

Garden City Road Safety Audit

Talley Trail

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& COMPANY

March 2025



NOT FOR CONSTRUCTION—The Recommendations in this document are intended ONLY for the local agency to use in determining possible future changes at the RSA location.

Subject to United States Code Use Restricted 23 USC 407.

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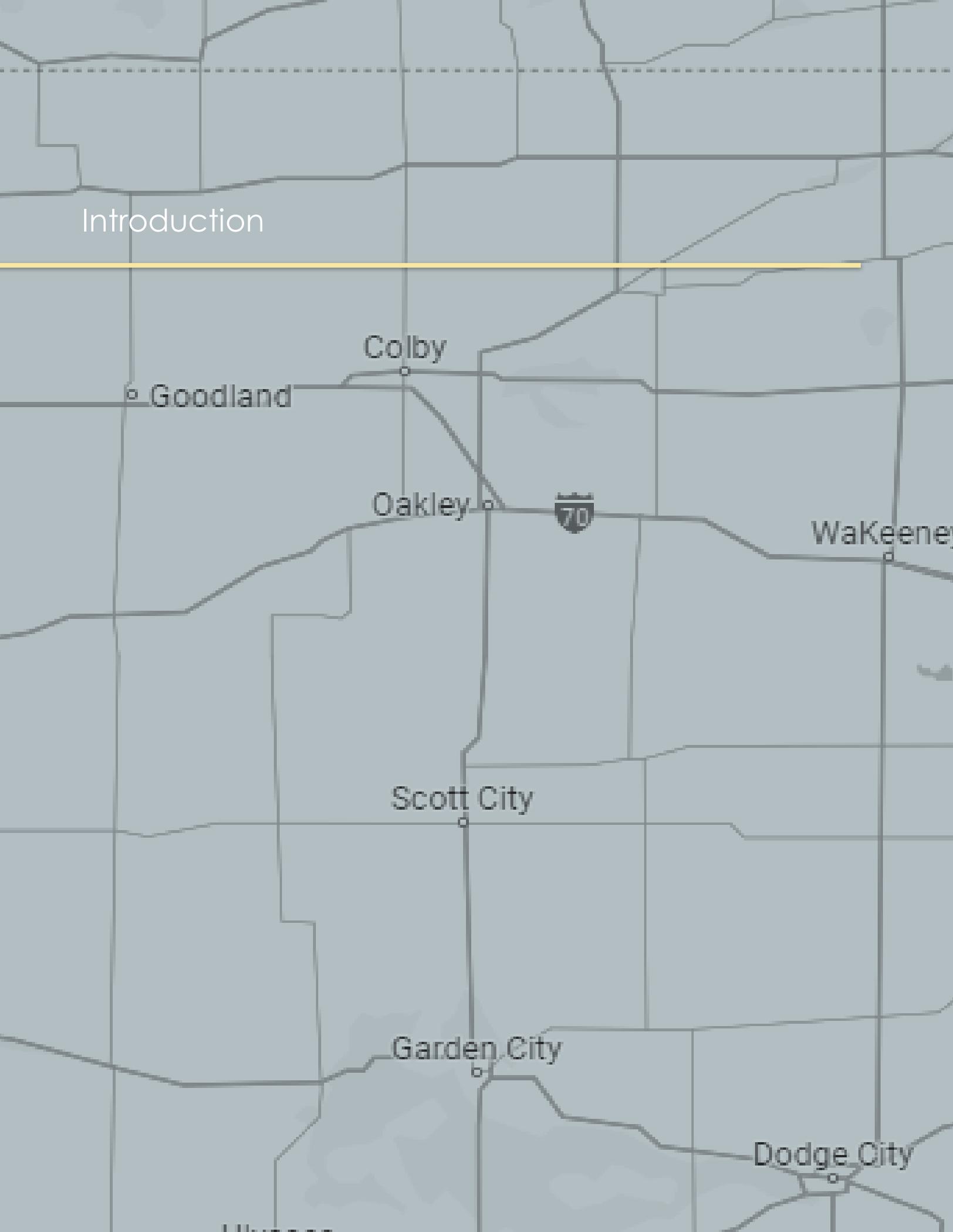
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Introduction



Introduction

Garden City, Kansas, is part of the Multi-Jurisdictional Safe Streets for All (SS4A) Safety Action Plan, a collaboration among twelve jurisdictions to improve roadway safety. Partner communities and counties include Garden City, Holcomb, Liberal, Scott City, Oakley, Oberlin, Finney County, Seward County, Haskell County, Scott County, Logan County, and Decatur County. The U.S. 83 Communities Roadway Safety Plan, Garden City Transportation Safety Action Plan, and Road Safety Audits (RSA) are key initiatives within the plan to enhance road safety.

RSAs are formal evaluations of roadway facilities' safety performance, conducted by an independent team of engineers, traffic specialists, and planners. The RSA report identifies potential safety issues and improvement opportunities for all road users. Using data, community input, and expert analysis, the city can implement targeted interventions to reduce traffic crashes and improve road safety. The RSA team reviews local crash data and conducts field observations at various times, including peak and non-peak hours. Talley Trail field reviews took place from April 1 to April 3, 2024.

Talley Trail is a well utilized 3.5 mile recreational path in Garden City, linking various destinations including Garden City Community College, retail, and parks within the city limits. This paved asphalt and concrete trail features resting spots with gazebos, water stations, benches, and landscaping. Recognized as a key community asset, Talley Trail plays a key role in expanding multi-modal transportation and is central to the city's recent comprehensive plan for a complete biking and walking trail network throughout Garden City.



Talley Trail

Figure 1 shows the study area, which covers 3.5 miles of Talley Trail, from N Humphrey Road and Spruce Street/U.S. 83 in the west to the Tangeman Sports Complex in the east. The RSA will evaluate the roadway and trail facilities to identify safety issues and improvement areas. By analyzing crash reports and conducting field reviews, the RSA will help the city implement measures to reduce crashes and improve overall road safety. The RSA will focus on multi-use trail crossings at Taylor Avenue/Campbell Street, 11th Street, 8th Street, Main Street, 3rd Street, Center Street, Fleming Street, Campus Drive, and Schulman Avenue. The two signalized intersections at Taylor Avenue/Mary Street and Kansas Avenue/Campus Drive are also referenced. Detailed recommendations can be found in the Mary Street and Kansas Avenue RSA documents.

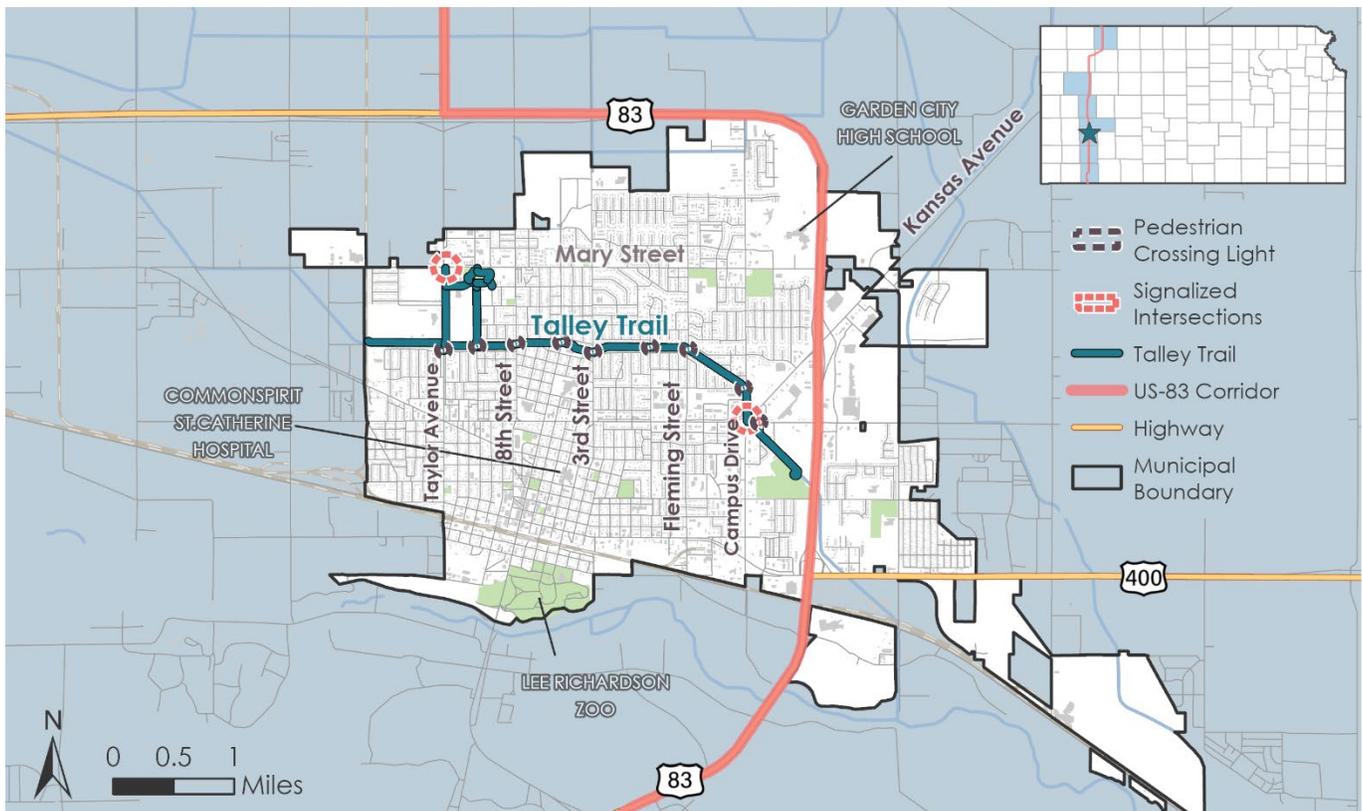


Figure 1 - Project Location Map

Report Overview

The following sections provide an overview, crash review, field review observations, and recommendations for the Talley Trail corridor study signalized intersections and multi-use trail crossings. The Appendix contains an inventory and matrix of existing infrastructure for the multi-use trail crossings along the Talley Trail.

Observation Process

To understand the corridor's use patterns, challenges, and needs, the team conducted three field observations, combining desktop review and in-person visits. On each occasion, various elements were analyzed and recorded. Before the field review, team members met virtually in March 2024 to discuss the overview, RSA schedule, and field review plan. Table 1 summarizes each trip and the observed variables.

Talley Trail

Corridor-wide notes were compiled based on general observations during the visits, including crosswalk and pavement condition, road user behavior, compliance with Americans with Disabilities Act (ADA) standards regarding ramps and sidewalks, signage visibility, obstructions, design deficiencies, bicycle infrastructure, and spot speed measurements.

Table 1 - Observation Process Overview

Date and Time	Variables Observed
April 1, 2024	Performed a desktop evaluation of the nine multi-use trail crossings to assess the overall conditions of each roadway connection along the trail corridor.
April 2, 2024 5:00 PM to 6:00 PM	Team members traveled the trail corridor at the signalized intersection from Campus Drive to Kansas Avenue and Schulman Avenue.
April 3, 2024 11:30 AM to Noon	Evaluation of signalized intersection at W Taylor Avenue/U.S. 83B and general assessment of roadway connection along the trail corridor.



Recommendation Process

The recommendations in this plan are based on comprehensive data analysis, fieldwork, observations, and community feedback. The goal is to improve safety and mobility for all road users. Recommendations are categorized by timeframe, from quick tasks to those requiring further planning or analysis, with an associated cost range reflecting implementation efforts.

Recommendations for the signalized intersections can be found in the respective RSA document. Recommendations for the multi-use trail crossings follow MUTCD guidelines, as illustrated in the typical two-lane and four-lane intersection example graphics.

The Appendix includes an inventory of existing infrastructure at each multi-use trail crossing site and a recommendations table based on time for plan, design, construction and funding of the project

Talley Trail RSA Corridor



Goodland

Colby

Oakley



WaKeene

Scott City

Garden City

Dodge City

Ulysses

Talley Trail Corridor

This section provides background, observations, and recommendations for the Talley Trail corridor, covering intersection geometry, user behavior, signal control, and multi-modal infrastructure.

Talley Trail, shown in Figure , runs east-west across Garden City, Kansas. Figure 2 depicts a plan view of the trail and its multi-use trail crossings. Talley Trail, with nine multi-use trail crossings between two typical section of the trail and between the intersection and multi-use trail crossings. The 12-foot wide trail features two signalized intersections and nine multi-use trail crossings at bisecting roadway locations. Along most of its length, the paved path is accompanied by a stormwater drainage channel from W/ Taylor Avenue to the Campus Drive crossing (Figure 4). The city has built bridges to connect north-south trail segments and facilitate resident passage, located west of Fleming Street, east and west of N. Main Street, and west of N. 8th Street.

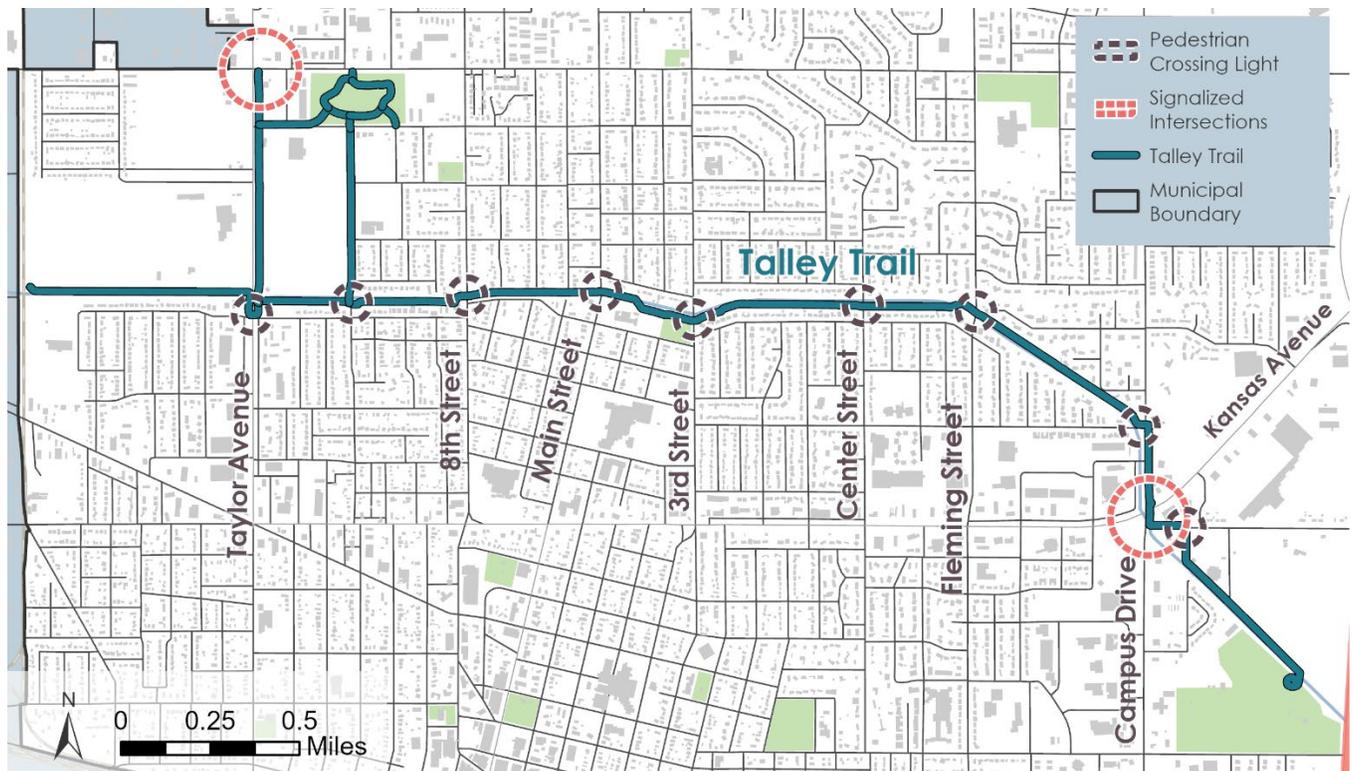


Figure 2 - Project Area

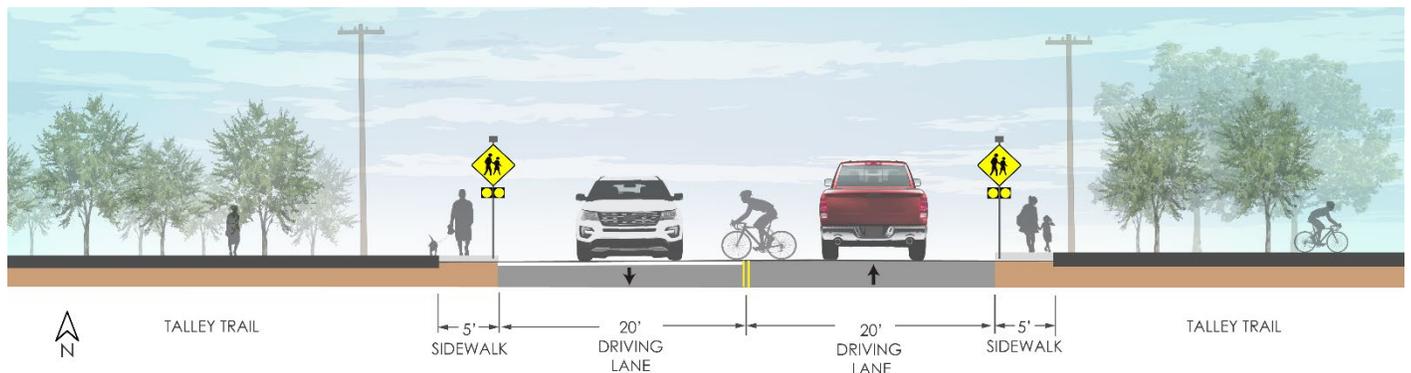


Figure 3 - Talley Trail Typical Trail Crossing Section

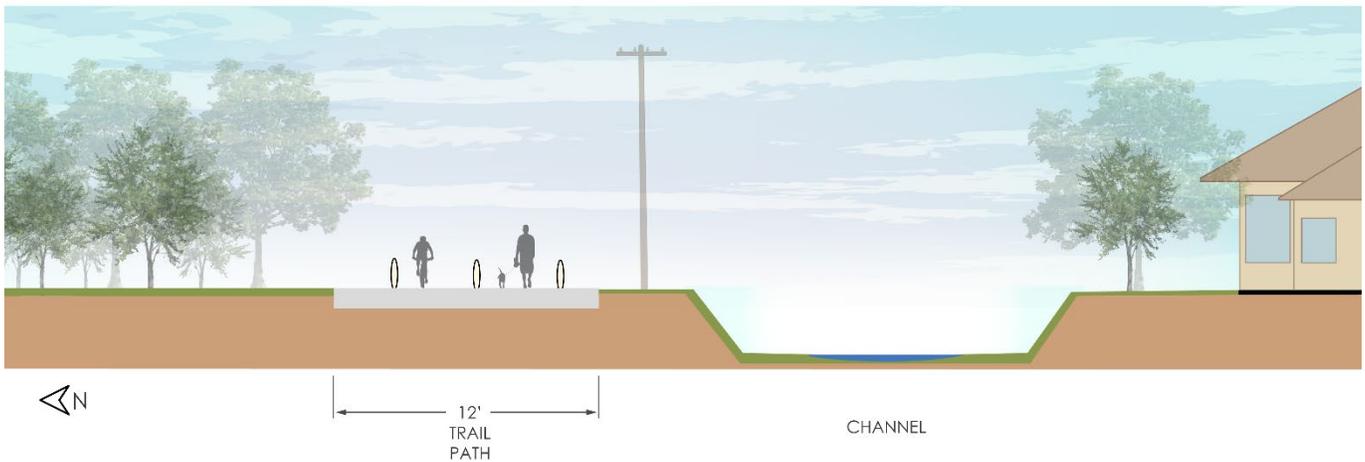


Figure 4 - Talley Trail Corridor Typical Trail Section

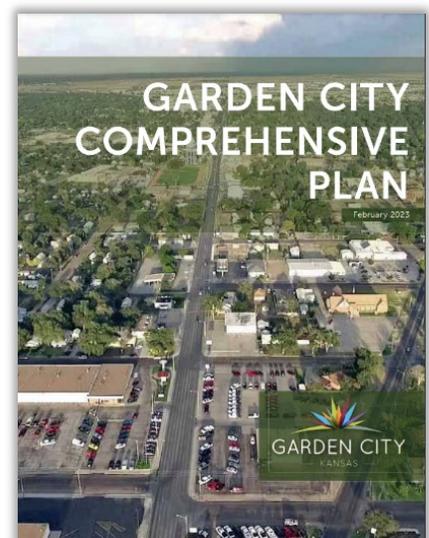
Plan Review

The Garden City Comprehensive Plan outlines goals and actions to improve the multimodal transportation system over the next decade, supporting the city's growth and quality of life. Talley Trail is a key component in creating a comprehensive bike and pedestrian network.

Building on previous bicycle and pedestrian plans and community feedback, the Comprehensive Plan proposes an integrated network of trails and connections for walking and biking across Garden City. By focusing on key trails and routes, the city can allocate funding more effectively and ensure the highest quality experience along these pathways. Proposed and existing bike and pedestrian facilities are shown in Figure 5.

Key highlights of the proposed biking and walking network include:

- A multi-use trail along the Arkansas River corridor, linking Garden City to Holcomb and the eastern Finney County limits, creating regional east-west connections.
- A "loop route" around Garden City, connecting Anderson Road, Rodkey Road, and Towns Road with the Arkansas River Trail, forming a 20+ mile loop. This will provide longer routes for users and access to expanding areas, attracting cyclists and pedestrians regionally.
- Bike lanes added along Spruce Street west of Downtown to serve the western part of the community.
- New shared lanes for biking and vehicles in several locations to complete gaps in the city's shared lane network.



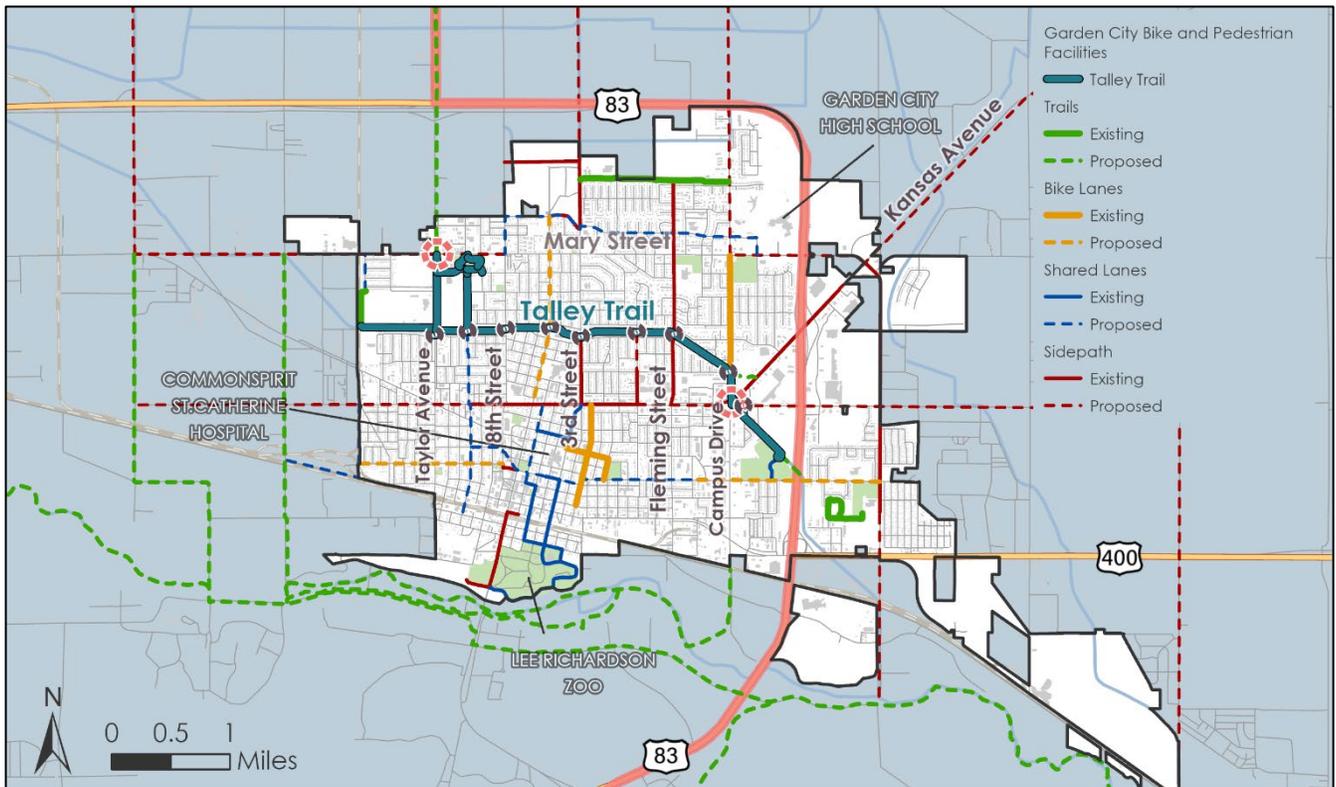


Figure 5 - Existing and Proposed Bike and Pedestrian Facilities. Source: City of Garden City, KS

Land Use

Garden City spans 10.93 square miles of incorporated land, bordered by unincorporated areas primarily used for agriculture. It includes various zoning districts, from low-density residential (3-6 units/acre) to mixed-use (12-40 units/acre). Future land use goals focus on maintaining a balanced mix of residential, commercial, industrial, and park/open space zones, with appropriate densities to improve housing options. Mixed-use zoning was introduced in the Comprehensive Plan update to support higher-density residential development.

The Talley Trail corridor includes low- and medium-density residential areas, commercial zones, and small businesses, with single-family homes predominating before transitioning to multi-family and commercial developments near Taylor Ave/U.S. 83B and Campus Dr. The corridor also features places of worship. Recreational options include Forest Park Lake Wildlife Habitat, with a trail loop connecting to Talley Trail, and amenities at nearby schools like Georgia Matthews Elementary and Horace Good Middle School, both adjacent to 3rd Street. The Garden City Comprehensive Plan envisions higher housing density along the trail without significantly altering the current development pattern.

Figure 6 shows the recommended future land use classifications. The corridor mainly features medium-density residential areas, including duplexes, townhomes, and small apartments. Low-density single-family homes are concentrated in the western section, west of Taylor Ave/U.S. 83B. Mixed-use developments are planned around the signalized intersections and multi-use trail crossings at Taylor Ave/U.S. 83B and Campus Dr/Kansas Ave to the east. Key changes include a mixed-use district at these intersections and new medium-density housing adjacent to Talley Trail.

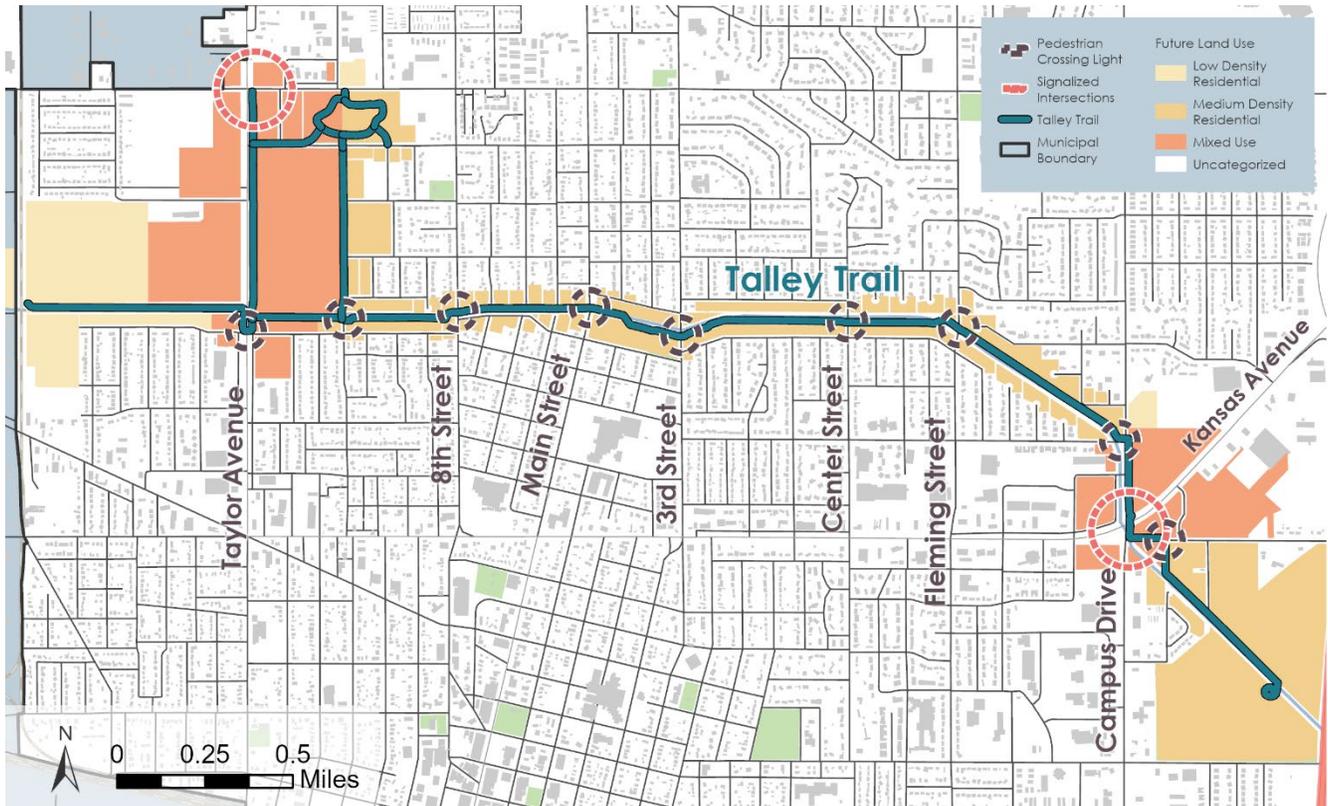


Figure 6 - Future Land Use along the Talley Trail. Source: City of Garden City, KS.

Speed Limits and Analysis

The posted speed limit on all the north-south local roads intersecting the trail is 30 miles per hour (mph), with multi-use trail crossings at each. In contrast, the minor arterial roads, Taylor Avenue and Campus Drive, have a 40-mph limit and heavier traffic. Major signalized intersections are located at Taylor Avenue and Mary Street, Campus Drive and Kansas Avenue.

Local roads are typically 40 feet wide, while minor arterials range from 50-60 feet. The wider design of many intersecting streets may influence driving speed. According to the FHWA, a motorist traveling at 30 mph has a 45% chance of causing a fatal or serious injury to a pedestrian, compared to just 5% at 20 mph. If reducing the speed limit is not feasible, road safety enhancements near multi-use trail crossings are recommended to help mitigate speeding and improve safety at multi-use trail crossings.

Pedestrian and Bicycle Network Volume

Garden City's pedestrian and bicycle facilities are limited, consisting mainly of Talley Trail, a multi-use path along Kansas Avenue, and the new Pioneer Trail between 3rd Street and Campus Drive. Bike lanes are also on Campus Drive (Mary Street to Harding Avenue) and 2nd Street (Kansas Avenue to Fulton Street). However, this limited infrastructure restricts connectivity, with Talley Trail serving as the central element of the city's 3.5-mile bike and pedestrian network.

To improve connectivity, the city has proposed new bike and pedestrian facilities along key routes, including planned trail extensions south, east, and north along N Taylor Avenue to connect with rural communities. Proposed bike lanes on E Spruce Street, N Main Street, and W St. John Street will enhance mobility. These efforts aim to support Garden City's growth and improve

Talley Trail

quality of life, with Talley Trail as the central feature of the city's bike and pedestrian plan.

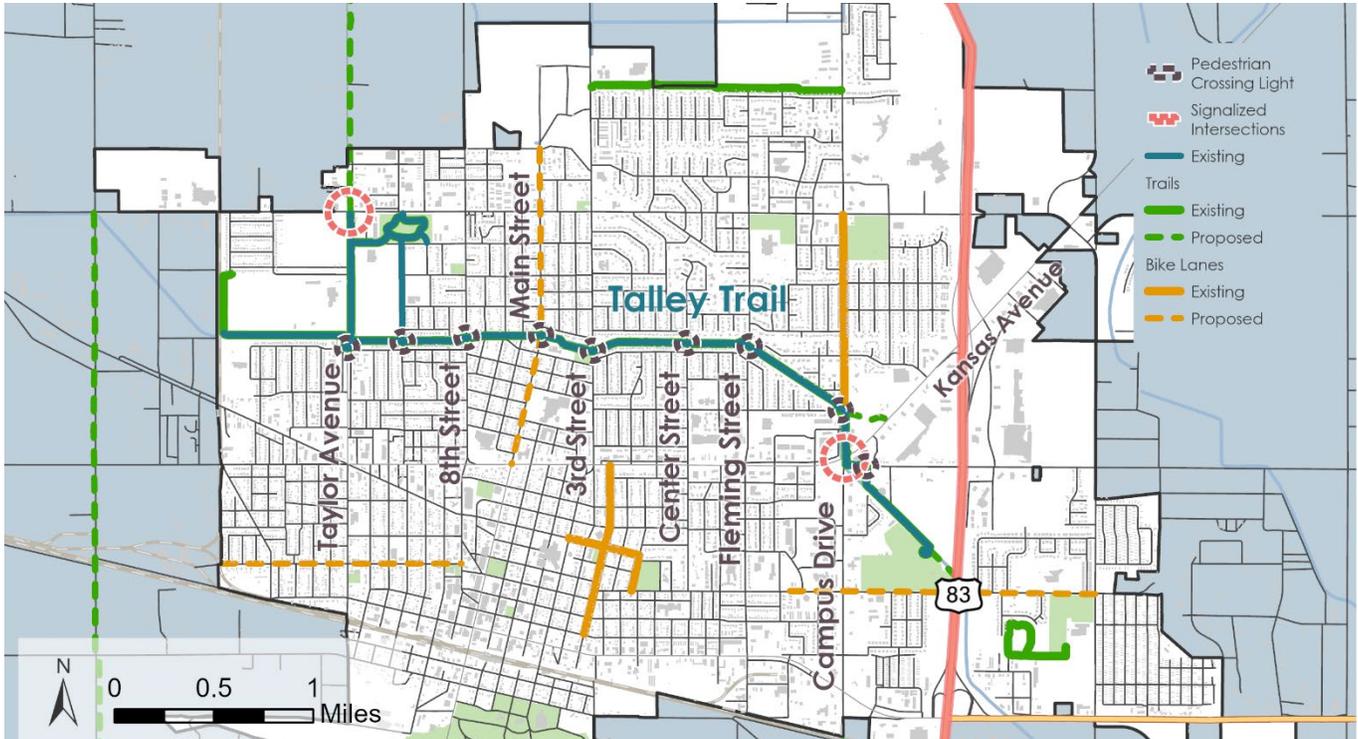


Figure 7 - Existing and Proposed Bike and Trail Facilities. Source: City of Garden City, KS.

Pedestrians and Bicycle counts were taken at three notable Talley Trail locations (see Figure 8).

- W Taylor Avenue/ U.S. 83B Crossing
- Main Street Crossing
- Campus Avenue Crossing

Pedestrian counts on Main Street were more than four times higher than at other locations. Cyclist counts were highest at the Campus Avenue crossing, with three westbound and six eastbound. Like pedestrians, most cyclists travel westbound, emphasizing the need for safety and accessibility improvements at Campus Avenue.

Talley Trail Pedestrian/Bicyclist Counts - Garden City, KS



Figure 8 - 13-hour Bicycle and Pedestrian Counts on the Talley Trail

Transit Connections

Garden City's public transportation, City Link, serves over 35,000 residents with bike-equipped buses and four fixed routes, totaling 65 stops (Figure 11). Three main routes—Green, Blue, and Orange—operate near the Talley Trail, with hourly departures from 6:00 AM to 6:00 PM. Bus stops on Taylor Avenue, 8th Street, and W Emerson Avenue improve trail access. Paratransit services are also available via a mini-bus program.

- Orange Route:** Intersects at 8th Street and Main Street, connecting destinations like the Finney County Transit Center, Horace Good Middle School, Wal-Mart, Salvation Army, and East Garden Village.
- Green Route:** Operating at 3rd Street and Kansas Avenue, it runs parallel to the trail between Taylor Avenue and 8th Street along W Campbell St, serving locations like the FCT Center, Greenbriar, Garden City High School, Dillons East and West, Wal-Mart, and Campbell & 8th St.
- Blue Route:** Operates north of the trail, connecting Forest Park Lake Wildlife Habitat on Mary Street and intersecting the trail at W Emerson Ave. It also has access south of the trail near Jones and Kansas Avenue, serving the FCT Center, local library, Finney County Health Department, Wal-Mart, and Garden City High School.

Talley Trail

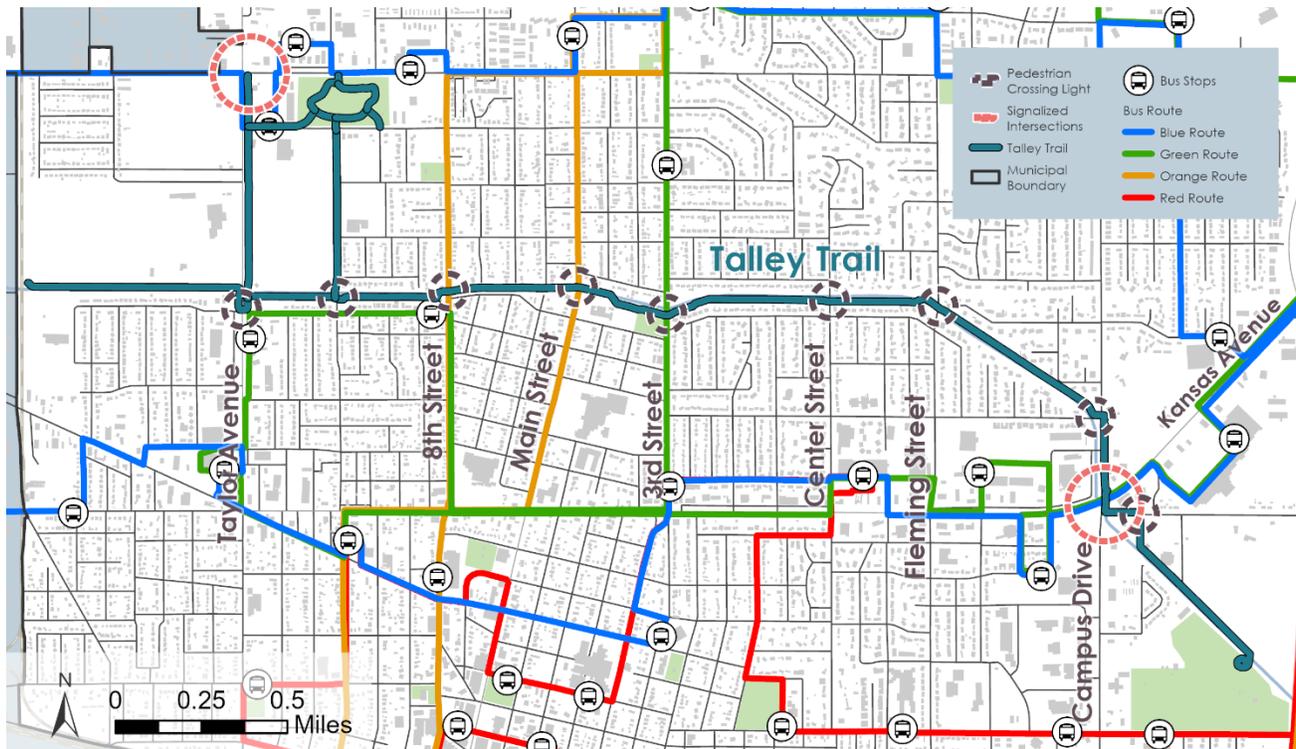


Figure 9 - Finney County City Link Transit Routes

Signalized Intersections

The two signalized intersections along the Talley Trail corridor are Taylor Avenue/Mary Street and Kansas Avenue/Campus Drive. The RSA provides detailed analysis, findings, and recommendations for each intersection.

Talley Trail & Taylor Avenue/Mary Street Intersection

The Talley Trail & Taylor Avenue/Mary Street signalized intersection marks the northwestern boundary of the project study area (Figure 9). While there are no trail facilities currently, the trail is planned to extend north. The east leg of Mary Street has one westbound through lane, a dedicated left-turn lane, and two eastbound receiving lanes. The west leg has a dedicated eastbound left-turn lane and two through lanes. Both north and south legs of Taylor Avenue include a dedicated left-turn lane and two through lanes. Right-turns are made from the shared through lane in all directions, with protected/permissive left-turn phasing on all approaches



Figure 10 - Taylor Avenue & Mary Street Intersection Aerial

Talley Trail

For more detailed information, please refer to the individual *Mary Street RSA*.

Kansas Avenue/Campus Drive Intersection

The Talley Trail and Campus Drive/Kansas Avenue signalized intersection (Figure 10) marks the southeastern boundary of the project study area. At the northern end of Campus Drive, there are four through lanes with a dedicated left-turn lane. The southern end has four through lanes and a dedicated right-turn lane, with all turns made from the shared through lane. A permissive right-turn merge lane is provided for northbound vehicles on Campus Drive from eastbound Kansas Avenue.



Figure 11 - Kansas Avenue & Campus Drive Intersection Aerial

Sidewalks are present on both sides of the intersection, with pedestrian signals on the east side for crossing north-south along Talley Trail.

The Kansas Avenue intersection has four through lanes for both right and left turns, with a dedicated left-turn lane on the northeastern and southwestern sides. A permissive right-turn merge lane is provided for vehicles turning south onto Campus Drive. Sidewalks are present on both sides of Kansas Avenue at the northeastern approach, with a winding sidewalk extending from Campus Drive along the south side. The Talley Trail follows Campus Drive south, continues east on Schulman Avenue, and then south adjacent to Harold Avenue, ending at the Garden City sports facility park. Schulman Avenue has alternating sidewalks on both sides. No bike facilities are present at this intersection.

For more detailed information, please refer to the individual *Kansas Avenue RSA*.

Talley Trail Signalized Intersection Crash Analysis

Table 2 - Signalized Intersection Crash Summary

Signalized Intersection Crash Summary						
Intersection	Entering Volume (vpd)	Serious Injury	Injury	PDO	Total	Crash Rate*
Taylor & Mary	13,900	0	4	17	21	82.78
Campus & Kansas	19,000	1	11	29	41	118.24

*Crashes/100 million entering vehicles

Table 3 - Signalized Intersection Crash Types

Signalized Intersection Crash Types					
Intersection	Angle	Rear End	Sideswipe	Head On	Other
Taylor & Mary	6	9	1	2	3
Campus & Kansas	16	15	6	2	2
TOTAL INTERSECTION CRASHES	22	24	7	4	5
ALL TALLEY TRAIL CRASHES	53	36	12	6	19
PERCENTAGE	41.5%	66.7 %	58.3%	66.7%	26.3%

Crash Analysis

Between 2018 and 2022, 126 crashes occurred along Talley Trail within the RSA study area, with most not involving multi-use trail crossings or users. The crashes included one Suspected Serious Injury (SSI), 26 Injuries, 99 Property Damage Only crashes, and one injury involving a bicyclist.

On September 17, 2022, a serious injury occurred at Campus Drive and Kansas Avenue from an eastbound angle side-impact crash between two vehicles. No adverse weather was present, but city property, including guardrails, was damaged. Of the 26 injuries reported, 14 were from angle-side impact crashes, making up 54% of major crashes. These collisions are concerning as they often result in injuries to motorists.

Angle-side impacts were the most common crash type, with 53 (42%) of 126 crashes, followed by 36 (28%) rear-end crashes. While most resulted in property damage only (PDO), serious injuries remain a concern, particularly in angle-side impacts. Addressing these crash types is essential for improving safety at intersections.

In addition to multi-vehicle crashes, 17 single-car incidents were recorded, with 11 (65%) caused by fixed objects, resulting in eight PDO and two injuries. Four crashes involved parked vehicles, all classified as PDO. One bicycle crash occurred east of the trail at Campus Drive and Harding Avenue, involving wet weather and a collision with a pickup truck, resulting in injuries.

Overall, 84% (106) of the recorded incidents were intersection-related, with the majority occurring at Campus Drive and Kansas Avenue. The remaining 16% (20) were non-intersection-related, primarily west along Taylor Avenue.

Talley Trail

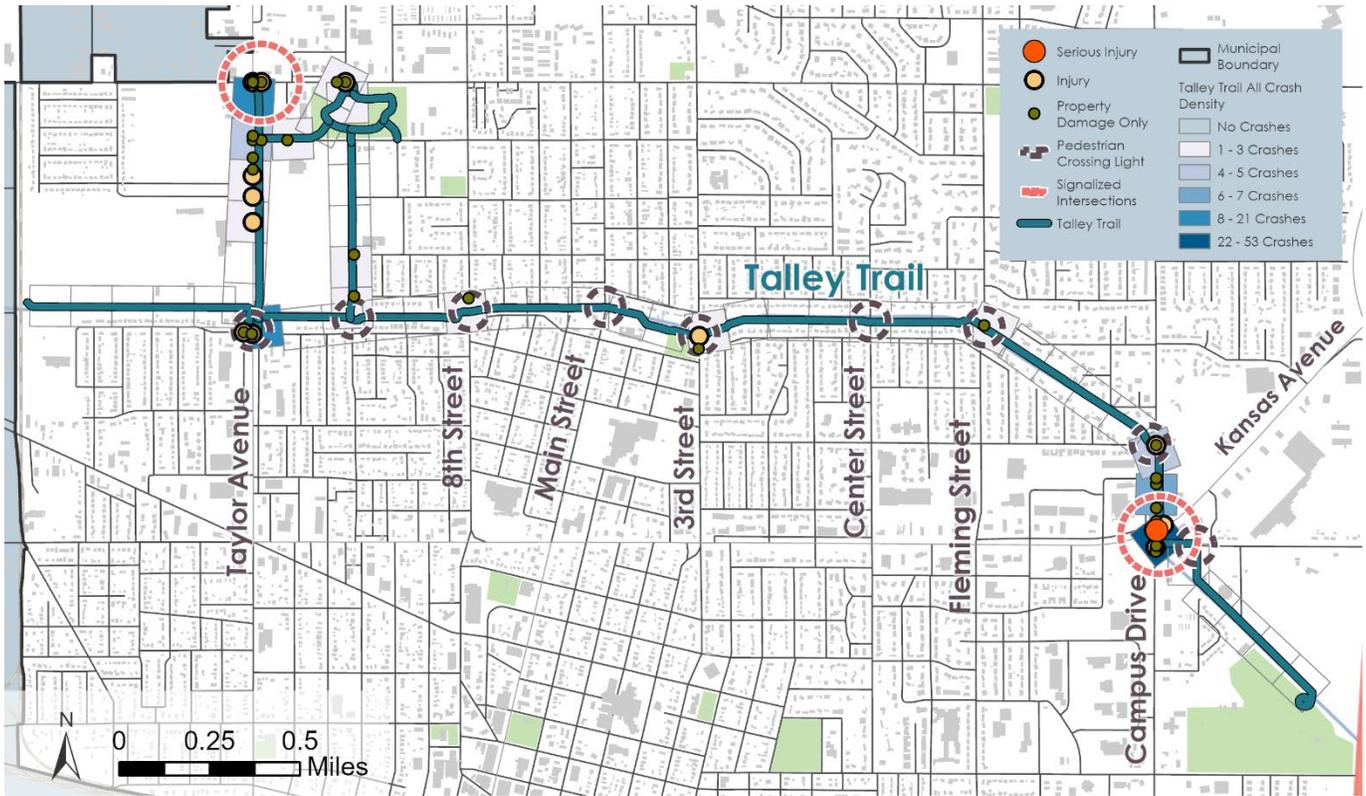


Figure 12 - Talley Crash Map Overview

Below are additional tables providing detailed crash analysis data.

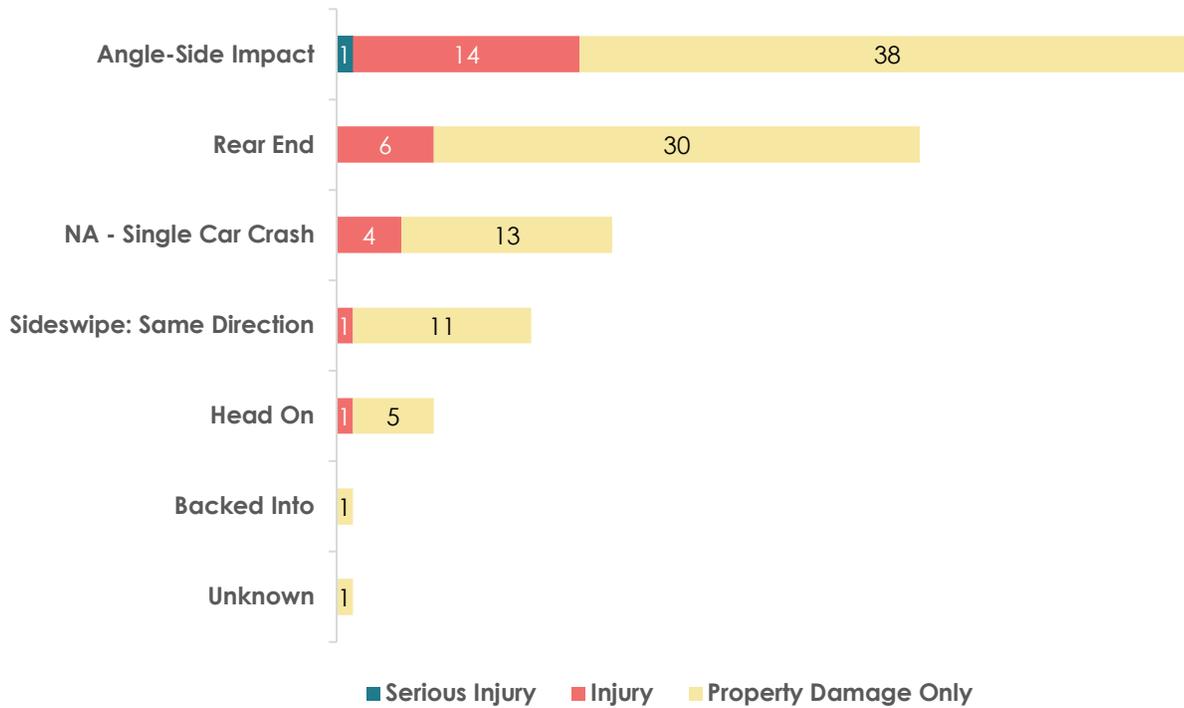


Figure 13 - Talley Trail Crash Summary (2018-2022)

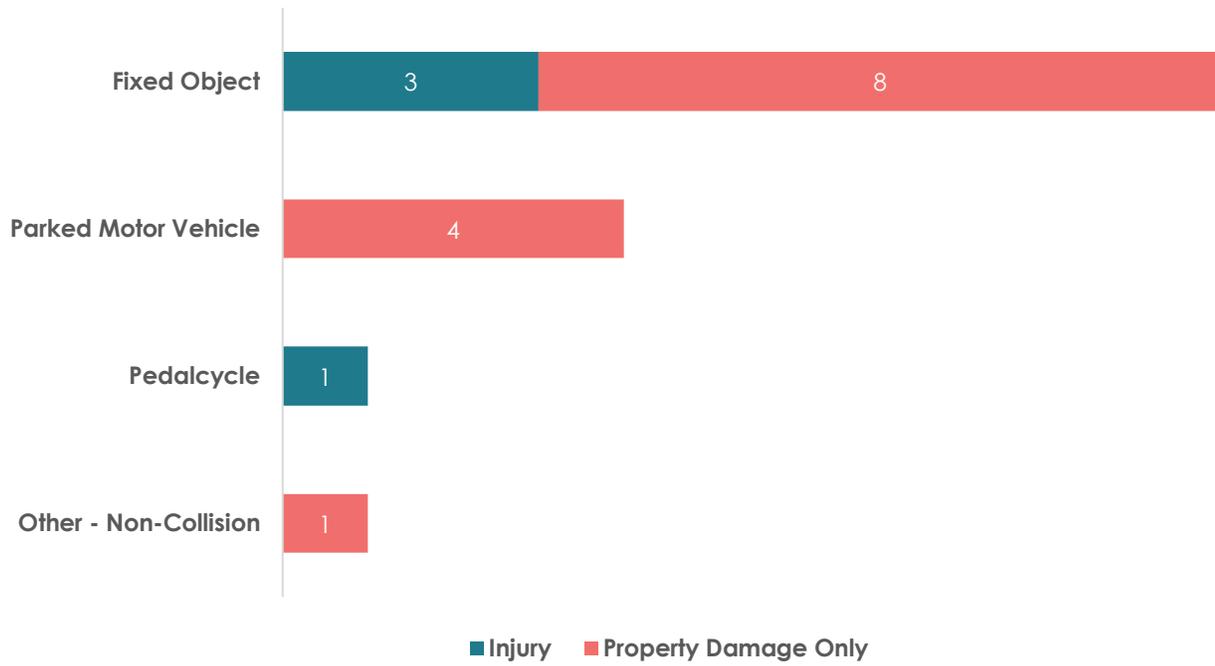


Figure 14 - Crash Classification for Single Car Crashes

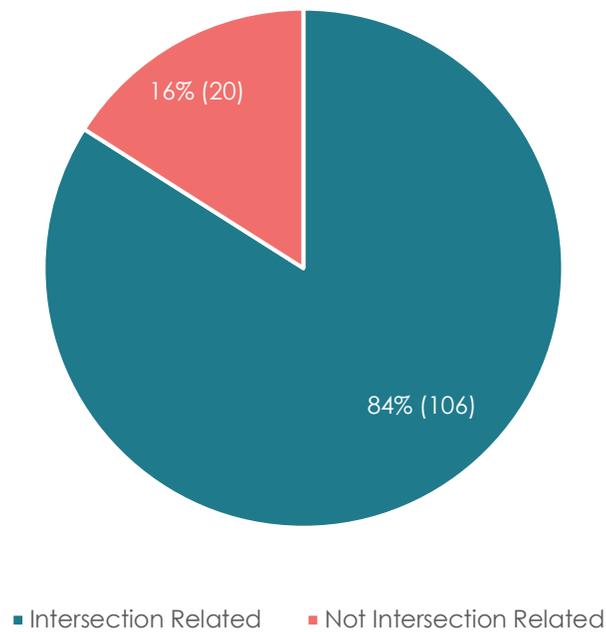
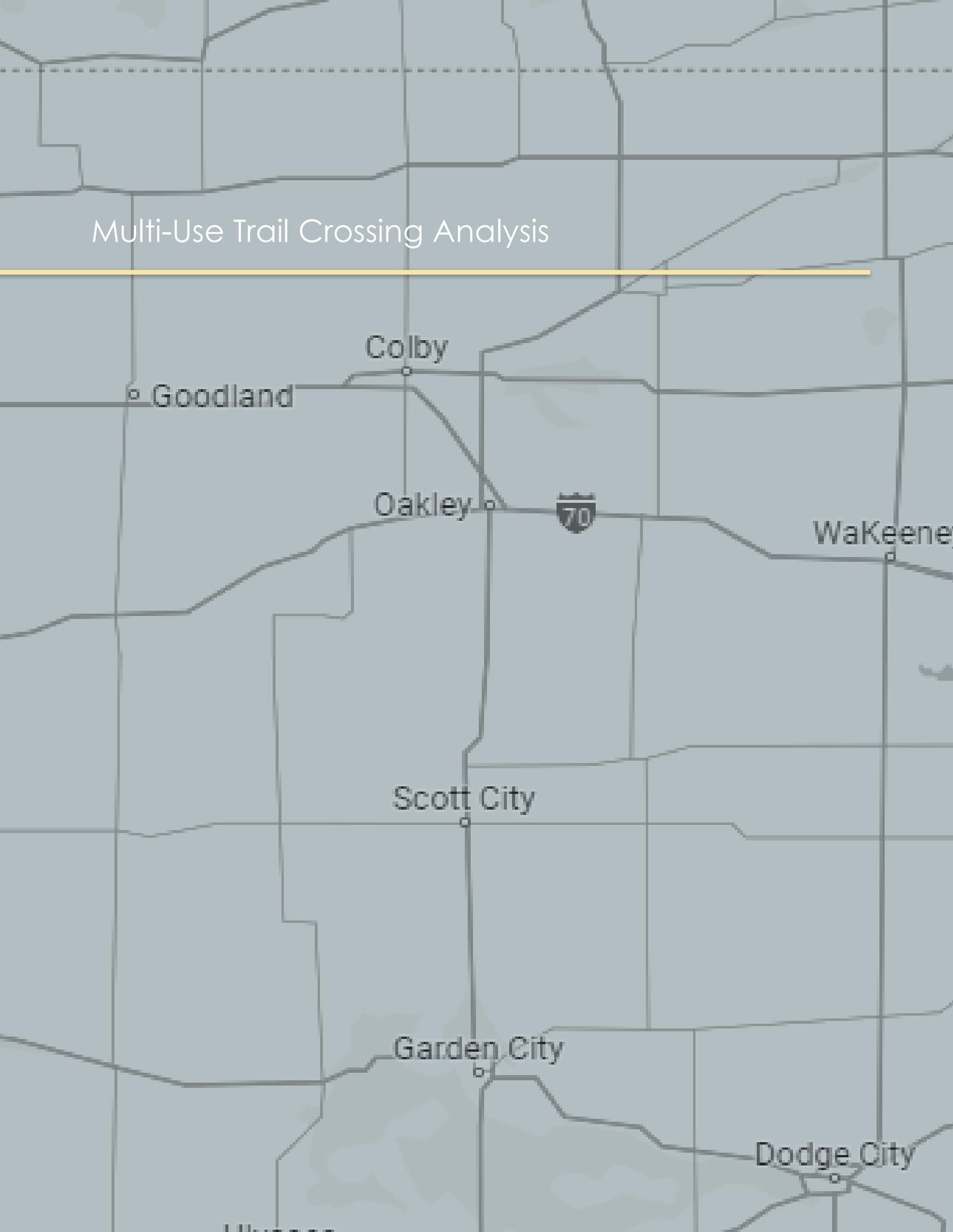


Figure 15 - Crashes by Location

Table 4 - Total Crash Summary

Crash Year	Serious Injury	Injury	PDO	Total
2018	0	2	24	26
2019	0	8	29	37
2020	0	5	13	18
2021	0	8	18	26
2022	1	3	15	19
TOTAL	1	26	99	126
PERCENTAGE	0.79%	20.63%	78.57%	100%

Multi-Use Trail Crossing Analysis



Multi-Use Trail Crossing Analysis

Multi-Use Trail Crossing 1: Talley Trail & Taylor Avenue/Campbell Street

Background Information

The Taylor Avenue and Campbell Street intersection marks the entrance to the eastern part of the Talley Trail. Taylor Avenue, a Minor Arterial, sees about 7,700 vehicles daily and has four lanes—two northbound and two southbound. Campbell Street leads into residential areas and some commercial on the west side. Both sides of the intersection are stop-controlled. Crossing infrastructure includes rectangular rapid flashing beacons (RRFBs), security bollards on the west side, and brick crosswalks on the north side. There are no sidewalks at the intersection except along the Talley Trail.



Figure 16 - Talley Trail & Taylor Avenue/Campbell Street Intersection Aerial

Recommendations

Update signing and pavement markings to meet the Manual on Uniform Traffic Control Devices (MUTCD) requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Four-Lane Intersection](#) example.

Multi-Use Trail Crossing 2: Talley Trail & 11th Street

Background Information

The multi-use trail crossing of Talley Trail and 11th Street has one lane for north and south traffic, with a crosswalk, two stop bars, and limited signage. The trail connects to both sides of 11th Street via an alley. Nearby amenities include a gazebo, benches, a bike rack, and trash can. North of

Talley Trail

the crossing, a side path links the trail to the Forest Park Lake Wildlife Habitat.

The Campbell and 11th Street intersection, 180 feet south of the multi-use trail crossing, is a two-way stop with stop signs on Campbell Street and crosswalks on all sides. Stop bars before all crosswalks may make it appear as an all-way stop. The Garden City Comprehensive Plan proposes a shared bike lane along 11th Street south of the trail to Santa Fe Street. Sidewalks are present at all corners of the Campbell/11th Street intersection.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.

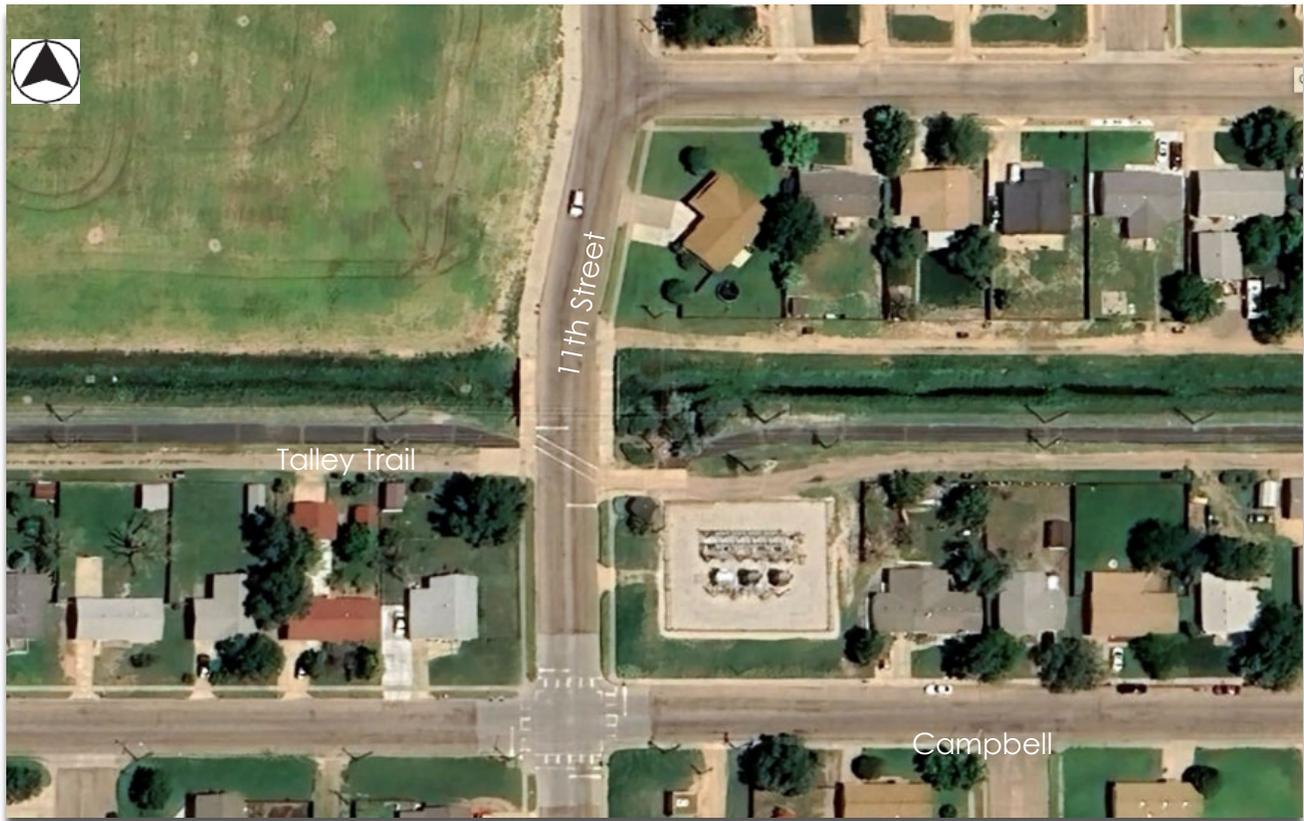


Figure 17 - Talley Trail & 11th Street Intersection Aerial

Multi-Use Trail Crossing 3: Talley Trail & 8th Street

Background Information 8th Street is a two-lane local road that connects Mary Street and Kansas Avenue and is classified as a [Minor Arterial](#) by KDOT. The Talley Trail crosses 8th Street about 90 feet north of Willow Brook Lane, with RRFBs, a crosswalk, and stop bars. The multi-use trail crossing is also near a channel and a pedestrian bridge. On-street parking in some areas narrows the road, and the notably faded pavement markings in Google imagery may reduce visibility and safety for trail users.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#),

Talley Trail

and in the Appendix, see [Typical Two-Lane Intersection](#) example.



Figure 18 - Talley Trail & 8th Street Intersection Aerial

Multi-Use Trail Crossing 4: Talley Trail & Main Street

Background Information

Main Street is a [Major Collector](#) road with steady traffic, connecting the northern and southern parts of the city, from Mary Street to Kansas Avenue. Mostly residential, it also provides access to key places like Abe Hubert Elementary, Horace Good Middle School, Downtown Garden City, and various businesses to the south.

The multi-use trail crossing of Talley Trail and Main Street has a two-lane collector road with RRFBs, a crosswalk, stop bars, on-street parking, and center turn lanes. The area has a 25 mph speed limit, mainly due to the nearby Georgia Matthews Elementary School. Sidewalks are on both the east and west sides, but the pavement markings are in poor condition. There are no bike facilities currently, but the city's comprehensive plan includes adding a bike lane along this section of Main Street, connecting to Bellevue Avenue and Kansas Avenue.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.



Figure 19 - Talley Trail & Main Street Multi-Use Trail Crossing Aerial

Multi-Use Trail Crossing 5: Talley Trail & 3rd Street

Background Information

The Talley Trail and 3rd Street multi-use trail crossing is at the trail system's midpoint. 3rd Street is a minor arterial connecting major roads like Mary Street and Kansas Avenue. To the south, E Johnson St, and to the north, E Hamline Street, are local roads leading to residential areas and Georgia Matthews Elementary School. Both sides of the crossing feature RRFBs with pedestrian pushbuttons, security bollards, lighting, benches, trash cans, utilities, and signs (R5-3, W11-2, W16-7P, yield, and school speed limit RRFB). Concrete sidewalks line both sides of 3rd Street.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.



Figure 20 - Talley Trail & 3rd Street Multi-Use Trail Crossing Aerial

Multi-Use Trail Crossing 6: Talley Trail & Center Street

Background Information

The Talley Trail and Center Street multi-use trail crossing is on a two-lane road. Center Street, a [Major Collector](#), connects nearby residential areas, Jennie Wilson Elementary School, and St. James Lutheran Church to the south on Harding Avenue. The crossing features pedestrian push-button RRFs, a crosswalk with faded markings (per Google imagery), stop bars, security bollards (east side), and various signs for vehicles, bikes, and pedestrians. Sidewalks run along the east side of Center Street, with a short section on the west side. Utilities are on both sides, and pedestrian lighting is provided on the west leg and along the trail.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.

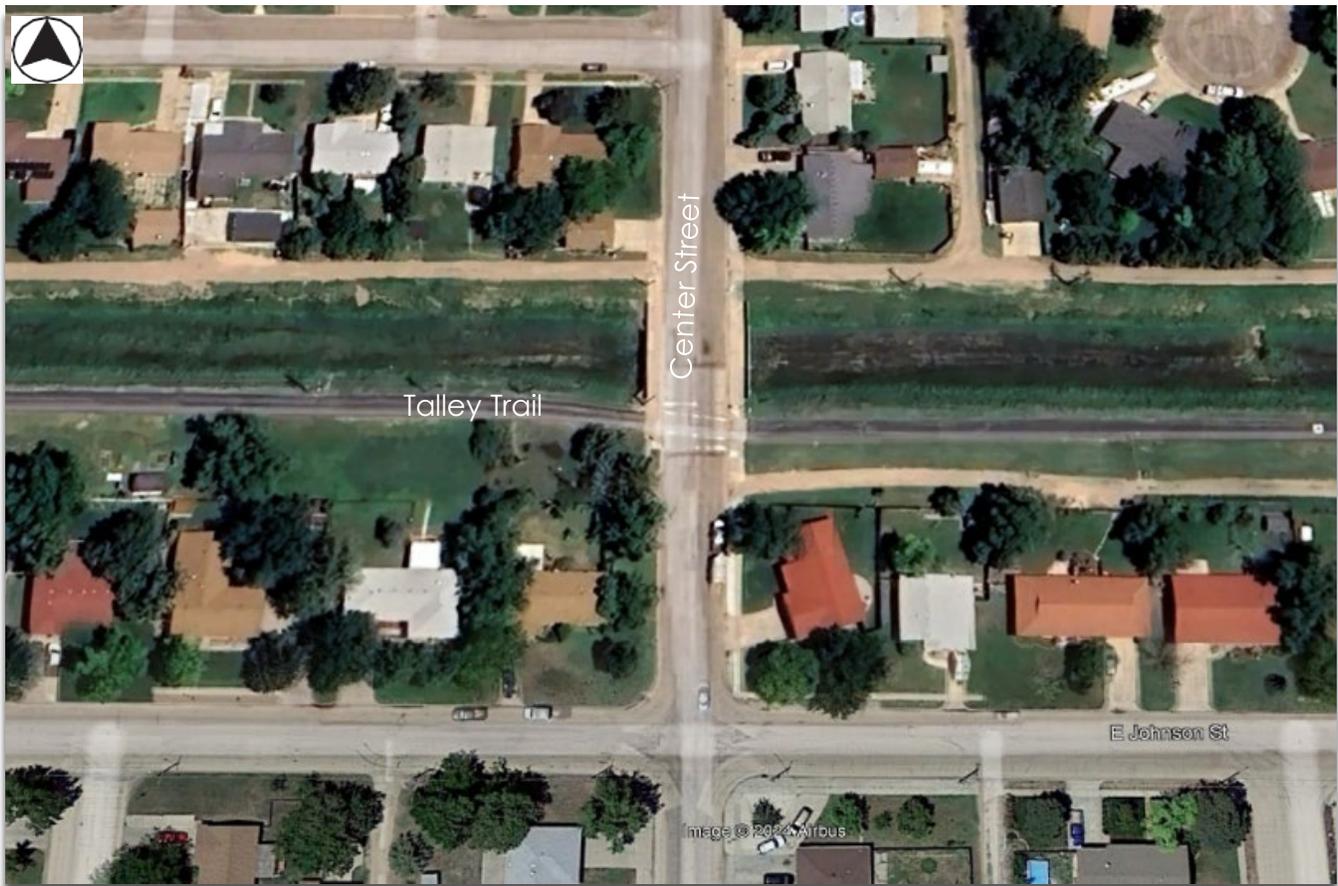


Figure 21 - Talley Trail & Center Street Multi-Use Trail Crossing Aerial

Multi-Use Trail Crossing 7: Talley Trail & Fleming Street

Background Information

Fleming Street is classified as a [Minor Arterial](#) and experiences high traffic volumes. It connects the nearby residential area to key locations like Kenneth Henderson Middle School, The Dome, Martin Esquivel Soccer Complex, and commercial areas south on Kansas Avenue. The Fleming Street crossing features a wide two-lane road with center turn lanes, on-street parking, stop bars, a transverse crosswalk, RRFBs, utilities, and signs (R5-3, W11-2, stop, speed limit). Both sides have security bollards and overhead lighting.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.



Figure 22 - Talley Trail & Fleming Street Multi-Use Trail Crossing Aerial

Multi-Use Trail Crossing 8: Talley Trail & Campus Drive/Harding Avenue

Background Information

The Talley Trail and Campus Drive/Harding Avenue multi-use trail crossing was recently realigned and now features pedestrian push-button RRFBs. The Campus Drive intersection includes truncated domes, lighting, utilities, and various signs (R5-3 (No motor vehicles), R3-17aP and R3-17bP (Bike Lane Ends), W11-2 (Pedestrian Crossing), W16-7P (Down Diagonal Left Arrow), stop, speed limit). Southbound traffic has designated left turn lanes, and both directions have center turn lanes.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.



Figure 23 - Talley Trail & Campus Drive/Harding Avenue Multi-Use Trail Crossing Aerial

Multi-Use Trail Crossing 9: Talley Trail & Schulman Avenue

Background Information

There have been almost no crashes at the multi-use trail crossings, and none involved trail users. Schulman Avenue, a major east-west [Major Collector](#) road, serves as a key connector with steady traffic. The crossing features a two-lane road, zebra crosswalk, stop bar, RRFBs with pedestrian push-buttons, security bollards, street lighting, utilities, and signs, including R5-3 (No Motor Vehicles), W11-2 (Pedestrian Crossing), W16-7P (Down Diagonal Left Arrow), yield, and speed limit signs.

Recommendations

Update signing and pavement markings to meet MUTCD requirements, see [MUTCD Guidelines](#), and in the Appendix, see [Typical Two-Lane Intersection](#) example.

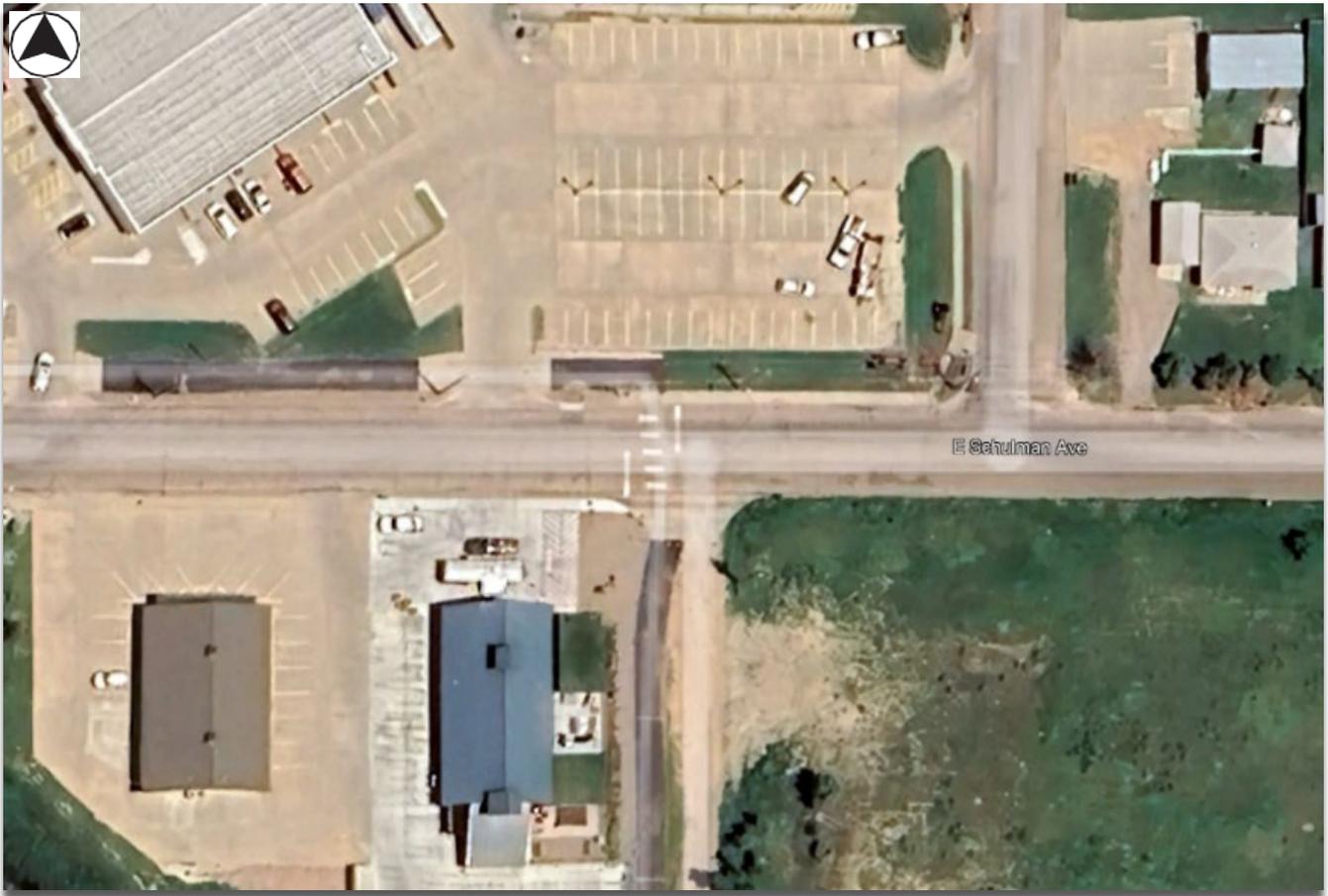
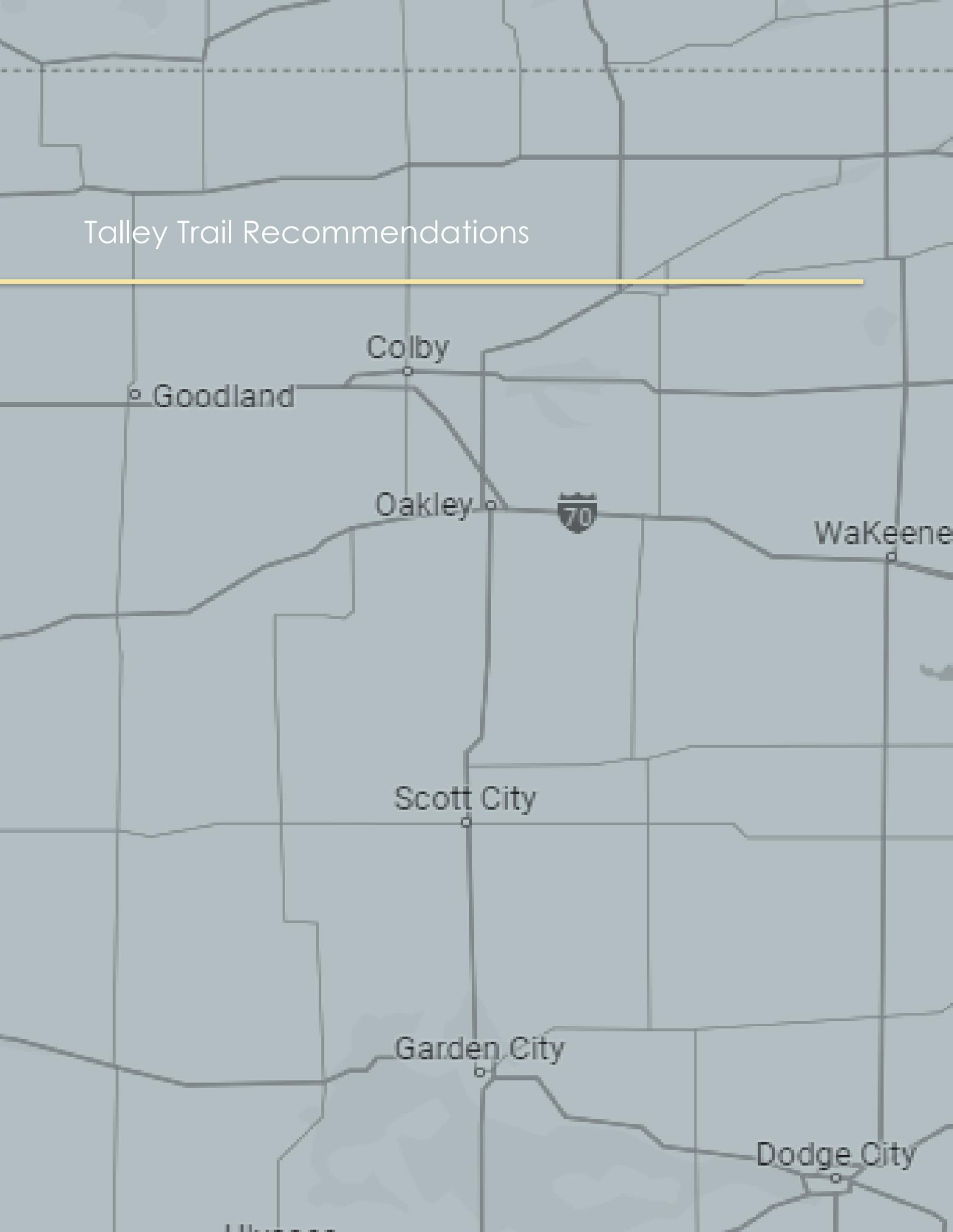


Figure 24 - Talley Trail & Schulman Avenue Multi-Use Trail Crossing Aerial

Talley Trail Recommendations



Goodland

Colby

Oakley

Scott City

Garden City

Dodge City

WaKeene

Talley Trail Recommendations

The following typical roadway safety improvements are recommended at multi-use trail crossings with two-lane and four-lane roads, in alignment with MUTCD standards. To develop these recommendations, a thorough desktop analysis was conducted resulting in a matrix that inventories the existing infrastructure at each multi-use trail crossing within the project area (please see the [Appendix](#)). This analysis provided insight into the current conditions, including what is present, its quality, and any deficiencies. This comprehensive approach informed the countermeasures outlined below, serving as a toolbox for various enhancements tailored to improve pedestrian safety.

The recommendations are based on the collaborative effort of the RSA multidisciplinary team and the team's experience driving and walking the corridor.

The time frame for each recommendation is based on time for plan, design, construction and funding of the project. It is broken down into three categories:

- Short-term: 0 to 3 years
- Medium-term: 3 to 5 years
- Long-term: 5 to 10 years

These estimates fall within the following range:

i.	Low:	\$
ii.	Medium:	\$\$
iii.	High:	\$\$\$

MUTCD Guidelines

MUTCD is a set of guidelines established by the U.S. Department of Transportation's Federal Highway Administration (FHWA) to provide consistent standards for traffic control devices, including signs, signals, and pavement markings. The MUTCD aims to improve roadway safety and efficiency by ensuring that traffic control devices are clear, consistent, and easily understood by drivers, pedestrians, and cyclists. The table below illustrates typical roadway safety improvements in accordance with MUTCD guidelines:

Table 5 - MUTCD Guidelines

Typical Roadway Safety Improvements	Two-Lane Road	Four-Lane Road
Advance Yield Lines	X	X
Improve Pavement Markings	X	X
High-Visibility Crosswalk Markings	X	X
Security Bollards	X	X

Talley Trail

Truncated Domes	X	X
W11-15 Sign (Bike and Ped)	X	X
W11-15A Sign (Trail Crossing)	X	X
Rectangular Rapid Flashing Beacons (RRFBs)	X	X
R10-25 Sign (sign next to pushbutton for pedestrians)	X	X
W16-7P Sign (Down Diagonal Left Arrow)	X	X
W16-9P Sign (Trail Crossing Ahead)	X	X
R1-5 Sign (Yield Here for Pedestrians)		X

Typical Two-Lane Intersection

Figure 27 illustrates the multi-use trail crossing at 3rd Street, showcasing safety improvements for a typical two-lane roadway intersection. This design example is recommended for improving the eight remaining two-lane multi-use trail crossings of Talley Trail from 11th Street to Schulman Avenue.

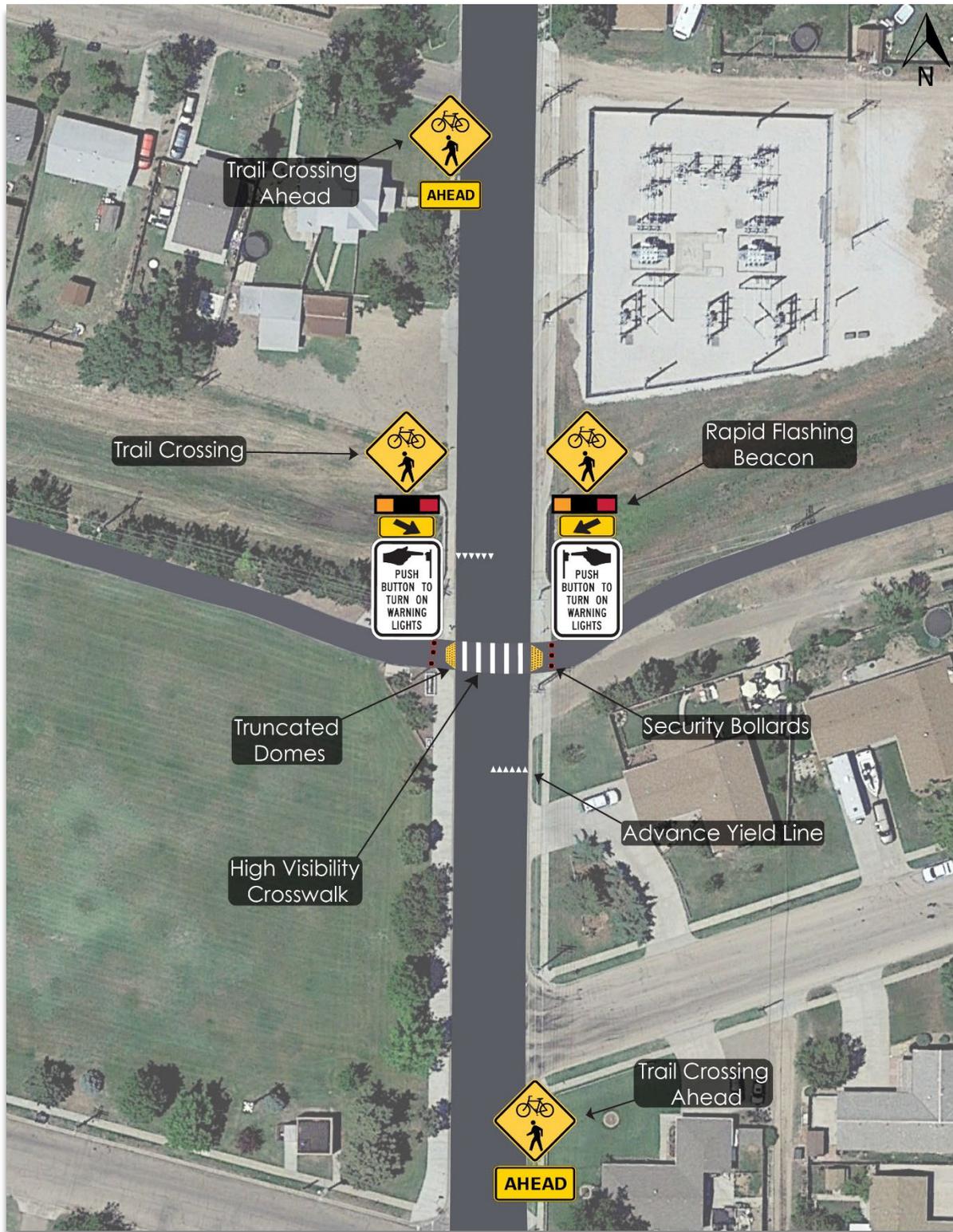


Figure 25 - 3rd Street Proposed Intersection

Table 6 - Typical Two-Lane Intersection Recommendations

ID	Two-Lane Intersection Recommendations	Time Frame	Cost Estimate ¹
1	Advance Yield Lines	Short	Low
2	Improve Pavement Markings	Short	Low
3	Install High-Visibility Crosswalk Markings	Short	Low
4	Install Security Bollards	Short	Low
5	Install Truncated Domes	Short	Low
6	Install Rapid Flashing Beacon(s)	Medium	Medium
7	W11-15 Sign (Bike and Ped)	Short-Medium	Low-Medium
8	W11-15A Sign (Trail Crossing)	Short-Medium	Low-Medium
9	R10-25 Sign (sign next to pushbutton for pedestrians)	Short-Medium	Low-Medium
10	W16-7P Sign (Down Diagonal Left Arrow)	Short-Medium	Low-Medium
11	W11-15 and W16-9P Sign ² (Trail Crossing Ahead)	Short-Medium	Low-Medium

¹Cost estimate shows high level costs at 10% planning phase. Cost may fluctuate based on design. For example, road diet implementation cost may higher if signals are rebuilt as a part of the project or lower if done in conjunction with scheduled roadway re-striping.

²W11-15 and W16-9P Sign should be located at least 200 feet minimum distance from high-visibility crosswalk markings for approaching motor vehicles.

Typical Four-Lane Intersection

In accordance with MUTCD guidelines, the design example shown in Figure 28 at Taylor Avenue is recommended for safety improvements at four-lane intersections with multi-use trail crossings.



Figure 26 - Taylor Avenue Proposed Intersection

Table 7 - Typical Four-Lane Intersection Recommendations

ID	Four-Lane Intersection Recommendations	Time Frame	Cost Estimate ¹
1	Advance Yield Lines ²	Short	Low
2	Improve Pavement Markings	Short	Low
3	Install High-Visibility Crosswalk Markings	Short	Low
4	Install Security Bollards	Short	Low
5	Install Truncated Domes	Short	Low
6	Install Rapid Flashing Beacon(s)	Medium	Medium
7	W11-15 Sign (Bike and Ped)	Short-Medium	Low-Medium
8	W11-15A Sign (Trail Crossing)	Short-Medium	Low-Medium
9	R10-25 Sign (sign next to pushbutton for pedestrians)	Short-Medium	Low-Medium
10	W16-7P Sign (Down Diagonal Left Arrow)	Short-Medium	Low-Medium
11	W11-15 and W16-9P Sign ³ (Trail Crossing Ahead)	Short-Medium	Low-Medium
12	R1-5 Sign (Yield Here for Pedestrians)	Short-Medium	Low-Medium

¹Cost estimate shows high level costs at 10% planning phase. Cost may fluctuate based on design. For example, road diet implementation cost may higher if signals are rebuilt as a part of the project or lower if done in conjunction with scheduled roadway re-striping.

²Advance yield lines should be located at least 20-50 feet minimum distance from high-visibility crosswalk markings for approaching motor vehicles.

³W11-15 and W16-9P Sign should be located at least 200 feet minimum distance from advance yield lines for approaching motor vehicles.

Taylor Avenue Road Diet Analysis

A Road Diet involves reconfiguring a four-lane undivided roadway into a three-lane road with two through lanes and a center two-way left-turn lane (TWLTL). This reconfiguration improves safety, reduces traffic speeds, and enhances mobility for all users. Key benefits include:

- Fewer rear-end and left-turn crashes due to the dedicated turn lane.
- Reduced right-angle crashes by limiting lane crossings for side street motorists.
- Safer pedestrian crossings with fewer lanes.
- Opportunities for adding bike lanes, pedestrian islands, on-street parking, and transit stops.

Talley Trail

- A more community-oriented and Complete Streets environment where roadway design prioritizes safety, accessibility, and convenience for all users, including pedestrians, cyclists, motorists, and transit riders.

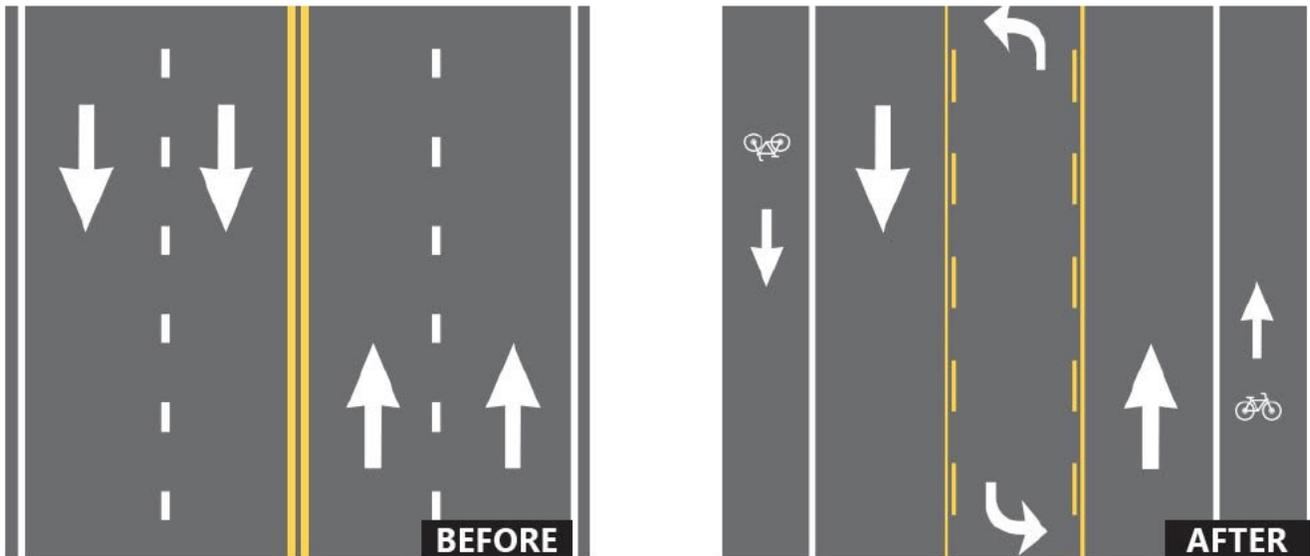


Figure 27 - Before and After Example of a Road Diet

The Federal Highway Administration (FHWA) recommends Road Diet evaluations for roadways with an average daily traffic (ADT) of 20,000 vehicles or fewer. Taylor Avenue's 2023 annual average daily traffic AADT is 7,263, with a peak daily volume of about 7,700 vehicles south of Mary Street.

A Road Diet's feasibility depends on peak hour traffic volumes: likely feasible with 750 vehicles per hour per direction (vphpd) or less, questionable between 750–875 vphpd, and unlikely above 875 vphpd. During the PM peak, Taylor Avenue sees 600–700 vph total (300–400 vph in the peak direction), with lower volumes north of Mary Street, indicating the Road Diet is feasible based on these traffic patterns.

Taylor Avenue Road Diet Analysis

A road diet on Taylor Avenue is recommended for safety, as the segment between Mary and Campbell Streets recorded an average of 50 crashes over half a mile, 20% of which caused injuries, making up 40% of the 126 crashes along the entire trail corridor.

According to the comprehensive plan, the Talley Trail will extend north of the Taylor Avenue and Mary Street intersection, increasing pedestrian traffic in the area. The proposed road diet is a timely and aligned solution, reducing road width and introducing measures that create a safer environment for all users while accommodating the expected rise in foot traffic on Taylor Avenue.

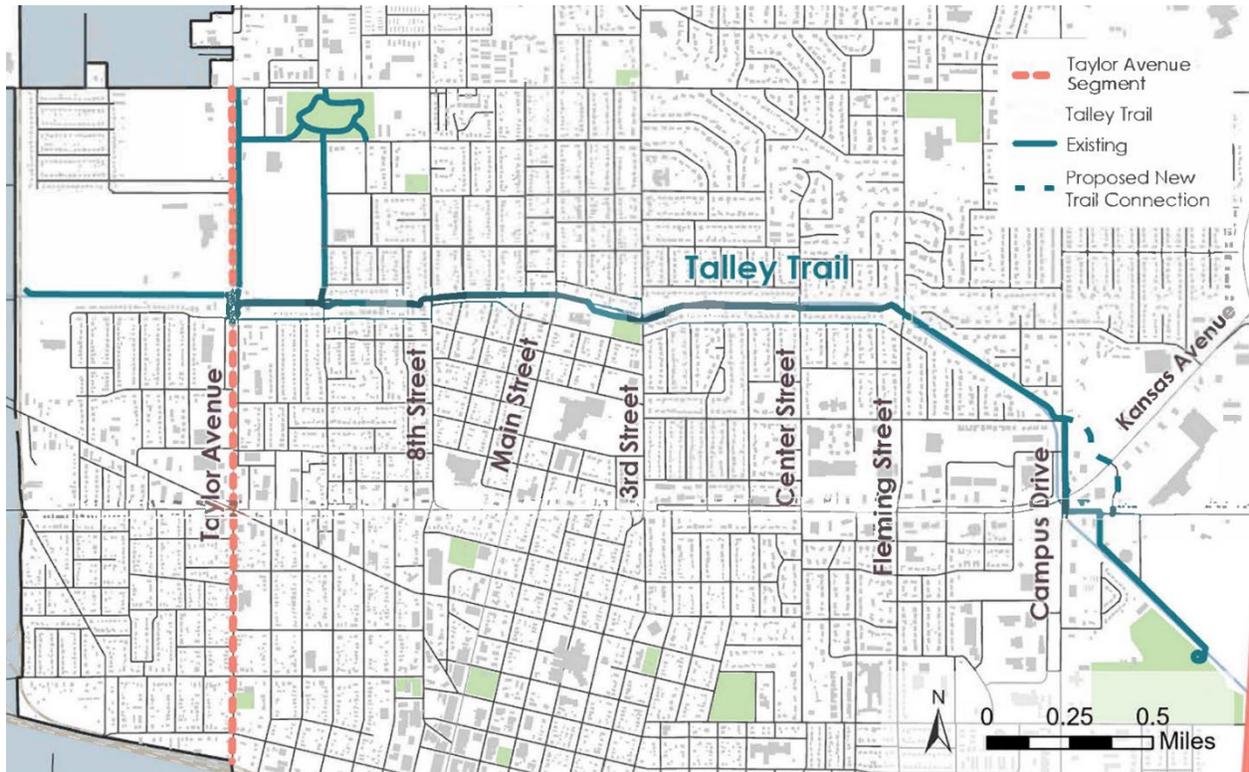


Figure 28 - Taylor Avenue Road Diet Analysis

Talley Trail Realignment at Campus Drive

The trail runs mainly east-west, crossing E. Harding Avenue and continuing south on Campus Drive. It crosses Kansas Avenue at a signalized intersection with a 73-foot crossing distance, then diverts east on Schulman Avenue, south on Harold Avenue, and heads southeast toward the Tangeman Sports Complex.

Despite its connection to a popular community destination, the high traffic volume and speed at this major intersection contribute to safety concerns due to the busy and lengthy crossing distance. For the current trail alignment to remain along Campus Drive, improvements are recommended for the existing trail alignment to meet current MUTCD standards:

- Relocate gas utilities and signing from trail access, Figure 29.
- Install truncated domes at signalized intersection, Figure 30.



Figure 30 - Sidewalk Obstructions on SE side of Campus Dr Facing South

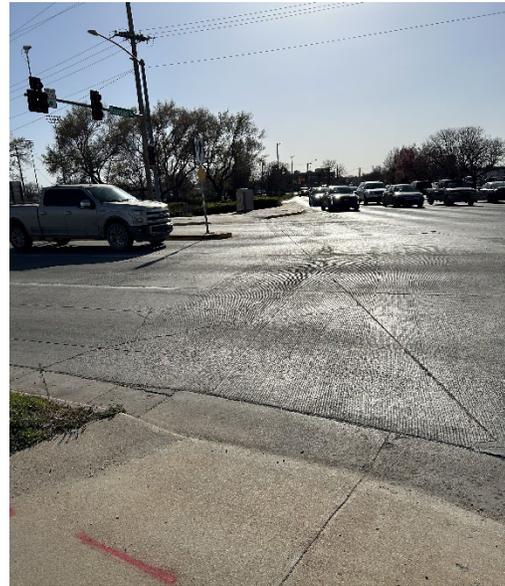


Figure 29 - Signalized Crossing at Campus Dr/Kansas Ave

Talley Trail Realignment at Campus Drive

Another recommended option is to realign the trail from E. Harding Avenue to McCoy Drive, where it connects to Schulman, with the goal of increasing pedestrian and bicycle traffic. McCoy Drive already has a 10-foot-wide sidewalk. This realignment should only be implemented if the Kansas Avenue/McCoy Drive intersection is signalized. If the intersection becomes signalized, it is recommended to install a High Intensity Activated Crosswalk (HAWK) signal for enhanced crossing safety at Kansas Avenue/McCoy Drive. From there, the realignment would continue along McCoy Drive to Schulman Avenue, where it would connect to the Schulman trail crossing and head southeast toward the Tangeman Sports Complex. Figure 31 illustrates both the existing trail path and the proposed realignment.

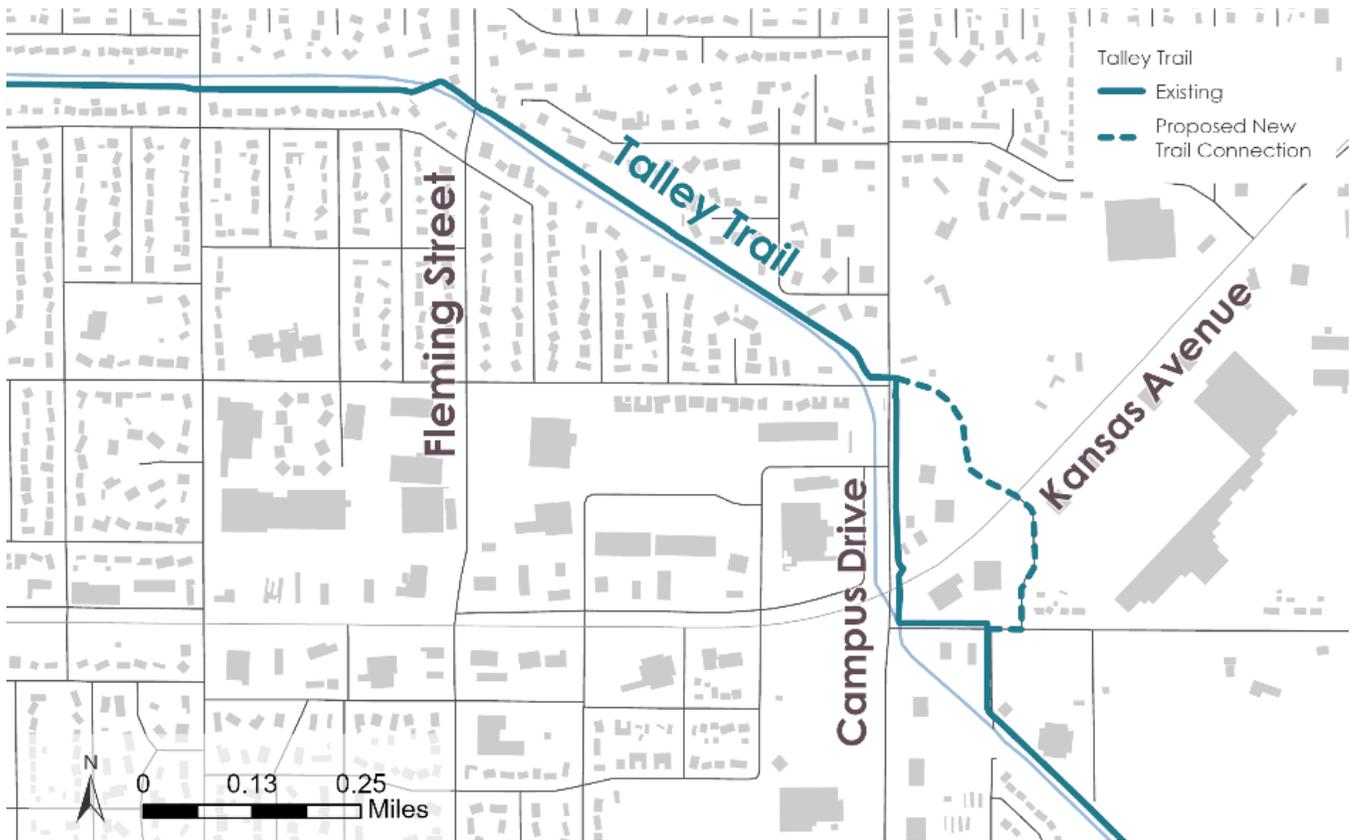


Figure 31 - Talley Trail Realignment

Table 8 - Current and Future Trail Realignment Recommendations

ID	Current & Future Trail Relignment Recommendations	Time Frame	Cost Estimate ¹
1	Relocate gas utilities and signing from trail access	Short	Low
2	Install truncated domes at signalized intersection	Short	Low
3	Realign trail at Campus Drive from E. Harding Avenue to McCoy Drive ²	Long	High
4	Install a High Intensity Activated Crosswalk (HAWK) at Kansas Avenue/McCoy Drive ³	Long	High

¹Cost estimate shows high level costs at 10% planning phase. Cost may fluctuate based on design. For example, road diet implementation cost may higher if signals are rebuilt as a part of the project or lower if done in conjunction with scheduled roadway re-striping.

²This realignment should only be implemented if the Kansas Avenue/McCoy Drive intersection is signalized.

³The HAWK signal is recommended once the Kansas Avenue/McCoy Drive intersection is signalized.

Appendix



Appendix

Multi-Use Trail Crossing Existing Infrastructure Inventory

Table 9 - Multi-Use Trail Crossing Existing Infrastructure Inventory

Multi-Use Trail Crossing Existing Infrastructure	Taylor Ave	11 th St	8 th St	Main St	3 rd St	Center St	Fleming St	Campus Dr	Schulman Ave
Transverse Crosswalk	X	X	X	X		X	X		
Zebra Crosswalk								X	X
Stop Bar	X	X	X	X		X	X	X	X
Rectangular Rapid Flashing Beacon (RRFBs)	X		X	X	X	X	X	X	X
Pedestrian Signal	X							X	
Pedestrian Push Button	X		X	X	X	X	X		X
Truncated Dome								X	
Security Bollards	X	X		X	X	X	X		X
Lighting	X		X	X	X	X	X	X	X
Utilities		X			X	X	X	X	X
R5-3 Sign (No Motor Vehicles)	X	X		X	X	X	X	X	X
W11-2 Sign (Pedestrian Ahead)	X		X	X	X		X		X
W11-15 Sign (Bike and Ped)									
W11-15P Sign (Trail X-Ing)									
W11-15A Sign (Trail Crossing)									
W11-1 Sign (Bicycle)		X				X			
Posted Speed Limit (w/wo Flashing Beacon)				X	X	X	X	X	X
Yield Sign	X		X	X	X			X	X
Stop Sign	X						X		
Caution Vehicle and Ped Traffic Sign						X			
Bike Rack		X							

Rest Stops		X			X				
Trash Cans		X			X				
Benches		X			X				
Turn Lane								X	
Center Turn Lane							X		
Bike Lane								X	

Multi-Use Trail Crossing Recommendations

Table 10 - Multi-Use Trail Crossing Existing Infrastructure Inventory

Multi-Use Trail Crossing Recommendations	Cost \$-\$\$\$	Taylor Ave	11th St	8th St	Main St	3rd St	Center St	Fleming St	Campus Dr	Schulman Ave
Truncated Domes	\$	X	X	X	X	X	X	X	X	X
Advance Yield lines	\$	X	X	X	X	X	X	X	X	X
High Visibility Crosswalk Markings	\$	X	X	X	X	X		X	X	X
Security Bollards	\$\$	X		X			X		X	X
Improve Pavement Markings	\$	X	X	X	X	X	X	X		X
Rectangular Rapid Flashing Beacons (RRFBs)	\$		X							
W11-15 Sign (Bike and Ped)	\$	X	X	X	X	X	X	X	X	X
W16-7P Sign (Down Diagonal Left Arrow)	\$	X	X	X	X	X	X	X	X	X
W11-15A Sign (Trail Crossing)	\$	X	X	X	X	X	X	X	X	X
W16-9P Sign (Trail Crossing Ahead)	\$	X	X	X	X	X	X	X	X	X
R10-25 Sign (sign next to pushbutton for pedestrians)	\$	X	X	X	X	X	X	X	X	X
R1-5 Sign (Yield Here for Pedestrians)	\$	X								
Road Diet/Reconfiguration	\$\$\$	X								
Relocate gas utilities and signing from trail access	\$\$								X	
Talley Trail Realignment	\$\$								X	
HAWK Signal at Kansas Avenue/McCoy Drive	\$\$\$								X	