Los Alamos County

PEDESTRIAN MASTER PLAN

February 2025

Attachment B

LOS ALAMOS

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EXECUTIVE SUMMARY

The Los Alamos County Pedestrian Master Plan Update demonstrates the County's dedication to creating a safe, accessible, and thriving pedestrian environment. This plan prioritizes critical areas within Los Alamos Townsite and White Rock Town Center, integrating principles from Vision Zero and the Federal Safe Systems Approach. The strategic recommendations aim to enhance safety, connectivity, equity, and vibrancy, fostering walkability and improving the quality of life for all residents.

Guiding Goals

1. **Safety**: Reduce pedestrian-related crashes and their severity through systematic design improvements, such as high-visibility crosswalks, speed feedback signage, and enhanced pedestrian crossings.
2. **Connectivity**: Develop a well-connected pedestrian network that links neighborhoods, key destinations, and recreational areas to ensure seamless mobility for all users.
3. **Equity**: Ensure walkability for everyone, focusing on underserved populations and achieving compliance with the Americans with Disabilities Act (ADA).
4. **Health**: Encourage physical activity by improving accessibility and connectivity to parks, schools, transit hubs, and other key destinations.
5. **Vibrancy**: Support the development of a robust pedestrian network that enhances economic vitality and community engagement. Walkable neighborhoods with safe access to schools, transit, and local businesses can sustain vibrant communities and strengthen a sense of place.

Planning Process and Community Engagement

The plan is grounded in public input and an analysis of existing conditions within the pedestrian environment, providing an evaluation of the strengths and challenges in Los Alamos County. A comprehensive community engagement process involved residents through surveys and meetings, ensuring that feedback directly informed the recommendations. The assessment of existing conditions, including sidewalk infrastructure, ADA curb ramp compliance, crash data, and key pedestrian destinations, facilitated the identification of the Areas of Concern and guided the development of targeted improvements.

Recommendations

Chapter 6 Recommendations outlines traffic calming techniques, projects identified in previous plans, funding opportunities, and implementation strategies. A set of location-based recommendations are provided with planning level estimates for costs, timeframes, and additional requirements.

The prioritization of the recommendations is guided by a comprehensive scoring methodology that evaluates projects based on five key criteria:

1. **Safety (35 points)**: Addresses crash history, vehicle speeds and volumes, and documented public safety concerns.
2. **Connectivity (25 points)**: Evaluates proximity to key destinations and the potential to fill critical network gaps.
3. **Equity and Accessibility (20 points)**: Focuses on ADA compliance and service to vulnerable populations.
4. **Community Support (10 points)**: Reflects the public input and prioritization level.
5. **Implementation Feasibility (10 points)**: Considers project cost, complexity, and funding opportunities.

The weighted scoring system ensures projects are prioritized based on an equitable and strategic approach to achieving a safer, more connected pedestrian network.

This set of recommendations emphasizes critical improvements, including high-visibility crosswalks, enhanced pedestrian signage, ADA curb ramp upgrades, and enhanced connectivity. Notable projects include:

- **Trinity Drive Improvements**: Enhancing safety with widened sidewalks, landscaped buffers, and improved crossings to better serve pedestrians along this key corridor.
- **School Zone Enhancements**: Upgrading crosswalks, signage, and curb ramps to ensure safer pedestrian access near schools.
- **Diamond Drive Improvements**: Adding curb extensions, landscaping, and crossing enhancements to improve safety and accessibility throughout this vital corridor.

Vibrancy and Connectivity

The Los Alamos County Pedestrian Master Plan emphasizes the importance of cultivating a connected and thriving pedestrian network. A well-designed pedestrian system directly enhances the health, safety, vibrancy, and economic vitality of a community. Walkable neighborhoods with safe access to schools, transit, and businesses foster dynamic, lively spaces that attract residents and visitors alike. Increased pedestrian accessibility will strengthen the County's most active and prosperous areas, promoting economic growth and a stronger sense of community.

The Los Alamos County Pedestrian Master Plan Update is a comprehensive roadmap for promoting a safer, healthier, and more connected pedestrian environment. By leveraging various funding opportunities and addressing identified gaps, the County is well-positioned to achieve a vibrant and inclusive walking network that benefits all residents and visitors.

CHAPTER 1
INTRODUCTION

Los Alamos County is enhancing its commitment to a pedestrian-friendly environment by updating the Pedestrian Master Plan. This plan seeks to make walking safe, accessible, and enjoyable for residents and visitors. Building on initiatives like Safe Routes to School and aligning with Vision Zero and Federal Safe Systems principles, this plan emphasizes improved infrastructure in critical areas within Los Alamos Townsite and White Rock Town Center. This forward-looking approach integrates national best practices and reflects the county's dedication to creating a vibrant, connected community that promotes health, sustainability, and local economic vitality.

Significance of a Pedestrian Master Plan

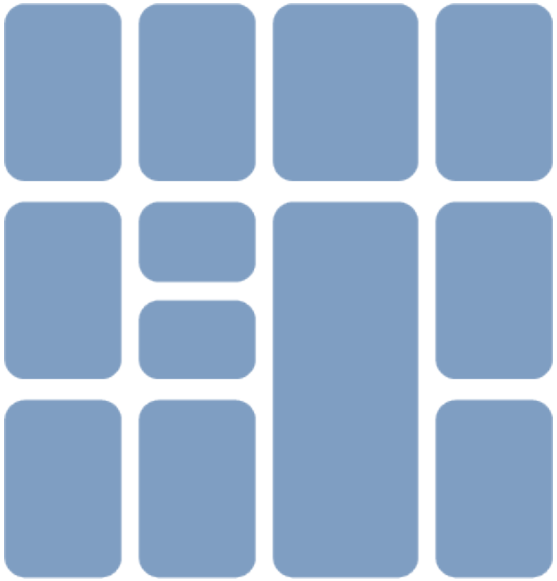
The Pedestrian Master Plan is vital for guiding the development and improvement of pedestrian infrastructure across Los Alamos County. It provides a clear roadmap for creating safe, accessible, and inviting walking routes that benefit all residents, including children, seniors, families, and individuals with limited mobility or other disabilities. In addition to supporting public health, pedestrian-friendly environments are associated with more robust economic well-being; they encourage local retail spending, increase property values, and attract new residents and businesses. By prioritizing pedestrian infrastructure, the plan promotes a more substantial community connection, boosts local economic vitality, and enhances the overall quality of life in the county.

How The Pedestrian Environment Is Shaped and Why It's Important

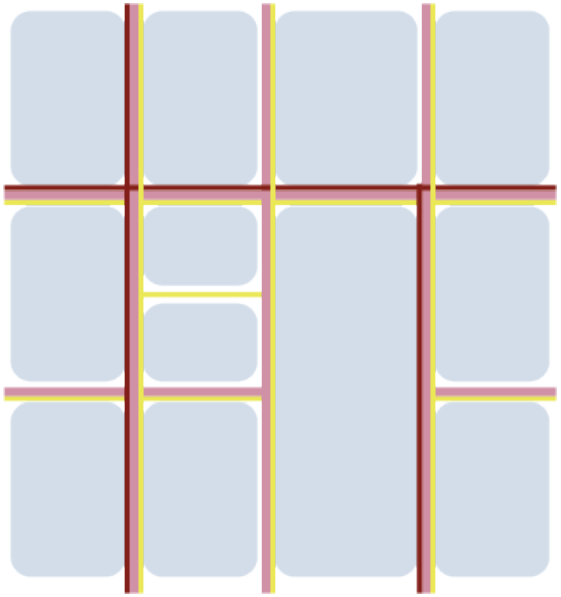
Accessibility, **connectivity,** and **safety** are crucial to foster a healthy, sustainable, and equitable community, ultimately shaping the level of **walkability**. These are established through interconnected elements of urban design which influence how individuals move through and experience the community.

These qualities manifest through a community's pattern of **blocks, roadway network, intersections**, and **open space**. These are the foundational and interconnected elements of an urban area's development layout which define the functionality of the pedestrian environment. Different transportation design techniques are then strategically added to a community's layout to enhance roadways users' accessibility, connectivity, and safety.

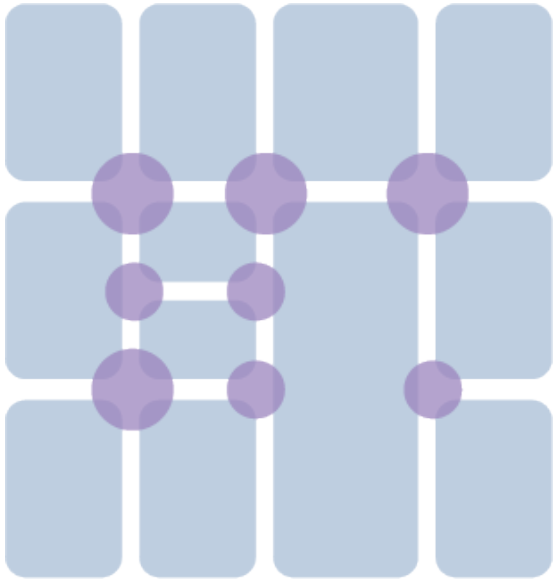
Descriptions and diagrams of the basic urban framework elements are provided on the following pages.



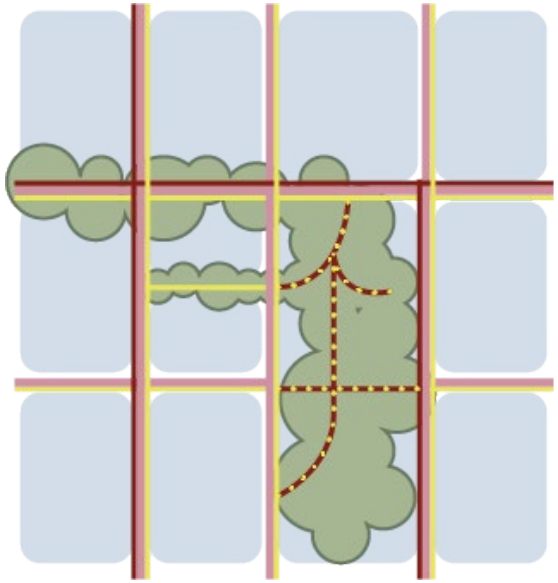
Block sizes: The physical dimensions of city blocks, influencing the layout (development pattern) and connectivity of streets and transportation networks.



Roadway network: The organized arrangement of accessible routes for different modes of transportation. The design and layout of routes for which vehicles, cyclists, pedestrians, and all other modes move throughout the city determines ease of travel and access to destinations.



Intersection density: The concentration of street crossings within a specific area, affecting the connectivity and accessibility of transportation routes. Higher intersection density enhances ease of movement and connectivity for everyone. Intersections have specific safety design techniques for traffic crossing to minimize the probability of crashes.



Open space connections: The deliberate integration of green spaces and open areas into the urban fabric, contributing to transportation connectivity by providing alternative routes, enhancing walkability, and influencing overall street network design.

Accessibility ensures that all individuals, including those with disabilities, can comfortably and confidently navigate public spaces, fostering inclusivity and enhancing social cohesion. Accessibility is established through urban design elements including curb ramps, lighting, wide sidewalks, routes to transit stops and public places, and other features, to create environments that are usable and safe for people of all abilities.

Connectivity refers to how well different parts of a community are linked to one another, through a network of routes designed for different modes of transportation. Good connectivity minimizes barriers to mobility and enables walking or rolling to be a convenient and practical option for travel.

Ensuring **safety** for pedestrian travel is crucial for a community as it protects people from harm and fear of walking or rolling. It promotes overall comfort and well-being, creating more opportunities for engagement and interactions within a community. Designing a safe environment for pedestrians takes a systematic approach through design improvements to mitigate the risks within a transportation network. An abundance of safety design techniques exists, including pedestrian refuge islands, raised crosswalks, improved lighting, bump-outs, and many more (discussed in more detail in the *Traffic Calming Section* on page 68).

A community's level of **walkability** is dependent on its accessibility, connectivity, and safety but also considers factors like comfort and amenities. Walkable communities have positive influences in many aspects of life such as enhancing community bonds, supporting local businesses, encouraging physical activity, and reducing vehicle dependency. In communities like Los Alamos County, where quality of life and environmental stewardship are paramount, walkability is essential to effective urban planning.

Why a Pedestrian Master Plan

The Pedestrian Master Plan provides a structured approach for Los Alamos County to address infrastructure gaps such as missing sidewalks, crosswalks, and ADA-compliant curb ramps. This plan will offer a clear roadmap to prioritize projects, secure funding, and implement improvements that enhance pedestrian safety and connectivity. Proactive planning ensures that pedestrian infrastructure meets both current and future needs, fostering a healthier and more active community. This approach aligns with urban planning best practices and supports the county's goals of building a resilient, adaptable network of pedestrian pathways. Such efforts advance the broader sustainability, inclusivity, and community well-being objectives in Los Alamos County.

Vision Zero and Safe Systems

The Vision Zero strategy and the Safe Systems approach are interconnected, nationally recognized efforts supported by the United States Department of Transportation (USDOT). These have become integral practices for most communities across the nation when planning for transportation, Los Alamos County among them. This Pedestrian Master Plan uses principals of the Safe Systems approach to guide the planning and recommendations process.

So what is Vision Zero and the Safe Systems Approach and how are these different than traditional approaches to safety?

Vision Zero is a strategy and goal to eliminate all traffic fatalities and severe injuries by improving traffic safety through a proactive and preventative approach that prioritizes safe, accessible, and equitable mobility for all roadways users.

Reaching a vision of zero fatalities and serious injuries requires implementation of a **Safe Systems** approach. The key focus of the Safe Systems Approach is to proactively address every aspect of crash risks to reduce death and serious injuries through design that accommodates human mistakes. Traditionally, traffic deaths and serious injuries have been considered "accidents" and inevitable side effects of modern life. When in reality, these can be prevented through roadway design and management that anticipates human mistake and reduces the impact of a crash. Six principles form the basis of the Safe Systems approach:

1. Deaths and serious injuries are unacceptable
2. Humans make mistakes
3. Humans are vulnerable
4. Responsibility is shared
5. Safety is proactive
6. Redundancy is crucial

These principles are supported by five guiding elements listed below. They must be applied together to ensure a holistic approach to safety, involving layers of protection.

1. **Safe People:** Encourage safe, responsible driving behavior for all roadway users
2. **Safe Vehicles:** Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes
3. **Safe Speeds:** Promote safer and more appropriate speeds through a combination of equitable and contextual roadway design, outreach campaigns, and enforcement
4. **Safe Roads:** Design and redesign roadway environments to mitigate human mistakes and account for injury tolerances
5. **Post-Crash Care:** Enhance the survivability of crashes through expedient access to emergency medical care

Recent Accomplishments

Twenty-six years have passed since the last Pedestrian Master Plan was adopted in 1998. The County, along with the rest of the nation, has undergone a number of changes in planning and engineering practices, shifts in social perceptions, and transformations in the physical characteristics of the pedestrian environment. Recent and notable accomplishments that have substantially improved the pedestrian experience include:

- Pedestrian Underpass at Eastern Canyon Rim Trailhead on East Road NM 502 (completed 2021)
- Canyon Rim Trail (Phase I & II complete, Phase III in progress)
- Urban Trail (in progress, 99% complete)
- White Rock Trails
- ADA Transition plan (2017 implementation and 2024 update)
- Public Works Title VI Civil Rights Act (Updated 2024)

A major accomplishment of the 1998 Los Alamos Pedestrian Transportation Plan was the establishment of a countywide Safe Routes to School program. This initiative introduced uniform procedures and traffic control devices to improve public awareness and create a safer environment for children traveling to and from school. The Public Works Department and Traffic Engineering Division focused on developing individualized safety plans for each school serving kindergarten and elementary students. This process involved coordination with school principals, community-policing officers, Parent-Teacher Organizations, Site Councils, and engineering staff to assess walking conditions and identify safety concerns on school routes. Following a multi-tiered public input process and community approval, a Safe Routes to School Plan was formally adopted, and pedestrian infrastructure improvements were implemented around participating schools.

Key guidelines for implementation included:

- Encourage children to walk in groups, which are more visible to drivers
- Minimize the number of street crossings, especially at uncontrolled intersections
- Prioritize crossings at intersections with stop signs, yield signs, or traffic signals
- Avoid requiring children to cross collector streets whenever possible
- Use sidewalks wherever available. Where sidewalks are lacking, install them
- Eliminate mid-block crossings
- Avoid routes along high-speed (40+ mph), high-volume roadways
- Follow uniform standards and safety provisions consistently
- Educate and train children and parents in pedestrian safety techniques

Since the 1998 plan, the County has continued to manage and improve infrastructure within Safe Routes to School areas, regularly inspecting for safety concerns

and making necessary updates. This ongoing effort reflects a sustained commitment to ensuring that school routes remain safe, accessible, and supportive of walking for children and families.

Community Context

Los Alamos County is composed of 109 square miles of land with a series of mesas and deep canyons. The two communities within the county represent the study areas for this project – Los Alamos Townsite and White Rock Town Center (also referred to as just White Rock). ***Figure 1*** illustrates the two study area boundaries within the County's geographic extent. The entirety of Los Alamos County is a fully incorporated community, however, both of the study areas represent distinct recognized communities identified by the Census Bureau as Census-Designated Places, or CDPs. Census-Designated Places are locally recognized communities with a population concentration, but are not legally incorporated as a municipality. The Census Bureau collects data for both Los Alamos CDP and White Rock CDP separately, in addition to for the entire Los Alamos County.

Los Alamos County is home to the Los Alamos National Laboratory (LANL) which is one of the largest science and technology institutions in the world. LANL operates under the U.S. Department of Energy (DOE) and is located almost entirely on federally owned land. The County does not have jurisdiction over the land, therefore it is not included as part of this plan's study area.

The laboratory is the foundational source of prosperity and growth for the two communities and has defined the County's unique community characteristics. Both communities maintain a high median income, low poverty rate, and significant educational attainment, contributing to a stable and prosperous environment. The county's demographics include a predominantly White and Hispanic population, a high homeownership rate, and a notable proportion of seniors and families. This economic and social landscape underscores the need for accessible pedestrian infrastructure, especially connecting residential areas with schools, parks, and commercial zones. Addressing the specific needs of various groups – such as seniors, low-income residents, and those with disabilities – ensures that the pedestrian network promotes inclusivity and equity. By considering these community characteristics, the Pedestrian Master Plan supports a high quality of life, economic growth, and a more connected, walkable environment for all residents.

Los Alamos Townsite and White Rock are geographically constrained by the many mesas and canyons, which have limited their physical growth. This has resulted in two refined communities in which the County has focused development and improvements within the established neighborhoods, rather than on their geographic expansion. One outcome of this is a well-established pedestrian network. The existing pedestrian network consists of a vastly connected system of sidewalks on most roadways, several pedestrian-friendly

crossings, and notable pedestrian corridors in destination areas. This being said, there can always be improvements to walkability to enhance a pleasant, convenient, and safe experience for pedestrians, as well as all other modes of transportation.

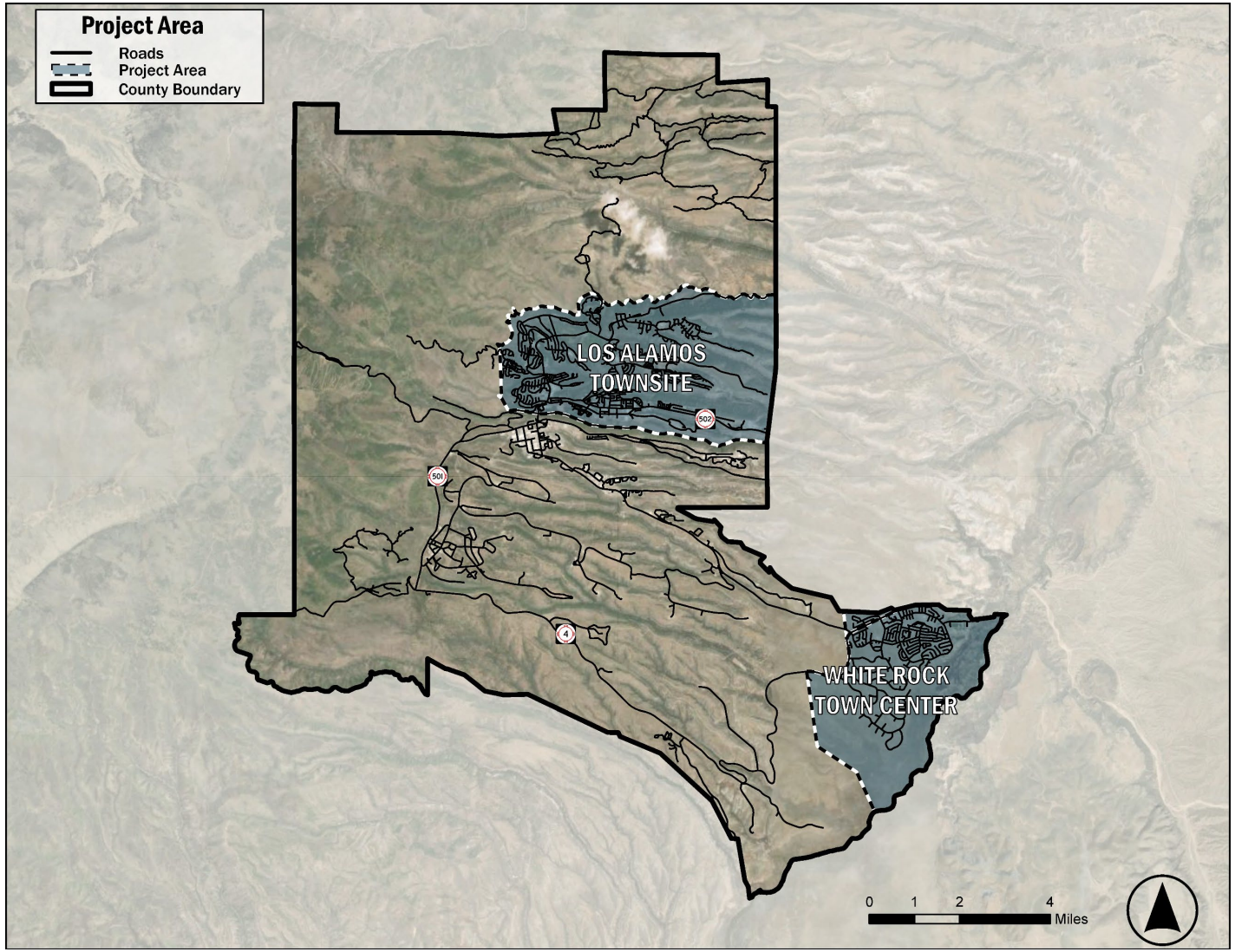


Figure 1: Project Area

Connection to Previous Plans and Related Documents

Previous Plans

Los Alamos County's previously adopted plans have developed several strategies and recommendations which involve the pedestrian environment. These were reviewed to help inform this plan's Vision & Goals, as well as create a comprehensive collection of previously identified projects and recommendations involving the pedestrian environment (this is provided in the *Projects from Previous Plans Section* on page 73).

The following plans were reviewed:

- Los Alamos County Pedestrian Transportation Plan (1998)
- Comprehensive Plan (2016)
- Road Safety Audit - Trinity Drive between 15th Street and Oppenheimer Drive (2016)
- Los Alamos County Americans with Disabilities Act (ADA) Transition Plan (2017)
- Bicycle Transportation Plan (2017)
- Los Alamos Tourism Strategic Plan (2018)
- Economic Vitality Strategic Plan (2019)
- Americans with Disabilities Act Access Audit and Transition Plan (2021)
- Los Alamos Resiliency, Energy and Sustainability Task Force (2021)
- Los Alamos County Downtown Master Plan (2021)
- White Rock Town Center Master Plan (2021)
- Mid-Block Crossing Policy (2023, requesting adoption in 2025)
- 2025 Strategic Leadership Plan (2024)

Common themes across the plans include:

- Improving and supporting streets for the safety and convenience of all users
- Designing for accessibility
- Supporting a "complete streets" policy for all new and rebuilt roadways
- Upgrading aging infrastructure
- Creating a vibrant, pedestrian-friendly downtown with gathering spaces, variety of uses, and nighttime entertainment
- Enhancing wayfinding and streetscaping
- Promoting and attracting tourism and outdoor recreation-related activities and businesses
- Incorporating transportation system planning into land use
- Integrating transit considerations into development approvals
- Improving access to public open space and recreational facilities

The complete literature review is found in Appendix A.

Related Documents and Divisions

The pedestrian environment is shaped by a variety of plans, policies, standards, and decisions from different departments, extending beyond the scope of this

Master Plan. Oftentimes, the connection between the pedestrian realm and seemingly unrelated documents may be overlooked or not fully understood. The following descriptions explain the purpose of each document and how it impacts the pedestrian safety and walkability.

Mid-Block Crossing Policy

This policy establishes a standardized procedure for identifying and implementing mid-block pedestrian crossings within the County. This policy is based on observations of pedestrian behavior, indicating a preference for crossing at mid-block locations to take the most direct route possible. The policy outlines a series of steps to ensure that mid-block crossings are installed where they are most needed and can be safely accommodated:

- Step 1: Request for Consideration sent to Engineering Division: Initiated by sending a request to the Engineering Division.
- Step 2: Physical Location Data Collection by County: If data meets criteria, the process is moved to the next step (some requirements include meeting the minimum pedestrian volume and minimum AADT; distance to nearest marked/protected crossing; presence of lighting; roadway configuration; and others)
- Step 3: Traffic Data Collection and Operational Observations: Additional data on traffic patterns and operational observations are gathered.
- Step 4: Apply Data from Steps 2 and 3 to Pedestrian Crossing Treatment Flowchart: The collected data is applied to a flowchart to determine appropriate pedestrian crossing treatments.
- Step 5: Evaluate and Recommend Countermeasures: Based on the flowchart's recommendations, countermeasures are evaluated and proposed for installation.

***Connection to Pedestrian Environment**: This policy ensures pedestrian safety and accessibility by systematically identifying locations where mid-block crossings are necessary and feasible. By following a structured process, the policy helps to reduce pedestrian-vehicle conflicts and enhance walkability within the County.*

Los Alamos County Open Space & Trails Management Plan

The Los Alamos County Open Space & Trails Management Plan (which is being updated at the time of the Pedestrian Master Plan effort) outlines the County's vision for preserving natural open spaces and maintaining a robust network of trails. This network includes hiking, biking, and equestrian trails that provide residents and visitors with access to scenic, ecological, and recreational assets. While the primary function of the trail system is recreational, it also offers opportunities to strengthen the broader pedestrian network by

improving connections between trails and sidewalks, neighborhoods, schools, and commercial areas. Strategic integration of trails into the pedestrian infrastructure can enhance walkability, expand access to nature, and promote active transportation for short-distance trips.

***Connection to pedestrian environment**: The Open Space and Trails Plan supports walkability by providing alternative walking routes and opportunities to connect the recreational trail system with the sidewalk network, creating a more complete and accessible pedestrian environment.*

Public Works Design and Construction Standards

This construction standards document (which is being updated at the time of the Pedestrian Master Plan effort) serves as the technical rubric for how transportation infrastructure is built and maintained throughout the County. These standards establish the required specifications for roadway design, sidewalk widths and placement, bike lanes, materials, street lighting, drainage systems, driveway access, and more. By defining the physical form and layout of the public right-of-way, these standards directly shape the pedestrian experience. It is essential that the standards reflect current best practices for pedestrian and multi-modal safety, accessibility, and comfort. Equally important is the evaluation of how these standards perform in practice—how they function in real life and meet the needs of people moving through the built environment on foot or by other non-motorized means.

***Connection to pedestrian environment**: These standards determine the physical design and quality of pedestrian infrastructure, shaping the foundational elements of the pedestrian network:*

- ***Sidewalk width** affects overall comfort, accessibility, and safety—narrow sidewalks may limit mobility for people with disabilities or those walking with strollers or in groups, while wider sidewalks support inclusivity and ease of movement and passing.*
- ***Access management**, such as the spacing and design of driveways, reduces potential conflict points between vehicles and pedestrians, improving safety at intersections and mid-block crossings.*
- ***Buffer zones** between the sidewalk and street enhance comfort and safety by separating pedestrians from moving vehicles.*
- ***Drainage** design affects walkability by preventing water pooling, ice formation, or debris on pedestrian paths.*

Traffic and Streets Division

The Los Alamos County Traffic and Streets Division is responsible for the operation and maintenance of the public roadway network, with specific oversight of traffic signals, streetlights, signage, school flashers, pavement markings, and other infrastructure critical to safe and efficient transportation. The Division also maintains physical elements such as curbs, gutters, drive-pads, sidewalks, and vegetation within the public right-of-way as a joint effort with the Parks and Open Space Division. In addition to maintenance, the Division conducts traffic engineering services including traffic impact studies, speed studies, traffic counts, and assessments of pedestrian walkability and bicycle accessibility. These activities directly inform decision-making and improvements related to roadway safety, traffic flow, and multimodal access.

***Connection to pedestrian environment**: The Traffic and Streets Division directly supports pedestrian safety and walkability through the maintenance and operation of sidewalks, crosswalks, streetlights, signals, and signage. Its work ensures that walking routes remain accessible, visible, and free of obstructions, while its traffic studies and speed monitoring help identify and address areas of concern. By combining infrastructure upkeep with data-driven planning, the Division plays a key role in creating a safe and functional pedestrian environment.*

Landscaping Code

The Landscaping Code, part of the Los Alamos County Development Code, establishes the standards for how landscaping is designed, installed, and maintained across public and private developments. It guides decisions about plant selection, placement, irrigation, and long-term upkeep to ensure consistency and quality throughout the County's built environment.

***Connection to pedestrian environment**: Landscaping plays an important role in shaping the pedestrian experience. It enhances aesthetics, provides shade and comfort, supports stormwater drainage, and often serves as a physical buffer between sidewalks and vehicle traffic, improving both comfort and safety. However, landscaping must be carefully maintained to preserve adequate sight distance at intersections, driveways, and crosswalks—ensuring that drivers and pedestrians can see each other clearly. Poor sight distance can lead to conflicts or collisions, especially in areas with high pedestrian activity.*

Demographics

Table 1 presents a brief overview of the two CDPs based on the 2020 Decennial Census and ACS (American Community Survey) 2023 5-year Estimates. Key statistics reveal the two communities' similar characteristics with the most notable difference being White Rock's much smaller population and housing unit stock. The fact of a smaller community likely contributes to the other slight differences in homeownership rate, household value, White population, and household income.

Overall, these statistics indicate both communities to be small, affluent, and highly educated with a mature working-age population. The housing market is relatively expensive, reflecting the high median household income and stability through homeownership, displaying a strong economic standing. While the majority of the population identifies as White and speaks only English at home, there is a notable presence of Hispanic or Latino residents. This demographic overview offers a high-level understanding of the communities' unique social, economic, and cultural landscape pertinent for planning and policy considerations.

Table 1: Demographic Snapshot of Los Alamos CDP and White Rock CDP

Topic	Los Alamos Townsite	White Rock
Total Population	13,179	5,852
Median Age	40.6	41.7
Population 65 and Older	16.4%	23.2%
Ratio of Sexes	53.0% M; 47.0% F	49.0% M; 51.0% F
Total Housing Units	6,026	2,409
Homeownership Rate	65.9%	99.6%
Median Household Value	$465,900	$472,800
Median Gross Rent	$1,304	No data
Identifies as Hispanic or Latino	2,287 (17.4%)	1,014 (17.3%)
Identifies as White	9,640 (67.8%)	4,311 (73.7%)
Identifies as Minority*	4,245 (32.2%)	1,541(26.3%)
Population Only to Speak English at Home	79.3%	93.4%
Employment Rate	66.2%	61.1%
Median Household Income	$136,502	$150,714
Population Below Poverty Level	3.6%	1.4%
Bachelor's Degree of Higher	68.0%	70.4%

**The Minority population consists of the population who identifies as Hispanic or Latino (including those who identify as White) in addition to the population who does not identify as Hispanic or Latino but are of a race other than White Alone.*

Below are deeper insights into how these demographics may affect the County's planning and approach to transportation:

Average Household Income and Poverty Rate: Both CDPs have **a significantly high average household income**, indicating a prosperous community. In addition, it possesses a low poverty rate, which highlights the county's financial stability compared to state and national averages.

Median Rental Cost and House Value: Housing costs in the communities are substantial, with **rental and ownership costs surpassing state averages**. This high market value aligns with the area's economic affluence but may impact affordability for new residents and lower-income households.

Median Age and Age Distribution: With a median age slightly above the national average, both CDPs' population includes a **significant senior demographic**. This age profile has implications for health services, community planning, and senior-oriented amenities.

Race and Ethnicity Composition: Los Alamos CDP and White Rock CDP are predominantly White but also include Hispanic and Latino residents who comprise a growing community. This diversity informs cultural, educational, and social dynamics within the region.

Language Proficiency: While **most residents speak only English, a sizable minority communicates in Spanish**, underscoring the presence of bilingual households and the need for language-accessible services.

Educational Attainment: Both communities boast a **highly educated population**, with a small proportion lacking a high school diploma, reflecting educational priorities and accessibility within the county.

Environmental Justice

Using Environmental Justice principles, Title VI of the Civil Rights Act definitions, and other transportation research, ten demographic characteristics from the U.S. Census are identified to represent those that may have special transportation needs.

These are considered disadvantaged population groups and are defined on the following pages, along with statistics for Los Alamos County, the state of New Mexico, and the United States for a comparative understanding. Los Alamos County as a whole was used for this analysis, rather than the individual CDPs. This enabled a more comprehensive understanding as these two communities are interconnected.

All data was collected from the 2022 5-Year American Community Survey (ACS) with the exception of the first two categories (individuals identifying as Hispanic or Latino and non-Hispanic minorities) which were collected from the 2020 Decennial Census.

Individuals Identifying as Hispanic or Latino

The ACS distinguishes between race and ethnicity. Hispanic is an ethnicity that is defined by the ACS and the U.S. Census by country of origin such as Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

In Los Alamos County, 18.1% of the population identifies as Hispanic or Latino, aligning closely with the national average of 18.7% but significantly lower than New Mexico's 47.7%, as shown in ***Figure 2***. This reflects New Mexico's higher Hispanic heritage statewide, indicating that Los Alamos County is less reflective of the broader state demographic but remains comparable to national levels.

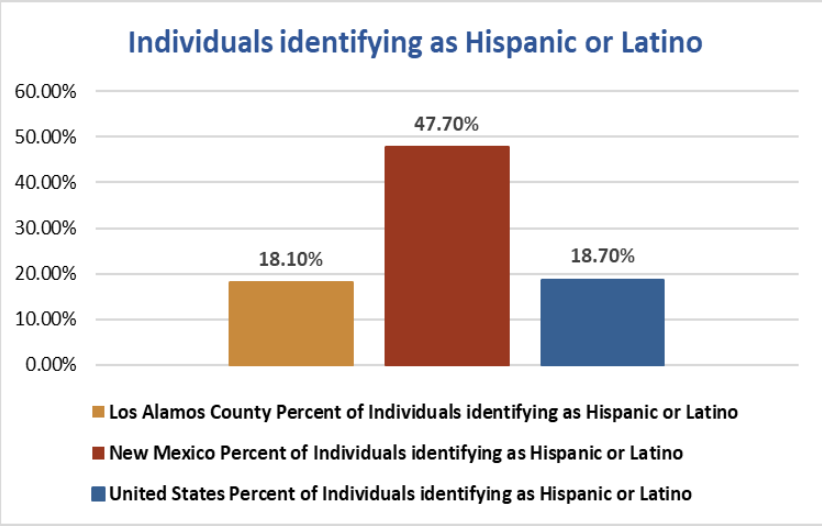


Figure 2: Individuals Identifying as Hispanic or Latino

Non-Hispanic Minority Population

The U.S. DOT Order (5610.2) on Environmental Justice defines a "minority" as a person identifying themselves as "Black"; "Asian American"; "American Indian and Alaska Native"; "Native Hawaiian and other Pacific Islander"; "Some Other Race"; or "Two or More Races." In the American Community Survey (ACS), participants may identify themselves as belonging to one or more races.

Figure 3 represents the county's non-Hispanic minority population standing at 14.9%, lower than both the state (15.8%) and national (23.4%) percentages. This suggests a less diverse non-Hispanic population in Los Alamos compared to the country as a whole, with limited representation from other racial and ethnic minorities relative to broader trends.

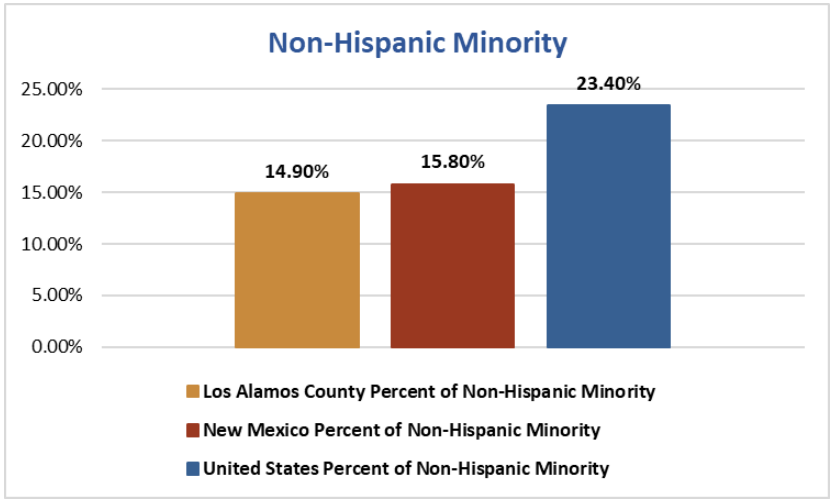


Figure 3: Non-Hispanic Minority

Population Below the Poverty Level

Poverty is defined as a state or condition in which an individual or community lacks the financial resources and essentials for a minimum standard of living. Poverty can be explained as an income level from employment that is so low that basic human needs are not being met. Poverty-stricken people and families might go without proper housing, clean water, healthy food, and medical attention.

Los Alamos County has a low poverty rate of 3.7%, much lower than New Mexico's rate of 18.6% and the national rate of 12.8%, shown in ***Figure 4.*** This stark difference highlights the county's economic strength and affluence, contrasting sharply with the state's higher poverty levels, likely influenced by the county's unique employment opportunities and higher-than-average incomes.

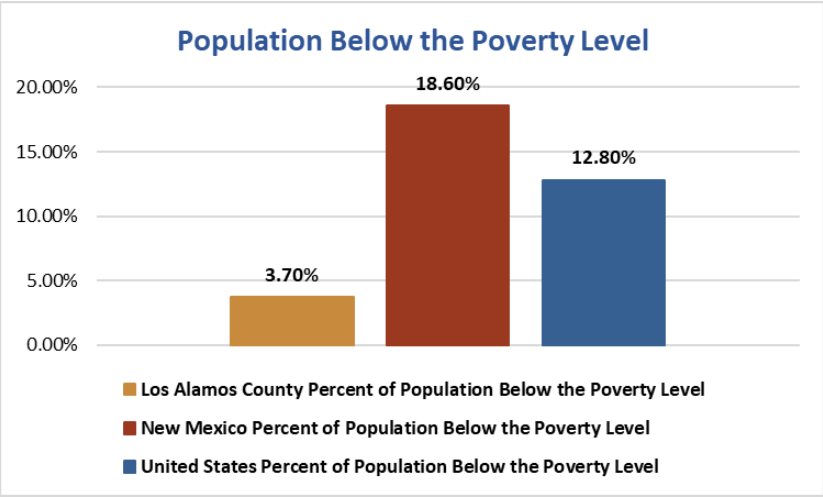


Figure 4: Population Below the Poverty Level

Individuals with Limited English Proficiency

Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," requires all federally funded agencies to make services more accessible to eligible persons who are not proficient in the English language. The ACS assesses only people aged five and older and defines Limited English Proficiency (LEP) as "primary language spoken at home other than English and speak English not very well."

About 5.9% of Los Alamos County's population has limited English proficiency, lower than both the state average of 8.6% and the national average of 8.2%, illustrated in ***Figure 5***. This indicates a smaller population requiring language assistance, although Spanish remains a significant non-English language locally.

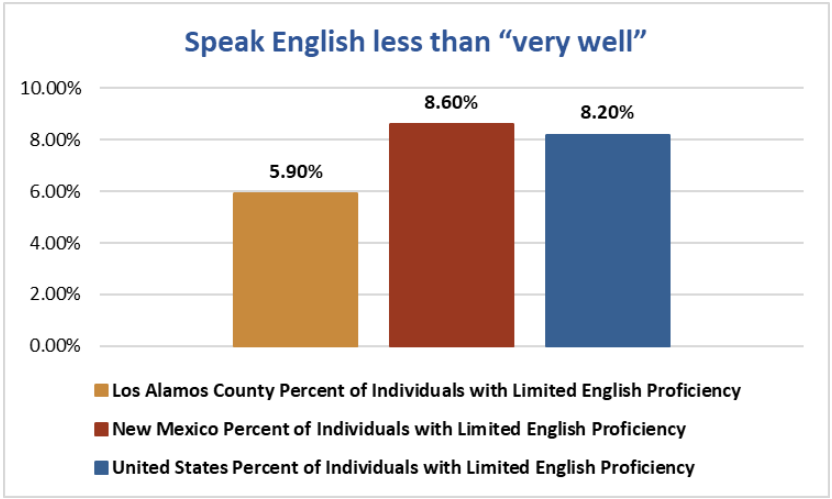


Figure 5: Population with Limited English Proficiency

Female Head of Household with Child

The ACS defined "Female Head of Household with Child" as female headed households with no husband present and children under the age of 18 years.

Figure 6 demonstrates the percentage of female-headed households with children as 5.6% in Los Alamos County, notably lower than New Mexico's rate of 26.89% and the national rate of 22.45%. This difference suggests a lower proportion of single-parent households in Los Alamos, reflecting demographic or economic factors that may contribute to family stability in the area.

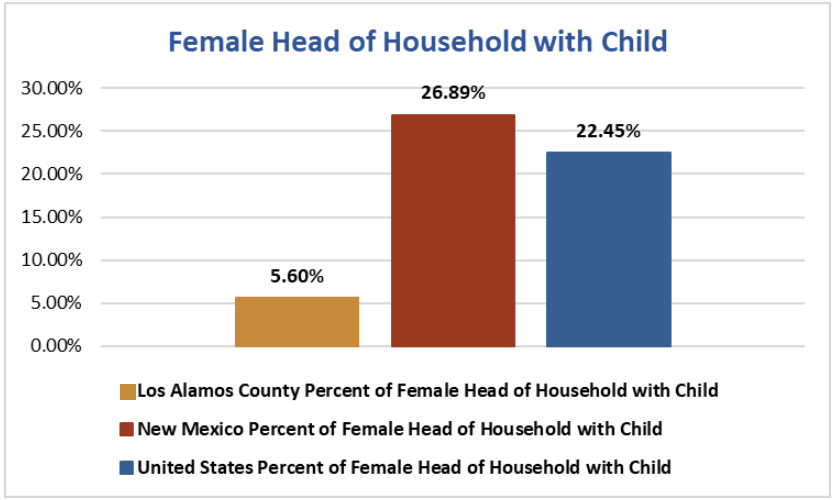


Figure 6: Female Head of Household with Child

Individuals 75 Years and Older

As an individual ages, mobility challenges increase. Age-related changes in vision, physical functioning, and the ability to reason and remember, as well as some diseases and medications, might affect some older adults' mobility abilities.

Los Alamos County has 6.2% of its population aged 75 and over, close to the national rate of 6.7% and somewhat lower than New Mexico's 7%, as shown in ***Figure 7***. This proportion suggests that the senior population is modest in size but slightly below the state and national averages, impacting local planning for elder care services and age-friendly infrastructure.

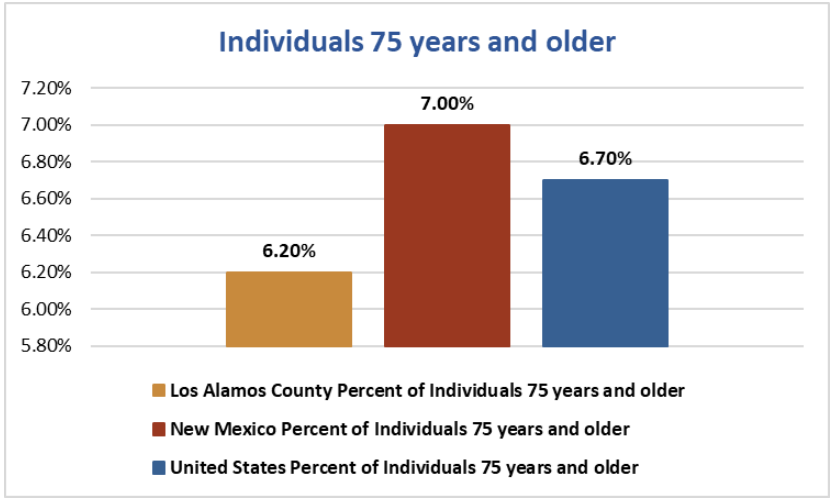


Figure 7: Individuals 75 Years and Older

Carless Households

The ACS defines carless households as occupied housing units with no vehicles available. A recent analysis of the 2001 National Household Travel Survey found that a greater percentage of rural households' own vehicles compared to those living in urban areas.

Only 2.0% of households in Los Alamos County do not have a car, a significantly lower rate compared to New Mexico's 5.7% and the national rate of 8.5%, as shown in ***Figure 8***. This reflects a high dependence on private vehicles in Los Alamos, emphasizing the need for efficient road networks and possibly indicating limited public transportation options.

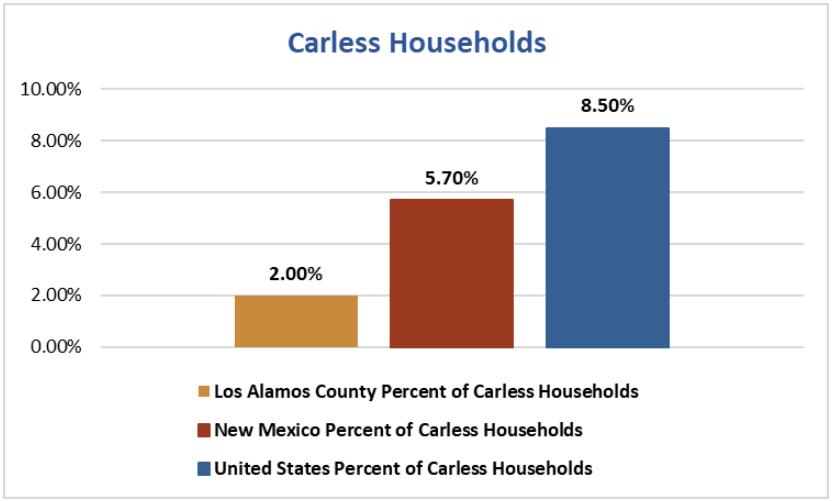


Figure 8: Carless Households

Individuals with a Disability

The ACS distinguishes disabilities by the following categories: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Each of these impairments can affect one's ability to use any mode of transportation safely and effectively, therefore all disabilities were recognized in this analysis.

Figure 9 shows the percentage of individuals with a disability in Los Alamos County at 6.1%, notably lower than both the state (15.8%) and national (12.7%) rates. This suggests a relatively healthy population but also implies that disability services, while still necessary, may be less in demand compared to other areas.

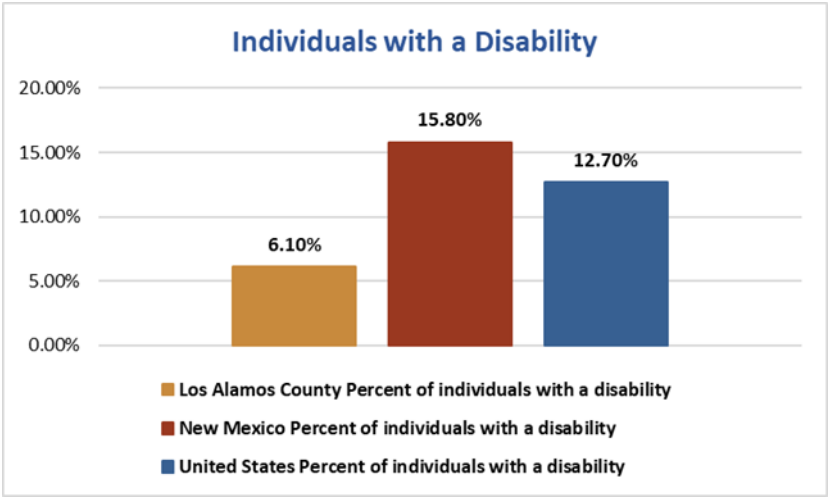


Figure 9: Individuals with a Disability

No High School Diploma

The ACS defines the population group with no high school diploma as individuals over the age of 25 who have attended school through the 12th grade but have no diploma or equivalent. Those with no high school diploma are often limited to low paying jobs and few economic resources

The percentage of residents without a high school diploma in Los Alamos County is represented in ***Figure 10*** at only 2.1%, far lower than both the state (13.5%) and national (11.5%) rates. This high level of educational attainment underscores the county's access to education and employment opportunities that prioritize advanced qualifications.

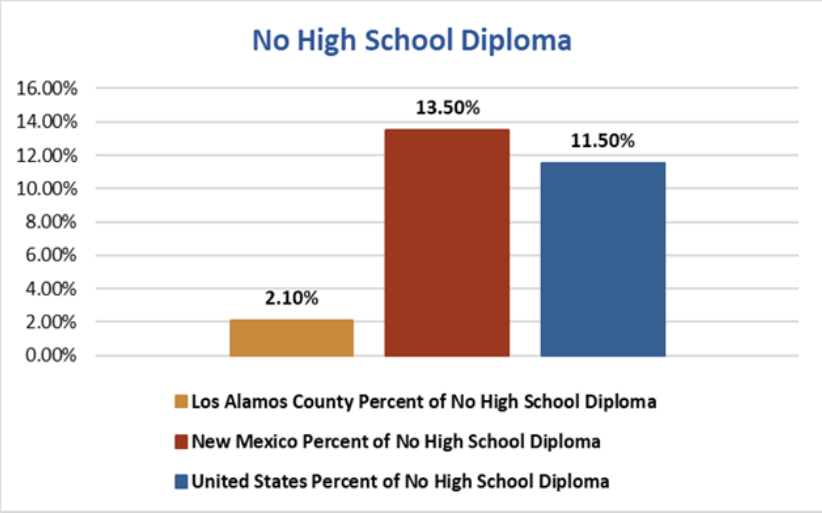


Figure 10: No High School Diploma

Unemployment Rate

The ACS defines the unemployment rate as the percentage of people not actively looking or available for work in the last 4 weeks. This population does not include those who have become discouraged or have not searched for work or have been available to take a job in the past four weeks.

Unemployment rate is represented in ***Figure 11*** with Los Alamos County at 2.0%, significantly lower than the state (6.5%) and national (5.3%) rates. This reflects local solid employment conditions, likely bolstered by specialized industries and high educational attainment levels in the county, fostering a robust labor market compared to state and national averages.

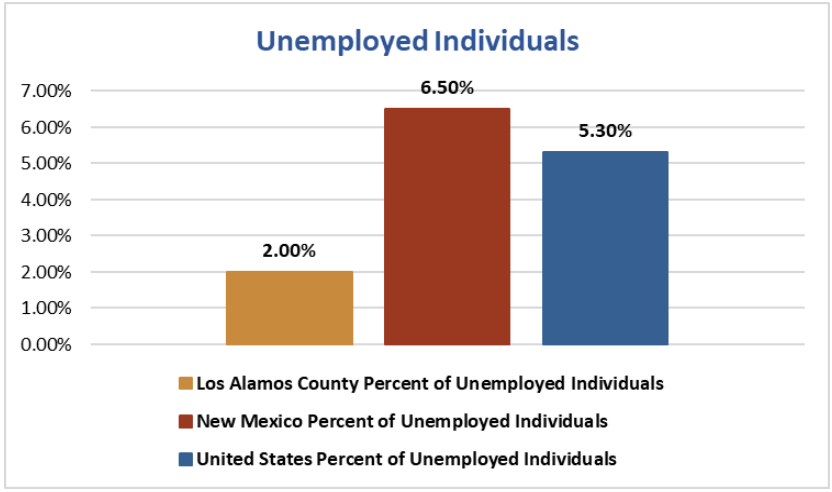


Figure 11: Unemployed Individuals

CHAPTER 2
VISION & GOALS

Vision: Where We Want to Go

The vision of Los Alamos County Pedestrian Master Plan was developed through a review of the vision statement in the 1998 Pedestrian Master Plan and the description for this project on the County's project webpage, and was approved by the steering committee.

The vision from the 1998 Pedestrian Master Plan is:

"It is the vision of Los Alamos County to have the community become a place where people continue to choose to make walking a part of their everyday lives. Residents and visitors alike will be able to walk with confidence, safety and security in every area of the community. It is also our vision that pedestrians will have a pleasant, convenient trip without motorized traffic conflicts and with minimal pedestrian barriers or obstructions."

The project webpage states:

"This initiative aims to enhance safety, infrastructure and accessibility in the Los Alamos Townsite and White Rock Town Center. Anticipated updates are to incorporate Vision Zero principles and the Federal Safe Systems Approach focusing on improving road network infrastructure within both townsites."

The final vision for this plan is:

Create a community where walking is the preferred, safe, and enjoyable mode of transportation for residents and visitors alike. By integrating Vision Zero principles and the federal Safe Systems approach, we aim to ensure that every pedestrian can navigate the townsites of Los Alamos and White Rock with confidence, safety, and accessibility. We envision a seamless walking experience with well-designed infrastructure, free of motorized traffic conflicts and barriers, fostering a walkable environment that promotes health, equity, and a high quality of life for all.

Goals

Safety: Reduce pedestrian-related crashes and their severity:

By investing in safe, connected pedestrian infrastructure, Los Alamos County ensures a high quality of life for its residents, workers, and visitors and fosters a stronger sense of community. Well-designed, accessible, and pedestrian-friendly areas are the backbone of vibrant communities, creating a shared space for all residents – children, adults, seniors, and everyone. The safety measures implemented through Vision Zero principles enhance this sense of community, building a safer environment for all pedestrians.

Connectivity: Develop a seamless, accessible pedestrian network

A comprehensive pedestrian network is essential for ensuring seamless mobility between neighborhoods, schools, transit hubs, key destinations, and recreational areas. Prioritizing connectivity encourages walking as a viable and enjoyable mode of transportation, reducing dependency on vehicles and fostering sustainable, vibrant communities. By connecting the dots, Los Alamos County can empower all users with safe and direct walking routes that enhance mobility and accessibility for everyone.

Equity: Ensure walkability and accessibility for all:

Walking is the most inclusive and equitable form of transportation, requiring no fare or unique resources. Los Alamos County is committed to addressing disparities in pedestrian infrastructure, ensuring that all neighborhoods benefit from equitable investment. Pedestrian projects must meet the needs of the County's diverse populations, particularly those who rely on walking as their primary mode of transportation. This includes people with disabilities and those using mobility aids. Prioritizing underserved areas with deficient infrastructure ensures that every resident has safe, comfortable, and dignified access to pedestrian facilities, helping correct historical inequities and creating a more inclusive, walkable community for everyone.

Health: Increase physical activity and improve public health:

Walking is a simple yet effective way to enhance health, whether for transportation or leisure. Regular walking reduces the risk of chronic diseases and promotes overall well-being. By creating environments that encourage walking, we can combat widespread health issues such as obesity and inactivity. Walking is a low-impact, age-inclusive activity that benefits physical and mental health and promotes longer, healthier lives, especially among older adults. Furthermore, walking reduces fossil fuel consumption, improves environmental

health, and contributes to climate goals by decreasing greenhouse gas emissions.

Vibrancy: Create a connected, thriving pedestrian network:

A well-connected pedestrian system is not just about safety and health, and it's also about sustaining vibrant communities and economic vitality. Walkable neighborhoods—especially those with safe access to schools, transit, and local businesses—tend to flourish economically and socially. By prioritizing pedestrian-friendly infrastructure, Los Alamos County can cultivate dynamic, lively spaces that attract residents and visitors alike. Increased pedestrian accessibility will also strengthen the County's most active and prosperous areas, fostering a stronger sense of place.

CHAPTER 3
PUBLIC ENGAGEMENT

The Los Alamos County Pedestrian Master Plan update involved a comprehensive effort to engage residents and stakeholders to gather valuable insights for improving pedestrian infrastructure in Los Alamos Townsite and White Rock Town Center.

Los Alamos County hosted a public meeting in conjunction with regular scheduled Transportation Board meeting on September 5, 2024, where Wilson & Co. presented proposed updates to the Pedestrian Master Plan. Community members were encouraged to participate in person at the Municipal Building Council Chambers or virtually via Zoom.

A public survey was available from September 5, 2024, until October 14, 2024, to encourage continued engagement. This survey allows residents to share their thoughts on improvements related to walkability and safety. The feedback gathered from this survey and other engagement activities will help shape the critical focus areas of the plan.

Outreach

The County utilized multiple channels to reach residents, including announcements for the public/Transportation Board meeting, a digital survey, and publicized email and phone contact options. Information was distributed via the County's website and social media, with a QR code for quick survey access. The County also invited community members to submit feedback through email if they were unable to attend the in-person meeting. By leveraging multiple outreach methods, Los Alamos County ensured that all residents had the opportunity to conveniently contribute to the pedestrian plan update.

A dedicated project page for the Los Alamos County Pedestrian Master Plan update is available on the Los Alamos County website. This page provides the community with project information, updates, and access to resources, including presentations, meeting details, and links to surveys for gathering public feedback. Residents are able to stay informed about the plan's progress and participate in the planning process by visiting this webpage.

Email and Phone Feedback

Community feedback gathered through emails, phone Community feedback via emails, phone calls, and survey responses highlighted a strong desire to improve pedestrian safety, infrastructure, and accessibility across Los Alamos County. Key concerns included intersection safety, walkway conditions, accessibility enhancements, and integration with public transportation.

- **Safety Concerns:**
    - **Intersections:** Dangerous crossings on Trinity Drive and Central Avenue were noted, with suggestions for diagonal crosswalks and turn restrictions during pedestrian signals.
    - **Driver Behavior:** Speeding and distracted driving were frequently cited, with calls for better enforcement.
- **Pedestrian Infrastructure:**
    - **Walkways:** Deteriorated sidewalks, particularly in White Rock, were reported, with calls for resurfacing and protective barriers.
    - **Trinity Drive:** High vehicle speeds and insufficient pedestrian separation were highlighted, prompting suggestions for concrete barriers.
- **Accessibility Enhancements:**
    - **Direct Paths:** Improved pedestrian routes near commercial areas, such as Smith's grocery store, were requested.
    - **Crosswalks:** Extended crossing times and redesigned crosswalks, including diagonal options, were proposed.
- **Public Transportation Integration:**
    - **Bus Stops:** Residents requested schedule displays at stops to aid those without mobile access.
- **Traffic Flow and Design:**
    - **Proposed Stop Signs:** Concerns about traffic disruption and emergency access adjustments were raised.
    - **Pedestrian-Oriented Design:** Calls for prioritizing pedestrians over vehicles included suggestions for widened sidewalks and physical barriers.

Feedback revealed diverse perspectives, with long-term residents focusing on upgrades to existing infrastructure and newer residents advocating for systemic improvements. These insights will inform actionable recommendations in the Los Alamos County Pedestrian Master Plan, emphasizing safety, accessibility, and a pedestrian-friendly environment.

Survey Analysis

The survey, conducted from September 5 to October 14, 2024, gathered community feedback to inform the Los Alamos County Pedestrian Master Plan. Focused on walkability in the Los Alamos Townsite and White Rock Town Center, it collected insights on walking habits, barriers, and improvement priorities. Key findings are detailed in Appendix B.

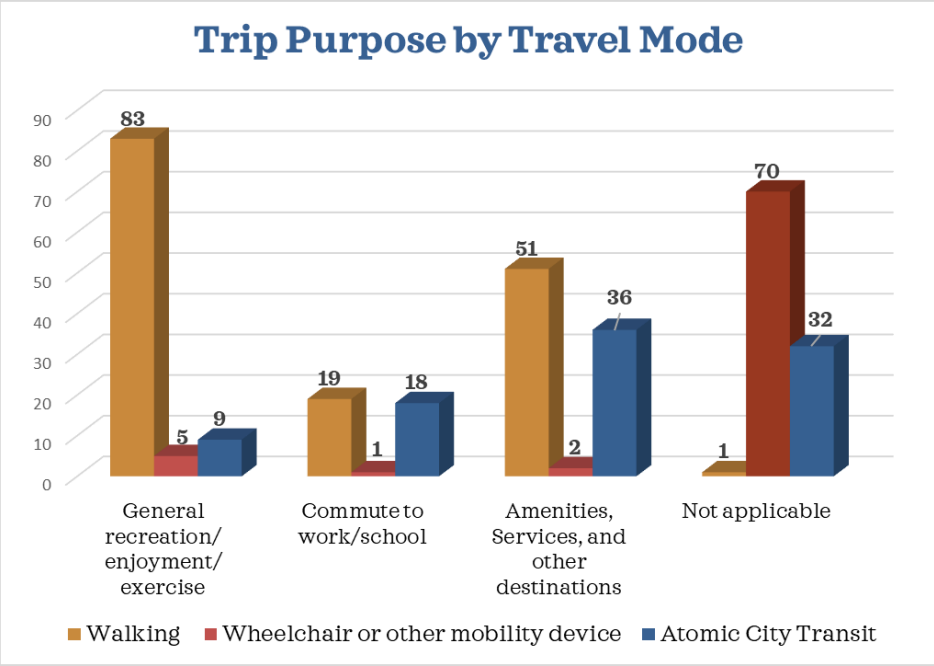


Figure 12: Survey Results for "What is your trip purpose by travel mode?"

Key Findings:

1. **Walking Habits**
   - 67% of respondents walk outdoors daily, primarily for recreation (83 respondents) or commuting to destinations (51) (***Figure 12*** illustrate respondent trip purpose)
   - Public transit usage is low, with 7% using it daily and 37% never using it.
2. **Barriers to Walking (a mapping exercise represented in *Figure 13* and *Figure 14*)**
   - **Top concerns**: Speeding drivers (52%), insufficient safe crossings (35%), and busy streets without sidewalks (31%).
   - Winter weather issues (snow/ice) and poor sidewalk maintenance were frequently cited, with specific problem locations highlighted (e.g., Trinity Drive, Diamond Drive, North Mesa).

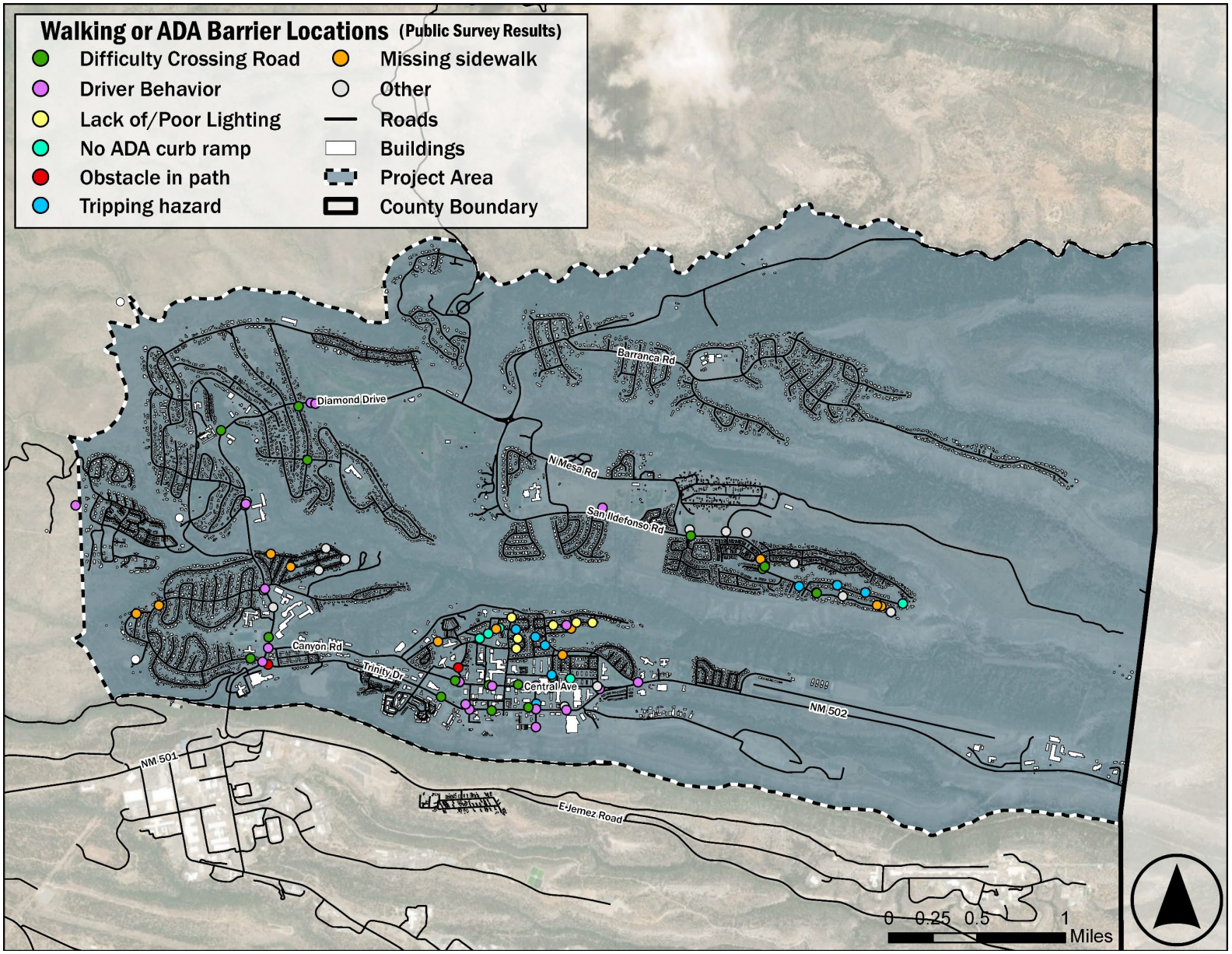


Figure 13: Los Alamos Townsite Mapped Survey Results

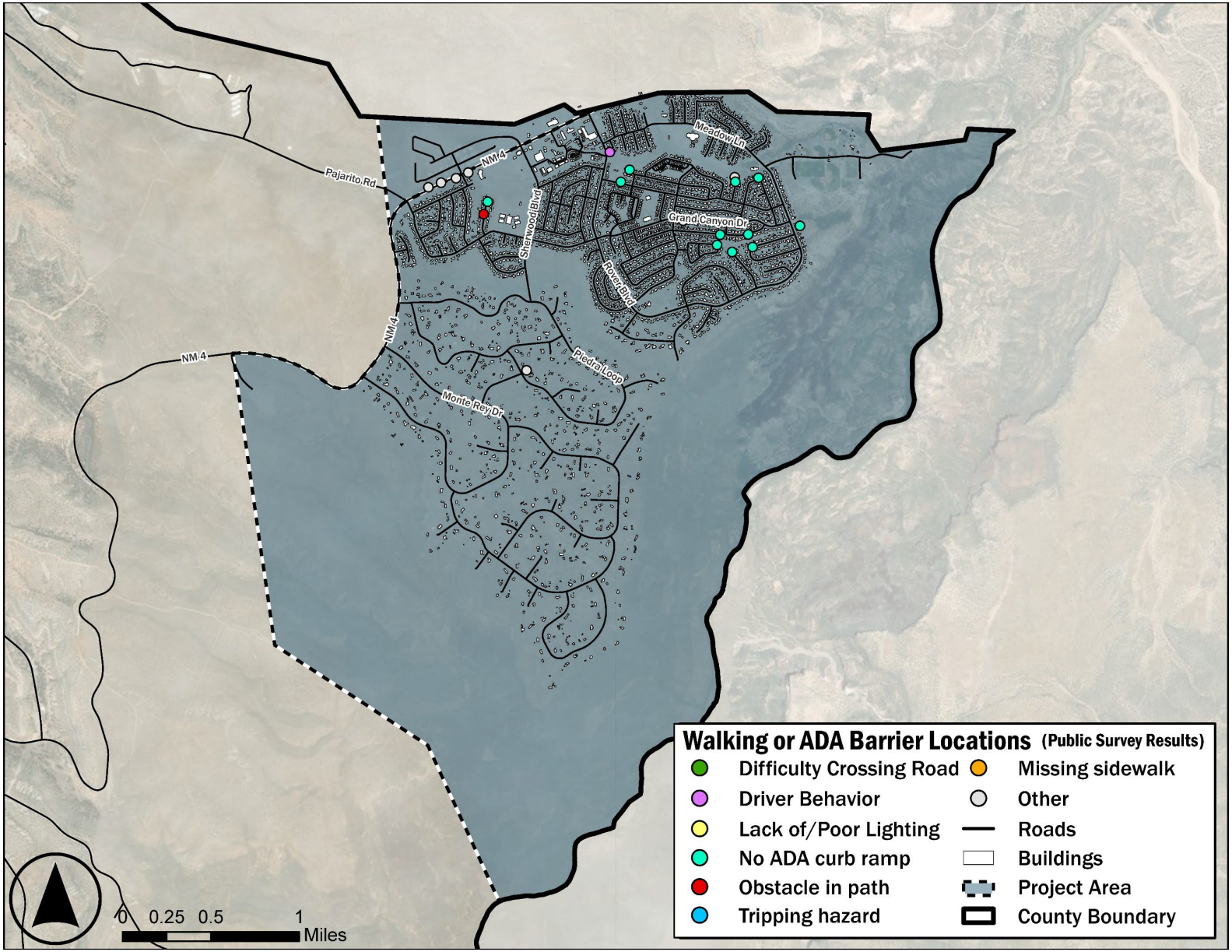


Figure 14: White Rock Town Center Mapped Survey Results

3. Priority Improvement Locations (*Figure 15*)

- Safety-critical areas: 82% prioritized addressing locations with frequent pedestrian injuries.
- Infrastructure: 72% prioritized adding sidewalks along busy streets and improving school routes.
- Accessibility: 58% highlighted the need for better connections to transit stops.

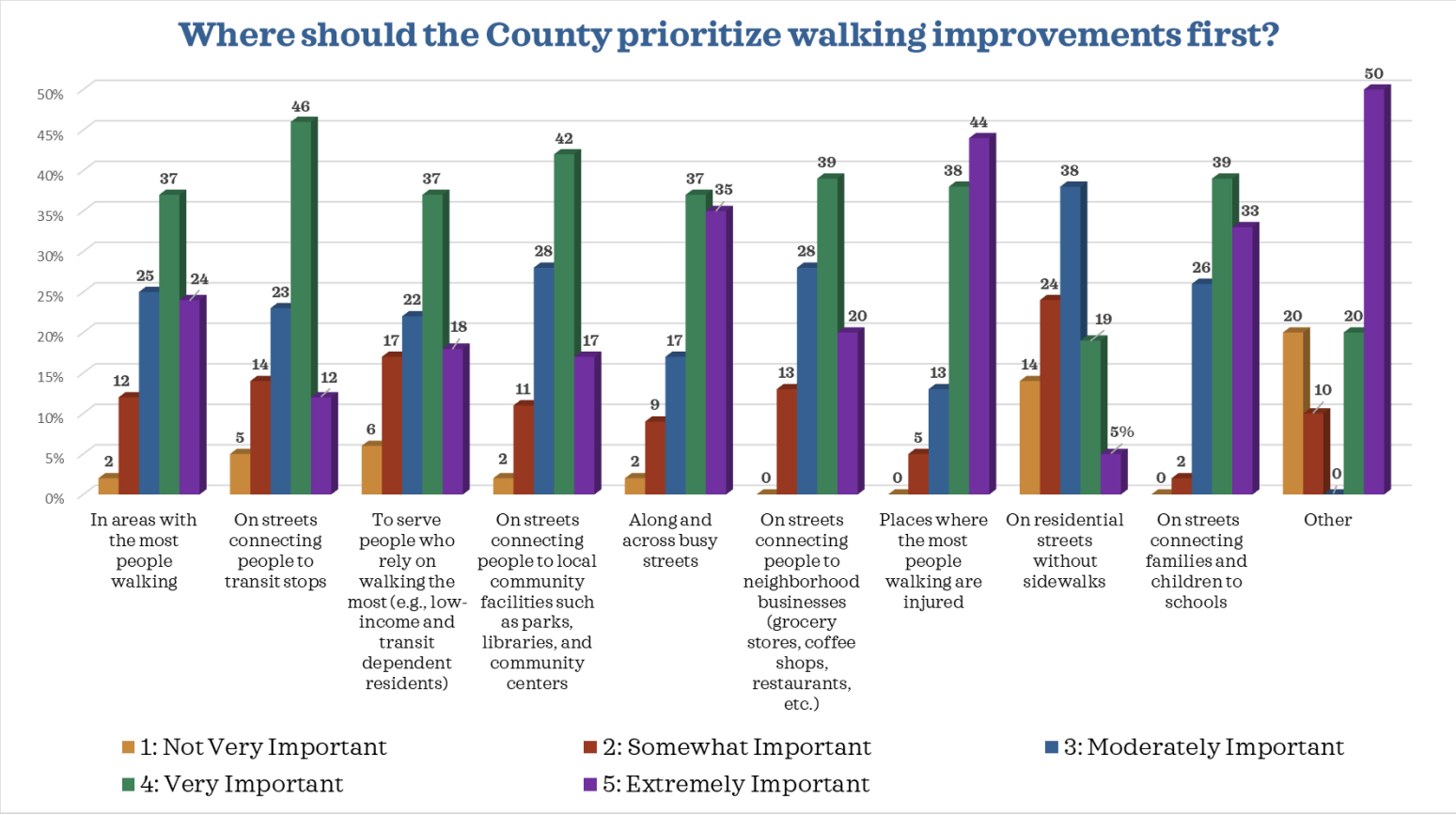


Figure 15: Survey Results for "Where should the County prioritize improvements first?"

4. Preferred Walking Path Design Elements

- Raised sidewalks with curb separation and landscape buffers were favored.
- Shared spaces and road-level paths without separation received negative feedback due to safety concerns.

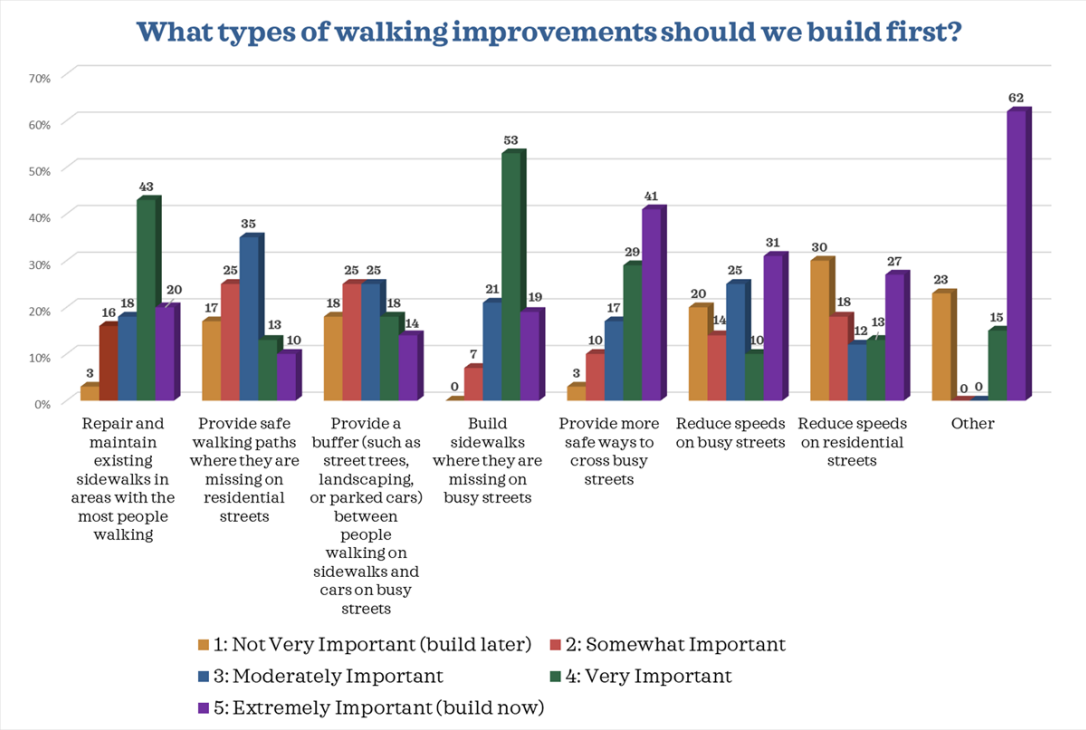


Figure 16: Survey Results for "What types of walking improvements should we build first?"

5. Types of Improvements (*Figure 16*)

- Prioritize pedestrian infrastructure maintenance, on existing sidewalks in high-traffic areas.
- Address major barriers (speeding, sidewalk gaps, and safer crossings) at critical locations such as Trinity Drive and school zones.
- Implement designs that emphasize safety, including separated pathways and tactile guidance systems.

6. Demographics

- Predominantly older population (34 respondents aged 55+), with balanced gender representation.
- Most respondents identified as White/Caucasian and were from the primary service area.

CHAPTER 4

EXISTING PEDESTRIAN CONDITIONS

Pedestrian Facilities Overview

Pedestrian facilities consist of the infrastructure on roadways and designated paths (sidewalks and trails) and crossing techniques used at intersections (signals and crosswalks). Together, these define the level of connectivity and safety in the pedestrian network. While trails are included in the existing facilities review, they are not the focus of this plan.

The project area, encompassing Los Alamos Townsite and White Rock Town Center, features a network of 102.4 miles of sidewalk. Of this, 75.39 miles are situated in Los Alamos Townsite, while White Rock Town Center accounts for the remaining 27.01 miles. Additionally, the area contains 152.91 miles of trails in total, with Los Almos Townsite containing 98.13 miles and White Rock Town Center encompassing 54.78 miles.

A total of 11 signalized intersections are in the project area, nine of which are situated in Los Alamos Townsite and two in White Rock Town Center. Furthermore, there are 164 marked crosswalks, with 117 in Los Alamos Townsite and 47 in White Rock Town Center. ***Table 2*** and the accompanying maps in ***Figure 17*** and ***Figure 18*** are provided below, offering a visual summary of the pedestrian facilities and aiding in a clearer understanding of the area's connectivity and accessibility.

Table 2: Countywide Pedestrian Facilities Inventory

Los Alamos County Pedestrian Facilities Inventory				
Area	Sidewalk Distance	Trails Distance	Signalized Intersections	Marked Crosswalks
Los Alamos Townsite	75.39 Miles	98.13 Miles	9	117
White Rock Town Center	27.01 Miles	54.78 Miles	2	47
Project Area	102.40 Miles	152.91 Miles	11	164

**Table 2 only includes an inventory of the pedestrian facilities in the study area (Los Alamos Townsite and White Rock Town Center).*

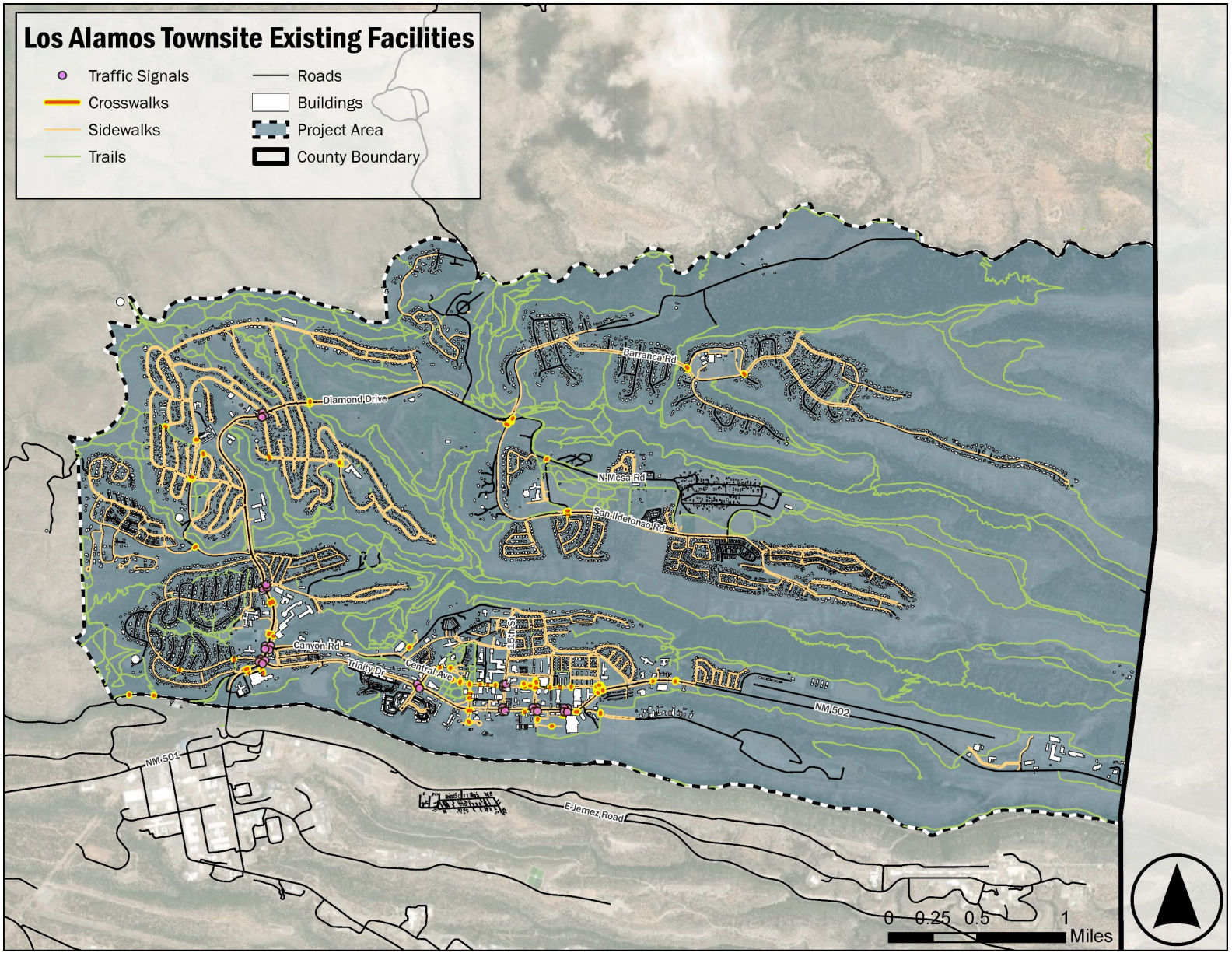


Figure 17: Los Alamos Townsite Existing Facilities Map

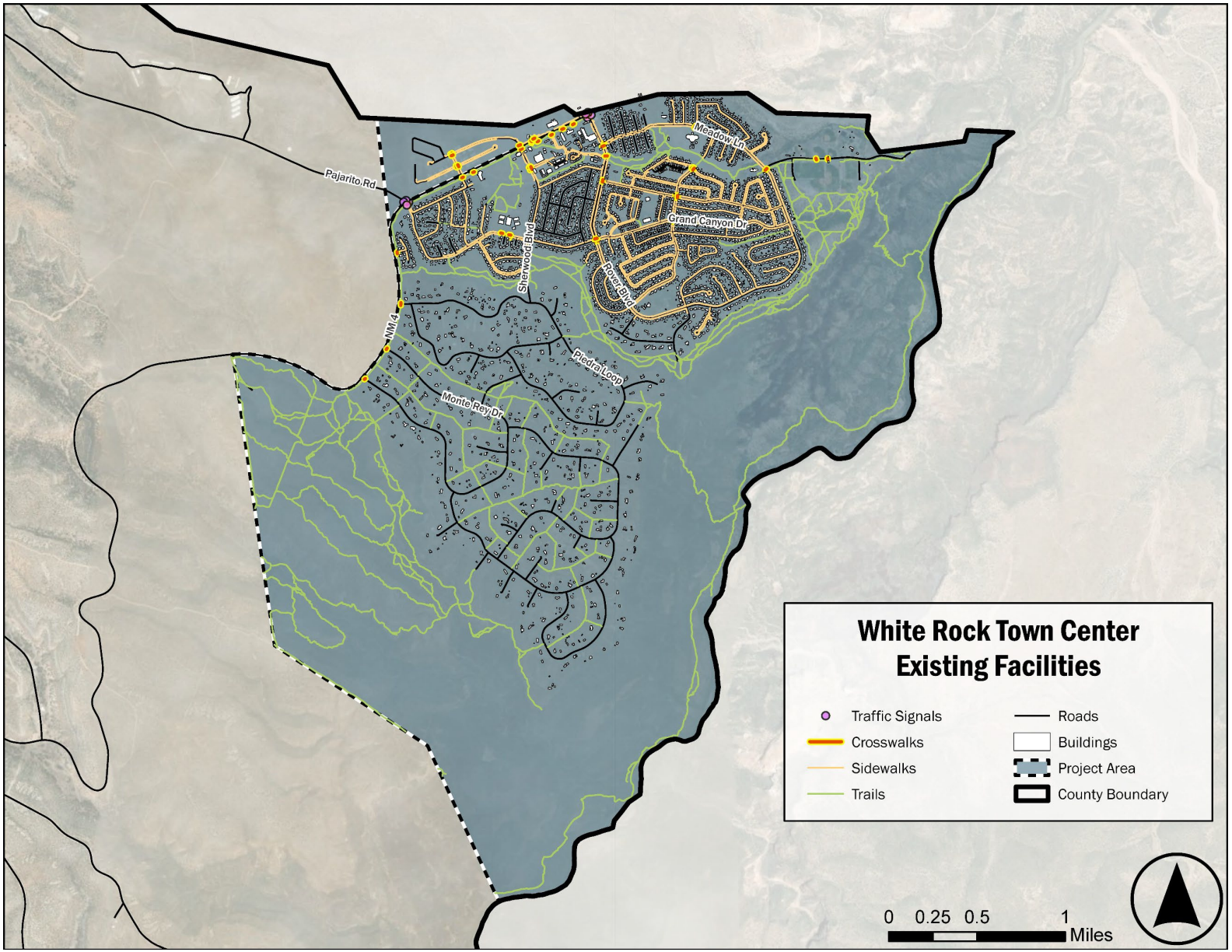


Figure 18: White Rock Town Center Existing Facilities Map

Sidewalk Conditions

An inventory of sidewalk conditions (***Table 3)*** and widths (***Table 4)*** was conducted across Los Alamos Townsite and White Rock Town Center. Out of the total 102.4 miles of sidewalk within the project area, approximately 97.65 miles are classified as good condition, with only 0.05 miles recorded as poor. An additional 4.7 miles lack sufficient data to determine their condition.

The Americans with Disabilities Act (ADA) recommends a sidewalk width of 5 feet for comfortable mobility and passing space for individuals using a wheelchair or other mobility assistive devices. A 3-foot sidewalk width is considered ADA-compliant, however, a 5-foot sidewalk width is ideal for communities. The majority of the study area's sidewalks measure less than five feet in width, approximately 85% of all inventoried sidewalks, or 86.45 miles. This indicates that most of Los Alamos has a predominately narrow pedestrian infrastructure network, possibly contributing to a negative perception of walking and rolling, as these sidewalks are less comfortable, easy, and enticing to use. The remaining sidewalks consist of 10.95 miles of widths between 5 and 8 feet, 0.30 miles that exceed 8 feet, and 4.7 miles of unspecified width. ***Table 3*** summarize the condition and ***Table 4*** offers the widths of sidewalks across Los Alamos County.

Table 3: Los Alamos County Sidewalks Condition

Los Alamos County Sidewalks Condition			
Total Sidewalk Distance	"Good Condition" Distance	"Poor Condition" Distance	Unknown Condition Distance
102.40 Miles	97.65 Miles	.05 Miles	4.70 Miles

Table 4: Los Alamos County Sidewalks Width

Los Alamos County Sidewalks Condition				
Total Sidewalk Distance	<5 ft Width Distance	5 ft - 8 ft Width Distance	>8 ft Width Distance	Unknown Width Distance
102.40 Miles	86.45 Miles	10.95 Miles	.30 Miles	4.70 Miles

**Table 3 and Table 4 only include an inventory of sidewalks in the study area (Los Alamos Townsite and White Rock Town Center).*

In Los Alamos Townsite, sidewalks less than 5 feet in width are predominately situated along smaller residential streets. Sidewalks ranging between 5 and 8 feet are more commonly found along primary roads with higher pedestrian activity, such as Diamond Drive, Trinity Drive, Canyon Road, and Central Avenue, as well as various streets within the Downtown area. Additionally, some smaller residential roads, particularly those in the northwest neighborhood along Diamond Drive, also feature sidewalks of this width. Sidewalk widths

exceeding 8 feet are limited to small sections along Central Avenue, 20th Street, and 15th Street, concentrated primarily around the Central Shopping Center.

In contrast, sidewalk widths within White Rock Town Center demonstrate far less variation than in Los Alamos Townsite. Nearly all sidewalks in White Rock measure less than 5 feet in width, aside from a small section along Longview Drive and Village Place, just west of the White Rock Senior Center.

Figure 19 and ***Figure 20*** on the following pages visually summarize these findings, offering a clear depiction of the existing distribution of sidewalk widths within the project area.

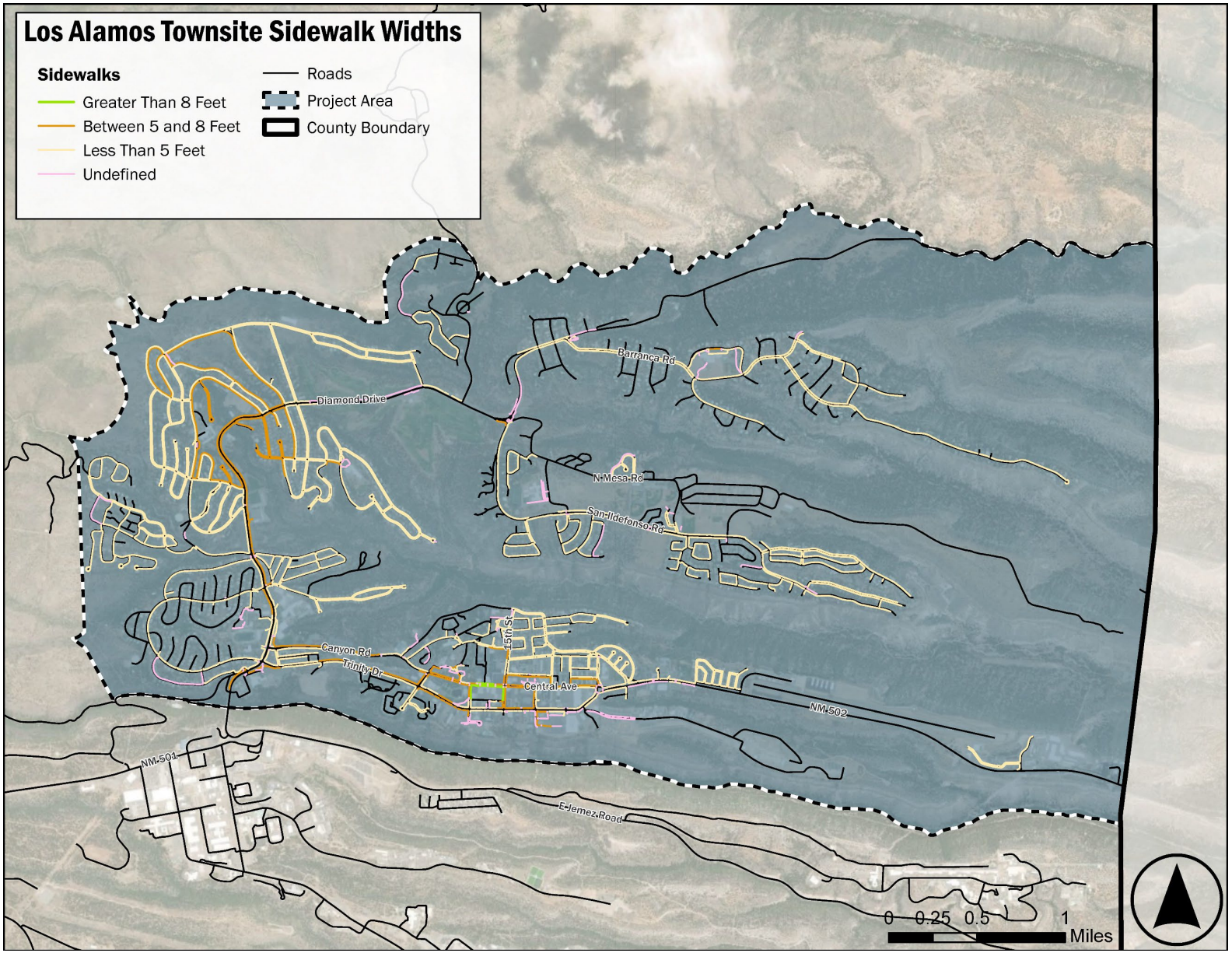


Figure 19: Los Alamos Townsite Sidewalk Widths Map

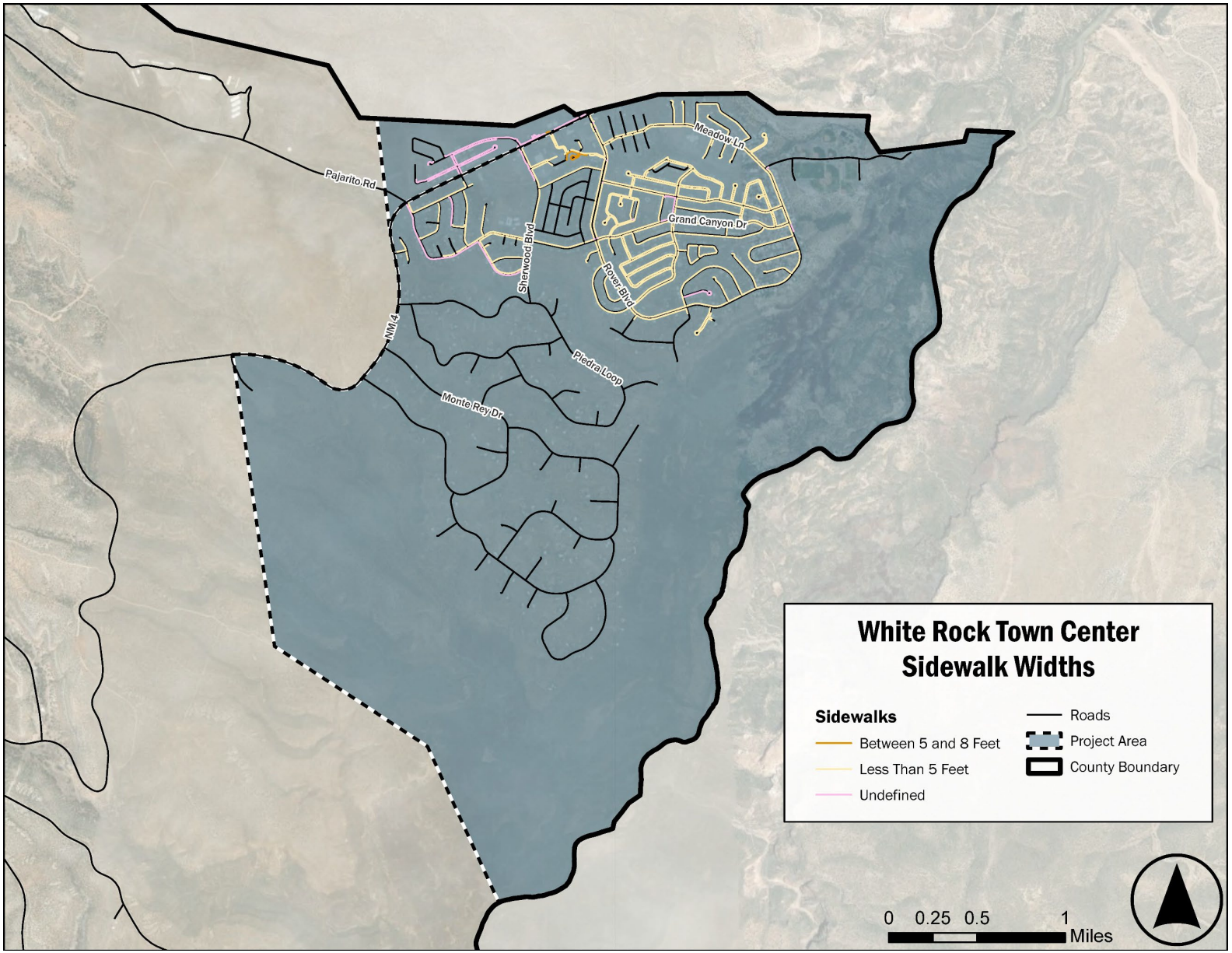


Figure 20: White Rock Town Center Sidewalk Widths Map

ADA Curb Ramp Compliance

Updated ADA curb ramp compliance data was compared to previous data collected in 2017. Overall, curb ramp compliance in the project area increased by over 10%. Los Alamos Townsite saw an increase of 14.09%, while White Rock Town Center saw a decrease of 1.06%. ***Table 5*** summarizes ADA curb ramp compliance in Los Alamos County.

Table 5: Los Alamos County ADA Curb Ramp Compliance

Los Alamos County ADA Curb Ramp Compliance			
Area	2017 Compliance %	2024 Compliance %	% Increase or Decrease
Los Alamos Townsite	27.39%	41.48%	+ 14.09%
White Rock Town Center	40.26%	39.20%	- 1.06%
Project Area	30.72%	40.81%	+ 10.09%

In Los Alamos Townsite, ADA curb ramp compliance varies significantly. Within the Downtown area, most curb ramps meet ADA standards, although several along Trinity Drive, particularly between Oppenheimer Drive and 10th Street, are non-compliant. Along Diamond Drive, the majority of curb ramps are ADA-compliant.

In residential neighborhoods within Los Alamos Townsite, ADA compliance is mixed. Certain areas, such as the Quemazon neighborhood on the far west side and the North Mesa neighborhood, demonstrate a high rate of compliance. In contrast, the Western Area neighborhood in the southwest, as well as the North Community neighborhood in the northwest, have a notably low rate of ADA-compliant curb ramps.

In White Rock Town Center, ADA curb ramp compliance is similarly varied. Most curb ramps along NM Highway 4 are compliant. Additionally, Sherwood Boulevard, between NM Highway 4 and Grand Canyon Drive, maintains a high compliance rate, as does most of Grand Canyon Drive. However, along Rover Boulevard/Meadow Lane, ADA curb ramp compliance is generally low, aside from the segment between Bryce Avenue and Kimberly Lane, where compliance rates are notably high.

Figure 21 and ***Figure 22*** illustrate these findings, providing a comprehensive overview of ADA curb ramp compliance across the project area.

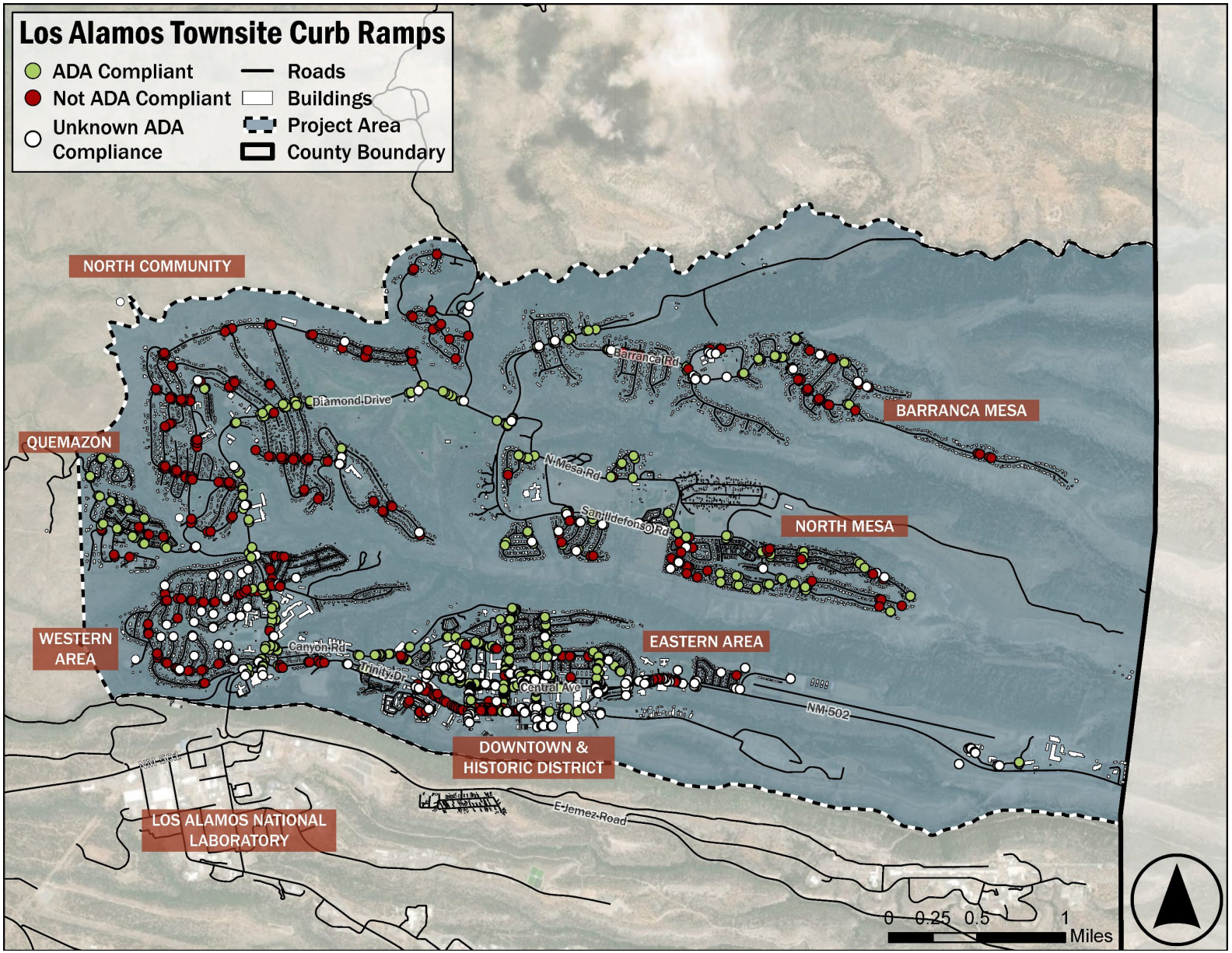


Figure 21: Los Alamos Townsite Curb Ramps Map

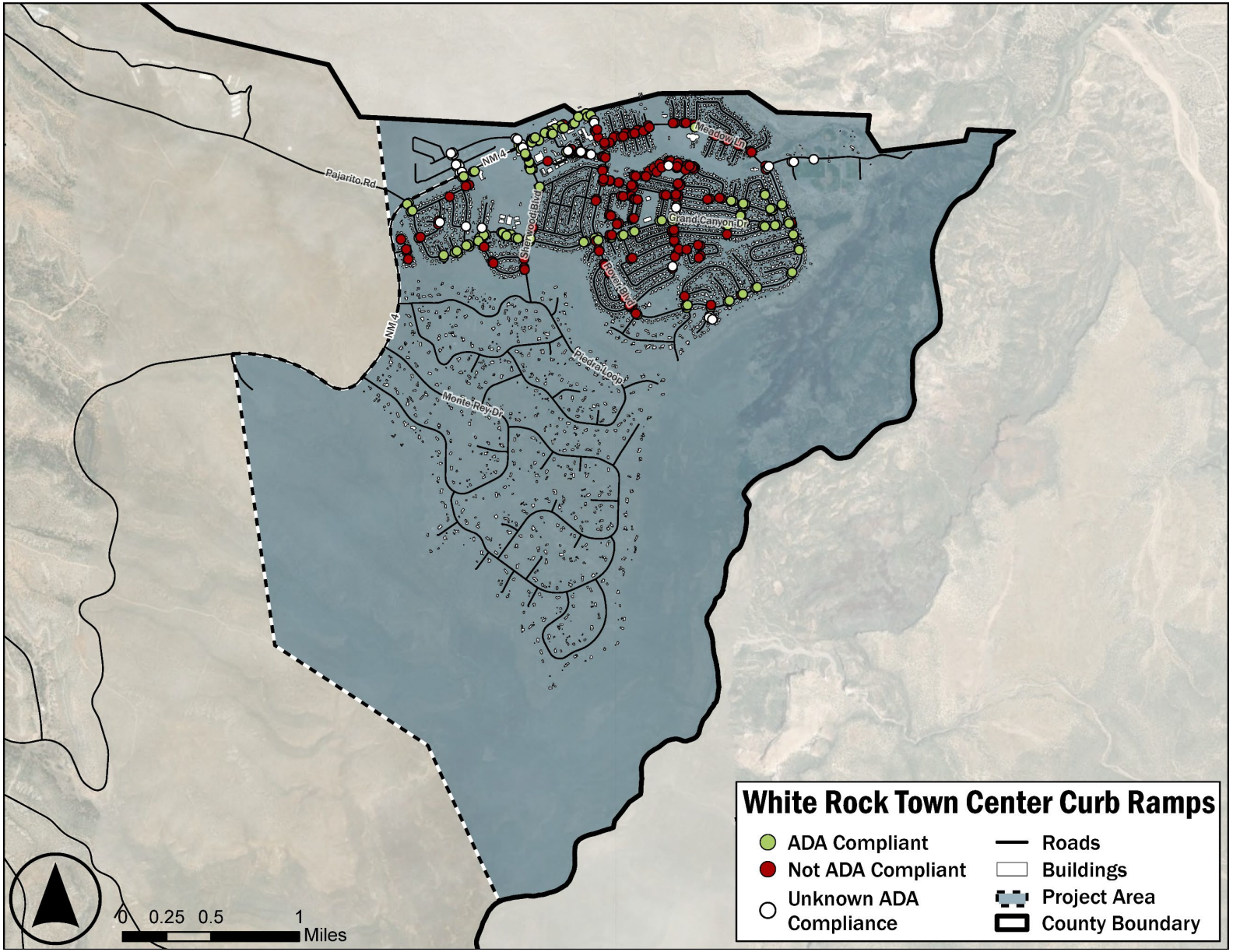


Figure 22: White Rock Town Center Curb Ramps Map

Transit

Los Alamos County Public Works Department owns and operates the Atomic City Transit (ACT) which provides fixed route, demand response, and paratransit services in Los Alamos and White Rock, and seasonal transit service to the nearby Bandelier National Monument. The transit center is located at the Los Alamos National Laboratory (LANL) where most of the fixed routes begin and end. Additionally, passengers traveling out of the county can catch one of the NMDOT Park and Ride buses to Espanola or Santa Fe.

Fixed Route Servies

ACT fixed route services can be considered in three categories: fixed routes, express routes, and the Bandelier service.

- **Fixed Route**: ACT operates a total of seven routes throughout each weekday (generally from 6 AM to 7 PM or 7:30 PM): Fixed routes are designed to meet at the transit center at 30-and 60-minute headways.
- **Express Routes**: These routes are open to the general public, but represent routes and schedules tailored specifically to school afternoon bell times.
- **Bandelier Shuttle**: This is a summer-only, free of charge service provided by ACT between mid-May and mid-October operating between the White Rock Visitors Center and the main entrance to the National Monument. It is an element of the traffic management plan for the National Monument, which requires visitors to use the bus by prohibiting general public auto access between 9 AM and 3 PM.

Dial-A-Ride Service

ACT provides a general public dial-a-ride service on weekdays between 6:30 PM and 9:00 PM. Phone requests are received starting at 6:00 PM for same-day service. This service is geared for "return" trips home and Park and Ride lots.

Paratransit Service

The ACT Assist program provides paratransit (origin-to-destination) service for ADA paratransit eligible persons between 6 AM and 9 PM on weekdays.

Transit is an integral part of pedestrian mobility because it extends the reach of walkable areas. Pedestrians rely on comfortable and navigable connections between transit stops, sidewalks, and crosswalks to provide safety and accessibility to destinations throughout the community. Ensuring connectivity across the transit network and the multi-modal network supports an efficient and equitable transportation system for the entire community. The amenities and infrastructure associated with a transit network (bus shelters, benches, maps and wayfinding, wider sidewalks and stops, bike racks) complement and benefit the pedestrian environment as well.

Pedestrian Destinations

Community Destinations are identified by highlighting the existing land uses that typically attract pedestrian activity (uses include commercial, downtown, educational, neighborhood commercial /mixed use, and parks). The Community Destination points, represented in ***Figure 23***, for Los Alamos Townsite and ***Figure 24*** for White Rock Town Center, identify certain activity centers where pedestrians are likely to travel to and move around.

In Los Alamos Townsite, the highest concentration of destinations is located in the Downtown. Other destinations are spread throughout the study area, mostly on Diamond Drive. White Rock is a smaller community, therefore nearly all the pedestrian destinations are concentrated in one area at the northern boundary.

These areas offer an understanding of where pedestrian activity occurs, thus indicating where recommendations to improve safety, accessibility, and connectivity should be focused.

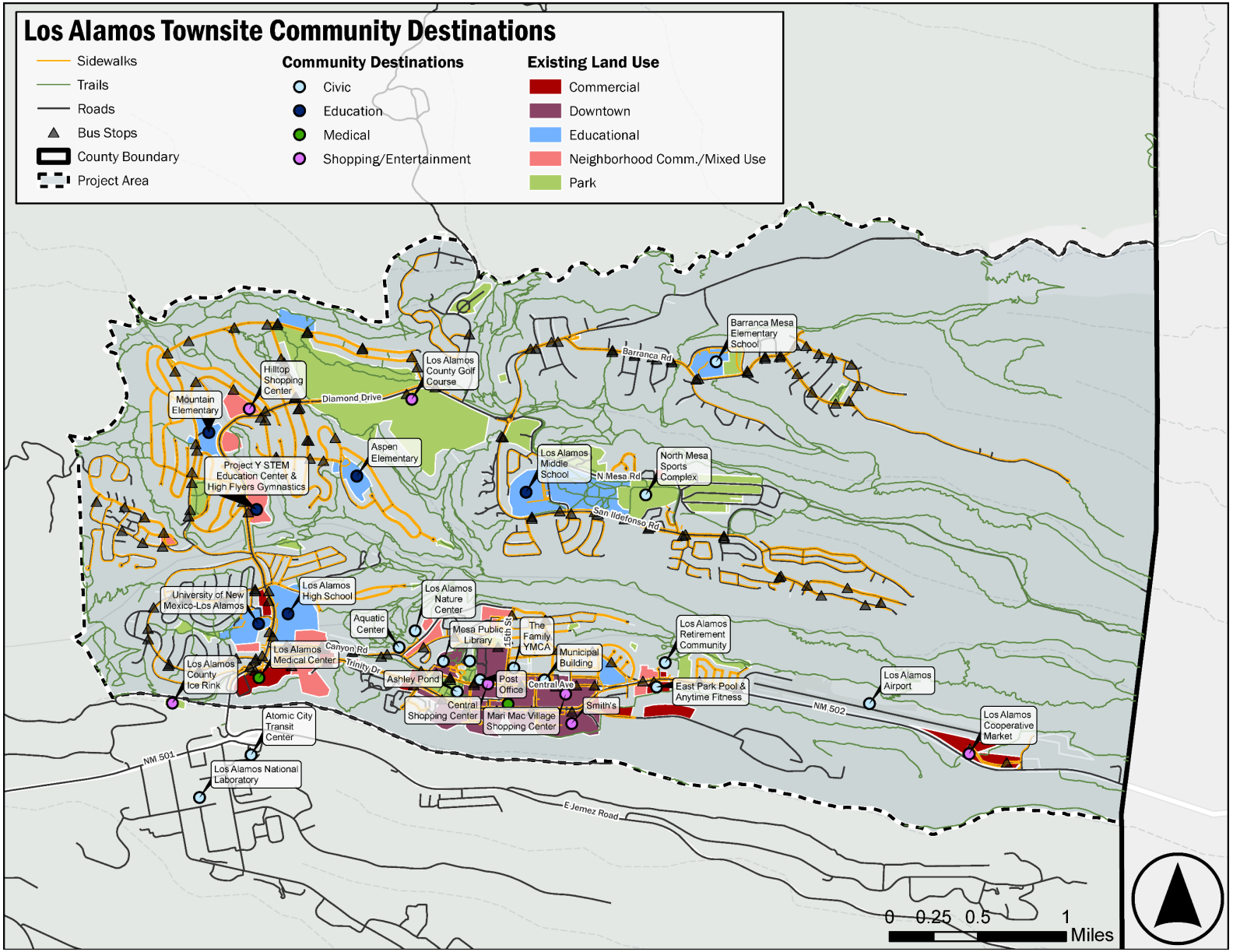


Figure 23: Los Alamos Townsite Community Destinations

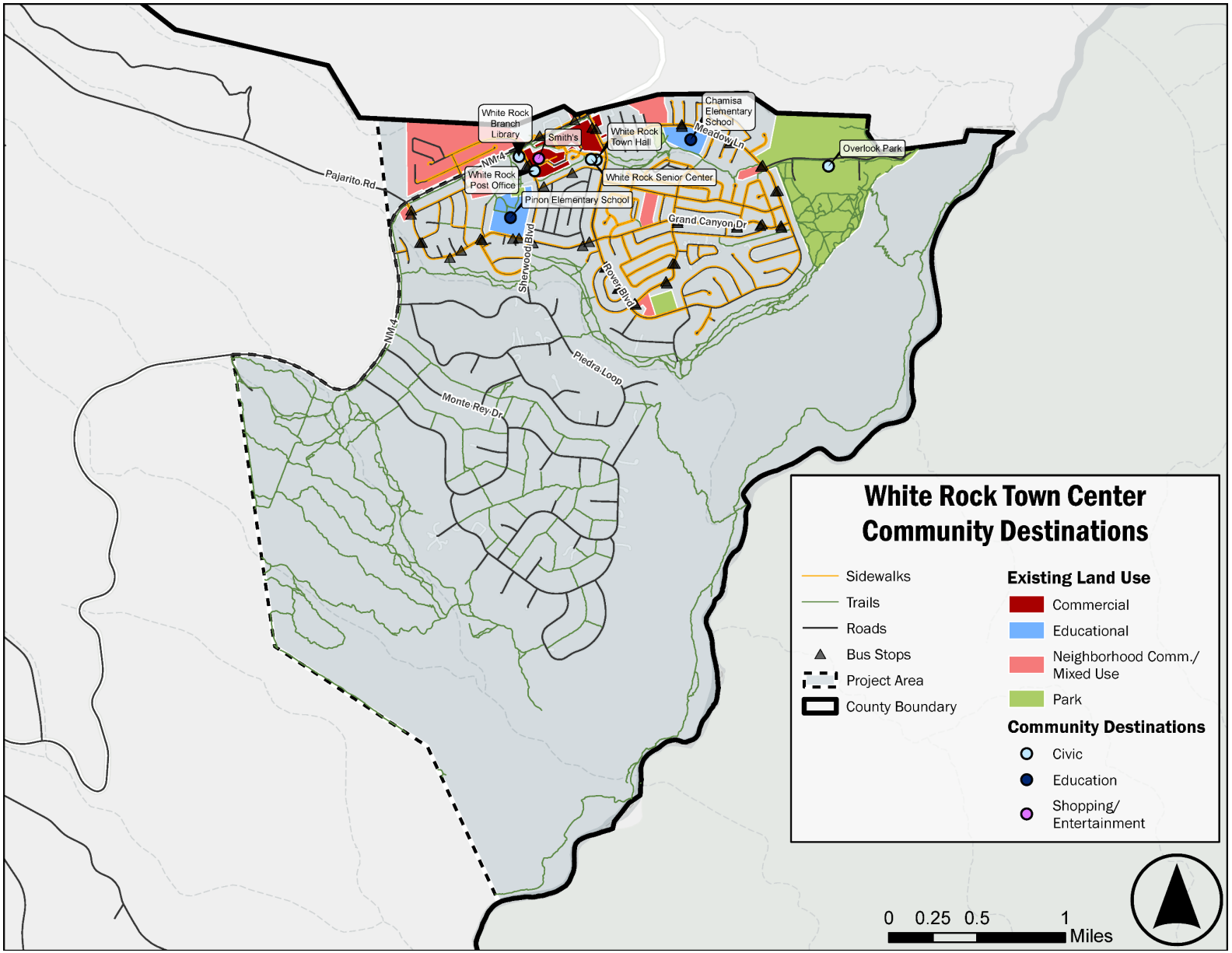


Figure 24: White Rock Town Center Community Destinations

Pedestrian Involved Crash Analysis

Los Alamos County

An analysis of crash data for Los Alamos County was conducted to identify locations with the highest frequency of pedestrian-involved incidents. Crash records from 2018 to 2022 were sourced from the New Mexico Department of Transportation and the Los Alamos County Police Department. These two data sources use different reporting methods, resulting in inconsistencies in certain crash factors. This fact, in addition to a minimal number of pedestrian crashes, has limited the analysis to a general overview.

During the five-year period, a total of 770 crashes were recorded in Los Alamos County, yielding a 1-year average of 154 crashes. This total includes crashes throughout the entire county, occurring both within and outside the project area. ***Figure 27*** illustrates all the crashes within the county boundary and the two project study areas (Los Alamos Townsite and White Rock Town Center). This first crash analysis includes crashes outside the study area boundaries, including the Los Alamos National Lab, to provide a contextual understanding of Los Alamos County as a whole. The following sections perform the same analysis for only the study area crashes.

Of the 770 crashes, only eight involved pedestrians. Note that there are no pedestrian-involved crashes outside the study area boundary; all eight crashes occurred in Los Alamos Townsite and White Rock Town Center, and will be detailed in the following sections. ***Table 6***, ***Figure 25***, and ***Figure 26*** present a summary of both total and pedestrian-involved crashes within Los Alamos County. While there are minimal pedestrian crashes, it is important that the county remain proactive in order to minimize any future potential conflicts, effectively saving lives and tax-payer dollars.

Table 6: Los Alamos County Crash Types by Year

Los Alamos County Crash Types by Year				
Year	Total Crashes (% Change from 5-Year Average)	Total Crashes 5-Year Average	Pedestrian Crashes (% Change from 5-Year Average)	Pedestrian Crashes 5-Year Average
2018	179 (+16.23%)	154	1 (-37.50%)	1.6
2019	177(+14.94%)	154	2 (+25.00%)	1.6
2020	130 (-15.58%)	154	1 (-37.50%)	1.6
2021	127 (-17.53%)	154	2 (+25.00%)	1.6
2022	157 (+1.94%)	154	2 (+25.00%)	1.6

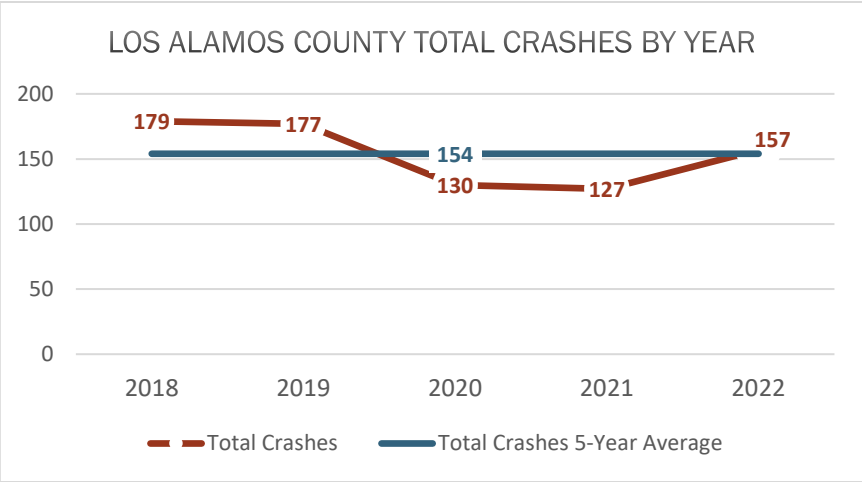


Figure 25: Los Alamos County Total Crashes by Year

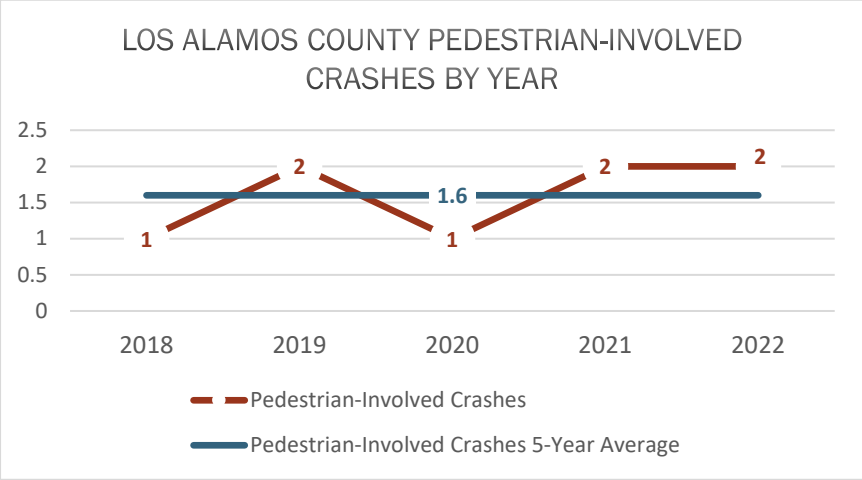


Figure 26: Los Alamos County Pedestrian-Involved Crashes by Year

The total number of crashes in Los Alamos County peaked in 2018, reaching 179. In the subsequent years, crash numbers declined annually until 2022, when they rose again, surpassing the five-year average with a total of 157 crashes. The marked decrease in crashes during 2020 and 2021 can be largely attributed to the COVID-19 pandemic, which led to a significant reduction in road traffic.

In contrast, pedestrian-involved crashes in Los Alamos County did not align with the general trend of total crashes. While total crashes were highest in 2018, pedestrian-involved incidents were tied for the lowest that year. The peak years for pedestrian-involved crashes were 2019, 2021, and 2022, with two incidents recorded each year.

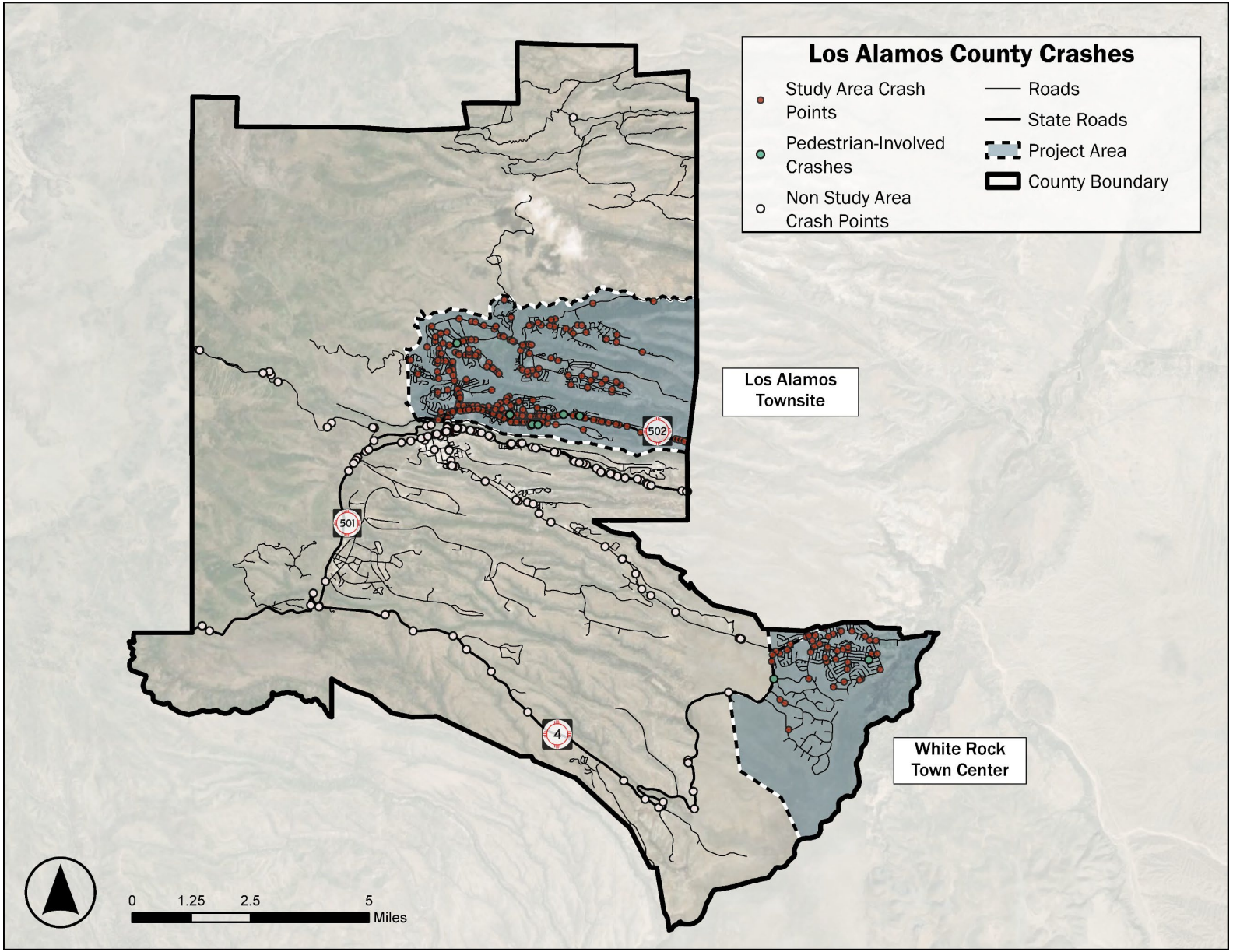


Figure 27: Los Alamos County Crashes

Los Alamos Townsite

A total of 529 crashes occurred in Los Alamos Townsite between 2018 and 2022, with a 5-year average of 105.8. Of the 529 crashes in Los Alamos Townsite, 6 involved pedestrians. ***Table 7***, ***Figure 28***, and ***Figure 29*** depict the total and pedestrian-involved crashes in Los Alamos Townsite.

Table 7: Los Alamos Townsite Crash Types by Year

Los Alamos Townsite Crash Types by Year				
Year	Total Crashes (% Change from 5-Year Average)	Total Crashes 5-Year Average	Pedestrian Crashes (% Change from 5-Year Average)	Pedestrian Crashes 5-Year Average
2018	125 (+15.36%)	105.8	1 (-16.67%)	1.2
2019	122 (+13.28%)	105.8	1 (-16.67%)	1.2
2020	85 (-24.47%)	105.8	1 (-16.67%)	1.2
2021	89 (-23.37%)	105.8	1 (-16.67%)	1.2
2022	108 (+2.04%)	105.8	2 (+66.67%)	1.2

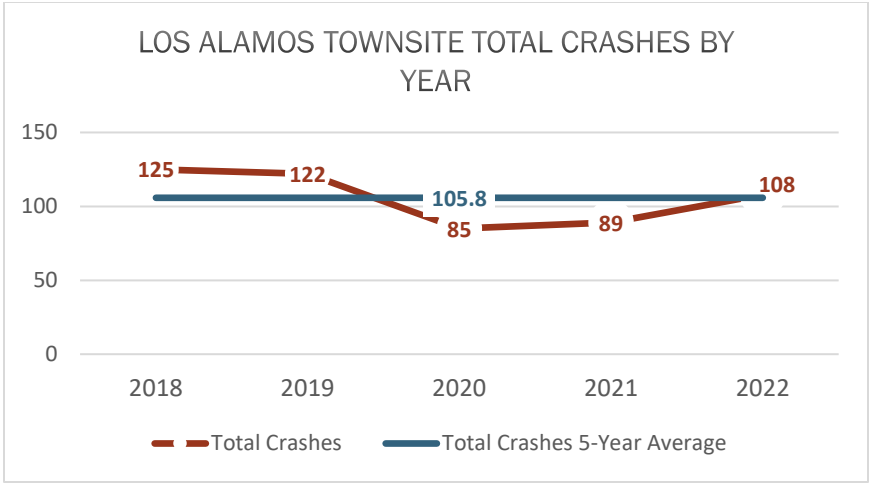


Figure 28: Los Alamos Townsite Total Crashes by Year

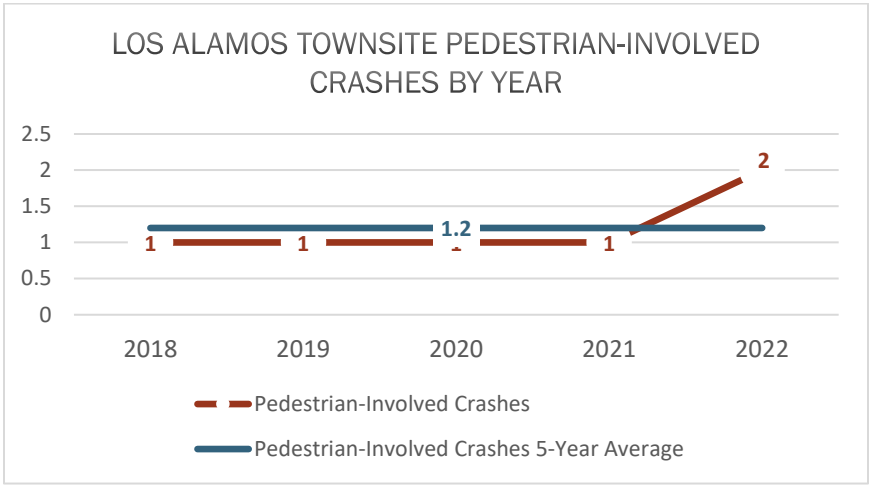


Figure 29: Los Alamos Townsite Pedestrian-Involved Crashes by Year

Reflecting the county-wide trend, Los Alamos Townsite experienced the highest number of crashes in 2018, totaling 125. Between 2019 and 2021, the number of crashes steadily declined each year, with a return to above-average levels in 2022, reaching 108 crashes. The significant reduction in crashes during 2020 and 2021 is attributed to the COVID-19 pandemic, which led to decreased traffic volumes.

Pedestrian-involved crashes in Los Alamos Townsite remained consistent from 2018 to 2021, with one incident per year, followed by an increase to two incidents in 2022.

Within Los Alamos Townsite, crashes were most frequently concentrated along primary routes, including Trinity Drive (or NM 502), Canyon Road, Central Avenue, and East Road. High-crash roadway segments include Diamond Drive between Trinity Drive and Sandia Drive/Orange Street, and Trinity Drive between 20th Street and the roundabout. Additionally, three intersections – Diamond Drive at West Road, Trinity Drive, and Canyon Road – registered the highest number of crashes, each with over 15 incidents.

Pedestrian-involved crashes are spread throughout Los Alamos Townsite, all occurring at different locations. Pedestrian-involved crashes occurred at the intersections of Diamond Drive and 38th Street/Arkansas Avenue, Central Avenue and Bathtub Row, East Road and Sombrillo Court, and East Drive and Tewa Loop. Two pedestrian-involved crashes occurred in the same shopping complex along Trinity Drive and Knecht Street. One occurred in front of Smith's Marketplace and one across the parking lot near McDonald's.

The exact locations of some crashes could not be determined based on the crash reports obtained from the Los Alamos Police Department. Their approximate locations are represented by the yellow dots. ***Figure 30*** illustrates the crash locations that occurred within Los Alamos Townsite.

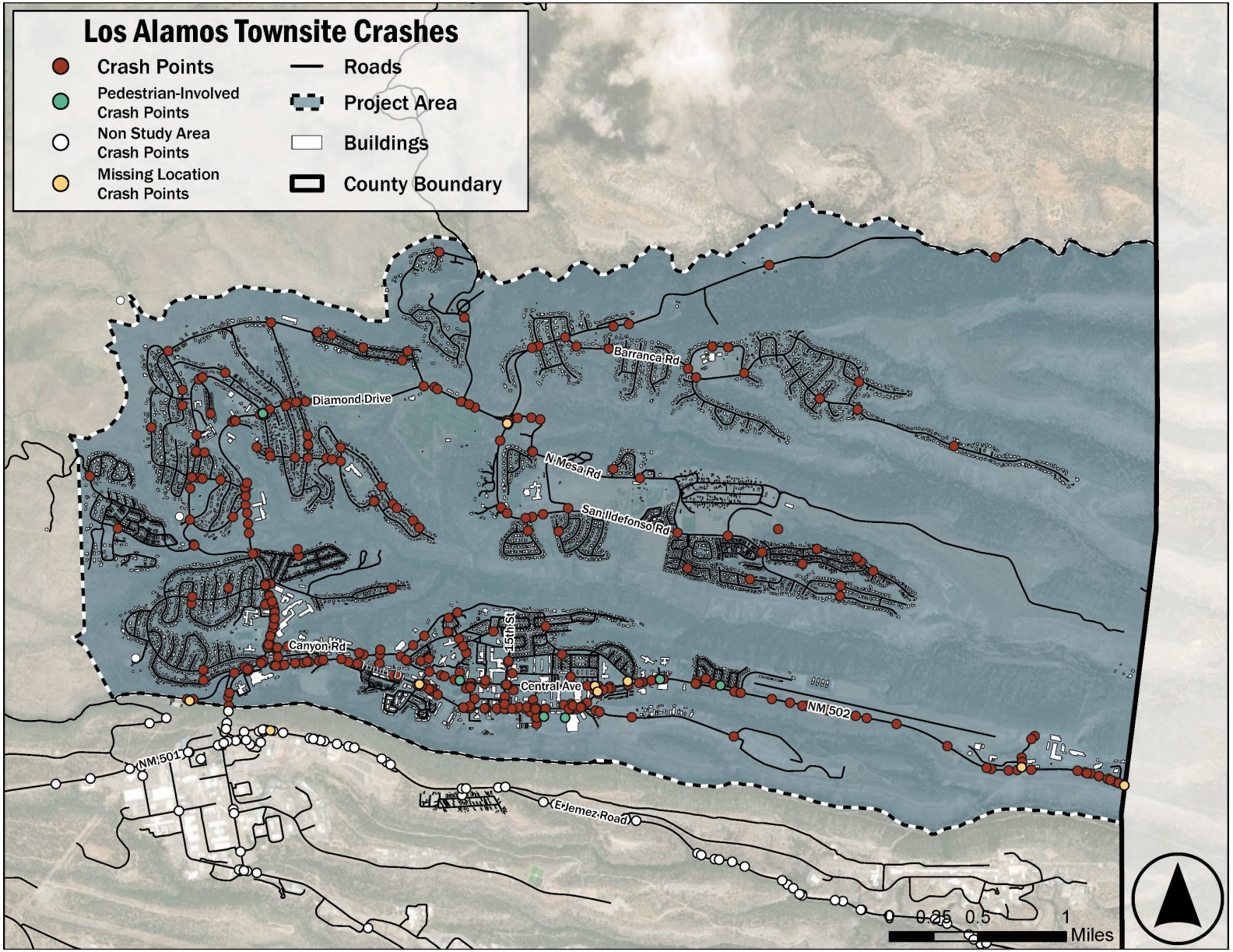


Figure 30:Los Alamos Townsite Crash Map

White Rock Town Center

A total of 59 crashes were recorded within the White Rock Town Center from 2018 to 2022, yielding a five-year average of 11.8 crashes per year. Among these, two crashes involved pedestrians, resulting in an average of 0.4 pedestrian-involved crashes annually. ***Table 8, Figure 31***, and ***Figure 32*** depict the total and pedestrian-involved crashes in White Rock Town Center.

Table 8: White Rock Town Center Crash Types by Year

White Rock Town Center Crash Types by Year				
Year	Total Crashes (% Change from 5-Year Average)	Total Crashes 5-Year Average	Pedestrian Crashes (% Change from 5-Year Average)	Pedestrian Crashes 5-Year Average
2018	16 (+22.64)	11.8	0 (-100.00%)	0.4
2019	17 (+41.51)	11.8	1 (+150.00%)	0.4
2020	5 (-52.83%)	11.8	0 (-100.00%)	0.4
2021	9 (-15.09%)	11.8	1 (+150.00%)	0.4
2022	12 (+3.77%)	11.8	0 (-100.00%)	0.4

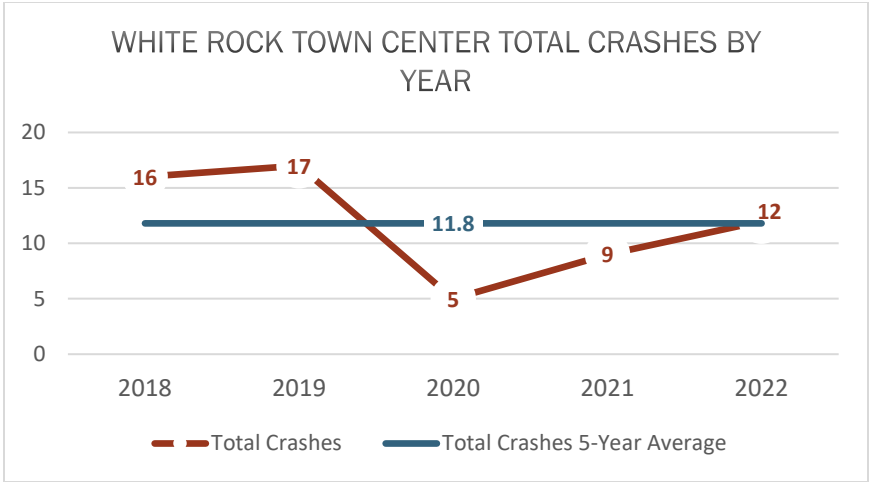


Figure 31: White Rock Town Center Total Crashes by Year

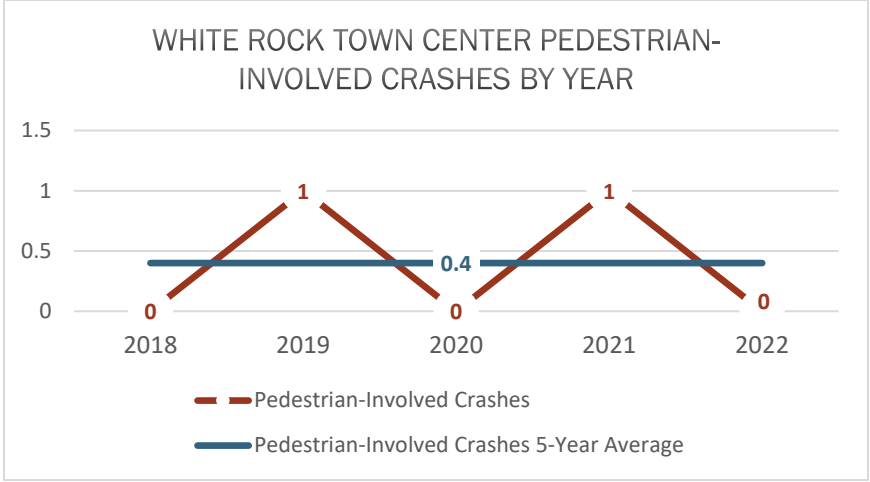


Figure 32: White Rock Town Center Pedestrian-Involved Crashes by Year

Crash patterns in White Rock Town Center largely mirrored those observed in the broader County and Los Alamos Townsite, though White Rock reached a peak of 17 crashes in 2019. The subsequent decline in crash frequency during 2020 and 2021 can be attributed to the reduction in vehicle traffic associated with the COVID-19 pandemic.

Pedestrian-involved crashes within White Rock Town Center showed year-to-year variability, with one crash occurring in both 2019 and 2021, and none reported in 2018, 2020, or 2022. The two pedestrian-involved crashes took place in at the intersection of NM Highway 4 and Piedra Loop, and on Ridgecrest Avenue, approximately 300 feet west of its intersection with Grand Canyon Drive.

The highest concentrations of crashes in White Rock Town Center occurred along NM Highway 4 and Rover Boulevard/Meadow Lane. Additionally, a smaller number of crashes were recorded on residential streets such as Aragon Avenue, Aztec Avenue, and La Paloma Drive. Notably, the intersection of NM Highway 4 and Rover Boulevard registered the highest number of crashes, with five.

The exact locations of a handful of crashes could not be determined based on the crash reports obtained from the Los Alamos Police Department. Their approximate locations are represented by the yellow dots. ***Figure 33*** shows the locations of every crash that occurred in White Rock Town Center.

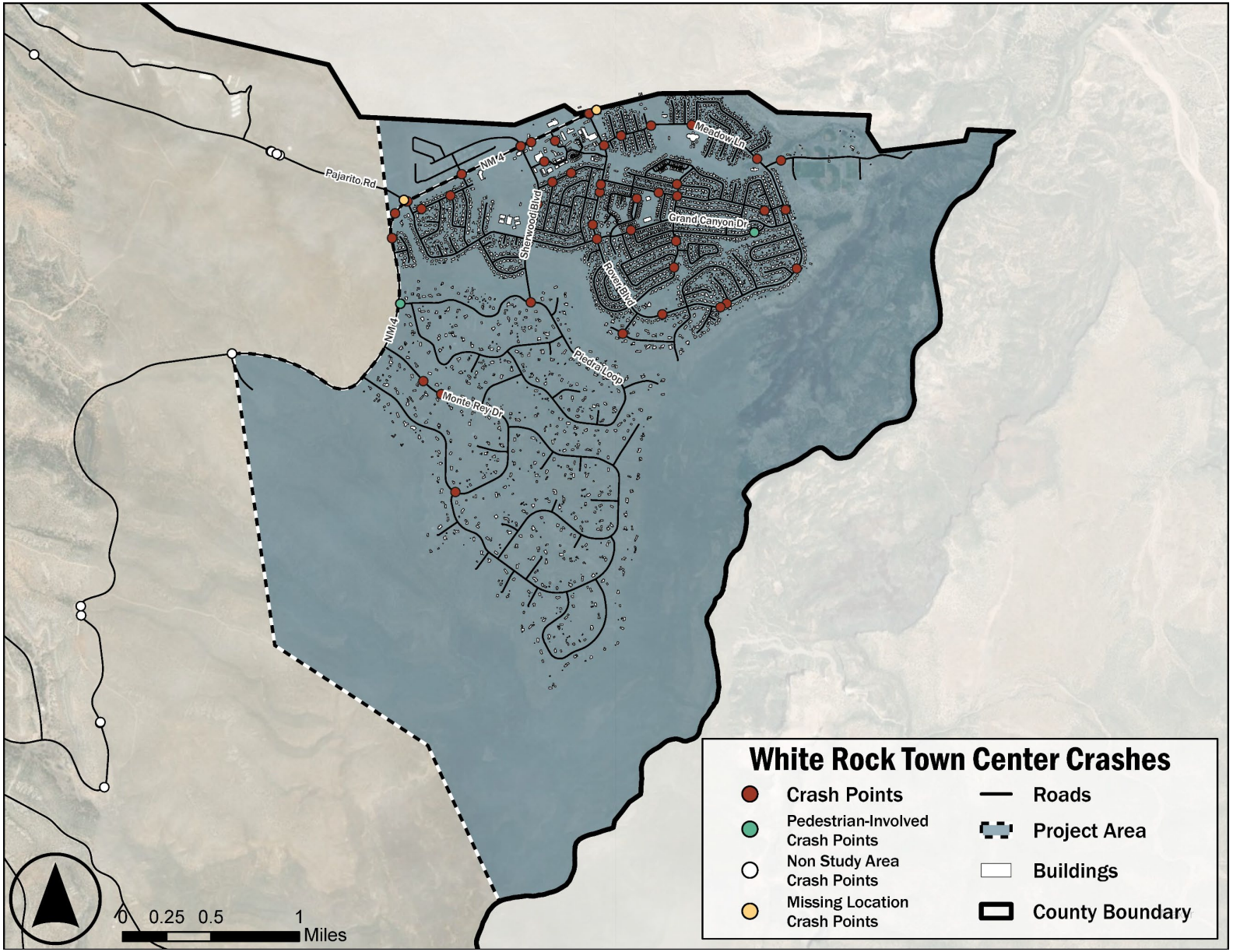


Figure 33: White Rock Town Center Crash Map

State and National Crash Comparison

An analysis of total crash severity rates between 2018 and 2022 for Los Alamos County, Los Alamos Townsite, and White Rock Town Center was conducted in comparison to state and national rates, represented in ***Table 9***.

Los Alamos Townsite reported a crash rate of 40.14 incidents per 1,000 people, while White Rock Town Center recorded a lower rate of 10.08 per 1,000 people. Los Alamos County had a crash rate of 39.65 per 1,000 people. Each of these rates is lower than the crash rates observed for New Mexico and the United States, which stand at 100.64 and 92.85 per 1,000 people, respectively.

Traffic injury rates mirrored the trends in overall crash rates. Los Alamos Townsite reported a traffic injury rate of 13.13 per 1,000 people, with White Rock Town Center showing a much lower injury rate of 2.05 per 1,000 people. Los Alamos County had an injury rate of 13.49 per 1,000 people. Once again, these rates are below those reported for New Mexico and the United States, at 43.42 and 38.05 per 1,000 people, respectively.

Los Alamos Townsite recorded 0.15 traffic fatalities per 1,000 people, whereas White Rock Town Center experienced a significantly higher rate of 0.34 fatalities per 1,000 people. The countywide traffic fatality rate for Los Alamos stood at 0.31 per 1,000 people. Each of these rates remain lower than those for New Mexico and the United States, which are 1.02 and 0.60 fatalities per 1,000 people, respectively.

Table 9: Crash Severity Summary with State and National Comparison

Crash Severity Summary with State and National Comparison (2018-2022)		
Total Crashes		
Area	Total Crashes	Crashes per 1,000 People
Los Alamos Townsite	529	40.14
White Rock Town Center	59	10.08
Los Alamos County	770	39.65
New Mexico	213,118	100.64
United States	30,775,480	92.85
Traffic Injuries		
Area	Total Traffic Injuries	Traffic Injuries per 1,000 People
Los Alamos Townsite	173	13.13
White Rock Town Center	12	2.05
Los Alamos County	262	13.49
New Mexico	91,949	43.42
United States	12,612,837	38.05
Traffic Fatalities		
Area	Total Traffic Fatalities	Traffic Fatalities per 1,000 People
Los Alamos Townsite	2	0.15
White Rock Town Center	2	0.34
Los Alamos County	6	0.31
New Mexico	2,164	1.02
United States	197,941	0.60

Additionally, an analysis concentrated on serious injury and fatal pedestrian-involved crashes was conducted in comparison to state and national rates. ***Table 10*** represents these findings. Los Alamos Townsite reported a pedestrian injury rate of 0.46 per 1,000 residents, while White Rock Town Center had no recorded pedestrian injuries, resulting in a rate of 0. Across Los Alamos County, the pedestrian injury rate was 0.31 per 1,000 residents. These rates are substantially lower than those for New Mexico and the United States, which are 0.79 and 1.01 per 1,000 residents, respectively.

Between 2018 and 2022, Los Alamos Townsite did not report any pedestrian fatalities, giving it a fatality rate of 0 per 1,000 residents. In contrast, White Rock Town Center recorded a significantly higher pedestrian fatality rate of 0.34 per 1,000 residents. The overall pedestrian fatality rate in Los Alamos County was 0.10 per 1,000 residents. While the pedestrian fatality rates for both Los Alamos Townsite and Los Alamos County were at or below the state and national rates, White Rock Town Center's rate was more than three times the national rate.

Ongoing crash analysis and thoughtful transportation planning are essential to the Safe Systems Approach, enabling proactive measures to reduce and prevent crashes. These efforts are key to achieving Vision Zero's goal of eliminating traffic fatalities and severe injuries through systematic, data-driven strategies.

Table 10: Pedestrian-Involved Crash Severity Summary with State and National Comparison

Pedestrian-Involved Crash Severity Summary with State and National Comparison (2018-2022)		
Pedestrian Injuries		
Area	Total Pedestrian Injuries	Pedestrian Injuries per 1,000 People
Los Alamos Townsite	6	0.46
White Rock Town Center	0	0
Los Alamos County	6	0.31
New Mexico	1,674	0.79
United States	333,493	1.01
Pedestrian Fatalities		
Area	Total Pedestrian Fatalities	Pedestrian Fatalities per 1,000 People
Los Alamos Townsite	0	0
White Rock Town Center	2	0.34
Los Alamos County	2	0.10
New Mexico	429	0.20
United States	34,203	0.10

CHAPTER 5
AREAS OF CONCERN

Pedestrian Barriers

This section summarizes the barriers within Los Alamos that prevent the safest and most accessible pedestrian environment. ***Figure 34*** and ***Figure 35*** illustrate the full extents of the study area to pinpoint areas that need a greater focus. The combined findings from the existing conditions analysis that contribute to the Areas of Concerns include:

- Pedestrian crash locations
- Vehicle crash locations
- Non-ADA curb ramps
- Pedestrian destinations

Three Areas of Concern are identified by their high concentration of barriers and are subsequently areas that are considered pedestrian destinations with more pedestrian traffic. The three areas are represented at a larger scale in the following figures:

1. Downtown Los Alamos: ***Figure 36***
2. Diamond Drive (North-South Bound): ***Figure 37***
3. White Rock (Along Northern Boundary): ***Figure 38***

White Rock's barriers are less concentrated, however, the pedestrian destinations offer an understanding of areas likely to have more pedestrian traffic, thus identifying the northern boundary as an Area of Concern, requiring greater attention.

Most of these areas require a holistic approach to improvements – addressing not only one gap in the pedestrian network, but several in the surrounding area. A project initiated for the reconstruction of a sidewalk should also recognize needed updates to curb ramps along the connecting pedestrian pathways, ensuring this stretch of the transportation network is safe and accessible to all. If feasible, road diets, gateway treatments, or intersection enhancements should also be considered (these types of improvements are discussed later in the *Traffic Calming Section*). This type of systematic approach solidifies and stabilizes the pedestrian network, creating a comfortable and easy to navigate experience on the ground.

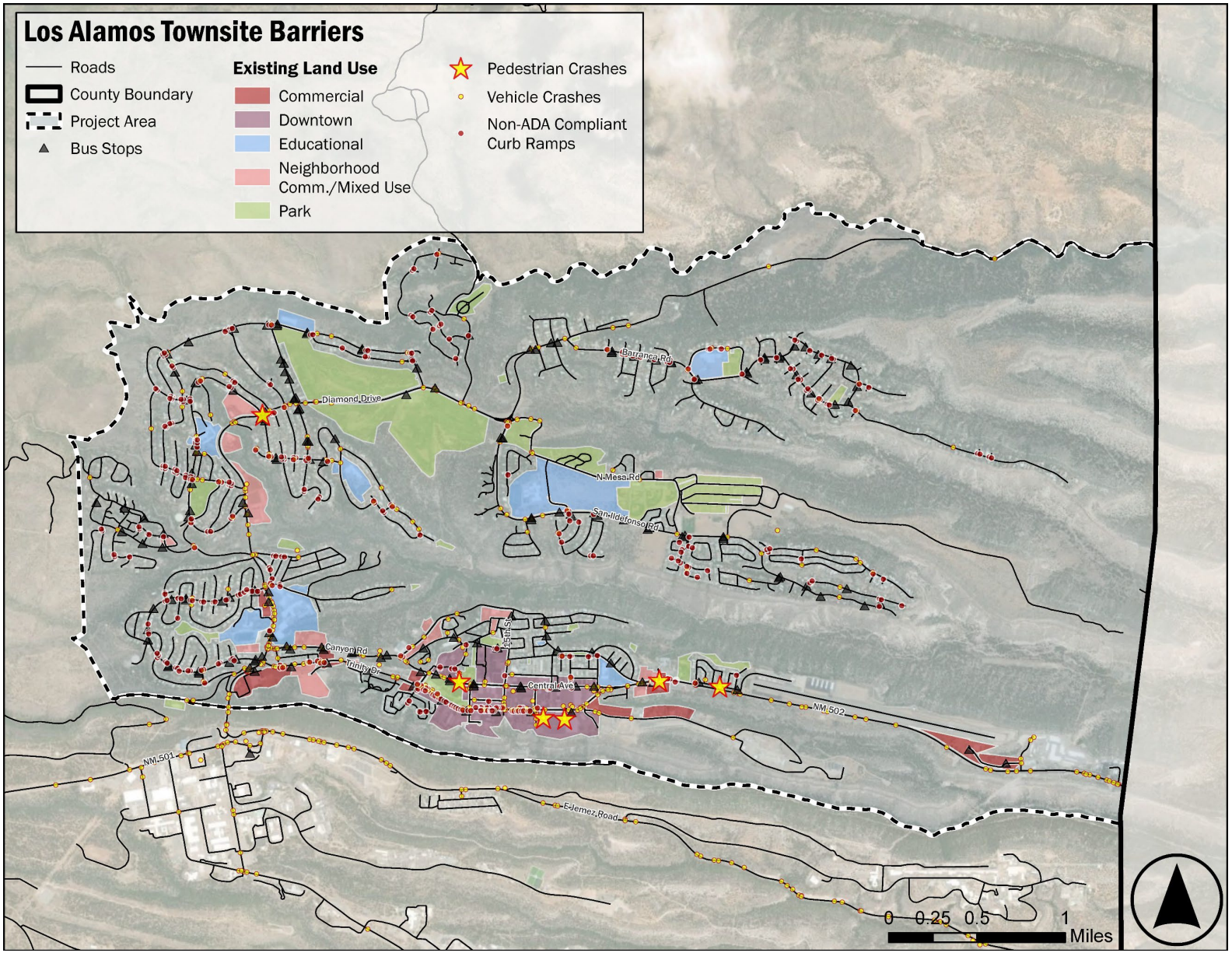


Figure 34: Los Alamos Townsite Barriers

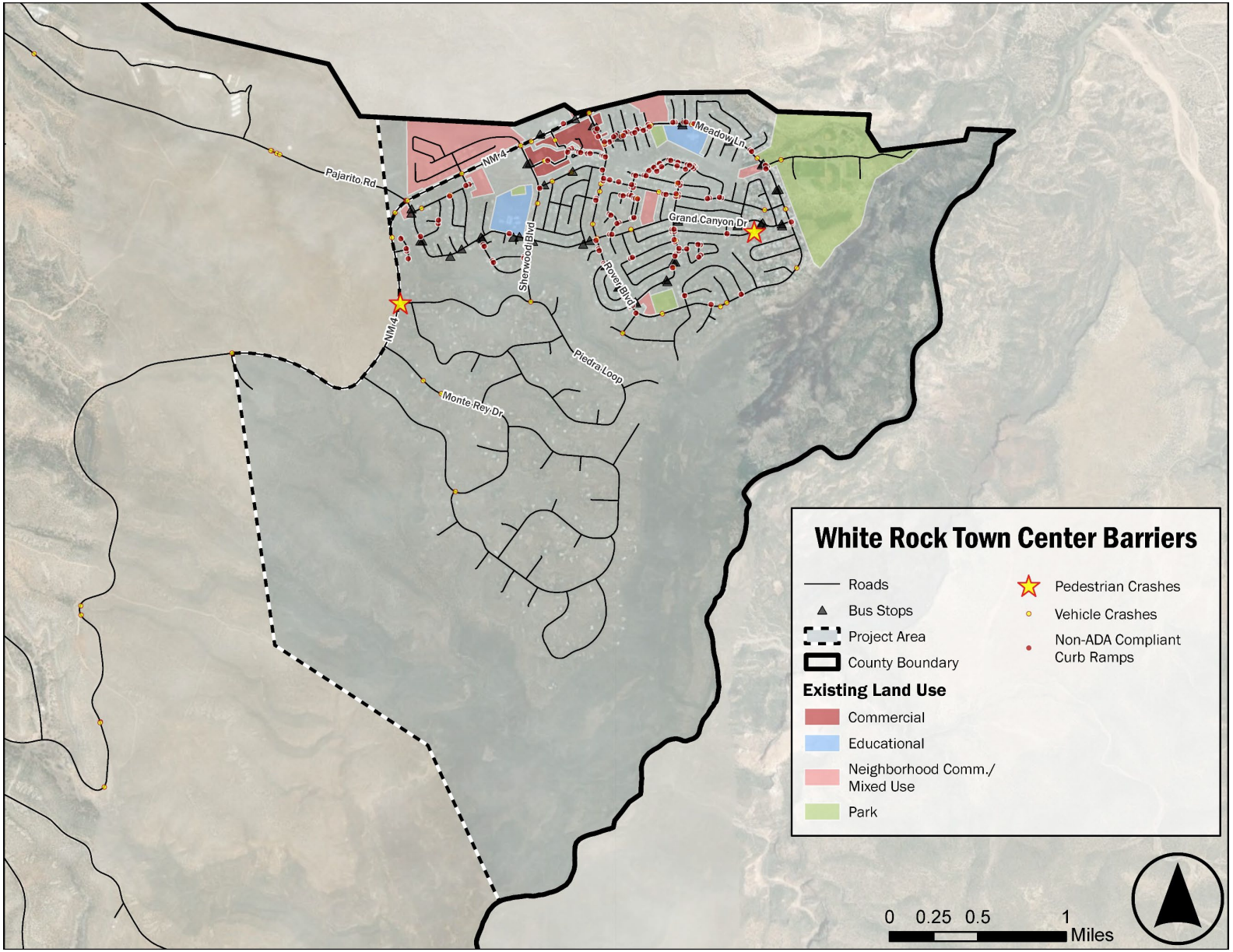


Figure 35: White Rock Town Center Barriers

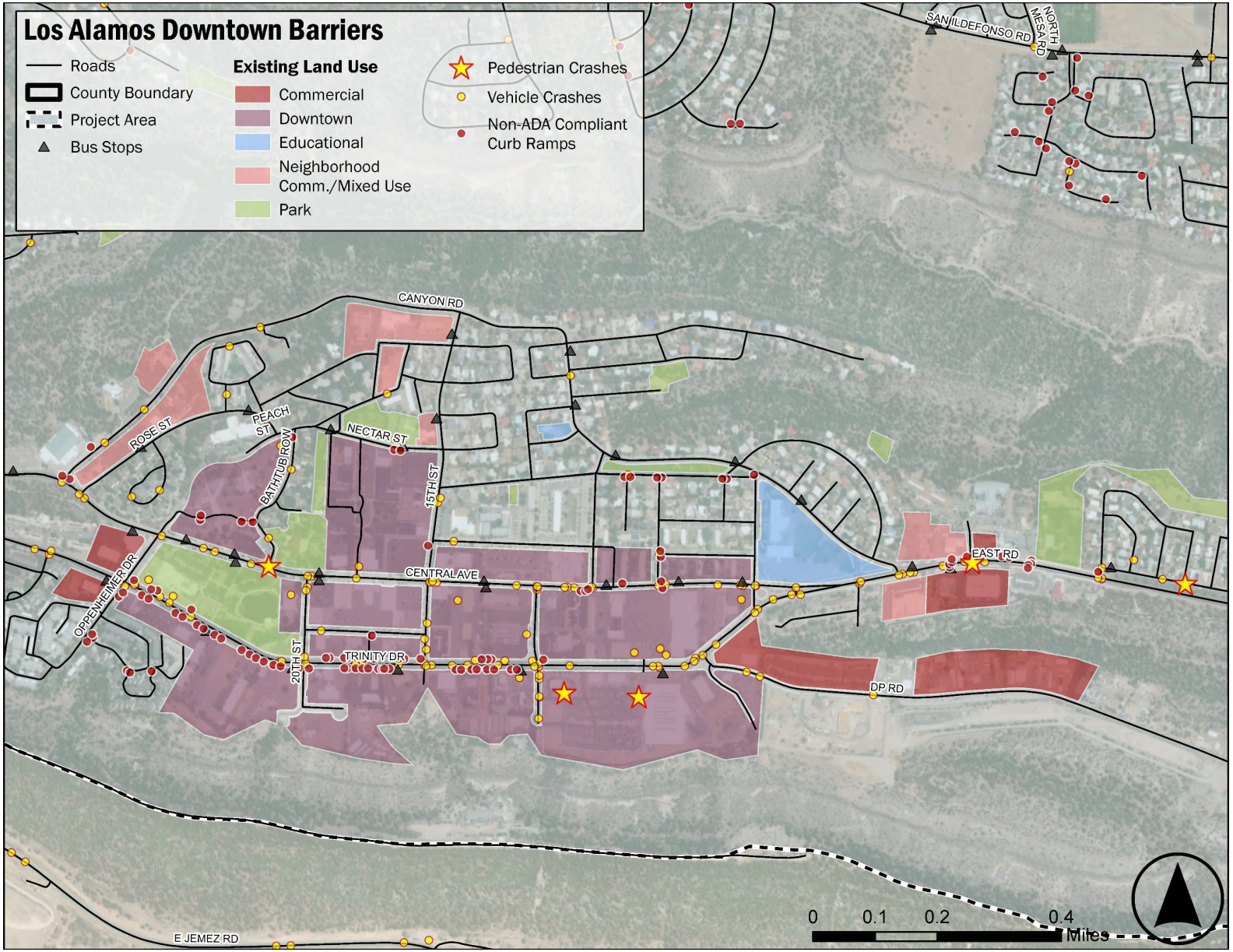


Figure 36: Areas of Concentration - Downtown Los Alamos

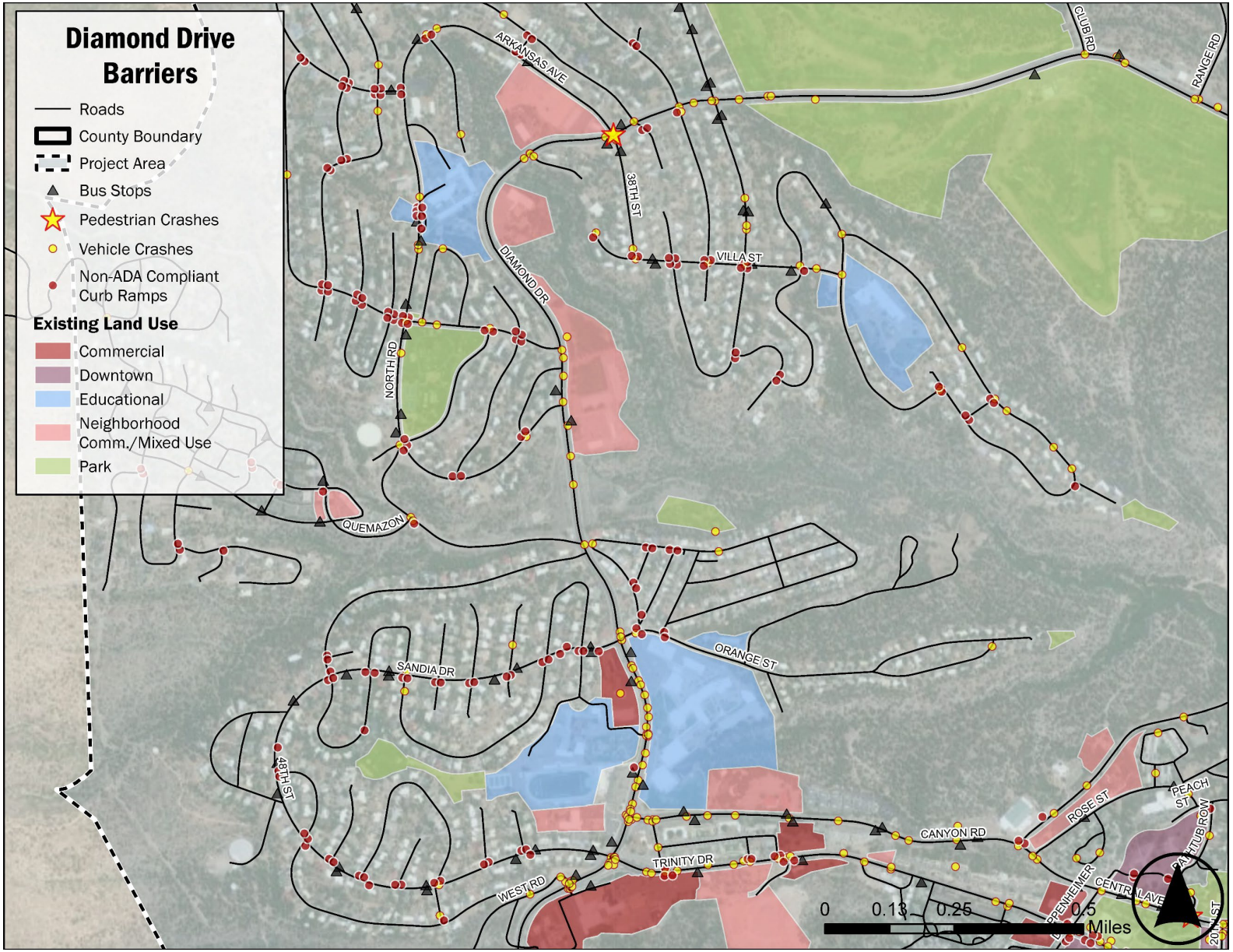


Figure 37: Areas of Concentration - Diamond Drive

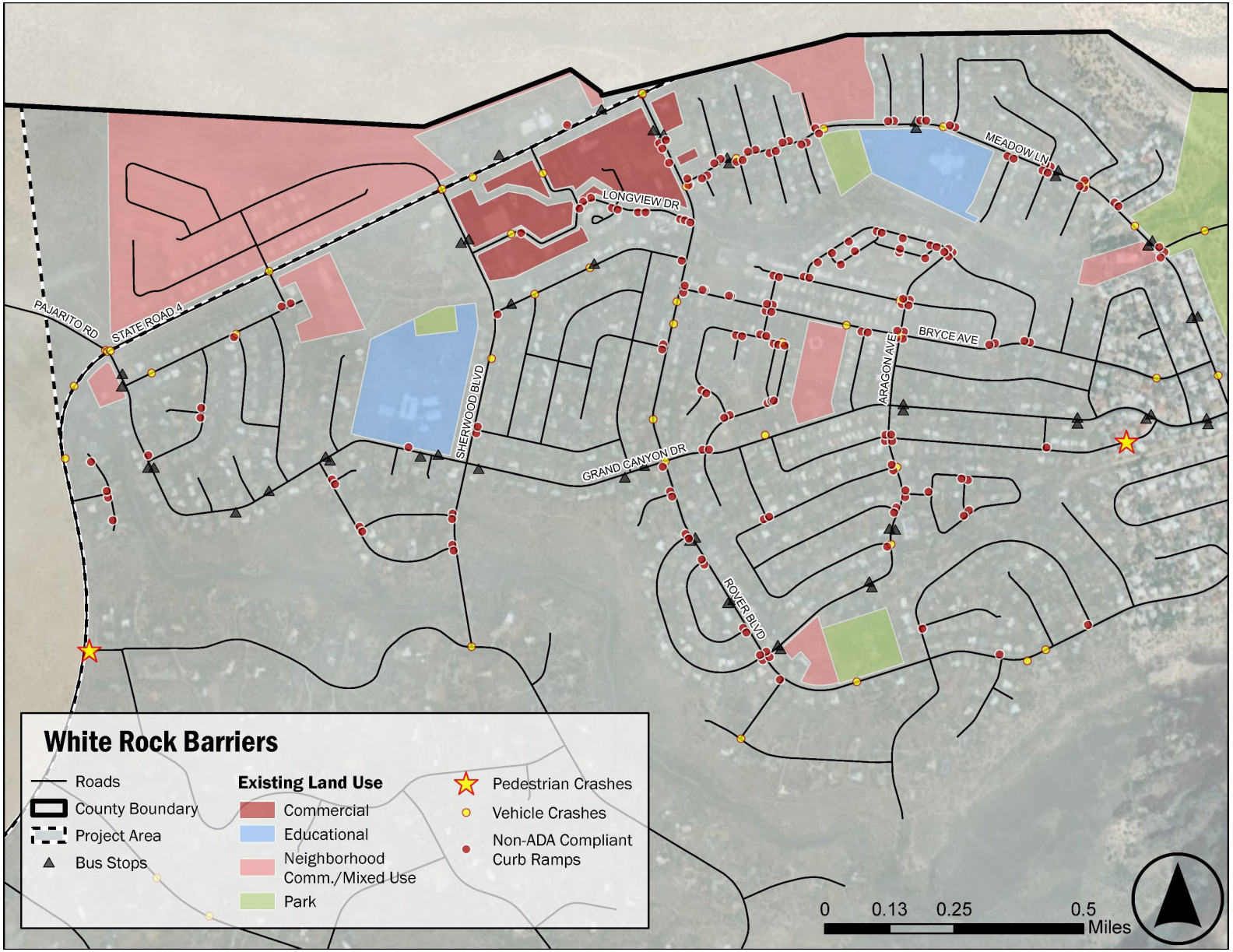


Figure 38: Areas of Concentration - White Rock Northern Boundary

CHAPTER 6
RECOMMENDATIONS

Traffic Calming Techniques

There are a variety of design techniques that can be incorporated into new and existing streets to reduce vehicle speed and make the roadway safer for every mode of travel. These *traffic calming strategies* are implemented on roadways to slow vehicle speeds. The various techniques typically either *alter the physical roadway* or *adjust how a street is perceived*, or both. Vehicle speed reduction is one of the most critical factors for creating a more controlled traffic environment, greatly reducing crash severity and risk of crashes.

The risk of pedestrian fatality increases exponentially with the increase of a vehicle's impact speed at the time of collision. ***Figure 39*** illustrates the higher rate of pedestrian fatality as vehicle speeds increase. This proves that implementation of traffic calming strategies to create an easily controlled traffic environment at safe speeds is critical in pedestrian destination areas.

The following pages offer a set of traffic calming design techniques aimed at creating a safer multi-modal environment. The placement and purpose of these techniques defines their organization, although several techniques may be used for multiple traffic calming functions. Oftentimes, several of these techniques are used strategically along a roadway to change the collective behavior of motorists to improve the multi-modal environment.

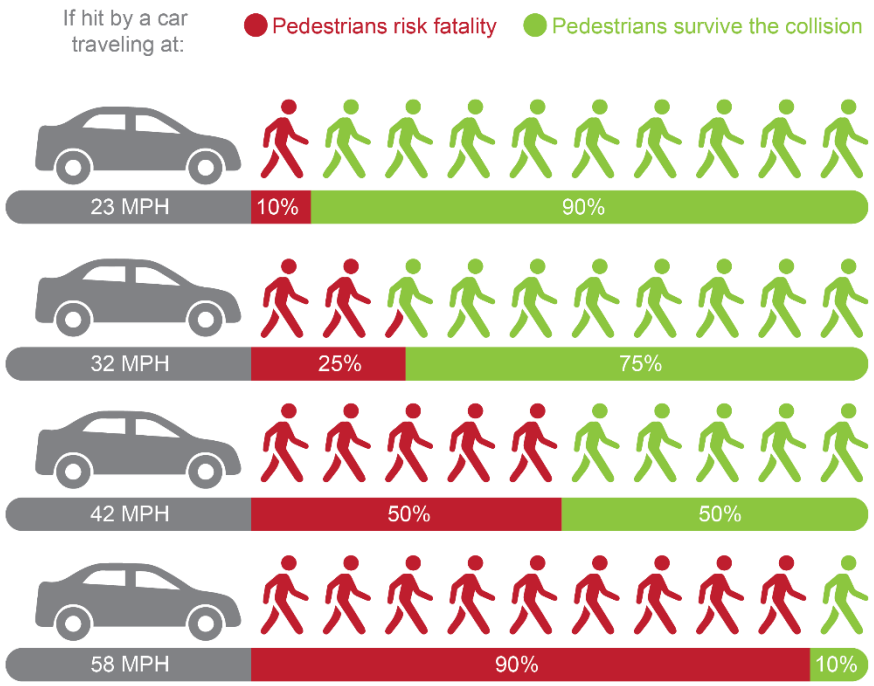


Figure 39: Risk of Pedestrian Fatality vs. Vehicle Speed
Source: https://www.transportation.gov/NRSS/SaferSpeeds

These best practices are nationally recognized as ways to improve transportation safety for all roadway users. The images and descriptions are collected from the National Association of City Transportation Officials (NACTO) and Global Designing Cities Initiative (GDCI).

Intersection Design Techniques

These design improvements are implemented at intersections to create a safer environment for different modes of transportation to cross paths.

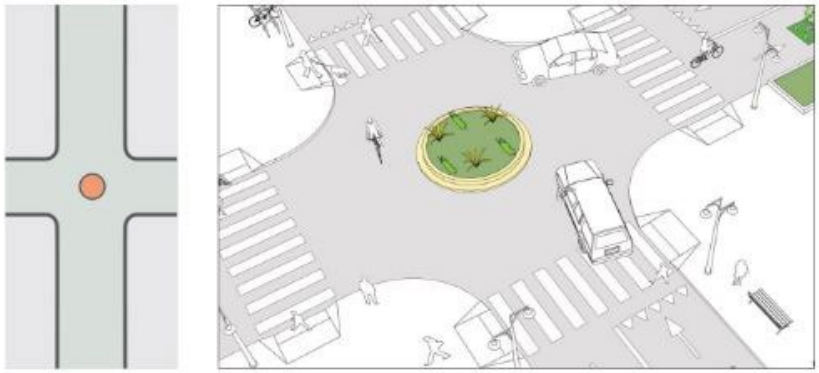
Corner Radii: Narrowing corner radii by adding corner "bumpouts" or curb extensions reduce vehicle turning speeds as well as pedestrian crossing distances.

Gateway Treatments: a combination of design techniques oftentimes implemented at an intersection to alert drivers that they are entering a slower area (also technique for change in perception). This treatment may include signage, entry portals, speed tables, raised crossings, and curb extensions

Roadway Reconfiguration

These elements physically force a directional shift in vehicular traffic, inherently slowing the speed.

Roundabouts (applied at intersection): round islands that serve to both reduce speeds and organize traffic, routing vehicles around the island rather than directly across the intersection.

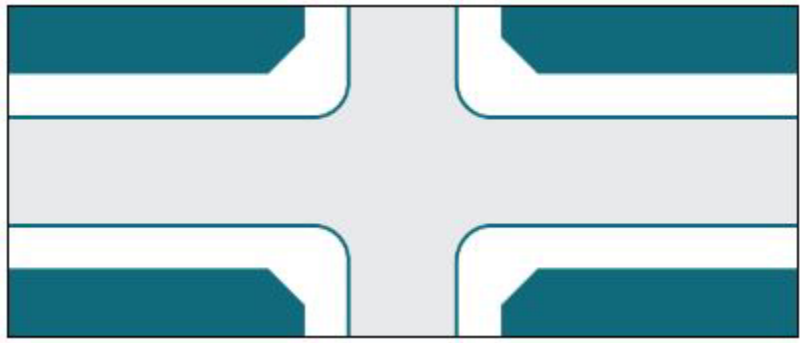


Chicanes and Lane Shifts: Chicanes and lane shifts use alternating parking, curb extensions, or edge islands to form an S-shaped path of travel which lowers vehicle speeds.

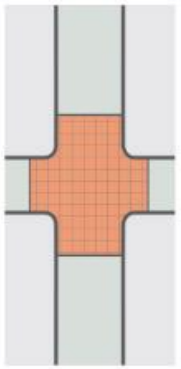
Change in Perception

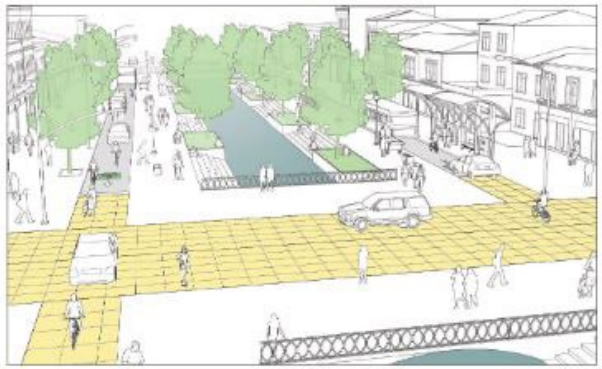
Roadways with these elements are visually different than those intended for high speeds. This calls upon the driver's awareness and creates a more comfortable and appealing environment for pedestrians.

Building Lines: A dense built environment with no significant setbacks constrains sightlines, making drivers more alert and aware of their surroundings. Density also encourages more pedestrian activity which inherently makes drivers more aware.

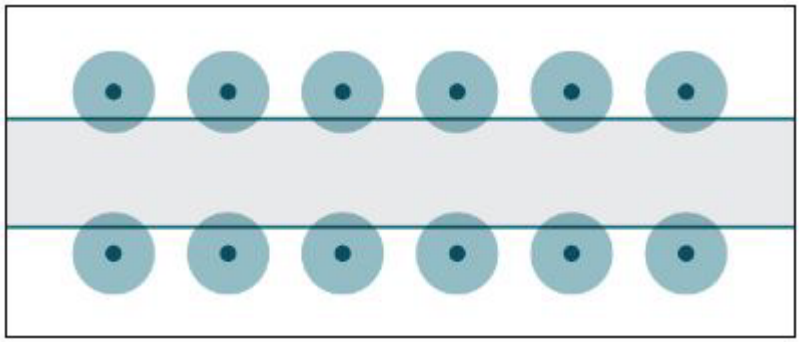


Pavement Materials: Pavement appearance can be altered through unique treatments that add visual interest, such as colored or pattern-stamped asphalt, concrete, or concrete pavers, which can be used to make other traffic calming techniques more noticeable to drivers. Pedestrian crossings and intersections can be painted to highlight crossing areas.



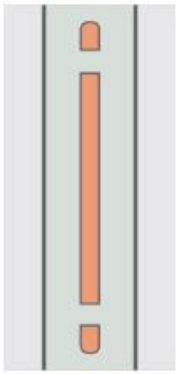


Street Trees: Similar to building lines, street trees narrow a driver's visual field and indicate that a street is in an urban environment, not a highway.

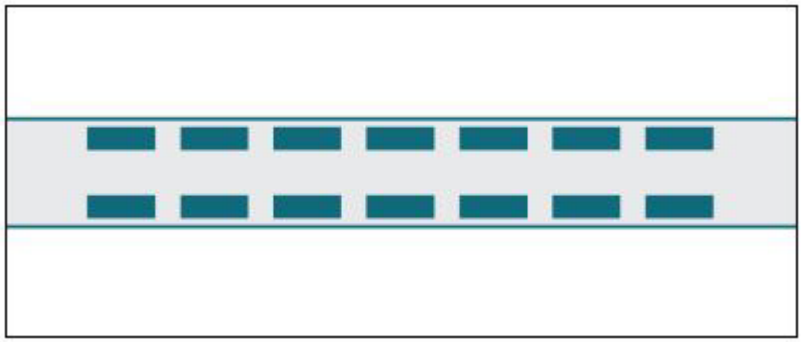


Reduced Lane Width

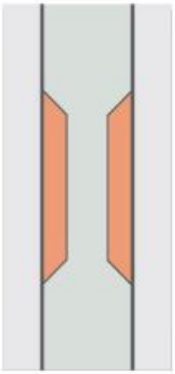
Narrow lanes reduce speeds and minimize crashes on city streets by way of reducing the right-of-way and making drivers wary of traffic.



Medians/ Pedestrian Refuges: these physically reduce the drivable area and visually alert the driver of a change in environment. They can also be used to organize traffic at intersections or to block access at strategic points.



On-street parking: narrows the street and slows traffic by creating friction for moving vehicles.



Pinchpoints: used at a midblock point to reduce the drivable area and vehicle speed by forcing drivers to alter their path (also roadway reconfiguration). This may expand the sidewalk realm and initiate space for on-street8 parking.

Projects from Previous Plans

One intention of the Pedestrian Master Plan for Los Alamos County is to forge a connection and promote the work completed in previous plans. ***Table 11*** presents an inventory of location specific pedestrian-related recommendations from other adopted plans. These act as supplemental recommendations, in addition to the new recommendations developed in this plan discussed in the *Location-Specific Recommendations Section*.

Table 11: Previous Plan Project Inventory

Plan Title	Page Number	Project Type	Location	Other Details/Notes	Status
Comprehensive Plan	**93**	Trail infrastructure	East Road crossing from Entrada to the Canyon Rim Trail trailhead		Complete (*with underpass*)
Comprehensive Plan	**93**	Trail infrastructure	Connecting two parts of the existing Canyon Rim Trail		Complete (*part of Canyon Rim Trail Phase II*)
Comprehensive Plan	**93**	Trail infrastructure	Extension of the western end of the Canyon Rim Trail across Trinity		In Progress (*anticipated as part of Trinity Dr Safety Project*)
Comprehensive Plan	**93**	Trail infrastructure	Connection of the trail networks west of Quemazon and west of the Western area		No Project Yet Identified
RSA Trinity Drive between 15th St & Oppenheimer Dr	**18; 24**	Median refuge island	Ashley Pond/Trinity Drive	Includes marked crosswalk	In Progress (*considered in Trinity Dr Safety Project*)
RSA Trinity Drive between 15th St & Oppenheimer Dr	**24**	Intersection crossing improvements	Trinity Dr intersections	Sidewalk ramp improvements, pedestrian countdown and audible pedestrian indications	In Progress (*considered in Trinity Dr Safety Project*)
RSA Trinity Drive between 15th St & Oppenheimer Dr	**17; 24**	Widen sidewalks and make ADA	Trinity Drive		In Progress (considered in Trinity Dr Safety Project)
Los Alamos Resiliency, Energy and Sustainability Task Force	**96**	Bike Path (Los Alamos to White Rock)	A bike path (Not along main roads) connecting Los Alamos townsite directly to White Rock		No Project Yet Identified
Los Alamos Resiliency, Energy and Sustainability Task Force	**96**	Bike lane and walking path	Omega Bridge	LANL-owned; improvements would be facilitated by LANL	No Project Yet Identified
Los Alamos Resiliency, Energy and Sustainability Task Force	**114**	Flashing light crosswalks	White Rock/Mirador, Crosswalk on Diamond near Urban/Mountain, North Mesa by middle school, Downtown on Trinity by 20th/Ashley Pond		No Project Yet Identified (sites considered)

Plan Title	Page Number	Project Type	Location	Other Details/Notes	Status
White Rock Town Center Master Plan	**48**	Curb extension and ped crossing	State Road 4 & Sherwood Blvd		In Progress
White Rock Town Center Master Plan	**48**	Curb extension and ped crossing	State Road 4 & Rover Blvd		No Project Yet Identified
White Rock Town Center Master Plan	**48**	At grade crossing	La Vista Dr & Sherwood Blvd		No Project Yet Identified
White Rock Town Center Master Plan	**48**	Paved trail	State Road 4 between La Vista Dr & Sherwood Blvd		In Progress *(considered in NM4 Crossing Proj.)*
White Rock Town Center Master Plan	**49**	Streetscaping	Sherwood Blvd	pedestrian lighting, street furnishings, signage, and street trees	Complete
White Rock Town Center Master Plan	**49**	Road reconstruction for ped Improvements	Rover Blvd	Lanes narrowed to allow bike lanes and existing sidewalks should enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees.	No Project Yet Identified
White Rock Town Center Master Plan	**51**	Road reconstruction for ped Improvements	Rover Blvd	Lanes narrowed to allow bike lanes and widened sidewalks with enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees	No Project Yet Identified
White Rock Town Center Master Plan	**51**	Road reconstruction for ped Improvements	Bonnie View Dr	Lanes narrowed to allow widened sidewalks with enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees	No Project Yet Identified

Plan Title	Page Number	Project Type	Location	Other Details/Notes	Status
White Rock Town Center Master Plan	**51**	Road reconstruction for ped Improvements	Longview Drive	Lanes narrowed to allow bike lanes and widened sidewalks with enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees	No Project Yet Identified
Downtown Master Plan	**53**	Streetscaping	Central Avenue	Extend existing improvements on Central to continue to the east past 9th St	In Progress (*Planning stage*)
Downtown Master Plan	**53**	Road reconstruction for ped Improvements	15th Street	Lanes narrowed to allow widened sidewalks and landscape buffers on both sides. Bike sharrows can be added to travel lanes. Ped realm can be enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees	No Project Yet Identified
Downtown Master Plan	**53**	Road reconstruction for ped Improvements	20th Street	Lanes narrowed to allow widened sidewalks and landscape buffers on both sides. The Urban Trail is planned for west side. Pedestrian realm can be enhanced with decorative paving treatments, pedestrian lighting, street furnishings, signage, and street trees	Complete
Downtown Master Plan	**55**	Road reconstruction for ped Improvements	Trinity Drive	Construct a landscape buffer on both sides of street and widened sidewalks. Incorporate a landscape median where turn lane is not needed.	In Progress

Plan Title	Page Number	Project Type	Location	Other Details/Notes	Status
Downtown Master Plan	**54-55**	Pedestrian corridor construction	Nectar St to Trinity Dr - north-south pedestrian corridor	Construct a pedestrian corridor where northern portion includes 2 travel lanes with low speed, a wide landscape and sidewalk area and a frontage zone. The southern portion (south of Central Ave) prohibits vehicles and is a ped-only corridor	No Project Yet Identified
Downtown Master Plan	**57-59**	Placemaking strategies/Intersection enhancements	Various locations along Central Ave and Trinity Dr	Seating, lighting, public art, intersection enhancements to enhance Downtown environment	No Project Yet Identified
Downtown Master Plan	**93-94**	Create interconnected public spaces	Various locations throughout downtown	Create and connect public spaces of various sizes throughout downtown	No Project Yet Identified

Location-Specific Recommendations

Through the analysis of existing conditions and incorporation of public feedback, a set of high-level, location-specific recommendations for pedestrian improvements have been identified. ***Figure 40*** and ***Figure 41*** display maps of the study area's recommendations with an improvement identification number (IMP#) which is associated with details listed in ***Table 12: Recommendations***. A scoring methodology was developed to determine a priority ranking which is explained further in *Recommendation Prioritization* on page 87.

The sections below offer descriptions of the details provided in the recommendations table.

Safe Routes to School

A icon represents a recommendation that supports Los Alamos' Safe Routes to School program. These consist of infrastructure improvements to enhance crossing safety, accessibility, traffic calming, and driver awareness.

High-Level Construction Cost Estimate

This offers a planning-level assumption of costs for the construction of recommendations. It does not include expenses for engineering studies and engagement and is used only to provide a general understanding of the cost range. Cost estimates were determined from previous studies and FHWA's Pedestrian Safety Guide.

Timeframe

The timeframe offers a planning-level assumption for a time range for implementation. They are defined below:

- **Short-Term (0–2 Years)**
- **Mid-Term (2–5 Years)**
- **Long-Term (5+ Years)**

Additional Requirements

This indicates a study, partnership, or engagement that should be completed for implementation. These are not included in the cost and may be necessary for other improvements where not indicated.

Definitions

These are used in the Recommendations table.

- **RRFB (Rectangular Rapid Flashing Beacons):** Pedestrian-activated, high-intensity flashing lights used to increase driver awareness at crosswalks.
- **PHB (Pedestrian Hybrid Beacons):** Traffic control devices that remain dark until activated by a pedestrian, at which point they display a series of signals to stop vehicles and allow safe crossing.
- **High Visibility Crosswalk**: A crosswalk using a more visible pattern (wide longitudinal lines, a bar-pair pattern, ladder, or zebra rather than the standard parallel pattern. A high-quality material is often selected for greater reflectivity and longer life.

- **Leading pedestrian interval**: A traffic signal timing strategy that gives pedestrians a head start to enter the crosswalk before vehicles receive a green light.
- **Feedback sign**: A sign that provides real-time feedback, such as displaying a vehicle's speed or alerting drivers and pedestrians to specific safety information.
- **NB; EB; SB; WB**: North bound; East bound; South bound; West bound

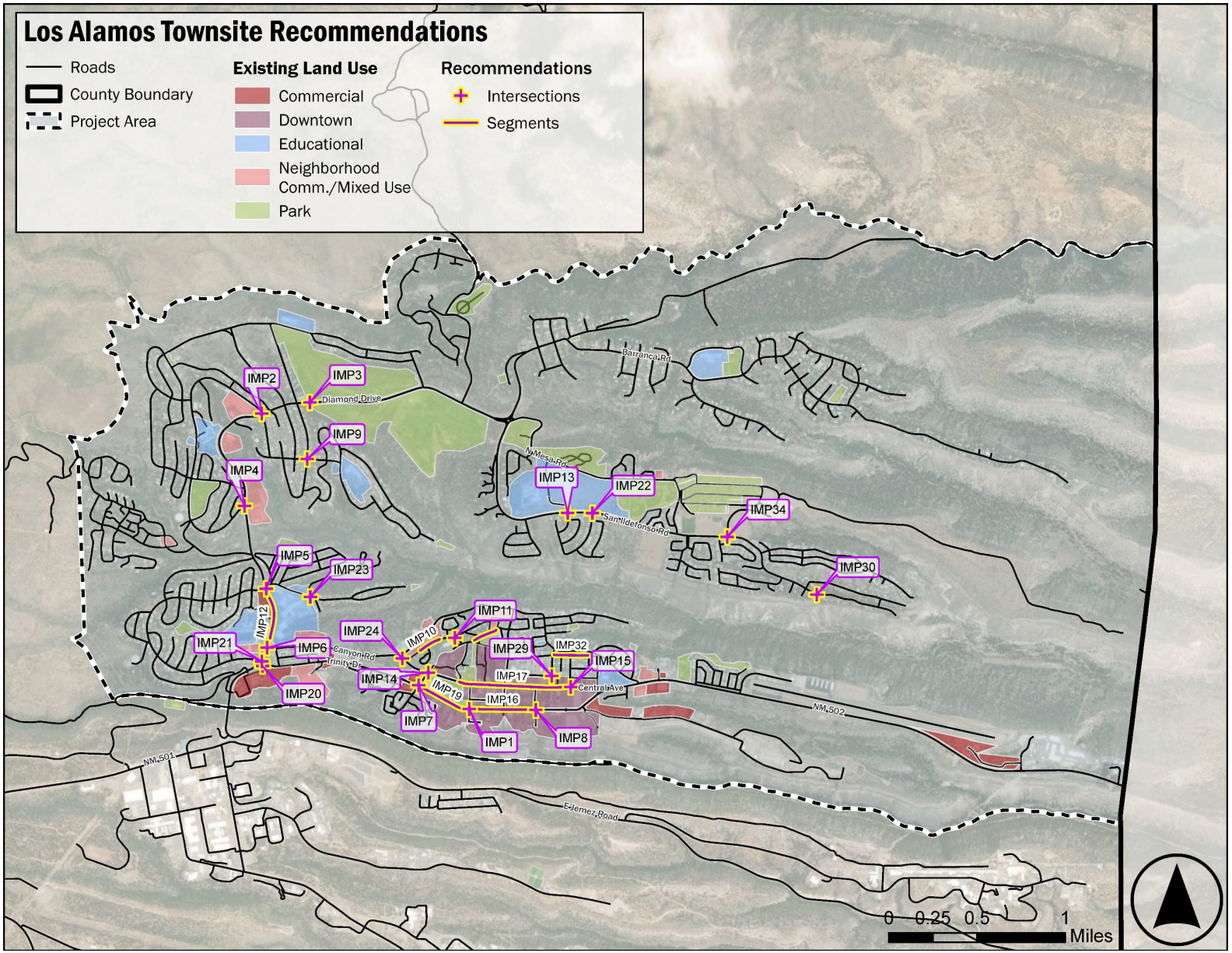


Figure 40: Los Alamos Townsite Recommendations

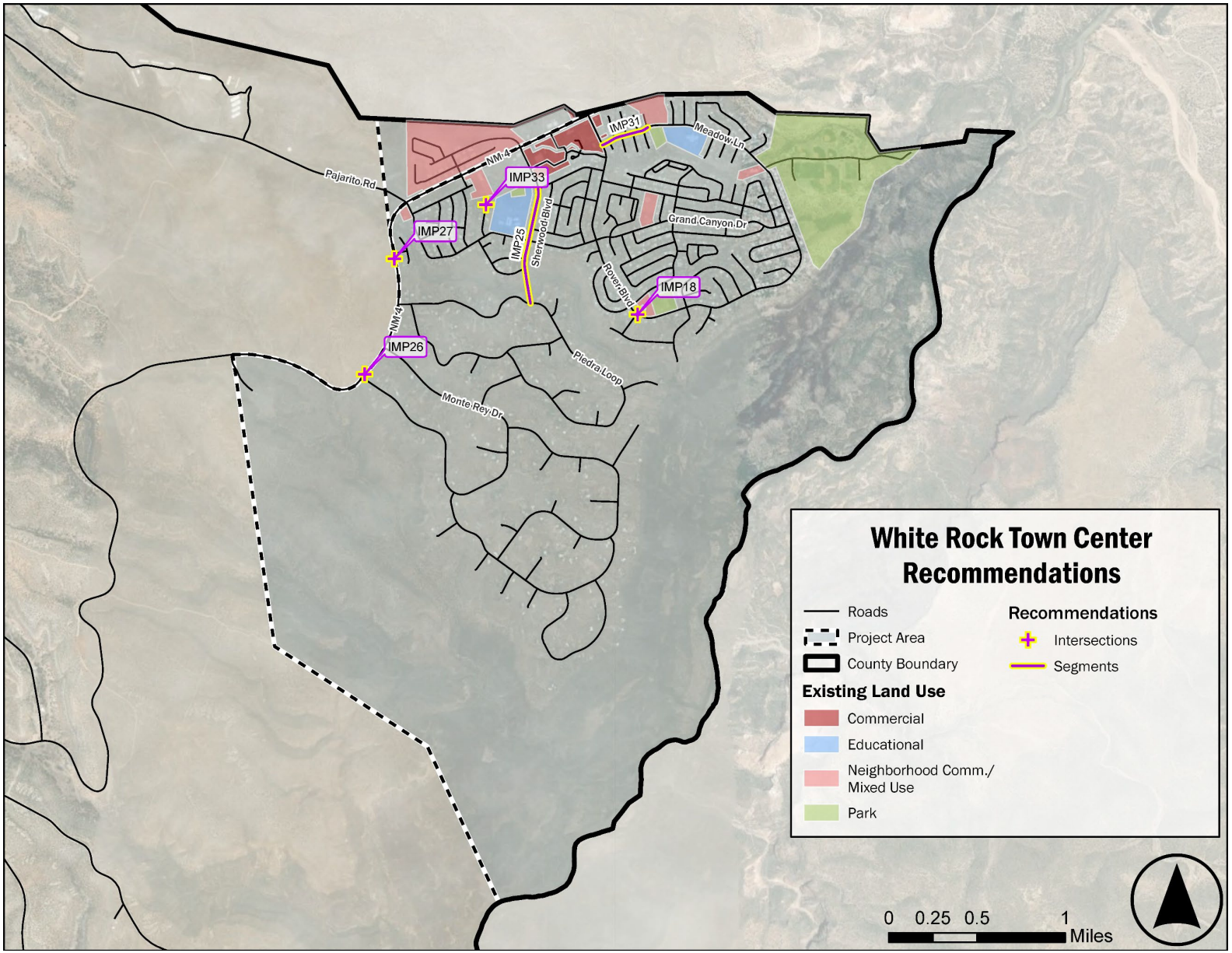


Figure 41: White Rock Recommendations

Table 12: Recommendations

ID	Improvement Recommendation	Location	Construction Cost Estimate	Timeframe	Additional Requirements
IMP1	High Visibility cross walks, signage, and PHB for both EB/WB approaches (pedestrians travelling NB/SB)	20th St and Trinity Drive	$5,710/each high vis. crosswalk $560/each signage $57,680/each PHB	Long-Term	Engineering Study & Requires NMDOT approval
IMP2	Repaint crossing striping	Southbound approach at Diamond Drive and Arkansas Avenue	$770/each standard crosswalk	Short-Term	
IMP3	Enhance landscaping on median and add curb extensions	East of 35th Street and Diamond Drive	$13,000/each curb extension $15 - $25/sq ft of landscaping	Mid-Term	Engineering Study
IMP4	Install high visibility crosswalk and RRFB	Sycamore Street and Diamond Drive	$5,710/each high vis. crosswalk $14,160/each RRFB	Mid-Term	Engineering Study
IMP5	Insert marked crosswalk at northbound approach and Pedestrian Push Buttons	Sandia Drive / Orange Street and Diamond Drive	$770/each standard crosswalk $1,200/each push button installation	Short-Term	Requires NMDOT approval
IMP6	Repaint pedestrian crossing striping and add Leading pedestrian interval	Eastbound approach at Canyon Road and Diamond Drive	$770/each standard crosswalk $1,500/ped signal re-timing	Short-Term	Engineering Operational Study & Requires NMDOT approval
IMP7	Repaint pedestrian crossing striping	Southbound Approach at Oppenheimer Drive and Trinity Drive	$770/each standard crosswalk	Short-Term	Requires NMDOT approval
IMP8	Repaint high visibility pedestrian crossing striping	Northbound and southbound approaches at Knecht Street and Trinity Drive	$5,710/each high vis. crosswalk	Short-Term	Requires NMDOT approval

ID	Improvement Recommendation	Location	Construction Cost Estimate	Timeframe	Additional Requirements
IMP9	Install pedestrian crossing and signage for both EB/WB approaches (pedestrians travelling NB/SB)	35th Street and Villa Street	"$770/each standard crosswalk	Mid-Term	Engineering Study with Safe Routes to School Program
IMP10	Install 2 school zone signs (one at each endpoint)	Canyoncito Montessori School	$300/each sign	Short-Term	
IMP11	Install crosswalk striping to direct pedestrian traffic to north side with sidewalk	Rose St and 22nd St	$770/each standard crosswalk	Short-Term	Horizontal Curve Study/Wayfinding Analysis
IMP12	Install speed feedback sign	Diamond Drive near Los Alamos High School	$3,000 - $7,000/sign	Short-Term	Requires NMDOT approval
IMP13	Install stop signs at eastbound and westbound approaches and upgrade curb ramps to meet ADA standards.	Hawk Drive and San Ildefonso Road (school zone)	$300/each sign $700-$3,500/each curb ramp reconstruction (depends on level of reconstruction.)	Long-Term	Engineering All-Way Stop Control (AWSC) Study
IMP14	Install pedestrian crossing on WB approach (for pedestrians traveling NB/SB)	Oppenheimer Drive and Central Avenue	$770/each standard crosswalk	Short-Term	
IMP15	Repaint crosswalk to match red standard style used in the West	Central Avenue and 6th Street	$2,090/each standard crosswalk with red interior	Short-Term	
IMP16	Sidewalk reconstruction - increase sidewalk widths that are 5 ft or less and ensure ADA curb ramp compliancy	Trinity Drive from 20th Street to Knecht Street	$410/linear foot	Long-Term	Requires NMDOT approval
IMP17	Incorporate wayfinding, appropriate pedestrian amenities, and art to enhance the pedestrian experience	Central Avenue from Bathtub Row to 6th Street	Varies largely on involvement of artists; type and style of amenities; creation and implementation of wayfinding branding	Long-Term	

ID	Improvement Recommendation	Location	Construction Cost Estimate	Timeframe	Additional Requirements
IMP18	Install pedestrian crossing, signage, and RRFBs on WB approach (for pedestrians traveling NB/SB)	Rover Boulevard near Rover Park and Ponderosa Montessori School	$770/each standard crosswalk $300/each sign $14,160/each RRFB	Mid-Term	Engineering Study
IMP19	Widen sidewalks and add landscaped buffer zones	Trinity Drive from Oppenheimer Drive to 20th Street	$410/linear foot of concrete sidewalk $10,000/each buffer	Long-Term	Requires NMDOT approval
IMP20	Install crosswalk striping and RRFBs	Southeast corner of Trinity Drive and Diamond Drive	$770/each standard crosswalk $14,160/each RRFB	Mid-Term	
IMP21	Leading pedestrian interval	Diamond Drive and Trinity Drive	$1,500/ped signal re-timing	Short-Term	Engineering Operational Study & Requires NMDOT approval
IMP22	Upgrade curb ramps to meet ADA standards.	San Ildefonso Drive and Camino Uva	$700-$3,500/each curb ramp reconstruction (depends on level of reconstruction)	Mid-Term	
IMP23	Restripe crosswalk (connection to trailhead) and install advanced pedestrian warning signing and crosswalk signing	Olive Street Trailhead	$770/each standard crosswalk $300/each sign	Short-Term	
IMP24	Install high visibility crosswalk and RRFBs	Canyon Road and Central Avenue connection to Acid Canyon Trail and South Pueblo Bench Trail	$5,710/each high vis. crosswalk $14,160/each RRFB	Short-Term	Engineering Study
IMP25	Improve lighting	Sherwood Blvd - Piedra Loop to Aztec Avenue	$5,000/each streetlight	Mid-Term	Lighting Study and Public Outreach
IMP26	Install speed feedback sign	NM-4 near Monte Rey Dr	$3,000 - $7,000/sign	Short-Term	Requires NMDOT approval
IMP27	Install speed feedback sign	NM-4 near Karen Circle	$3,000 - $7,000/sign	Short-Term	Requires NMDOT approval

ID	Improvement Recommendation	Location	Construction Cost Estimate	Timeframe	Additional Requirements
IMP28	Connect sidewalks	S Peach St from Nectar St to S Sage Loop	$410/linear foot of concrete sidewalk	Long-Term	
IMP29	ADA curb ramp reconstruction	9th St and Iris St (NE and SE corner)	$700-$3,500/each curb ramp reconstruction (depends on level of reconstr.)	Mid-Term	
IMP30	Install crosswalk	San Ildefonso Rd near Big Rock Loop	$770/each standard crosswalk	Short-Term	
IMP31	Widen sidewalks and make curb ramps compliant	Meadow Ln from Rover Blvd to trail entrance	$410/linear foot of concrete sidewalk $700-$3,500/each curb ramp reconstruction (depends on level of reconstr.)	Long-Term	Engineering Study
IMP32	Connect sidewalk on N side. Opportunity to implement amenities/art/wayfinding in Myrtle Street Green Park	Myrtle St - 9th St to 5th St	$410/linear foot of concrete sidewalk	Mid-Term	
IMP33	Install ADA compliant curb ramps on end of sidewalk and entrance to trail	End of Siera Vista Dr/Entrance to trail	$700-$3,500/each curb ramp reconstruction (depends on level of reconstr.)	Mid-Term	
IMP34	Install crosswalk and ADA compliant curb ramps on EB approach (to direct ped traffic to continued sidewalk on N side)	San Ildefonso Rd and N Mesa Park Rd	$5,710/each high vis. crosswalk $700-$3,500/each curb ramp reconstruction (depends on level of reconstr.)	Mid-Term	

Note that several recommendations are located on state owned roadways. New Mexico Department of Transportation (NMDOT) owned roadways within Los Alamos County include:

- *Within Los Alamos Townsite:*
  - South end of Diamond Drive (from Sandia Drive/Orange Street in the north to Jemez Road in the south)
  - University Drive
  - NM 502 (East Road and Trinity Drive)
- *Within White Rock Town Center:*
  - NM 4
- *Primarily outside study area boundaries:*
  - NM 501 (W Jemez Road)
  - E Jemez Road
  - West Road

Out of these roads, the Pedestrian Master Plan provides recommendations only for Diamond Drive, Trinity Drive, and NM 4 (these IMPs indicate "Requires NMDOT approval" in the Additional Requirements column). As these corridors are owned and maintained by NMDOT), any improvements must be approved and implemented by the state. While Los Alamos County does not have primary responsibility for planning or executing projects on these state-owned roads, it can play a supporting role by coordinating and collaborating with NMDOT throughout the process.

State-owned roads are not excluded from the recommendation process in this plan, as they are critical corridors within the study area that warrant attention for pedestrian safety improvements. Although the County cannot directly carry out enhancements on these roads, this Plan can serve as a supportive resource for future collaborative projects with NMDOT.

Recommendation Prioritization

The methodology for scoring is detailed below. ***Table 13: Recommendation Scores and Priority Level*** displays the recommendation scores ranked in order of prioritization. Appendix C lists the complete scores for each of the recommendations. This combined framework ensures projects are prioritized based on objective criteria while incorporating community needs and feasibility to achieve a safer, more connected pedestrian network in Los Alamos County.

Prioritization Scoring Methodology

The methodology evaluates and prioritizes pedestrian projects using a weighted scoring system across five key criteria: **Safety, Connectivity, Equity and Accessibility, Community Support, and Implementation Feasibility**. A total of 100 points is distributed among these categories, ensuring an objective comparison of projects. The scoring factors and weights are detailed below:

Priority Scoring Merit Criteria (100 Points Total)

1. Safety (35 Points)

- **Crash History (15 Points)**:
  - Includes all vehicle crashes, not just

pedestrian crashes, as this is a safety concern for all roadway users.
    - High crash location (>2 crashes in 5 years): 15 points
    - 1–2 crashes in 5 years: 10 points
    - No crashes but identified safety concern: 5 points
- **Vehicle Speeds and Volumes (10 Points)**:
    - High speed (>35 mph) and volume arterials: 10 points
    - Collector streets: 7 points
    - Local streets: 3 points
- **Public Safety Concerns (10 Points)**:
    - Multiple documented concerns: 10 points
    - Single documented concern: 5 points

2. Connectivity (25 Points)

- **Proximity to Key Destinations (15 Points)**:
    - Schools/senior centers: 15 points
    - Commercial/retail areas: 12 points
    - Parks/recreation: 10 points
    - Residential areas: 8 points
- **Network Gaps (10 Points)**:
    - Fills critical missing link: 10 points
    - Enhances existing connection: 5 points

3. Equity and Accessibility (20 Points)

- **ADA Compliance (10 Points)**:
    - Non-compliant high-priority location: 10 points
    - Non-compliant medium-priority location: 7 points
    - Non-compliant low-priority location: 3 points
- **Serves Vulnerable Populations (10 Points)**:
    - High concentration of seniors/disabled/low-income: 10 points
    - Moderate concentration: 5 points

4. Community Support (10 Points)

- **Public Input Priority (10 Points)**:
    - High community priority: 10 points
    - Medium community priority: 5 points
    - Low community priority: 2 points

5. Implementation Feasibility (10 Points)

- **Cost and Complexity (5 Points)**:
    - Low cost/complexity: 5 points
    - Medium cost/complexity: 3 points
    - High cost/complexity: 1 point
- **Funding Opportunity (5 Points)**:
    - Secured or highly likely funding: 5 points
    - Potential funding identified: 3 points
    - No funding identified: 1 point

Project Priority Levels

- **High Priority Projects (90–100 Points)**
- **Medium Priority Projects (80–89 Points)**
- **Lower Priority Projects (Below 80 Points)**

Table 13: Recommendation Scores and Priority Level

ID	Safety	Connectivity	Equity & Access.	Comm. Support	Impl. Feasibility	Total	Priority Level
IMP18	35	25	20	10	8	**98**	High
IMP12	32	24	19	10	9	**94**	High
IMP25	32	24	19	10	9	**94**	High
IMP6	30	25	20	8	7	**90**	High
IMP19	33	23	18	8	7	**89**	Medium
IMP21	32	23	19	8	6	**88**	Medium
IMP34	31	23	19	8	6	**87**	Medium
IMP13	27	23	20	8	8	**86**	Medium
IMP26	31	23	18	8	6	**86**	Medium
IMP31	29	22	18	9	8	**86**	Medium
IMP17	29	24	19	7	6	**85**	Medium
IMP20	31	23	18	8	5	**85**	Medium
IMP33	30	21	18	9	7	**85**	Medium
IMP24	29	22	18	9	6	**84**	Medium
IMP30	28	21	17	10	7	**83**	Medium
IMP4	30	20	17	8	7	**82**	Medium
IMP15	28	22	18	8	6	**82**	Medium
IMP16	31	19	17	8	7	**82**	Medium
IMP1	30	20	15	8	7	**80**	Medium
IMP2	30	17	17	8	8	**80**	Medium

ID	Safety	Connectivity	Equity & Access.	Comm. Support	Impl. Feasibility	Total	Priority Level
IMP22	28	21	17	7	7	**80**	Medium
IMP27	28	21	17	7	7	**80**	Medium
IMP29	27	20	16	8	7	**78**	Low
IMP14	26	20	17	7	6	**76**	Low
IMP23	27	20	16	7	6	**76**	Low
IMP5	26	20	16	7	6	**75**	Low
IMP8	26	20	17	6	6	**75**	Low
IMP28	25	19	16	7	6	**73**	Low
IMP10	25	18	16	7	6	**72**	Low
IMP32	26	19	15	6	6	**72**	Low
IMP3	27	18	14	7	4	**70**	Low
IMP7	23	20	15	6	5	**69**	Low
IMP9	22	18	15	5	5	**65**	Low
IMP11	22	17	14	6	5	**64**	Low

Recommended Funding Opportunities

The proposed pedestrian improvements in Los Alamos County can be funded through various federal, state, and local funding sources. This section outlines the primary funding mechanisms available for the recommendations.

Federal Funding Sources

1. **Highway Safety Improvement Program (HSIP)**
   - Applicable to high-priority safety improvements, particularly at locations with documented crash histories
   - Best suited for projects involving crosswalks, RRFBs, signage, and speed feedback signs
   - Recommended for high-crash locations along Trinity Drive, Diamond Drive, and other arterial corridors
   - Projects must demonstrate a direct safety benefit through crash reduction

2. **Transportation Alternatives Program (TAP)**
   - Supports a wide range of pedestrian and bicycle infrastructure projects
   - Particularly suitable for:
   - Sidewalk construction and reconstruction
     - ADA compliance improvements
     - Pedestrian crossing enhancements
     - Trail connections and accessibility improvements
   - Can be combined with other funding sources for larger projects

3. **Surface Transportation Block Grant Program (STBG)**
   - Flexible funding source for various transportation projects
   - Applicable to:
     - Major corridor improvements
     - Sidewalk reconstruction
     - Intersection modifications
     - Pedestrian signal improvements
   - Can support both small-scale and comprehensive corridor projects

4. **Infrastructure Investment and Jobs Act (IIJA) Grants**
   - New funding opportunity for significant infrastructure improvements
   - Best suited for large-scale projects such as:
     - Corridor-wide sidewalk reconstruction
     - Major accessibility improvements
     - Complete streets implementations
     - Multiple improvement combinations

5. **Safe Routes to School Program**
   - Specifically targeted at improving pedestrian safety near schools
   - Ideal for:
     - School zone improvements
     - Crosswalk enhancements
     - Signage and warning systems
     - Sidewalk connections to schools

6. **Recreational Trails Program (RTP)**
   - Focused on trail accessibility and connections
   - Suitable for:
     - Trail entrance improvements
     - Trail-to-sidewalk connections
     - Trailhead accessibility upgrades
     - Wayfinding systems

7. **Congestion Mitigation and Air Quality (CMAQ) Program**
   - Supports projects that improve air quality and reduce congestion
   - Applicable to projects that encourage walking as an alternative to driving
   - Can fund pedestrian infrastructure in high-traffic areas

State and Local Funding Sources

1. Local Capital Improvement Funds

- Primary source for smaller-scale improvements
- Suitable for:
  - Routine maintenance
  - Minor repairs
  - Quick-implementation projects
  - Local match for federal grants

2. Community Development Block Grants (CDBG)

- Focused on improvements in qualifying neighborhoods
- Particularly suitable for:
  - ADA compliance upgrades
  - Sidewalk connectivity
  - Neighborhood accessibility improvements
  - Projects serving vulnerable populations

3. Local Bond Measures

- Can fund larger capital improvements
- Requires voter approval
- Suitable for comprehensive improvement packages
- Provides dedicated local funding source

4. State Transportation Innovation Grants

- Support innovative transportation solutions
- Applicable to pilot projects and new technologies
- Can fund speed feedback signs and other smart transportation features

5. New Mexico FUNDIT

- Platform that facilitates links between projects and 20 different state and federal funding opportunities
- Eligible public projects include business development, community development, infrastructure development, housing, and opportunity zones

ADA-Specific Funding

1. ADA Compliance Grants

- Dedicated funding for accessibility improvements
- Priority for:
  - Curb ramp reconstruction
  - Sidewalk width compliance
  - Crossing improvements
  - Removal of accessibility barriers

Recommended Implementation Strategies

Implementation requires a tailored approach for each recommendation, supported by coordination, community input, and access to appropriate funding. The following section outlines clear, practical strategies to guide next steps – helping prioritize projects, secure funding, and maintain momentum over time.

Funding Priorities

Below is a recommended investment priority order based on project types and associated funding sources.

1. High-Priority Safety Projects

- Focus on HSIP and STBG funding
- Target locations with documented crash histories
- Emphasize quick-implementation improvements

2. Safe Routes to School Related Projects

- Utilize Safe Routes to School funding
- Combine with local funds for comprehensive improvements
- Prioritize projects with strong community support

3. ADA Compliance Projects

- Pursue dedicated ADA compliance grants
- Combine with TAP funding for larger projects
- Focus on high-priority locations first

4. Corridor-Wide Improvements

- Seek IIJA grants for major projects
- Combine multiple funding sources
- Plan for phased implementation

Strategic Approaches

The strategies below offer different methods for funding and implementation to improve efficiency and effectiveness.

1. Bundling Projects

- Combine similar improvements for efficient funding applications
- Group projects by geographic area or improvement type
- Create comprehensive funding packages

2. Matching Funds

- Use local funds to leverage federal grants

- Maintain flexible local funding for matching requirements
- Consider bond measures for larger matching needs

3. Phased Implementation

- Start with high-priority, low-cost improvements
- Build momentum with early successes
- Plan for longer-term, more complex projects

4. Regular Monitoring

- Track funding availability and deadlines
- Monitor project eligibility requirements
- Update priorities based on funding opportunities

Recommendations for Success

The steps below offer best practices to help maintain momentum and position projects for success.

1. Maintain Project Readiness

- Keep design documents updated
- Document safety concerns and crash data
- Prepare cost estimates regularly

2. Build Community Support

- Document public input and priorities
- Demonstrate community benefits
- Maintain transparent communication

3. Multiple Sources

- Identify complementary funding opportunities
- Create funding packages for larger projects
- Maintain flexibility in funding approaches

4. Focus on Documentation

- Track crash data and safety concerns
- Document ADA compliance needs
- Maintain current cost estimates

Post-Implementation Monitoring and Update Suggestions

Below outlines strategies for project monitoring, assessment, and feedback after construction to ensure the plans and projects remain current and effective.

1. Annual Review: Update crash data and safety patterns.

2. Bi-Annual Feedback: Conduct community input sessions.

3. Priority Adjustments: Update project rankings using:

- Completed projects
- New safety concerns
- Changed conditions
- Funding availability
- Community feedback

Countermeasure Process Guide

The guide below outlines the process for identifying and selecting countermeasures in support of ongoing efforts to enhance pedestrian mobility and advance other transportation initiatives. This process was used for the Pedestrian Master Plan and can be referred to for future projects.

1. Determine Objectives

Determine objectives to guide the process of countermeasure selection starting with data collection and ending with recommendation prioritization. Identify the reason for this effort – are there multiple crashes of the same type along a corridor? Is there an area with heavy pedestrian traffic but little crossing infrastructure? Are there accessibility barriers near community destinations?

The objectives, or goals, of the Pedestrian Master Plan are safety, connectivity, equity, health, and vibrancy (*detailed further in Chapter 2 Vision & Goals*). The plan uses Vision Zero principles and the Safe Systems approach to focus on improving pedestrian safety through a proactive and preventative approach.

Enhancing pedestrian safety is a cornerstone of improved walkability. Prioritizing safety inherently supports broader goals such as connectivity, equity, health, and vibrancy. Research shows that intersections are the most common locations for traffic fatalities and serious injuries, with crossing traffic posing a significant risk to pedestrians. In response, this plan outlines a series of targeted crossing improvements aimed at increasing visibility, calming traffic, and heightening driver awareness. These measures not only encourage walking by making routes safer and more appealing, but they also contribute to improved habits and expectations for all modes of transportation throughout the entire county.

2. Collect and Analyze Data

Collect and analyze data based on the defined objectives to understand current conditions. Examples of data include street light density, roadway configuration, land use and zoning, Annual Average Daily Traffic (AADT), crash data, and much more. The Pedestrian Master Plan reviewed the following data:

a. Pedestrian facilities, sidewalk conditions, ADA compliance: existing data was used to identify signalized intersections, marked crosswalks, sidewalk conditions, and ADA curb ramp compliance. It is important to consistently update inventories such as these to develop accurate analysis and recommendations.

b. Pedestrian destinations: existing land use was used to identify areas likely to receive high pedestrian traffic (commercial, downtown, educational, neighborhood commercial /mixed use, and parks). Pinpointing specific uses provides a more detailed understanding of the area (this means marking on a map the existing establishments

likely to receive pedestrian traffic, i.e. civic, educational, medical, and shopping & entertainment uses).

c. Crash data: crashes were geolocated from the most recent 5-year period to identify hot spot locations. Review of crash types and contributing circumstances helps determine patterns. Other details involved in crash incidents may be selected to guide the analysis depending on the objective. For the Pedestrian Master Plan, crashes involving pedestrians were the focus of the analysis, however other factors may reveal different patterns (ex: speeding, sideswipes, vision obstruction, etc.) It is important to revisit crash reporting systems and training to ensure consistency across all reporting divisions so that data analysis can be complete and accurate.

3. Engage the Public

Conduct public engagement to receive qualitative data involving real-world experiences of pedestrian safety. Forms of public engagement include meetings, walking & rolling tours, surveys, tabling local events, and more. Consider developing a mapping question within surveys to easily geolocate respondent experiences – this contributes greatly to the identification of barriers.

4. Identify Areas of Concern

Combine the collected data and locate areas with high amounts of barriers (i.e. an area has a concentration of crashes, pedestrian destinations, non-compliant ADA curb ramps, sidewalks in poor condition). This is the first step to identify areas in need of improvements.

5. Select Countermeasures (High-Level)

Focusing first on the Areas of Concern, conduct a desktop review involving the existing conditions of geolocated data, survey data, and aerial imagery to select countermeasures which address the defined objectives.

Start simple – are there sidewalk gaps along this corridor? If yes, then recommend a countermeasure to install ADA compliant sidewalks to complete the connection and ensure accessibility. Does an area contain pedestrian destinations across a major corridor with no crosswalk? If yes, then recommend a countermeasure to make pedestrian crossing safer such as a PHB, RRFB, or high visibility crosswalk.

Many different types of countermeasures exist and there are several resources to assist in their selection, including PedSafe Matrices and FHWA Countermeasures list. A traffic engineer or someone experienced with traffic management and operations is able to identify barriers and appropriate countermeasures.

6. Determine High-Level Details for Countermeasures

Apply any other details to the countermeasures to support a better understanding of their implementation and to assist in prioritization identification. Examples include:

a. Cost Estimate: apply general cost estimates to gauge a price range. Kee in mind that more complete and accurate details of costs are determined from additional studies.

b. Timeframe: determine an estimated timeframe based on a general level of effort. A signage installation or maintenance and upkeep improvement such as repainting a crosswalk would be short-term, crosswalk enhancement or smaller roadway reconstruction improvements such as curb extensions would be mid-term, while widening sidewalks or reconfiguring the roadway would be a long-term improvement. This helps gauge the "quick wins" to help improve transportation safety quickly or temporarily while studies and funding are initiated for long-term projects.

c. Additional requirements: note the other types of studies and requirements that are likely needed for implementation.

7. Apply Prioritization Scoring Method

Use a scoring methodology to prioritize the recommendations. The methodology used in this plan is detailed in the *Recommendation Prioritization Section* and Appendix C. This step is important to determine which projects should be pursued first.

8. Complete Additional Studies

Once high-priority recommendations are selected, complete any additional studies and plans for each location and/or recommendation to ensure all data and procedures are taken into account. Consider combining recommendations in the same location or vicinity to address different types of barriers during the same process.

Additional studies may include a Road Safety Audit (RSA), lighting study, traffic operational study, additional public outreach, and others.

9. Identify Funding and Implementation Opportunities

Projects may be funded by federal, state, local, private, or any combination of sources. Funding may be accessible through grants/program applications or local governments may be able to take advantage of existing opportunities such as adding pedestrian improvements to capital projects, expanding or initiating annual programs, enhancing public/private partnerships, or setting developer requirements or incentives. Several online resources exist to help find funding sources,

including a table provided by FHWA at the time of this planning effort.

10. Design, Construct, and Monitor Results

When specific countermeasures are selected, additional studies are completed, and funding is secured, construction of the improvements can begin. After construction, data should be collected and monitored to assess the effectiveness of the countermeasure for at least three years after the installation. Data before and after the countermeasure installation should be compared to demonstrate the value and importance for future improvements. Data to monitor includes durability of materials, maintenance requirements, crash data, pedestrian volumes, traffic speeds, and interactions between roadways users.