

JOPLIN
MISSOURI

DOWNTOWN LOOP SAFETY INITIATIVE

Safe Streets and Roads for All Implementation Application FY 2025

SUBMITTED BY:
City of Joplin, Missouri
City Manager Nick Edwards
602 S. Main Street, Joplin, MO 64801
NEdwards@joplinmo.org

June 26, 2025

TABLE OF CONTENTS

Forms

SF424 Forms .....uploaded to Valid Eval
Self-Certification Eligibility Worksheet .....uploaded to Valid Eval
Supplemental Estimated Budget .....uploaded to Valid Eval

Contents

Narrative
I. Overview 1
II. Location..... 4
III Selection Criteria
A. Safety Need..... 8
B. Safety Impact 9
C. Engagement..... 10
D. Supplemental Planning (not applicable)
IV Readiness 12

APPENDICES: Supporting Documentation

1. JATSO SAFETY ACTION PLAN & JOPLIN ACTIVE TRANSPORTATION PLAN..... A-1
2. MAPS (PROJECT LOCATION, DESTINATIONS, AND KML) A-2
3. PHOTO ESSAY A-3
4. COLLISION DETAILS & HIGH INJURY NETWORK A-4
5. SUPPORT LETTERS..... A-5

OVERVIEW

With Missouri's above-average roadway fatality rate and Joplin's history of high-severity crashes, the Downtown Loop Safety Initiative represents a critical investment in life-saving infrastructure that will protect vulnerable road users, reduce crashes, and move Joplin toward a future of zero traffic fatalities. Missouri experiences 17.1 vehicle deaths per 100,000 people, which is 4.3 deaths per 100,000 people higher than the national average. This means there were over 1,050 deaths on Missouri roads in 2022. In Joplin alone, 355 crashes resulted in someone being Killed or Seriously Injured (KSI crashes) between 2019 and 2023. These collisions resulted in 85 deaths and 335 serious injuries, including 40 KSIs involving vulnerable road users (VRU). The City of Joplin seeks to address the most serious safety problems with the proposed Downtown Loop Safety Initiative.



Joplin Area Transportation Study Organization (JATSO) is the official Metropolitan Planning Organization for the Joplin metro area, the 5th largest metro area in the state of Missouri. In 2025, JATSO approved a comprehensive Safety Action Plan to identify methods of improving road safety and eliminating KSI crashes in the Joplin area, with the goal of reaching zero KSI crashes by 2035. The Downtown Loop Safety Initiative synergizes priority actions originally identified in the 2022 Active Transportation Plan and supported by the JATSO 2025 Safe-Streets-for-All-Safety-Action-Plan.

To this end, the City of Joplin is seeking $4,840,040.00 through the U.S. Department of Transportation (USDOT) Safe Streets and Roads for All grant program to implement the Downtown Loop project, with a 20% local match provided by the city's transportation tax. Outlined as a priority project in the 2022 Active Transportation Plan, the Downtown Loop project will bring 5 miles of buffered bike lanes, pedestrian infrastructure improvements, and street lighting to central Joplin, reducing multi-modal risks along these corridors and acting as a catalyst for multi-modal infrastructure throughout the city.

A. Introduction

To ensure increased roadway safety, Joplin has adopted the Safe System Approach, which emphasizes the importance of designing transportation infrastructure for all modes of transportation. The Safe Systems Framework also considers human error and injury tolerance throughout.

Seeking to eliminate all KSI crashes city-wide by 2035, Joplin developed a High Injury Network (HIN) to identify locations where KSI crashes frequently occur. Now the city is rapidly and thoroughly addressing these locations through capital improvement projects and the strategic implementation of multi-modal infrastructure.

The corridors included in the Downtown Loop were chosen for their potential to be a centralized, connected core of buffered bike lanes that can be expanded throughout the city in the coming years, as outlined in the Active Transportation Plan. Furthermore, these streets run through underserved communities and appear on the HIN. The Downtown Loop project aligns with the Active Transportation Plan and Safety Action Plan, representing a major investment in multi-modal infrastructure that will save lives for years to come.

B. *Jurisdiction*

Joplin, Missouri is a thriving city located in southwest Missouri, strategically positioned at the crossroads of Interstate 44 and Interstate 49.



FIGURE 1: *Joplin serves as a regional hub for commerce, healthcare, and education, making it a key player in the four-state area that includes Missouri, Kansas, Oklahoma, and Arkansas.*

Joplin's population has seen a 3.5% increase since 2020. Joplin is home to both Missouri Southern State University and Ozark Christian College, with a combined total post-secondary enrollment of over 4,500 students. According to the 2023 American Community Survey, Joplin is a relatively young and growing city of 52,218. The average age of a Joplin resident is 37.5 years. The median income is $51,154, and the poverty rate is 17.9%. The birth rate is 62 births per 1,000 women, significantly higher than the national average of 52 births per 1,000 women. The largest ethnic groups in Joplin are White Non-Hispanic (82.0%), Hispanic/Latino of Any Race (6.4%), Two or More Race Non-Hispanic (5.5%), Black Non-Hispanic (2.7%), and Asian (2.0%).

Background

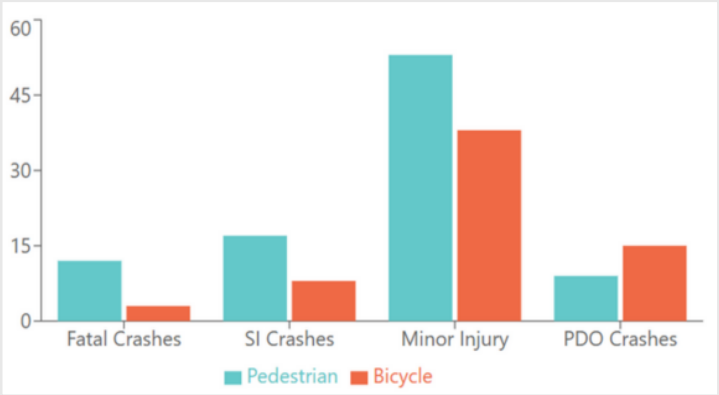


FIGURE 2: *2019-2023 Fatal Pedestrian and Bike Accidents Source: JATSO 2025 Safety Action Plan*

In Joplin, VRUs are overrepresented in fatal crashes, accounting for 17.65% of all roadway fatalities despite making up a small percentage of total traffic. The League of American Bicyclists ranks Missouri 49 out of 50 states for bicycle infrastructure, in part due to its higher-than-average cyclist fatality rate.

The requested funds will allow Joplin to address this safety crisis with the construction of buffered bike lanes and pedestrian crossing infrastructure. By improving a core network of streets—many of which are on the city's HIN—the project improves overall city connectivity and allows for strategic expansion in the coming years.



FIGURE 3: *The 2011 Joplin EF5 tornado was the most devastating in the U.S. in more than 70 years causing 158 deaths and $2.8 billion in damage. Joplin is building back better and stronger with transportation investments that further the City's post-disaster resurgence. Photo credit: KRCG-TV*

This is especially important as Joplin's population has grown steadily since the 2011 Joplin Tornado. The City's resilience and community-driven recovery sets the stage for multi-modal transportation investments. Safer transportation facilities are an overarching goal of the City's Complete Streets Ordinance. The project's streets connect residents from single family and multi-family neighborhoods to schools, parks, a regional trail, commercial districts, and downtown Joplin. By investing in this core loop of bicycle lanes and pedestrian infrastructure, Joplin can reduce VRU fatalities, keeping residents safer and better connected to opportunities in their community.

LOCATION

The City of Joplin covers 35.68 square miles in southwestern Missouri, bordering both Kansas and Oklahoma. The 12th largest town in Missouri, Joplin is the hub of the 4-State Area and has a rich history of nationwide connectivity, thanks to its location as a rail hub and along historic US Route 66.

A. *High Injury Network*

JATSO's High Injury Network (HIN) identifies corridors where KSI crashes occur most often. Though these corridors make up just 11.9% of the centerline miles in JATSO's jurisdiction, they account for 71.5% of all KSI crashes. JATSO has developed a HIN for all roadway users as well as HINs specific to motorcycles and non-motorized users, with some corridors appearing on all three networks. (See Attachment A-4.)

B. *Project Corridors*

The chosen project corridors form a loop of buffered bike lanes and improved pedestrian infrastructure, encircling central Joplin and providing safer connections within the City's core. (Please see Photo Essay Attachment A-3.)

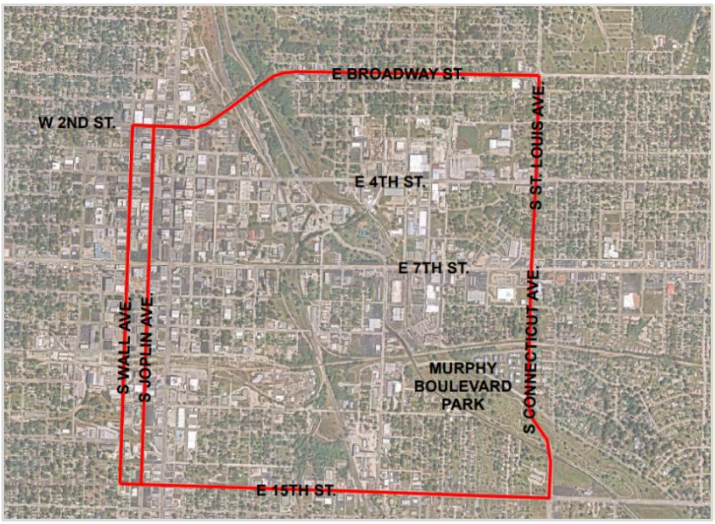


FIGURE 4: *The Downtown Loop includes corridors that encompass the downtown area. The project was identified through the public engagement process for Joplin's Active Transportation Plan, and it also aligns with the safety needs identified in the JATSO Safety Action Plan. It addresses several streets within the HIN (see Figure 7), diverting VRU away from high-traffic, high-speed roads and onto smaller roads with better multi-modal infrastructure, and improved access to downtown Joplin.*

West Segment: Wall & Joplin Avenues

Wall and Joplin Avenues are a pair of one-way streets, both with two travel lanes and parallel parking on both curbs. Wall Avenue allows for northbound traffic, and Joplin Avenue allows for southbound traffic.

The project will narrow the width of vehicle lanes while maintaining safe, effective operations and discourage speeding while still accommodating larger vehicles. The project will remove

parallel parking on the west side of Wall Avenue and the east side of Joplin Avenue. The project will replace the parking spaces with a 6-foot bike lane and 4-foot buffer. Plastic bollards will increase bike lane visibility, along with bike-related signage and striping. Altogether, this segment adds approximately 10,630 linear feet of buffered bike lanes.



FIGURE 5:
Wall Ave. Segment

Pedestrian improvements such as crosswalks, ADA-compliant curb ramps, and updated pedestrian crossing timing would be added at signalized intersections.

North Segment: Second & Broadway Streets

Second Street and Broadway Street have a wide cross section, forming an east-west corridor with one or two travel lanes in each direction as well as parallel parking along both curbs in some locations. The Downtown Loop project has two profiles along this segment.

Travel lanes will be narrowed from Wall Street to Main Street, and parallel parking will be removed. This allows for a two-way cycle track or individual buffered bike lanes. The final cross section will be determined during preliminary design.

From Main Street to St. Louis Avenue, the project will reduce vehicle lane widths and provide similar treatment for bicycle facilities. Parallel parking on the north side of the roadway will be narrowed, and parallel parking on the south side will be removed. In its place, a two-way cycle track would be added, featuring 6-foot bike lanes in each direction as well as a 4-foot buffer between the cycle track and vehicular traffic.

Throughout the segment, appropriate bike signage and striping will be added, and bollards will be placed in all buffers to increase visibility. Altogether, this segment adds approximately 6,220 linear feet of buffered bike lanes.

Pedestrian improvements such as crosswalks, ADA-compliant curb ramps, and updated pedestrian crossing timing would be added at signalized intersections.

East Segment: St. Louis and Connecticut Avenues

St. Louis Avenue is a three-lane section, with two northbound lanes and one southbound lane. At Murphy Boulevard, the road transitions to Connecticut Avenue, which has two travel lanes in each direction as well as a center turn lane. This project has three different profiles along the segment.

On St. Louis Avenue from 2nd Street to 7th Street, the residential street will be converted to a neighborhood greenway with sharrow pavement markings. Due to the traffic signals present at 4th and 7th Streets, these two intersections will use designated bike lanes.

On St. Louis Avenue from 7th Street to Murphy Boulevard, the outer northbound travel lane will be removed, and the two remaining travel lanes will be narrowed. A 5-foot bike lane with a 2-foot buffer will be added on both sides of the roadway. This road diet—as well as all other road diets in the Downtown Loop Safety Initiative—is supported by MoDOT traffic volume and level of service data.

Connecticut Avenue from Murphy Boulevard to 15th Street will also undergo a road diet. The outermost travel lane in each direction will be converted to a 6-foot bike lane with a 4-foot buffer. The remaining travel lanes as well as the center turn lane will be narrowed.

Throughout the segment, appropriate bike signage and striping will be added, and bollards will be placed in all buffers to increase visibility. Altogether, this segment adds approximately 6,350 linear feet of improved bicycle infrastructure.

Pedestrian improvements such as crosswalks, ADA-compliant curb ramps, and updated pedestrian crossing timing would be added at signalized intersections.

South Leg: 15th Street

15th Street is a four-lane undivided section, providing travel in the east and west directions. Left-turn lanes are present at the intersections with Main Street and Connecticut Avenue.

For this project, 15th Street will undergo a road diet, reducing the travel lanes to one in each direction as well as a center turn lane. All vehicle lanes will be narrowed to 10 or 11 feet.

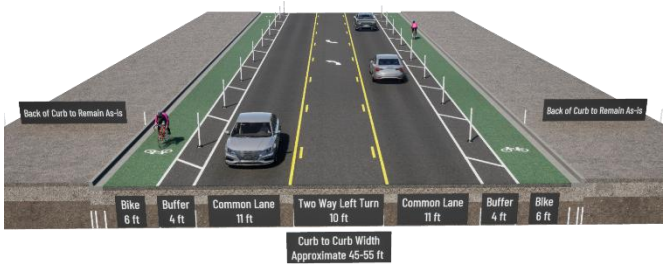


FIGURE 6:
Proposed cross section of 15th Street

A 6-foot bike lane with a 4-foot buffer will be added along both sides of the street. Plastic bollards would be added to the buffer to increase visibility, as well as appropriate bike-related signage and striping. Altogether, this segment adds approximately 6,400 linear feet of buffered bike lanes.

Pedestrian improvements such as crosswalks, ADA-compliant curb ramps, and updated pedestrian crossing timing would be added at signalized intersections.

Intersection Improvements

To accommodate the proposed bicycle infrastructure, two intersections along the Downtown Loop project would require additional infrastructure.

Due to the presence of a left turn lane along a one-way road, the intersections of Wall Avenue and 7th Street as well as Joplin Avenue and 15th Street require the bike lane to shift rightward to be located between the through lane and the left turn lane, as shown in Figure 7. This reduces the conflicts between cyclists and drivers at the signalized intersection.



FIGURE 7: *7th St. & Wall Ave. Intersection*

SELECTION CRITERIA

A. Safety Need

Within Joplin, the downtown area has high traffic volumes including cross-country freight and non-commercial vehicles on historic U.S. Route 66. These vehicles frequently conflict with local non-motorized traffic, resulting in serious accidents and fatalities. Reducing conflicts between motorists and both pedestrians and cyclists is an overarching priority. Ranking 49th in the nation according to the American League of Cyclists, Missouri has immense opportunity to improve its bike infrastructure. The City of Joplin specifically has no buffered or protected bike lanes, and the connectivity of the existing bike lanes is poor. Furthermore, crash data shows that 20% of all KSI crashes in Joplin occur on dark, poorly lit streets, including 73% of all fatal VRU collisions.

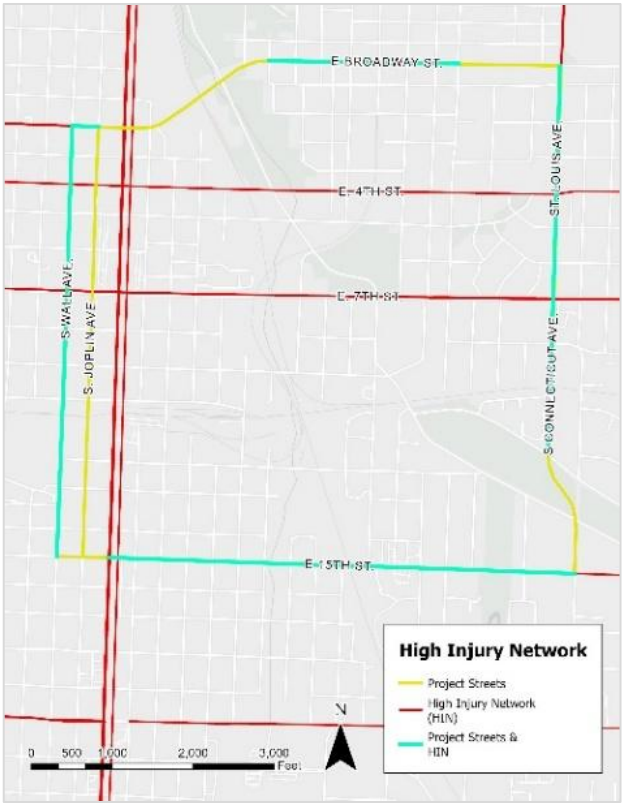


Figure 8: *The project addresses safety issues on the HIN (green lines) and provides alternatives on adjacent streets (yellow project lines).*

In the past five years, there have been four KSI crashes on the project corridors among VRUs. The blocks surrounding the Downtown Loop project, which will likely experience safety benefits by rerouting multi-modal traffic down enhanced streets, have experienced an additional four VRU KSIs. These few blocks containing the Downtown Loop Safety Initiative and its immediate vicinity account for 20% of all vulnerable road user KSI crashes in the City of Joplin over the past five years. Joplin crash data is supported by geospatial analysis from the City's high-injury network map, which highlights the Downtown Loop as a critical zone for VRU risk.

Additionally, the Safety Action Plan incorporates findings from road safety audits and near-miss reports to prioritize infrastructure improvement. The 2025 Safety Action Plan identifies central Joplin as overrepresented in crash data, and the high frequency of VRU collisions on Main and 7th Streets justify the Downtown Loop Safety Initiative's goals to move vulnerable road traffic to quieter streets with enhanced infrastructure. The overwhelming majority of KSI crashes in Joplin occur on dry pavement and with clear skies, indicating these crashes are not weather-related; instead, these crashes can be addressed with purposeful infrastructure improvements, such bike lanes, pedestrian improvements, and street lighting.



FIGURE 9: *The project adds street lighting to address nighttime crash trends in for VRUs.*

B. Safety Impact

The Downtown Loop Project will develop a core network of buffered bike lanes and bike boulevards, connecting to transit, schools, parks, commercial districts, and more. These centralized dedicated bike facilities can be easily expanded in the coming years, allowing for a network of safe bicycle infrastructure throughout the city. The project also includes pedestrian safety improvements and the installation of street lighting along all project corridors. See Table 1 for the Federal Highway Administration's proven safety countermeasures used in the Downtown Loop Safety Initiative.

FHWA Countermeasures (live links to crash reduction factor details)	*Wall & Joplin Avenues*	*Second & Broadway Streets*	*St. Louis & Connecticut Avenues*	*15th Street*
Bicycle Lanes	Yes	Yes	Yes	Yes
Road Diets	No	No	Yes	Yes
Lighting	Yes	Yes	Yes	Yes
Leading Pedestrian Interval	Yes	Yes	Yes	Yes
Crosswalk Visibility Enhancements	Yes	Yes	Yes	Yes

Table 1: *FHWA Proven Safety Countermeasures*

This project aligns with the U.S. Department of Transportation (DOT) Safe System Approach. By investing in buffered bike lanes on low to medium volume roads, Joplin recognizes that cyclists are vulnerable, and the city is taking steps to be proactive and build redundancies on local roadways.

Bike lanes are highly effective in reducing injury crashes. One study found that implementing bike lanes reduces injury crashes by up to 50% for all road users, including cyclists, drivers, and pedestrians. In addition to reducing overall crashes, bike lanes also lead to an increase in biking, leading to a potential per-capita crash reduction even beyond the previously stated 50%.

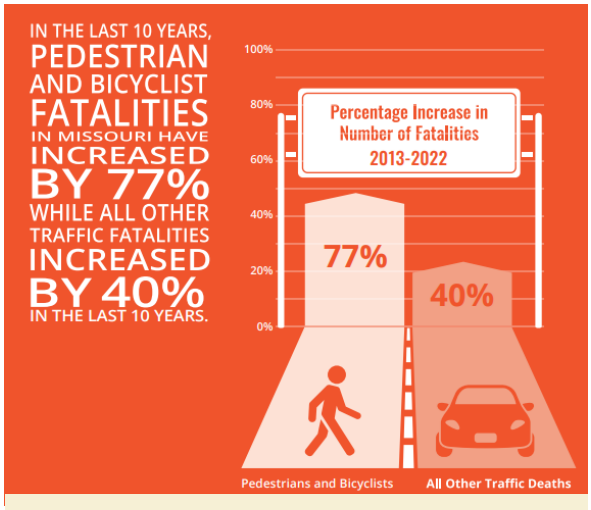


FIGURE 10: *MoDOT Strategic Highway Safety Plan infographic*

Studies have also shown that improving cycling and walking infrastructure can benefit the local economy. With the Downtown Loop's location on the HIN and in central Joplin's commercial district, these buffered bike lanes have the potential to increase safety for all road users, improve biking in the Joplin area, and grow the local economy.

To maximize the area receiving improvements, Joplin is utilizing cost-effective measures. All changes will occur within the city right-of-way, eliminating the need for land acquisition. Additionally, Joplin will use paint and flex-posts for the improvements as opposed to concrete-based materials, providing significant safety improvements for a fraction of the cost.

This project aligns with the state of Missouri's Show Me Zero safety campaign, as it addresses concerns with VRU and follows design guidance for public works & engineering officials. The project also aligns with the needs laid out in the 2023 state-wide Vulnerable Road User Safety Assessment, due to its focus on vulnerable road user safety at urbanized intersections.

The project area was identified through Joplin's high-injury network analysis, which used five years of crash data to prioritize corridors with the highest rates of VRU injuries. The city will track post-implementation crash rates and bike counts to evaluate safety and mobility outcomes. These improvements are designed to be durable and scalable, with potential for replication in other high-risk corridors.

C. *Engagement and Collaboration*

This project was identified as a community need during the public engagement process for the city's Active Transportation Plan. This rigorous engagement process included a city-wide survey, two open houses, focus groups, tabling, media releases, active transportation workshops, bike tours, and more. The city was intentional about including representation from central Joplin's Area of Persistent Poverty in the focus groups, ensuring voices from these neighborhoods were heard. The project also avoids displacement or gentrification by working entirely within the existing right-of-way.

The proposed path of the Downtown Loop project falls entirely within an underserved, Area of Persistent Poverty/underserved community. This region has a median household income well below the federal poverty line, and up to 19% of homes have no personal vehicle. The low rate of car ownership and high rate of VRU collisions highlights this area's need for safer alternatives to vehicular travel, especially bicycle and pedestrian improvements. The bike lanes and pedestrian improvements proposed in this project will safely connect local residents, especially those who may not own a vehicle, to basic services and amenities such as grocery stores, laundromats, schools, parks, commercial districts, and job opportunities. These connections can not only improve resident safety, but also improve residents' mobility options, financial stability, and quality of life.

As the Downtown Loop Project moves into the design and construction phases, Joplin plans to continue community engagement efforts. The city will stay connected to BikeWalk Joplin and Joplin Trails Coalition, public safety, school district, elected officials, and local nonprofits focused on improving multi-modal infrastructure in the Joplin area. Additionally, the city will continue outreach to impacted communities, ensuring community concerns and needs are addressed. Only by maintaining strong relationships with local communities and stakeholders will this project be successful.

D. Supplemental Planning and Demonstration Activities *(not applicable to this project)*

PROJECT READINESS

The Downtown Loop Project will be completed expeditiously within four years of receiving a fully executed grant agreement from the U.S. DOT/FHWA. The City will obligate funds within 12 months of award. The City anticipates completing design and NEPA clearance by Q4 2026. Procurement and final design approval are expected by Q1 2027, with construction contracting in late 2027. Mobilization for construction will start in Q2 2028 and conclude by Q2 2029. No right-of-way acquisition or utility relocation is required, and the project qualifies for a NEPA Categorical Exclusion. No design exceptions are being sought. This includes the necessary time for design completion, permitting, public involvement, and construction, as shown in the detailed schedule below.

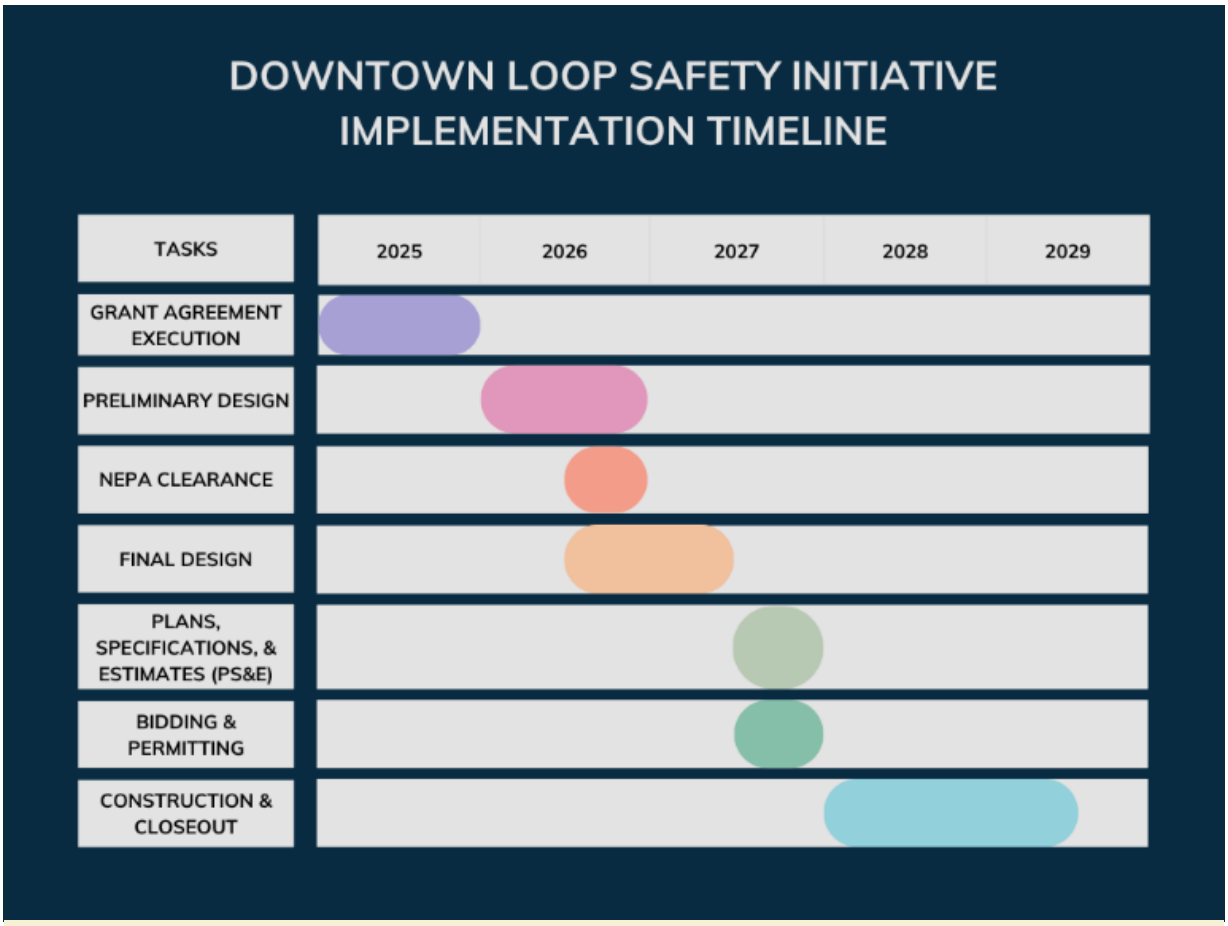


FIGURE 11:
Anticipated Project Schedule to Meet Grant Deadlines

This City is ready to proceed with permitting, design, and environmental review immediately after award notification. Design specifications will adhere to Joplin's award-winning Complete Streets ordinance, which aligns with all state and federal design guidelines. The Downtown Loop Project is not expected to require any right-of-way acquisition or utility relocation. Environmental impacts are expected to be negligible, making this a Categorical Exclusion as defined by the National Environmental Policy Act (NEPA) procedures. There is already significant community support for this project, as identified by the Active Transportation and Safety Action Plans. Joplin is committed to continuing this engagement process as the project moves into the design and construction phases, hosting open houses and pop-up events, posting updates on social media, and maintaining a project page on the city's website.

The City of Joplin has demonstrated its organizational capacity to complete this project on time and within its well-researched budget. Joplin is experienced in successfully managing Federal Highway Administration (FHWA) funded projects, as demonstrated in its completion of the following projects:

- ✓ **Missouri Southern State University Trail and Pedestrian Bridge**
  $734,544 total cost with Surface Transportation Block Grant funds

- ✓ **Newman Road Turkey Creek Bridge Rehab and Sidewalk**
  $327,307 total cost with Surface Transportation Block Grant funds

- ✓ **St. John's and Mohaska Trails**,
  $734,544 total cost with Transportation Alternatives Program funds

The City of Joplin's leadership team has a strong track record of managing complex infrastructure projects and federal funding with precision and accountability. Dan Johnson, Joplin's Director of Public Works, brings over 17 years of experience with the city, having served as an engineer, assistant director, and now director, where he oversees capital improvement planning and delivery. Under his leadership, the Public Works Department has successfully executed multimillion-dollar projects, including those funded by the Federal Highway Administration. The city's Finance Department, working in tandem with Public Works, has helped manage a portfolio of over $97 million in active projects, with nearly $58 million funded through grants. This collaborative structure ensures that Joplin is well-positioned to deliver federally funded projects on time, on budget, and in full compliance with state and federal requirements.