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About

The *Huntsville Alternative Modes Review* is an annual summary of the city's progress on alternative transportation infrastructure projects built for safety, quality-of-life, and recreation. This review is a compilation of public data which covers grant funding, preliminary engineering, right of way acquisition, construction costs, and timelines of infrastructure projects in the City of Huntsville for transportation and recreation by alternative modes.

Questions or comments about the *Review***?** *Email the editor at* paige.colburn@huntsvilleal.gov

Cover Photos

Clockwise, from top left: Spragins Cycle Track and Depot Greenway, New Lenox Ave Sidewalk, Crosswalk over Four Mile Post, and Aldridge Creek Greenway

Disclaimer

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THE HUNTSVILLE ALTERNATIVE MODES REVIEW

2019 First Edition

A Publication of the City of Huntsville Department of Urban Development, Long Range Planning Division

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What is an Alternative Mode?

There are many modes of transportation. For transportation planners, an "Alternative Mode" is a mode of transportation other than a motor vehicle. This includes walking, cycling, running, jogging, and using mobility aids such as wheelchairs and walkers. Some motorized alternative modes, such as scooters, electric bicycles, and motorized mobility aids also require alternative mode infrastructure.

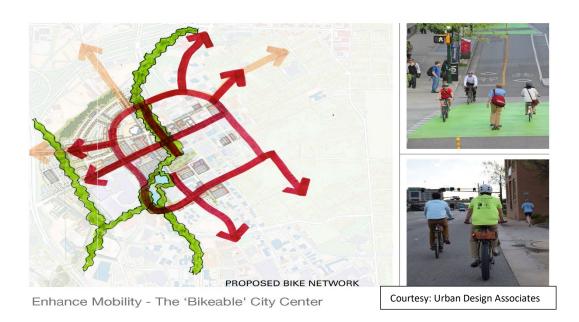
The City of Huntsville invests in alternative modes of transportation primarily for traffic safety, quality of life, and recreation.

To improve the safety of our streets for all users, the City of Huntsville builds sidewalks, ramps, crosswalks, and bike lanes. These infrastructure improvements reduce casualties and fatalities for pedestrians, cyclists, and people with disabilities.

Alternative modes are often a form of recreation. Investment in greenways, trails, and cycle tracks is a quality-of-life improvement for Huntsville.

This report will focus on sidewalks, bicycle projects, greenways, and complete streets. Other types of alternative modes projects such as crosswalks and ADA compliance ramps will also be discussed throughout.

Linking these investments to create a network of alternative mode transportation options is an ongoing goal for the city.



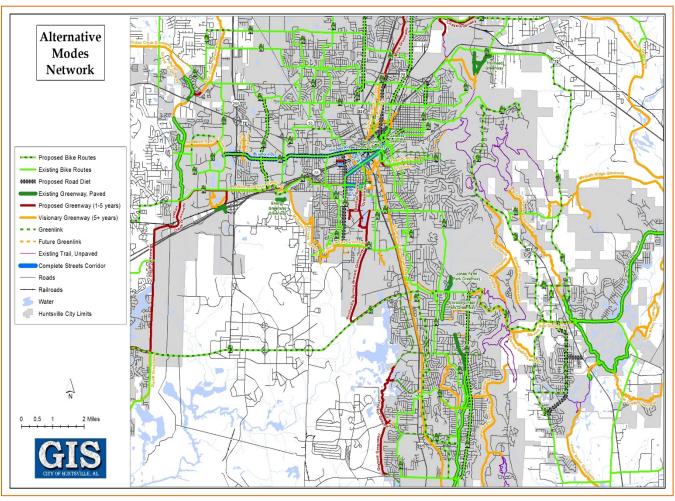
It's all about the Network

The goal of transportation infrastructure is to provide connectivity from point A to point B by the most efficient and safest route possible. Users of alternative modes require this same connectivity to travel safely from home to work, school, medical appointments, and shopping.

Planners use phrases like "the sidewalk network" or "the greenway network" to describe a safe, connected network for alternative modes throughout the city.

Ideally, where every bike lane ends, a greenway or multi-use path would begin; every street would have sidewalks on both sides; and every sidewalk would have ADA compliant ramps at all crossings. The City of Huntsville, like most cities nationwide, is still working toward that ideal.

This annual report details the city's efforts, challenges, and progress toward creating an ideal alternative modes network.



Life of an Alternative Mode Request

Requests for greenways, sidewalks, complete streets or bike lanes come from a variety of sources. "SeeClickFix" is the city's online citizen request portal at seeclickfix.com/Huntsville. Requests are also sent directly to elected officials and city department staff. Nearly all alternative modes requests, received by all departments, are sent to the Planning Department. City Planners add these requests to existing small area plans, ongoing projects, or prioritize the requests for future funding based on safety, equity, connectivity, and feasibility.

Who Processes My Request?									
Planning Engineering Legal Public Works Traffic Engineeri									
Greenways									
Sidewalks									
Bicycle Projects									
Complete Streets									
Special Initiatives									

Once a request is prioritized by the Planning Department, several of the above departments become involved. The type of alternative mode request determines which departments are involved in implementation.

Engineering is involved in every type of alternative mode project because funding, design, bidding, oversight, and inspection of these projects is done by Engineering.

Legal is involved in ADA Compliance considerations for alternative modes projects.

Public Works is responsible for maintenance of sidewalks and roadways, as well as installation of ADA accessible ramps and in-house alternative modes construction.

Traffic Engineering is responsible for crosswalks, signage, and signalization of alternative modes projects, and design work for complete streets improvements.

Who Implements My Request?									
Planning Engineering Legal Public Works Traffic Engineerin									
Greenways									
Sidewalks									
Bicycle Projects									
Complete Streets									
Special Initiatives									

The Current Process

Every alternative mode request requires a high degree of cross-departmental coordination and time. An alternative modes request may receive a response from any or all of the above departments. The resulting construction will likely involve all departments.

Funding is also complicated. Greenways, sidewalks, and large complete streets projects, such as Holmes Ave, have specific line-items in the city budget. Funding for greenways and sidewalks also includes resources external to the city, such as grants and construction by private developers. Other alternative modes do not have as many funding sources.

Funding Sources by Alt Mode Project Type							
	Capital Improvement Plan (CIP): multiple projects and departments	Planning: various grant applications for projects	Engineering: Federal Projects, Greenways and Sidewalks budgets	Public Works: Maintenance and ADA Compliance budgets	External to the City: partner organizations or developers \$		
Greenways	\$	\$	\$		\$		
Sidewalks			\$	\$	\$		
Bicycle Projects							
Complete Streets	\$		\$				
Special Initiatives		\$			\$		

Greenways have the most funding sources. Greenways also have the most established implementation process, through the city's partnership with The Land Trust of North Alabama. There are delineated roles and responsibilities and a detailed Greenway Master Plan with achievable goals set on a timeline. As such, the greenway section of this report lists the most projects in progress or completed.

Sidewalks have several funding sources. However, as detailed in the Sidewalks section of this report, the supply of funds is not sufficient to meet demand for sidewalks. Most sidewalks in the city are funded by private developers in new residential subdivisions or commercial projects. The building of sidewalks also necessitates building associated crosswalks and ADA compliant accommodations. Sometimes curb and gutter issues arise. Construction costs can vary greatly, depending on existing context of the proposed sidewalk.

Bike projects do not currently have a dedicated funding source. Bike projects are often attached to federally-funded projects in the Engineering department as part of mandated bicycle and pedestrian accommodations for federally funded roads. There are many logistical issues in constructing bicycle infrastructure detailed in the Bicycle section of this report. Fortunately, the city has a strong partnership with the bicycle community in Huntsville. Avid cyclists are engaged in discussing citywide bicycle projects and helpful in identifying needs.

Complete Streets are the newest alternative modes projects, with the Complete Streets Policy adopted in 2018. While priority complete streets corridors have budget line-items, other prioritized complete streets projects do not have dedicated funds and the tab for their construction is often split among several departments. The city is still in the process of establishing roles and responsibilities for complete streets implementation.

Special Initiatives are unique projects or opportunities presented to the city. These projects are usually initiated by the Planning Department through grants or by external partners such as business associations, non-profits, or neighborhood associations. This report will cover the alternative modes projects in conjunction with the city's participation in the Safe Streets, Smart Cities Academy as well as alternative mode projects included in the recently completed 2018 Transit Study.

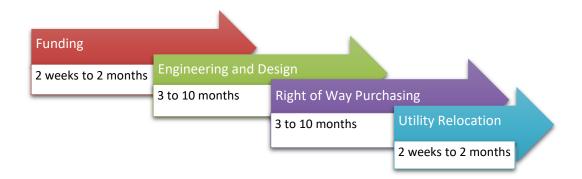
Why does this cost so much and take so long?

The most common questions the city receives from the public about alternative mode projects regard the perception of high cost and lengthy construction timelines.

Before concrete is poured or paint is purchased:

- Funding must be acquired
 - In the case of greenways, this is often a grant application process, which can take several weeks to prepare
 - o In the case of sidewalks, this is a process of prioritizing sidewalk requests against the limited funds available each year to determine where tax dollars will do the most good.
 - In the case of complete streets, this is a process of negotiating cost sharing across several city departments.
 - In the case of bicycle projects, this is often a matter of adding funds to existing projects, such as roadway resurfacing.
- Preliminary Engineering and design must be completed
- Right of way must be purchased
- Utilities often need to be relocated
- Environmental considerations must be documented (if federal money is involved)

The entire process can take from 6 to 18 months with several steps overlapping.



The Growth of Greenways

The City of Huntsville formalized its agreement with the Land Trust of North Alabama in 2016. The Greenway Master Plan was updated and adopted in 2017.





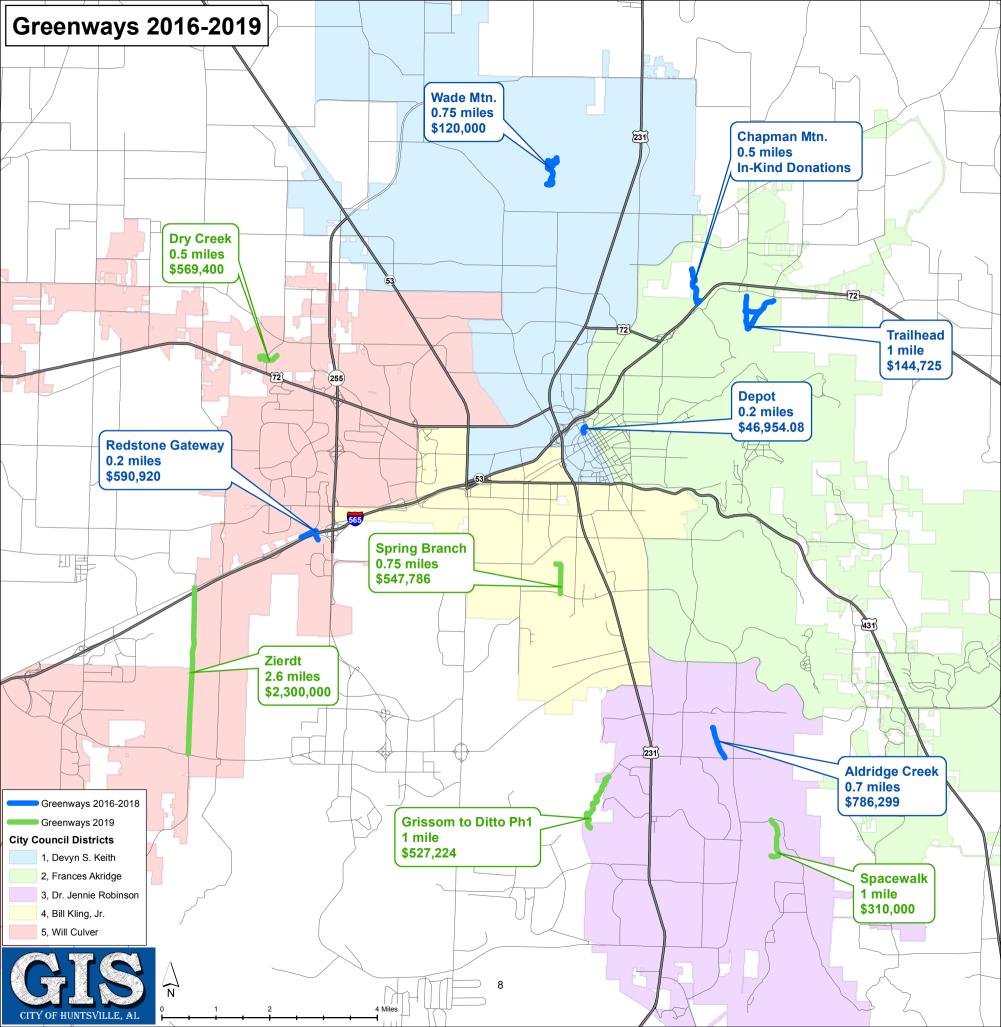
Between 2016 and 2018, the City of Huntsville built

3.35 miles of greenway network at a cost of \$1,688,898.

After the adoption of the Greenway Master Plan, greenways became a priority infrastructure improvement for quality-of-life, recreation, and alternative modes of transportation. Many new greenway projects were planned and designed for 2019 and 2020.

In 2019, the City of Huntsville will build
5.85 miles of greenway network at a cost of \$4,254,410.

The "Greenways 2016-2019" map details the geographic diversity of the growth of the city's greenway network.



A Tale of Two Greenways

Every greenway is different and the process involved to build each greenway is unique. The time required to build a greenway depends on: whether design and engineering work is required; whether right of way has been donated or must be purchased; and the origin of funds used for construction.

The city's partnership with the Land Trust of North Alabama has streamlined the process, with clear roles and responsibilities for all parties involved in the implementation of the Greenway Master Plan.

However, many factors are outside the control of the city or the Land Trust. Two recent greenway projects are a good example of the variables inherent in greenway planning, design, and construction.

<u>Depot Greenway</u> The steps involved in this downtown greenway's construction process in late 2017 were:



Defining the Greenway layout: City administration and Huntsville Depot and Museum representatives worked together to determine the best route for this final leg of the downtown Gateway greenway. No surveying, engineering, or design issues were present in this flat piece of property owned by the city.

Funding and Construction: The funding for this greenway was obligated internally from existing budgets of the city departments involved in its construction.

This greenway was built entirely inhouse, making a fast, three-month timeline easy to achieve.

<u>Dry Creek Greenway</u> The steps involved, so far, over the last 2 years:



Grant Application- A federal grant application and supporting documentation took 2 months to compile, and 2 months for the grantor to review and notify winners of funding availability.

Right of Way Acquisition- The land was donated to the city. However, adjacent development projects affected the greenway's design and added time to the engineering contract.

Engineering and Design: This greenway required more detailed engineering due to slope, drainage, road crossings, and conflicts with ongoing construction. Design took 10 months, and three scope adjustments.

Certification Requirements- Federal

or state funding requires 2 to 10 months of paperwork, review, and approval. Mandatory certifications such as Environmental Categorical Exclusion and Historical Significance involve several state and federal agencies. These certifications are important for preserving natural habitats and historic features. However, they do require additional time. For example, because more than one acre of land was donated for this greenway, additional documentation was required to certify that the greenway was appropriate and legal for the large tract of land around it.

When federal or state grants are involved, the city pays only twenty percent of the cost of the greenway. Most of the city's greenways have been funded in this manner. Therefore, going through all these additional steps is worthwhile for the opportunity to grow our greenway network.

It's All in the Details

Unless conditions are perfect to build a greenway entirely in-house, the timelines of most greenways built by the city fall closer to that of Dry Creek Greenway: 18 months to 2 years.

The following pages detail the costs and timelines of preliminary engineering, right of way, utility relocation, and construction for the greenway network projects built between 2016 and 2019. As described in "A Tale of Two Greenways," each of these projects is unique in cost, complexity, and timeline.

The greenways already constructed are listed first in alphabetical order, followed by the upcoming 2019 greenways in progress.

Land Trust Trails are part of the Greenway Master Plan network because trails provide connectivity between greenways in areas where building a paved, flat surface is not feasible.





Aldridge Creek Greenway Extension 0.75 Miles

FHWA Transportation Alternatives grant for construction, ROW was floodway owned by the city, and PE paid for by the city to GMC Engineering Firm.

PE: \$56,990, 2015 to 2016

RW: Was donated by the landowners.

CN: \$786,299, complete in 2017





<u>Chapman Mountain Trail</u> 0.5 miles

This trail was completed entirely with Land Trust in-kind donations of labor and materials. Land was purchased in 2012.

PE: Was not necessary for the trail

RW: Purchased by Land Trust

CN: \$11,000 in-kind value, 2018





Depot Greenway 0.2 miles

The City of Huntsville owned the land. Engineering and Design was negligible and absorbed by city departments. City of Huntsville Public Works constructed the project at a cost of \$46,954. Design, right of way, and construction took only 3 months from concept to completion because all phases of the greenway were done internally.





Redstone Gateway (or EUL) Greenway 0.2 miles plus parking lot

FHWA Transportation Alternatives grant for construction, ROW purchased by the city, and PE paid for by the city to Garver.

PE: \$37,800 in 2015

RW: \$1,506,785 in 2014

CN: \$934,044, 2018 to 2019





Space Walk Trail 1 Mile

The cost of this greenway was primarily the purchase of land for right of way. The Land Trust and the City of Huntsville shared this cost.

No PE was necessary for this trail

RW: \$200,000, 2018 to 2019

CN: in-kind from Land Trust, 2020





Trailhead Greenway 1 Mile

Subdivision developer donated land and did most of the construction work. City poured the asphalt and did crossings.

No PE was necessary for this greenway

RW: donated by the land owners

CN: \$144,725, completed in 2018





Dry Creek Greenway 0.5 Miles

FHWA Transportation
Alternatives grant money for construction, ROW donated by owners, and PE paid for by the city to Croy Engineering Firm.

PE: estimated \$62,000, from 2017 to 2019; PE included several scope-of-work changes

CN: \$569,400, 2019 to 2020





Hays-Street Greenway (Grissom to Ditto Phase I) 1 mile

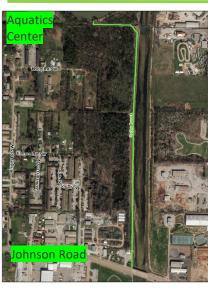
The owners donated the land to the city. Design was contracted to Smith Engineering.

PE: \$31,158, 2015-2017

RW: no land needed to be

purchased

CN: \$527,224 in 2019





Spring Branch Greenway 0.75 Mile

FHWA Transportation
Alternatives grant money for construction, less than one acre of ROW was donated to the city, and PE paid for by the city to 4Site.

PE: \$33,450, 2018 to 2019

CN: \$547,786 2020 to 2021

The Many Faces of Sidewalks

There are six city departments involved in sidewalk construction in Huntsville. Most sidewalks built by the City are bid and contracted to private construction firms for installation.

Which departments are involved in a sidewalk project depends on several factors:

- 1. Is the project in an existing neighborhood or new development?
- 2. Is the project maintenance/repair or new construction?
- 3. Does the project require ADA compliant accessible ramps?
- 4. Does the project involve new crosswalks, signage and signalization?

City Departments and Private Sector Involved in Different Aspects of Sidewalk Installation Existing Repair New ADA New Communities sidewalk or crosswalks, Compliance: Development: complete small that want new signage and additions of Subdivisions sidewalks missing links signalization accessible and Large Commercial ramps $\sqrt{}$ $\sqrt{}$ Planning Engineering Traffic Engineering $\sqrt{}$ **Public Works** Legal Administration $\sqrt{}$ **Private** Developer or Contractor









Who Builds Sidewalks?

Sidewalk construction falls into two categories in the City of Huntsville: public and private. Public sidewalk construction is built by the city.

Private sidewalk construction is built by developers, most often due to city requirements for sidewalks in new subdivisions and along new commercial properties.

2018 Sidewalks Built by City of Huntsville

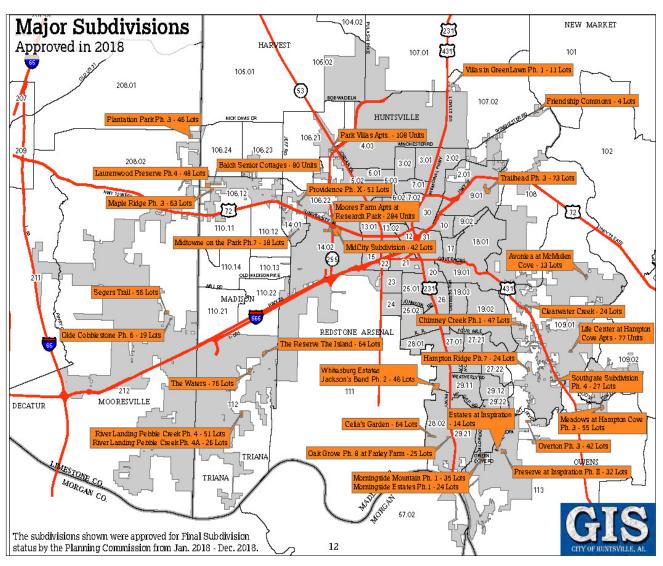
The city builds an average of 10-12 sidewalks per year. These sidewalk projects vary in cost due to complexities such as grade of the roadway, drainage along properties adjacent to sidewalks, and utility relocation. Sidewalks built in 2018 and estimated cost per linear foot:

Sidewalk Location	From/ To	Actual Cost	Estimated Length	Est Cost per linear foot	Council District
Lenox Ave	Logan to Cul-de-Sac	\$35,634	646 feet	\$55.17	3
University Drive	Pkwy to Church St	\$56,605	1584 feet	\$35.74	1
Orba Drive	Oakwood to existing sidewalk	\$21,441	1056 feet	\$20.30	2
Westview Drive	Old Monrovia to dead end	\$37,277	594 feet	\$62.76	5
Martha Drive	Four Mile Post to Bel Air	\$147,686	4521 feet	\$32.67	3
Old Monrovia Road	Perimeter Pkwy to Research Park Blvd	\$32,941	490 feet	\$67.23	5
Barkwood Drive	Existing to Old Gurley Road	\$4,283	528 feet	\$8.11	2
Auburn Ave	Stanford to Marsheutz	\$49,978	528 feet	\$94.65	4
Princeton Blvd	Governors to Auburn	\$36,786	1160 feet	\$31.71	4
Tunlaw Rd	To Blossomwood School	\$61,311	1584 feet	\$38.70	2
Bridgewater	On Old Railroad Bed	\$45,585	1100 feet	\$86.34	5
Bob Wallace	Gallatin to Poinciana	\$23,562	1051 feet	\$22.42	4
Total:		\$590,368	2.8 miles	\$39.75 per foot	

2018 Sidewalks built by Private Developers

In 2018, there were 931 single family subdivision lots and 53 commercial lots approved by the Planning Commission. In addition, 565 multi-family housing units were approved. Connecting these new lots and living units with the city's roadway network resulted in approximately 10.93 miles of street added to the city.

City regulations require sidewalks along streets in all new developments; unless there are circumstances allowing for a variance. This means that in 2018 private developers built approximately 21 miles of sidewalk in the City of Huntsville, nearly 10 times the amount of sidewalk built by the city. Find subdivision details in the city's annual Development Review.



Everyone Wants Sidewalks

The city receives about five sidewalk requests per month from residents contacting their Councilmembers, city departments, using SeeClickFix, or calling the Mayor's office.

There are 54 sidewalk requests currently in process with the City of Huntsville. See the Sidewalk Requests map and chart on the following pages.

These sidewalk requests must be scored using the Draft Sidewalk Scoring Criteria once the criteria have been finalized. Then each request is prioritized based on available funding. As such, the map and chart do not list sidewalk requests in any particular order.

Not Everyone Knows to Ask

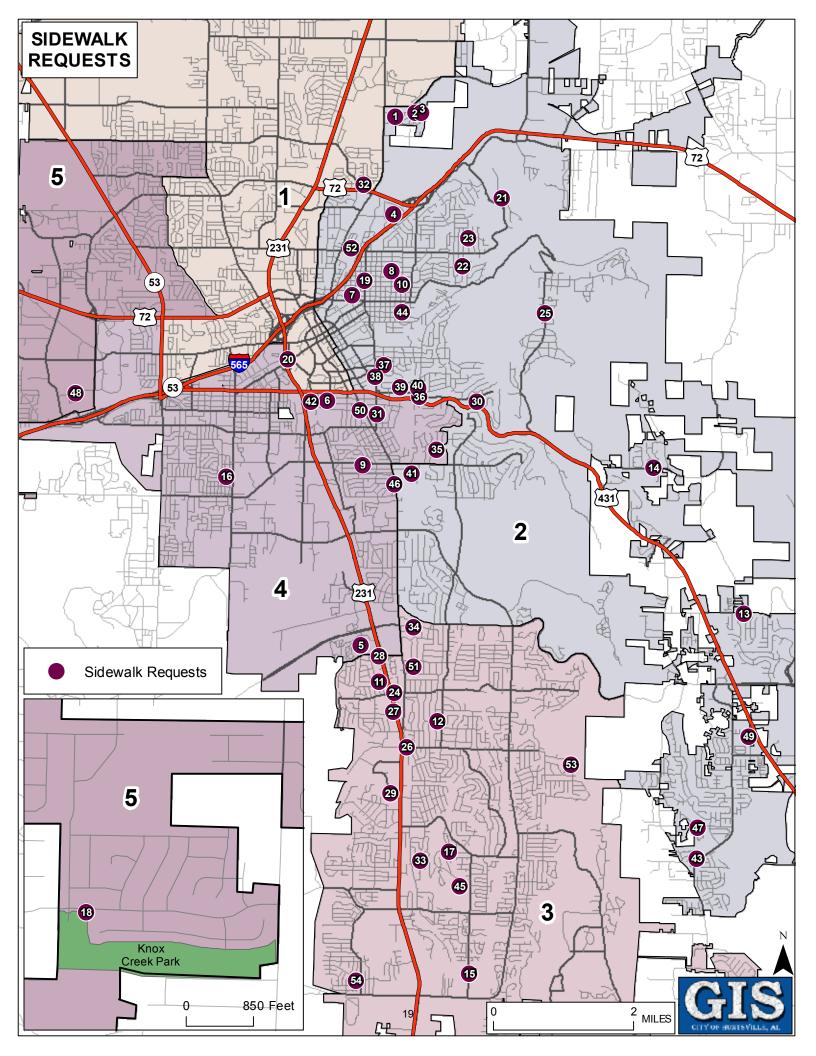
Looking at the Sidewalk Requests map, most of the requests are clustered in areas that have had a BIG Picture "Small Area Plan" developed for their community. Each Small Area Plan results in a comprehensive study of bike and pedestrian connections in the area.

The city strives for an equitable distribution of sidewalk projects each year and encourages citizens in all parts of the city to help staff identify sidewalk needs.

Wants versus Needs: Sidewalks to Schools

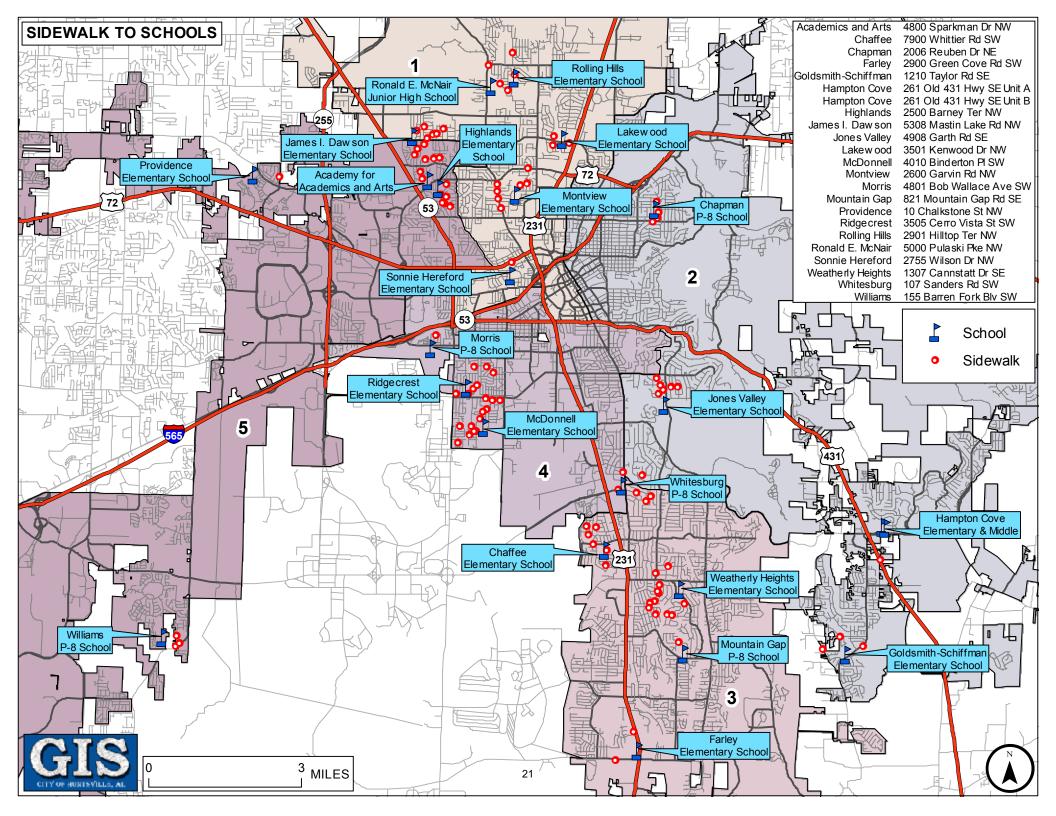
There are 102 missing sidewalk connections within a quarter mile of City of Huntsville elementary or middle schools. The Sidewalk to Schools map details the missing sidewalk links that have been identified by City of Huntsville Planning department. These have been cross-checked against the requests lists to remove duplicates.

Prioritizing these needed sidewalk connections would create a more evenly-distributed map of sidewalk installation that touches all areas of the city.



SIDEWALK REQUESTS

<u>ID</u>	<u>Sidewalk/Crosswalk</u>	Additional Location Information	<u>ID</u>	Sidewalk/Crosswalk	Additional Location Information	
1	Wilkenson Dr	From Meridian St to Salem Dr	28	Byrd Spring Rd	From Dalton St to Maxwell Pl	
2	Salem Dr	From Wilkenson Dr to Melody Rd	29	Meadowbrook Dr	From Hannifin Dr to Hillwood Dr	
3	Melody Rd	From Salem Dr to James C Crawford Park	30	Parkhill Rd	From Big Cove Rd to Governors Dr	
4	Valley Brook Dr	From Vinyard St to Belle Meade Dr	31	California St	From Governors Dr to Whitesburg Dr	
5	Benaroya Ln	From Boulevard South to Byrd Spring Rd	32	Treymore Ave	From Mastin Lake Rd to Countess St	
6	Sewanee Rd	From Governors Dr to Marsheutz Ave	33	Greenleaf Dr	From Rockhill Dr to Pawnee Trl	
7	Ward Ave	From White St to Schiffman St	34	Vincent Rd	From Whitesburg Dr to Oxford Dr	
8	Stevens Ave	From Russell St to Maysville Rd	35	Barcody Rd	From Rivlin Rd to Drake Ave	
9	Drake Ave	From L & N Dr to Whitesburg Dr	36	Big Cove Rd	From California St to End of Big Cove Rd	
10	Windham St	From Philpot Ave to Wells Ave	37	Fraser Ave	From California St to Tennessee St	
11	Charlotte Dr	From Milton St to Memorial Pky	38	California St	Lowe Ave to Lowell Dr	
12	Valley View Dr	From Lily Flagg Rd to Weatherly Rd	39	Olive Dr	From Woodmont Ave to Big Cove Rd	
13	Caldwell Ln	From Featherstone Ln to Natures Trl	40	Owens Dr	From Woodmont Ave to Big Cove Rd	
14	Dug Hill Rd	From Existing Sidewalk to Williams & Broad Dr	41	Devon St	From Drake Ave to End of Devon St	
15	Chaney Thompson Rd	North entrance of Southside Park to South entrance of Southside Park	42	Vanderbilt Dr & Vanderbilt Cir		
16	North Broad Pl	From 3300 NorthBroad Pl to 3420 North Broad Pl	43	Flint Dr	From Nature Walk Way (and around cul-desac) to Taylor Rd	
17	Blackbird Dr	From Skylark Dr to end of existing sidewalk at 11005 Blackbird Dr	44	Clinton Ave	From Grayson St to Maysville Rd	
18	Knox Creek Trl	From 261 Knox Creek Trl to Knox Creek Park	45	Stone Mountain Dr	From 11002 Stone Mountain Dr to 11006 Stone Mountain Dr	
19	Andrew Jackson Way & O'Shaughnessy Ave	Crosswalks at Andrew Jackson Way and O'Shaughnessy Ave	46	Whitesburg Dr	From Westchester Ave to Homewood Dr	
20	Clinton Ave	From Brown St to Woodson St	47	Terry-Drake Rd	From Old Big Cove Rd to Taylor Rd	
21	Hawks Way		48	Technology Dr	From Wynn Dr to Sparkman Dr	
22	Chambers Dr	From Oak Park Dr to Oakwood Ave	49	Wade Rd	From 388 Wade Rd to 434 Wade Rd	
23	Rodgers Dr	From Haynes Ave to Oakwood Ave	50	Marsheutz Ave	From Gallatin St to California St	
24	Lily Flagg Rd	From Memorial Pky to end of existing sidewalk	51	Roberta Rd	From Whitesburg Dr to Martha Dr	
25	Monte Sano Blv	From North entrance of Monte Sano Elementary School to South entrance of Monte Sano Elementary	52	Davidson St	From 2005 Davidson St to 2013 Davidson St	
26	Weatherly Rd & Blanda Dr	Crosswalks at Weatherly Rd and Blanda Dr	53	Vista Dr	From Valley Ln to End of Vista Dr	
27	Memorial Pky	From Logan Dr/ Lily Flagg Rd to Cameron Rd	20 54	Yorkshire Dr	From 13925 Creely Dr to 14018 Creely Dr	



SIDEWALKS TO SCHOOLS

<u>ID</u>	<u>Sidewalk</u>	<u>School</u>	Additional Location Information
1	Rita Ln/Regina Way	Academy for Academics & Arts	From Grizzard Rd To Gayhart Dr
2	Gayhart Dr	Academy for Academics & Arts	From Regina Way To Broadmeadow Ln
3	Broadmeadow Ln	Academy for Academics & Arts	All of Broadmeadow Ln
4	Dry Creek Dr	Academy for Academics & Arts and Highlands	From Elton Rd To Trail Ridge Rd
5	Rita Ln	Academy for Academics & Arts and Highlands	From Grizzard Rd To Dry Creek Dr
6	Shamrock Dr	Academy for Academics & Arts and Highlands	All of Shamrock Dr
7	Broadmor Rd	Academy for Academics & Arts and Highlands	All of Broadmor Rd
8	McClain Ln	Academy for Academics & Arts and Highlands	All of McClain Ln
9	Morningside Dr	Academy for Academics & Arts and Highlands	From south side of McClain Ln To Brookline Dr
10	Delia Ln	Academy for Academics & Arts & James I Dawson	All of Delia Ln
11	Whittier Rd	Chaffee Elementary School	From Logan Dr To south side of Randall Rd
12	Logan Dr	Chaffee Elementary School	From Logan Cir To Whittier Rd
13	Whittier Rd	Chaffee Elementary School	From Shereton Rd To Lauderdale Rd
14	Mallard Rd	Chaffee Elementary School	All of Mallard Rd
15	Peacock Dr	Chaffee Elementary School	All of Peacock Dr
16	Charlotte Dr	Chaffee Elementary School	From Byrd Spring Rd To Milton St
17	Birchwood Dr	Chapman P-8 School	All of Birchwood Dr
18	Dellbrook Dr	Chapman P-8 School	All of Dellbrook Dr
19	Oakwood Ave	Chapman P-8 School	From Cabaniss Rd To Dellbrook Dr
20	Haynes Ave	Chapman P-8 School	From Maysville Rd To Rodgers Dr
21	Memorial Pky	Farley Elementary School	From north side of Oak Dairy Ln To Green Cove Rd
22	Green Cove Rd	Farley Elementary School	West side of Memorial Pky
23	Old Big Cove Rd	Goldsmith Schiffman Elementary	From Terry-Drake Rd To Flint Dr
24	Terry-Drake Rd	Goldsmith Schiffman Elementary	From Adonis Rd To Taylor Rd
25	Taylor Rd	Goldsmith Schiffman Elementary	From Terry-Drake Rd To southwest of Weeping Willow Dr
26	US 431 S Hwy	Hampton Cove Elementary & Middle Schools	Near Hampton Cove Dog Park
27	Darby Cr	Highlands Elementary School	From Barney Ter To Courtney Dr
28	Gunnison Ln	Highlands Elementary School	From Sparkman Dr To Nelson Dr
29	Rickwood Dr	James I Dawson Elementary School	All of Rickwood Dr
30	Nathalee Ave	James I Dawson Elementary School	From Olson St To Boone St
31	Lucretia Ave	James I Dawson Elementary School	All of Lucretia Ave
32	Ellington Rd	James I Dawson Elementary School	From Greenbriar Dr To Rosedale Dr
33	Greenbriar Dr	James I Dawson Elementary School	22 From Ellington Rd To Rickwood Dr

<u>ID</u>	<u>Sidewalk</u>	<u>School</u>	Additional Location Information
34	Rosedale Dr	James I Dawson Elementary School	All of Rosedale Dr
35	Avondale Dr	James I Dawson Elementary School	From Westwood Dr To Westwood Dr
36	Walter Ave	James I Dawson Elementary School	All of Walter Ave
37	Watson Dr	James I Dawson Elementary School	All of Watson Dr
38	Bayfield Dr	Jones Valley Elementary	All of Bayfield Dr
39	Dunsmore St	Jones Valley Elementary	All of Dunsmore St
40	Dobbs Dr	Jones Valley Elementary	All of Dobbs Dr
41	Heatherhill Dr	Jones Valley Elementary	
42	Huntington Rd	Jones Valley Elementary	All of Huntington Rd
43	Wright Dr	Jones Valley Elementary	From Huntington Rd To Garth Rd
44	Mastin Lake Rd	Lakewood Elementary School	From Kenwood Dr To Memorial Pky
45	Inglewood Dr	Lakewood Elementary School	From Timbercrest Dr To Mastin Lake Rd
46	Glen Park Dr	Lakewood Elementary School	All of Glen Park Dr
47	Conger Rd	Mc Donnell Elementary School	3601 Conger Rd
48	White Oak Way	Mc Donnell Elementary School	3903 & 3905 Grunden Dr
49	Newson Rd	Mc Donnell Elementary School	
50	Grassfort Dr	Mc Donnell Elementary School	From Kennemore Dr To Conger Rd
51	Kennemore Dr	Mc Donnell Elementary School	All of Kennemore Dr
52	Wilks Pl	Mc Donnell Elementary School	From Archer Dr To Binderton Pl
53	Telstar Cir	Mc Donnell Elementary School	From west side of Penny St To Centaur Blv
54	Gazette Dr	Mc Donnell Elementary School	All of Gazette Dr
55	Oak Glen Ter	Mc Donnell Elementary School	
56	The Prado	Mc Donnell Elementary School	All of The Prado
57	Lemley Pl	Mc Donnell Elementary School	All of Lemley Pl
58	Pulaski Pke	Montview Elementary School	From Sparkman Dr To Stonebrook Cir
59	Pulaski Pke	Montview Elementary School	From Stonebrook Cir To Garvin Rd
60	Pulaski Pke	Montview Elementary School	From north side of Clayton Dr To south side of Cave Ave
61	Pulaski Pke	Montview Elementary School	From north side of Link Ave To north side of Norton Ave
62	Thornhill Rd	Montview Elementary School	From Mountain Park Cir To Greenhill Dr
63	Mountain Park Cir	Montview Elementary School	From Thornhill Rd To north side of Sparkman Dr
64	Monticello Dr	Montview Elementary School	From Greenhill Dr To Thornhill Rd
65	Crestwood Dr	Morris Elementary School	All of Crestwood Dr
66	Rockford Dr	Mountain Gap P-8 School	From south side of Argent Dr To Versailles Dr
67	Indian Creek Rd	Providence Elementary School	From north side of King Rd To Providence Main St
68	Pinedale Dr	Ridgecrest Elementary School	From Cerro Vista St To Beaty Rd

<u>ID</u>	<u>Sidewalk</u>	<u>School</u>	Additional Location Information	
69	McVay St	Ridgecrest Elementary School	From Drake Ave To north side of Drake Ave	
70	Fairacres Rd	Ridgecrest Elementary School	From Belvoir Dr To Hillsboro Rd	
71	Drake Ave	Ridgecrest Elementary School	From Thomas Rd To The Prado	
72	Holiday Dr	Ridgecrest Elementary School	From Hillsboro Rd To north side of Cayman Rd	
73	Bermuda Rd	Ridgecrest Elementary School	All of Bermuda Rd	
74	Thurman Rd	Ridgecrest Elementary School	From north side of Saturn Dr To Fairacres Rd	
75	Beaty Rd	Ridgecrest Elementary School	From Pinedale Dr To Belvoir Dr	
76	Colfax Rd	Rolling Hills Elementary School	All of Colfax Rd	
77	Joy Dr	Ronald McNair Jr. High School	All of Joy Dr	
78	Pulaski Pke/Winchester Rd	Ronald McNair Jr. High School	SE corner of intersection of Pulaski Pke & Winchester Rd	
79	Lumary Dr	Ronald McNair Jr. High School & Rolling Hills	All of Lumary Dr	
80	Hilltop Ter	Ronald McNair Jr. High School & Rolling Hills	Near Rolling Hills Dr	
81	University Dr	Sonnie Hereford Elementary School	From Meadow Dr To Pulaski Pke	
82	Hemlock Dr	Weatherly Heights Elementary School	From Hickory Hill Ln To west side of Holder Dr	
83	Westleigh Dr	Weatherly Heights Elementary School	From Hampshire Dr To south side of Dover Rd	
84	Valley View Ter	Weatherly Heights Elementary School	From Hickory Hill Ln To McBride Dr	
85	Hickory Hill Ln	Weatherly Heights Elementary School	From north side of Bebe Ann Ave To Valley View Ter	
86	Ronald Dr	Weatherly Heights Elementary School	All of Ronald Dr	
87	McBride Dr	Weatherly Heights Elementary School	All of McBride Dr	
88	Cumberland Dr	Weatherly Heights Elementary School	From west side of Salmon Dr To McBride Dr	
89	Hillwood Dr	Weatherly Heights Elementary School	From west side of Dellcrest Dr To Mountaincrest Dr	
90	Mountaincrest Dr	Weatherly Heights Elementary School	From Hillwood Dr To south side of Hummingbird Dr	
91	Hampshire Dr	Weatherly Heights Elementary School	From Nottingham Ln To south side of Dover Rd	
92	Bayreuth Dr	Weatherly Heights Elementary School	All of Bayreuth Dr	
93	Forrest Heights Dr	Weatherly Heights Elementary School	From Hickory Hill Ln To east side of Willow Hills Dr	
94	Vincent Rd	Whitesburg School	All of Vincent Rd	
95	Whitesburg Dr	Whitesburg School	From Bellingrath Dr To Four Mile Post Rd	
96	Martin Rd	Whitesburg School	From east side of Rails and Trails Greenway To Whitesburg Dr	
97	Oxford Dr	Whitesburg School	From Vincent Rd To Martha Dr	
98	Martha Dr	Whitesburg School	From Four Mile Post Rd To Oxford Dr	
99	Baylor Dr	Whitesburg School	From Eagles Ridge Pl To Corlett Dr	
100	Fox Rd	Williams P-8 School	All of Fox Rd	
101	Arnett Rd	Williams P-8 School	All of Arnett Rd	
102	Zierdt Rd	Williams P-8 School	From north side of Bremerton Dr To Southwest of Barren Ford Blv	

Bicycle Projects: More than Just Paint

A common misconception is that bicycle projects should be easy to achieve, as bike lanes are "just some paint."

Bicycle projects must address a variety of considerations.

> Different types of riders

- From seasoned commuter cyclists to kids on training wheels
 Roger Geller in Portland, OR is credited with creating the four cyclist typologies:
 - Strong and Fearless: Current riders who ride with little or no bicycle-specific infrastructure in place
 - Enthused and Confident: Current riders who ride where some bicycle-specific infrastructure exists
 - Interested but Concerned: People willing to bicycle if highquality bicycle infrastructure were added
 - No Way, No How: People unwilling to bicycle even if highquality bicycle infrastructure was in place





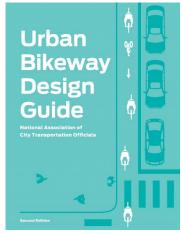
Courtesy: Bikes & Brews Facebook Photos

Courtesy: City of Huntsville, AL

The City of Huntsville's goal for improving and increasing bicycle infrastructure is to appeal to the **Interested but Concerned** segment of the population, to encourage more people to ride if they are interested. Additionally, the city endeavors to create a safe environment for the **Strong and Fearless**, as well as the **Enthused and Confident** cyclists already riding on city streets.

Different contexts and solutions

Every street is unique and the appropriate bicycle infrastructure for one street is not always best for another.







Images: National Association of City Transportation Officials

There is an entire field of transportation engineering that focuses on safely moving bicycles through cities. Some context to consider:

- ➤ Conflicts between bicycle lanes and traffic lanes at:
 - o "T" intersections
 - o 4-way intersections
 - Driveways
 - o Traffic signals
 - o Bridges
- > Conflicts when the bike lanes end
 - Where do bikes go next? How to get there safely?
- > Does the road need to be resurfaced?
 - Paint cannot simply be applied to the top of the roadway surface. It will come off and must be reapplied constantly.
 - The road needs to be milled and repaved for the application to be permanent.

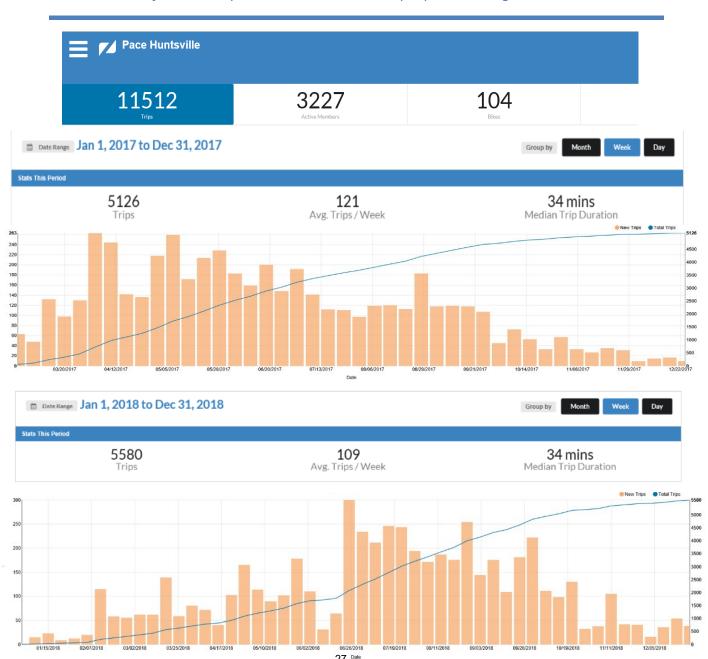
The city of Huntsville does not currently have a specialist in engineering safe bicycle infrastructure. However, city staff from multiple departments regularly attend bicycle safety webinars and other educational opportunities offered by FHWA, Smart Growth America, and the DOT.

Every bicycle infrastructure project presents new challenges for which the city must often consult professional texts, other cities, or expert consultants.

Does Anyone Ride Those Bike-Share Bikes?

Since the Pace Bike Share program started in Huntsville in 2017, Pace bikes have taken 11512 individual rides. There are 3227 active memberships in the Pace Bike Share program in Huntsville. Active memberships include people who have paid a monthly or annual membership fee.

2018 saw 454 more rides than 2017.
The fleet was expanded in 2018 and more people are riding Pace bikes.



Cyclist Community in Huntsville

Huntsville's cyclists are engaged in the community, advocates for safety, and promoters of increased cycle ridership citywide. To get involved in cycling in Huntsville, there are many groups to join:

Spring City Cycle Club (SCCC)- Huntsville's own 120+ year old cycle club was founded in 1892 for the promotion and development of cycling for sport, fitness, recreation, transportation, and safety education. This 120+ year old club hosts regular rides for all levels and education and training events. www.springcity.org to join.

Bicycle Advisory and Safety Committee (BASC)- This committee was formed in 1992 to assist the City of Huntsville in planning and developing non-motorized transportation facilities and programs. Members represent local bicycle organizations, bike shops, and citizens at large. The committee meets with city staff from Traffic Engineering, Planning, and other departments once a month. Contact <a href="mailto:image:

Bicycle Friendly Business- Members of either of the above organizations can help your business become a certified Bicycle Friendly Business (BFB) through the national League of American Bicyclists. There are four BFBs in the state of Alabama, two of which are in Huntsville: Bicycle Cove bike shop and Straight to Ale Brands, Inc. brewery. Learn more at bikeleague.org/business

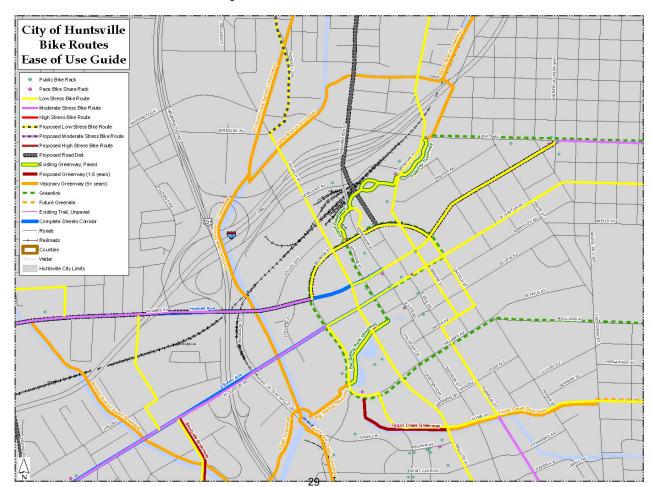
Bikes and Brews- The newest addition to the Huntsville bicycle community is the monthly Bikes and Brews event. A group of 15 to 50 cyclists take unique brewery and eatery bike tours of Huntsville. Learn more at facebook.com/groups/bikesbrewshsv/

There are many more opportunities to be involved in Huntsville cycling besides the above. Any of the local bike shops: Bicycle Cove, Bicycles Etc., Blevins Bicycle Co., or Trailhead Inc. can discuss local resources, rides, and events.

Draft 2020 Bicycle Network Plan

The current bicycle plan was completed in 2006. An expansive update of the bicycle network plan is underway. The goals of this new plan include:

- Expand the bicycle network beyond city limits to include the entire Metropolitan Planning Organization (MPO) area.
- Create Bicycle Analysis Zones (BAZ)- These are designated areas based on Census tracts and are used to assess the area's existing assets such as Bike routes, Greenways, Parks and recreational activities. This additional information may encourage the novice cyclist to ride.
- > Align the MPO Bike plan with the Principles of the "BIG Picture"
 - 1. Build a Live/Work Connect Community
 - 2. Design a mobile Sustainable Transportation Network
- The new Bike Plan will include an Ease of Use Guide for the bike routes in Huntsville, for example, in Downtown:



2017-2019 Bicycle Infrastructure Projects

Project	Cost	Miles	Lane Width	Buffered	Year
Clinton Phase I Bike Lanes	\$400,000	0.9	4 feet	No	2019
Spragins Cycle Track	\$285,000	0.75	5 feet	Yes	2017
Governors House Cycle	\$250,000	1.1	4.5	Yes	2019
Track			feet		
Old Hwy 20 Bike Lanes	\$1.4 Million	4.25	4 feet	Yes	2019-20
Martin Road Bike Lanes	\$3 Million	3	4 feet	No	2019

 Clinton Ave Phase I will include four-foot-wide bike lanes from Woodson/Heart of HSV to Governors Drive.

Clinton at Pinhook Creek Before:



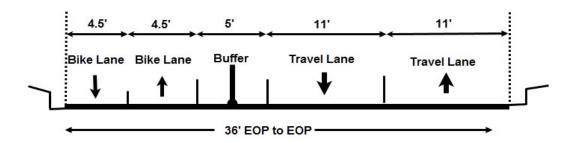
Clinton at Pinhook Creek After:



Governors House Dr SW- part of the Singing River Trail- will have a bi-directional, buffered cycle track with 4.5 foot wide bike lanes from Jordan Lane to Bob Wallace Ave.



Governor's House Cross Section

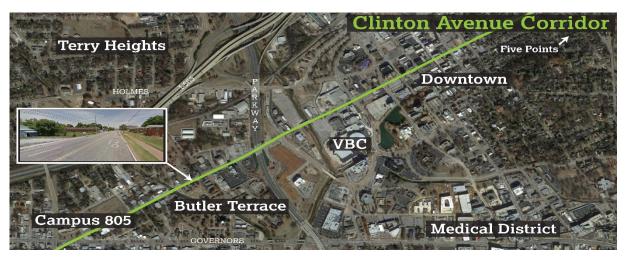


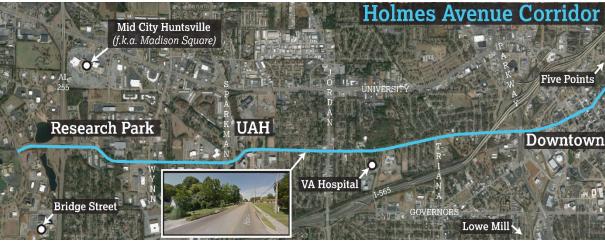


What is a Complete Street?

Complete streets are streets for everyone. Complete street improvements make roadways safer for all users. Transit riders, daily commuters, freight delivery, and alternative mode users of all ages and abilities are considered when designing complete streets.

At the 2016 Complete Streets Workshop, the city designated Holmes Avenue and Clinton Avenue as the city's Complete Streets pilot projects. Both roads are wider than current capacity demand and are alternatives to major thoroughfares I-565 and US-72. Funds were committed in the city's capital plan for both projects.





Clinton Avenue

Complete streets are about more than sidewalks and bike lanes. Access management to businesses, transit accessibility, and safe intersections were all incorporated into the Clinton Avenue complete street design. The construction of Clinton Avenue improvements began in Spring 2019. The improvements include:

- Bike lanes from Heart of Huntsville Way to Governors Drive
- Multi-use path from Church Street to Heart of Huntsville Way including the new VBC plaza to be completed by 2020
- Sidewalk improvements throughout the corridor
- ADA compliance ramps throughout the corridor
- Additional crosswalks throughout the corridor
- Intersection improvements for safer bicycle and pedestrian crossings throughout the corridor

Access management is a complete streets tool for improved roadway safety for all users, see this aerial image of Bandito Burrito (located at the corners of Clinton Avenue, 6th Street, and Governors Drive) with access management problem areas circled. These three areas created conflict when drivers made turning movements, slowing drivers behind them and causing dangerous conditions for bikes and pedestrians.



Imagery ©2019 Google, Map data ©2019 Google 20 ft I

The Clinton Ave. project will be ongoing throughout the summer of 2019. The lessons learned from the Clinton Avenue project will inform the work to be done on Holmes Avenue.



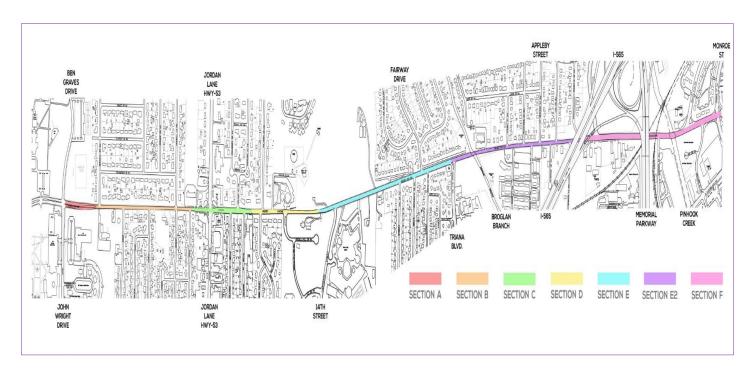




Holmes Avenue

Currently, 4Site is the company designing Holmes Ave with 90% design plans in review. Construction to begin on phase one from Broglin Branch Creek to Pollard St in 2020.

The project will need to be constructed in seven sections. These seven sections were determined due to the changing widths and inclines of Holmes Avenue at each of these locations.



Section A: From John Wright/Ben Graves Drive on UAH campus to Brickell Rd, just east of UAH

Section B: From Brickell Rd to Greenacres Dr., just west of Jordan Lane

Section C: From Greenacres Dr. to the beginning of the hill's incline between Jack Coleman Dr. and Hillmont Dr.

Section D: Up over the hill, passing Wexler, Russell Hill, and ending just west of 14th Street

Section E: West of 14th Street to Triana Blvd

Section E2: Triana Blvd. to Broglan Branch Creek

Section F: Broglan Branch Creek to Pollard St

The community, elected officials, business owners, and city partners have all responded to the Clinton Avenue project and this response will inform the Holmes Avenue improvements. Clinton Avenue is a much smaller project in scope and scale, it was a good guinea pig for complete streets improvements before tackling Holmes.

The Holmes Avenue complete streets project will be like conducting seven Clinton projects back to back, in terms of scale and complexity.

Future of Complete Streets

The city adopted a Complete Streets Policy in 2018. An informal process for implementation has developed among city departments working on the Clinton Avenue and Holmes Avenue projects.

While these two projects had dedicated funding sources in the capital plan since 2016, other complete street improvements that arose from the Downtown Master Plan did not.

Many complete streets improvements were added to existing roadway projects- such as Governors House Road, discussed in the Bicycle Projects section. Adding on the complete streets improvement to a re-paving job created scope-creep and additional costs.

For the 2020 fiscal year, the funding mechanism for alternative modes will be discussed and formalized by all departments involved. Roles and responsibilities for complete street design and construction will be formalized as well.

Expanding Alternative Modes

The goal of multi-modal safety and connectivity is important to many of our external partners. Beyond the traditional work of transportation infrastructure improvements, the city engages in alternative modes activities throughout the year when special opportunities arise. These are initiated in several ways.

- The Planning Department applies for professional development and workshops for training in alternative modes best practices.
- Opportunities arise in other citywide projects to apply alternative modes improvements.
- Organizations such as Downtown Huntsville Inc. (DHI), South Huntsville Business Association (SHBA), Rotary, AARP, Committee of 100, and local schools, colleges, and universities engage the city for partnership and participation in their alternative modes projects.

Safe Streets, Smart Cities Academy



Ten city employees from four departments have trained together since October 2018 on alternative modes safety. Topics included placemaking with alternative modes, effects of complete streets on traffic safety results, design considerations, and incorporating transit.

The Academy's demonstration project will be on Four Mile Post Road at the Jones Farm Park. The goals of the project are to make a safer bike/pedestrian crossing of Four Mile



Post into the park as well as connect the park to the Atwood Linear Park Greenway, which is about a quarter mile east of the park.

Safe Streets, Smart Cities Academy: Demonstration Project



A temporary improvement will be demonstrated on Four Mile Post in May 2019. A community safety event will occur at Jones Farm Park on Saturday, May 18, 2019. After public response is received, the city will implement a permanent improvement.



Current Alternative Modes Grants

Many organizations throughout the city pursue grant opportunities for alternative mode improvements. Most of these grants require partnership with the city.

- 2017 People for Bikes Grant

- Ditto Landing won this grant in Fall, 2017, implementation has been held up due to permitting issues, which were resolved in early 2019.
- Greenway expansion west of the Memorial Parkway bridge to include bike and pedestrian crossing on the historic truss bridge on the park's property.

2018 America Walks Grant

- Downtown Huntsville Inc. (DHI) won this grant in December 2018
- Wayfinding signage to connect cyclists from Meridian Street bike lanes to Gateway Greenway in downtown Huntsville

2019 AARP Community Change Grant

- Three different applications have been submitted by organizations across the City of Huntsville.
- If one of these organizations wins the grant, implementation will be done by November 2019
 - Custom bicycle racks for South Huntsville Business Association
 - Ditto Landing greenway connectivity
 - ADA accessibility for Land Trust property and trails

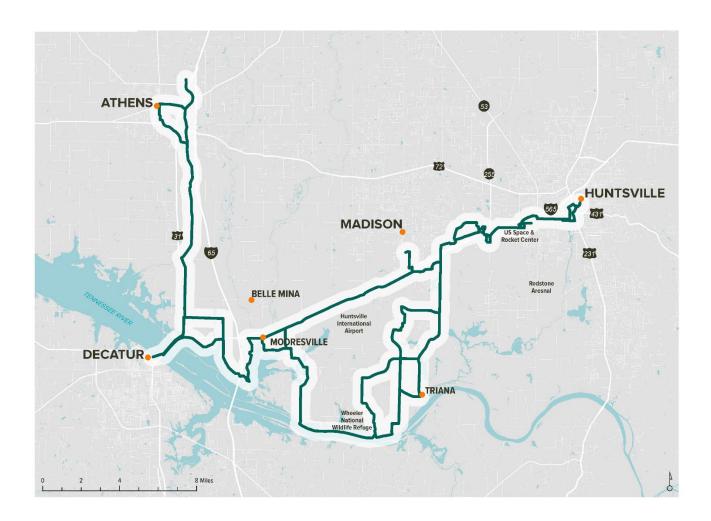
Singing River Trail



The vision for the Singing River Trail was borne out of the Launch 2035 initiative begun by the Committee of 100 with many partner agencies. Project branding, an economic impact analysis, and a master plan for the project were funded by 30 separate entities, organizations, and individuals.

The Singing River Trail will connect communities in three counties with approximately 70 miles of

trails, with the long-term goal of trails following the Tennessee River from Knoxville, TN to Paducah, KY. To learn more, visit: www.singingrivertrail.com

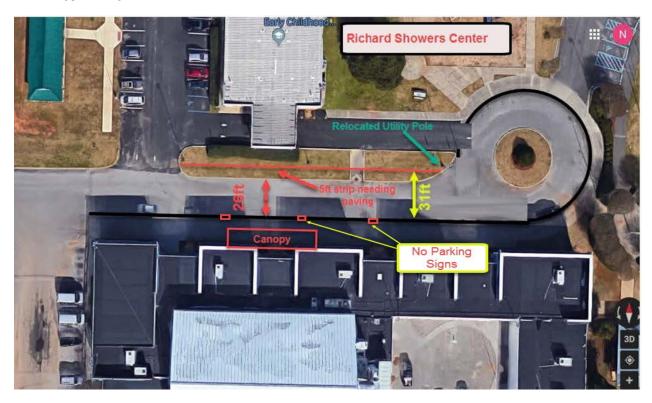


Transit Study

In 2018, City of Huntsville Public Transit completed a transit study with the goal of improving and expanding transit service in Huntsville. Beginning July 1, 2019 city buses will serve more locations, run until 8pm, and have service on Saturdays.

The study noted that "Every fixed-route transit rider is a pedestrian, and infrastructure improvements are needed to ensure safe pedestrian access to bus stops. As a result, the 5-year capital plan recommends several crosswalks and sidewalk extensions across the city." Specifically, fourteen new ramps, sidewalks, or crosswalks were recommended at new or existing transit stops by the 2019 Transit Study consultants.

Additionally, a new transfer center, where three bus routes will converge for riders to change buses will be located at the Richard Showers Center and new pedestrian improvements will make this a comfortable bus terminal.



Definitions

PE- Preliminary Engineering- the work of design, surveying, and producing engineering documents for an alternative modes project.

RW- Right of Way- the land on which an alternative modes project is built must be acquired unless owned by the city.

CN- Construction- the building of an alternative modes project.

GMC- Goodwyn Mills & Cawood- a design consultant and preliminary engineering contractor in Huntsville, AL.

Trails- existing dirt paths that connect to the greenway network.