



LINKING TAHOE: ACTIVE TRANSPORTATION PLAN

TAHOE METROPOLITAN PLANNING ORGANIZATION
TAHOE REGIONAL PLANNING AGENCY



THANK YOU!

Thank you to all project partners, community members, and elected officials, for your continued support promoting and building active transportation infrastructure at Lake Tahoe. This plan illustrates our progress in the Lake Tahoe Region and provides a vision for our continued success. Together, we can continue to support innovative complete street projects that improve the mobility and safety of all roadway users. And for those about to actively transport: We salute you!

Linking Tahoe: Active Transportation Plan and its accompanying appendices can be found online at www.tahoempo.org/activetransportationplan

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Logan Shoals. Photo: Lotshaw

INTRODUCTION

Bicycling, walking, and other forms of active transportation are important methods of travel that promote healthy lifestyles, improve air quality, boost the local economy, and enhance community character. Active transportation includes any method of travel that does not rely entirely on a car to travel between origin and destination. This can include walking, biking, skateboarding, rollerskating, cross country skiing, using public transit, or driving to an intercept lot, parking, and then using another form of travel. The Tahoe Regional Planning Agency/Tahoe Metropolitan Planning Organization (TRPA/TMPO) seeks to increase active transportation through an improved, expanded, and community-driven bicycle and pedestrian network.

The Linking Tahoe: Active Transportation Plan presents a guide for planning, designing, constructing, and maintaining a regional active transportation network that includes innovative infrastructure, support facilities, and awareness programs. The infrastructure network includes on-street bike facilities such as bike lanes, bike routes, and intersection designs that promote safety and convenient travel for bicycling and walking. The network also includes offstreet, shared-use paths and sidewalks that appropriately integrate with the roadway and existing and planned land-use design. The ATP outlines goals, policies, and actions that support implementation of high priority projects and guides long-term planning that will transform Tahoe's transportation system. To support this process, the plan includes analysis of current conditions, provides data for future projects, and outlines levels of project priority. To help ensure feasible implementation, the ATP identifies potential funding sources and recommended designs to encourage consistent and safer access for all roadway users.



VISION – COMPLETE STREETS

Complete streets are designed and operated to facilitate safe, comfortable, and efficient travel for roadway users of all ages and abilities such as pedestrians, bicyclists, transit riders, motorists, commercial vehicles, and emergency vehicles. A complete streets approach also supports economic vitality by designing for aesthetic improvements, place-making, and by building natural partnerships between private, public, and community entities.



Kahle Drive Vision. Rendering: Design Workshop

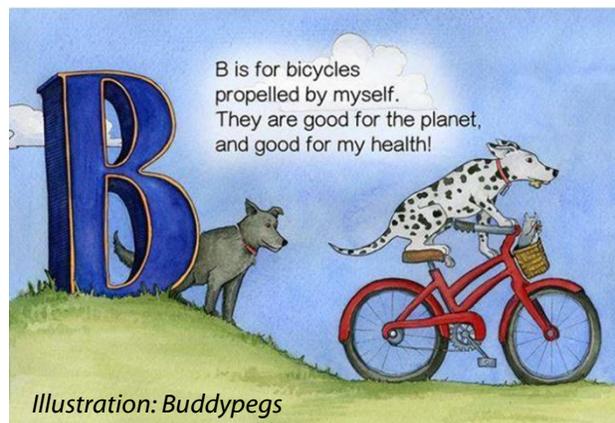
GOALS

- Increase connectivity by completing the active transportation network.
- Improve safety for bicyclists and pedestrians.
- Increase and support consistent project implementation through technical assistance and funding.
- Increase encouragement and awareness through implementation of the “5 E’s.”

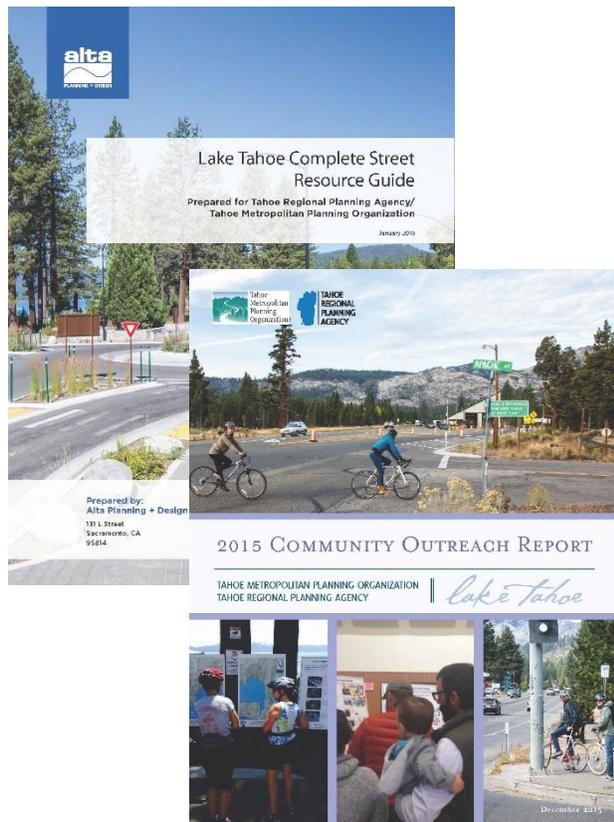
PLANNING FOR THE 5 E’S

Encouraging community members to use active transportation to reach their destinations relies on a variety of components. The League of American Bicyclist promotes the use of the “5 E’s” when seeking to change behavior by getting people out of their cars and onto their bike or other modes.

- **Engineering** includes offering safe and convenient infrastructure by altering the roadway through physical changes to the road and adjacent areas, such as rethinking the width of vehicle lanes, the addition of bicycle lanes, shared-use paths, enhanced crosswalks, and adding bicycle racks. This plan offers a variety of engineering solutions in the Lake Tahoe Complete Street Resource Guide.
- **Education** expands people’s understanding of how to use infrastructure and the benefits associated with increasing active transportation use. This plan offers a variety of methods for community members, schools, law enforcement, and government agencies to provide educational opportunities and increase awareness.
- **Enforcement** assists in reminding roadway users of their legal rights, the rules of the road and encourages safety between user types. This plan lays out methods where partnerships between schools, police, governments, and advocacy groups can help keep our streets safe.
- **Encouragement** to use active transportation and sustain that activity helps keep momentum growing for biking and walking as primary travel modes. Group activities like the Lake Tahoe Bike Challenge help users find camaraderie and an overall sense of moving towards the same goal. This plan outlines encouragement opportunities in Chapter 5.
- **Evaluation** of how a transportation system is working, who and how many people are riding and why, is an important measure in active transportation planning and implementation. Use of data can help create user friendly, safe networks, and supports grant applications and other funding opportunities. TRPA/TMPO assists in evaluating our system through the development and implementation of the Bicycle & Pedestrian Monitoring Protocol, crash reporting, the 2015 Community Outreach Report, and in documenting performance measures.



STAKEHOLDER & COMMUNITY OUTREACH



The 2016 Active Transportation Plan is an update to the 2010 Lake Tahoe Region Bicycle and Pedestrian Plan. To develop the plan, staff undertook over six months of public and stakeholder outreach. Agency stakeholders were also invited to participate in “Transforming Tahoe’s Transportation: A Workshop on Completing Our Streets.” This 1.5-day workshop brought regional implementers together to reimagine our roadway system, discuss challenges and opportunities, and conceptualize improvements for Lake Tahoe roadways. Recommendations within the plan and the *Lake Tahoe Complete Street Resource Guide (Appendix A)* illustrate much of the information discussed at the workshop. The *2015 Community Outreach Report (Appendix B)* analyzes all of the information collected

COMMUNITY OUTREACH HIGHLIGHTS:

- In total, 630 people signed-in at stakeholder and community meetings between January and July 2015.
- Participants identified closing connectivity gaps that limit the ability to get from one destination to another as the top priority for active transportation planning.
- Participants identified shared-use paths that are completely separated from roadway traffic as a preferred infrastructure design. This was in response to a general question about preferred infrastructure and not specific to any one location.
- The most common biking routes identified by survey participants were US Highway 50 from Sierra Tract through Stateline (South Shore), the Pope Beach bike path (South Shore), and State Route 89/State Route 28 from Tahoma to Dollar Point (West and North Shores).
- The most common transit routes used by survey respondents in combination with bikes are TART State Route 89 and TART Mainline.

Recent Accomplishments

Since 2010, many active transportation projects all over the Region have broken ground and are providing commuting and recreational opportunities. Funding, implementation, and ongoing maintenance of these projects are the joint effort of many agency partnerships. Fact Sheets & Media Campaigns



- **Shared-Use Paths:** In total, 6.5 miles of path have been constructed since 2010.
- **Bike Lanes:** In total, over 22 miles of bike lanes have been added since 2010.
- **Sidewalks:** In total, over 7.5 miles of sidewalk have been constructed since 2010.
- **Enhanced Crosswalks:** In 2014 and 2015, the Region saw three new pedestrian-activated beacons installed in El Dorado County, and in Incline Village by Nevada Department of Transportation. More are planned for Camp Richardson in South Lake Tahoe and Tahoe City.
- Of special note are the Region's first **roundabouts**, which are located in Kings Beach and just outside of Incline Village. Roundabouts reduce traffic congestion, lower speeds, reduce pedestrian exposure, and add aesthetic value to communities.

CHALLENGES & STRATEGIES

Meeting our goals requires identifying challenge areas and strategies to achieve solutions. **Safety, connectivity, implementation, and maintenance** are identified as Tahoe's main challenge areas.

SAFETY:

ACCURATE CRASH REPORTING - STRATEGY: Encourage all crash victims to report incidents to police. Some ways to encourage this behavior are through education campaigns that inform people how to report, such as calling hotlines. An online self-reporting tool could be developed to support increased reporting. Hospitals can also encourage victims to report their incident to law enforcement. Ensure law enforcement records all active transportation-related crashes, regardless of injury severity, and includes those records in their report to the state. This may entail altering the way law enforcement collects information, or may require updating technological systems to coordinate with state systems.

“HOT SPOT” LOCATIONS IN NEED OF IMPROVEMENT - STRATEGY: Use 2010-2014 Crash Report and intersection priority locations to prioritize locations for improvement. Priority locations should be added into capital improvement programs and included in private and public projects, where appropriate.

CONNECTIVITY:

The Lake Tahoe Region has a few key locations that sever the active transportation network and act as barriers to increased use.



Photo: Vollmer

- For **regional connectivity gaps**, implementation of large scale projects may be necessary. These projects can be done in phases, such as first adding bike lanes and later providing a Class I shared-use path when funding is available. Interim projects (described below) can help close gaps more quickly at reduced costs. Constructing interim projects may allow more robust planning, outreach, and funding analysis to be conducted while still meeting the short-term needs of the community.



Warrior Way. Photo: Vollmer

- For more **localized connectivity gaps**, wayfinding signs are a small improvement that can generate a large benefit. Tourists and residents may not understand that the Lake Tahoe network is comprised of various types of infrastructure, such as bike lanes that connect to bike routes that connect to a shared-use path. Wayfinding offers people recommendations about preferred routes, provides destination and distance information, and acts as a key landmark in case of emergency.

IMPLEMENTATION

HIGH BUILDING COST - STRATEGIES:

- *Be Opportunistic:* Look for nearby or similarly timed projects and identify opportunities to expand the scope to include complete street improvements.
- *Resurface and Repurpose:* If a roadway is programmed for resurfacing, revisit the street striping to include painted active transportation infrastructure.
- *Bundle Funds:* Be creative with funding sources by planning ahead and diversifying sources.
- *Design/Build vs. Construction Manager at Risk vs. Design/Bid/Build:* Cost savings can occur when contractors are brought on board for projects before they have reached 100 percent design. These methods give contractors an opportunity to provide feedback on the implementation challenges they foresee and creates buy-in to implement the project as envisioned.

PUBLIC SUPPORT - STRATEGIES:

- *Interim Treatments:* During planning and outreach phases, construct low-cost, interim treatments that reflect future project plans. This gives the community a chance to understand the new infrastructure, give feedback, and improve the area in the short-term without large costs. Interim projects give staffers the opportunity to refine and rethink issues to implement better long-term projects. Some examples of interim treatments include:
 - Signs
 - Signal phase readjustment
 - Painted roadway markings
 - Street furniture (planters, benches, tables)
 - Superficial construction
 - Part-time closures
- *Phased Implementation:* Similar to interim treatments, phased implementation gives the community a chance to understand the project and experience benefits. As the project draws closer to completion, public support and desire for the project will be stronger.

MAINTENANCE:

ONGOING MAINTENANCE COST - STRATEGIES:

- *Public-Private Partnerships:* The Town of Truckee, Placer County in Kings Beach, and the City of South Lake Tahoe all employ this method. Facility and assessment districts are created when local government and businesses enter into an agreement where the government invests capital funds to build complete street improvements and add value to commercial centers while business owners pay fees to assist in ongoing maintenance. Local examples include the Kings Beach Benefit Assessment District and the Park Avenue Development Maintenance Association.
- *Surcharge on Property Taxes:* This tax can only be implemented by a vote by property owners, per Proposition 218 (for California). Taxes are used for transportation-related maintenance, including refurbishment and snow removal.
- *Design with Maintenance in Mind:* Include maintenance staff during design phase. Maintenance staff understands available resources. They can offer design strategies to alleviate known maintenance limitations.



Flush Curb. Photo: Alta Planning + Design

SNOW REMOVAL - STRATEGIES:

- *Design for Snow Removal:* Design ingress and egress that is wide enough for existing equipment, delineate and defend hardscape, and provide capacity for snow storage on site.
- *Identify Primary Routes:* Not all facilities in the network are appropriate for snow removal. Use count and common route data to identify which routes are most heavily used and for what activity, such as commuting to work or recreation. In some cases, paths may be more appropriate for packing snow and providing cross country ski routes. For commute locations, schedule operations so that ideal conditions occur between 7 a.m. and 7 p.m., with added emphasis on peak travel times of 7-8 a.m. and 4-5 p.m. Begin snow clearing after two inches of accumulation.
- *Get Creative with Equipment:* Create smaller snow plows out of old Jeeps that can remove snow from trails, bike lanes, sidewalks, and pedestrian refuge islands.

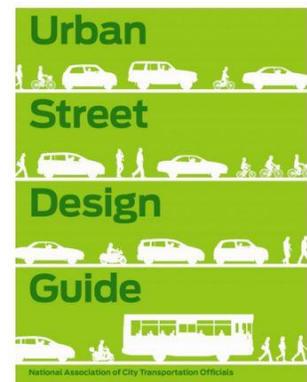
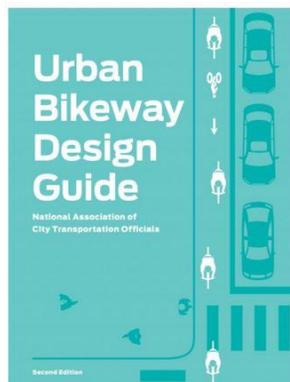
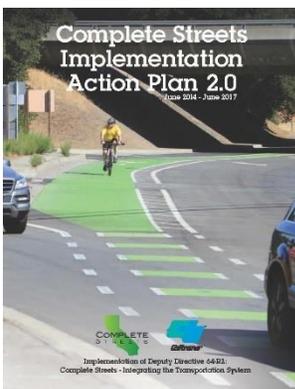


Salt Lake City – Buffered Bike Lane
Photo: Alta Planning + Design

TORT LIABILITY - STRATEGIES:

Utilize Federal and State Design Flexibility: Both the FHWA and Caltrans have released memos that direct local jurisdictions to utilize design and funding flexibility in multi-modal design.

- Caltrans, 2014: “Design Flexibility in Multimodal Design”
- FHWA, 2013: “Bicycle and Pedestrian Funding, Design, and Environmental Review: Addressing Common Misconceptions.”
- FHWA, 2015: “Revision of Thirteen Controlling Criteria for Design” (Docket No. FHWA- 2015-0020).



NETWORK RECOMMENDATIONS

Alignments found in the plan are conceptual. As the Region progresses towards the implementation of complete streets, pre-determining location-specific infrastructure or routes may not be the best solution to meet the needs of all users. Infrastructure type and route recommendations found in this plan should be used as a catalyst for project development and for programming into TRPA's EIP and local jurisdiction's capital improvement programs (CIPs). Some areas on the Existing & Proposed Infrastructure maps are displayed as *priority complete street improvement areas* or stretches of highway. These locations are chosen based on residential and commercial density, lack of existing active transportation infrastructure, and existing plans for redevelopment. These designations do not exclude any other area from considering complete street improvements. All projects within the Region should consider improving the streetscape to increase safety, economic vitality, and mobility for all users. To provide increased capacity for active transport, *this plan also recommends shared-use paths in all appropriate locations rather than sidewalks.*

Through review of existing plans, community outreach, agency stakeholder professional expertise, and previously programmed projects, each corridor illustrates proposed active transportation routes and infrastructure. In the plan, in-depth details and recommendations for each corridor in the Lake Tahoe Region are described.

Each corridor section contains the following information:

- Physical Geographic Description
- Context Relevant Plans & Studies
- Additional Corridor Considerations
- Existing & Proposed Infrastructure Map
- Crash Analysis Map
- Corridor Project List and Cost Estimates
- A complete street improvement rendering produced as part of "Transforming Tahoe Transportation: A Workshop on Completing Our Streets."



SR 28 / Lakeshore Boulevard. Rendering: Alta Planning + Design

FIGURE 4-1: CORRIDOR 1 NORTH, EXISTING & PROPOSED INFRASTRUCTURE

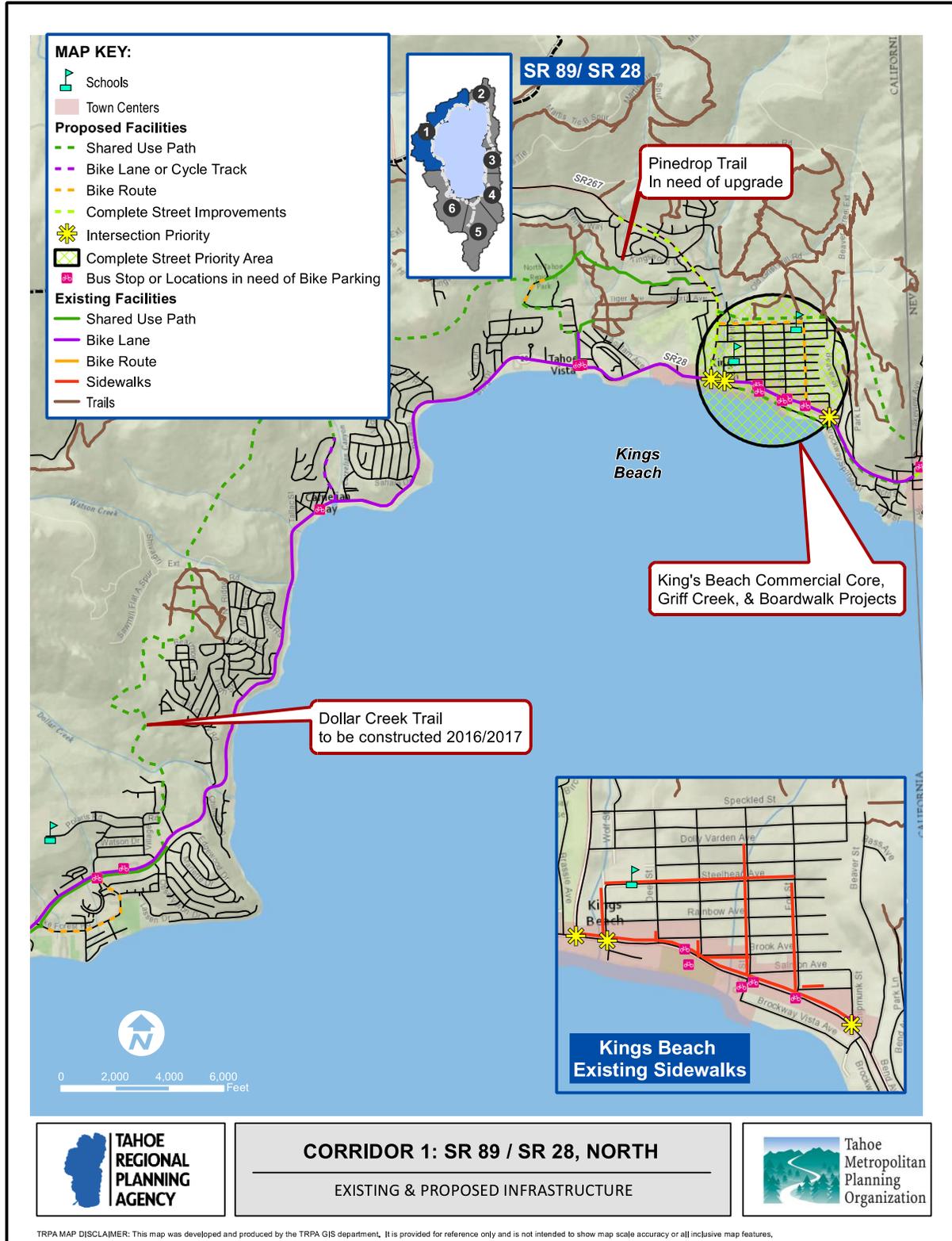


FIGURE 4-2: CORRIDOR 1 SOUTH, EXISTING & PROPOSED INFRASTRUCTURE

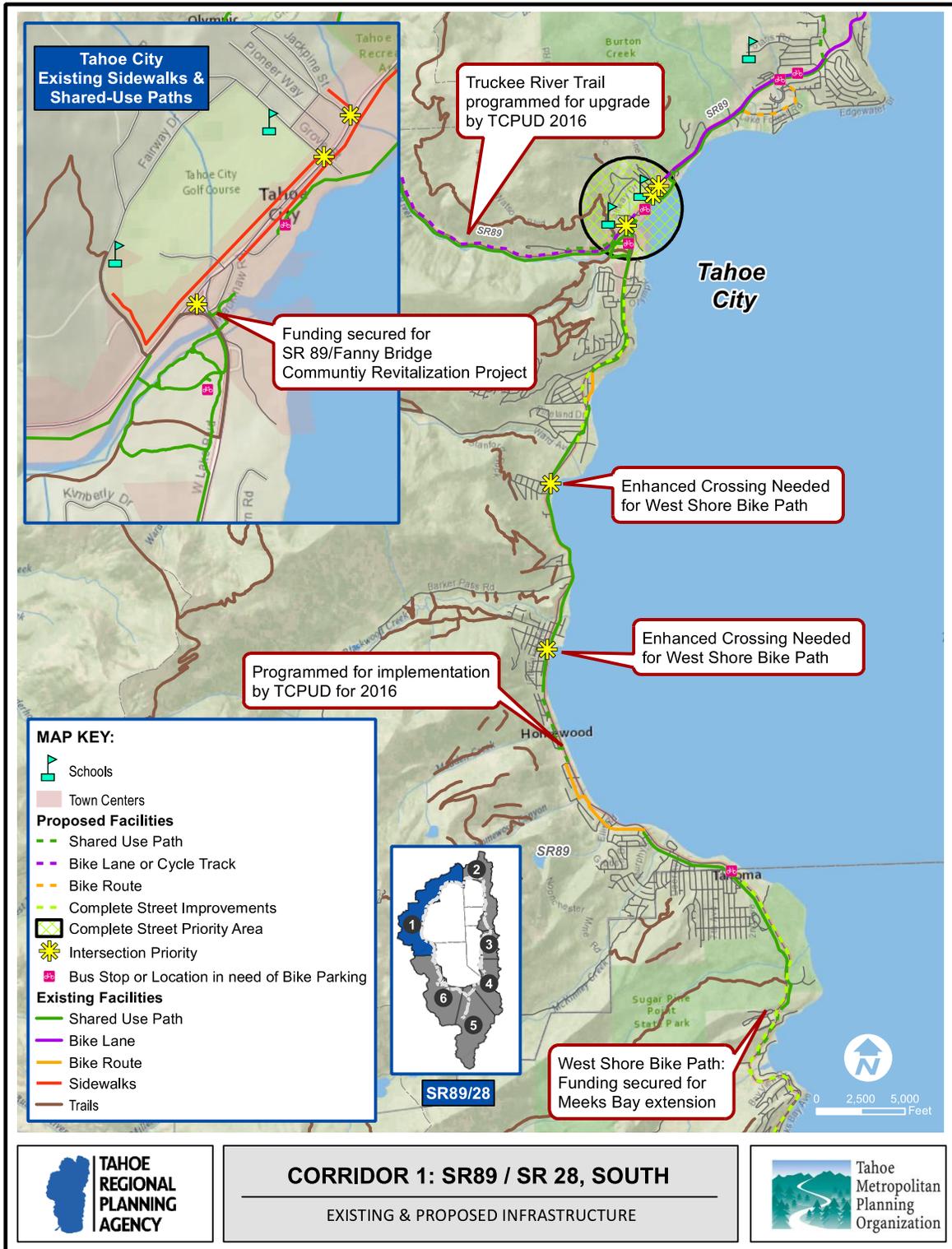
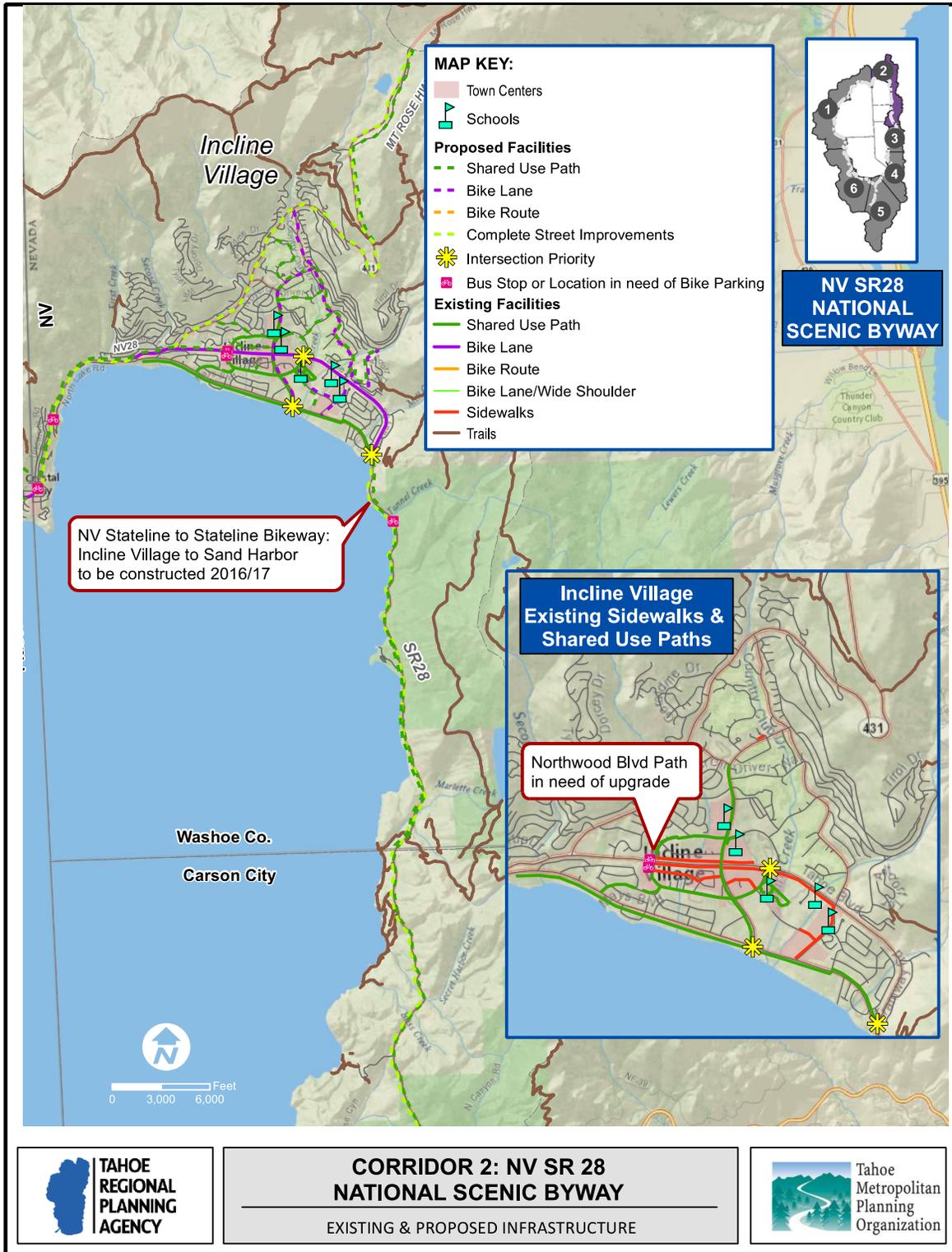


FIGURE 4-3: CORRIDOR 2 EXISTING & PROPOSED INFRASTRUCTURE



TRPA.MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features.

FIGURE 4-4: CORRIDOR 3 EXISTING & PROPOSED INFRASTRUCTURE



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FIGURE 4-5: CORRIDOR 4 EXISTING & PROPOSED INFRASTRUCTURE

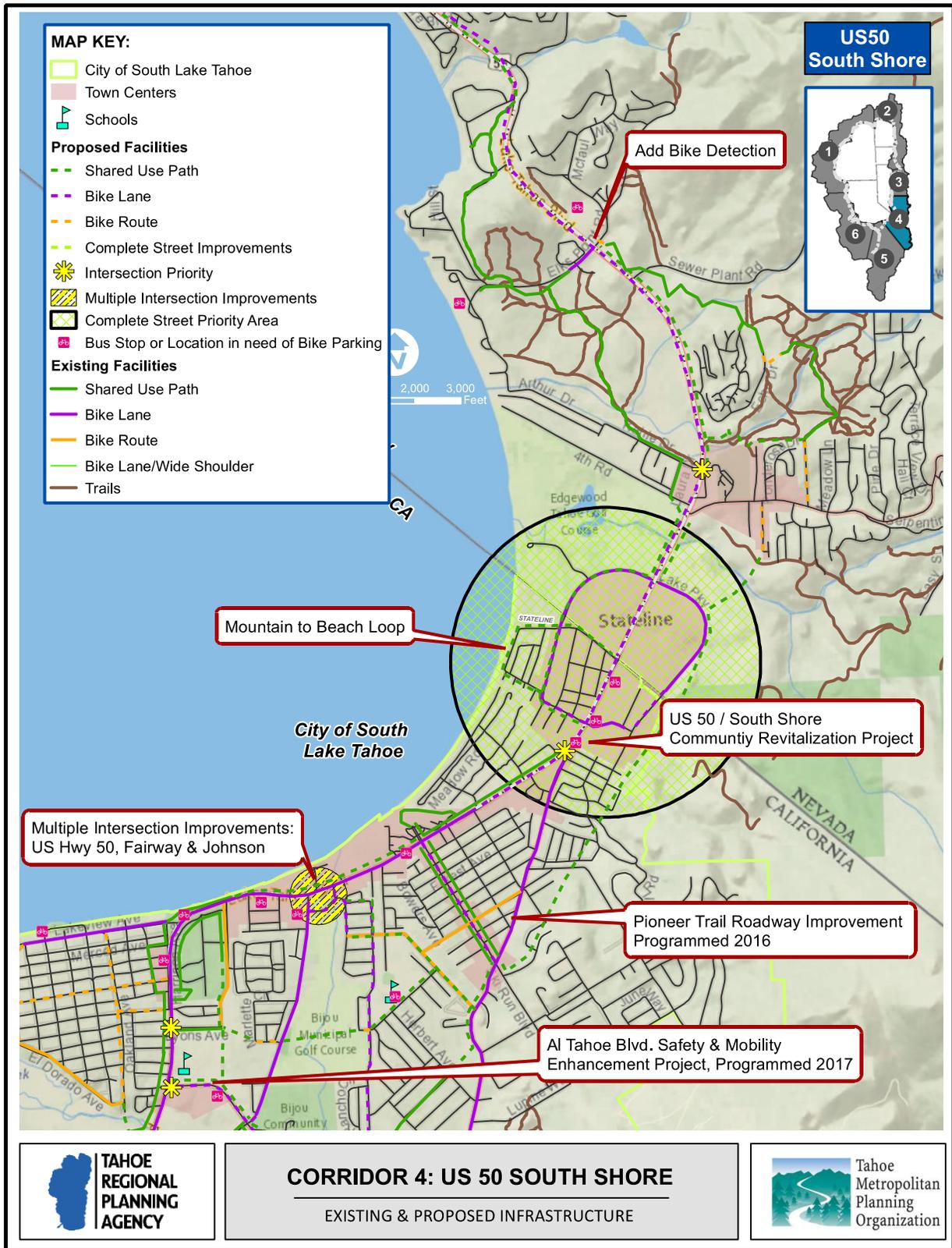
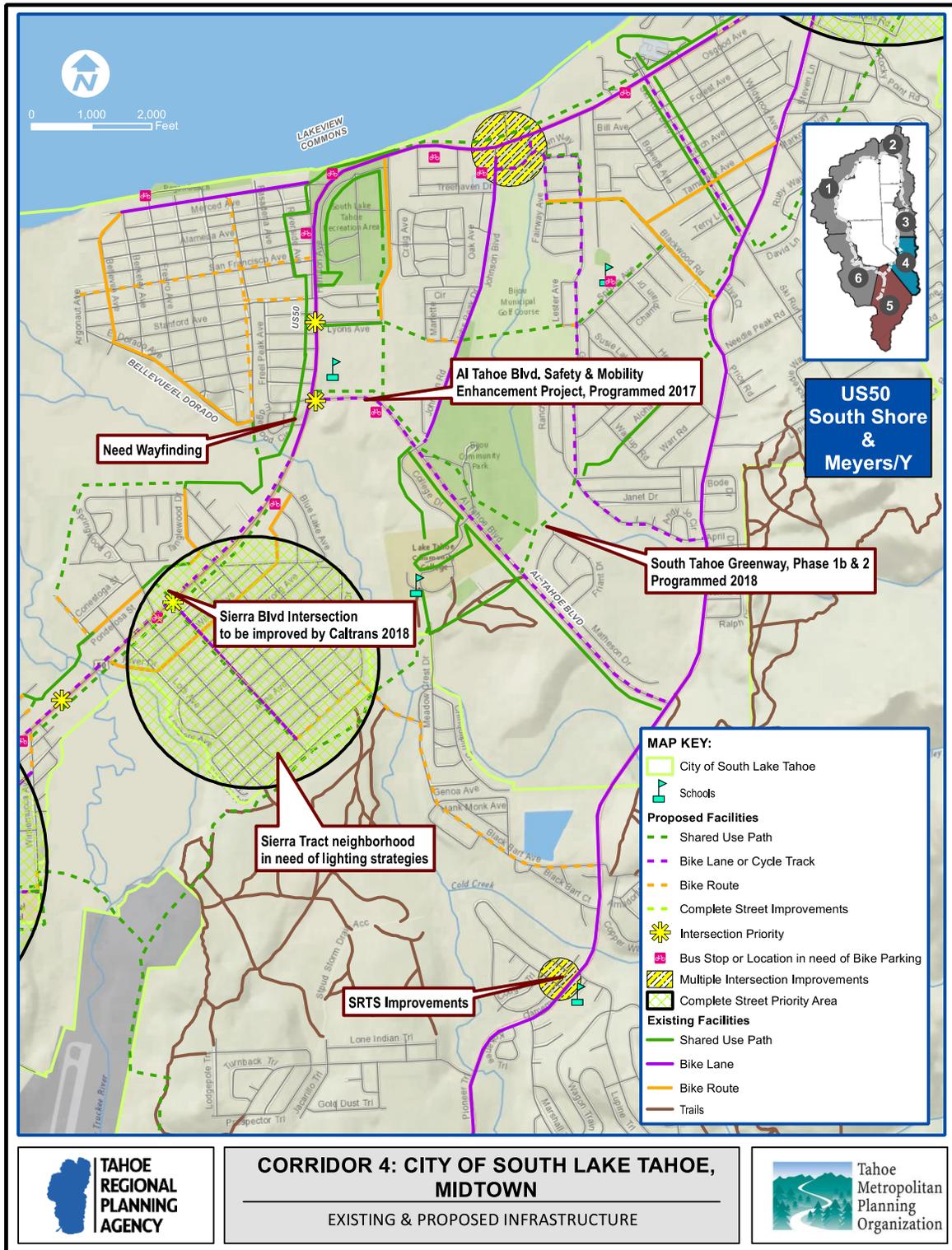
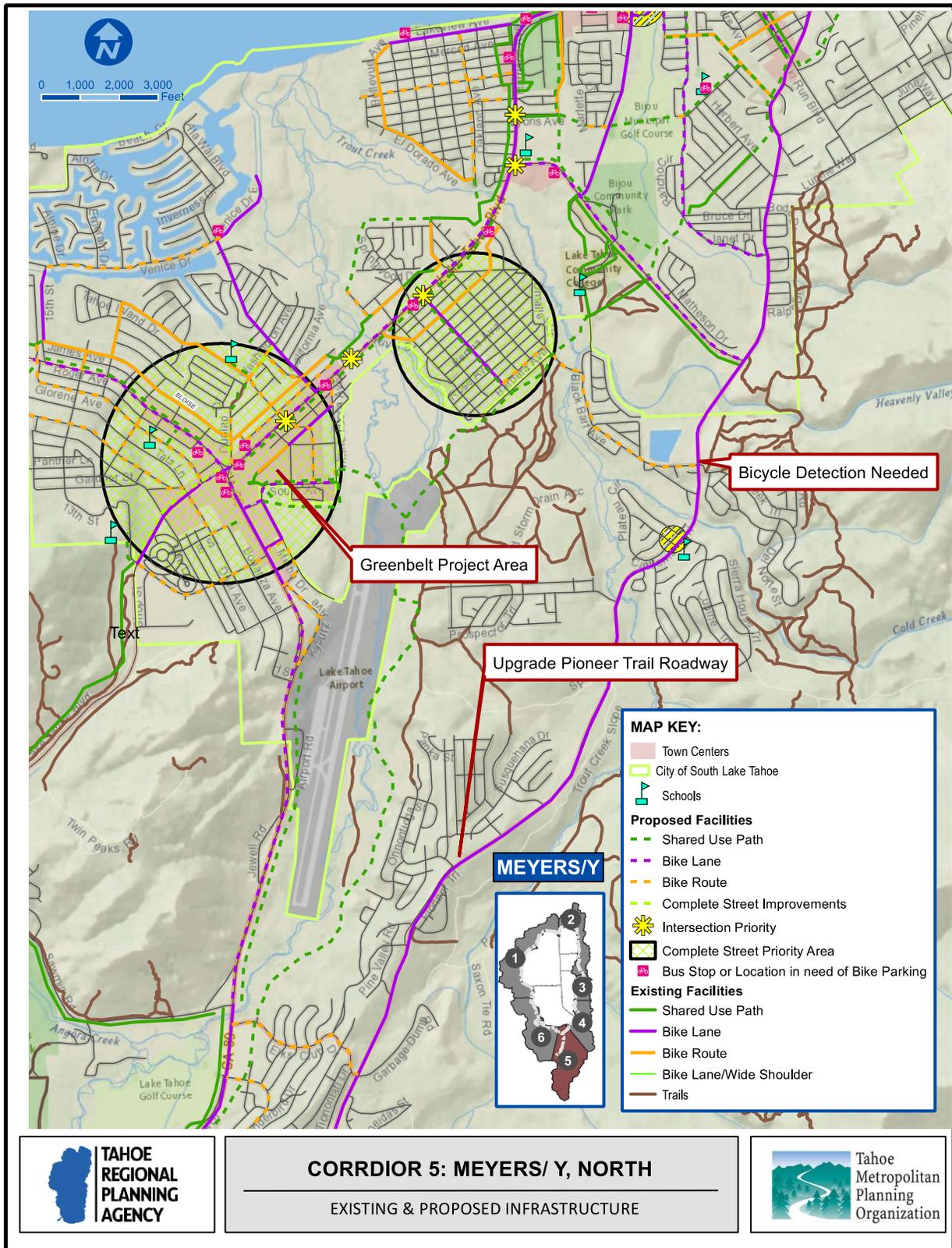


FIGURE 4-6: CORRIDOR 4 (MIDTOWN) EXISTING & PROPOSED INFRASTRUCTURE



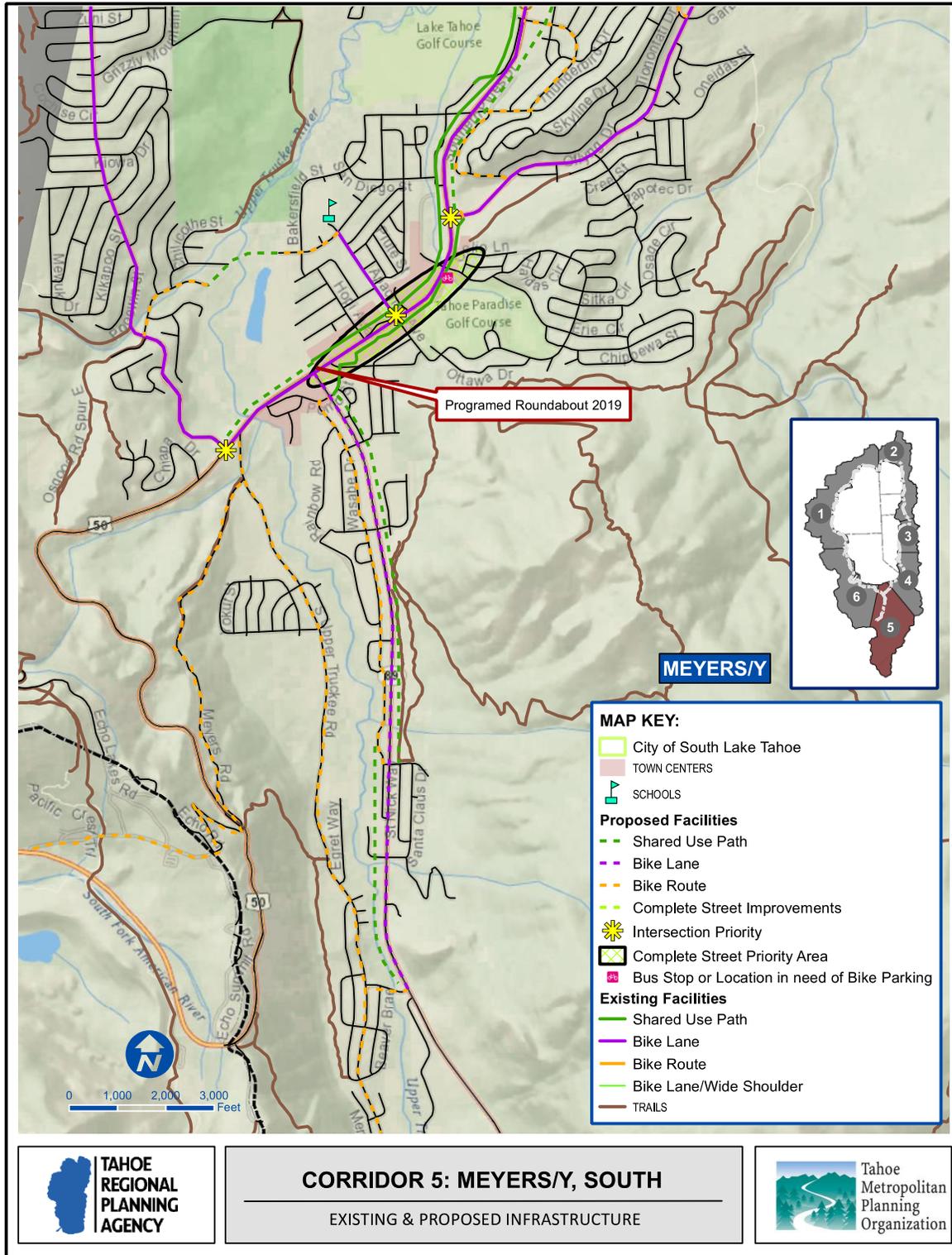
TRPA MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features.

FIGURE 4-7: CORRIDOR 5 NORTH EXISTING & PROPOSED INFRASTRUCTURE



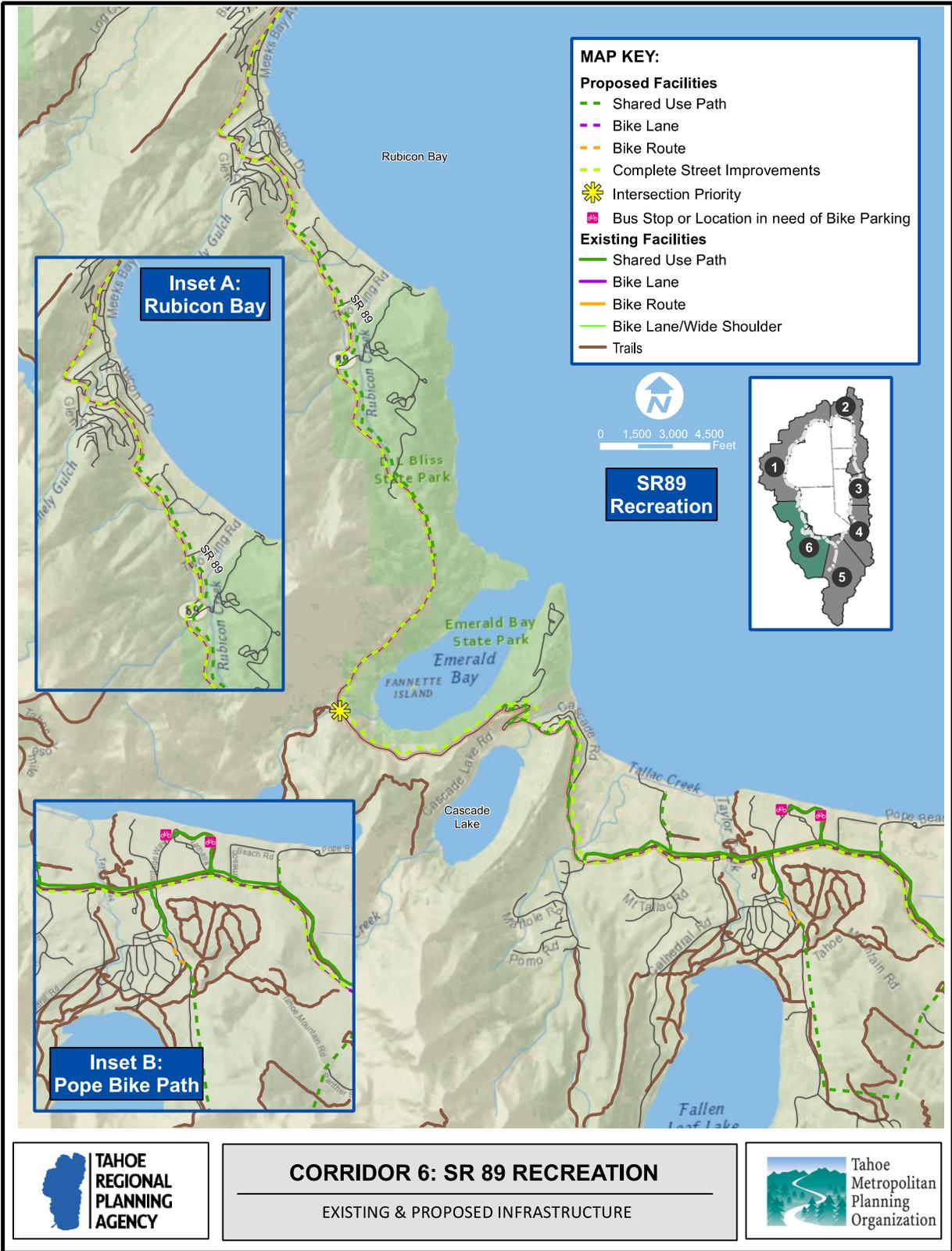
TRPA MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features.

FIGURE 4-8: CORRIDOR 5 SOUTH EXISTING & PROPOSED INFRASTRUCTURE



TRPA MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features.

FIGURE 4-9: CORRIDOR 6 EXISTING & PROPOSED INFRASTRUCTURE



AGENCY ROLES & RESPONSIBILITIES

Implementation of the ATP is a multi-agency collaboration, and the ATP fulfills multiple agency requirements. As the TMPO document, the ATP is incorporated by reference into the TMPO Regional Transportation Plan and meets federal requirements for active transportation planning. The ATP is also part of the TRPA Regional Plan. Projects listed in the ATP are eligible for federal, state, and local grants. To apply for these grants, in most cases local jurisdictions will need to formally adopt the ATP. Adoption should take place shortly after the plan is approved by the TRPA/TMPO Board. The primary responsibility for construction and maintenance of the active transportation network lies with local jurisdictions. Private developers also play an important role in implementation of the network by providing easements and constructing and maintaining segments that are adjacent to their property. Input from the public, advocacy community, and other associations are also an essential part of project implementation.

AGENCY TYPE	AGENCY	RESPONSIBILITY				
		Planning	Design	Construction	Maintenance	Funding
FEDERAL	US Forest Service	X	X	X	X	X
	Federal Lands	X	X	X		X
STATE	Caltrans	X	X	X	X	X
	Nevada Department of Transportation (NDOT)	X	X	X	X	X
	California Tahoe Conservancy (CTC)	X	X	X		X
	California State Parks	X	X	X	X	X
	Nevada State Parks	X	X	X	X	X
LOCAL JURISDICTION	Counties	X	X	X	X	X
	City of South Lake Tahoe	X	X	X	X	X
PUBLIC UTILITY DISTRICTS	North Tahoe Public Utility District (NTPUD)			X	X	X
	Tahoe City Public Utility District (TCPUD)	X	X	X	X	X
REGIONAL TRANS. DISTRICT	Tahoe Transportation District (TTD)	X	X	X		X
METRO-PLANNING ORG.	Tahoe Regional Planning Agency / Tahoe Metropolitan Planning Organization (TRPA/TMPO)	X				X

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