Complete Streets and Road Diets

John Landosky
City of Little Rock Bicycle and Pedestrian Coordinator
What are “Complete Streets”?

Complete Streets are streets designed to be safe and comfortable for all legal street users.

- **Space for PEOPLE**: Curb ramps, crosswalks, and curb extensions to make it easy for pedestrians to cross streets and access destinations.
- **Space for BIKES**: Designated connected routes and low-stress facilities that support people riding bikes, e-bikes, and scooters.
- **Space for CARS**: Traffic calming measures and design cues to encourage slower speeds and driver awareness of vulnerable road users.
- **Space for MASS TRANSIT**: Bus pullouts, shelters, transit-only lanes, and signal priority to create transit-friendly roadways.
- **Space for SHARED MOBILITY**: Designated curbside space for shared bike and scooter parking that separates users from traffic, and keeps sidewalks clear and safe.
- **Space for CREATURE COMFORT**: Street furniture, parks, public art, lighting, and public green spaces that promote gathering and social interaction.
### Why Aren’t You Biking?

<table>
<thead>
<tr>
<th>What keeps you from biking more often? (Check all that apply)</th>
<th>Arkansans</th>
<th>Little Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destinations too far/takes too long to bike</td>
<td>30.7%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Unsure of routes to take</td>
<td>16.8%</td>
<td>18.8%</td>
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<tr>
<td><strong>Traffic is too heavy</strong></td>
<td><strong>70.0%</strong></td>
<td><strong>72.1%</strong></td>
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<tr>
<td>Dangerous intersections</td>
<td>63.1%</td>
<td>64.2%</td>
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<tr>
<td>Motorists don’t exercise caution around cyclists</td>
<td>76.7%</td>
<td>77.0%</td>
</tr>
<tr>
<td>Lack of bike facilities - bike lanes, paths, wide shoulders, etc.</td>
<td>79.9%</td>
<td>83.0%</td>
</tr>
<tr>
<td>Poor condition of bike facilities</td>
<td>27.5%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Weather</td>
<td>33.0%</td>
<td>32.7%</td>
</tr>
<tr>
<td>Lack of lighted routes or paths</td>
<td>24.2%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Personal security</td>
<td>18.6%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Need to transport other people or things</td>
<td>30.7%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Traveling with small children</td>
<td>13.3%</td>
<td>9.7%</td>
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<tr>
<td>Lack of secure bicycle parking</td>
<td>35.0%</td>
<td>32.1%</td>
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<tr>
<td>Lack of work amenities (showers, lockers, etc.)</td>
<td>25.8%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Exposure to air pollution</td>
<td>3.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Other</td>
<td>10.1%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

| Total Number of Respondents                                | 894       | 165         |

• **ARDOT’s Bicycle and Pedestrian Transportation Plan (2017)**
Policy
Complete Streets Resolution

- 2013
- Directed City staff to revise Master Street Plan to reflect Complete Streets principles
Roadmap to 2020

• 2014
• Complete Streets one of 17 key goals for the City of Little Rock Sustainability Commission
Complete Streets Ordinance

• 2015
• When building or resurfacing a street, design will be a Complete Street unless one of five exceptions met
• One of the best Complete Streets Ordinances of 2015 (Smart Growth America)
Complete Streets Policy

Adopt a statewide Complete Streets policy or other policy that institutionalizes planning, designing, and building safe places for people to bike and walk as part of the transportation system.
Planning
Master Bike Plan

- 1990’s
- Adopted into Master Street Plan
Complete Streets: Bicycle Plan

- 2021-present
Arkansas Bicycle and Pedestrian Transportation Plan

2017
Arkansas Department of Transportation

ACTION PLAN FOR IMPLEMENTING PEDESTRIAN CROSSING COUNTERMEASURES AT UNCONTROLLED LOCATIONS

October 2018

ArDOT Midblock Crossing Plan

2018
Route Planning
2022
Funding
Not Great

City of Little Rock

<table>
<thead>
<tr>
<th>Building Blocks of a Bicycle Friendly Community</th>
<th>Average Silver</th>
<th>Little Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Speed Roads with Bike Facilities</td>
<td>35%</td>
<td>6%</td>
</tr>
<tr>
<td>Total on- and off-road Bicycle Network Mileage to Total Road Network Mileage</td>
<td>48%</td>
<td>18%</td>
</tr>
<tr>
<td>Bicycle Education in Schools</td>
<td>GOOD</td>
<td>NEEDS IMPROVEMENT</td>
</tr>
<tr>
<td>Share of Transportation Budget Spent on Bicycling</td>
<td>11%</td>
<td>2%</td>
</tr>
</tbody>
</table>

“Budgets are moral documents”
Martin Luther King Jr.

ArDOT

- Infrastructure & Funding: C
- Education & Encouragement: D+
- Traffic Laws & Practices: C
- Policies & Programs: F+
- Evaluation & Planning: D

» Establish a dedicated annual budget for implementation of your Bicycle Master Plan, in addition to funding for ongoing bicycle programming and infrastructure development/maintenance.

Spend at least 2% of federal transportation funds on biking and walking improvements.
Road Diets While Resurfacing

Low cost way to increase safety for all users
Low cost way to add to your bike network

Incorporating On-Road Bicycle Networks into Resurfacing Projects
Road Diets
ROAD DIET

every day counts
An Innovation Partnership with States
Road Diets

4-to-3 Road Diet
Typical 4-to-3 Road Diet
Method #2: Evaluating All Four-Lane Undivided Roads

Four-lane undivided roads historically experience increased crashes as traffic volumes rise due to motorists weaving in and out of traffic to avoid vehicles slowing to turn. Additionally, as non-motorized and multimodal transportation increases, communities desire street designs that include pedestrian and bicycle facilities, transit options, and more livable spaces, known as Complete Streets.
Incorporating Road Diets into Existing Agency Plans and Practices

Including Road Diets into an agency's Strategic Highway Safety Plan (SHSP), overall transportation planning process, or design guidance distinguishes the countermeasure as a broader safety improvement strategy. The following are examples of how States have Incorporated Road Diets into agency plans, guidance and practices.

Road Diets in Strategic Highway Safety Plans

Strategic Highway Safety Plans (SHSPs) can facilitate and promote Road Diets within an agency by incorporating the treatment into several State SHSPs refer directly to Road Diets for the same improvement, including:

- Lane Conversion
- Lane Elimination
- Lane Narrowing
- Lane Reduction
- Road Narrowing
- Road Re-channelization
- Road Reconfiguration

The table below lists State SHSPs that include the SHSP emphasis or focus area which can be found on FHWA’s Office of Safety website:

<table>
<thead>
<tr>
<th>State</th>
<th>Terminology</th>
<th>Emphasis or Focus Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>Lane Conversion</td>
<td>Highways</td>
</tr>
<tr>
<td>Arkansas</td>
<td>Road Diet</td>
<td>Bicyclists, Pedestrians</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>Road Narrowing</td>
<td>Pedestrian</td>
</tr>
<tr>
<td>Idaho</td>
<td>Lane Narrowing</td>
<td>Intersection</td>
</tr>
<tr>
<td>Michigan</td>
<td>Lane Conversion</td>
<td>Intersection</td>
</tr>
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<td>Minnesota</td>
<td>Road Diet</td>
<td>Bicyclists, Pedestrians</td>
</tr>
<tr>
<td>Missouri</td>
<td>Lane Narrowing</td>
<td>Intersection</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Road Diet</td>
<td>Lane Departures, Bicyclists, Pedestrians</td>
</tr>
<tr>
<td>Ohio</td>
<td>Road Diet</td>
<td>Bicyclists, Pedestrians</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>Road Diet</td>
<td>Achievements</td>
</tr>
<tr>
<td>South Dakota</td>
<td>Road Diet</td>
<td>Intersections</td>
</tr>
<tr>
<td>Washington</td>
<td>Road Diet</td>
<td>Bicyclists</td>
</tr>
</tbody>
</table>
Four Lane Street Configuration
Unsafe for Cars
3 crash types can be reduced by going from 4 to 3 lanes:

1 – rear enders
3 crash types can be reduced by going from 4 to 3 lanes:
2 – side swipes
3 crash types can be reduced by going from 4 to 3 lanes:
3 – Left Turns/Broadsides
Calms Traffic

• No “jockeying”
• No passing – prudent driver sets speed
• Reduces speed differentials
Also high speed differentials
Road Diet Makes Street Safer for Bikes and Pedestrians
Calming traffic makes people walking and biking more visible.
Prevents collisions.
Calming traffic makes collisions less deadly.
Toward Zero Deaths.
Dedicated space for bikes
Consider the experience walking here
vs. here

Broadway (US 70) & 19th
Midblock Crossing Safer
BETORE
40-48 ft. of danger, no refuge

AFTER
5-7 ft. of relative safety
10-12 ft. of relative safety
10-12 ft. of danger
10-12 ft. of danger
10-12 ft. of danger
Parallel Parking

7-10 ft. wide “steel barrier” between moving traffic and sidewalk
Little Rock Road Diets - Completed
12th Street
Jonesboro to Wolfe
2.1 miles
2012-2013
4-to-3, Conventional bike lanes added

Purple – Resurfaced but no road diet
Blue – Resurfaced and road dieted
July 2007
Main Street

7th Street to Roosevelt (US 70)
1.25 miles
2013
4-to-3, Conventional bike lanes added
Pop Up in the Rock 2012
2007 or 2021?

Where would you rather spend more time?

Where is there more revenue generated?

What makes you say that?
Chester

Daisy Bates to Roosevelt
0.84 miles
2015
4-to-3, Fog lanes added
W Daisy Gaston Bates (14th Street)

Battery to Scott
1.3 miles
2015
Fog lanes added
9th Street
Main St. to I-30
0.53 miles
2020
4-to-3, wider lanes
Road Diets

Lane Narrowing
Wider travel lanes are correlated with higher vehicle speeds.

As the width of the lane increased, the speed on the roadway increased. When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster.

36th Street
Lane narrowing
Van Buren
Markham to Kavanaugh
0.52 miles
Lane Narrowing
2017
Little Rock Road Diets - Proposed
Broadway (US 70)

- 4-to-3 road diet
- 12th Street to Roosevelt
- 0.94 miles
Four lane streets challenging for pedestrians to cross
Kavanaugh Lane Narrowing

PROJECT SCOPE: Kavanaugh Resurfacing / Restriping Project
Markham to Cedar
Markham to Cedar

- Bike lane
- Buffer
- Bike Lane
- Parking
Questions?
Demand Analysis:
Residential Density
Demand Analysis: Employment Density
Demand Analysis:

Safe Routes to Schools
Demand Analysis:

Trails and Parks
Demand Analysis: Transit
Demand Analysis:
Retail Employment
Composite Demand Analysis
Equity Analysis:

Race/Ethnicity
Equity Analysis:
Age
Equity Analysis: Income
Equity Analysis:

Education
Equity Analysis: Commute
Equity Analysis:

Linguistic Isolation
Composite Equity Analysis
Safety Analysis

Bicycle Crashes

OVERVIEW
There were 96 crashes involving bicycles in Little Rock from 2015 through 2019, with only one fatal injury to a bicyclist and six serious injuries. The largest categories of injury were "possible" and "suspected minor," each with 32 total incidents, and 34 incidents out of 96 involved "no apparent injury" to the bicyclist. Map 18 displays all 96 bicycle crashes during the five-year study period by injury severity.

Map 18: Bicycle crashes by injury severity, 2015 - 2019

Figure 27 below shows the occurrence of the injury severity on each type of roadway. All fatal or suspected serious injury crashes occurred on non-local roads where higher traffic volumes and speeds are found.
Public Outreach Summary: What We Heard

The interactive map provided options for participants to identify destinations of interest, barriers to walking and biking, and where they would like bike parking, on street bike facilities and off-street bike facilities.

Interactive Map Comment Themes

- Downtown connectivity needed
- Improvements needed for biking across and along high speed/high volume arterials
- Bicycle infrastructure needed south of I-630 and SW Little Rock in general
- Close the Arkansas River Trail gaps
- Existing bike infrastructure is inconsistent and disconnected
- Bike infrastructure needed for more direct connections across town

THE TOP 3 things the City could do to improve mobility in Little Rock, according to the survey:

1. Build more biking/walking trails
2. Increase connectivity between neighborhoods and activity/commercial areas
3. Implement traffic calming measures on streets

80% Prefer bicycle facilities that are physically separated from cars, and only 7% are willing to ride in mixed traffic with automobiles on almost any type of street

13% Do not ride a bicycle or are unlikely to ever do so

78% Live in Little Rock
54% Work in Little Rock
4% Visit Little Rock for shopping, fun, or recreation

| 1,386 total surveys | 8 stakeholder interviews |
| 700+ interactive map comments | 3 committee meetings |
Introduction

The proposed bicycle network aims to reflect the plan's vision and goals, the core of which is to provide a connected network of low stress bikeways that is safe and comfortable for people of all ages and abilities. A connected network of neighborhood greenways, buffered and protected bike lanes and intersections, and paved shared trails, aim to achieve this vision of a low stress network.

Other improvements such as standard bike lanes that can be implemented in the near-term can serve as stepping stones in the development of a city-wide, low stress network. These facility types are described in detail on the following pages. The proposed bicycle network was developed to:

- Build upon existing and in development bicycle facilities
- Create bicycle facilities in areas where currently none exist
- Provide low stress facility recommendations, serving all ages and abilities of bicyclists
- Provide feasible alternative routes to the major arterials
- Provide connections to neighborhoods, schools, parks, and other key destinations
- Address gaps in the network

Facility Types

The facility types on the right and following pages make up the general toolbox of recommendations proposed in this plan. Each facility has its own set of guidance based on context and implementation feasibility. This section culminates in a series of maps showing the recommended strategic and existing network.
Neighborhood Greenways

Description

Neighborhood greenways (also known as bicycle boulevards) are streets with low vehicle volumes and speeds that prioritize bicycle travel through signage, pavement markings, and/or traffic calming. Cities with strong neighborhood greenway networks utilize the local street network instead of busy arteries. In residential neighborhoods, neighborhood greenways improve travel for bicyclists while calming traffic and adding green infrastructure where possible. Neighborhood greenways are shared by automobiles and bicycles, but at speeds and volumes that make travel more comfortable for all ages and abilities of bicyclists.

Elements of Neighborhood Greenways

DISTINCT VISUAL IDENTITY

Unique pavement markings and wayfinding signs increase visibility of neighborhood greenway routes, assist with navigation, and alert drivers that the roadway is a priority route for people bicycling.

SAFE, CONVENIENT CROSSINGS

Traffic controls, warning devices, and/or separated facilities at intersections help facilitate safe and convenient crossings of major streets along the neighborhood greenway network.

Benefits

- Provide a low-stress route that is safe for all ages and abilities.
- Can be implemented with relatively low-cost materials.
- Bicycle travel is prioritized using a variety of tools, from simple branding/signage to more robust traffic-calming treatments such as speed humps or traffic diverters.

BICYCLE PRIORITY

Traffic-calming treatments such as traffic circles, diverters, and chicanes, sometimes in place of existing stop signs, can help prioritize bicycle through travel and reduce motor vehicle traffic speeds.

TYPICAL USE

- Parallel with, and in close proximity to major thoroughfares (1/4 mile or less) on low-volume, low-speed streets.
- Follow a desire line for bicycle travel that is ideally long and relatively continuous (2-5 miles).
- Avoid alignments with excessivedigging or circuitous routing if possible. The bikeway should have less than 10% out of direction travel compared to shortest path of primary corridor.

- Local streets with traffic volumes of fewer than 1,500 vehicles per day and posted speed limits of 25 miles per hour or less.
- Utilize traffic calming to maintain or establish low volumes and discourage vehicle cut-through and speeding.
- Signs and pavement markings are the minimum treatments necessary to designate a street as a bike boulevard.
Bike Lanes

I frequently bike Chester St from 23rd St all the way to the trail, and it gets more dangerous when the road goes to 4 lanes and there is no bike lane. Connecting that would open up biking for my neighbors, most of whom won’t feel safe without at least a painted bike lane.

Description

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge, or parking lane. This facility type may be located on the left side when installed on one-way streets, or may be buffered if space permits.

Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions. Bike lanes also facilitate predictable behavior and movements between bicyclists and motorists. Bicyclists may leave the bike lane to pass other bicyclists, make left turns, avoid obstacles or debris, and avoid other conflicts with other users of the street.

Elements of Bike Lanes

- The minimum width of a bike lane adjacent to a curb is 3 feet exclusive of a gutter, a desirable width is 5 feet.
- Parking To’s or hatch marks can indicate the vehicle door zone on one-way streets with high parking turnover, to guide bicyclists away from doors.
- Typically installed in reducting street space.
- Can be used on one-way or two-way streets.

- Counter flow bike lanes may be used to allow two-way bicycle travel on one-way streets for motorists, improving bicycle network connectivity.
- Stopping, standing and parking in bike lanes may be problematic in areas of high parking demand and deliveries, especially in commercial areas.
- Wider bike lanes or buffered bike lanes are preferred at locations with high parking turnover. Furthermore, on streets with higher speeds and higher traffic volumes, the greater the need for buffer space, and ideally, a physical barrier (see protected bike lane in the pages that follow).

Benefits

- Increases bicyclist comfort and confidence on busy streets.
- Creates separation between bicyclists and automobiles.
- Increases predictability of bicyclist and motorist positioning and interaction.
- Increases total capacities of streets carrying mixed bicycle and motor vehicle traffic.
- Visually reminds motorists of bicyclists’ right to the street.

Figure 3.1: Bike lane dimensions with buffer (graphs from the NACTO, Small Town and Rural Multimodal Networks Design Guide)

Bike Lane

6 ft (1.8 m)

Buffer (Optional)

1.5-4 ft (0.5-1.2 m) or wider
Protected Bike Lanes

Description
Protected bike lanes are exclusive bicycle facilities where bikeways are separated from sidewalks and motor vehicle traffic by physical features intended to prevent encroachment. They may also be referred to as cycle tracks or separated bike lanes. Protected bike lanes differ from standard bike lanes in two ways: there is a lateral separation between the protected bike lane and the nearest general purpose lane, and there is some type of physical feature that provides positive separation between the protected bike lane and the general purpose lane. The physical feature may include such things as curbs, flexible delineator posts, permanent planters, or other raised features (see graphic on the following page). Protected bike lanes may be one-way or two-way.

Benefits
- Completes networks where high-speed roads provide the only corridor available.
- Provides a more appropriate facility for users of all ages and abilities than shoulders or mixed traffic facilities on roads with moderate or high traffic intensity.
- Fills gaps in networks of low-stress local routes such as shared use paths and bicycle boulevards.
- Encourages bicycling and walking in areas where high-volume and high-speed motor vehicle traffic would otherwise discourage it.

Elements of Protected Bike Lanes
In addition to lateral separation and raised physical features, separation may also be achieved by adjusting the elevation of the bike lane surface relative to the elevations of the sidewalk and general purpose roadway. General dimensions include:
- 7 ft width preferred (5 ft minimum).
- 3 ft minimum buffer width adjacent to parking, 18 inch minimum adjacent to travel lanes (NACTO, 2012). Channelizing devices should be placed in the buffer area.
- If buffer area is 4 ft or wider, white chevron or diagonal markings should be used.

I very firmly believe that building bike lanes in denser areas will pay massive dividends. Fill up downtown with protected bike lanes ASAP.

Figure 88: Two-way separated bike lane example

Figure 24: Forms of separation as outlined in the FHWA’s Separated Bike Lane Planning and Design Guide.
Paved Shared Trails

Description

Paved shared trails (or commonly referred to as shared use paths) are completely separated from motorized vehicular traffic and are constructed in their own corridor, often within an open-space area. Paved shared trails should be a minimum of 10’ wide. Pavement widths of 12’-14’, and even 16’-feet are appropriate in high-use urban contexts.

Benefits

- Provides a dedicated facility for users of all ages and abilities.
- Provides, in some cases, access to areas that are otherwise served only by limited-access roadways.
- Provides nonmotorized transportation access to natural and recreational areas, which can especially help individuals without access to an automobile obtain access to recreation.
- Provides, in some cases, a shortcut between cities or neighborhoods.
- Supports tourism through convenient access to natural areas or as an enjoyable recreational opportunity itself.

Elements of Paved Shared Trails

- The minimum paved width for a trail is 10 feet. Anticipated future traffic volumes should be used to guide design decisions.
- Maximum grade should not exceed 5 percent.
- Provide a graded shoulder area of at least 2 feet.
- Lighting should be provided at path/pathway intersections at a minimum and at other locations where nighttime use is likely to be high.
- Sight distances are based on site conditions and user-based factors. Ensure sight distances are designed per the AASHTO Guide.
- Provide protective railings/ences at 42 inches high if the trail is adjacent to a steep slope.

Sidepaths

A sidepath is a bidirectional paved shared trail located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to on-roadway facilities in heavy traffic environments, and can allow for reduced roadway crossing distances.

Design Strategies

- Reduce the frequency of driveways.
- Design intersections to reduce driver speeds and heighten awareness of path users.
- Encourage low speeds on pathway approaches.
- Maintain visibility for all users.
- Provide clear assignment of right-of-way with signs and markings and elevation change.

Horizontal Clearance

- From Path: 3 ft (0.9 m) min
- From Roadway: 4 ft (1.2 m) min

Lateral Offset

- From Roadway: 4 ft (1.2 m) min

Adjacent Road Speed Limit (MPH) | Recommended Sidepath Separation Distance at Crossings
--- | ---
25 | 6.5 ft (2.0 m)
35-45 | 6.5-16.5 ft (2.0-5.0 m)
>55 | 16.5-30 ft (5.0-9.0 m)

Figure 40: Guidance for sidepath separation distance in various contexts (FHWA Small Town and Rural Multimodal Networks Design Guide)

Figure 39: Shared bike path from the FHWA Small Town and Rural Multimodal Networks Design Guide
Spot Improvements

Description
Spot improvements address locations that present a barrier to safe, comfortable, and convenient bicycle travel. Spot improvements are usually located at potential points of conflict between motor vehicles and bicyclists such as intersections and crossings. Spot improvements include a variety of tools and specific improvements should be context-sensitive.

These spot improvements recommendations are a critical piece of the low stress network. In several instances, spot improvements should be coordinated with the implementation of the neighborhood greenway network to ensure a connected network of improvements.

Benefits
- Support bicycle crossing of major roadways.
- Provide enhanced connections between two bicycle facilities and/or from a bicycle facility to a destination.
- Address existing gaps or missing links in the bicycle network.

Spot Improvement Examples

The Arch St/Roosevelt Rd intersection is where a majority of South of Roosevelt bicyclists end up having to cross, just due to safety. Need an improved safe crossing to get riders across Roosevelt.

Figure 48: Rectangular rapid flashing beacons (RRFB) above left signal drivers at underorganized intersections of people biking or walking. New street signs, connections, above right, enhance access for people walking and biking.

Figure 49: The chart below from ADOT’s Action Plan for Implementing Pedestrian Crossing Treatments at Uncontrolled Locations outlines parameters for choosing an appropriate crossing treatment.

![Chart]

Figure 50: Pedestrian Hybrid Beacons stop automobile traffic for bicyclists and pedestrians wishing to cross a high traffic volume/high speed roadway.

Figure 47: The photo above shows a protected intersection using low cost material such as plastic bollards and paint.

Figure 42: Bike boxes, above left, provide a dedicated space for bicyclists ahead of motor vehicle traffic at signaled intersections. Bicycle crossing markings, above right, provide clear direction for bicycle travel through an intersection.

LITTLE ROCK COMPLETE STREETS: BICYCLE PLAN

CHAPTER 3: RECOMMENDATIONS
Choosing an All Ages and Abilities Bikeway Type

This chart provides guidance in choosing a bikeway design that can create an all ages and abilities bicycling environment based on a street’s basic design and motor vehicle traffic conditions such as vehicle speed and volume. This chart should be applied as part of a flexible, results-oriented design process on each street, alongside robust analysis of local bicycling conditions.

Users of this guidance should recognize that, in some cases, a bicycle facility may fail short of the all ages and abilities criteria but still substantively reduce traffic stress. Jurisdictions should use an inability to meet the all ages and abilities criteria as a reason to avoid implementing a bikeway, and should not prohibit the construction of facilities that do not meet the criteria.

### Table 5. Contextual Guidance for Selecting All Ages and Abilities Bikeways

<table>
<thead>
<tr>
<th>Roadway Context</th>
<th>Target Motor Vehicle Speed</th>
<th>Target Max. Motor Vehicle Volume (AADT)</th>
<th>Motor Vehicle Lanes</th>
<th>Key Operational Considerations</th>
<th>All Ages and Abilities Bicycle Facility</th>
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</thead>
<tbody>
<tr>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td>Any of the following high correlations: activity, frequent buses, motor vehicle congestion, or turning conflicts</td>
<td>Protected Bicycle Lane</td>
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<tr>
<td>10 mph</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td>Pedestrians share the roadway</td>
<td>Shared Street</td>
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<td>25 mph</td>
<td>Any</td>
<td>1,000 – 2,500</td>
<td>Any</td>
<td>&lt;50 motor vehicles per hour on the peak direction at peak hour</td>
<td>Neighborhood Bike Route</td>
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<tr>
<td>30 mph</td>
<td>Any</td>
<td>300 – 1,500</td>
<td>Any</td>
<td>&lt;30 motor vehicles per hour on the peak direction at peak hour</td>
<td>Neighborhood Bike Route</td>
</tr>
<tr>
<td>35 mph</td>
<td>Any</td>
<td>1,300 – 3,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
</tr>
<tr>
<td>40 mph</td>
<td>Any</td>
<td>800 – 2,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
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<td>24 mph</td>
<td>Any</td>
<td>800 – 2,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
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<td>28 mph</td>
<td>Any</td>
<td>800 – 2,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
</tr>
<tr>
<td>32 mph</td>
<td>Any</td>
<td>800 – 2,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
</tr>
<tr>
<td>High speed</td>
<td>Any</td>
<td>800 – 2,000</td>
<td>Any</td>
<td>Motor vehicle lane or more</td>
<td>Neighborhood Bike Route</td>
</tr>
</tbody>
</table>

Figure 45: The Preferred Bikeway Types chart shown above from the FHWA Bikeway Selection Guide provides a great resource when selecting the appropriate facility for varying roadway contexts.

Figure 46: Chart assumes operating speeds are similar to posted speeds, if they differ, use operating speeds rather than posted speed.
### Funded Bicycle Facilities

Building on the existing bicycle network, the City of Little Rock is already in the process of implementing several facilities that are funded and will be constructed in the near term. Each of these facilities are paved shared trails and are identified in the table to the right and in the map below. These are key building blocks for bicycle network planning.

**Map 20: Funded Bicycle Facilities**

<table>
<thead>
<tr>
<th>Table 6. Funded Bicycle Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROJECT NAME</strong></td>
</tr>
<tr>
<td>Arkansas River Trail</td>
</tr>
<tr>
<td>Southwest Trail</td>
</tr>
<tr>
<td>Joubert Dr</td>
</tr>
<tr>
<td>Tri-Creek Greenway</td>
</tr>
<tr>
<td>Rodney Parham Rd (side lanes and shoulder)</td>
</tr>
</tbody>
</table>

### In Development Bicycle Facilities

These projects, while not fully funded for construction, have some conceptual design or even preliminary engineering completed. These are key building blocks for Little Rock’s bicycle network as well that should remain top priorities for implementation.

**Map 21: In Development Bicycle Facilities**

<table>
<thead>
<tr>
<th>Table 7. In Development Bicycle Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROJECT NAME</strong></td>
</tr>
<tr>
<td>Kawsmouth Blvd</td>
</tr>
<tr>
<td>Arkansas River Trail</td>
</tr>
<tr>
<td>Southeast Trail</td>
</tr>
<tr>
<td>Southwest Trail</td>
</tr>
<tr>
<td>Center Hill Rd</td>
</tr>
<tr>
<td>Tri-Creek Greenway</td>
</tr>
<tr>
<td>UALR Connection</td>
</tr>
<tr>
<td>Rose Creek Trail</td>
</tr>
</tbody>
</table>
2022 RESURFACING PROJECTS

These are roads that are scheduled for resurfacing in 2022 that are also opportunities to be stripped with bicycle facilities due to extra pavement width. While many of these segments do not connect directly to other existing bicycle facilities, they can serve as a starting point for network development.

Map 22: 2022 Resurfacing Projects

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>FROM</th>
<th>TO</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellington Village Rd</td>
<td>Kirk Rd</td>
<td>Wellington</td>
<td>1.1</td>
</tr>
<tr>
<td>Huron Ln</td>
<td>Braun Mountain Dr</td>
<td>Marshall Dr</td>
<td>0.3</td>
</tr>
<tr>
<td>Shackleford Rd</td>
<td>Riding Path Rd</td>
<td>Brookline Dr</td>
<td>0.5</td>
</tr>
<tr>
<td>Arrow Rd</td>
<td>Vandeventer Dr</td>
<td>J.J. Dupuy Rd</td>
<td>1</td>
</tr>
<tr>
<td>7th St</td>
<td>Marshall St</td>
<td>Broadway St</td>
<td>0.9</td>
</tr>
<tr>
<td>Lancaster Rd</td>
<td>Young Rd</td>
<td>5th St</td>
<td>0.6</td>
</tr>
<tr>
<td>Otter Creek Rd</td>
<td>Base Pro Pkwy</td>
<td>Stagecoach Rd</td>
<td>0.5</td>
</tr>
</tbody>
</table>

7TH ST RESURFACING

7th St is one of the few east/west streets that crosses the railroad tracks and serves as a key corridor for east/west bicyclists commuting to/from downtown. This corridor was previously studied by the city, including multiple parking studies, network analyses, and public and stakeholder engagement. The below concept is the preferred alternative from that study. With the upcoming resurfacing from Marshall St to Chester St, the buffered bike lane option below should be striped from Marshall St to Broadway St (Chester St to Broadway St was previously resurfaced and has space for stripping buffered bike lanes).

Figure 57: The currently existing four-lane cross section on 7th St exits at Battery St. The 7th St buffered bike lane configuration should continue to Battery St (and further west), which is a key north/south crossing for bicyclists of all ages.

OPTION #2

TYPICAL PAVEMENT SECTION W.I.A.
PHASE 1 PRIORITY PROJECTS

These three proposed priority projects were supported in public input and stakeholder feedback. They are composed of key opportunities that fulfill a variety of prioritization criteria that will help them score high in future funding applications, and are geographically distributed across Little Rock. Furthermore, these projects represent a diversity of facility types, including protected bike lanes and neighborhood greenways, that can aid the City of Little Rock in developing an all ages and abilities bicycle network.

Map 23: Phase 1 Priority Projects

Priority Project Checklist

Developed by the project team and supported by project stakeholders, the table below was created to serve as a general guide for comparing bicycle infrastructure projects. When listing the order in which to build out Little Rock’s network, it is just as important to be strategic in considering how new projects build upon previous projects as it is to build in order of any given list. It is also important to consider opportunities to build facilities as they arise. For example, some of the most cost-effective opportunities to build facilities are by utilizing streets with extra pavement width and capitalizing on the network of low traffic volume/low speed neighborhood streets (neighborhood greenways). In addition to upcoming roadway and development projects, regardless of priority ranking.

The three projects below fill critical gaps in the bicycle network, as well as create bicycle facilities where there are currently none. They serve as potential ‘backbone’ elements of Little Rock’s developing bicycle network.

Table 9. Priority Project Checklist

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>FACILITY TYPES</th>
<th>MILES</th>
<th>ESTIMATED COST RANK</th>
<th>CONNECTS HIGH PRIORITY AREAS FROM DEMAND ANALYSIS</th>
<th>CONNECTS TO AN EXISTING GROOVE IN DEVELOPMENT</th>
<th>REPORTED BIKE LANE CRASH AVOIDANCE ROUTE</th>
<th>USES NURSERY PUBLIC LAND OR STREET ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Central Extension</td>
<td>Neighborhood Greenway</td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectivity</td>
<td>Shared Painted Trail</td>
<td>Protected Bike Lane</td>
<td>Coving Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Arkansas River Trail to Interstate Park</td>
<td>Neighborhood Greenway</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. 3rd Street St</td>
<td>Protected Bike Lanes</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Priority Project Sheets

The following series of three project summaries can be used when applying for future funding, or when communicating the priority project details to potential partners during implementation. The project sheets that follow show an analysis of the priority segments, including factors of feasibility identified by the stakeholder committee and project consultants. It serves as an inventory of the alignment factors at play, providing guidance for the next steps in implementation.

Strategic Network

Furthermore, a network of 54 strategic bicycle projects connecting all parts of Little Rock was developed during this planning process by identifying ‘paths of least resistance’ opportunities for all ages and abilities network in Little Rock that also fulfill the priority criteria in the table above.
PHASE 2: STRATEGIC BICYCLE NETWORK – DOWNTOWN LITTLE ROCK

Due to several key streets that have extra pavement width as well as a network of low volume/low speed neighborhood streets, multiple opportunities exist to better connect downtown Little Rock and surrounding neighborhoods with all ages and abilities bicycle facilities.

Map 25: Strategic Bicycle Network - Downtown Little Rock

Table 11. Strategic Bicycle Network Projects

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>FROM</th>
<th>TO</th>
<th>RECOMMENDATION NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chester St</td>
<td>Arkansas</td>
<td>Crump Park</td>
<td>4.0 road realignment opportunity (660.0, 980.0, AADT) north of 14th St, Chester St - combine with neighborhood greenway opportunity to the south to Crump Park.</td>
</tr>
<tr>
<td>Martin Luther King Jr. Dr</td>
<td>4th St</td>
<td>Southside Park/SW Trail</td>
<td>Uptake bike lanes within existing pavement south of 600, examine potential realignments of I-630 bridge to bring bike lanes across the bridge.</td>
</tr>
<tr>
<td>Battery St</td>
<td>Capitol St</td>
<td>Southside Park/SW Trail</td>
<td>Create a buffered bike lane on Battery St over I-630 between 7th St and 10th St (would need to remove small amount of on-street parking to bring this cross-section to 12th St bike lane). Each of New, Walnut St and Battery St could combine as a neighborhood greenway. Key Intersections: Duvall-Olson Blvd, West Ave, Roosevelt Rd.</td>
</tr>
<tr>
<td>22nd St</td>
<td>Booker Ave</td>
<td>Barton Park, SW Trail</td>
<td>22nd St could serve as a neighborhood greenway. E 21 St from Kerr St across 301 Sts. Elementary school has extra width, could create a two-way protected bikeway/bike path along the north side and create trail connection to school entrance.</td>
</tr>
<tr>
<td>Main St</td>
<td>Washington Street</td>
<td>Crump Park</td>
<td>Consider creating protected bike lane in front of school (on-street parking can be shifted elsewhere). Consider creating a neighborhood greenway following the freeway route along a series of neighborhood streets to White St. Could serve as a connection. W 33rd St under I-30 (currently gated off) to allow for a bi-level crossing under I-30.</td>
</tr>
<tr>
<td>17th St</td>
<td>Washington</td>
<td>Rockefeller Magnet, MacArthur Park</td>
<td>Using the extra pavement width along Mackinmont St and the 17th St undercrossing of I-30, create a two-way protected bike lane/bike path that will serve all ages and abilities. MacArthur Park. Key crossing 17th St.</td>
</tr>
<tr>
<td>15th St</td>
<td>Rockefeller Magnet, MacArthur Park</td>
<td>Central High, 6th St</td>
<td>15th St has low traffic volumes and speeds and is very flat – consider converting this to a neighborhood bikeway with additional traffic calming features, shared lane markings, and wayfinding signage. Key intersections - MLK Blvd, 14th St, Broadway St, Main St.</td>
</tr>
<tr>
<td>7th St</td>
<td>Downtown</td>
<td>Woodruff Elementary, Lamar Porter Field</td>
<td>Combined with a future resurfacing and previously recommended buffered bike lanes, extend bike lanes west within the existing pavement (buffer striping where possible, eventually create protected bike lanes.</td>
</tr>
<tr>
<td>10th St/12th St</td>
<td>Existing Park/Shared Trail at Main St</td>
<td>State St</td>
<td>Utilize green space along the south side of 12th St/10th St to extend the trail. Key challenge will be retaining walking along north side of Mt. Holly Cemetery.</td>
</tr>
<tr>
<td>Spring St</td>
<td>5th St</td>
<td>Broadway St</td>
<td>Spring St is a relatively low traffic volume/speeded street through downtown. Shared lane treatments (sharrows, wayfinding, and a degree of traffic calming measures) could make it a suitable north/south connector to the Broadway Bridge sidewalk and Arkansas River Trail. A short two-way protected bikeway along 2nd St and as a short paved shared trail connection would be needed to complete the link to the Broadway St bridge.</td>
</tr>
<tr>
<td>3rd St</td>
<td>Union Station/SW Trail</td>
<td>Broadway St</td>
<td>A two-way protected bike lane (similar to 8th St recommendation) could be implemented by removing an on-street parking to adjacent surface lots. Otherwise, the road could be reconfigured 2.5 with a directional buffered bike lane (2nd St is one-way to the west).</td>
</tr>
<tr>
<td>Park St</td>
<td>7th St</td>
<td>12th St</td>
<td>Park St is a steep hill climbing toward Central High. Due to its width, an uphill bike lane could be striped on the climbing side, complemented by sharrows on the downhill side.</td>
</tr>
</tbody>
</table>
Chapter 4

Program & Policy Recommendations

Introduction

Program and policy recommendations are essential and complementary to the bicycle infrastructure recommendations presented in the previous chapter. Throughout the planning process, several ideas for program and policy improvements were collected during public, stakeholder, and committee feedback. Program and Policy recommendations in this chapter include:

- Update The Medlar Street Plan: Complete Streets Ordinance Adherence
- Greenway Infrastructure Requirements
- Equitable Engagement in Active Transportation
- Safe Routes To Parks & Schools Action Plans
- Create and Adopt a Vision Zero policy and action plan
- Speed Management
- Tactical Urbanism/Pop Up in the Rock
- Wayfinding
- Bicycle & Pedestrian Count Program
- Bike Parking Ordinance
- Electric Micromobility Share Expansion Study
- Medical District Active Transportation Plan

Figure 32: The Six Es are the general categories that provide a balance of active transportation efforts.

Source: Alte Planning + Design
UPDATE THE MASTER STREET PLAN: COMPLETE STREETS ORDINANCE ADHERENCE

Recommendation:

The updated bicycle maps in this plan, including the protected bike lane category, should be incorporated into the Master Street Plan. Bicycle infrastructure should be included during all roadway surfacing, reconstruction, or new roadway or development projects, unless as specified as one of the exceptions in Section 5 of the Complete Streets Ordinance.

Bikeway designers and the City of Little Rock should reference the latest versions of existing national design guidance for bicycle infrastructure, including that published by FHWA, AASHTO and NACTO. These guidelines are also incorporated in Metroplan’s recently completed Multimodal Infrastructure Guidelines.

GREENWAY INFRASTRUCTURE REQUIREMENTS

Recommendation:

Paved shared trails identified in this plan (also known as shared use paths or greenways) should be required as part of new development.

Background

The City should consider requirements for reservation of right-of-way for greenway, dedication of easement or greenway for public use; and/or construction of greenway in new developments where a greenway or trail is shown on the updated Little Rock Bicycle Plan (or other adopted plan) or where a property connects to an existing or proposed greenway. The City should consider this for both new residential and commercial development.

Because this would be a new requirement, the City could consider offering incentives in the form of reduced fees, cost sharing, density bonuses, or reduction in other open space requirements when adopted greenway alignments are constructed through private development. For example, the City could require reservation of right of way for a greenway in a new development, but could reduce open space requirements or grant a density bonus or other incentive if a portion of a planned greenway is constructed and dedicated by the developer.

EXAMPLES FROM OTHER CITIES

| Charlotte, NC | Nashville, TN |
| Durham, NC | Fayetteville, AR |
| Oxford, MS | Fort Smith, AR |

Figure 54: Recently installed bicycle path just south of the new Little Rock Southwest High School on Malvern Rd. This was constructed by the City as part of the new high school construction and auxiliary roadway improvements in this area. As new development or new roadway projects happen, there are key opportunities to continue adding to the paved shared trail network.

FEDERAL, STATE AND LOCAL GUIDELINES

Additional resources for standards and guidance are referenced throughout the Guide. These should be used in conjunction with the Guide to meet in varying contexts as appropriate.

ADA: Americans with Disabilities Act
- United States Access Board’s proposed Public Rights-of-Way Accessibility Guidelines (PRWAG)
- 2010 ADA Standards for Accessible Design

American Association of State Highway and Transportation Officials (AASHTO)
- Guide for the Development of Bicycle Facilities
- Guide for Geometric Design of Transit Facilities on Highways and Streets
- Guide for the Planning, Design, and Operation of Pedestrian Facilities

Federal Highway Administration (FHWA)
- Federal Highway Administration (FHWA) Bicycle Design Guide
- The Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD)
- Achieving Multimodal Networks
- Federal Highway Administration (FHWA) Traffic Calming in Poly 5.7

The National Association of City Transportation Officials (NACTO)
- NACTO Transit Street Design Guide
- NACTO Urban Bikeway Design Guide
- NACTO Urban Street Design Guide

Figure 53: National standards for bicycle infrastructure design from the FHWA, AASHTO and NACTO are referenced on page 5 of Metroplan’s Multimodal Infrastructure Guidelines.
EQUITABLE ENGAGEMENT IN ACTIVE TRANSPORTATION

Recommendation:
With the City’s creation of the Office of Diversity, Equity, and Inclusion (ODEI), develop a toolbox of equitable engagement strategies and materials to be used at future active transportation events and engagement efforts. Develop and implement an ongoing engagement process co-created with this new Office that builds community capacity and is available to supplement engagement for active transportation projects.

Background
Prepare an engagement plan that identifies desired outcomes and measures for engagement efforts.
- Identify and contact existing residents, employees, business and property owners, neighbors, and other stakeholders
- Partner with a community-based organization or consultant that has experience working with community members in the proposed project area
- Coordinate partnering organization or consultant for their time and energy on the project and for their local expertise
- Work with partnering organization or consultant early in the process to shape the engagement efforts and build shared understanding, accountability, and a sense of value in the project outcomes

Implement an inclusive outreach process
- Use a variety of outreach methods including pop-up or mobile workshops, design charrettes, regular standing neighborhood association meetings, focus groups, and online engagement tools
- Collect demographic data of outreach participants related to the geographic area of the project or program to understand who is not being reached and tailor remaining engagement accordingly
- Designate an ODEI staff member that will act as a community liaison to regularly update stakeholders on the project pipeline as part of their work plan

Evaluate the impact of engagement efforts during and after the process
- Share and learn from the results

SAFE ROUTES TO PARKS & SCHOOLS ACTION PLANS

Recommendation:
Develop action plans for active transportation connections to both schools and parks around the City, building off efforts such as the Safe Routes to Parks plan for connecting War Memorial Park from 12th St along Jonesboro Dr.

Background
Safe Routes to School and Safe Routes to Parks enables and encourages children to bike and walk to school parks. The program helps make bicycling and walking to school a safe and more appealing method of transportation for children. These programs facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools and parks.

Both schools and parks are key local destinations that, if connected by safe and accessible bicycle infrastructure, has the potential to influence a shift to more active modes of transportation. Serving as “mini” bicycle and pedestrian plans for each school/park, these planning processes could begin by incorporating the recommendations for the network from this plan, and further explore opportunities and challenges for infrastructure, programming, and policy. See Priority Project 1 in Chapter 3 of this plan for an example of potential connectivity improvements to multiple schools and parks in southwest Little Rock.

Encouraging children to bike or walk to and from school is an easy and inexpensive solution. Following are suggestions on programmatic approaches to active transportation for students to schools:
- If children live close enough and have a safe route, they can ride their bikes or other cycling with parents, friends or others in their neighborhood. Of course, the school needs to provide bike racks for students to safely lock their bikes while they are in class.
- Another option is a bike train led by parents or school staff. Students can gather with their bikes at a designated location and ride in a “train” with a parent or other trusted adult leading the group to school in the morning and home again in the afternoon.
- For students who live too far away, a drop-off location within biking distance of the school can be used as the meeting location. Churches are often willing to host these meet-ups. The students would then ride together, preferably with an adult, to end from the school.
- National Bike to School Day: In partnerships with the League of American Bicyclists, the National Center for Safe Routes to School organizes an annual Bike to School Day during the first week of Bike Month. Encourage parents and school officials to organize a bike-pool or bike train for parents at local schools and engage the next generation of cyclists. Learn more and get tips at www.walkbiketoschool.org.

Many of these ideas and resources are both applicable to schools and parks connectivity as key destinations in Little Rock.
TACTICAL URBANISM/POP UP IN THE ROCK

Recommendation:
Partner with Pop Up in the Rock and create and adopt a Tactical Urbanism Design Guide and implementation policy to streamline the process and ensure consistent implementation.

Background
Tactical urbanism has evolved quickly from small community-driven acts addressing a need in the built environment with a temporary intervention to include formalized processes that test and implement major infrastructure projects. Cities tend to support these activities because their benefits can be far-reaching with often minimal risk. Pop Up in the Rock has 10 years of experience working with the City of Little Rock to create demonstration projects, several of which altered traffic movement to facilitate active transportation. Through that experience, they've learned how to get these projects done in Little Rock. The City should partner with them to record and formalize this process using Fayetteville's guide as a template/reference as needed.

CITY OF FAYETTEVILLE, AR TACTICAL URBANISM GUIDE
The City of Fayetteville developed a Tactical Urbanism Guide to encourage and enable residents to streamline tactical urbanism projects in Fayetteville. Similar to Little Rock, Fayetteville has experience with various forms of tactical and open streets type projects. The guide and policy builds off those precedents to create a process so the community and City of Fayetteville can develop and test ideas in a more streamlined way. Complete with easy-to-understand timelines, materials examples, and necessary forms, the guide and policy can serve as a potential template for Little Rock.

WAYFINDING

Recommendation:
Create and implement a wayfinding plan as bicycle facilities become connected across the City of Little Rock.

Background
Wayfinding elements such as signage and mile markers will help to draw visitors, help users identify the best routes, and enhance their ability to connect to key destinations. A wayfinding system will give users a unique experience while improving safety by alerting both users and motorists of the presence of active transportation routes. The Little Rock Convention and Visitor’s Bureau is in the process of conducting a wayfinding campaign. As the City works to implement connected bicycle infrastructure projects, including neighborhood greenways, wayfinding schemes for these projects should be developed in parallel with the results of the Little Rock Convention and Visitor’s Bureau wayfinding efforts.

Figure 58. City of Fayetteville AR’s Tactical Urbanism Guide

Figure 59. Example neighborhood greenway (or bicycle boulevard) wayfinding signage from across the US.

LITTLE ROCK COMPLETE STREETS: BICYCLE PLAN
CHAPTER 6: PROGRAM & POLICY RECOMMENDATIONS

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Page 109
Chapter 5

The Path Forward

Introduction

The infrastructure, policy, and program recommendations in previous chapters provide strategies for making Little Rock more bicycle friendly. The purpose of this chapter is to provide guidance and action steps for implementing the recommendations.

The implementation of the Little Rock Complete Streets Plan will require leadership and dedication to bicycle facility and program development on the part of a variety of City of Little Rock departments and partners. Equally critical, and perhaps more challenging, will be meeting the need for a recurring source of revenue. Even small amounts of dedicated funding for bicycle and pedestrian infrastructure & programs could be very useful and beneficial when matched with outside sources. Most importantly, the City needs to accomplish the recommendations of this plan by acting alone; success will be realized through collaboration with regional and state agencies, the private sector, and non-profit organizations.

This chapter provides the necessary steps and guidance for delivering the recommendations of this plan. Additionally, further guidance on project delivery, maintenance, partnerships, funding, investment approach, and evaluation are provided.

Phase One and Phase Two action steps, with recommended project partners, are detailed at the end of this chapter.

This plan provides a long-range vision for improving conditions for bicycling in Little Rock. This plan will be implemented incrementally over the coming years.
Typical Project Development Process

These are the steps typically involved in bicycle facility development, when the project is being built independent of other major development or roadway projects. Certain funding sources may have additional requirements, and some steps may occur simultaneously or in a different order.

Bicycle Project Delivery Process

This section outlines several steps in the bicycle project delivery process to be used by the City (much of which is part of current City implementation processes), especially in regards to public engagement and project evaluation. Consistency is critical to provide the public a general understanding of how a project will be developed, designed, and implemented.

As noted in the previous page, the project development process includes a number of steps in taking a project from idea to implementation. The following pages provide additional details, including the public engagement process within the implementation process. The list below highlights important action steps to implement this process.

PROJECT SELECTION FOR IMPLEMENTATION:

Bicycle projects are selected through several means:

- The prioritized process as described in Chapter 2.
- By building on opportunities, such as street restorations, major street reconstruction projects, or those that arise when new connecting facilities (from completed projects or new development) trigger a change in needs or expectations.
- Strategically building an interconnected network, building and expanding off of existing facilities and/or key destinations/neighborhoods that are currently unconnected.

BICYCLE PROJECT DELIVERY ACTION STEPS

Continue formalizing bicycle project delivery that includes public engagement, data collection and technical analysis, conceptual design alternatives, and preferred design.

- Evaluate and monitor projects by conducting before-and-after data collection, including incorporating new technology (such as MioVision bike/ped counts) and user perception surveys.
- Continue partnering with StudioMAIN and build a robust program for temporary implementation of bicycle facilities (tactical urbanism projects (ie: Pop Up in the Rock)). Experiment and test improvements of a bicycle facility in order to determine traffic operation pros and cons.
- Continue providing training for City staff on bicycle facility design best practices, the bicycle project delivery process, and project evaluation techniques.
- Evaluate the need for an additional staff person that would more directly oversee education and outreach as part of the bicycle project delivery process and all bicycle plan implementation activities.

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CHAPTER 9: THE PATH FORWARD

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INVESTMENT APPROACH
Little Rock’s funding approach to implement this plan should be multi-pronged, covering investments not just in constructing new facilities, but also in offering bicycle parking, encouraging people to use facilities, educating people about the rules of the road, maintaining bicycle facilities, and tracking the success of bicycle projects and programs. The City should employ a funding allocation strategy that is flexible and allows for opportunistic spending.

CAPITAL FINANCING & FUNDING STRATEGY
Federal and state grant funding sources are important, and will be even more so with the recently passed Infrastructure Investment and Jobs Act. Current budget allocations are not sufficient for widespread expansion of the bicycling network. The City will need to provide an increased Capital Improvement Program (CIP) allotment for those bicycle projects defined in Chapter 3 of this plan while continuing to take advantage of implementation during street resurfacing, major street improvements, and enforcing the Complete Streets Ordinance with new development/broadway projects (including paved shared trails).

In the past decade, local funds have been allocated to bicycle-specific projects on a case-by-case basis, typically to match funds garnered from state or federal funds. Bicycle projects have been funded by the Surface Transportation Block Grant Program (STBG), Transportation Alternatives Program (TAP), Highway Improvement Program (HIP), and Federal Lands Access Program (FLAP). The table to the right shows some of these grants recently awarded for bicycle projects.

The City has been successful in obtaining grant funding, and this plan will help in positioning the City for continued successful grant applications in addition to more thoroughly incorporating Complete Streets elements into all new roadway and development projects in the City. The table on the right is a sampling of recent grant funding awards for new bicycle facilities.

CONTINUE EVALUATION AND CONSIDERATION FOR UPGRADES
In addition to maintaining existing bicycle facilities, the City should also work to improve facilities as needed. An improvement of an existing facility could involve the condition of a bicycle facility, modifying operations for all modes, or other engineering elements that provide a safer street for everyone. In the new Complete Streets Policies, the City should maintain the prioritization framework developed in this plan to re-prioritize bicycle facility corridors to be considered for improvements. A bicycle network is always evolving. The City must continually update its GIS bicycle facility database, re-evaluate re-prioritize, and modify its bicycle facilities as opportunities (and challenges) change from year to year.

This final step is functionally the same as step one in the process, as Little Rock re-evaluates its bicycle network, identifying new projects to undertake and existing facilities that need modification or expansion. The process is a cycle of continuous improvement.

Table 19. Funding and Financing Strategies

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>FUNDING AND FINANCING STRATEGIES APPLIED TO DIFFERENT TYPES OF BICYCLE FACILITY PROJECTS</th>
<th>PROTECTED BIKE LANE</th>
<th>NEIGHBORHOOD GREENWAY</th>
<th>BIKE LANES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>Continue to include bicycle facilities in street projects and development programs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometime</td>
<td>Continue to install pavement markings for bicycle facilities through the street resurfacing program.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often</td>
<td>Position bicycle projects to compete for grant funds by developing preliminary plans for priority bicycle projects.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Complete for funds on an annual basis in significant but manageable packages of projects.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>As done with other major transportation investments, utilize bonds to finance priority bicycle projects.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 18. Recent Grant Awards

<table>
<thead>
<tr>
<th>SELECTED BIKE PROJECT GRANTS</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW Trail FLAP Grant Phase 1</td>
<td>$1.6M</td>
</tr>
<tr>
<td>SW Trail FLAP Grant Phase 2</td>
<td>$1.3M</td>
</tr>
<tr>
<td>Southwest Trail STF TAP</td>
<td>$900K</td>
</tr>
<tr>
<td>Jonerboro DR STBG</td>
<td>$710K</td>
</tr>
<tr>
<td>Wil Creek Greenway STBG</td>
<td>$3M</td>
</tr>
</tbody>
</table>

FUNDING COMMITMENT
Top cities across the country have shown that a broad-based approach to bicycle investment funding for infrastructure, marketing, education, and maintenance can simultaneously realize marked increases in bicycle use and safety. To attain the successes of other cities, Little Rock should emulate their strategies and commitment to bicycling, including providing continuous and predictable investments. Doing so is critical for the City to achieve the goals of this plan.

FUNDING STRATEGY ACTION STEPS
Include bicycle projects in the City’s Capital Improvement Program (CIP), increasing consistent year-to-year funding levels.

Fund bicycle facilities maintenance and consider funding additional maintenance equipment needed to adequately maintain the system, especially new facilities such as protected bike lanes.

To maximize readiness for grant funding, develop preliminary plans (30% construction drawings) for priority bicycle projects.

Fund bicycle programs and public outreach efforts. Create a bicycle and pedestrian education/outreach coordinator position.

Fund end-of-life facilities as part of all future development of major capital projects, adhering to the updated bicycle map in this plan and the Complete Streets Ordinance.