Town of Lyons
Pedestrian Network Plan

February 2024

TABLE OF CONTENTS

FIGURES

TABLES

Introduction

The Town of Lyons developed a Pedestrian Network Plan to improve pedestrian mobility and safety within the Town. Because of its size and geography, many community members have the opportunity to walk to key destinations such as the historic downtown, schools, community destinations, and open spaces. A well-connected pedestrian network improves the quality of life for both residents and visitors. However, not all sidewalks are equal. Factors such presence, width, condition, and separation from the roadway impact pedestrian experience, comfort, and safety. The Pedestrian Network Plan advances the Town's commitment to providing active transportation options that meet the needs of people of all ages and abilities. This plan provides a prioritized framework that outlines actions for filling gaps in the network, replacing aging non-ADA compliant sidewalks, and provides ideas to help Lyons achieve its vision for a walkable community.

An existing conditions analysis included a Pedestrian Network Inventory and Analysis to develop an inventory of sidewalks, curb ramps, and marked crossing characteristics to understand locations that have adequate, inadequate, or missing infrastructure. Additionally, a public outreach survey was launched to understand community feedback about the existing pedestrian network and identify areas with challenges. The Pedestrian Network Inventory was also presented to the Town Board and Planning & Community Development Commission and that feedback is incorporated into the plan.

The existing conditions analysis and community outreach informed a list of sidewalk improvement projects. Constructing all of the identified projects at the same time is not feasible due to a gap in capital resources, so a prioritization methodology was developed and applied to categorize improvements into phases for implementation. The prioritization process included weighing factors such as existing pedestrian infrastructure quality, recommendations from previous Town of Lyons plans, proximity to key community destinations, and public input. The Pedestrian Network Plan summarizes the improvements in four phases to guide implementation of the pedestrian network. Planning level cost estimates are included in the implementation plan to assist the Town in identifying funding sources and grant opportunities for implementation.

PROJECT GOALS

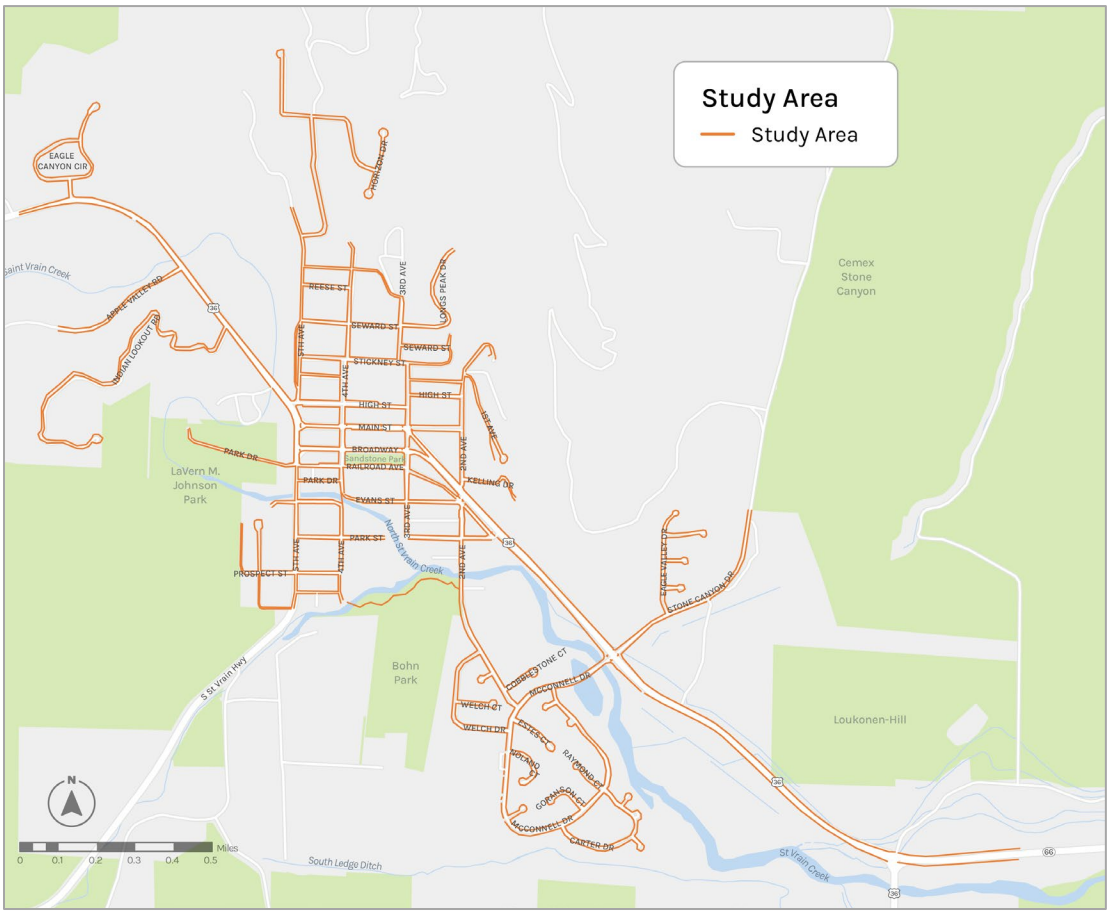
The main goals of the Pedestrian Network Plan include:

- Provide the Town with an inventory and quality assessment rating of the existing sidewalks, curb ramps, and marked crossings.
- Recommend and prioritize pedestrian network improvements.
- Identify funding sources for the design and construction of pedestrian network improvements.

STUDY AREA

The Pedestrian Network Plan included all public streets in the Town of Lyons. **Figure 1** displays the Pedestrian Network Plan study area.

Figure 1. Town of Lyons Sidewalk Assessment Study Area



MAINTENANCE OF SIDEWALK BACKGROUND

A brief review of the Towns Municipal code and conversations with staff uncovered that maintenance of existing sidewalks is the responsibility of the owner, tenant, or occupant of property abutting a sidewalk/pedestrian facility. Additional conversations with staff also revealed that the Town is responsible for the construction of new sidewalks that fall within Town Right-of-Way. Below is the current code relating to sidewalk maintenance.

Town of Lyons Municipal Code currently states in Sec. 7-2-140(b) - Property maintenance:

> *Maintenance of Sidewalks: It shall be unlawful and constitute a nuisance for any owner, tenant or occupant of property abutting a sidewalk to fail to maintain such sidewalk for reasonably passable pedestrian travel.* ***Maintenance of the sidewalk for reasonably passable pedestrian travel shall include tree or shrub trimming to a height of at least seven (7) feet from the surface of the sidewalk, weed removal, grass-cutting, and removal of snow and ice*** *within twenty-four (24) hours after snow or ice has ceased falling on such sidewalk for a period of at least four (4) hours. This Subsection shall not apply to property abutting a sidewalk that is "native rangeland," as this phrase is defined by Section 7-5-10 of this Chapter.*

Existing Conditions

A Pedestrian Network Inventory and Analysis was performed to inventory assets including sidewalks, curb ramps, and marked crossings along public roadways in the Town. The inventory also notes locations where sidewalks and curb ramps are missing but should be implemented. Lyons has approximately 15 miles of public roadways. If a sidewalk were present on both sides of the street, there would be 30 miles of sidewalks. Currently, the Town of Lyons has approximately 14 miles of sidewalks. Deficiencies in the network include:

- 16 miles of missing sidewalks
- Missing curb ramps at approximately 60% of locations where curb ramps are needed
- Of the existing curb ramps, many are non-ADA compliant

To determine the existing conditions of each of these assets the project team developed a Sidewalk Quality Index (SQI), which considers sidewalk type, sidewalk width, and sidewalk condition. Additionally, a crowd sourcing survey gathered resident feedback about existing navigational concerns and future improvements. The existing conditions analysis informed locations and specific projects for implementation.

PEDESTRIAN NETWORK INVENTORY AND ANALYSIS

Sidewalk Quality Index Overview

The project team collected the data outlined in the following section for all sidewalks, curb ramps, and marked crossings in the Town of Lyons. Sidewalks were categorized by type, width, condition, material, and if there are any existing or future obstructions. Curb ramps were categorized by landing compliance and the presence/absence of detectable warnings. Marked crossings were inventoried and the team noted other information from observations. The inventory also includes locations where sidewalks and curb ramps are missing but should be implemented with future improvements. Photos were collected for all existing sidewalk segments, curb ramps, and marked crossings.

Sidewalk Inventory Features

All sidewalks were inventoried and mapped within the public right-of-way in the Town of Lyons, including type, width, condition, and any existing and future obstructions. Locations where no sidewalk currently exist were noted as "Missing Sidewalk." **Table 1** displays additional information about the sidewalk attributes.

Table 1. Sidewalk Inventory Features

Feature	Description				
Type	Missing Sidewalk	Attached *Directly next to the travel lane*	Both *Changes from attached to detached within the block*	Detached *Buffered by an amenity zone (grass, trees, benches, etc.)*	
Width	Missing Sidewalk	Less than 4 feet	4 – 5 feet	5 - 6 feet	Over 6 feet
Condition	Missing Sidewalk	Critical/Poor *Immediate repair is needed; high tripping hazard for pedestrians and is likely not ADA compliant*	Fair *Sidewalk facility is safe to travel on but is likely in need of repair in the near future*	Good *Sidewalk facility is in good condition and no repair/replacement is needed*	
Material	Missing Sidewalk	Sandstone/Flagstone	Concrete	Crushed Granite	Other
Obstructions & Conflicts	Describes if the sidewalk is uneven, heaved (from roots), has an existing tree or utility pole encroachment or will if the sidewalk is widened, overgrown, etc.				

The images below show existing sidewalk conditions and configurations in Lyons. These attributes include type, width, condition, and material.

Attached sidewalk on 5th Avenue.

Sidewalk in critical condition on Stickney Avenue.

Missing sidewalk on 3rd Avenue.

Sandstone sidewalk on Main Street.

Curb Ramp Inventory Features

All curb ramps were inventoried and mapped within the public right-of-way in the Town of Lyons, including landing compliance and the presence of detectable warnings. Locations where curb ramps do not exist were noted as "Missing Curb Ramp." **Table 2** displays information about curb ramp attributes.

Table 2. Curb Ramp Inventory Features

Features	Description			
Compliant Landing	Missing Curb Ramp	No *Under 3 feet x 3 feet*	Partial *Detectable warning strip included in landing area*	Yes *3 feet x 3 feet or more*
Detectable Warnings	Missing Curb Ramp	No	Yes	

The images below exhibit some of the features of existing curb ramps in Lyons. These features include presence or absence of detectable warnings and compliant landings.

Curb ramp with detectable warnings and compliant landing on Old Main Street.

Curb ramp with detectable warnings on 5th Avenue.

Curb ramp missing detectable warnings and compliant landing on Railroad Avenue.

Marked Crossing Inventory

Marked crossings were inventoried and added to the GIS database. Condition and location of associated regulatory signs were also annotated as part of the crossing inventory. Photos of all existing marked crossings are included in the dataset. These images to the right show the different types of marked crossings in Lyons, which include continental (striped lines), transverse (bars marking the edges), and decorative.

Continental marked crossing on 5th Avenue

Transverse marked crossing on 4th Avenue

Decorative marked crossing on 4th Avenue

Data Collection Methodology and Results

GIS software and recent aerial imagery was used to map the location of all potential sidewalks within the Town of Lyons. On September 11th and 12th, 2023, Field Maps, a mobile version of ArcGIS, was used to field verify the locations of each sidewalk, curb ramp, and marked crossing. The features for each asset were documented during field verification.

Of note, the Broadway US-36 Multimodal Improvements project was under construction during the data collection period. The inventory dataset reflects the future condition: attached sidewalks that are 5-6 feet on the north side and over 6 feet on the south side, creating a multi-use trail. The Town is also installing directional curb ramps with compliant landings and detectable warnings with this project.

Once the data was in GIS, it was cleaned and organized for analysis. The analysis for each sidewalk, curb ramp, and marked crossing is detailed and mapped on the following pages.

Sidewalk Inventory

Lyons has approximately 15 miles of public streets. If sidewalks were present on both sides of all roadways, there would be approximately 30 miles of sidewalks. Townwide, there are approximately 14 miles of existing sidewalks and 16 miles of sidewalk gaps. Gaps are present across all roadway types. Factors such as sidewalk presence, width, buffer size, and condition impact the pedestrian experience, safety, and comfort. Sidewalk type, width, condition, and material were inventoried for each segment of sidewalk. The results of the inventory are described in this section.

Sidewalk Type

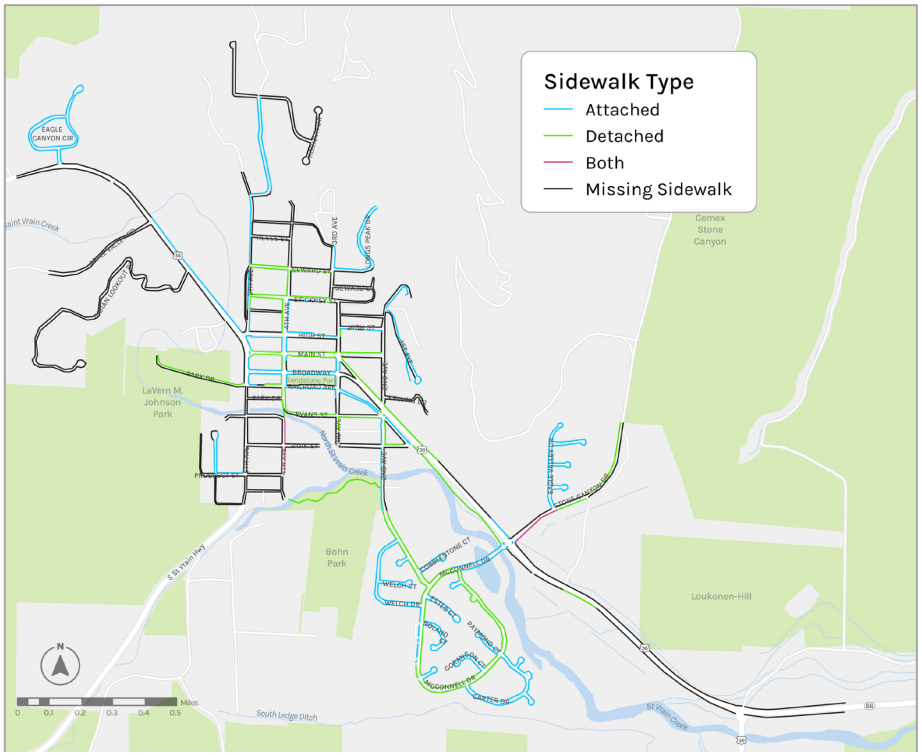
Figure 2 displays the types of sidewalks in Lyons:

- **Attached**: Sidewalk is directly adjacent to the roadway (travel lane or on-street parking).
- **Detached**: Sidewalk is separated from moving vehicles buffered by an amenity zone (grass, trees, benches, etc.).
- **Both Attached and Detached**: Sidewalk changes from attached to detached within the block.
- **Missing Sidewalk**: Locations adjacent to the roadway where no sidewalk is present.

Lyons Existing Conditions: Roughly 2/3 of the Town's existing sidewalks are attached to roadway (travel lane or on-street parking lane). The analysis shows attached sidewalks are more common in the residential areas of Lyons Valley Park, Eagle Canyon, and Eagle Valley, where vehicle volumes and speeds are likely lower. In this context, attached sidewalks are relatively comfortable to walk on.

Best Practices: Research shows that detached sidewalks are safer and more comfortable for pedestrians than attached sidewalks, due to the presence of a buffer. However, an existing attached sidewalk in good condition is acceptable and should not be recommended for replacement.

Figure 2. Sidewalk Type Assessment Summary



Needs:

- **Consider upgrading the sidewalks adjacent to roadways with higher traffic volumes and speeds (Main Street, Broadway, US 36, and 5th Avenue) to be detached where they are not already.**

Sidewalk Width

Figure 3. Sidewalk Width Assessment Summary

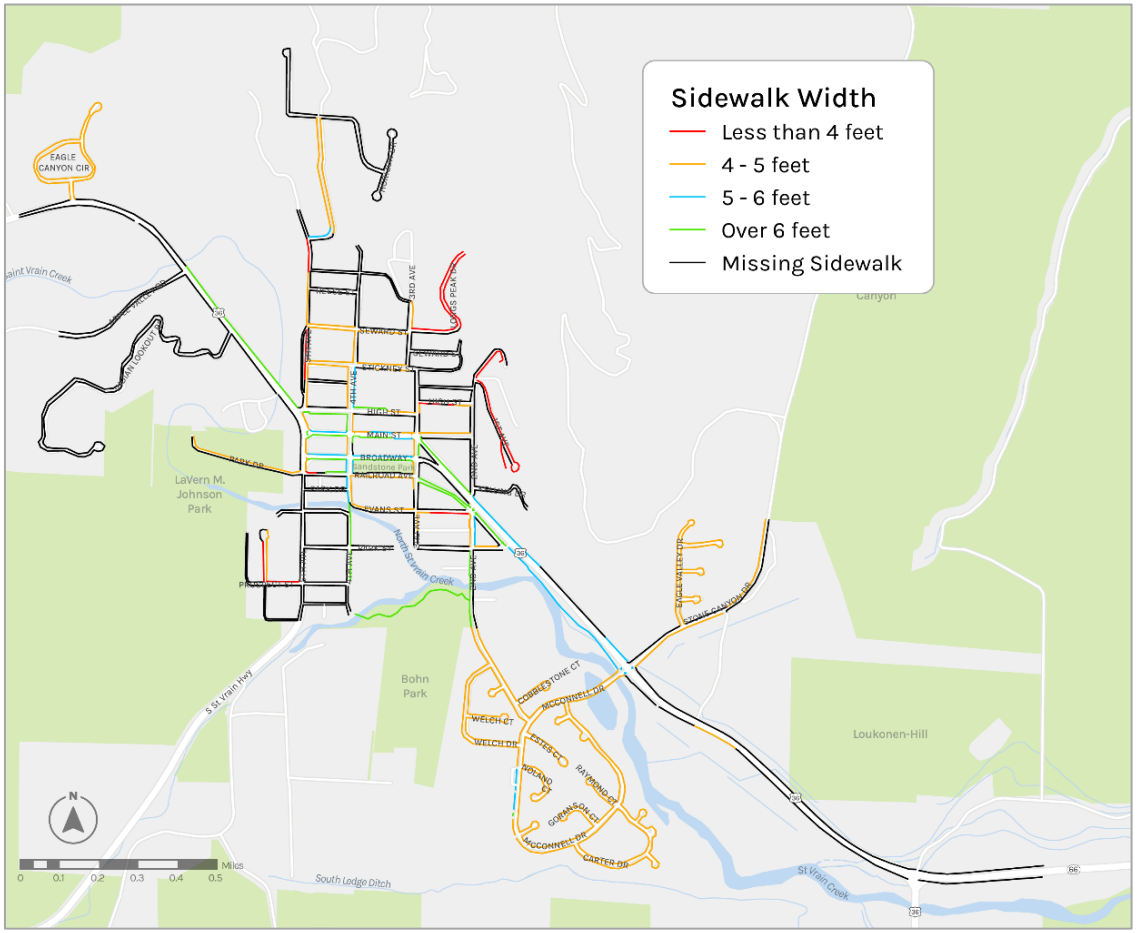


Figure 3 displays sidewalk width in Lyons, by block:

- Less than 4 feet
- 4 – 5 feet
- 5 - 6 feet
- Over 6 feet
- Missing Sidewalk

Lyons Existing Conditions: About 2/3 of existing sidewalks in town are 4-5 feet wide. Most of these are in Lyons Valley Park. There are a few segments of sidewalk that are under 4 feet wide, but they are mostly contained to residential areas. However, one segment on Railroad Avenue near the library and Town Hall is under 4 feet and associated with a parking lot, so is likely uncomfortable for most users.

Best Practices: Wider sidewalks improve pedestrian comfort. A sidewalk that is less than 4 feet is not ADA accessible and is also difficult for someone with a stroller or two people walking side-by-side. ADA recommends a minimum sidewalk width of 5 feet or 4 feet wide with a passing zone every 200 feet. Sidewalks that are over 6 feet allow for users to pass each other easily.

Needs:

- Reconstruct/widen the sidewalk on Railroad Avenue adjacent to the Library and Town Hall. This sidewalk is currently part of the parking zone/spaces and forces pedestrians into the street.
- Construct sidewalks in high pedestrian demand areas that currently have no existing sidewalks (4th Avenue between Main Street and Broadway and 3rd Avenue north of Main Street).

Sidewalk Condition

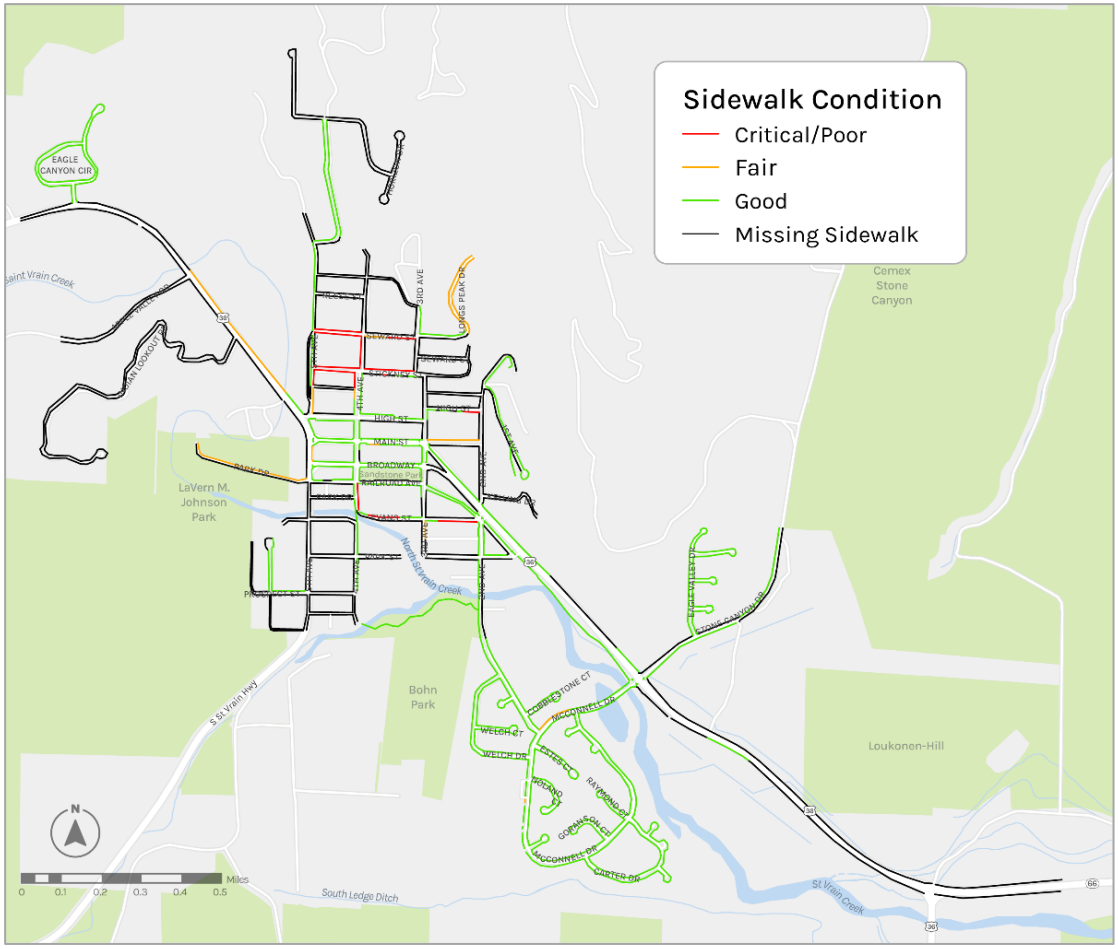
Figure 4 displays a summary of the average width of sidewalks in Lyons, by block:

- **Critical/Poor:** Immediate repair is needed; high tripping hazard for pedestrians and is likely not ADA compliant
- **Fair:** Sidewalk facility is safe to travel on but is likely in need of repair in the near future
- **Good:** Sidewalk facility is in good condition and no repair/ replacement is needed
- **Missing Sidewalk**

Lyons Existing Conditions: The majority (approximately 85%) of existing sidewalks in Lyons are in good condition, as many were recently built as part of Lyons Valley Park. Most of the sidewalks in critical condition are near Lyons Elementary School on Stickney, Seward, and 4th Avenue. The condition of these sidewalks is likely causing issues for families walking their children to school, therefore repair and replacement should be a high priority for the Town. A few areas along Evans Street are also in critical condition and need repair in the near future.

Best Practices: The condition of the sidewalk is the most important feature for pedestrian usability. A wide, detached sidewalk becomes inaccessible if it is heaving, cracked, or contains obstructions.

Figure 4. Sidewalk Condition Assessment Summary



Needs:

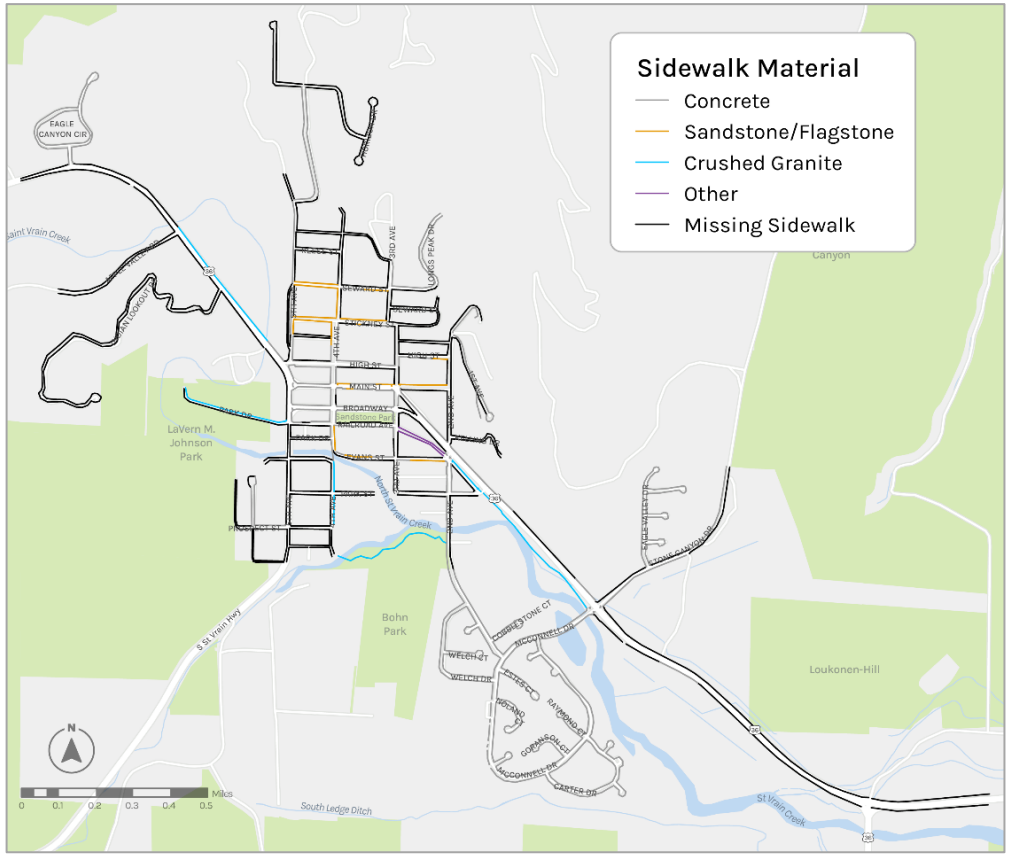
- Replace and maintain the sidewalks in critical/poor condition near Lyons Elementary School (Stickney Street, Seward Street, and 4th Avenue).
- Replace and maintain the sidewalks in critical condition along Evans Street.

Sidewalk Material

Figure 5 displays a summary of sidewalk material types in Lyons:

- **Concrete**
- **Sandstone/Flagstone**
- **Crushed Granite**
- **Other:** Asphalt or another material
- **Missing Sidewalk**

Figure 5. Sidewalk Material Assessment Summary



Lyons Existing Conditions: Sandstone is an important part of the town's historic character, as it is quarried in the surrounding hills. About 7% of existing sidewalks are sandstone. The community would like to see these sidewalks maintained and improved, especially in the downtown core. Unfortunately, the sandstone segments near Lyons Elementary School and on Evans Street are in poor condition. The majority (82%) of existing sidewalks are constructed with concrete. The remaining sidewalks and multi-use paths are constructed with crushed granite.

Best Practices: Concrete is widely accepted as the most suitable material for sidewalks due to its longevity and low maintenance requirements. Concrete sidewalks can last 50 - 80 years without repair, as long as no tree roots or other major obstructions have caused damage. Sandstone has more maintenance issues than concrete by nature. Meeting vertical and horizontal ADA requirements with sandstone can be challenging, but achievable, if constructed correctly. It is also more susceptible to breakage.

Needs:

- **Maintain existing sandstone sidewalks in historic downtown; replace and maintain sandstone in poor condition near Lyons Elementary School and Evans Street.**
- **When installing new sandstone sidewalks, utilize implementation best practices to increase longevity and reduce ADA non-compliance.**
- **Upgrade/replace crushed granite sidewalk segments along US 36 to concrete sidewalk.**

Curb Ramp Inventory

There are over 200 existing curb ramps in town. However, there are approximately 337 other locations where a curb ramp would be beneficial. Curb ramps are essential to provide access between the sidewalk and roadway for people using mobility devices, strollers, and for pedestrians with mobility. ADA compliance was assessed by inventorying the curb ramp landing compliance and the presence of detectable warnings.

Curb Ramp Landing Compliance

Figure 6 displays a summary of the curb ramp landing compliance in Lyons:

- **No:** Under 3 feet by 3 feet or nonexistent
- **Partial:** Detectable warning strip included in landing area
- **Yes:** 3 feet by 3 feet or more
- **Missing Curb Ramp**: No curb ramp present

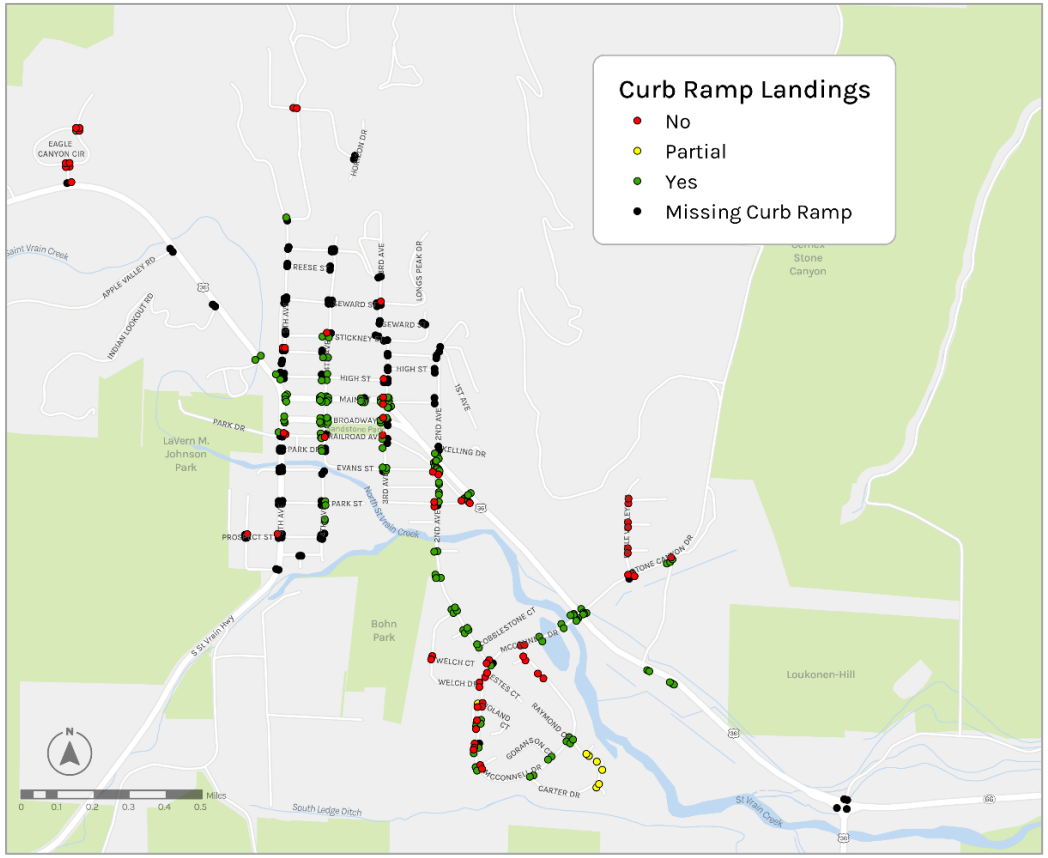
Lyons Existing Conditions: About 70% of the existing curb ramps in Lyons have ADA compliant landings. Most of these landings are in the downtown core and recently built areas, like Lyons Valley Park. Due to a slight discrepancy in CDOT's design guidelines, which are used by the town, some landings have been categorized as "partially compliant." CDOT currently allows for detectable warnings to be included in the 3 feet by 3 feet landing area if they are flat, but ADA requirements do not. There are only a few of this type in the southeast part of Lyons.

Best Practices: ADA requires a flat 3 feet by 3 feet landing at the top of the curb ramp, separate from detectable warnings, to allow people in wheelchairs or strollers to turn or pause before navigating the ramp.

Needs:

- Upgrade curb ramps downtown that are not ADA compliant.
- Require future development to install ADA compliant curb ramps.

Figure 6. Curb Ramp Landing Compliance Summary



Curb Ramp Detectable Warnings

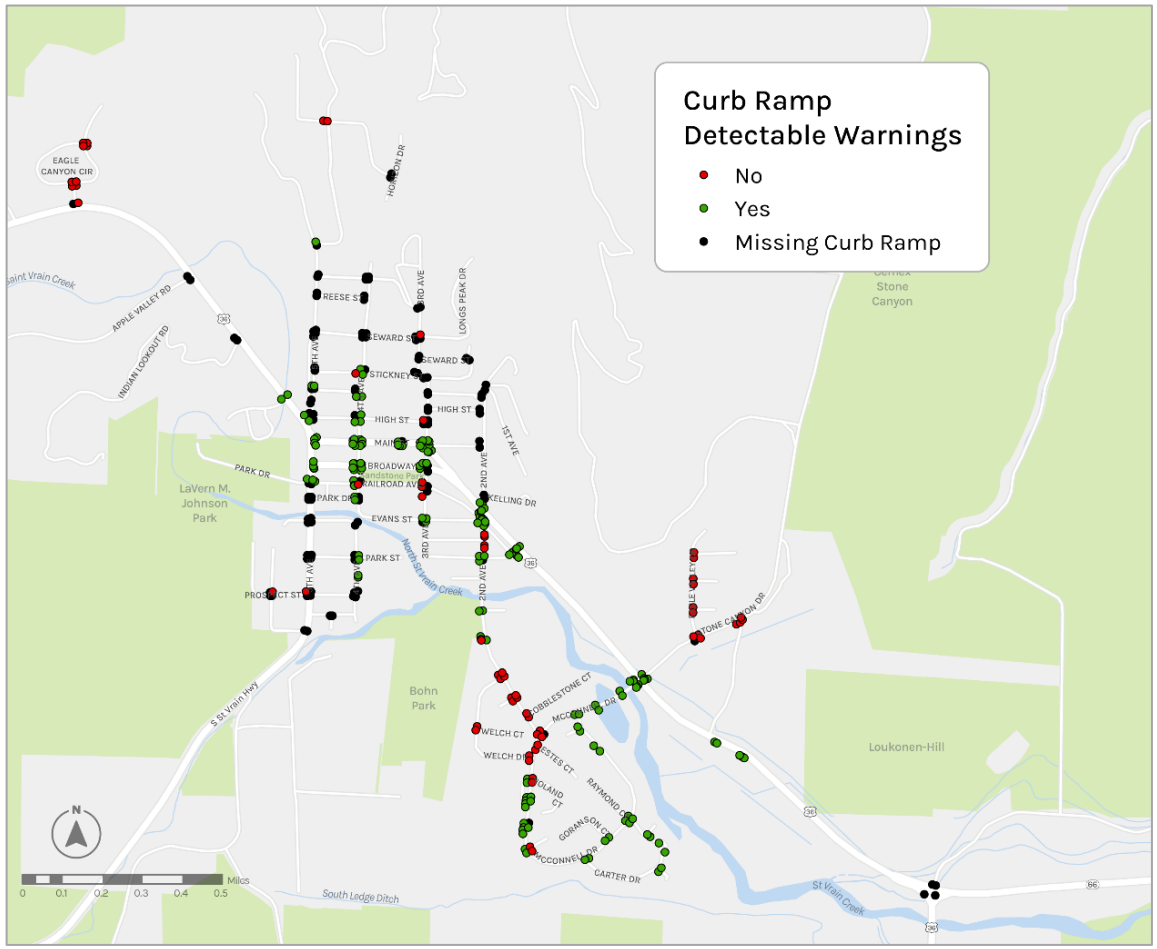
Figure 7 displays a summary of the existing and missing detectable warnings on curb ramps in Lyons:

- **No:** No detectable warning present
- **Yes:** Detectable warning present
- **Missing Curb Ramp**: No curb ramp present

Lyons Existing Conditions: 70% of all existing curb ramps currently have detectable warnings. The majority of curb ramps missing detectable warnings are in the three residential subdivisions in town and at a few locations along Railroad Avenue.

Best Practices: Detectable warnings (also known as truncated domes) help to notify people who are visually impaired that they are entering or exiting a roadway. ADA requires detectable warnings at all curb ramps.

Figure 7. Curb Ramp Detectable Warning Summary



Needs:

- Upgrade curb ramps to include detectable warnings at non-compliant locations along Railroad Avenue.
- Upgrade curb ramps to include detectable warnings at non- ADA compliant locations in the three residential subdivisions of Lyons Valley Park, Eagle Canyon, and Eagle Valley.
- Require future development to install ADA compliant curb ramps.

Marked Crosswalk Inventory

Figure 8 display existing marked crosswalks in Lyons:

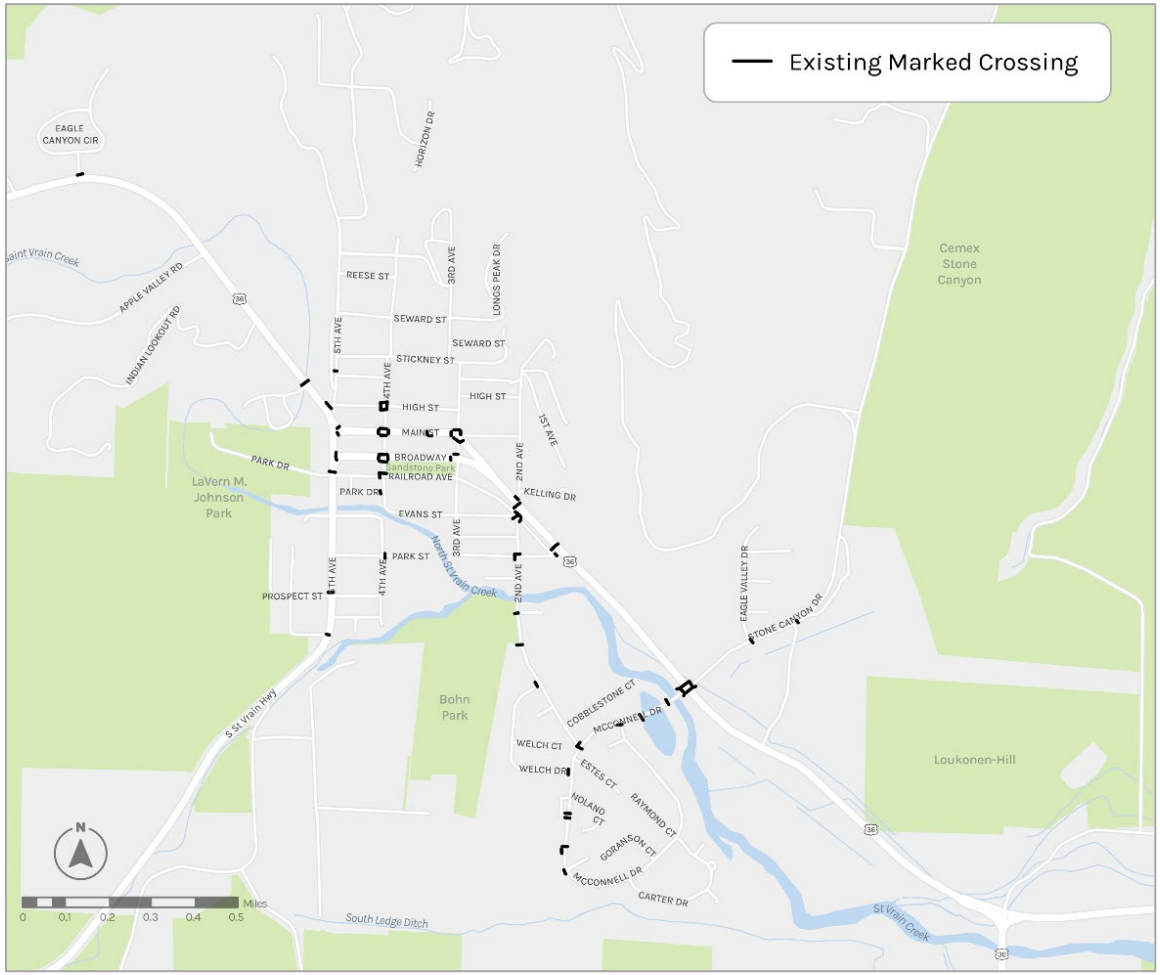
- **Existing Marked Crosswalk**

Marked crosswalks were only included in the inventory if they exist.

Lyons Existing Conditions: There are 35 intersections in the town with a marked crosswalk on least one approach. Most of the intersections downtown have marked crosswalks on 2 to 4 approaches.

Best Practices: Crosswalks provide dedicated connections for pedestrians at intersections or mid-block locations. These markings not only communicate to pedestrians where to cross, but also indicate the crossing to vehicles. Marked crossings can be paired with a traffic signal, all-way stop controlled intersection, raised crossing, curb extensions, pedestrian refuge islands, Rectangular Rapid Flashing Beacons (RRFB), Pedestrian Hybrid Beacons (PHB or HAWK signal), and/or signage. When installing a new or decorative crosswalk, remove the old one first.

Figure 8. Marked Crossing Inventory Summary



Needs:

- Add marked crosswalks at intersections to access Lyons Elementary School.
- Develop Pedestrian Crossing Guidelines to establish thresholds for marking crosswalks.

Sidewalk Quality Index Scoring

The results from the Pedestrian Network Inventory were used to develop a Sidewalk Quality Index for all sidewalks, curb ramps, and marked crosswalks within the Town of Lyons. The SQI score was based on a scale of 1 – 100. Higher index scores indicate better conditions and lower index scores indicate poorer conditions. The SQI was one of the inputs to develop the prioritization of projects. This section describes the methodology used to calculate the SQI for sidewalks, curb ramps, and marked crossings.

Sidewalk Scoring Methodology

Each sidewalk segment was assigned a score for type, width, and conditions. The scores of the three sidewalk categories were summed together to calculate a sidewalk SQI score. The SQI score is based on a scale of 1 to 100. Higher index scores indicate better conditions, wider sidewalks, and more separation of the sidewalk from the roadway. Lower index scores indicate poorer condition and narrower sidewalks that may be close to/not separated from the street. Missing sidewalk segments received a score of 0. **Figure 9** displays a summary of the sidewalk SQI results by categorizing segments by missing, needs upgrade/repair (inadequate existing infrastructure), and good (adequate existing infrastructure).

Sidewalk Type (20 points)

Detached sidewalks are more comfortable for pedestrians than attached sidewalks because of the buffer size separating pedestrians from the roadway. Detached sidewalks score the highest in the SQI and locations with no sidewalk score zero points. **Table 3** displays the SQI scoring for sidewalk types on a scale from 0 to 20, with detached sidewalks being scored higher.

Table 3. Sidewalk Type SQI Scoring

Points	0	10	15	20
Type	N/A *Sidewalk does not exist*	Attached *Directly next to the travel lane*	Both *Changes from attached to detached within the block*	Detached *Buffered by an amenity zone (grass, trees, benches, etc.)*

Sidewalk Width (30 points)

The width of the sidewalk impacts the pedestrian experience and wider sidewalks are associated with greater comfort. Best practices follow ADA standards, which require sidewalks to be 5 feet wide or 4 feet wide with a passing space every 200 feet. Sidewalks that are over 6 feet allow for users to pass each other easily. **Table 4** displays the SQI scoring for sidewalk width on a scale from 0 to 30, with larger sidewalk widths being scored higher.

Table 4. Sidewalk Width SQI Scoring

Points	0	7	15	22	30
Width	0 feet	Less than 4 feet	4 – 5 feet	5 - 6 feet	Over 6 feet

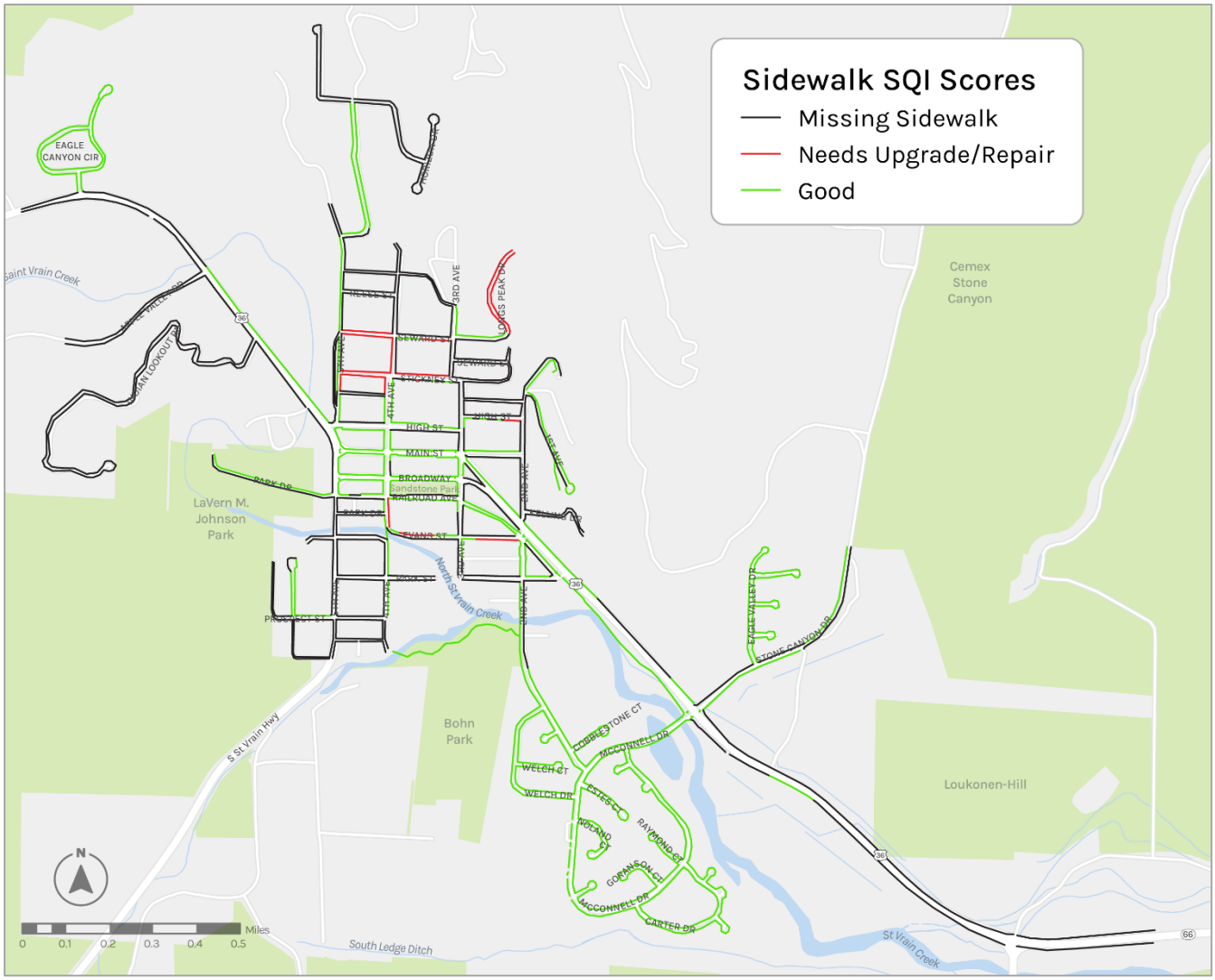
Sidewalk Condition (50 points)

The condition of the sidewalk is the most important of these features, so it has been given the highest value. An attached sidewalk that is 4 - 5 feet wide in good condition is more useable than a 6' wide sidewalk that is in poor condition. **Table 5** displays the SQI scoring for sidewalk conditions on a scale of 0 to 50, with higher quality sidewalks scored the highest.

Table 5. Sidewalk Condition SQI Scoring

Points	0	17	34	50
Condition	Missing Sidewalk	Critical/Poor *Immediate repair is needed; high tripping hazard for pedestrians and is likely not ADA compliant*	Fair *Sidewalk facility is safe to travel on but is likely in need of repair in the near future*	Good *Sidewalk facility is in good condition and no repair/replacement is needed*

Figure 9. Sidewalk SQI Summary



Curb Ramp Scoring Methodology

Each curb ramp was assigned a score value for missing/existing, landing compliance, and presence of detectable warnings. The scores of the three curb ramp categories were summed together to calculate the curb ramp SQI score. The SQI score is based on a 1 – 100 scale. Higher index scores indicate existing curb ramps with compliant landings and detectable warnings. Lower index scores indicate missing curb ramps or non-compliant curb ramps. Missing curb ramps received a score of 0. **Figure 10** displays a summary of the curb ramp SQI results by categorizing segments by missing, needs upgrade/repair (inadequate existing infrastructure), and good condition (adequate existing infrastructure)

Existing/Missing Curb Ramps (40 points)

Curb ramps are important for ADA access because those using mobility devices, or pushing strollers may have trouble navigating a vertical curb to cross a roadway. The existence of curb ramps is an important distinction, even if the existing ramps do not have compliant landings or detectable warnings. **Table 6** displays the SQI scoring for existing and missing curb ramps, with missing curb ramps assigned a score of 0 and curb ramps presents assigned a score of 40.

Table 6. Curb Ramp Presence SQI Scoring

Points	0	40
Existing	No	Yes

Curb Ramp Landing Compliance (30 points)

ADA requires a 3 foot by 3 foot landing at the top of a curb ramp to allow for people in wheelchairs or strollers to turn or pause before navigating the ramp. Each existing curb ramp in town is categorized as having a compliant landing or not. Table 7 displays the SQI scoring for curb ramp landing compliance on a scale of 0 to 30.

Table 7. Curb Ramp Landing SQI Scoring

Points	0	15	30
Compliant Landing	No *Under 3 feet x 3 feet*	Partial *Detectable warning strip included in landing area*	Yes *3 feet x 3 feet or more*

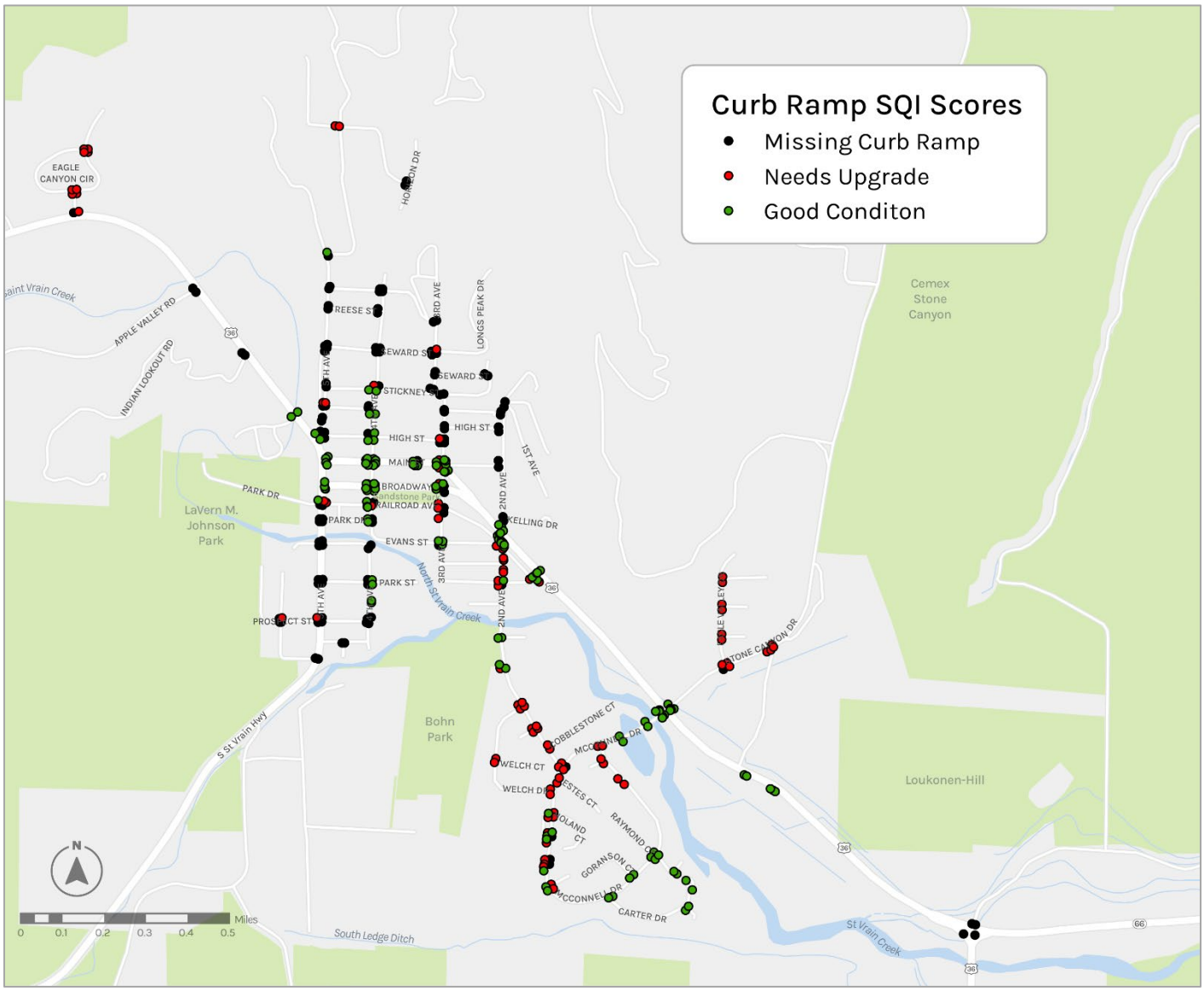
Curb Ramp Detectable Warnings Present (30 points)

Detectable warnings help to notify people who are visually impaired that they are entering or exiting a roadway. These are required by the ADA at all curb ramps. Points are included in the scoring if detectable warnings are present. **Table 8** displays the SQI scoring for presence of curb ramp detectable warnings, with missing detectable warnings assigned a value of 0 and detectable warnings present assigned a value of 30.

Table 8. Curb Ramp Detectable Warning SQI Scoring

Points	0	30
Detectable Warnings Present	No	Yes

Figure 10. Sidewalk Quality Index: Curb Ramp Scores Map



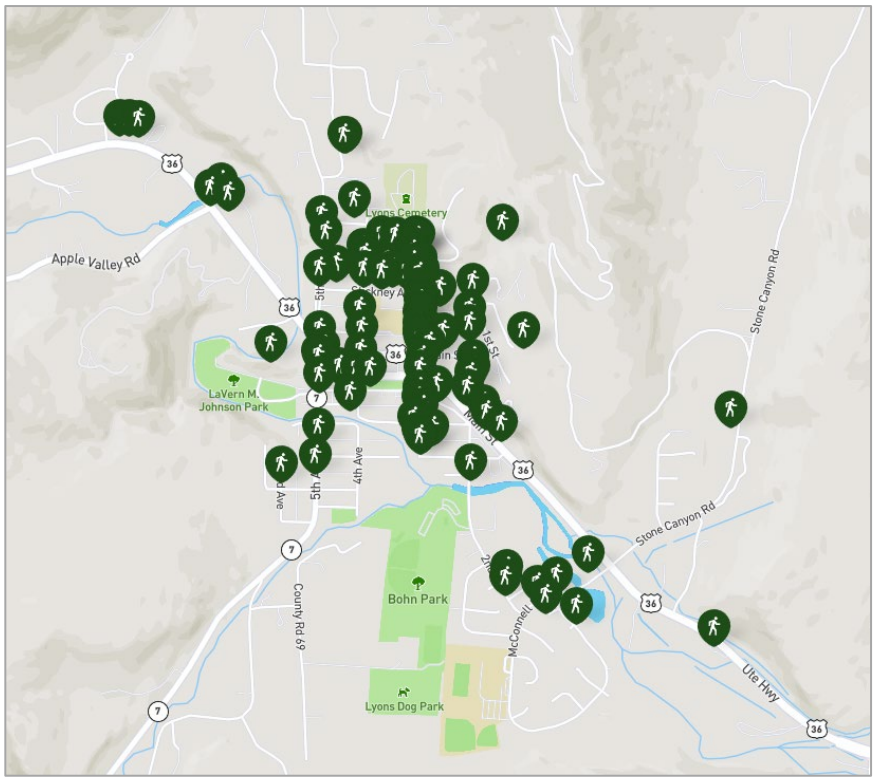
Marked Crossing Scoring Methodology

Marked crossings were only inventoried if they currently exist, so they were not assigned an SQI.

COMMUNITY FEEDBACK SUMMARY

To better understand the needs of pedestrians in Lyons, the project team conducted a survey where the public could place "pins" on a map to note concerns or suggest improvements to the pedestrian network. The survey was open from September 15 to October 5, 2023. The survey reached 142 people through the Town email lists and social media.

Figure 11. Community Feedback Map Summary



A total of **44 people placed 102 pins** on the map. **Figure 11** summarizes the top locations and topics where comments were received, with some comments falling in multiple categories. A full list of the comments can be found in **Appendix A: Community Feedback**.

Sidewalks (60% of comments)

- Comments that 3rd Avenue between Main Street and Seward Street, Stickney Avenue, and Seward Avenue are critical routes to access Lyons Elementary School and there are missing links in the sidewalk network.
- Comments that 3rd Avenue between Railroad Avenue and Park Avenue is the neighborhood connection to the post office and there are missing links in the sidewalk network.
- Comments that US 36 between Main Street and the Eagle Canyon neighborhood does not have a comfortable pedestrian connection to downtown, considering the speed and volumes of vehicles on the roadway.
- Comments that there are locations in Lyons Valley Park that need sidewalk repairs.

Crosswalks (26% of comments)

- Comments that 3rd Avenue lacks safe crossings, with the exception of Main Street. The Main Street and 3rd Avenue intersection crossing feels uncomfortable due to the speeds of vehicles approaching the intersection.
- Suggestion for a roundabout and more comfortable crossing at 5th Avenue and Broadway.
- Suggestion for an underpass to cross US 36 at Apple Valley Road.

Stormwater and Drainage (17% of comments)

- Comments that 2nd Avenue needs drainage and roadway improvements.
- Comments that the High Street and 3rd Avenue area needs drainage and roadway improvements.

Intersections (16% of comments)

- Suggestion for an all-way stop at Longs Peak Drive and 3rd Avenue due to vehicle speed down the hill.
- Desire for a roundabout and more comfortable crossing at 5th Avenue and Broadway.
- Comments that the corner of Park Street and 3rd Avenue is uncomfortable for pedestrians.

Curb Ramps (10% of comments)

- 3rd Avenue between Main Street and Seward Street, Stickney Avenue, and Seward Avenue are critical routes to access Lyons Elementary School and there are inadequate curb ramps.

Other

- Suggestion for pedestrian crossing infrastructure like Pedestrian Hybrid Beacons, Rectangular Rapid-Flashing Beacons, and underpasses.
- Improvements to road surface quality.
- Install roundabouts.
- Improve parking.

BOARD OF TRUSTEES AND PLANNING & COMMUNITY DEVELOPMENT COMMISSION FEEDBACK

The project team presented the pedestrian network inventory and analysis and needs assessment to the Town Board and Planning & Community Development Commission (PCDC) on October 16, 2023. The Town Board and PCDC had the following comments and questions:

- Data presented was consistent with their observations.
- Provide the complete community feedback as an appendix to this report (**Appendix A: Community Feedback).**
- Were pedestrian and vehicle volumes considered as part of the needs assessment?
    a. No, this was not scoped as part of the assessment.
- How will PROWAG impact the recommendations?
    a. If/when adopted, PROWAG will change the requirements for sidewalk, curb ramp, and marked crossing design and construction. Town Staff should work closely with CDOT to align any future projects on US 36 with the updated requirements.

Needs Assessment

The existing conditions analysis, including public and Town Board feedback, highlighted a few areas of need throughout the town. The following list has informed the sidewalk prioritization process and the project phasing detailed later in this document.

- Sidewalk, curb ramp, and marked crossing upgrades to **the area surrounding and leading up to Lyons Elementary School** (Stickney Avenue, Seward Avenue, 4th Avenue, and 3rd Avenue)
- Safer crossing and vehicle movement at the **5th and Broadway intersection**, with suggestions for a roundabout
- Sidewalk and crossing improvements along **US 36 between Main Street and the Eagle Canyon neighborhood** (Riverbend Trailer to Eagle Canyon Circle)
- All-way stop desired at **Longs Peak Drive and 3rd Avenue**
- Sidewalk connection on **3rd Avenue between Railroad Avenue and Park Avenue** (neighborhood route to the post office)
- Complete the sidewalk along **Railroad Avenue adjacent to Town Hall and the library** (between 5th Avenue and 3rd Avenue)
- **Continue sidewalk maintenance in high-traffic areas** (Main Street, Broadway, 5th Avenue, 4th Avenue, and 3rd Avenue)
- **Adopt guidelines for pedestrian crossings** to establish thresholds for a marked crossing installation

In addition to the areas noted above, the analysis concluded that the town has sidewalks and curb ramps on approximately half of its roadways. The downtown core and residential neighborhoods of Lyons Valley Park, Eagle Canyon, and Eagle Valley have the highest quality connectivity and sidewalk conditions. The areas just outside of downtown (Stickney, Seward, 3rd Avenue, 5th Avenue, and Railroad) have missing sidewalks and curb ramps or have sidewalk related infrastructure in critical condition. Missing sidewalk gaps impact the ability for residents and visitors to safely walk to school, businesses, and around town neighborhoods. The next section, Prioritization Methodology, scores the need of each sidewalk segment. These scores inform the projects recommended in the Pedestrian Network Plan.

PRIORITIZATION METHODOLOGY

The following criteria were assigned to each sidewalk segment, resulting in a total score between 1 and 100.

- SQI Score
- Previous Plans
- Destinations
- Public Inputs

Table 9 displays the matrix used for assigning a prioritization score. Higher scores indicate a strong need for improvements because sidewalks are missing or the existing sidewalks are in critical condition, provide access to a number of destinations, and the public or a previous plan noted it as needing improvements. The point values are then multiplied by the category's weight.

SQI Score

The Sidewalk Quality Index (SQI) Score was assigned to each sidewalk segment as part of the Existing Conditions analysis. The SQI score assigns points based on type, width, condition, and any existing and future obstructions. Locations where no sidewalk currently exists are noted as "Missing Sidewalk."

Additional information about the sidewalk attributes can be found in the Sidewalk Quality Index Overview section. This category received a weight of 7, since the existence and condition of a sidewalk is critical to its use by pedestrians.

Previous Plans

The project team incorporated recommendations from previous plans in an effort to align this study with feedback and analysis that has been executed in the past. The Lyons Comprehensive Plan and Walkability Study identified priority walking corridors. Sidewalks along these corridors were given points in the prioritization since they have been highlighted in past planning processes as needing improvements. The project team also reviewed CDOT's 2020 SH 66 Planning and Environmental Linkages Study, but this was not included as part of the prioritization. This category received a weight of 2.

Destinations

Major destinations in town like schools, parks, the library, post office, and transit stops are important to consider when planning a pedestrian network. Five-minute walksheds were developed for each of these destinations and then each sidewalk segment was assigned points based on the number of walksheds it fell within. This category received a weight of 7, as specific destinations/land uses tend to generate more pedestrian walking trips.

Public Input

To better understand the needs of pedestrians in Lyons, the project team conducted a crowd sourced survey in September 2023 where the public could place pins on a map to note concerns or suggest areas for improvements. A total of 44 people placed 102 pins on the map. Participants were also able to up or down-vote pins from other users. The total number of pins, plus or minus upvotes and downvotes resulted in a public input score. This category received a weight of 4.

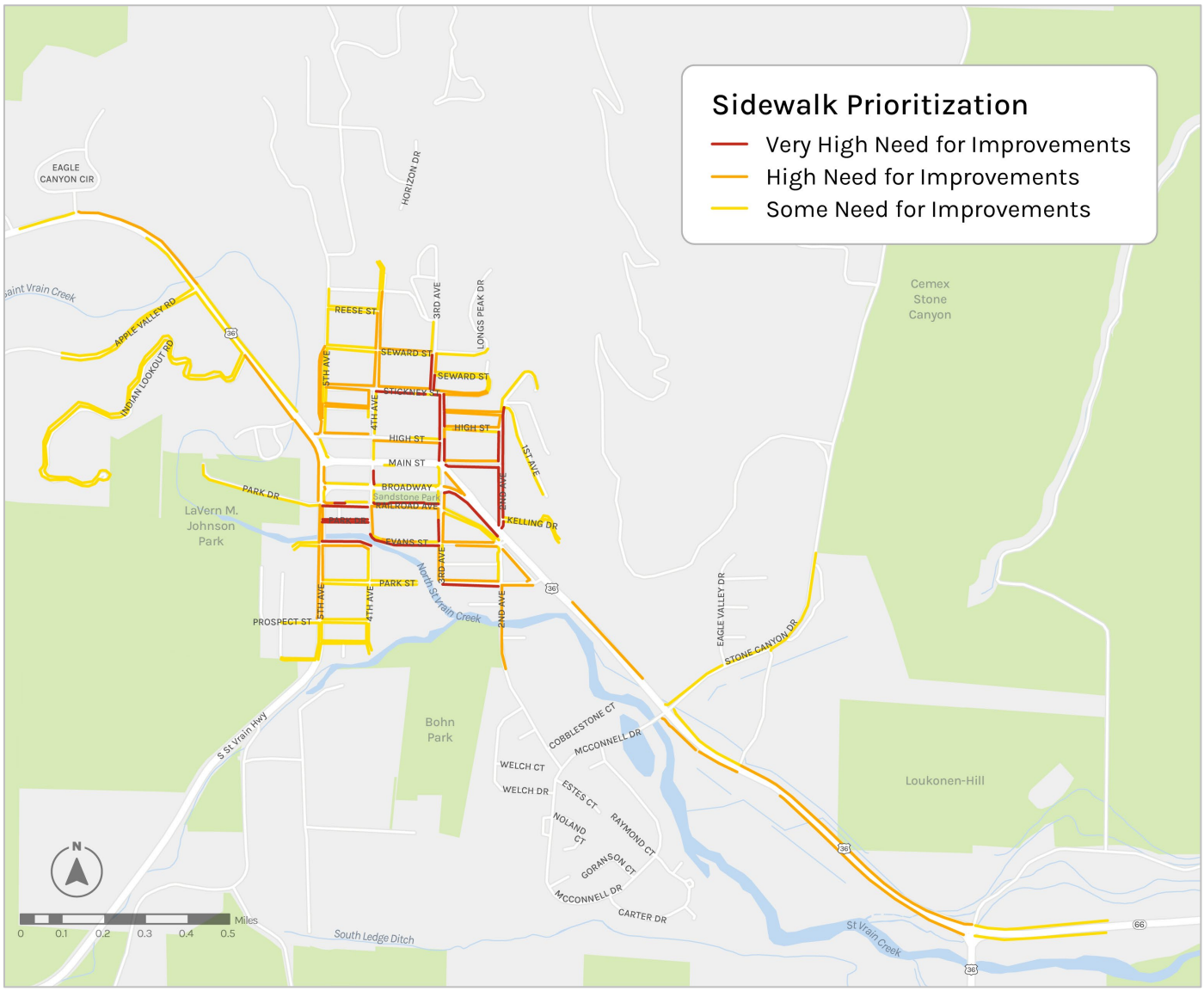
Table 9. Pedestrian Network Prioritization Criteria

Category	Sub-Category/ Description	Point Values					
		0	1	2	3	4	5
SQI Score 7 points overall category weight		85 and above	76 - 84 points	71 - 75 points	56 - 70 points	Under 55 points	Missing Sidewalk
Existing Plans 2 points overall category weight	Comprehensive Plan or Walkability Study Priority		Walkability Study Low Priority	Walkability Study Medium Priority	Walkability Study High Priority		Comprehensive Plan priority
Destinations 7 points overall category weight	Walksheds to destinations, including transit stops	Not within a 5 min walk to any destinations	5 min walk from 1-2 destinations	5 min walk from 3-5 destinations	5 min walk from 6-8 destinations	5 min walk from 9-11 destinations	5 min walk from 12+ destinations
Public Input 4 points overall category weight	Count of pins on or adjacent to a segment + likes - dislikes	0	1 - 3	4 - 7	8 - 13	14 - 18	19 or above
Each sidewalk segment and curb ramp are assigned a point value for each category. The four categories are then added to result in a Sidewalk Prioritization Criteria (SPC) score. The SPC score is based on a 1 – 100 scale. Higher scores indicate sidewalks with a higher prioritization for improvement. Lower scores indicate sidewalks with a lower prioritization.							

Sidewalk Prioritization Map

Sidewalk segments were prioritized and summarized in **Figure 12**. The highest scores represented in dark red show the areas of greatest need for improvement. These areas are along 3rd Avenue, Stickney Street, Evans Street, Park Drive, Old Main Street, and a few other locations.

Figure 12. Sidewalk Prioritization Summary



Pedestrian Network Plan

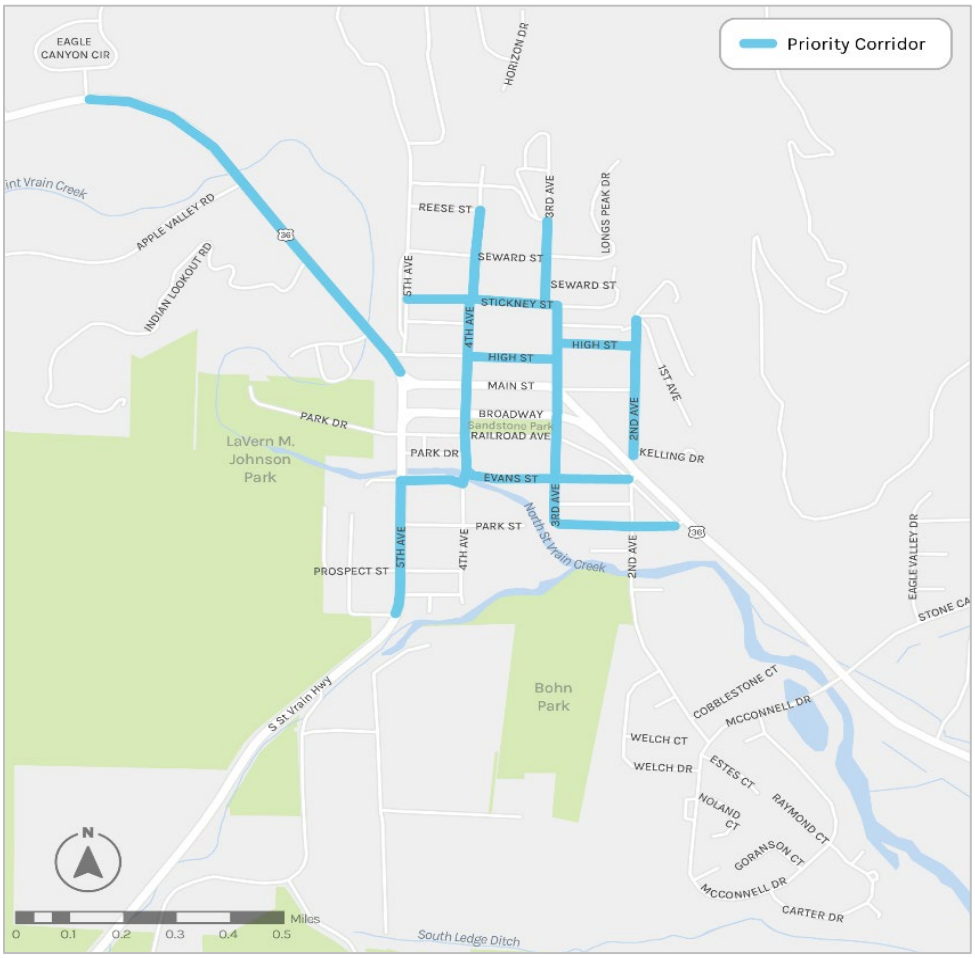
The Pedestrian Network Plan presents recommended pedestrian-related infrastructure improvements developed from the pedestrian network inventory, community input, the needs assessment, and Town Staff feedback. The proposed improvements are intended to make walking trips more comfortable, enjoyable, and safer for pedestrians of all ages and abilities. This chapter identifies the following:

- **Priority Pedestrian Corridors:** A network of corridors intended to provide a series of connected streets where improvements should be focused.
- **Project Cutsheets:** Outline locations for sidewalk, curb ramp, and crosswalk improvements along Priority Pedestrian Corridors.

PRIORITY PEDESTRIAN CORRIDORS

Figure 13 shows the Priority Pedestrian Corridors: a connected network of streets intended to improve pedestrian connections to key destinations, transit, and recreational opportunities and serve walking demand as identified in the prioritization process. This network was informed by the needs assessment, community input, and Town Staff feedback. Phase 1 of the recommended improvements focuses on filling the gaps in these priority corridors.

Figure 13. Priority Pedestrian Corridors



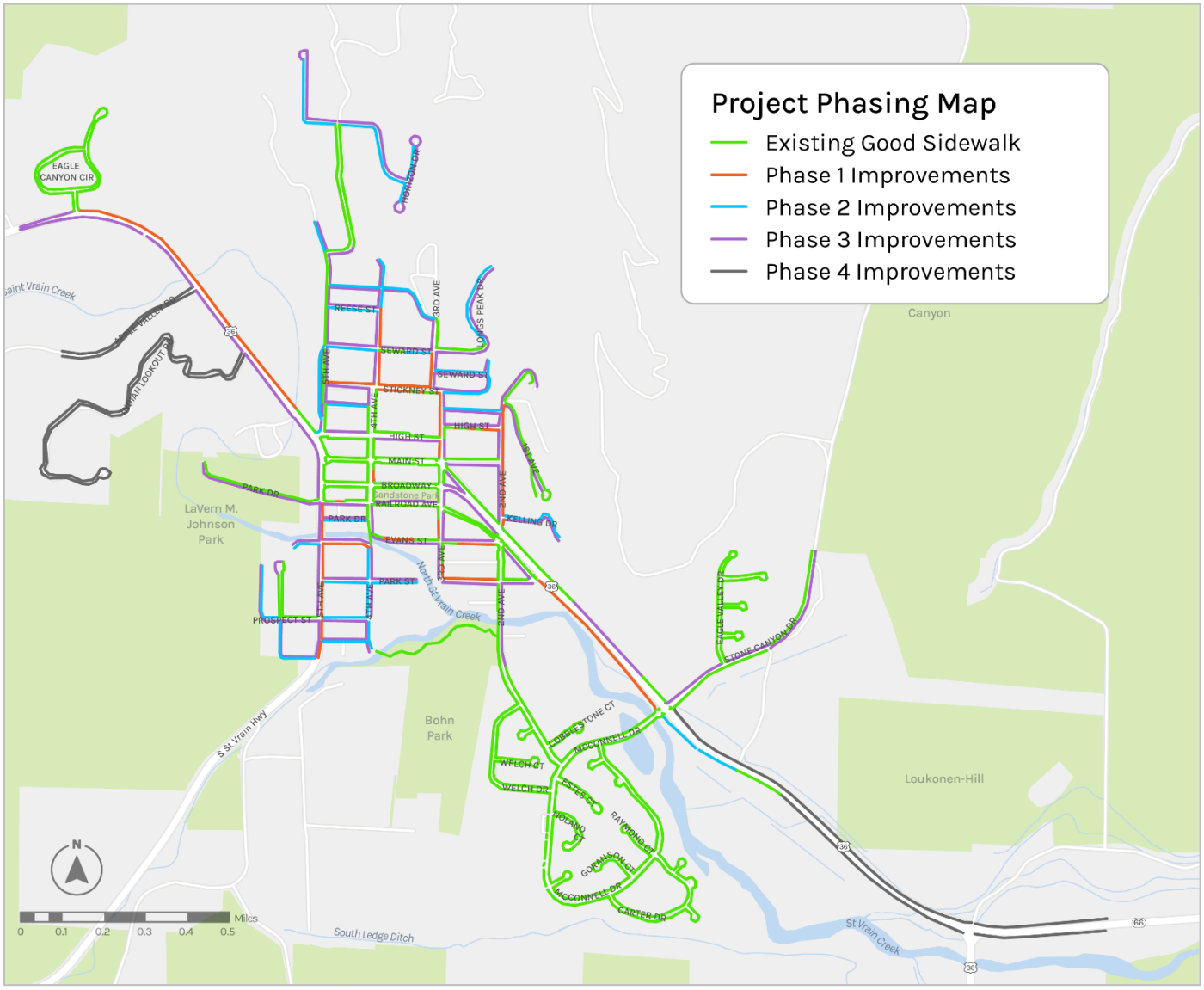
PROJECT RECOMMENDATIONS

The Priority Pedestrian Corridors were a starting point designed to focus improvements where people are most likely to walk or areas with greater comfort/safety challenges. The Town should prioritize pedestrian travel on this network and consider implementation of pedestrian improvements with roadway and infrastructure projects. The network should have high quality pedestrian facilities on at least one side of each street, and it is recommended to be completed in concrete due to durability and cost. Property owners are encouraged to repair and upgrade the sidewalk in front of their property to sandstone, if desired. Additionally, property owners are responsible for sidewalk maintenance in front of their property. The Town should also consider updating or implementing new curb ramps to meet current ADA requirements. Marked crosswalks should also be implemented in locations that are warranted.

Using the prioritization scores and Priority Pedestrian Corridors, the project team developed a phased approach to complete the pedestrian network in Lyons. **Figure 14** categorizes the project improvements into phasing. The recommendations in the phases below are for the Town to construct new sidewalks and repair certain sidewalks in critical condition.

- Phase 1 Improvements
  - Once completed, most of the Town will have access to a sidewalk on at least one side of the street, greatly improving the overall pedestrian network.
- Phase 2 Improvements
  - Blocks with no sidewalk on either side of the street are prioritized using the methodology outlined in the next section. Once this phase is completed, most of the town will have access to a sidewalk on at least one side of the street.
- Phase 3 Improvements
  - The last phase of improvements will build out the remaining sidewalk gaps on each block, as well as upgrade existing sidewalks that are in poor condition.
- Phase 4 Improvements
  - The remaining streets that do not have sidewalks are in more rural areas or do not access many destinations. Sidewalks are not necessary and/or practical at this time.
- Town-Wide Recommendations
  - These recommendations are not location specific but provide Town staff with actions to enhance and maintain the pedestrian network outside of sidewalk improvements.

Figure 14. Project Phasing Map



Phase 1 Improvements

Phase 1 improvements identify projects that will create a pedestrian network that allows people of all ages and abilities to walk around most of town on a sidewalk. These improvements are organized into nine projects and presented as cutsheets below. The purpose of the project cutsheets is to provide in-depth recommendations for improving the pedestrian network along nine key corridors:

1. 3rd Avenue
2. Stickney Street
3. Evans and Park Streets
4. 5th Avenue and Evans Street
5. West US 36
6. 4th Avenue
7. 2nd Avenue and High Street
8. Downtown Segments
9. East US 36

Improving walking conditions along these streets can be accomplished through a number of ways, including:

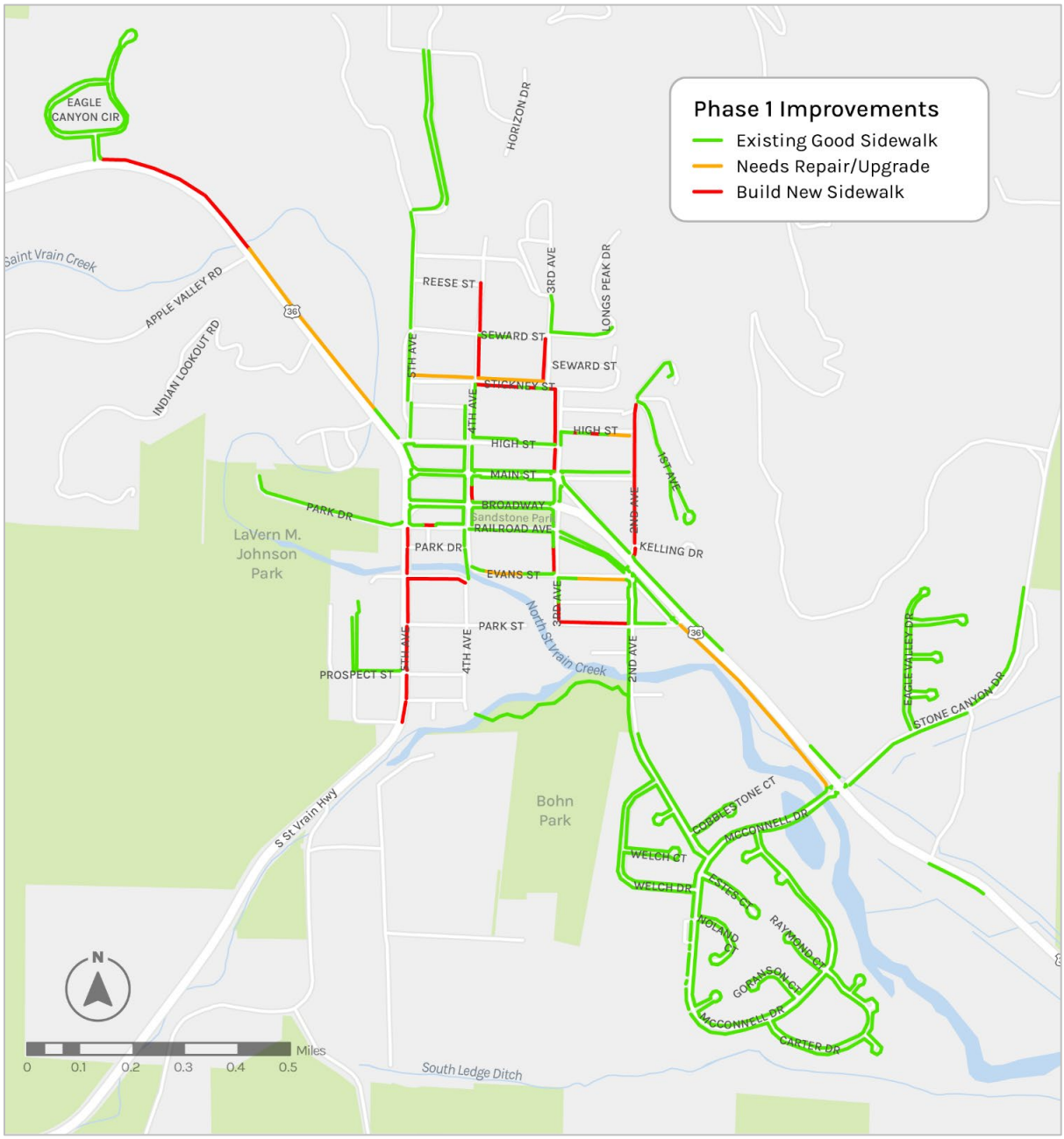
- Installing a continuous sidewalk that is 5’ wide or more on at least one side of each block.
- Repairing or upgrading an existing sidewalk.
- Adding curb ramps in conjunction with new or upgraded sidewalks.
- Marking crosswalks as warranted to increase pedestrian visibility.

The following pages illustrate the recommended improvements.

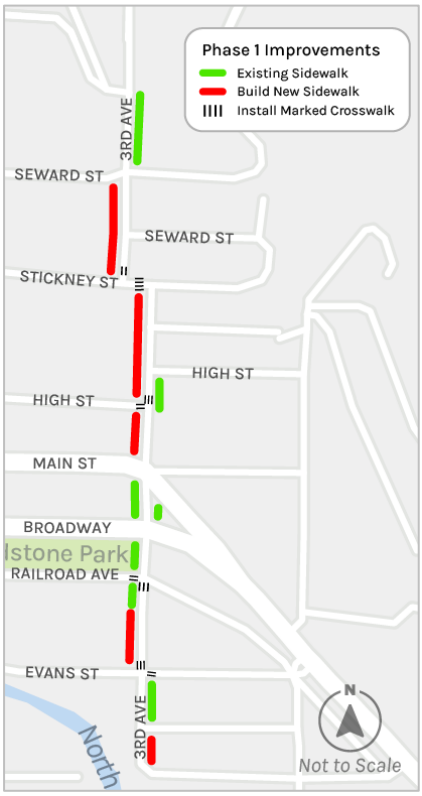
Phase 1 Improvements

Figure 15 shows existing sidewalks in good condition in green. The red and orange lines identify Phase 1 projects, which are detailed in the cutsheets below. In this phase, only one side of each block is prioritized for improvements, with the goal of creating a wide network first. This means that if there is an existing sidewalk in good condition on one side of the block, this block is not recommended for improvements until Phase 3. As of December 2023, it will cost approximately $4.7 million to complete Phase 1 improvements.

Figure 15. Phase 1 Improvements



3rd Avenue



Corridor Description

3rd Avenue is a critical north-south connection from Lyons Elementary School, downtown, the Post Office, and residential neighborhoods. Usable sidewalks currently cover about half of the corridor, but many locations are completely missing. Many spots along this corridor are recommended for stormwater improvements, which could be combined with sidewalk projects.

Project Locations and Details

- **Seward Street to Stickney Avenue**
  - New 5' concrete sidewalk.
  - West side preferred due to drainage ditch on east side that might conflict with sidewalk.
  - Alternative option: Build a new sidewalk on the east side of street if ROW doesn't allow for west side construction.
  - Coordinate with the Water Capital Improvement Project.
- **Stickney Avenue to Main Street**
  - New 5' concrete sidewalk.
  - West side preferred due to connection to Lyons Elementary School and downtown.
  - Alternative option: Build a new sidewalk on the east side of street if ROW doesn't allow for west side construction.
- **Mid-Block between Railroad Avenue to Evans Street**
  - New 5' concrete sidewalk to complete the block.
  - West side preferred due to existing sidewalk connection to Post Office and downtown.
- **Park Street Alley to Park Street**
  - New 5' concrete sidewalk to complete the block.
  - East side preferred due to existing sidewalk connection.
- **Marked Crosswalks**
  - At 3rd Avenue and Stickney Street on the north side and east side.
  - At 3rd Avenue and High Street on the north side and west side.
  - At 3rd Avenue and Railroad Avenue on the west side and south side.
  - At 3rd Avenue and Evans Street on the north side and west side.

Missing sidewalk on 3rd Avenue between Stickney and High Streets

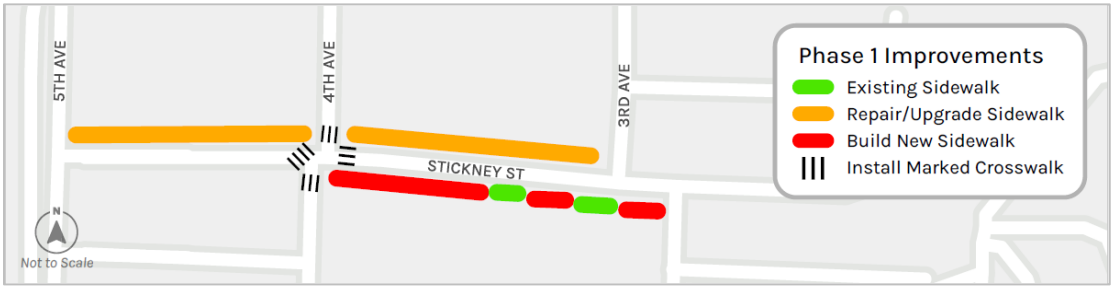
Total Project Cost Estimate

$425,000 (see Cost Estimate Tool for assumptions)

Stickney Street

Corridor Description

Stickney Street is an important east-west connection to Lyons Elementary School and the north part of Town. The existing sidewalks are in need of repair. The images at the bottom of this page illustrate some of the critical conditions.



Project Locations and Details

- 5th Avenue to 4th Avenue
  - Repair existing 4-5' sidewalk.
  - North side preferred for repairs since it is in better condition than the south side.
- 4th Avenue to 3rd Avenue
  - Repair existing 4-5' sidewalk on north side and fill in gaps on south side to complete the block.
  - Both sides preferred due to adjacency to Lyons Elementary School. If only one side can be repaired or filled in, prioritize filling the gaps on the south side, as it directly connects to Lyons Elementary School.
- Marked Crosswalks
  - At Stickney Street and 4th Avenue on all four sides.
  - At Stickney Street and 3rd Avenue on the north side and east side (repeated from 3rd Avenue project cut sheet).

Total Project Cost Estimate

$425,000 (see Cost Estimate Tool for assumptions)

Sidewalk in critical condition on Stickney Avenue between 4th and 3rd Avenues (north side)

Sidewalk dead ends on Stickney Avenue between 4th and 3rd Avenues (south side)

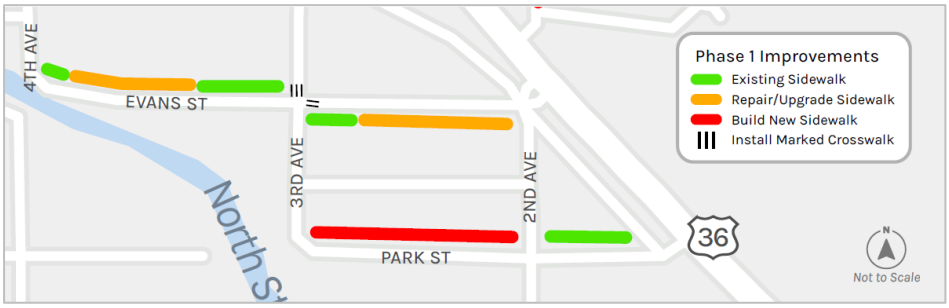
Sidewalk in critical condition on Stickney Avenue between 5th and 4th Avenues

Evans Street (East of St. Vrain Creek) and Park Street

Corridor Description

Evans Street is an important east-west connection in the older residential neighborhoods in town and provides a connection to the new pedestrian bridge across St. Vrain Creek. Park Street is also included in this project, as sidewalks are not present on either side of the street between 2nd and 3rd Avenues. The addition of a sidewalk will allow people to walk more comfortably to destinations along US 36.

Project Locations and Details



- **Evans Street from 4th Avenue to 3rd Avenue**
  - Repair middle section of existing 4-5' sidewalk.
  - North side is preferred due to good existing sidewalk along most of this block.
- **Evans Street from Mid-Block on 3rd Avenue to 2nd Avenue**
  - New 5' concrete sidewalk to complete the block.
  - South side preferred due to good existing sidewalk on the west side of this block.
- **Park Street from 3rd Avenue to 2nd Avenue**
  - New 5' concrete sidewalk to complete the block.
  - North side preferred due to some existing sidewalk and connection to sidewalk to the north on both ends.
  - Alternative option: Build a new sidewalk on the south side of street if ROW doesn't allow for west side construction.
- **Marked Crosswalks**
  - At 3rd Avenue and Evans Street on the north side and west side (repeated from 3rd Avenue Project cutsheet)

Total Project Cost Estimate

$350,000 (see Cost Estimate Tool for assumptions)

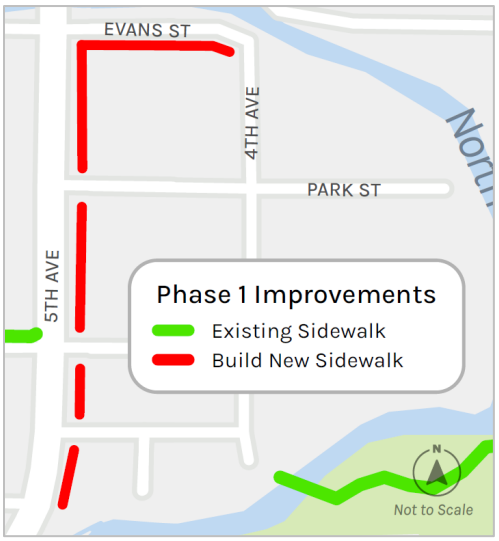
Overgrown and uneven sidewalk on Evans Street between 4th and 3rd Avenues (north side)

Sidewalk dead ends on Park Street between 3rd and 2nd Avenues

5th Avenue and Evans Street (West of St. Vrain Creek)

Corridor Description

5th Avenue, which also serves as SH 7, is an important north-south connection to the older residential neighborhoods in town and provides a connection to the new pedestrian bridge across St. Vrain Creek by way of Evans Street. Sidewalks are important along this corridor because of higher vehicle volumes and potential speeds of the roadway. Sidewalks were not included in most of this area when it was built, so residents do not have as much pedestrian access as their neighbors in other neighborhoods.



Project Locations and Details

- **5th Avenue from Evans Street to Meilly Street**
  - New 5' concrete sidewalk.
  - East side preferred due to connection to Evans Street and the pedestrian bridge.
- **Evans Street from 5th Avenue to 4th Avenue**
  - New 5' concrete sidewalk to complete the block.
  - South side preferred due to potential conflict with St. Vrain Creek, connectivity to houses, and existing sidewalk on east side.
- **Marked Crosswalks**
  - At 5th Avenue and Evans Street on the north side.

Total Project Cost Estimate

$500,000 (see Cost Estimate Tool for assumptions)

Partial sidewalk on Evans Street between 5th and 4th Avenues (south side)

Wide road with no sidewalk at 5th Avenue and Prospect Street

West US 36

Corridor Description

US 36 from 5th Avenue to the Eagle Canyon neighborhood provides a critical connection not only for the residents of that neighborhood to downtown, but also for those attending events at Planet Bluegrass. Currently, a concrete sidewalk leads west until St. Vrain Creek, where it turns into crushed granite. The crushed granite stops about two-thirds of the way up US 36, where it drops off into a shoulder.

Project Locations and Details

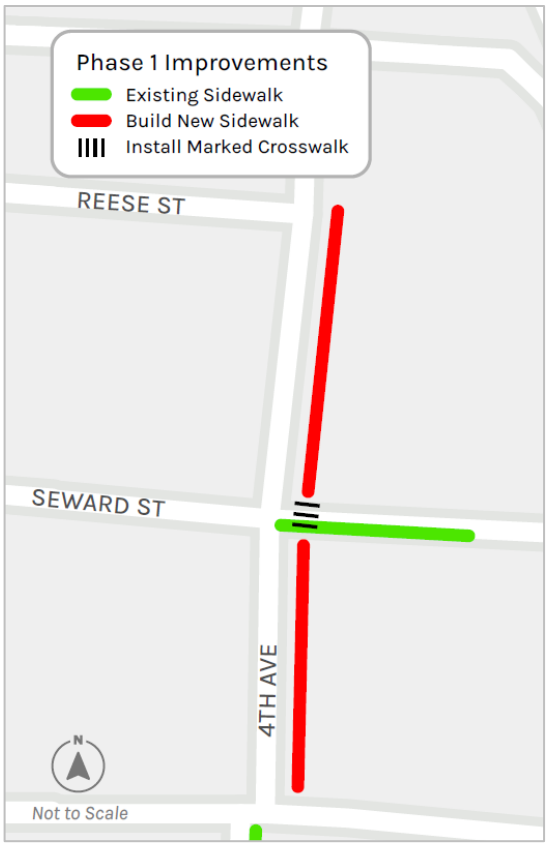
- **St. Vrain Creek to Apple Valley Road**
  - Upgrade the sidewalk to a 10' concrete multiuse path. Existing crushed granite is not ADA accessible and poses a maintenance concern.
  - Northeast side preferred due to existing sidewalk location, existing crushed granite path, and proximity to residential area, downtown, and Planet Bluegrass.
- **Apple Valley Road to Eagle Canyon Drive**
  - New 10' multi-use path to complete the connection.
  - Northeast side of the roadway is preferred due to the existing concrete sidewalk location. It provides better connections to the residential area, downtown, and Planet Bluegrass.
- **Marked Crosswalks**
  - At 5th Avenue and High Street on the east side (requires curb ramp construction).

Total Project Cost Estimate
$1,200,000 (see Cost Estimate Tool for assumptions)

Crushed granite path on US 36

Crushed granite path turns into shoulder on US 36

4th Avenue (North of Stickney)



Corridor Description

This improvement will provide a direct connection to Lyons Elementary School and ultimately provide a continuous walking connection from the north side of Lyons to the south side of Lyons. The only existing sidewalk is in need of major repairs.

Project Locations and Details

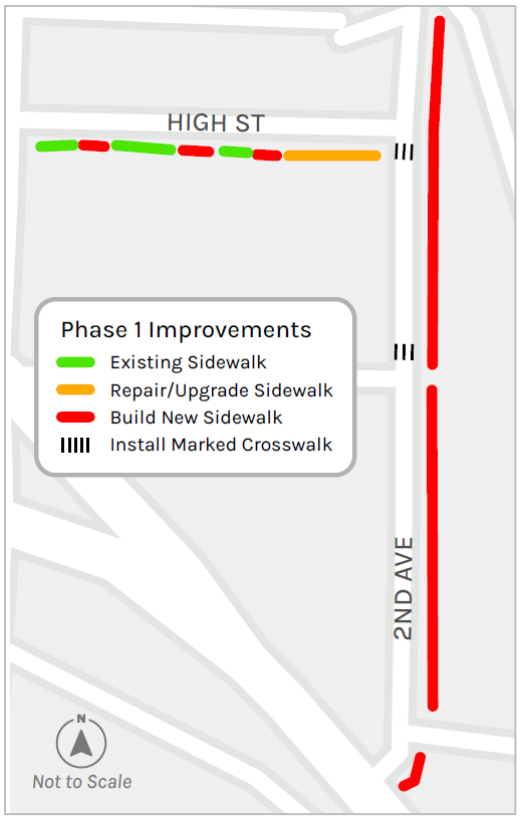
- **Reese Street to Stickney Avenue**
  - New 5' concrete sidewalk.
  - East side preferred due to conflicts with existing utility poles and other obstructions on the west side. The northern part of the west side also has existing curb and gutter. Taking some travel lane space on the east side will likely be an easier and more affordable project.
- **Marked Crosswalks**
  - At 4th Avenue and Seward Street on the east side.

Total Project Cost Estimate

$400,000 (see Cost Estimate Tool for assumptions)

Existing sidewalk at 4th and Stickney Avenue in need of major repairs, with obstructions if widening desired

2nd Avenue and High Street



Corridor Description

2nd Avenue is an important north-south connection for the residents on the northeast side of town. Many spots along this corridor also need drainage improvements, which could be combined with sidewalk projects.

High Street is a critical east-west connection, especially for those walking to Lyons Elementary School. It currently has some existing sidewalk panels. Some are in need of repair, and some are completely missing. Multiple spots along this corridor are recommended for stormwater improvements, which could be combined with sidewalk projects.

Project Locations and Details

- **2nd Avenue from 1st Street to US 36**
  - New 5' sidewalk.
  - East side preferred due to a lot of driveway breaks on the west side, which would require more marked crossings and curb ramps.
- **High Street from 3rd Avenue to 2nd Avenue**
  - Replace and install 5' concrete sidewalk along entire block.
  - South side preferred due to connection to Lyons Elementary School.
- **Marked Crosswalks**
  - At 2nd Avenue and High Street on the south side.
  - At 2nd Avenue and Old Main Street on the north side.

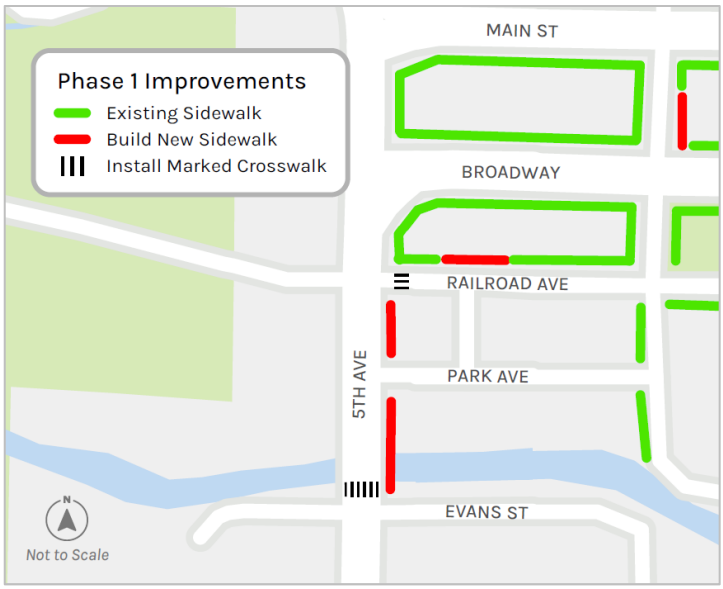
Total Project Cost Estimate

$475,000 (see Cost Estimate Tool for assumptions)

Missing sidewalk on 2nd Avenue showing large parking space on west side

Missing sidewalk leads to existing sidewalk on High Street between 3rd and 2nd Avenues

Downtown Segments



Corridor Description

Although these segments are not along a priority improvement corridor, they are included in Phase 1 due to their high prioritization scores. Overall, the sidewalk network in the downtown is usable, but a few gaps remain. One gap exists on 4th Avenue between Main Street and Broadway. Another gap exists by the parking zone in front of the Boulder County Sheriff's Office. The connection on 5th Avenue from Railroad Avenue to Evans Street across the bridge is also an unsafe area for those trying to access downtown.

Project Locations and Details

- **4th Avenue between Main Street and Broadway**
  - New 6' concrete sidewalk to complete the block.
  - Missing connection on east side is extremely steep and unusable.
- **Railroad Avenue by Town Hall**
  - Modify existing parking to add new 5' concrete sidewalk.
  - North side preferred to complete block and connect to library.
- **5th Avenue from Railroad Avenue to Evans Street**
  - New 5' concrete sidewalk.
  - East side preferred to connect to existing sidewalk to the north and to align with the recommended sidewalk on the east side of 5th south of Evans.
- **Marked Crosswalks**
  - At 5th Avenue and Railroad Avenue on the east side.
  - At 5th Avenue and Evans Street on the north side (repeated from previous project).

Total Project Cost Estimate

$175,000 (see Cost Estimate Tool for assumptions)

Missing sidewalk connection on 5th Avenue bridge

Missing sidewalk in front of parking on Broadway between 5th and 4th Avenues

Missing sidewalk on 4th Avenue between Main Street and Broadway

East US 36

Corridor Description

Although this segment is not along a priority improvement corridor, it is included in Phase 1 due to its high prioritization score. This segment is currently a crushed granite path headed southeast out of town. This path is usable for recreation but is not ADA compliant as a sidewalk and requires ongoing maintenance. This would also better connect the existing sidewalks that end at Park Street and McConnell Drive.

Project Locations and Details

- **Park Street to McConnell Drive**
  - Upgrade crushed granite path to an 8' wide concrete multi-use path.
  - West side preferred due to existing path and connections to the north and south.

Total Project Cost Estimate

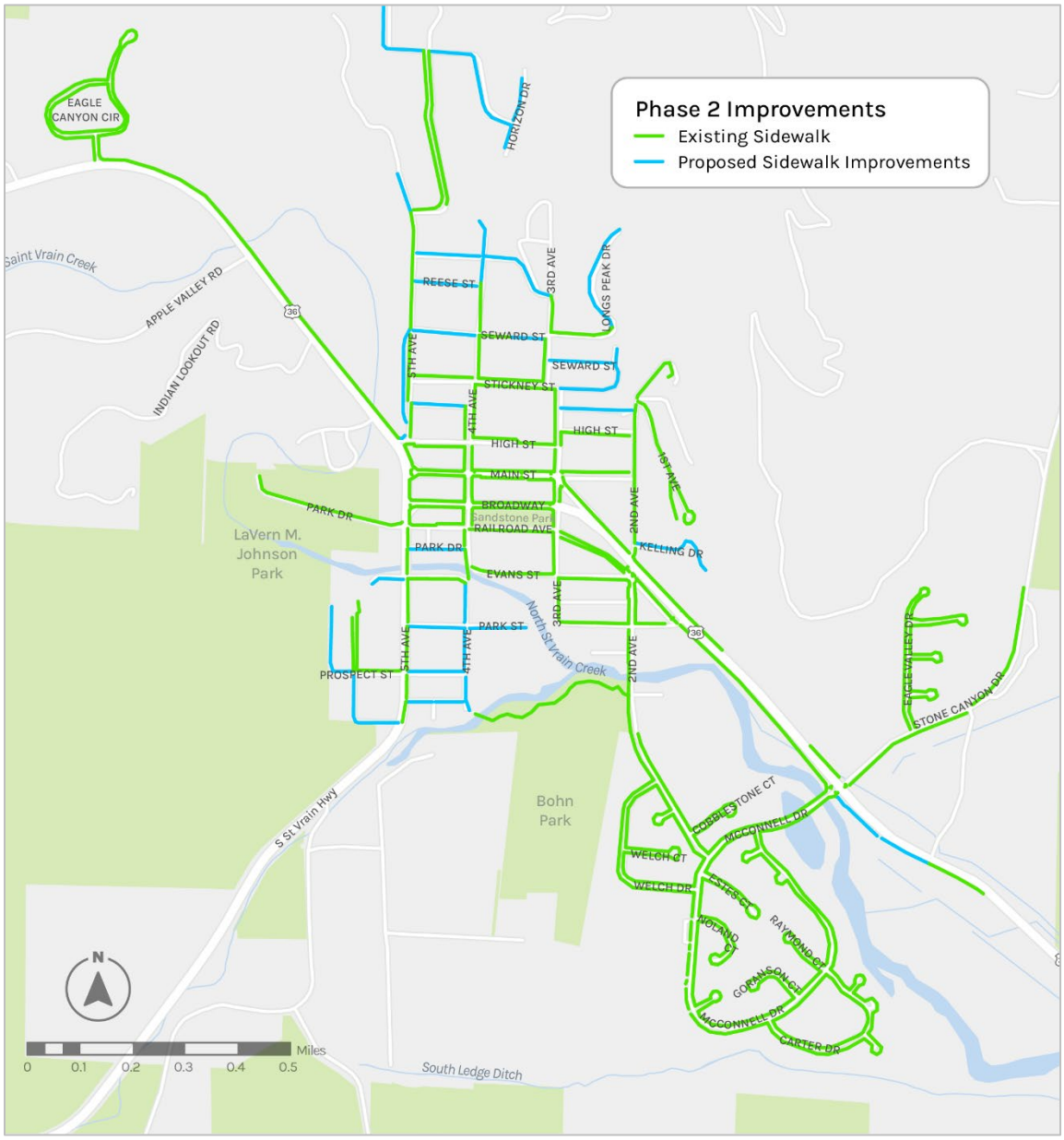
$750,000 (see Cost Estimate Tool for assumptions)

Existing crushed granite path along US 36 going southeast

Phase 2 Improvements

Phase 2 improvements include segments with no sidewalk on either side of the street that were not included in Phase 1 improvements. Once this phase is completed, most of the town will have usable sidewalks on at least one side of the street. **Figure 16** identifies the Phase 2 improvements and assumes Phase 1 improvements were previously completed and considered existing sidewalk. In order to accurately calculate the cost of Phase 2 improvements over time, the project team developed a cost estimation tool (**Appendix B: Cost Estimate Tool**) that allows Town Staff to update unit prices, account for inflation, and add in additional costs as necessary. This tool calculates total project cost by linear feet of sidewalk. As of December 2023, it will cost approximately $4,200,000 to complete Phase 2 improvements.

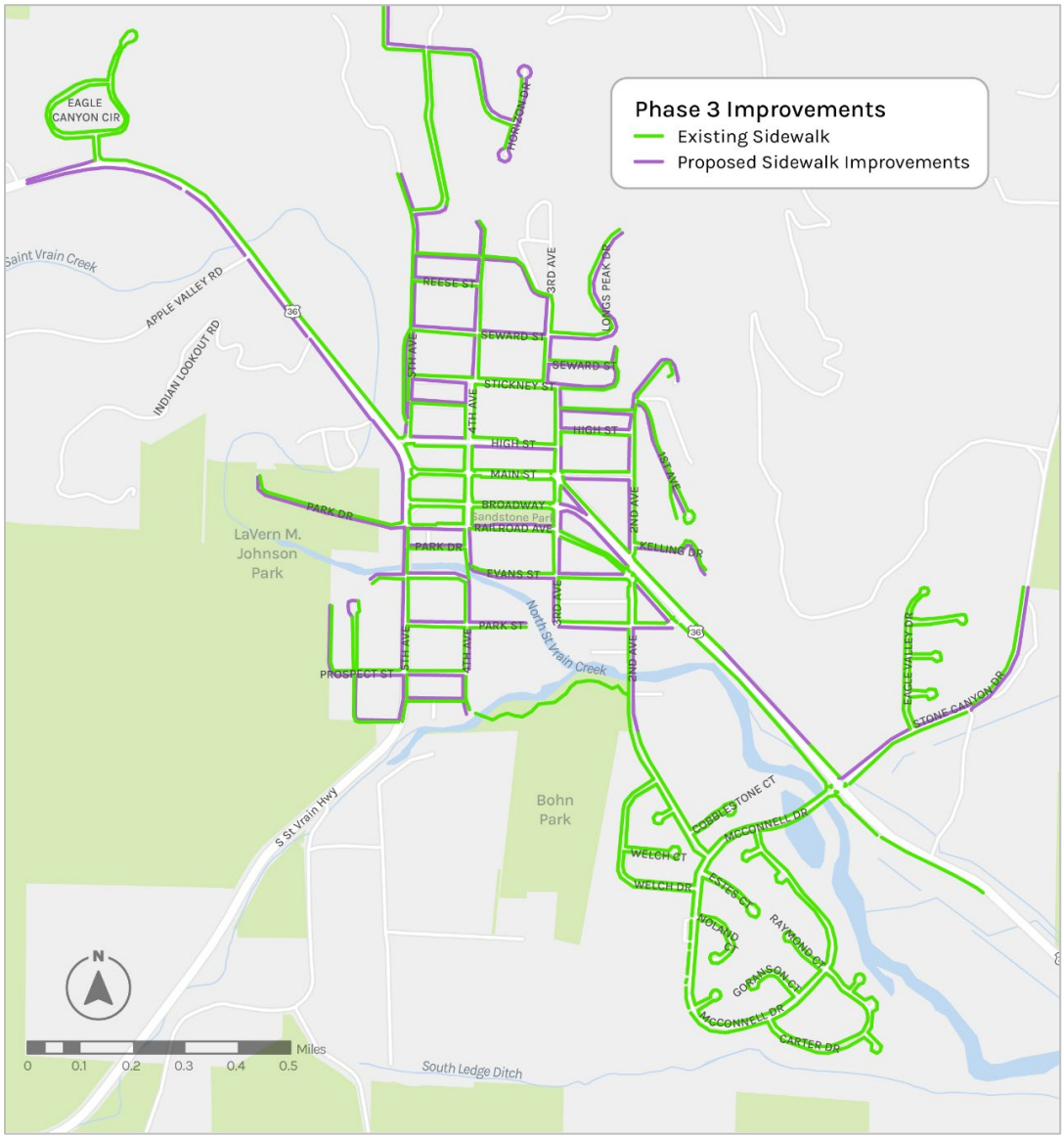
Figure 16. Phase 2 Improvement Locations



Phase 3 Improvements

Phase 3 improvements focus on filling in the remaining sidewalk gaps that have not been completed in Phase 1 or Phase 2, as well as upgrading existing sidewalks that are in poor condition or are too narrow. Once this phase is completed, most of the town will have usable sidewalks on both sides of the street. **Figure 17** summarizes Phase 3 improvements and assumes Phase 1 and Phase 2 improvements were previously completed and considered existing sidewalk. In order to accurately calculate the cost of Phase 3 improvements over time, the project team developed a cost estimation tool (**Appendix B: Cost Estimate Tool**) that allows Town Staff to update unit prices, account for inflation, and add in additional costs as necessary. This tool calculates total project cost by linear feet of sidewalk. As of December 2023, it will cost approximately $11,500,000 to complete Phase 3 improvements.

Figure 17. Phase 3 Improvement Locations



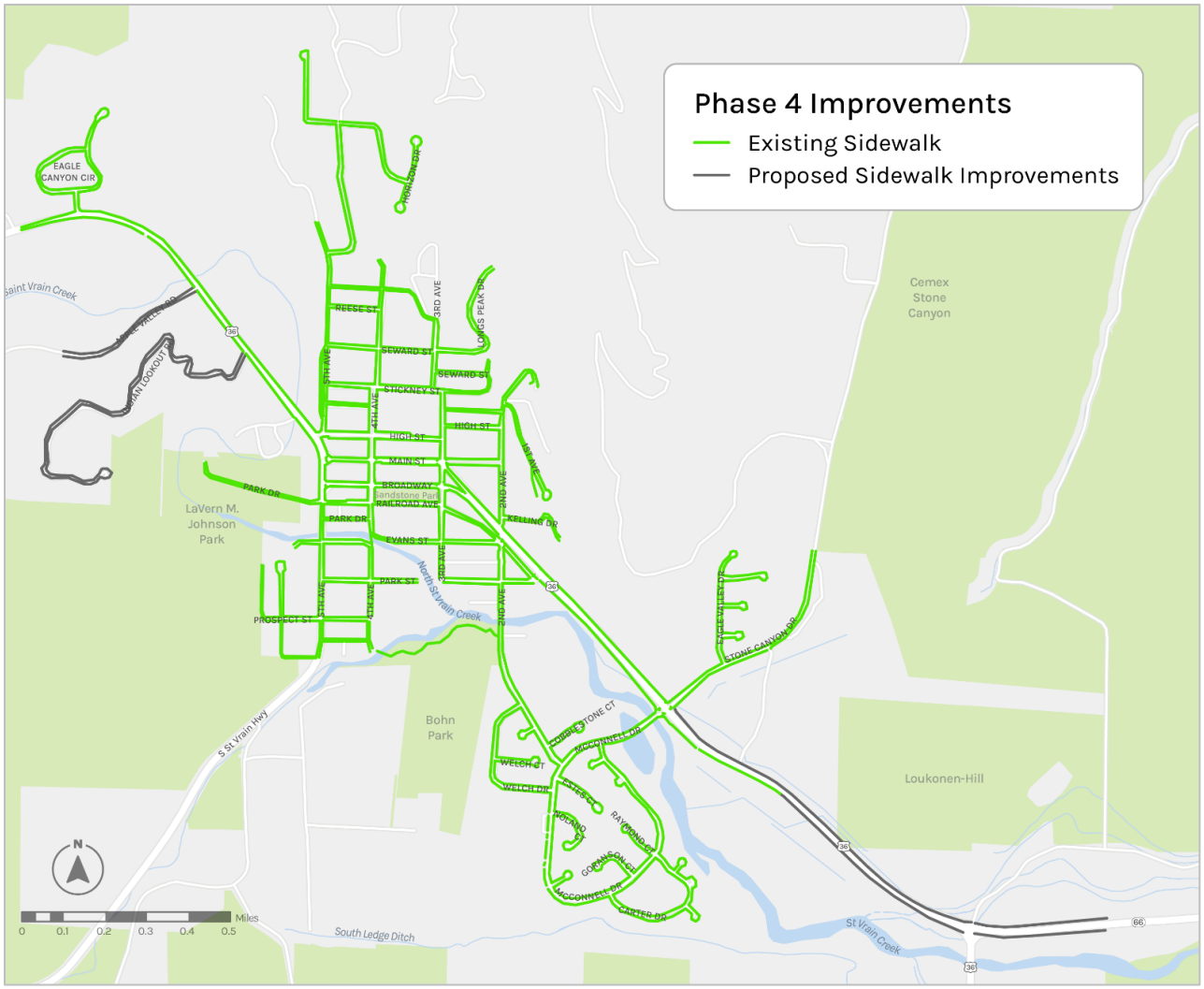
Phase 4 Improvements

The remaining streets that do not have sidewalks have very low pedestrian demand due to being in more rural areas of Town or do not access many destinations. Therefore, these locations do not necessitate sidewalks at this time. **Figure 18** summarizes Phase 4 improvements and assumes Phase 1, Phase 2, and Phase 3 improvements were previously completed and considered existing sidewalk. Once improvements are complete for Phases 1-3, the Town can reevaluate the need for sidewalks on the following roadways:

- Indian Lookout Road
- Apple Valley Road
- East US 36 past McConnell Drive

In order to accurately calculate the cost of Phase 4 improvements over time, the project team developed a cost estimation tool (**Appendix B: Cost Estimate Tool**) that allows Town Staff to update unit prices, account for inflation, and add in additional costs as necessary. This tool calculates total project cost by linear feet of sidewalk. As of December 2023, it will cost approximately $4,800,000 to complete Phase 4 improvements.

Figure 18. Phase 4 Improvement Locations



Town-Wide Recommendations

The following recommendations will help Town Staff advance the recommendations in this report.

General Considerations

- Consider the impact on project design if/when PROWAG is adopted.
- When feasible, combine sidewalk improvement projects with stormwater and sanitary improvements that have been identified on the same corridor.
- Restripe faded crosswalks, especially in high traffic areas.
- Develop Uncontrolled Pedestrian Crossing Guidelines to better guide where crosswalks should be marked and if crossing infrastructure such as a Pedestrian Hybrid Beacon or Rectangular Rapid Flashing Beacon is recommended.

Policy or Ordinance Options to Build and Maintain Sidewalks

The following list of mechanisms can be used to build and maintain sidewalks, in addition to the grant funding identified in the next section. Some of these mechanisms may require Town policy or ordinance changes.

- **Maintenance Enforcement *(enhance current mechanism):*** Property owners are responsible for maintaining existing sidewalks in front of their property. Historically, this code requirement has not been routinely enforced. The Town can schedule regular inspections and fine property owners if sidewalks are in poor or critical condition.
- **Annual Property Fee or Utility Fee:** Property owners contribute to a fund that pays for sidewalk improvements. This creates a new Town program and is managed by Town Staff. Option for property owners to opt out of this program, but they are then responsible for all sidewalk repairs in front of their property. If they are not compliant, a fine will be issued to the property owner.
- **Business or Local Improvement District (BID or LID):** Business or property owners contribute to a fund that pays for sidewalk improvements in their area. This is managed outside of Town Staff.
- **Cost Share:** The Town cost shares with property owners to fund sidewalk replacement/repairs. The cost share comes out of the Town's budget. The percentage that the property owner is responsible for is determined by the Town Board.
- **Sales Tax:** Implement a new sales tax to fund new sidewalks, as well as repair/replacement.
- **Infrastructure Fee:** Charge a flat fee included in residents' utility bills. This fee can be applied per unit or per property owner.
- **Mill Levy:** Establish a mill levy, which is a "tax rate" applied to the assessed value of a property.
- **Rebate Program:** The Town assesses needed repairs and provides an estimate (using the Cost Estimate Tool provided in this report). The property owner completes repairs and submits the invoice and rebate form to the Town. The Town reimburses a percentage or all of the cost.
- **Local Fuel Tax:** Instate a tax per gallon on gas purchased within Town limits.
- **Property or Utility Assessment:** Each property is assessed for an annual maintenance fee, square footage fee, plus frontage fee, minus a past work reduction, with all funding going towards sidewalk repair or curb ramp construction.
- **Remodel or Construction Requirements:** Property owners must build or repair/replace sidewalk as part of a major remodel or new home construction. The Town could provide some percentage of matching funds.
- **Bond**: Gauge public interest in a tax that voters will then approve or deny.

Other Location-Specific Improvement Requests

The following improvements were requested by the public through the September 2023 survey.

- Install a stop sign at Longs Peak Drive (where it intersects with 3rd Avenue) to make the intersection safer for pedestrian crossings.
- Enhance the dirt road below the bridge on US 36 connecting to Apple Valley Road to the north sidewalk.
- Install a roundabout at 5th Avenue and Broadway.
- Install a roundabout at 5th Avenue and Main Street.
- Pedestrian safety improvements at intersections:
    - 4th Avenue and High Street
    - 3rd Avenue and Stickney Street
    - 3rd Avenue and High Street
    - 3rd Avenue and Main Street

IMPLEMENTATION PLAN

The Town will need to secure funding to support its Capital Improvement Plan (CIP) to build out the pedestrian network. This implementation plan provides cost estimates that Town staff can use to allocate the existing budget and apply for a variety of grant opportunities. Planning-level cost estimates have been developed for each project outlined in Phase 1 and incorporate new concrete or sandstone sidewalks, curb ramps, curb and gutter, and associated labor costs.

The funding opportunities section identifies five significant grant opportunities that Town staff should consider applying for to help advance the construction of the pedestrian network. Both the cost estimates and funding opportunities have associated spreadsheets as part of the appendix that allow the Town to modify costs, account for inflation, and find more information for each grant opportunity as needed.

Cost Estimates Overview

The planning-level estimated project costs developed for Phase 1 improvements were determined by evaluating what treatment type is needed (new sidewalk, replace/repair existing sidewalk) and how much that treatment would cost on a linear foot basis.

Treatment types are broken down into the following:

- New concrete sidewalk with new curb and gutter
- New sandstone sidewalk with new curb and gutter
- New concrete sidewalk with removal of existing sidewalk
- New sandstone sidewalk with the removal of existing sidewalk
- New directional curb ramp
- Existing curb ramp removal
- Reset existing sandstone sidewalk
- Reset existing sandstone in concrete base
- Retaining walls where appropriate

Each treatment factored in material costs, percentages for contingency items such as drainage and erosion control, surveying, and public information services, and a percentage for design cost. A detailed breakdown of these can be found in **Appendix B: Cost Estimate Tool.** This tool can also be used by the Town in the future to easily estimate project costs for corridors and phases without a supplied cost estimate from this study.

Cost Estimate Summary for Phase 1 Improvements

Cost estimates are provided for the priority corridors in Phase 1 so that the Town can allocate budget and apply for grants to complete these corridors. The table below summarizes this information. **Reference the Cost Estimate Tool in Appendix B for cost estimate assumptions.**

Project Name	Cost Estimate
3rd Avenue	$425,000
Stickney Street	$425,000
Evans and Park Streets	$350,000
5th Avenue and Evans Street	$500,000
West US 36	$1,200,000
4th Avenue	$400,000
2nd Avenue and High Street	$475,000
Downtown Segments	$175,000
East US 36	$750,000
Phase 1 Total	$4,700,000

Funding Opportunities

The Town of Lyons can fund pedestrian network improvements through both capital funding (such as apportioning a percentage of the Town's budget for sidewalk building and repairs) each year, as well as by applying for grant program funding. The federal government, CDOT, DRCOG, and Boulder County all offer grant funding through different programs.

The five funding opportunities detailed in this report are the most applicable to sidewalk projects and should be prioritized in the near term. Most of these grants are annual funding opportunities but some are bi-annual (SRTS). Town Staff should position themselves to apply for the following grants sooner rather than later to hit the funding cycle windows. Specifically, **Town Staff should immediately pursue both the Federal RAISE (due February 28, 2024) and ATIIP (NOFO release anticipated in 2024, pending an announcement by USDOT) grants.**

Rebuilding American Infrastructure with Sustainability and Equity (USDOT)

The USDOT Office of the Secretary's RAISE grant program can be used for surface transportation projects that will improve safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness and opportunity including tourism, state of good repair, partnership and collaboration, and innovation. The Town can use this funding for all parts of sidewalk network improvements, both capital and planning. **The next deadline for application submittal is February 28, 2024.**

Funding Amount:

- Implementation grants: Minimum of $1 million in rural areas
- Planning grants: No minimum award
- Town Match Requirement: 20% minimum (maximum 80% federal contribution limit)

Active Transportation Infrastructure Investment Program (FHWA)

The FHWA's ATIIP grant can be used to construct projects which provide safe and connected active transportation facilities in active transportation networks or active transportation spines. The Town can use funding from this program for all sidewalk network improvements that connect people to everyday destinations (business, community activity centers, schools, and trail spines). **The next expected Notice of Funding Opportunity (NOFO) is anticipated for Winter 2023.**

Funding Amount:

- Grant applicants must request a minimum of at least $100,000 (for planning and design grants) or at least $15,000,000 for active transportation projects (funding can be allocated towards a group of projects)
- Town Match Requirement: 20% minimum (maximum 80% federal contribution limit)

Revitalizing Main Streets (CDOT)

CDOT's Revitalizing Main Street's program provides funds to enhance active transportation safety and strengthens the connection of people to main streets and central economic hubs through funding infrastructure improvements to make walking and biking easy. The project team anticipates that funding through this grant opportunity could be used for all parts of sidewalk improvements in the city's

downtown core area along and adjacent to Main Street and Broadway. **The next deadline for application submittal is February 28, 2024.**

Funding Amount:

- $10,000 to $250,000
- Town Match Requirement: 10% minimum

Safe Routes to School (CDOT)

CDOT also offers funding the Town could use for sidewalk improvements through the SRTS program. These funds can be used for infrastructure improvements that enable and encourage children in grades K-8 to walk and bicycle to school by making walking and bicycling to school safer and more appealing. SRTS funds can be used both for the planning and implementation of these projects. **The next expected submittal for funding is August 2024.**

Funding Amount:

- Infrastructure grants: Minimum award amount of $100,000 and a maximum of $750,000 per project
- Non-Infrastructure grants: Minimum award amount of $5,000 (no maximum)
- Town Match Requirement: Applicants for SRTS program funds must provide 20% of the total project costs in matching funds, unless qualifying for 100% funding (see Match Funding Exemptions here).

Potential Project(s): The highly prioritized streets near Lyons Elementary School (3rd Avenue, 4th Avenue, and Stickney Avenue).

Transportation Capital Improvements Program (DRCOG and Boulder County)

Both DRCOG and Boulder County offer TIPs which can be used for all parts of sidewalk improvement projects in the town. DRCOG programs the federally and state funded transportation improvements and management actions to be carried out by entities such as local jurisdictions. Boulder County programs county wide funds from fees and taxes for projects to be carried out throughout the county. **The next opportunity for funding through DRCOG's TIP program is not until 2025 and BOCO has not yet released when their next opportunity for TIP funding will be.**

Funding Amount:

- DRCOG: Must request a minimum of $100,000
- BOCO: No minimum or maximum identified
- Town Match Requirement: 20% Minimum from non-federal financial resources for STBG, CMAQ, CRP, and TA funding requests

Appendix C: Funding Opportunities provides a detailed matrix of other funding opportunities that the Town can consider. In addition, the USDOT has developed a Rural Grant Applicant Toolkit for Competitive Federal Transportation Funding to help rural communities apply for grant funding. This toolkit guides potential applicants in both identifying and navigating discretionary grant funding opportunities for rural transportation projects, such as the Town's sidewalk network improvements.

Appendices

APPENDIX A: COMMUNITY FEEDBACK

APPENDIX B: COST ESTIMATE TOOL

APPENDIX C: FUNDING OPPORTUNITIES