33.6%	
Bad weather				
Count	85	163	112	360
Row %	23.6%	45.3%	31.1%	
Lack of worksite amenities (lockers/showers/etc.)				
Count	43	70	247	360
Row %	11.9%	19.4%	68.6%	
Travel with small children				
Count	47	42	272	361
Row %	13.0%	11.6%	75.3%	
Too many stops to make				
Count	34	58	269	361
Row %	9.4%	16.1%	74.5%	
Too much to carry				
Count	58	120	183	361
Row %	16.1%	33.2%	50.7%	
Unsure of route				
Count	15	40	305	360
Row %	4.2%	11.1%	84.7%	
I do not like to walk				
Count	17	36	308	361
Row %	4.7%	10.0%	85.3%	
Totals				
Total Responses				362

6. How would you rate the following as reasons that you do not BICYCLE more frequently?

	Major reason	Minor reason	Not a reason	Responses
No bicycle parking				
Count	115	85	160	360
Row %	31.9%	23.6%	44.4%	
No bike lanes				
Count	220	40	100	360
Row %	61.1%	11.1%	27.8%	
Bike lanes in poor condition				
Count	156	42	161	359
Row %	43.5%	11.7%	44.8%	
Unsafe intersections				
Count	210	62	88	360
Row %	58.3%	17.2%	24.4%	
Bad driver habits				
Count	210	60	90	360
Row %	58.3%	16.7%	25.0%	
Vehicle traffic				
Count	184	79	97	360
Row %	51.1%	21.9%	26.9%	
Personal safety				
Count	187	75	98	360
Row %	51.9%	20.8%	27.2%	

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	Major reason	Minor reason	Not a reason	Responses
I do not have the time Count Row %	44 12.3%	76 21.2%	239 66.6%	359
Destinations too far away Count Row %	69 19.2%	84 23.4%	206 57.4%	359
Bad weather Count Row %	82 22.8%	137 38.1%	141 39.2%	360
Lack of worksite amenities (lockers/showers/etc.) Count Row %	38 10.6%	61 16.9%	261 72.5%	360
Travel with small children Count Row %	40 11.1%	35 9.7%	285 79.2%	360
Too many stops to make Count Row %	30 8.3%	48 13.3%	282 78.3%	360
Too much to carry Count Row %	42 11.7%	82 22.8%	236 65.6%	360
Unsure of route Count Row %	16 4.5%	37 10.3%	306 85.2%	359
I do not have a bike Count Row %	98 27.1%	24 6.6%	239 66.2%	361
Totals Total Responses				361

7. How important do you think the following improvements would be in supporting walking and bicycling in the City of Natchitoches?

	Very important	Somewhat important	Not important	Not sure	Responses
More sidewalks/bike lanes/signed bike routes/greenways Count Row %	296 81.8%	23 6.4%	41 11.3%	2 0.6%	362
Maintenance of sidewalks, bike lanes, bike, routes/greenways Count Row %	296 81.8%	36 9.9%	27 7.5%	3 0.8%	362
Improved connections between sidewalks, bikeways Count Row %	270 74.6%	57 15.7%	31 8.6%	4 1.1%	362
Better intersections (pedestrian signals/crosswalks) Count Row %	292 80.7%	44 12.2%	23 6.4%	3 0.8%	362
Better street lighting Count Row %	232 64.1%	84 23.2%	40 11.0%	6 1.7%	362
More separation from vehicle traffic Count Row %	233 64.4%	99 27.3%	28 7.7%	2 0.6%	362
Education/enforcement for motorists, pedestrians, & bicyclists Count Row %	234 64.6%	93 25.7%	34 9.4%	1 0.3%	362
Worksite amenities (lockers, showers, dressing rooms) Count Row %	58 16.0%	90 24.9%	179 49.4%	35 9.7%	362
Secure bicycle parking Count Row %	164 45.3%	129 35.6%	59 16.3%	10 2.8%	362

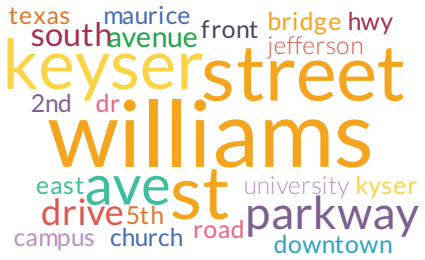
Appendix A: Bicycle & Pedestrian User Survey

	Very important	Somewhat important	Not important	Not sure	Responses
Bicycle route map					
Count	122	130	92	17	361
Row %	33.8%	36.0%	25.5%	4.7%	
Totals					
Total Responses					362

8. If it were safe and convenient, how likely would you be willing to walk or bike for the following reasons? (Check all that apply)

	Very likely	Somewhat likely	Neutral	Somewhat unlikely	Very unlikely	Responses
Go to work						
Count	134	51	51	22	104	362
Row %	37.0%	14.1%	14.1%	6.1%	28.7%	
Go to school						
Count	108	33	83	15	123	362
Row %	29.8%	9.1%	22.9%	4.1%	34.0%	
Run errands						
Count	116	95	44	34	73	362
Row %	32.0%	26.2%	12.2%	9.4%	20.2%	
Go shopping or eat						
Count	134	97	36	24	71	362
Row %	37.0%	26.8%	9.9%	6.6%	19.6%	
Exercise or go to the park						
Count	270	35	15	9	33	362
Row %	74.6%	9.7%	4.1%	2.5%	9.1%	
Totals						
Total Responses						362

9. What streets would you like to see improvements in your community? Identify by street name, neighborhood, or road segment, such has from Road A to Road B.



ResponseID	Response
9	No preference
10	St. Maurice Lane and Blanchard Rd.
11	Highway 494 addition of road shoulder
13	Just about every street LOL
14	Jefferson to Washington. University park way to LA 1 by-pass. Keyser Ave from Jefferson to end of four lane. Hwt 1 Business from Jefferson to end of four lane.
15	Williams Ave, Jefferson, Historic District, Downtown
16	From beginning of second street to the end.
17	Down town Natchitoches, along Jefferson street, crossing amulet street.
20	Blanchard, Clarence dr, Abbie drive, Woodyard
21	St. Clair
22	All along Williams Ave, intersections at both bridges in town, general review of sidewalks in town.
23	Hancock, Parkway,Watson
24	Cypress Ave
25	Williams Ave. Kyser Ave,

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ResponseID	Response
26	Downtown. People ride bikes on the sidewalks by stores. People can't walk.
27	East Fifth
30	Williams, second and university
31	University Parkway all along campus
32	bridges are death traps
33	Williams avenue
34	For cycling, crossing Jefferson at the Keyser bridge is terrifying.
35	Kyser Intersection Campus Side
36	Kyser Avenue & all bridges
37	Keyser Avenue
38	Williams Ave
39	Williams Ave to 2nd St
41	Downtown, Saint Maurice Lane, East fifth
42	Keyser st. And university parkway
44	St Maurice Ln, Blanchard, 2nd street or front street, university pkwy, keyser
47	All
48	Keyser from bridge to Walmart
50	Washington street
51	Outskirts of the parish for drivers! Roads are so bad, tax dollars need to be spent there first!
52	all of Bermuda Rd in Natchez and Fish Hatchery Rd.
53	Hicks Road/Bennett Loop - in Oak Grove (Parish to City connectors, I understand)
54	Oak grove, university roads
55	All of them needs work.

ResponseID	Response
57	Keyser Avenue
58	Highland Park neighborhood, Breda town, near hospital, keyser, nsu campus
59	Literally all of University Parkway/Mill Rd./Rapides Dr., Williams Ave., Second St.
60	From campus to downtown to East Natchitoches
62	2nd Street, Kayser Ave, University, Jefferson St.
63	South Williams, Parkway, South Drive
64	Jefferson from university to front st
65	Williams Ave, Jefferson St, Keyser Ave, Hwy 1
66	Keyser Ave, par road 507
68	Wider bridge at corner of south Avenue and woodyard
69	St. Clair Ave, pedestrian lights at intersection of highway one.
70	Smith Garage Road
71	Pecan Park
72	University
73	Historic District, NSU, East Natchitoches,
74	Williams and keyser
75	Keyser down 494
76	Almost all of them
77	University Parkway from Tarleton to Jefferson; Jefferson from Kyser to University Parkway; Second Street from Touline to University Parkway
78	historic district
79	There's too many bad roads to mention. My car is shot because of natchitoches roads. They're the worst I've ever seen!
80	All of Second Street.
82	Hwy 484 just past Wal-Mart

Appendix A: Bicycle & Pedestrian User Survey

ResponseID	Response
83	Anything close to the NSU campus
84	Pjefferson
85	North Williams from Blanchard to Church
86	Grady Erwin Trail. I ride bikes competitively. To me there is nothing wrong with the roads. I would like for more trails to be constructed!
87	From Williams to downtown and to University
88	All of them
89	Blanchard Rd to Kyser Avenue
91	Kyser Ave, University Pkwy, Jefferson St, Front St, South Dr
92	College ave. to second st. and Jefferson. Jefferson to kyeser, front, and Washington. Williams Avenue to Church, kyeser. College Avenue to Texas. All of kyeser Avenue. All of south drive. All of 5th street
93	Parkway
94	Blanchard Road from Keyser to St. Maurice
95	Oakland drive royal street area needs better lighting and drainage roads need repairs
96	Any streets
98	Whitfield st claire
99	Texas st
100	tarlton drive and caspari street
101	Old Robeline Road
102	second street university
103	Unknown
105	Keyser Ave to City Limits
106	Jefferson overlay with asfault to make smooth
108	North Williams avenue

ResponseID	Response
109	All of Pecan Park Subdivision
110	No preference
112	From Stephens/Henry area to campus and to grocery stores area.
113	Overall, I think we need to do a better job maintaining roads and sidewalks. I also feel the need to add walk/don't walk lights at Church St. & Front St. Visible crosswalks with "stop for pedestrian" signage added to many of the streets downtown. Walk/Don't Walk lights and crosswalks need to be added to University, especially at 2nd/Central Ave, Caspari, Watson Library to Bookstore, Sam Sibley, and Frog Pond/Tarlton. Others should be included at popular areas of Kyser, South, and Texas streets linking neighborhoods and sidewalks to major business areas.
114	Williams Ave, St. Maurice, basically any road connecting to downtown
115	East 5th, JEFFERSON from campus to Keyser bridge, Williams (extend sidewalk past St Maurice), easier crossing from Williams onto Church St bridge.
116	V
117	University parkway
118	Hicks Rd.
119	Oakland from Melrose to cul de sac.
120	Fairgrounds Road; University Parkway; South Drive
121	All of University and Keyser
122	None
123	East 5th, Short Street, Loren Avenue, Nettie Street, Harling Lane, etc.
124	texas street
125	None. Too much money wasted
126	Bike lane on Keyser, fix Blanchard so that it can be road down, right tickets for drivers that do not respect cyclists on roadways, it can be quite scary
127	Fish hatchery road from 494 to Beau Riviera Subdivision & safe bike paths across both bridges over cane river leading to downtown.
128	E. 5th. Sidewalk North of St. Maurice on Williams.

ResponseID	Response
129	Oakland Drive to East 5th down to St. Maurice.
130	Jefferson Street
131	Pecan Park/Parkway Dr
132	Front St, Second St, around Univ and loop all the was to super 1
134	Royal, Kyser, South Drive
135	East natch, near schools, Williams , toward downtown
136	Nice route-Pecan park area, Entire north and South Williams, then becomes Shoreline. it's pleasant next to river, another area is 2nd Street to Washington to Grand Ecore Bridge-very nice route
137	St Denis Heights
138	historic district riverfront,williams,nsu district
139	2nd, Williams, University
140	From Whitfield drive to east fifth and the park there
141	Front street, Texas street, east fifth street
142	Williams Ave from Church Street Bridge to Keyser.
143	St Maurice Lane, Blanchard Rd.
144	Ledet to Whitfield
145	Mr. Ed Lane
146	Williams ave
147	second street to texas street
148	East Lakeshore Dr., Williams Ave.
150	Cypress (sidewalks are broken and blocked by trees and power lines)
152	Shoreline drive. No sidewalks
153	Johnson Chute, Hwy 1 to city
154	From Sudbury neighborhood to downtown

ResponseID	Response
155	Highway 6 from University Parkway to the Interstate
156	Jefferson Street, Keyser Avenue, Second Street, East Fifth, University Parkway
157	Sidewalk on Williams
158	Woodyard Dr., Rapides Dr., Texas St., Second St. , MLK Dr.
159	Williams Avenue
160	University
161	From Parkway to Downtown
162	Cypress Street, Keyser Avenue
163	All streets are bad outside of the city!! We don't need to make bicycle paths!
165	Williams avenue
166	North Williams from bridge to Salter needs sidewalks repaired or sidewalks put in
169	Williams
170	Washington Street from Grand Ecore to Front Street, Keiser Ave., Historic Route connecting Oakland to Magnolia Plantation
171	Roads with pot holes and one lanes
172	Rapides. South drive. Jefferson.
173	Williams Ave, Blanchard Road
174	University Parkway. Kyser Avenue. Williams Avenue. Second street.
176	Hwy 1 to university parkway
177	Jefferson street
178	All streets need to be evaluated and decide which one needs repairs/improvements/cost effective.
179	Williams Ave to downtown
180	north williams to church st
181	Woodyard Dr. onto Hwy 1 bridge; all of Parkway, all of Rapides Dr. & Mill St.

Appendix A: Bicycle & Pedestrian User Survey

ResponseID	Response
182	historic district
183	Kyser, South drive, Washington street, and front street.
184	Woodyard Dr.
185	147 mary drive...Payne subdivision roads... third fourth and fifth and sixth street...second street.....
186	University Pkwy & North; University Parkway & 2nd St ; Jefferson St & Pine St (Keyser bridge)-My concern is student safety. There are no pedestrian cross lights!
187	Woodyard Drive (from the South Drive Bridge to Lakeview Drive)
188	University Parkway
190	Williams Ave
191	Chuch/Williams, all intersections on Keyser
192	All of Keyser ave, williams, east 5th st. Jefferson and university blvd.
193	Church and Williams intersection, Keyser and hwy 1 intersection. St Clair and fifth intersection. We need actual crosswalks. Church Street bridge
194	Lakeview
196	Parkway across cane river down mill street to campus
198	All streets should be inspected and evaluated. Those in need should be repaired. There is no organization of street repair now
199	Crossing Kesyer Avenue
200	A Jefferson B collage
201	pedestrian crossing in front of Watson Library
202	Shady Ln,University Pkwy,Keyser
204	5th Street, Adelaide Street
205	Sudbury to downtown (Washington St)
206	Williams Ave.
207	Royal St

ResponseID	Response
209	University Drive
210	Hwy 504 and 3191
211	Fish hatchery road
212	College avenue
213	Whitfield Dr
214	East 5th to park
215	Parkway and Blanchard Rd
216	University Pkwy, 2nd Street, and Kyser largely
217	Sirod, Williams, Church St, 5th St.
218	Church St, Front St, Jefferson St, 2nd Street, NSU campus, E. 5th, St Claire Ave, Williams Ave
219	N/A
220	Keyser @ Jefferson and Williams @ Church
221	From campus to movie theater
222	Williams Ave and East 5th
223	Keyser intersection and crossing at both bridges
224	University Dr, By-pass, 2nd St.
225	Williams Avenue
226	Church St. Bridge & Keyser Bridge (esp. the three way stop at Jefferson)
227	Walkable sidewalk along Williams Ave, crosswalks at Williams/Church, Williams/Keyser, and South/Keyser
228	West Court Drive
229	Williams, st. Maurice, east 5th
230	Marthaville raid and ajax road
231	Fourth Street from Texas Street to St. Denis

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ResponseID	Response
232	2nd St from Yexas St. to Event Center. Third St. From Texas St. to Church St.
234	University parkway especially by the university, many people walk to class everyday and there is no walking lights so students have to run across the street when they feel it's somewhat safe. The sidewalks and trashed and overgrown with grass and walking on the then SUCK
235	University Parkway railroad tracks !
236	All roads and streets.
237	Blanchard from Keyser to St. Maurice
238	We need improvements in the condition of our roads, not bike lanes.
240	Front street to university parkway
241	Hwy 120 between robeline and Belmont
242	Keyser
243	Keyser ave
244	Hicks road
245	Adelaide to Williams
246	E. 5th from South drive st. Marys
247	University Pkwy bike lane
248	University Parkway the crossing from frogpond to NSUs gate....Also the crossing from the NSU library to Chicfila/bookstore
250	williams avenue
251	South Drive
252	2nd St. between Church St. and University Pkwy.; University Pkway (all of it); Williams between St. Maurice & Keyser Ave.
253	E. Fifth to Front St
254	Sam Sibley Drive to Keyser Avenue
255	University Avenue from Hwy 1 Bypass to Jefferson St.; Hwy 1 Bypass; Washington St.; Texas St. from Washington to 504.

ResponseID	Response
256	All of williams Ave and all of second street
258	Bennett Loop, Hwy 1 Bypass
259	East Natchitoches, College Park and surrounding neighborhoods down east fifth st. and south williams areas
260	N. Williams-slow traffic and add sidewalk at least to Bird to facilitate walking to/from schools on E. Fifth, University PKWY from Bypass to Jefferson sidewalks and better crosswalks
262	keyser, highway 1,
263	St. Maurice, Hancock, Nettie, Oma, Sirod, Loren, and then some!
265	University parkway
266	South drive bridge
267	Keyser Avenue
269	I wish there were sidewalks in St. Clair Estates
271	I live on White Oak Lane and alot of times about 3-4 times a week depending on weather I walk my street but on weekends walk from White Oak Lane to the Dodge Dealership on Hwy 1 North. Also will begin doing some bike riding.
272	A
273	Williams, Keyser, East Fifth, Second
274	Kyser and First Streer
277	St. Clair into Jasmine Circle, Intersection to cross bridge at front street/ st clair
278	Keyser, South Dr, Jefferson, Front, Hwy 6
279	Bossier St. College Ave, E. 5th
280	Oakland Dr to Melrose Dr
281	MLK, Lake, Texas, entire historic district
282	University Parkway, South drive
283	Williams

Appendix A: Bicycle & Pedestrian User Survey

ResponseID	Response
285	North 5th Street
288	East 5th and keyser intersection- VERY UNSAFE for any traffic ledestrian bike or car. Multiple cars run intersection daily
289	Not sure
290	2nd,Jefferson Washington woodyard mill
291	Fix all streets and don't worry about bike paths.
297	Down William's Ave and crossing the bridge to front Street
298	Kyser Avenue and Church Street
300	Hwy 3191
301	Jefferson Street in area of Bayou Amulet. Street is very narrow and sidewalk very close to street with a guard rail on bayou side.
302	Douglas Drive
303	Jefferson street, second street
304	East 5th
305	Woodyard Dr. to Hwy 6
307	Jefferson Street all the way to SouthJefferson Street on campus.
308	Every road in the parish.
310	University Parkway to cross over at the intersections
312	More street lights in all the neighboring streets around campus. University Parkway gets pitch black once you past campus(after the four way to go onto front street) and I ride my bike home from work late by myself.
313	Fairgrounds and University Parkway
315	Hicks Road
316	Crosswalk lights
317	All

ResponseID	Response
318	Fix the traffic light at the intersection of Williams and Church Street. I have to wait 7 minutes for the light to turn and it makes me late for class.
319	Give the city workers a raise BLVD
320	Williams Avenue to Front Street
321	All of NSU campus and throughout the city
323	All of them
326	Keyser needs sidewalks and crosswalks with traffic lights.
327	2nd Street
329	Texas Street between LA-1 and Front Street. Williams Ave. 2nd Street. University. Keyser from the bridge to at least Blanchard. South Drive.
330	Williams Ave from keyser bridge to Salter or beyond
331	Parkway Drive, Watson Drive, Hancock Avenue, Royal Street, Keyser Avenue, South Drive (including the bridge by Woodyard Drive), Melrose Avenue , Rapides Drive - Mill Street, Woodyard Drive
332	To perdition
333	Fairgrounds Road, South Drive, Texas St., Martin Luther King Dr. We need a lot more sidewalks 4 those that must walk and use wheelchairs!!!!!
334	Parkway Drive is so dangerous due to excessive speeders, need speed bumps, speed limit is s 25 average speed 45-55
335	NSU Campus needs more lights next to the river.
336	Keyser
337	A majority of them. Also the first sentence is incomplete.
338	Hell all are bad there isnt a street in natchitoches that doesnt have a pot hole in it but yet yall spend a ton of money to remodel river bank and want to charge to go down there now guess what you not getting my money should of fixed streets instead if working about walking tracks bike lanes and dumb crap. Just fix the damb streets so I dont need a front end alignment every month and things will be good
339	Rapides to South
340	Jefferson Street

ResponseID	Response
341	Parkway Drive
342	All of Fish hatchery to woodyard dr
344	University Parkway intersections by campus, Second Street, Keyser Avenue, South Drive/Keyser intersection, Mill Street
345	WILLIAMS AVE (north)
346	Williams to keyser or the historic section
348	Keyser, St. Maurice, Front Street, Historic Natchitoches
350	Not sure
351	Texas Street, MLK, Keyser, St. Maurice, South Dr.(especially at the bridge), Parkway, University
353	Keyser, South Drive, Jefferson, Front St., Washington St., 2nd St., University Dr., Williams Ave., 5th Ave., Church St., M.L.K.,,
354	East 5th and Williams Ave
355	Crossing Keyser Av at South Williams and at Jefferson
357	Williams Ave. along the river, all of South Dr., and all of University Parkway all need sidewalks, crosswalks, and bike lanes that are in good repair. The bridges around town all need to be updated in order to become bike friendly (and pedestrian friendly in some cases).
358	All the roads are awful. We can't keep are roads in good shape why expand
359	Goldonna Rd
360	JOHNSON CHUTE ROAD
361	JOHNSON CHUTE RD
362	Johnson Chute Road
363	JOHNSON CHUTE ROAD
364	all streets
365	The natchez road by family dollar
366	JOHNSON CHUTE ROAD

ResponseID	Response
367	WASHINGTON AVE.
368	College Ave
369	Parkway, Mills St., South Drive

10. Rank the following recommended changes by priority that would make it easier and encourage you to walk and bike:

Item	Overall Rank	Rank Distribution	Score	No. of Rankings
Provide more pedestrian facilities, such as sidewalks, walkways, lighted areas, signaling at intersections	1		1,694	357
Provide more bicycle facilities, such as bike paths, bike lanes, bike parking racks, lighted areas, signaling at intersections	2		1,598	357
Improve existing facilities	3		1,186	357
Making areas for bicycling safer	4		1,179	358
Enforce laws governing bicycling	5		1,001	359
Initiate bicycle safety education	6		846	356

Lowest Rank — Highest Rank

Appendix B: Bicycle & Pedestrian Suitability Index Variable Scoring System

User Survey	Score
Mapped by Respondents	3
Not Mapped	0

Speed	Score
<= 25mph	3
>25 mph and <=35 mph	2
> 35 mph and <=55 mph	1
> 55 mph	0

Strava Bike Count	Score
>= 50	3
>25 and <50	2
<=25	1

Strava Ped Count	Score
>= 50	3
>25 and <50	2
<=25	1

Existing Facility	Score
Facility Exists	3
No Facility	0

Distance to School	Score
< = .25 mi	3
> .25 to <= .5 mi	2
>.5 mi and < =1mi	1
> 1 mi	0

Bike/Ped Crash Intensity	Score
>4	3
>=1 to <=3	2
>=.5 to < 3	1
<.5	0

State Recommeded	Score
Yes	3
No	0

Steering Committee/User Survey/Bike Natchitoches Recommended	Score
Yes	3
No	0

Zero Vehicle HHs	Score
> =50%	3
<=50 % to >=25%	2
<25% to >15%	1
<15%	0

Low Income Workers (Home)	Score
> = 35%	3
> =20 % to < 35%	2
> = 10 % to < 20%	1
<10%	0

Low Income Workers (Workplace)	Score
> = 50%	3
>=25 % to <50%	2
>=10% to < 25%	1
<= 10%	0

Activity Density per acre	Score
> 5	3
> 2.5 to <5	2
>=1 to <2.5	1
<1	0

EMBARGOED DRAFT

Distance to Points of Interest /Key Attractions	Score
< = .25 mi	3
> .25 to <= .5 mi	2
>.5 mi and < =1mi	1
> 1 mi	0

#	Factors	Max Score	Weightage	Total
1	**Speed**	3	10	30
2	**Strava Bike Count**	3	5	15
3	**Strava Ped Count**	3	5	15
4	Existing Facility	3	5	15
5	**Distance to School**	3	10	30
6	Bike/Ped Crash Intensity	3	10	30
7	**Lane Width**	3	5	15
8	**Steering Committee/User Survey/Bike Natchitoches/State Recommended**	3	10	30
9	Zero Vehicle HHs	3	5	15
10	Low Income Workers (Home)	3	10	30
11	Low Income Workers (Workplace)	3	10	30
12	**Activity Density per acre**	3	5	15
13	**Distance to Points of Interest /Key Attractions**	3	10	30
Grand Total		**39**	**100**	**300**

Appendix C: Glossary

EMBARGOED DRAFT

- **AASHTO:** American Association of State Highway and Transportation Officials
- **ACS:** American Community Survey
- **ADA/504:** Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
- **AMPO**: Association of Metropolitan Planning Organization
- **APMPO:** Alexandria-Pineville Metropolitan Planning Organization
- **ArcGIS:** Geographic Information System Software
- **ATI:** Associated Transit Improvement (1% set-aside of FTA)
- **BMP:** Bicycle Master Plan
- **BPSI:** Bicycle and Pedestrian Suitability Index
- **BUILD:** Better Utilizing Investments to Leverage Development Transportation Discretionary Grants
- **CMAQ:** Congestion Mitigation and Air Quality Improvement Program
- **CON:** City of Natchitoces
- **CRF:** Crash Reduction Factor
- **EPA:** Environmental Planning Agency
- **FHWA:** Federal Highway Administration
- **FAST:** Fixing America's Surface Transportation Act
- **FLTTP:** Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)
- **FTA:** Federal Transit Administration
- **GIS:** Geographic Information System
- **HSIP:** Highway Safety Improvement Program
- **HSRG:** Highway Safety Research Group
- **INFRA:** Infrastructure for Rebuilding America Discretionary Grant Program
- **LADOTD:** Louisiana Department of Transportation and Development
- **LRBMS**: Long Range Bicycle Map Statewide
- **LTAP:** Local Technical Assistance Program
- **MAP-21:** Moving Ahead for Progress in the 21st Century
- **NACTO:** National Association of City Transportation Officials
- **NBPP:** Natchitoches Bicycle and Pedestrian Plan (the Plan)
- **NHPP:** National Highway Performance Program
- **NHTS:** National Household Travel Survey
- **NHTSA:** National Highway Traffic Safety Administration
- **NHTSA 402:** State and Community Highway Safety Grant Program
- **NHTSA 405:** National Priority Safety Programs (Nonmotorized safety)
- **PLAN:** Statewide Planning and Research (SPR) or Metropolitan Planning funds
- **PPP:** Public Participation Plan (P3)
- **RAPC:** Rapides Area Planning Commission
- **RTP:** Recreational Trails Program
- **SHSP:** Strategic Highway Safety Program
- **SRTS:** Safe Routes to School Program / Activities
- **STBG:** Surface Transportation Block Grant
- **STP:** Surface Transportation Program
- **TA:** Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
- **TAC:** Technical Advisory Committee
- **TDM:** Travel Demand Management
- **TIFIA:** Transportation Infrastructure Finance and Innovation Act (loans)
- **TIP:** Transportation Improvement Program
- **TPC:** Transportation Policy Committee
- **USDOT:** United Stated Department of Transportation

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Appendix E: Media Coverage

CITY OF NATCHITOCHES ANNOUNCES BICYCLE/PEDESTRIAN MASTER PLAN

NOVEMBER 27, 2018

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The City of Natchitoches has hired the Rapids Area Planning Commission (RAPC) in partnership with Bantam Strategy Group, two experienced planning agencies, to create a city-wide Bicycle/Pedestrian Master Plan which will include a Bikeshare Feasibility and Implementation Plan serving the City of Natchitoches and Northwestern State University.

Bicycle and pedestrian efforts are advancing in mid-size and small cities across the country, offering another transportation option as some people opt to pedal as a healthier alternative. RAPC and Bantam Strategy Group will be working through an eight-to-ten month process which includes several layers of quantitative and qualitative factors to complete this plan. Some of the goals of the plan are to: capture non-motorized vehicle needs and setting goals for the urbanized area; reducing bike/ped related crashes and encourage safety education, promote the use of alternative transportation modes and equity, and develop a strategy for branding the bike/ped network.

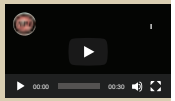
"It is important to the City of Natchitoches and Northwestern State University that this is a unified, city-wide plan that can be implemented and ultimately enhances our community. Most recently through the State's construction project of LA Hwy 478, the City requested bicycle lane signs be implemented on this highway. Since implementation these bicycle lanes have been utilized by our local Bike Natchitoches group as well as others visiting the area." said Mayor Lee Posey. "RAPC has experience with creating foundationally solid bike/ped networks and as a forethought positioning these projects to be eligible for public and private funding."

Additionally, Bantam Strategy Group will be evaluating the feasibility of a bikeshare system which includes a demand analysis, exploring the various bikeshare business models available, and outlining a practicable system business pro-forma. Some of these efforts include a website with interactive mapping, community outreach meetings, and several layers of GIS analysis to determine the fleet size and service area. To learn more about the bikeshare portion of this study visit www.natchitochesbikeshare.com and follow the Natchitoches Bikeshare Facebook page.

"Connecting people regardless of socio-economic status to places and communities in Natchitoches with an accessible and sustainable alternative transportation network is the ultimate mission," said Lindsey G. West, President and CEO of Bantam Strategy Group. "Bikeshare is a tool in the transportation 'toolkit'. We are excited to partner with RAPC, the City, the University and other local partners to enhance the way residents, students, and visitors move and explore this community."

RAPC secured safety funding from the Louisiana Department of Transportation and

LOUIE BERNARD – STATE SENATE DISTRICT 31



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Development (DOTD) for the development of this plan with the municipality providing some local funding for the completion of the study to include bikeshare.

About RAPC:

The Rapides Area Planning Commission is a regional organization providing land use planning, development review, technical assistance, geographical information, and other planning and enforcement services for member governments as well as other partnered political subdivisions. RAPC is governed by a board of commissioners, which are appointed by the member jurisdictions. For more information, visit http://www.rapc.info.

About Bantam Strategy Group:

Bantam Strategy Group is the leading turn-key bikeshare consulting and implementation firm for small-medium size cities. Bantam currently consults or operates for 20+ communities and entities to make the bikeshare vision a reality, including several other Louisiana communities. Bantam has representing bikeshare on various national platforms and showcasing cycle-friendly communities. Bantam is a 100% women-owned business and headquartered in Baton Rouge, LA. For more information, visit www.bantamstrategygroup.com.

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SOURCE:Natchitoches Parish Journal, https://natchitochesparish-journal.com/2018/11/27/city-of-natchitoches-announces-bicy-cle-pedestrian-master-plan/comment-page-1/; accessed September 2019.

City announces bicycle/pedestrian mast

By **Natchitoches Times** - November 27, 2018

Plan includes a Northwestern State University collaboration & bikeshare system feasibil

The City of Natchitoches hired the Rapids Area Planning Commission (RAPC) in partnership with Ban agencies, to create a city-wide Bicycle/Pedestrian Master Plan which will include a Bikeshare Feasibil

Implementation Plan serving the City of Natchitoches and Northwestern State University. Bicycle an and small cities across the country, offering another transportation option as some people opt to p Bantam Strategy Group will be working through an eight-to-10 month process which includes sever goals of the plan are to capture non-motorized vehicle needs and set goals for the urbanized area, encourage safety education, promote the use of alternative transportation modes and equity and d bike/pedestrian network.

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SOURCE:Natchitoches Times, https://www.natchitochestimes.com/2018/11/27/city-announces-bicycle-pedestrian-mas-ter-plan/; accessed September 2019.

Bicycle and Pedestrian MasterPlan from the City of Natchitoches

By **Natchitoches Times** - May 9, 2019

The City of Natchitoches has set the wheels in motion on its Bike and Pedestrian Master Plan. Mayo and Pedestrian Plan come to fruition further solidifying our goal of healthy initiatives in our city. Thi offer and has the potential to impact economic development in a positive way."

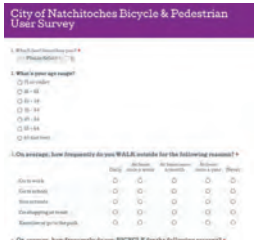
Bicycle and Pedestrian MasterPlan – UserSurvey from the City of Natchitoches | Natchitoches Times 9/18/19, 10:53 AM

The public can help the city envision the future of bicycle and pedestrian connectivity in Natchitoch User survey. The online survey was created to gauge the public's perceptions and experience in wal

The survey will be available on the City's website, www.natchitochesla.gov until May 31, after whicl Steering Committee will begin drafting recommendations that will take survey responses into accou Hall by calling 318-352-2772 or by emailing hwenninger@NatchitochesLA.gov.

All City of Natchitoches residents are encouraged to complete the brief, 10 question public input su complete.

Survey Link: https://www.surveygizmo.com/s3/4989662/NBPP-Bicycle-Pedestrian-Surve


City of Natchitoches Bicycle & Pedestrian User Survey

A screenshot of the actual survey.

SOURCE:Natchitoches Times, https://www.natchitochestimes.com/2019/05/09/bicycle-and-pedestrian-masterplan-usersurvey-from-the-city-of-natchitoches/; accessed September 2019.

TOP STORY

Natchitoches looking for input on bicycle & pedestrian plan

Natchitoches looking for input on bicycle & pedestrian plan

By **Maranda Whittington** | May 14, 2019 at 11:59 AM CDT - Updated May 14 at 5:38 PM

NATCHITOCHES, LA (KSLA) - More sidewalks and bike lanes are on their way to the city of Natchitoches — but where the city decides to put them is up to you.

Natchitoches looking for input on bicycle & pedestrian plan 8/29/19, 10:37 AM

On Front Street in Natchitoches you'll likely see cars, but just a block away, you'll find Carey Blanchard on his bike. The Vietnam veteran has taken up the hobby of biking, and has been doing it for the last seven years.

His passion even led him to running a cycling group — Bike Natchitoches.

But there's big plans in the work to bring more bikes to the city.

"There's two kind of phases: one phase is the bike share itself and the other phase is the pedestrian and bike master plan, Van Erikson said.

Erikson is part of the city's historic district development commission and says they are currently working to bring in a bike share company.

The idea came about two years ago. Since then the city has hired the Rapids Area Planning Commission and Bantam Strategy Group to come in and help with this project.

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Maranda Whittington

Maranda Whittington joined KSLA in July 2018 as a reporter. She is a military brat and was born in San Diego, California. She has lived in Oklahoma, North Carolina and Georgia. Maranda graduated from Georgia State University with a degree in Telecommunications and a minor in speech.

Natchitoches looking for input on bicycle & pedestrian plan 8/29/19, 10:37 AM

Bike paths may come to Natchitoches

HOME NEWS WEATHER SPORTS COMMUNITY ABOUT

Right now, Erikson says the city is working on a pedestrian and bike master plan that will allow them to determine where to add new bike lanes and sidewalks for these bikes — but they need feedback.

"Whatever they want to say about this we want to hear it because at the end of the day this is going to be utilized by the public," he said.

Carey's already learned about the plans, and is excited about how this could grow his city.

"A lot of tourist like to ride bicycles, but they don't want to carry their bicycles with them," he said. "They'll have a chance to have a dock right down on Front Street where they can rent a bicycle for an hour, a half hour or whatever they want."

Erikson says they are looking to place bikes and bike lanes around Northwestern State University and the Louisiana School for Math, Science and the Arts, but their goal is to make sure they are placed strategically around the city.

While Carey plans to continue biking, he's excited to see less cars, and more walking and biking throughout the

Erikson says they will hold another stakeholder meeting at the end of May to begin looking at selecting a bike share company. He says they are looking to launch the program by the end of August early September of this year.

If you live in Natchitoches and want to take the survey, click HERE. The survey will be available until May 31st.

If you need a paper survey you can pick one up at City Hall located on 700 2nd Street.

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https://www.ksla.com/2019/05/14/natchitoches-looking-input-bicycle-pedestrian-plan/ Page 4 of 7

SOURCE:KSLA, https://www.ksla.com/2019/05/14/natchitoches-looking-input-bicycle-pedestrian-plan/; accessed September 2019.

Appendix E: Media Coverage

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https://www.ktbs.com/news/local/deadline-approaching-to-complete-bicycle-and-pedestrian-master-plan-survey/article_5cc44296-82f2-11e9-b45a-f7c9723a6515.html

Deadline approaching to complete Bicycle and Pedestrian Master Plan Survey in Natchitoches

May 31, 2019

anyaberkut

NATCHITOCHES, La. - The City of Natchitoches has set the wheels in motion on its first-ever Bike and Pedestrian Master Plan. But city leaders need your help, and time is running out.

"We're excited to see the Bicycle and Pedestrian Plan come to fruition further solidifying our goal of healthy initiatives in our city. This will increase accessibility to all our city has to offer and has the potential to impact economic development in a positive way," Mayor Posey said.

You can help the city envision the future of bicycle and pedestrian connectivity in Natchitoches by completing the online Bike & Pedestrian User survey. The online survey was created to gauge the public's perceptions and experience in walking and bicycling in the City of Natchitoches.

The survey will be available on the City's website, www.natchitochesla.gov until May 31st, after which responses will be tallied and the Plan's Steering Committee will begin drafting recommendations that will take survey responses into account. Paper surveys may be obtained from City Hall by calling 318-352-2772 or by emailing hwenninger@NatchitochesLA.gov.

All City of Natchitoches residents are encouraged to complete the brief, 10 question public input survey regarding your perception towards bicycling and walking in the city. The survey takes approximately 8 minutes to complete.

SOURCE:KTBS, https://www.ktbs.com/news/local/deadline-approaching-to-complete-bi...aster-plan-survey/article_5cc44296-82f2-11e9-b45a-f7c9723a6515.html; accessed September 2019.

Final Public Meeting: Citizens Invited to Review Draft Plan and Share Ideas

AUGUST 21, 2019

The City of Natchitoches invites all citizens to attend the final public meeting

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presenting the city's draft Bicycle and Pedestrian Plan (NBPP). A first for the city, the plan will serve as a guide for improving bicycle and pedestrian network inside city limits, once adopted.

Mayor Posey stated, "The Bicycle and Pedestrian Plan is just another future improvement our community needs as we continue to see an influx in use of our sidewalks by cyclist and pedestrians alike. We encourage the public to attend the meeting on August 28th and share opinions on the proposed plan."

The final public meeting is an opportunity for Natchitoches residents to gather and share their ideas and experiences improving walking and biking, in addition to learning first-hand about the proposed plan. Anyone who is interested in improving the City of Natchitoches won't want to miss it!

ADA NOTICE:

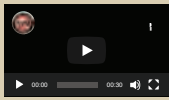
For special meeting accommodations, contact our ADA Coordinator, Hannah Perot-Wenninger, via (318) 352-2772.

FINAL PUBLIC MEETING:

DATE: WHEN: WHERE:

August 28, 2019 (08.28.19)
5:00 – 6:00 p.m.
City Municipal Building
560 2nd Street, Natchitoches, Louisiana

LOUIE BERNARD – STATE SENATE DISTRICT 31



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SOURCE:Natchitoches Parish Journal, https://natchitochesparishjournal.com/2019/08/21/final-public-meeting-citizens-invited-to-review-draft-plan-and-share-ideas/comment-page-1/; accessed September 2019.

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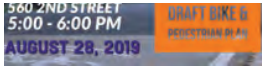
Natchitoches citizens invited to discuss proposed bicycle plan



Posted: Aug 21, 2019 / 10:25 AM CDT /
Updated: Aug 21, 2019 / 10:25 AM CDT

NATCHITOCHES, La. – Natchitoches is inviting citizens to attend a final public meeting Tuesday, August 28 presenting the city's draft Bicycle and Pedestrian plan. (NBPP)

The plan will serve as a guide for improving the bicycle and pedestrian network inside city limits.

Mayor Posey said "The Bicycle and Pedestrian Plan is just another future improvement our community needs as we continue to see an influx in use of our sidewalks by cyclist and pedestrians alike. We encourage the public to attend the meeting on August 28th and share opinions on the proposed plan."

The meeting is an opportunity for Natchitoches residents to gather and share their ideas and experiences

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2. Two unrestrained juveniles killed in Claiborne Parish crash
3. Two killed, one injured in Texarkana, Arkansas shooting
4. Woman convicted of torching ex's home sentenced to three years probation
5. Jury finds Bossier man guilty of killing co-worker

improving walking and biking, and learning more about the proposed plan.

The meeting will be held at 5 p.m. in the City Municipal Building at 560 2nd Street in Natchitoches, La.

For more information contact Sooraz Patro at 318-487-5401.

Stay up to date with the latest news and weather by downloading the Arklatexhomepage News App from the App Store or Google Play.

SOURCE:KTYL, https://www.arklatexhomepage.com/top-stories/natchitoches-citizens-invited-to-discuss-proposed-bicycle-plan/; accessed September 2019.

Appendix E: Media Coverage

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VIDEO

Natchitoches prepares for new bike path plans

by: Alexandra Meachum

Posted: Aug 28, 2019 / 10:15 PM CDT / Updated: Aug 29, 2019 / 07:57 AM CDT

NATCHITOCHES, La. (KTAL/KMSS) – People will eventually be able to safely ride their bicycles through the streets of Natchitoches as the city develops a new bike path program

A final public meeting was held Wednesday evening to hear from residents and share ideas, while learning about how bike paths will improve the quality of life in Natchitoches.

Transportation officials discussed the various types of bike share lanes and where they can be implement throughout the city.

"The younger generation want to bike and ride. They don't want to move to places to live and work where there is no facility right. So the City of Natchitoches and the mayor are progressive enough and they wanted to have up a bike and pedestrian plan that can then leverage federal, state and any funding to get those projects done," said Sooraz Patro, Transportation Director Rapides Area Planning Commission.

The bike paths are also a part of a larger plan for better pedestrian crossings. Patro said it's also a quality of life issue that promotes a healthier lifestyle.

"We're excited to see some sort of biking improvements. I know I'd use my bike a lot more," said Jeremiah Alonzo, Natchitoches resident.

2 Claiborne Parish crash
3 Two killed, one injured in Texarkana, Arkansas shooting
4 Woman convicted of torching ex's home sentenced to three years probation
5 Jury finds Bossier man guilty of killing co-worker

It's also geared toward Natchitoches being a tourist and college town, helping people and students access the city in a safer way.

"To capture more tourists that will fuel the economy. Help the students because most of the students don't have vehicles. So they would like to go to the Wal-Mart, grocery store, super one, and they don't have anything safer. No sidewalks or no bike lanes to go to those places," Patro said.

Which some residents said they are ready for.

"I already bike from the east side to campus occasionally and it's always a little scary," said Amelia Chelsey, Natchitoches resident.

Currently, they've selected 55 miles of roads that can be used in the bike and pedestrian path plans.

The first projects will begin the next few years and continue to expand throughout Natchitoches.

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Man seeks justice after his dog was left to die

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SOURCE:KTYL, https://www.arklatexhomepage.com/video/natchitoches-prepares-for-new-bike-path-plans/; accessed September 2019.

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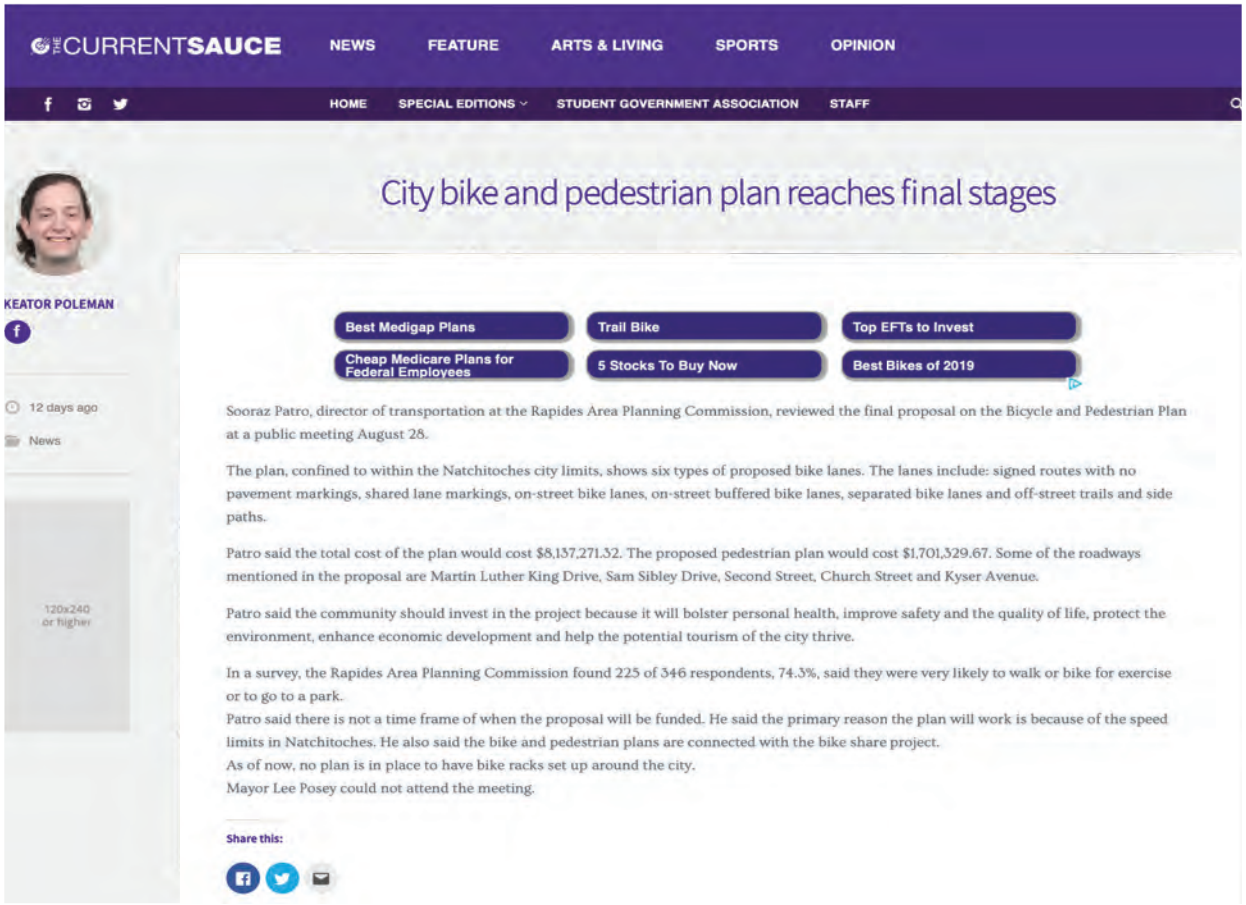

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City bike and pedestrian plan reaches final stages

KEATOR POLEMAN

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Sooraz Patro, director of transportation at the Rapides Area Planning Commission, reviewed the final proposal on the Bicycle and Pedestrian Plan at a public meeting August 28.

The plan, confined to within the Natchitoches city limits, shows six types of proposed bike lanes. The lanes include: signed routes with no pavement markings, shared lane markings, on-street bike lanes, on-street buffered bike lanes, separated bike lanes and off-street trails and side paths.

Patro said the total cost of the plan would cost $8,137,271.32. The proposed pedestrian plan would cost $1,701,329.67. Some of the roadways mentioned in the proposal are Martin Luther King Drive, Sam Sibley Drive, Second Street, Church Street and Kyser Avenue.

Patro said the community should invest in the project because it will bolster personal health, improve safety and the quality of life, protect the environment, enhance economic development and help the potential tourism of the city thrive.

In a survey, the Rapides Area Planning Commission found 225 of 346 respondents, 74.3%, said they were very likely to walk or bike for exercise or to go to a park.
Patro said there is not a time frame of when the proposal will be funded. He said the primary reason the plan will work is because of the speed limits in Natchitoches. He also said the bike and pedestrian plans are connected with the bike share project.
As of now, no plan is in place to have bike racks set up around the city.
Mayor Lee Posey could not attend the meeting.

Share this:

SOURCE: Currentsauce.com, https://currentsauce.com/2019/09/05/city-bike-and-pedestrian-plan-reaches-final-stages/; accessed September 2019.