



LITTLETON LINKAGES
— TRAIL STUDY —

Exiting Conditions Assessment

Prepared for City of Littleton

Prepared by

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Existing Conditions Abstract

Planning Context

Six recent plans from Littleton and partner agencies were reviewed for key takeaways and recommendations relevant to local trails. These plans do not include many trail-specific observations or recommendations; the main takeaway from the review is that trails are highly valued among the City's residents, highlighting the need for this study and the importance of robust community engagement.

Littleton's demographic makeup was reviewed to establish an understanding of how well the existing trail network serves portions of the community that tend to have specific mobility needs and concerns and/or have been historically left out of planning efforts. While there are no glaring disconnects between the trail network and the six assessed demographic groups, this assessment will be used to apply an equitable lens to future stages of the study.

Existing Network Inventory & Assessment

The existing conditions work revolves around an inventory of the trail network (widths, surface types, existing crossings, etc.) and assessments of a variety of network-related considerations that are key to identifying issues and opportunities, including crash history, accessibility problems, and connectivity to primary destinations for walking and biking – specifically the relationship between local trails and those considerations. Key observations include:

- + The local trail network in Littleton is segmented and disparate, and primarily serves a recreational purpose
- + Little consistency in widths and surface types between different parks/neighborhoods
- + Over 200 ADA non-compliant points in near parks and trails (*ADA Transition Plan*)
- + The Mineral Avenue Trail is the only local trail which passes through high-crash intersections

Opportunities & Constraints

The final section of this assessment provides a summary of the key observations related to network opportunities and constraints, based on the various existing conditions components, that will inform the next steps of concept development and concept evaluation. Opportunities to explore further include: the role of local trails in the broader low-stress active transportation network, connectivity and accessibility to parks and regional trails, and surface and/or widening improvements to existing local trails. The significant east-west barrier of the South Platte River/Santa Fe/rail lines and the generally limited available space for new trail alignments are potential constraints to the types of concepts that will be feasible to move forward in this study.



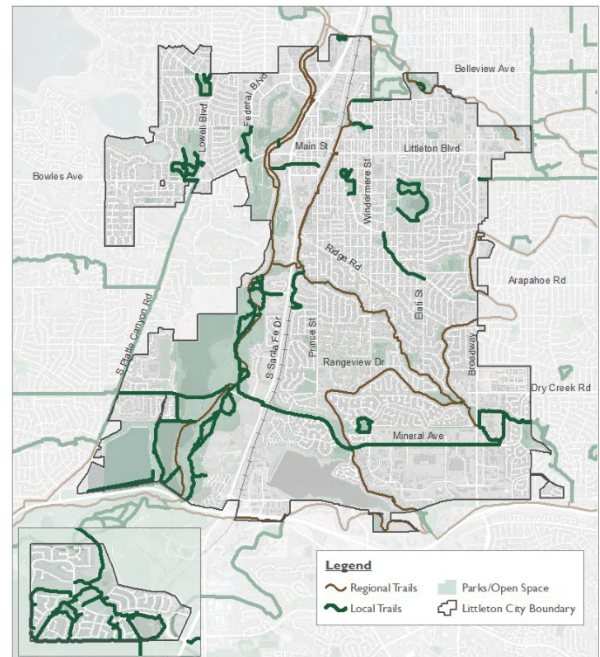
Existing Conditions Assessment

The City of Littleton is developing the Littleton Linkages Trail Study to identify opportunities for improvement to the local trail system, which provides neighborhood access to parks, schools, regional trails, and other destinations, as well as recreational opportunities. A key first step in the planning process is an assessment of the local trail network today – how well it connects the community, how well it accommodates its users, and how well it integrates with other transportation infrastructure.

Planning Context

Local trail planning requires consideration of more than just existing infrastructure conditions and network gaps. Because local trails are components of the broader transportation network, their integration with streets, sidewalks, and regional trails – and any planned changes to those facilities – needs to be factored in. Local trail needs and desires are also highly dependent on the specific makeup of the neighborhoods they serve, so an understanding of demographics is critical to inform context-sensitive and equitable planning.

While the Lee Gulch Trail is formally considered a regional trail because it serves multiple jurisdictions, it functions more as a local trail for nearby residents because it does not provide the same level of regional connectivity as the Mary Carter Greenway, High Line Canal, and C-470 trails.



Previous & Concurrent Plans

Recent transportation and/or land use-focused plans relevant to Littleton provide helpful insight into community priorities, as well as important planning context (known issues, previously identified recommendations, etc.). The six plans listed below were reviewed due to their relevance to local trails in Littleton – key general takeaways are summarized. In addition to these completed studies, South Suburban Parks and Recreation is currently developing the *Mary Carter Greenway Feasibility Study*, focused on identifying future improvements to that major regional trail; as a substantial portion of the Mary Carter Greenway is within Littleton, relevant findings and outcomes of that study will be incorporated into Littleton Linkages as each progress.



Table 1. Previous & Concurrent Plans

Plan/Study	Agency	Year Completed
Parks, Recreation, and Trails Master Plan	City of Littleton	2016
Transportation Master Plan	City of Littleton	2019
Envision Littleton Comprehensive Plan	City of Littleton	2021
Bicycle & Pedestrian Master Plan	City of Littleton	2012
Safe Routes to School Evaluation & Wayfinding Plan	City of Littleton	2022
South Platte Connections Study	Arapahoe County	2019

- + Local parks are highly valued by the Littleton community – past plans show that residents view the Littleton parks in a very favorable light
- + Many previous recommendations – not specific to trails – are focused on improving the safety of pedestrians and bicyclists at busy intersections
- + Challenges with accessing the regional trail network are a consistent observation through many of the plans
- + There is a broad community desire to encourage more people to use other, non-vehicle modes of travel and providing better trail connections are seen as the easiest ways to achieve that goal

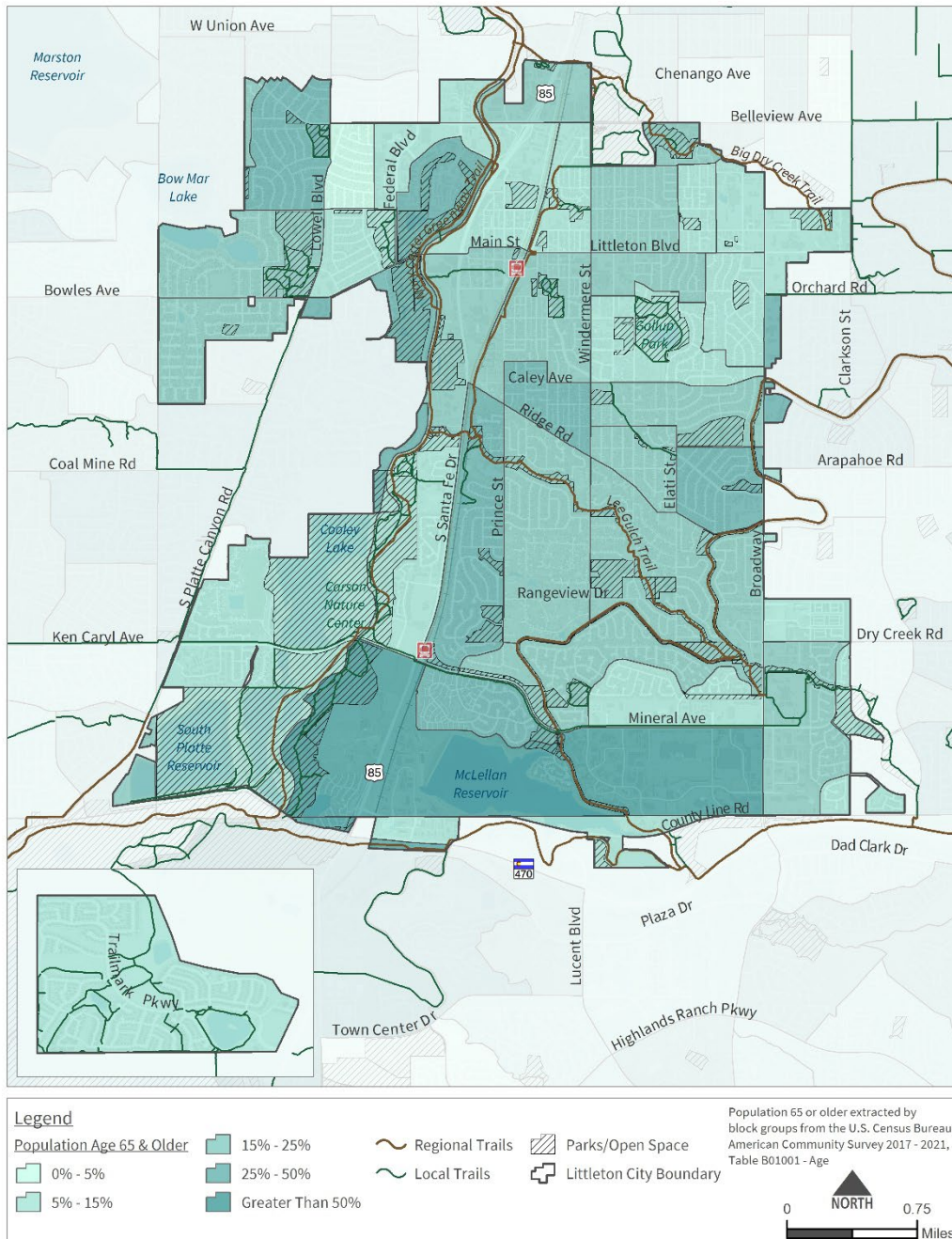
Demographic Assessment

In any transportation study, assessment of population demographics is key to understanding the composition of a community and the integration of various population groups with the infrastructure/network of interest – local trails, in this case. A demographic assessment also anticipates where new or improved transportation facilities or services are most needed to improve accessibility and equity. While no demographic group is a monolith, many tend to have particular mobility needs or considerations that differ from the general population, so understanding where they are concentrated helps determine the types of improvements that may be most needed in different parts of the community. The maps on the following pages display relative concentrations of six key demographic groups by census tract throughout Littleton.



Older Adults

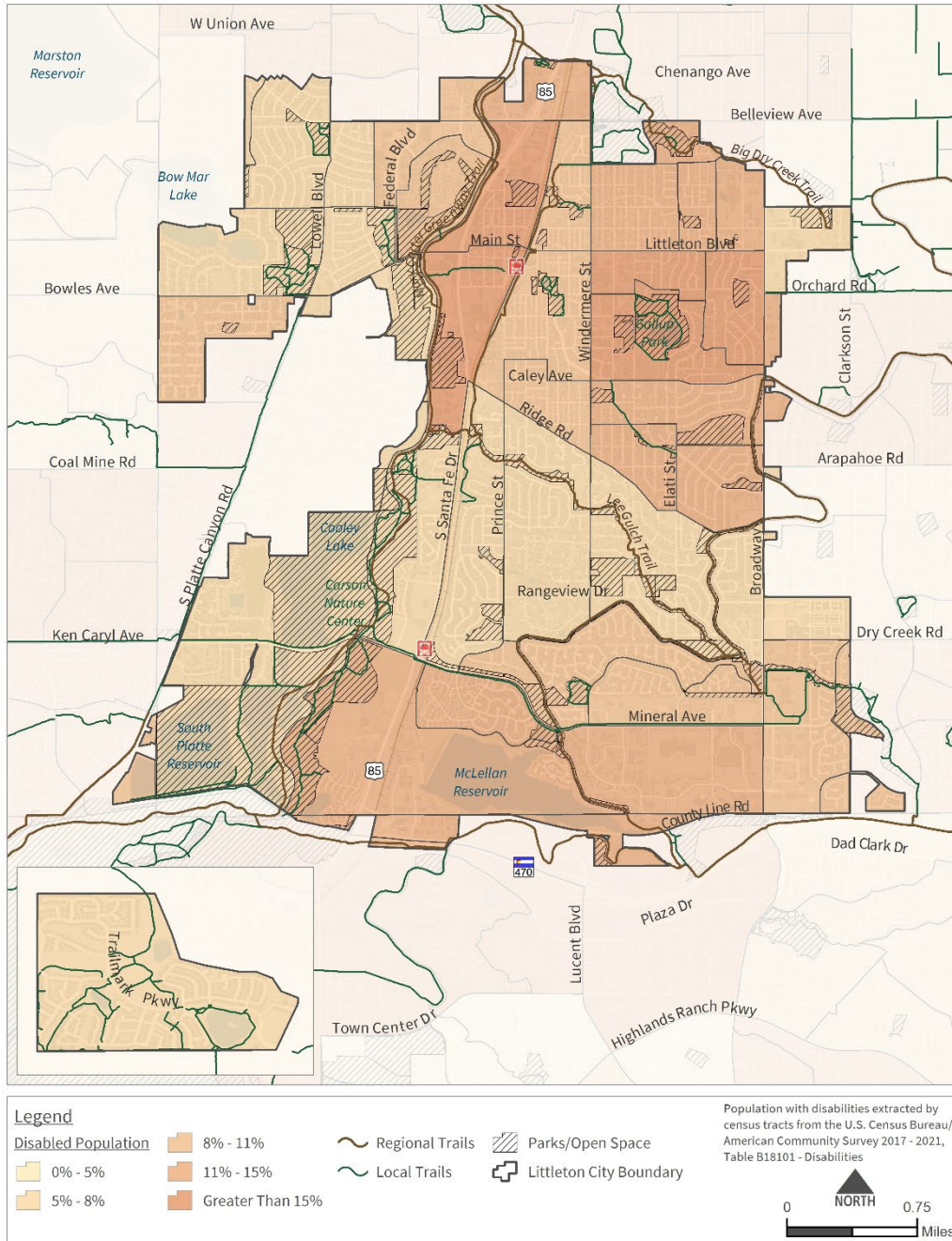
Approximately 18% of Littleton’s residents are 65 or older. While older adults are spread out relatively even across Littleton, there are slightly higher concentrations around Littleton Golf and Tennis Club and southern parts of the city. Older adults are an important demographic in trail planning because they are relatively less likely to own/drive a car and more likely to have mobility challenges than the general population.





People with Disabilities

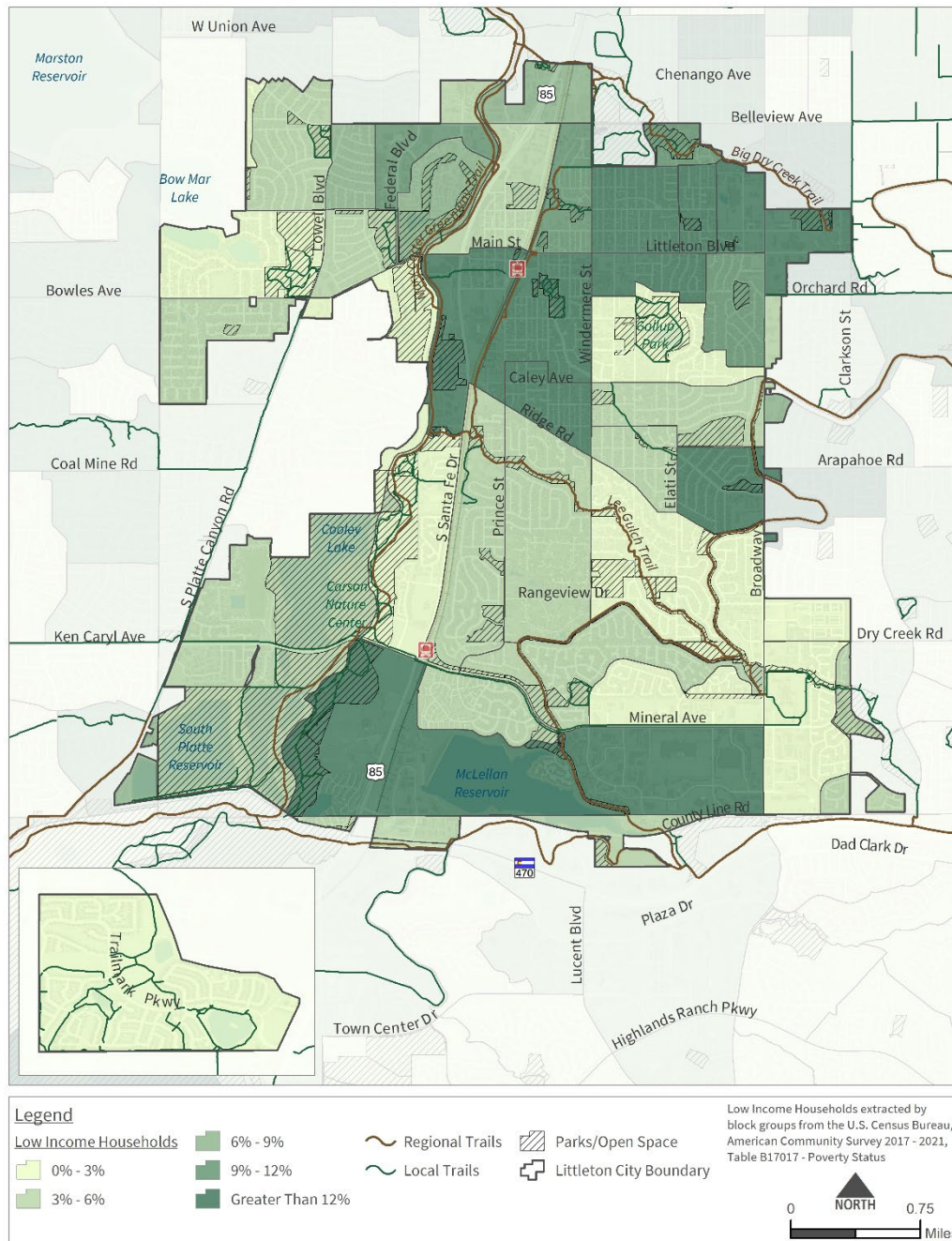
People with disabilities are spread out relatively even across the city of Littleton with a slightly higher concentration in the northeast. People with disabilities are an important demographic in trail planning because they are relatively less likely to own/drive a car and more likely to have mobility challenges than the general population.





Households with Low Incomes

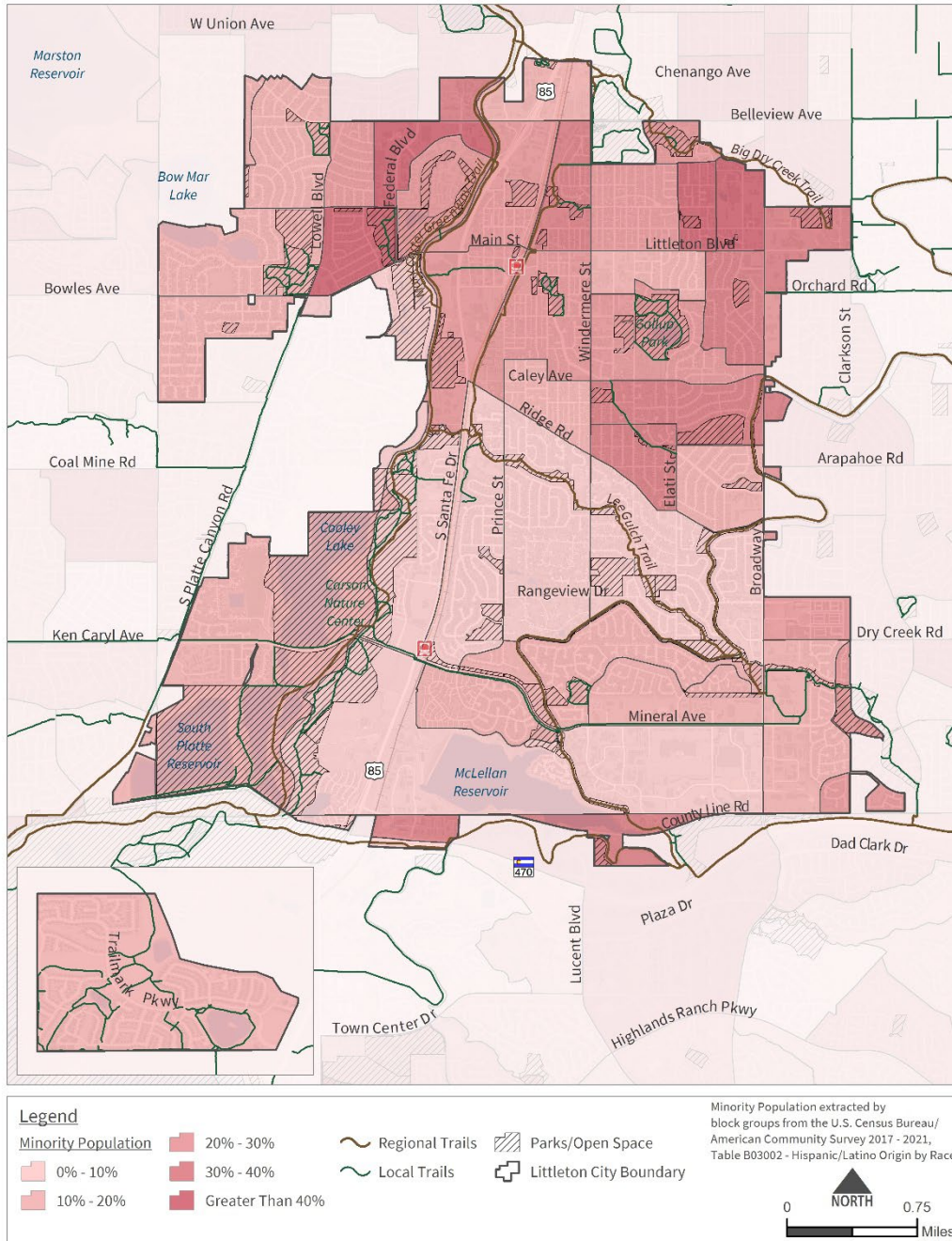
Households with low incomes are most highly concentrated around downtown and northeast Littleton. Several regional trails run through these areas. Households with low incomes are an important demographic in trail planning relatively less likely to own a car and may lack the means to participate in private recreational opportunities.





Communities of Color

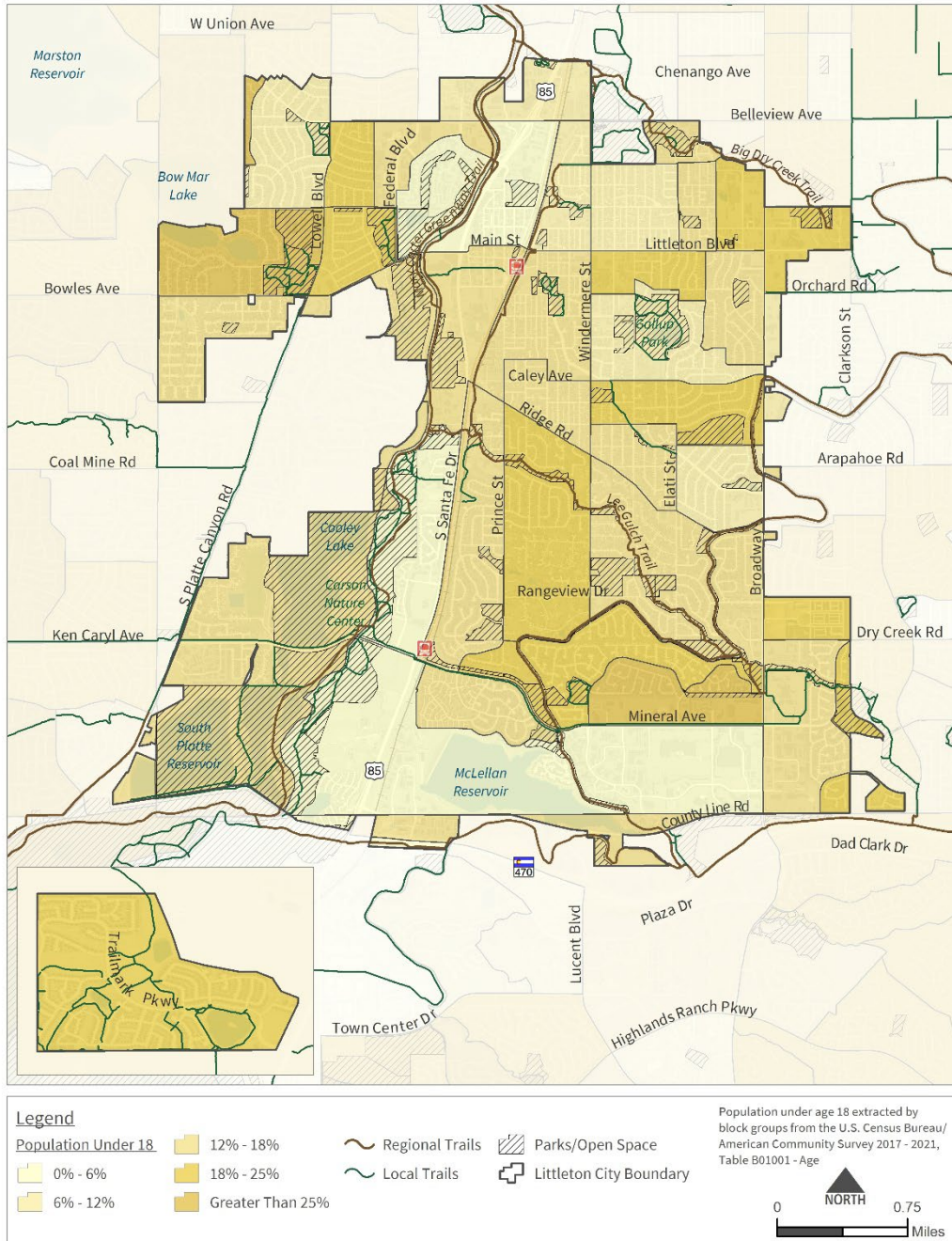
People of color make up about 12.7% of Littleton’s total population, with higher concentrations in the far northern and southern portions of the city. People from minority backgrounds are an important demographic in trail planning because they are relatively less likely to own a car and have been historically excluded from infrastructure planning and some recreational opportunities.





Children

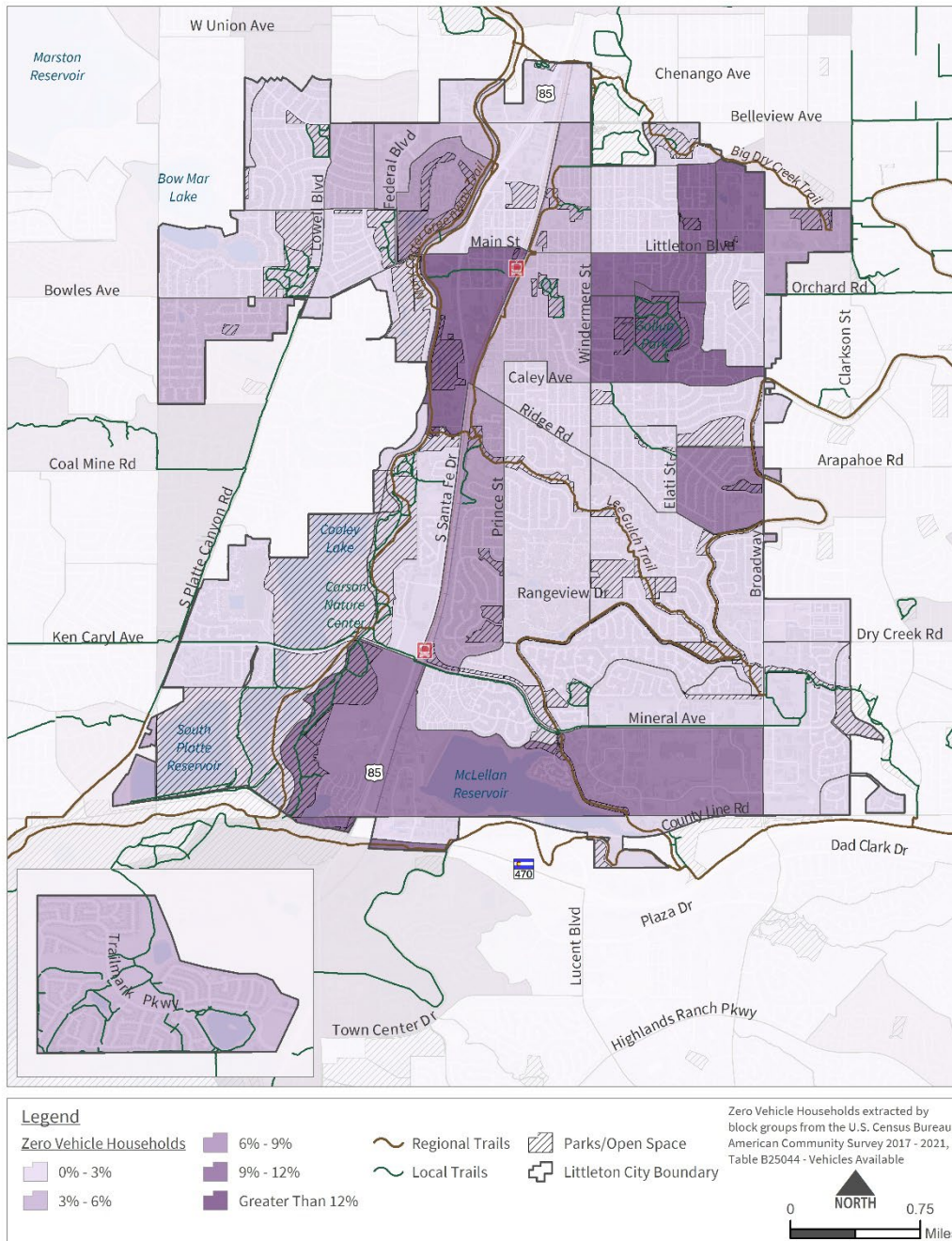
Approximately 18.3% of Littleton’s population is under the age of 18, with higher concentrations in southeast Littleton and the Trailmark neighborhoods. Children are an important demographic in trail planning because they are major recreational users of public spaces and often do not have personal access to a car; trails provide a space wholly separated from vehicular traffic to play.





Zero Vehicle Households

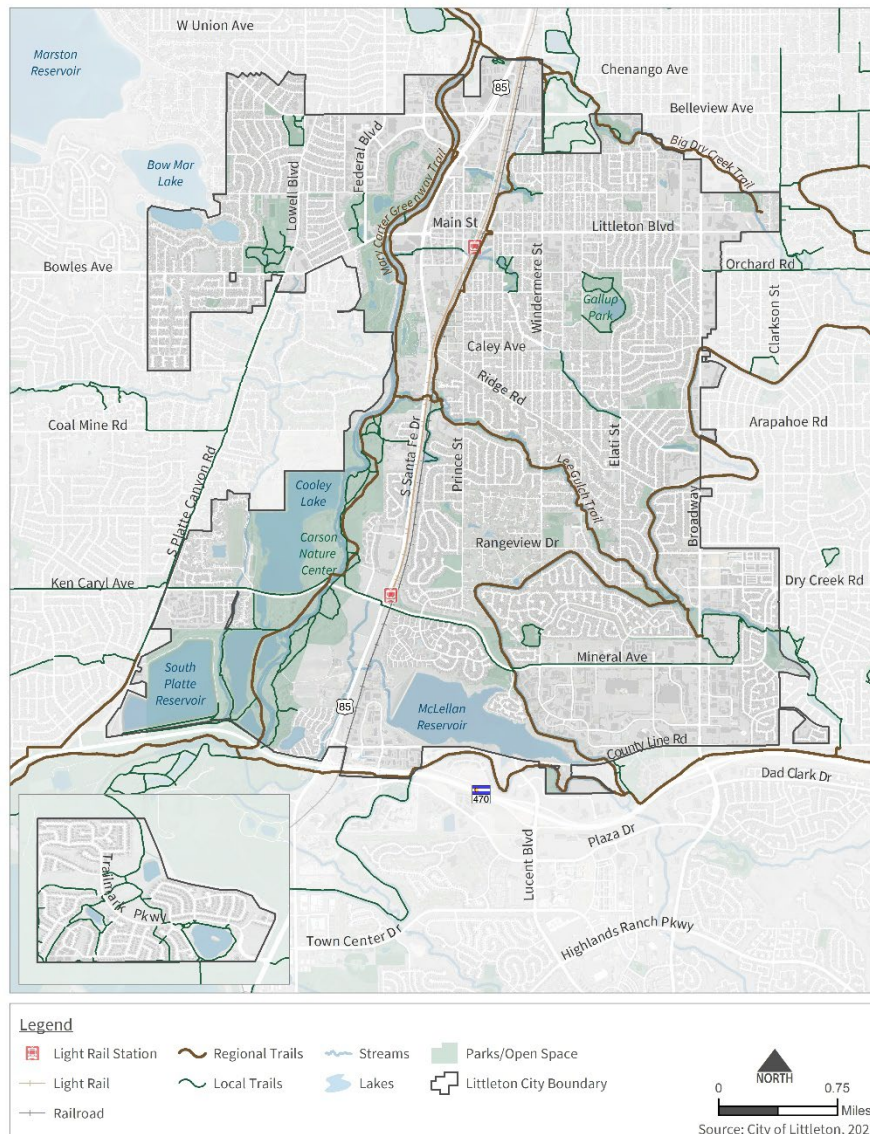
In Littleton, zero vehicle households are concentrated around the downtown area, around Gallup Park, and the far southern part of the city. People in zero-vehicle households are an important demographic in trail planning because they are more likely to depend on active modes and bicycle/pedestrian facilities (like trails) for some or all of their mobility needs and may have less access to destinations more than a few miles away.





Existing Network

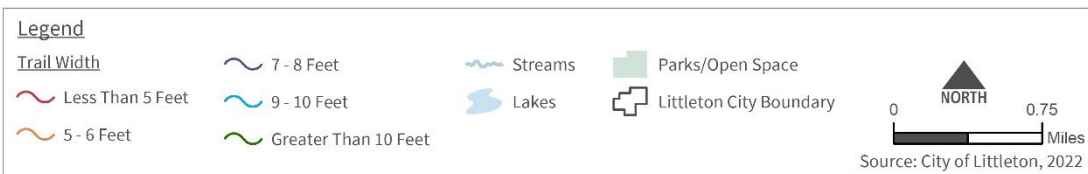
The backbone of Littleton’s trail network is formed by two prominent regional trails: High Line Canal and Mary Carter Greenway. The Big Dry Creek Trail and C-470 Trail, which generally follow the north and south borders of contiguous Littleton respectively, also serve people in the community. The Lee Gulch Trail is also important for local connectivity through central Littleton – it links the Mary Carter Greenway Trail and High Line Canal Trail – but it does not provide the same level of regional connectivity. The City’s local trail network is much more segmented and disparate; with the exception of the Mineral Trail and some local connections/parallels to the Mary Carter Greenway Trail, they are not generally well-integrated with the overall trail network, instead primarily serving a recreational purpose for nearby residents. The following pages in this section present various characteristics of the trail network that will inform later phases of the study.





Trail Width

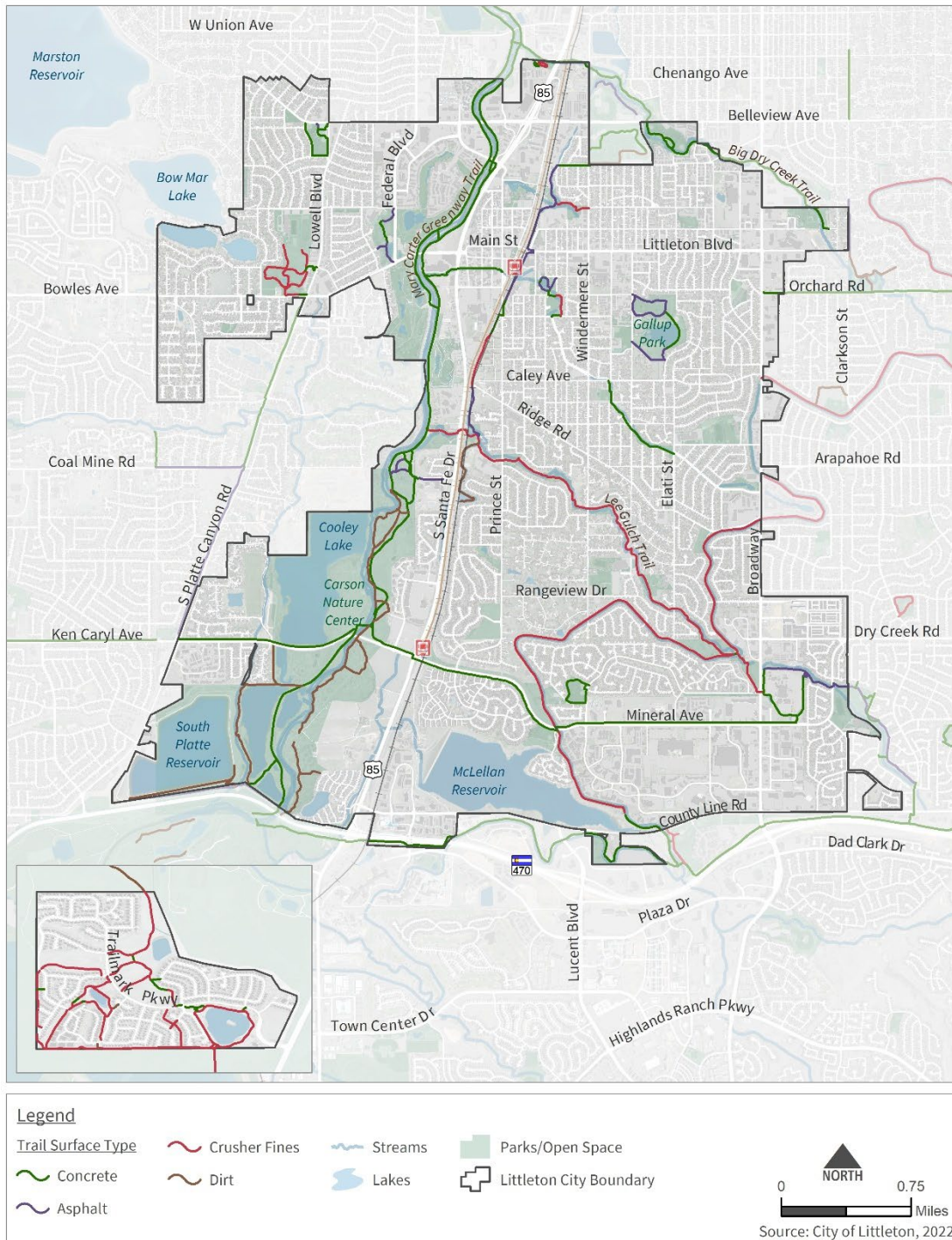
The widths of local trails in Littleton vary considerably by park and neighborhood. While the large majority of regional trails are at least 8' wide (the generally accepted minimum for accommodating pedestrians and bicyclists), many of the City's local segments are not. The Mineral Avenue Trail, which provides the most connectivity of any local trail in Littleton, is particularly narrow. The only trail segment less than 5' wide is a pedestrian-only trail through South Platte Park south of Mineral Avenue.





Trail Surface

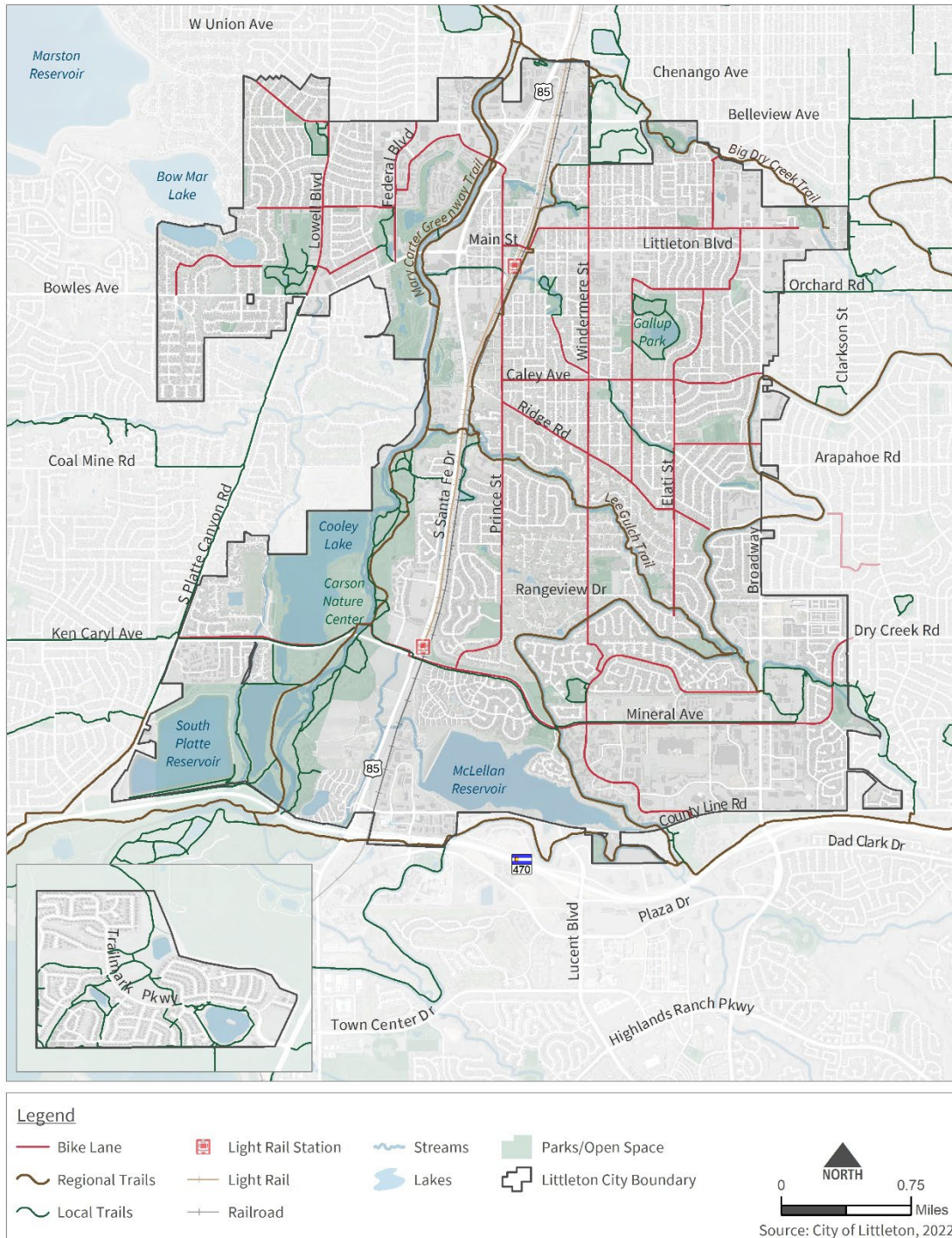
There is little consistency in trail surface type between different neighborhoods and parks in Littleton – concrete, asphalt, and crusher fines trails all exist throughout the city. The local trails that serve primarily as connections (Sterne Parkway, Mineral Trail, Little’s Creek Trail) are mostly concrete.





On-Street Integration

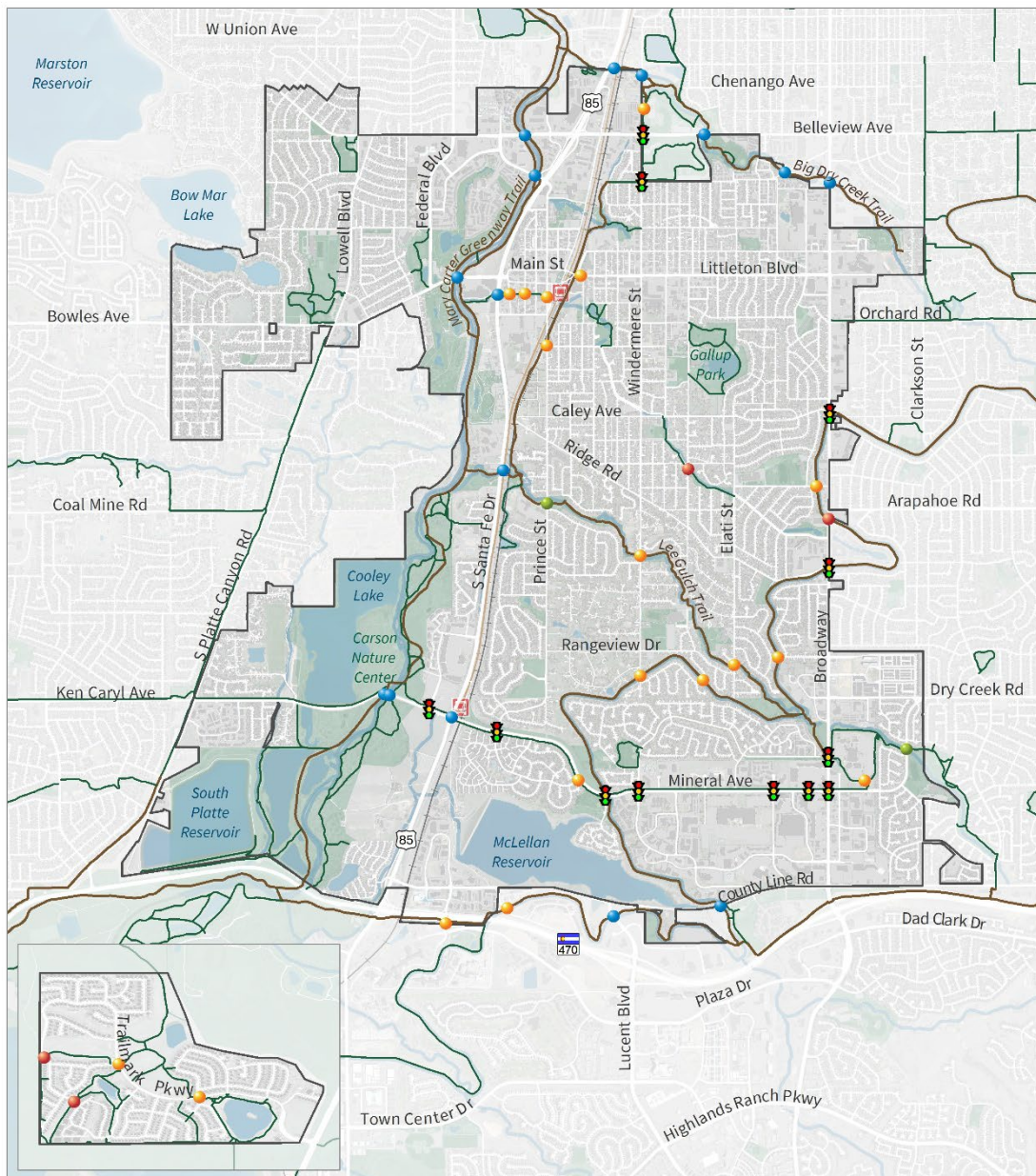
Littleton’s trails and on-street bike connections together form a bicycle network that covers most of the city well, with the most apparent gaps to the northwest and south. However, many of the existing on-street bike lanes are not low-stress per analysis conducted for the TMP, so the reach of the low-stress network (which includes the trail system) is more restricted. The City has plans to make all of its on-street bikeways low-stress.





Trail Crossings

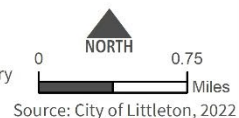
Most of the local trails in Littleton are contained within parks, so their alignments do not cross any streets, but users generally must cross a street to access them. The primary exception is the Mineral Trail – it parallels the alignment of Mineral Avenue and crosses seven signalized intersections. There are a handful of unsignalized crossings for local trails, mainly along Little’s Creek and in Trailmark.



Legend

Trail Crossings

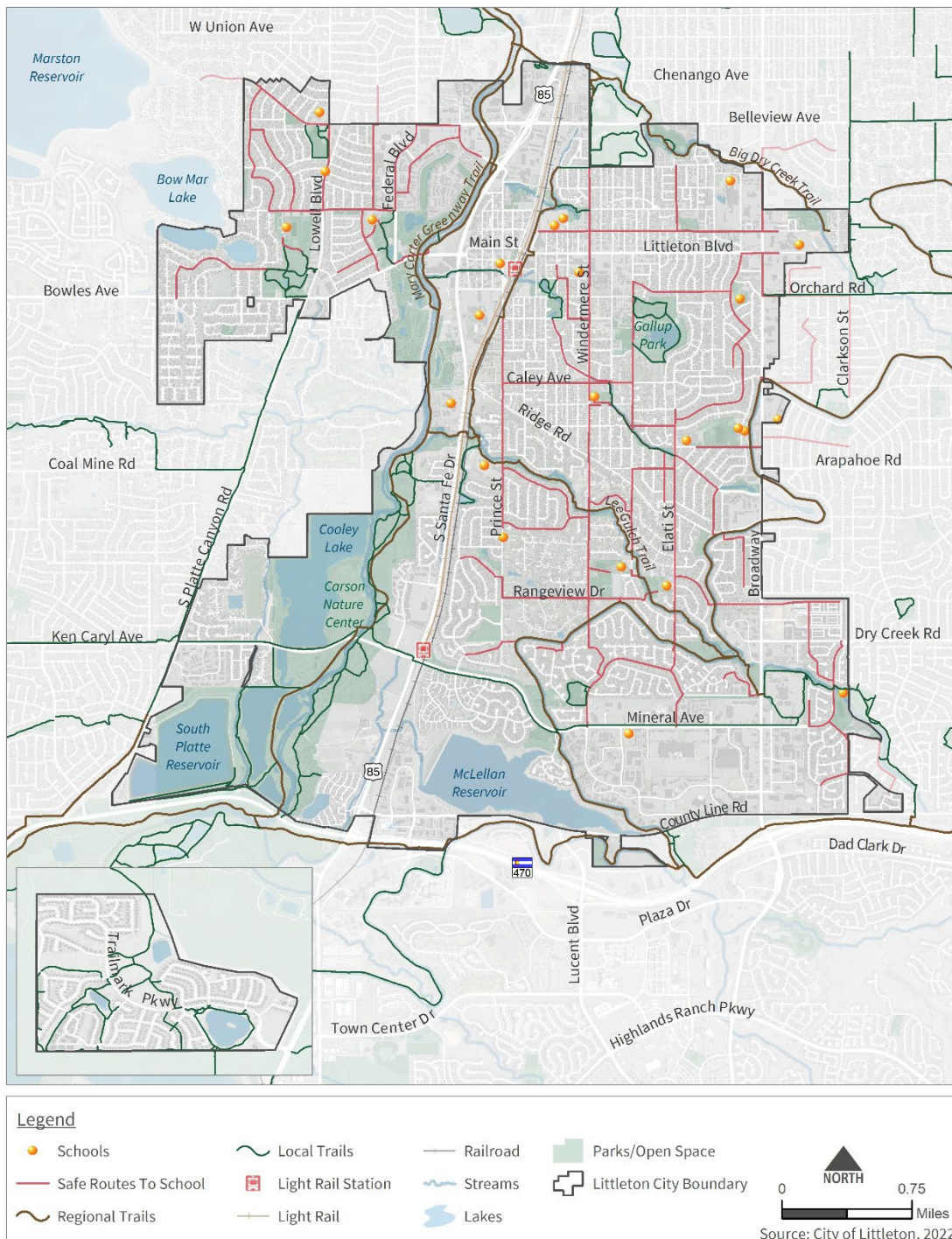
- At Grade, RRFB
- At Grade, No Crosswalk
- At Grade, No Signal
- At Grade, With Signal
- Grade Separated
- Regional Trails
- Local Trails
- Streams
- Lakes
- Parks/Open Space
- Littleton City Boundary





School Routes

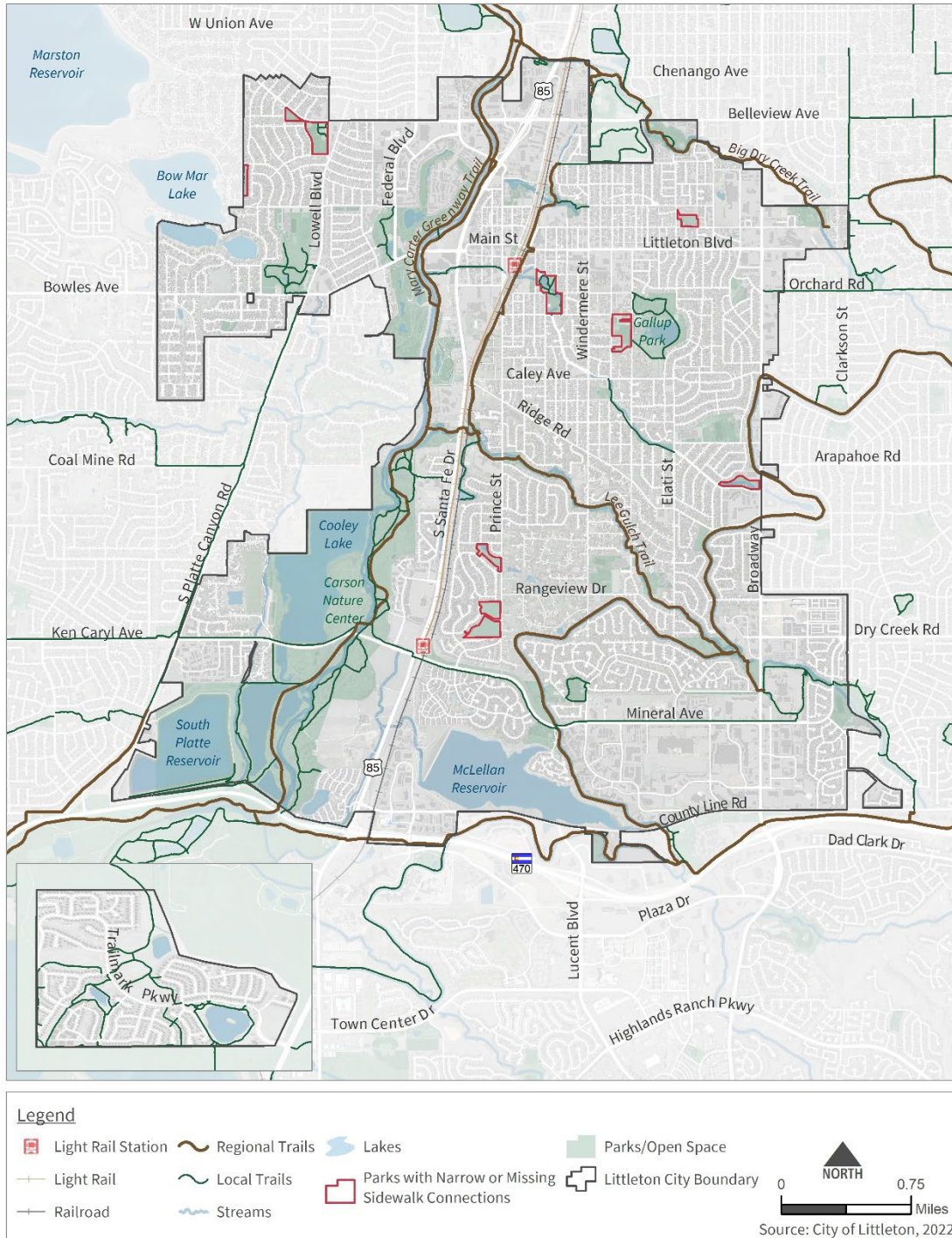
The City and Littleton Public Schools have designated school routes for every public school in Littleton, many of which are near local trails and parks. Although the school routes are entirely composed of on-street connections, some of the segments are along high-stress facilities (e.g., Prince Street, Windermere Street); trails offer a low-stress alternative fully separate from traffic.





Park Connections

Some of Littleton’s city parks lack formal trails and/or ADA-compliant (i.e., 5’ minimum width) sidewalk connections along their perimeters, potentially limiting their functionality and accessibility. These parks are spread throughout Littleton and mostly relatively small.





Network Assessment

School & Transit Access

The Littleton Transportation Master Plan includes walkshed and bike-shed analyses aimed at assessing how much of the city is accessible via pedestrian and low-street bicycle facilities, including trails. Reviewing the results of this analysis can help to identify where additional local trail connections may be most useful for improving access to key destinations in Littleton.

The walkshed analyses for the TMP focused on access to light rail stations and education facilities. The City's education facilities are mostly located east of Santa Fe and north of Mineral; although a large majority of this area is within a ½ mile of an education facility, only 33% of households in that area are within a ½ mile walk of an education facility via the existing pedestrian network. Only 6% of Littleton households are within a half-mile walk of an RTD light rail station, which is in large part due to there only being two stations, both directly adjacent to Santa Fe Drive.

The bike-shed analysis only incorporated low-stress facilities as identified through a Level of Traffic Stress analysis. Only 21% of Littleton households are within a half-mile low-stress bike ride of education facilities. Numerous schools, including Littleton Prep, Euclid Middle School, and Heritage High School, have little to no access via the existing low-stress bicycle network. 15% of households are within a two-mile low-stress bike to the light rail stations.

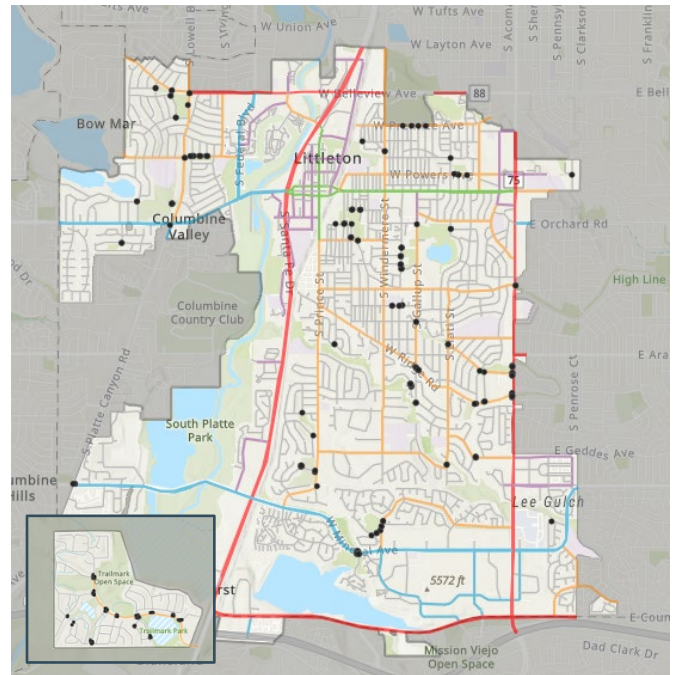
Crashes

Crash data from 2022, as well as the High Injury Network identified in the TMP, were reviewed to determine any known safety issues relevant to the local trail network. In 2022, crashes involving bicyclists or pedestrians were mostly concentrated along arterial roadways including Belleview Avenue, Littleton Boulevard, and Santa Fe Drive; the High Injury Network also consists primarily of arterial intersections. The only local trail that passes through a bicycle/pedestrian crash location and/or a High Injury Network location is the Mineral Avenue Trail – its crossings of Broadway, Santa Fe Drive, Jackass Hill Road, and Platte Canyon Road all have demonstrated safety issues. Although the other bicycle/pedestrian crash locations are not directly adjacent to the existing local trail network, people likely use some of these intersections to access local trails, so they warrant further consideration through this study. The High Injury Network will also be a resource in determining where new trail connections may be most beneficial for safety.



ADA Compliance

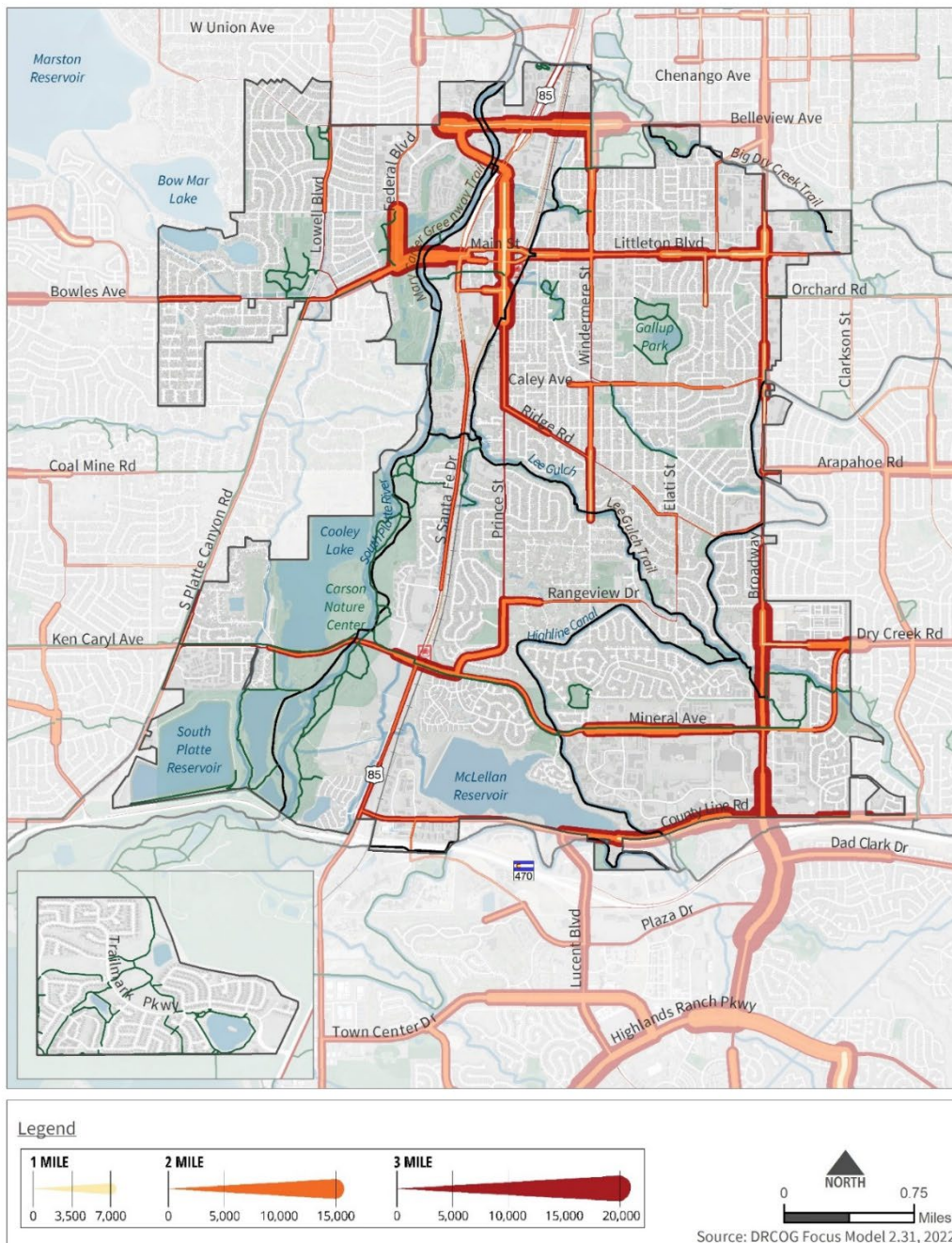
The City's ADA Transition Plan includes a full inventory of ADA non-compliant points within the public right-of-way in Littleton, most of which are along sidewalks. The nearly-5,000 non-compliant points are divided into numerous prioritization tiers, and Category 3.5 – sidewalks within 100' of parks and open spaces, or within 100' of a designated trail connection – is of most relevance to Littleton Linkages; there are 262 non-compliant points within this category, which equates to a High Medium Priority (the third-highest level) for addressing. The figures at right indicate these points in black. There are likely non-compliant points within higher prioritization categories which are also near the City's local trails.





Short Trip Analysis

Short trip analysis is a product of travel demand modeling which depicts where short (3 miles or less) trips are most prevalent based on land use, and relatedly where investments in active transportation infrastructure may be most beneficial for supporting increased biking and walking. Short trips are most prevalent near downtown and throughout northern Littleton, where development is relatively denser than in the rest of the city.





Opportunities & Constraints

The ultimate outcome of the Littleton Linkages Trail Study will be a prioritized list of concepts for improving the City's trail network, based on observations from this assessment and early input from the community and key stakeholders. Identifying more specific opportunities and constraints apparent from the various existing conditions elements of this assessment will help to more directly inform the next steps of concept development and concept evaluation. The presented list of opportunities in particular provides a helpful starting point for identifying potential concepts, but it is not intended to be a comprehensive list; further discussions with stakeholders and input from the public will also inform concept identification.

Network Opportunities

- + Supplement and/or complement the low-stress on-street network, especially near schools
- + Parks with missing/narrow sidewalk connections
- + Parks without safe pedestrian crossings
- + Known ADA issues along/near trails
- + Additional neighborhood connections to regional trails
- + Little's Creek Trail enhancements to better integrate with Downtown Littleton
- + Mineral Avenue Trail safety enhancements, especially at major intersections

Network Constraints

- + Ability to expand east-west trail connectivity is restricted by the South Platte River, Santa Fe Drive, and rail lines
- + Outside of designated parks and open spaces, there are few potential locations in Littleton for new trail alignments (sidewalks may be designated as trails)
- + Arterials bisecting trails and/or limiting access to parks and trails