B- ACTIVE Plan Executive Summary

Greater Birmingham Region

REGIONAL PLANNING COMMISSION
OF GREATER BIRMINGHAM

May 2019

IT ALWAYS SEEMS IMPOSSIBLE UNTIL IT'S DONE.

Nelson Mandela

A Plan for Active Transportation

The B-ACTIVE Plan (the Plan) is the Active Transportation Plan for the Greater Birmingham region. The purpose of the Plan is to establish a clear vision for building and expanding a multimodal transportation network in Jefferson and Shelby Counties and parts of Blount and St. Clair Counties, with specific focus on creating a cohesive system of bicycle and pedestrian infrastructure. This Plan identifies and prioritizes strategic projects to build a safer, more connected, and equitable active transportation system for the region.

The plan was developed by the Regional Planning Commission of Greater Birmingham and Toole Design Group on behalf of the Birmingham Metropolitan Planning Organization (MPO), in conjunction with local municipalities, agencies and stakeholders throughout the region.

The following Executive Summary document is intended to give you a high-level overview of the public involvement process and the plan development itself. In addition, this summary contains a walk-through of how to use the Plan when identifying a project and using the appendices that are a part of the B-ACTIVE Plan.

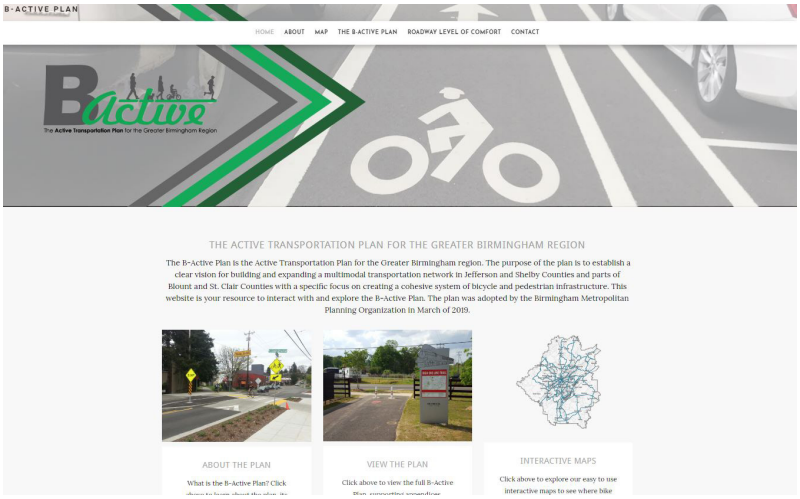
Active transportation:

Refers to the human-powered modes of travel such as walking and biking, primarily.

Active transportation, also known as non-motorized transportation, refers to the human-powered modes of travel such as walking and biking, primarily. The greater Birmingham regional transportation system currently lacks sufficient non-motorized provisions along many corridors where bicycling and walking should be viable travel choices–especially for short trips. In light of rising energy costs, an aging population, public health concerns, and an increasing demand for alternatives to motor vehicle travel, there is a growing need for infrastructure and development patterns that support what has widely become known as “active transportation.”

VIEW THE FULL PLAN AND IT’S APPENDICES AT:

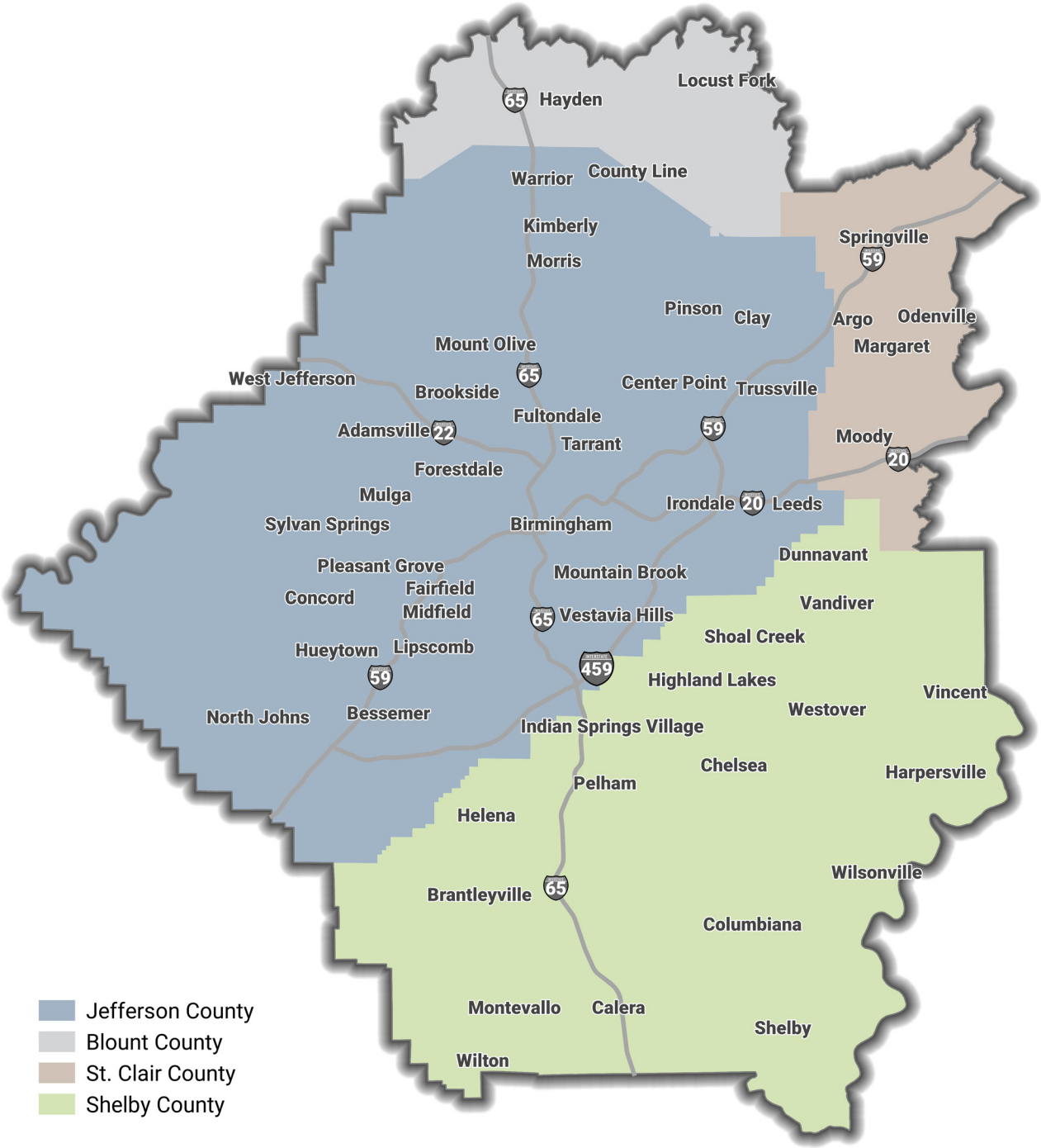
WWW.B-ACTIVEPLAN.COM

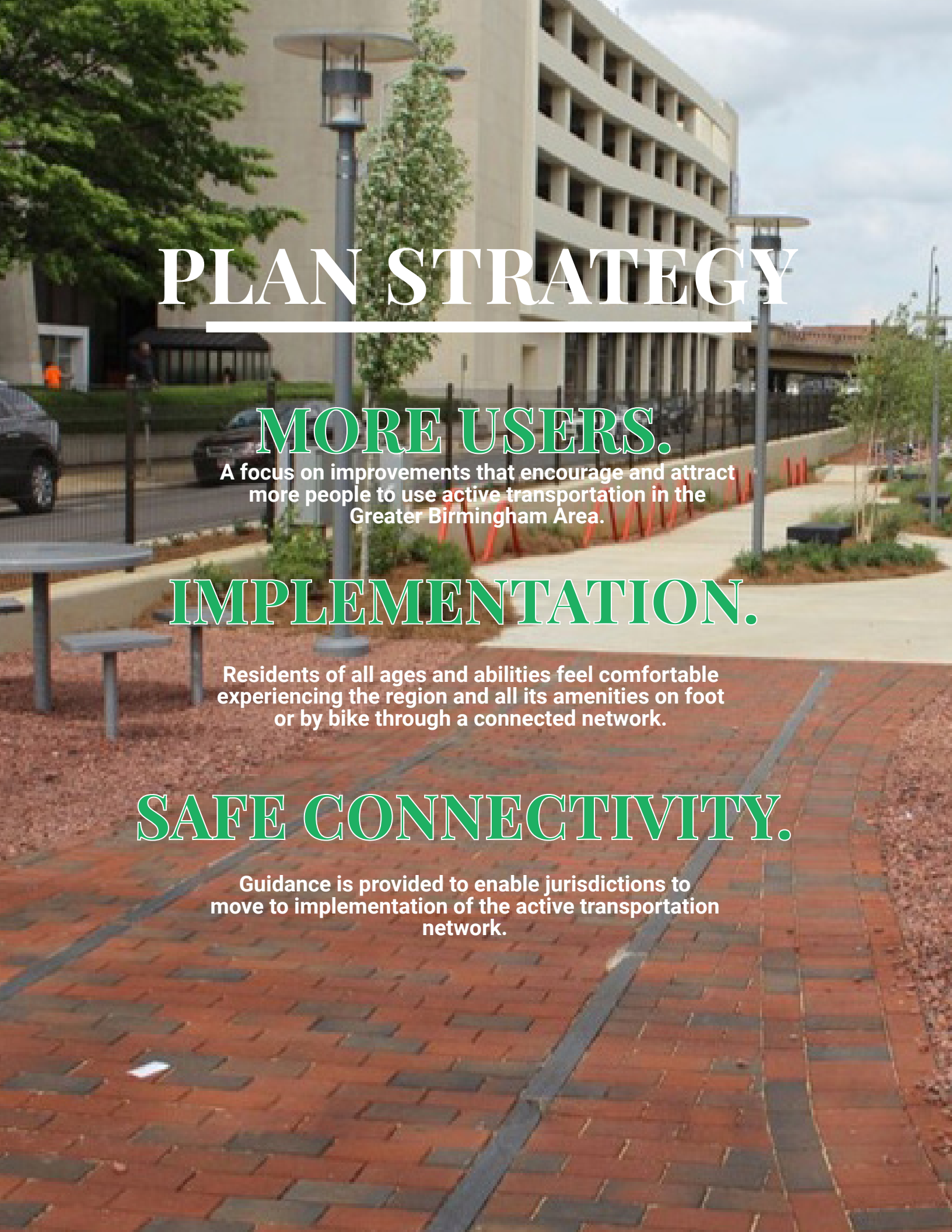


The B-ACTIVE Plan Website

The B-ACTIVE study area

The B-ACTIVE study area consist of Jefferson and Shelby Counties and portions of Blount and St. Clair Counties. A map of the study area can be seen below.





PLAN STRATEGY

MORE USERS.

A focus on improvements that encourage and attract more people to use active transportation in the Greater Birmingham Area.

IMPLEMENTATION.

Residents of all ages and abilities feel comfortable experiencing the region and all its amenities on foot or by bike through a connected network.

SAFE CONNECTIVITY.

Guidance is provided to enable jurisdictions to move to implementation of the active transportation network.

WHAT IS THE B-ACTIVE PLAN FOR?

Key questions of the B-ACTIVE Plan:

- Where are the major gaps and barriers in the regional bicycle and trail system today?
- What is needed to attract new users to the active transportation network (i.e. to make people feel safer commuting by bicycle)?
- How can we increase regional connectivity?
- What and where are the key projects needed for implementation?

Why is the B-ACTIVE Plan important to the Greater Birmingham region?

Active transportation is an opportunity for everyone. All of us are pedestrians at some point during the day. Even if you are walking between your car in the parking lot to the grocery store's entrance, you are traveling as a pedestrian. People using walking assistance devices such as wheelchairs or walkers are also pedestrians. Whether you are an avid cyclist, occassional rider, or do not ever ride a bicycle, a safe and connected active transportation network benefits for the larger community and region. These benefits include:

Goals & Objectives

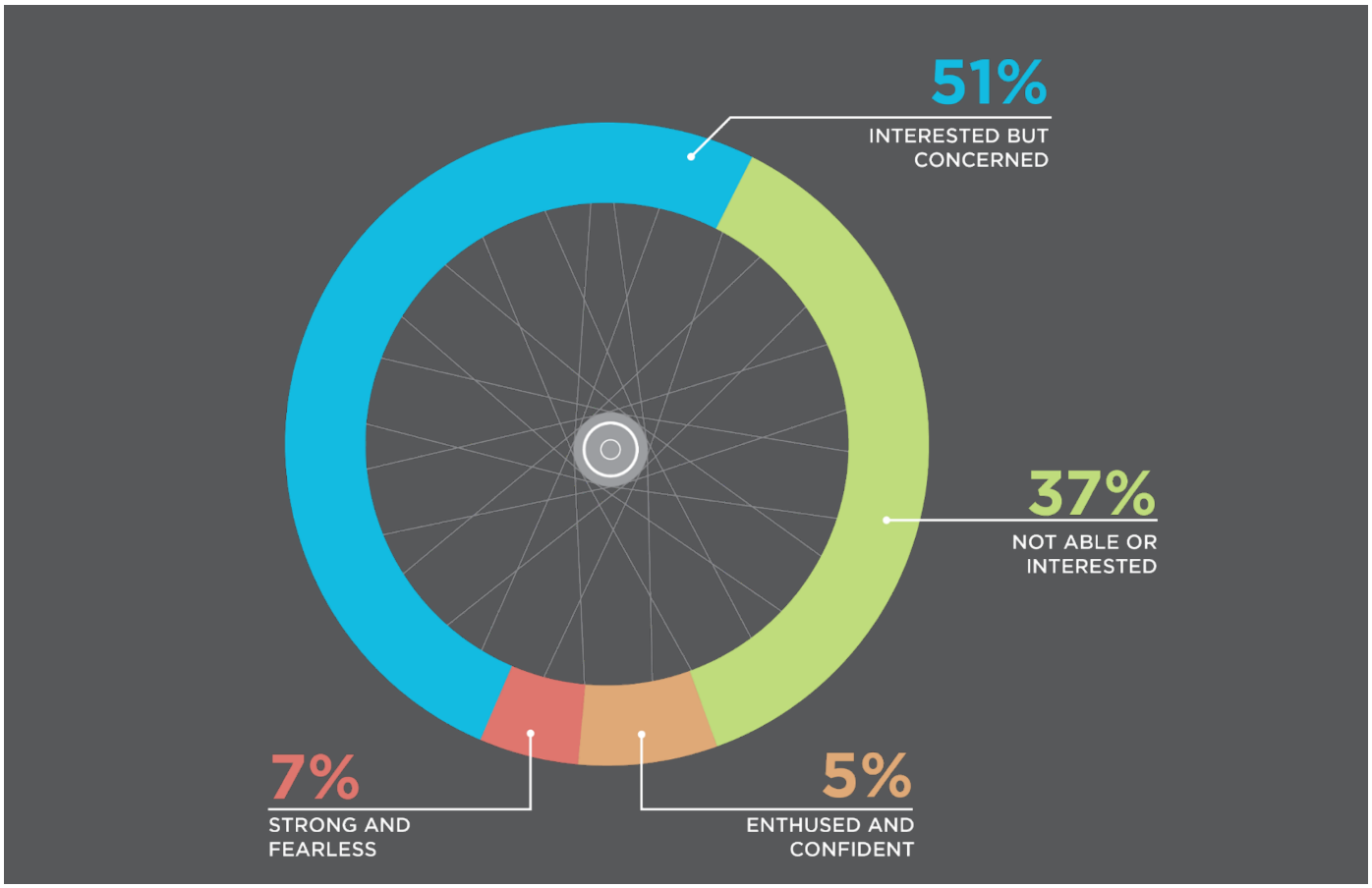
The B-ACTIVE Plan crafts a vision for the future of biking and walking in the region through strategic goal setting. It is clear that a growing population within the region hope to see an improved environment for biking and walking . The goals and objectives below are the building blocks of the approach for creating an active transportation network in the Greater Birmingham area by the municipalities in the region.

	GOAL	OBJECTIVES
CONNECT	- The Greater Birmingham area is connected through a network of low-stress bicycle facilities.	- Build connected bicycle facilities. - Remove gaps in the sidewalk network. - Provide active transportation linkages to existing transit routes and stops. - Provide users the choice to make trips to key destinations on a bike or walking.
ACCESS FOR ALL	- The future network of facilities improves (1) access to active transportation routes for the entire region and (2) access for more ages and abilities to use the system.	- Provide infrastructure access points all around the region. - Provide guidelines to designing facilities that are safe enough for any type of active transportation user. - Provide users the choice to make trips to key destinations on a bike or walking.
PROTECT USERS	- Implementation of the Plan decreases the number of bicycle and pedestrian crashes.	- Record and analyze yearly crash data. - Implement countermeasures at key intersections and streets that have high-density of bike/pedestrian crashes.
MORE USERS	- The number of people using active transportation grows as the system is implemented.	- Implement system for measuring the number of people using the existing active transportation system. - Create yearly progress reports in tandem with new active transportation infrastructure.
POLICY SUPPORT	- The network of infrastructure is supported by policies that encourage safe travel for all road users.	- Adoption of Complete Streets ordinances and policies by municipalities within the region. - Create design guidelines for facility construction. - Identify funding mechanisms for implementation.
EDUCATE	- Residents of all types—students, families, children, etc.—have opportunities to learn about the benefits of active transportation and associated laws and safe practices.	- Host annual safety and encouragement event supporting all modes of transportation. - Implement biking and walking safety training in schools within the region.
PRIORITIZE, IMPLEMENT, & MAINTAIN	- Key connections in the network of facilities are strategically prioritized to create a smooth path to implementation. A variety of different funding mechanisms are identified to implement and maintain the network.	- Identify “low-hanging fruit” projects and highly prioritized projects to implement first. - Provide a general timeline for implementing identified projects. - Encourage municipalities to include a maintenance schedule in annual budgets.

Planning for Everyone

One of the guiding principles of the B-ACTIVE Plan is that it should be focused on creating more users rather than solely providing more lanes of bicycle or pedestrian infrastructure. This means designing and recommending facilities based on a larger audience, identified in the plan as "interested but concerned". This group was the target audience throughout the planning process, and is broadly defined as someone who is interested in walking or biking more but are concerned for their safety due to a lack of existing facilities.

Figure 1-1: *National Bicycle User Type Statistics (1)*



1 *Dill & McNeil, 2015*

PLAN PROCESS

PUBLIC ENGAGEMENT

DEMAND ANALYSIS

LEVEL OF COMFORT ANALYSIS

Robust Public Engagement

The foundations of the B-ACTIVE Plan—including policy recommendations and the proposed network of bicycle and pedestrian facilities—are the result of continual engagement with the residents, businesses, nonprofits, and other stakeholders within the Greater Birmingham area. Benefits of engaging with the public is two-fold:

» A diverse range of backgrounds, experiences, abilities, and opinions about transportation will create a stronger, more implementable, and better-serving plan and resulting transportation system, and
» Talking about biking and walking with many people helped spread the word about the B-ACTIVE Plan and the benefits of active transportation.

01 PERSONAL CONNECTIONS

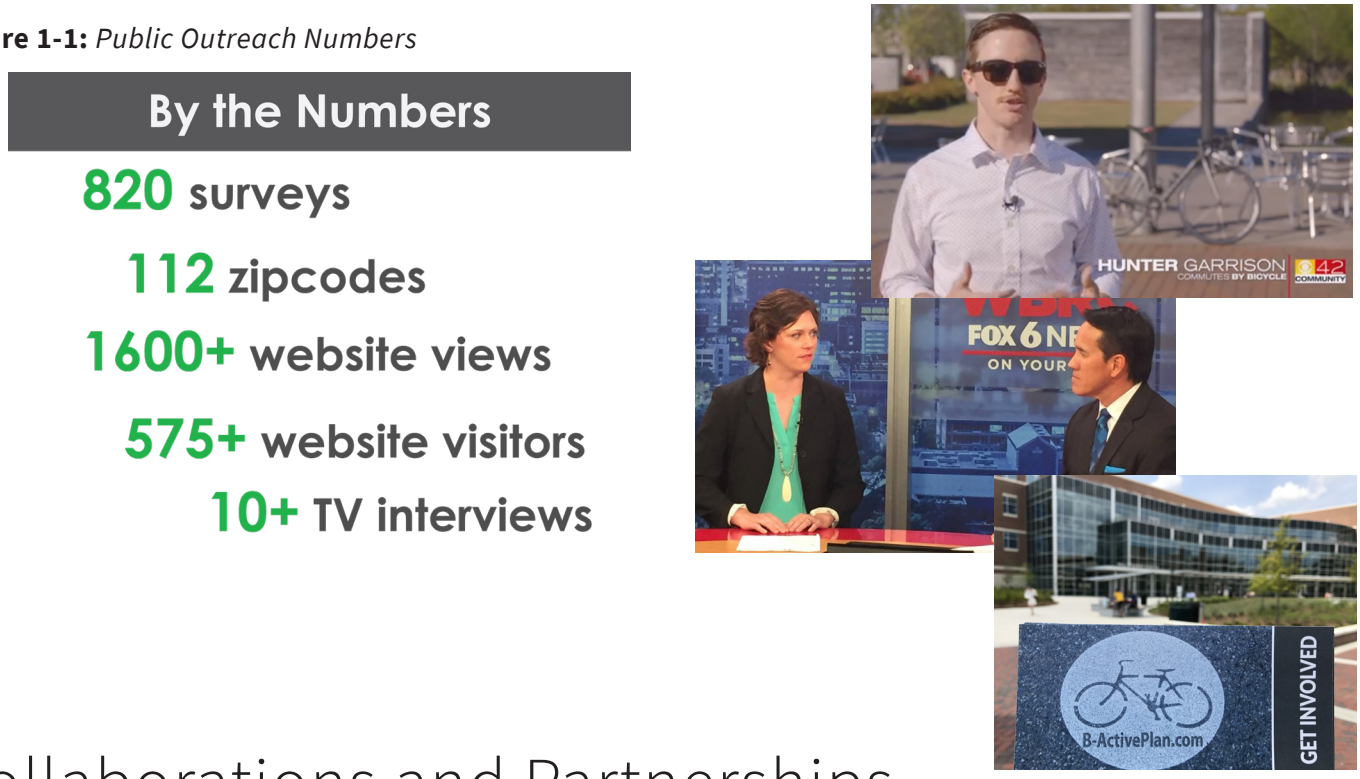
02 POP UP MEETINGS AND INTERCEPT SURVEYS

03 OPEN HOUSES

04 INTERACTIVE OUTREACH

The B-ACTIVE planning team held multiple public meetings, pop-ups, and informal “intercept” surveys to receive input from a wide range of stakeholders and potential network users. Additionally, an online map or “Wikimap” in addition to an online survey allowed the plan to reach an even broader audience. Overall numbers from public involvement can be seen on the next page and for an in depth look at public outreach please consult the B-ACTIVE Plan pages 14-21.

Figure 1-1: *Public Outreach Numbers*



Collaborations and Partnerships

In addition to gathering perspectives from the general public, the B-ACTIVE Plan used feedback from various stakeholders and entities that have special interests in and unique perspectives on active transportation in the Greater Birmingham area. The following section summarizes how various stakeholders provided feedback, and results from their input.

MPO'S ACTIVE TRANSPORTATION COMMITTEE

The MPO's Active Transportation Committee (ATC) served as a steering committee for the Plan development, network vetting, and public engagement strategies. The ATC is comprised of representatives from a broad cross-section of both the public and private sectors including local municipalities,universities, non-profit entities, and high profile businesses. For a comprehensive list of who comprises the ATC please see Chapter 2 of the full B-ACTIVE Plan.

ALDOT AND FHWA

During the planning process, multiple presentations were given to staff from the Alabama Department of Transportation (ALDOT) and the Federal Highway Administration (FHWA). The project team shared updates from the B-ACTIVE planning process and explained the methods that were used to create the network.

STAKEHOLDER MEETINGS

Stakeholder meetings permitted individuals from organizations or people who were particularly interested in active transportation to provide input on specific topic areas. These community members and organizations offered perspectives that were valuable in shaping network and policy recommendations. Fourteen (14) stakeholders provided input for the Plan; for a comprehensive list of stakeholders please see Chapter 2 of the full B-ACTIVE Plan.

Outreach Findings

People in the region care about biking and walking and do so regularly:

- Over 60% of survey respondents are, at the minimum, interested in biking in the Greater Birmingham area.
- Nearly 75% of respondents walk at least frequently for trips, and over 50% bike at least frequently for trips.

Infrastructure and design matter:

- Some of the top most cited reasons for biking and walking are related to lack of infrastructure, intersection design, and feeling like traffic is too heavy to bike or walk. Good infrastructure design can make people feel safer, more protected from heavy traffic, and more respected on the street.

The community desires safe connections across municipal boundaries:

- Many of the comments from the Wikimap indicated that people want to see safe routes to travel between municipalities.

There is momentum behind active transportation culture in the Greater Birmingham region:

- Based on strong input from stakeholders and the general public, it is clear that biking and walking are a desired form of transportation.

Entities that are interested in biking and walking in the region want to collaborate:

- There are a variety of organizations that have started to implement change at an organizational level and are ready to partner with others to make a larger impact.

The B-ACTIVE Plan won the “2017 Outstanding Media Coverage” Award by the Alabama Chapter of the American Planning Association. Media coverage included 10+ TV interviews and 3 radio interviews.

Network Development & Design Approach

DEMAND ANALYSIS

For the B-ACTIVE Plan, the demand analysis locates existing demand for bicycle and pedestrian use in the region. This analysis highlights areas within the region that are already (or that could become) hubs of bicycle or pedestrian activity. The demand analysis maps are heatmaps that illustrate these locations by considering multiple weighted input factors. These resulting "hotspots" of activity can serve as connection points for future active transportation infrastructure. The methodological approach and results are discussed below.

The demand analysis created for the B-ACTIVE Plan identifies existing and potential demand for bicycle and pedestrian activity through three demand analyses and multiple weighted factors:

Demand Analyses Descriptions

FACTOR 01

A general demand analysis of active transportation use, existing plans such as the Red Rock Ridge and Valley Trail System (RRRVTS), compatible land uses, and existing bike and pedestrian facilities,

FACTOR 02

A destination demand analysis of employment destinations within the study area that may attract bicycle or pedestrian commuting trips, and

FACTOR 03

A "Strava" demand analysis using bicycling data (time of ride, location, distance, length of ride, etc.) collected by the Strava cell phone application.

When considered together, these inputs show locations in which future bike and pedestrian infrastructure can be most successful. These analyses, along with public input, have shaped the network recommendations for the B-ACTIVE Plan. Each of the factors from all analyses and their weights were chosen based on their likelihood to generate biking and/or walking trips.

The Strava application is a social media platform designed to connect cycling and running enthusiasts and to track users' cycling progress. Strava's data sharing program—Strava Metro—provides aggregated data and other resources to communities for planning purposes. For the B-ACTIVE Plan, Strava data from 2016 for the entire metropolitan region contributed to the demand analyses and to the overall

LEVEL OF COMFORT ANALYSIS

Bicyclists have varying levels of tolerance for traffic and the stress created by volume, speed, and proximity of adjacent traffic. Their tolerance may vary by time of day or trip purpose, and it may change over time. To quantify a cyclist's comfort, the project team conducted a Level of Comfort (LOC) analysis for the B-ACTIVE Plan. The resulting LOC score is a qualitative indicator of the stress felt by a bicyclist using a facility based on a given road's characteristics. Factors that affect LOC include speed, number of adjacent travel lanes, daily traffic conditions, and the level of separation for a bicycle facility from traffic. Five classifications were used to describe the Greater Birmingham area's existing conditions, with LOC 1 indicating the most comfortable riding environments, and LOC 5 indicating riding environments not suitable for bicycle traffic. More details on the LOC analysis can be reviewed in **Appendix A: METHODS** of the full B-ACTIVE plan.

1

LOC 1 is assigned to roads that are appropriate for most children; the level of attention required from cyclists is minimal, making it safe for all levels of cyclists. These roads are characterized by lower traffic speeds and one lane of travel in each direction. Multiuse paths, trails, and greenways are also assigned LOC 1.


LOC 1 - Lakeshore Trail

2

LOC 2, is given to local roads that still have slower traffic speeds (35 miles per hour or less). Based on average annual daily traffic (AADT) counts, local roads can be assigned LOC 2 with either one or two travel lanes in each direction. Major collector roads can also be LOC 2 if they have bicycle lanes.


LOC 2 - 23rd Street S

3

LOC 3 are corridors that are well suited for the most enthusiastic rider that is confident in their abilities but may be discouraging to newer or less experienced riders due to higher traffic speeds or traffic counts.


LOC 3 - 2nd Avenue North

4

LOC 4 The LOC 4 category roads are those that are only fitting for the most advanced levels of cyclists—those who can be classified as "strong and fearless" riders. Even those riders will often try to find alternative routes if available.


LOC 4 - Greensprings Highway

5

LOC 5 are not considered suitable for any level of cyclist, though some cyclist may use them out of necessity due to a lack of other options. these roads include major arterials, interstates, and expressways.

LOC 5 - Lakeshore Drive

CONTEXT SENSITIVE DESIGN

B-Active is semi-prescriptive in terms of facility guidance for proposed segments. The plan acknowledges that project cost, existing conditions, and a variety of other factors can affect what type of facility is feasible. As such, the plan provides a menu of options based on the land use context for each segment.

Facility selection and design for a given road depends on circumstantial factors such as existing right of way, lane widths, budgetary constraints, etc. These details are specific to each project and jurisdiction and were not explored at the time that B-ACTIVE Plan was drafted. Instead, specific facility selection and design should be left to the judgement of local design staff at the time of implementation. The B-ACTIVE Plan does not prescribe specific recommendations for each project in the network. The Plan does, however, provide strategies for design decisions through (1) a series of context-specific design menus and (2) generalized design guidelines for common facility types. Notable benefits to this approach include:

FLEXIBILITY

A generalized approach allows designers the freedom to make certain decisions about facility design that reflect conditions during implementation and engineering judgement. This will ultimately create better-designed and more cost-effective bicycle and pedestrian facilities.

CONSISTENCY

The guidance provided in the B-ACTIVE Plan ensure that facilities are designed with key safety elements to be accessible for many ages and abilities in many contexts.

APPROPRIATENESS

Not all bicycle and pedestrian facilities in the network require the same type of facility; for example, the types of facilities recommended in a densely developed urban area may not be appropriate for a rural or suburban setting due to differences in land uses, road design, typical users, etc. Design recommendations that are delineated based on the type of development around the facility ensure that the type of facility implemented is appropriate for its surroundings.

STREAMLINED IMPLEMENTATION

Creating foundational guidelines for bicycle and pedestrian facility design can expedite design and construction of facilities throughout the region.

CONTEXT SENSITIVE DESIGN

HOW TO USE THIS CONTEXT SENSITIVE DESIGN MENU

The Context Sensitive Design Menu in **Appendix D: Facility Options and Cost** provides facility recommendations based on five land use context categories: urban core, urban, suburban, rural, and rural town. For each context, the B-ACTIVE Plan provides recommended facility types and typical cross sections. The cross sections should serve as general recommendations for facility/street widths, but it is important to note that actual widths may vary in implementation due to design constraints. It should also be noted that some facility types are applicable to more than one context, but not all types are applicable to all contexts. Please reference **Appendix D** for information about cost estimates for each facility type proposed in the context sensitive design menu.

UC Urban Core Context

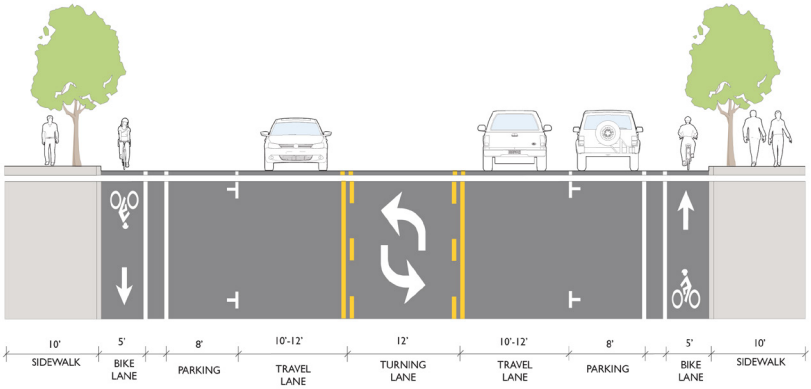
U Urban Context

S Suburban Context

R Rural Context

RT Rural Town Context

The icons above represent each land use context category. On page 146 in **Appendix D** of the B-ACTIVE Plan you will find the "Menu of Cross Sections By Context." The cross-sections are all potential facility types that will improve the Level of Comfort for a given roadway. Under each cross-section are the icons for the land use context that the facility type is appropriate for. The "Using the B-ACTIVE Plan" pages at the end of this document will further detail how to use the context sensitive design menu to identify the appropriate facility for a project.



PARKING PROTECTED BIKE LANE

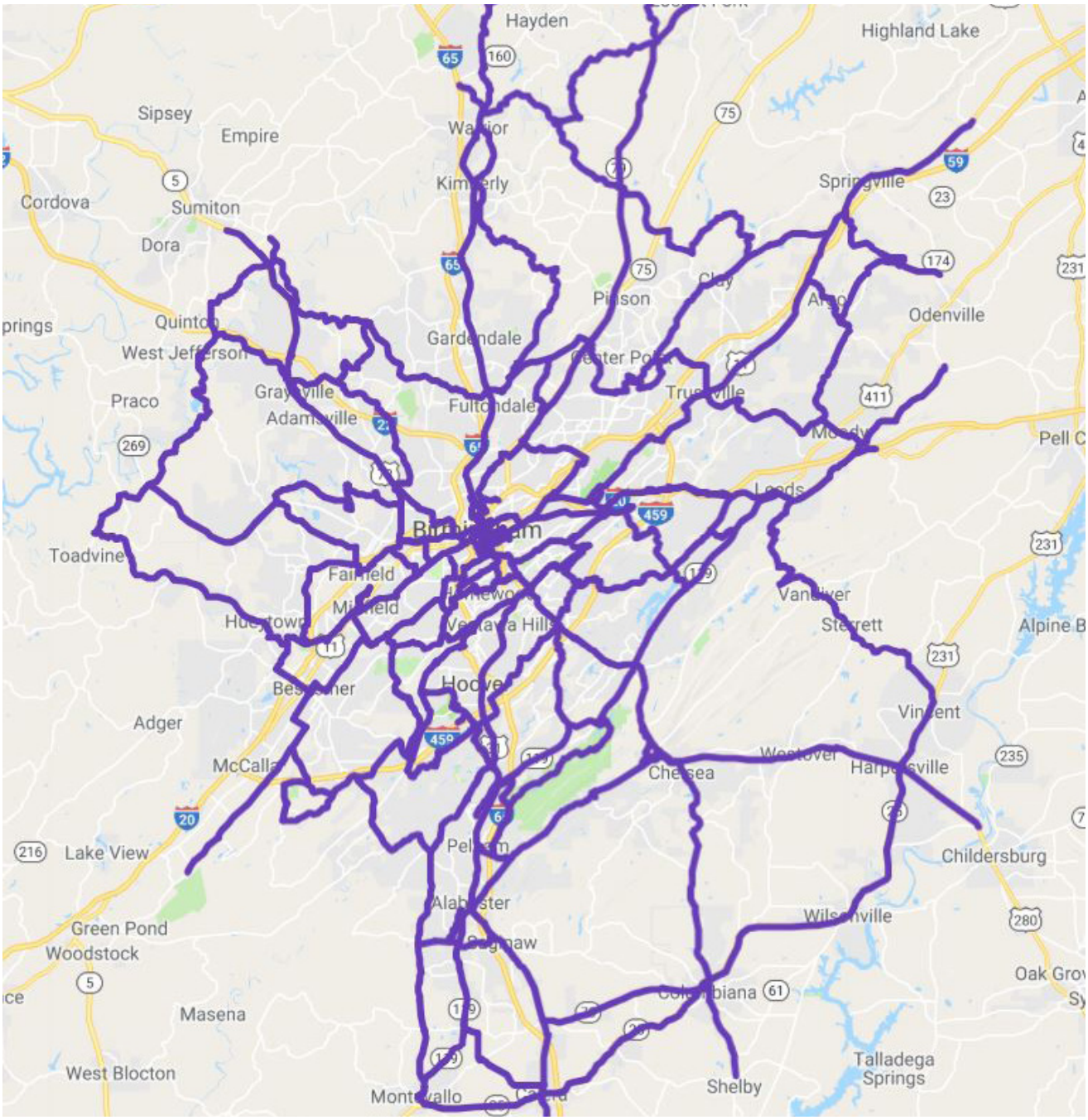
UC U RT

The B-ACTIVE Regional Network

The final regional network is the result of detailed analyses of existing conditions, public and stakeholder input, and iterative vetting. The network consists of proposed on-road and off-road facilities across four counties that connect communities and destinations throughout the region.

Explore the interactive map at www.B-Activeplan.com

Now you can explore the B-ACTIVE Plan from the convenience of your browser or phone! At www.B-Activeplan.com you can zoom in and out of the plan networkwith all the convenient features of a google map. Additionally you can turn on and off the existing facilities so you can plan your route and see how the plan will connect to what exists today.



Using the B-ACTIVE Plan

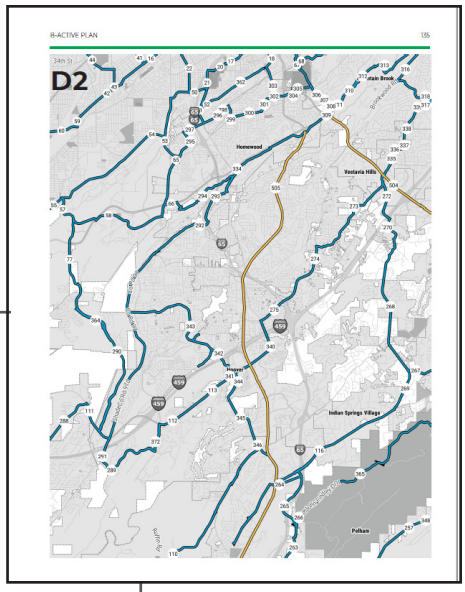
The B-ACTIVE Plan is designed to be easy to use and understood. Afterall, a plan that is difficult to understand or interpret is also likely to be difficult to implement. As such, the B-ACTIVE Plan has a series of appendices designed to make it easy to understand and use. The following section will walk you through how to use the Plan!

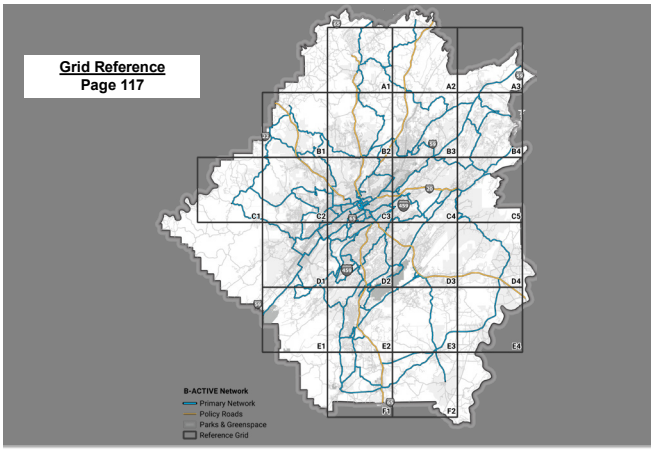
01 IDENTIFY YOUR PROJECT

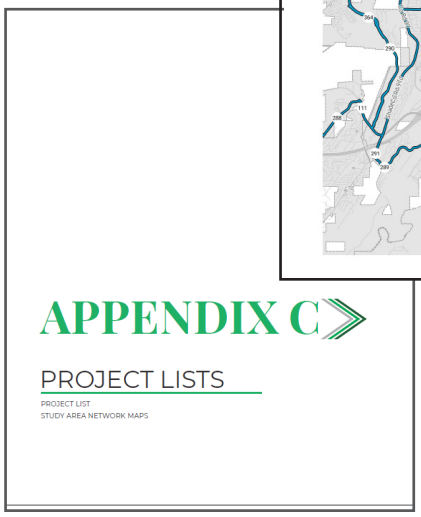
The first step in using the Plan is to identify and find the project you are interested in. To walk you through this process we are going to use a segment of West Oxmoor Road in Birmingham and Homewood as a project example.

02 CONSULT APPENDIX C: PROJECT LISTS

Appendix C is comprised of two key tools for using the B-ACTIVE Plan, the **Project List**, and the **Study Area Network Maps.** The first step, using our example, is to consult the Study Area Network Map. The Study Area Network map is broken down into a grid, and each grid is named. By looking at the map, we can see that our project is in Grid D2. We then look up a full page map of D2, which can be found on page 135. Then we find our desired project, West Oxmoor Road, and see that its Project ID is 65. We can then look up Project 65 in our comprehensive Project List, at the beginning of **Appendix C**. Projects are listed alphabetically by municipality, Project 65 can be found on page 108 with Birmingham/Homewood. Projects are listed by municipality, alphabetically.

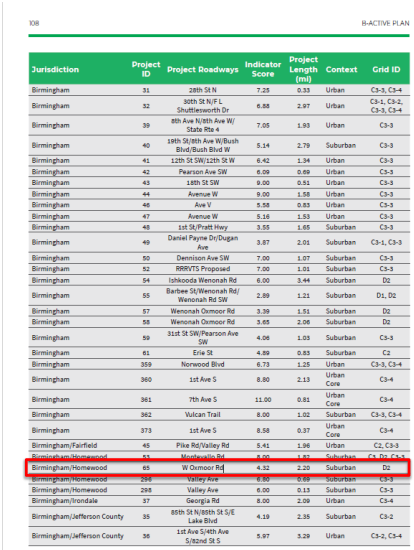






03 USE THE PROJECT DETAILS TO IDENTIFY THE LAND USE

Now that we have ID'ed our project from the Project List, we can see the project details. These details include what jurisdiction(s) the project is in, it's indicator score (details regarding indicator scores can be found on page 42), the project length, the land use context, and the Grid ID. Our example of West Oxmoor Road is in the Suburban land-use context, which takes us to our next step.



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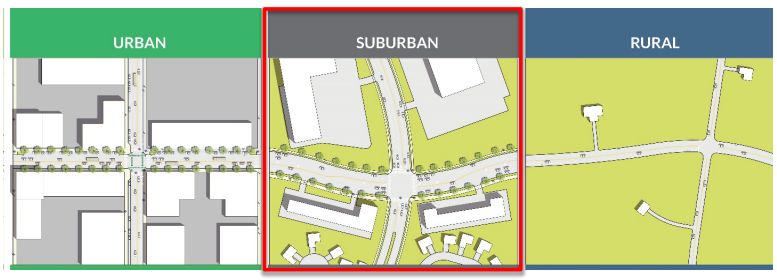
Jurisdiction	Project ID	Project Roadways	Indicator Score	Project Length (mi)	Context	Grid ID
Birmingham	31	28th St N	7.25	0.33	Urban	C3-3, C3-4
Birmingham	32	30th St N/F L Shuttlesworth Dr	6.88	2.97	Urban	C3-1, C3-2, C3-3, C3-4
Birmingham	39	8th Ave N/8th Ave W/ State Rte 4	7.05	1.93	Urban	C3-3
Birmingham	40	19th St/8th Ave W/Bush Blvd/Bush Blvd W	5.14	2.79	Suburban	C3-3
Birmingham	41	12th St SW/12th St W	6.42	1.34	Urban	C3-3
Birmingham	42	Pearson Ave SW	6.09	0.69	Urban	C3-3
Birmingham	43	18th St SW	9.00	0.51	Urban	C3-3
Birmingham	44	Avenue W	9.00	1.58	Urban	C3-3
Birmingham	46	Ave V	5.58	0.83	Urban	C3-3
Birmingham	47	Avenue W	5.16	1.53	Urban	C3-3
Birmingham	48	1st St/Pratt Hwy	3.55	1.65	Suburban	C3-3
Birmingham	49	Daniel Payne Dr/Dugan Ave	3.87	2.01	Suburban	C3-1, C3-3
Birmingham	50	Dennison Ave SW	7.00	1.07	Suburban	C3-3
Birmingham	52	RRRVTS Proposed	7.00	1.01	Suburban	C3-3
Birmingham	54	Ishkooda Wenonah Rd	6.00	3.44	Suburban	D2
Birmingham	55	Barbee St/Wenonah Rd/ Wenonah Rd SW	2.89	1.21	Suburban	D1, D2
Birmingham	57	Wenonah Oxmoor Rd	3.39	1.51	Suburban	D2
Birmingham	58	Wenonah Oxmoor Rd	3.65	2.06	Suburban	D2
Birmingham	59	31st St SW/Pearson Ave SW	4.06	1.03	Suburban	C3-3
Birmingham	61	Erie St	4.89	0.83	Suburban	C2
Birmingham	359	Norwood Blvd	6.73	1.25	Urban	C3-3, C3-4
Birmingham	360	1st Ave S	8.80	2.13	Urban Core	C3-4
Birmingham	361	7th Ave S	11.00	0.81	Urban Core	C3-4
Birmingham	362	Vulcan Trail	8.00	1.02	Suburban	C3-3, C3-4
Birmingham	373	1st Ave S	8.58	0.37	Urban Core	C3-4
Birmingham/Fairfield	45	Pike Rd/Valley Rd	5.41	1.96	Urban	C2, C3-3
Birmingham/Homewood	63	Mecklenlin Rd	8.00	1.82	Suburban	C3, D2, C3-3
Birmingham/Homewood	65	W Oxmoor Rd	4.32	2.20	Suburban	D2
Birmingham/Homewood	296	Valley Ave	6.80	0.69	Suburban	C3-3
Birmingham/Homewood	298	Valley Ave	6.00	0.13	Suburban	C3-3
Birmingham/Irondale	37	Georgia Rd	8.00	2.09	Urban	C3-4
Birmingham/Jefferson County	35	86th St N/88th St S/E Lake Blvd	4.19	2.35	Suburban	C3-2
Birmingham/Jefferson County	36	1st Ave S/4th Ave S/82nd St S	5.97	3.29	Urban	C3-2, C3-4

04 CONSULT APPENDIX D: FACILITY OPTIONS AND COST

Using **Appendix D**, the first step is to identify a cross-section that will work for your project. The B-ACTIVE Plan is semi-prescriptive in nature, meaning that it provides a menu of design options for each land-use context but it is up to local elected officials, planners, engineers and stakeholders to determine which facility will work best for their project. All of the potential facility treatments reduce the level of traffic stress felt by a bicyclist or pedestrian, however some facility options may do this better than others, or simply be more appropriate for the project in question. To learn more about the facility options please visit page 146 of the full plan.

Once a facility type is determined, a rough project cost can be estimated using the Detailed Cost Estimates section of **Appendix D**. In this section you will find a break down of facility cost per project mile. The estimates are planning level estimates to give a general idea of what a project may cost and real world conditions will always alter these cost. These cost estimates are intended to be used purely as a guide in initial project selection or budgeting.



12' SHARED USE PATH (4' BUFFER) WITH NO CURB AND GUTTER

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST	COST PER LINEAR FOOT
12' ASPHALT (110 LB/SQ YD)	TON	323	$125	$40,375.00	$7.65
12' PLANING	SQ YD	7040	$4	$28,160.00	$5.33
SOLID SODDING	SQ YD	2347	$10	$23,470.00	$4.45
TOPSOIL (4" THICK)	CU YD	259	$50	$12,950.00	$2.45
EARTHWORK	CU YD	783	$35	$27,405.00	$5.19
5" STRIPING	MILE	1	$4,000	$4,000.00	$0.76
SIGNING	EACH	11	$400	$4,400.00	$0.83
MAILBOX RELOCATION	EACH	11	$250	$2,750.00	$0.52
ITEM TOTAL				$143,510.00	$27.18
LUMP SUM ITEMS	**UNIT**	**QUANTITY**	**UNIT COST**	**TOTAL COST**	**COST PER LINEAR FOOT**
TRAFFIC CONTROL	LS	1	1% OF ITEM TOTAL	$1,435.10	$0.27
EROSION CONTROL	LS	1	2% OF ITEM TOTAL	$2,870.20	$0.54
GEOMETRIC CONTROLS	LS	1	0.5% OF ITEM TOTAL	$717.55	$0.14
MOBILIZATION	LS	1	10% OF ITEM TOTAL	$14,351.00	$2.72
LUMP SUM TOTAL				$19,373.85	$3.67
30% CONTINGENCY				$48,865.16	$9.25
TOTAL ESTIMATED COST				$211,749.01	$40.10


BActive
The Active Transportation Plan for the Greater Birmingham Region
RPC
Regional Planning Commission
of Greater Birmingham