

LEADING BY EXAMPLE

Project Approach and Needs Assessment

When it comes to walking and bicycling, Jacksonville, Fla., can be described as a big city with a big challenge, and a lot of opportunity to improve. Encouraging walking and bicycling in a city covering the largest geographic area of any in the lower 48 states, where more than 100 people are killed in traffic crashes every year (one third of whom are cyclists or pedestrians), and where the majority of the metropolitan area has been built in the age of auto-dominated suburban development, is a daunting task. Tackling that challenge head-on, however, is vital for the long term economic and physical health of the community.

Where to start? The city does not have the benefit of decades of prior planning and implementation of bikeway networks and pedestrian-friendly development; there was no benchmark data on levels of use, network mileage, connectivity, or even the relative safety of biking and walking on City streets – just the raw crash data and the disturbing near-daily news stories of fatal or serious crashes on area roadways.

The development of the Pedestrian and Bicycle Master Plan was focused on the center of the city – approximately the area within the I-295 Beltway, or Mobility Zones 7-10 – to capture those areas with the highest existing levels of bicycling and walking, the greatest concentration of crashes involving pedestrians and bicyclists, and the biggest likely demand for these activities in the future.

Within this limited geographical scope, the consultant team was tasked with a series of data collection and inventory tasks that were designed to establish precedent and a methodology that could subsequently be used throughout the whole city. The preceding chapter documents the first pedestrian and bicyclist counts in the City, as well as an inventory of bicycle parking spaces and walking/biking infrastructure in a number of areas of the community. In each case, the consultant team has recommended an approach to continuing these tasks across the whole city in the future.

The discovery phase of the project also revealed:

- a systemic, citywide traffic safety problem with 15,000-18,000 injury-producing motor vehicle collisions every year
- serious and fatal crashes are heavily concentrated on major arterial roadways – especially FDOT roads
- pedestrian and bicyclist crashes are also heavily concentrated on roads with higher speeds and multiple lanes
- there is a significant absence of basic pedestrian infrastructure – sidewalks – on many roads in neighborhoods throughout the city
- there is a significant absence of crosswalks on all but the busiest intersections, leaving long stretches of busy roadways with no controlled or marked crosswalks (with the notable exception of the downtown core where crosswalks and sidewalks are mostly present)
- infrastructure for bicyclists – trails, striped lanes, signed and marked routes – is highly disconnected and is often the bare minimum required for designation (e.g. bike lanes are minimum widths regardless of traffic volumes, speed and number of lanes)

- there is a widespread disregard for crosswalks by both motorists (failing to stop/yield) and pedestrians (not using push buttons, crossing out of the crosswalk or against the light)
- extensive sidewalk bicycling (except for riders in the “enthusiast” category), even on streets with marked bike lanes such as North Main Street, suggests a high level of perceived danger associated with on-road bicycling
- an absence of any organized group(s) of pedestrians or voice for issues around walking safety, and
- an active bicycling constituency representing a relatively narrow segment of the observed cycling population.

Against this backdrop and potentially overwhelming needs assessment, the consultant team pursued a strategy for addressing pedestrian and bicyclist issues separately. The goal was to provide both a systematic, long-term, city-wide approach to create a more walkable and bike friendly community while simultaneously creating an actionable list of projects immediately ready for funding through the CIP and Mobility Fee process.

Walking Approach

The consultant team identified five common Jacksonville street types that emerged from the crash study, facility inventory, field work, and other data collection activities. In documenting these street types, the consultant team highlighted one prime example of each type, together with several similar streets within the study area that fell into the same category with the most significant crash history and demand for walking.

For each of the five street types, a summary of the key issues and potential design solutions was presented. Before and after images were rendered to show the changes that are necessary to enhance safety and accessibility on that street type.

Bicycling Approach

Addressing the issues and opportunities around bicycling centered on a traditional approach to establishing a bikeway network in the study area that can be used to identify and prioritize key projects to improve bike safety, accessibility and mobility.

The consultant team identified a network of some 250 miles of on-street and off-street trail infrastructure that includes existing bikeways (e.g. bike lanes on San Jose Boulevard; the S Line Trail) on city and state rights of way, as well as potential corridors for improvement.

Creating a Roadmap for Change

The result of this needs assessment and project approach was an extensive set of recommended improvements to hundreds of miles of roadway throughout the study area – and, by extension, throughout the entire City. Clearly, such significant change won't happen overnight, and isn't going to be accomplished by the City alone.

Therefore, the following sections of this Master Plan create a roadmap for change that:

- focuses attention on target areas (both high crash locations as well as area- and system-wide improvements that are necessary)
- prioritizes recommended improvements based on community-developed criteria, and
- identifies clear roles for the City, JTA, FDOT, DIA and other related agencies to play in making this transformation happen.

By following this roadmap, the City of Jacksonville can lead by example in implementing changes to create a more walkable and bike-friendly community.

Pedestrian Safety Action Plan

Elected officials, agency staff, the media, and the general public in Jacksonville are all acutely aware of the poor traffic safety record for which the city is infamous, particularly in relation to pedestrian safety. The city is ranked as the third most dangerous City in America for walking, and has been identified by the Federal Highway Administration as a Pedestrian Safety Focus City.

FHWA recommends, and the City has embraced, development and implementation of a Pedestrian Safety Action Plan to begin to address pedestrian safety issues. The consultant team followed the steps in the FHWA's "How to Develop a Pedestrian Safety Action Plan" to identify problems, develop countermeasures, and recommend an implementation plan. The implementation plan for Jacksonville is built around three key strategies.

1. Systematic Neighborhood Action Program for Pedestrians (SNAPP)

The City has an extensive backlog of basic neighborhood pedestrian infrastructure needs that has to be addressed strategically to maximize efficiency and make a noticeable difference. The plan recommends an approach to improving sidewalks and crosswalks throughout the city that tackles all maintenance needs, as well as minor installation projects (e.g. filling a missing section of sidewalk), in a defined neighborhood or area in one concentrated effort – rather than in a reactive, piecemeal approach in individual locations all over the city. This approach is modeled on the City's successful stormwater management program.

Further, the plan recommends that the prioritization of neighborhoods to receive SNAPP treatment incentivizes community involvement in completing walking audits (another tool provided by the Federal Highway Administration for Focus Cities) to identify needed improvements in the community.

2. Roadway Improvements for Pedestrian Safety (RIPS)

Too many of the roads and streets in the City of Jacksonville lack adequate infrastructure for safe, convenient, and accessible travel by foot. Most streets lack basic sidewalks, or have sidewalks intermittently on one or other side of the road. Very few intersections have marked or signalized crosswalks, even on roads with significant volumes of traffic.

Only two of the five typical street types identified by the consultant team have even basic sidewalk and crosswalk facilities in place. On downtown streets, there are sidewalks and crosswalks throughout, but they are often a bare minimum given the actual and potential volume of pedestrians. Along busy commercial and retail roadways, minimum width sidewalks and periodic crosswalks (usually with minimum crossing times and continual turning traffic), are insufficient given the high volume and speed of motor vehicle traffic.

This is impossible to fix overnight. Each of the five typical street types identified in this plan is illustrated with an archetypal example, together with recommended improvements to improve pedestrian and bicyclist safety in that location. In addition, there are several locations identified with similar characteristics to the example where there is a history of pedestrian crashes and/or high pedestrian demand. Making the recommended improvements to these streets will begin to tackle immediate high crash locations in a highly visible manner – and establish concrete examples that are replicable, time and again, in locations all across the city.

The plan further recommends several strategies for funding improvements to these specific roadways, including stand-alone projects developed for the Mobility Fee process as well as projects that are included in larger roadway improvements funded by the City or state.

3. Recommended locations for Rectangular Rapid Flashing Beacons

During the development of the plan, the consultant team was asked to address pedestrian safety issues from the perspective of where a particular countermeasure – the rectangular rapid flashing beacon – could be used to improve conditions for walking and improve pedestrian safety. The team created a methodology and initial list of locations suitable for the installation of RRFBs based on projected crossing demand, roadway characteristics, and crash history.

Implementation by the City of this combination of area-wide improvements, corridor-specific actions, and individual location-based countermeasures can start to change the narrative around pedestrian safety and access in Jacksonville, and point the way forward for all transportation- and development-related agencies and partners in the city.

Bikeway Network Improvements

Connecting existing bikeways, and improving the overall safety of the on-road bicycling experience, emerged as clear priorities from the public, project steering committee members and agency staff throughout the planning process.

1. Network Identification

The consultant team was tasked with identifying a network of bicycling infrastructure to serve people of all ages and abilities, and to focus on local – i.e. short distance -- bike access issues rather than longer distance cycling routes and trips. The City has a lot of local and neighborhood roads that offer a relatively low stress cycling experience, but connectivity of that street network is very limited. As a result, traffic – including bike traffic – is inevitably channeled to a smaller number of busy major roads and bridges that are very high-stress (if not downright hostile) bicycling environments.

Within the study area, the consultant team identified a potential low-stress network of 250-miles of bikeway, comprising a wide range of bicycle facility types. The network was selected to provide connected, accessible travel throughout the study area.

In some instances, for example where there are limited roadway connections across a river or highway, major arterials with high traffic volumes and speeds were included in the network. In order to make them part of a low-stress bicycling network, these roadways will require separated bike lanes or shared use paths. In other corridors, low volume local roads were included as reasonable direct alternatives to parallel, busier major roads; on these routes, improvements to busy intersections will be needed to facilitate safe connections between quieter streets.

The plan therefore includes a 250+-mile bikeway network that, when implemented, will create a connected system of on- and off-street bikeways throughout the study area. Some segments of the network must be created as part of Florida DOT projects, others as the JTA completes its' Mobility Works initiative, and still more will be the responsibility of agencies such as the City of Jacksonville Parks department and the Downtown Investment Authority. Recommended improvements will be funded primarily through the annual CIP and multi-year Mobility Fee funding process.

2. Network Assessment

Of this study network, approximately 150 miles was identified for assessment using the Bicycle Level of Service (BLOS) tool that is a component of Florida DOT's Quality/Level of Service assessment. The BLOS assessment uses roadway and traffic characteristics to determine a level of comfort that bicyclists (with some level of experience) typically feel on the road – with vehicle speed, traffic volume and lane widths as key determinants to that perception of safety or comfort.

Corridors with newly installed bike infrastructure, such as the San Jose Boulevard corridor, were excluded from the BLOS assessment as the goal was to focus on corridors where changes to the roadway would make a significant difference to the comfort and attractiveness of the route for cyclists, i.e. where the BLOS score could be noticeably improved.

For several reasons, the consultant team would not recommend continued use of the BLOS tool for additional application in the study area or when initiating a planning process for Mobility Zones 1-6.

- The BLOS tool is increasingly dated. For example, it does not adequately assess separated bikeway infrastructure types (e.g. separated bike lanes, sidepaths) that are more and more common today;
- The BLOS assessment does not take into account intersections and turning movements, which are a significant factor in the feeling of safety and comfort on the roadway for bicyclists
- The BLOS tool was initially calibrated with cyclists of some experience and tolerance for traffic – this does not provide the “all ages, all abilities” focus that communities are using today to determine facility choices and design.

Based on the BLOS assessment; an analysis of crashes, public input, and network gaps; and current best-practice approaches to low stress bike network development, the consultant team has recommended specific bikeway facility types for the 250-mile network. The principles behind the facility selection – which boils down to increasing the degree of separation between motor vehicles and bicyclists as speed and traffic volumes increase – should also be applied for network development outside the study area.

3. Project prioritization.

In order to create a prioritized list of bikeway projects for the Mobility Fee and CIP funding process, the consultant team worked with the city to break the proposed bikeway network down into individual project segments. These individual projects were then ranked using a tool that reflected priorities established by the Steering Committee, agency staff and the public. This process is documented in the bike network chapter that follows.

Design Recommendations

Throughout the planning process, there has been a clear recognition that while the City must take a leadership role in improving conditions for walking and bicycling, there is also a critical role for other agencies to play. Important segments of the bikeway network will need to be created as part of Florida DOT projects. The ambitious Mobility Works initiative of the Jacksonville Transportation Authority includes critical corridors for walking and bicycling – and the full integration of walking, bicycling and transit is essential to provide real transportation choices in the community. In addition, players such as the Parks Department, the Downtown Investment Authority, and private sector developers all need to be following the city’s leadership, and using the same roadmap to create a more walkable and bike-friendly Jacksonville. Therefore the Master Plan includes general design recommendations for these agencies and organizations to follow when implementing roadway, park and development projects.